

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA

Civil Action No.: 7:23-CV-00897

IN RE: CAMP LEJEUNE WATER
LITIGATION

This Pleading Relates to:

ALL CASES.

)
)
)
)
)
)
)

PLAINTIFFS' LEADERSHIP
GROUP'S MEMORANDUM OF LAW
IN OPPOSITION TO DEFENDANT'S
MOTION TO EXCLUDE THE
TESTIMONY OF DR. RODNEY KYLE
LONGLEY

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. FACTUAL BACKGROUND.....	2
A. Professor Longley is a highly qualified historian whose opinions have never been excluded.....	3
B. Professor Longley employed the same historical methodology that characterizes his illustrious career to his work on Camp Lejeune.....	5
C. Defendants’ own historial expert acknowledged the usefulness of Professor Longley’s research.....	8
III. LEGAL STANDARD.....	8
IV. ARGUMENT	10
A. Professor Longley applied a reliable methodology.	11
B. Defendant’s scattershot objections to Professor Longley’s testimony do not undermine its admissibility.....	13
1. Professor Longley’s typographical errors do not undermine his methodology.	13
2. Professor Longley properly surveyed a wide array of primary and secondary sources.	14
3. Professor Longley accounted for bias.....	15
4. Professor Longley corroborated his sources.	19
5. Professor Longley’s citation practices are proper.....	20
C. The motion should be denied as premature.	22
V. CONCLUSION.....	23
CERTIFICATE OF SERVICE	25

Pursuant to Local Rules 7.1 and 7.2 and the March 11, 2025 Scheduling Order (D.E. 332), Plaintiffs' Leadership Group ("PLG") respectfully submit their memorandum in opposition to Defendant United States' ("Defendant") Motion to Exclude the Testimony of Dr. Rodney Kyle Longley. D.E. 360 (D.E. 362 ("Memorandum")).

I. INTRODUCTION

Professor Longley's testimony as forecast by his reports is relevant and reliable, satisfying Federal Rule of Evidence 702 and *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Defendant does not challenge his qualifications or the relevance of his opinion, nor could it. Professor Longley's credentials as a historian are extraordinary and his historical analysis of Camp Lejune is undeniably relevant to this action, because it can fill gaps in the factual foundation relied on by other experts and assist the Court as the finder of fact in a bench trial. Given that Professor Longley was designated to testify both as PLG's historian expert for its case-in-chief and as a rebuttal witness to the government's own historian experts, his testimony is also relevant as rebuttal testimony. The Court should find that he passes *Daubert* muster for both purposes.

Professor Longley's testimony is also reliable. Professor Longley applies the same historical methodology in this case that courts regularly approve and that he has used to write books and articles throughout his distinguished career as an academic military historian, namely researching and reporting on sources of credible historical information. Here, he traveled to archives and sifted through primary sources. He toured the base, spoke with eyewitnesses, consulted public historians, reviewed prior statements and testimony of persons with knowledge, and aggregated and summarized voluminous historical facts regarding the base with an eye on the water contamination and water use issues. He corrected for bias, and extensively cited and footnoted his reports. Such methodological rigor easily passes *Daubert* muster, particularly here, where the Court is the finder of fact so its gatekeeping role to exclude evidence from a jury that

might be confused is diminished.

Defendant raises a scattershot of attacks on Professor Longley that rest on mischaracterizations and cherry-picking. None withstand scrutiny, and even if any attack were credible, it would go to the weight of the evidence, not its admissibility.

Finally, Defendant's motion is premature. Until issues in contention are narrowed, it cannot be predicted which of the numerous historical documents and facts cited by the parties' historians may become relevant. For example, it is currently unknown which facts from Professor Longley's reports Plaintiffs may seek to offer at any trial or which facts from the government's experts the government may offer that Professor Longley will address in rebuttal. In seeking to have the Court address the entirety of Professor Longley's reports now, the government seeks an unnecessary advisory opinion. At a minimum, then, the motion should be denied without prejudice to any objections Defendant may seek to raise in the future.

II. FACTUAL BACKGROUND

The Camp Lejeune Justice Act of 2022 ("CLJA")¹ allows individuals to recover for injuries caused by exposure to contaminated water at Camp Lejeune between 1953 and 1987. The Court has ordered three phases of expert discovery: the "Water Contamination Phase," "General Causation Phase," and "Residual Expert Phase." D.E. 270 at 2. As of the date of the filing of this brief, the parties are still in the process of producing all reports, completing all discovery and filing all motions with regard to the three phases.

As part of expert discovery, the parties both designated historian experts, whose reports were originally issued partly in Phase 1 and partly in Phase 2.² The parties subsequently deemed

¹ Pub. L. No. 117-168, § 804, 136 Stat. 1759, 1802-04 (2022).

² Plaintiffs designated Dr. Longley and Defendant designated Drs. Brigham and Kelman as historian experts. Defendant originally identified Dr. Brigham as a Phase 1 case-in-chief expert. Plaintiffs originally

all respective historian experts to be part of Phase 1 by agreement. The sequence of the reports was as follows:

1. Dr. Longley report dated Dec. 7, 2024.
2. Dr. Brigham report dated Dec. 9, 2024.
3. Dr. Longley report dated Jan. 13, 2025.
4. Dr. Brigham report dated Feb. 7, 2025.
5. Dr. Kelman report dated Feb. 7, 2025.
6. Dr. Longley report dated March 17, 2025.

Each historian expert was deposed (Dr. Brigham on March 27, Dr. Longley on April 3, and Dr. Kelman on April 1 & 8, 2025). Additional historical materials were entered as exhibits at their depositions.

A. Professor Longley is a highly qualified historian whose opinions have never been excluded.

Professor Longley is a highly-qualified historian.³ He is the director of the War, Diplomacy, and Society Program at Chapman University; the Henry Salvatori Professor of American Values and Traditions; and Director in War, Diplomacy, and Society. Professor Longley joined the Chapman faculty in July 2020 after teaching at Arizona State University as the Snell Family Distinguished Professor since 1995.⁴ His voluminous academic qualifications are further detailed in his CV and his reports.⁵

Professor Longley is a prolific scholar. He has published many books, including on military historical topics as here. His books include *The Sparrow and the Hawk: Costa Rica and the United States During the Rise of José Figueres* (1997); *In the Eagle's Shadow: The United States and*

identified Dr. Longley as a Phase 2 case-in-chief expert. Plaintiffs later also identified Dr. Longley as a rebuttal expert in Phase 1, rebutting Dr. Brigham.

³ See Ex. 1, Dr. Longley report dated Dec. 7, 2024, pp. 4-6 (summarizing qualifications); publications list (appended to same); Ex. 10 (Longley CV); and see <https://www.chapman.edu/our-faculty/kyle-longley.aspx> (last accessed May 16, 2025) (Chapman University entry).

⁴ See *id.*

⁵ See Ex. 1, Dr. Longley report dated Dec. 7, 2024, pp. 4-6; Ex. 10, CV.

Latin America (2003), *Senator Albert Gore Sr.: Tennessee Maverick* (2004); *Deconstructing Reagan: Conservative Mythology and America's Fortieth President* (editor and contributor) (2006); *Grunts: The American Combat Soldier in Vietnam* (2008), *The Morenci Marines: A Tale of Small Town America and the Vietnam War* (2013); *The Enduring Legacy: Leadership and National Security Affairs during the Presidency of Ronald Reagan* (co-editor and contributor) (2017); *Reagan and the World: Leadership and National Security, 1981-1989* (co-editor and contributor) (2017); *LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval* (2018); and *In Harm's Way: A History of the American Military Experience* (2019).⁶

Moreover, Professor Longley was an associate editor for *Encyclopedia of United States-Latin American Relations* (2012) with Thomas Leonard and is a lead editor for the *Oxford Encyclopedia of Latin America* (2018-present). More recently, Professor Longley has been working on book projects involving Afghanistan and Iraq. His books have won prizes including the Southeastern Council on Latin American Relations A.B. Thomas Award, the Best Book on Arizona History from the Arizona/New Mexico Book Co-op Committee, and the Southwest Book Award from the Arizona Historical Society. Professor Longley has also published articles and essays in historical journals.⁷

Professor Longley has been active in organizations including the American Historical Association, the Organization of American Historians and the Society for Historians of American Foreign Relations. Professor Longley has published and taught on the subjects of military history and the Marines.⁸ Professor Longley has provided expert reports in the past.⁹ He has not previously had his testimony excluded under *Daubert* or Rule 702 grounds in any matter.

⁶ See Ex. 1, Dr. Longley report dated Dec. 7, 2024.

⁷ See *id.*

⁸ See *id.*

⁹ Ex. 1, Dr. Longley report dated Dec. 7, 2024, court cases disclosure.

B. Professor Longley employed the same historical methodology that characterizes his illustrious career to his work on Camp Lejeune.

Plaintiffs retained Professor Longley as an expert in July 2024. Between July and December 2024, Professor Longley researched and wrote his first report. He also gathered much of the material he referred to in his second and third reports. The first report described his research process.¹⁰ In connection with that process, he reviewed pleadings and other background materials provided to him by counsel, visited archives and reviewed countless primary sources, reviewed appropriate secondary sources, traveled to Camp Lejeune and toured the base, and conducted interviews—sometimes called oral histories—with veterans and public historians. He analyzed the entirety of the voluminous materials he reviewed, corrected for any bias, and developed his reports with detailed footnotes and citations.

Specifically, he was provided with copies of pleadings and other background materials by counsel such as documents produced in discovery, which he also reviewed and where appropriate, cited.¹¹ He reviewed books about military bases in general and Camp Lejeune in particular, and publications regarding the water contamination issues.¹²

As to primary sources, he worked through numerous back issues of the base newspaper, the *Globe*, in publication throughout the statutory period.¹³ Professor Longley traveled to the Marine Corps Library at Quantico.¹⁴ There, too, he reviewed primary sources, including back issues of *Leatherneck* magazine and numerous records of government agencies including the

¹⁰ *Id.*, Appendix 1, “Research Methodology,” pp. 45-48.

¹¹ *Id.*, Dr. Longley report dated Dec. 7, 2024, p. 48. Defendant criticizes the fact that counsel provided the expert with materials yet Defendant did the same with its expert Dr. Brigham. For example, the DOJ provided him with materials on the subject of the opening date for ABC Dry Cleaners. *See* Ex. 2, Brigham report dated Dec. 9, 2024, pp. 25-33 & Image 9 (High School Yearbook), Image 10 (ad in the Jacksonville Daily News, June 29, 1954); Ex. 7, Dr. Brigham depo. 86:24-87:6 (admitting he was made aware of Yearbook by DOJ); 89:12-90:21 (admitting he was made aware of ad in Jacksonville Daily News by DOJ).

¹² *Id.*, Exhibit 1, Dr. Longley report dated Dec. 7, 2024, pp. 45-46.

¹³ *Id.*, p. 47; *and see* reliance list entries, e.g., nos. 9 to 62.

¹⁴ *Id.*, App. 1, p. 46-47; reliance list nos. 6-8.

ATSDR, the Department of Defense, Department of Veteran's Affairs, U.S. Congress, Environmental Protection Agency, the Centers for Disease Control and the Government Accountability Office.¹⁵

In addition, Professor Longley spoke to persons with knowledge and researched first-hand accounts of relevant aspects of life on the base, reviewing depositions, oral histories and memoirs of people who served.¹⁶

Professor Longley's reports are comprehensive. He cited numerous historical records.¹⁷ With regard to oral history, his initial report cited to a Zoom call with Alan Howard,¹⁸ a communication with Jerry Ensminger,¹⁹ and depositions or declarations of named Plaintiffs Mr. McElhiney, Mr. Howard, and Ms. Tukes, and nonparty witness General Anthony Zinni.²⁰ Professor Longley noted that "oral history" information could range from words on a phone to witness testimony at congressional hearings.²¹ With regard to his methodology for oral history, Professor Longley cited to publications by Don Ritchie (former chief historian of the Senate) and other luminaries in the field.²² Professor Longley himself has more than 30 years of experience employing oral histories and using them for his books.²³

Dr. Brigham's first report dated December 9, 2024 "crossed in the mail" with Professor

¹⁵ *Id.*, App. 1, p. 47.

¹⁶ Ex. 1, p. 47.

¹⁷ See Ex. 1, Dr. Longley report dated Dec. 7, 2024, fn. 1-132 and reliance list nos. 1-198; Exs. 3, 6.

¹⁸ Ex. 1 p. 10 n. 21; p. 32 n. 85; reliance list no. 127.

¹⁹ *Id.* p. 19 n. 46; reliance list no. 148.

²⁰ *Id.*, reliance list nos. 127-131, 133-136. Mr. McElhiney, Mr. Howard and Ms. Tukes were three of the 25 Track One Plaintiffs. *Id.* at p. 48. "They reflect two men and one woman who resided at the base at distinct time periods in the earlier 1970s, the later 1970s, and the 1980s. One resided at Hadnot Point, one at Tarawa Terrace, and one spent time at both communities." *Id.*

²¹ See *id.*, p. 47.

²² *Id.*

²³ *Id.*

Longley's first report dated December 7, 2024.²⁴ Professor Longley's second report, dated January 13, 2025 and styled as a rebuttal report, addressed Dr. Brigham's December 9, 2024 report and included additional citations not included in his first report.²⁵ Defendant then served Drs. Brigham and Kelman's February 7, 2025 reports that, *inter alia*, criticized Professor Longley's use of "oral history." To address that contention, in his third report dated March 17, 2025, Professor Longley provided, *inter alia*, a recorded interview with Jerry Ensminger and Mike Partain, a declaration from Mr. Partain,²⁶ and discussed oral history materials on the U.S. Marines website in the form of archived transcripts of interviews of Marines.²⁷ At the government's expert Dr. Brigham's deposition, Dr. Brigham agreed that such information was instructive and could be useful as part of the historical record.²⁸

The government's expert Dr. Brigham worked with a staff of a dozen assistants²⁹ to fact-check Professor Longley's three reports.³⁰ Out of the 296 reliance list citations³¹ and additional materials found in the reports, Dr. Brigham's team identified only three (3) errors, each of which were photos. Professor Longley corrected them and issued an errata sheet.³²

²⁴ This occurred because Plaintiffs designated Dr. Longley originally as an expert in Phase 2, while Defendants designated Dr. Brigham as an expert in Phase 1, and the phases have overlapping deadlines.

²⁵ See Ex. 3, Dr. Longley report dated Jan. 13, 2025, reliance list. Defendant states that "Dr. Longley's second and third reports relied upon the research and analysis of his December 7, 2024 report." D.E. 362, p. 2. In fact, but his second and third reports also cited to new research. See Ex. 3, Dr. Longley report dated Jan. 13, 2025, p. 1 ("For purposes of this rebuttal report, I relied on my 12/7/24 Report, along with additional investigation, research and analysis as discussed below and as cited in my supplemental Reliance List."); Ex. 6, Dr. Longley report dated March 17, 2025 (citing additional materials); Ex. 12 (declaration).

²⁶ Ex. 6, Dr. Longley report dated March 17, 2025, pp. 23-31 & reliance list nos. 1, 17, 33-45.

²⁷ Ex. 6, p. 7.

²⁸ Ex. 7, Brigham depo. 20:12-23, 135:19-136:20.

²⁹ *Id.* at 8:11-18 (assisted by four senior assistants and about four more research associates), 8:19-10:6 (confirming identities of 12 staff members involved).

³⁰ *Id.* at 32:20-21 (describing review of Dr. Longley's first report); 162:17-21 (fact-checking of citations), 164:8-18 (same), 165:1-6 (same), 176:12-23 (staff went through report).

³¹ See Exs. 1, 3, 6 (first Longley report had 198 reliance items; second had 36 items; third had 62 items).

³² Ex. 1, last page.

C. Defendants' own historical expert acknowledged the usefulness of Professor Longley's research.

Professor Longley's voluminous unchallenged citations illuminate many historical facts of potential relevance. To pick but a few examples, Professor Longley provides potentially useful citations to a *Globe* news article reflecting the details of using standpipe to supply water buffaloes at Hadnot Point;³³ bus schedules reflecting how buses went to and from the Tarawa Terrace community;³⁴ *Globe* features reflecting the uses of the swimming pools at Hadnot Point;³⁵ and historical information on the starting date of ABC Dry Cleaners.³⁶ There are numerous other examples of facts and historical documents cited in Professor Longley's reports and potentially of relevance depending how matters unfold at trial. Defendant's expert Dr. Brigham at his deposition agreed that such cited materials were methodologically appropriate and useful information for the historical record.³⁷

III. LEGAL STANDARD

Rule 702 of the Federal Rules of Evidence governs the admissibility of expert testimony. *See SAS Inst., Inc. v. World Programming Ltd.*, 125 F. Supp. 3d 579, 584 (E.D.N.C. 2015). The proponent of the expert testimony bears the burden of establishing admissibility by a preponderance. *Id.* (citing *Cooper v. Smith & Nephew, Inc.*, 259 F.3d 194, 199 (4th Cir. 2001)). The trial court has broad discretion under Rule 702. *Id.* at 3-4 (citing *United States v. Gastiaburo*, 16 F.3d 582, 589 (4th Cir. 1994)). Rule 702 provides:

³³ Ex. 3, Longley report dated Jan. 13, 2025, p. 23.

³⁴ *Id.* at p. 13.

³⁵ Ex. 1, Longley report dated Dec. 7, 2012/7/24, pp. 37-39.

³⁶ Ex. 3, Dr. Longley report dated Jan. 13, 2025, p. 25.

³⁷ *See* Ex. 7, Brigham depo. 29:9-21 (agreeing historian may consider depositions and affidavits as part of methodology); 120:8-121:1 (Mike Magner book cited by Longley also cited by Brigham), 121:2-25 (Brigham cited ATSDR reports and Maslia publication also cited by Longley), 184:18-185:12 (agreeing that oral history interviews available on U.S. Marines website and cited by Longley may be useful), 204:20-24 (agreeing website cited by Longley may have useful historical information).

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

Fed. R. Evid. 702 (last amended Dec. 1, 2023). “Courts have distilled the requirements of Rule 702 into two crucial inquiries: whether the proposed expert’s testimony is relevant and whether it is reliable.” *See SAS Inst., Inc.*, 125 F. Supp. 3d 579, 584 (E.D.N.C. 2015) (citing cases).

In order to be relevant, the proposed expert testimony must appear to be helpful to the trier of fact. *Id.* (citing *Daubert*, 591 U.S. at 591-92). “Testimony from an expert is presumed to be helpful unless it concerns matters within the everyday knowledge and experience of a lay juror.” *Id.* (quoting *Kopf v. Skyrms*, 993 F.2d 374, 377 (4th Cir. 1993)).

The test for reliability is flexible and involves balancing a variety of factors. One factor is the expert’s qualifications. *Id.* at 584. Additional factors may include: “(1) whether a theory or technique can be (and has been) tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) whether a technique has a high known or potential rate of error and whether there are standards controlling its application; and (4) whether the theory or technique enjoys general acceptance within the relevant community.” *Id.* (quoting *Tunnell v. Ford Motor Co.*, 245 F. App’x. 283, 286 (4th Cir. 2007)); *see also United States v. Crisp*, 324 F.3d 261, 265-66 (4th Cir. 2003). The trial court may consider other factors as it deems appropriate. *United States v. Hassan*, 742 F.3d 104, 130 (4th Cir. 2014) (citing *Crisp*, 324 F.3d at 266).

In a bench trial, the court is presumed to be capable of assigning the appropriate weight and reliability to the evidence, so the court’s role as a “gatekeeper” to keep out evidence is lessened. *See, e.g., David E. Watson, P.C. v. United States*, 668 F.3d 1008, 1015 (8th Cir. 2012)

(so stating); *Novartis Pharms. Corp. & Novartis AG v. Breckenridge Pharm. Inc.*, Civ. A. Nos. 14-1043, 14-1196, 14-1289 (D. Del. Aug. 18, 2016) (denying motions to exclude experts, noting that role as “gatekeeper” is not as critical in bench trial; court reserved both side’s rights to renew their objections to the expert testimony at trial) (Ex. 14); *Roake v. Brumley*, 756 F.Supp 219, 232 (M.D. La 2024) (citing cases); *United States v. Brown*, 415 F.3d 1257, 1269 (11th Cir. 2005) (accord); *Vifor Fresenius Med. Care Renal Pharma Ltd. v. Teva Pharms. USA, Inc.*, No. 1:20-cv-911-MN, slip op. at 1 (D. Del. May 16, 2022) (citing *In re Unisys*, 173 F.3d 145, 155-58 (3d Cir. 1999)) (Ex. 15).

A Court may hold a hearing prior to deciding a *Daubert* motion but is not required to do so. *See Roake*, at 228 (citing *Carlson v. Bioremedi Therapeutic Sys., Inc.*, 822 F.3d 194, 201 (5th Cir 2016)).

IV. ARGUMENT

Expert historians are routine in litigation and the admissibility of their testimony is subject to the *Daubert* standard.³⁸ *See, e.g., Saginaw Chippewa Indian Tribe of Mich. v. Granholm*, 690 F. Supp. 2d 622, 634 (E.D. Mich. 2010) (applying *Daubert* and evaluating historians under the Rule 702 category of “technical, or other specialized knowledge” that may “assist the trier of fact to understand the evidence or to determine a fact in issue”). Even where historical reports might appear like the “persuasive argument of an advocate” and be “perhaps flawed in some respects,” courts nevertheless tend to admit such testimony because it can be subject to cross-examination and considered and weighed appropriately by the Court. *Id.* at 643.

The role of the historian role is magnified in this case, given that the historical facts that

³⁸ *See* Jonathan D. Martin, *Historians at the Gate: Accommodating Expert Historical Testimony in Federal Courts*, 78 N.Y.U.L. Rev. 1518 (2003) (citing cases reflecting use of historian experts in various factual and legal contexts).

give rise to potential liability allegedly occurred many decades ago.³⁹ Given that this Court is the trier of fact, there is no reason at this juncture to keep out the undeniably relevant historical evidence developed by the well-qualified historian Professor Longley using time-tested historical methodology. Professor Longley testimony, should it be introduced at trial, will be subject to cross examination and the Court can appropriately weigh such evidence.

A. Professor Longley applied a reliable methodology.

In reviewing the methodologies of history experts, the court “need only determine that the expert, in applying that methodology to form his opinion, is using ‘the same level of intellectual rigor’ that would be expected in his field.” *Plum Creek Timberlands, LP v. Yellow Poplar Lumber Co.*, No. 1:13CV00062, 2016 WL 6837173, at *2 (W.D. Va. Nov. 21, 2016) (quoting *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999)). Where experts on history are qualified and their methodology is reliable, courts regularly deny motions, because opponents may engage in cross-examination at trial. *See id.* at *6 (declining to exclude testimony where expert was a “historian, with knowledge of the naming conventions historically prevalent in the area in question,” noting that opposing counsel “may choose to attack [expert’s] opinion via cross-examination and contrary evidence”).

Here, Professor Longley is well-qualified as an expert in history generally and military history specifically.⁴⁰ Defendant does not challenge his qualifications.

Professor Longley applied a reliable methodology. *See* Ex. 1, Professor Longley report dated Dec. 7, 2024, pp. 45-48 (summarizing Professor Longley’s methodology). He researched

³⁹ Michael C. Reis & W. David Wiseman Jr., *The Historian’s Valuable Role as Expert and Advisor in Environmental Litigation*, 22 *The Env’t Litigator* 1, 14 (2011) (“As a matter moves into trial phase, whether before a court or in arbitration, an expert historian can provide relevant and reliable information to assist the trier of fact in understanding and evaluating the evidence where complex historical facts are at issue.”).

⁴⁰ *See* Ex. 1, Professor Longley report dated Dec. 7, 2024, pp. 4-6 (discussing his qualifications).

the topic exhaustively. *See* Exs. 1, 3, 6 and reliance lists citing voluminous sources. He visited the base. Ex. 3, p. 2. He traveled to the archives in Quantico. Ex. 1, p. 46. He reviewed voluminous historical materials from hardcopy and online libraries. Ex. 1, pp. 45-48; and see reliance lists for reports. He prepared reports that presented and discussed numerous historical documents providing a variety of historical facts which may inform various issues in the proceedings with citations. *See id.* As explained in his reports and at his deposition, Professor Longley gathered and consider numerous historical sources of information, and deployed a critical awareness of his own biases and those of sources and witnesses. *See* Ex. 8, Longley depo. 82:17-23, 83:5-85:5 88:13-22, 147:19-148:3.

Courts have routinely held that the historical methodology applied by Professor Longley is sound. It is proper for a historian to found his methodology on the review of pertinent historical documents. *See Langbord v. Dep't of Treasury*, No. 06-CV-05315, 2009 WL 1312576, at *3 (E.D. Pa. May 7, 2009) (“In cases involving the testimony of historians and other social scientists the reliable methodology often consists of the review of the pertinent historical documents.”). Here, and as discussed above, Dr. Longley reviewed extensive literature, including a wide variety of archival materials. *See* Background, *supra*. Indeed, he went much further. As discussed above, he conducted interviews, toured the base, spoke to key stakeholders, and conducted a bias analysis. Courts have also found that such methodological precision is sound. *See Burton v. Am. Cyanamid Co.*, No. 07-CV-0303, 2018 WL 3954858, at *5 (E.D. Wis. Aug. 16, 2018) (observing that “[p]roper historical work involves surveying the full array of available sources” and having “a critical awareness of the historian's own biases”).

Accordingly, Professor Longley’s testimony is eminently reliable.

B. Defendant's scattershot objections to Professor Longley's testimony do not undermine its admissibility.

None of Defendant's arguments undermine the soundness of his methodology. Defendant's objections are based on mischaracterizations and cherry-picking. But even if they were true, they at best go to the weight of the evidence not its admissibility.

1. Professor Longley's typographical errors do not undermine his methodology.

Defendants attack Professor Longley for purportedly failing to "thorough[ly] document[]" his sources. D.E. 362, p. 5. This is overblown. Defendant's own expert Dr. Brigham agreed at his deposition that his team had thoroughly vetted Professor Longley's reports and found that *all but three citations* – out of hundreds – were accurate. *See* Background, *supra*. These citations, moreover, involved photo captioning that have since been corrected. *First*, Defendant points to a photo incorrectly identified as President Nixon at Lejeune.⁴¹ Professor Longley withdrew the citation⁴² and provided an errata sheet.⁴³ He also supplemented with unchallenged citations to two other presidents who had visited the base during the statutory period.⁴⁴ The two other errors involved photo captions and were likewise corrected.⁴⁵ Correcting errors does not undermine Professor Longley's methodology; it supports it. Part of the historian's methodology is to revise and correct as necessary if there are errors. *See Plum Creek Timerlands*, 2016 WL 6837173, at *2; *Langbord*, 2009 WL 1312576, at *3; *Burton*, 2018 WL 3954858, at *5.

⁴¹ Ex. 1, Dr. Longley report dated Dec. 7, 2024, p. 13 and reliance item no. 143; Ex. 4, Dr. Brigham report dated Feb. 7, 2025, pp. 15-16; Ex. 7, Brigham depo. 70:12-14.

⁴² Ex. 6, Dr. Longley report dated March 17, 2025, pp. 33-34.

⁴³ Ex. 1, Dr. Longley report dated Dec. 7, 2024, last page.

⁴⁴ Ex. 6, Dr. Longley report dated March 17, 2025, pp. 34-35.

⁴⁵ Dr. Longley's first report captioned a photo of a water buffalo as being at Lejeune when the photo was only intended to be demonstrative of the appearance of a water buffalo. *See* Ex. 1, p. 34; Ex. 4, p. 17 (noting error); Ex. 7, Brigham depo. 70:15-19 (discussing same); Ex. 6, p. 40 (error addressed); Ex. 1, last page (errata sheet). Dr. Longley's first report also captioned a *Globe* photo of the Holcomb Boulevard water treatment plant as being from the 1960s, when it was actually from the 1970s. *See* Ex. 1 p. 10; Ex. 4, p. 18; Ex. 7, Brigham depo. 70:20-25; Ex. 6, p. 40; Ex. 1, last page.

More generally, such errors do not cast doubt on Professor Longley's *methodology*. Indeed, Defendant's expert Dr. Brigham agreed at his deposition that many of the materials cited and discussed in Professor Longley's reports were accurately cited *and* of potential relevance to the historical record – in other words, reliable and relevant here.⁴⁶ Unsurprisingly, Defendant's own experts Dr. Brigham and Dr. Kelman are not immune to mistakes; they have also made mistakes in prior matters and publications.⁴⁷

In any event, even if such error correction was improper (it is not), it goes to the weight of the evidence and does not undermine its admissibility. Courts have observed that “soft sciences” involve “necessarily diminished methodological precision” when compared to scientific disciplines like math and engineering. *Roake*, at 230 (quoting *United States v. Simmons*, 470 F.3d 1115, 1123 (5th Cir. 2006), and *Jenson v. Eveleth Taconite Co.*, 130 F.3d 1287, 1297 (8th Cir. 1997)). “As a general rule, questions relating to the bases and sources of an expert's opinion affect the weight to be assigned that opinion rather than its admissibility” *Id.* at 229 (quoting *United States v. 14.38 Acres of Land, More or Less Situated in Leflore Cnty., Miss.*, 80 F.3d 1074, 1077 (5th Cir. 1996), and *Viterbo v. Dow Chem. Co.*, 836 F.2d 420, 422 (5th Cir. 1987)).

In short, that Defendants were only able to identify three captioning errors out of hundreds of citations – and that those errors were promptly corrected – does not undermine Professor Longley's methodology.

2. Professor Longley properly surveyed a wide array of primary and secondary sources.

Defendant contends that historians should survey a full array of available sources and

⁴⁶ Ex. 7, Brigham depo. 8:11-18 (recalling he was assisted by four senior assistants and about four more research associates), 8:19-10:6 (12 staff members involved). Dr. Brigham's staff fact-checked Dr. Longley's reports. *Id.* at 32:20-21 (describing they reviewed Dr. Longley's first report for accuracy); 162:17-21 (fact-checking of citations), 164:8-18 (same), 165:1-6 (same), 176:12-23 (staff went through report).

⁴⁷ Ex. 9, Kelman depo. 151:15-156:16, 178:1-179:2.

“view events from more than one perspective.” D.E. 362, pp. 5-6, citing Zachary M. Schrag, *The Princeton Guide to Historical Research* (2021), at 110. This is exactly what Professor Longley did. *See* Background, *supra* (explaining that Professor Longley reviewed books, articles, and substantial primary archival materials, among other sources). Courts have routinely found such a historical methodology appropriate. In *Roake*, for example, the district court approved of a historian expert’s methodology which he described as involving reviewing primary and secondary sources, determining the reliability of sources, comparing them to other sources of evidence, and considering the circumstances under which historical materials were generated. *Roake*, slip op. at 233-235. That court noted that while judges can certainly seek to answer historical questions without expert testimony by looking directly at historical texts and sources, historical experts provide valuable assistance. *Id.* at 235. Accordingly, the court found the historian’s input acceptable in determining whether to grant a preliminary injunction. *Id.*

Defendants resort to simply mischaracterizing Professor Longley’s report as “primarily supported” by oral histories and plaintiff statements. D.E. 362 at 6. That is not true. Professor Longley’s opinions are primarily supported by his voluminous document citations, as a review of his report written reports reflects. *See* Exs. 1, 3, 6. But in any event, Defendants cite no case law that oral histories are not appropriate.

Finally, it bears noting that both Dr. Brigham and Professor Longley relied on many similar sources, further underscoring the methodological appropriateness of Professor Longley’s work. *See also* Argument § B. 3, *infra* (comparing sources).

3. Professor Longley accounted for bias.

Defendant contends that “Professor Longley failed to account for his own biases.” D.E. 362, p. 6. This is incorrect. *See* Ex. 6, Professor Longley report dated March 17, 2025, pp. 3 (discussing the subject of bias and how historian must be mindful of bias), 25 (“I constantly test

for bias and mistakes through the use of multiple primary sources for reference and comparison.”).

Specially, Defendant complains that many of the sources of his documents were from the PLG and other “biased sources.” D.E. 362, p. 9. As an initial matter, from whom an expert receives his material does not create a bias. Indeed, Defendant’s expert Dr. Brigham himself admitted receiving help from the government. For example, the DOJ provided him with materials on the subject of the opening date for ABC Dry Cleaners. *See* Ex. 2, Brigham report dated Dec. 9, 2024, pp. 25-33 & Image 9 (High School Yearbook), Image 10 (ad in the Jacksonville Daily News, June 29, 1954); Ex. 7, Dr. Brigham depo. 86:24-87:6 (was made aware of Yearbook by DOJ); 89:12-90:21 (ad in Jacksonville Daily News). In any event, Professor Longley did not limit his review to materials provided by the PLG, nor is there any testimony that those materials provided the basis for his opinions. *See* Background, *supra*.

Defendant also argues that Professor Longley is improperly selective in his choices of citations. But many of his citations overlap those of Dr. Brigham.⁴⁸ It is not persuasive to argue that Professor Longley is overly selective when he is citing the same documents as its own expert. Further, it is unreasonable to require a party’s historian expert to include *all* facts on a topic as broad and variegated as the history of Camp Lejeune and its water use over decades of time.

More broadly, Defendant’s argument that Professor Longley is an advocate, while untrue, would not disqualify him. *Saginaw Chippewa Indian Tribe*, 690 F. Supp. 2d at 634 (denying motion to exclude despite noting that retained historical experts of each side tend to appear like persuasive advocacy). It is, of course, commonplace that historians retained by opposing parties may focus on different aspects of a topic. To the extent that Professor Longley focuses more on

⁴⁸ As one of numerous examples, both Dr. Longley and Dr. Brigham cite some of the same issues of the *Globe* for historical information on water buffaloes. *See* Ex. 2, Dr. Brigham report dated Dec. 9, 2024, p. 103 (citing Dec. 4, 1975 *Globe*); Ex. 3, Dr. Longley report dated Jan. 13, 2025, p. 23 (same); Ex. 13, Brigham depo. ex. 12, at pp. 55-56 (complete image of the standpipe photo and text from the *Globe* issue).

Hadnot Point, while Dr. Brigham focuses more on the outlying areas, it is not surprising. And indeed, Dr. Brigham's focus on "Filling of Water Buffaloes Away From Hadnot Point"⁴⁹ is properly a subject of rebuttal by Professor Longley, who points out historical evidence indicating filling of water buffaloes at Hadnot Point.⁵⁰ Moreover, given Dr. Brigham's focus on the outlying areas, there is no need for Professor Longley's reports to cover the same (less relevant) ground.

Further, as Professor Longley observed, Dr. Brigham himself was selective in the facts that he and his team chose to include or leave out. Ex. 3, pp. 1 (so noting); 9-11 (Brigham "discusses pools without considering important historical details of their use."), 14 (while Brigham cites back issue of the *Globe* to focus on articles regarding outlying regions, he "omits that in the same issue, there were stories which reflected that people often traveled to Hadnot Point: a photo of a child participating at Marine family day (cover of issue); announcement of a new pool opened at Tarawa Terrace (p. 3); news of a drill competition at Goettge Field (p. 8); a feature on use of the main auto hobby shop (p. 17); a note of children's story time at the Base Library (p. 19); sports league results for football intramural season (p. 25); and an item on a regional golf championship at Paradise Point (p. 26).").⁵¹

Dr. Longley also properly responded to Dr. Brigham. Dr. Brigham's reports seek to support the Government's position that residents of outlying areas (not contaminated) did not need or want to travel to Hadnot Point (where the contamination was documented). Professor Longley's report, to rebut Dr. Brigham, cites to documents indicating otherwise. For instance, Dr. Brigham cites the

⁴⁹ Exhibit 4, Dr. Brigham report dated Feb. 7, 2025, p. 32 (emphasis added).

⁵⁰ Exhibit 3, Dr. Longley report dated Jan. 13, 2025, pp. 23-24.

⁵¹ As another example, Dr. Brigham admitted he had been aware of the existence of the information showing that Presidents Reagan and Kennedy had been to the base, however he excluded this from his report, even as he criticized Professor Longley for including the inaccurately ascribed Nixon photo. Ex. 7, Brigham depo. 30:15-32:6.

same source seven different times across two reports⁵² for the proposition that distances between outlying areas of the base and Hadnot Point were “prohibitive” of travel, and his first report has four different subsections⁵³ titled “Separation from Mainside.” In rebuttal, Professor Longley cites historical information refuting that distances were not “prohibitive.” Thus, Dr. Brigham cited Onslow Beach as an example where “travel distance” was “prohibitive.”⁵⁴ In rebuttal, Professor Longley properly cited to historical documents tending to refute that travel to or from Onslow Beach was difficult.⁵⁵ In this regard, Professor Longley is designated both as an expert supporting the Plaintiffs’ case-in-chief, and, as a rebuttal expert against Dr. Brigham. It is appropriate for Professor Longley to cite facts on the importance of Hadnot Point to refute Dr. Brigham.

Defendant argues that while Professor Longley discusses filling of water buffaloes at Hadnot Point, he neglects to discuss the possibility that there were also means to fill them in the outlying regions. D.E. 362, pp. 7-8. In fact, the interaction between Professor Longley and Dr. Brigham as respective experts in that regard reflects the historian’s methodology at work. In his first report, Professor Longley cites sources including the depositions of Mr. McElhiney, Mr. Urquhart and General Zinni, on the subject of water buffalo use and how they could be filled at Hadnot Point.⁵⁶ In his responsive report, Dr. Brigham noted that elsewhere in the depositions, these deponents give testimony indicating water buffaloes could also be filled elsewhere.⁵⁷ In his

⁵² Ex. 2, Dr. Brigham report dated Dec. 9, 2024, pp. 71, 74, 78, 84; Exhibit 4, Dr. Brigham report dated Feb. 7, 2025, pp. 22, 23, 25.

⁵³ Ex. 2, Dr. Brigham report dated Dec. 9, 2024, pp. 62, 71, 76, 84.

⁵⁴ Ex. 2, Dr. Brigham report dated Dec. 9, 2024, p. 78.

⁵⁵ See, e.g., April 12, 1979 issue of the *Globe* (“The Onslow Beach recreation area officially opens April 28 for the summer season... Free parking is available adjacent to each enlisted, staff noncommissioned officer and officer pavilion. For those without transportation, a tractor trailer bus will depart the base bus terminal every hour from 8 am - 7 pm daily.”); Exhibit 6, Dr. Longley report dated March 17, 2025, p. 36, and reliance list no. 56 (citing and linking to same).

⁵⁶ Ex. 1, p. 34.

⁵⁷ Ex. 4, pp. 2, 33-34.

third report, Professor Longley replied by adducing additional information from interviewing Mr. Partain and Mr. Ensminger, to the effect that regardless, the Hadnot Point standpipes were preferred.⁵⁸ It is for the finder of fact to weight the respective information and evidence at trial, to the extent testimony on this subject may become relevant to the matters at hand.

4. Professor Longley corroborated his sources.

Defendant asserts that Professor Longley failed to “critically evaluate or corroborate his sources.” D.E. 362, p. 9. Defendant likewise claims that “Dr. Longley’s information was not gathered independently and objectively, but largely supplied by counsel or plaintiffs themselves.” D.E. 362, p. 11. *First*, these contentions are false. Professor Longley largely researched and gathered his own information through his own efforts including travel to archives and review of secondary sources.⁵⁹ In asserting that Professor Longley did not seek to corroborate his sources, the Government simply ignores the facts.⁶⁰ And as discussed above, it is no critique at all that experts are given some materials by counsel. That is routine in litigation, as evidenced by Defendant’s own expert Dr. Brigham.⁶¹

Second, Defendant contends that it was improper for Professor Longley to converse with or rely on any information from Plaintiffs Mr. Partain or Mr. Ensminger because “[b]oth individuals have a vested interest in the outcome of this litigation as nonbellwether plaintiffs.” D.E. 362, p. 12. However, a historian may consider information derived from sources with a bias,

⁵⁸ Ex. 6, p. 8.

⁵⁹ See Ex. 1, pp. 45-48, *see* p. 47 (describing methodology including the work he personally did and documents he personally located); Ex. 6, p. 4 (noting how he engaged in primary research himself so as to avoid dependence on materials from others).

⁶⁰ See Ex. 1, pp. 45-48, *see* p. 47 (describing methodology including how he worked to have sources “corroborated by other primary or secondary sources”); Ex. 6, pp. 3 (same), 4 (noting how Dr. Longley sought to engage in primary research himself so as to avoid dependence on material that was “pre-screened, pre-selected, or pre-excluded, before the historian received it”).

⁶¹ See Ex. 7, Brigham depo. 89:12-16; 90:10-18 (admitting it was not his team but the DOJ who found historical records regarding ABC Dry Cleaners that he relied on).

so long as the historian seeks to account for that fact, which he did. *See* Ex. 8, Longley depo. 82:17-23, 83:5-85:5, 88:13-22, 147:19-148:3; Ex: 6 at 29 (“I checked Ensminger’s statements against these and other[s] such as those in the documentary, ‘Semper Fi.’ I understand and always critique oral histories as well as all sources for bias, truthfulness, and context, and then corroborate them as much as possible. Once more, I have been employing this methodology for over 30 years in the course of researching and writing my books....”). Thus Defendant is flat wrong that Professor Longley did not explain how he accounted for bias. Doc. 362, p. 12.

But even if Professor Longley had not accounted for bias (he did), Defendant’s own VA agency has *also* relied on information from Mr. Partain and Mr. Ensminger, which indicates Defendant thought they were reliable. The VA used the website, “The Few The Proud,” as a reliable source of historical information for purposes of training staff on Camp Lejeune water matters.⁶² That website is maintained by Mr. Ensminger and Mr. Partain.⁶³ Both are credible who have testified to Congress.⁶⁴ The mere fact that they also allege injury and bring claims here does not negate these facts.⁶⁵

5. Professor Longley’s citation practices are proper.

Defendant argues that “Dr. Longley’s poor citation practices make it difficult, if not impossible, to know whether the assertions in his report are supported or are inadmissible ‘*ipse dixit*.’” D.E. 362, p. 14. This is clearly wrong. His three reports include nearly 300 references in the reliance list, along with 213 footnotes.⁶⁶ The citations are accurate and can be fact-checked and cite-checked. And, as noted above (*see* Background, *supra*), it appears that Defendant’s expert

⁶² Ex. 3, pp. 5-8.

⁶³ *Id.*

⁶⁴ Ex. 6, p. 29.

⁶⁵ *See id.*

⁶⁶ Exs. 1, 3, 6 (first report contains 132 footnotes; the second has 34; the third 47).

Dr. Brigham and his staff indeed have thoroughly vetted Professor Longley's reports and found de minimus errors involving the labeling of photos.⁶⁷

Defendant relatedly argues that “[o]n almost every page of Dr. Longley’s reports, there are assertions and images that lack any citation or identifiable source.” D.E. 362, p. 15. This statement is belied by reviewing the reports themselves which contain ample footnotes and reliance list items. *See* Exs. 1, 3, 6 (including reliance lists and footnotes thereto. Every historical work could have more citations and footnotes). The best example Defendant can come up with is that Professor Longley’s report contained four paragraphs with one footnote. Defendant accuses him of improperly relying on “general knowledge” here, but its brief indicates that the discussed contained therein are straightforward. D.E. 362 at 15 (faulting Professor Longley for asserting that “Camp Lejeune required large numbers of civilians,” the Marine Corps provided “a security apparatus,” and the Marine Corps were interested in keeping Marines on base to prevent trouble with local residents and to spend their money on the base).

Defendant endlessly cites Professor Longley’s statements saying that if he had more time, he would have included even more citations. But every work of history *could* include more citations. *Daubert* does not require perfection not does historiography.

Finally, Defendant asserts that the recorded oral interview of Mr. Partain and Mr. Ensminger “will not help the Court understand the history of Camp Lejeune.” D.E. 362, p. 18. Yet this is no argument to support the exclusion of Professor Longley. At most, this previews an objection that Defendant may make at trial in the event that the Plaintiffs seek to introduce such evidence. Moreover, this vague conjecture does not undermine the admissibility of such history. In short, the Court can weigh this testimony if it is introduced.

⁶⁷ Ex. 7, Brigham depo. 32:20-21, 162:17-21, 164:8-18, 165:1-6, 176:12-23.

C. The motion should be denied as premature.

A motion to exclude an expert under Rule 702 may be denied as premature where the expert is qualified and where specific objections may be deferred to trial. *See, e.g., United States v. Weed*, No. 1:04-cr-00103-REB-MEH, slip op. at 3 (D. Colo. March 30, 2007) (“Here again, the alleged flaw goes to the weight, but not the admissibility, of the expert’s opinion. For these reasons, the government’s objections are for now overruled. My decision in this regard is without prejudice to the government’s ability to raise objections to the expert’s testimony, under Rule 702 or otherwise, if further development of the evidence at trial suggests that such objections are viable.”) (Ex. 16).

Where, as here, the expert is properly qualified and has applied a normal and reliable methodology, any contentions as to specific flaws in his sources or his application of that methodology go to the weight not the admissibility. *See, e.g., United States v. Shea*, 211 F.3d 658, 668 (1st Cir. 2000) (“[A]ny flaws in [an expert]’s application of an otherwise reliable methodology went to weight and credibility and not to admissibility.”); *Puga v. RCX Sols., Inc.*, 922 F.3d 285, 294 (5th Cir. 2019) (“As a general rule, questions relating to the bases and sources of an expert’s opinion affect the weight to be assigned that opinion rather than its admissibility.”). Here Professor Longley is a qualified historian. *See* Background, *supra*. His reports cover a great deal of ground and prior to trial it can only be speculated which opinions and citations may be offered at trial. Accordingly, the motion should be denied as premature.⁶⁸

Furthermore, Professor Longley is also named as a rebuttal expert. Until Defendant calls

⁶⁸ *See also CNY Fair Housing, Inc. v. Clover Group Inc.*, No. 5:21cv361 (N.D.N.Y. May 8, 2024) (holding that motion to strike was, at that time, premature; court did not have to resolve the admissibility of the expert opinions before resolving the motions for summary judgment); *City of Bangor v. Citizen Commc’ns Co.*, No. 1:02-cv-00183-GZS, slip op. at 2-3 (D. Maine Sept. 7, 2005) (“In short, the Court is satisfied that Dr. Gustafson’s testimony is both relevant and reliable. The issues raised by Plaintiff go to the credibility and weight of that testimony – issues that are best resolved at trial and do not serve as a basis for excluding this witness from testifying at trial. Therefore, the Court DENIES this Motion without prejudice to Plaintiff renewing its objections at trial.”) (Ex. 17).

its historian expert at trial, it is not known what rebuttal testimony may be appropriate. In this regard, courts agree that a rebuttal expert may critique another's theories or conclusions, and "need not offer his own independent theories or conclusions." *In re Cessna 208 Series Aircraft Prods. Liab. Litig.*, No. 05-MD-1721-KHV, 2009 WL 1649773, at *1 (D. Kan. June 9, 2009); *see also Pandora Jewelers 1995, Inc. v. Pandora Jewelry, LLC*, No. 0961490-CIV, 2011 WL 2295269, at *5 (S.D. Fla. June 8, 2011) ("A rebuttal expert can testify as to the flaws that she believed are inherent in another expert's report that implicitly assumes or ignores certain facts."). Because Professor Longley is properly qualified as an expert, he may appropriately provide rebuttal testimony as the matter proceeds. *Compare Rothe Dev., Inc. v. Dep't of Defense*, 107 F.Supp.3d 183, 202-03 (D.D.C. 2015) (finding rebuttal expert not to be qualified). For that reason as well, because it is unknown whether the Government will adduce evidence from its historian expert at trial, the motion is premature.

V. CONCLUSION

Defendant's motion should be denied.

DATED this 4th day of June 2025.

/s/ J. Edward Bell, III

J. Edward Bell, III (admitted *pro hac vice*) Bell
Legal Group, LLC
219 Ridge St.
Georgetown, SC 29440
Telephone: (843) 546-2408
jeb@belllegalgroup.com

Lead Counsel for Plaintiffs

/s/ Elizabeth J. Cabraser

Elizabeth J. Cabraser (admitted *pro hac vice*)
Lieff Cabraser Heimann & Bernstein, LLP 275
Battery Street, 29th Floor
San Francisco, CA 94111
Telephone: (415) 956-1000
ecabraser@lchb.com

Co-Lead Counsel for Plaintiffs

/s/ Robin L. Greenwald

Robin L. Greenwald (admitted *pro hac vice*)
Weitz & Luxenberg, P.C.
700 Broadway
New York, NY 10003 Telephone:
212-558-5802
rgreenwald@weitzlux.com

Co-Lead Counsel for Plaintiffs

/s/ Mona Lisa Wallace

Mona Lisa Wallace (N.C. Bar No.: 009021)
Wallace & Graham, P.A.
525 North Main Street Salisbury,
North Carolina 28144 Tel: 704-
633-5244
mwallace@wallacegraham.com

Co-Lead Counsel for Plaintiffs

/s/ Zina Bash

Zina Bash (admitted *pro hac vice*) Keller
Postman LLC
111 Congress Avenue, Suite 500
Austin, TX 78701
Telephone: 956-345-9462
zina.bash@kellerpostman.com

*Co-Lead Counsel for Plaintiffs and
Government Liaison Counsel*

/s/ W. Michael Dowling

W. Michael Dowling (NC Bar No. 42790)
The Dowling Firm PLLC
Post Office Box 27843
Raleigh, North Carolina 27611
Telephone: (919) 529-3351
mike@dowlingfirm.com

Co-Lead Counsel for Plaintiffs

/s/ James A. Roberts, III

James A. Roberts, III
Lewis & Roberts, PLLC
3700 Glenwood Ave., Ste. 410
Raleigh, NC 27612
Telephone: (919) 981-0191
jar@lewis-roberts.com

Co-Lead Counsel for Plaintiffs

CERTIFICATE OF SERVICE

I, J. Edward Bell, III, hereby certify that the foregoing document was electronically filed on the Court's CM/ECF system on this date, and that all counsel of record will be served with notice of the said filing via the CM/ECF system.

This the 4th day of June 2025.

/s/ J. Edward Bell, III

J. Edward Bell, III

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
SOUTHERN DIVISION
Civil Action No.: 7:23-CV-897**

IN RE:)
)
CAMP LEJEUNE WATER LITIGATION)
)
This Pleading Relates to:)
)
ALL CASES.)
)
)

**TABLE OF EXHIBITS
IN SUPPORT OF PLAINTIFFS' LEADERSHIP GROUP'S MEMORANDUM OF LAW
IN OPPOSITION TO DEFENDANT'S MOTION TO EXCLUDE THE TESTIMONY OF
DR. RODNEY KYLE LONGLEY**

- Ex. 1** – December 7, 2024 Expert Report of Dr. Kyle Longley
- Ex. 2** – December 9, 2024 Expert Report of Jay L. Brigham, Ph.D
- Ex. 3** – January 13, 2025 Rebuttal Report of Dr. Kyle Longley
- Ex. 4** – February 7, 2025 Expert Report of Jay L. Brigham, Ph.D
- Ex. 5** – February 7, 2025 Expert Report of Ari Kelman, Ph.D,
- Ex. 6** – March 17, 2025 Dr. Kyle Longley Response to Dr. Brigham and Dr. Kelman Reports dated 2/7/25
- Ex. 7** – March 27, 2025 Deposition of Jay L. Brigham, Ph.D, transcript excerpts
- Ex. 8** – April 3, 2025 Deposition of Rodney Kyle Longley, Ph.D, transcript excerpts
- Ex. 9** – April 8, 2025 Deposition of Ari Kelman, Ph.D, transcript excerpts
- Ex. 10** – Kyle Longley CV
- Ex. 11** – Kyle Longley Invoices
- Ex. 12** – Declaration of Mike Partain
- Ex. 13** – March 27, 2025 Deposition of Jay L. Brigham, Ph.D, Exhibit 12
- Ex. 14** – *Novartis Pharms. Corp. & Novartis AG v. Breckenridge Pharm. Inc.*, Civ. A. Nos. 14-1043, 14-1196, 14-1289 (D. Del. Aug. 18, 2016)

- Ex. 15** – *Vifor Fresenius Med. Care Renal Pharma Ltd. v. Teva Pharms. USA, Inc.*, No. 1:20-cv-911-MN (D. Del. May 16, 2022)
- Ex. 16** – *United States v. Weed*, No. 1:04-cr-00103-REB-MEH (D. Colo. March 30, 2007)
- Ex. 17** – *City of Bangor v. Citizen Commc 'ns Co.*, No. 1:02-cv-00183-GZS (D. Maine Sept. 7, 2005)

EXHIBIT 1

***In re Camp Lejeune Water Litig.*, Master Case No. 7:23-CV-897 (E.D.N.C.).**
Expert Report of Dr. Kyle Longley
December 7, 2024

Table of Contents

I. Introduction.....	2
II. Qualification of Witness	4
III. History of Camp Lejeune.....	6
IV. Water Development and Usage Background.....	9
V. Marines Stayed on Base, Specifically at Mainside -- Hadnot Point	11
a. Size and Scope of the Base	11
b. All Encompassing Nature of the Base	11
c. Centrality of Hadnot Point.....	11
VI. The Mainside Barracks at Hadnot Point.....	17
VII. Mess Halls	20
VIII. Family Housing and Activities	24
IX. Schools.....	29
X. Climate	30
XI. Staying Hydrated	31
XII. Field Training and Tent Cities.....	33
XIII. Compromising the Skin Barrier on Field Days.....	36
XIII. Swimming Pools	37
XV. Steam.....	39
XVI. Occupational Duties.....	40
XVII. Ventilation and Maintenance Issues	41
XVIII. Recapitulation of Findings	43
XIX. Appendix 1: Research Methodology	45
XX. Appendix 2: History of U.S. Military Bases	48

I. Introduction.

I am a historian with a specialty in military history and war and society. The purpose of this report is to provide historical information informed by my expertise that may be of relevance for purposes of understanding the historical use of the Marine Corps Base Camp Lejeune as it related to water consumption and use by those on the base.

Here, the unique historical facts occurred in the context of a time period which, for purposes of statutory relevance, extends from August 1, 1953, to December 31, 1987, as per the CLJA statute. The geographical location of relevance is Camp Lejeune, a massive military base in the southeastern United States whose demography consisted largely of many young Marines as well as numerous young spouses and others, including children and civilians.

I have sought to frame my historical investigation by reviewing facts, documents, and oral testimony and history that can inform the topic of the water use at the base by the Marines and their dependents. My understanding is that the Plaintiffs have brought claims alleging that their exposure to certain chemical contaminants in the drinking water at the base contributed to their later diagnoses with certain diseases. I am advised that the chemical contaminants at issue included Tetrachloroethylene, Trichloroethylene, Dichloroethylene, Vinyl Chloride, and Benzene, and that the relevant diseases at issue for the “Track One Plaintiffs” are leukemia, kidney cancer, bladder cancer, Parkinson’s disease, and Non-Hodgkin’s Lymphoma. While my report does not intrude into areas of science, medicine, or environmental engineering outside my area of expertise, I note these facts for purposes of background and context.

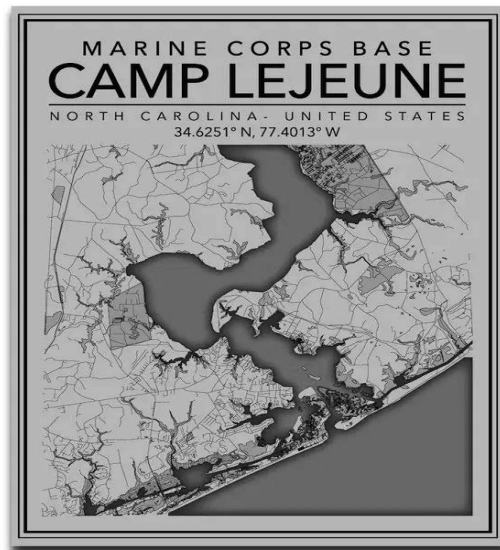
I am advised that the primary contaminated communities/systems per the ATSDR studies and publications with regard to the drinking water issues at Lejeune were three: the Hadnot Point/Mainside barracks region (Hadnot water system), the Tarawa Terrace area (Tarawa Terrace water system), and the Holcomb Boulevard area (Holcomb Boulevard water system).¹ I reviewed other regions and areas of the base and referenced them below as may be relevant. As discussed further throughout the report, my findings include, among others, the following:

1. Designers of the base intentionally directed the occupants to stay within the base boundaries. If occupants spent more time on the base grounds, all else being equal, they had more time exposed to its water, versus during time spent outside the boundaries where they were not exposed to or using the Lejeune water systems.
2. A substantial part of the overall demographic historically was composed of young male Marines (under the age of 25), and they typically lacked cars during much of the relevant time period. They relied heavily on the internal bus system and walking to access different services on base. It was very different from ordinary American environments today in which cars are ubiquitous. This again contributed to the behavior of staying on base.

¹ Technical or engineering issues such as when various water systems fed various piped-water areas such as Camp Geiger, New River, Midway Point, etc., fall outside the scope of this report. ATSDR publications cover the subject.

3. As a related aspect to the base historically being self-contained, there were ample opportunities for social, recreational, and other such events on base, including at facilities geographically located in the Hadnot Point, Tarawa Terrace, and Holcomb Boulevard areas during the relevant time period as discussed further below.
4. Research and investigation into sources of historical records and facts, including access to public record archives, documents produced in the CLJA action, and oral histories and testimony of Marines and spouses, reveals the existence of numerous historical documents and facts reflecting the nature of the water uses on the base during the pertinent times, as summarized below.
5. Certain features of particular areas, such as shower rooms in barracks, motor pools and mechanic buildings, and scullery and mess hall facilities, are correlated to considerable anecdotal reported evidence of the presence of steam and copious water use during the historical time period at issue.
6. Historical records and recollections of Marines' daily tasks, activities, and duties reflect the presence of numerous outdoor activities during warm and hot weather periods, the use of canteens and wheeled water tanks known as water buffaloes, and other such facts. Likewise, historical records document daily-life and social activities of spouses, children, and civilians that involved, for instance, spending time at base-located schools that used base water systems, using recreational swimming pools that used base water systems, and engaging in activities like socializing at clubs, bowling, going to movies, going to buy necessities at the commissary facilities, using medical facilities, and so forth, which gave rise to opportunities for water use.

I reserve the right to supplement my analysis or this report or my opinions based on the receipt of additional information and evidence discovered in the course of this case.



General map layout of the base

II. Qualification of Witness.

I have studied history, with a heavy emphasis on military history, for more than thirty years. I earned a B.A. in history and mathematics at Angelo State University in 1987 and an M.A. in history with a minor in comparative literature at Texas Tech in 1989. From there, I received a Ph.D. in history with minors in anthropology and political science at the University of Kentucky in 1993, where I studied with the internationally recognized expert on the Vietnam War, George Herring. Once I completed graduate school, I taught at The Citadel as a visiting professor before taking a tenured position at Arizona State University, where I spent nearly twenty-five years with a year off to direct the LBJ Presidential Library. In 2020, I joined the faculty at Chapman University to lead the War, Diplomacy, and Society graduate program, which I have done for the past four years. In the past two years, I served as the executive director of the Society for Military History, the leading international organization that promotes the study of military history among more than 3,300 members, including many members of the U.S. government and military.

I have researched and published extensively on a variety of subjects over the years. My publications include eleven books (with a twelfth going to press soon), fifteen long articles and essays, fifteen encyclopedia articles, numerous book reviews, and nearly forty opinion pieces in publications including *Time*, *Newsweek*, *the Washington Post*, *Los Angeles Times*, *Austin American Statesman*, *San Antonio Express News*, *The Dispatch*, and numerous other outlets as well as serving as a consultant to international news organizations including the Associated Press, *JiJi Press*, and the *Jornol do Brazil*. My works have won awards and garnered attention by groups including the State Department, U.S. military academies, and non-governmental organizations that use several of my works for instructional purposes. I have also been invited to speak at such organizations including the State Department (three times), West Point (two times), U.S. Naval Academy, the Infantry Museum at Fort Moore, and others.

The primary focus of my work has been military history with other fields in U.S. foreign relations, modern Latin America, and contemporary U.S. politics. I researched extensively in the field for many of my books, such as those on the Latin American region including *In the Eagle's Shadow: The United States and Latin America* (2002, second edition, 2009) that chronicles U.S. military interventions, primarily by the U.S. Marines Corps, in the region. Subsequent works concentrated on the experiences of soldiers who fought from World War II forward with a special emphasis on those who served in Vietnam and the most recent wars in Afghanistan and Iraq. My two books on combat soldiers in Vietnam focus extensively on the experiences of those recruited and trained in the 1960s, many ending up in Vietnam and cycling through Camp Lejeune. *Grunts: The American Combat Soldier in Vietnam* (2008, 2nd edition, 2020) has been characterized as a "monument" to those who fought in the conflict by reviewers and is used extensively in courses throughout the country, including West Point, and was recommended reading by the Marine Corps. Published in 2015, *The Morenci Marines: A Tale of Small Town America and the Vietnam War*, is a prize-winning book that helped serve as the basis for the PBS documentary, "On Two Fronts: Latinos in Vietnam." It examined the lives of nine Marines from the small copper mining town of Morenci, Arizona, as they proceeded from high school through training and stationing stateside at Camp Pendleton and in Hawaii before heading to Vietnam, where six of the nine died in combat. It is an

in-depth study of the lives of Marines and their service that has become a standard text for sustaining the history of Corps in different ways, including via reading lists published by the Corps.

Subsequent works have continued to focus on the Vietnam War but expanded the topical and chronological scope of the works back to WWII and forward to the most recent wars of the Middle East. The co-authored text, *In Harm's Way: A History of the American Military Experience*, has been utilized by many different universities, including West Point, for their surveys of the American military history. I contributed the final five chapters for the period 1941 to the present. The chapters focus on major innovations in U.S. military policies, including the massive explosion of military bases, both in the United States (and especially the Sunbelt and West) and overseas, the experiences of soldiers in training and combat, and the environmental effects of this expansion, including sections on nuclear testing, Agent Orange, and burn pits. That specialized focus was further developed in my most recent work, *The Forever Soldiers: Americans at War in Afghanistan and Iraq*, being published by the University of North Carolina Press in the Spring/Summer 2025.

Beyond my research, I have taught extensively about U.S. military history over the past two decades, especially to large numbers of combat veterans and ROTC members at both the undergraduate and graduate levels. My most popular courses include graduate seminars in War and Society, the American Way of War, and War and Popular Culture, as well as undergraduate courses on U.S. military history, War and Film, the Vietnam War, and the Guerrilla Wars. My teaching has included discussions of training and daily life on bases, including those on the American frontier which set the tone and laid down core principles for later developments and patterns of base design and infrastructure. It has also focused on the logistical support provided for people by bases stateside especially when the numbers and sizes of bases increased during and after WWI and WWII, and the circumstances of foreign bases ranging from South Korea and Japan to Germany and England and the Caribbean. Despite having taught for more than three decades, the classroom constantly provides ways to integrate existing studies and combine new research into discussions and lectures, helping refine my knowledge and keep it updated. It has also brought me into close contact with major historical international organizations, including the American Historical Association (the world's largest group in that category), the Gilder Lehrman Foundation, the National Endowment for the Humanities, and the Society for Military History, where I have contributed learning materials and, in turn, have benefited from the knowledge of others.

Beyond the classroom and publications, I have also participated as an expert witness in cases relating to immigration, veterans' issues, including a death sentencing case, water rights, and consumer products. Conducting research and writing reports, as well as giving depositions and trial testimony has been a good learning experience that itself has helped develop and refine the processes employed in my work on cases, including this one. All of these efforts have helped me establish a strong reputation in multiple fields, but especially military history and topics related to war and societies. It is a never-ending process of learning and refinement of existing materials and continues through the work such as on this case.

Each of these areas highlights the more than three decades of research and writing I have done to familiarize myself with a plethora of materials available on topics such as military bases and those who served. It is a process that continues each year with my work on new books and articles on

topics related to military service, including, for example, my recent work on burn pits as well as regarding a Marine Reserve unit from Ohio, Lima Company, who fought in Iraq and suffered heavy casualties in 2005 and 2006.

III. History of Camp Lejeune.

There is a long history of military bases in the United States dating back to the colonial period. Naval bases and forts extended across the country through the 19th and 20th Centuries. Often isolated from major urban areas, these were self-contained and sustaining entities sponsored by the U.S. government through housing and food subsidies for the soldiers and their families who joined them. They were, in essence, small towns that became massive over time, and which in relevant respects grew to resemble the counties spread throughout the United States, developing their own schools, hospitals, churches, and entertainment and recreational facilities on-base. Often, indeed, people lived some or all of their whole adult lives on the bases, cut off from the outside world by distance and even language barriers in foreign lands. By World War II, these military bases had long-established histories that defined the way new bases such as Camp Lejeune evolved and were constructed and demographically designed.²

As the Nazi threat loomed in Europe and the Japanese Imperial Army waged a war in China, the United States began preparing for conflict in the late 1930s. By 1940, our nation had begun a massive building project of bases throughout the country. This included the Marine Corps, a group for which the government significantly increased its maximum strength during that time. To handle the changes and coordinate with the Marine Recruiting Depot at Parris Island, South Carolina, planners selected a portion of Onslow Beach and nearby areas to begin building a base in April 1941. The planned space ultimately encompassed 11,000 acres on marshy lands with tidal basins. On May 1, 1941, Marines and contractors began the construction, which had its first headquarters at Montford Point before settling at Hadnot Point in 1942.³

² Alexander Humes, “Fortified Arguments: Fortifications and Competing Spatial Views of Colonial North America,” Ph.D. dissertation, University of Virginia, 2021; David La Vere, *The Tuscarora War: Indians, Settlers, and the Fight for the Carolina Colonies* (University of North Carolina Press, 2013); M. Patrick Hendrix, *A History of Fort Sumter: Building a Civil War Landmark* (History Press, 2014); William Whittaker, ed., *Frontier Forts of Iowa: Indians, Traders, and Soldiers, 1682-1862* (University of Iowa Press, 2009); Ethel Jackson Price, *Fort Huachuca* (Arcadia Publishing, 2004); Robert Wooster, *Frontier Crossroads: Fort Davis and the West* (Texas A&M Press, 2005); Katherine A. Zien, *Sovereign Acts: Performing Race, Space, and Belonging in Panama and the Canal Zone* (Rutgers University Press, 2017); Stephen Irving Schwab, *Guantanamo, USA: The Untold History of America’s Cuban Outpost* (University of Kansas Press, 2009); Matthew D. Rector, *The United States Army at Fort Knox* (Arcadia Publishing 2005); Peggy A. Stelpflug and Richard Hyatt, *Home of the Infantry: The History of Fort Benning* (Mercer University Press, 2007); Rebecca Herman, *Cooperating with the Colossus: A Social and Political History of U.S. Military Bases in WWII Latin America* (Oxford University Press, 2022); Kenneth MacLeish, *Making War at Fort Hood: Life and Uncertainty in a Military Community* (Princeton University Press, 2013); John W. Lemza, *American Military Communities in West Germany: Life in the Cold War Badlands, 1945-1990* (McFarland, 2016); Jonathan Stevenson, *Overseas Bases and U.S. Strategy: Optimizing America’s Military Footprint* (Routledge, 2022); Catherine Lutz, *The Bases of Empire: The Global Struggle Against U.S. Military Posts* (New York University Press, 2009).

³ Gertrude Carraway, *Camp Lejeune Leathernecks* (Owen G. Dunn Company, 1946); U.S. Marine Corps, “History,” <https://www.lejeune.marines.mil/Visitors/History/> [accessed 16 October 2024]; William Darden, “Camp Lejeune,” in *United States Navy and Marine Corps Bases* (Greenwood Press, 1985), 67-71.



Marines Training, WWII

It was a massive undertaking, but the changing geopolitical conditions, such as in Asia, required a massive expansion of Marine capabilities. Authorities also began building a massive base at Camp Pendleton in southern California. The Defense Department appropriated over \$14 million (in 2024, the equivalent would be \$304.5 million) for Camp Lejeune, and engineers and construction workers began the massive undertaking under the command of Lieutenant Colonel P.T Hill to design the base after the resettlement of over 600 farm families that formerly occupied the area.⁴ Quickly, construction started for the headquarters of what became the 2nd Marines (and later, the 6th and 8th Divisions as well), including Marines who distinguished themselves in battles at Guadalcanal, Saipan, and Okinawa.⁵

Almost overnight, the base grew from a tent city into a massive training base for those cycling out of Parris Island and preparing for deployment to the Pacific Theater.⁶ The engineers and contractors worked tirelessly to provide for matters ranging from clearing and grading, drainage for roads and streets, sewers and disposal plants, to water supply storage and distribution systems, and steam plants.⁷ Barracks, housing, administration



Marine training for amphibious assaults at Camp Lejeune, Marine Corps Archive

buildings, and mechanical and maintenance shops arose to support the U.S. war effort. The base grew throughout the conflict as tens of thousands of Marines received training for deployments into some of the worst fighting in the South Pacific.⁸ Camp Lejeune added an air naval station in 1944 at New River that also trained Marine paratroopers and glider Marines. Across the base, buildings and housing sprung up along with warehouses, administrative buildings, and mechanical shops throughout the war until it ended in 1945.⁹

⁴ Herb Richardson, "Home Sweet Home," *Leatherneck*, 59:8 (August 1976): 22-23.

⁵ Thomas Loftfield, *An Archaeological and Historical Reconnaissance of U.S. Marine Corps, Camp Lejeune* (U.S. Department of Navy, 1981); Jeter A. Isely and Philip Crowl, *U.S. Marines and Amphibious Warfare* (Princeton University Press, 2016).

⁶ Billy Arthur, "Camp Lejeune-The Early Days," *Leatherneck*, 65:11 (November 1982): 28-31, 69.

⁷ The Marines outlined their efforts in great detail. The reports and plans reside in folders: "Clearing, Grading, and Drainage," (Folder P-1-1), "Roads and Streets," (Folder P-1-2), Phase II Redeployment Box II for Creation of Camp Lejeune, post-1942, Marine Corps Archives, Quantico, Virginia.

⁸ Harry Polete, "Posts of the Corps: Camp Lejeune," *Leatherneck*, 31:9 (September 1948), 27-29.

⁹ Edward J. Evans, "Esprit de Camp," *Leatherneck*, 30:10 (October 1947): 7-8.



Construction at Camp Lejeune during World War II (Courtesy of the U.S. Marine Corps Archives)



The building of homes at Camp Lejeune

While the United States historically demobilized following a major conflict like WWI, the quarrels after 1945 with Moscow often required expanding the branches of the military, including the Marines, during the Cold War.¹⁰ The Korean War saw another major buildup of Camp Lejeune as the Marines played a substantial role in the massive conflict from 1950-1953.¹¹ Thousands of volunteers and draftees flocked to Camp Lejeune and lived on the base during the conflict, often with their families. Increasingly, retirees settled in the area, taking advantage of the medical facilities and Post Exchange (PX) where people bought everything from groceries to clothes at reduced prices compared to their civilian counterparts.

By 1955, the base had grown significantly since its inception fourteen years earlier. One observer, reporting about the sheer enormity of the base, noted that it included “145 miles of electric distribution lines, 112 miles of telephone cables and 165 miles of telephone lines connecting the eight telephone exchanges . . . which provide service to 3700 telephones.” A modern road system of “130 miles of paved highways and more than 500 miles of unpaved roads accompanied 90 miles of sidewalks.” He also added that they had a bakery capable of producing enough bread in an eight-hour period to feed a city of 50,000 people.¹² Many people marveled at the base’s size and services, both within and without the Marine Corps.

One of the most important infrastructure projects at the base from the outset was the water works. When construction began, it was a struggle to find large quantities of drinking water, especially during the summer when temperatures soared, and rivers dried out. The Marines built a water well pumping system among the several freshwater aquifers under the base, including the Castle Hayne aquifer that ran under the sandy soil at depths ranging from 150 to 400 feet. There were issues, including when the Marines used the aquifer more in the hot and humid summer months. The salt content of the water required significant treatment, and over the following years, the demand grew along with the need to continue to filter salt and impurities from the water. By the mid-1950s, the Marines boasted Lejeune had an “ultra-modern water treatment plant . . . capable of purifying 5,000,000 gallons of water daily.”¹³ Ultimately, the Marines reported building 100 or more wells that required more than 1,500 miles of pipe to supply more than 7,000 buildings.¹⁴

¹⁰ Aaron B. O’Connell, *Underdogs: The Making of the Marines Corps* (Harvard University Press, 2012).

¹¹ Charles R. Smith, *U.S. Marines in the Korean War* (Marine Corps Press, 2008).

¹² *The Globe*, 28 July 1967; Robert T. Fugate, “Camp Lejeune,” *Leatherneck*, 38:4 (April 1955), 19.

¹³ Fugate, “Camp Lejeune,” 19.

¹⁴ The Marines outlined their efforts in great detail. The reports and plans reside in folders: “Sewers and Disposal Plant,” (Folder P-1-3), “Water Supply Storage and Distribution,” (Folder P-1-4); “Steam and Hot Water Plants and Distribution,” (Folder P-1-10), Phase II Redeployment Box II for Creation of Camp Lejeune, post-1942, Marine Corps Archives, Quantico, Virginia; Mike Magner, *A Trust Betrayed: The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families* (DeCapo Press, 2014), 30-31.

Camp Lejeune, along with Camp Pendleton, remained the main training and home station of the Marines throughout the 1950s and into the mid-1960s, its troops deploying across hotspots in the world from Lebanon in 1958 to the Dominican Republic in 1965. The base expanded even more during the heaviest fighting of the Vietnam War, from 1965 to 1970.¹⁵ Thousands of young men flooded the training facilities, many heading to Vietnam as replacements for those killed or completing their tours of duty.¹⁶ Many received training on how to behave if captured, a problem dating back to the Korean War.¹⁷ It was a period of challenges and unrest on bases including Camp Lejeune, as race riots swept the base in July 1969, reflecting divisions in society boiling over during that historical period.¹⁸

The buildup during the Reagan years continued for the military, including the Marines who continued to prepare for military potentialities including, among others, conventional conflicts with Russia and, later, China, or others or their proxies. The size of the Camp Lejeune base increased by an additional 41,000 acres during this period, as it added more firing ranges and storage facilities to meet the demand, giving it more than fifty tactical landing zones, thirty-four gun positions with ranges for those firing from naval craft positioned offshore, and enhanced military operations facilities. Ultimately, the growth continued, culminating with the First Persian Gulf War in 1991 when the Marines played a significant role in efforts to drive out the Iraqis from Kuwait, although it was a short conflict with limited casualties. The importance of the base during the wars in Afghanistan and Iraq during the early 21st Century has only enhanced its visibility and importance to American policymakers.

IV. Water Development and Usage Background.

When constructing Camp Lejeune in 1942, one of the first major challenges planners faced was the need for water supplies for the thousands of people who soon occupied the base during WWII and on into the Cold War when manpower needs remained much higher than previous peacetime requirements. It was a constant struggle to keep the base supplied with water, and issues arose over the years as it expanded and more people lived and interacted on base.

Every day, the residents of this burgeoning society used water in their homes or when they left to go to training, to work in various administrative and mechanical offices on base, or to teach or learn at school. They used water when they went to shop or to staff counters and cash registers, when they went to be entertained at clubs, or when they participated in recreational activities. These attractions occurred all over the base, but mainly in the large daily living areas of the

¹⁵ *The Globe*, 31 January 1969.

¹⁶ U.S. Marine Corps, "DoD Picks Marine Bases," *The Marine Corps Gazette*, 50:10 (October 1966): 1.

¹⁷ Photographs of POW Training, P&S: Camp Lejeune, NC-CLNC/POW School, U.S. Marines Archive, Quantico, VA.

¹⁸ U.S. Marine Corps, Black Marines Reference Collection, 5958, A/33/K/3/3 Box 3 of 6; House of Representatives, "Inquiry Into the Disturbances at Marine Corps Base, Camp Lejeune, N.C. on July 20, 1969," Report of the Special Subcommittee to Probe Disturbances on Military Bases, Committee on Armed Services House of Representatives, Ninety-First Congress, First Session, 15 December 1969 (U.S. Government Printing Office, 1969), pp. 5051-5059.

residential communities and barracks and centrally at the area of Hadnot Point, which functioned metaphorically as the nervous center of the body of the base at large.

Water consumption in the 1950s through the 1980s at Camp Lejeune and throughout the country had its roots in massive changes that took place in the 20th Century. At the turn of the century, most Americans secured their water through wells on their farms, natural springs, or rivers. Increased urbanization, however, changed the way people secured their water, often shifting reliance towards pumping, canals and aqueducts to send water to treatment plants. Soon, major public work projects that focused on underground delivery of water became the norm in most cities and suburbs sprouting up around the country.

The local water supply at Camp Lejeune, created in 1942, underwent expansion as the base became larger over the years, and relied heavily on relatively shallow wells. Engineers laid hundreds of miles of pipes to distribute water from to thousands of buildings from numerous wells dug to provide water supplies. These expansions continued throughout the base's history, with many more miles of piping built, new water treatment plants constructed, and additional expansion to incorporate facilities to reach the tens of thousands of Marines and their dependents.¹⁹



Water Treatment Plant near Holcomb Boulevard, 1960s

The distribution of water during the period from 1942 through the late 1980s was simpler than today. While, today, people rely on bottled water, many different types of sodas and other drinks, and filters, even in public locations, the same was not true in the 1950s, 60s, 70s and 1980s. Back then, most people drank tap water from the faucet, or used it to create teas, coffee, or a favorite of many people, sweetened Kool-Aid, and later, Gatorade.²⁰ There were water fountains in the barracks, the schools, the shops on base,

the main administrative buildings, and at the hospital complex. There were even hoses across the base to distribute water from the main water supply to stations where Marines could fill up canteens and jugs. There were also distribution points for water buffaloes to fill.

Many Marines and their dependents drank from the water fountains provided around the base as well as from hoses and jugs spread across Camp Lejeune. The only equivalent to today's wide selection of bottled drinks would have been the canteens that the Marines carried. However, they filled these canteens with base tap water from taps, commonly found in the logistics support areas, primarily at Hadnot Point, or from the big jugs of tap water stationed around base to provide for the Marines during training.²¹

¹⁹ Comprehensive relevant information on the technical details of the water systems at the base is found in the voluminous publications of the ATSDR on the subject of the base and its water.

²⁰ Video Deposition of Allan Wayne Howard, Dayton, Ohio, 16 February 2024, p. 29-30 [hereafter Howard Deposition].

²¹ Oral History via Zoom with Alan Howard, 30 August 2024.

To highlight the importance of water to the planning and operation of a military base, one 1999 report put out by the Army on water consumption had a cover page proclaiming that “the ultimate weapon runs on WATER.”²² The report included numbers and statistics on how much of this necessity it would take to run a successful operation based on a variety of detailed estimates. For example, calculations reflected a “central hygiene standard of 2 showers and 15 pounds of laundry per soldier per week.” The report listed statistics for teeth brushing (0.2 gallons per soldier per day), shaving (0.25 gallons per soldier per day), washing hands (0.75 gallons per soldier per day), and total general personal hygiene (1.7 gallons per soldier per day). The bottom-line takeaway from the document was that water is crucial to a functioning military operation.

V. Marines Stayed on Base, Specifically at Mainside -- Hadnot Point.

a. Size and Scope of the Base.

Newcomers often compare Camp Lejeune to a city with its facilities, housing operations, and many consumer services. However, a more appropriate analogy would be that the base is like a county, covering more than 240 square miles and encompassing 153,439 acres with 14 miles of oceanfront. It is bigger than many counties in North Carolina, including Alleghany (on the North Carolina and Virginia border) and Avery (north of Asheville) counties. In addition, the base covers a land area equivalent to or larger than several big cities in North Carolina, such as modern Raleigh (144.8 square miles), and in fact is only surpassed by Charlotte (297.7 square miles). The base’s current population of 33,422 (2022) makes it the 33rd largest city in North Carolina.²³

b. All-Encompassing Nature of the Base.



Fire station at Camp Lejeune

The base, just like any other large governmental entity, required a sophisticated organizational structure to maintain and manage the facilities, create security, administer logistics, and enhance the living experience for the mainly volunteer force. The base infrastructure historically required large numbers of workers, including civilian ones, to maintain and sustain the complex community, with its core mission to serve and protect the United States.

²² Study Report Water Consumption Planning Factors,” Directorate of Combat Developments (Quartermaster) U.S. Army Combined Arms Support Command, Ft. Lee, VA, June 15, 1999.

²³ North Carolina Department of Military and Veterans Affairs, “Military Bases in North Carolina,” <https://www.milvets.nc.gov/benefits-services/military-bases-north-carolina#:~:text=Camp%20Lejeune%20occupies%20about%20153%2C439,the%20Marine%20Corps%20expeditionary%20abilities>. [accessed 8 October 2024]; Kristen Carney, “North Carolina Cities by Population (2024),” *North Carolina Demographics*, 20 June 2024, https://www.northcarolina-demographics.com/cities_by_population [accessed 8 October 2024]; “North Carolina Land Area County Rank,” *USA.com*, <http://www.usa.com/rank/north-carolina-state--land-area--county-rank.htm> [accessed 8 October 2024].

To ensure the efficiency of the base and its Marines, the Marine Corps and Navy provided almost all basic services. There were civilian-staffed fire stations built and operated on the base. The Marines provided a security apparatus against crimes, such as robberies, drunk driving and domestic violence. The base had its own jail that could house numerous inmates and a judicial system that could hand down sentences. Administrative offices provided services such as housing inspection, banking and financial management, and data processing for everything from paychecks to bills to various PXs and clubs. The employees who worked at these establishments, some civilians, helped keep the base running efficiently and within the parameters constructed by congressional oversight committees and the Department of Defense.



Midway Park Commissary in 1949 (Courtesy of the Marine Corps Archives, Quantico, VA)

From the start, the goal was to keep the Marines on base, spending their time and money there to prevent challenges from developing between sometimes rowdy Marines and locals, to keep the Marines happy and engaged with the military sources of entertainment, and also importantly, to keep their funds cycling back through U.S. military PXs, restaurants, and cultural entities into military budgets which became relatively self-sustaining over time in light of Marine pay and savings on housing, foodstuffs, and cultural activities.

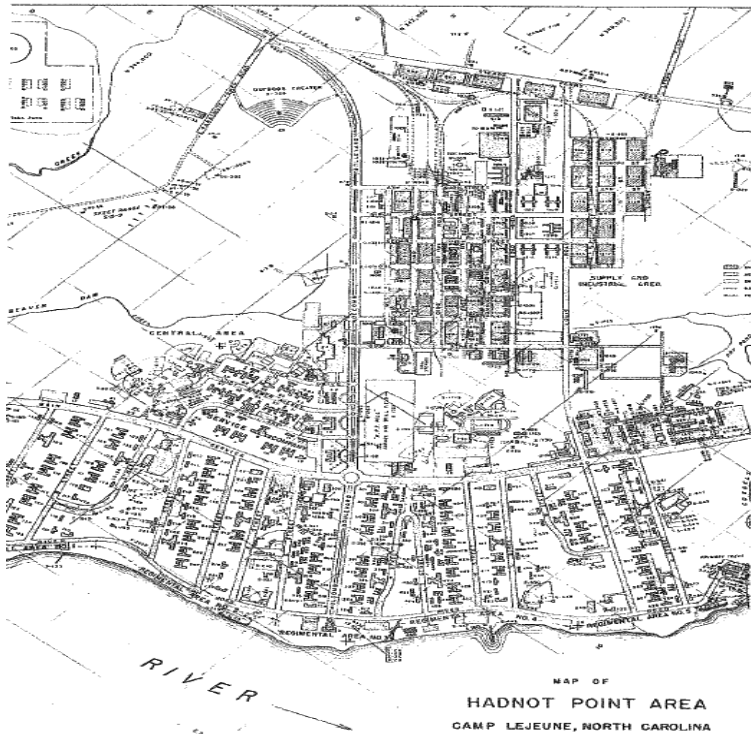


Children at playground at Main Commissary as their parents shopped, *The Globe*, 19 May 1966

The Marine Corps wanted to prevent the residents of Camp Lejeune from feeling a need to leave the base, where the Marines exercised better control, and to go to the surrounding communities such as Jacksonville; this also kept money in government coffers. To that end, the Marine Corps, in designing and building the base over the years, worked hard to provide many opportunities for the Marines and their families for entertainment, recreation, and socialization. One writer for *Leatherneck* magazine noted in 1955 that “it’s doubtful whether those hardy troopers who pitched their tents in the mud of Verona Road and fought the first battle of chiggers in 1941 remember Camp Lejeune as a veritable vacation paradise.” However, he added: “Fourteen years later, the off-duty merriment” made available by base facilities made it “the world’s most amphibious playground.”²⁴

²⁴ Robert A. Suhosky, “Recreation (at Camp Lejeune),” *Leatherneck*, 38:4 (April 1955): 25.

c. The Centrality of Hadnot Point.



Historical map of Hadnot Point area



Changing of colors on
parade ground



President Nixon at main parade
grounds, 30 Oct. 1971

Hadnot Point was the nerve center of Camp Lejeune, replete with schools, barracks, stores, and mess halls. Regardless of where they lived, people naturally regularly traveled back and forth between their homes and work, school, military or other activities, including the main attractions at Hadnot Point, such as the hospital, main PX, churches, and parade grounds for events.²⁵ Marines, their family members, and others were present and consuming the water at Hadnot Point, regardless of whether or not they had their homes or barracks there.

There were many activities that attracted service members and their families to Hadnot Point and its playing fields, gyms, social clubs, theaters, riding stables, golf courses, boathouses, complete with ski and

sailing boats and canoes, and other amenities. For many young Marines, coming from modest economic backgrounds and rural regions, the base offered more amenities than they had experienced before in their young lives. The Marines wanted them to have ways to interact with each other and build *esprit d' corps* while staying out of trouble and spending their money at base commissaries and clubs.

One of the most prominent gathering spaces on base was Hadnot Point's main parade grounds. Here, crowds would gather for many events, including change of command parades and ceremonies, the Fourth of July, returns from overseas deployments, and other formal occasions like President Nixon's visit to the base in 1971.²⁶ The parade grounds also hosted the major reviews for the Marine Corps Birthday bash, traditionally held on November 10, which included many ceremonies and

²⁵ *The Globe*, 2 January 1970.

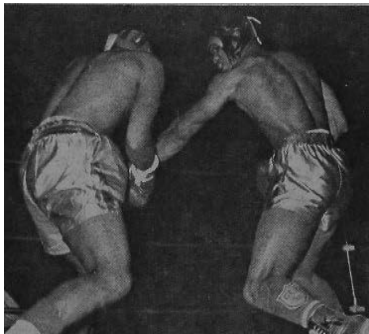
²⁶ U.S. Marine Corps, "Nixon's Visit to Camp Lejeune," 30 October 1971, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.



Football between units, *The Globe*,
6 Jan. 1966



Soccer match on base, *The Globe*,
25 Aug. 1983



Ken Norton, fighting at Camp
Lejeune, *The Globe*, 6 Jan. 1966

dances to honor the establishment of the Marines at Tun Tavern in Philadelphia. Thousands often descended on the base to celebrate the special day.²⁷ On such occasions, people consumed large quantities of beverages, including water, iced tea, punch, and alcoholic drinks. The food, prepared by the base kitchens and bakeries, fed the participants who often had accompanying dances and other special activities.

Oftentimes, people congregated at Hadnot Point as it hosted intramural-style games and major events for popular sports, including basketball, baseball, and football.²⁸ In the 1950s and 1960s the Camp Lejeune football games drew 12,000 spectators as they competed against other bases and also universities, including DePaul and Elon.²⁹ In addition, the Goettge Memorial Fieldhouse hosted multiple basketball games, and its optimal floor arrangement meant that 4,000 spectators could pack the gym.³⁰ Some Marines played in leagues, including bowling (there was a 32-lane alley at Mainside) and tennis and joined in many other sports such as equestrian competitions, tennis, racquetball, handball, and golf.³¹ The sports extended beyond the adults and to the children.³² Sporting events filled up the week and provided the Marines with opportunities to participate as well as observe and support their units, who often fielded teams in the major sports, allowing for some healthy competition and further creation of an *esprit de corps*.³³

Beyond the semi-professional teams and intramural sports, a profusion of other opportunities for recreational activities existed for the Marines and their dependents on base. For example, Camp Lejeune had a variety of gyms with weight-lifting facilities, which, over time, grew to include equipment that most modern gyms had at the time, such as Nautilus machines, treadmills, and stationary bikes.³⁴ When off duty, Marines also followed societal trends that developed, including jogging and preparing for long-distance races. In all places, people ate food and drank water and other

²⁷ *The Globe*, 30 June 1977.

²⁸ U.S. Marine Corps, "Baseball at Camp Lejeune," 6 September 1952, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina. Retired Master Sergeant Ensminger relates that in addition boxing was a popular sport, with numerous Marine boxers some of whom even achieved prominence in forums such as the Olympics. Boxing was featured at facilities such as Goettge Fieldhouse in Hadnot Point.

²⁹ *The Globe*, 10 May 1957; *The Globe*, 31 January 1969; *The Globe*, 6 October 1977.

³⁰ Herb Richardson, "Post of the Corps," *Leatherneck*, 51:9 (September 1968): 27.

³¹ Herb Richardson, "Post of the Corps: Camp Lejeune, N.C.," *Leatherneck*, 64:10 (October 1981): 39.

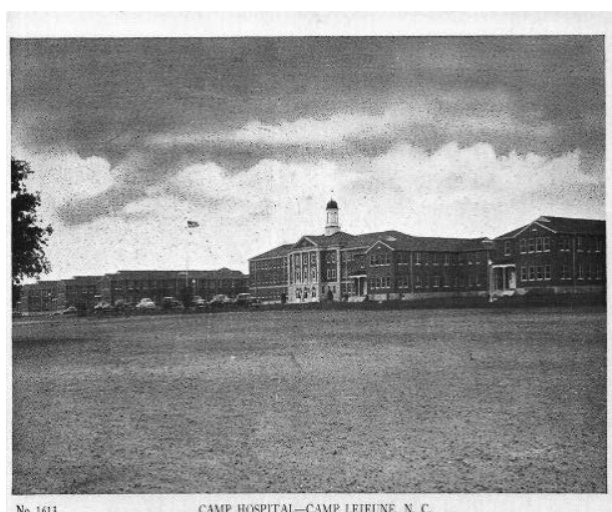
³² *The Globe*, 27 October 1977.

³³ *The Globe*, 8 October 1953.

³⁴ *The Globe*, 9 March 1967; *The Globe*, 29 September 1977.



Announcement for Frank Sinatra, Jr. performing on base, *The Globe*, 6 January 1966



No. 1613 CAMP HOSPITAL—CAMP LEJEUNE, N. C.

Main Hospital (facility used through 1983)

beverages, especially in high-exertion activities such as distance running or flag football. While smaller clubs and theaters dotted the base, the main ones were at Hadnot Point. Its theaters hosted a number of major entertainment events, such as the Christmas concert by the internationally respected Marine Corps Band. The different venues in the area, such as the SNCO Club, hosted many popular entertainers, such as Frank Sinatra, Jr., Lou Rawls, Nancy Rowe, Jesse James, and the Country Outlaws, and diverse celebrations, including the Bavarian Festival Show Band during Oktoberfest.³⁵ Entertainment also was offered in smaller venues such as the clubs and other places for social gatherings and relaxation. Both Marines and family members as well as civilians had access to such resources at Hadnot Point.

The base, and especially Hadnot Point, provided major services to the Marines and their dependents, including free and low-cost medical care, something few Americans had until the 1970s and 1980s. In the 1950s, Hadnot Point's fully staffed Naval Hospital covered 144 acres and had room for more than 1,074 patients.³⁶ It grew as manpower needs increased during the Vietnam War when more casualties returned from the heavy fighting. The hospital provided healthcare to all the Marines, their dependents, and when available, retirees who had settled in the area. The Navy, well known for its medical corps, via the hospital complex offered everything from basic physical exams to emergency room service to gynecological

check-ups for women to surgeries and even malaria treatments, which some soldiers contracted while serving in the sometimes swampy conditions at the base.³⁷ At the hospital, doctors performed surgeries, including some complex ones, and the hospital hosted numerous births, especially nine months after a major deployment ended and the Marines returned home. It was a full-service hospital, the envy of many communities surrounding the area and one of the best in the Southeastern United States.³⁸ Over time, the facility was rebuilt, and by 1983, the new hospital,

³⁵ *The Globe*, 8 September 1977; *The Globe*, September 15, 1977.

³⁶ Fugate, "Camp Lejeune," 19-20.

³⁷ "Naval Medical Center Camp Lejeune Celebrates 75 Years of Care," Defense Visual Information Distribution System, 1 May 2018, <https://www.dvidshub.net/news/278247/naval-medical-center-camp-lejeune-celebrates-75-years-care> [accessed 21 October 2024]; U.S. Marine Corps, "Naval Hospital and Surgeon's Row" (Camp Lejeune), <https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Cultural-Resources/Historic-Architecture/Districts-Buildings/Naval-Hospital-and-Surgeons-Row/> [accessed 21 October 2024].

³⁸ *The Globe*, 10 May 1957.



Bus Schedule (*The Globe*, 2 July 1970)

a \$45.3 million facility on 162-acres, handled nearly 8,000 admissions a year and over 540,000 outpatient visits. It boasted a computer-based control system to monitor security and transfer heat and cooling throughout the complex and 205 beds, expandable to 236 if needed.³⁹

A complex bus system linked the various neighborhoods to Hadnot Point so that residents could access the latter's medical care, groceries, dry goods, banking, clubs, churches, and other main attractions as discussed above. As in many small counties and towns across the country through the 1970s and 1980s, the main bus station, located directly across from Hadnot Point's water treatment plant, served as the transportation hub that brought people to the PX system and across the community. To provide a sense of the scope of use of the bus system, over six months in 1977, Camp Lejeune's PX system grossed more than \$22.8 million [over \$118 million in 2024 dollars].⁴⁰ The bus station at Hadnot

Point was crucial in the 1970s and 1980s before the advent of affordable and accessible alternative means of transportation. Air travel to go on leave was expensive, and few could afford luxuries such as cars. Most of the base relied on buses and walking to access their basic needs for groceries, clothes, and other goods and movement to entertainment and religious services, at least through the 1980s. The average price of a car in the 1960s was \$2,650 with additional costs, including \$50/month for insurance, maintenance, and gasoline.⁴¹ Contrast that with the fact that, in 1965, a private first class earned \$97.50 a month (\$136.50 if a person served more than 2 years).⁴² For most Marines at Camp Lejeune outside of officers, buying a car was cost-prohibitive, so buses were key to movement on and off base.

Walking constituted another major mode of transportation, just as it did for many Americans at the time without access to cars. People traveled to bus stops and then walked the rest of the way to the many facilities provided by the Marine Corps, especially in the Hadnot Point area. This reliance on walking and public transportation also largely explained why many Marines lived within the center of the base in the barracks at Hadnot Point, as further described below.

No matter where a person lived on base, and even for the small number of Marines that sometimes lived in off-base housing, Hadnot Point was the functional "county seat" for Camp Lejeune, and people frequented it daily in many cases. They traveled there for major shopping trips at the

³⁹ P. L. Thompson, "Camp Lejeune's New Hospital," *Leatherneck*, 66:5 (May 1983): 46-47; U.S. Marine Corps, "New Medical Center at Camp Lejeune," *The Marine Corps Gazette*, 66:11 (November 1982): 15.

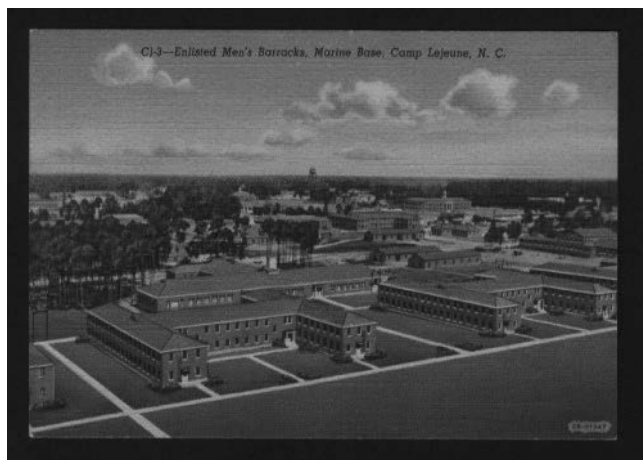
⁴⁰ U.S. Marine Corps, "Command Chronologies, July 1977-December 1977," U.S. Marine Corps Archive, Quantico, VA., 44-48.

⁴¹ "Average Price of a Car in 1965," *Worldmetrics*, July 24, 2024, <https://worldmetrics.org/average-cost-of-a-car-in-1965/> [accessed 27 September 2024].

⁴² Defense Finance Accounting Service, "Military Pay Tables 1965," 1 September 1965, <https://www.dfas.mil/Portals/98/MilPayTable1965.pdf> [accessed 27 September 2024]

government subsidized PX, recreational opportunities for themselves and their children, medical and dental care, cultural exchanges that were plentiful in the base theaters, and other activities, including religious ones. Many worked in the buildings that housed mechanical shops, administrative offices, and that served other important functions that kept the base working efficiently in preparation for the next deployments of its Marines to distant duties.

VI. The Mainside Barracks at Hadnot Point.



Aerial view of main barracks circa early 1960s



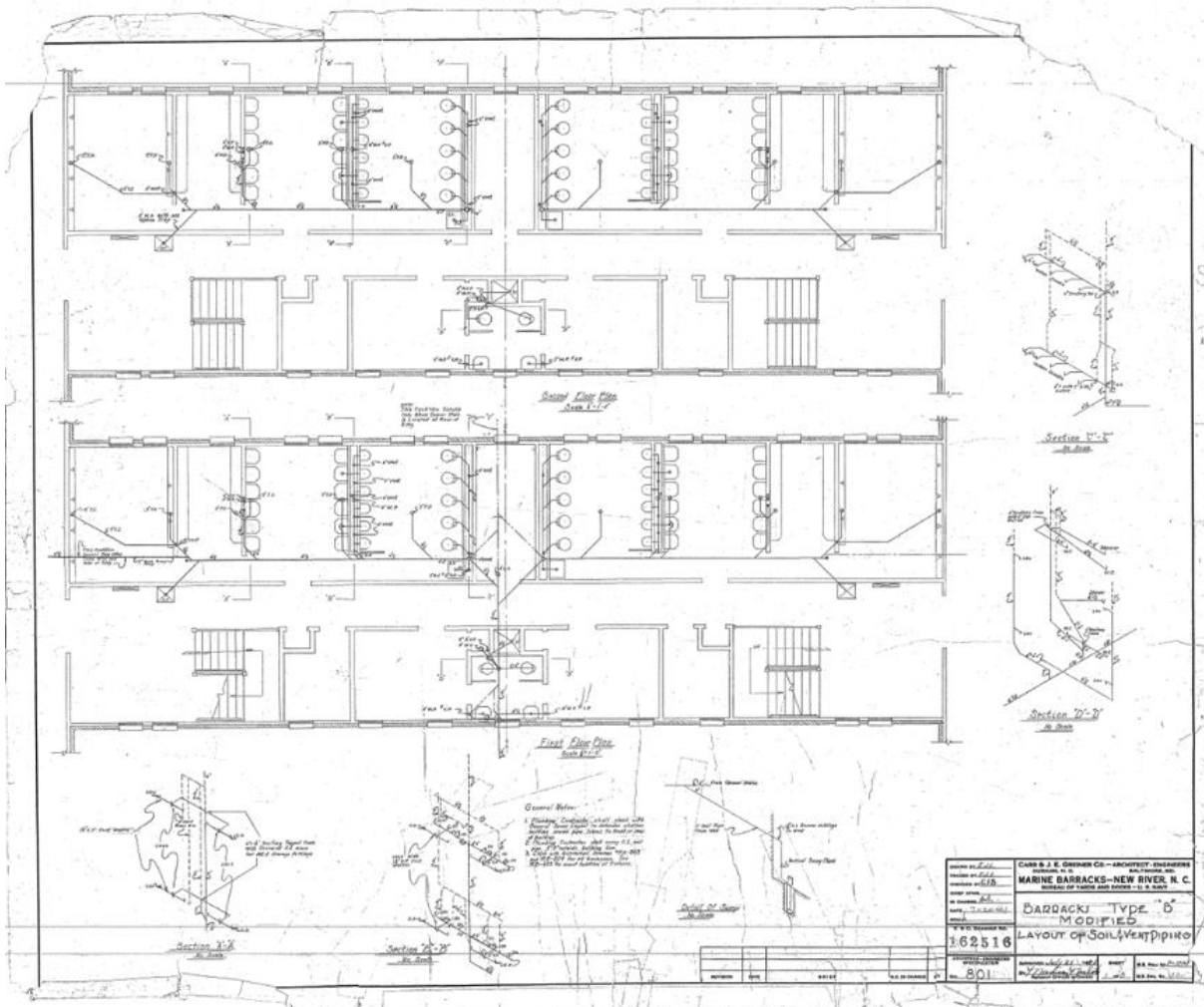
Inside of barracks at Mainside

Hundreds of thousands of Marines passed through the barracks over the course of the three decades under review. While some lived in the surrounding neighborhoods, such as Tarawa Terrace, Midway Point, or Camp Geiger, the majority of single Marines lived at Hadnot Point. The Hadnot Point single enlisted men's quarters, which hosted the largest group of people on base, per ATSDR drew its water supply from contaminated water in the area. A later report on water conservation at Lejeune prepared by a contractor for the U.S. Marines found that the average water consumption per day at Hadnot Point bachelor housing was 862,000 gallons (2.7 million a month). This report broke down the consumption by fixtures and, for example, used an estimate that toilets consumed 177,000 gallons per day. According to the report, shower flow rates were 4.5 gallons per minute, toilet flow rates were 4.5 gallons per flush, and faucet flow rates were 3.5 gallons per minute.⁴³

From the outside, these barracks resembled apartment complexes in urban areas of many cities, with interior arrangements similar to

spartan college dorms, lacking individual rooms until later. The young Marines lived in close proximity to each other, had communal bathrooms including showers, and shared adjacent mess halls where they ate together. There was little privacy at any point during the day for the Marines at Camp Lejeune, excepting some senior NCOs who had separate rooms. It was a very controlled environment that stressed conformity and regimented behavior conducive to preparation for the mission of combat.

⁴³ U.S. Marine Corps Headquarters, "Marine Corps Base Camp Lejeune and Marine Corps Air Station, New River: Water Conservation Analysis" (ECG. INC., 1999), 47, 60.



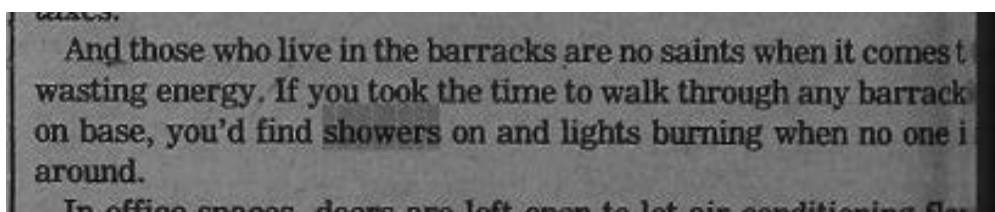
Structural drawing of barracks bathroom area with a gang shower with six shower heads

There were many ways that the Marines in the barracks had exposure to water. In the mornings, the Marines showered, brushed their teeth, shaved, and groomed themselves for the day, often many at a time in communal barracks bathrooms. Many of the bathrooms in the original base masterplan for Camp Lejeune had gang showers with six shower heads, like the one shown in the above schematic. These showers would run continuously in the mornings and evenings while approximately 58 Marines would shower and complete their personal hygiene routines in the steamy rooms.⁴⁴ Oftentimes during the summer, this could happen up to three times a day: mornings, evenings, and following heavy physical training.

⁴⁴ “Declaration of Allan Howard: *In re: Camp Lejeune Water Litigation*,” 26 November 2024, 11; “Declaration of Gary McElhiney: *In re: Camp Lejeune Water Litigation*,” 25 November 2024, 5.

The showers had other uses highlighted by Marines over the years. One heavy machine gunner operator remembered that keeping clean weapons was a “big, big deal in the Marine Corps.” In his case, he spent time in the showers taking care of the weapon, an M60 E2 machine gun. He recalled they would strip down to PT gear and flip flops, go in the showers, turn the water on as hot as they could endure, and then wash down 22-to-23-pound weapons. In the showers, they washed all the different components of their weapons, stripping them down before reassembling them, following the complete procedure of making them sparkle to pass inspection.⁴⁵ Another oral historian, former Master Sergeant Ensminger, says it was not the authorized method for cleaning weapons, but it happened a lot.⁴⁶

According to this Globe article, sometimes the showers in the barracks were even left on when no one was in them:



The Globe, 19 July 1979. Bates 00897 PLG 0000038193 to 00897 PLG 0000038204



Field Day, *The Globe*, 18 April 1945

This is significant because the Marines would sleep in the barracks all night, very close to where showers had just been running. Named Plaintiff Gary McElhiney, for example, remembers his sleeping quarters being about 30 feet from the showers at night.⁴⁷

The Marines would also clean their own barracks every day, with multiple hours of deep cleaning occurring once a week in what was known as “field day.” The Marines believed in instilling discipline in their ranks by keeping a clean barracks, especially their bunks, bathrooms, and showers. This meant at least once a week spending significant time sweeping, mopping, and disinfecting the entirety of their portion of the barracks, oftentimes on the weekends when they were off formalized training. They used large quantities of water, exposing their skin to it as well as encountering steam in the showers where they worked to prevent the

development of molds and mildews in vents and floors. Working without gloves or protective gear, they inhaled the steam that accumulated during the cleaning time. Even in the 21st Century, a

⁴⁵ Howard Deposition, p. 25.

⁴⁶ Oral historian statement, Ensminger.

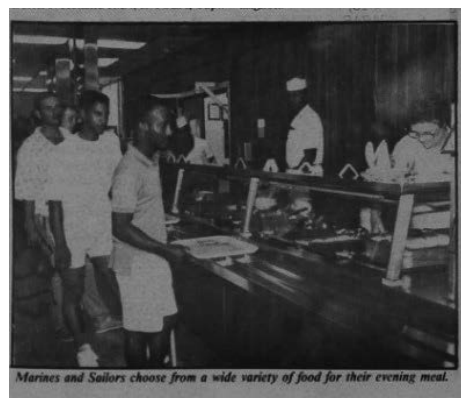
⁴⁷ McElhiney Deposition, p. 73.

Marine noted: “Field Day plays a vital role in keeping Marines healthy and mission capable.”⁴⁸ It was also a source of significant use of water at least once a week.

The Marines would also wash their own laundry in machines in the barracks.⁴⁹ Mr. McElhiney and Allan Howard, another named Plaintiff who lived in the Hadnot Point barracks, both did their own laundry once a week in a laundry machine in their unit. Because 232 men lived in the type of barracks that Mr. McElhiney and Mr. Howard lived in, the laundry machinery could have been running for 232 cumulative hours a week in their barracks.⁵⁰ Mr. McElhiney’s recollection was that the laundry machines were “always very busy.”⁵¹



Marine Mess Hall at Hadnot Point
(Photo courtesy of U.S. Marine
Archives, Quantico, VA)



Marines line up at the serving line,
The Globe, 4 Aug. 1988

VII. Mess Halls.

One of the places in Hadnot Point and the other barracks areas and neighborhoods where Marines experienced exposure to water was within the mess halls. They ate in the mess halls up to three times a day for breakfast, lunch, and dinner, where they drank tap water and coffee and tea made with local water, especially during the hot and humid months, and consumed meals prepared with local water. Drinking, eating, cleaning, and preparing food in the mess halls all contributed to ingestion, dermal absorption, and inhalation of water. The Marine Corps estimated that the mess halls utilized 116,000 gallons of water each day.⁵²

At meals, officers and NCOs pushed the young Marines to consume quantities of water, particularly on days when they had heavy physical training or long marches and runs. Additionally, for every meal, the Marines lined up to get their food at serving lines that were heated with steam, as can be seen in the photo at left from the *Globe* and in the schematics shown below, reflecting the installation of steam tables in a common dining facility layout.

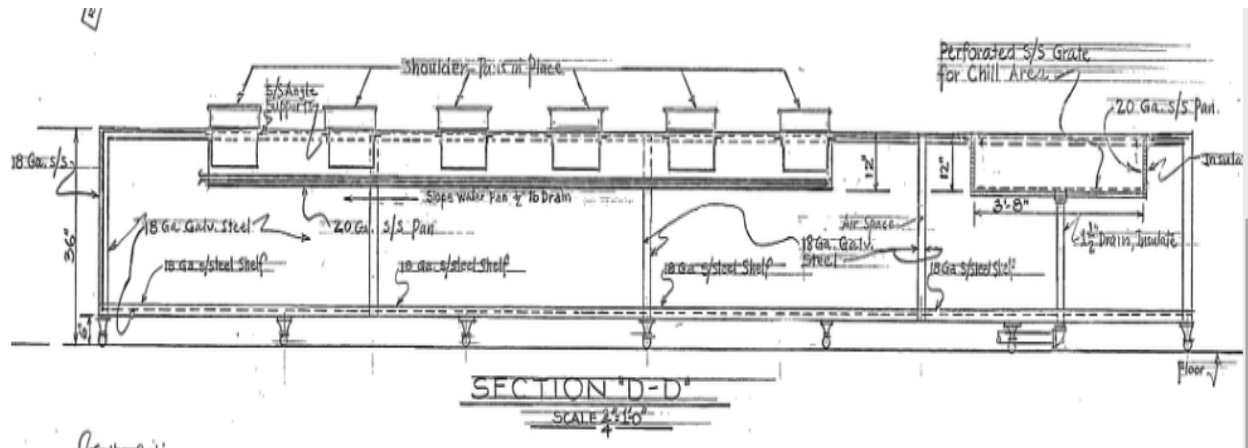
⁴⁸ U.S. Marine Corps, “Continuing the Field Day Tradition,” 22 March 2006, Marines: The Official Website of the United States Marine Corps, <https://www.lejeune.marines.mil/News/Article/Article/512046/continuing-the-field-day-tradition/>

⁴⁹ “Declaration of Gary McElhiney: *In re*: Camp Lejeune Water Litigation,” 25 November 2024, 12; Howard Deposition, 16 February 2024, p. 45, 48.

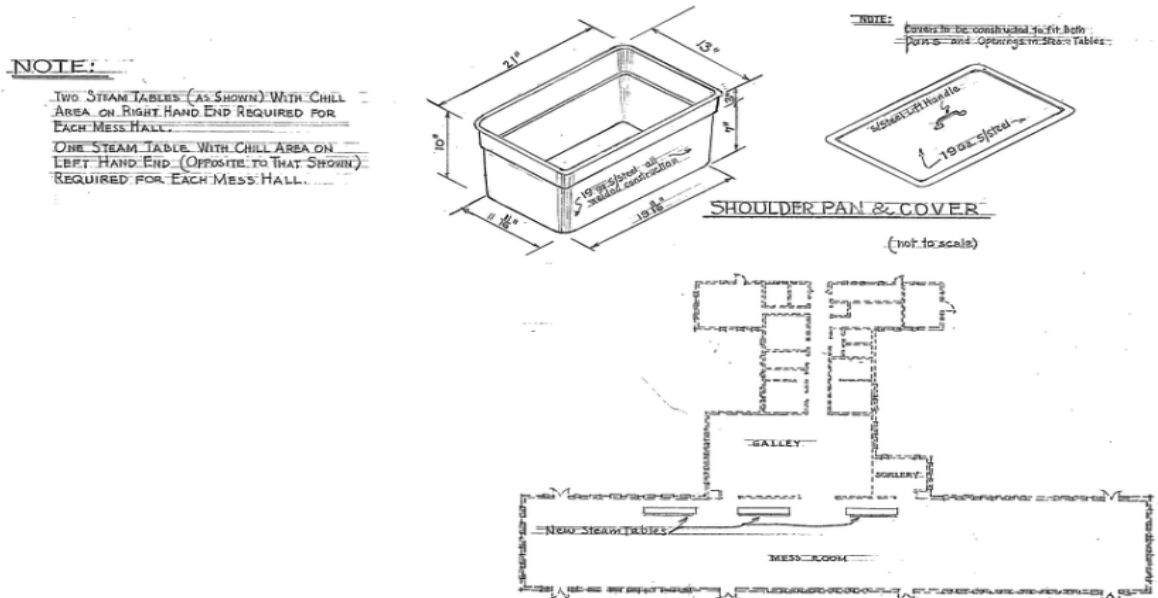
⁵⁰ Completion Report Covering the Design of Camp Lejeune U. S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks Contract NOy 4751, p. 54, April 15, 1941-September 30, 1942. CLJA_USMCGEN_0000287341 to CLJA_USMCGEN_0000287705

⁵¹ “Declaration of Gary McElhiney: *In re*: Camp Lejeune Water Litigation,” 25 November 2024, 12.

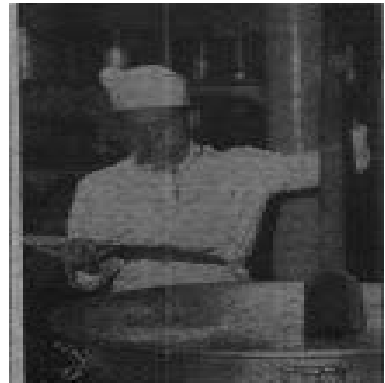
⁵² U.S. Marine Corps Headquarters, “Marine Corps Base Camp Lejeune and Marine Corps Air Station, New River: Water Conservation Analysis” (ECG. INC., 1999), 61.



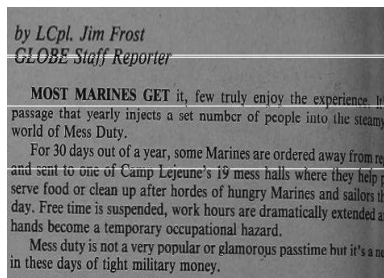
Mess hall schematic drawing; steam table area



Mess hall schematic drawing; steam table area



The “steamy world of mess duty,” *The Globe*, 24 June 1982



Reference to Lejeune’s “19 mess halls,” *The Globe*

Many of the Marines were required to work in the kitchens on mess duty, with tasks such as washing the dishes for numerous other Marines with hot, scalding water (and later big industrial strength dishwashers), drying, and then stacking dishes and all the pots and pans required, and mopping the floors. Mess duty lasted for 30 days, and Marines could serve three rounds of mess duty for a total of 90 days in a year.⁵³ They would work for about 14 hours a day in the “rigors of strenuous, tedious work.”⁵⁴ The *Globe* conducted an informal poll and found that 27 of the 30 Marines that the surveyors asked had participated in mess duty at least once.⁵⁵

One 1982 *Globe* article on mess duty described the “humid atmosphere of the scullery” and evoked that a “hot blast of air greets people who enter the scullery” where workers were “scraping plates and servicing the mammoth dishwashing machine.” The individuals washing the dishes were “hunched forward and covered with sweat generated from scrubbing pans in a steamy sink.”⁵⁶

The conditions were often very hot and wet. Steam filled the working areas and made life miserable. A 1985 report found that “existing mess hall facilities have a number of HVAC related problems. The scullery area is the most obvious. Working conditions in the scullery are impaired by the excessive heat and steam generated by the dish machine. We would recommend the installation of new make-up air ventilation equipment utilizing primarily outside air.”⁵⁷ A follow-up request to replace ventilation equipment dated September 16, 1985, stated, “Proper ventilation is not available in the galley, scullery, and serving lines. This lack of ventilation prohibits proper functioning of the air conditioning/heating units employed on food service workers and other mess personnel.”⁵⁸

⁵³ The *Globe*, Camp Lejeune, N.C., Vol. 28, No. 10, Mar. 9, 1972, Bates 00897_PLG_0000042688 to 00897_PLG_0000042699.

⁵⁴ The *Globe*, Camp Lejeune, N.C., Vol. 31, No. 5, Jan. 30, 1975, Bates 00897_PLG_0000040914 to 00897_PLG_0000040925.

⁵⁵ The *Globe*, Camp Lejeune, N.C., Vol. 43, No. 4, Jan. 29, 1987, Bates 00897_PLG_0000026597 to 00897_PLG_0000026636.

⁵⁶ *The Globe*, 24 June 1982.

⁵⁷ Wilber, Kendrick, Workman & Warren, Inc., “Fast Food Conceptual Study for Enlisted Dining Facilities: Marine Corps Base, Camp Lejeune, North Carolina,” 3 June 1985, 13.

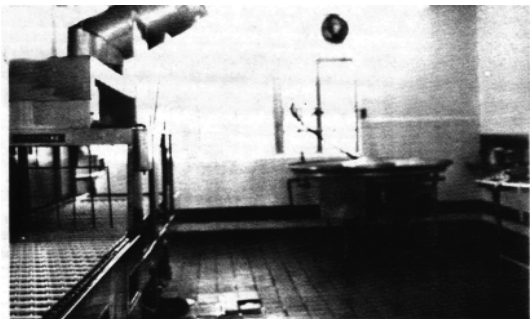
⁵⁸ Request for Replacement of Existing Hadnot Point Messing Facilities, Sep. 16, 1985, Bates CLJA WATERMODELING 07-0001081648 to CLJA WATERMODELING 07-0001081651.

I reviewed the testimony of two different Marines regarding their memories of mess duty. Gary McElhiney described his mess duty as being 30 days of ten-to-twelve-hour shifts scrubbing pots and pans in the scullery at the soak sink with no gloves or mask.⁵⁹ These many years later Mr. McElhiney recalled how “it was so hot” back in the scullery. He stood about five feet from the dishwasher, which would run starting at 6 a.m. He also brought hot water out in buckets to the serving lines, cleaned trash cans with hot water, and mopped the floors.⁶⁰



Cooking in Mess Hall, *The Globe*, 24 April 1952

Allan Howard, who served in the late 1970s, remembered being on mess duty for two 30-day stretches of lengthy shifts.⁶¹ Like Mr. McElhiney, he loaded the dishwasher and sprayed dishes at the sink using hot water and with no mask or gloves, the steam building up throughout the day. Mr. Howard also recalled the dishwasher running for the entirety of the day as the mess hall serviced numerous Marines for three meals. He described the physical exertion level as initially moderate but, because he sustained it over a long period of time, it increased. In this environment, Mr. Howard remembered the walls and floors as being wet because of the amount of moisture in the air in the kitchen. The steam, he recalled, would “almost take your breath away.”⁶²



Dish washing facility at Mess Hall 122

There is other evidence of the use of dishwashing machines and presence of steam and vapor in the mess hall environment. According to Charity Rychak Delaney, an environmental engineer at Camp Lejeune, some or all of the mess hall dishwashers lacked a vent hood until approximately 1986-87, in that “prior to the new equipment” being “installed around 1986/87[,] . . . steam could and would build up in the wash rooms.”⁶³ As evident in the historical picture to the left of a dishwasher station in Building 122, they were open below and drained to a hole in the floor in front of the machine.⁶⁴



Mess Hall Dishwashing Station

Additionally, steam would come from industrial-sized pots that Mr. McElhiney estimated would boil water from ten a.m. to eight or nine p.m. daily. Imagery from *The Globe* shows Marines working with these pots. All day long, but especially before the rushes for meals at breakfast, lunch, and dinner, the cooks and

⁵⁹ Video Deposition of Gary McElhiney, Sr., Knoxville, TN, 11 April 2024, p. 76-77 [hereafter McElhiney Deposition].

⁶⁰ “Declaration of Gary McElhiney: *In re*: Camp Lejeune Water Litigation,” 25 November 2024, 2-3.

⁶¹ “Declaration of Allan Howard: *In re*: Camp Lejeune Water Litigation,” 26 November 2024, 12.

⁶² “Declaration of Allan Howard: *In re*: Camp Lejeune Water Litigation,” 26 November 2024, 13.

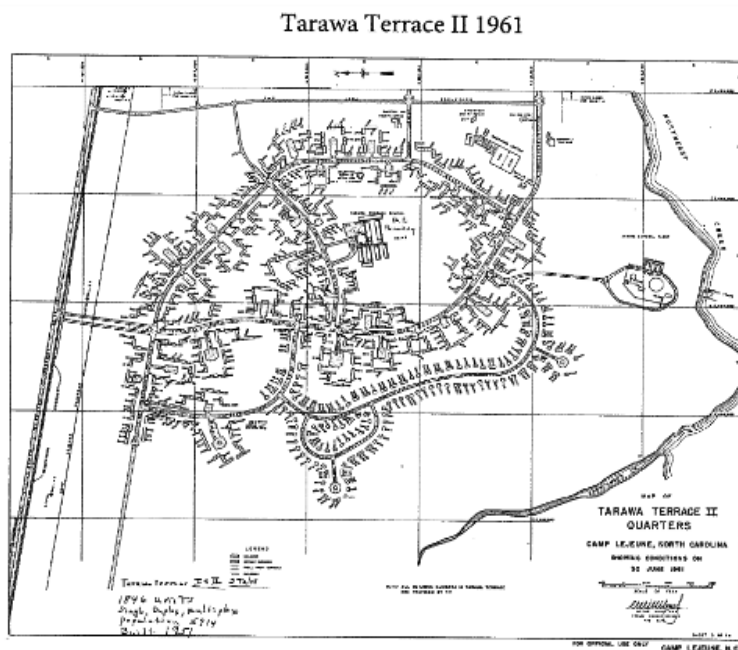
⁶³ Email from Charity Delaney to Jason Sautner (ATSDR), 24 July 2014, p. 1.

⁶⁴ Wilber, Kendrick, Workman & Warren, Inc., “Fast Food Conceptual Study for Enlisted Dining Facilities, 68.

their aides stirred and mixed large quantities of vegetables, pasta and rice, and other foods that required large quantities of water to prepare.

Whether exposed to the steam during the mess hall requirements or through drinking water during meals, the mess halls and other restaurants on base that provided meals to the soldiers relied on base-provided water.

VIII. Family Housing and Activities.



Master planned community of Tarawa Terrace II; note resemblance to suburban subdivisions across the country

Beyond the barracks for single Marines, many soldiers lived with their families in housing. These neighborhoods and communities included (as described by ATSDR and as relevant for purposes of the issues of contaminated water) Tarawa Terrace, Knox Trailer Park, Midway Park, Paradise Point, and Berkeley Manor. Like many rapidly developing suburbs across the country that sprouted during and after WWII, Camp Lejeune reflected the growth of master planned communities with centralized housing, playgrounds, cultural centers, and other facilities. At the same time, in the case of these neighborhoods that were part of the Marine base, the

occupants also still relied on the central system of Hadnot Point to provide many of the basic services that were also enjoyed by the single Marines stationed in their barracks at Hadnot Point.

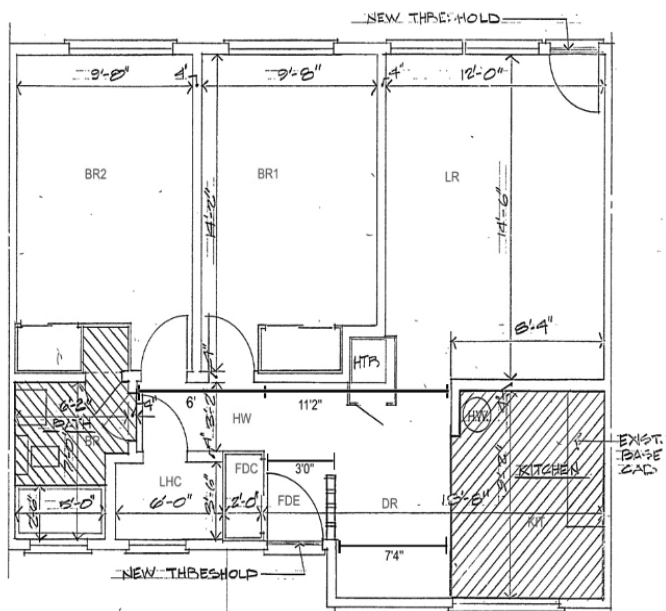
Many of these communities were hastily built during WWII as a master plan evolved around how to sustain the community vis-à-vis schools, health care, and workplaces. By the mid-1950s, there were over 400 one- and two-story homes for officers at Paradise Point, while Tarawa Terrace (#1 & #2) had over 2,100 one-, two- and three-bedroom homes for married officers and staff NCOs, and Midway Park had more than 1,100 one-, two- and three-bedroom homes. For many years, there were also many trailers for enlisted residents. Camp Knox held 450 of these trailers, and Camp Geiger had another 900.⁶⁵

⁶⁵ Jim Elliott, "Post of the Corps: Camp Lejeune," *Leatherneck*, 55:4 (April 1972): 24-25; Fugate, "Camp Lejeune," 22.

Within these homes, obviously, the families at Camp Lejeune would use water in all of the ways that constitute the necessities of life. They showered. They brushed their teeth. They shaved. They used the toilets. They bathed and showered their children. They drank from the tap, made beverages such as tea and coffee with that same water, cooked with it, and used it to clean.

Using Tarawa Terrace as an illustration, the Marine Corps estimated that each resident in this housing area used 63 gallons of water a day on average.⁶⁶ Tarawa Terrace resident Mrs. Jacqueline Tukes, there in the early 1980s, for example, toiled like many housewives of the time while her husband served. She made breakfasts of boiled breakfast sausages and grits made with the tap water available. For dinner, she often boiled her vegetables, rice, and meats in water. Once done, she handwashed the dishes along with the pots and pans in hot water that she ran for rinsing.⁶⁷

She recalled ingesting water throughout the day, cold water stored from the tap in the kitchen, especially on hot summer days. She used tap water to make beverages such as coffee, tea, and Kool-Aid or other powdered drinks.



**Schematic of a standard two-bedroom home
in Tarawa Terrace**

Ms. Tukes engaged in other chores such as mopping floors with hot water, wringing out the water and dumping it for cleaner water periodically. This was a chore as were others such as 20- to 30-minute spans cleaning the floors, toilets, and showers and bathtubs in the bathrooms, using water from the shower or faucets. She also did the laundry for herself, her husband, and her son, and ironed her own clothes and her husband's uniforms.⁶⁸

During the summer months, she would fill up a blow-up pool for her son with water from a hose outside her house at Tarawa Terrace as often as several times a week.⁶⁹

Mrs. Tukes lived in a home that looked like the schematic to the left with her husband, a Marine, and their toddler son, Antonio. The family shared one bathroom with no windows and rarely used the vent. Mrs. Tukes took hot showers for up to 15 minutes, up to twice

⁶⁶ U.S. Marine Corps Headquarters, "Marine Corps Base Camp Lejeune and Marine Corps Air Station, New River: Water Conservation Analysis" (ECG. INC., 1999), 43.

⁶⁷ Video Deposition of Jacqueline Tukes, Jacksonville, NC, 11 April 2024, p. 38-39, 49, 54-55, 107 [hereafter Tukes Deposition]; "Declaration of Jacqueline Tukes: In re: Camp Lejeune Water Litigation," 26 November 2024, 4.

⁶⁸ Ibid; "Declaration of Jacqueline Tukes: In re: Camp Lejeune Water Litigation," 26 November 2024, 4-5.

⁶⁹ Tukes Deposition, 40-41; "Declaration of Jacqueline Tukes: In re: Camp Lejeune Water Litigation," 26 November 2024, 7.



Three-bedroom unit. (Photo courtesy of U.S. Marine Archives, Quantico, VA)



Trailer Park unit (Photo courtesy of U.S. Marine Archives, Quantico, VA)



Kitchen in three-bedroom unit at Midway Park (Photo courtesy of U.S. Marine Archives, Quantico, VA)

a day, replacing one of the showers with a bath about twice a week. She also brushed her teeth daily with lukewarm water.⁷⁰

Mrs. Tukes would give her son a 15-minute hot shower before she showered. She recalled completing her personal hygiene and daily routine for 15-20 minutes in the bathroom while her husband was showering. She recalled that the door to the bathroom was closed during these showers.⁷¹

The accommodations in military housing varied depending on the quality of craftsmanship by the builder and when the military constructed them, but they had modern conveniences such as indoor plumbing, heat, sometimes air-conditioning (usually not central air as that came later in the 1980s and forward), electricity, and gas. These were all amenities that many Americans, especially through the 1950s and 1960s, still lacked, especially in impoverished regions where many of the enlisted oftentimes originated.

Outside of the individual homes in housing areas, the neighborhoods at Camp Lejeune were communities like many suburbs then sprouting up around the country. There were common areas, including playgrounds and sporting facilities, local PXs (the equivalent of the convenience store), theaters in many areas, and community centers where people gathered for many different events.

Mrs. Tukes and other women on base who were dependents of Marines had many duties outside of the home that took them all over the base. There was shopping to do at the Hadnot Point PX when they needed food and dry goods. There were school events, hospital appointments, and social engagements, mostly at Hadnot Point area where everyone congregated by taking the bus and walking around. Here, residents relied heavily on water fountains for hydration and consumed more in the hot/humid summer months.

⁷⁰ Ibid.

⁷¹ Tukes Deposition, 54-55.

When the kids were out of school, they swam at the local pools and did extracurricular activities across the base, typically relying on drinking fountains at the various facilities such as the Onslow Beach or sports fields.⁷² Parents could sign their children up for day camps where they could participate in games and play in the woods.

Numerous mothers such as Mrs. Tukes residing in on-base housing had similar daily routines with cooking, cleaning, laundry, and childcare, the latter shaped by the ages of the children and their school activities. Family members left their homes to visit with neighbors, travel to Hadnot Point for social events, engage in chores, shopping, and entertainment, and so forth. They interacted with the water at home and on main areas on base, much like their spouses, either traversing the huge base, or staying in Hadnot Point for training, administration, and other duties.



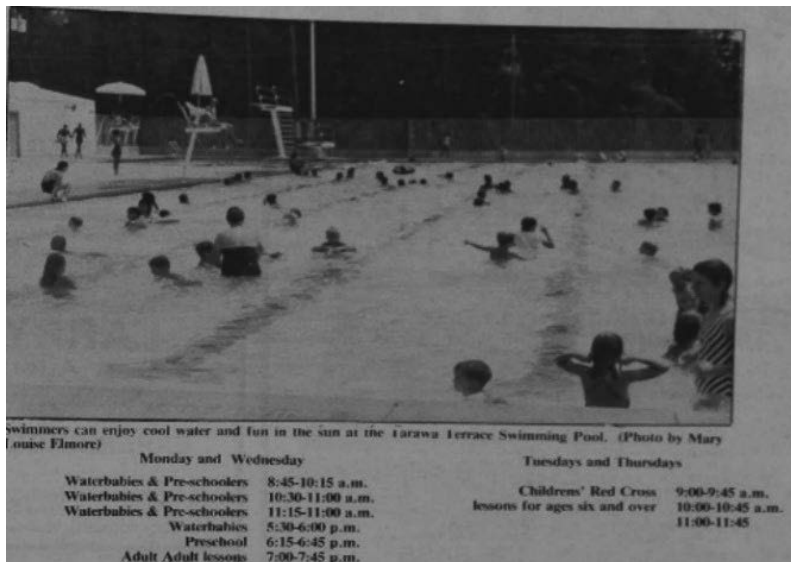
**Little League team, Lejeune,
The Globe, May 19, 1960**



**Children at playground,
Midway Park, The Globe,
May 19, 1960**



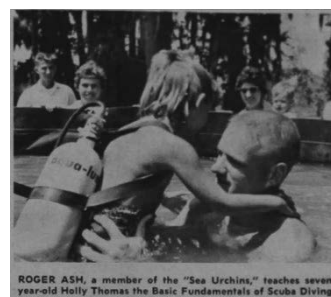
**Summer camp, The
Globe, Aug. 14, 1980**



swimmers can enjoy cool water and fun in the sun at the Tarawa Terrace Swimming Pool. (Photo by Mary Louise Elmore)

Monday and Wednesday		Tuesdays and Thursdays	
Waterbubies & Pre-schoolers	8:45-10:15 a.m.	Children's Red Cross	9:00-9:45 a.m.
Waterbubies & Pre-schoolers	10:30-11:00 a.m.	lessons for ages six and over	10:00-10:45 a.m.
Waterbubies & Pre-schoolers	11:15-11:50 a.m.		11:00-11:45
Waterbubies	5:30-6:00 p.m.		
Preschool	6:15-6:45 p.m.		
Adult Adult lessons	7:00-7:45 p.m.		

Family swimming at Tarawa Terrace pool



**Scuba training for children,
The Globe, 11 July 1963**

⁷² U.S. Marine Corps, "Recreation at Camp Lejeune, 1952," 23 June 1952, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.



Water balloons, *The Globe*, 9 July 1981

The children also interacted with water throughout their days in the cafeterias and using water fountains throughout school properties on base. They drank tap water at home and at school. They spent hours at the baseball or football fields, bicycling or running around the base, and at the basketball and tennis courts. Children were active both during the school year and the summer.



Women at the Tarawa Terrace Beauty Shop, *The Globe*, 10 April 1986

While children attended school, there were a number of activities for mothers. As one person observed, "There are clubs to cover a wide variety of interest for women. There are enlisted, staff and officer wives' clubs, bowling leagues, golf associations, hobby-shop facilities, and a multitude of other activities."⁷³ Soldiers, their spouses, and their dependents went to school activities, volunteered on base, and attended clubs and other social activities, all the while spending their hard-earned and limited money on base (as the military intended). They developed relationships with fellow Marines and their families. It was a very insular system that resulted in individuals being often located on the base where the public water systems were.



Wives' Club of Knox Trailer Park, Dec. 1965, *The Globe*, 6 Jan. 1966

IX. Schools.

As in any community, schools were also a major organizing institution for children and families. Camp Lejeune had schools that started with pre-K and continued through elementary and high school, and additionally the base hosted university extension courses. Thousands of children populated the schools, which the Department of Defense staffed with civilian teachers employed through the Department of Defense Education Activity (DoDEA). By the late 1960s, there were seven elementary schools, and a large modern high school linked together by a good busing system that reached all parts of the base.⁷⁴ While the numbers fluctuated by the late 1970s, they held fairly steady at around 3,300 enrolled students, kindergarten through twelfth grade.⁷⁵ Like other schools across the country, those at Camp Lejeune hosted many activities for the kids as well as families. Students participated in sports such as football, basketball, swimming, baseball, and track.



Marine woman at hospital with wounded soldiers, *The Globe*, 6 Feb. 1970

⁷³ Richardson, "Post of the Corps," 28-29.

⁷⁴ Richardson, "Post of the Corps," 27.

⁷⁵ U.S. Marine Corps, Command Chronologies, July 1977-December 1977," U.S. Marine Corps Archive, Quantico, VA., 49.

Base School Bus Schedule
1966-1967

This is a detailed bus schedule for the 1966-1967 school year. It lists various locations including Courthouse Bay, U.S.N. Hospital, Paradise Point, Berkeley Manor, Midway Park, Tarawa Terrace I & II, Camp Knox, and Rifle Range. Each location has a corresponding bus route and schedule.

School bus schedule, *The Globe*, 25 Aug. 1966



Tarawa Terrace elementary, free dental exams, *The Globe*, 8 Feb. 1962

Lejeune High School — All 9-12 students residing in quarters at Camp Lejeune and New River Air Station.
Brewster Junior High School — All 7-8 students residing in quarters at Camp Lejeune and New River Air Station.
Delallo Elementary School — All K-6 students residing in quarters at New River Air Station.
Tarawa Terrace I Elementary School — All K-3 students residing in quarters at Tarawa Terrace, Camp Knox and Midway Park.
Tarawa Terrace II Elementary School — All grade 4 students residing in quarters at Tarawa Terrace, Camp Knox and Midway Park. All 5-6 students residing in quarters at Tarawa Terrace, Berkeley Manor, Paradise Point, Hospital Point, Courthouse Bay, Rifle Range, Camp Knox and Midway Park.
Berkeley Manor Elementary School — All K-4 students residing in quarters at Berkeley Manor and on Oklahoma and Ohio Courts at Watkins Village.
Stone Street Elementary School — All K-4 students residing in quarters at Paradise Point, Hospital Point, Courthouse Bay, Rifle Range, and Watkins Village except quarters on Oklahoma and Ohio Courts.
The 1960-61 school year will begin 2 September 1960.
Eligibility. All dependent children who are living with their military sponsor in government quarters and are of school age are eligible to attend the school system.
Children of personnel who are certified by the Base Housing Officer

School information, from *The Globe*, 10 July 1980



Tarawa Terrace II Track Meet, *The Globe*, 8 Feb. 1962

Like their parents who trained in the often hot and humid environment, they consumed water to battle dehydration (both during breaks at the water fountain between classes and after recess as well as at lunch). In junior and high school, they also often participated in sports that would have led to showering following participation.

School would have been the source of a school-going child's or teenager's water for the majority of their day whether they were drinking it from the taps between classes, ingesting it with their cafeteria food, inhaling steam in the showers, or quenching their thirst after running around in the sports and activities offered after regular school hours had elapsed.

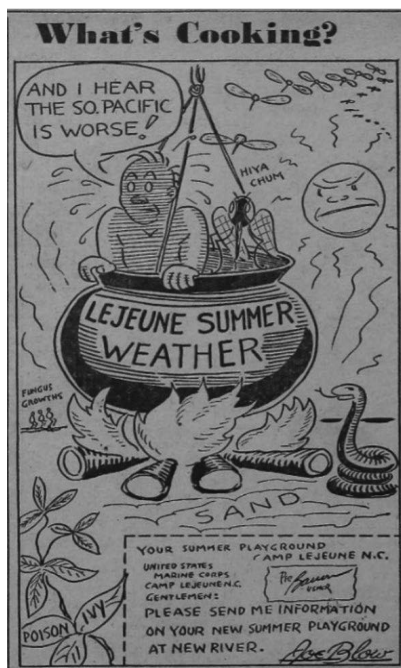
X. Climate.

The weather of the period from the late spring until the early fall approximated some tropical climates, which the lack of air conditioning exacerbated before its large-scale introduction in the 1960s and 1970s. The base was located on the coast, in the south, and as noted above, numerous activities occurred outdoors.

Historically preserved anecdotes and reporting reflect how Camp Lejeune was known to many as “Swamp Lejeune” or “Swamp Lagoon,” due to its marshy coastal setting complete with swarms of mosquitos.

One Marine who fought along the New River at the Battle of Guadalcanal in horrific conditions of the tropical South Pacific in 1942 commented about Camp Lejeune: “If this place had more snakes, it would be just like New River.”⁷⁶ A *Globe* cartoon alluded to the climate:

⁷⁶ Mike Magner, *A Trust Betrayed: The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families* (DeCapo Press, 2014), 30.



The Globe, 1944

As the cartoon to the left and the table below indicates, Camp Lejeune’s location near the water, both the beach and tidal rivers, led to higher temperatures during the summer months with large quantities of sunlight. The nature of Camp Lejeune’s weather naturally was coupled with a need to stay hydrated.⁷⁷ During hot days, family members would run errands, attend to foodstuffs and other needs, go to scheduled medical appointments and physical activities throughout the day, and so forth.

It was a challenging setting for heavy exertion and exercise as compared to the other Marine base at Camp Pendleton in California, which in July was, on average, 15 degrees cooler with nice ocean breezes and lower humidity. The climate affected how much water the Marines and their dependents needed, and the U.S. military would have been hard-pressed to find a place with warmer sunnier weather to train and house large numbers of Marines outside of bases such as those overseas in the Philippines, Panama, or Cuba.

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Average High (F)	56	59	66	74	81	87	90	88	83	75	67	58
Average Low	34	37	43	51	59	68	72	71	65	54	44	37
Average Humidity	73%	74%	72%	72%	75%	75%	75%	76%	76%	74%	74%	73%
UV Index	2	3	4	5	5	6	6	6	5	4	3	3
Rainfall (in inches)	4.06	3.63	4.10	2.74	3.70	5.07	7.11	7.19	6.90	4.0	3.74	3.44

Table reflecting historical climate readings, Camp Lejeune area⁷⁸

XI. Staying Hydrated.

The military has focused on the health of its soldiers over its long history. It has been a priority for commanders to sustain operational units, including through a focus on the basics of hydration. As one military study under the heading “Message to the Unit Commander,” stressed, “historically, in every conflict the US has been involved in, only 20% of the hospitalizations have been from combat injuries. The other 80% have been from diseases and nonbattle injuries (DNBI).” It added: “Excluded from these figures are vast numbers of soldiers with decreased combat effectiveness

⁷⁷ See The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 2, No. 9, April 18, 1945. Bates 00897_PLG_0000056445 to 56460.

⁷⁸ U.S. Climate Data, “Climate Camp Lejeune-North Carolina,” <https://www.usclimatedata.com/climate/camp-lejeune/north-carolina/united-states/usnc1306> [accessed 23 November 2024]; Weather World, “Camp Lejeune, North Carolina Climate Averages,” <https://www.weatherworld.com/climate-averages/nc/camp+lejeune.html> [accessed 23 November 2024].

due to DNBI not serious enough for hospital admission.” It concluded: “Preventive medicine measures are simple, commonsense actions that any soldier can perform, and every leader must know.”⁷⁹ Preventative measures included hydration such as during significant physical exertion. As General Anthony Zinni has noted, “It is considered a leadership responsibility . . . especially in climates like [Camp Lejeune], to ensure that [Marines] are hydrated. We have—our medical people, our corpsmen, in our units . . . where we have doctors’ part of their responsibility, too, is to ensure that people are properly hydrating.”⁸⁰



Marines in full gear march

The majority of training for the Marines at Camp Lejeune, depending on their MOS,⁸¹ revolved around preparing for the next deployment. This meant a great deal of time focused on physical preparedness and readiness. As one Vietnam-era Marine noted: “They work us harder than the average college student. But there’s a reason. We are learning how to kill, while the college student is learning how to live.”⁸² It was serious business; throughout Camp Lejeune’s existence in WWII and the Cold War, Marines never knew what to expect in terms of their next mission, as hotspots developed periodically such as in Korea, Lebanon in 1958, Vietnam, Lebanon and Grenada in 1983,

and the Middle East after 1991. These tasks mandated combat readiness. One Marine noted about the focus at Camp Geiger after leaving Parris Island: “He must be in top physical shape and stay that way throughout his tour.”⁸³ A Marine manual emphasized something similar: “A program of regular, vigorous and progressive physical training results in an increase in work efficiency, self-confidence, and personal as well as unit pride.” The manual argued that cardiovascular training, with a focus on stamina for “prolonged activity of a moderate tempo,” combined with strength work to manipulate, at the minimum, the weight of the individual ensured longer lives and the “ability to march long distances with heavy loads or to work long hours and still maintain the reserve to carry on in an emergency.”⁸⁴

The daily routine for most Marines on base required physical training, often Monday through Saturday. The day often started early, sometimes around 6 a.m. After being allotted time to dress and go to the bathroom, Marines headed out of the barracks for calisthenics and training. They often performed hours of resistance exercises with their body weight, including push-ups, sit-ups, squats, and other innovative exercises the trainers directed them to complete to build lean muscle. They engaged in such exercises as using rifles for lunges, completing chest presses, and participating in static exercise, which resulted in aerobic and anaerobic exertion. At times, six-to-

⁷⁹ Department of the Army Headquarters, *Field Hygiene and Sanitation* (Department of the Army, 1988), 1.

⁸⁰ Zinni Deposition, 41-42.

⁸¹ The Marines Military Occupational Specialty (MOS) is a system that categorizes career fields.

⁸² As cited in Kyle Longley, *The Morenci Marines: A Tale of Small Town America and the Vietnam War* (University of Kansas Press, 2013), 76.

⁸³ Jack McLean, *Loon: A Marine Story* (Ballantine Books, 2009), 58.

⁸⁴ U.S. Marine Corps, “United States Marine Guidebook of Essential Subjects,” (U.S. Marine Corps Institute, 1983), 7.1-7.2.

Table 1. Water Requirements

Activity	Illustrative Duties	Quarts per man per day for drinking purposes (a guide for planning only) WBGT or WD Index*	
		Less than 80°	Greater than 80°
Light	Desk work	5	6
Moderate	Route march	7	9
Heavy	Forced marches; stevedoring; entrenching; or route marches with heavy loads or in CBR protective clothing.	9	13

* 80° WBGT or WD index is approximately equivalent to a dry bulb temperature of 85° in a jungle or 105° in a desert environment. (WD = $0.85WB + 0.15DB$)

seven-mile runs followed as well as days at the obstacle courses where they climbed ropes, crossed monkey bars, crawled under barbed wire, and ran through a variety of obstacles. All the while, instructors pushed them to attain and stay in top-notch shape and to create unit cohesion. Depending on the schedule, these instructors might order the Marines into their camouflage gear with full packs that weighed between 50-60 pounds in addition to their weapons before embarking on marches that could go as long as 50 miles.⁸⁵



Marines in MOPP Gear

As seen in the “water requirements” table above-left found in a 1980 publication put out by the U.S. Navy, Army, and Air Force, all of these activities, coupled with the climate, necessitated consumption of water that contrasted with ordinary consumption of individuals in other less rigorous forms of service.⁴ The weather and duty types led to the Marines taking steps to provide easily accessible drinking water. The Marines worked hard to develop means to ensure the availability of this water so as to avoid dehydration and issues such as cramps and heat stroke.⁸⁶



Marines in MOPP Gear, *The Globe*, 16 Aug. 1984

During training, the Marines often carried their 32-ounce canteens (often more than one) which they filled periodically in the barracks or from water barrels with hoses across the base. While, in the 1970s, the Marines began allowing supplemental additions such as Gatorade for mineral replenishment, mostly, instructors were just directing the Marines to drink water during their breaks.

Training was more severe when the Marines had to conduct operations in MOPP (Mission Oriented Protective Posture) with heavy body suits and masks to protect against chemical, biological, or radiological threats. Heavier body armor was worn in combat training exercises that had become a standard during the Vietnam

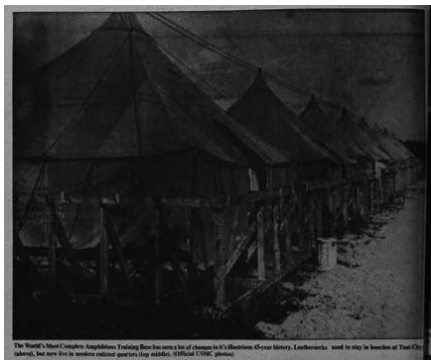
⁸⁵ U.S. Marine Corps, “Obstacle Course at Camp Lejeune, 1953,” 14 May 1953, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina; U.S. Marine Corps, “Training Activities at Camp Lejeune,” 31 October 1961, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina; Oral History via Zoom by the Author with Alan Howard, 30 August 2024 [hereafter Howard Oral History].

⁸⁶ Departments of Army, Navy, and Air Force, “Prevention, Treatment and Control of Heat Injury” (Washington D.C. Departments of the Army, the Navy, and the Air Force, 1980), 5.

War and evolved in 1980s. Manuals emphasized that “MOPP/body armor increases your heat stress” and to “drink more water. Work and rest as your leader directs.”⁸⁷ The Marines had incorporated the gear when training for deployment to hotspots in the Middle East where governments had chemical/biological weapons. The training on base, whether physical training or preparing for biological and chemical warfare, was intense.

The Marines were readying themselves for future deployments, oftentimes not knowing where they might go. However, they knew it could be an inhospitable climate that required preparation for everything from providing water to cooking and showering in the middle of a combat zone. Thus, the Marines took time away from the main part of the base and training areas and headed out into the field for simulated campaigns that would prepare them for the situations that they would face.

XII. Field Training and Tent Cities.



**Field tents for bathing and dressing,
The Globe, 8 May 1986**

Historical records describe that approximately twenty percent of the time spent by Marines at Camp Lejeune could involve field training, spending a week or so at various parts of the base (and sometimes at places such as Fort Bragg) preparing for maneuvers and trying to replicate the nature of combat or amphibious assaults, at least living conditions during deployment.⁸⁸

One of the challenges that the military faced in the wars in the 20th Century, particularly those fought by the Marines in South Pacific and later Vietnam, was how to deal with the heat and humidity. Many of the areas where the troops prepared to fight in Southeast Asia, Latin America, Africa, and the Middle East

required preparation for extreme climates with many challenges. These environments generally required large quantities of water for sanitation and proper hydration to sustain troops in combat and prevent both diseases, such as dysentery, and also heat related ailments, such as heat stroke. Thus, the Marines and other military branches emphasized how to care for their soldiers relating to water during field training, especially in hotter climates such as those of Camp Lejeune. Marines at Camp Lejeune recall these long days preparing for future deployments. Mr. McElhiney remembers that, during a six-month training period, he spent ten days a month living in the field. Outside of that six-month training period, he spent another two weeks every three- or four-months doing field training. Similarly, Mr. Howard recalls spending ten, or maybe slightly more, days in the field in a 30-day month.⁸⁹

⁸⁷ Department of Army Headquarters, *Field Hygiene and Sanitation*, 6.

⁸⁸ U.S. Marine Corps, “Maneuvers at Camp Lejeune,” 16 July 1969, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.

⁸⁹ McElhiney Declaration, 3; Howard Deposition, 17.



Marines fill water buffalo, Hadnot Point



Marine showering in the field, *The Globe*,
26 June 1952

According to General Anthony Zinni, during the Vietnam War era, Marines went out on maneuvers for weeks at a time. To hydrate, they used water buffaloes, wheeled water tanks that provided water during field training and operations. The logistics command was the fourth service support group located at Hadnot Point, the industrial area, and they had responsibility for providing this water.⁹⁰

On field days, many Marines used water buffaloes for hydration, brushing teeth, shaving, cooking, cleaning and "field bathing." Sometimes they would mix water buffalo water with "meals ready to eat" or food that they needed to hydrate to consume.⁹¹ Some of the Marines would even stay in "tent cities" to house, feed, and clean themselves during field days in order to simulate deployment conditions. One retired Marine, Lamar Urquhart, recalled the tent cities during his deposition. An electrician, he helped set up these tent cities at Camp Lejeune in the early and mid-1980s. He helped wire up the water heaters that used water provided by water buffaloes to provide hot water to the shower tents. He also helped prepare for field deployment by filling the water buffaloes primarily at Hadnot Point locations.⁹² There were also "GP" (general purpose) tents sized about 20 by 20 feet. They connected three of these GP tents for bathing. One would be a shower tent, with multiple shower heads, often all running together simultaneously, creating a "steam bath," former service member Mr. Urquhart recalled. The water was hot and the ceiling at the shower heads stood at about 7-8 feet. Mr.

Urquhart said you could touch it by reaching up when under the shower head. The ventilation was poor because the ventilation flaps at the top of the tent were typically closed, especially during cooler weather. The next two tents would be for changing clothes and brushing teeth, with sinks pulling from the same water buffalo or tap water. Mr. Urquhart also described the "mess" tents, where the marines would eat. These tents paralleled the bathroom tent setup with water pulled from the water buffaloes for drinking and preparing beverages including coffee, or for cooking meals.⁹³

⁹⁰ Video Deposition of General Anthony Charles Zinni, Williamsburg, VA, 28 May 2024, 33-34 [hereafter Zinni Deposition]. See also *The Globe*, 18 June 1981; *The Globe*, 15 October 1987.

⁹¹ Howard Deposition, 34-36; McElhiney Deposition, 70-71.

⁹² Video Deposition of Benjamin L. Urquhart, 13 November 2024, 72 [hereafter Urquhart Deposition]

⁹³ Urquhart Deposition, 84-89.

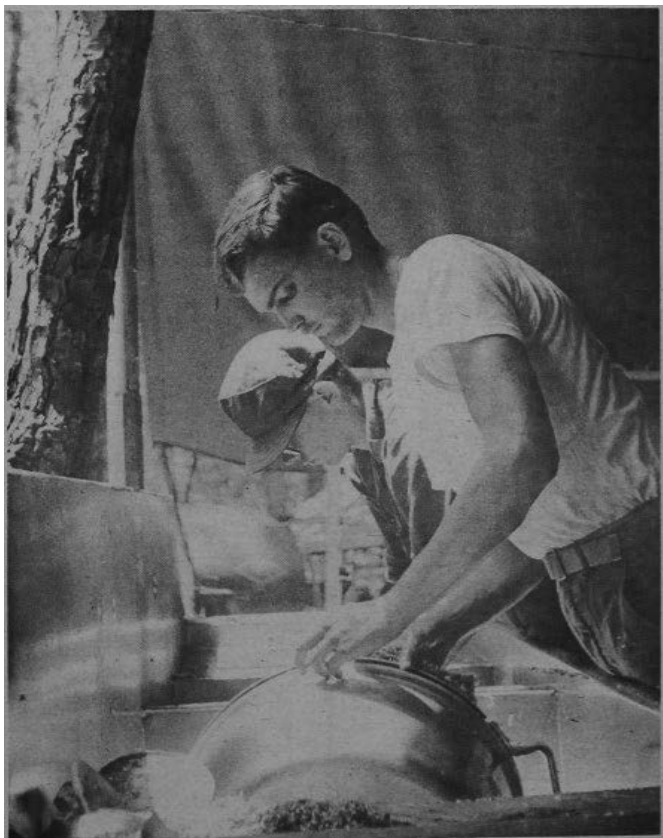
106. INDIVIDUAL WASHING. When necessary, soldiers in the field must wash and retain their own mess kits. Just before each meal the mess kits are disinfected as described in a below. After the meal, remaining food is scraped off as completely as possible into a garbage can or pit, using the spoon. The washing, rinsing, and disinfection after use is done in a series of three containers (usually GI cans) by the method described in b below:

a. Disinfection before use. Before each meal, the mess gear with the exception of the canteen will be disinfected by immersing for not less than 3 seconds in clear boiling water. All of this equipment including cutlery may be assembled by hanging it on the meat can. Wire hooks or other suitable holders may be improvised to avoid too close contact with the steam.

b. Washing, rinsing and disinfection after use.
(1) Wash thoroughly in first container, filled with *hot soapy water* (120° F. to 140° F.) or other approved

99

A field training manual from July 1945 outlines proper care of mess kits



Marines washing pots in the field, *The Globe*, 18 July 1974

By the 1980s, the military had established hydration guidelines for field training exercises based on lessons learned from earlier wars which later served important roles in the wars of the desert in 1991 and in Iraq in 2003. Among the military's recommendations was one stating that, "Depending on the heat, you may need to drink from ½ to 2 quarts of water per hour—4 gallons or more per day in hot dry climates." These guidelines promoted drinking water before beginning exertion, preferably cool water (50 to 55F), drinking small quantities frequently even when not thirsty, and filling and topping-off canteens when provided an opportunity.⁶⁶

The training in the field was more intense for those at Camp Lejeune preparing for Recon. Often considered the most elite units in the Corps, groups of five to seven men could be dispatched, often behind enemy lines, to reconnoiter enemy positions and request air strikes and artillery on an elusive enemy. Their physical training, with rigorous assessments of strength and endurance training, included daily swimming and often water survival, time on the rifle ranges, special training with weapons, and testing on tactics and first aid. The initial training period typically washed out over fifty percent of those who began the program. More than any group on base, they spent time in the field and training, experiencing challenges including heat exhaustion and cramping.

Additionally, each summer, more than 10,000-15,000 reservists invaded the base for their Annual Training Duty (ATD), swelling the ranks of the thousand-man naval personnel working in the hospital and

Medical Field Research Laboratory that combined with nearly 3,600 civilian employees and twenty thousand or more military dependents. During this time, water for showers, cooking and cleaning, and of course consumption increased significantly and placed a heavier burden on the water wells and the water distribution system.⁹⁴

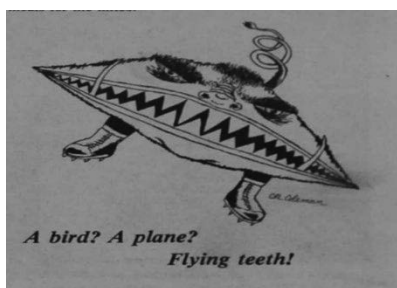
XIII. Compromising the Skin Barrier on Field Days.



Passing through barbed wire



Medic treating Marine with foot blisters, *The Globe*, 1961



Chigger in *The Globe*, 2 July 1981

One of the challenges of field training had to do with abrasions and wounds incurred during the process. A major focus of the Marines and Army was footwear and having properly fitting boots and dry socks when fighting or training in wet areas. Wet footwear combined with long marches, sometimes exceeding twenty miles a day, led to Marines often ending up with blisters on their feet and ankles. In the field there was water available for washing skin drawn from sources at Hadnot Point and carried into the field in water buffaloes.⁹⁵

Other wounds experienced in the field included from barbed wire and other obstructions or through bites of insects such as mosquitoes, chiggers, ticks, and fleas from the marshes and forests, creating lesions (often made worse by scratching at the bites) that required treatment to prevent infection.

Chiggers existed in large numbers and plagued Marines, along with mosquitoes. *The Globe* published twenty-five different articles from the 1950s through the 1980s mentioning chiggers. These pests bore into skin and inject a toxic ingredient that leaves red welts. People can scratch at them until they bleed. The Marines tried everything from wearing panty hoses to flea collars, and heavy concentrations of insect repellent, often with no effect. They were everywhere, in the high grasses, along hiking trails, and even the golf course and front lawns.⁹⁶ The advice that *The Globe* published on getting rid of these insects involved applying water directly onto the chigger burrows in the skin. The articles noted that “the most immediate way to reduce the itching is to take repeated baths,” and “[o]nce chiggers have bitten, the experts advise using a hot washcloth applied to the area affected.”⁹⁷

⁹⁴ Elliott, “Post of the Corps,” 19; U.S. Marine Corps, “Reserves Training at Camp Lejeune,” 1949, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.

⁹⁵ U.S. Marine Corps, “First Aid at Camp Lejeune,” 1972, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.

⁹⁶ *The Globe*, 1 July 1981; *The Globe*, 9 June 1977, *The Globe*, 3 May 1957.

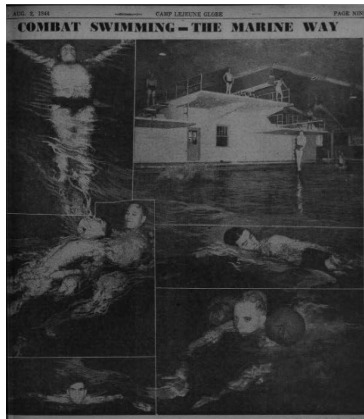
⁹⁷ *The Globe*, 5 May 1983.

Field training was a hard and dirty duty during which Marines often slept on the ground, which was often muddy during the rainy season of the summer, when as much as 7-8 inches of rain fell a month. Field training constituted a major part of the training experience and involved use of water from Hadnot Point for drinking, bathing, washing hands, brushing teeth, and other activities.

XIV. Swimming Pools.

Marines and their family members also frequently used the indoor pools for training and recreation. Contributing to the potential pervasiveness of water moisture within these spaces, a 1986 survey found that the Area 2 and Area 5 Training Pools in Hadnot Point both had exhaust fans that were not operational.⁹⁸

Because they were part of the U.S. Navy and needed the skills to survive at sea and during amphibious assaults, Marines had to spend time doing water survival training. In large indoor training facilities across base, everyone learned to swim effectively and many more went beyond the requirements to become instructors. Every Marine had to have some form of swim training and pass a series of tests annually to continue to receive certification. According to a 1944 issue of *The Globe* publication, during the “beginner” stage of training, soldiers spent five hours in the pool, and the “rough water” stage of training included four hours in the pool. Those who had not learned to swim in advance needed instruction in treading water, simple swim strokes, and other water safety. Annually, the Marines retested people as recalled by Mr. Howard among others.⁹⁹



The Globe, 2 Aug. 1944

Marines who participated in a pre-dive course could spend hours in the pool each day for two weeks. It could take two hours for a Marine to become basic swim qualified, four to five hours for a Marine to become intermediate swim qualified, and 25 hours for a Marine to become advanced qualified. Some Marines also became water safety survival instructors who spent time learning to teach others to swim that they learned to float for 10 minutes and swim 50 meters while diving to the bottom of the pool to retrieve objects, all the while with their feet tied together.¹⁰⁰

⁹⁸ J. R. Bailey, Commander, Atlantic Division, Naval Facilities Engineering Command, Transmittal of Survey of Potable Water Treatment Plants and Swimming Pool Water Treatment, p. 5, Dated May 29, 1986, Bates CLJA_USMCGEN_0000006660 to CLJA_USMCGEN_0000006671.

⁹⁹ *The Globe*, 2 August 1944; Howard Deposition, 45-46.

¹⁰⁰ Email from Charity Delaney to Jason Saunter, 20 August 2014. The Marines follow a similar curriculum even today. Ashley Gomez, “Camp Lejeune Marines Sharpen Water Survival Skills,” *Marines: The Official Website of the United States Marine Corps*, 18 July 2018, <https://www.lejeune.marines.mil/News/Article/Article/1572942/camp-lejeune-marines-sharpen-water-survival-skills/> [accessed 30 November 2024]



1962 *Globe*. 00897 PLG 0000048152-
00897 PLG 0000048163.

The Marines had significant interaction with the swimming pools on base, often at Hadnot Point. Many trained hours in the water, including those in specialized training such as Recon, absorbing it through full body immersion. It was one of the many ways by which people at the base interacted with water, but an important one given the requirements and the opportunities. The pools were also open to the civilian population and Marines to use recreationally. This recreational time at the pool included independent swimming as well as group classes. Mr. McElhiney, for example, taught scuba lessons for four-hour-long stretches at the pool on certain weekends.¹⁰¹ There are also historically preserved videos of residents taking their small children for swimming classes on base, including a specialized “Water Babies” course for infants.



Water Babies course (video still)



Swim Team Practice, 1979.
00897 PLG 0000038011-
00897 PLG 0000038024

There was also a swim team for residents aged six to eighteen that practiced 4:30 to 6:30 p.m. Monday through Friday in the Area 5 swimming pool and sometimes hosted meets on Saturdays.¹⁰²

¹⁰¹ “Declaration of Gary McElhiney: *In re: Camp Lejeune Water Litigation*,” 25 November 2024, 29.

¹⁰² The *Globe*, Camp Lejeune, N.C., Vol. 35, No. 43, Nov. 1, 1979, Bates 00897 PLG 0000038011 to 00897 PLG 0000038024; The *Globe*, Camp Lejeune, N.C., Vol. 29, No. 17, Nov. 21, 1973, Bates 00897 PLG 0000041602 to 00897 PLG 0000041609; The *Globe*, Camp Lejeune, N.C., Vol. 43, No. 4, Jan. 29, 1987, Bates 00897 PLG 0000026597 to 00897 PLG 000002663; The *Globe*, Camp Lejeune, N.C., Vol. 28, No. 17, Apr. 27, 1972, Bates 00897 PLG 0000042620 to 00897 PLG 0000042631; The *Globe*, Camp Lejeune, N.C., Vol. 21, No. 22, June 3, 1965, Bates 00897 PLG 0000046163 to 00897 PLG 0000046174.



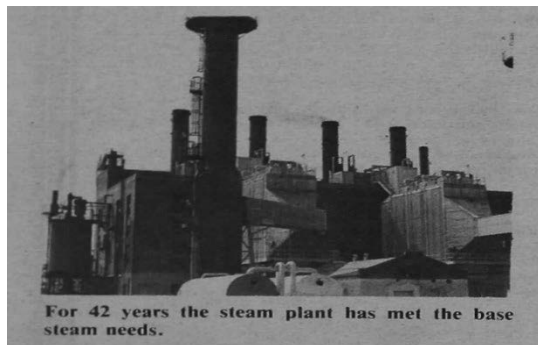
Swim Team Competition at the Area 5 Pool, 1972.
00897 PLG 0000042620-00897 PLG 0000042631.



Scuba training at indoor pool, from *The Globe*

XV. Steam.

Steam was not only associated with hot water use activities like cooking and showering, but also in connection with other uses. Hadnot Point's central heating plant relied on steam with a 9,000-square-foot boiler with an operating pressure of 150 pounds according to a record from 1946.¹⁰³ By 1972, the Hadnot Point heating plant capacity had significantly increased. That year, the plant had four different boilers with capacity for 100,000 pounds per hour each. When temperatures were low, the plant used up to all four boilers in service to meet base demand, around 335,000 pounds per hour. A 1972 document stated that they would need to add a fifth boiler with a 100,000 pound per hour capacity in order to meet base demand for heat generation.¹⁰⁴



Steam plant, *The Globe*, 16 Aug. 1984

According to a document from 1985 listing the duties and responsibilities of the deputy maintenance officer, "[a]nnual steam production [was] approximately 1.5 billion pounds" at the hot water plants across Camp Lejeune.¹⁰⁵ In 1984, *The Globe* ran an article stating that seven steam plants across the base produced a cumulative 1,800,000 pounds of steam per hour in the summer months and a cumulative 4,500,000 pounds of steam per hour in the winter months. According to

¹⁰³ Camp Lejeune, U.S. Marine Base and Related Activities: U.S. Naval Hospital, U.S. Coast Guard Detachment, Field Medical Research Laboratory, Dog Detachment, and Marine Training Command, dated Oct. 1, 1946, Bates CLJA_WATERMODELING_07-0001200597 to CLJA_WATERMODELING_07-0001200638.

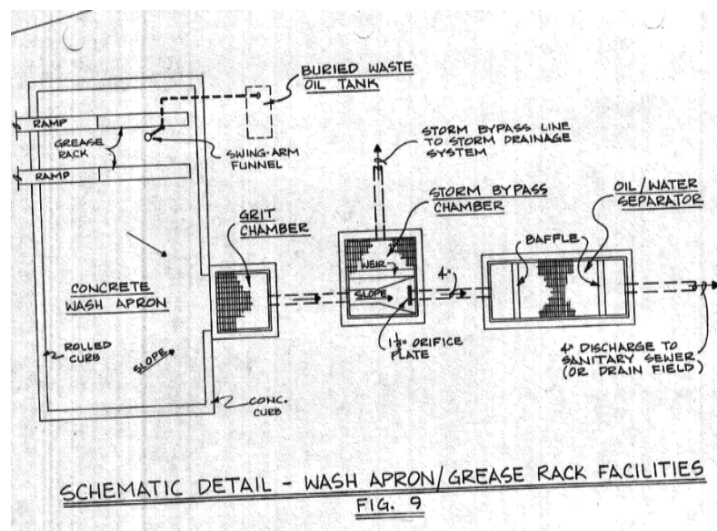
¹⁰⁴ U.S. Marine Corps, "Marine Barracks Camp Lejeune, North Carolina, Naval District Five Report," 1 October 1946 [CLJA_Watermodeling_07-0001200597]; U.S. Marine Corps, "Master Plan for the Development and Utilization of the Camp Lejeune Area," 24 March 1970 [CLJ0257940].

¹⁰⁵ U.S. Marine Corps, "Position Description for Director, Maintenance & Repair Branch," 16 December 1987. [CLJA Watermodeling, 07-0011086866, 07-0001086909].

the article, “[t]he steam is derived from water obtained from the water treatment plant.”¹⁰⁶

Marines, their family members, and other civilians worked in laundry facilities, fire stations, hair salons, dentists, hospitals, bakeries, and meat preparation facilities. At each of these places, people could encounter steam resulting from heating or other uses.¹⁰⁷

XVI. Occupational Duties.



Schematic of a “wash apron”

and is mixed with water to remove accumulations of oils, grease, and dirt from the underside of the vehicle chassis and the engine block.”¹⁰⁹ According to a 1983 operation and maintenance manual, “almost every Marine Corps unit throughout Base operates at least one wash apron for cleaning of vehicles, tanks,¹¹⁰

After being in the field, the Marines pulled their vehicles up onto ramps of varying sizes in the motor pools to clean them, a requirement of a wash after deployment mandated by commanders.¹¹¹ As one 1985 document about an automotive maintenance shop described, “During field exercises tanks and other vehicles can ‘pick up’ large accumulations of dirt and sand. Before entering the

Various groups used water in their everyday jobs. Marines, their family members, and civilians worked in laundry facilities, fire stations, hair salons, dentists, hospitals, bakeries, meat preparation facilities, and a number of other locations using water. For example, some worked at vehicle maintenance shops. They would use a “steam jenny,” or portable steam unit, also used in the laundry facilities,¹⁰⁸ to clean vehicles on base. A 1978 document summarized the process stating that, “Wash aprons use steam and water for cleaning automotive and military vehicles. Steam is generally supplied from a portable ‘steam jenny’

¹⁰⁶ *The Globe*, 16 August 1984.

¹⁰⁷ U.S. Marine Corps, “Training Activities at Camp Lejeune,” 31 October 1961, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.

¹⁰⁸ *The Globe*, Camp Lejeune, N.C., Jan. 8, 1953, Bates 00897_PLG_0000053480 to 00897_PLG_0000053486.

¹⁰⁹ Austin Brockenbrough and Associates, Consulting Engineers, “Oil Spill Prevention Control and Countermeasures Plan,” 1 March 1978, Bates CLJA_NAVLANT-0000007914 to CLJA_NAVLANT-0000008011.

¹¹⁰ Austin Brockenbrough and Associates Consulting Engineers, “Oil Spill Prevention Control and Countermeasures Plan,” 1 March 1978 [CLJA_NAVLANT-0000007914].

¹¹¹ U.S. Marine Corps, Utilities, Energy and Environmental Division, Atlantic Division, “Engineering Study to Correct Existing Operational and Environmental Discrepancies, Building 1450, at Marine Corps Base Camp Lejeune, North Carolina,” December 1982 [CLJA_LANTDIV01-000000555].

parking, area or maintenance shop these vehicles must be cleaned.”¹¹² The maintenance shop referenced possessed three steam hydrants that they used for the cleaning of the dirty vehicles.

Other documents across the base reflect similar uses of steam and wash aprons throughout Camp Lejeune. In 1980, one maintenance shop requested the construction of a 6,370-foot overhead steam line. A schematic of one maintenance facility required six 20-by-40-foot concrete wash aprons with water and steam outlets and one 20-by-60-foot concrete wash apron with water and steam outlets. Other documents from the 1970s contain pages listing the wash aprons and their locations on base, indicating widespread usage of these types of cleaners across Camp Lejeune.¹¹³

There were many people who remembered working in the motor pools for periods of time while at Camp Lejeune. Mr. McElhiney remembered working in the motor pool cleaning vehicles for five days a week, Monday through Friday, for an average of four hours a day. When asked about vapor related to the use of water to clean vehicles, he said, “It’s fair to say I was drenched.”¹¹⁴ During the months when temperatures and humidity soared at the base, those working in the motor pools dealt with the heat and humidity, increasing their water consumption and need to shower and wash. The same was true across the base for others such as those who worked in the kitchens.

XVII. Ventilation and Maintenance Issues.

In addition to the aforementioned ventilation issues in the dining and laundry facilities, many living areas had historically documented issues with excess humidity and poor ventilation. Historical records reflect discussion of matters such as moist air, humidity and standing water. For example, a 1981 report on mildew and excessive moisture in various buildings noted such issues at the Camp Lejeune barracks. The report noted that an onsite survey had been conducted during August 1981 to determine the extent and source of excessive moisture and mildew in buildings that mainly were unaccompanied enlisted personnel housing. The survey included buildings at Hadnot Point and the hospital complex. The presence of “mildew and excessive moisture” varied among rooms and buildings. Some occupants had showers and lavatory areas that “allow the water to flow from the faucet or shower head as hot as they can endure” and “the hot water can flow into the shower stall and lavatory at the high temperature resulting in excessive moisture added to the space.”¹¹⁵ The report noted how in some buildings the same switch would turn on and off both the light and the fan, meaning personnel would “turn off the light when they leave the toilet area which also stops the exhaust fan before the space is properly ventilated following use of the shower.” Other problems included clogged fan coil units in the barracks “resulting in the unit acting as a humidifier

¹¹² U.S. Marine Corps, Director, Natural Resources and Environmental Affairs Division, “Request for Information,” 18 July 1985 [CLJA_Watermodeling_07-0001133623].

¹¹³ U.S. Marine Corps, “MILCON Projects,” 1980 [CLJA_Watermodeling_07-000112575]; U.S. Marine Corps, “Plans with Plumbing and Mechanical Requirements,” 1998 [CLJA_Watermodeling_07-0001248536]; U.S. Marine Corps, Series of Maps for the Base, 30 June 1979 [CLJA_Watermodeling_07-0001352246]; Commanding General of Camp Lejeune, R. McC. Tompkins, to Commandant of Marine Corps, General Wallace Greene, “Consolidation of Support Services in Camp Lejeune Area,” 24 February 1971 [CLJA_Watermodeling_07-0001138692].

¹¹⁴ “Declaration of Gary McElhiney: *In re*: Camp Lejeune Water Litigation,” 25 November 2024, 1-4.

¹¹⁵ U.S. Marine Corps, Atlantic Division, Naval Facilities Engineering Command, “Report on Study Concerning Mildew and Excessive Moisture in Various Building at the Marine Corps Base, Camp Lejeune, North Carolina,” 19 October 1981 [CLJA_Watermodeling_07-0001284958-CLJA_Watermodeling_07-0001285095]

rather than providing dehumidification control.” The report also found that “[h]ot moist air from some of the laundry rooms (from dryer vents and wall exhaust fans) is able to enter those sleeping rooms near the laundry room.” Additionally, there were areas where water accumulated in laundry rooms, the presence of “inoperative exhaust fans,” and “[d]oors to common bathroom propped open allowing hot moist air to enter sleeping rooms,” and “condensation on the front window walls of the sleeping rooms.”¹¹⁶ The report listed different buildings in Hadnot Point with handwritten notes about issues such as mold growing on walls, ceilings, and lockers; dripping AC units; water stains near the laundry units indicating leakage; and others.

Another report, dated 1981, noted that some of the moisture and mildew problems were longstanding, e.g., “From observations of Bldgs. M614 and M616, it appears mildew and excessive moisture problems have existed in the central bathroom areas for some time.”¹¹⁷ Government officials concluded: “The key to mold control is moisture control.”¹¹⁸

A “Final Report on High Humidity/Moisture Conditions Miscellaneous Buildings Camp Lejeune, North Carolina” (July 1983) noted the “purpose of this study and report has been to establish that a humidity/moisture problem does exist. It found “on-going complaints regarding high humidity/high moisture content within the conditioned space of several buildings at Camp Lejeune, North Carolina. Associated with the high humidity conditions has been the prevalent occurrence of property damage from mold/mildew.” “An inordinately high number of toilet exhaust fans were encountered at the buildings inspected which were inoperative. . . Failure of the exhaust systems has great impact on the amount of moisture from the toilet/shower areas which is retained within the building as a latent heat load.” It concluded: “Air quality is also impaired due to proliferation of odors throughout the building. The extent to which failed exhaust fans were encountered suggests that insufficient regimen of preventive and general maintenance is occurring.”¹¹⁹

The Marines concurred with the appraisal of the report which highlighted problems with ventilation at different points on the base, but especially the barracks. One Marine observed that he always just assumed that the exhaust fans in the barracks bathrooms did not work. When he walked back from the shower to his barracks room, “you just started sweating because [there was] no air moving in the barracks.”¹²⁰ For some time, there were few fans to circulate air in parts of the base, especially the older barracks and buildings at Hadnot Point. When the Marines began using air conditioning more prominently, the Marine Corps nonetheless limited its use. One document reported that, per energy conservation, the base set the thermostats to 78 degrees in the summer and only allowed air conditioning to run when it reached 85 degrees.¹²¹

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ U.S. Environmental Protection Agency, “Can Mold Cause Health Problems?” 14 October 2024, <https://www.epa.gov/mold/can-mold-cause-health-problems> [accessed 1 December 2024].

¹¹⁹ Darrell S. Larsen, Mechanical Engineering Branch of the Naval Facilities Engineering Command, “Final Report on High Humidity/Moisture Conditions Miscellaneous Buildings, Camp Lejeune, North Carolina,” 29 July 1983 [CLJA_Watermodeling_07-000134879-CLJA_Watermodeling_07-001375308.pdf]

¹²⁰ “Declaration of Gary McElhiney: In re: Camp Lejeune Water Litigation,” November 2024, 1-4.

¹²¹ U.S. Marine Corps, Commanding General to Distribution List, “Utilities and Energy Management Plan,” 2 June 1982 [CLJA_Watermodeling_07-0001245213-CLJA_Watermodeling_07-0001245244.pdf].

Ventilation issues extended to family housing. Some homes in older neighborhoods had been built quickly, resulting in prolonged issues. The article excerpted below from *The Jacksonville Daily News* shows that Tarawa Terrace residents were experiencing health problems due to mold and mildew issues in their homes, causing the “ventilation of some base residences [to be] questioned,” even after having better air conditioning and updates to bathrooms and kitchens.



News article on ventilation issues at Tarawa Terrace dating back to 1980s, *Jacksonville Daily News*, 18 March 1990.¹

Historical documents also reflect that at times, Marines were required for energy conservation purposes to keep windows and doors shut while the heat was on, from approximately the third week in October to the first week in April.¹²²

XVIII. Recapitulation of Findings.

1. There is a long history of the U.S. military designing its bases to contain its service members and their dependents within base boundaries. If occupants spent more time on the base grounds, they inferably had more time near its water, versus during time spent outside the boundaries of the base. Clearly, as the previous narrative notes, this was very much the case at Camp Lejeune. What I uncovered through intensive research in primary and secondary materials was that Lejeune was a complex organism, relatively isolated from the outside world by its location. In many ways, it was a self-contained county with multiple neighborhoods, such as Tarawa Terrace, Holcomb Boulevard, Camp Johnson / Montford Point,¹²³ with thousands of residences whose inhabitants frequented locations across the base, but especially the “county seat” of Hadnot Point, for medical

¹²² Base Order 11300.1G, p. 3, June 2, 1982, Bates CLJA WATERMODELING 07-0001245213 to CLJA WATERMODELING 07-0001245244.

¹²³ In addition, important communities and areas on the base included Courthouse Bay (location of Marine Corps engineer schools), Onslow Beach (where recon was historically), New River (where an air station is located), Camp Geiger (site of infantry training), and the Rifle Range area (a functional rifle range with a small but permanent staff). In certain ways, all of these spread-out camps were dependent on the existence of Hadnot Point as the “County Seat.” (Source: Ensminger).

services, food and other goods, entertainment and cultural experiences, schools, and for many other reasons. It was, and has remained, a vibrant, integrated community, insular and to some extent self-contained.

2. A substantial part of the overall demographic historically was young, male Marines (under the age of 25) or young families with children. The lack of adequate pay and lack of a need to drive off the base meant most typically lacked cars during much of the relevant years. Marines and others relied on the bus system and walking to access different services on base. It was very different from ordinary American environments today in which cars are ubiquitous. But it reflected the times and resulted in the Marines spending more time on base, spending their money at the PXs, local restaurants and taking time for rest and relaxation in the plethora of sports and entertainment facilities maintained by the Marine Corps.

3. As a related aspect to the base historically being self-contained, there were ample opportunities for social, recreational, and other such events on base, including at facilities geographically located in living areas such as Tarawa Terrace, Midway Point, and Holcomb Boulevard during the relevant period. Many Marines lived in the barracks at Hadnot Point, the nerve center of the base. Marines, their wives and dependents, came from the on-base neighborhoods to Hadnot Point to work, shop, attend religious services, enjoy clubs and entertainment, go for medical care, and participate in many other activities and tasks. Children went to on-base schools. The residents drank from the tap water sources, ate meals and consumed drinks prepared with the water, and swam at the local pools.

4. Research and investigation into sources of historical records and facts, including access to public record archives, documents produced in the CLJA action, and oral histories and testimony of Marines and spouses, reveals the existence of numerous historical facts reflecting the nature of the drinking water uses on the base during the pertinent times. These have been employed and discussed above to develop a narrative encapsulating the everyday lives of Marines and their dependents who spent time at the base during the period under review.

5. Certain features of particular areas, such as shower rooms in barracks, motor pools and mechanic buildings, and scullery and mess hall facilities, reflect an association with steam and water use in the historical documentation and recollections of service members.

6. Historical records and recollections of Marines' daily tasks, activities and duties reflect the presence of numerous outdoor activities, including during warm and hot weather periods, accompanied by the use of canteens and water buffaloes, water stations, and water fountains, Marines on base experienced significant physical exertion during training, both during weeks at the barracks and in field training. Their commanders ensured they remained hydrated with water provided mainly from sources at Hadnot Point. They also bathed in it, washed their wounds with it, and otherwise used it.

7. Likewise, historical records document daily-life and social activities of spouses, children, and civilians that would have involved for instance, spending time at base-located schools that used base water systems, using recreational swimming pools that used base water systems, and engaging

in activities like going bowling, going to movies, going to buy necessities at the commissary facilities, using medical facilities and so forth, which gave rise to opportunities for water use. Like their military spouses, the family members spent time in recreational activities across the base, both in neighborhoods like Tarawa Terrace and at Hadnot Point. Base areas had baseball, football, and soccer fields and indoor and outdoor basketball facilities. Water was provided in canteens, big jugs, and water buffaloes.

8. The case of the water at Camp Lejeune has gathered significant attention. From my long-term study of the military, and my focus on Camp Lejeune over the past year, I have sought to summarize pertinent aspects of how it operated from its inception in World War II until the 1980s. That is what I have endeavored to report herein. My report highlights the historical facts available informing the water use process on base based on my research and examination of available facts and historical documents and my knowledge in military history and the histories of military bases. It seeks to provide a detailed narrative of the important water issues and access throughout the Marine Corps Base Camp Lejeune. I reserve the right to supplement my report to the extent additional facts, documents and testimony become available and as may be appropriate as the matter proceeds.

XIX. Appendix 1: Research Methodology

I have conducted extensive research on the history of Camp Lejeune. I began by examining the secondary materials on the topics. First, I consulted a large number of works including those on the history of the Marine Corps, some of which I knew from earlier research including Allen Millet's *Semper Fidelis: The History of the United States Marine Corps* and Edwin Howard Simmons and Charles Waterhouse's, *The United States Marines: A History*, but also some new ones such as Victor Krulak, *First to Fight: An Insider View of the U.S. Marines Corps* and Jon Hoff, *USMC: United States Marine Corps: A History*, Thomas E. Ricks, *Making the Corps*, and James B. Wolfe, *Into the Crucible: Making Marines for the 21st Century*.

Once the macro story of the Marine Corps presented itself through these secondary sources, I dug deeper into the history of military bases, including Marine bases, in the United States and around the world to better comprehend the nature of living on them. Again, I relied on many years of accumulated knowledge from my research and teaching to inform the narrative from many books such as ones on domestic bases including those on Army bases such as Kenneth MacLeish, *Making War at Fort Hood: Life and Uncertainty in a Military Community*, Matthew Rector's *The United States Army at Fort Knox*, and Peggy Stelpflug and Richard Hyatt, *Home of the Infantry: The History of Fort Benning*. For international bases, my research included those such as and for Jonathan Stevenson's *Overseas Bases and U.S. Strategy: Optimizing America's Military Footprint*, Catherine Lutz, *The Bases of Empire: The Global Struggle Against U.S. Military Posts*, Rebecca Herman, *Cooperating with the Colossus: A Social and Political History of U.S. Military Bases in WWII Latin America*, and Jonathan Hansen, *Guantanamo: An American History*. I also consulted M.A. theses and dissertations as well as journal articles and essays in books. All these provided snapshots of life on a U.S. military base spread over nearly 150 years, something reinforced by my personal visits to many military bases over the past thirty years, both working ones as well as historical state and national parks spread over the country.

With a grounding in the macro story of military bases, I continued to narrow my focus on only Marine bases, primarily in the United States to start to narrow my subject, many obtained over the years in research for books and teaching classes. For the Marines, I consulted works such as Bradley Gernand, *Quantico: Semper Progređi, Always Forward*, Charles A. Fleming and Robin Austin, *Quantico: Crossroads of the Marine Corps*, and Verle Ludwig, *U.S. Marines at Twentynine Palms, California*. These books provided a good framework for life on Marine bases and how it evolved, particularly during WWII and later the Cold War when the Marine Corps grew significantly and expanded its role in U.S. military policy and foreign relations. The comparative analysis also helps place Lejeune into the overall historical narrative of development of the bases.

For Camp Lejeune, I reviewed many secondary works, both those related to the history of the base and specifically the water issues. For general histories, I referenced works such as Gertrude Carraway, *Camp Lejeune Leathernecks*; William Darden, "Camp Lejeune," in *United States Navy and Marine Corps Bases*; Thomas Loftfield, *An Archaeological and Historical Reconnaissance of U.S. Marine Corps Base, Camp Lejeune*; Louis Berger Group, *Semper Fidelis: A Brief History of Onslow County, North Marine Corps Base, Camp Lejeune*, Kenneth E. Dunn, *Camp Lejeune Command: Commanders Notes*, and Melton McLaurin, *The Marines of Montford Point: America's First Black Marines*. Each provides a good overview of the development of the base, its geography, and evolution, including life on the base during the period after its creation in 1941.

There were sources that specifically related to the water cases, including articles and theses. They review the history of the base and then the issues that arose and why. They include Mike Magner, *A Trust Betrayed: The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families*, Robert O'Dowd, *A Few Good Men, Too Many Chemicals: Toxic Exposure of U.S. Marines and Government Lies*, and George Swimmer, *Deadly S.N.A.F.U.: Marine Corps Base Camp Lejeune, N.C.* The theses including Kevin Boyce, "Troubled Waters: A History of Camp Lejeune's Toxic Legacy" and Michael Partain, "Camp Lejeune Digital Community Archive Project: An Analysis of Digital Public History Efforts to Achieve Social Justice for Camp Lejeune Drinking Water Contamination, 1999-2017." Other works include those such as Lori Freshwater's "What Happened at Camp Lejeune" in the *Pacific Standard* and Leo Shane III's "Now that the PACT Act Has Passed, How Soon Will Veterans See Their Benefits," in *Military Times*.

From these secondary readings, I gained a foundational understanding of many topics related to military bases. Once completed, I began intensive research into the primary documents on life at Camp Lejeune in the postwar period. These included a major research trip to the Marine Corps Archives at Quantico, VA, which houses a vast quantity of materials on all the subjects related to the 248-year long history of the Marines. It has a vast bibliography on Camp Lejeune, especially related to the private collection of people stationed there from WWII through the 1980s. I reviewed forty different private collections of people with ties to Camp Lejeune, many with multiple folders of materials that included letters, photographs, slides, and other personal materials. Some had additional information, such as manuals and guides to the base. In addition, I reviewed 17 different boxes and folders of photographs ranging from those of the mess halls, aerial photos of the base, the chapels, the hospital, and recreation facilities and activities. Finally, I obtained copies of Command Chronologies relating to the base from the 1960s until the 1980s. These primary sources

helped in the creation of a historical record of change over time from 1942 through the 1980s, including infrastructure and daily life.

A review of primary documents included works that covered life at Camp Lejeune such as the base newspaper, *The Globe*. It is a newspaper that the Marine Corps published weekly, covering everyday life on base in great detail, including entertainment, base housing, and a number of events such as sporting and change of commands. I complemented this research with readings of major Marine Corps publications including *Leatherneck* magazine (reviewed at the Marine Corps Library at Quantico), *The Marine Corps Gazette*, and local newspapers such as *The Daily News* (Jacksonville) as well as national news outlets. These materials have many human-interest stories on topics at the base, ranging from the 1950s through contemporary times when the water cases have generated additional interest.

There was also a plethora of primary documents contained in the large number of government documents and those of non-governmental organizations, focused on the topic of the base and often water contamination. They include documents from the Department of Defense, the Department of Veteran's Affairs, the U.S. Congress, the Environmental Protection Agency, Center for Disease Control, Government Accountability Office, Department of Justice, and other agencies. These included testimonies in hearings, pamphlets, and memorandums relating to Camp Lejeune, especially its infrastructure including water distribution. Non-governmental organizations and their primary and secondary materials also played a role in developing an understanding of life at Camp Lejeune. Like their government counterparts, various organizations produced studies that provided an understanding of life on the base and the effects of the water on health. These included groups such as the National Academies of Sciences, Engineering, and Medicine. They have a lot of first-person accounts and the science surrounding various issues, including the water and are more contemporary in nature, making them somewhat more reliable than memories from fifty years or more earlier.

Finally, with a much fuller understanding of the secondary and primary documents, my focus shifted to other forms of first-hand accounts, principally depositions and oral histories, but also memoirs of people who served there. These materials provided background information and also a form of oral history from those who testified in front of various congressional hearings, military commissions, and other governmental groups, including the Environmental Protection Agency. Building on a methodology outlined in books including Don Ritchie (former chief historian of the Senate), *Doing Oral History: A Practical Guide* and Barbara W. Sommer and Mary Kay Quinlan, *The Oral History Manual* along with good examples of oral history collections such as Studs Terkel, *The Good War: An Oral History of World War II* or Christian Appy's *Patriot's: The Vietnam War Remembered from All Sides*. I have more than thirty years of experience employing oral history within almost all of my 11 books. I have studied and learned about conducting, recording, and compiling them, understanding some limitations but, simultaneously, their value, particularly when corroborated by other primary or secondary sources. In many ways, conducting these is the last step in the methodology employed as you need a good grounding in the materials before proceeding with oral histories.

I have also been provided with copies of the master complaint, master answer, and various background documents on the base history and water contamination issues from agencies such the ATSDR,⁷⁶ EPA⁷⁷ and GAO.⁷⁸ In addition, I was provided with copies of depositions and declarations provided by three (Gary McElhiney, Allan Howard, Jacqueline Tukes) of the 25 named Plaintiffs whom I am advised constitute the “track one” Plaintiffs for the CLJA claims. They reflect two men and one woman who resided at the base at distinct time periods in the earlier 1970s, the later 1970s, and the 1980s. One resided at Hadnot Point, one at Tarawa Terrace, and one spent time at both communities. I have also been provided with various additional reliance materials consisting of documents either produced during the CLJA lawsuit or located in public records, as are discussed below. I have also been provided with oral history interview information from one or more individuals as indicated below.

With all these materials, I have concentrated on writing a narrative about everyday life on Camp Lejeune, especially peoples’ interaction with water. The vast quantity of sources as well as their diversity have allowed me to create such a narrative that recognizes individual experiences determined by personal issues and time but also the many overlapping narratives that characterize the research that bring together far more commonalities than individual differences, all acknowledged during the writing of the narrative as well as the section on the interaction between water and people on the base that follows.

XX. Appendix 2: History of U.S. Military Bases.

Since colonial times, the landscape of America’s frontiers and coastal lands have been heavily populated with military bases. They have been designed as defenses first against England’s European enemies, France and Spain, as well as the Native Americans. Many of the major U.S. cities such as Pittsburgh and Detroit developed as forts where trade and daily life interacted with defense. Other major cities such as New York City and Charleston, South Carolina, became large naval bases with intricate connections to forts and naval defenses.¹²⁴ When the United States became an independent nation in 1783, it maintained many of the British defenses and added to them, such as via the Northwest Territory and the Louisiana Purchase in 1803. New forts sprung up such as the St. Louis Arsenal, Fort Boonesborough and Fort Smith.¹²⁵ The process continued with the westward expansion after the Mexican-American War with major installations on the

¹²⁴ Alexander Humes, “Fortified Arguments: Fortifications and Competing Spatial Views of Colonial North America,” Ph.D. dissertation, University of Virginia, 2021; David La Vere, *The Tuscarora War: Indians, Settlers, and the Fight for the Carolina Colonies* (University of North Carolina Press, 2013); Eric Klingelhofer, *First Forts: Essays on the Archaeology of Proto-Colonial Fortifications* (Brill Publishers, 2010); “Holding Fort Against Time: Rebuilt Military Barracks, Pennsylvania Battlefields Recall Forgotten Conflict in America’s Colonial Era,” *The America’s Intelligence Wire*, 2010; Daniel Patrick Ingram, *Indians and British Outposts in Eighteenth Century America* (University Press of Florida, 2012).

¹²⁵ M. Patrick Hendrix, *A History of Fort Sumter: Building a Civil War Landmarks* (History Press, 2014); Kathleen Troost-Cramer, *True Tales of Life and Death at Fort Adams* (History Press Library Editions, 2013); William Whittaker, ed., *Frontier Forts of Iowa: Indians, Traders, and Soldiers, 1682-1862* (University of Iowa Press, 2009); Donna Hechler Porter, *The Big Siege of Fort Boonesborough and the Winning of the American West* (independently published, 2023); Charles Rivers Editors, *Fort Dearborn: The History of the Controversial Battle of Fort Dearborn during the War of 1812 and the Settlement that Became Chicago* (CreateSpace, 2016); Mike Bunn, *This Southern Metropolis: Life in Antebellum Mobile* (NewSouth Books, 2024).

West Coast such as the Presidio in San Francisco and San Diego naval station. More land forts strung the Mexican border from Fort Bliss to Fort Huachuca and also along the frontier such as Fort Collins and Fort Douglas in Utah. In many cases, these bases remained fairly isolated from major towns (with exceptions like Fort Bliss) and were self-contained entities dependent on the support of the U.S. government, especially the Quartermaster Division, which provided food, goods to buy at the local PX including clothes, dry goods, and other needs. Their isolation ensured that while small communities sometimes arose around them, the majority of soldiers' time was spent on base. They were often paid in scrip rather than dollars. Many of the bases ultimately sheltered families of the soldiers, with housing provided as well as medical care, education and entertainment and cultural opportunities.¹²⁶

By the end of the 19th Century, the overseas expansion of the United States with the Spanish American-Cuban-Filipino Wars (1898-1903) ensured significant changes. The United States now extended its reach with bases in Puerto Rico, Cuba, Guam, Hawaii and the Philippines. The Marine Corps received “the missions of seizure and defense of advanced naval bases, as well as land operations incident to naval campaigns,” and “development of amphibious warfare doctrines, tactics, techniques, and equipment employed by landing forces.”¹²⁷ For nearly thirty years, the Marines utilized bases in Latin America including the Panama Canal Zone to launch a series of interventions, including in Nicaragua, Mexico, the Dominican Republic, as well as China and the Philippines (and preparing for war with Japan). These bases, just like those back home, were often isolated from local populations and self-contained and sufficient entities.¹²⁸

Military bases sprouted up through the country with the involvement of the United States in WWI and WWII. Many were on the East Coast and in the south, nearer the fighting in Europe. These bases, sometimes hastily constructed initially, included Fort Bragg (now Fort Liberty) and Camp Benning, Georgia (now Fort Moore) along with the Marine Recruit Depot at Parris Island.¹²⁹ The process accelerated during WWII when 25 million Americans served. All across the country, the military initiated a huge buildup of military bases including Fort Hood (now Fort Cavazos) Texas, Fort Carson, Camp Pendleton, California, and Camp Lejeune. They were often isolated from population centers as the government bought cheaper land for the sprawling bases and, seemingly

¹²⁶ Ethel Jackson Price, *Fort Huachuca* (Arcadia Publishing, 2004); Thomas R. Buecker, *Fort Robinson and the American West, 1874-1899* (University of Oklahoma Press, 2003); Robert Wooster, *Frontier Crossroads: Fort Davis and the West* (Texas A&M Press, 2005); James Evetts Haley and H.D. Bugbee, *Fort Concho and the Texas Frontier* (Literary Licensing, 2012); John D. McDermott, *Dangerous Duty: A History of Frontier Forts in Fremont County, Wyoming* (Fremont County Historic Preservation Commission, 1993).

¹²⁷ U.S. Marine Corps, “History of Camp Lejeune,” <https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Cultural-Resources/History-Live/History-of-Camp-Lejeune/> [accessed 10 October 2024].

¹²⁸ Katherine A. Zien, *Sovereign Acts: Performing Race, Space, and Belonging in Panama and the Canal Zone* (Rutgers University Press, 2017); M. Gerald Anderson, *Subic Bay: From Magellan to Pinatubo: A History of the U.S. Naval Station* 4th edition (CreateSpace, 2009); Stephen Irving Schwab, *Guantanamo, USA: The Untold History of America's Cuban Outpost* (University of Kansas Press, 2009); Alfred Peredo Flores, *Tip of the Spear: Land, Labor, and US Settler Militarism in Guahan, 1944-1963* (Cornell University Press, 2023).

¹²⁹ Edward M. Coffman, *The War to End All Wars: The American Military Experience in World War I* (University of Kentucky Press, 1998); Matthew D. Rector, *The United States Army at Fort Knox* (Arcadia Publishing 2005); H.W. Crocker III, *The Yanks Are Coming!: A Military History of the United States in World War I* (Regnery Press, 2014); Peggy A. Stelpflug and Richard Hyatt, *Home of the Infantry: The History of Fort Benning* (Mercer University Press, 2007).

overnight, the bases became self-sufficient and contained entities complete with entertainment facilities, barracks, mess halls, hospitals, and family housing. Even as conflict ended in 1945, many of the bases continued their expansion over the following decade.¹³⁰

This building of bases continued in the postwar era as the Cold War emerged between the United States and the Soviet Union. The military provided stores, schools, security, housing, and everyday entertainment facilities as well as huge warehouses, motor pools, and construction battalions housing millions of Americans around the country and globe. Cities around bases flourished with some soldiers living off base, particularly in larger urban areas such as in San Diego or the San Antonio area. Most stayed in subsidized housing on base doing their jobs while interacting with base entertainment, social, schools, and dining facilities.¹³¹ The same occurred overseas in places such as Great Britain, West Germany, Okinawa, and South Korea. Millions cycled through the bases during the Cold War, including large numbers of draftees through 1974 when the country switched to an All-Volunteer Force. Those at bases overseas often remained cut off from the host country due to language and cultural barriers but had everything they needed on base including subsidized food and goods. Commanders restricted their movement also to limit risk of misbehavior by GIs that could endanger relations with the host. The goal was also to limit U.S. dollars going off base and/or causing inflation for local economies. The isolation also often existed because of tensions between the Americans and the locals as one foreigner once complained about Americans for being “oversexed, overpaid, and over here.”¹³²

New commitments followed with subsequent military interventions and U.S. military buildups during the time periods of Korea, Vietnam, and the wars of the Middle East in the late 20th and on into the 21st Century. Over the years, millions of Americans have served, and have resided, often accompanied by their families, on bases in the United States and across the globe. Again, the isolation of life on the base with regard to surrounding communities was compensated for by the organizational and financial structures which encouraged people to interact on base and rewarded them for doing so. The continuities between experiences, whether at a frontier fort out west in the 19th Century, or at Camp Lejeune, North Carolina, today, are in fact, in some respects, quite strong. Understanding the long history of camp and installation development over our national history accordingly informs our understanding of the context for water uses at the base.

¹³⁰ Geoffrey Perret, *There's a War to be Won: The United States Army in World War II* (Random House, 1997); Rebecca Herman, *Cooperating with the Colossus: A Social and Political History of U.S. Military Bases in WWII Latin America* (Oxford University Press, 2022).

¹³¹ Kenneth MacLeish, *Making War at Fort Hood: Life and Uncertainty in a Military Community* (Princeton University Press, 2013); “U.S. Military Buildup of Thule and DEW Line,” Beaufort Gyre Exploration Project, <https://www2.who.edu/site/beaufortgyre/history/us-military-buildup-of-thule-and-dew-line-1950s-1960s/> [accessed 11 November 2024].

¹³² John W. Lemza, *American Military Communities in West Germany: Life in the Cold War Badlands, 1945-1990* (McFarland, 2016); Stephen Hugh Lee, *Outposts of Empire: Korea, Vietnam and the Origins of the Cold War in Asia, 1949-1954* (Liverpool University Press, 1996); Jonathan Stevenson, *Overseas Bases and U.S. Strategy: Optimizing America's Military Footprint* (Routledge, 2022); Catherine Lutz, *The Bases of Empire: The Global Struggle Against U.S. Military Posts* (New York University Press, 2009).

SIGNATURE PAGE:

Dated: 12/7/24

Kyle Longley
Dr. Kyle Longley

KYLE LONGLEY, PHD

PUBLICATIONS OVER THE PAST DECADE

BOOKS:

In Harm's Way: A History of the U.S. Military (with Gene Smith and David Coffey). New York: Oxford University Press, February 2019.

LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval. New York: Cambridge University Press, February 2018.

The Enduring Legacy: Leadership and National Security Affairs during the Presidency of Ronald Reagan [co-editor and contributor with Brad Coleman (VMI), University Press of Kentucky, June 2017.

Forthcoming:

The Forever Soldiers: Americans at War in Afghanistan and Iraq (In editing stage at University of North Carolina Press for publication in Spring/Summer 2025).

Days in the Life: LBJ (Under contract with Cambridge University Press for submission in July 2025)

ESSAYS IN COLLECTED VOLUMES

"The Obsession: The Reagan Administration and Central America," in Brad Coleman and Kyle Longley, *The Enduring Legacy: Leadership and National Security Affairs during the Presidency of Ronald Reagan* (Lexington: University Press of Kentucky, 2017): 211-38.

ARTICLES

"Costa Rica and the Environment: The 'Switzerland of the Americas'?" *Discurso* (Southeastern Council on Latin American Studies) 10 December 2020,
[https://discursorevista.com/f/costa-rica-the-environment-the-switzerland-of-the-americas"?blogcategory=Policy](https://discursorevista.com/f/costa-rica-the-environment-the-switzerland-of-the-americas)

"The Vietnam War by Ken Burns and Lynn Novick: A Review," *Diplomatic History* (June 2018): 396-400.

ENCYCLOPEDIAS

Senior Editor, *The Oxford Encyclopedia of Latin America*, Oxford University Press, 2018-present.

DOCUMENTARY CONSULTING

Mylene Moreno, "On Two Fronts: Latinos and the Vietnam War, Souvenir Pictures (Los Angeles), 2015.

BOOK AND JOURNAL REVIEWS:

Vanessa Walker, *Principles in Power: Latin America and the Politics of U.S. Human Rights*, Society for Historians of American Foreign Relations, *Passport*, September 2021.

John Lindsay-Poland, *Plan Colombia: U.S. Ally Atrocities and Community Activism* for the *American Historical Review*. Fall 2019.

Greg Daddis, *Withdrawal: Reassessing America's Final Years in Vietnam* for *Diplomatic History*, March 2018.

Jeffrey A. Engel, When the World Seemed New: George H. W. Bush and the End of the Cold War for H-DIPLO, March 2018.

Russell Crandall, *The Salvador Option: The United States and El Salvador* for H-DIPLO, January 2018.

Beth Bailey and Richard Immerman, eds., *Understanding the Wars in Iraq and Afghanistan* for *Diplomatic History*, Fall 2016.

Malcolm Byrne, *Iran-Contra: Reagan's Scandal and the Unchecked Abuse of Presidential Power* for H-DIPLO, November 2015.

Sandra Scanlon, *The Pro-War Movement: Domestic Support for the Vietnam War and the Making of Modern American Conservatism*, forthcoming in *The Register of the Kentucky Historical Society*, Spring 2016.

Linda Tamura, *Nisei Soldiers Break Their Silence: Coming Home to Hood* in *Pacific Historical Review*, January 2014.

COMMUNITY SERVICE MATERIALS

"The History Behind Attacks on the Military Records of Politicians Like Tim Walz," *Time*, 29 August 2024.

"Presidents on the Election Sidelines: Like Job Biden, Lyndon B. Johnson Took Himself Out of a Reelection Race but Struggled With His Role," *The Dispatch*, 19 August 2024.

"History Shows What Biden Needs to Do at the DNC to Help Harris Win," *Time*, 19 August 2024.

"The History Behind Why a BYU Volleyball Game Went Viral," *Washington Post*, 16 September 2022.

"Learning From Past Blunders Is Crucial for New Army Program," *Washington Post*, 11 August 2022.

"The 1950s Congressman Whose Career Explains the Texas GOP's Extremism," *Washington Post*, 7 July 2022.

"The Last Twenty 20 Years Have Remade the Nature of Military Service: Here's How," *Washington Post*, 11 November 2021.

"The Olympics Have Long Been an Arena for the Fight Between Racism and Equality," *Washington Post*, 23 July 2021.

"The U.S. War on Drugs Helped Unleash the Violence in Colombia Today," *Washington Post*, 8 June 2021.

"Our Politics Is No Uglier or Dysfunctional Than in the Past," *Washington Post*, 14 May 2021.

"Lyndon Johnson's Vision for Voting Rights Offers a Vision for Protecting Them," *Washington Post*, 8 April 2021.

"Harassing the Biden Bus Could Backfire on the Republicans: In a Close Election, the Backlash Against Boorish Behavior Can Make an Impact," *Washington Post*, 2 November 2020.

"The Real Meaning of Memorial Day: Families That Endure the Loss of Service Members Deserve a Day of Collective Remembrance," *Washington Post*, 24 May 2020.

"What Democrats Need to Know to Win Latinos: To Avoid a Disappointing 2020 Turnout,

the Party Needs to Understand the Nuances of the Latino Electorate,” *New York Times*, 20 November 2019 [with Arnold Garcia].

“What Happens When You Kill the Messenger in Nicaragua,” *Statfor Worldview*, 23 October 2019.

“Historians on Trump: We’ve Never Seen Anything Like This,” *CNN*, 4 October 2019 [with Lisa Cobbs, Ken Osgood, Jeremi Suri].

“Why Donald Trump Is Just Following in Ronald Reagan’s Footsteps on Race,” *Washington Post*, 4 August 2019.

“Anti-Americanism, Venezuelan Style,” *Statfor Worldview*, 16 July 2019.

“Why It’s Wrong to Attack Joe Biden on Civil Rights,” *Washington Post*, 1 July 2019.

“President Johnson’s Private vs. Public Reaction to Martin Luther King’s Assassination,” *Newsweek*, 3 April 2018.

“Lyndon Johnson’s Trip Around the World,” *New York Times*, 2 January 2018.

“Even in the 1960s, the NRA Dominated Gun Control Debates,” *Washington Post*, 5 October 2017.

“In Handling North Korea, Restraint Is Donald Trump’s Only Option,” *Washington Post*, 28 August 2017.

“The Heavy Price of War,” *New York Times*, 12 August 2017.

“The Grunts War,” *New York Times*, 17 February 2017.

“LBJ and the Days of America on Fire,” *San Antonio Express News*, 27 September 2016.

“Morenci Paid Heavy Price in the Vietnam War,” *Arizona Republic*, 30 August 2016.”

“Empty Chairs at a Vietnam War Conference,” *Austin American Statesman*, 26 April 2016.

“Lying Our Way Into War? We’ve Done It Before,” *Arizona Republic*, 10 August 2014.

“Can Women Be Brave in Combat? You Bet,” *Arizona Republic*, 25 May 2014.

“Always Faithful: The Morenci Nine and the Vietnam War,” *Arizona Veterans Magazine*, Spring 2014.

Kyle Longley, PhD

Court Cases, Past Four Years (listed in chronological order)

Kyung H. Lee & Joe J. Lee v. Bi-Mart Corporation, May 2024, Portland Oregon. Case involving South Korean nationals and access to U.S. military PXs in Busan, South Korea in the 1970s.

Immigration Cases [provided declarations and sometimes testimony on country conditions via Zoom in immigration court in New York, Pennsylvania, New Mexico, and Texas]

Maria Vasquez (Mexico), Application for Provisional Unlawful Presence Waiver, 26 November 2024.

Norma Velasquez (Guatemala), Cancellation of Removal, 13 November 2024.

Gloria Garcia (Mexico), Cancellation of Removal, 26 October 2024.

Edward Herrand Caballero (Dominican Republic), asylum case, 22 July 2024.

Viridiana Rodriguez (Mexico), Cancellation of Removal, 18 July 2024.

Eymi Roque (Guatemala), Joint Motion to Reopen and Dismiss Removal Proceedings, 10 July 2024.

Alejandra Maria Rodriguez-Perez (Honduras), Convention Against Torture (CAT), 2 March 2024.

Andres Salinas-Varon (Colombia), CAT, 29 November 2023.

Luz Dary Novoa (Colombia), CAT, 15 November 2023.

Zonia Roselia Perez Velasquez (Guatemala), CAT, 27 April 2023.

Jeisson Alfonso Alfonso-Canchala (Colombia), CAT, 5 January 2023.

Angeith Carolina Hincapie-Orozco (Colombia), CAT, 4 September 2022.

Lina Marcela Trejos-Yepes (Colombia), CAT, 29 July 2022.

Gerver Geovanny Mateo (Guatemala), CAT, 3 June 2022.

John Arteta (Colombia), CAT, 16 December 2021.

Mariente Rodrigues DaSilva (Brazil), asylum case, 19 September 2021.

Segundo Ancelmo Bermeo-Zamaro (Ecuador), Withdrawal of Removal, 8 February 2021.

This listing is based on a reasonable search, and I reserve the right to amend at a future date should it become necessary.

Statement of Compensation-Kyle Longley, PhD - Expert Witness

My rate is \$350 per hour. I do not have any additional differentiation beyond research for testimony or deposition.

***In re Camp Lejeune Water Litig.*, Master Case No. 7:23-CV-897 (E.D.N.C.).**
Expert Report of Dr. Kyle Longley
RELIANCE LIST

1. Arthur, Billy. "Camp Lejeune-The Early Days," *Leatherneck*, 65:11 (Nov. 1982).
2. "Average Price of a Car in 1965," *Worldmetrics*, July 24, 2024, <https://worldmetrics.org/average-cost-of-a-car-in-1965/>.
3. Carney, Kristen, "North Carolina Cities by Population (2024)," *North Carolina Demographics*, 20 June 2024, https://www.northcarolina-demographics.com/cities_by_population.
4. Darden, William, "Camp Lejeune," in *United States Navy and Marine Corps Bases* (Greenwood Press, 1985), 67-71.
5. Defense Finance Accounting Service, "Military Pay Tables 1965," 1 Sept. 1965, <https://www.dfas.mil/Portals/98/MilPayTable1965.pdf>.
6. Elliott, Jim. "Post of the Corps: Camp Lejeune," *Leatherneck*, 55:4 (April 1972).
7. Evans, Edward J. "Esprit de Camp," *Leatherneck*, 30:10 (October 1947): 7-8.
8. Fugate, Robert T. "Camp Lejeune," *Leatherneck*, 38:4 (April 1955), 19-20.
9. The Camp Lejeune Globe, Camp Lejeune, N.C., 2 Aug. 1944.
10. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 2, No. 9, April 18, 1945. Bates 00897_PLG_0000056445 to 56460.
11. The Camp Lejeune Globe, Camp Lejeune, N.C., 24 April 1952.
12. The Camp Lejeune Globe, Camp Lejeune, N.C., 26 June 1952.
13. The Globe, Camp Lejeune, N.C., Jan. 8, 1953, Bates 00897_PLG_0000053480 to 00897_PLG_0000053486.
14. The Camp Lejeune Globe, Camp Lejeune, N.C., 8 Oct. 1953.
15. The Camp Lejeune Globe, Camp Lejeune, N.C., 3 May 1957.
16. The Camp Lejeune Globe, Camp Lejeune, N.C., 10 May 1957.
17. The Camp Lejeune Globe, Camp Lejeune, N.C., 19 May 1960.

18. The Camp Lejeune Globe, Camp Lejeune, N.C., Bates 00897_PLG_0000048152 to 48163.
19. The Camp Lejeune Globe, Camp Lejeune, N.C., Photo, Tarawa Terrace II Track Meet, 8 Feb. 1962.
20. The Camp Lejeune Globe, Camp Lejeune, N.C., 14 Feb. 1963.
21. The Camp Lejeune Globe, Camp Lejeune, N.C., 11 July 1963.
22. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 21, No. 22, June 3, 1965, Bates 00897_PLG_0000046163 to 00897_PLG_0000046174.
23. The Camp Lejeune Globe, Camp Lejeune, N.C., 6 Jan. 1966.
24. The Camp Lejeune Globe, Camp Lejeune, N.C., 19 May 1966.
25. The Camp Lejeune Globe, Camp Lejeune, N.C., 25 Aug. 1966.
26. The Camp Lejeune Globe, Camp Lejeune, N.C., 9 March 1967.
27. The Camp Lejeune Globe, Camp Lejeune, N.C., 28 July 1967.
28. The Camp Lejeune Globe, Camp Lejeune, N.C., 31 Jan. 1969.
29. The Camp Lejeune Globe, Camp Lejeune, N.C., 2 Jan. 1970.
30. The Camp Lejeune Globe, Camp Lejeune, N.C., 6 Feb. 1970.
31. The Camp Lejeune Globe, Camp Lejeune, N.C., 2 July 1970.
32. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 28, No. 10, Mar. 9, 1972, Bates 00897_PLG_0000042688 to 00897_PLG_0000042699.
33. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 28, No. 17, Apr. 27, 1972, Bates 00897_PLG_0000042620 to 00897_PLG_0000042631.
34. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 29, No. 17, Nov. 21, 1973, Bates 00897_PLG_0000041602 to 00897_PLG_0000041609.
35. The Camp Lejeune Globe, Camp Lejeune, N.C., 18 July 1974.
36. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 31, No. 5, Jan. 30. 1975, Bates 00897_PLG_0000040914 to 00897_PLG_0000040925.
37. The Camp Lejeune Globe, Camp Lejeune, N.C., 4 May 1977.

38. The Camp Lejeune Globe, Camp Lejeune, N.C., 9 June 1977.
39. The Camp Lejeune Globe, Camp Lejeune, N.C., 16 June 1977.
40. The Camp Lejeune Globe, Camp Lejeune, N.C., 30 June 1977.
41. The Camp Lejeune Globe, Camp Lejeune, N.C., 8 Sept. 1977.
42. The Camp Lejeune Globe, Camp Lejeune, N.C., 15 Sept. 1977.
43. The Camp Lejeune Globe, Camp Lejeune, N.C., 29 Sept. 1977.
44. The Camp Lejeune Globe, Camp Lejeune, N.C., 6 Oct. 1977.
45. The Camp Lejeune Globe, Camp Lejeune, N.C., 27 Oct. 1977.
46. The Camp Lejeune Globe, Camp Lejeune, N.C., 11 May 1978.
47. The Camp Lejeune Globe, Camp Lejeune, N.C., 19 July 1979. Bates
00897_PLG_0000038193.
48. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 35, No. 43, Nov. 1, 1979, Bates
00897_PLG_0000038011.
49. The Camp Lejeune Globe, Camp Lejeune, N.C., 10 July 1980.
50. The Camp Lejeune Globe, Camp Lejeune, N.C., 18 June 1981.
51. The Camp Lejeune Globe, Camp Lejeune, N.C., 1 July 1981.
52. The Camp Lejeune Globe, Camp Lejeune, N.C., 2 July 1981.
53. The Camp Lejeune Globe, Camp Lejeune, N.C., 24 June 1982.
54. The Camp Lejeune Globe, Camp Lejeune, N.C., 5 May 1983.
55. The Camp Lejeune Globe, Camp Lejeune, N.C., 25 Aug. 1983.
56. The Camp Lejeune Globe, Camp Lejeune, N.C., 16 Aug. 1984.
57. The Camp Lejeune Globe, Camp Lejeune, N.C., 10 April 1986.
58. The Camp Lejeune Globe, Camp Lejeune, N.C., 8 May 1986.

59. The Camp Lejeune Globe, Camp Lejeune, N.C., Vol. 43, No. 4, Jan. 29, 1987, Bates 00897_PLG_0000026597.
60. The Camp Lejeune Globe, Camp Lejeune, N.C., 15 Oct. 1987.
61. The Camp Lejeune Globe, Camp Lejeune, N.C., 4 Aug. 1988.
62. The Camp Lejeune Globe, Camp Lejeune, N.C., 19 July 1990.
63. Gomez, Ashley. "Camp Lejeune Marines Sharpen Water Survival Skills," Marines: The Official Website of the United States Marine Corps, 18 July 2018, <https://www.lejeune.marines.mil/News/Article/Article/1572942/camp-lejeune-marines-sharpen-water-survival-skills/>.
64. Jacksonville Daily News, 18 March 1990.
65. "Naval Medical Center Camp Lejeune Celebrates 75 Years of Care," Defense Visual Information Distribution System, 1 May 2018, <https://www.dvidshub.net/news/278247/naval-medical-center-camp-lejeune-celebrates-75-years-care>.
66. Polete, Harry. "Posts of the Corps: Camp Lejeune," *Leatherneck*, 31:9 (Sept. 1948), 27-29.
67. Richardson, Herb. "Home Sweet Home," *Leatherneck*, 59:8 (Aug. 1976): 22-23.
68. Richardson, Herb. "Post of the Corps," *Leatherneck*, 51:9 (Sept. 1968): 27.
69. Richardson, Herb. "Post of the Corps: Camp Lejeune, N.C.," *Leatherneck*, 64:10 (Oct. 1981): 39.
70. Suhosky, Robert A. "Recreation (at Camp Lejeune)," *Leatherneck*, 38:4 (April 1955): 25.
71. Thompson, P. L. "Camp Lejeune's New Hospital," *Leatherneck*, 66:5 (May 1983): 46-47.
72. U.S. Climate Data, "Climate Camp Lejeune-North Carolina," <https://www.usclimatedata.com/climate/camp-lejeune/north-carolina/united-states/usnc1306>.
73. U.S. Environmental Protection Agency, "Can Mold Cause Health Problems?" 14 Oct. 2024, <https://www.epa.gov/mold/can-mold-cause-health-problems>.
74. U.S. Marine Corps, "DoD Picks Marine Bases," *The Marine Corps Gazette*, 50:10 (Oct. 1966): 1.

75. U.S. Marine Corps, “New Medical Center at Camp Lejeune,” *The Marine Corps Gazette*, 66:11 (Nov. 1982): 15.
76. U.S. Marine Corps, “Continuing the Field Day Tradition,” 22 March 2006, *Marines: The Official Website of the United States Marine Corps*, <https://www.lejeune.marines.mil/News/Article/Article/512046/continuing-the-field-day-tradition/>.
77. U.S. Marine Corps, “Naval Hospital and Surgeon’s Row” (Camp Lejeune), <https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Cultural-Resources/Historic-Architecture/Districts-Buildings/Naval-Hospital-and-Surgeons-Row/>.
78. Weather World, “Camp Lejeune, North Carolina Climate Averages,” <https://www.weatherworld.com/climate-averages/nc/camp+lejeune.html>.
79. Carraway, Gertrude. *Camp Lejeune Leathernecks*. Owen G. Dunn Co., 1946.
80. U.S. Marine Corps, “History,” <https://www.lejeune.marines.mil/Visitors/History/> [accessed 16 Oct. 2024]
81. Hendrix, M. Patrick. *A History of Fort Sumter: Building a Civil War Landmarks*. History Press, 2014.
82. Herman, Rebecca. *Cooperating with the Colossus: A Social and Political History of U.S. Military Bases in WWII Latin America*. Oxford Univ. Press, 2022.
83. Isely, Jeter A. and Philip Crowl, *U.S. Marines and Amphibious Warfare*. Princeton Univ. Press, 2016.
84. La Vere, David. *The Tuscarora War: Indians, Settlers, and the Fight for the Carolina Colonies*. Univ. of North Carolina Press, 2013.
85. Lemza, John W. *American Military Communities in West Germany: Life in the Cold War Badlands, 1945-1990*. McFarland, 2016.
86. Loftfield, Thomas. *An Archaeological and Historical Reconnaissance of U.S. Marine Corps, Camp Lejeune*. U.S. Department of Navy, 1981.
87. Longley, Kyle. *The Morenci Marines: A Tale of Small Town America and the Vietnam War*. University of Kansas Press, 2013.
88. Lutz, Catherine. *The Bases of Empire: The Global Struggle Against U.S. Military Posts*. New York Univ. Press, 2009.
89. MacLeish, Kenneth. *Making War at Fort Hood: Life and Uncertainty in a Military Community*. Princeton Univ. Press, 2013.

90. Mike Magner, *A Trust Betrayed: The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families*. DeCapo Press, 2014.
91. O’Connell, Aaron B. *Underdogs: The Making of the Marines Corps*. Harvard Univ. Press, 2012.
92. Price, Ethel Jackson. *Fort Huachuca*. Arcadia Publishing, 2004.
93. Rector, Matthew D. *The United States Army at Fort Knox*. Arcadia Publishing 2005.
94. Schwab, Stephen Irving. *Guantanamo, USA: The Untold History of America’s Cuban Outpost*. University of Kansas Press, 2009.
95. Smith, Charles R. *U.S. Marines in the Korean War*. Marine Corps Press, 2008.
96. Stelpflug, Peggy A. and Richard Hyatt. *Home of the Infantry: The History of Fort Benning*. Mercer Univ. Press, 2007.
97. Stevenson, Jonathan. *Overseas Bases and U.S. Strategy: Optimizing America’s Military Footprint*. Routledge, 2022.
98. Whittaker, William. ed., *Frontier Forts of Iowa: Indians, Traders, and Soldiers, 1682-1862*. University of Iowa Press, 2009.
99. Wooster, Robert. *Frontier Crossroads: Fort Davis and the West*. Texas A&M Press, 2005.
100. Zien, Katherine A. *Sovereign Acts: Performing Race, Space, and Belonging in Panama and the Canal Zone*. Rutgers Univ. Press, 2017.
101. Humes, Alexander. “Fortified Arguments: Fortifications and Competing Spatial Views of Colonial North America,” Ph.D. dissertation, Univ. of Virginia, 2021.
102. Austin Brockenbrough and Associates Consulting Engineers, “Oil Spill Prevention Control and Countermeasures Plan,” 1 March 1978, Bates CLJA_NAVLANT-0000007914 to CLJA_NAVLANT-0000008011.
103. Operation and Maintenance Manual for Pollution Abatement Facilities,” 1 Aug. 1983 [CLJA_Watermodeling_07-0001254609].
104. Commanding General of Camp Lejeune, R. McC. Tompkins, to Commandant of Marine Corps, General Wallace Greene, “Consolidation of Support Services in Camp Lejeune Area,” 24 Feb. 1971 [CLJA_Watermodeling_07-0001138692].
105. Department of the Army Headquarters, *Field Hygiene and Sanitation*. 1988.

106. Departments of Army, Navy, and Air Force, "Prevention, Treatment and Control of Heat Injury." Washington D.C. 1980.
107. Email from Charity Delaney to Jason Saunter, 20 Aug. 2014.
108. Email from Charity Delaney to Jason Sautner (ATSDR), 24 July 2014.
109. Larsen, Darrell S. Mechanical Engineering Branch of the Naval Facilities Engineering Command, "Final Report on High Humidity/Moisture Conditions Miscellaneous Buildings, Camp Lejeune, North Carolina," 29 July 1983 [CLJA_Watermodeling_07-000134879 to 1375308].
110. North Carolina Department of Military and Veterans Affairs, "Military Bases in North Carolina," <https://www.milvets.nc.gov/benefits-services/military-bases-north-carolina#:~:text=Camp%20Lejeune%20occupies%20about%20153%2C439,the%20Mari ne%20Corps'%20expeditionary%20abilities.>
111. U.S. House of Representatives, "Inquiry Into the Disturbances at Marine Corps Base, Camp Lejeune, N.C. on July 20, 1969," Report of the Special Subcommittee to Probe Disturbances on Military Bases, Committee on Armed Services House of Representatives, Ninety-First Congress, First Session, 15 Dec. 1969, U.S. Government Printing Office, 1969, pp. 5051-5059.
112. U.S. Marine Corps, Black Marines Reference Collection, 5958, A/33/K/3/3 Box 3 of 6.
113. U.S. Marine Corps "Clearing, Grading, and Drainage," (Folder P-1-1), "Roads and Streets," (Folder P-1-2), Phase II Redeployment Box II for Creation of Camp Lejeune, post-1942, Marine Corps Archives, Quantico, Virginia.
114. U.S. Marine Corps, "Command Chronologies, July 1977-December 1977," U.S. Marine Corps Archive, Quantico, VA., 44-48.
115. U.S. Marine Corps, Commanding General to Distribution List, "Utilities and Energy Management Plan," 2 June 1982 [CLJA_Watermodeling_07-0001245213 to 1245244].
116. U.S. Marine Corps, "Sewers and Disposal Plant," (Folder P-1-3), "Water Supply Storage and Distribution," (Folder P-1-4), "Steam and Hot Water Plants and Distribution," (Folder P-1-10), Phase II Redeployment Box II for Creation of Camp Lejeune, post-1942, Marine Corps Archives, Quantico, Virginia.
117. U.S. Marine Corps, "Marine Barracks Camp Lejeune, North Carolina, Naval District Five Report," 1 Oct. 1946 [CLJA_Watermodeling_07-0001200597].

118. U.S. Marine Corps Headquarters, “Marine Corps Base Camp Lejeune and Marine Corps Air Station, New River: Water Conservation Analysis. ECG INC., 1999.
119. U.S. Marine Corps, “Master Plan for the Development and Utilization of the Camp Lejeune Area,” 24 March 1970 [CLJ0257940].
120. U.S. Marine Corps, “MILCON Projects,” 1980 [CLJA_Watermodeling_07-000112575].
121. U.S. Marine Corps, Utilities, Energy and Environmental Division, Atlantic Division, “Engineering Study to Correct Existing Operational and Environmental Discrepancies, Building 1450, at Marine Corps Base Camp Lejeune, North Carolina,” Dec. 1982 [CLJA_LANTDIV01-000000555]
122. U.S. Marine Corps, Atlantic Division, Naval Facilities Engineering Command, “Report on Study Concerning Mildew and Excessive Moisture in Various Building at the Marine Corps Base, Camp Lejeune, North Carolina,” 19 Oct. 1981 [CLJA_Watermodeling_07-0001284958 to 1285095].
123. U.S. Marine Corps, “Plans with Plumbing and Mechanical Requirements,” 1998 [CLJA_Watermodeling_07-0001248536].
124. U.S. Marine Corps, “United States Marine Guidebook of Essential Subjects,” U.S. Marine Corps Institute, 1983.
125. U.S. War Department, “FM 21-10: War Department Field Manual: Military Sanitation.” U.S. War Department, 1945.
126. Wilber, Kendrick, Workman & Warren, Inc., “Fast Food Conceptual Study for Enlisted Dining Facilities: Marine Corps Base, Camp Lejeune, North Carolina,” 3 June 1985, 13.
127. Howard, Allan. Oral History by author via Zoom, 30 Aug. 2024.
128. Declaration of Allan Howard, In re: Camp Lejeune Water Litig., 26 Nov. 2024.
129. Video Deposition of Allan Wayne Howard, Dayton, Ohio, 16 Feb. 2024.
130. Declaration of Gary McElhiney, In re: Camp Lejeune Water Litig., 25 Nov. 2024
131. Video Deposition of Gary McElhiney, Sr., Knoxville, TN, 11 April 2024.
132. McLean, Jack. *Loon: A Marine Story*. Ballantine Books, 2009.
133. Tukes, Jacqueline. Video Deposition of Jacqueline Tukes, Jacksonville, NC, 11 April 2024.

134. Declaration of Jacqueline Tukes, In re: Camp Lejeune Water Litig., 26 Nov. 2024.
135. Urquhart, Benjamin. Video Deposition of Benjamin L. Urquhart, 13 Nov. 2024.
136. Zinni, Anthony Charles. Video Deposition of General Anthony Charles Zinni, Williamsburg, VA, 28 May 2024.
137. U.S. Marine Corps, "Reserves Training at Camp Lejeune," 1949, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
138. U.S. Marine Corps, "Recreation at Camp Lejeune, 1952," 23 June 1952, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
139. U.S. Marine Corps, "Baseball at Camp Lejeune," 6 Sept. 1952.
140. U.S. Marine Corps, "Obstacle Course at Camp Lejeune, 1953," 14 May 1953, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
141. U.S. Marine Corps, "Training Activities at Camp Lejeune," 31 October 1961, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
142. U.S. Marine Corps, "Maneuvers at Camp Lejeune," 16 July 1969, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
143. U.S. Marine Corps, "Nixon's Visit to Camp Lejeune," 30 October 1971, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
144. U.S. Marine Corps, "First Aid at Camp Lejeune," 1972, U.S. Marine Corps Film Repository, Research Collections, Univ. of South Carolina.
145. U.S. Marine Corps, Photographs of POW Training, P&S: Camp Lejeune, NC-CLNC/POW School, U.S. Marines Archive, Quantico, VA.
146. Study Report Water Consumption Planning Factors," Directorate of Combat Developments (Quartermaster) U.S. Army Combined Arms Support Command, Ft. Lee, VA, June 15, 1999.
147. "North Carolina Land Area County Rank," *USA.com*, <http://www.usa.com/rank/north-carolina-state--land-area--county-rank.htm>.
148. Oral history, Retired Master Sergeant Jerry Enslinger.
149. Completion Report Covering the Design of Camp Lejeune U. S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks Contract No. 4751, p. 54, April 15, 1941-Sept. 30, 1942. CLJA_USMCGEN_0000287341 to 287705.

150. Request for Replacement of Existing Hadnot Point Messing Facilities, Sep. 16, 1985, Bates CLJA_WATERMODELING_07-0001081648 to 1081651.
151. Photo, Scuba training for children, The Globe, 11 July 1963.
152. J. R. Bailey, Commander, Atlantic Division, Naval Facilities Engineering Command, Transmittal of Survey of Potable Water Treatment Plants and Swimming Pool Water Treatment, p. 5, May 29, 1986, Bates CLJA_USMCGEN_0000006660 to 6671.
153. Swim Team Practice, 1979. 00897_PLG_0000038011 to 38024.
154. Water babies video (still shots).
155. Camp Lejeune, U.S. Marine Base and Related Activities: U.S. Naval Hospital, U.S. Coast Guard Detachment, Field Medical Research Laboratory, Dog Detachment, and Marine Training Command, Oct. 1, 1946, Bates CLJA_WATERMODELING_07-0001200597 to 1200638.
156. Swim Team Competition at the Area 5 Pool, 1972. 00897_PLG_0000042620 to 42631.
157. U.S. Marine Corps, "Position Description for Director, Maintenance & Repair Branch," 16 Dec. 1987. [CLJA Watermodeling, 07-0011086866, 07-0001086909].
158. U.S. Marine Corps, Director, Natural Resources and Environmental Affairs Division, "Request for Information," 18 July 1985 [CLJA_Watermodeling_07-0001133623].
159. U.S. Marine Corps, Series of Maps for the Base, 30 June 1979 [CLJA_Watermodeling_07-0001352246]
160. Base Order 11300.1G, p. 3, June 2, 1982, Bates CLJA_WATERMODELING_07-0001245213 to 1245244.
161. Eric Klingelhofer, *First Forts: Essays on the Archaeology of Proto-Colonial Fortifications* (Brill Publishers, 2010)
162. "Holding Fort Against Time: Rebuilt Military Barracks, Pennsylvania Battlefields Recall Forgotten Conflict in America's Colonial Era," *The America's Intelligence Wire*, 2010
163. Daniel Patrick Ingram, *Indians and British Outposts in Eighteenth Century America* (Univ. Press of Florida, 2012).

164. Kathleen Troost-Cramer, *True Tales of Life and Death at Fort Adams* (History Press Library Editions, 2013)
165. Donna Hechler Porter, *The Big Siege of Fort Boonesborough and the Winning of the American West* (independently published, 2023)
166. Charles Rivers Editors, *Fort Dearborn: The History of the Controversial Battle of Fort Dearborn during the War of 1812 and the Settlement that Became Chicago* (CreateSpace, 2016)
167. Mike Bunn, *This Southern Metropolis: Life in Antebellum Mobile* (NewSouth Books, 2024).
168. Thomas R. Buecker, *Fort Robinson and the American West, 1874-1899* (Univ. of Oklahoma Press, 2003)
169. James Evetts Haley and H.D. Bugbee, *Fort Concho and the Texas Frontier* (Literary Licensing, 2012)
170. John D. McDermott, *Dangerous Duty: A History of Frontier Forts in Fremont County, Wyoming* (Fremont County Historic Preservation Commission, 1993).
171. U.S. Marine Corps, “History of Camp Lejeune,” <https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Cultural-Resources/History-Live/History-of-Camp-Lejeune/>.
172. Katherine A. Zien, *Sovereign Acts: Performing Race, Space, and Belonging in Panama and the Canal Zone* (Rutgers Univ. Press, 2017).
173. M. Gerald Anderson, *Subic Bay: From Magellan to Pinatubo: A History of the U.S. Naval Station* 4th edition (CreateSpace, 2009).
174. Alfred Peredo Flores, *Tip of the Spear: Land, Labor, and US Settler Militarism in Guahan, 1944-1963* (Cornell Univ. Press, 2023).
175. Edward M. Coffman, *The War to End All Wars: The American Military Experience in World War I* (Univ. of Kentucky Press, 1998).
176. H.W. Crocker III, *The Yanks Are Coming!: A Military History of the United States in World War I* (Regnery Press, 2014).
177. Geoffrey Perret, *There’s a War to be Won: The United States Army in World War II* (Random House, 1997).

178. “U.S. Military Buildup of Thule and DEW Line,” Beaufort Gyre Exploration Project, <https://www2.who.edu/site/beaufortgyre/history/us-military-buildup-of-thule-and-dew-line-1950s-1960s/>.
179. Stephen Hugh Lee, *Outposts of Empire: Korea, Vietnam and the Origins of the Cold War in Asia, 1949-1954* (Liverpool Univ. Press, 1996).
180. Allen Millet, *Semper Fidelis: The History of the United States Marine Corps*.
181. Edwin Howard Simmons and Charles Waterhouse, *The United States Marines: A History*.
182. Victor Krulak, *First to Fight: An Insider View of the U.S. Marines Corps*.
183. Jon Hoff, *USMC: United States Marine Corps: A History*.
184. Thomas E. Ricks, *Making the Corps*.
185. James B. Wolfe, *Into the Crucible: Making Marines for the 21st Century*.
186. Jonathan Hansen, *Guantanamo: An American History*.
187. Bradley Gernand, *Quantico: Semper Progrede, Always Forward*.
188. Charles A. Fleming and Robin Austin, *Quantico: Crossroads of the Marine Corps*.
189. Verle Ludwig, *U.S. Marines at Twentynine Palms, California*.
190. Louis Berger Group, *Semper Fidelis: A Brief History of Onslow County, North Marine Corps Base, Camp Lejeune*.
191. Kenneth E. Dunn, *Camp Lejeune Command: Commanders Notes*.
192. Melton McLaurin, *The Marines of Montford Point: America’s First Black Marines*.
193. Robert O’Dowd, *A Few Good Men, Too Many Chemicals: Toxic Exposure of U.S. Marines and Government Lies*.
194. George Swimmer, *Deadly S.N.A.F.U.: Marine Corps Base Camp Lejeune, N.C.*
195. Kevin Boyce, “Troubled Waters: A History of Camp Lejeune’s Toxic Legacy.”
196. Michael Partain, “Camp Lejeune Digital Community Archive Project: An Analysis of Digital Public History Efforts to Achieve Social Justice for Camp Lejeune Drinking Water Contamination, 1999-2017.”

197. Lori Freshwater, “What Happened at Camp Lejeune” in the *Pacific Standard*.
198. Leo Shane III, “Now that the PACT Act Has Passed, How Soon Will Veterans See Their Benefits,” in *Military Times*.

ERRATA SHEET – 12/7/24 REPORT.

With regard to my expert report dated 12/7/24, I make the following corrections:

1. The citation to President Nixon visiting Lejeune is incorrect and should be deleted. Report p. 13 & n. 26, and reliance list number 143.
2. At page 10, the photo caption reading “Water Treatment Plant near Holcomb Boulevard, 1960s” should read “Water Treatment Plant near Holcomb Boulevard.”
3. At page 34, the photo caption reading “Marines fill water buffalo, Hadnot Point” should read “Demonstrative photo of water buffalo.”

Dated: 3/4/25



Kyle Longley, Ph.D.

EXHIBIT 2


Expert Report of Jay L. Brigham, Ph.D.

**In the United States District Court
for the Eastern District of North Carolina
Southern Division**

Case No.: 7:23-CV-897

Camp Lejeune Water Litigation

Prepared by


**Jay L. Brigham, Ph.D., Managing
Partner**

**Morgan, Angel, Brigham and
Associates, L.L.C.
Washington, D.C.
December 9, 2024**

Table of Contents

Report Section	Page
I. Introduction, Qualifications, and Opinions	1
II. Executive Summary	3
A. What is Camp Lejeune?	3
B. Summary of Report	6
III. The Development of the Marine Corps Base Camp Lejeune Prior to the Statutory Period: Origins, Site Selection, and World War II Construction of the Base	10
A. Background, Site Selection, and Base Authorization	10
B. Construction of Marine Corps Base Camp Lejeune	11
1. Construction of the Regimental Areas	11
2. World War II Water Systems at Camp Lejeune	17
IV. The Development of the Camp Lejeune Water Systems: 1952-1987	22
A. Introduction	22
B. The Tarawa Terrace WTP and the ABC One-Hour Cleaners as a Source of Contamination	24
C. Development of the Camp Lejeune Water Systems, 1957-1972	33
V. Areas of Camp Lejeune	42
A. Introduction	42
B. Areas Identified by the ATSDR as Contaminated	42
1. Hadnot Point, including French Creek	42
2. Holcomb Boulevard	48
3. Tarawa Terrace	51
4. Knox Trailer Park	55
C. Water Treatment Plants and Service Areas Not Alleged to Have Contamination	56
1. The Six WTPs Not Investigated by ATSDR	56
2. Montford Point / Camp Johnson	57
a. The Marine Corps Field Medical School	58
b. Marine Corps Service Support / Supply Schools	58
c. Housing	60
d. Amenities	61
e. Separation from Mainside	62
3. Camp Geiger	64
a. The Infantry Training Regiment (ITR)	65
b. The Nuclear, Biological, and Chemical School	67
c. Housing	67
d. Amenities	70
e. Separation from Mainside	71
4. Marine Corps Airfield / Marine Corps Air Station New River	71
a. Housing and Amenities	72
b. Separation from Mainside	74
5. Rifle Range at Stone Bay	75
a. Separation from Mainside	76

6. Onslow Beach	77
7. Courthouse Bay	80
a. The Engineer School	82
b. Housing	82
c. Amenities	83
d. Separation from Mainside	84
VI. Life at Camp Lejeune	84
A. Swimming Pools	84
B. Schools for Base Dependents	87
C. Air Conditioning at Camp Lejeune	94
D. Activities at Camp Lejeune During the Statutory Period	95
VII. Water Trailers – Water Provided During Training	97

I. Introduction, Qualifications, and Opinions

I have prepared this expert witness report at the request of the Environmental Torts Litigation Section of the Civil Division of the United States Department of Justice. A representative of the Environmental Torts Section first contacted me in March 2024 regarding the Camp Lejeune Justice Act (CLJA) claims. Subsequently, Morgan, Angel, Brigham and Associates, LLC (“Morgan Angel Brigham”) and I, as the expert witness, signed a contract with the Department of Justice to review historical documents and write an expert witness report examining historical issues pertinent to the distribution of water to the areas of Camp Lejeune, relevant to the current litigation, during the CLJA “statutory period,” from August 1953 to December 1987.

This report is based on the information that I have reviewed to date. I reserve the right to supplement the opinions expressed herein as I review additional documents held in the National Archives and Records Administration facilities, other research repositories, including Marine Corps Base Camp Lejeune (MCBCL) and Marine Corps Base Quantico, additional documents produced by the parties in this case, and the reports and testimony of other experts in this matter. I, and staff under my direct supervision, conducted research at the National Archives and Records Administration facility in College Park, MD and at the Library of Congress in Washington, D.C. I contacted the National Archives regional facility in Ellenwood, GA and inquired about potentially relevant documents. I also visited the Harriette B. Smith Library at Marine Corps Base Camp Lejeune. My staff and I also reviewed digitized copies of the *Camp Lejeune Globe*, available online, and conducted online research primarily on Newspapers.com and various U.S. Marine Corps websites. A member of my staff also contacted Marine Corps Base Quantico and the Washington, D.C. Navy Yard to inquire about potentially relevant documents. In total, we reviewed approximately 23,100 documents in the preparation of this report, some of which are duplicates.

I hold a doctoral degree in United States history from the University of California Riverside with an emphasis on late nineteenth and twentieth-century American history. My company, Morgan Angel Brigham, is compensated at the rate of \$175.00 per hour for my services. I have given expert testimony in the United States Court of Federal Claims and the following United States District Courts: District of Kansas, District of New Jersey, Central District of California, District of South Carolina, Western District of Washington, Southern District of California, District of Arizona, the Southern District of Texas, and the District of New Mexico. I have attached my resume as Attachment 1 and a list of cases in which I have testified as an expert during the last four years as Attachment 2.

Based on my research and review of documents I offer the following opinions.

1. Camp Lejeune was serviced by nine water treatment plants (WTPs) during the “statutory period,” from 1953-1987. The Agency for Toxic Substances and Disease Registry (ATSDR) researched and determined that the Tarawa Terrace and Hadnot Point WTPs at Camp Lejeune were affected by contaminated water sources containing the chemicals at issue in this case. A third water treatment plant, the Holcomb Boulevard WTP, from the time it became operational in 1972 until February 1985, sporadically received contaminated water from the Hadnot Point WTP. ATSDR concluded that only base water supply systems at Tarawa Terrace, Hadnot Point, and Holcomb Boulevard were contaminated, and Plaintiffs’ experts did not allege otherwise. The United States’ expert, Dr. Remy Hennet, agrees.

2. The Camp Geiger (formerly Tent City), Camp Johnson (also known as Montford Point), Marine Corps Air Station New River, Rifle Range, Onslow Beach, and Courthouse Bay areas of the base were some distance from the Mainside, and each had infrastructure, including barracks and/or family housing, mess halls, and service clubs. Camp Geiger, Montford Point / Camp Johnson, MCAS New River, and Courthouse Bay all had lengthy travel distances to Mainside and/or were isolated from Mainside and had the types of services and amenities that made frequent trips to the Mainside unnecessary, such as post offices, dental clinics, laundromats or dry cleaners, theatres, libraries, and recreational facilities. Unlike these four areas, few Marines lived at the Rifle Range and Onslow Beach. Instead, portions of Onslow Beach were used by Marines and their families for recreation, while other portions were used for amphibious training. The Rifle Range was used by Marines on a revolving basis for training/qualification but was sufficiently far from Mainside that those assigned to it lived at the Rifle Range for the duration of the training/qualification. Each of these six areas were serviced by water treatment plants/systems that were independent of the contaminated water systems identified by ATSDR and Plaintiffs’ experts.

3. Documentary evidence shows that the ABC One-Hour Cleaners located at 2127 Lejeune Boulevard (Highway 24), identified as the source of contamination of the Tarawa Terrace WTP, likely opened in June 1954 or later, and not in 1953 as reported by the ATSDR.

4. Extant documentation reveals that the Marine Corps used water trailers to supply water for field training (otherwise known as “water buffaloes” or “water bulls”) at Camp Lejeune during the statutory period. All of the WTPs at Camp Lejeune had the infrastructure to support the installation of standpipes used to fill water trailers in their respective areas. The travel times between Hadnot Point and other areas, including those west of the New River, suggest further reason to construct standpipes in those areas.

II. Executive Summary

A. What is Camp Lejeune?

Camp Lejeune was originally called the Marine Barracks New River. It was renamed Marine Barracks Camp Lejeune in late 1942, following the death of Major General John Lejeune, and was later renamed Marine Corps Base Camp Lejeune in 1944.¹ For the entire statutory period, the Camp Lejeune Military Complex covered “an area of approximately 110,000 acres,” that included 2,772 acres that encompasses Marine Corps Air Station (MCAS) New River.² The city of Jacksonville, N.C. borders Camp Lejeune to the north. The Marine Corps acquired the area labeled in Image 1 as the Greater Sandy Run Area (“GSRA”) consisting of 41,100 acres in 1992. The area to the right of the GSRA is the footprint of MCBCL during the statutory period of the current litigation.³

¹ “History,” <https://www.Lejeune.marines.mil/visitors/history.aspx>. Also see G. Carraway, *Camp Lejeune Leathernecks, Camp Lejeune, N.C., Marine Corps’ Largest All-Purpose Base* (Carraway, *Camp Lejeune Leathernecks*) (New Bern, N.C.: Owen G. Dunn, 1946), 5, Exhibit 1. Throughout this report, I will refer to the base as Camp Lejeune. Most of Camp Lejeune is used for Marine Corps training and maneuvers, see Harland Bartholomew and Associates, Inc., “Camp Lejeune-Master Plan Update,” prepared for Atlantic Division Naval Facilities Engineering Command, Camp Lejeune, North Carolina, Atlantic Division, May 1986, (1986 Master Plan Update), CLJA_USMCGEN_0000326502, at *0000326643.

² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326604. See also No author, “Welcome Aboard: A Guidebook to the 2nd Marine Division and Camp Lejeune, N.C.,” (Wilmington Printing Company) (1952 Base Guide), Base_Guides_0000000058, at *0000000063 and No author, “Camp Lejeune and New River,” (San Diego, CA: MARCOA Publishing Incorporated, 1988) (1988 Base Guide), Base_Guides_0000000923, at *0000000928.

³ USMC, *Semper Fidelis, A Brief History of Onslow County, North Carolina, and Marine Corps Base Camp Lejeune* (*Semper Fidelis, A Brief History of Onslow County*), (2004), 81, Exhibit 2. Portions of this work are excerpted to create the document, Naval Facilities Engineering Command, Mid-Atlantic, *The Past, the Present, and a Promising Future, At Marine Corps Base Camp Lejeune, North Carolina, An Abbreviated Overview of the Native American History and Historical Cultural Resources at Marine Corps Base Camp Lejeune*, undated (The Past, The Present, and a Promising Future, undated), CLJA_UST02-0003676100. In this expert witness report, I will cite the book length document except as noted.

Image 1

Map of Camp Lejeune and the Surrounding Area⁴

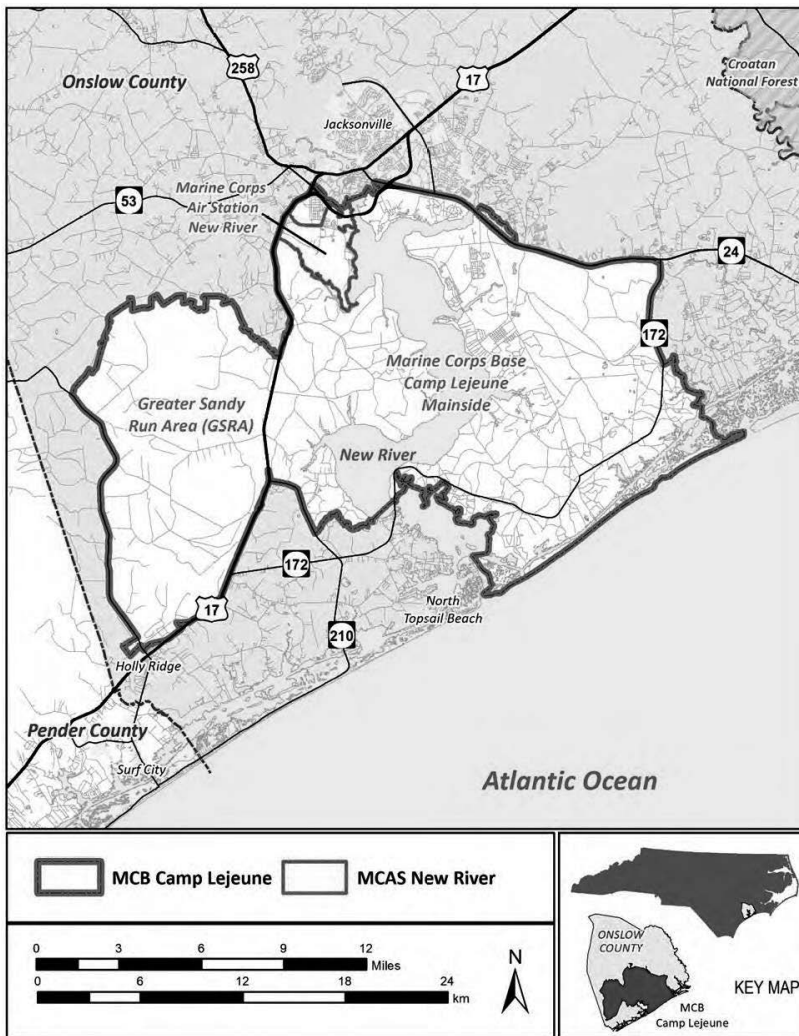
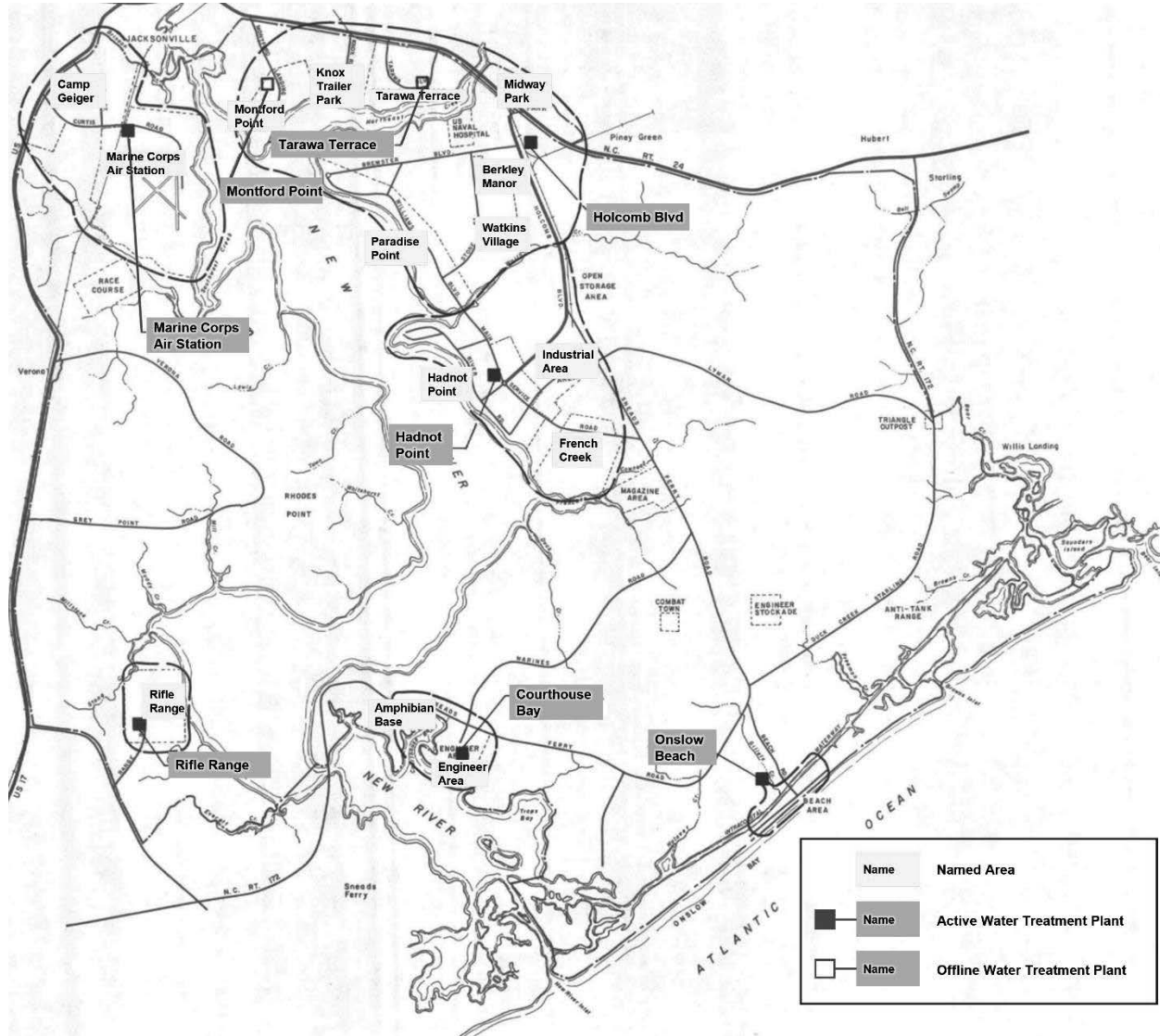


Image 2 is a map of Camp Lejeune dated May 1986. This map shows the areas of the base that I will discuss in this report.

⁴ The Past, The Present, and a Promising Future, undated, CLJA_UST02-0003676100, at *0003676101.

Image 2
Water System, Master Plan
Camp Lejeune, North Carolina, May 1986⁵



⁵ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326660. Highlighting and legend added. The Camp Geiger WTP closed prior to May 1986 and, therefore, is not shown on Image 2.

Troop housing is mostly at “Hadnot Point, French Creek, Camp Geiger,” and at the Marine Corps Air Station while family housing is predominantly at the Holcomb Boulevard housing area, Tarawa Terrace, Midway Park, and there is also family housing at the Marine Corps Air Station, 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326648-49. This document also says troop housing exists “in smaller numbers at scattered locations” at Montford Point, Rifle Range, and Courthouse Bay,” *ibid.*

In 1941, Congress authorized the Navy to purchase the land for Camp Lejeune. Marines that trained at Camp Lejeune during World War II saw combat in the Pacific. There were three populations at Camp Lejeune during the statutory period. First, the Second Marine Division and the Second Marine Logistics Group, and its predecessors that have supported the Second Marine Division, were primarily assigned to Hadnot Point, though Marines and families may have lived in the area of the base I refer to as the Holcomb Boulevard area. Second, several training schools were located at Camp Lejeune: the Infantry Training Regiment (ITR) was located at Camp Geiger, the Engineer School at Courthouse Bay, and several support/supply schools (such as food service, automotive maintenance and driving, administrative supply) and the Field Medical School at Montford Point / Camp Johnson. Third, helicopter units were assigned to the Marine Corps Air Station at New River⁶

B. Summary of Report

This report is divided into seven sections. The first two are: “Introduction, Qualifications, and Opinions” (Section I) and “Executive Summary,” (Section II). In Section III, I review the development of Camp Lejeune from the time the Marine Corps first identified the area depicted in Image 1 as the location for the Marine Corps’ East Coast training center shortly after the start of World War II. In this section, I also review the construction of the base that began in the spring of 1941 and continued into 1943. Many of the structures and facilities built during those years continued to exist and Marines continued to use them into the late 1980s.

Beginning in Section IV, I focus on the “statutory period,” defined in the Camp Lejeune Justice Act of 2022 as August 1, 1953, to December 31, 1987.⁷ In Section IV, I discuss the development of Camp Lejeune’s water systems, consisting of the nine historic WTPs that have provided water to various areas of the base.

Section V examines areas of Camp Lejeune that received water from each WTP during the statutory period and is divided into two parts. Following an Introduction in Section V.A., Section V.B. examines the areas that, at times, received contaminated water: Hadnot Point, Tarawa Terrace, and Holcomb Boulevard (see Image 3). Hadnot Point, referred to as the Mainside, is “the location of the 2nd Marine Division and Marine Corps Base [Headquarters],”

⁶ History, <https://www.Lejeune.marines.mil/visitors/history.aspx>; and *Semper Fidelis, A Brief History of Onslow County*, 48-49, 56, 77, Exhibit 2. An example of the number of troops assigned to each is found in the 1986 Master Plan Update. In 1983, there were 20,082 Marines assigned to the Second Marine Division and 9,840 assigned to the Second Marine Logistic Group (2nd FSSG). There were also 2,553 Marines permanently assigned to Camp Lejeune that were not under the command of the Second Marine Division, see 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326620.

⁷ “Public Law 117-168,” Public and Private Laws of the United States 117 (2021-2022): 136 Stat. 1759. See Sec. 804 Federal cause of action relating to water at Camp Lejeune, North Carolina, “Camp Lejeune Justice Act of 2022.”

and, beginning in the late 1960s, the French Creek area.⁸ The WTPs in this area are indicated by black squares in Image 3. The Hadnot Point service area has included the French Creek area and several areas between Wallace Creek and Northwest Creek, such as Berkeley Manor and Paradise Point. The Holcomb Boulevard WTP began operation in 1972, and served several areas formerly serviced by the Hadnot Point WTP. These areas stretched from Wallace Creek north to the Northwest Creek and included Berkeley Manor, Paradise Point, Watkins Village, and Midway Park (though the Holcomb Boulevard service area was occasionally serviced by the Hadnot Point WTP from 1972 to 1985).⁹ The Tarawa Terrace WTP serviced the Tarawa Terrace housing areas as well as the Knox Trailer Park area (the Knox Trailer Park area also, at times, received water from the Montford Point / Camp Johnson WTP during the statutory period). All three of these WTP service areas—Hadnot Point, Holcomb Boulevard, and Tarawa Terrace—are east of the New River.

Image 3 also shows the sources of contamination for these water treatment service areas. The ABC One-Hour Cleaners, the source of contamination for the Tarawa Terrace WTP and service area, is shown by a red square on Image 3. As identified by the ATSDR¹⁰, the Hadnot Point Landfill Area (HPLF) and the Hadnot Point Industrial Area (HPIA) were the sources of contamination for the Hadnot Point WTP (which, as noted, also served the Holcomb Boulevard Service area until 1972). Image 3 shows these areas in shaded gray rectangles.¹¹

⁸ 1970 Master Plan, Marine Corps Base Camp Lejeune, Jacksonville, North Carolina, Atlantic Division, Naval Facilities Engineering Command, (1970 Master Plan), CLJA_USMCGEN_0000336978, at *0000337047 and *0000337049.

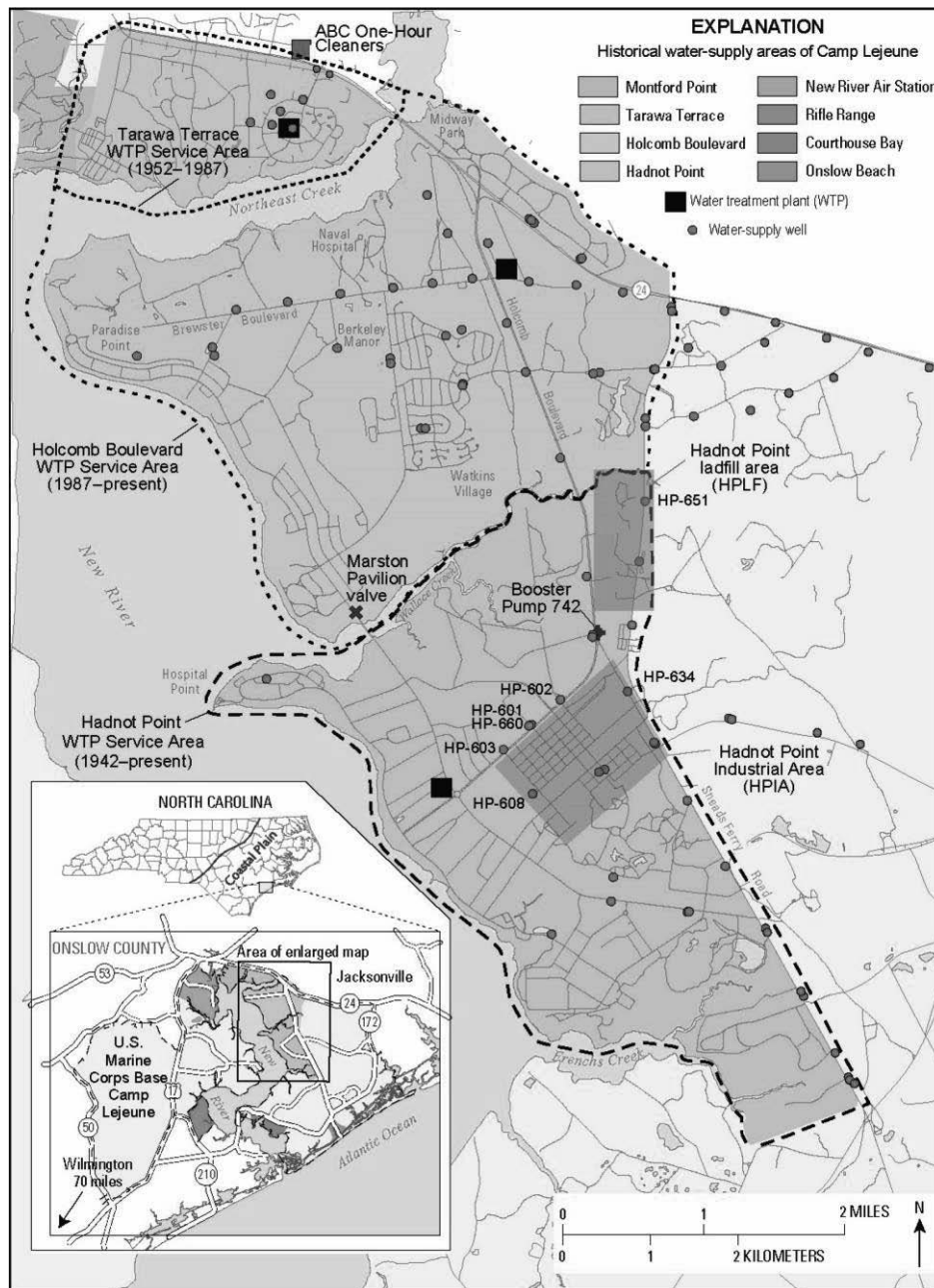
⁹ The Hadnot Point WTP furnished water to Holcomb Boulevard via the Marston Pavilion from January 27 to February 7, 1985, when the Holcomb Boulevard WTP was temporarily shut down. Hadnot Point WTP also supplemented the Holcomb Boulevard WTP “intermittently . . . during dry spring and summer months when demand was high (1972-1985),” Agency for Toxic Substances and Disease Registry, “Summary of the water contamination situation at Camp Lejeune,” 4/18/2017, https://www.atsdr.cdc.gov/sites/Lejeune/watermodeling_summary.html. 1985 was the last time that contaminated water from the Hadnot Point WTP was pumped into the Holcomb Boulevard distribution system, *ibid*.

¹⁰ Image 3 is an ATSDR map. See M. Maslia, et al., *Reconstructing Historical VOC Concentrations In Drinking Water For Epidemiological Studies at a U.S. Military Base: Summary of Results*, Water, 8, 449 (2016): CLJA_ATSDR_BOVE_HC_0000004039, at *0000004040. The inset map of the entire base shows the location of the other Camp Lejeune water supply areas except for the Camp Geiger water supply area since Camp Geiger WTP went offline in 1977. Since that date, the New River Air Station has provided water to Camp Geiger.

¹¹ See pages 24-33 of this report for a discussion of the ABC One-Hour Cleaners and pages 42-43 for a discussion of the Hadnot Point Landfill Area and the Hadnot Point Industrial Area.

Image 3

Historical Water Supply Areas of Camp Lejeune Studied for Contamination¹²



¹² M. Maslia, et al., *Reconstructing Historical VOC Concentrations In Drinking Water For Epidemiological Studies at a U.S. Military Base: Summary of Results*, *Water*, 8, 449 (2016): CLJA_ATSDR_BOVE_HC_0000004039, at *0000004040. The inset map of the entire base shows the location of the other Camp Lejeune water supply areas except for the Camp Geiger water supply area since Camp Geiger WTP went offline in 1977. Since that date, the New River Air Station has provided water to Camp Geiger. The other WTPs are shown in Image 2, except Camp Geiger that closed by May 1986, see footnote 5.

In section V.C., I discuss the Camp Lejeune WTP service areas that the ATSDR did not conclude, and Plaintiffs do not allege, were contaminated (the “Non-Contaminated Areas” of the base). Dr. Remy Hennet, the United States’ expert, agrees with their assessment. The areas are west of the New River, including: Montford Point / Camp Johnson; Camp Geiger, the location of Camp Lejeune’s first WTP and system; Marine Corps Airfield / Marine Corps Air Station New River; and the Rifle Range located at Stone Bay; as well as two areas east of the New River and south of Hadnot Point: Onslow Beach and Courthouse Bay (see Image 2).¹³

Several of the areas discussed in Section V.C. were home to Marine Corps schools wherein Marines participated in occupational specialty training. Infantry training was conducted at Camp Geiger, support occupations were trained at Montford Point / Camp Johnson, and combat engineers were trained at Courthouse Bay. Marines assigned to helicopter units lived and trained at the Marine Corps Air Station.¹⁴ As I will discuss in Section V.C., in these areas during the statutory period, Marines lived in barracks—or lived in family housing with their families—and had access to mess halls, amenities, service clubs, and recreational activities.

In Section VI, I examine life at Camp Lejeune, focusing on swimming pools that were used for training and leisure, schools for base dependents, and recreational and social activities available for Marines and their families on the base. In Section VII, I review the use of water trailers at Camp Lejeune and their role in providing drinking water to Marines training at the various areas of the base.

¹³ Hennet Report at Sec. 5 Op. 1.

¹⁴ MCAS is under the jurisdiction of the Commander, Marine Air Bases, Eastern, Cherry Point, N.C., No author, “The Coast of North Carolina Salutes Camp Lejeune,” (Lubbock, TX: Boone Publications, Inc., 1966), Base_Guides_0000000098, at *0000000103 (1966 Base Guide).

III. The Development of the Marine Corps Base Camp Lejeune Prior to the Statutory Period: Origins, Site Selection, and World War II Construction of the Base

A. Background, Site Selection, and Base Authorization

In September 1939, Germany invaded Poland starting World War II in Europe. At the end of 1939, the Marine Corps numbered 19,432 troops.¹⁵ It became apparent with the expected escalation of the war and the United States' possible involvement, that the Marines' existing East Coast training facilities at Quantico, VA and Parris Island, SC, would be inadequate to train the projected influx of new Marines.¹⁶ To address this situation, the Marine Corps began to study areas for a new training facility.

In 1940, the Marine Corps examined the area along the New River in North Carolina as the site for the Marine Corps' new East Coast training facility. The New River site was considered ideal as there were deepwater ports to the south (Wilmington) and the north (Morehead City).¹⁷ The site was also close to the Cherry Point Naval Air Station located approximately forty miles to the east/northeast.¹⁸ On December 30, 1940, Secretary of the Navy Frank Knox approved the site as the location for the Marines' East Coast training facility.¹⁹ On April 5, 1941, Congress passed a law that included \$14,575,000 for the "Marine Corps training area, east coast."²⁰ Eventually, the Navy purchased 111,155 acres of land totaling 174 square miles that included eleven miles of oceanfront land.²¹ The government moved quickly to

¹⁵ United States Marine Corps History Division, "End Strengths: 1795-2015," <https://www.usmcu.edu/Research/Marine-Corps-History-Division/Research-Tools-Facts-and-Figures/End-Strengths/>.

¹⁶ During World War I, Congress authorized establishment of facilities to "house advanced base/expeditionary units" at Quantico, VA and San Diego, CA, see, A. Millett, *Semper Fidelis, The History of the United States Marine Corps* (Millett, *Semper Fidelis*) (New York: The Free Press, 1980), 284, Exhibit 3. In 1927, Congress authorized the Secretary of the Navy to spend \$2,205,000 for construction of "public works" at Quantico to replace "temporary buildings" dating from World War I, 44 stat., 1101.

¹⁷ *Semper Fidelis, A Brief History of Onslow County*, 17-18, Exhibit 2. In 1915, the Marines moved their recruiting station from the Naval Base at Norfolk, VA to Parris Island, S.C., see, <https://www.mcrdpi.marines.mil/Centennial-Celebration/Historical-information/2TheMarinesArriveatParrisIsland/>.

¹⁸ *Semper Fidelis, A Brief History of Onslow County*, 94, Exhibit 2.

¹⁹ *Semper Fidelis, A Brief History of Onslow County*, 18, Exhibit 2.

²⁰ 55 Stat. 123, at 128-29.

²¹ T. Farnham, "Camp Lejeune," *NCPEDA*, 2006, <https://www.ncpedia.org/camp-Lejeune/>; and *Semper Fidelis, A Brief History of Onslow County*, 18, Exhibit 2.

construct the Marine Corps' new East Coast base. On May 1, 1941, Marine Corps Commandant Lieutenant General Thomas Holcomb ordered Lieutenant Colonel William Hill "to establish and assume command" of the new base at that time named Marine Barracks New River, N.C."²²

The Marine Corps planned a long list of training activities at the new base, including:

'rifle range firing; long-range and anti-aircraft machine gun firing; combat practice firing; anti-aircraft artillery firing; light and medium field artillery firing; seacoast artillery firing; boat and anti-boat gun firing; troop landing operations in surf; maneuvering and training in rubber boats; land and water training with amphibian vehicles; maneuvering and training with artillery and tank lighters; maneuvering and training landing boat crews; ship and boat loading; tank and anti-tank training; parachute troop training; barrage balloon training; infantry and artillery land tactics and maneuvering; beach defense training; and training of hospital units.'²³

B. Construction of Marine Corps Base Camp Lejeune

Construction of Camp Lejeune started in the spring of 1941 and continued through most of 1943. During the construction phase, the base's architect and engineering company issued completion reports that detailed construction activities between April 15, 1941, and December 18, 1943.²⁴ Each completion report contains information about the construction of facilities at Camp Lejeune including barracks, officers' quarters, mess halls, training areas, swimming pools, gunnery ranges, weapons training areas, amphibious training locations, and water supply systems for the various areas of the base.

1. Construction of the Regimental Areas

When construction began, base headquarters was located at "Tent Camp No. 1," also known as Tent City (now Camp Geiger) and this is where the First Marine Division lived when they arrived in September 1941. Initially 1,000 tents were built at Tent Camp No. 1. After the United States entered the war in December 1941, it became necessary to train more troops and

²² United States Marine Corps, *History*, <https://www.Lejeune.Marines.mil/visitors/history.aspx>.

²³ *Semper Fidelis, A Brief History of Onslow County*, 20, Exhibit 2.

²⁴ Carr and J. E. Greiner Company, "Completion Report Covering the Design of Camp Lejeune U.S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks, Contract Number 4751, April 15, 1941-September 30, 1942," Vol. I, CLJA_USMCGEN_0000287341 (Completion Report, Vol. I) and Vol. II, CLJA_USMCGEN_0000161226 (Completion Report, Vol. II); and Carr and J. E. Greiner Company, "Completion Report Covering the Design of Camp Lejeune U.S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks, Contract Numbers 6006 and 7795, October 1, 1942-December 18, 1943," Vol. III, CLJA_USMCGEN_0000209879 (Completion Report, Vol. III).

expand Tent City. Tent Camp No. 2 was thus built as an extension of Tent Camp No. 1.²⁵ The previous month, the officer-in-charge had approved a site “plan for entire Division Training Area” at Hadnot Point, which was originally four regimental areas, where each Marine Corps regiment would live while training at Hadnot Point. After the bombing of Pearl Harbor in December 1941, the Marine Corps added a fifth regimental area.²⁶ Completion Report Volume I (April 1941-October 1942), states that all five regimental areas had “been developed.”²⁷ Each Regimental Area included the following buildings:

- 12 Barracks
- 3 Mess Halls
- 12 Battalion Warehouses
- 1 Regimental Headquarters
- 3 Battalion Headquarters
- 1 Post Exchange
- 1 Regimental Infirmary
- 1 Regimental Theater
- 1 Regimental Service Club²⁸

In addition to the five regimental areas at Hadnot Point, there were other barracks and housing areas constructed on the eastern side of New River during World War II. In 1941, for instance, construction began on 177 duplexes and 346 single units to house Marines and civilians. This area later became known as Midway Park (named after Battle of Midway in June 1942).²⁹ During the war, there were also 900 trailers at the “Trailer Camp” located near Midway Park.³⁰ In addition, Completion Report Volume I notes that: “The standard Marine Corps mess hall . . . for a minimum of 600 men is considered the most satisfactory.”³¹ Each of the five

²⁵ *Semper Fidelis, A Brief History of Onslow County*, 23, Exhibit 2.

²⁶ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287398-99; and *Semper Fidelis, A Brief History of Onslow County*, 23, Exhibit 2.

²⁷ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287410.

²⁹ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287380 and *0000287566. The Midway housing was located on Route 24 between the Northeast Creek and Piney Green, and in the Completion Report Vol. I it was referred to as “Low Cost Defense homes.” The Completion Report also stated that an area had “been provided for certain public buildings such as a church, school, and community building,” *ibid.*, *0000287412.

³⁰ Carraway, *Camp Lejeune Leathernecks*, 10, Exhibit 1.

³¹ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287356.

Hadnot Point Regimental Areas had three mess halls. This suggests that each housed at least 1800 men, and that at least 9,000 men were stationed at this area of Camp Lejeune.

Hadnot Point was also the area selected for the Naval Hospital.³² The hospital was deemed “essential” as the closest hospital was fifty miles away and was thus inadequate to provide services to the many Camp Lejeune Marines, civilians, and their families in the area.³³ In the Naval Hospital area, there were two corpsmen’s barracks, three officers’ quarters, one warrant officers’ quarters, one bachelor officers’ quarters, one servant quarters for women and one for men.³⁴

In August 1942, the Corps relocated base headquarters from Tent City to Hadnot Point, indicating completion or near completion of the regimental areas and other buildings in the area.³⁵ Although base headquarters and many of the base’s facilities were at Hadnot Point, combat training continued at Tent City throughout World War II.³⁶ Base planners had selected Hadnot Point for the division headquarters, the regimental barracks area, other housing units, and the base hospital because of its central location and close proximity to training areas. The area’s good drainage, scenic views, and fewer mosquitoes added to its attraction.³⁷

³² *Semper Fidelis, A Brief History of Onslow County*, 24, Exhibit 2.

³⁴ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287474-75. The corpsmen’s barracks were also H shaped with four dormitories, *ibid.*, *0000287496. Corpsmen provide assistance to doctors and other caregivers. See America’s Navy, Hospital Corpsman, Responsibilities, <https://www.navy.com/careers-benefits/careers/medical/hospital-corpsman>. In the Marine Corps, warrant officers “are officer-level technical specialists in their respective fields, providing leadership, training, and extensive knowledge to the Marines in their MOS [military occupational specialty].” See Marine Corps Ranks, <https://www.marines.com/about-the-marine-corps/roles/ranks.html#:~:text=Warrant%20officer%20Marines%20are%20officer,be%20appointed%20a%20warrant%20officer>.

³⁵ United States Marine Corps, *History*, <https://www.Lejeune.Marines.mil/visitors/history.aspx>.

³⁶ In March 1944, Corporal R. Myers wrote in *The Globe* that Marines arrived at Tent City for training before their westward departure for deployment in the Pacific, making Camp Geiger the “Direct Road to Tokyo,” R. Myers, “Replacement Battalions -- Only Direct Road to Tokyo Now Open to Marines,” *The Globe*, 3/22/1944, 00897_PLG_0000057345, at *0000057352-53. *The Globe* is the Camp Lejeune newspaper. Over the years its name has changed. From 2/23/1944 to 9/2/1948, the name was *Camp Lejeune Globe* (<https://www.loc.gov/item/sn91066064/>); from 9/9/1948 to 12/23/1955 the name was *The Globe*) (<https://www.loc.gov/item/sn95072307/>); then from 1/6/1956 to 7/15/1976) the name was again, *Camp Lejeune Globe* (<https://www.loc.gov/item/sn95072308/>); from 7/22/1976 to 3/28/1985 the name was just *Globe* (<https://www.loc.gov/item/sn95072309/>); and from 4/4/1985 into the 1990s it was again called *Camp Lejeune Globe* (<https://www.loc.gov/item/sn95072310/>). Throughout this report, I will reference it as *The Globe*.

³⁷ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287355 and *0000287409; and *Semper Fidelis, A Brief History of Onslow County*, 21, Exhibit 2.

Image 4 is a map of the Division Training Area on Hadnot Point as of June 30, 1946, less than a year from the end of World War II. It shows the main areas of Hadnot Point, including the regimental areas, the supply and industrial area, the service company area, the hospital area, married officer quarters, and the many H-style barracks located at Hadnot Point.

Image 4

Map of the Division Training Area at Hadnot Point, June 30, 1946³⁸

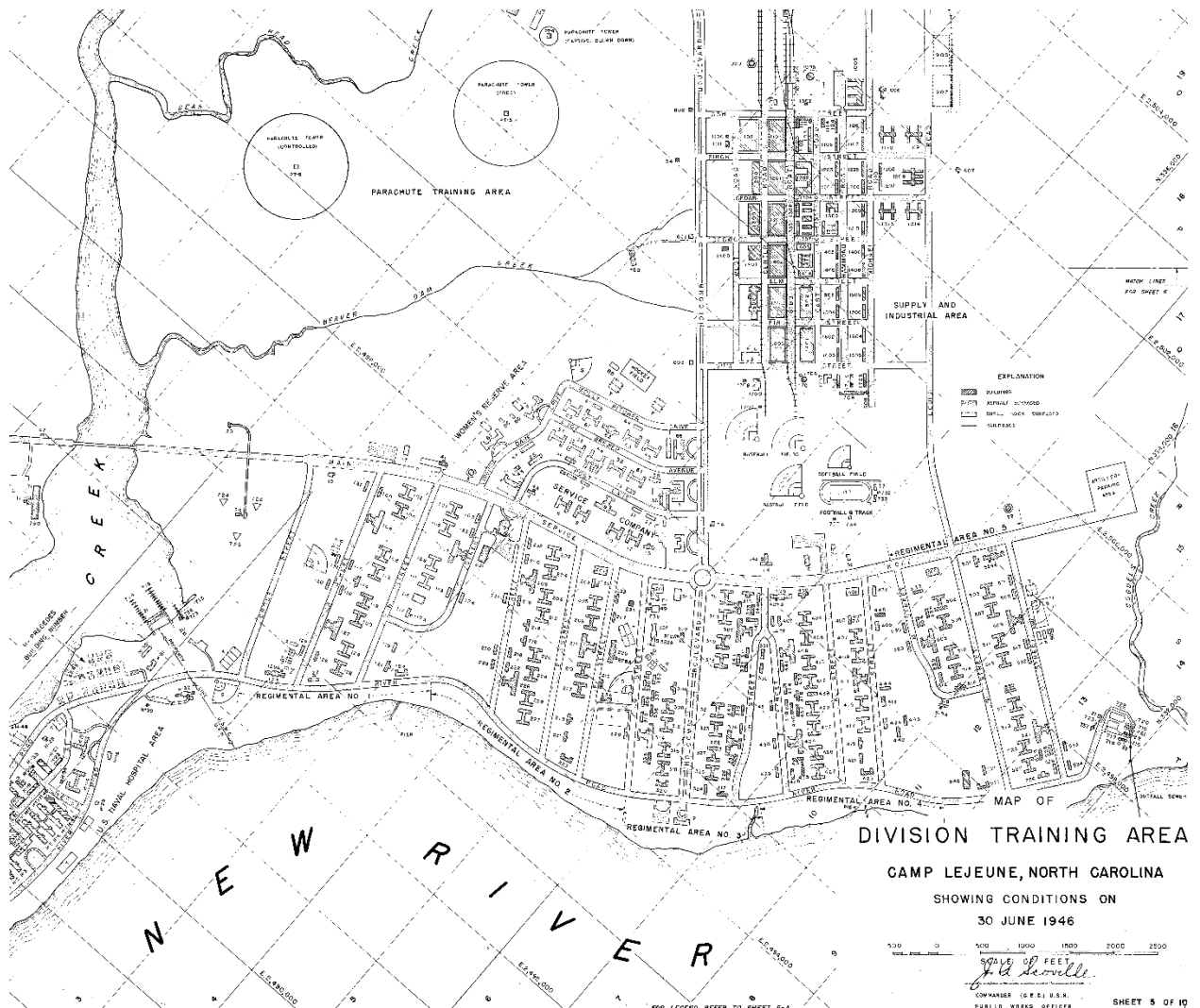


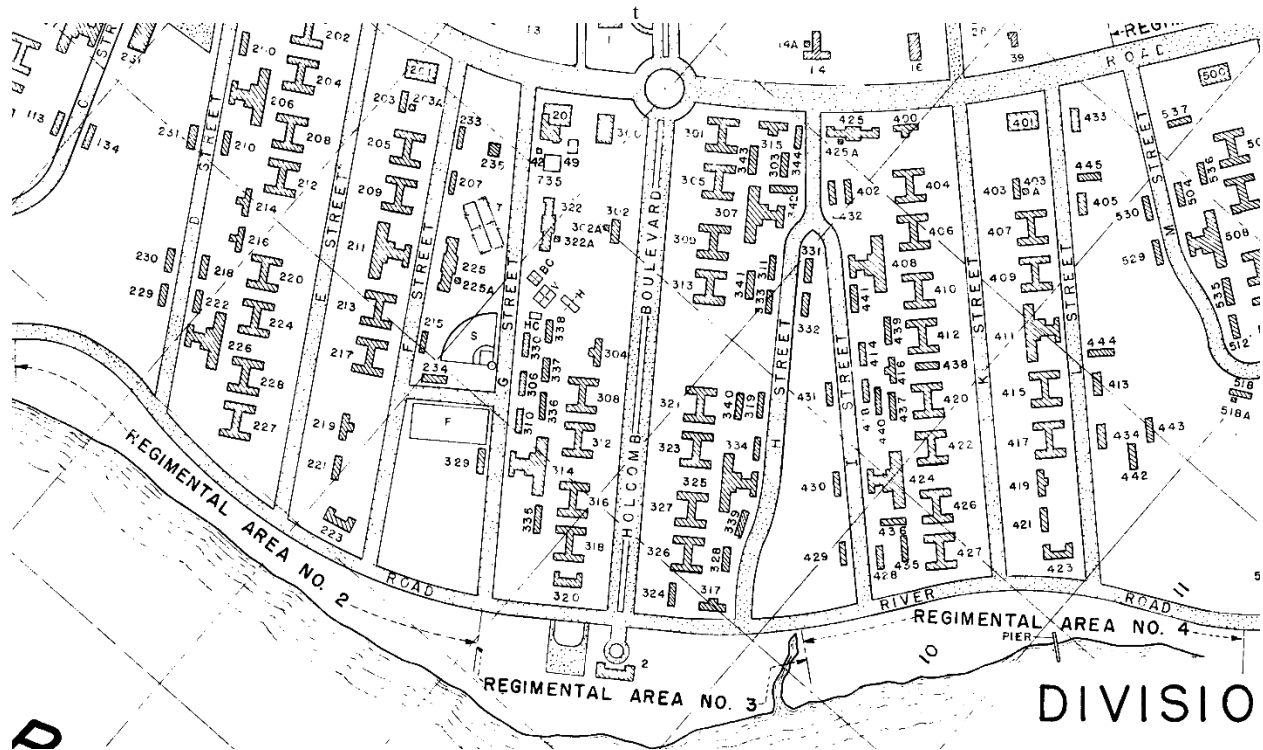
Image 5 is an enlargement of Image 4 that shows most of Regimental Areas No. 2, No. 3, and No. 4 at the Division Training Area. The H-style barracks took their name from the shape of the structures and were the predominant type of housing for enlisted Marines at Camp Lejeune

³⁸ CLJA_USMC_PWD_0000126644.

living on Hadnot Point for most of the statutory period. In the 1960s, the Marines Corps started to build other styles of living quarters as discussed in Section V.³⁹

Image 5

H-Style Barracks in Regimental Areas No. 2, No. 3, and No. 4, June 30, 1946⁴⁰



Housing areas were also constructed at other areas of the base during this time, including at Camp Geiger, Rifle Range, Courthouse Bay and units at the Piney Green housing area for African-American tenants that was located north of Highway 24 (see Image 2).⁴¹ The Rifle

³⁹ During World War II, Marines lived in tents at other locations on MCBCL. Tent Camps were located at Tent Camp Nos. 1 and 2 that housed 16,000 troops, at the location of the Tank Battalion, Engineer Battalion, and at segregated Mumford (later called Montford) Point, Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287385.

⁴⁰ CLJA_USMC_PWD_0000126644.

⁴¹ National Research Council of the National Academies, "Contaminated Water Supplies at Camp Lejeune: Assessing Potential Health Effects," (Washington, D.C.: The National Academies Press, 2009), (National Research Council 2009), CLJA_HEALTHEFFECTS-0000000431, at *0000000486; and *Semper Fidelis, A Brief History of Onslow County*, 26, Exhibit 2. For a contemporaneous account of Camp Lejeune during World War II see, Carraway, *Camp Lejeune Leathernecks*, Exhibit 1.

Range, Barrage Balloon Battalion, Amphibian Base, and Post Troops Activities areas had four barracks each.⁴²

The September 25, 1943, facilities contract included construction of four swimming pools. Three indoor swimming pools for training purposes were built at “Regimental Areas No. 2 and No. 5” and at Montford Point Camp No. 3.⁴³ Each of three training pools had a capacity of 434,000 gallons. There was also a smaller, uncovered, recreational swimming pool at Paradise Point in the officers’ area, in what became the Holcomb Boulevard area.⁴⁴

Following the construction of the officers’ housing on Paradise Point and the addition of two base trailer parks, no additional housing construction occurred at Camp Lejeune until the Korean War.⁴⁵

All together at Camp Lejeune, by September 1942, there were seventy-four barracks, twenty-eight mess halls, 174 warehouses, ten post exchanges, eleven theaters, two brigs (one at Montford Point and one where the Post Troops were housed), and four chapels (two at Hadnot Point, one at Tent Camps No. 1 and No. 2, and one Montford Point).⁴⁶ During World War II, 196 Officers’ Quarters were built: 180 in the residential area for married officers, three at the Naval Hospital, five at the Rifle Range, and eight at the Barrage Balloon area. Ten Bachelor Officer’s Quarters were built with eight located in the residential area and one each at the Rifle Range and Naval Hospital.⁴⁷

⁴² Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287512, *0000287518, and *0000287552. The Post Troops Activities Barracks were on Hadnot Point. The Rifle Range located at Stone Bay was across the New River from Hadnot Point. The Amphibian Base and Balloon Barrage Battalion were at Courthouse Bay, *ibid.*, at *0000287411-12.

⁴³ Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000209901, *0000209951-53, and *0000210107.

⁴⁴ Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000209907, *0000209951-53, *0000209963, and *0000210107. On page *0000210110-11 of Completion Report Vol. III, it is stated that the capacity of the pool at the Paradise Point officers’ quarters was 177,500 gallons.

⁴⁵ *Semper Fidelis, A Brief History of Onslow County*, 26, Exhibit 2.

⁴⁶ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287559-62. Post troops were those Marines permanently assigned to Camp Lejeune who served in administrative, training, and operational support. During World War II a battalion of post troops were assigned to Camp Lejeune, see History of Camp Lejeune, <https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Cultural-Resources/History-Live/History-of-Camp-Lejeune/>. Since World War II, these troops have been identified as Force Troops.

⁴⁷ Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287565-66.

2. World War II Water Systems at Camp Lejeune

From the beginning of construction, water was an issue at the base. Volume II of the Completion Report for the period April 15-September 30, 1942, included a forty-two page chapter on the base's "Water Supply and Distribution" that noted:

Introduction. The design of water utilities, at the outset presented major problems as to the source of supply and the treatment of same.

The treatment and pumping plant for the Division Training Area [Hadnot Point] has been designed for easy and economical operation.

Water systems in the outlying areas have been designed along exactly the same lines except that treatment has been eliminated.⁴⁸

The water systems reviewed in Completion Report Volume II were at Tent Camps No. 1 and No. 2, the Division Training Area (Hadnot Point), Midway Park Residential Area, Mumford (later Montford) Point Camp No. 1, Barrage Balloon Battalion, Amphibian Base, Rifle Range Area, Glider Training Base, Peterfield Point Tent Camp, Tank Battalion Tent Camp, and Camp Knox.⁴⁹

On May 10, 1941, the first well at Tent Camp No. 1 was drilled. In the second Completion Report, it is stated that: "The estimated consumption for all ordinary purposes is 120 gallons per capita, per day, or a total of 720,000 gallons."⁵⁰ Wells would be the source of all water and the water would be stored in elevated and on-the-ground storage tanks. When the government authorized Tent Camp No. 2 in December 1941, additional wells were drilled to accommodate the doubling of the area's population. At the date of completion of this report,

⁴⁸ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161430.

⁴⁹ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161430. The Barrage Balloon Battalion and the Amphibian Base were near Courthouse Bay. The Glider Training Base and the Peterfield Point Tent Camp were in the area that became the MCAS New River. The Tank Battalion Tent Camp was located on U.S. Route 17 south of Jacksonville. On Image 2, Camp Knox is to the right of the Montford Point label. For the location of the Glider Training Base, Peterfield Point Tent Camp, see Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161411, *0000161598, and *0000161764. For the Barrage Ballon and Amphibian Base locations see Existing Condition Map, 1943, Balloon Barrage and Amphibian Troops Area, 6/30/1946, CLJA_USMC_PWD_0000126655.

A document dated October 1, 1946 stated that water systems then in operation at Camp Lejeune were at Hadnot Point, Midway Park, Montford Point, Tent Camp, Rifle Range, Courthouse Bay, and Onslow Beach. Hadnot Point water was pumped to the treatment plant and Tent City water into underground storage tanks. At the remaining locations water was pumped directly into the distribution systems, see, Marine Barracks Camp Lejeune, North Carolina, Naval District Five, 10/1/1946, CLJA_WATERMODELING_07-0001200597, at *0001200601-03.

⁵⁰ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161434. "Ordinary Purpose" is not defined in the document.

September 30, 1942, eleven shallow wells provided 2 million gallons of water per day and another 1.2 million gallons per day was pumped from “highly mineralized water from deep wells.”⁵¹

When the government authorized Tent Camp No. 2, it also authorized a second elevated storage tank. A pumping plant lifted the well water and it was then “pumped over coke tray aerators” that were attached to the roofs of two 272,000 gallon ground-level storage tanks.⁵² This process removed hydrogen sulfide gas that was found in some wells. The water was also chlorinated before usage as a standard disinfection process.⁵³

At the time the Completion Report Volume II was released, discussions were underway regarding further treatment of water at Tent City Camps No. 1 and No. 2. The Navy considered the current water treatment adequate while the Marine Corps thought “the high mineral content is objectionable . . . because of deposits in hot water heaters and other mechanical equipment.”⁵⁴

While the water systems at Tent City Camps No. 1 and No. 2 were being constructed, work was underway on treating the water at the Division Training Area at Hadnot Point. A preliminary report dated June 16, 1941, based water requirements at the Division Training Area on an estimated population of 12,500 that included the planned four regimental areas, the hospital area, and the residential area. Although pumping water from the New River was considered, and cost estimates made, and after studying the White Oak River as a possible water source, it was determined that there were no suitable bodies of surface water to supply Hadnot Point. Groundwater was the only viable source of water.⁵⁵

In mid-September 1941, the first ten wells—deemed “Group A”—were drilled at Hadnot Point to furnish water to the Division Training Area. By mid-April 1942, workers had finished drilling the Group A wells. Work then began on drilling the six Group B wells, a process that took four months. The sixteen “Group A” and “Group B” wells could furnish enough water for a population of 20,000. Then, in August 1942, additional authority for five Group C wells was

⁵¹ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161434-38.

⁵² Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161438.

⁵³ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161438-40.

⁵⁴ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161442.

⁵⁵ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161442-50. In this document, *0000161448 and *0000161450 are incorrectly numbered. The text on *0000161448 should follow the text on *0000161450. In part, the low river levels in September 1941 contributed to the rationale against pumping water from the New River.

given and that brought the total gallons per day at Hadnot Point, serving the regimental area, housing, and the hospital, to 6.77 million gallons per day.⁵⁶

The completion report then discusses “Water Storage, Treatment, and Pumping Plant.” The WTP at Hadnot Point was designed to pump three million gallons of “softened filtered water” each day. The language in this portion of the report indicates that the plant was still under construction in 1942. For example, reference is made to a June 23, 1942, letter that referenced additional construction of a specific type of tank.⁵⁷ However, the Hadnot Point WTP began operations in the fall of 1942.⁵⁸ In the third volume of the completion report covering the dates from October 1942 into December 1943, it is noted that in July 1943 the officer in charge recommended that the Hadnot Point WTP be enlarged since the population of that area had doubled.⁵⁹ This discussion underscores that the WTP that served Tent City Camps No. 1 and No. 2, was the first WTP at Camp Lejeune.

In October 1946, a local company published *Camp Lejeune Leathernecks*, a book that provides many descriptions and contains many photographs of Camp Lejeune during World War II, including numerous ones of areas and structures at Hadnot Point.⁶⁰ The book’s author, Gertrude Carraway, included descriptions of the Hadnot Point WTP and the Hadnot Point Industrial Area. The WTP cost exceeded \$1 million. Twenty-one wells furnished water to that plant that in 1946 had a daily capacity of 3,000,000 gallons, soon to be expanded to 5,000,000 gallons.⁶¹

The industrial area included a large commissary, warehouses, and the area’s central heating plant that serviced Hadnot Point structures, including the hospital. Also located at

⁵⁶ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161456-58. This section notes that two more wells were drilled to provide a dedicated well for the hospital and officers’ quarters, *ibid.*, *0000161458.

⁵⁷ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161470 and *0000161478. A *Globe* article from December 1948 states that Hadnot Point WTP started operating in the fall of 1942. The same article stated: “There are outlying stations at Tent Camp, Montford Point, Onslow Beach, Rifle Range and Courthouse Bay, “Water Treatment Plant,” *The Globe*, 12/2/1948, 00897_PLG_0000055167, at *0000055174.

⁵⁸ In December 1948, a story in *The Globe* stated that the Hadnot Point WTP began operating in the fall of 1942, “Water Treatment Plant,” *The Globe*, 12/2/1948, 00897_PLG_0000055167, at *0000055174.

⁵⁹ Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000210100.

⁶⁰ Carraway, *Camp Lejeune Leathernecks*, 5-7, Exhibit 1.

⁶¹ Carraway, *Camp Lejeune Leathernecks*, 7, Exhibit 1. \$1,000,000 in January 1943 equates to approximately \$18.5 million in April 2024, Bureau of Labor Statistics, CPI Inflation Calculator, <https://data.bls.gov/cgi-bin/cpicalc.pl>.

Hadnot Point were the camp dispensary, two churches, a “mammoth camp theatre, regimental theatres, mess halls and recreation centers.”⁶² The Hadnot Point WTP furnished water to all of these structures as depicted in Image 4, the area between Northwest and French Creeks.

Completion Reports Volumes II and III each contain discussions and descriptions of water systems that served Camp Lejeune. Completion Report Volume III, includes a “Summary of Facilities Provided.” The water subsection reads:

98 Miles Water Lines.

58 Wells with Pumping Stations.

3 Water Treatment and Pumping Plants.⁶³

Image 6 is a map of the Camp Lejeune water systems in 1941 and 1942. As indicated by the small blue square in the Camp Geiger area of the map, only Tent City Camps No. 1 and No. 2 had a WTP. The other solid-colored areas received “water (chlorinated) [that] was provided directly to storage tanks and distribution systems.”⁶⁴

⁶² Carraway, *Camp Lejeune Leathernecks*, 6-7, 23, Exhibit 1.

⁶³ Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000209890-91. Evidently the authors of this completion report counted the Tent City Camps No. 1 and No. 2 water systems separately. A document written in October 1950 discussed the Hadnot Point Water System. The author noted that it continued to serve the following areas of Camp Lejeune: the Regimental Area, Post Troops Area, Industrial Area, the U.S. Naval Hospital, the Officers’ Quarters at Paradise Point, Camp Lejeune Schools, and the Midway Park Housing Project, see, Technical Report and Recommendations, for Additions and Improvements to the Hadnot Point Fresh Water System at the Marine Barracks, Camp Lejeune, N.C., 10/13/1950, CLJA_HEALTHEFFECTS-0000057609, at *0000057611.

⁶⁴ Each of the Camp Lejeune Water Zone Maps cited in this report has a note that reads: “Solid color in the water zone area indicates that the water (chlorinated) was provided directly to storage tanks and distribution system.”

Image 6
Camp Lejeune Water Zones, 1941-1942⁶⁵

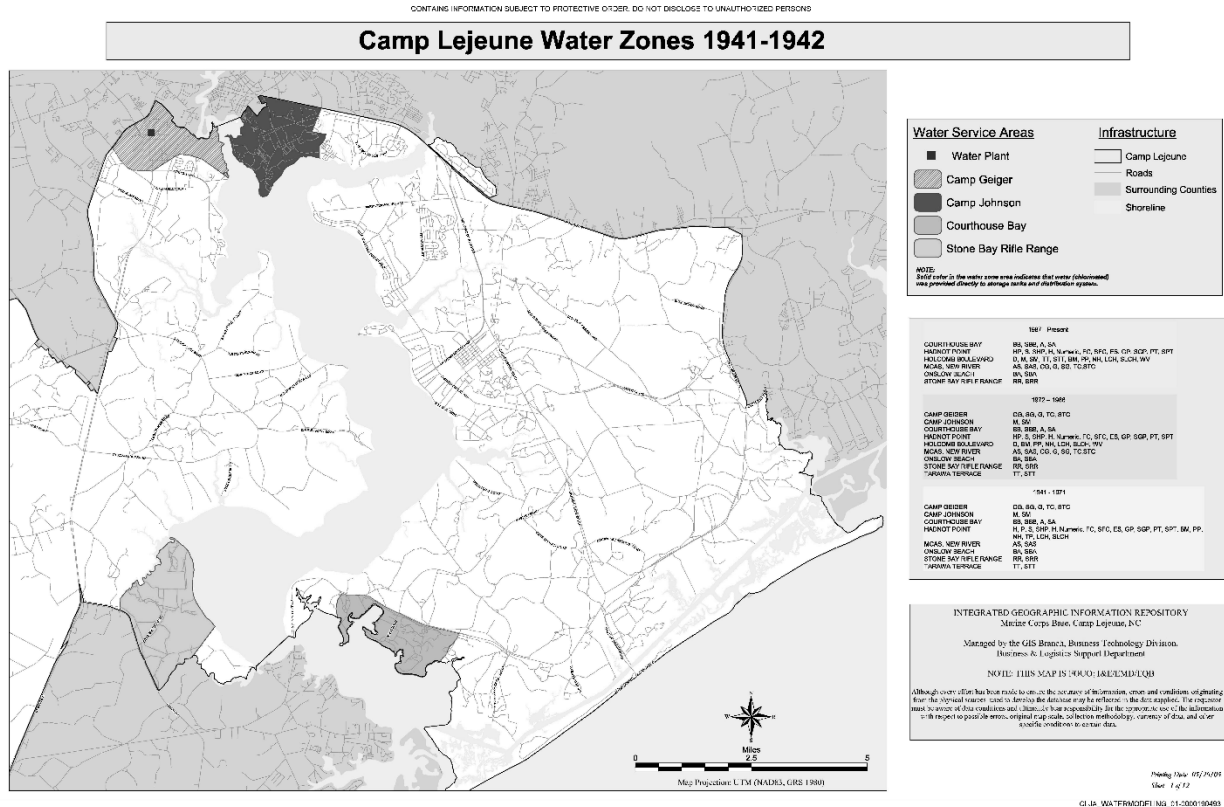
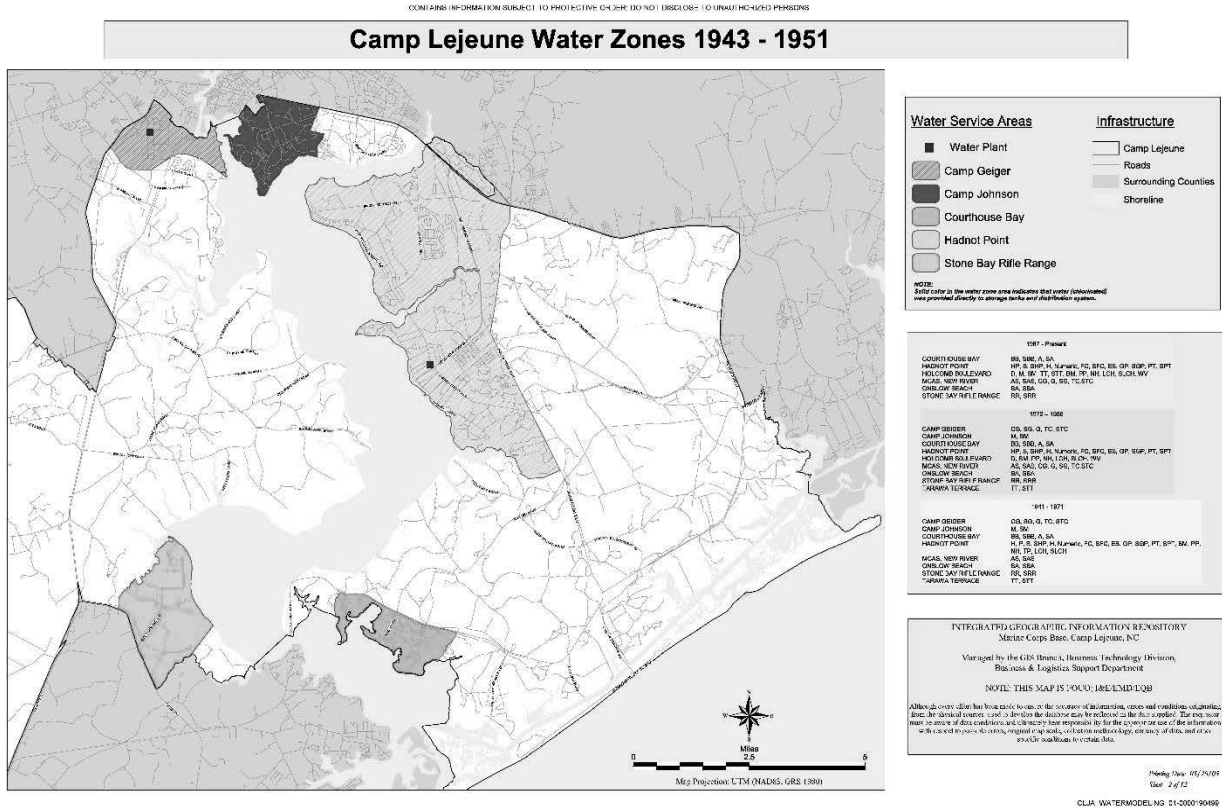


Image 7 is the water zone map for the 1943-1951 period and it shows the Tent City Camp (Camp Geiger) WTP and the Hadnot Point WTP.

⁶⁵ CLJA_WATERMODELING_01-0000190493.

Image 7

Camp Lejeune Water Zones, 1943-1951⁶⁶



IV. The Development of the Camp Lejeune Water Systems: 1952-1987

A. Introduction

After the construction of the Tent City and Hadnot Point WTPs during World War II, the Marine Corps built seven additional WTPs at Camp Lejeune. All nine WTPs have served particular areas of the base. Table 1 lists the nine WTPs organized by dates of operation.

⁶⁶ CLJA_WATERMODELING_01-0000190499. In 2005, the Integrated Geographic Information Repository at Camp Lejeune created a series of twelve color-coded maps showing the location and dates of the water service areas and water treatment plants at Camp Lejeune dating from 1941 to 2000 that I discuss in this report. The office also created composite map, CLJA_WATERMODELING_01-0000190502.

Although the Hadnot Point WTP continued to pump water beyond 2000, the contaminated wells that it was connected to were deactivated between November 1984 and February 1985, see, the Expert Witness Report of Morris L. Maslia in this litigation (Maslia Expert Witness Report), 10/25/2024, 23; and the Expert Witness Report of Professor Mustafa M. Aral, (Aral Expert Witness Report), 10/23/2024, 6.

Table 1
Operation Dates for Camp Lejeune Water Treatment Plants Based on
Camp Lejeune Water Zone Maps, 1941-1987

WTP Name	Year Operations Started	Year Operations Ended
Camp Geiger	1941	1976
Hadnot Point	1942	Pumping in 2000
Tarawa Terrace	1952	1987
MCAS- New River	1954	Pumping in 2000
Montford Point / Camp Johnson	1957	1987
Onslow Beach	1958	Pumping in 2000
Rifle Range (Stone Bay)	1965	1993
Courthouse Bay	1969	Pumping in 2000
Holcomb Boulevard	1972	Pumping in 2000

As I note above, the Camp Geiger WTP was the first WTP at Camp Lejeune and it began operating no later than September 30, 1942, the end date of the second Completion Report.⁶⁷ As reported in *The Globe* in December 1948, the Hadnot Point WTP commenced operations in the fall of 1942. For the remainder of the War, the Camp Geiger and Hadnot Point WTPs provided water for those two areas. Other areas on the base distributed groundwater that had been chlorinated, as discussed in the completion histories.

At the end of the War, in August 1945, Camp Lejeune was “operating at nearly full capacity.”⁶⁸ The U.S. military quickly demobilized after World War II and the situation was no different at Camp Lejeune. In October of 1946, for example, on average there were fewer than 10,000 Marines on base per month. In 1950, total Marine Corps strength across all commands

⁶⁷ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161434-38. In September 1942, what became the Camp Geiger area was still called Tent City Camps No. 1 and No. 2.

⁶⁸ *Semper Fedelis, A Brief History of Onslow County*, 47, Exhibit 2.

numbered fewer than 75,000 regular duty Marines.⁶⁹ Fewer Marines at Camp Lejeune lowered the demand for water.

In June 1950, North Korean troops invaded South Korea, and the United States led the United Nations' response. By the end of 1950, the country was again on a war footing and things began to change at Camp Lejeune as Marines and sometimes their families arrived at the base. During this time, the Marine Corps reactivated old units such as the Field Medical Services and Infantry Training Regiment and established new ones, including Force Troops, Fleet Marine Force Atlantic (FMFLant) at Camp Lejeune. Also, in 1951, the Marines reopened the former Marine Airfield at Peterfield Point, renamed in 1954 to Marine Corps Air Facility (MCAF) New River.⁷⁰

By 1952, the influx of Marines and their families caused a severe housing shortage at Camp Lejeune "that paralleled that of their predecessors at the beginning of World War II."⁷¹ To alleviate the shortage, the Marines started constructing new housing. On January 22, 1953, *The Globe* ran a front-page story on the opening of the Tarawa Terrace II housing development. The article discussed the 1952-1953 housing program and the new construction then underway. According to the article the new Tarawa Terrace II housing complex would have 1,054 housing units, Marine Corps Air Station New River would have 176 housing units, at "Camp Geiger" there would be 900 new trailers, and at "Camp Knox" 250 new trailers.⁷² More Marines and more families meant increased demand for water especially for the 2,108 housing units at Tarawa Terrace I and II.

B. The Tarawa Terrace WTP and the ABC One-Hour Cleaners as a Source of Contamination

The Tarawa Terrace WTP became operational in 1952, after the completion of the Tarawa Terrace I housing area in September 1951.⁷³ Image 8 shows the three WTPs in operation at Camp Lejeune in 1952 and 1953. As noted in the legend of the map, the Montford Point

⁶⁹ *Semper Fidelis, A Brief History of Onslow County*, 48 and 50, Exhibit 2.

⁷⁰ *Semper Fidelis, A Brief History of Onslow County*, 60-61, Exhibit 2. In 1954, six new barracks opened to the west of the airfield located close to the hangar, mess hall, and Service Club and the Staff NCO Club, *ibid.*, 60. On January 8, 1952 Tent City Camp was officially renamed Camp Geiger after USMC General Roy S. Geiger, *ibid.*, 59.

⁷¹ *Semper Fidelis, A Brief History of Onslow County*, 52, Exhibit 2.

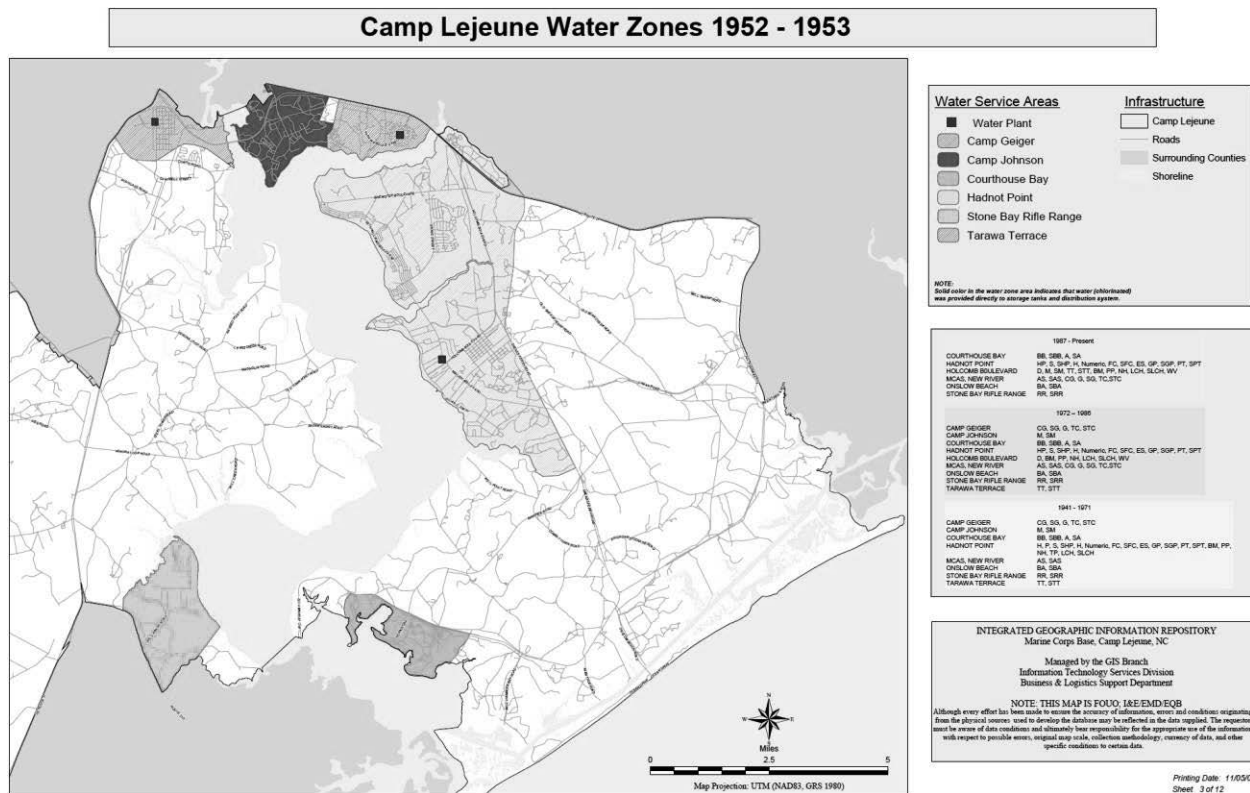
⁷² "First Marine Families Occupy Tarawa Terrace Two: Official Greeting Marks Project's Opening Day," *The Globe*, 1/22/1953, 00897_PLG_0000053464.

⁷³ "Tarawa Terrace Doors [Open] to First Families; [Units] Available Weekly," *The Globe*, 9/13/1951, 00897_PLG_0000054027.

(Camp Johnson), Stone Bay Rifle Range, and Courthouse Bay areas of the base continued to receive and use chlorinated well water.

Image 8

Map of the Water Systems after the Construction of the Tarawa Terrace Housing Areas and Water Treatment Plant⁷⁴



The ATSDR found that Tarawa Terrace WTP, at times, pumped water contaminated with tetrachloroethylene (PCE / perchloroethylene). As stated in their 2008 report and restated in their 2009 report, the: “Migration of PCE to the water table in the immediate vicinity of ABC One-Hour Cleaners and subsequently to Tarawa Terrace water-supply wells probably began with the onset of dry-cleaning operations during 1953.”⁷⁵ The authors continued: “ABC One-Hour

⁷⁴ CLJA_WATERMODELING_01-0000190503.

⁷⁵ ATSDR, Analyses of Groundwater Flow, Contaminant Fate and Transport, and Distribution of Drinking Water at Tarawa Terrace and Vicinity, U.S. Marine Corps Base Camp Lejeune, North Carolina: Historical Reconstruction and Present Day-Conditions, Chapter F: Simulation of the Fate and Transport of Tetrachloroethylene (PCE) (Atlanta, GA: ATSDR, 2/2008), (ATSDR 2008), CLJA_2019ATSDR04-0000000775, at *0000000808. Also see *ibid.*, *0000000798; ATSDR, Analyses of Groundwater Flow, Contaminant Fate and Transport, and Distribution of Drinking Water at Tarawa Terrace and Vicinity, U.S.

Cleaners always used PCE in its dry cleaning operations, beginning during 1953 when the business opened.”⁷⁶ The authors cited the deposition of Mr. Victor Melts, one of the owners of ABC One-Hour Cleaners, in a written communication dated April 12, 2001.⁷⁷ However, as explained in greater detail below, ABC One-Hour Cleaners did not open until June 1954.

During his deposition in April 2001, Mr. Melts testified that they used perchloroethylene at ABC One-Hour Cleaners and that they received it in fifty-five gallon drums with the names of Dow and Dupont on the outside of the drums.⁷⁸ Mr. Melts further testified that he and his brother opened ABC One-Hour Cleaners in 1953 and that at the time of his deposition it was located at 2127 Lejeune Boulevard.⁷⁹

Mr. Melts was later asked, “what years did you actually work at A.B.C. One Hour Cleaners?” He responded: “From 1954 to ’56, ’57. My brother worked it mainly while I moved down to New Bridge Street. Then I had a place out at Camp Geiger on Highway 17 South.”⁸⁰ He continued that he operated the New Bridge Street location and that it was a cleaning business also called “A.B.C. One Hour Cleaners.”⁸¹

However, in contrast to Mr. Melts’ 2001 testimony, a newspaper advertisement, a high school yearbook, telephone directories, and other documents support opinion three that the ABC One-Hour Cleaners on Highway 24 East, later 2127 Lejeune Boulevard, opened in June 1954.

First, an establishment that operated in the same space as ABC One-Hour Cleaners placed an advertisement in the 1954 Camp Lejeune Yearbook. The North Carolina Environmental Management Commission found that a model and hobby shop operated in the

Marine Corps Base Camp Lejeune, North Carolina: Historical Reconstruction and Present Day-Conditions, Response to the Department of the Navy’s Letter on: Assessment of ATSDR Water Modeling for Tarawa Terrace (Atlanta, GA: ATSDR, 3/2009), (ATSDR 2009), CLJA_2019ATSDR04-0000000449, at *0000000470-71.

⁷⁶ ATSDR 2008, CLJA_2019ATSDR04-0000000775, at *0000000798.

⁷⁷ ATSDR 2008, CLJA_2019ATSDR04-0000000775, at *0000000798. Mr. Maslia states in his Expert Witness report that the ABC One-Hour Cleaners started operations in 1953. See, Maslia Expert Witness Report, 57 and 176-77.

⁷⁸ Deposition of Victor John Melts (Melts Deposition), 4/12/2001, 00897_PLG_0000067564, at *00897_PLG_0000067573-75.

⁷⁹ Melts Deposition, 00897_PLG_0000067564, at *0000067569-70.

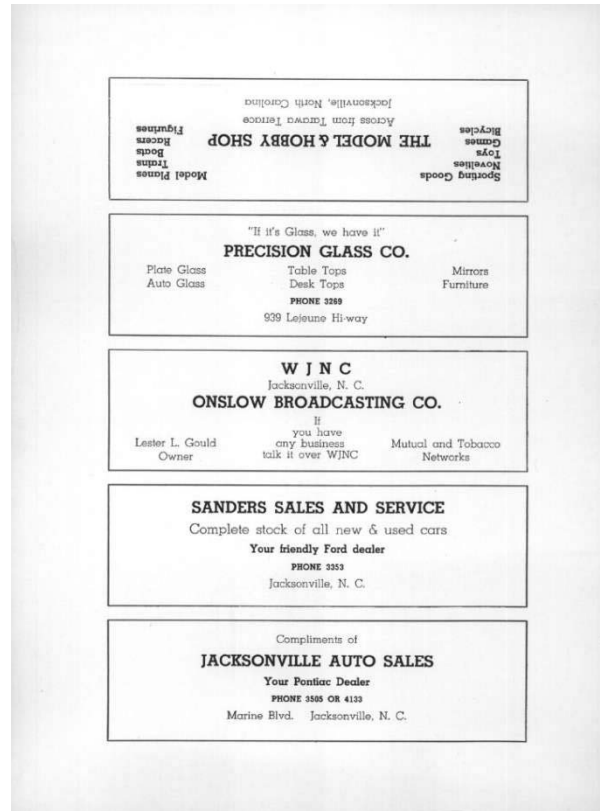
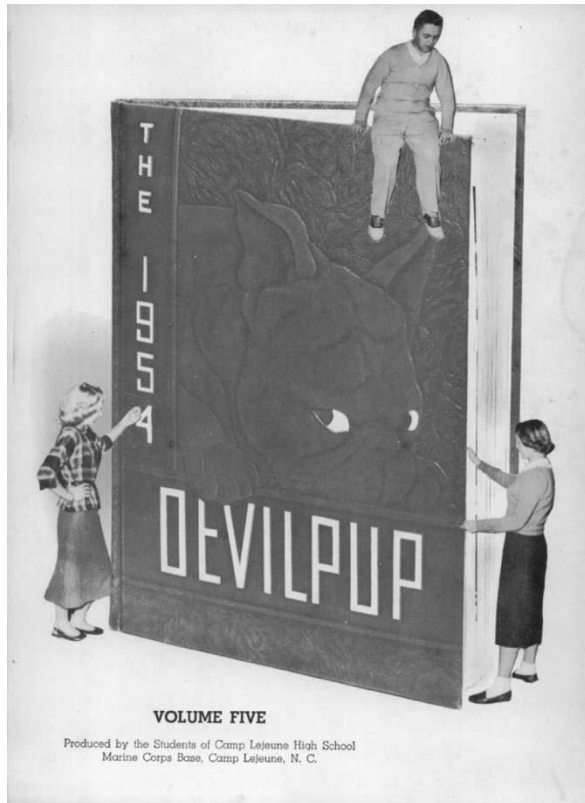
⁸⁰ Melts Deposition, 00897_PLG_0000067564, at *0000067631-32.

⁸¹ Melts Deposition, 00897_PLG_0000067564, at *0000067632. ABC One-Hour Cleaners, New Bridge Street, is the second ABC One-Hour Cleaners location and is situated across Highway 17 to the northwest of Camp Johnson and to the northeast of Camp Geiger.

building leased by Mr. Melts before he opened ABC One-Hour Cleaners.⁸² The 1954 Camp Lejeune High School yearbook, the *Devilpup*, included an advertisement from the “Model & Hobby Shop” as shown in Image 9 below. Information in the *Devilpup* confirms that it was the yearbook for the 1953-1954 school year.

Image 9

Camp Lejeune High School 1954 Yearbook⁸³



Second, a newspaper advertisement in June 1954 indicated that the ABC One-Hour Cleaners opened in that month and year. The June 29, 1954, *Jacksonville Daily News* advertisement reads: “Announcing . . . Grand Opening ABC 1 Hour Cleaners” on Camp Lejeune Highway (Image 10). The advertisement notes that: “We use DuPont Perlene Dry Cleaning

⁸² North Carolina Environmental Management Commission, File No. GW 86-01, CLJA_WATERMODELING_07-0001289853. The signature date of this document is 9/30/1987.

⁸³ These two images were copied from the Camp Lejeune Yearbook available at <https://www.classmates.com/siteui/home>. The yearbook lacks publication information although on the fifth page it is noted: “Volume Five. Produced by the Students of Camp Lejeune High School Marine Corps Base, Camp Lejeune, N. C.,” Exhibit 4.

Solution . . . Safer . . . Faster . . . Cleaner!”⁸⁴ Dupont Perlene Dry Cleaning Solution was a tetrachloroethane / perchloroethylene based solvent.⁸⁵

Image 10

ABC One-Hour Cleaners Advertisement in the Jacksonville, NC *Daily News*, June 29, 1954⁸⁶



⁸⁴ “Announcing . . . Grand Opening ABC 1 Hour Cleaners,” *Daily News*, 6/29/1954, CLJA_OCPL_0000000001, at *0000000012. The advertisement references Midville. To place Midville in the context of Highway 24/2127 Lejeune Blvd, I reference an article in *The Globe* dated March 10, 1960, that discussed a fire that base fire fighters responded to, which indicates that Midville is near Tarawa Terrace. The article reads, in part, “when fire broke out in a huge furniture store in the Midville section of Lejeune Boulevard opposite Tarawa Terrace.” The article further noted that firefighters had “to connect the Lejeune Pumpers and 2,500 feet of hose to the nearest hydrant in Tarawa Terrace.” “Base Firemen Help Fight Highway Fire,” *The Globe*, 3/10/1960, 00897_PLG_0000049366, at *00897_PLG0000049374-75. Notably, Mr. Melts testified that ABC One-Hour Cleaners was next door to a furniture store. Melts Deposition, 00897_PLG_0000067564, at *00897_PLG_0000067626.

⁸⁵ R. Doherty, “A History of the Production and Use of Carbon Tetrachloride, Tetrachloroethylene, Trichloroethylene, and 1,1,1-Trichloroethan in the United States: Part I – Historical Background; Carbon Tetrachloride and Tetrachloroethylene,” *Journal of Environmental Forensics*, 69 81 no.1 (2000), CLJA_WATERMODELING_07-0001271402.

⁸⁶ “Announcing . . . Grand Opening ABC 1 Hour Cleaners,” *Daily News*, 6/29/1954, CLJA_OCPL_0000000001, at *0000000012.

Third, an examination of telephone books indicates that ABC One-Hour Cleaners did not open in the 2127 Lejeune Boulevard, which was the source of the contamination, until 1954 at the earliest. The 1953 telephone directory for Jacksonville, NC and surrounding communities, which had been updated through April 15 of that year, does not include a listing for the ABC One-Hour Cleaners.⁸⁷ There is not an extant telephone directory for 1954. However, the August 1955 telephone directory has three mentions of an ABC One-Hour Cleaners. Two of these are one-line entries—one appearing in the residential section and the other in the business section—that read: “A B C One Hour Cleaners Hwy 24 East-----4749”; the third is an advertisement for the ABC One-Hour Cleaners located on “Hwy 24” (see Image 11).

Image 11

**ABC One-Hour Cleaners Advertisement, August 1955,
Jacksonville, NC and Surrounding Communities Telephone Directory⁸⁸**



⁸⁷ Telephone Directory, Jacksonville, N.C.; Holly Ridge, N.C.; Richlands, N.C.; Sneads Ferry, N.C.; Swansboro, N.C.; Topsail Island, (Jacksonville Telephone Directory), June 1953, Carolina Telephone and Telegraph Company, Exhibit 5.

⁸⁸ Telephone Directory, Jacksonville, N.C.; Holly Ridge, N.C.; Richlands, N.C.; Sneads Ferry, N.C.; Swansboro, N.C.; Topsail Island, August 1955, Carolina Telephone and Telegraph Company, Exhibit 6.

In July 1956, the date of the next Jacksonville, NC telephone directory, there are again three entries for the ABC One-Hour Cleaners. As in 1955, one in the residential listing and one in the business listing. There is also a half-page advertisement that lists the locations of “2 Ultra-Modern Plants” (Image 12). The first is for the one located on “Hwy. 24 East” and the second is for “509 New Bridge St.”⁸⁹

Image 12

ABC One-Hour Cleaners Advertisement, July 1956, Jacksonville, NC and Surrounding Communities Telephone Directory⁹⁰

ABC **ONE HOUR CLEANERS** (C-26)

FREE MOTH PROOFING
ALTERATIONS - PRESSING
WHILE YOU WAIT

*"If Your Clothes Are Not Becoming To You;
They Should Be Coming To Us."*

2 ULTRA-MODERN PLANTS
TO SERVE YOU...

No. 1—HWY. 24 EAST Dial **4749**
No. 2—509 NEW BRIDGE ST. Dial **4944**

CLOSEST CLEANERS TO CAMP LEJEUNE
ALL WORK DONE ON PREMISES

SPICK **SPAN**

YOUR CLEANER IS YOUR CLOTHES' BEST FRIEND
NID
NATIONAL INSTITUTE OF DRYCLEANING 1931

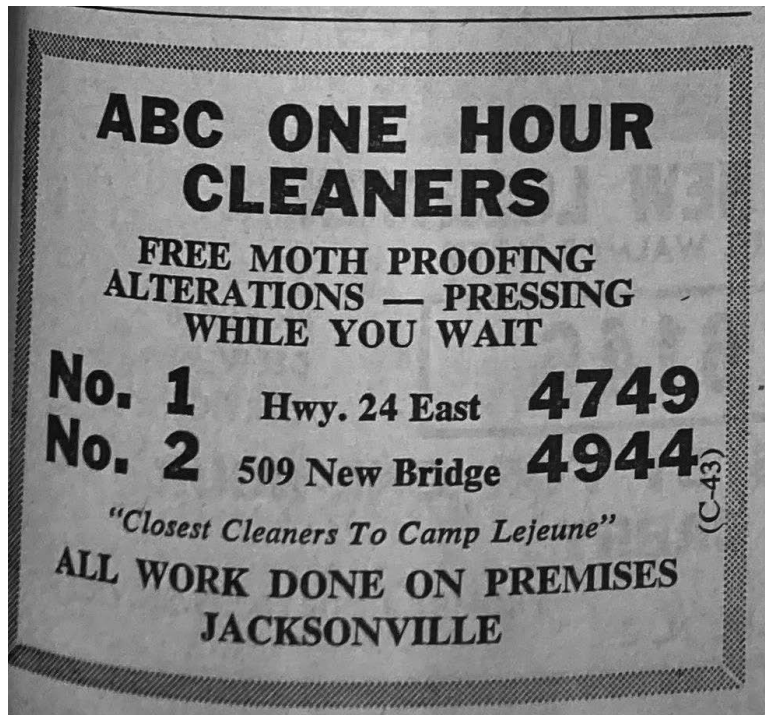
⁸⁹ Jacksonville Telephone Directory, July 1956, Exhibit 7.

⁹⁰ Jacksonville Telephone Directory, July 1956, Exhibit 7.

In 1959, the telephone directory again lists both locations for the ABC One-Hour Cleaners. In addition to the listings, ABC ran an advertisement (see Image 13).

Image 13

**ABC One-Hour Cleaners Advertisement, March 1959, Jacksonville, NC
and Surrounding Communities Telephone Directory⁹¹**



As shown in Image 14, the 1960 directory lists both locations although “Hwy. 24 East” had become “2127 Lejeune Blvd,” the address that Mr. Melts testified was the address of his first location.

⁹¹ Telephone Directory, Jacksonville, N.C.; Holly Ridge, N.C.; Richlands, N.C.; Sneads Ferry, N.C.; Swansboro, NC; Topsail Island, March 1959, Carolina Telephone and Telegraph Company, Exhibit 8.

Image 14

**ABC One-Hour Cleaners Advertisement, March 1960, Jacksonville, NC
and Surrounding Communities Telephone Directory⁹²**



As the above advertisements and discussion illustrate, the ABC One-Hour Cleaners Midville, Highway 24 East, and 2127 Lejeune Boulevard locations are the same. As I have discussed, the ABC One-Hour Cleaners at 2127 Lejeune Boulevard was the source of contamination of the Tarawa Terrace WTP.

Fourth, a North Carolina report issued in 1987 noted that ABC One-Hour Cleaners at 2127 Lejeune Boulevard has been operating as a dry cleaners at the site since 1954,” and was using tetrachloroethylene.⁹³ In this report, the author references a “telephone conversation with Victor Melts, Manager, ABC One Hour Cleaners for the source of the year it opened.”⁹⁴

⁹² Telephone Directory, Jacksonville, N.C.; Holly Ridge, N.C.; Richlands, N.C.; Sneads Ferry, N.C.; Swansboro, N.C.; Topsail Island, March 1960, Carolina Telephone and Telegraph Company, Exhibit 9.

⁹³ C. McMorris, Site Inspection Report, ABC One-Hour Cleaners NC D024644494, 2127 Lejeune Boulevard, Jacksonville, N.C. 28540, 5/27/1987, CLJA_USMCGEN_0000312406, at *0000312408.

⁹⁴ C. McMorris, Site Inspection Report, CLJA_USMCGEN_0000312406, at *0000312428.

Fifth, a 1989 state of North Carolina report and property records indicate that ABC One-Hour Cleaners at 2127 Lejeune Boulevard opened in 1954 or later. In the report, the state noted that the cleaners was located at 2127 Lejeune Boulevard, and further stated: “The site was originally owned by Walter Morgan who constructed a total of three buildings on the property.” The report continued: “In 1954 Mr. Morgan leased the buildings to Milton Melts of ABC 1 Hour Cleaners.” The report also said that the cleaners had “been using tetrachloroethylene at the site since operations began.”⁹⁵ Although, there is not an extant 1954 lease for the property, the first lease involving Mr. Melts is dated May 2, 1955 and between the Carolina Eastern Realty Company and Milton Melts, Jimmy L. Melts, Victor J. Melts, and Florence L. Melts.⁹⁶

The *Devilpup*, the June 29, 1954 advertisement in the Jacksonville, NC Daily News, the Jacksonville, N.C. telephone directories, the North Carolina state reports, the testimonies of Mr. Melts and documents cited in footnotes 77-84 and 86-96 confirm that in the 1950s, the ABC One-Hour Cleaners had two Jacksonville, N.C. locations, and the one located at 2127 Lejeune Boulevard, the source of tetrachloroethylene contamination at Tarawa Terrace, opened in 1954 rather than in 1953 as the ATSDR concluded.⁹⁷

The information in this section of my report serves to lay the foundation for my third opinion.

C. Development of the Camp Lejeune Water Systems, 1957-1987

As shown in Image 15, by 1957, Montford Point (Camp Johnson) and the Marine Corps Air Station had their own WTPs that serviced each area. Stone Bay Rifle Range and Courthouse Bay areas continued to receive and use chlorinated well water from their own WTPs.⁹⁸

⁹⁵ North Carolina Division of Health Services, Solid Waste Management Section, Hazardous Waste Branch, “Comprehensive Ground Water Monitoring Evaluation, ABC 1 Hour Cleaners, Jacksonville, North Carolina, EPA ID # NCD981757726,” 4/20/1989, CLJA_USMCGEN_0000312358, at *0000312360.

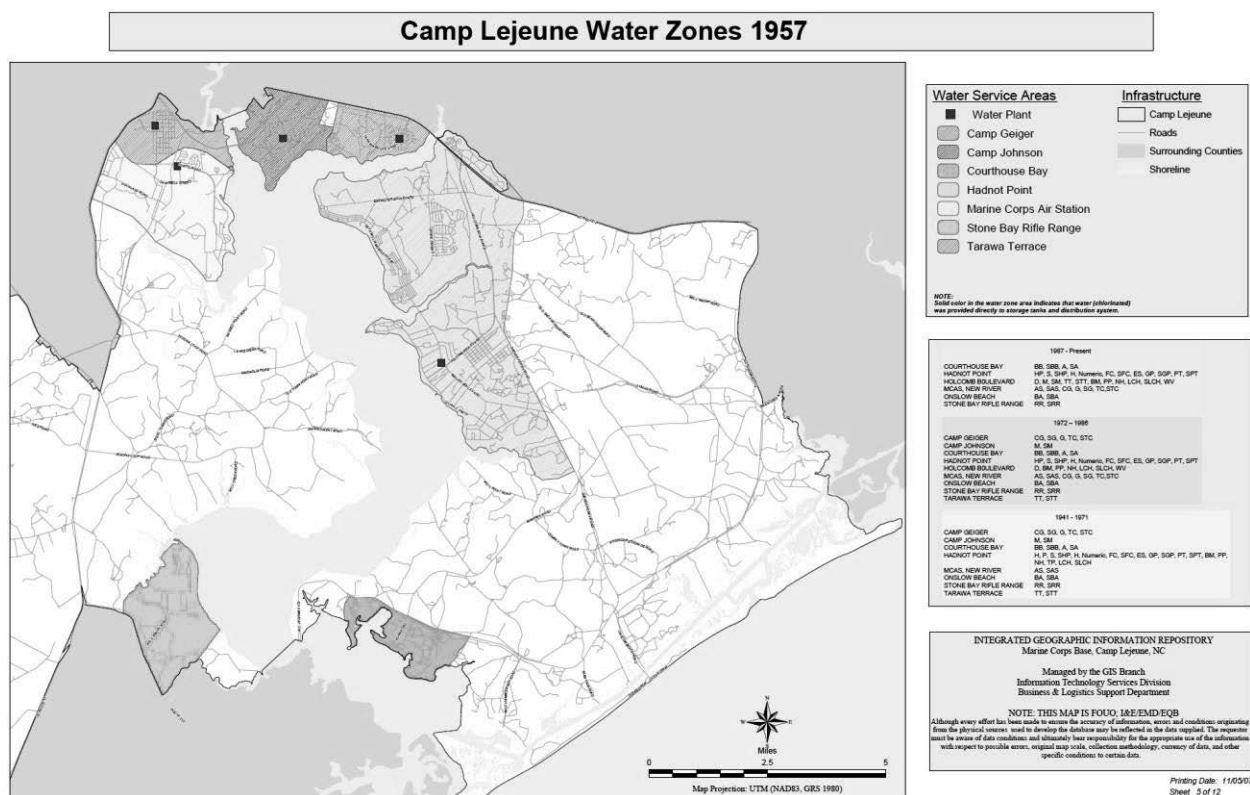
⁹⁶ Lease and Agreement, Carolina-Eastern Realty Company Inc., and Milton Melts, et al., 2/24/1955, Abstract of Title, Lots 1 and 2, Shugart Morgan Subdivision, Plat Book 3, page 55, CLJA_EPA01-0000221397, at *0000221403-05.

⁹⁷ I am unaware of any information that suggests the ABC One-Hour Cleaners located at 509 New Bridge Street (which is the ABC One-Hour Cleaner location in the 1956, 1959 and 1960 telephone directories but not the 1955 directory) was the source of PCE contamination.

⁹⁸ See footnote 64.

Image 15

Map of the Water Systems after the Construction of the MCAS and Montford Point / Camp Johnson Water Treatment Plants⁹⁹



In 1958, the WTP at Onslow Beach began operating as shown in Image 16. Then in 1965, when the U.S. involvement in Vietnam escalated, the WTP at the Stone Bay Rifle Range began operations (see Image 17). Four years later in 1969, at the highpoint of U.S. ground forces in Vietnam, the Courthouse Bay WTP went online (see Image 18). With the commencement of service at the Courthouse Bay WTP, all of the major inhabited areas of Camp Lejeune were now connected to WTPs.

⁹⁹ CLJA_WATERMODELING_01-0000190495.

Onslow Beach Water Treatment Plant¹⁰⁰



CONTAINS INFORMATION SUBJECT TO PROTECTIVE ORDER. DO NOT DISCLOSE TO UNAUTHORIZED PERSONS.

Infrastructure

 Camp Lejeune
 Roads
 Surrounding Counties
 Shoreline

NOTE:
Solid color in the water zone area indicates that water (chlorinated) was provided directly to storage tanks and distribution system.

ONSLow BEACH	BA, SBA
STONE BAY RIFLE RANGE	RR, SRR

HOLDING BOULEVARD
MCAS, VFW RIVER
CHAS. CHAS. BRADY

O. BM PP, NH, LCH
AS. SAS CO. O. SO
RE. BLO.

CAMP BEIDEN	CG, SG, d, TC, etc.
CAMP JOHNSON	M, EM
COURTESY BAY	WS, WWS, A, BA

Business & Logistics Support Department

has been made to ensure the accuracy of information, errors and omissions, resulting from the detection of the application of the data.

conditions and, ultimately, bear responsibility for the appropriate use of such data. Original map scale, collection methodology, currency,

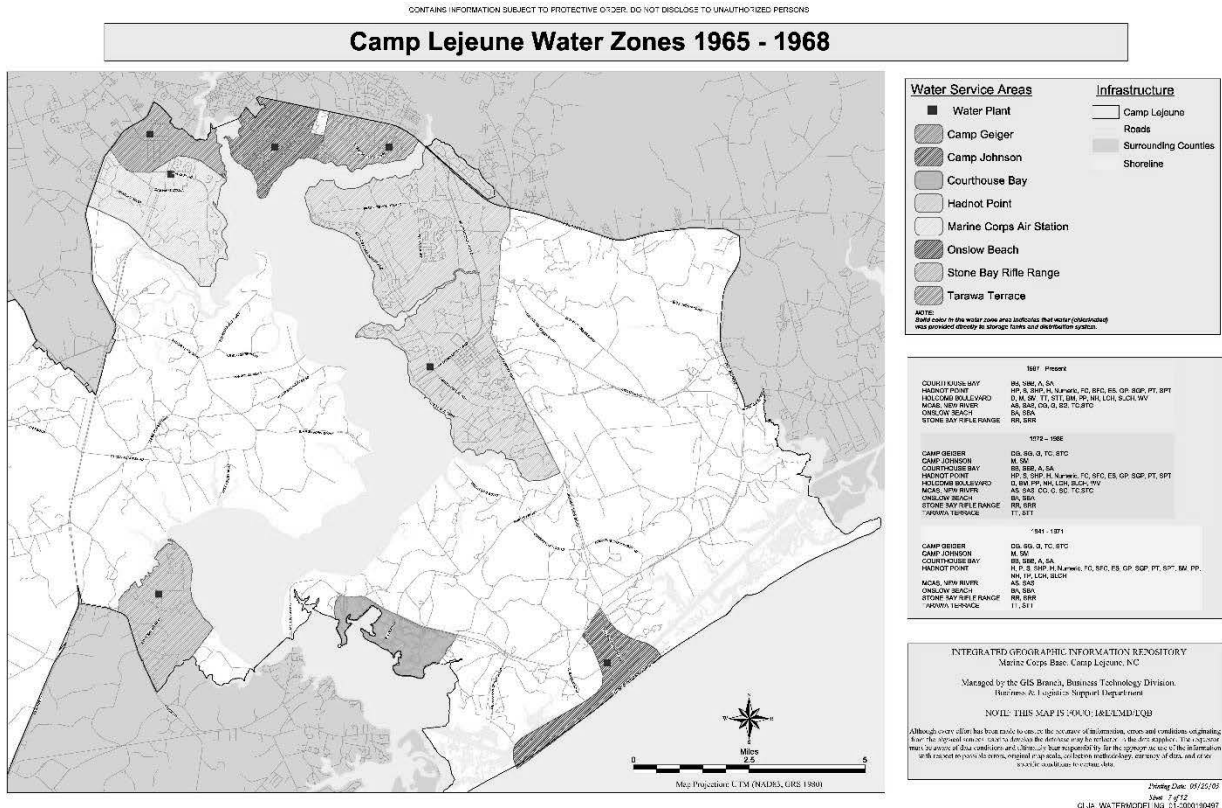
8333, it is difficult to extract data.

June 6, 1992
CLJA_WATFRMODELING_01-2000190498

100 CLJA_WATERMODELING_01-0000190496.

Image 17

Map of the Water Systems after the Construction of the Stone Bay Rifle Range Water Treatment Plant¹⁰¹



¹⁰¹ CLJA_WATERMODELING_01-0000190497.

addressed the need for a new WTP at Hadnot Point: “The construction of the new Force Troops Complex, the new Division Shop Area, and the air conditioning of the new majority of existing building will result in a substantial increase in the potable water requirements imposed upon the Hadnot Point water treatment plant.”¹⁰⁴ Because the Hadnot Point WTP was already operating at capacity and it was not “economically possible” to enlarge it was “proposed to construct a new water treatment plant, together with a new well field . . . and to connect this plant to the main housing areas.”¹⁰⁵

The justification for the construction of the new WTP further stated:

Hadnot Point proper is the most highly developed complex on the Base and is the nucleus of the entire camp. It includes the U.S. Naval Hospital, the Division billeting area, the Central Area, the Supply and Industrial Areas, and the Force Troops Area. A reliable and adequate water supply to this area is of absolute and paramount importance to the mission of the Base. The water demand in this area is very susceptible to great fluctuations as influenced by troop loading conditions and the potential for an increase in troop loading always exists here.¹⁰⁶

The proposed new WTP would be located east of the intersection of Brewster and Holcomb Boulevards with wells located in the Piney Green area.¹⁰⁷

The new Holcomb Boulevard WTP plant was approved and was completed in the summer of 1972 at a cost of \$1.8 million. It is located near the old Main Gate to Camp Lejeune on Holcomb Boulevard near Highway 24.¹⁰⁸ As shown on Image 19, it served the area north of Wallace Creek, which had previously been serviced by the Hadnot Point WTP. The addition of the Holcomb Boulevard WTP brought the total number of active WTPs at Camp Lejeune to nine from 1972 to 1976.

¹⁰⁴ Index 09.05-3/24/70-00368, CLJA_LANTDIV_0000000914, at *0000001590. The referenced “new Force Troops Complex” is south of the main part of the Hadnot Point regimental area at French Creek. Construction started in the late 1960s and continued into the 1970s. The Force Troops are those Marines at Camp Lejeune who work in support of the Second Marine Division providing “heavy combat support and specialized technical support not organic to the 2d Marine Division. . . .,” see, 1966 Base Guide, Base_Guides_0000000098, at *0000000112.

¹⁰⁵ Index 09.05-3/24/70-00368, CLJA_LANTDIV_0000000914, at *0000001590.

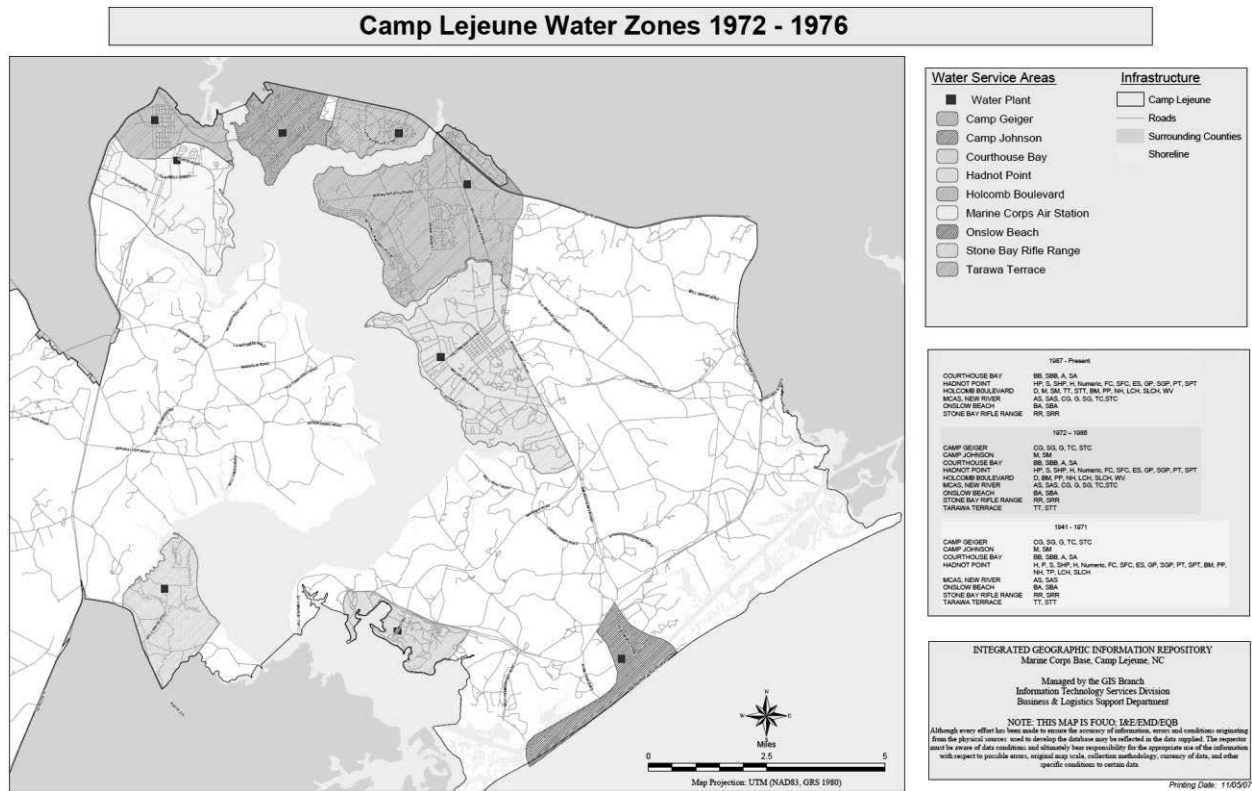
¹⁰⁶ Index 09.05-3/24/70-00368, CLJA_LANTDIV_0000000914, at *0000001593.

¹⁰⁷ Index 09.05-3/24/70-00368, CLJA_LANTDIV_0000000914, at *0000001593-94.

¹⁰⁸ Photo caption “Water Works,” *The Globe*, 8/10/1972, 00897_PLG_0000042448, at *0000042453.

Image 19

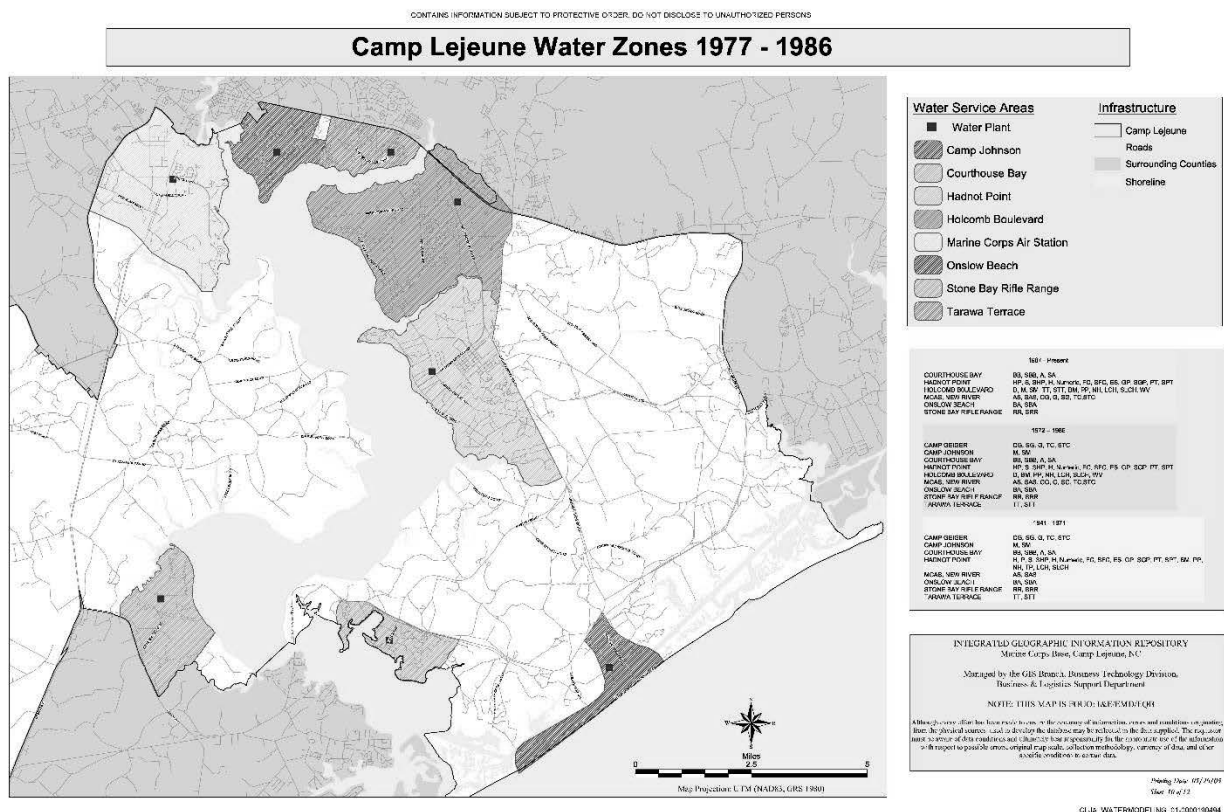
Map of the Water Systems after the Construction of the Holcomb Boulevard Water Treatment Plant¹⁰⁹



¹⁰⁹ CLJA_WATERMODELING_01-0000190491.

In 1976, the Camp Geiger WTP went offline and its service area was connected to the Marine Corps Air Station – New River WTP as shown in Image 20.¹¹⁰

Image 20
Map of the Water Systems after the Camp Geiger
Water Treatment Plant went Offline¹¹¹



In 1987, the Holcomb Boulevard WTP began serving the Tarawa Terrace and Camp Johnson (Montford Point) areas after WTPs serving those two areas were taken offline as depicted in Image 21.¹¹² The Camp Johnson (Montford Point) WTP was taken offline because of

¹¹⁰ National Research Council 2009, CLJA_HEALTHEFFECTS-0000000431, at *0000000486.

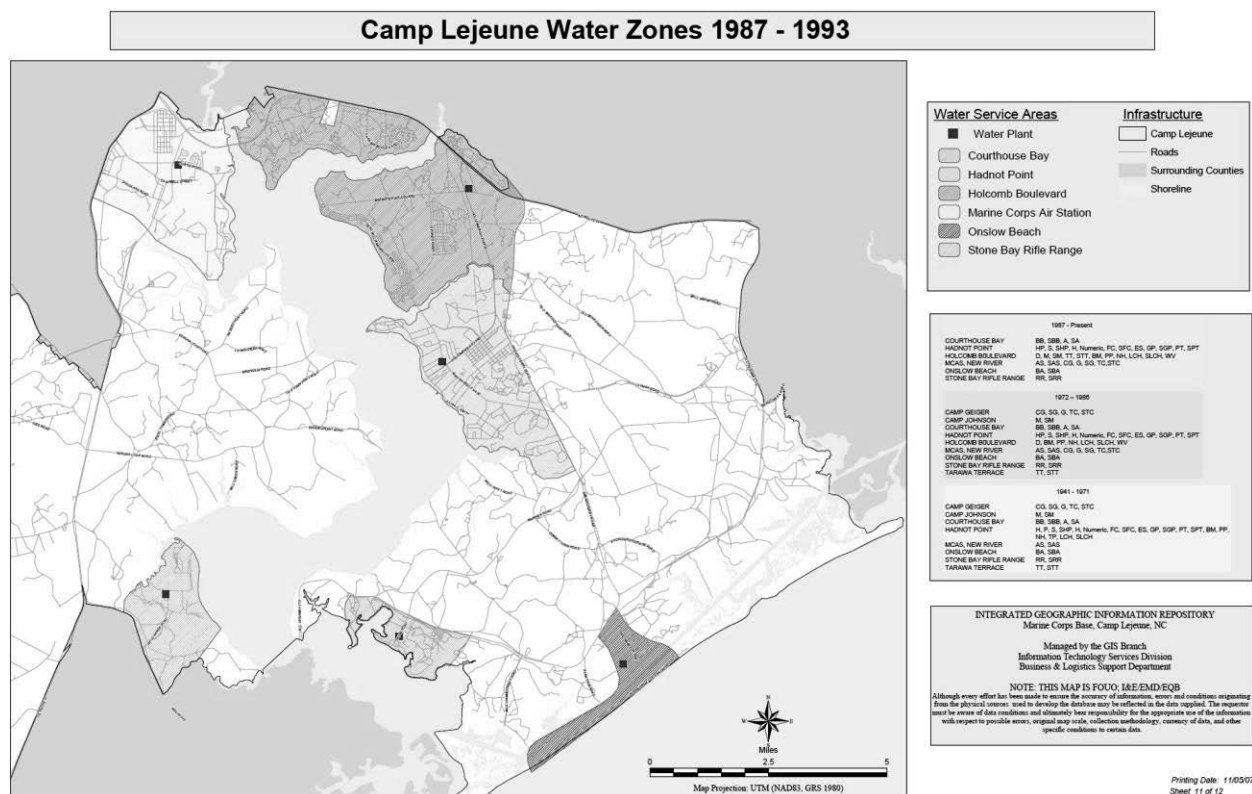
¹¹¹ CLJA_WATERMODELING_01-0000190494.

¹¹² National Research Council 2009, CLJA_HEALTHEFFECTS-0000000431, at *0000000486.

the hardness of the water and the water's high iron levels, although the water was "safe to drink."¹¹³

Image 21

**Map of the Water Systems after the Camp Johnson and Tarawa Terrace
Water Treatment Plants were Retired¹¹⁴**



Opinions one and three of the current report are partially supported by the discussion above in Section IV.

¹¹³ M. G. Lilley, Commanding General to Commanding Officer, Field Medical Service School, 2/9/1984, CLJA_WATERMODELING_01-0000286041-42.

¹¹⁴ CLJA_WATERMODELING_01-0000190501.

V. Areas of Camp Lejeune

A. Introduction

Various sources provide insight into the physical locations of barracks and family housing, main and auxiliary post exchanges (PX), an officers' club, a NCO and service clubs, theaters, and swimming pools at Camp Lejeune, where Marines might have lived, shopped, exercised, recreated and worked since the construction of the base in the early 1940s. These sources include the World War II era completion reports, *The Globe*, Camp Lejeune telephone directories, and base guides. The 1979 "existing condition" maps presented throughout this section, provide a visual representation of the various areas of Camp Lejeune during those years.¹¹⁵ When compared to the "existing condition" maps from 1946, they show that many areas of the base did not change significantly from the World War II time period. The increase in housing for single and married Marines, additional WTPs, and development of the French Creek area are notable exceptions.

B. Areas Identified by the ATSDR as Contaminated

1. Hadnot Point, including French Creek

The Hadnot Point WTP, located in building 20, close to the main service road and Holcomb Boulevard (as shown in Image 4), began operating in the fall of 1942. Originally designed to filter 3 million gallons per day during World War II, it was later expanded to filter 5 million gallons of water per day.¹¹⁶ As shown in Table 1, the Hadnot Point WTP continued to operate in 2000. By 1953, the beginning of the statutory period, it was one of three WTPs operating at Camp Lejeune (see Image 8).

The Agency for Toxic Substance and Disease Registry (ATSDR) has identified that the Hadnot Point WTP (HPWTP) pumped contaminated water. The Hadnot Point Industrial Area and the Hadnot Point Landfill Area were identified as the sources of contamination of ground water wells connected to the Hadnot Point WTP. The ATSDR stated that "within the HPWTP service area [water] was contaminated with trichloroethylene (TCE), PCE, and refined petroleum products, such as benzene, toluene, ethylbenzene, and xylenes (BTEX). Groundwater within the

¹¹⁵ The existing condition maps were prepared annually for various parts of Camp Lejeune and show changes in a particular area from year to year. Extant existing conditions maps exist for the years 1946-1960, 1963, 1964, 1966, 1979, 1984, and 1985. Most of the existing conditions maps bear the signature of the MCBCL Director of Public Works.

¹¹⁶ "Water Treatment Plant," *The Globe*, 12/2/1948, 00897_PLG_0000055167, at *0000055174.

Holcomb Boulevard WTP (HBWTP) service area remained largely uncontaminated except for intermittent supply by contaminated Hadnot Point water during the years 1972-1985.”¹¹⁷

The legend sheet for Image 22, the 1979 Existing Condition Map for the Division Training Area located at Hadnot Point, lists buildings in the supply and industrial area. Among the buildings listed are an ordnance shop, ordnance warehouses, “a gas and oil filling station,” a “Fuel, Stor. Fac. - 600,000 Gal.,” an “oil storage,” eleven repair shops for vehicles, a motor transport repair shop, an “mc exchange washing and greasing bldg.,” a 420,000 gallon storage tank for fuel oil, and a steam cleaning ramp. There were also barracks, a cafeteria, fourteen mess halls, a bakery, fire station, post office, and post exchange where Marines could buy goods and household items.¹¹⁸

Ever since August 1942, when the Marine Corps moved Camp Lejeune headquarters from Tent City / Camp Geiger to Hadnot Point, Hadnot Point has been the center of activity at the base. As discussed above and shown on Image 4, five regimental areas, officers’ quarters, barracks for women, the U.S. Naval Hospital, the base supply and industrial area, the main base exchange, two training pools, clubs, churches, and theaters were all located on Hadnot Point.¹¹⁹ As noted above the decision to build the Holcomb Boulevard WTP was driven by the construction at Hadnot Point that had strained the capacity of the Hadnot Point WTP.¹²⁰ Although members of the Second Marine Division worked at Hadnot Point, some of them also could have lived at Midway Park, Paradise Point, the Tarawa Terrace housing areas when they opened in the early 1950s, Berkeley Manor after it opened in 1962, or Watkins Village following its opening in 1977. Beginning in the late 1960s, the Marine Corps began construction at French Creek to house members of the Camp Lejeune’s Force Troops.¹²¹

¹¹⁷ ATSDR, “Analyses and Historical Reconstruction of Groundwater Flow, Contaminant Fate and Transport, and Distribution of Drinking Water Within the Service Areas of the Hadnot Point and Holcomb Boulevard Water Treatment Areas of the Hadnot Point and Holcomb Boulevard Water Treatment Plants and Vicinities, U.S. Marine Corps Base Camp Lejeune, North Carolina, Chapter A: Summary and Findings” (Atlanta, GA: ATSDR, March 2013), (ATSDR 2013). CLJA_HEALTHEFFECTS-0000221326, at *0000221356.

¹¹⁸ Legend Sheet for Division Training Area, Camp Lejeune Training Area, Camp Lejeune, North Carolina Showing Conditions on 30 June 1979, sheet 10A of 24, CLJA_USMC_PWD_0000173796.

¹¹⁹ There are two legends for Image 4, that list all of the structures and training areas in what in 1946 was called the Division Training Area. See, Legend Sheet 5A of 9.PDF and Legend Sheet 5A of 10.PDF, CLJA_USMC_PWD_0000126642, and *0000126643.

¹²⁰ Index 09.05-3/24/70-00368, CLJA_LANTDIV_0000000914, at *0000001590.

¹²¹ The Second Marine Division was, and remains, comprised of the Second, Sixth, Eighth and Tenth Marine Regiments. Also attached to the Second Marine Division at Hadnot Point were the Second Anti-Tank Battalion, Second Medical Battalion, Second Motor Transport Battalion, Second Pioneer Battalion, Second Reconnaissance Battalion, and the Second Service Battalion. The Marine Corps Force Troops

In 1979, headquarters of Camp Lejeune remained in Building 1 at Hadnot Point and included the offices of the base headquarters and the base's legal offices.¹²²

In some ways the area of Hadnot Point south of Wallace Creek was unchanged from 1946, although, as discussed in the next section, changes in housing had occurred with the construction of Berkeley Manor in the early 1960s, the development of the French Creek area beginning in the late 1960s, and the opening of Watkins Village in 1977. Recreational facilities available on the Mainside in the 1960s, included "bowling alleys, movie theaters, swimming pools, horse stables, and skeet ranges."¹²³ Also in the 1960s the old Non-Commissioned Officers' Club (NCO) club at Marston Pavilion was converted to a youth center to serve the growing number of teenagers who lived at Camp Lejeune.¹²⁴

stationed at Camp Lejeune were located at Hadnot Point, USMC, *Camp Lejeune, NC, Telephone Directory*, 6/1959, (June 1959 Telephone Directory), CLJA_USMCGEN_0000074318, at *0000074319; Headquarters, Marine Corps Base at, *0000074356-76; Second Marine Division at, *0000074382-96; Force Troops at, *0000074398-402.

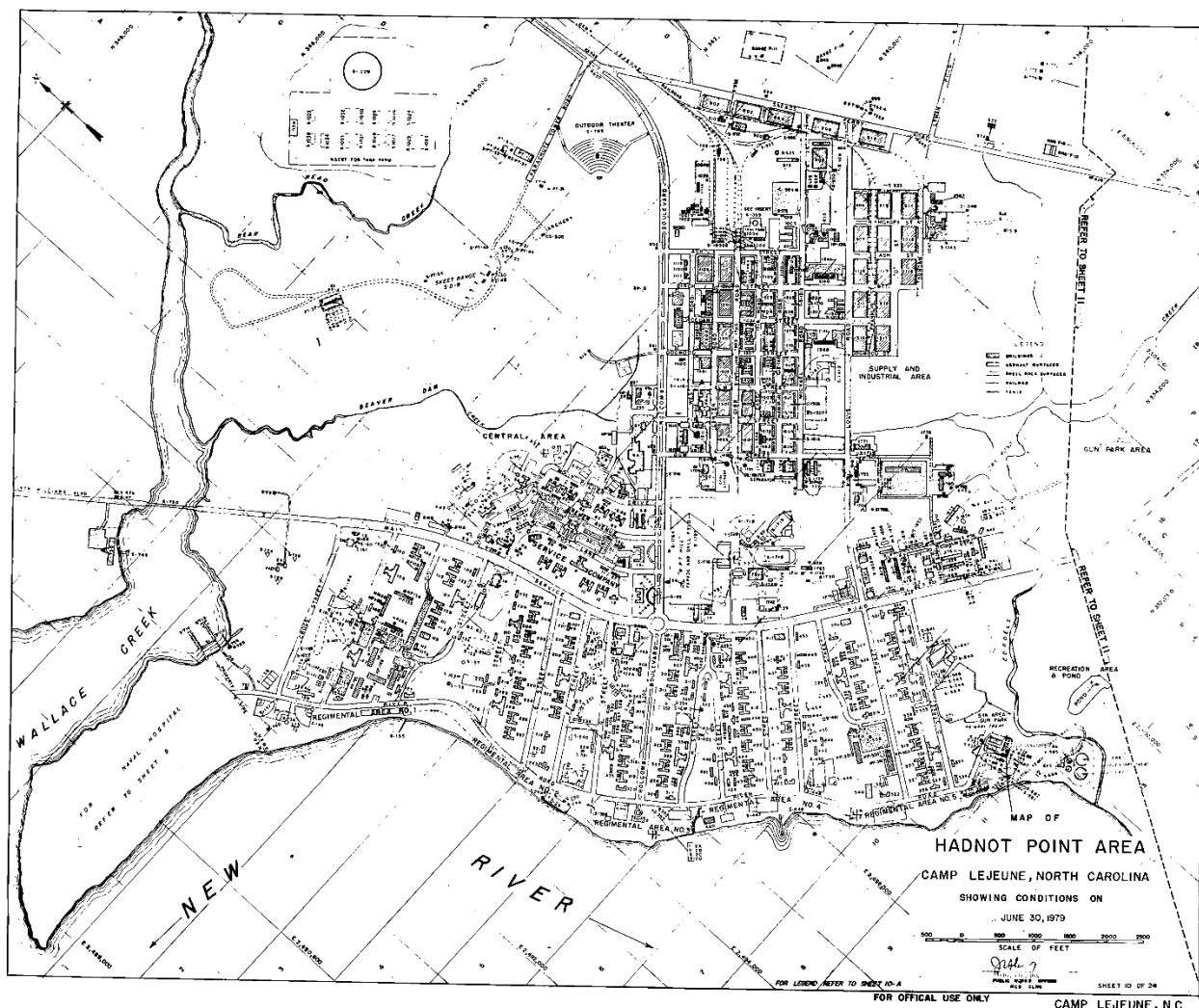
¹²² Legend Sheet for Division Training Area, Camp Lejeune Training Area, Camp Lejeune, North Carolina Showing Conditions on 30 June 1979, CLJA_USMC_PWD_0000173785.

¹²³ *Semper Fidelis, A Brief History of Onslow County*, 63-66, Exhibit 2. In 1959 at MCAF New River 325 family housing units were built for enlisted Marines and 110 for officers, *ibid.*, 66.

¹²⁴ *Semper Fidelis, A Brief History of Onslow County*, 66, Exhibit 2.

Image 22

Hadnot Point, June 30, 1979¹²⁵



The French Creek area is to the south of Hadnot Point (see Image 2) and was one area of new construction that took place in the Hadnot Point area after World War II and the Korean War. This area was called French Creek because it is on the north bank of the French Creek. It is part of Hadnot Point WTP service area.

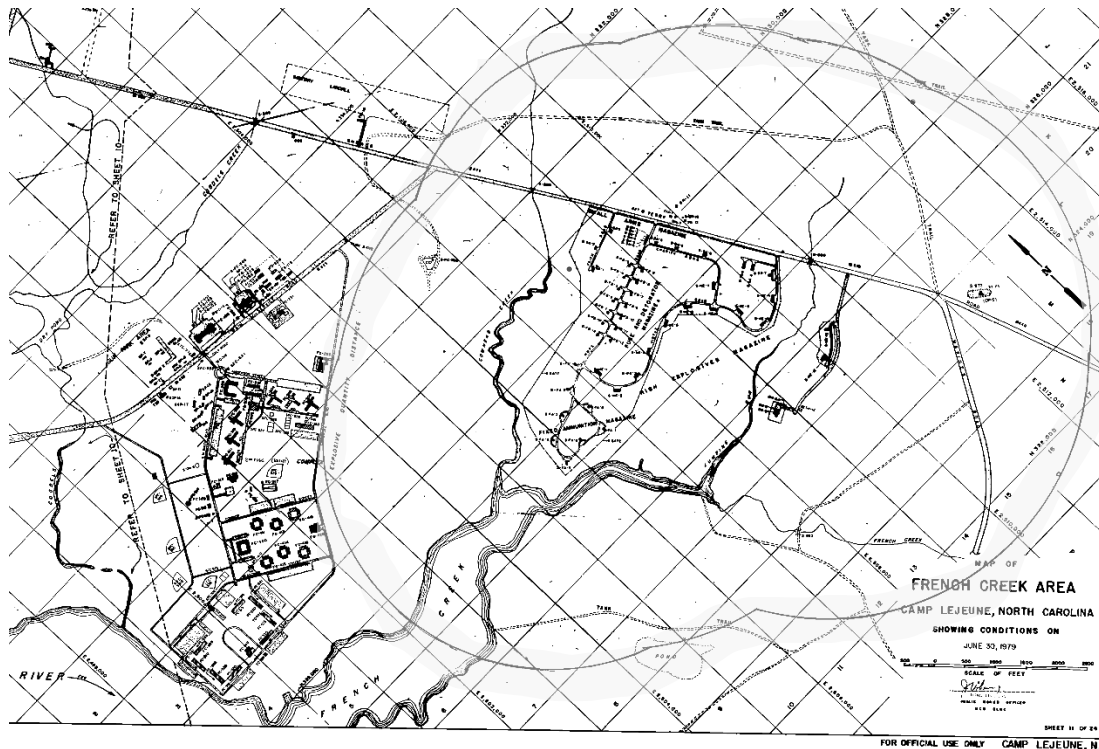
Image 23 shows a portion of the French Creek area that is to the immediate south of Hadnot Point. Ever since World War II, the area shown on Image 23 within the yellow highlighting on the map is the demarcation line for the “explosive quantity distance” that is

¹²⁵ Map of Hadnot Point Area, Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 10 of 24), CLJA_USMC_PWD_0000173785. The 1979 Existing Condition Maps are the last available ones that show the entirety of the main part of Hadnot Point.

inside the perimeter of the line. In the middle of the yellow highlighting, the area is labeled as “high explosive magazine.”¹²⁶ This is the area wherein high explosives were stored and the highlighted yellow line is the distance from the storage area deemed safe.

Image 23

French Creek Area of Camp Lejeune, June 1979¹²⁷



Just beyond the yellow highlighting in the lower lefthand corner are numerous building that do not appear on the existing conditions map of this area dated June 30, 1963.¹²⁸ The structures at the bottom left near the confluence of the New River and French Creek are barracks and sheds that lack use description. The building to the north of the barracks and sheds are bachelor enlisted quarters where enlisted Marines would live. Other buildings included an administration building, two mess halls and a dining facility, an enlisted men’s clubs, a dispensary, a heating plant, a maintenance building, and a number of other structures, and

¹²⁶ See, “Map of Magazine Area, Camp Lejeune, New River, NC, Showing Conditions on 30 June 1943” (Sheet 6 of 9), CLJA_USMC_PWD-0000126647.

¹²⁷ Map of French Creek Area, Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 11 of 24). Highlighting added. CLJA_USMC_PWD_0000173841.

¹²⁸ See, “Map of Magazine Area, Camp Lejeune, North Carolina, Showing Conditions on 30 June 1963” (Sheet 11 of 18), CLJA_USMC_PWD-0000126202. This map identifies storage areas for fixed ammunition magazines, high explosive magazines, and small arms magazines.

numerous softball fields and basketball courts. There was also a 300,000 gallon elevated water tank and eight pump houses for eight wells.¹²⁹ These structures were built in the late 1960s during the Vietnam War. In 1968, elements of the Force Troops—those Marines assigned to Camp Lejeune who supported the activities of the Second Marine Division—began to move into the French Creek area, although construction was not yet complete. The bachelor enlisted quarters were “motel-like” units with two- to four-man bedrooms.¹³⁰ Additional housing at French Creek was built in the 1980s.¹³¹

The 1970 Master Plan noted that geographically “the French Creek area is not too remote from the main facilities at Hadnot Point to consider consolidation; however, the billeting load [the number of people that could live in an area] at French Creek was too large to be absorbed into the existing (or expanded) Community facilities at Hadnot Point.” Because of that, -- except for the “Main Exchange, the Commissary,” and some “certain special amenities,” most of the community facilities at Hadnot Point were built at French Creek.¹³²

The 1986 Master Plan Update discussed the importance of moving the 2nd Force Service Support Group (FSSG) to the French Creek area. The document noted that in 1958 the 2nd FSSG, had moved to various locations on Hadnot Point. The unit’s barracks were relocated to areas within Second Marine Divisions’ regimental area and the industrial area on Hadnot Point.¹³³ The authors of the Master Plan Update continued:

These inefficient operating conditions prompted the development of a new, consolidated barracks and shops complex designed solely for the 2nd FSSG at French Creek. During the summer of 1968, 2nd FSSG units were relocated to the first phase of the newly-constructed Creek Complex. The barracks constructed were the first in a series of modern configurations which included private two- and four-man air-conditioned rooms and integrated mess facilities.¹³⁴

Construction at French Creek for the Force Troops continued into the 1970s. The 1970 unofficial Camp Lejeune base guide described a new area for the Force Troops as follows:

¹²⁹ Legend Sheet for French Creek Area Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 11A of 24), CLJA_USMC_PWD_0000173824.

¹³⁰ *Semper Fidelis, A Brief History of Onslow County*, 70, Exhibit 2.

¹³¹ *Semper Fidelis, A Brief History of Onslow County*, 80, Exhibit 2.

¹³² 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337153-337155.

¹³³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326610.

¹³⁴ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326610.

The new, ultra-modern Force Troops Complex, currently under construction in the French Creek area has recently been opened to the first 1,000 Marines. The completed first phase of the complex is comprised of four barracks, one administrative building, one 1,500 man mess hall, two storage buildings, one dispensary and one classroom building. The development, with a projected completion date in the 1970's is an innovation for the Marine Corps. Gone are the legendary wall-lockers, footlockers, and bunks . . . The buildings are constructed of pre-cast concrete panels, brick masonry and tinted glass, and will house 3,500 Marines in two and four-man rooms, when completed.¹³⁵

2. Holcomb Boulevard

The Holcomb Boulevard WTP began operating in June 1972.¹³⁶ On the south, Wallace Creek separates the areas serviced by the Holcomb Boulevard WTP from those serviced by the Hadnot Point WTP. To the north, the Northeast Creek separates the areas serviced by the Holcomb Boulevard WTP from those serviced by the Tarawa Terrace WTP. Until the Holcomb Boulevard WTP became operational in 1972, the Hadnot WTP provided water to what became the Holcomb WTP service area.¹³⁷ For purposes of clarity in this report I will use "Holcomb Boulevard" to describe the area between Wallace and Northeast Creeks and east of Paradise Point for the years prior to the construction of the Holcomb WTP and establishment of the Holcomb Boulevard water system area.

When it went online in June 1972, the Holcomb Boulevard WTP provided water to the Midway Park and Berkeley Manor housing areas where Marines and their families lived. At

¹³⁵ No author, "The Coast of North Carolina Salutes Camp Lejeune," (Lubbock TX: Boone Publications, Inc., 1970), (1970 Base Guide), Base_Guides_0000000254, at *0000000269. The purpose of the base guides was to "provide information to all personnel on the facilities and services available at Camp Lejeune," No author, "Information Booklet," Marine Corps Base, Camp Lejeune, North Carolina, 9/11/1962, (1962 Base Guide), Base_Guides_0000000077, at *0000000078.

The 1971 guide noted that the Force Troops had been activated in April 1951, and originally consisted of fifteen battalions and companies with each fulfilling a specific role at Camp Lejeune. By 1971, only five of the original units were still in existence: the 8th Motor Transport Battalion, 8th Engineer Battalion, 2d Amphibian Tractor Battalion, Headquarters Company, and the 2d Air and Naval Gunfire Liaison Company. However, other units had been activated or converted and were part of the Force Troops in 1970 that included the 2d Force Service Regiment, the 2d Field Artillery Group, 8th Communication Battalion, 2d Tank Battalion, 2d Radio Battalion, 2d Force Reconnaissance Company, 2d Bridge Company, 2d Topographic Company, 2d Hospital Company, 2d Separate Surgical Company, and the 22nd Dental Company. In addition, the 2d, 4th, 6th, 8th, 10th, and 12th Interpreter Teams, the 2d, 4th, 6th, 8th, 10th, 12th, and 14th Interrogator-Translator Teams, and the 2d Counterintelligence Team are part of the Force Troops command, No author, "The Coast of North Carolina Salutes Camp Lejeune," (Lubbock TX: Boone Publications, Inc., 1971) (1971 Base Guide), Base_Guides_0000000391; at *0000000401.

¹³⁶ See Table 1.

¹³⁷ For a map of the WTP service areas see, Image 3.

Midway Park there were 700 units available to corporals and junior officers while at Berkeley Manor there were 677 air conditioned three- and four-bedroom units for non-commissioned officers. The Holcomb Boulevard WTP also supplied water to 523 housing units for officers—ranked captain and higher—at Paradise Point, of which 123 had central air conditioning.¹³⁸ When Watkins Village opened in 1977, another 250 townhomes became available for Marines and their families. Watkins Village also received water from the Holcomb Boulevard WTP.¹³⁹

From 1942 to 1972, the Hadnot Point WTP furnished water to Midway Park and Paradise Point, and from 1962 to 1972 to Berkeley Manor. Under ATSDR's analysis, from 1953 to June 1972, these areas received water potentially contaminated with perchloroethylene ("PCE"), trichloroethylene ("TCE"), trans-1,2-dichloroethylene ("1,2-tDCE"), vinyl chloride ("VC"), and benzene). However, when the Holcomb Boulevard WTP went online in 1972, it furnished water to these areas, as well as to Watkins Village, except when the Hadnot Point WTP occasionally supplied contaminated water between 1972 and 1985.¹⁴⁰

Image 24 is a 1984 map of MCBCL that shows the Holcomb Boulevard WTP area between Wallace and Northeast Creeks. The highlighted areas are the housing units that the Holcomb Boulevard WTP served starting in June 1972. As noted in the 1986 Master Plan Update:

The Holcomb Boulevard distribution system serves the Paradise Point, Berkeley Manor, Watkins Village and Midway Park quarters, as well as the new U.S. Naval Hospital facility on Brewster Boulevard. The facilities served include Brewster Junior High School on Brewster Boulevard, Lejeune High School on Stone Street, the Berkeley Manor Elementary School and the Stone Street Elementary School.¹⁴¹

¹³⁸ 1970 Base Guide, Base_Guides_0000000254, at *0000000273-74.

¹³⁹ *Semper Fidelis, A Brief History of Onslow County*, 66, 74, Exhibit 2. The Berkeley Manor housing replaced the 464 housing units at Midway Park built in 1944, *ibid.*, 66. Watkins Village was named after Medal of Honor winner Staff Sergeant Lewis G. Watkins.

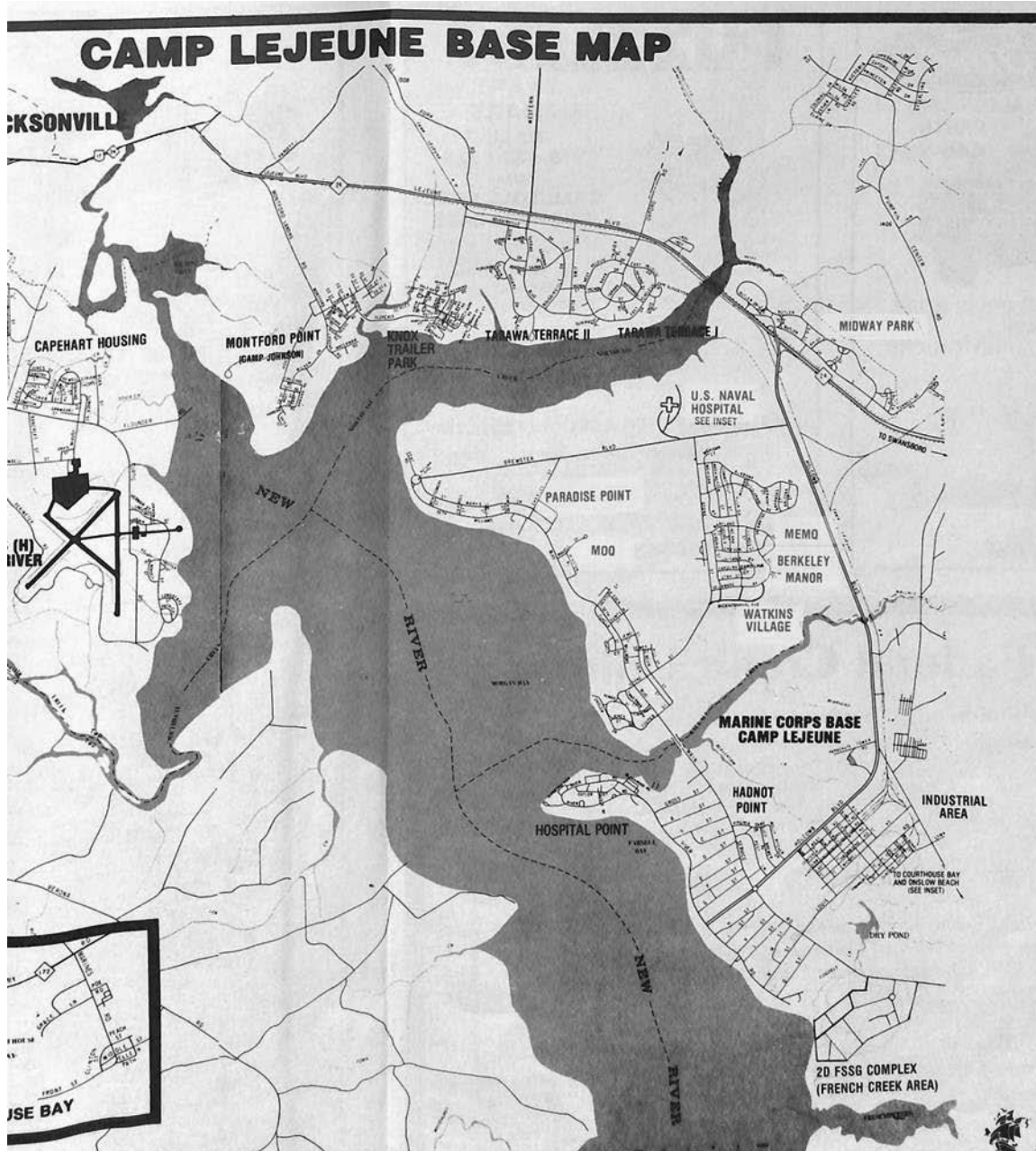
¹⁴⁰ ATSDR 2013, CLJA_HEALTHEFFECTS-0000221326, at *0000221350-52, and *0000221362. The ATSDR reports that the Hadnot Point and Holcomb Boulevard WTPs were "rarely connected—exceptions being some documented intermittent connections that occurred during the late spring and early summer months of 1978-1986," *ibid.*, *0000221362 and *0000221378. In June 1978, the Hadnot Point WTP furnished contaminated water to the Holcomb Boulevard water system that included the Berkeley Manor housing area. Also, from January 28-February 4, 1985, the Hadnot Point WTP provided water to housing in the Holcomb Boulevard, *ibid.*, *0000221351.

¹⁴¹ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326766.

Image 24

The Holcomb Boulevard Service Area -

Excerpt From Camp Lejeune Base Map, 1984¹⁴²



The Midway Park housing area is among the oldest at Camp Lejeune dating to World War II. Because of when it was built and its location, it developed apart from the main area of

¹⁴² No author, "Camp Lejeune," (El Cajon, CA: National Military Publications, 1984), (1984 Base Guide), Base_Guides_0000000871, at *0000000907.

Hadnot Point. As shown in Image 24, the Midway Park area is northeast of Hadnot Point on the east side of Northeast Creek and on the north side of State Highway 24. The 1986 Master Plan Update noted that Midway Park, Tarawa Terrace I and II, and MCAS New River—were “relatively close in proximity to off-Base commercial resources, while access to Marine Corps/Navy commercial community and medical facilities is less direct.”¹⁴³

The Midway Park housing was both refurbished and phased out in the 1960s, 1970s and 1980s. In 1962, when Berkeley Manor was completed, 464 Midway Park houses were “phase[d] out.”¹⁴⁴ In 1982, another \$9.7 million was spent to improve the housing at Midway Park and the officers’ quarters at Paradise Point. The cost per unit at Midway Park was \$13,500.¹⁴⁵

3. Tarawa Terrace

As discussed in Section IV, the Tarawa Terrace WTP became operational in 1952 and it serviced Tarawa Terrace housing areas I and II.¹⁴⁶ In June 1951, construction began on the Tarawa Terrace I housing complex for officers and NCOs and their families.¹⁴⁷ In September 1952, work began on the similar Tarawa Terrace II housing development located west of Tarawa

¹⁴³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326649.

In 1959, given its status as generally a housing area, there were few of the types of buildings and associated amenities available to Marines and their families in the Midway Park area as compared to Hadnot Point. There was, however, a fire station, a gas station, a maintenance shop, schools, a nursery, and a shopping center that included a beauty shop, a drug store, a grocery store, a post office, a theater, and classrooms in buildings 4000, 4014, 4022, and 4003, see June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074360, *0000074362, and *0000074366; and USMC, *Camp Lejeune, NC, Telephone Directory*, 10/1959, (October 1959 Telephone Directory), CLJA_USMCGEN_0000074318: *0000074412, at *0000074459.

The 1970 *Camp Lejeune Telephone Directory* provides similar information on amenities and services available to residents of Midway Park that included: a beauty salon, a branch of the base exchange, a nursery, a post office, a soda fountain, a laundromat, and a theater, see USMC, *Camp Lejeune, NC, Telephone Directory*, 11/1970, (November 1970 Telephone Directory), CLJA_USMCGEN_0000077468, at *0000077529. Similar amenities were available to Marines and their families ten years later. The 1980 telephone book includes listings at Midway Park for a barber shop, a beauty salon, a chapel, a community center, a post exchange, a fire department, a gas station, a nursery, a post office, and a theater, see USMC, *Camp Lejeune, NC, Telephone Directory*, 1/1980, (January 1980 Telephone Directory), CLJA_USMCGEN_0000089039, at *0000089062, *0000089070.

¹⁴⁴ *Semper Fidelis, A Brief History of Onslow County*, 66, Exhibit 2.

¹⁴⁵ *Semper Fidelis, A Brief History of Onslow County*, 80, Exhibit 2.

¹⁴⁶ See Table 1. Also see Section V.B.4 where multiple sources indicate that Knox Trailer Park was serviced by both the Tarawa Terrace and Montford Point / Camp Johnson WTPs at times between 1952 and 1987.

¹⁴⁷ “Tarawa Terrace Doors [Open] to First Families; [Units] Available Weekly,” *The Globe*, 9/13/1951, 00897_PLG_0000054027. The 1953 article is referencing Tarawa Terrace II’s opening.

Terrace I. These housing complexes served as family housing for Marines and their families, and as discussed in Section IV, were constructed because the influx of Marines to Camp Lejeune during the Korean War created a housing shortage. In November of 1952, construction began on a shopping center to serve those living in the Tarawa Terrace housing areas. The Tarawa Terrace elementary school opened in 1953.¹⁴⁸

When Tarawa Terrace I and II opened in the early 1950s, they each had 1,054 housing units.¹⁴⁹ These housing units have been remodeled several times. The first remodel was in January 1959, when the Marine Corps announced that 1,200 units at Tarawa Terrace would be renovated by July of that year. Renovations included electrical upgrades, repair of windows and floors, and replacing countertops. Another 592 one- and two-bedroom homes would be converted into 336 three-bedroom homes the following fiscal year.¹⁵⁰ The conversion of one- and two- bedrooms to three-bedroom homes reduced the number of Tarawa Terrace housing units by 256. As stated in the 1966 and 1971 base guides, there were 1,851 units at the Tarawa Terrace housing areas.¹⁵¹ In 1984 there were 1,846 housing units at Tarawa Terrace.¹⁵²

The authors of *Semper Fidelis* wrote that in 1962, \$1 million in renovations at Tarawa Terrace had been completed. From 1981 to 1984, the government spent \$5 million to improve Tarawa Terrace.¹⁵³

The Tarawa Terrace I and II housing areas are north of Northeast Creek. Tarawa Terrace was and remains largely a residential area and there were few industrial, maintenance, or military operations similar to those at Hadnot Point and other areas of the base. However, there were amenities that one might typically associate with a residential area. In 1959, similar to Midway Park, the shopping center in Tarawa Terrace included a drug store, barber shop, beauty shop, a

¹⁴⁸ *Semper Fidelis, A Brief History of Onslow County*, 52, Exhibit 2.

¹⁴⁹ As noted, when constructed Tarawa Terrace I and II each had 1,054 housing units, see “Officials Greeting Marks Project’s Opening Day,” *The Globe*, 1/22/1953, 00897_PLG_0000053464.

¹⁵⁰ “[illegible] Building, Renovation, ‘Boom’ in Full Swing,” *The Globe*, 1/22/1959, 00897_PLG_0000050082, at *0000050084.

¹⁵¹ 1966 Base Guide, Base_Guides_0000000098, at *0000000120 and 1971 Base Guide, Base_Guides_0000000391, at *0000000411.

¹⁵² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326703.

¹⁵³ *Semper Fidelis, A Brief History of Onslow County*, 70 and 80, Exhibit 2.

dry cleaners, a service station, and a variety store. There was also a school, a dentist office, and a maintenance shop.¹⁵⁴

The 1970 base telephone directory provides information on amenities and other services available to people living at Tarawa Terrace. They included a bank, a beauty salon, a branch of the post exchange, a dry cleaner, a post office, two elementary schools with cafeterias, and a community center.¹⁵⁵ Just as at Midway Park, similar services existed at Tarawa Terrace in 1980 including a bank, a community center, a beauty shop, a service station, a barber shop, a dry cleaners, a gas station, a post exchange, a snack bar, a post office, and two elementary schools.¹⁵⁶

Images 25 and 26 show Tarawa Terrace housing areas south of Highway 24 and west of Northeast Creek. As shown in these images, there were elementary schools at both Tarawa Terrace housing complexes.¹⁵⁷

¹⁵⁴ June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074362, *0000074366, and *0000074368.

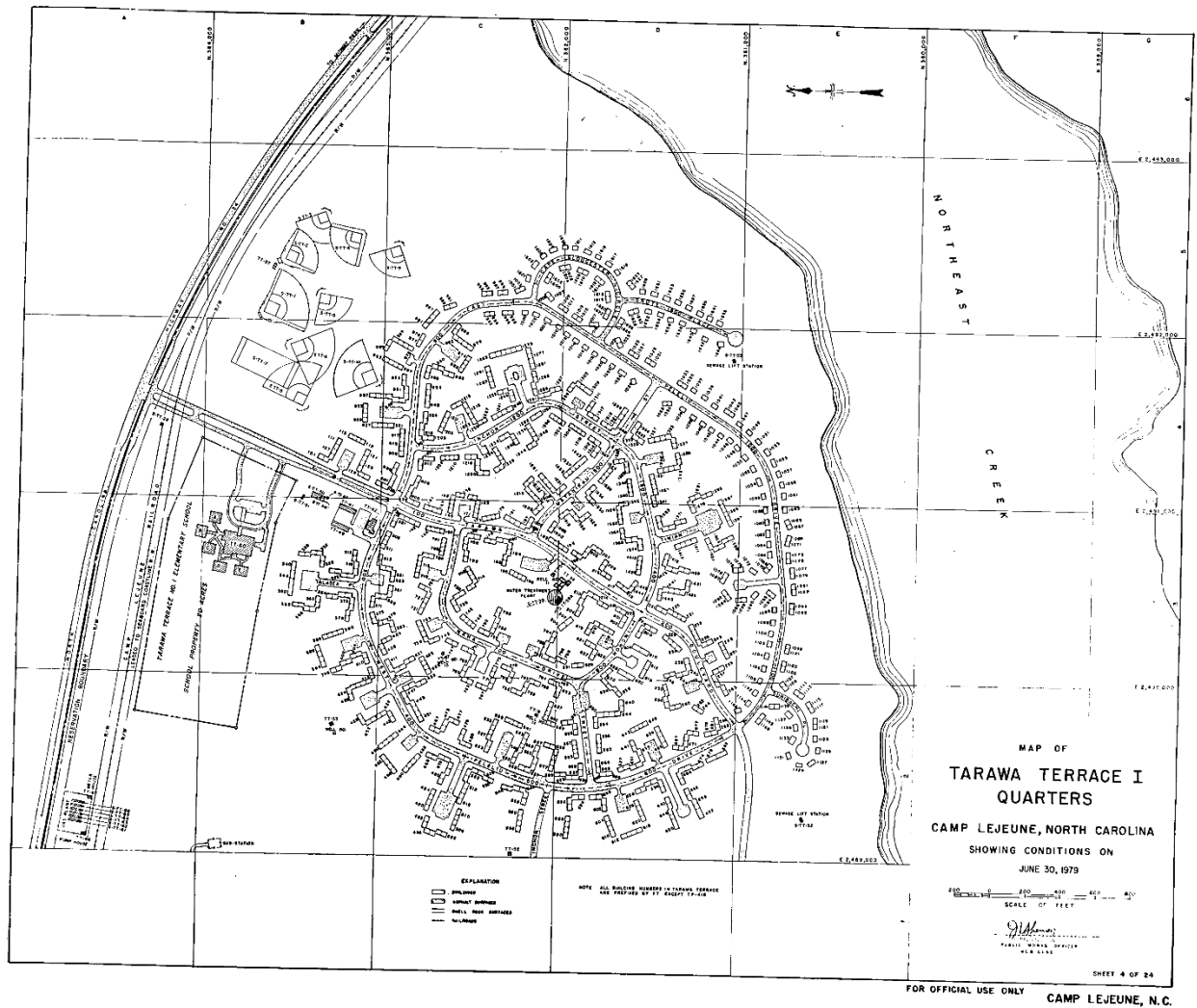
¹⁵⁵ November 1970 Telephone Directory, CLJA_USMCGEN_0000077468, at *0000077522, *0000077527, *0000077528, *0000077530, *0000077531, and *0000077533.

¹⁵⁶ January 1980 Telephone Directory, CLJA_USMCGEN_0000089039, at *0000089074-75.

¹⁵⁷ The 1986 Master Plan Update confirms that there were two elementary schools at Tarawa Terrace, CLJA_USMCGEN_0000326502, at *0000326767.

Image 25

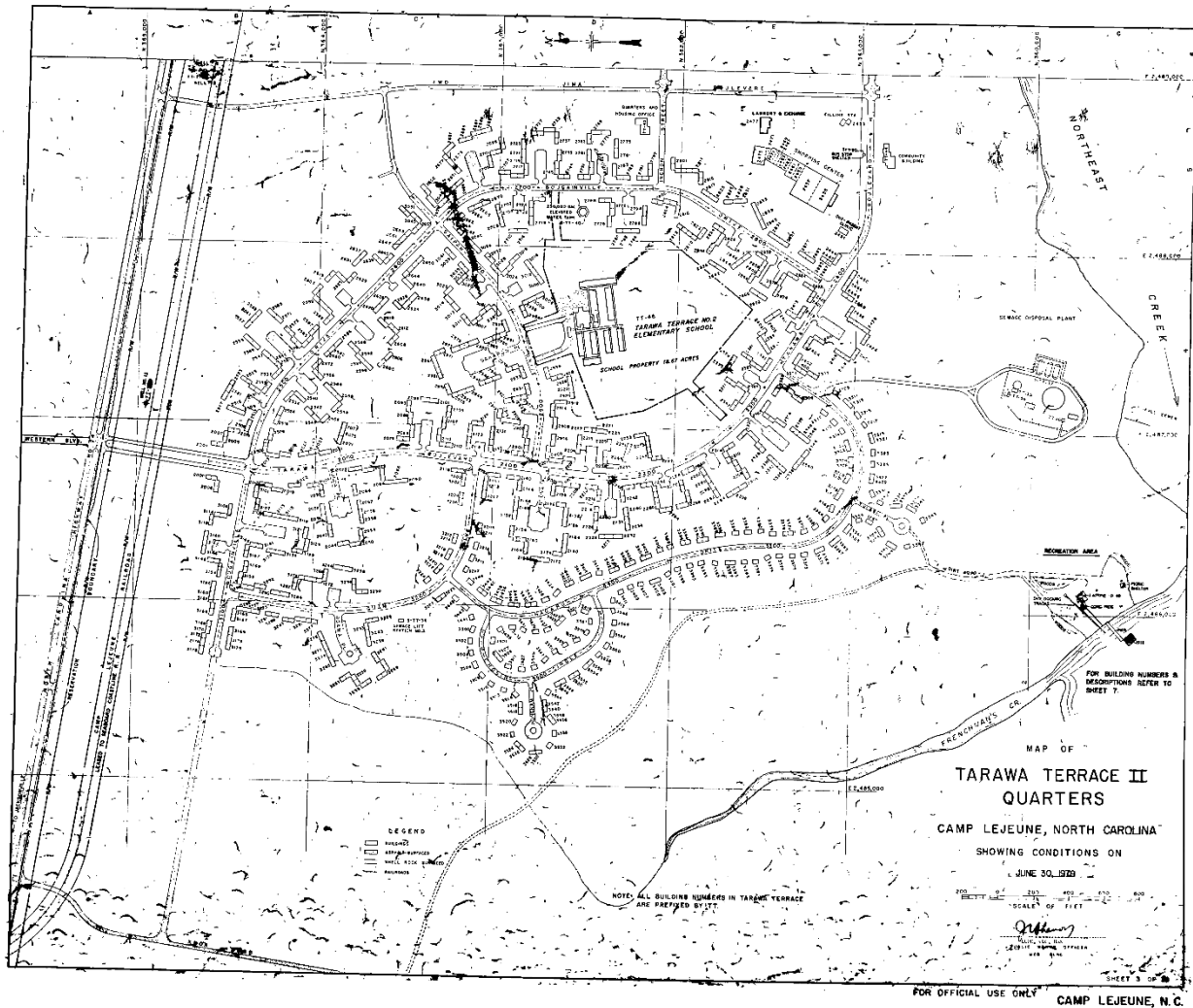
Tarawa Terrace I, June 30, 1979¹⁵⁸



¹⁵⁸ Map of Tarawa Terrace I Quarters, Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 4 of 24), CLJA_USMC_PWD_0000173822.

Image 26

Tarawa Terrace II, June 30, 1979¹⁵⁹



4. Knox Trailer Park

In 1953, there were 212 trailers at Knox Trailer Park and contracts for an additional 250 to be installed.¹⁶⁰ In 1962, there were 451 trailers at Knox Trailer Park and another 300 parking

¹⁵⁹ Map of Tarawa Terrace II Quarters, Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 3 of 24), CLJA_USMC_PWD_0000173840.

¹⁶⁰ "First Marine Families Occupy Tarawa Terrace Two: Official Greeting Marks Project's Opening Day," *The Globe*, 1/22/1953, 00897_PLG_0000053464.

spaces for privately-owned trailers.¹⁶¹ And in 1983 there were “112 spaces.”¹⁶² Knox Trailer Park is in the upper middle of Image 24.

Multiple documents, including primary sources from the statutory period and two ATSDR reports, indicate that Knox Trailer Park received water both from the Montford Point / Camp Johnson WTP and the Tarawa Terrace WTP until 1986 or 1987, at which point it was serviced by the Holcomb Boulevard WTP.¹⁶³ On the other hand, two non-primary source documents state that the Tarawa Terrace WTP furnished water to this area until 1986 or 1987.¹⁶⁴

C. Areas Not Identified by the ATSDR as Contaminated

1. The Six WTPs Not Investigated by ATSDR

Six of the nine historic WTPs were not investigated by ATSDR. These were located on the parts of the base they served and were at Montford Point / Camp Johnson, Camp Gieger, MCAS New River, Onslow Beach, the Rifle Range at Stone Bay, and Courthouse Bay. Table 1

¹⁶¹ 1962 Base Guide, Base_Guides_0000000077, at *0000000081.

¹⁶² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326703. Note: the 1986 Master Plan Update is reporting on 1983 figures. According to Base Guides from 1966, 1967, 1970 and 1971, the trailers were “four and six sleeper trailers,” see 1966 Base Guide, Base_Guides_0000000098, at *0000000120; No author, “The Coast of North Carolina Salutes Camp Lejeune,” (Lubbock TX: Boone Publications, Inc., 1967) (1967 Base Guide), Base_Guides_0000000180, at *0000000202; 1970 Base Guide, Base_Guides_0000000254, at *0000000273; and 1971 Base Guide, Base_Guides_0000000391, at *0000000413.

¹⁶³ The 1986 Master Plan Update stated that the Montford Point / Camp Johnson WTP included a line connecting it to Knox Trailer Park, and the discussion of the Tarawa Terrace WTP does not mention any lines to or service of Knox Trailer Park, CLJA_USMCGEN_0000326502, at *0000326662. In April 1982, when water samples were being collected, a researcher noted: “an extra sample taken in the Knox Trailer Park Area, which switches back and forth from Tarawa Terrace to Montford Point Systems.” E. Betz, Memorandum for the Record” 4/27/1982, CLJA_WATERMODLELING_07-0001176746, at *0001176746.

A map in a June 2007 ATSDR report reads “Camp Knox served by Montford Point and Tarawa Terrace water supplies at various historical times,” see ATSDR, “Analyses of Groundwater Flow, Contaminant Fate and Transport, and Distribution of Drinking Water at Tarawa Terrace and Vicinity, U.S. Marine Corps Base Camp Lejeune, North Carolina: Historical Reconstruction and Present Day-Conditions, Executive Summary, (Atlanta, GA: ATSDR, June 2007), CLJA_HEALTHEFFECTS-0000132803, at *0000132808.

¹⁶⁴ ATSDR 2013 (Tarawa Terrace WTP provided water to Camp Knox until 1987 at which time the Holcomb Boulevard WTP started to provide water to that area), CLJA_HEALTHEFFECTS-0000221326, at *0000221362; National Research Council 2009, CLJA_HEALTHEFFECTS-0000000431, at *0000000486 (the Tarawa Terrace WTP furnished drinking water to the Knox Trailer Park from 1952 to 1986, and the Holcomb Boulevard WTP supplied water from 1987 to 2000).

lists the dates of operation of each of these WTPs. As noted in Table 1 and shown in Image 19, the Camp Geiger WTP went offline in 1976, and its water distribution system was connected to the MCAS New River WTP. As also noted in Table 1 and depicted in Image 21, in 1987 the Montford Point / Camp Johnson WTP went offline and that area started to receive water from the Holcomb Boulevard WTP.¹⁶⁵ None of these WTPs have been identified as sources of contaminated water in the current litigation.¹⁶⁶

2. Montford Point / Camp Johnson

Montford Point, later renamed Camp Johnson, was constructed during World War II and “originally designed for the basic tactical training of all Negro troops.”¹⁶⁷ The camp was located on approximately 1,600 acres between the New River and the southern boundary of Jacksonville, N.C.¹⁶⁸ As listed in Table 1, and shown in Images 15 and 21, the Montford Point / Camp Johnson WTP operated from 1957 to 1987.¹⁶⁹

One of the MCBCL’s missions is to “conduct specialized schools and other training.”¹⁷⁰ During the statutory period, the specialized schools at Montford Point / Camp Johnson broadly fit into two categories: (a) the Field Medical Service School and (b) the Support / Supply

¹⁶⁵ ATSDR 2013, CLJA_HEALTHEFFECTS-0000221326, at *0000221362.

¹⁶⁶ D. Harned, O. Lloyd, Jr., M. Treece, Jr., “Assessment of Hydrologic and Hydrogeologic Data at Camp Lejeune Marine Corps Base, NC,” U.S. Geological Survey, Water-Resources Investigations Report 89-4096, 1989, (USGS Report 89-4096, 1989) CLJA_WATERMODELING_01-0000131765, at *0000131781; National Research Council 2009), CLJA_HEALTHEFFECTS-0000000431, at *0000000486 and *0000000488.

¹⁶⁷ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337073. Also, the USMC renamed Montford Point in April 1974 in honor of Sergeant Major Gilbert “Hashmark” Johnson, an original Montford Point Marine, see <https://www.lejeune.marines.mil/News/Article/Article/513343/camp-johnson-lejeune-recognize-montford-point-marines/> and *Semper Fidelis, A Brief History of Onslow County*, 75, Exhibit 2.

¹⁶⁸ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337049.

¹⁶⁹ As noted in Table 1, the Holcomb Boulevard WTP began providing water to this area in 1987.

¹⁷⁰ 1962 Base Guide, Base_Guides_0000000077, at *0000000080; 1966 Base Guide, Base_Guides_0000000098, at *0000000101; No author, “The Coast of North Carolina Salutes Camp Lejeune,” (Lubbock TX: Boone Publications, Inc., 1967) (1967 Base Guide), Base_Guides_0000000180, at *0000000183; and 1970 Base Guide, Base_Guides_0000000254; at *0000000257.

Schools, which included food service, automotive maintenance and driving, administrative supply and disbursement.¹⁷¹

In 1969, at Montford Point / Camp Johnson there were 136 officers and 1,126 enlisted Marines (including Marines stationed permanently at MCBCL and student trainees) as well as seven civilian staff for a total of 1,269 people.¹⁷² In 1983, the area had an effective service population of 2,768.¹⁷³

a. The Marine Corps Field Medical School

The Marine Corps Field Medical School at Camp Lejeune dates to World War II when, on April 8, 1943, it was activated as the “Field Medical Training Battalion-East (FMTB-E).” Deactivated immediately after the war, the school was reactivated on October 1, 1950, as the Field Medical Service School and was relocated to what is now Camp Johnson. The goal of the school’s staff is to meet the growing need for medically trained Naval officers and enlisted men to support combat Marines. The 1970 Master Plan describes the school “[a]s a small unit working somewhat autonomously” and “located in the available facilities at Montford Point, remote from any essential relationship to other Commands.”¹⁷⁴ The school remained at Camp Johnson throughout the statutory period.¹⁷⁵

b. Marine Corps Service Support / Supply Schools

The service support schools at Montford Point / Camp Johnson have included supply schools, the Food Service School Company, and the Motor Transport School Company,¹⁷⁶ as

¹⁷¹ 1962 Base Guide, Base_Guides_0000000077, at *0000000080; and 1966 Base Guide, Base_Guides_0000000098, at *0000000101.

¹⁷² 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337057, *0000337059, and *0000337067.

¹⁷³ T]he effective service population takes into account the proportional parts of each day that military and civilian personnel and dependents” are in an area, 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326746.

¹⁷⁴ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978; at *0000337084.

¹⁷⁵ In 2000, the Field Medical School “celebrated more than fifty years of continuous training and support of the Marine Corps aboard Camp Johnson, see “Field Medical Training Battalion – East,” History, <https://www.fmtbneast.marines.mil/>; 1966 Base Guide at Base_Guides_0000000098, at *0000000103 and No author, “Camp Lejeune,” (San Diego, CA: Military Publishers, 1976) (1976 Base Guide), Base_Guides_0000000559, at *0000000567.

¹⁷⁶ The Camp Lejeune telephone directory dated June 1, 1953, included a listing for “Supply School Battalion” and the “Supply School Company,” see USMC, *Camp Lejeune, NC, Telephone Directory*, 6/1953, (June 1953 Telephone Directory), CLJA_USMCGEN_0000100173, at *0000100222-23. See also the 1970 telephone directory (“Food Service School Company”), November 1970 Telephone Directory,

well as cooking, baking, training of military instructors, and disbursing.¹⁷⁷ The 1986 Master Plan Update noted that training facilities classrooms were “scattered throughout the developed areas” and represented almost 21 percent (48 acres) of the developed area, making them the “second largest land use category existing” at Camp Johnson.¹⁷⁸

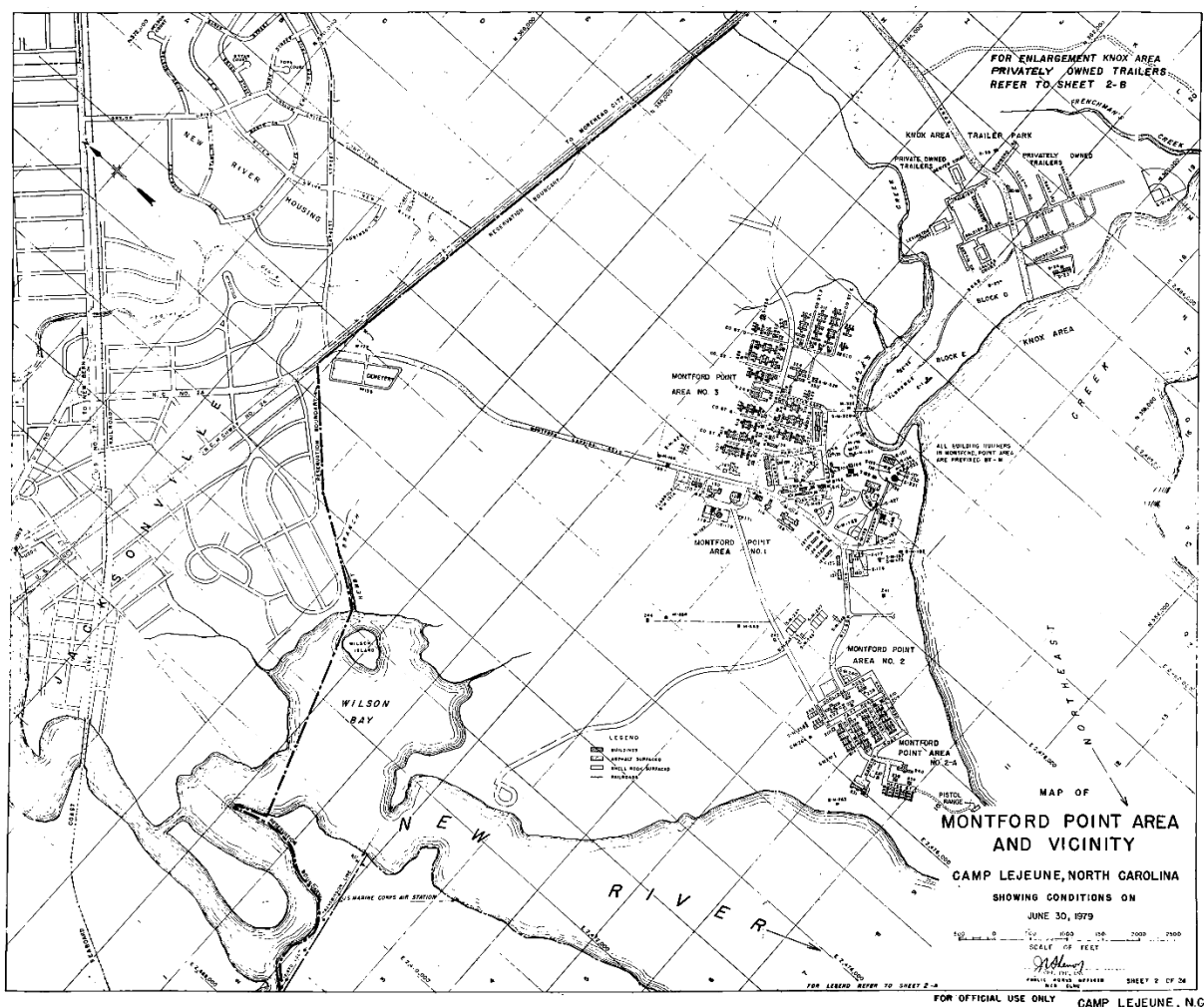
CLJA_USMCGEN_0000077468, at *0000077541-43; and USMC, *Camp Lejeune, NC, Telephone Directory*, 10/1986 (October 1986 Telephone Directory) (“Motor Transport School Company”), CLJA_USMCGEN_0000089039; CLJA_USMCGEN_0000089437, at *0000089475-77.

¹⁷⁷1966 Base Guide, Base_Guides_0000000098, at *0000000103; No author, “Eastern Carolina Salutes Camp Lejeune/New River,” (San Diego, CA: Military Publishers, 1978) (1978 Base Guide), Base_Guides_00000000695; at *00000000699.

¹⁷⁸ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326737.

Image 27

Montford Point / Camp Johnson Area, June 30, 1979¹⁷⁹



c. Housing

The base architectural plan stated that Montford Point / Camp Johnson “experienced a large initial development in the 1940s” but then remained mostly unchanged until the mid-1980s.¹⁸⁰

Regarding housing at Montford Point / Camp Johnson, as depicted in Image 27, there were numerous World War II era H-style barracks in the area. In the 1980s, motel-style barracks

¹⁷⁹ Map of Montford Point Area and Vicinity, Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 2 of 24), CLJA_USMC_PWD_0000173821.

¹⁸⁰ HBA Architecture & Interior Design, Inc., “Marine Corps Base Camp Lejeune, BEAP, Base Exterior Architectural Plan,” 2010, CLJA_USMC_PWD_0000164812, at *0000164974.

were built at Camp Johnson.¹⁸¹ According to the 1986 Master Plan Update, “[o]f the 233 acres of development” at Camp Johnson, “35 percent (32 acres) consist of troop housing.”¹⁸² There was no family housing at Camp Johnson.¹⁸³

d. Amenities

In addition to housing, other World War II era structures in this area included the swimming pool that was used for combat training, a post office, a theater, and a recreation hall.¹⁸⁴

The 1959 base telephone directory lists amenities and facilities at Montford Point that were similar—although on a smaller scale—to those located at Hadnot Point. For example, there was one theater at Montford Point compared to the several theaters at Hadnot Point. Among the other structures and facilities at Montford Point noted in this directory were a boat house, a library, a sewage plant, a steam plant, a water plant, a dispensary, a Marine Corps Exchange, a pharmacy, a mess hall, a service club, a staff NCO club, a chapel, a swimming pool, bachelor officer quarters, a dental clinic, a post office, two commissioned officers mess halls, a fire station, a gas station, a woodworking shop, a maintenance shop, an indoor theater, and a school.¹⁸⁵

The 1967 base directory listings at Montford Point included a chapel, an alteration shop, a barber shop, a cleaning and pressing shop, two laundromats, a recreation center, a service station, an outdoor theater, a post office, a library, and several clubs, including an enlisted service club, a Staff NCO Club, and an Officer’s Club.¹⁸⁶ The 1970 directory included Montford Point listings for a library, a post exchange, mess halls, a staff NCO club, a swimming pool, bachelor officers’ quarters, a dental clinic, a post office, commissioned officers mess halls, a gas

¹⁸¹ *Semper Fidelis, A Brief History of Onslow County*, 80, Exhibit 2.

¹⁸² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326737.

¹⁸³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326712 and *0000326703.

¹⁸⁴ Carraway, *Camp Lejeune Leathernecks*, 8, 11, 35, Exhibit 1.

¹⁸⁵ June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074358, *0000074361-63, and *0000074366-67; and October 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074412, *0000074420, *0000074456-59, *0000074462-63, and *0000074466. Although the telephone directories only list one mess hall, the legend for the 1958 Existing Conditions Map of Montford Point lists four mess halls including one at the staff NCO club and one at the cooks and bakers building, see, Legend Sheet for Montford Point Camp and Vicinity, Camp Lejeune, North Carolina, Showing Conditions on 30 June 1958, (Sheet 3A of 14), CLJA_USMC_PWD_0001771150.

¹⁸⁶ 1967 Base Guide, Base_Guides_0000000180, at *0000000207-09, *0000000212-13, and *0000000215.

service station, a gymnasium, a swimming pool, an airline ticket office, an enlisted recreation center, an enlisted service club, and a dry cleaner.¹⁸⁷ Similar facilities were at Camp Johnson in 1986.¹⁸⁸

e. Separation from Mainside

As indicated by the above telephone directories, by 1959, Montford Point / Camp Johnson had the types of services and amenities that made frequent trips to the Mainside unnecessary. This may have been due, in part, to necessity. The 1970 Master Plan described the unique considerations for Montford Point / Camp Johnson development, stating that “[b]ecause of the planned isolation of this unit, community facilities were established within this geographical area with a minimum of dependence upon the Base Mainside for social, recreational, and tactical support.”¹⁸⁹ Moreover, the 1986 Master Plan Update contained these statements that illustrate the size of the base and the associated travel times between locations:

Lengthy Travel Distances Between Areas

Lengthy travel distances are involved in traveling from areas such as MCAS (H), New River, Montford Point and Tarawa Terrace I and II to the main community facilities located at Hadnot Point. Travel times from outlying areas should be minimized to the extent that is cost-effective.

Proposed Bypass

Construction of a Highway 17 Bypass south of the present facility would be one solution to reducing travel distances between Complex areas: however, alignment selection is critical in maintaining the integrity of the Montford, Point Camp Geiger, and MCAS (H), New River. . . .¹⁹⁰

¹⁸⁷ November 1970 Telephone Directory, CLJA_USMCGEN_0000077468, at *0000077521, *0000077523, *0000077525, *0000077528-29, *0000077531-33, and *0000077541.

¹⁸⁸ October 1986 Telephone Directory, CLJA_USMCGEN_0000089039: CLJA_USMCGEN_0000089437, at *0000089472-80, *0000089484, and *0000089492.

¹⁸⁹ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337073. See also *ibid.*, at *0000337093 (“Montford Point is geographically isolated from other basic functions”).

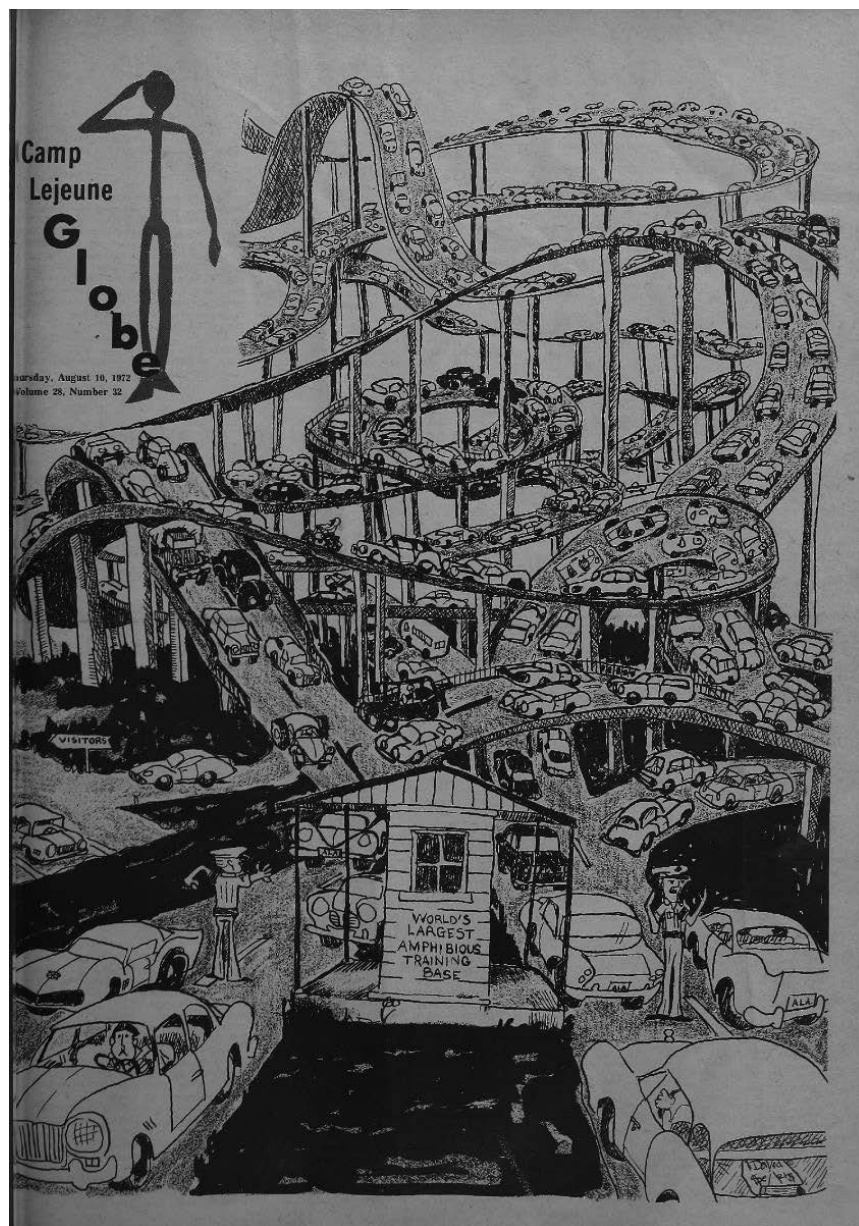
¹⁹⁰ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326656. The Master Plan also notes: “Family housing at the Air Station is even less accessible to Marine Corps/naval personnel support facilities at Hadnot Point, *ibid.*, *0000326649. The “H” stands for helicopter.

Thus, according to this plan, the long travel times and perhaps heavy traffic were disincentives for those not living on the Mainside (including those living at Montford Point/ Camp Johnson) to make the trip to the Mainside.

An image on the front page of *The Globe* in August 1972 depicts the artists view of Camp Lejeune traffic problems and the long travel times on the base.

Image 28

The Globe, August 10, 1972¹⁹¹



¹⁹¹ *The Globe*, 8/10/1972, 00897_PLG_0000042448.

3. Camp Geiger

Image 29 shows the location of the Camp Geiger cantonment area as of June 1979. As discussed earlier in this report, construction at Camp Lejeune began in this area, then called Tent Camp No. 1, in 1941. Construction workers and the 1st Marine Division were the first to live here and it served as the base's headquarters.¹⁹² Camp Geiger then became home to the Force Troops, Fleet Marine Force, Atlantic, activated on April 1, 1951, and they remained there "until 1958 when most of the units, including the Headquarters, moved to the present location at Hadnot Point."¹⁹³ In 1953, the USMC formed an Infantry Training Regiment (ITR) at Camp Geiger, "established to conduct basic unit tactical training of recent recruits."¹⁹⁴ A few years later, nuclear, biological, and chemical training began at Camp Geiger's "NBC [Nuclear, Biological, and Chemical] School."¹⁹⁵ By at least the fall of 1978 the 8th Marine Regiment had relocated to Camp Geiger due to overcrowding at Hadnot Point and remained there through the end of the statutory period.¹⁹⁶

As I discussed in Section III.B.2, the Camp Geiger Water Treatment Plant was the first functioning water treatment plant developed on Camp Lejeune and it operated from 1941 to 1977 (See Table 1 and Images 6 and 20).¹⁹⁷ After the Camp Geiger WTP went offline, the Marine Corps Air Station WTP furnished water to Camp Geiger.¹⁹⁸

¹⁹² 1966 Base Guide, Base_Guides_0000000098, at *0000000103. After World War II, the 1st Marine Division moved to Camp Pendleton and, in 1946, the 2d Marine Division was permanently assigned to Camp Lejeune, where it has been located ever since.

¹⁹³ 1966 Base Guide, Base_Guides_0000000098, at *0000000112.

¹⁹⁴ <https://www.soieast.marines.mil/Units/Infantry-Training-Battalion/>; the USMC established another Infantry Training Regiment at Camp Pendleton at the same time. Also see 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337049.

¹⁹⁵ P. Lewis, "NBC defense is important today," *The Globe*, 6/21/1979, 00897_PLG_0000038241, at *0000038244.

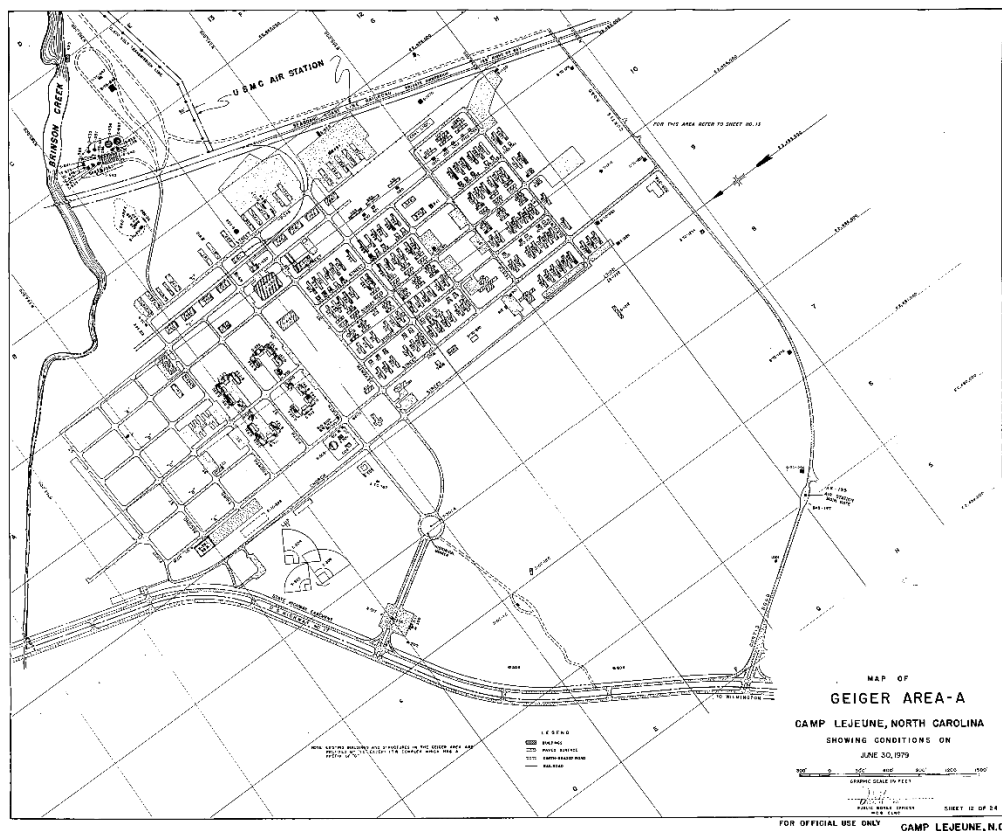
¹⁹⁶ *The Globe*, 10/12/1978, 00897_PLG_0000038623, at *0000038627. The 1986 Master Plan Update states that the 8th Regiment was "slated" to be moved back to Hadnot Point by 1990, CLJA_USMCGEN_0000326502 at *0000326608.

¹⁹⁷ As I discussed in Section III, the Camp Geiger WTP went online in the fall of 1941 and was the first WTP at Camp Lejeune.

¹⁹⁸ USGS Report 89-4096, 1989, CLJA_WATERMODELING_01-0000131765, at *0000131781 and National Research Council 2009, CLJA_HEALTHEFFECTS-0000000431, at *0000000486.

Image 29

Camp Geiger Area A Map, June 30, 1979¹⁹⁹



a. The Infantry Training Regiment (ITR)

As noted above, one of MCBCL's missions is to conduct specialized schooling, and the largest training school at the base during the statutory period was the Infantry Training Regiment (ITR) located at Camp Geiger.²⁰⁰ The ITR "conducts the bulk of the training for six-month reservists who enlist under the program calling for six months of active duty and several years of membership in the Marine Corps Reserve."²⁰¹

¹⁹⁹ Map of Geiger Area - , Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 12 of 24), CLJA_USMC_PWD_0001789197.

²⁰⁰ 1966 Base Guide, Base_Guides_0000000098, at *0000000103; 1967 Base Guide, Base_Guides_0000000180, at *0000000185; and 1970 Base Guide, Base_Guides_0000000254, at *0000000271.

²⁰¹ 1962 Base Guide, Base_Guides_0000000077, *at 0000000080; also see the January 1954 issue of *The Globe*, noting that the Reserve Training Battalion had moved from Hadnot Point to Camp Geiger where it

The 1966 Base Guide stated the ITR training was a nineteen-day course (by 1970, this was described as a thirty-six-day course) including “over 200 hours of instruction in small unit tactics, night combat, the firing of weapons under simulated combat conditions, conditioning hikes, and lectures examining both conventional and guerilla warfare.”²⁰² Given an emphasis on night fighting tactics, the guide further noted that Marines would spend “several evenings on bivouac in the field.”²⁰³ At Camp Geiger in 1969, there were 4,212 military personnel, including 39 officers and 4,173 enlisted, the majority of whom were students.²⁰⁴ In late 1972, the ITR at Camp Lejeune was “reduced to Infantry Training Detachments.” Six years later in August 1979, the Marine Corps reactivated the detachment as an Infantry Training School (“ITS”).²⁰⁵

In April 1980, a *Globe* article discussed “ITS” or Infantry Training Schools at Camp Geiger. The four-week training included basic riflemen, machine gunners, mortarmen, and antitank assault men before the Marines in each group transferred to the Fleet Marine Force. The four-week course included classroom and field work. The article states that the “training builds upon the foundations laid in boot camp and prepares these young men for transfer to the Fleet Marine Force.”²⁰⁶

The July 18, 1985, edition of *The Globe* included a story on the Infantry Training School at Camp Geiger. The author of this article noted that ITR school gave, “newly graduated Marines their first chance to practice combat skills before departing [ITS]...skills required to function in a fleet command.”²⁰⁷ The training took more than five weeks and was divided into two phases. In the first phase, training focused on “land navigation, nuclear, biological and chemical warfare, first aid, combat formation, and hand and arm signals.” During the second phase, the training

would be attached to an Infantry Training Regiment (ITR), “Res. Training Bn. Switched to New Operational Site,” *The Globe*, 1/14/1954, 00897_PLG_0000053338.

²⁰² 1966 Base Guide, Base_Guides_0000000098, at *0000000117; and 1970 Base Guide, Base_Guides_0000000254; at *0000000271.

²⁰³ 1966 Base Guide, Base_Guides_0000000098, at *0000000117; and 1970 Base Guide, Base_Guides_0000000254; at *0000000271.

²⁰⁴ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337057, *0000337059, and *0000337067.

²⁰⁵ *Semper Fidelis, A Brief History of Onslow County*, 75, Exhibit 2. The authors of *Semper Fidelis* note that the ITR was “reduced to Infantry Training Detachments after Congress questioned why it required more time to train a Marine than enlisted personnel in other services,” *ibid*.

²⁰⁶ S. Rogers, “‘ITS’ the best in training, Preparing for the FMF,” *The Globe*, 4/17/1980, 00897_PLG_0000037757, at *0000037762.

²⁰⁷ “Infantry school Marines spend two days applying newly learned new combat skills,” *The Globe*, 7/18/1985, 00897_PLG_0000029712, at *0000029717.

focused on specialized weapons training “such as machine gunners, [M47] Dragons and tube launched, optically tracked, wire command link guided missile (TOW), mortars and infantrymen.” Upon completion of the second phase, Marines conducted a “two-day wrap-up” that included an amphibious landing at Onslow Beach before moving to “Combat Town” at Camp Geiger to practice urban warfare tactics. At night, ITS instructors filled the air with “60mm mortar and small arms rounds streaking through the night air to their targets. The second day started with helicopter assault drills.”²⁰⁸

b. The Nuclear, Biological, and Chemical School

The Nuclear, Biological, and Chemical School (NBC School) started at Camp Geiger in 1956, the year the Atomic Energy Commission issued the school its first license. Each year the NBC School trained 600 Marines, sailors, and civilians. Upon completion of the two and one-half week training, qualified students were certified “as NBC defense specialists.” A two-day class on field decontamination followed completion of the NBC School training.²⁰⁹ Similar NBC training occurred in June 1979.²¹⁰

c. Housing

After the majority of activity moved from Tent City to Hadnot Point, Tent City was renamed Camp Geiger and “was established as the location of primary unit tactical training for recent recruits from the Parris Island basic training complex.”²¹¹

In terms of housing, the most notable change that occurred in this area since 1946 was the addition of the Camp Geiger Trailer Park that was part of the Korean War housing expansion at the base. In 1962, there were 904 trailers at the Camp Geiger Trailer Park,²¹² in 1970 there were 448 trailers,²¹³ and the trailer park existed through 1983.²¹⁴ As at the Camp Knox Trailer Park,

²⁰⁸ A. Vaughan, “Infantry school Marines spend two days applying newly learned combat skills,” *The Globe*, 7/18/1985, 00897_PLG_0000029712, at *0000029717-18.

²⁰⁹ D. Smith, “NBC School: FMFLant school trains approximately 600 Marines, sailors and civilians annual,” *The Globe*, 7/20/1978, 00897_PLG_0000038791, at 0000038794.

²¹⁰ P. Lewis, “NBC defense is important today,” *The Globe*, 6/21/1979, 00897_PLG_0000038241, at *0000038244.

²¹¹ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337073.

²¹² 1962 Base Guide, Base_Guides_0000000077, at *0000000081.

²¹³ No author, “Jacksonville Salutes New River Marine Corps Air Station,” (Lubbock TX: Boone Publications, Inc., 1970), (1970 MCAS Base Guide), Base_Guides_0000000328, at *0000000342.

²¹⁴ The 1986 Master Plan Update makes two references to the Camp Geiger Trailer Park, although it does not provide information on the number of units available, CLJA_USMCGEN_0000326502, at

according to the 1966 and 1970 base guides, there were “four and six sleeper trailers” at the Camp Geiger Trailer Park.²¹⁵ The Camp Geiger Trailer Park was southwest of the Camp Geiger’s permanent structures, just south of Curtis Road and visible in the lower left-hand corner of Image 29.

In 1972, several new barracks, which were “three-story, open-bay facilities,” were constructed for the Infantry Training Regiment.²¹⁶

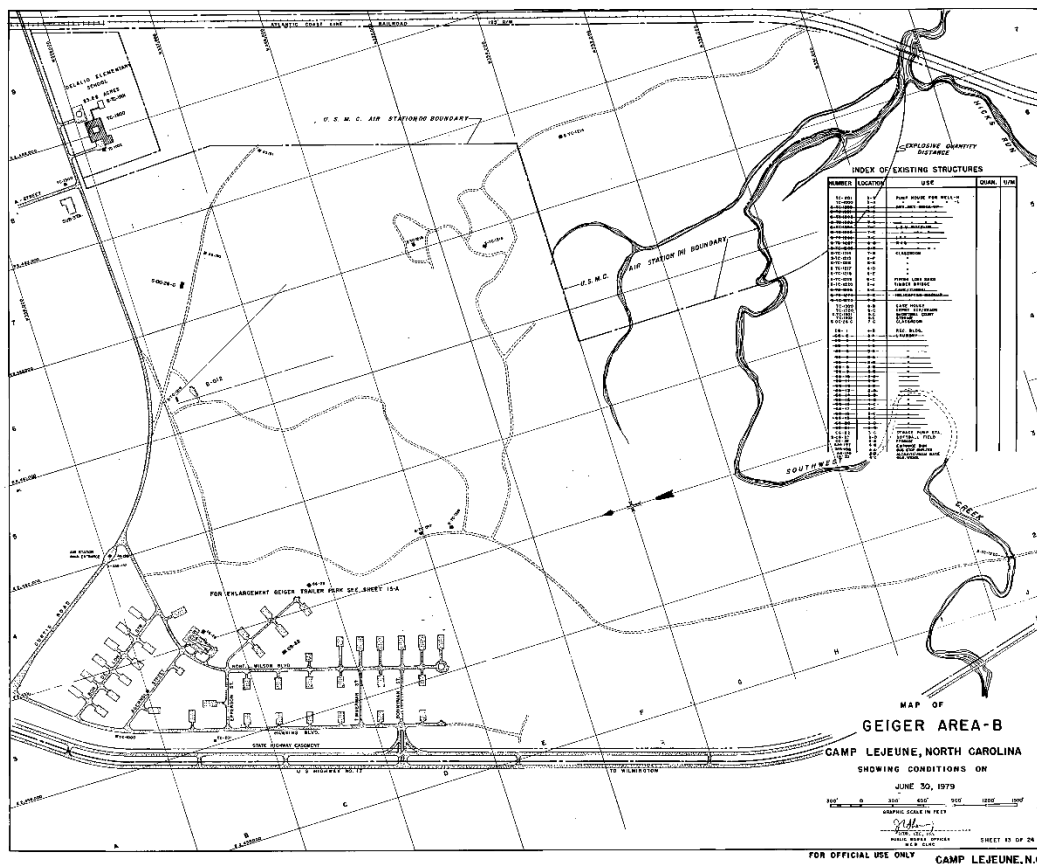
*0000326662 and 0000326596. Geiger Trailer Park was likely serviced by the same water treatment plant as the rest of Camp Geiger, as the 1986 Master Plan Update noted that Geiger Trailer Park was serviced by the MCAS WTP (which after 1977 serviced the Camp Geiger area), see 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326662. The 1970 Master Plan noted that the Geiger Trailer Park was “within the boundary of Lejeune . . . allocated to family housing. By directive, housing was excluded from this study,” 1970 Master Plan, CLJA_USMC_GEN_0000336978, at *0000337049.

²¹⁵ 1966 Base Guide, Base_Guides_0000000098, at *0000000120; and 1970 Base Guide, Base_Guides_0000000254, at *0000000274.

²¹⁶ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326608.

Image 30

Camp Geiger Area B Map, June 30, 1979²¹⁷



The 1986 Master Plan Update stated that “a mixture of new and old facilities” existed at Camp Geiger,” including troop housing.²¹⁸ This plan also noted there was no family housing at Camp Geiger and there were 54 acres of troop housing.²¹⁹ It further stated that “[t]raining tends to be conveniently accessible by foot from troop housing although less accessible from community uses, such as the dining facilities.”²²⁰

²¹⁷ Map of Geiger Area - B, Camp Lejeune, North Carolina, Showing Conditions on June 30, 1979, (Sheet 13 of 24), CLJA_USMC_PWD_0000173829.

²¹⁸ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326700, *0000326736, and *0000326712.

²¹⁹ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326736-37.

²²⁰ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326737.

d. Amenities

As for amenities, by 1959, if not earlier, Camp Geiger, much like Montford Point / Camp Johnson, had the types of services and amenities that made frequent trips to the Mainside unnecessary. Among the Camp Geiger facilities and services listed in the 1959 telephone directory were an airline ticket office, a railroad depot (the Atlantic Coast Line Railroad), a chapel, a bank, two commissioned officers' mess halls, a dental clinic, a fire station, an auto repair shop, a laundry, a maintenance shop, a sewage treatment plant, a steam plant, a WTP, three mess halls, two service clubs, a service station, a staff NCO club, an indoor theater, an outdoor theater, a boat house, cleaning and pressing shops within the Marine Corps Exchange, a gas station, an automobile and woodworking shop, a post office, a printing plant, and a clothing store.²²¹

Marines at Camp Geiger in 1970 had access to many of the same facilities and amenities as they did in 1959. Such facilities and amenities included the airline ticket office, an American Red Cross office, a bank, a barber shop, a bus station, a chaplain, a commissioned offices mess hall, a dentist, a recreation center for enlisted Marines, a base exchange store, a dry cleaner, a photographic studio, a watch repair store, service station, dispensary, two mess halls, two post offices, a passenger train office, an enlisted service club, a community center, a staff NCO club.²²² Additional mess facilities, as well as dental and medical clinics, were constructed at Camp Geiger in the early 1970s.²²³

By November 1986, some of the services and facilities available to Camp Geiger residents no longer existed such as the airline ticket office, the American Red Cross Office, and the passenger train office, but many others remained. Those still available included an ambulance service, a bank, bachelor officer housing, a chapel, an enlisted club, a non-commissioned officers club, a dental clinic, a fire station, an automotive hobby shop, a service station, a barber shop, a dry cleaners, a post exchange, a snack bar with an arcade, a theater, and a laundry.²²⁴

²²¹ June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074358-67; and October 1959 Telephone Directory, CLJA_USMCGEN_0000074318, *0000074412, at *0000074453-54, *0000074456, *0000074460, *0000074462, and *0000074459.

²²² November 1970 Telephone Directory, CLJA_USMCGEN_0000077468, at *0000077521-23, *0000077525-28, *0000077530, and *0000077533.

²²³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326700.

²²⁴ October 1986 Telephone Directory, CLJA_USMCGEN_0000089039: CLJA_USMCGEN_0000089437, at *0000089472-79, *0000089484, and *0000089489.

e. Separation from Mainside

The 1970 plan noted that Camp Geiger was one of the “somewhat isolated parts of the Base,” and the long “travel distance . . . to the main areas of Hadnot Point [was] prohibitive.”²²⁵ Due to this lengthy travel distance and isolation, “the Community facilities [at Camp Geiger] were determined to be of necessity somewhat self-sufficient.”²²⁶ Moreover, as discussed in Section V.C.2, above, the 1986 Master Plan Update also noted that there were long travel distances from Montford Point / Camp Johnson to the main community facilities at Hadnot Point, as Camp Geiger was even farther from Hadnot Point than Montford Point / Camp Johnson, these travel distances were even longer from Geiger. This plan also highlights the importance of considering Camp Geiger’s relationship to the MCAS, located to its south: “Recent commercial and community development at the Curtis Road Triangle serves effectively to pull the orientation of Geiger southward.”²²⁷

4. Marine Corps Airfield / Marine Corps Air Station New River

In 1951, the Marines reopened the airfield (previously called Peterfield Point airfield), naming it Marine Corps Air Facility (MCAF) New River. In 1954, the first helicopter group—Marine Aircraft Group-26 (MAG-26)—was stationed at the airfield.

The airfield was redesignated as the Marine Corps Air Station (MCAS) on September 1, 1968.²²⁸ In 1970, the air station was manned by approximately 4,000 Marines, and was the base of operations for Marine Aircraft Group-26 (the above-mentioned helicopter group), Marine Helicopter Training Group-40 (which provided specialized helicopter training to pilots and aircrewmembers)²²⁹ and Marine Air Control Squadron-5 (which provided “air surveillance and control of aircraft and surface-to-air missiles for anti-air warfare”²³⁰).²³¹ In 1972, “a major

²²⁵ 1970 Master Plan, CLJA_USMC_GEN_0000336978, at *0000337153. The other isolated areas noted were Courthouse Bay and Mile Hammock Bay, which was near Onslow Beach.

²²⁶ Ibid.

²²⁷ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326737.

²²⁸ 1977 Base Guide, Base_Guides_0000000627, at *0000000654.

²²⁹ 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000337.

²³⁰ 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000338.

²³¹ 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000334.

reorganization occurred,” and MHTG-40 [the helicopter training group] was deactivated and Marine Aircraft Group 29, another helicopter group, was born.”²³²

From at least 1977 through the 1980s, the principle Second Marine Aircraft Wing tenants were MAG 26 and MAG-29.²³³ MAG 26 and 29 have similar missions and tasks, namely, to provide helicopter support to Fleet Marine Force, perform logistical and administrative support for other Marine air Group units, and helicopter training for pilots and aircrewmembers.²³⁴ According to the 1986 Master Plan Update, the “Air Station is primarily a helicopter base with an increasing contingent of fixed-wing aircraft.”²³⁵

a. Housing and Amenities

In 1951, when the Marines reopened the airfield, the area did not have housing, so single Marines stationed at the airfield lived at Camp Geiger and married Marines lived in family housing across the New River took a ferry to and from work at MCAF New River. In 1954, with the arrival of MAG-26, six new barracks opened to the west of the airfield located close to the hangar, a mess hall, a service club, and the Staff NCO Club.²³⁶ In 1956, there was a Marine Corps Exchange and bachelor officers’ quarters at MCAF.²³⁷

In 1959, there were six barracks at the MCAF that housed Marines from ten units. There was a dental office, a mess hall, a commissioned officers’ mess hall, an infirmary, a Marine Corps Exchange, a maintenance and public works division, a staff NCO club, and a supply department.²³⁸ In 1959, construction started on ranch-style housing for families stationed at New

²³² 1977 Base Guide, Base_Guides_0000000627, at *0000000654.

²³³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326945; 1977 Base Guide, Base_Guides_0000000627, at *0000000654.

²³⁴ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326946.

²³⁵ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326945.

²³⁶ *Semper Fidelis, A Brief History of Onslow County*, 60, Exhibit 2. Also see 1970 MCAS Base Guide, Base_Guides_0000000328, at *0000000334; and 1977 Base Guide, Base_Guides_0000000627, at *0000000654.

²³⁷ USMC, *Camp Lejeune, NC, Telephone Directory*, 7/1/1956 (July 1956 Telephone Directory), CLJA_USMCGEN_0000059706: CLJA_USMCGEN_0000059854, at *0000059863.

²³⁸ June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074363 and *0000074405-06.

River. The complex was located east of the airfield's runways and included 325 houses for enlisted Marines and 110 houses for officers.²³⁹

When MHTG-40 was activated, and Marines attached to this unit lived in a three-story air-conditioned barracks and trained in a 13,000 square-foot air-conditioned building. Amenities at MCAS in 1970 included a bowling alley, medical and dental facilities, a mess hall, and bachelor officer quarters for fifty men.²⁴⁰ Other facilities and amenities available to Marines and their families in 1970 at the air station included a credit union, a shoe repair, a dry cleaner, a service station, a toy store, a post office, and a mess hall.²⁴¹

In 1975, new construction included "another avionics facility, simulator training building, and additional enlisted housing."²⁴² The 1977 Camp Lejeune base guide noted the following housing options at MCAS: Bachelor Officers' Quarters (144-man unit with central heating and air conditioning), Bachelor Staff Noncommissioned Officers' Quarters (80-man unit with 20 single-man rooms and 40 two-man rooms); and Married Quarters – 110 Married Officers' Quarters and 325 Married Enlisted Men Quarters.²⁴³ Facilities at MCAS in 1977 included a dispensary, a Marine Corps Exchange, a cafeteria, a commissary store, a cleaners, a bank, schools, officers' clubs, a marina, a pool, and a bowling center, among others.²⁴⁴

In the 1980s, "motel-style barracks were built at MCAS."²⁴⁵ The 1986 Camp Lejeune phone directory for the MCAS included a subsection titled "Special Services" which listed an athletic facility, an auto hobby shop, a bowling center, camper rentals, a ceramic hobby shop, a child care center, a gymnasium, a library, a marina, a mini-school, a swimming pool for the enlisted, a theater, a weight room, and a woodworking hobby shop. Other facilities listed in the

²³⁹ *Semper Fidelis, A Brief History of Onslow County*, 66, Exhibit 2.

²⁴⁰ *Semper Fidelis, A Brief History of Onslow County*, 66, Exhibit 2. The 1970 MCAS Base Guide includes listings for housing for married officers and for married enlisted men, see 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000355.

²⁴¹ 1970 MCAS Base Guide, Base_Guides_0000000328, at *0000000340-52.

²⁴² 1977 Base Guide, Base_Guides_0000000627, at *0000000654.

²⁴³ 1977 Base Guide, Base_Guides_0000000627, at *0000000658.

²⁴⁴ 1977 Base Guide, Base_Guides_0000000627, at *0000000658-64.

²⁴⁵ *Semper Fidelis, A Brief History of Onslow County*, 74, 80, Exhibit 2. Also see 1977 Base Guide, Base_Guides_0000000627, at *0000000654. Between 1983 and 1988, the Marine Corps estimated that approximately 5,040 people were assigned to MCAS New River, see 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326951.

1986 Camp Lejeune phone directory were barbers shops, a beauty shop, a dry cleaners, several snack bars, an optical shop, a service station and a thrift shop.²⁴⁶

In at least 1966 through 1977, children from the Air Facility attended DeLalio Elementary.²⁴⁷ Middle- and high school-aged children living at the Air Facility attended Lejeune Junior - Sr High School in 1966, and Brewster Junior High School and then Lejeune High School in 1967 through at least 1977.²⁴⁸

a. Separation from Mainside

The 1986 Master Plan Update noted that there were long travel distances from MCAS, New River to the main community facilities at Hadnot Point.²⁴⁹ This plan also noted that family housing at the air station is less accessible to the main facilities at Hadnot Point than the housing located on Highway 24 (presumably Midway Park, and Tarawa Terrace I and II), which themselves were “less accessible” to these facilities.²⁵⁰ Moreover, as discussed in Section V.C.3, the 1970 plan noted that Camp Geiger—which was closer to Hadnot Point than MCAS, New River— was one of the “somewhat isolated parts of the Base” where the travel distances to the main areas of Hadnot Point “were prohibitive.”²⁵¹ Since, MCAS was even farther from Hadnot Point than Camp Geiger, this analysis presumably applies to MCAS, New River as well.

²⁴⁶ October 1986 Telephone Directory, CLJA_USMCGEN_0000089039; CLJA_USMCGEN_0000089437, at *0000089467.

²⁴⁷ 1966 Base Guide at Base_Guides_0000000098, at *0000000122; 1967 Base Guide at Base_Guides_0000000180, at *0000000204; 1970 Base Guide at Base_Guides_0000000254, at *0000000276; 1971 Base Guide, Base_Guides_0000000391, at *0000000419; 1972 Base Guide, Base_Guides_0000000466; at *0000000503; 1976 Base Guide, Base_Guides_0000000559; at *0000000590; 1977 Base Guide, Base_Guides_0000000627; at *0000000644.

²⁴⁸ 1966 Base Guide at Base_Guides_0000000098, at *0000000122-23; 1967 Base Guide at Base_Guides_0000000180, at *0000000204; 1970 Base Guide at Base_Guides_0000000254, at *0000000276; 1971 Base Guide, Base_Guides_0000000391, at *0000000419; 1972 Base Guide, Base_Guides_0000000466; at *0000000503; 1976 Base Guide, Base_Guides_0000000559; at *0000000590; 1977 Base Guide, Base_Guides_0000000627; at *0000000644; *Semper Fidelis, A Brief History of Onslow County*, 71, Exhibit 2; and “Camp Lejeune School Bells Ring Again,” *The Globe*, 8/25/1967, 00897_PLG_0000044834, at *0000044837. Brewster Junior High and Lejeune High School are located on the Mainside.

²⁴⁹ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326656.

²⁵⁰ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326649.

²⁵¹ 1970 Master Plan, CLJA_USMC_GEN_0000336978, at *0000337153. The other isolated areas noted were Courthouse Bay and Mile Hammock Bay, which is near Onslow Beach

5. Rifle Range at Stone Bay

The Camp Lejeune Rifle Range is located next to Stone Bay on the west side of the New River (see Image 31). Stone Bay Rifle Range dates to World War II when the Marine Corps activated the Rifle Range Battalion.²⁵²

Only a “small number” of Marines were assigned to the Rifle Range.²⁵³ Instead, the Rifle Range was “utilized on a revolving basis by personnel throughout the Camp Lejeune Complex.”²⁵⁴ According to the Camp Lejeune, Special Training Analysis, every Marine had to spend at least five days a year at the Rifle Range for their rifle qualification.²⁵⁵ Moreover, according to the 1970 Master Plan, “all” Marines at Camp Lejeune lived at the Rifle Range for the two week period of their requalification of rifle skills.²⁵⁶ Similarly, the 1986 Master Plan Update notes that Marines lived at the Rifle Range for the two week period they were assigned to “range training.”²⁵⁷

Structures built during the war at the Rifle Range included the four barracks, “three 50-target ranges and a pistol range,” a post office, a theater, and a recreation hall.²⁵⁸

²⁵² Completion Report, Vol. I, CLJA_USMCGEN_0000287341, at *0000287344.

²⁵³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326605. Other documents indicate that at least some Marines lived at the Rifle Range: legends of the 1964 and 1979 existing condition map for the Rifle Range lists five officers’ quarters for married Marines (Excerpt Map of Rifle Range Area, Camp Lejeune, North Carolina, Showing Conditions on June 30 1964, Sheet 13 of 18, CLJA_USMC_PWD_0000126207; and Map of Rifle Range Area, Camp Lejeune, North Carolina, Showing Conditions on June 30 1979, Sheet 16 of 24, CLJA_USMC_PWD_0000173849); and the “Personnel Listing” in the 1970s telephone directory includes individuals whose addresses are bachelor officers’ quarters and other quarters at the Rifle Range (USMC, *Camp Lejeune, NC, Telephone Directory*, 11/1970, CLJA_USMCGEN_0000077468, at *0000077482-83, *0000077485; and Base Guides from 1967, 1970, 1971, 1972, and 1976 all indicate that kids from the Rifle Range attend Stone Street elementary school (1967 Base_Guides_0000000180 at *0000000204; 1970 Base_Guides_0000000254 at *0000000276; 1971 Base_Guides_0000000391 at *0000000419; 1972 Base_Guides_0000000465, at *0000000502; 1976 Base_Guides_0000000559, at *0000000590)

²⁵⁴ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326701.

²⁵⁵ Camp Lejeune, North Carolina, Special Training Analysis, April 1986, CLJA_USMCGEN_0000027381, at *0000027509.

²⁵⁶ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337095.

²⁵⁷ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326605.

²⁵⁸ Completion Report Vol. I, CLJA_USMCGEN_0000287341, at *0000287465, *0000287471, and *0000287505; and Carraway, *Camp Lejeune Leathernecks*, 6, 8, 11, 21, 35, Exhibit 1.

The 1959 base telephone directory listed the buildings at the Rifle Range that included: four barracks, a bachelor officer quarters, a carpenter shop, maintenance shop, firehouse, mess hall, library, Marine Corps Exchange, post office, service club, service station, steam plant, and theater. There was also a dispensary, a dental office, a medical office, and a sick bay on site.²⁵⁹ Amenities and facilities available to those at the Rifle Range in 1970 and 1986 were similar to those available in 1959 and included bachelor officers' quarters, a dental clinic, an enlisted recreation center, a dispensary, mess hall, post office, an enlisted service club, and theater.²⁶⁰

a. Separation from Mainside

The 1970 Master Plan noted that the Rifle Range is “isolated,” and the “travel distance between the major billeting [housing] areas at Hadnot Point and Rifle Range” require that personnel requalifying their rifle skills reside at the Rifle Range. The plan further noted that the practice of “billeting personal for a two week period, at the Rifle Range, for requalification [of rifle skills], is . . . expensive to maintain due to the duplication of housing and support facilities.”²⁶¹

The 1986 Base Master Plan also described the Rifle Range as “isolated,” and noted that “Lengthy travel distance makes use [of Rifle Range] less than convenient to troops billeted at the Hadnot Point regimental area.”²⁶²

²⁵⁹ June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074360-65, *0000074367, and *0000074372.

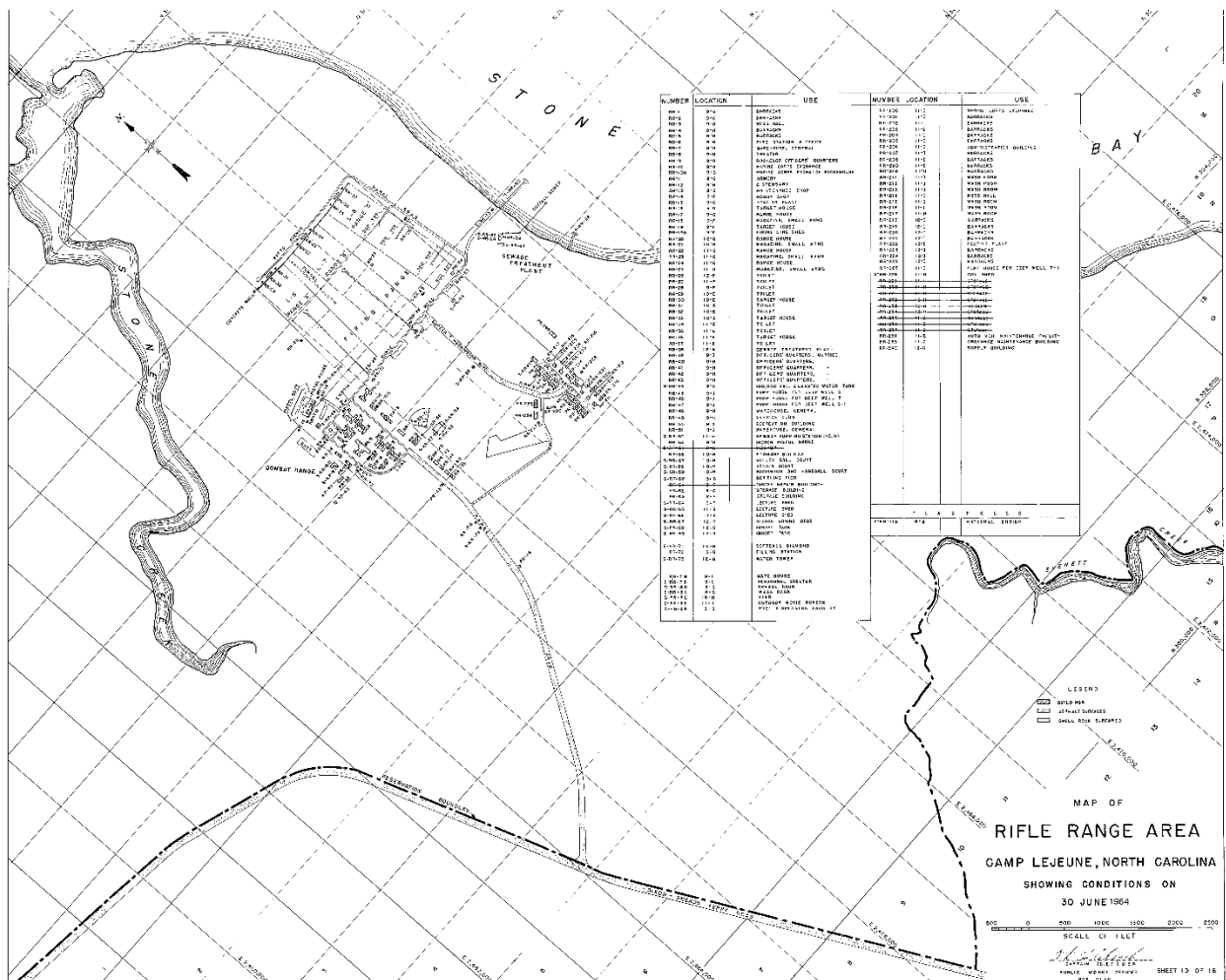
²⁶⁰ November 1970 Telephone Directory, CLJA_USMCGEN_0000077468, at *0000077521, *0000077525, and *0000077532; October 1986 Telephone Directory, CLJA_USMCGEN_0000089039: CLJA_USMCGEN_0000089437, at *0000089472 and *0000089475-81.

²⁶¹ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337095.

²⁶² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *000032647-28, and *000032659-60.

Image 31

Map showing location of the Rifle Range Area, June 30, 1964²⁶³



6. Onslow Beach

The Onslow Beach WTP served the Onslow Beach area from 1958 to 2000 (see Table 1 and Image 16). Onslow Beach was one of the areas that used well water that had been treated with chlorine beginning in World War II. There is no documentation that the Onslow Beach WTP was ever affected by contaminated water.²⁶⁴

The Onslow Beach area also dates to Camp Lejeune's earliest days and was one of the reasons that the Marine Corps selected the site for the base in 1940. Since World War II, Onslow Beach has been the area where Marines conducted amphibious training exercises. As at the other

²⁶³ Map of Rifle Range Area, Camp Lejeune, North Carolina, Showing Conditions on 30 June 1964, (Sheet 13 of 18), CLJA_USMC_PWD_0001789670.

²⁶⁴ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161430; and "Water Treatment Plant," *The Globe*, 12/2/1948, 00897_PLG_0000055167, at *0000055174.

areas during World War II beyond the main part of Hadnot Point, there were numerous structures at Onslow Beach.²⁶⁵ Completion Report, Volume III notes: “Signal School facilities provided housing, mess and training facilities for 750 troops. It is located in the beach area between the dunes and Intercoastal Waterway.”²⁶⁶ Three barracks, a mess hall, and heating plant were also listed.²⁶⁷

Onslow Beach has also been an area where Marines and their families would visit for recreation. One author estimated during the summer of 1945, 10,000 Marines visited Onslow Beach each Sunday in the summer. Buses transported Marines to and from the beach. Among the amenities the Marines could enjoy were, an officers’ club, and a “beach house for enlisted Marines with 1,000 lockers, snack bars, and a motion picture auditorium,” and “pavilion for Negro Marines.”²⁶⁸

The 1959 *Camp Lejeune Telephone Directory* included listings for the Onslow Beach snack bar and canteen and a “Senior Guest House” with seven rooms. A steam plant served the area and the “Water Plant – Onslow Beach” is also listed in the 1958 telephone directory. Other structures listed include a Marine Corp Exchange, dispensary, mess hall, chapel, enlisted pavilion, officers pavilion, staff NCO pavilion, and a commissioned officers mess hall.²⁶⁹

In the 1970 base telephone directory there were only a few structures listed which were the enlisted recreation center, mess hall, and a staff NCO club. However, in 1986, the Onslow Beach Pavilion, a commissioned officers mess hall, barber shop, post exchange, three snack bars, and quarters for officers and enlisted men, and a medical clinic were listed in the directory.²⁷⁰ The 1986 Master Plan stated that there was no family housing and minimal troop housing.²⁷¹

Onslow Beach is near Mile Hammock Bay, and the 1970s master plan notes that “the travel distance[]” from Mile Hammock Bay to Hadnot Point was “prohibitive,” requiring that Mile Hammock Bay (and, presumably, Onslow Beach) have its own community facilities.

²⁶⁵ Carraway, *Camp Lejeune Leathernecks*, 6, 8, 11, 21, 35.

²⁶⁶ Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000209909. Add short explanation about signal school activities (i.e. communications)

²⁶⁷ Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000209991.

²⁶⁸ Carraway, *Camp Lejeune Leathernecks*, 6, 8, 11, 21, 35.

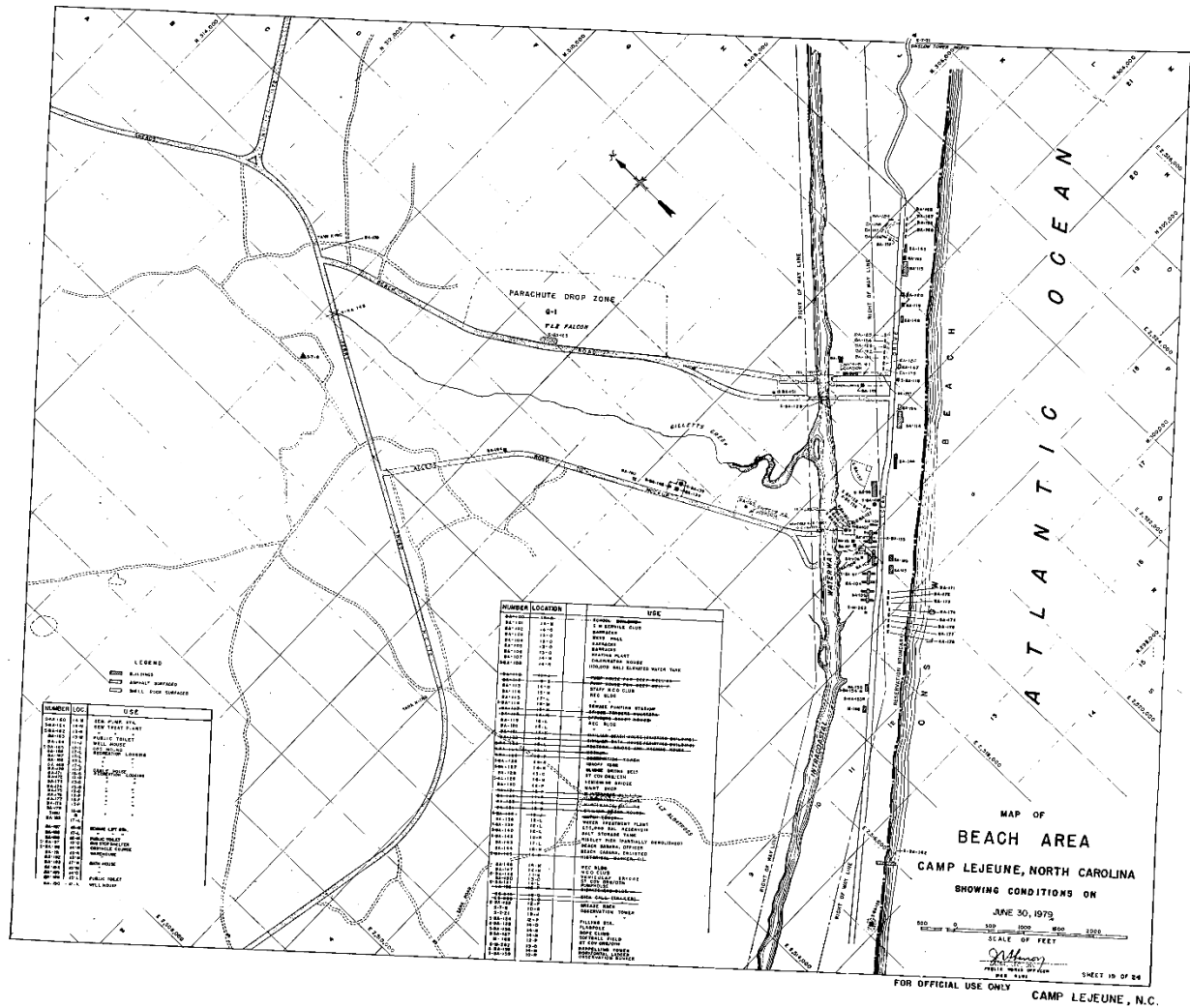
²⁶⁹ USMC, *Camp Lejeune, NC, Telephone Directory*, 6/1959, 27, 30, 33-34; and USMC, *Camp Lejeune, NC, Telephone Directory*, 10/1959, 27, 31, 35. The Onslow Beach Water Plant was first listed in the September 1958 MCBCL telephone directory, see, USMC, *Camp Lejeune, NC, Telephone Directory*, 6/1959, MCBCL *Telephone Directory*, 62.

²⁷⁰ USMC, *Camp Lejeune, NC, Telephone Directory*, 11/1970, MCBCL *Telephone Directory*, 60-62; and USMC, *Camp Lejeune, NC, Telephone Directory*, 10/1986, MCBCL *Telephone Directory*, 21-22, 26-28, 86. The 1986 directory does not indicate if the quarters were permanent residences or vacation rentals.

²⁷¹ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326712 and *0000326729..

Image 32

Onslow Beach, June 30, 1979²⁷²



²⁷² Existing Condition Maps 1979, Beach Area, 019.pdf. Exhibit 14.

7. Courthouse Bay

The Courthouse Bay WTP operated from 1969 to 2000 and the ATSDR did not study this WTP (see Table 1 and Image 18).²⁷³ During World War II, the Amphibian Base was located at Courthouse Bay and it received pumped well water that had been treated with chlorine.²⁷⁴

Courthouse Bay takes “its name from the bay of water on a narrow portion of New River” and “is the area designated for the Marine Corps Combat Support Schools.”²⁷⁵ Plans for the development of this area began in 1942 “with the construction of barracks, training and support facilities for one battalion of Balloon Barrage Training and Amphibious operations.”²⁷⁶ The 1986 Master Plan Update noted that once “balloon training became obsolete, these facilities were occupied by a series of Marine Corps units and eventually became the home of the Engineer School.”²⁷⁷ Image 32 shows the various engineer and amphibian troop areas at Courthouse Bay in June 1979.

²⁷³ See Table 1 and Image 18.

²⁷⁴ Completion Report, Vol. II, CLJA_USMCGEN_0000161226, at *0000161430; and “Water Treatment Plant,” *The Globe*, 12/2/1948, 00897_PLG_0000055167, at *0000055174.

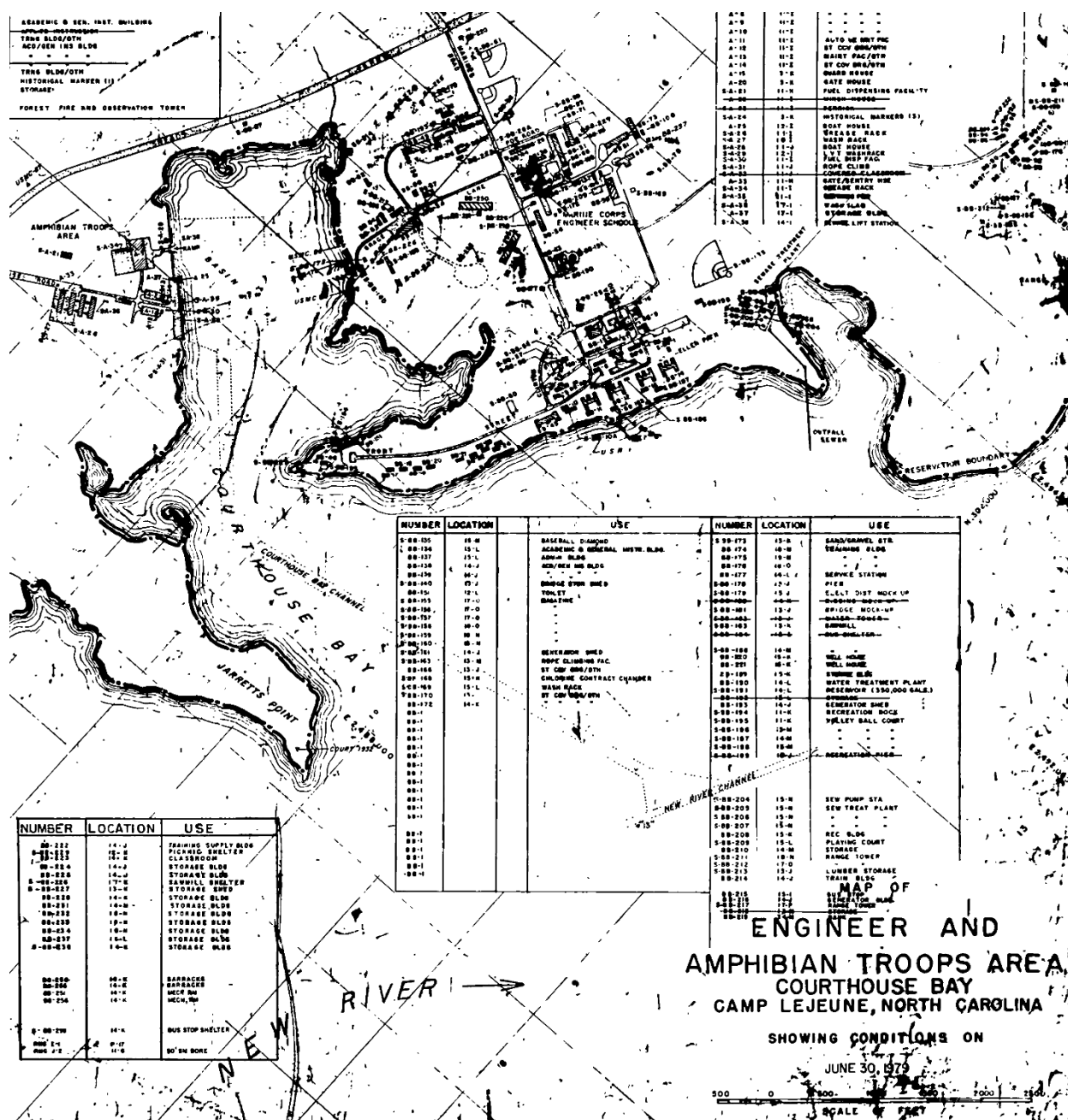
²⁷⁵ 1970 Master Plan, CLJA_USMCGEN_0000336978, at *0000337051. This document further notes that the Combat Service Support School (the Engineer School) conducts training in all types of combat support functions,” *ibid.*, at *0000337053.

²⁷⁶ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326608.

²⁷⁷ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326608.

Image 33

Courthouse Bay Area, June 30, 1979²⁷⁸



²⁷⁸ Existing Condition Maps 1979, Courthouse Bay, 017.pdf. Exhibit 15.

a. The Engineer School

During World War II, the following subjects were taught at the school: “Basic Surveying, Bridging, Drafting, Aerial Photographic Interpretation, Field Electrician, Map Reproduction and Photography . . . Shop, Engineer Equipment, Water Supply and Well Drilling. After a period of disbandment following World War II, the school was reactivated in January 1949 and in April 1952 was renamed the Marine Corps Engineer School.”²⁷⁹ In 1969, there were at 616 military personnel at Courthouse Bay (Engineer School) that included 246 permanent military personnel of which 21 were officers.²⁸⁰ In addition, the summary of the FY-1969 academic program for the Engineer School showed that sixteen courses were offered ranging from “combat engineer basic specialist” (85 four-week classes that had a total of 2,374 students) to “utility chief” (one 17-week that had a total of fifteen students).²⁸¹ The Marines reorganized the school during the winter of 1976-1977 and created four companies: “Headquarters and Service Company, Engineer Equipment Instruction Company, Utilities Instruction Company, and Combat Engineer Instruction Company.”²⁸²

b. Housing

While troop and family housing were generally concentrated in other areas of the base, there was some housing at Courthouse Bay.²⁸³ There was a small number of family housing units in the Courthouse Bay area, likely to house instructors and their families.²⁸⁴ In 1979 housing in the area included engineering student barracks, four additional barracks, bachelor officers’ quarters, and married officers housing.²⁸⁵ In 1983 some troop housing, and there were 8 family housing units in Courthouse Bay. In the 1980s, construction started on “hotel-style barracks at Courthouse Bay.”²⁸⁶

²⁷⁹ “Marine Corp Engineer School,” History, <https://www.mces.marines.mil/>.

²⁸⁰ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337057, and *0000337059.

²⁸¹ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337057, *0000337059, and *0000337065.

²⁸² “Marine Corp Engineer School,” History, <https://www.mces.marines.mil/>.

²⁸³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326648-49.

²⁸⁴ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326703, and *0000326644. There are eight units listed at Courthouse Bay, *ibid*, at *0000326703.

²⁸⁵ J.E. Sirrine Company, “A Utility Study for Courthouse Bay Area, Marine Corps Base Camp Lejeune, NC” 1/31/1979, CLJA_USMC_CAGE_0000200592, at *0000200608

²⁸⁶ *Semper Fidelis, A Brief History of Onslow Beach*, 80, Exhibit 2.

c. Amenities

In terms of amenities, the 1959 *Camp Lejeune Telephone Directory* lists various facilities and structures at Courthouse Bay, including a boat house, two mess halls including one for commissioned officers, a dental clinic, firehouse, library, maintenance shop (two structures), steam plant, Marine Corps Exchange, service club, staff NCO club, indoor theater, gas station, and a post office.²⁸⁷ The 1966 base guide features for the Courthouse Bay area include a chapel, barbershop, cleaning and pressing shop, Exchange, laundromat, food service, theater, library, enlisted service club, staff NCO club, and an officers' club.²⁸⁸ There were also "[t]wo tennis courts, one handball court, two softball/football fields, one basketball court, one volleyball court and one badminton court" and a recreation center.²⁸⁹

The 1970 Master Plan noted that ten percent of the "community facilities" at the base were at Courthouse Bay, which is in almost direct proportion to the number of Troops being handled at this area.²⁹⁰ The plan lists several such facilities at Courthouse Bay, including "a small Library, Theater, Recreation facilities, and Hobby Shops" as well as a Dental Clinic.²⁹¹

In 1984, of the 255 acres of development at Courthouse Bay, the Training Facilities accounted for "the largest single land use."²⁹² "Commercial, community and medical facilities [were] consolidated and centralized relative to troop housing and training classrooms."²⁹³ The 1986 Master Plan Update mentioned a dental annex as well as ancillary supply and storage facilities at Courthouse Bay.²⁹⁴

²⁸⁷ June 1959 Telephone Directory, CLJA_USMCGEN_0000074318, at *0000074358-63; and *000074368; and October 1959 Telephone Directory, CLJA_USMCGEN_0000074318; CLJA_USMCGEN_000007441, at *0000074453-64, and *0000074466.

²⁸⁸ 1966 Base Guide at Base_Guides_0000000098, at *0000000125-127, *0000000131, and *0000000133.

²⁸⁹ 1966 Base Guide at Base_Guides_0000000098, at *0000000136, and *0000000138-139.

²⁹⁰ 1970 Master Plan, CLJA_USMCGEN_0000336978, at *0000337153.

²⁹¹ 1970 Master Plan, CLJA_USMCGEN_0000336978, at *0000337155, *0000337147.

²⁹² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326728-729.

²⁹³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326891.

²⁹⁴ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326618 and *0000326648.

d. Separation from Mainside

The 1970 Base Master Plan noted that “the travel distance[]” from Courthouse Bay to Hadnot Point was “prohibitive,” such that in Courthouse Bay and other similar “somewhat isolated portions of the Base,” required “Community facilities . . . [that were] of necessity somewhat self-sufficient.”²⁹⁵

The above discussion in Section V.C supports my opinion two.

VI. Life at Camp Lejeune

A. Swimming Pools

As discussed, pool training at Camp Lejeune dated to World War II when two swimming pools were built at Hadnot Point that were “used for teaching combat methods in water.” These pools were located in building 236, Area 2 pool and building 540, Area 5 pool. During World War II, a training pool was also built at Montford Point. Each of the World War II pools measured 110 by 60 feet.²⁹⁶ Marines and their families continued to use the Camp Lejeune pools through the statutory period.²⁹⁷

In February 1970, *The Globe* included an article titled, “Base pools offer summer comfort when temperatures dive to zero.” According to the story’s author, during the winter two of the base’s five pools remained open and brought “78-degree heated water to all Marines and their dependents.” The story continued that during summer the two indoor pools and three outdoor pools were open. Of the three outdoor pools, one was at the commissioned officers mess hall at Hadnot Point (Paradise Point) and the other two were at the MCAS-New River. There were two

²⁹⁵ 1970 Master Plan, CLJA_USMCGEN_0000336978, at *0000337155, *0000337147.

²⁹⁶ Carraway, *Camp Lejeune Leathernecks*, 6-8, 23, Exhibit 1. During the statutory period the training pools on Hadnot Point drew water from the Hadnot Point WTP. During World War II, the Hadnot Point Training pools were connected to Hadnot Point WTP system and the Montford Point Pool was filled “untreated water directly from the distribution system that served Hadnot Point, see Completion Report, Vol. III, CLJA_USMCGEN_0000209879, at *0000210107 and *0000210110. The Montford Point pool drew water from the Montford Point / Camp Johnson WTP until 1987 when Holcomb Boulevard WTP started to serve Camp Johnson.

²⁹⁷ See for example 1967 Base Guide, Base_Guides_0000000180, at *0000000221-22; 1976 Base Guide, Base_Guides_0000000669, at *0000000596; and 1984 Base Guide Base_Guides_0000000871, at *.

swimming clubs at Camp Lejeune, a scuba club and the Devil Fish Swim team.²⁹⁸ Table 2 contains information about each of the pools at Camp Lejeune.

²⁹⁸ “Base pools offer summer comfort when temperatures dive to zero,” *The Globe*, 2/13/1970, 00897_PLG_0000043316, at *0000043324.

Table 2**Camp Lejeune Swimming Pools²⁹⁹**

Pool	Area of Base	Years Open During the Statutory Period	Indoor or Outdoor	Uses	Size
Area 2, Building 236 ³⁰⁰	Hadnot Point	Entire Statutory period (1953-1987)	Indoor	Appears to be used for training and recreation in 1962, and normally used for recreation from at least 1966 through the end of the statutory period	110 by 60 feet.
Area 5, Building 540 ³⁰¹	Hadnot Point	Entire Statutory period (1953-1987)	Indoor	Generally reserved for training, though the swim team also used this pool	110 by 60 feet.
Montford Point, Building M-139 ³⁰²	Montford Point	Entire Statutory period (1953-1987)	Indoor	Appears to be used for training and recreation in 1962, and normally used for recreation from	110 by 60 feet

²⁹⁹ The information in Table 2 is compiled from extant Camp Lejeune Base Guides for select years between 1952 – 1988 (as follows), unless otherwise noted: 1952 Base Guide, Base_Guides_0000000058, at *0000000072 and *0000000073; 1962 Base Guide at Base_Guides_0000000077, at *0000000085; 1966 Base Guide at Base_Guides_0000000098, at *0000000139-40; 1967 Base Guide at Base_Guides_0000000180, at *0000000221-22; 1970 Base Guide at Base_Guides_0000000254, at *0000000295; 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000347 and *0000000351; 1971 Base Guide, Base_Guides_0000000391; at *0000000413-17; No author, “Camp Lejeune,” (Lubbock TX: Boone Publications, Inc., 1972) (1972 Base Guide), Base_Guides_0000000465; at *0000000514-15; 1976 Base Guide, Base_Guides_0000000559; at *0000000596; 1977 Base Guide, Base_Guides_0000000627; at *0000000649; 1978 Base Guide, Base_Guides_0000000695; at *0000000718; No author, “Eastern Carolina Salutes Camp Lejeune/New River,” (San Diego, CA: Military Publishers, 1979) (1979 Base Guide), Base_Guides_0000000759; at *0000000782; No author, “Eastern Carolina Salutes Camp Lejeune/New River,” (San Diego, CA: MARCOA Publishing, 1980) (1980 Base Guide), Base_Guides_0000000829; at *0000000852-53; 1984 Base Guide, Base_Guides_0000000871, at *0000000881 and *0000000895; and 1988 Base Guide, Base_Guides_0000000923, at *0000000937 and *0000000951.

³⁰⁰ Carraway, *Camp Lejeune Leathernecks*, 6-8, 23, notes the pool was opened in World War II era.

³⁰¹ Carraway, *Camp Lejeune Leathernecks*, 6-8, 23, notes the pool was opened in World War II era.

³⁰² Carraway, *Camp Lejeune Leathernecks*, 6-8, 23, notes the pool was opened in World War II era.

				at least 1966 through the end of the statutory period	
Paradise Point Officers' Club ³⁰³	Holcomb Boulevard	Entire Statutory period (1953-1987)	Outdoor	Recreation	
MCAS New River Officer's Club	MCAS New River	1963 through end of statutory period ³⁰⁴	Outdoor ³⁰⁵	Recreation	
Station Pool	MCAS New River	[open by 1970, through end of statutory period]	Outdoor	Recreation	
Tarawa Terrace	Tarawa Terrace	August 1983, through the end of the statutory period (1987) ³⁰⁶	Outdoor ³⁰⁷	Recreation ³⁰⁸	

B. Schools for Base Dependents

³⁰³ Carraway, *Camp Lejeune Leathernecks*, 6-8, 23, notes the pool was opened in World War II era.

³⁰⁴ MCAS Officers Pool and bathhouse, construction drawings approved 10/25/1962, drawing 959483, CLJA_USMC_PWD_0000131483.

³⁰⁵ "Base pools offer summer comfort when temperatures dive to zero," *The Globe*, 2/13/1970, 00897_PLG_0000043316, at *0000043324.

³⁰⁶ New pool approved," *The Globe* 6/11/1981, 00897_PLG_0000037094, at *0000037107; and "New pool," *The Globe*, 8/11/1983, 00897_PLG_0000033941, at *0000033943

³⁰⁷ "May 17: Tarawa Terrace outdoor pool opens," *The Globe*, 4/10/1986, 00897_PLG_0000028215, at *0000028220.

³⁰⁸ See for example, "Devil Fish Club, summer program registration," *The Globe*, 5/30/1985, 00897_PLG_0000029988, at *0000030028; "Tarawa Terrace pool is now open for recreational swimming," *The Globe*, 5/22/1986,; 00897_PLG_0000027907, at *0000027942; "Innertube Water Polo at Tarawa Terrace Pool," *The Globe*, 7/31/1986, 00897_PLG_0000027497, at *0000027508; and "A Moonlight Swim will be conducted for adults at Tarawa Terrace Outdoor Pool..." *The Globe*, 5/21/1987, 00897_PLG_0000025999, at *0000026026.

The first schools at Camp Lejeune opened during World War II. Carraway in *Camp Lejeune Leathernecks* wrote that during World War II kids grades kindergarten through fifth grade attended the Midway Park school and kids sixth grade through high school attended the Paradise Point school.³⁰⁹ The 1952 base guide states that there was a kindergarten and that kids grades 1-4 attended the Midway Park School. Students grades 5-12 attended the Camp School.³¹⁰ No new schools opened at the base until the Tarawa Terrace elementary school opened in 1953.³¹¹ By 1962, the base had five elementary schools and a combined junior and senior high school. Within five years, two more elementary schools and separate junior and senior high schools were built.³¹²

The information in Table 3 is drawn from the extant Camp Lejeune Base Guides as indicated in the citation column.³¹³

Table 3
Camp Lejeune Nursery Schools During the Statutory Period³¹⁴

³⁰⁹ Carraway, *Camp Lejeune Leathernecks*, 10.

³¹⁰ No author, "Welcome Aboard, Guidebook to 2nd Marine Division and Camp Lejeune, N.C., Base_Guides_0000000058, at *0000000066.

³¹¹ *Semper Fidelis, A Brief History of Onslow County*, 52.

³¹² *Semper Fidelis, A Brief History of Onslow County*, 66.

³¹³ The information in Table 3 is compiled from extant Camp Lejeune Base Guides (BG) for select years between 1952–1988 (as follows), unless otherwise noted: 1952 Base Guide, Base_Guides_0000000058, at *0000000066; 1962 Base Guide at Base_Guides_0000000077, at *0000000082-83; 1966 Base Guide at Base_Guides_0000000098, at *0000000122-24; 1967 Base Guide at Base_Guides_0000000180, at *0000000204-06; 1970 Base Guide at Base_Guides_0000000254, at *0000000276-78; 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000344-46; 1971 Base Guide, Base_Guides_0000000391; at *0000000418-19; 1972 Base Guide, Base_Guides_0000000466; at *0000000503; 1976 Base Guide, Base_Guides_0000000559; at *0000000590; 1977 Base Guide, Base_Guides_0000000627; at *0000000644.

³¹⁴ The information in Table 3 is compiled from extant Camp Lejeune Base Guides (BG) for select years between 1952–1988 (as follows), unless otherwise noted: 1952 Base Guide, Base_Guides_0000000058, at *0000000066; 1962 Base Guide at Base_Guides_0000000077, at *0000000082-83; 1966 Base Guide at Base_Guides_0000000098, at *0000000122-24; 1967 Base Guide at Base_Guides_0000000180, at *0000000204-06; 1970 Base Guide at Base_Guides_0000000254, at *0000000276-78; 1970 MCAS Base Guide at Base_Guides_0000000328, at *0000000344-46; 1971 Base Guide, Base_Guides_0000000391; at *0000000418-19; 1972 Base Guide, Base_Guides_0000000465; at *0000000495, *0000000503; 1976 Base Guide, Base_Guides_0000000559; at *0000000584, *0000000590; 1977 Base Guide, Base_Guides_0000000627; at *0000000644.

School Name	Grades / Ages Enrolled	WTP System	Operational Dates	Housing Areas Served	Citation
Midway Park Nursery	Ages 2-6	Hadnot Point	1962 to 1970	Midway Park	1962BG 1967BG 1970BG
Tarawa Terrace Nursery	Ages 4 months-10 years / Kindergarten for five year olds (1962BG, 1970BG), 2 months-14 years (1967BG)	Tarawa Terrace	1962 to 1970	Nursey (Base Wide), Kindergarten (Military Personnel On/Off Base)	1962BG, 1966BG, 1967BG, 1970BG
Paradise Point	Nursery School (1966BG, 1967BG, 1970BG-1972BG), Kindergarten (1970BG)	Hadnot Point	1966 to 1971	Dependents of Officers Only (1967BG)	1966BG, 1967BG, 1970BG, 1971BG, 1972BG, 1976BG

Table 4
Camp Lejeune Elementary Schools During the Statutory Period

The extant base guides for 1978, 1979, 1980, 1984, and 1985 do not list individual base schools. Instead, they have language stating that at the base there are five elementary schools, a junior high, and a high school.³¹⁴ Information in the Camp Lejeune Telephone directories for years 1979, 1980, 1983, 1985, and 1986 corroborates the school information in each of these base guides. These schools were listed in each of the telephone directories: This document lists the following schools: Lejeune High School, Brewster Junior High School, Berkeley Manor Elementary School, DeLalio Elementary School, Stone Street Elementary School, Tarawa Terrace I Elementary School, and Tarawa Terrace II Elementary School, see 1978 Base Guide, Base_Guides_0000000695; at *0000000710; 1979 Base Guide, Base_Guides_0000000759; at *0000000774; 1980 Base Guide, Base_Guides_0000000829; at *0000000844; 1984 Base Guide, Base_Guides_0000000871, at *0000000899; and 1988 Base Guide, Base_Guides_0000000923, at *0000000955.

School Name	Grades / Ages Enrolled	WTP System	Operational Dates	Housing Areas Served	Citation
Midway Park Elementary School	Grades 1-4 (1952BG), Grades 1-3 (1962BG), Grades 1-4 (1966BG), Grades 1-6 (1967BG), Kindergarten (1970BG-1972BG)	Hadnot Point	Beginning of statutory period to 1967, Kindergarten 1970-1972	Base Wide (1952BG), Midway Park (1962BG), Midway Park, Knox Trailer Park and 5 th graders from Berkeley Manor (1967BG)	1952BG, 1962BG, 1966BG, 1967BG, 1970BG-1972BG
Tarawa Terrace I (TT I) Elementary School	Grades 1-6 (1962BG), Grades 1-5 (1966BG, 1967BG), Grades 1-6 (1970BG-1972BG), Kindergarten (1970BG-1971BG) Grades 1-3 TT I and Kindergarteners Base Wide (1976BG), Grades 1-2 TTI and all Kindergarteners Base Wide (1977BG)	Tarawa Terrace	Entire statutory period	Tarawa Terrace I	1962BG, 1966BG, 1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977BG
Tarawa Terrace II (TT II) Elementary School	Grades 1-6 and Grade 6 from Tarawa Terrace I (1967BG),		1967 to the end of the statutory period	Tarawa Terrace II	1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977BG

	Grades 1-6 (1970BG- 1972BG) All TT II students, TT I Grades 4-6, Midway Park and Knox Trailer Park Grades 1-6 (1976BG), All TT II, Midway Park and Knox Trailer Park grades 1-6, and TT I grades 3-6 (1977BG)				
Montford Point Elementary School	Grades 1, 3, & 5 (1962BG), Grades 1-4 (1966BG)	Montford Point / Camp Johnson	Beginning of statutory period to 1966 ³¹⁵	Knox Trailer Park (1966BG)	1962BG, 1966BG
Stone Street Elementary School (Paradise Point)	Grades 1-6 (1962BG), Grades 1-5 (1966BG), Grades 1-6 (1967BG, 1970BG, 1971BG, 1976BG, 1977BG)	Hadnot Point	1959through statutory period ³¹⁶	Paradise Point and Berkeley Manor (1966 BG), Paradise Point, Rifle Range, Courthouse Bay (1967 BG), Paradise Point, Rifle Range, Courthouse Bay, Navy Hospital	1962BG, 1966BG, 1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977BG

³¹⁵ Camp Lejeune Telephone Directory, 6/1/1953, CLJA_USMCGEN_0000100173; at 0000100219.

³¹⁶ Construction drawings approved 10/4/1957, , Drawing 765257, CLJA_USMC_PWD_0001278135.
As-built drawings of water and sewer utilities dated 4/6/1959, drawing 765386,
CLJA_USMC_PWD_0001675806.

				(1970BG-1971BG), [in 1972 some students from Berkeley Manor (1972BG)], [in 1976 same as 1972 except Center Hospital instead of Navy Hospital (1976BG), 1977BG	
Geiger School	Grades 1-6 (1962BG)	Camp Geiger	1962 ³¹⁷ TO 1965	Camp Geiger Trailer Park, MCAS (1962BG)	1962BG
1943 Russell Elementary School ³¹⁸ In 1952 and 1959 also known as Camp School From 1962-1966 named Brewster Elementary School	Grades 5-12 (1952BG), Grades 4-7 (1962BG), Grades 5-7 (1966BG)	Hadnot Point	Entire statutory period	Base Wide (1962BG, 1966BG)	1952BG, 1962BG, 1966BG,

³¹⁷ "3200 Pupils Expected To Begin Classes," *The Globe*, 8/31/1961, 00897_PLG_0000048420; at *0000048422.

³¹⁸ Construction drawings, revisions approved 8/30/1943, Contract 43-P1500, drawing 287748, no as-built drawings, CLJA_USMC_PWD_0000131522.

Berkeley Manor Elementary School	Grades 1-4 (1967BG), Grades 1-6 (1970BG-1972BG, 1976BG, 1977BG)	Hadnot Point	1967 to the end of the statutory period	Berkeley Manor	1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977BG
DeLalio Elementary School	Grades 1-5 (1966BG), Grades 1-6 (1967BG, 1970BG-1972BG, 1976BG, 1977BG) Kindergarten (1970BG, 1972BG)	MCAS-New River	1965 to the end of the statutory period	MCAS-New River and Camp Geiger Trailer Park) Beginning in 1976 only MCAS students	1966BG, 1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977BG

Table 5

Camp Lejeune Junior and High Schools During the Statutory Period

School Name	Grades / Ages Enrolled	WTP System	Operational Dates	Housing Areas Served	Citation
Brewster Junior High School starting in 1967	Grades 6-8 (1967BG), Grades 7-8 (1970BG-1972BG, 1976BG, 1977BG)	Hadnot Point	Entire statutory period	Base Wide 1970BG-1972BG)	1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977BG,
Lejeune Junior – Senior High School	Grades 7-12 (1962BG), Grades 8-12 (1966BG), Grades 9-12 (1967BG, 1970BG-1972BG,	Hadnot Point	Entire statutory period	Base Wide	1962BG, 1966BG, 1967BG, 1970BG, 1971BG, 1972BG, 1976BG, 1977 BG

	1976BG, 1977BG)				
--	--------------------	--	--	--	--

C. Air Conditioning at Camp Lejeune

In the mid-1950s, few American homes had air conditioning. By 1980, more than half of the country's homes were air conditioned.³¹⁹ In 1959, a Marine Corps order allowed air conditioning to be installed in all new residential construction in areas where the wet-bulb temperature was 67 degrees or higher during 2200 hours during the six hottest months of the year. At Camp Lejeune the average was 2898 hours.³²⁰ According to data reviewed, all housing built after 1959, included air conditioning in the original construction drawings.³²¹ The 1959 Marine Corps order recommended a priority system for adding air conditioning to existing personnel living spaces. Based on its climate, Camp Lejeune was in priority three of five.³²² According to available drawings, no residential properties built prior to 1959 received air conditioning retrofits in the 1960s.

In 1971, the Department of Defense (DOD) released new guidance that prioritized installing air conditioning in both new and existing housing units in more climate locations.³²³ In the early 1970s, DOD leadership recommended adding air conditioning to existing barracks at Camp Lejeune, like those at Hadnot Point.³²⁴ Additionally, air conditioning was added to existing family housing, such as at Tarawa Terrace, in the early 1970s.³²⁵

³¹⁹ J. Biddle, "Explaining the Spread of Residential Air Conditioning, 1955-1980," *Explorations in Economic History*, v. 45 (2008), 402-423, at 402, Exhibit 10.

³²⁰ Lt. Gen R. Hogabloom, Marine Corps Order 11380.1A, re: Air Conditioning, Evaporative Cooling, dehumidification and mechanical ventilation; procurement and installation of, 8/6/1959, p. 4. For wet bulb temperature data at Camp Lejeune see Enclosure 1 to Marine Corps Memo 11380.1A, p. 4 (PDF page 7 of 15). Exhibit 11

³²¹ See Attachment 3: Air Conditioning at Various Camp Lejeune Housing Projects.

³²² Lt. Gen R. Hogabloom, Marine Corps Order 11380.1A, re: Air Conditioning, Evaporative Cooling, dehumidification and mechanical ventilation; procurement and installation of, 8/6/1959, p. 3, Exhibit 11.

³²³ A copy of OASD(I&L) Construction Criteria Manual 4270.1-M, 6/17/1971, has not been located, but is referenced in United States General Accounting Office, "DOD's Requirement For Air-Conditioning Military Family Housing In Hawaii Is Unnecessary," B-172376, 5/20/1974, Exhibit 12.

³²⁴ "Military Construction Appropriations for 1974, Part 3" *Hearing Before the House Military Construction Appropriations Subcommittee*, 6/6/1973, pp. 432-434, Exhibit 13.

³²⁵ See Attachment 3: Air Conditioning at Various Camp Lejeune Housing Projects and "Air Conditioning of Family Qtrs, Tarawa Terrace I and II," PWO 73-B-1062, Drawing 4007891, "As-Built" 9/12/1974, CLJA_USMC_PWD-0001281657.

Some facilities at Camp Lejeune did not appear to follow these trends. For example, some Naval Hospital housing received air conditioning renovations prior to the 1970s, whereas guest houses at Onslow Beach may not have received it until 1985. Yet the larger trends point to new housing built after 1959 likely to have air conditioning and pre-1959 housing retrofitted with air conditioning during the 1970s.³²⁶

D. Activities at Camp Lejeune During the Statutory Period

In the statutory period, most of the areas of the base had similar services and recreational activities available to Marines and their dependents that existed on the Mainside, although fewer in number. Most of the areas of the base away from the Mainside had similar amenities, services and recreational activities available to Marines and their dependents as existed on the Mainside, although fewer in number. Many of the base guides, telephone directories, and the master plans cited in Section V.C provided information on community centers, areas to hold parties, and the many clubs on base, and other recreational opportunities on base.

The 1976 unofficial directory and guide noted community centers located at Tarawa Terrace, Midway Park, and Knox Trailer Park with each offering classes and social activities. Those interested in outdoor activities could use the picnic areas at Hospital Point, Gottschalk Marina, or Onslow Beach. Onslow Beach had two areas for enlisted Marines and one for officers during summer. Several clubs were for Marine wives including the Staff NCO Wives Club opened to wives of Marines and Sailors with a pay grade higher than E-6. Activities included picnics, lunches, and banquets. There was also a club for officer's wives that had eight-unnamed-groups. This club raised money to fund scholarships for the base's high school students.³²⁷

In 1976, numerous services clubs were available to Marines on the base. Eleven clubs for enlisted Marines included four at Hadnot Point, and one at each of the following: Courthouse Bay, Camp Geiger, French Creek, Montford Point, Rifle Range, and Onslow Beach. For the NCOs—sergeants and corporals—the main NCO club was at Hadnot Point with annexes at Montford Point, Camp Geiger, and Courthouse Bay. At each location there was a tavern and sometimes live entertainment. Staff noncommissioned officers could visit the main base staff NCO club at Hadnot Point for live entertainment, dancing, dinner, and drinks. There were other staff NCO clubs at Montford Point, Courthouse Bay, Camp Geiger, and during the summer at Onslow Beach. Officers could visit the main officers club at Paradise that has numerous amenities including, “a formal bar, casual bar, snack bar, cafeteria, dining room, and barber shop.” Three times a band provided music and during the summer the outdoor swimming pool and children's pool were open. Annex Officers clubs were at Camp Geiger, Courthouse Bay, and

³²⁶ See Attachment 3: Air Conditioning at Various Camp Lejeune Housing Projects.

³²⁷ 1976 Base Guide, Base_Guides_0000000559, at *0000000587.

Montford Point.³²⁸ As listed in the 1976 base telephone directory there were barber shops, post exchange outlets, service stations, and theaters at most of the areas of the base.³²⁹

The 1984 Camp Lejeune guide has much of the same information as the 1976 guide regarding clubs for Marines, although a club for wives of enlisted men had been formed since 1976. In addition to the Officers Wives Club at Paradise Point, one had also been established at MCAS-New River.³³⁰ The 1984 publication included a listing of on and off base recreational activities including discounts for amusement parks, an archery club, activities at Onslow Beach, boating, bowling, camping, the Devilfish Swim Team, fishing and hunting, golf, horseback riding, intermural sports, and activities at the community centers at Tarawa Terrace and Midway Park and Marston Pavilion for those that lived at Paradise Point, Berkeley Manor and Watkins Village.³³¹

The above discussion in Section VI.D supports my opinion two.

³²⁸ 1976 Base Guide, Base_Guides_0000000559, at *0000000587-88.

³²⁹ October 1976, *Telephone Directory*, CLJA_USMCGEN_0000077468: CLJA_USMCGEN_0000077996, at *0000078024 and *0000078045-46.

³³⁰ 1984 Base Guide, Base_Guides_0000000871, at *0000000896-97.

³³¹ 1984 Base Guide, Base_Guides_0000000871, at *0000000892-92.

VII. Water Trailers – Water Provided During Training

Potable water at Camp Lejeune and other military installations is transported to field training areas by mobile water tanks mounted on trailers. “Water Bulls” and “Water Buffalos” are colloquial terms to reference trailer-mounted water. To transport water, “The Marine Corps uses a water trailer commonly known as a water buffalo which holds 400 gal [ons] of water. This is the most widely used method of transporting water from the water point to the troops.”³³² Trucks tow the water trailers to and from their destination.

Historically, Marines at Camp Lejeune used at least two models of 400-gallon water trailers to transport water. From at least the beginning of the statutory period, Marines transported water in an oval-shaped water trailer. Image 32 is a photograph from Technical Manual 9-875B dated October 1951, showing a water tank attached to a water tank trailer M106.

³³² Field Water Supply and Water Purification Equipment, SR-UT-P02, Marine Corps Engineer School, Marine Corps Base Camp Lejeune, North Carolina, circa 1974, (Field Water Supply and Water Purification Equipment), CLJA_WATERMODELING_07-0001368605: CLJA_WATERMODELING_07-0001368902, at *0001368935. In this document the year 1974 appears at *0001368661 and *0001369459.

Image 32

Oval-Shaped Water Trailer, October 1951³³³

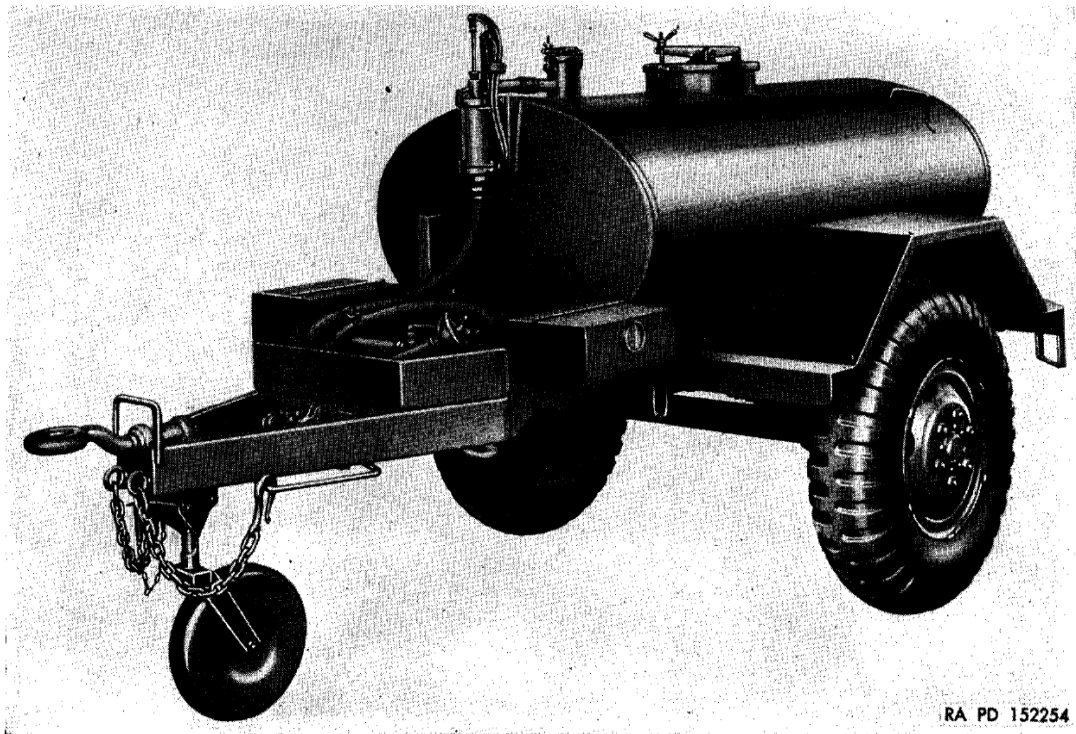


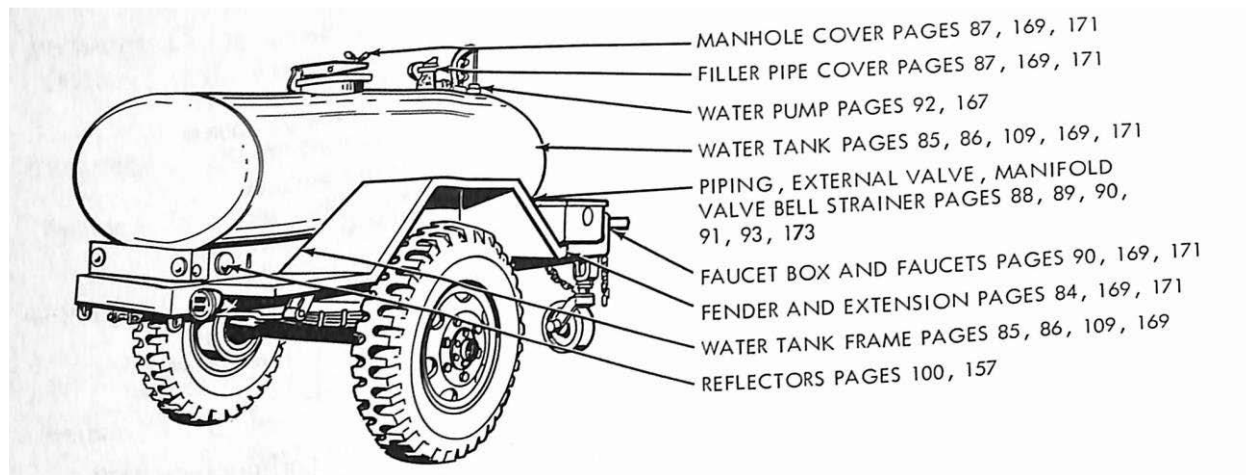
Figure 4. Left-front view of water tank trailer M106.

³³³ Department of the Army Technical Manual, TM 9-875B, 1½ Ton, 2-Wheel Cargo Trailer M104 and 1½ Ton, 2-Wheel Water Tank Trailer M106, 9, Exhibit X. In his history of the Marine Corps when discussing Vietnam, the Corps' supply system and associated problems, Millet noted that: "The Corps' dependence on the same suppliers who served the Army did not help." See Millett, *Semper Fidelis*, 580. Exhibit 14.

Image 33 is a drawing from a 1964 technical manual that also shows an oval-shaped water bull attached to a water tank trailer.

Image 33

Oval-Shaped Water Trailer, January 1964³³⁴



In January 1977, cold weather engulfed Jacksonville, N.C. and Camp Lejeune when “Commex 1-77,” a five-day training exercise was underway. The picture below, Image 34, accompanied the article titled “Frigid field training.” In the picture, Lance Corporal Mark Long appears to be drawing water from an oval-shaped water tank mounted on the water trailer.

³³⁴ Department of the Army Technical Manual, TM 0-2330-213-14, Operator, Organization and Field Maintenance Instructions, Including Repair Parts and Special Tools List for Chassis Trailer: 1½ Ton, 2-Wheel M103A1, M103A2, M103A3, M103A2, M103A3C, M103A4, and M103AC; Trailer, Cargo: 1½ Ton, 2-Wheel M104, M104A1, M105A1, M105A2, and M104A2C; Trailer, Tank, Water: 1½ Ton, 2-Wheel M106, M106A1, M107A2, and M107A2C; and Trailer, Van, Shop: Folding Sides, 1½ Ton, 2-Wheel, M448, Headquarters, Department of the Army, January 1964, iv. Exhibit 15.

Image 34

Oval-Shaped Water Trailer in the Field, January 27, 1977³³⁵



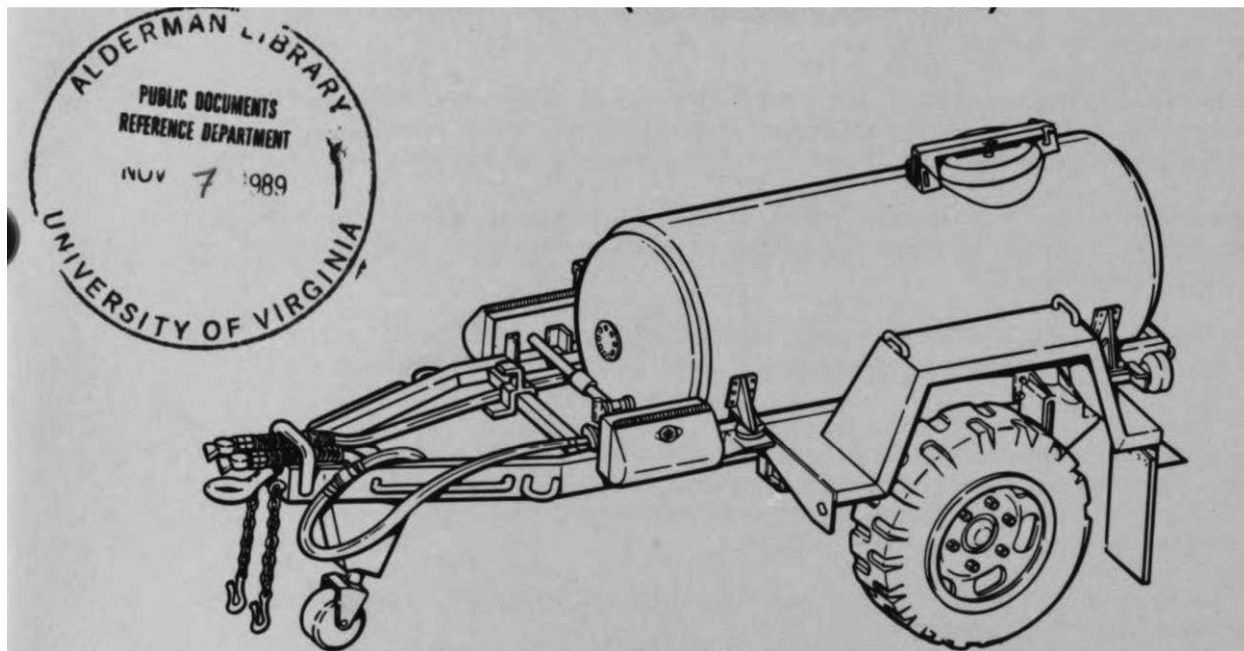
An iteration of Technical Manual M149A2, dated February 1981, depicts a water trailer with a round water tank (Image 35). In March 1984, the military revised this technical manual. An image in this technical manual depicts a round-shaped water trailer.³³⁶

³³⁵ W. Goodloe, "Frigid field training," *The Globe*, 1/27/1977, 00897_PLG_0000039705, at *0000039707.

³³⁶ An article appearing in *The Globe* in December 1977, "'Water buffalo hunts' near 'Little Hardees,'" by Staff Sergeant James Gladowski, noted that 500 Marines were living in tents for four days during a Marine Amphibious Force Command exercise. They started each morning by looking for water trailers to fill their canteens, *The Globe*, 12/15/1977, 00897_PLG_0000039153, at *0000039158.

Image 35

Round-Shaped Water Trailer, February 1981³³⁷



Marines filled water trailers from standpipes. Standpipes were structures attached to a water line with an attached hose used to fill the water trailer.

In a 1970s-era technical manual that discusses the development of potable water points to support field operations, there is a discussion about water development on the frontlines and in rear areas. *“The extent to which a water point is developed depends primarily on the time, labor, troops, and materials available to do the work. At frontline installations, development is held to a minimum consistent with supplying enough potable water to the troops. However, in rear areas*

³³⁷ Department of the Army Technical Manual, TM 9-2330-213-14&P, Operator, Organizational, Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Trailer, Tank, Potable Water, 400 Gallons, 1½ Ton, 2-Wheel, M149 (2330-00-542-2039), M149A1 (2330-00-832-8801), and M625 (2330-00-782-6059), Headquarters, Department of the Army, February 1981, front cover. Exhibit 16.

On the cover of a technical manual dated July 1991 it is noted “This manual supersedes TM9-2330-267-14&P, dated February 1981, and all changes since the first iteration of the manual in February 1981. See, Technical Manual TM 9-2330-267-14&P, Operator’s, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools Lists) for Trailer, Tank, Water: 400 Gallon 1-1/2 Ton, 2 Wheel M-149 (NSN 2330-00-542-2039), M149A1 (NSN2330-000832-8801), and M149A2 (NSN 2330-01-108-7376), Headquarters, Department of the Army, 7/1991.

*the extent of development varies with the size of the water point, the problems to be overcome, and the permanency of the installation.”*³³⁸

This document includes a discussion and diagram of a standpipe (see Image 36) that explains: “A water-point standpipe is a rigid pipe which supplies water under pressure from an outlet high enough to service water trailers. The usual construction is a 2-in. pipe fastened to a vertical timber support. Several standpipes can be supplied from a common underground header,”³³⁹ implying that they can be installed anywhere with existing underground potable water pipes, like those that existed during the statutory period not only at Mainside, but also at Camp Geiger, Camp Johnson, Courthouse Bay, and MCAS New River as well.

³³⁸ Field Water Supply and Water Purification Equipment, CLJA_WATERMODELING_07-0001368605, at *0001368931 (Emphasis added).

³³⁹ Field Water Supply and Water Purification Equipment, CLJA_WATERMODELING_07-0001368605, at * 0001368933.

Image 36

Description and Diagram of a Standpipe Circa 1970³⁴⁰

f. Standpipes (fig 1-26). A water-point standpipe is a rigid pipe which supplies water under pressure from an outlet high enough to service water trailers. The usual construction is a 2-in. pipe fastened to a vertical timber support. Several standpipes can be supplied from a common underground header. The most satisfactory outlet for standpipes is a short length of rubber suction hose with a safety nozzle. The safety nozzle should be suspended so that it cannot touch the ground and become contaminated. In the absence of a safety nozzle for the hose, a valve may be inserted in the standpipe.

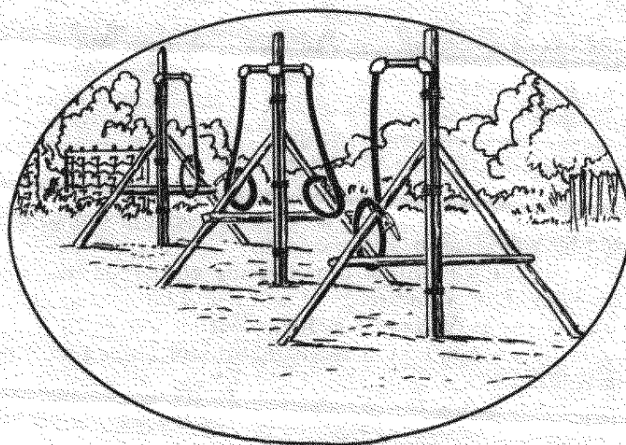


Fig 1-26. Standpipes.

A photograph of a standpipe at Hadnot Point appeared in a December 1975 article in *The Globe* after a staff sergeant wrote a letter to the editor stating that the valve had “been constantly leaking for the past year” and the person considered the situation “a great waste of one of our natural resources” (Image 37).³⁴¹ While the article was not intended to describe the standpipe to the community, the infrastructure aligns visually with what was described in the 1970s technical manual cited above.

³⁴⁰ Field Water Supply and Water Purification Equipment, CLJA_WATERMODELING_07-0001368605, at *07-0001368933.

³⁴¹ “Leaking for the past year, fixed in the past few weeks,” *The Globe*, 12/4/1975, 00897_PLG_0000040390, at *0000040394.

Image 37

Standpipe at Building 1400 at Hadnot Point, December 12, 1975³⁴²



All of the WTPs at Camp Lejeune had the infrastructure to support the installation of standpipes in their respective areas including Hadnot Point, Camp Geiger, Camp Johnson/Montford Point, MCAS, Rifle Range, Courthouse Bay and Onslow Beach. The travel times from Hadnot Point to other places on Camp Lejeune proximate to training activities would present significant “problems to be overcome,” and “the permanency of the installation” would be further reason for constructing standpipes in areas closer to training activities than Hadnot Point.³⁴³

The discussion above in Section VII supports opinion four of the current report.

³⁴² “Leaking for the past year, fixed in the past few weeks,” *The Globe*, 12/4/1975, 00897_PLG_0000040390, at *0000040394.

³⁴³ Field Water Supply and Water Purification Equipment ,CLJA_WATERMODELING_07-0001368605, at *CLJA_WATERMODELING_07-0001368931.

Attachment 1

MORGANANGELBRIGHAM



ASSOCIATES, LLC

JAY L. BRIGHAM, PH.D., MANAGING PARTNER

Morgan, Angel, Brigham & Associates, LLC

1601 Connecticut Avenue, NW, Suite 600

Washington, DC 20009

Office 202-265-1833, ext. 113 • Cell 703-955-0275

jay@morganangel.com • www.morganangel.com

EDUCATION

Ph.D., American History, The University of California, Riverside, CA, 1992

M.A., American History, The University of Maryland, College Park, MD, 1986

B.A., American History, Linfield College, McMinnville, OR, 1982

CAREER SUMMARY

After receiving his Ph.D. from the University of California, Riverside (UCR), Dr. Brigham taught at UCR; the University of Nevada, Las Vegas; and Arizona State University. His areas of expertise include American Political History, the American West, and Environmental History. The University of Kansas published his book on the public power movement *Empowering the West: Electrical Politics Before FDR*, in 1998. Dr. Brigham has also authored several articles, written book reviews, and delivered presentations on the history of energy, the West, and the environment. He has authored expert witness reports that examined public policy issues during World War I, World War II and the Korean War, energy issues, mining cases, U.S. Army Corps of Engineer dredging, and Takings cases for the U.S. Department of Justice and for private law firms. Dr. Brigham has given expert testimony in U.S. District Courts and the U.S. Court of Federal Claims and is presently serving as an expert witness on several Superfund cases involving issues dating from World War I through the Cold War, Takings cases, as well as cases involving Native Americans.

PROFESSIONAL EXPERIENCE

Morgan, Angel, Brigham & Associates, LLC, Washington, DC

Managing Partner, 2014-present

Partner, 2009-2013

Senior Research Associate, 2000-2008

Research Associate, 1997-1999

Arizona State University, Tempe, AZ

Senior Visiting Lecturer, 1996-1997

University of Nevada, Las Vegas, NV

Visiting Assistant Professor, 1995-1996

University of California, Riverside, CA
Visiting Assistant Professor, 1992-1995

EXPERT WITNESS EXPERIENCE

Retained by the United States Department of Justice in the following CERCLA cases:

Texaco Facilities Cleanup, Star Lake Canal Superfund Site Discussions.

City of Torrance v. Hi-Shear Corporation.

101 Frost Street Associates, L.P. Next Millennium Realty LLC. v. U.S., GTE Sylvania Incorporated, et al., (E.D.N.Y) Civ. No. 2:17-CV-03585-JMA-ARL.

Discussions Regarding Shell Oil Company Refineries in CA, TX, LA, IL, and KS.

Discussions Regarding the Haystack Mines etc., McKinley County, New Mexico.

Discussions Regarding Chevron U.S.A., Inc.'s Mariano Lake Mine Site, Navajo Nation Reservation, near Gallup, N.M.

EnPro Holding, Inc.'s Cameron Region Uranium Mines Discussions.

Gold King Mine MDL Litigation, (D. N.M.) No. 1:18-md-02824-WJ. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2021).

BASF Corp. v. Albany Molecular Research, Inc.; AMRI-Rensselaer, Inc. f/k/a Organichem Corp.; E.I. Dupont de Nemours and Co.; GE Healthcare, Inc.; Sanofi US Services, Inc.; STWB, Inc; and the United States of America, (N.D. N.Y.) No. 1:19-cv-134.

Former Holden Mine Site, Cost Recovery Claim.

Boeing Mediations at the Former Torrance Site.

United States of America v. General Dynamics Corp. and Dow Chemical.

Chevron Mining Inc. v. United States of America, (D. N.M.) No. 1:13-cv-00328. Deposition testimony and trial testimony were given in this case.

Expert Report (submitted to Department of Justice, 2019).

Valero Companies v. United States of America, (E.D. MI.) 2:17-cv-11174. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2020).

Zatika Properties, LLC v. General American Transport Corporation, n/k/a GATC Corp.; United States Department of Energy; and United States Army Corps of Engineers, (D. N.J.) CV No. 2:16-CV-09289(ES)(SCM).

Government of Guam v. United States of America, (D. D.C.) 3:17-CV-00371.

Fort DuPont Landfill Site, Cost Recovery Claim.

Chevron Oil Company World War II Aviation Gasoline Production Discussions.

United States of America and State of Wisconsin v. NCR Corp. et al., (E.D. WI.) 10-CV-91-WCG.

Expert Report (submitted to Department of Justice, 2016).

Gowanus Canal Superfund Site (E.D. N.Y.).

Cranbury Brick Yard, LLC v. United States of America, et al., (D. N.J.) 3:15-CV-02789-PGS-LHG. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2017).

Electric Boat Corporation v. United States of America, (D. R.I.) Civil Action No. 15-461.

United Nuclear Corporation, El Paso Natural Gas Company, LLC, and Homestake Mining Company of California v. United States of America, (D. N.M.) 1:15-CV-411.

United States of America v. Honeywell International, Inc., Onondaga Lake Superfund Site Settlement Negotiations.

United States of America and California Department of Toxic Substances Control v. Sterling Centrecorp, Inc., Stephen P. Elder, and Elder Development, Inc., (E.D. CA., Sacramento Division) 2:08-CV-02556-MCD-JFM.

LCP Chemicals Superfund Sites Mediation.

Atlantic Richfield Company v. United States of America, et al., (D. N.M.) 1:1CV-56.

Expert Report (submitted to Department of Justice, 2021)

Former Vanadium Corporation of America and Climax Uranium Company Mines on the Navajo Reservation, Discussions.

El Paso Natural Gas Company, LLC v. United States of America, et al., (D. AZ.) 3:14-CV-8165. Trial testimony was given in this case.

Expert Report (submitted to Department of Justice, 2016).

Boeing Mediations at the Former Long Beach Site and the Former Wichita Site.

Navajo Nation Abandoned Uranium Mines Discussions.

PPG Industries, Inc., v. United States of America, (D. N.J.) 2:12-CV-0352(KM)(MF).
30(b)(6) testimony and deposition testimony were given in this case.

Expert Report (submitted to Department of Justice, 2016).

United States of America v. Federal Resources Corporation, (D. ID.) 2:11-CV-000127-BLW. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2013).

Lockheed Martin Corporation v. United States of America, (D. D.C.) 06-1438-RJL.

Expert Report and Rebuttal Report (submitted to Department of Justice, 2013).

Exxon Mobil Corporation v. United States of America, (D. LA.) 4:11-CV-1914.

Exxon Mobil Corporation v. United States of America, (S.D. TX., Houston Division)
H:10-2386.

Exxon Mobil Corporation v. United States of America, (S.D. TX.) C. A. Nos. H-10-2386
and H-11-1844 and (CFC) Nos. 09-165C and 09-0882C.

Deposition testimony and trial testimony were given in the above Exxon Mobil cases.

Expert Reports (submitted to Department of Justice, 2012, 2014, and 2016).

National Fireworks, Inc. and Security Signals, Inc., Mediation involving plant in Cordova, TN.

United States of America v. Washington State Department of Transportation, (W.D. WA.) 3:08-CV-05722-RJB. Deposition testimony and trial testimony were given in this case.

Expert Report (submitted to Department of Justice, 2010).

Texas Instruments Incorporated, f/k/a Metals and Controls Corp., M&C Nuclear, Inc. v United States of America, (CFC) 09-701.

AVX Corporation v. Horry Land Company, Inc., and United States of America, (D. S.C., Florence Division) 4:07-CV-3299-TLW-TER. Deposition and trial testimony were given in this case.

Expert Report (submitted to Department of Justice, 2009).

Appleton Papers, Inc. and NCR Corporation v. George Whiting Paper Company, et al., (E.D. WI.) 08-CV-00016-WCG (Consolidated with 08-CV-0895). Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2009).

City of Fresno v. United States of America, et al., (E.D. CA.) 1:06-CV-01559-OW-LJO. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2009).

American International Specialty Lines Insurance Company v. United States of America, (C.D. CA.) CV06-4686 AHM (RZx). Deposition testimony and trial testimony were given in this case.

Expert Report and Rebuttal Report (submitted to Department of Justice, 2009).

Litgo New Jersey, Inc., et al. v. Mauriello, (D. N.J.) 06-2891 (AET) (TB). Deposition testimony and trial testimony were given in this case.

Expert Report and Supplemental Report (submitted to Department of Justice, 2009).

Blue Tee Matter, Mediation involving the former American Zinc plant in Dumas, TX.

TDY Holdings, LLC and TDY Industries, Inc. v. United States of America, (S.D. CA.) 07-cv-0787-JAH (POR). Deposition testimony and trial testimony were given in this case.

Expert Report and Rebuttal Report (submitted to Department of Justice, 2009).

Raytheon Aircraft Company v. United States of America, (D. KS.) 05-CV-2328. Deposition and trial testimony were given in this case.

Rebuttal Report (submitted to Department of Justice, 2007).

Hudson RiverKeeper Fund Inc. v. Atlantic Richfield Co., (S.D. N.Y.) 94-CV-2741 (WCC). Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2007).

Tar Creek Superfund Site, Ottawa County, OK, EPA ID OKD980629844, Discussions.

Ford Motor Company v. United States of America, (E.D. MI.) 04-CV-72018.

Reynolds Metals Co. and Alcoa Inc. v. United States of America, et al., (W.D. PA.) Civil Action No. 03-1180.

United States of America v. Horsehead Industries, Inc., et al., (M.D. PA.) Civil Action No. 3: CV-98-0654.

United States of America v. Monsanto, (S.D. IL.) Civil Action No. 99-63-DRH.

Alcoa, Inc. v. United States of America, et al., (W.D. PA.) Civil Action No. 96-1098.

Old American Zinc Superfund Site, Fairmont, IL, EPA ID IL0000034355, Mediation.

Exxon Mobil, Inc. Mediations at the Sharon Steel Fairmont Coke Works.

Martin-Dennis Mediation involving Chemical Land Holding.

Retained by the United States Department of Justice in the following takings cases:

Baxter Brothers Farms, et al., v. United States of America, (CFC) 1:19-cv-00428-VJW.

Riverview Farms, et al., v. United States of America, (CFC) 18-cv-1099 L. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, April 2023).

Illinois Central Railroad Company v. United States of America, (CFC) 17-cv-826L.

Land Grantors in Henderson, Union, & Webster Counties, KY & Their Heirs (Taking Realty), (CFC) Congressional Reference No. 93-648X. Trial testimony was given in this case.

Expert Report (submitted to Department of Justice, 2004).

Retained by the United States Department of Justice in the following cases involving Native Americans:

Ute Indian Tribe of the Uintah and Ouray Indian Reservation v. United States of America, (CFC) 18-359 L and (D. D.C.) 18-cv-547.

Debra Jones, et al., v. United States of America, (CFC) 1:13-cv-00227-MBH.

White Mountain Apache Tribe v. United States of America, (CFC) 17-359 L.

Grace Goodeagle v. United States of America, (CFC) 12-431L.

Quapaw Tribe of Oklahoma (O-Gah-Pah) v. United States of America, (CFC) 12-592L.

T.C. Bear v. United States of America, (CFC) Congressional Reference No. 13-cg-00051X. Deposition testimony was given in the *Goodeagle*, *Quapaw*, and *Bear* cases.

Expert Report (submitted to Department of Justice, 2016).

James Richard, Sr., et al., v. U.S., (C.F.C.) 10—503 C.

Seminole Nation of Oklahoma v. Salazar, et al., (E.D. OK.) Case No. CIV-06-556-SPS CV-935-L; and *Seminole Nation of Oklahoma v. United States of America*, (CFC) 06-CV-935-L.

Ute Tribe of Uintah and Ouray Tribes v. United States of America, (CFC) 06-CV-00866.

Confederated Tribes of the Warm Springs Reservation of Oregon v. United States of America, (CFC) Case No. 02-126L.

The Shoshone and Arapahoe Tribes of the Wind River Indian Reservation v. United States of America, (CFC) Dockets 458-79 and 459-79.

Red Lake Band of Chippewa Indians, et al., v. United States of America, (CFC) No. 189-C.

Retained by the United States Department of Justice in the following contract cases:

Chevron U.S.A. Inc., Texaco Downstream Properties Inc., and Union Oil Company of California v. United States of America, (CFC) No. 20-1784 C.

OXY USA Inc. and CITGO Petroleum Corporation v. United States of America, (CFC) No. 19-694c.

Shell Oil Company, Union Oil Company of California, Atlantic Richfield Company, and Texaco, Inc. v. United States of America, (CFC) 06-141C. Deposition testimony and trial testimony were given in this case.

Expert Report and Rebuttal Report (submitted to Department of Justice, 2015).

Retained by the United States Department of Justice in the following title cases:

State of Alaska v. United States of America, (D.AK.) 3:22-CV-0103-SLG.

State of Montana v. Talen Montana, LLC f/k/a PPL Montana, LLC and Northwestern Corporation, d/b/a Northwestern Energy and United States of America, (D. MT., Helena Division) CV 16-35-H-DLC. Deposition testimony was given in this case.

Expert Report (submitted to Department of Justice, 2021)

F.E.B. Corps v. United States of America, (S.D. FL.) Case No. 12-10072-CV-Martinez; retained by the U.S. Attorney's Office, District of Florida.

"A Report on The Political Controversy Leading to the Passage of the Submerged Lands Act" (submitted to Department of Justice, 2014)

Retained by the United States Department of Justice in the following toxic torts case:

Camp Lejeune Water Litigation, United States, (E.D. N.C., Southern Division). Civ. No. 7:23-CV-897.

Retained by the State of Wisconsin:

Retained by the State and the Wisconsin Department of Justice in the case of *Lac Courte Oreilles Band et al. v. Tony Evers et al.*, (W.D. WI.) Case No. 18-CV-992-JDP. Deposition testimony was given in this case.

Expert Report (submitted 2019).

Retained by the following law firms:

Retained by the law firm of Talbot, Carmouche & Marcello, in the following cases: *The Parish of Plaquemines v. Riverwood Production Co., et al.*, (E.D. LA.) Civil Action: 2:18-cv-05217; *The Parish of Cameron v. Auster Oil and Gas Inc., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00677; *The Parish of Cameron v. Ballard Exploration Company, Inc., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00678; *The Parish of Cameron v. Brammer Engineering Inc., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00679; *The Parish of Cameron v. Burlington Resources Oil & Gas Company, LP, et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00682; *The Parish of Cameron v. Alpine Exploration Companies, Inc., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00684; *The Parish of Cameron v. Bay Coquille, Inc., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00685; *The Parish of Cameron v. Atlantic Richfield Company, et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2:18-cv-00686; *The Parish of Cameron v. BP America Production Company, et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00687; *The Parish of Cameron v. Apache Corporation (of Delaware), et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00688; *The Parish of Cameron v. Anadarko E&P Onshore, LLC, et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00689; *The Parish of Cameron v. BEPCO L.P., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00690; and *Keith Stutes, District Attorney for the 15th Judicial District of the State of Louisiana v. Gulfport Energy Corp., et al.*, (W.D. of LA., Lake Charles Division) Civil Action: 2-18-cv-00691.

Retained by the law firm of Blaney McMurtry, LLP, Toronto, Canada, in the mediation of General Electric Canada Company, Davenport and Guelph Sites.

Retained by the law firm of Blaney McMurtry, LLP, Toronto, Canada, in the mediation of General Electric Canada Company, Ward Street Site.

Retained by the law firm of Covington and Burling in the case of *Travelers Indemnity Company et al., v. Northrop Grumman Corporation*, (S.D. N.Y.) 1:12-CV-03040.

Retained by the law firm of Gordon, Thomas, Honeywell, Malanca, Peterson & Daheim in the case of *Skokomish Indian Tribe v. City of Tacoma, et al.*, (W.D. WA.) Civil Action No. C99-5606 FDB.

Expert Report (submitted 2000).

SELECT PUBLICATIONS

BOOKS

Empowering the West, Electrical Politics Before FDR (University Press of Kansas, 1998).

This book was nominated for the George P. Marsh Award presented by the American Society for Environmental History, the Sharlin Memorial Award presented by the Social Science History Association, and the Best Book Award presented by Westerners International.

CHAPTERS IN BOOKS

“From Water to Power: The Changing Charge of the Bureau of Reclamation,” *Reclamation, Managing Water in the West, The Bureau of Reclamation: History Essays from the Centennial Symposium*, Volume 2 (U.S. Department of the Interior, Bureau of Reclamation, 2008).

“Lighting Las Vegas: Electricity and the City of Glitz” in Mike Davis and Hal Rothman, eds., *The Grid Beneath the Glitter: Tales from the Real Las Vegas* (University of California Press, 2002).

ARTICLES

“Lighting the Reservation: The Impact of the Rural Electrification Administration on Native Lands,” *The Journal of the West* (2001).

“Hydro Power’s Legacy,” *Public Power* 58 (2000). This article was reprinted as “Governing Hydropower: The Story Behind the Law,” *Hydro Review* (2001).

“The Ace: Local Control,” *Public Power* 58 (2000).

“Moving Out and Settling In: Residential Mobility, Homeowning, and the Public Enframing of Citizenship, 1921-1950,” with Ronald Tobey and Charles Wetherell, *American Historical Review* 95 (1990): 1395-1422.

ENCYCLOPEDIA ENTRIES

“Federal Power Act,” Steven L. Danver, ed., *The Encyclopedia of Politics in the American West* (Washington, DC: Mesa Verde Publishing/CQ Press, 2013).

“Public Utilities (Federal Policy),” Donald Critchlow and Philip VanderMeer, eds., *Oxford University Encyclopedia of American Political, Policy and Legal History* (New York: Oxford University Press, 2012).

BOOK REVIEWS

Gene A. Budig and Don Walton, *George Norris, Going Home: Reflections of a Progressive Statesman*. (Lincoln and London: University of Nebraska Press, 2013), *Journal of the West*, 2015.

Eugene P. Moehring, *Reno, Las Vegas, and The Strip: A Tale of Three Cities*. Wilbur S. Shepperson Series in Nevada History. (Reno: University of Nevada Press, 2014), *Western Historical Quarterly* 46 (Winter) 2015.

Paul W. Hirt, *The Wired Northwest, The History of Electrical Power, 1870s-1970s* (Lawrence: University Press of Kansas, 2012), *Journal of American History*, 2013.

Char Miller, eds. *Cities and Nature in the American West* (Reno and Las Vegas: University of Nevada Press, 2010), *Journal of the West*, 2012.

Zachary A. Smith and John C. Freemuth, eds. *Environmental Politics and Policy in the West*, Revised Edition (Boulder: University Press of Colorado, 2007), *Journal of the West*, 2009.

Gary D. Libecap, *Owens Valley Revisited, A Reassessment of the West's First Great Water Transfer* (Palo Alto: Stanford University Press, 2007), *Journal of the West*, 2008.

John Trombold & Peter Donahue, eds. *Reading Portland: The City in Prose* (Portland: Oregon Historical Society Press; and Seattle University of Washington Press, 2006), *Journal of the West*, 2008.

Renée Corona Kolvet and Victoria Ford, *The Civilian Conservation Corps in Nevada: From Boys to Men* (Reno and Las Vegas: University of Nevada Press, 2006), *Journal of the West*, 2007.

William D. Layman, *River of Memory: The Everlasting Columbia* (Seattle: University of Washington Press; and Vancouver: University of British Columbia Press, 2006), *Journal of the West*, 2007.

Marjorie Weinberg, *The Real Rosebud, The Trump of a Lakota Woman* (Lincoln, NE: University of Nebraska Press, 2004), *Journal of the West*, 2005.

Frank H. Goodyear III, *Red Cloud, Photographs of a Lakota Chief* (Lincoln, NE: University of Nebraska Press, 2003), *Journal of the West*, 2005.

Daniel Tyler, *Silver Fox of the Rockies: Delphus E. Carpenter and Western Water Compacts* (Norman, OK: University of Oklahoma Press, 2003), *Register of the Kentucky Historical Society*, 2003.

Tom H. Hastings, *Ecology of War & Peace: Counting the Cost of Conflict* (Lanham, MD: University Press of America, 2001), *Peace & Change*, 2002.

J. William T. Youngs, *The Fair and The Falls: Spokane's Expo '74 and the Transforming of an American Environment* (Cheney, WA: Eastern Washington University Press, 1996), *Pacific Northwest Quarterly*, 2000.

Char Miller, ed., *American Forests: Nature, Culture, and Politics* (University Press of Kansas, 1997), H-ASEH, H-Net Reviews, 2000. URL: <http://www.h-net.msu.edu/reviews/showrev.cgi?path=10514954955461>.

REPORTS

Public Power and Democracy (American Public Power Association, 2000).

SELECT PRESENTATIONS

Contaminated Industrial Site Investigation: Insights from Experts,” panelist, Environmental History Conference, American Society for Environmental History, Eugene, OR, March 2022.

“Public Historians and Research on Contaminated Sites,” panelist, Environmental History Week Virtual Conference, American Society for Environmental History, April 2021.

“Navigating the Historical Profession: Different Career Options for Historians,” panelist, Western History Association Conference in Las Vegas, NV, November 2019.

“The Legal Applications of Western Histories,” panelist, Western History Association Conference in San Diego, CA, November 2017.

“The Changing Political Landscape of Electrical Generation, Transmission, and Distribution in the American West,” panelist, The Electric West: A Roundtable Discussion held at the Western History Association Conference in Denver, CO, October 2009.

“Salmon and Hydropower: The Policy Debates over Hydroelectric Development on the Cowlitz River,” paper delivered at the Western History Association Conference in Fort Worth, TX, October 2003.

“Homer Truett Bone: Hydro and Public Power Crusader,” paper delivered at the American Society of Environmental History Conference, Providence, RI, March 2003.

“From Water to Power: The Changing Charge of the Bureau of Reclamation,” paper delivered at the Bureau of Reclamation’s Centennial Conference, Las Vegas, NV, June 2002.

Panelist, “Public vs. Private: Who Should Own Utilities,” 13th Annual Envisioning California Conference, Center for California Studies at California State University, Sacramento, Sacramento, CA, October 2001.

“Energy Resources and the Development of Modern America,” paper delivered at the Woodrow Wilson National Symposium, “America: Transformation Toward the Modern, 1856-1924,” Staunton, VA, October 2000.

ACADEMIC EXPERIENCE

Courses taught include:

Twentieth Century American History (numerous courses)
American West
Twentieth Century U.S. and American West Undergraduate Writing Seminars
Quantitative Methods and Social Science History
U.S. Survey, 1607-1865 and 1865-Present
Slavery and the Old South
Vietnam War
American Indian Policy

PROFESSIONAL MEMBERSHIPS AND SUBSCRIPTIONS

American Society for Environmental History
Western History Association
Environmental History
Western Historical Quarterly
Montana, The Magazine of Western History
Pacific Historical Review

SELECT PROFESSIONAL ACTIVITY AND SERVICE

Manuscript reviewer for the University of Nebraska Press, 2007.

Guest on “Springboard” technology program, produced by KQED Television, San Francisco, August 2001. Discussed technology and the electrification of rural America.
Guest Lecturer, The George Washington University, Washington, DC 2000, 1997.

Attachment 2



JAY L. BRIGHAM, PH.D., MANAGING PARTNER

Morgan, Angel & Associates, LLC
1601 Connecticut Avenue, NW, Suite 600
Washington, DC 20009
P 202-265-1833, ext. 113 • F 202-265-8022
jay@morganangel.com • www.morganangel.com

EXPERT WITNESS TESTIMONY LAST FOUR YEARS

Riverview Farms, et al., v. United States of America, (CFC) 18-cv-1099 L. Deposition testimony (June 2023).

Chevron Mining Inc. v. United States of America, (D. N.M.) No. 1:13-cv-00328. Deposition testimony (December 2019) and trial testimony (March 2022).

Gold King Mine MDL Litigation, (D. N.M.) No. 1:18-md-02824-WJ. Deposition testimony (November 2021).

State of Montana v. Talen Montana, LLC f/k/a PPL Montana, LLC and Northwestern Corporation, d/b/a Northwestern Energy and United States of America, (D. MT., Helena Division) CV 16-35-H-DLC. Deposition testimony (May 2021).

Attachment 3

Attachment 3: Air Conditioning at Various Camp Lejeune Housing Projects

Housing Project	Type of Housing	Housing Population	Year Built	AC?	AC Cite
Hadnot Point Regimental Barracks	H-style Barracks	bachelor enlisted and officers	1942	1973	CLJA_USMC_PWD_0001281400
Hadnot Point Service Company Barracks	H-style Barracks	bachelor enlisted and officers	1942	1973	USMC-00293335, CLJA_USMC_PWD_0001281400
Women's Reserve Area aka HP Regimental Area 1	H-style barracks	Women's Reserves/ Enlisted	1943	1973	USMC-00293344, CLJA_USMC_PWD_0001281409
Hadnot Point III	Hotel Style Barracks	bachelor enlisted	1978	1978	USMC-00114517, CLJA_USMC_PWD_0000458833
Hadnot Point IV	Hotel Style Barracks	bachelor enlisted	1981	1981	USMC-00112344, CLJA_USMC_PWD_0000455939
Hadnot Point V	Hotel Style Barracks	bachelor enlisted	1982	1982	USMC-00040898, CLJA_USMC_PWD_0000163453
Hadnot Point VI	Hotel Style Barracks	bachelor enlisted	1984	1984	USMC-00220502, CLJA_USMC_PWD_0000927910
Naval Hospital I	H-style Barracks	corpsmen/ enlisted	1942	1969	USMC-00194087, CLJA_USMC_PWD_0000756272
Naval Hospital II	H style barracks	bachelor officers	1942	1985	USMC-00239660, CLJA_USMC_PWD_0000955635
Naval Hospital III	Single homes	Family officers	1945	No	USMC-00045933, CLJA_USMC_PWD_0000175446
Tent Camp	H-style Barracks	bachelor enlisted	1941	No	USMC-00045317, CLJA_USMC_PWD_0000174337
Montford Point I	one story barracks	African American enlisted, 1951 some converted into bachelor officers quarters	1942	No	USMC-00355211, CLJA_USMC_PWD_0001677451
Montford Point II	Single homes	Family, Officers	1942	No	USMC-00045825, CLJA_USMC_PWD_0000175288
Onslow Beach/Signal School	One story H-style barracks	enlisted	1943	No	USMC-00290189, CLJA_USMC_PWD_0001277711
Onslow Beach II	Single homes	Senior Officer Guest House	1941	1985	USMC-00228082, CLJA_USMC_PWD_0000937776

Midway Park I	single homes	Family	1941	No	USMC-00000030, CLJA_USMC_PWD_0000000030
Midway Park II	Apartments	Family Enlisted	1944	No	USMC-00038639, CLJA_USMC_PWD_0000160243
Courthouse Bay I	H style barracks	bachelor enlisted/officers	1941	1973	USMC-00293346, CLJA_USMC_PWD_0001281411
Courthouse Bay II	H style barracks	Bachelor officers	1943	No	USMC-00044734, CLJA_USMC_PWD_0000173518
Courthouse Bay III	Single homes	Family Officers	1943	No	USMC-00045825, CLJA_USMC_PWD_0000175288
Courthouse Bay V	Hotel Style Barracks	bachelor enlisted	1978	1978	USMC-00114517, CLJA_USMC_PWD_0000458833
Courthouse Bay VI	Hotel Style Barracks	bachelor enlisted	1982	1982	USMC-00040898, CLJA_USMC_PWD_0000163453
Paradise Point I	Single homes	Family Officers	1943	No	USMC-00045825, CLJA_USMC_PWD_0000175288
Paradise Point II	Single homes	Family Officers	1946	No	USMC-00045933, CLJA_USMC_PWD_0000175446
Paradise Point III	Single homes	Family Officers	1946	No	USMC-00044825, CLJA_USMC_PWD_0000173680
Paradise Point IV	Single homes	Family Officers	1961	1961	USMC-00290339, CLJA_USMC_PWD_0001277861, 00897_PLG_0000049334 at *343 (1961 opening)
Tarawa Terrace I	Single homes	Family Officers	1952	1974	USMC-00293562, CLJA_USMC_PWD_0001281651
Tarawa Terrace II	Single homes	Family Officers	1953	1974	USMC-00293562, CLJA_USMC_PWD_0001281651
MCAS New River II	Hotel style Apartments	Bachelor Officers Quarters	1955	No	USMC-00354560, CLJA_USMC_PWD_0001676755
MCAS New River III	Hotel style Apartments	Bachelor Officers Quarters	1967	1967	NARA_APERTURE_CARD_00000108, CLJA_NARA_APERTURE_CARD_0000000196
MCAS New River IV	Hotel style Apartments	Bachelor Officers Quarters	1975	1975	USMC-00142953, CLJA_USMC_PWD_0000534747
Holcomb Boulevard	Hotel style Apartments	Bachelor Enlisted Quarters	1972	1972	USMC-00354164, CLJA_USMC_PWD_0001676300
Berkeley Manor	Single homes	Family Officers and Enlisted	1961	1961	USMC-00290348, CLJA_USMC_PWD_0001277870, 00897_PLG_0000048396 (1961 opening)
Watkins Village	Single homes	Family Officers and Enlisted	1977	1977	USMC-00045537, CLJA_USMC_PWD_0000174685
French Creek I	Hotel style Apartments	Bachelor Enlisted	1968	1968	USMC-00370303 (CLJA_USMC_PWD_0001747597),

		Quarters/ Force Troops Complex			USMC-00370306 (CLJA_USMC_PWD_0001747600)
French Creek II	Hotel style Apartments	Bachelor Enlisted Quarters/ Force Troops Complex	1977	1977	USMC-00114217, CLJA_USMC_PWD_0000458354
French Creek III	Hotel style Apartments	Bachelor Enlisted Quarters/ Force Troops Complex	1979	1979	USMC-00113995, CLJA_USMC_PWD_0000458045
French Creek IV	Hotel style Apartments	Bachelor Enlisted Quarters/ Force Troops Complex	1980	1980	USMC-00433760 (CLJA_USMC_PWD_0001911424), USMC-00433780, CLJA_USMC_PWD_0001911444
French Creek V	Hotel style Apartments	Bachelor Enlisted Quarters/ Force Troops Complex	1987	1987	USMC-00180010, CLJA_USMC_PWD_0000712590

EXHIBIT 3

CAMP LEJEUNE JUSTICE ACT LITIGATION
REBUTTAL REPORT OF KYLE LONGLEY

This report reflects my review of the report submitted by Dr. Brigham for the Defendant dated December 9, 2024 (the “Brigham Report”). For relevant background on myself, see my prior report dated December 7, 2024 (the “12/7/24 Report”). For purposes of this rebuttal report, I relied on my 12/7/24 Report, along with additional investigation, research and analysis as discussed below and as cited in my supplemental Reliance List.

The Brigham Report does not provide adequate detail on important topics of life on the base. For example, the report does not include statements from veterans or other living survivors who lived at the base during pertinent times. By comparison, I have reported anecdotal details recalled by living individuals who formerly spent time at Camp Lejeune during the pertinent 1950s to 1980s period. First-person accounts assist to paint a fuller picture of life on the base as it related to water (e.g., swimming pools; activities that drew residents of outlying areas to Hadnot Point; barracks; showers; mess hall steam; family living; Tarawa Terrace base housing; etc.).

Relatedly, the Brigham Report often presents broad characterizations or cites demonstrably incomplete information. These narrow or incomplete statements reflect a lack of an understanding of, or a willingness to acknowledge evidence of, the broader human context when it is harmful to the Defendant’s position on the merits. There is an absence of citation to the full range of sources that tell the full story of life on a U.S. military base such as Lejeune. The report only has a cursory review of the facts of actual life on the base.

The Brigham Report relies significantly on selected Completion Reports without examining other important documents such as Command Chronologies. It also relies on snippets isolated from back issues of the *Globe*, the Camp Lejeune weekly newspaper in publication since the 1940s, without accounting for offsetting information available if one only bothered to turn the page. This methodological bias reflects cherry-picking to support particular assertions.¹

The report lacks any witness statements or citations to support its efforts to portray the outlying areas as being isolated from Hadnot Point. The report inaccurately casts Marines and family members as staying where they slept, affixed like a dot on a map.

The report also fails to account for information indicating that water buffaloes routinely picked up water from the Hadnot Point industrial area and took it all over the base (and even off-base), and other information on water buffaloes.

It is important to compare the details of the facilities at the outlying areas as compared to the facilities at Hadnot Point. For example, club- and bar-type facilities at Hadnot Point were vibrant with social life, relaxation, and other opportunities going far beyond what facilities at outlying areas like New River or Courthouse Bay could provide.

¹ Other important sources such as *Leatherneck* also delivered relevant stories about the base during the pertinent times (back issues are available at the Marine Corps Library at Quantico). See further discussion of back issue of *Leatherneck* below.

As described in my 12/7/24 Report, residents at the base were not historically siloed at one point on the base geography. Rather, Camp Lejeune was an active base that required people to travel all over it, all the time, both to work and to continue preparing for deployments, and for other uses.

It is not clear that the Brigham Report author spent time aboard the base. A personal tour of the base helps to gain an understanding of issues such as distances between different parts on the base and where key facilities and landmarks fall. A map of the base in the abstract fails to impart a full comprehension of the topic, as I know first-hand from my visit to the base with retired Master Sergeant J.M. Ensminger (USMC, Ret.). He spent many years aboard the base. His extensive knowledge has served to educate me on historical details. It better allows me to draw relevant comparisons between Camp Lejeune and other bases I have visited over the years.

The Brigham Report bases assumptions on Marine-authored secondary sources and reports supported only selectively by other sources and media such as historically preserved stories from the *Globe*. The report fails to offer any first-person accounts of people who lived there during the period under examination. The report lacks first-person accounts from persons who lived at Hadnot or at areas such as Camp Johnson, Onslow Beach, Courthouse Bay, the Rifle Range, or Camp Geiger. These accounts are vital for a full understanding of these populations.

I challenge the assertion that people generally remained isolated from the contaminated water while living and working aboard the base. There is an absence in the Brigham Report of eyewitness testimony to show that personnel who lived in the so-called “outlying camps” remained confined there with little interaction with other parts of the base, including Hadnot Point. The Brigham Report ignores historical magazines and journalism providing useful insight. For example, the magazine *Leatherneck* over many years delivered relevant stories about the base.² A review of archived issues of *Leatherneck* assists to provide a fuller picture. A cover story on Camp Lejeune featured in an April 1955 issue of the magazine reflects how even by then, there were extensive facilities located at Hadnot Point, and the article fully supports my assertion in my 12/7/24 Report that Hadnot Point was central to the base, like a city:

From the air, Camp Lejeune looks like a small city surrounded by suburbs. Hadnot Point, with its many barracks and huge industrial area, is the “city” while Courthouse Bay, Montford Point, Petersfield Point, Paradise Point, The Rifle Range, Camp Geiger, Midway Park, Tarawa Terraces +1 and +2, and Camp Knox make up the “suburbs.”³

The *Leatherneck* article goes on to describe – just like my original report -- how the base was intentionally designed so as to encourage its Marines and others to stay on the base and head to the central “city” of Hadnot Point for activities, rather than leaving the base for off-base locations like Jacksonville:

The biggest complaints come from men who expected to find good liberty towns like Washington, Chicago or New York within easy commuting distance. They’re

² See, e.g., *Leatherneck*, April 1955, issue available at https://archive.org/details/sim_leatherneck_1955-04_38_4. Back issues are available at the Marine Corps Library at Quantico, and some are available online.

³ *Leatherneck* issue dated April 1955.

disappointed. The sleepy little town of Jacksonville, North Carolina is the closest city. In 1940, it had 984 people. In 1950, this figure had swelled to 3930 and the city clerk of Jacksonville conservatively estimates the 1955 population as being more than 10,000. Nevertheless, the city has grown as a result of Camp Lejeune being nearby, not because it was nearby. Unfortunately, it has little to offer a Marine on liberty.

This fact is recognized by Major General Alfred H. Noble, Commanding General of Camp Lejeune, as it has been in the past by his predecessors. Consequently, many kinds of recreation are provided for the Marines at Camp Lejeune. There are 14 theaters located throughout the Camp, one of which is a modern drive-in theater which can accommodate 500 cars for each showing. Each area has a service club and there are facilities at Camp Lejeune that make swimming a year-around sport. Two 18-hole golf courses, a driving range and three putting greens have been laid out on the reservation....

Athletics weren't neglected at Camp Lejeune either and the base is literally dotted with various types of athletic fields. One innovation started at Camp Lejeune has been "dependent's athletics" where the offspring of Marines stationed at the Camp are taught boxing, baseball, basketball and even compete in their own intramural program.

Everything possible is done at Camp Lejeune to make a Marine's free time enjoyable. Name bands appear regularly at the base for dancing and one of the latest innovations is Camp Lejeune's own radio station. Under the call letters of WCLR, this non-commercial, public service station is confined, in range, to the base itself and is manned by seven enlisted Marines. It first went on the air in November 1954, and has been broadcasting during the daylight hours ever since WCLR beams music and timely information to specific units from their headquarters.

From a humble beginning of 1000 tents, 14 years ago, to the huge multimillion dollar installation it is today, Camp Lejeune now offers its Marines good duty and comfortable living on one of the world's most carefully planned military reservations.⁴

This 1955 magazine issue also provides details on some of the dining, social and entertainment options at Hadnot Point. It describes how "[t]he Hadnot Point Staff NCO Club's Mirror Room is one of the plushiest niteries in the Corps." The author relates how "Camp Lejeune's supper beanery is the Chinese Room, hidden behind the camp cafeteria in the Industrial Area. The menu naturally announces Oriental dishes, but American food is also served."⁵ The magazine issue also provides a photo showing the large mess hall facilities (which had steam and water):

⁴ *Leatherneck*, April 1955, https://archive.org/details/sim_leatherneck_1955-04_38_4.

⁵ *Leatherneck*, April 1955, p. 27.



Mess hall photo from *Leatherneck*, April 1955.

Similarly, an inspection of back issues of the *Globe* reveals the existence of vibrant and interconnected base-wide activities, unaccounted-for by Brigham, yet essential for a historical understanding. For example, a review of the back issues (including issues cited by Brigham) reveals at least 1-2 pages of year-round intramural sports coverage per weekly issue. These articles reflect how there was a robust intramural sports program with practices and games routinely offered and held at Hadnot Point.

Brigham's contention that people "had lengthy travel distances to Hadnot Point/Mainside and/or were isolated from Mainside" (Brigham Report p. 2) and therefore only used services in their locations does not correspond to the factual data available. Materials such as the *Globe*, *Leatherneck*, command chronologies, depositions, and oral histories show to the contrary. In fact, personnel from Camp Geiger, Onslow Beach, the Rifle Range, Camp Johnson, New River and Courthouse Bay were not confined to their respective areas. Rather, the historical sources demonstrate that they interacted extensively with the command, cultural, and industrial center of the base, chiefly located at Hadnot Point.

For my 12/7/24 Report and this rebuttal report, I obtained and reviewed oral histories, Congressional testimonies and depositions. I interviewed people such as MSgt. J. M. Ensminger USMC (Ret), who lived and worked on the base for over 11 years. His experience and relevant knowledge were critical for an understanding of daily life on the base. In addition, I communicated with Mr. Michael Partain. Mr. Partain published his Master's thesis⁶ on the history of the Camp Lejeune contaminated drinking water issues. He also for many years has maintained the nonprofit website known as "The Few, The Proud, the Forgotten," which has been a relevant resource and an online historical archive of relevant materials.

⁶ University of Central Florida, May 2021.

This publicly accessible nonprofit website for many years has included a historical event timeline with hyperlinks to official government documents. This is an important resource for purposes of understanding the history of the base. The timeline is titled: “Marine Corps Base Camp Lejeune chronology of significant events concerning contamination of the base drinking water supply. Part 1 1941 through October 1989.” It is identified as having been compiled by Mr. Partain and as having been last updated on March 10, 2012.⁷

In short, it appears that the Partain website provides a fair representation of the state of the general historical knowledge on the Camp Lejeune water contamination issue as of 2012. In fact, I am advised that the Government itself has produced documents in this case, from the Veterans Administration (“VA”), reflecting that the VA used excerpts from the Partain website to help teach and train its own subject matter experts with regard to Camp Lejeune VA claims several years ago. The VA directed its own experts to the Partain website as a reliable historical source.

The Partain website timeline would have shown the state of historical knowledge as of 2012 to any Government specialist who wanted to know. The website showed the known facts as of 2012 that the public historians on the contamination subject were then aware of. This raises questions as to whether all the documents now cited by Brigham in 2024 were not made available by the Government in the years past. It raises questions as to why all the information provided by the Government to Brigham today was not provided to Partain years ago. Again, the government’s own VA experts on Lejeune were relying on this very website for factual background.

The “Yale documents” corroborate this fact. The “Yale documents” are documents produced by the Government and the VA years ago in response to a FOIA request and lawsuit by various nonprofit groups.⁸ These VA documents reflect the use of subject matter experts retained by the VA to evaluate veterans’ claims including for cancers claimed to have been caused by Camp Lejeune water exposures. There are slide presentations where the VA presenters training these experts reference the Partain “The Few The Proud The Forgotten” website and the Lejeune documentary⁹ (about Partain and Ensminger and others) as relevant and credible sources to review. Below is an excerpt from a VA educational slideshow from 2012:

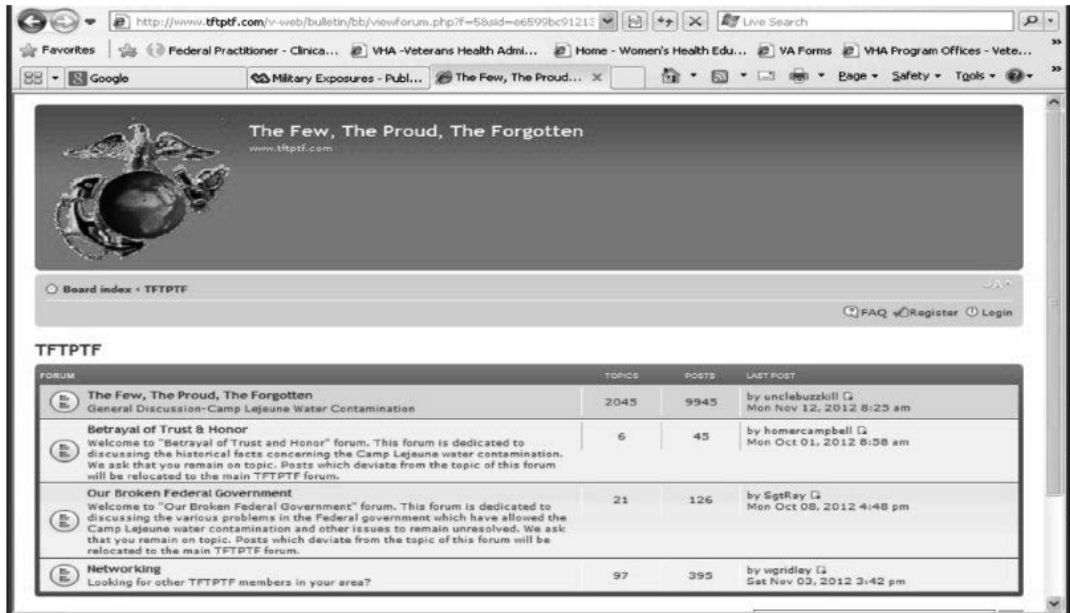
⁷ See https://tftptf.com/Misc/Timeline_Linked_March_2012.pdf.

⁸ *The Few, The Proud, The Forgotten v. United States Department of Veterans Affairs*, No. 3:16-cv-00647-VAB (D. Connecticut). The plaintiff nonprofit and other plaintiffs were represented by attorneys at Yale Law School’s Veterans Legal Services Clinic.

⁹ <https://semperfialwaysfaithful.com/>.

The Few, The Proud, The Forgotten

Website for Veterans, Family, etc.



Documentary:

<http://semperfialwaysfaithful.com/>

Excerpt from VA slideshow, 2012.

As can be seen, the slide has an image from the Partain website and cites the documentary. The last slide in the deck makes clear that this was information coming from the VA itself and which the Government itself was vouching for as reliable:

Questions?

(b) (6)
**Environmental Health Program
Post-Deployment Health
Office of Public Health
Veterans Health Administration
Department of Veterans Affairs
(202) 461-1020**



(b) (6)
[HTTP://WWW.PUBLICHEALTH.VA.GOV/EXPOSURES](http://www.publichealth.va.gov/exposures)

Excerpt from VA slideshow, 2012.

Another VA slide includes content again corroborating that the VA viewed the Partain website as a reliable source:



Excerpt from VA slideshow.

Both men (Ensminger and Partain) have testified extensively before Congress (11 times between the two of them) and have provided me with first-person accounts about life on the base from their own experiences and that of their families.¹⁰

Below is another image taken from one of the VA slide training presentations:



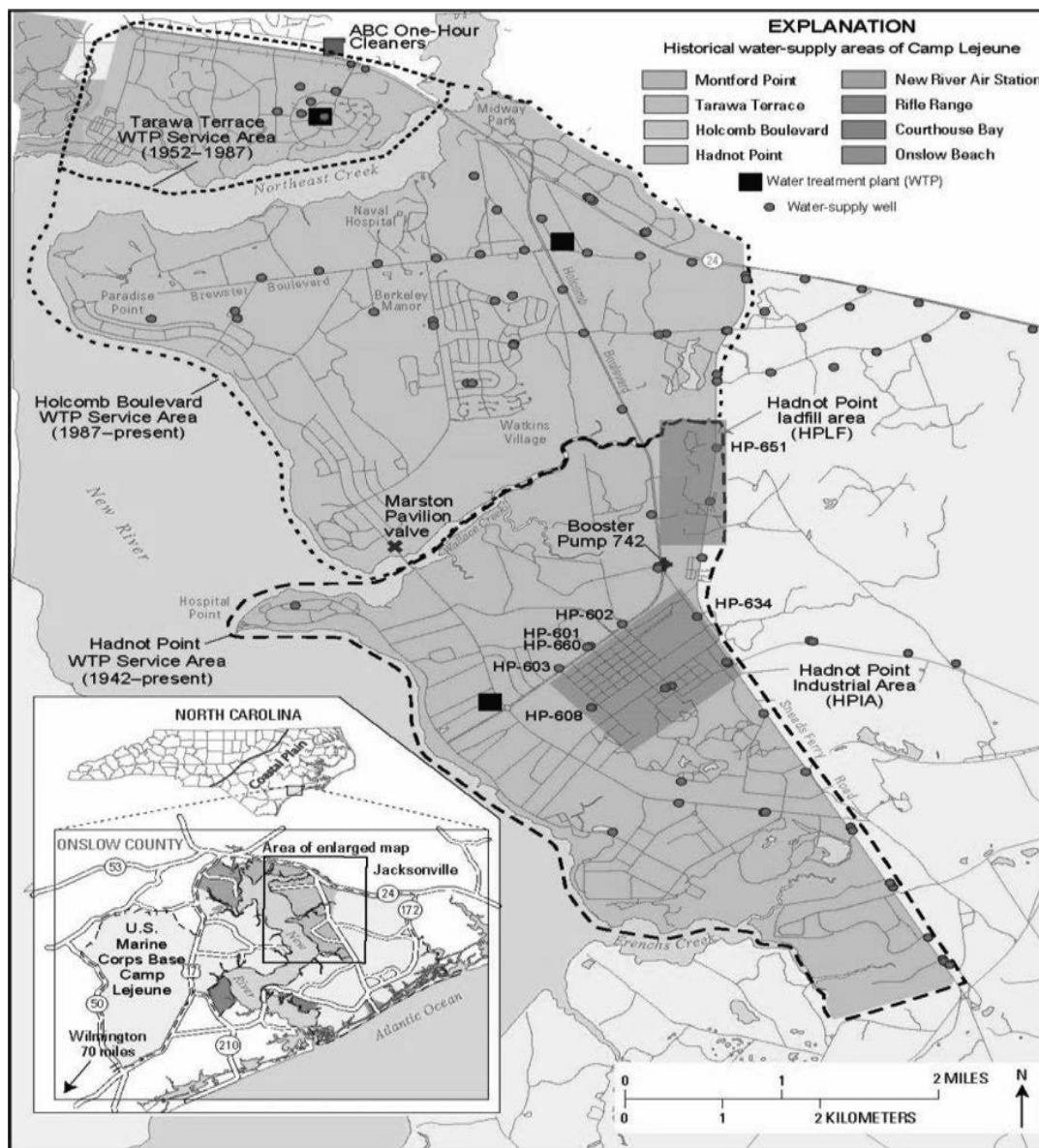
Excerpt from VA slideshow.

Mr. Ensminger and Mr. Partain, pictured above with President Barack Obama, were instrumental in the passage of the Janey Ensminger Act, which gives medical and other VA benefits to Camp Lejeune Marines and their families. They also were instrumental in advocating for the passage of the Camp Lejeune Justice Act.

¹⁰ See *id.*, Marine Corps Base Camp Lejeune chronology of significant events concerning contamination of the base drinking water supply, Part 1, 1941 through October 1989, compiled by Mike Partain for use by WWW.TFTPTF.COM. See also generally, Partain, Michael, "Camp Lejeune Digital Community Archive Project: An Analysis of Digital Public History Efforts to Achieve Social Justice for the Camp Lejeune Drinking Water Contamination 1999-2017" (2021). *Electronic Theses and Dissertations, 2020-2023*. 543. <https://stars.library.ucf.edu/etd2020/543>. See also Testimony of Michael Partain, <https://republicans-science.house.gov/cache/files/e/2/e2d4a1f2-d82e-45e9-b284-449754bf6aff/6917E476C613D3421FFAF940A8975922.091610-partain.pdf>.

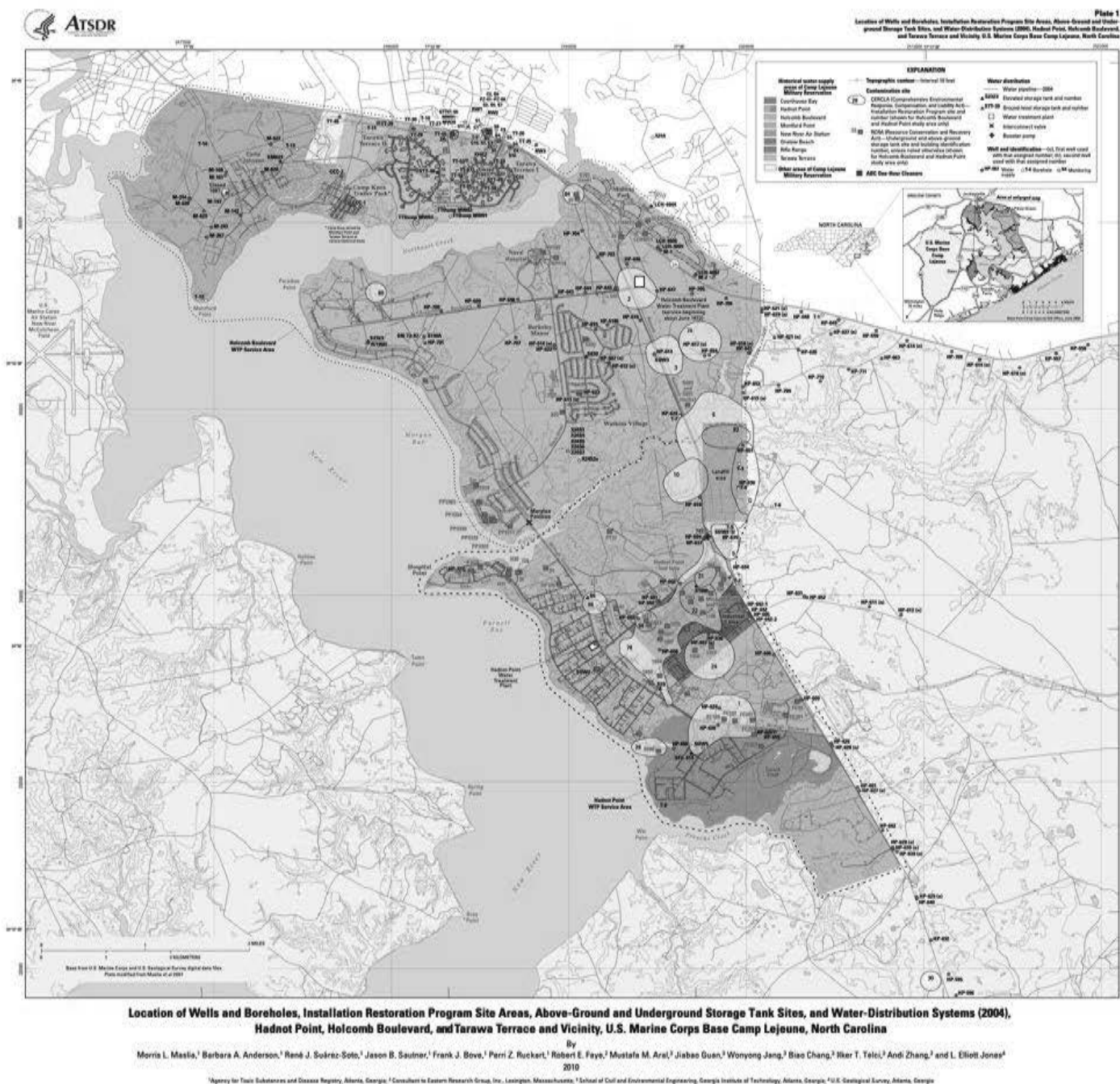
Yet even though the Government VA used the Partain website to provide relevant historical background for VA experts, the Brigham Report fails to cite it. The facts regarding the Partain website therefore help to highlight how the Brigham Report relies on selective information.

Another example of this pattern is this map image found in the report:



Map from Brigham Report, Page 11.

This image, culled from ATSDR publications, has conspicuously less information than other ATSDR maps and images Brigham omits. This fact is seen by comparing the image above to the more detailed image below:



The second map was not used in the Brigham Report. It illustrates in greater detail the relevant contamination sites identified aboard Camp Lejeune.

When one compares the two maps shown above, the version used by the Brigham Report omits many details, particularly related to the contaminated water sites. By comparison, the second map

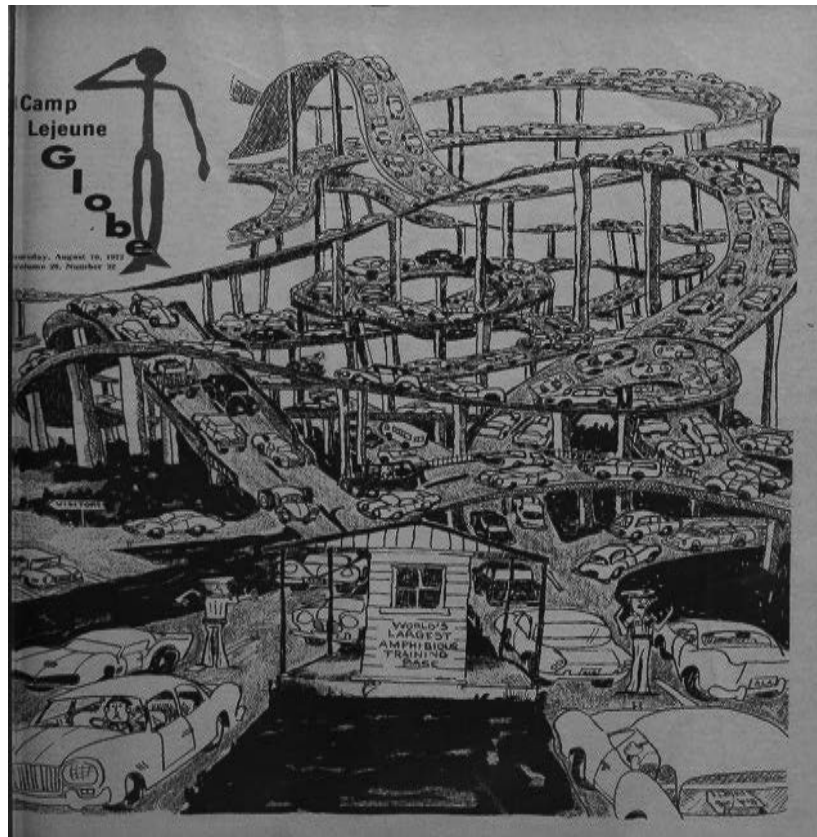
usefully illustrates the specific Installation Restoration (IR) source sites discovered by the Marine Corps' environmental remediation programs. The pattern is incomplete and one-sided information in the Brigham Report. This is a pattern repeated over and over again in the report.

As another example, the Brigham Report (see pages 86-87) discusses pools without considering important historical details of their use. Brigham does not explore the importance of the indoor Hadnot Point heated training pools including the Area 2 pool, the Area 5 pool, and the Montford/Johnson indoor pool. He does not acknowledge how these pools offered more than the facilities (such as they were) at other areas like Camp Geiger, Onslow Beach, Rifle Range, New River and Courthouse Bay.¹¹

A more complete reading of the *Globe* reveals that the main water survival training was conducted at Hadnot Point. There were competitions for intramurals, scuba training, water polo, and other contests and activities. Children and teenagers on the swim team, the Devil Fish, had practices and competitions in Hadnot Point's Area 2 and 5 pools. Children received swim training in the Hadnot pools. The pools at Tarawa Terrace and Paradise Point were also relevant as they were used by families. As evidenced in the *Globe*, the base pools were routinely opened for all personnel and their dependents when not being used for training. Families from elsewhere where facilities were lacking could travel to Hadnot Point to swim. The best facilities for water sports existed at Hadnot Point, drawing people from all over the base, something that the Brigham Report does not acknowledge despite the extensive documentary evidence.

As another example of selective use of evidence, Brigham cites a cartoon from the *Globe*:

¹¹ Former Camp Lejeune resident and public historian Ensminger recalled there were three indoor training pools aboard Camp Lejeune. These was the Area 2 indoor pool at Hadnot Point, the Area 5 indoor pool at Hadnot Point, and a third indoor swimming pool at Camp Johnson/Montford Point. All, at different times, were not just used for training, but were also open for recreational use, competitive swimming practices, and competitions. By contrast, outlying areas like Camp Geiger or the Rifle Range did not have any pools at all. (Ensminger interview/email).



Cartoon image from the *Globe*, found in Brigham Report.

The cartoon above is a humorous image of endlessly overcrowded roads entering and leaving the base. But Brigham, in focusing on the traffic, misses the main point of the *Globe* article content that goes with the image, which is that the Marines were developing Mainside, making the roads more accessible and building a dentist office and a hotel, among other things. It also ignores that traffic at the base entrance was only episodic, as civilian employees and others entered the base in the morning and left in the evening.

Further, in the past most Marines could not afford cars and would instead use buses (see 12/7/24 Report at page 16 discussing bus system and lack of cars). Thus, traffic was not an issue in getting to the Hadnot hub. Marines and their dependents during the period under review relied heavily on buses, which transported them free of charge around the base. These buses were recognizable as being green with white roofs¹² to reflect the sun and keep them cooler in the summers. Historical documents reflect that an assistant director of military passenger traffic for the Department of Defense, Captain C.V. Johnson, visited the base in September 1961 and was impressed by the bus system that brought people from areas such as Camp Geiger to Hadnot Point with great efficiency and convenience.¹³ Indeed, historical bus schedules reflect vigorous use of a network of buses:

¹² From Ensminger interview/email.

¹³ The *Globe*, 21 September 1961. I note that the area known or labeled for some purposes as “Hadnot Point” or sometimes, the “Hadnot Point Industrial Area,” has also been labeled as, “Mainside” or the “Mainside Barracks area.” See e.g. Naval Medical Center Camp Lejeune entry for “Mainside Branch” Medical Clinic (Building 15) at [Naval Medical Center Camp Lejeune > Branch Medical Clinics > Mainside Medical \(Building 15\)](#). And see map specifying the “Main Side C Store,” at [Camp Lejeune Overview](#).

YOUTH ACTIVITIES BUS SCHEDULES

Buses will stop at scheduled stops only.

Youth Activity Buses will be designated as "Activities."

Students should be at the scheduled stops five minutes prior to the time indicated.

Youth Activities

Bus No. 10

Paradise Point to Tennis Courts, Golf Course, Marston Pavilion, Boat House, Area Club, Area 5 Pool, and Hobby Shop.

Block Pickup	Time
3300 3306 Cooper St.	0740
3300 3362 Pender St.	0741
3400 3412 Timmerman Ave.	0743
3200 3237 Eden St.	0746
3100 3131 Eden St.	0747
3000 3020 Eden St.	0749
2900 2922 Eden St.	0750
2900 2993 Cukela St.	0752
3000 3063 Cukela St.	0754

To: Tennis Courts, Golf Course, Marston Pavilion, Boat House, Area Club, Area 5 Pool, and Hobby Shop.

Bus No. 11

USNH and Paradise Point to Tennis Courts, Golf Course, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool, and Hobby Shop.

Block Pickup	Time
USNH H-51	0735
USNH Surgeons Row	0737
2700 2731 Winston Rd.	0742
2700 Winston Rd. & Wavell St.	0744

To: Tennis Courts, Golf Course, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

NOTE: Junior students living in the 2900, 3000, 3100, 3200, 3300 or 3400 blocks may board Bus No. 11 at Stone Street School at 0800 for transportation to the Area 2 Pool.

Bus No. 12

Paradise Point to Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Block Pickup	Time
2500 2519 St. Mary's Dr.	0745
2400 2408 St. Mary's Dr.	0746
2300 2319 St. Mary's Dr.	0748
2200 2227 St. Mary's Dr.	0749
2100 2119 St. Mary's Dr.	0750
2000 Kent Rd. & Autumn Cir.	0751

To: Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

NOTE: Junior students living in the 2900, 3000, 3100, 3200, 3300 or 3400 blocks may board Bus No. 12 at Stone Street School at 0800 for transportation to the Area 2 Pool.

Buses No. 13 & 14

Berkeley Manor to Golf Course, Tennis

Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Block Pickup	Time
5500 5520 Virginia St.	0735
5700 5702 Virginia St.	0737
5700 5715 Virginia St.	0739
5800 5844 Delaware Ave.	0741
5800 5800 Florida Ave.	0743
5500 5505 Maryland Ave.	0745

To: Golf Course, Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Bus No. 15

Berkeley Manor to Golf Course, Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Block Pickup	Time
5800 5856 Delaware Ave.	0740
5800 5884 Maryland Ave.	0742
5600 5629 Delaware Ave.	0744
5600 5609 Illinois Ave.	0746

To: Golf Course, Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Bus No. 16

Berkeley Manor to Golf Course, Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Block Pickup	Time
5100 5167 Delaware Ave.	0740
5200 5234 Alabama Ave.	0742
5200 5245 Alabama Ave.	0744
5100 5119 Alabama Ave.	0746
5300 5331 Florida Ave.	0748

To: Golf Course, Tennis Courts, Stone Street School, Marston Pavilion, Boat House, Area 2 Pool, Area Club, Area 5 Pool and Hobby Shop.

Bus No. 17

Midway Park to Tarawa Terrace School, via Knox Trailer Park.

Block Pickup	Time
1000 1038 Butler Dr.	0730
1600 1645 Butler Dr.	0732
1200 1200 Butler Dr.	0734
800 810 Butler Dr.	0736
300 308 Butler Dr.	0738
400 410 Butler Dr.	0740
700 700 Butler Dr.	0742

Knox Tr. Park 338 Toledo Rd. 0800
Knox Tr. Park D-34 Wash House 0802
To: Tarawa Terrace School.

Bus No. 18

Tarawa Terrace I (E. Peleliu) to Tarawa Terrace School.

Block Pickup	Time
900 956 E. Peleliu	0800
1000 1026 E. Peleliu	0802
1000 1070 E. Peleliu	0804

To: Tarawa Terrace School.

Bus No. 19

Knox Trailer Park, Tarawa Terrace I and II to Hobby Shop, Area 5 Pool, Area Club, Boat House, Marston Pavilion, Tennis Courts and Golf Course.

Block Pickup	Time
300 338 Toledo Rd.	0725
Raleigh Dr. D-34 Wash House	0727
2000 2012 Tarawa Blvd.	0732
2200 2202 Tarawa Blvd.	0734
2300 2362 Tarawa Blvd.	0736
2400 2444 Tarawa Blvd.	0737
200 221 Tarawa Blvd.	0739
100 187 Tarawa Blvd.	0741
100 137 Tarawa Blvd.	0743

To: Hobby Shop, Area 5 Pool, Area Club, Boat House, Marston Pavilion, Tennis Courts and Golf Course.

MCAF BUS

MCAF and Geiger Trailer Park to Montford Point Swimming Pool, Tarawa Terrace School, Hobby Shop, Area 5 Pool, Area Club, Boat House, Marston Pavilion, Tennis Courts and Golf Course.

Block Pickup	Time
MOQ Area 2038 Telephone Booth	0710
Chapel Chapel Parking Lot	0715
Geiger TP Community Center	0720

To: Montford Point Pool, Tarawa Terrace School, Hobby Shop, Area 5 Pool, Area Club, Boat House, Marston Pavilion, Tennis Courts and Golf Course.

SHUTTLE SYSTEM

Tarawa Terrace School to Montford Point Pool — Monday through Friday.

Shuttle Buses — depart Tarawa Terrace for Montford Point at 0820.

Shuttle Buses — depart Tarawa Terrace for Montford Point at 0920.

Shuttle Buses — depart Montford Point for Tarawa Terrace at 0920.

Shuttle Buses — depart Tarawa Terrace for Montford Point at 1020.

Shuttle Buses — depart Montford Point for Tarawa Terrace at 1020.

Stone Street School to Area 2 Pool — Monday through Friday.

Shuttle Buses — depart Stone Street School for Area 2 Pool at 0920.

Shuttle Buses — depart Area 2 Pool for Stone Street School at 0920.

Shuttle Buses — depart Area 2 Pool for Stone Street School at 1020.

Shuttle Buses — depart Stone Street School for Area 2 Pool at 1020.

Golf Course to Hobby Shop via Tennis Courts, Marston Pavilion, Boat House, Area Club and Area 5 Pool.

Shuttle Buses — depart Golf Course for Hobby Shop at 0950.

Hobby Shop to Golf Course, via Area 5 Pool, Area Club, Boat House, Marston Pavilion and Tennis Courts.

Shuttle Buses — depart Hobby Shop for Golf Course at 0950.

RETURN TO QUARTERS

Return to quarters transportation will be accomplished over reverse routes of buses commencing at 1130. (Example: Students going to activities on Bus No. 10 will be picked up at the last activity in which they participated by Bus No. 10 and returned to quarters.)

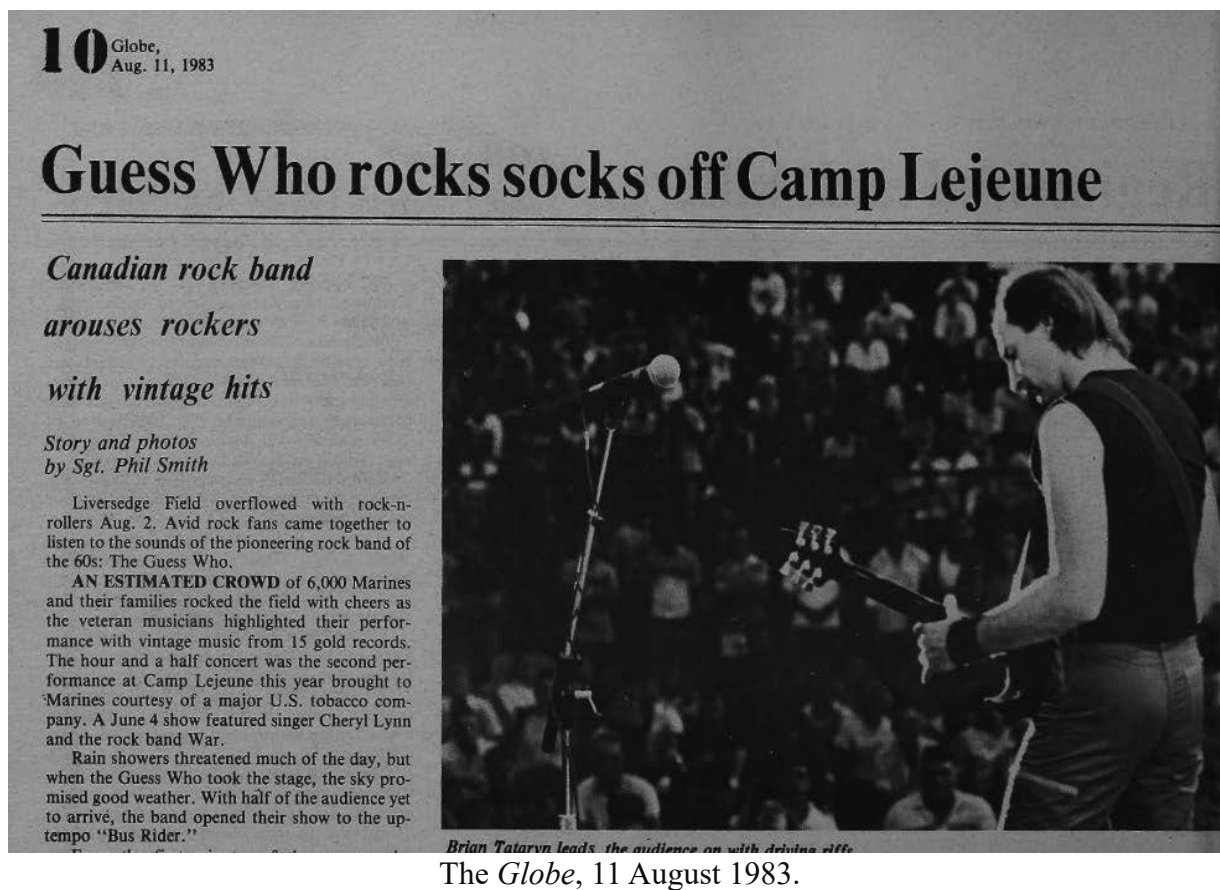
Bus schedule, the *Globe*, 26 July 1962.

The Marine dependents relied on buses for school and in the summer months. I outlined this topic in detail at pages 16, 26, 28, and 29 of my 12/7/24 Report. The image above shows how extensive

and expansive the bus service was for the entire base in the summer months, including those supposedly isolated from Hadnot Point.

To further highlight the selectivity of the Brigham Report, there are other examples when the author uses the *Globe* to support his statement but ignores contextual evidence. Brigham cites the August 11, 1983 issue of the *Globe*, but omits that in the same issue, there were stories which reflected that people often traveled to Hadnot Point: a photo of a child participating at Marine family day (cover of issue); announcement of a new pool opened at Tarawa Terrace (p. 3); news of a drill competition at Goettge Field (p. 8); a feature on use of the main auto hobby shop (p. 17); a note of children's story time at the Base Library (p. 19); sports league results for football intramural season (p. 25); and an item on a regional golf championship at Paradise Point (p. 26).

The photo below from the same issue reflects how in 1983 more than 6,000 Marines and their dependents attended a concert at Hadnot Point by the Guess Who, a popular Canadian band:



Brian Tatarov leads the audience on with driving riffs.

The *Globe*, 11 August 1983.

The story notes that it was second performance of the year sponsored by a particular sponsor (the earlier concert featured Cheryl Lynn and War on June 4), indicating how it was not uncommon on the base to have these events at Hadnot Point that had the best facilities for such large events.¹⁴

¹⁴ The *Globe*, 11 August 1983.

Thus, the Brigham Report uses the *Globe* as a source, but only in a narrow way to make an assertion and ignore the plethora of stories that support the fact that Marines and dependents' activities exposed them to contaminated water at places such as Hadnot Point and Tarawa Terrace.

The Brigham Report at page 104 cites a *Globe* article dated December 4, 1975 about a standpipe. However, the report omits reference to multiple other relevant stories in the same issue. For example, news included opportunities for GED classes at Hadnot Point; the Tarawa Terrace Kiddie College; intramural sports matches; advertising for the popular Turkey Bowl football game; and Camp Lejeune High School's 2A state football championship.¹⁵

Oral history and deposition sources highlight the incomplete nature of the research in the Brigham Report. For example, Mr. Partain recalls that his father lived in Tarawa Terrace II in the 1960s. His father instructed at the Radio School while also reporting to Hadnot Point.¹⁶

The same was true for Master Sergeant Ensminger, who lived both on base and off base for over eleven years. Over those years, Master Sergeant Ensminger and his family members spent time at multiple places on the base, including, the Tarawa Terrace housing area, the Tarawa Terrace and Hadnot swimming pools, the Hadnot Point areas for recreation, and the Hadnot Point hospital (at the "old" Naval hospital premises, later replaced by the new hospital that opened circa 1983).¹⁷

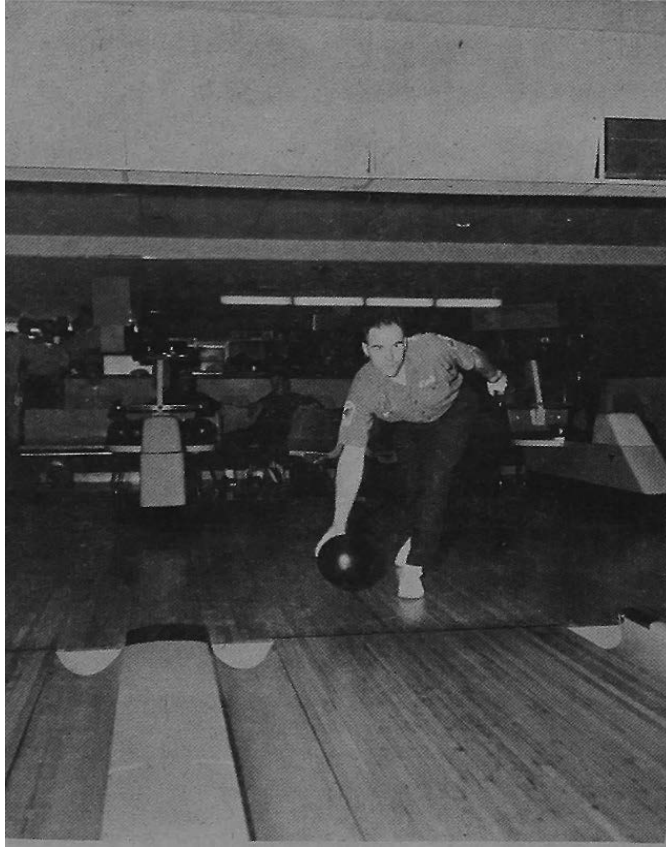
Service in the Marines required strenuous physical activity. Hadnot Point provided the most opportunities for exercise and conditioning. Hadnot Point had facilities for water survival training; intramural and semi-professional athletic competitions; weightlifting; swimming; and running. Thus when running became fashionable in the 1970s and 1980s, in order to train for races and marathons, many used the various facilities, relying on water fountains and gym showers. I outlined these activities at pages 14, 27, and 37-39 of my 12/7/24 Report.

Below is a photo of a person bowling at the Hadnot Point bowling alley, a massive multi-lane establishment that sold refreshments and hosted many people from all over the base for the popular sport at the time. Men and women gathered here to enjoy the sport and interact in leagues and intramurals. It was one of the most popular gathering places on base for many years:

¹⁵ The *Globe*, 4 December 1975.

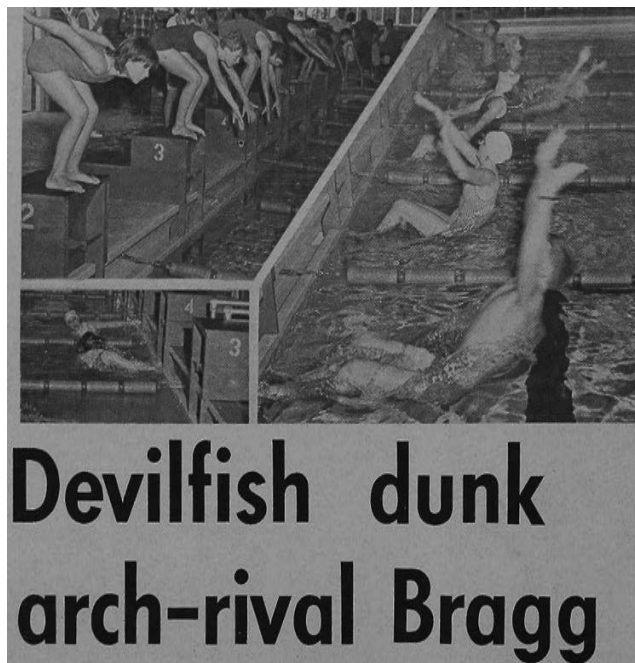
¹⁶ Oral History by author via Zoom with Mike Partain, 7 January 2025.

¹⁷ From Ensminger communications/interview, including oral history interview by author via Zoom with Master Sergeant Jerry M. Ensminger, 7 January 2025. See <https://camp-lejeune.tricare.mil/About-Us> for more information on hospital.



The *Globe*, 30 April 1964.

Below is an image of one of the swimming competitions pitting the Devilfish youth team against the Fort Bragg team, at one of the heated indoor pools at Hadnot Point:



Devilfish dunk arch-rival Bragg

The *Globe*, 3 June 1965.

Those images reflect ordinary activities and facilities at Camp Lejeune where there was water obviously in use.

The Brigham Report portrays that groups such as the 8th Marine Regiment stayed in Camp Geiger once the 8th Marine Regiment was transferred there by the 1970s, remaining isolated from the remainder of the base and the contaminated water. (Brigham Report p. 64). However, this is another incomplete story. In fact, evidence from multiple sources reflects that the Marines in areas such as Camp Geiger traversed the base for training, including using facilities at Hadnot Point, where much of their machinery and weapons were serviced. Equally as important, the 8th Marine Regiment also cross-trained with the other regiments on the base, often at Hadnot Point.¹⁸

Brigham also omits mention of “cattle cars.” Historically, truck-drawn trailers, often called “cattle cars,” helped transport Marines around the base. The troops sat on benches, or stood and held onto poles, as in this demonstrative photo:¹⁹



Demonstrative photo of “cattle car.”²⁰

Marines piled into cattle cars to travel to Hadnot Point and elsewhere including for field maneuvers for weeks that included amphibious training. (See 12/7/24 Report, pages 30-36). Others relied on the “cattle cars” to transport them to work across the base. Personal accounts bear this out. For example, James Branham, Jr. lived in a barracks at Hadnot Point. He was a trained mechanic

¹⁸ See General Zinni deposition, regarding the 8th Marine Regiment.

¹⁹ Background on cattle cars was provided in Enslinger/Partain interviews/communications.

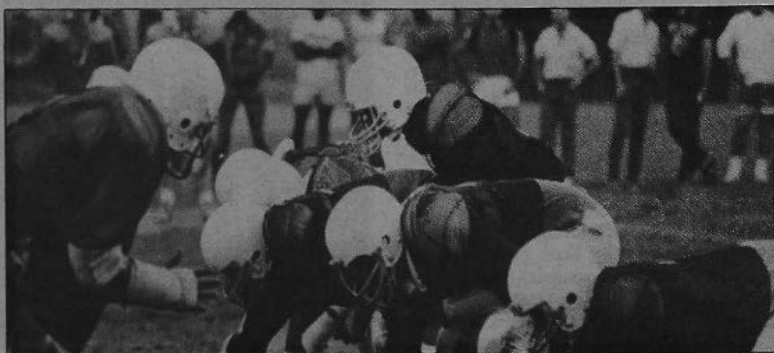
²⁰ https://www.reddit.com/r/USMC/comments/11w8u9s/i_bet_you_know_what_this_is/?rdt=60395.

working in the Hadnot Point industrial area off Sneads Ferry for the 2nd FSR Motor Pool a couple of miles away. He recounted how he rose at 5:30 am at his barracks at Mainside, showered, had breakfast at the mess hall, and then waited for a “cattle car” to pick him up and have him at work by 8 am. He worked at the motor pools doing repairs such as replacing brake shoes, oil changes, and steam cleaning. At 11 am, the “cattle trucks” picked him up and returned him to the mess hall until 1 pm when he returned to work. He worked until approximately 4:30 pm when he took the “cattle car” back to the barracks and showered to get the oil and grease off him before dinner, after a hard day’s work in the industrial area. He repeated the process throughout the week, highlighting the importance of the transportation system of “cattle cars” for the entire base that relied on them for movement from the outlying areas to Hadnot Point.²¹

These troops traveled on buses and “cattle cars” to Hadnot Point for intramurals, to attend boxing matches and football games, and for recreational activities such as bowling, golf, boating, and riding horses. Families used the buses to attend junior high and high school events including sports. In addition, they rode the bus to do shopping at the Main PX as evidenced by advertisements for the main exchange found within the *Globe*.

Below is an example highlighting how the Marines gathered for sports at Hadnot Point where they played, drank water, and could shower in local facilities after games. All the major groups including the 8th Marines had teams involved (the 8th Marines in the text below are listed as being fourth place at the time in the Red League):

INTRAMURAL FOOTBALL STANDINGS					H&SBn.	1	3	12	127
					MedBn.	0	4	14	104
Gold League	W	L	PF	PA	Red League	W	L	PF	PA
SupplyBn.	3	0	83	6	TankBn.	4	1	130	61
SuptBn.	3	1	90	38	MCAS	3	1	56	32
8thEngrBn.	3	1	70	55	CEB	3	1	54	18
MaintBn.	2	1	79	19	8th Mar.	2	1	76	64
HqBn. (MCB)	2	2	62	59	6th Mar.	2	2	65	38
LSB	2	2	50	31	HqBn.	2	2	54	69
MCSSS	2	2	33	39	AAVBn.	1	2	42	87
8thCommBn.	1	3	28	50	2d Mar.	1	3	22	90
					10th Mar.	0	3	24	40



The *Globe*, 10 October 1985

²¹ Deposition of James Claude Branham, Jr., 16 October 2024, 15-16, 18-20.

The Marines and relied on Hadnot Point for entertainment. There were few places to go off base due to the high costs of cabs to Jacksonville, which itself had very limited options. Meanwhile, there was much to do if one stayed on base. See pages 12-15 of my 12/7/24 Report discussing famous entertainers such as Frank Sinatra, Lou Rawls, and the Marine Corps Band coming to the base and drawing large crowds from across the base. Duke Ellington performed at the Hadnot Point SNCO Club in 1972 for \$6 per person.²² For big events, the Marines went to Hadnot Point.

Below is an advertisement in the *Globe* from January 1956:



The *Globe*, 20 January 1956

As shown, the Staff NCO Club at Hadnot Point hosted a dance on Friday and Saturday evenings with Jimmy West and His Tradewinds, while Billy Tillis and Versi-Tones played on Sunday evening with Sammy Audrain on the piano in the afternoon with a special steak dinner offered for

²² The *Globe*, 5 October 1972.

\$1. There were other offerings during the week including free drafts on Wednesday night and complete breakfast every day until 1 p.m. Meanwhile, Geiger only had Happy Hours on Thursday and cocktail hours on Sunday, lasting two hours.²³ There was even less at Montford Point.

The majority of Marines in combat units were under the age of 25 and not married, thus they wanted companionship beyond their everyday lives with other males.²⁴ This was the case all over the country where bars hosted lady's nights, fraternity parties occurred on college campuses, and other events that brought together the young. On the base, males outnumbered females. Once again, the *Globe* illustrates this point with many advertisements for events, socials, and other recreational activity on the base. It is also important to note that female Marines had barracks at Hadnot Point as did the Navy nurses and other personnel.

As outlined in my 12/7/24 Report (pages 11-16, 26-29, 37-39), Hadnot offered opportunities ranging from golf to boating and even equestrian events. It was the center of activity for everyone on base, not just those located in the Mainside barracks. People congregated at Hadnot for worship services, hospital visits (the outlying areas only had the equivalent of at the best an urgent care), shopping, banking, car care and there was an inn for visitors.

At Hadnot Point, the Main PX, per an article dated October 1981 in the *Globe*, served more than 23,000 customers each month.²⁵



²³ The *Globe*, 20 January 1956.

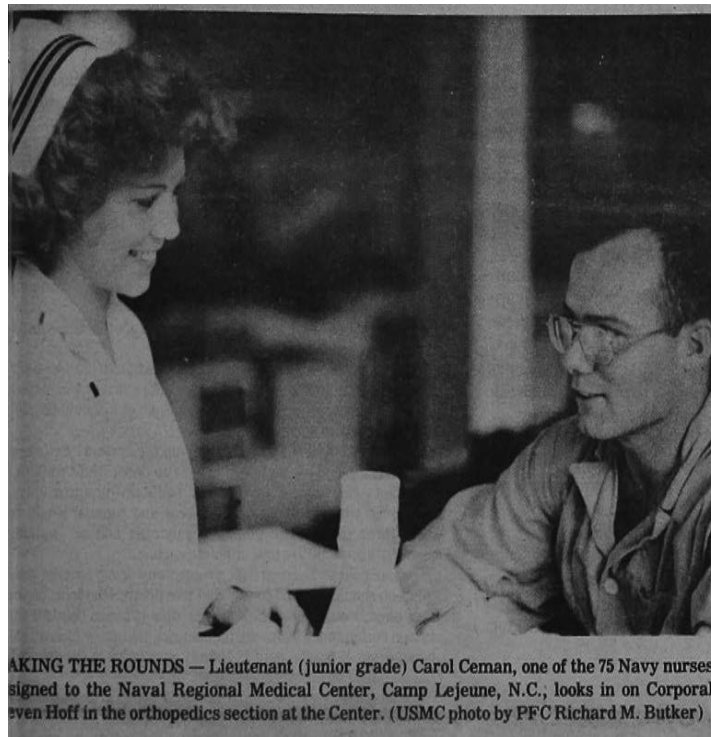
²⁴ Ensminger interview, 7 January 2025.

²⁵ The *Globe*, 8 October 1981. Available at <https://www.dvidshub.net/publication/issues/59545>.

The Globe, 8 October 1981.

Many of these people coming to the Hadnot Point Commissary came from areas such as Camp Geiger, Camp Johnson, Onslow Beach and Courthouse Bay. The selection of groceries, dry goods, and alcohol was significantly better at Hadnot. Most of the outlying PXs bore more of a resemblance to a 7-11, not a WalMart like the Main PX at Hadnot Point.²⁶

Schools were an important factor as well. The junior and high schools were centers of activity for the children and their families as well as community members who came to sporting events to support their community, go to school plays, and attend special events such as Halloween parties and dances. With one high and one junior high school, students from all of the family housing areas came from across the base to attend these schools which were at various times supplied with contaminated water. See pages 28-29 of my 12/7/24 Report. The kids and their parents also spent a lot of time at Hadnot Point for summer camps that included swimming, horseback riding, crafts, and playtime (also highlighted in my 12/7/24 Report). The Marine Corps wanted people active and engaged, hoping to ensure good times in the organization that helped with reenlistment, even in the period before the advent of the All-Volunteer Force.



The Globe, 11 May 1978.

As the above photo reflects, Hadnot Point was the location of doctors and nurses along with members of the Navy stationed at the base hospital. An epicenter of the base was the state-of-the-art Naval Hospital at Hadnot Point that I outlined at pages 15-16 of my 12/7/24 Report. Everyone on the base relied upon it for everything from medical check-ups to emergency and critical care to dental needs. It was a place where significant life events happened – births, major surgeries, deaths.

²⁶ Enslinger interview, 7 January 2025.

The hospital was widely used by base personnel and families. It was a perk for life on a military base that far exceeded what they generally had in life before the Marines. There are many personal stories that bear out its importance, and the centrality of the Hadnot Point hospital. Below is a photograph of oral historian Michael Partain's mother taken in her hospital room showing a glass of tap water along with his formula bottle with contaminated water. Mr. Partain's family lived on Hagaru Drive in the Tarawa Terrace housing area. The photo below is both poignant and significant: note the water glass and the infant formula bottle, both filled with Hadnot-supplied water, visible by the bedside of the young mother with the baby boy:



Photo from Mike Partain archives.

Others who passed through the hospital included Dr. Mike Gros. He joined the Navy to pay for medical school and became an Ob/Gyn stationed at Camp Lejeune in the early 1980s. Daily, he scrubbed his hands in hot water at the hospital, causing exposures to go along with those to water used at his residence very close to the hospital.²⁷ Later, he developed health issues, including cancer, after moving into private practice, just like Mr. Partain did years later after his family left the base. These first-person accounts highlight the human nature of the whole process of life on the base, including time at the hospital.

Other first-person accounts highlight the interconnectedness of the base. Terry Dyer remembers living at the base as a child and teenager with her parents at Camp Lejeune between 1958 and 1973. Her father worked on base as a school principal. Over the years, the family resided in homes located in the Tarawa Terrace community, including homes located on Bougainville Drive, Chosin Circle, and on Hagaru Drive.²⁸ Ms. Dyer lived a normal life with all of life's usual activities. She described family life including baths, showers, other bathroom uses, drinking water and other beverages at home and school, and eating lunch in the cafeteria at Tarawa Terrace II Elementary School, Brewster Junior High School, and Camp Lejeune High School.²⁹ She further remembered going to do summer recreation activities, most at Hadnot Point where she consumed large quantities of water during the hot, humid summers of coastal North Carolina.³⁰

²⁷ Mike Magner, *A Trust Betrayed: The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families* (DaCapo Press, 2014), 113-117.

²⁸ Video Deposition of Terry Dyer, 10 April 2024, 22-24.

²⁹ Dyer Deposition, 25-27, 48.

³⁰ Dyer Deposition, 56-59, 87-88, 151-154.

The same patterns of underreporting also plague the section of the Brigham Report on water buffaloes. Brigham goes into detail about the water buffaloes at pages 97-101. Then, he asserts that the standpipes used to fill them could be installed anywhere using underground water pipes and those existed not only at Mainside but also at other areas. He asserts that the travel times from Hadnot Point to other places on Camp Lejeune proximate to training activities would present significant problems to be overcome, and the permanency of the installation would be further reason for constructing standpipes in areas closer to training activities than Hadnot Point. However once again, his evidence is incomplete. He does not point to specific evidence of standpipes being used to fill water buffaloes outside of Hadnot. In fact, the historical shows that the Marines typically filled the water buffaloes at the Hadnot Point industrial area because of the water plant's size and capacity. It had standpipe equipment necessary to quickly fill the large trucks carrying many gallons of water. The Marines could fill the water buffaloes at Hadnot Point in 10-20 minutes. The water buffaloes filled at Hadnot Point were driven to deliver water widely, including going as far off as Bogue Field, halfway to the Cherry Point Marine Corps Air Station.³¹



Large and Tall Standpipe at Building 1400 at Hadnot Point
The *Globe*, 4 December 1975

³¹ Ensminger Oral History, 7 January 2025. See also information found at <https://www.stetson.edu/law/veterans/bogue-field.php>.



Smaller version of water station, Exhibit 9, David Greer Deposition.

The documentary evidence demonstrates that water buffaloes were critical to maintain proper hydration for training Marines. As I noted in my 12/7/24 Report at pages 30-36, the Marines used water buffaloes for both standard training and field maneuvers. This latter drilling occurred at least one week a month for most of the Marines, with increased frequency when a unit prepared for deployment aboard. Training included amphibious assault training on the beaches. According to General Anthony Zinni, UMSC (Ret) who served at Camp Lejeune multiple periods, Marines went out on maneuvers for up to weeks at a time and relied on the 2nd service support group based at the Hadnot Point industrial area to provide the water during the exercises. This was so no matter which regiment he commanded. This is important to note as other senior commanders likely followed similar patterns due to expediency at the Hadnot Point industrial area, and the Brigham Report offers no evidence to the contrary.³²

Other witnesses substantiate how Marines filled water buffaloes at Camp Lejeune. Colonel William Walters testified that he spent several years at Camp Lejeune in the late 1950s and then at nearby Bogue Field in the early 1960s. The latter, located between Camp Lejeune and Cherry Point (just over thirty miles away), was an auxiliary landing base that relied on water from the Hadnot Point industrial area standpipes according to Walters. A graduate of the Motor Transport School at Camp Johnson, he said the Marines from Bogue Field frequently used the standpipes at Hadnot Point.³³ The Marines, according to Colonel Walters, went to Hadnot Point because their officers wanted their work done quickly and water filled quickly at Hadnot. He stressed: “when you tell a driver or anybody else in those ranks this is where you go, they don’t deviate.”³⁴

³² Deposition of General Anthony Charles Zinni, 28 May 2024, 33-34. See also *the Globe*, 18 June 1981; *the Globe*, 15 October 1987.

³³ Deposition of Lt. Colonel William Walters, 20 May 2024, 49.

³⁴ Walters Deposition, 53.

The testimony highlights that the Marines relied heavily on getting their water from the Hadnot Point at Camp Lejeune because of its better facilities. They used the water from the water buffaloes for things like filling their canteens, using it for heating field rations, and for washing.

Finally, the Brigham Report at pages 24-33 discusses the topic of the opening date of ABC Cleaners. He describes that “in contrast to Mr. Melts’ 2001 testimony, a newspaper advertisement, a high school yearbook, telephone directories, and other documents support ... that the ABC One-Hour Cleaners ... opened in June 1954.” First, it appears that there are materials cited by Brigham that were not provided by the government in the past to investigating agencies or historian researchers like Michael Partain. (See “The Few, The Proud” timeline dated 2012). Second, the Melts Deposition (cited in the Timeline) reflects the owner Mr. Melts’ testimony that put the opening date in 1953. This evidence refutes Brigham’s arguments for 1954. More specifically, throughout his deposition, Mr. Melts’ testimony confirmed that the ABC cleaners began operation in 1953 at 2127 Lejeune Boulevard and operated in the same location ever since he opened it in 1953; that he worked with his brother who also worked in the business prior to his death; that he obtained the PCE chemical and used it ever since he began operations in 1953; and that as far as he knew it was not diluted but 100% pure PCE.³⁵ Government agencies were aware in the past that historians like Mr. Partain believed the Melts deposition and the 1953 start date as evidenced by 2012 “The Few, the Proud” Timeline. Yet apparently the government took no steps to share the information they now share with their expert Brigham today for litigation purposes.

In conclusion, I would say that the Brigham Report does have some good historical sections such as regarding the original building of the camp, based primarily on secondary sources written by the Marines, although the pertinence of that part of the narrative is unclear. However, the majority of the report lacks primary research, especially use of first-person accounts and ignores many sources such as command chronologies, the *Globe* newspaper, and back copies of *Leatherneck* magazine that illustrate all aspects of life on the base. The Brigham Report is incomplete in many areas, inferring people lived isolated lives in outlying areas, which is misleading. It provides little primary research such as oral histories to substantiate its assertions and fails to go into detail about life on the base and peoples’ interaction with water. By contrast, in my 12/7/24 Report and here, I have sought to use many sources to show a fuller picture of the life at the base.

³⁵ See Victor Melts’ deposition, April 12, 2001, at pp. 2-5; 7; 11; 13; 24; 37.

Dated: 13 January 2025.

Signed: Kyle Longley
Kyle Longley

RELIANCE LIST FOR REBUTTAL REPORT

1. Issue of *Leatherneck* dated April 1955.³⁶
2. Oral history notes/email, reflecting discussions/communications with retired Master Sergeant J.M. Ensminger (USMC, Ret.).
3. Oral history notes from discussions with Mr. Michael Partain.
4. Testimony of Partain (1).³⁷
5. Testimony of Partain (2).³⁸
6. Nonprofit website, "The Few, The Proud, the Forgotten."³⁹
7. Mike Partain's TFTPTF Timeline (1941-1989) Updated 03.10.12.⁴⁰
8. "Yale" documents reflecting VA use of Partain website.
9. Partain, Michael, Thesis, "Camp Lejeune Digital Community Archive Project: An Analysis of Digital Public History Efforts to Achieve Social Justice for the Camp Lejeune Drinking Water Contamination 1999-2017" (University of Central Florida, May 2021). *Electronic Theses and Dissertations, 2020-2023*.⁴¹
10. ATSDR Hadnot Point map.⁴²
11. The Camp Lejeune *Globe*, 10 August 1972.⁴³
12. The Camp Lejeune *Globe*, 21 September 1961.⁴⁴
13. Naval Medical Center Camp Lejeune entry for "Mainside Branch" Medical Clinic (Building 15).⁴⁵
14. Map specifying the "Main Side C Store."⁴⁶

³⁶ issue available at https://archive.org/details/sim_leatherneck_1955-04_38_4

³⁷ https://republicans-science.house.gov/_cache/files/e/2/e2d4a1f2-d82e-45e9-b284-449754bf6aff/6917E476C613D3421FFAF940A8975922.091610-partain.pdf

³⁸ <https://www.veterans.senate.gov/services/files/071BA053-6068-4305-9337-5243828435C4>

³⁹ <https://www.tftptf.com/>

⁴⁰ <https://www.tftptf.com/5873.html>

⁴¹ <https://stars.library.ucf.edu/etd2020/543/>

⁴² https://www.atsdr.cdc.gov/camp-lejeune/media/pdfs/2024/10/masterplate_hadnotpoint.pdf

⁴³ <https://www.dvidshub.net/publication/issues/60724>

⁴⁴ <https://www.dvidshub.net/publication/issues/61751>

⁴⁵ <https://camp-lejeune.tricare.mil/Branch-Medical-Clinics>

⁴⁶ https://www.mcicest.marines.mil/portals/33/documents/contracting/contracting_map.pdf

15. Photo of “Main Side C-Store” from Base Exterior Architectural Plan (BEAP), Marine Corps Base (MCB) Camp Lejeune and Marine Corps Air Station (MCAS) New River.⁴⁷
16. The Camp Lejeune *Globe*, 26 July 1962.⁴⁸
17. The Camp Lejeune *Globe*, 11 August 1983.⁴⁹
18. The Camp Lejeune *Globe*, 4 December 1975.⁵⁰
19. The Camp Lejeune *Globe*, 30 April 1964.⁵¹
20. The Camp Lejeune *Globe*, 3 June 1965.⁵²
21. The Camp Lejeune *Globe*, 10 October 1985.⁵³
22. The Camp Lejeune *Globe*, 5 October 1972.⁵⁴
23. The Camp Lejeune *Globe*, 20 January 1956.⁵⁵
24. The Camp Lejeune *Globe*, 8 October 1981.⁵⁶
25. The Camp Lejeune *Globe*, 11 May 1978.⁵⁷
26. Photo from Mike Partain archives.⁵⁸
27. Dr. Mike Gros – Mike Magner, *A Trust Betrayed: The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families* (DaCapo Press, 2014), 113-117.
28. Deposition of Terry Dyer, 10 April 2024 (previously produced).
29. Stetson University Bogue Field project, <https://www.stetson.edu/law/veterans/bogue-field.php>.
30. Exhibit 9 from David Greer Deposition (previously produced).

⁴⁷ <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/BEAP.pdf>

⁴⁸ <https://www.dvidshub.net/publication/issues/61612>

⁴⁹ <https://www.dvidshub.net/publication/issues/59319>

⁵⁰ <https://www.dvidshub.net/publication/issues/60210>

⁵¹ <https://www.dvidshub.net/publication/issues/61312>

⁵² <https://www.dvidshub.net/publication/issues/61241>

⁵³ <https://www.dvidshub.net/publication/issues/58953>

⁵⁴ <https://www.dvidshub.net/publication/issues/60716>

⁵⁵ <https://www.dvidshub.net/publication/issues/62469>

⁵⁶ <https://www.dvidshub.net/publication/issues/59545>

⁵⁷ <https://www.dvidshub.net/publication/issues/59993>

⁵⁸ Copy available at <https://www.ucf.edu/news/ucf-history-grad-helps-secure-justice-for-military-families-exposed-to-toxic-water/>

31. Deposition of General Anthony Charles Zinni, 28 May 2024 (previously produced).
32. *The Globe*, 18 June 1981.⁵⁹
33. *The Globe*, 15 October 1987.⁶⁰
34. Deposition of Lt. Colonel William Walters, 20 May 2024 (previously produced).
35. Deposition of James Claude Branham, Jr., Salisbury, North Carolina, 16 October 2024.
36. Demonstrative photo of “cattle car.”⁶¹

⁵⁹ <https://www.dvidshub.net/publication/issues/59564>

⁶⁰ <https://www.dvidshub.net/publication/issues/58564>

⁶¹ https://www.reddit.com/r/USMC/comments/11w8u9s/i_bet_you_know_what_this_is/?rdt=60395.

EXHIBIT 4

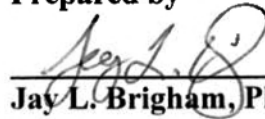
Expert Report of Jay L. Brigham, Ph.D.

**In the United States District Court
for the Eastern District of North Carolina
Southern Division**

Case No.: 7:23-CV-897

Camp Lejeune Water Litigation

Prepared by

A handwritten signature in black ink, appearing to read "Jay L. Brigham", is written over a horizontal line.

**Jay L. Brigham, Ph.D., Managing
Partner**

**Morgan, Angel, Brigham and
Associates, L.L.C.
Washington, D.C.
February 7, 2025**

Table of Contents

I. Introduction and Opinions	p. 1
II. Objectives and Methodology	p. 3
III. Narrative Shortcomings of Dr. Longley's Report: Disregard of the Non-Contaminated Areas; Lack of Citations, Corroborating Evidence, and Extrapolations and Assertions; and Misattributed and Misrepresented Sources	p. 6
A. Introduction	p. 6
B. Dr. Longley's Sole Focus on Hadnot Point and Tarawa Terrace Hinders His Ability to Provide an Accurate Picture of Water Use and Exposure to Contaminated Water on the Base	p. 7
C. Lack of Citations, Corroborating Evidence, and Extrapolations and Assertions	p. 8
D. Misattributed and Misrepresented Sources	p. 15
IV. Camp Lejeune is Larger than Hadnot Point and Tarawa Terrace; the Other Areas of the Base Are Not Alleged to Have Contamination	p. 19
A. Introduction	p. 19
B. Montford Point / Camp Johnson	p. 20
C. Camp Geiger	p. 21
D. Marine Corps Airfield / Marine Corps Air Station New River	p. 22
E. Rifle Range at Stone Bay, Onslow Beach, and Courthouse Bay	p. 23
V. Many Family Housing Areas Did Not Receive Contaminated Water and Many of the Activities of Daily Living Dr. Longley Discusses Took Place in Non-Contaminated Areas of the Base	p. 25
A. Family Housing and Activities	p. 25
B. School and Pools	p. 26
VI. Off-Base Housing	p. 27
VII. Marines and Their Families Could Leave Camp Lejeune and Use Off-Base Services and Participate in Off-Base Recreational Opportunities	p. 29
VIII. Filling of Water Buffaloes Away From Hadnot Point	p. 32
IX. Cars at Camp Lejeune	p. 36
X. Conclusion	p. 39

I. Introduction and Opinions

I have prepared this expert witness report at the request of the Environmental Torts Litigation Section of the Civil Division of the United States Department of Justice. As I noted in my “Phase I” expert witness report dated December 9, 2024, the Department of Justice first contacted me in March 2024 regarding this case. Morgan, Angel, Brigham and Associates, LLC, (Morgan Angel Brigham) and I, as the expert witness, signed a contract with the Department of Justice to review historical documents and write an expert witness report examining historical issues pertinent to the distribution of water to the areas of Marine Corps Base Camp Lejeune (MCBCL or Camp Lejeune), relevant to the current litigation, during the Camp Lejeune Justice Act (CLJA) “Statutory Period,” from August 1953 to December 1987.

Based on my review of Dr. Longley’s “Phase II” expert witness report of December 7, 2024, I offer the following opinions. I may revise or supplement my opinions as the litigation progresses or should new information be made available to me.

1. Toward the end of his report, in “XIX. Appendix 1: Research Methodology,” Dr. Longley discusses the methodological approach he used when conducting research for his report. I take issue with Dr. Longley’s application of the methodology he outlines, given his portrayal, description, and account of facts and events throughout his narrative, and his use and citation of sources. In short, Dr. Longley does not consistently follow the accepted practices that historians use in writing narratives and expressing their findings. Notably, in numerous places, Dr. Longley fails to provide citations for his assertions at all. In other places, he fails to provide corroborating documentation for some of his assertions. Additionally, he extrapolates from a single document representing a snapshot in time to characterize an event or experiences over time at Camp Lejeune. Furthermore, in at least three instances, Dr. Longley entirely and egregiously misrepresents his source material.

2. Dr. Longley’s six findings in his expert report dated December 7, 2024, are broad generalizations, written to encompass the entirety of Marine Corps Base Camp Lejeune. By his own admission, however, he only examines the Hadnot Point and Tarawa Terrace areas. Although Hadnot Point is the center of many activities at Camp Lejeune, there are other areas of the base where important activities occur, and Marines lived and worked and otherwise spent time on these other areas of the base.

3. More specifically, and of concern, Dr. Longley’s findings 4, 5, and 6 examine water usage only at Hadnot Point and Tarawa Terrace. Although Dr. Longley discusses the Holcomb Boulevard area of Hadnot Point, he fails to mention that the Holcomb Boulevard Water Treatment Plant (WTP) went online in 1972 and only occasionally pumped contaminated water to its service area for the remainder of the statutory period. As I note in my December 9, 2024,

report, there were several Camp Lejeune WTPs that serviced areas that are referred to as “Non-Contaminated Areas” of the base, because the ATSDR did not conclude, and Plaintiffs do not allege that WTPs serving those areas were ever contaminated. Dr. Longley does not dispute this. These areas are: Montford Point / Camp Johnson, Camp Geiger, Marine Corps Air Station New River (MCAS New River), Rifle Range at Stone Bay, Onslow Beach, and Courthouse Bay. For most of the statutory period, each of these areas had its own WTP that serviced it, or in the case of two such Non-Contaminated Areas were serviced by the same WTP (Camp Geiger and MCAS New River after 1976). In the second sentence of finding 6, Dr. Longley describes Marines and their families’ activities of daily living including attending school, swimming in pools, and socializing at clubs; yet he does not take into consideration that when Marines and their families engaged in these activities away from Hadnot Point or Tarawa Terrace, they were not exposed to contaminated water. Similarly, in finding 5, in which Dr. Longley notes that Marines were exposed to much water when they lived in barracks and worked in “motor pools and mechanic buildings, and scullery and mess hall facilities,” he does not account for the fact that Marines who lived and worked in the Non-Contaminated Areas were not exposed where they lived, while eating or working in mess halls, or while working at the motor pool. Nor were Marines and their families exposed to contaminated water in the Holcomb Boulevard service area after its WTP went online in 1972, except when the Hadnot Point WTP occasionally furnished water to the Holcomb Boulevard area.

4. Dr. Longley does not adequately address the fact that some Marines and their families lived in off-base housing that did not receive water from on-base water treatment plants. Likewise, he does not address that Marines and Marines’ family members could go off-base for social and recreational purposes. Jacksonville business establishments and real estate companies advertised in the Camp Lejeune base guides and, beginning in the 1980s, *The Globe*, suggesting that the business owners considered Camp Lejeune Marines as potential customers.

5. The portion of Dr. Longley’s finding 6 discussing water buffaloes does not take into consideration the likelihood that water buffaloes were, at times, filled with non-contaminated water away from Hadnot Point. In fact, although Dr. Longley, in other parts of his report, cites certain portions of General Anthony Zinni’s deposition of May 28, 2024, he fails to cite the part of General Zinni’s testimony that notes there was a water buffalo filling station at Camp Geiger. And although Dr. Longley cites Plaintiff Gary McElhiney, Sr.’s deposition in his report, he does not reference Mr. McElhiney’s statement that a water filling station was located at Courthouse Bay. Similarly, when Dr. Longley selectively cites Plaintiff Benjamin Urquhart’s deposition, he fails to include Mr. Urquhart’s testimony that there were water buffalo filling stations in numerous locations on base.

6. Dr. Longley mischaracterizes the modes of transportation at Camp Lejeune, most notably regarding the use of privately-owned vehicles. As discussed in this report, at various times

during the statutory period, the number of privately-owned cars at Camp Lejeune exceeded 20,000.

II. Objectives and Methodology

During my first discussions with the DOJ in March 2024 and after signing a contract to work on this project, the DOJ asked me to write a base-wide history “examining historical issues pertinent to the distribution of water to the areas of Camp Lejeune relevant to the current litigation, during the CLJA ‘statutory period.’”¹ As part of that work, I was asked to examine the water systems that operated before and during the statutory period, including the areas of the base that each water system served. My examination of the various areas of the base included the housing for troops and families, as well as the recreational opportunities, amenities, and schools operated at MCBCL beyond Hadnot Point and Tarawa Terrace. I was also asked to look for information about water trailers, or water buffaloes, that provided water to Marines during field training activities at Camp Lejeune. I was not asked to undertake a technical analysis of how water buffaloes were filled or how they worked. Finally, the DOJ asked me to look for and examine historical documents concerning the opening of the ABC One-Hour Cleaners.

To provide credence to my first opinion in this report, I describe here the methodology and historical standards I employ in my work. The first thing I did after my retention by the DOJ in March of 2024 was to review secondary sources on the history of the Marine Corps generally and Camp Lejeune specifically. This review included books such as Allan R. Millett, *Semper Fidelis, The History of the United States Marine Corps, Revised and Expanded Edition* (New York: The Free Press, 1980, 1991); USMC, *Semper Fidelis, A Brief History of Onslow County, North Carolina, and Marine Corps Base Camp Lejeune*, (2004); G. Carraway, *Camp Lejeune Leathernecks, Camp Lejeune, N.C., Marine Corps’ Largest All-Purpose Base* (New Bern, N.C.: Owen G. Dunn, 1946); and Alan D. Watson, *Onslow County, A Brief History* (Raleigh, NC: North Carolina Department of Cultural Resources, 1995). As part of this work, I also reviewed books on the Camp Lejeune water contamination that is at the center of the CLJA. Books that I reviewed include: Mike Magner, *A Trust Betrayed, The Untold Story of Camp Lejeune and the Poisoning of Generations of Marines and Their Families* (Philadelphia, PA: Da Capo Press, 2014); Robert O’Dowd, *A Few Good Men, Too Many Chemicals, Toxic Exposure of US Marines and Government Lies* (Odowd Publishing, 2019); and George Swimmer, *Deadly S.N.A.F.U., Marine Corps Base Camp Lejeune, N.C. and Joint Base Pearl Harbor-Hickman, Hawaii* (George Swimmer, 2024).

¹ Expert Report of Jay L. Brigham, Ph.D., In the United States District Court for the Eastern District of North Carolina, Southern Division, Case No.: 7:23-CV-897, Camp Lejeune Water Litigation, December 9, 2024, (Brigham Report, 12/9/2024), 1.

While my review of secondary sources was underway, my staff and I started to review documents on the internet such as Camp Lejeune “History,”² United States Marine Corps History Division, “End Strengths: 1795-2015,”³ and reports prepared by the Agency for Toxic Substances and Disease Registry (ATSDR) including ATSDR, “Summary of the Water Contamination Situation at Camp Lejeune,” 11/12/2024;⁴ and M. Maslia, et al., *Reconstructing Historical VOC Concentrations in Drinking Water for Epidemiological Studies at a U.S. Military Base: Summary of Results, Water*, 8, 449 (2016).⁵ I also reviewed Marine Corps publications discussing the Corps’ experience in Vietnam such as J. Shulimson, *U.S. Marines in Vietnam, An Expanding War, 1966* (History and Museum Division, 1982); and G. Dunham and D. Quinlan, *U.S. Marines in Vietnam, The Bitter End* (History and Museum Division, 1990). I provided electronic copies of these reports as part of my reliance documents. I provided a list of the books I reviewed as part of my reliance documents.

I visited Marine Corps Base Camp Lejeune from May 21, 2024, to May 23, 2024. On May 21, 2024, I went to the Harriotte B. Smith Library located on Marine Corps Base Camp Lejeune and reviewed material in the stacks on the history of Camp Lejeune and the Marine Corps.⁶ The remaining days, I went on a USMC guided tour of Camp Lejeune. As part of the site tour, we visited Onslow Beach, which gave me an indication of the size of the base east of the New River. We also passed through several training areas, including areas where live-fire training was taking place. On the tour we visited one of the remaining H-style barracks at Hadnot Point, the parade grounds, warehouses and motor pools throughout the base; we also drove by the Hadnot Point and Holcomb Boulevard Water Treatment Plants, and the Camp Lejeune High School. After lunch at one of the former Paradise Point officer clubs, now known as The Club at Paradise Point, we visited the former site of the ABC One-Hour Cleaners, the Tarawa Terrace housing area, and Montford Point / Camp Johnson before exiting the base to cross New River via Highway 17. After a long drive to the western side of the base, we visited Camp Geiger, MCAS New River, and several more training areas. Photographs of the visit, including one of me standing next to a M149A2 water buffalo in a motor pool on MCAS New River, have been

² <https://www.Lejeune.marines.mil/visitors/history.aspx>.

³ <https://www.usmcu.edu/Research/Marine-Corps-History-Division/Research-Tools-Facts-and-Figures/End-Strengths/>.

⁴ <https://www.atsdr.cdc.gov/camp-lejeune/about/summary-of-the-water-contamination-situation.html>.

⁵ CLJA_ATSDR_BOVE_HC_0000004039.

⁶ On June 7, 2024, I participated in a virtual meeting with the head librarian at the Harriotte B. Smith Library who showed me and the DOJ several base guides. Later in the summer, one of my staff members returned to Camp Lejeune with the DOJ to image the base guides.

produced under the protective order due to the sensitivity of photographs on military installations.⁷

In late June, I participated in a telephone call with Mr. John Lyles, Chief Archivist of the Marine Corps History center at Quantico, VA, after which my staff collected command chronologies for many of the Marine Units stationed aboard Camp Lejeune. During June and throughout the summer and into the fall, under my direction, my staff visited the National Archives and Records Administration (NARA) in College Park, MD, where they reviewed Marine Corps and Navy records. Staff also visited the NARA facility in the District of Columbia, and I contacted the NARA facility in Ellenwood, GA, to inquire about Marine Corps records. The staff at the Ellenwood facility provided me with information regarding where to locate *The Globe* online. Also under my direction, members of my staff conducted research at the Library of Congress.

In drafting my report, I relied on the documents that I and my staff reviewed and collected as well as documents that the DOJ had acquired as part of the CLJA litigation. When writing expert witness reports, I endeavor to use primary and contemporaneous documents. For example, when I was examining the construction of Camp Lejeune in the early 1940s, I used the three base completion reports issued during that time period. The base completion reports are contemporaneous documents since they were prepared during the time of the base's construction and included a description of the first two water systems built on base at Camp Geiger and on Hadnot Point. Another contemporaneous source that I used was the base weekly newspaper *The Globe*, published by the Marine Corps. *The Globe* provides information on what was occurring at the base. Other contemporaneous sources that I reviewed and used to formulate my opinions included the base telephone directories, extant base guides, and existing conditions maps. I used articles and other information from *The Globe* to support my opinions about the various areas of Camp Lejeune and when Marines and their families used water from contaminated as well as non-contaminated WTPs. I also used local newspapers and materials in my exploration of the origins of the ABC One-Hour Cleaners in Jacksonville.

I do not consider deposition testimony or declarations to be oral histories. The reliance on memory in both must always be taken into consideration. Samuel Redman addressed human memory in his work *Historical Research in Archives: A Practical Guide*, published by the American Historical Association. Redman wrote: "Human memory, however, is both fallible and malleable. Oral histories, should, therefore be read carefully and critically in the light of

⁷ CLJA_PHOTOS_0000000004, see also CLJA_PHOTOS_0000000001–0000000058.

evidence from other available sources.”⁸ This statement that memory is “fallible and malleable” in the context of oral histories applies to deposition testimony and declarations as well.

Throughout my December 9, 2024, report, I strove to provide citations for the facts I referenced, to use corroborative documentation for the assertions I made, and, to the extent possible, to review sources discussing each area of the base during all decades of the statutory period. By doing so, I provide the readers of the report with a roadmap for understanding how I arrived at my opinions.

III. Narrative Shortcomings of Dr. Longley’s Report: Disregard of the Non-Contaminated Areas; Lack of Citations, Corroborating Evidence, and Extrapolations and Assertions; and Misattributed and Misrepresented Sources

A. Introduction

I find Dr. Longley’s narrative suffers several shortcomings, including a failure to show readers the totality of Camp Lejeune, and methodological issues in the portrayal of the research and findings. First, Dr. Longley has an almost complete disregard for the Non-Contaminated Areas of the base and, as such, his narrative provides an incomplete picture of life at Camp Lejeune during the statutory period. Second, and perhaps more egregious for a professional historian, Dr. Longley’s narrative suffers from a lack of citations or incomplete citations, a lack of corroborating evidence, and a failure to consider changes over time at Camp Lejeune. As a result, Dr. Longley makes several assertions and/or draws inferences that cannot be justified by his documentation. Third, in at least three instances, Dr. Longley provides a complete mischaracterization of his source material. As a result of these shortcomings, I conclude that his findings should be met with less trust and greater uncertainty. Because of these flaws, and the existence of sources that lead me to different conclusions, I respectfully disagree with a number of Dr. Longley’s findings in his report.

⁸ S. Redman, *Historical Research in Archives: A Practical Guide* (American Historical Association, 2013), 58. Redman teaches at the University of Massachusetts, Amherst, <https://www.umass.edu/history/about/directory/samuel-j-redman>. Also see Expert Witness Report of Ari Kelman, Ph.D., February 7, 2025, In the United States District Court for the Eastern District of North Carolina, Southern Division, Case No.: 7:23-CV-897, Camp Lejeune Water Litigation (Kelman Report, 2/7/2025).

B. Dr. Longley's Sole Focus on Hadnot Point and Tarawa Terrace Hinders His Ability to Provide an Accurate Picture of Water Use and Exposure to Contaminated Water on the Base

In the Introduction, on the second page of his report, Dr. Longley lays out the purpose of his report:

The purpose of this report is to provide historical information informed by my expertise that may be of relevance for purposes of understanding the historical use of the Marine Corps Base Camp Lejeune as it related to water consumption and use by those on the base.

I have sought to frame my historical investigation by reviewing facts, documents, and oral testimony and history that can inform the topic of the water use at the base by the Marines and their dependents.⁹

In contrast to his stated purpose, Dr. Longley does not actually examine water use on the totality of the base, nor does he provide an accurate picture of exposure to contaminated water, given that he focused on only two areas of the base. Indeed, he barely mentions—let alone discusses—six of the other seven areas and failed to recognize the effect of the Holcomb Boulevard WTP coming online in 1972. To provide a full picture of water use on the base during the statutory period, Dr. Longley would have needed to examine water sources and water usage at the base beyond Hadnot Point and Tarawa Terrace, including an examination of when the other seven water treatment plants were in operation during the statutory period, an examination which I undertook in my report.¹⁰ His failure to look at the operation dates of the water treatment plants is particularly significant when analyzing exposure to those using the water from the Holcomb Boulevard WTP, which began operating in 1972 and continued for most of the remaining statutory period through 1987. Except for infrequent occurrences, this WTP supplied uncontaminated water to Hadnot Point north of Wallace Creek, referred to in my December 9, 2024, report as the Holcomb Boulevard area, which included the family housing areas of Berkeley Manor, Watkins Village, Midway Park, and other housing such as the officers' quarters

⁹ *In re Camp Lejeune Water Litig.*, Master Case No. 7:23-CV-897 (E.D.N.C.), Expert Report of Dr. Kyle Longley, December 7, 2024 (Longley Report, 12/7/2024), 2.

¹⁰ Brigham Report, 12/9/2024, 23, Table 1 and Section V.C, 56-84.

and barracks at Paradise Point.¹¹ I will discuss this issue in more detail in Section IV of this report.

By way of another example, on page 16 of his report and in “Section XVIII. Recapitulation of Findings,” Dr. Longley uses the phrase “County Seat” to describe Hadnot Point as the area where Marines and their families sought “medical services, food and other goods, entertainment, and cultural experiences, schools, and for many other reasons.”¹² Once, at the end of the report, he describes other areas of the base “such as Tarawa Terrace, Holcomb Boulevard, Camp Johnson / Montford Point” as “neighborhoods” near Hadnot Point, but does not discuss who lived and worked in these neighborhoods. In the footnote to that sentence, he notes that other “important communities and areas on the base included Courthouse Bay (location of Marine Corps engineer schools), Onslow Beach (where recon was historically), New River (where an air station is located), Camp Geiger (site of infantry training), and the Rifle Range area (a functional rifle range with a small but permanent staff).”¹³ Yet what is written in this footnote is the extent of his discussion of Courthouse Bay, Onslow Beach, MCAS New River, Camp Geiger, and the Rifle Range; thus, similar to his discussion in the text, Dr. Longley does not discuss who lived (temporarily or permanently), worked, or trained in these areas. As I discussed in my December 9, 2024, report, most of these areas had the same types of services and other amenities available at Hadnot Point (albeit on a smaller scale), especially Montford Point / Camp Johnson, Camp Geiger, and MCAS New River. Thus, Dr. Longley’s finding that Hadnot Point was the “County Seat” is incomplete. I will discuss these areas in more detail in Section IV of this report.

C. Lack of Citations, Corroborating Evidence, and Extrapolations and Assertions

Dr. Longley’s report is marred at times by incorrect or missing citations to some of the photographs he uses and by a lack of citations and/or corroborating evidence for some of the assertions that he makes. As discussed by Dr. Ari Kelman in his February 7, 2025, report, historians have a methodological responsibility to provide documentation for their assertions. Without citations and corroborating evidence, it is difficult to evaluate some of Dr. Longley’s findings.¹⁴ The American Historical Association (AHA) notes in its “Statement of Standards on Professional Conduct (updated 2023):” “Honoring the historical record also means leaving a

¹¹ Brigham Report, 12/9/2024, 7 and footnote 9.

¹² Longley Report, 12/7/2024, 16, 43.

¹³ Longley Report, 12/7/2024, 43-44 and footnote 123.

¹⁴ Kelman Report, 2/7/2025.

clear trail for subsequent historians to follow.”¹⁵ The AHA continues: “The trail of evidence in bibliographies, notes . . . and other forms of scholarly apparatus is crucial not just for documenting the primary sources on which a work of history depends, but the secondary sources as well.”¹⁶ A lack of citations prevents a work of scholarship from providing “a clear trail” for other historians to follow. The AHA further notes:

Finally, the trail of evidence left by any single work of history becomes a key starting point for subsequent investigations of the same subject, and thus makes a critical contribution to our collective capacity to ask and answer new questions about the past. For all these reasons, historians pride themselves on the accuracy with which they use and document sources. The sloppier their apparatus, the harder it is for other historians to trust their work.¹⁷

Relatedly, Dr. Longley often uses a single citation or document related to a distinct point in time and then broadly extrapolates from the finding, applying it to the entire statutory period. As Professor Zachary M. Schrag writes in *The Princeton Guide to Historical Research*, “history has been defined as ‘the analysis of change over time.’ Accordingly, historians seek sources that document this change.”¹⁸ Relying on a single document might prevent such an analysis. It is inappropriate for Dr. Longley to draw broad conclusions covering decades of time by relying on a single document focused on a specific point in time.

Professor Schrag discusses the importance of providing accurate citations and including corroborative documents when writing history. He first cites historian Richard White who noted the historian’s desire “to tell ‘the truth,’” although the historian usually ends up “providing evidence for what we say so others can check for themselves.”¹⁹ Schrag then writes, “the real standard is not accuracy but replicability, meaning that, as in a laboratory science, ‘a study can

¹⁵ American Historical Association, “Statement on Standards of Professional Conduct (updated 2023),” <https://search.app/BtE9gymqWDvzBEEL6>, pdf page 3.

¹⁶ “American Historical Association, Statement on Standards of Professional Conduct (updated 2023),” <https://search.app/BtE9gymqWDvzBEEL6>, pdf page 3.

¹⁷ “American Historical Association, Statement on Standards of Professional Conduct (updated 2023),” <https://search.app/BtE9gymqWDvzBEEL6>, pdf page 3.

¹⁸ Z. Schrag, *The Princeton Guide to Historical Research*, (Princeton, NJ: Princeton University Press, 2021), (Schrag, *The Princeton Guide*), 221. For “the analysis of change over time,” Schrag cites Social Science Research Council, *The Social Sciences in Historical Study: A Report of the Committee on Historiography*, (New York: Social Science Research Council, 1954), 24.

¹⁹ Schrag, *The Princeton Guide*, 27.

be repeated because a detailed study methods description is available.”²⁰ In the writing of history, this means providing accurate citations and, when possible, including additional corroborating documents to substantiate assertions and findings.

Professor Schrag’s discussion raises the question of when a historian should use citations. In 1989, historian Anthony Brundage wrote, *Going to the Sources, A Guide to Historical Research and Writing* and addressed this issue of when historians should use footnotes.²¹ Brundage included a section on footnoting, asking the question: “Should each ‘fact’ be footnoted?”²² He continued: “The purpose of footnoting is to allow your reader to check on the accuracy of your quotations, citations, and assertions. You should not footnote a major fact that is well known and unchallenged, such as ‘President Lincoln was assassinated by John Wilkes Booth . . .’”²³ Brundage continued that it is not “necessary to footnote most of those smaller facts about events or details of a person’s life that the reader can easily check . . . But when such a fact is being emphasized or used as evidence, and certainly when it is in dispute, it needs to be footnoted.”²⁴

Below I provide eight examples of Dr. Longley’s lack of citations and corroborating evidence to support his findings, as well as his extrapolations and assertions, which, in my opinion, make his findings unreliable and cast doubt on other findings in his report.

1) In Section IV on pages 9-11 of his report, Dr. Longley discusses water usage in the United States in general, and at Camp Lejeune specifically, from 1942 through the 1980s. In this section of seven paragraphs, Dr. Longley cites only four sources: (1) a general reference to all of the ATSDR reports, (2) deposition testimony of one individual Plaintiff, (3) an “oral history” Dr. Longley conducted with this same Plaintiff, and (4) a 1999 Army planning guide. These sources do not substantiate the assertions and summaries in Dr. Longley’s narrative. To illustrate, I note that, in fact, in his first three paragraphs of this section, he fails to provide any citations at all. In these paragraphs he discusses the construction of the base, the use of water on base, and water consumption at the base and “throughout the country” without providing any citations. This

²⁰ Schrag, *The Princeton Guide*, 27. Schrag’s quote is from Rik Peels and Lex Bouter, “The Possibility and Desirability of Replication in the Humanities,” *Palgrave Communications* 4 (2018), 2.

²¹ A. Brundage, *Going to the Sources, A Guide to Historical Research and Writing*, 6th ed., (Hoboken, NJ: John Wiley & Sons, Inc., 2018) (Brundage, *Going to the Sources*). Brundage is professor emeritus at the California State Polytechnic University, <https://anthonybrundage.academia.edu/>.

²² Brundage, *Going to the Sources*, 125.

²³ Brundage, *Going to the Sources*, 125.

²⁴ Brundage, *Going to the Sources*, 125.

leaves the reader without a single source to check for the information he discusses in these paragraphs. In the fourth paragraph, Dr. Longley discusses the Camp Lejeune water supply that started in 1942 in a singular sense. While he notes “new water treatment plants [were] constructed” over the years, he does not elaborate or provide any context, but merely points the reader, with one sweeping citation, to the “voluminous publications of the ATSDR on the subject of the base and its water.”²⁵

2) In the last two paragraphs on page 10, Dr. Longley cites a video deposition of Allan Howard and an “oral history” that he later conducted with Mr. Howard to support his assertion that water usage in the 1950s through the 1980s was different from today. While this might be the case, a more robust discussion, one that included more corroborating sources, would better support this contention rather than a reliance on the oral history of one individual who was at Camp Lejeune for a specific period of time, from roughly 1977 to 1981, and who is a Plaintiff in the litigation.²⁶

This passage also highlights why Dr. Longley’s failure throughout the report to discuss the WTPs and systems other than those at Hadnot Point and Tarawa Terrace limits the credibility of his assertions. I do not doubt that people drank tap water or used water in mixing tea and coffee and other drinks. However, when those activities occurred away from Hadnot Point and Tarawa Terrace I and II, the water most likely would have come from a non-contaminated WTP. Dr. Longley writes in the second to the last paragraph on page 10 that: “There were even hoses across the base to distribute water from the main water supply to stations where Marines could fill up canteens and jugs,” without providing a citation. Given that water is at the center of the Camp Lejeune Justice Act this is a serious omission. In the last paragraph of the section, Dr. Longley discusses a 1999 Army study on water consumption. While water is certainly “crucial to a functioning military operation,” additional documentation from the statutory period is necessary to draw conclusions about what may have occurred decades earlier and would bolster this claim.

3) Throughout Dr. Longley’s report, there are numerous images and pictures that have no citations or incomplete citations. Examples of images and pictures that have no citations can be found on pages 3, 7, 8, 10, 11, 13, 15, 17, 18, 21, 24, 25, 31, 32, 34, and 36 of his report. Some pictures are cited “Courtesy of the U.S. Marine Corps Archives,” but lack additional location information that is needed for a person to view the original pictures. See for example pictures on pages 8, 12, 20, and 26 of Dr. Longley’s report.

²⁵ Longley Report 12/7/2024, 9-11 and footnote 19. As I discuss in my December 9, 2024, report there were nine different water supply systems at Camp Lejeune during the statutory period, Brigham Report, 12/9/2024, 5 and 23.

²⁶ Longley Report, 12/7/2024, 9-10. See also Deposition of Allan Howard, 2/16/2024, 12-15.

4) Section V.b, pages 11-12, “All-Encompassing Nature of the Base,” is comprised of four paragraphs and includes only one citation at the end of the fourth paragraph. In the first paragraph, Dr. Longley states that the size of the base required large numbers of workers, including civilians. In the second paragraph he writes that the Marine Corps provided security to protect base occupants from crimes and had its own security system. In the third paragraph, he discusses the Marine Corps’ desire to keep Marines on base in part to prevent clashes “between sometimes rowdy Marines and locals” as well as to keep entertainment dollars on base.

In the fourth paragraph, Dr. Longley further discusses the Corps’ goal of keeping Marines on base when he references on-base “entertainment, recreation, and socialization” opportunities. In this paragraph, Dr. Longley quotes the author of a 1955 article in the *Leatherneck* magazine.²⁷ While the quote that Dr. Longley uses in his report is the first sentence of the article, there is nothing else in the article to support the rest of his multi-paragraph discussion.²⁸ Thus, the article does not provide support for the broad statements in this section of Dr. Longley’s report. While the article does discuss recreational opportunities at Camp Lejeune in 1955, to establish continued recreational opportunities from subsequent decades, additional documentation is needed to establish the validity of his assertion that this was representative of the entire statutory period.

There is, however, information in this article that supports opinion 2 in my December 9, 2024, report about recreational opportunities at other areas of the base and my opinion 4 in this report that Marines participated in off-base recreational activities. For example, the article’s author noted that: “Service Clubs, nee Slopchutes, dot every area on the station and house snack bars, bowling alleys, pool, card, game and ping-pong tables and branches of the big central library.”²⁹ After mentioning the plush “niteries” at Hadnot Point, the author continued: “Camp Geiger and Montford Point also boast spas for the top three paygraders.”³⁰ Still later the article refers to the 14 theaters on base as well as off-base opportunities in Jacksonville: “if the camp is ‘closed,’ the Camp Lejeune Highway is lighted with the neon facades of the drive-in restaurants.”³¹

²⁷ Longley Report 12/7/2024, 12, footnote 24. Longley incorrectly cites the article title as “Recreation (at Camp Lejeune).”

²⁸ Longley Report 12/7/2024, 11-12, footnote 24.

²⁹ R. Suhosky, “Lejune Recreation,” *Leatherneck*, 4/1955, 27.

³⁰ R. Suhosky, “Lejune Recreation,” *Leatherneck*, 4/1955, 27.

³¹ R. Suhosky, “Lejune Recreation,” *Leatherneck*, 4/1955, 27.

5) In Section V.c of his report, on page 13, Dr. Longley also discusses “The Centrality of Hadnot Point” and to support the information in his first paragraph, he cites—in his footnote 25—to the January 2, 1970, edition of *The Globe*. He does not provide the reader with the name of an article or a page number as a reference point, but a review of the entire edition of the journal shows that there are certainly articles and announcements that discuss activities at Hadnot Point. However, I notice that this issue of *The Globe* also contains, even though Dr. Longley does not acknowledge this in his narrative, several articles and announcements that discuss activities elsewhere on the base, including Non-Contaminated Areas.³² In Dr. Longley’s following paragraph (on page 13), he lists the various activities at Hadnot Point available to Marines and their families, without discussing the activities available elsewhere on base. He also writes that: “For many young Marines, coming from modest economic backgrounds and rural regions, the base offered more amenities than they had experienced in their young lives.” Although this assertion is likely accurate, without a citation the reader cannot independently determine the veracity of the assertion.

6) In Section VI, pages 17-20, Dr. Longley discusses “The Mainside Barracks at Hadnot Point.” Here he discusses water usage and volume in the barracks for personal use, cleaning of weapons, cleaning the barracks and doing laundry. While it is possible that the described activities occurred at the Hadnot Point Barracks that received water from the Hadnot Point Water Treatment Plant, his sources for this discussion include only declarations and deposition transcripts from two Plaintiffs in this litigation who were at Camp Lejeune in the 1970s and an “oral historian statement.” These depositions were taken in 2024, and the declarations were written in 2024, some 40 years after these individuals were at Camp Lejeune. Without additional source material, Dr. Longley cannot make assertions about what transpired at other times during the 34-year statutory period to corroborate his assertions regarding water use.

In support of his claim that “sometimes the showers in the barracks were even left on when no one was in them” (page 19), Dr. Longley cites to what, upon further examination, is an opinion piece from the July 19, 1979, edition of *The Globe*. In this commentary by Russ Thurman, the author, who is writing during the energy crisis of the late 1970s, describes “The

³² *The Globe*, 1/2/1970, Brigham_USA_0000022897. Articles and announcements for activities at Hadnot Point include “Prenatal Classes Will Begin” (page 4), numerous sporting events (pages 8-9), and a “Movie Schedule” and “Activities Calendar” (page 11). Articles and announcements for other areas of Camp Lejeune include an announcement of an auction at the Marine Corps Air Station (page 5), the “Movie Schedule” on page 11 listing movies that will be shown at Courthouse Bay, Rifle Range, Montford Point (indoor and outdoor), Camp Geiger, the Air Station, and Onslow Beach in addition to theaters at Hadnot Point. The “Activities Calendar” includes activities at Camp Geiger and Montford Point as well as Hadnot Point. Also on page 11 is an announcement that the musician George Doerner and his orchestra would be performing five shows at Camp Lejeune including one at the Camp Geiger theater, one at the Montford Point Service Club, and one at the Courthouse Bay Service Club. Two shows would be held at Hadnot Point venues.

American Crisis.” Thurman writes: “And those who live in the barracks are no saints when it comes to wasting energy. If you took the time to walk through any barracks on base, you’d find showers on and lights burning when no one is around.”³³ Given the context, the claim that showers were left on “all of the time” appears to be hyperbole.³⁴

7) In Section VIII, pages 24-28, Dr. Longley examines family housing and activities and references Hadnot Point and Tarawa Terrace. Although many of the daily activities that Dr. Longley discusses in this section of his report likely occurred, he relies mostly on the declaration and deposition of one individual Plaintiff, Ms. Jacqueline Tukes, who testified she resided at Camp Lejeune from June 1985 to July 1985 and December 17, 1985 to January 8, 1987,³⁵ without any corroborating evidence from other sources at different time periods, such as the base guides, newspapers, magazines, or even other depositions.

8) In Section XII, pages 33-36, Dr. Longley discusses what Marines did while in the field. He writes that “approximately twenty percent of the time spent by Marines at Camp Lejeune could involve field training.”³⁶ The source for this quote is a film on maneuvers at Camp Lejeune. I did not find a reference in this film to support Dr. Longley’s statement that “approximately twenty percent” of a Marine’s time was spent doing field training.³⁷ Additionally, Dr. Longley relies exclusively on declarations and depositions, which were taken or written decades after the training, for his discussion of what occurred during such training. As Dr. Kelman discusses, such sources could be biased.³⁸

³³ Longley Report, 12/7/2024, 19. See R. Thurman, *Foxhole Express*, “The American Crisis,” *The Globe*, 7/19/1979, BRIGHAM_USA_0000027244, at *0000027245.

³⁴ The two other sources cited in this section of Dr. Longley’s report discussing the barracks do not discuss water usage in the barracks. Instead, one is from the post-statutory period and discusses Marines’ drinking habits, and the other is a historical reference that notes the size of the barracks. See Longley footnote 43, U.S. Marine Corps Headquarters, “Marine Corps Base Camp Lejeune and Marine Corps Air Station, New River: Water Conservation Analysis” (ECG. INC., 1999), 47, 60; and Longley, 20, footnote 50, Completion Report Covering the Design of Camp Lejeune U. S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks Contract NOy [sic] 4751, page 54, April 15, 1941-September 30, 1942, CLJA_USMCGEN_0000287341, at *0000287419.

³⁵ Deposition of Jacqueline Tukes, 4/11/2024, 35-38, 157-58; Deposition of Jacqueline Tukes 1/15/2025, 45-46. Ms. Tukes amended her complaint in August 2024, Deposition of J. Tukes, 1/15/2025, 15. Ms. Tukes testified that she and her family lived at the Hostess House on Hadnot Point for 30 days in the summer of 1985, before moving off base until December 1985, Deposition of J. Tukes, 1/15/2025, 20-21.

³⁶ Longley Report, 12/7/2024, 33.

³⁷ The hyperlink for the video is: <https://digital.tcl.sc.edu/digital/collection/MarineCorps/id/3661/rec/6>.

³⁸ Kelman Report, 2/7/2025.

D. Misattributed and Misrepresented Sources

In Section V.c, pages 13-16, Dr. Longley's lack of citations once again illustrates cause for concern over the accuracy of his narrative. On page 13, Dr. Longley references President Nixon's visit to Camp Lejeune and he includes a photograph with the caption "President Nixon at main parade grounds, 30 Oct. 1971," (Image 1). Dr. Longley cites a collection of Marine Corps films at the University of South Carolina (USC).³⁹ However, there is a problem with this image and with Dr. Longley's remark about President Nixon's visit to Camp Lejeune: it never happened. There is no film in this collection at USC that shows President Nixon at Camp Lejeune. There is, however, film of Nixon at Marine Corps Base Camp Pendleton on "Possibly April 30, 1971" as shown in Image 2. Image 2 is a screenshot of the video at time stamp 1:51 and is a very close match (if not identical) to the image on page 13 of Dr. Longley's report.

There is additional evidence to dispute further the idea that President Nixon visited Camp Lejeune on October 30, 1971. The White House's Daily Diary provides us with the answer. On the morning of October 30, 1971, the president was at the White House and had meetings with advisors including Henry Kissinger and H.R. Haldeman. Shortly after noon he and the first lady flew to Camp David where he spent the afternoon watching the Nebraska-Colorado football game. After the game the president spent much of the remainder of the day on the telephone.⁴⁰ According to a September 4, 2020, article in the Jacksonville publication, *The Daily News*, which listed the U.S. presidents who had visited Camp Lejeune, President Nixon never visited Camp Lejeune while in office.⁴¹

³⁹ Longley Report, 12/7/2024, footnote 26, is the citation for this photograph that reads: "U.S. Marine Corps, 'Nixon's Visit to Camp Lejeune,' 30 October 1971, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina."

⁴⁰ "President Richard Nixon's Daily Diary," 10/30/1971, see, <https://www.nixonlibrary.gov/sites/default/files/virtuallibrary/documents/PDD/1971/062%20October%2016-31%201971.pdf>, pdf pages 62-63.

⁴¹ C. Shomaker, "U.S. Presidents who visited Camp Lejeune while in office," *The Daily News*, 9/4/2020, see, https://www.jdnews.com/news/u-s-presidents-who-visited-camp-lejeune-while-in-office/article_38787c91-67f4-5dfc-8ed4-366617b67731.html.

Image 1

Page 13 of Dr. Kyle Longley's December 7, 2024, Report

Changing of colors on
parade ground

base commissaries and clubs.



President Nixon at main parade grounds, 30 Oct. 1971

One of the most prominent gathering spaces on base was Hadnot Point's main parade grounds. Here, crowds would gather for many events, including change of command parades and ceremonies, the Fourth of July, returns from overseas deployments, and other formal occasions like President Nixon's visit to the base in 1971.²⁶ The parade grounds also hosted the major reviews for the Marine Corps Birthday bash, traditionally held on November 10, which included many ceremonies and

²⁵ *The Globe*, 2 January 1970.

²⁶ U.S. Marine Corps, "Nixon's Visit to Camp Lejeune," 30 October 1971, U.S. Marine Corps Film Repository, Research Collections, University of South Carolina.

Image 2

Film of President Nixon Visiting Marine Corps Base Camp Pendleton⁴²

The screenshot shows a web page from the University of South Carolina's Digital Collections. The page title is "USMC 110012: 'Nixon's visit to Camp Pendleton'". It features a video player on the left showing a black and white film of President Nixon visiting Camp Pendleton. To the right of the video player is a "Short Description" section with the following details:

- Title:** USMC 110012: "Nixon's visit to Camp Pendleton"
- Description:** President Nixon visits Camp Pendleton. The President shakes hands with Marine Officers, waves to Marine and civilian spectators from the back of a civilian automobile, and departs via VH3A. Marine Corps musicians perform songs throughout.
- Running Time:** 20:35
- Location(s):** Camp Pendleton (CA)

Below the video player is an "Item Description" section with the following details:

- Title:** USMC 110012: "Nixon's visit to Camp Pendleton"
- Citation information:** USMC 110012: "Nixon's visit to Camp Pendleton", United States Marine Corps Film Repository. Moving Image Research Collections. University of South Carolina.
- USMC History Division inventory no:** 10/3134/1
- Marine Corps Library Number:** 0000-16
- MIRC inventory no.** USMC 110012
- Decade:** 1970
- Date:** 1971
- Description:** President Nixon visits Camp Pendleton. The President shakes hands with Marine Officers, waves to Marine and civilian spectators from the back of a civilian automobile, and departs via VH3A. Marine Corps musicians perform songs throughout.
- Location(s):** Camp Pendleton (CA)
- Genre:** Informational
- Film date (note):** Possibly April 30, 1971
- Item collection:** United States Marine Corps Film Repository
- Original color:** B&W

⁴² The hyperlink for the video is: <https://digital.tcl.sc.edu/digital/collection/MarineCorps/id/5997/rec/1>.

In addition to neglecting testimony stating that water fill stations existed beyond Hadnot Point, which I discuss below in Section VIII, Dr. Longley entirely misrepresents the photograph on page 34 of his report, captioned “Marines fill water buffalo, Hadnot Point” as shown in Image 3. In fact, the individuals in the photograph are not Marines and the photograph was not taken at Hadnot Point or even at Camp Lejeune. As shown in Image 4 below, the photograph that Dr. Longley uses is actually of New Jersey Army National Guardsmen filling a water buffalo “in preparation for Hurricane Sandy” on October 26, 2012.

Image 3

Page 34 of Dr. Kyle Longley’s December 7, 2024, Report



Marines fill water buffalo, Hadnot Point

According to General Anthony Zinni, during the Vietnam War era, Marines went out on maneuvers for weeks at a time. To hydrate, they used water buffaloes, wheeled water tanks that provided water during field training and operations. The logistics command was the fourth service support group located at Hadnot Point, the industrial area, and they had responsibility for providing this water.⁹⁰

On field days, many Marines used water buffaloes for hydration, brushing teeth, shaving, cooking, cleaning and

Image 4

Army National Guardsmen Fill a Water Buffalo with Potable Water in Preparation for Hurricane Sandy at the National Guard Armory in Lawrenceville, NJ, October 26, 2012⁴³

NATIONAL GUARD
ALWAYS READY ALWAYS THERE

Search National Guard

Home News Features About the Guard Leadership Resources Contact Us

News Images

Keyword: Search Tag: Search All Images Upload Date

261012-A-YG824-045.JPG Photo By: Staff Sgt. Wayne R. Wooley, U.S. Army

Lawrenceville, NJ - Staff Sgt. Robert Nieratko, top, and Pfc. Michael McAteer, both with the 50th Infantry Brigade Combat Team, New Jersey Army National Guard, fill a water buffalo with potable water in preparation for Hurricane Sandy at the National Guard Armory in Lawrenceville, N.J., Oct. 26, 2012.

DOWNLOAD PHOTO (1.97 MB)

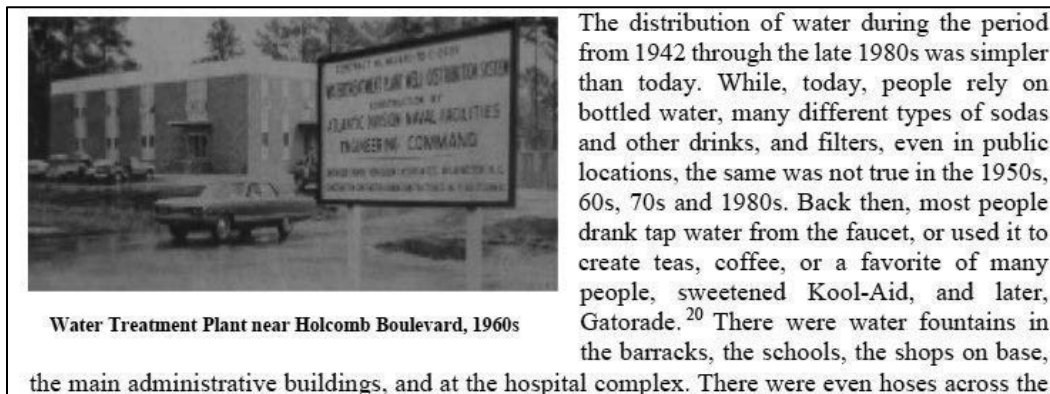
This photograph is considered public domain and has been cleared for release. If you would like to republish please give the photographer appropriate credit. Further, any commercial or non-commercial use of this photograph or any other DoD image must be made in compliance with guidance found at: <http://www.dimoc.mil/resources/limitations.html>, which pertains to intellectual property restrictions (e.g., copyright and trademark, including the use of official emblems, insignia, names and slogans), warnings regarding use of images of identifiable personnel, appearance of endorsement, and related matters.

⁴³ National Guard “News Images,” <https://www.nationalguard.mil/Resources/Image-Gallery/News-Images/igphoto/2000709524/>.

Dr. Longley also includes a picture on page 10 of his report with a caption that reads “Water Treatment Plant near Holcomb Boulevard, 1960s” as shown in Image 5.⁴⁴

Image 5

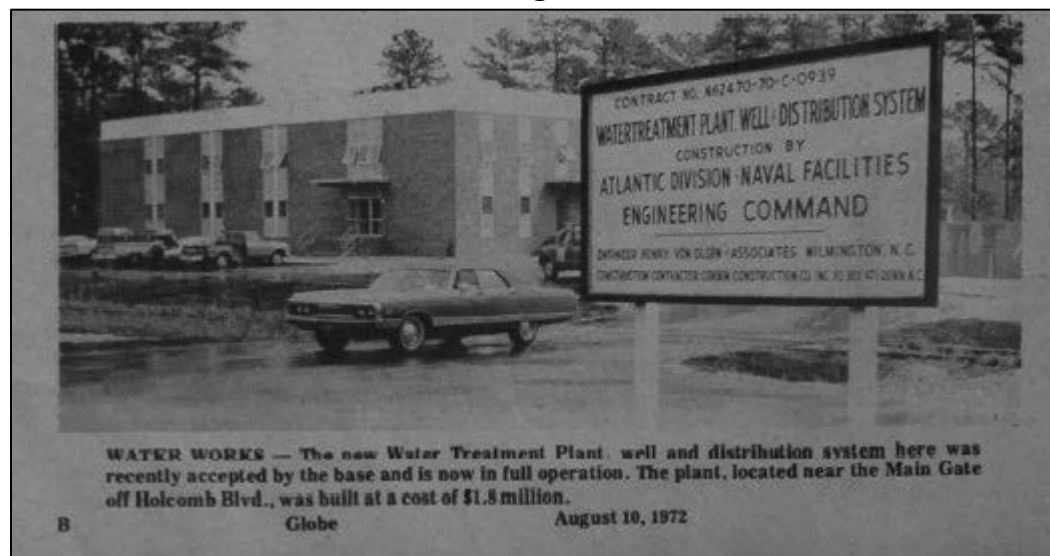
Page 10 of Dr. Kyle Longley’s December 7, 2024, Report



He provides no citation for this photograph. Again, the reader is unable to check the origins of the picture and therefore the accuracy of the caption. In fact, Dr. Longley’s caption is incorrect as the Holcomb Boulevard WTP did not start operating until 1972, as I stated in my December 9, 2024, report. This picture appeared in *The Globe* on August 10, 1972, as shown in Image 6.⁴⁵

Image 6

The Globe, August 10, 1972⁴⁶



⁴⁴ Longley Report, 12/7/2024, 10.

⁴⁵ Brigham Report, 12/9/2024, 38 and footnote 108.

⁴⁶ *The Globe*, 8/10/1972, BRIGHAM_USA_0000024981, at *0000024986.

The mischaracterization of the image of President Nixon allegedly visiting Camp Lejeune, the photograph of the water buffalo, and the photograph of the Holcomb Boulevard WTP are especially egregious oversights for a trained historian such as Dr. Longley and make me further call into question his findings.

My discussion in this section of this report supports opinion 1 of this report regarding Dr. Longley's failure to use accepted practices that historians follow when writing narratives and expressing their findings. In the remainder of this report, I will critique several major points of Dr. Longley's December 7, 2024, expert witness report.

IV. Camp Lejeune is Larger than Hadnot Point and Tarawa Terrace; the Other Areas of the Base Are Not Alleged to Have Contamination

A. Introduction

While I agree with Dr. Longley that Hadnot Point was central to certain base activities at Camp Lejeune, Dr. Longley's "county seat" analogy is lacking. It fails to take into consideration the significance of other areas of the base during the statutory time period and the fact that each of these areas received water from different, non-contaminated sources.⁴⁷ Notably, Dr. Longley's report does not include any substantive description of other areas of the base where Marines lived, worked, and trained. In my December 9, 2024, report, I never deny that Hadnot Point was the center of base activities at Camp Lejeune. In my report I discussed the early construction of base headquarters at Hadnot Point, the regimental areas, the training pools, family housing, officer quarters at Paradise Point, and the build-out of French Creek. But much like the towns and communities surrounding a county seat would have their own services, amenities, and recreational opportunities, the areas at Camp Lejeune away from Hadnot Point had their own services, amenities, recreational activities, and, significantly, housing. While a county seat likely would be the location of county courts, county fire, and police headquarters, the surrounding areas would have infrastructure and services to support their residents. At Camp Lejeune, the areas surrounding Hadnot Point had such infrastructure, including water treatment plants.

Specifically, six areas of Camp Lejeune did not receive contaminated water from the Hadnot Point WTP or the Tawara Terrace WTP: Montford Point / Camp Johnson, Camp Geiger, MCAS New River, Rifle Range at Stone Bay, Onslow Beach, and Courthouse Bay. A seventh service area, that I refer to as the Holcomb Boulevard service area, was created in 1972 when the Holcomb Boulevard WTP began serving the family housing areas of Paradise Point, Berkeley

⁴⁷ Longley Report, 12/7/2024, 16, 43.

Manor, and Midway Park that had been previously served by the Hadnot Point WTP.⁴⁸ As I discussed in my December 9, 2024, report, during most of the statutory period each of these areas had their own water systems or shared water systems with other Non-Contaminated Areas. As a result, people living in these areas had less exposure to the contaminated water pumped from the Hadnot Point and Tarawa Terrace WTPs. Camp Geiger was home to the first WTP on the base and that plant remained in operation until 1976, when it went offline and the MCAS New River WTP began servicing the Camp Geiger area. At the other five areas of the base, water was chlorinated before use before the Marine Corps eventually built WTPs in each of these areas as well.⁴⁹ The ATSDR has not found, and Plaintiffs have not alleged, that any of these areas—which take up a large percentage of the Camp Lejeune base—ever had contaminated water.

B. Montford Point / Camp Johnson

Dr. Longley's report fails to take into consideration the self-sufficient nature of Montford Point / Camp Johnson. Montford Point, renamed Camp Johnson in 1973, dates to World War II and was initially designed to house and train black troops prior to the integration of the Marine Corps in 1949. During the statutory period, Montford Point / Camp Johnson was primarily used for specialized schooling and training. Schools at Montford Point / Camp Johnson included the Field Medical Service School and the Support / Supply Schools that offered courses on several subjects.⁵⁰ In 1969, for example, at Montford Point / Camp Johnson there were 1,269 people, and

⁴⁸ Brigham Report, 12/9/2024, 7 and footnote 9. The Holcomb Boulevard TWP also provided water to Watkins Village when it opened in 1977, Brigham Report 12/9/2024, 43.

⁴⁹ Brigham Report, 12/9/2024, 18, 20, Table 1 on 23, and footnote 64. An early example of this was at Camp Geiger / Tent City during World War II. The population of Tent City required drinking water and workers drilled numerous wells and built a water distribution system, with the water being treated with chlorine for disinfection purposes. Water was stored in two 272,000 storage tanks (Brigham Report, 12/9/2024, 17-18).

The second Completion Report states: "Chlorination is effected [sic] by a solution feed manually adjusted chlorinator with maximum capacity of 40 lbs. per 24 hrs. This machine is semi-automatic, designed to start and stop when either of the service pumps is operated. This feature is accomplished through solenoid valves placed in the water supply line to the chlorinator with one solenoid in each pump circuit," see Carr and J. E. Greiner Company, "Completion Report Covering the Design of Camp Lejeune U.S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks, Contract Number 4751, April 15, 1941-September 30, 1942," Vol. II, CLJA_USMCGEN_0000161226, at *0000161440.

As shown in a table in the 1986 Master Plan Update, the seven WTP systems operating in that year had elevated storage tanks, see 1986 Master Plan Update, CLJA_USMCGEN_00000326502, at *0000326763.

⁵⁰ Brigham Report, 12/9/2024, 57-58.

in 1983 there could have been as many as 2,768.⁵¹ To house the trainees and staff, there originally were H-style barracks at Montford Point / Camp Johnson. By the 1980s, hotel-style barracks had started to replace the H-style barracks.⁵² In addition, by at least 1959, and continuing through the rest of the statutory period, there were numerous services and amenities at Montford Point / Camp Johnson that made travel to the Mainside largely unnecessary unless a Marine was required to do so for official business. For example, Marines and their families had access to a base exchange store, a library, an indoor theatre, and several service clubs at Montford Point / Camp Johnson.⁵³ The 1970 Master Plan described Montford Point as “isolated from Mainside,” and it was one of the areas identified in the 1986 Master Plan Update as having a lengthy travel time to Hadnot Point.⁵⁴

C. Camp Geiger

Dr. Longley’s report fails to account for the self-sufficient nature of Camp Geiger. As I discussed in my December 9, 2024, report, Camp Geiger, originally called Tent Camp No. 1, was the first location of the 1st Marine Division headquarters in 1941.⁵⁵ During most of the statutory period, Camp Geiger was home to the Infantry Training Regiment (ITR) and the Nuclear, Biological, and Chemical School (NBC School).⁵⁶ The 1970 base guide stated that it was “the job of the First Infantry Training Regiment at Camp Lejeune” to turn recent basic training graduates into “self-confident, ‘thinking’ Marines capable of handling any situation at a moments [sic] notice.”⁵⁷

⁵¹ Brigham Report, 12/9/2024, 58. These numbers are based on the effective service population that is defined in the 1986 Master Plan Update as: “The effective service population data . . . were developed from data indicating where military and civilian employees work and where military personnel and their dependents reside. The calculated data for the effective service population takes into account the proportional parts of each day that military and civilian personnel and dependents of the military personnel would be in each service area,” 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326746.

⁵² Brigham Report, 12/9/2024, 60-61.

⁵³ Brigham Report, 12/9/2024, 61.

⁵⁴ Brigham Report, 12/9/2024, 62.

⁵⁵ Brigham Report, 12/9/2024, 11. The 1st Marine Division later relocated to Pendleton, CA where it remains today.

⁵⁶ Brigham Report, 12/9/2024, 64-71.

⁵⁷ 1970 Base Guide, Base_Guides_0000000254, at *000000271.

At a single point in time at Camp Geiger in 1969 there were 4,212 military personnel, most of them students.⁵⁸ Many more Marines spent time at Camp Geiger in a given year than were stationed there at a single point in time, due to the fact that many were trainees at the Infantry Training School. Though course times varied over the years, the training course typically lasted only a short period of time. A 1972 *Leatherneck* article gave information on the number of Marines that trained at the Infantry Training Regiment (ITR) from 1969-1971. In 1969, 39,000 Marines trained; in 1970 23,000 Marines trained; and the Marine Corps estimated that in 1971 approximately 21,000 Marines would train at the ITR.⁵⁹ The length of training changed over time. For example, in 1966 it was nineteen days, in 1970 training took thirty-six days, in 1980 it was four weeks, and in 1985 it was five weeks.⁶⁰

Housing at Camp Geiger included the Camp Geiger Trailer Park from the beginning of the statutory period through 1983 and troop housing for the entire statutory period.⁶¹ There were also numerous amenities at Camp Geiger by at least 1959 and such amenities continued to exist throughout the statutory period.⁶² By 1959 at Camp Geiger, there was a theatre, a base exchange store, a community center and service clubs, among other amenities.⁶³ The 1970 base plan described Camp Geiger as “somewhat isolated” and long travel times to Hadnot Point made such trips “prohibitive.”⁶⁴ And the 1986 Master Plan Update, noted that Montford Point—which is closer to Hadnot Point than Camp Geiger—had long travel distances to Hadnot Point.⁶⁵

D. Marine Corps Airfield / Marine Corps Air Station New River

Dr. Longley’s report fails to take into account the self-sufficient nature of Marine Corps Airfield / MCAS New River. The Marine Corps Airfield, later known as MCAS New River, is physically part of Marine Corps Base Camp Lejeune, but those stationed there do not take orders from the base’s commanding general and instead take orders from the Commander, Marine Air

⁵⁸ Brigham Report, 12/9/2024, 62.

⁵⁹ T. Bartlett, “ITR Boot Camp Post Grad. . .,” *Leatherneck*, 6/1971, 41.

⁶⁰ Brigham Report, 12/9/2024, 66.

⁶¹ Brigham Report, 12/9/2024, 67-69.

⁶² Brigham Report, 12/9/2024, 70.

⁶³ Brigham Report, 12/9/2024, 70-71.

⁶⁴ Brigham Report, 12/9/2024, 74.

⁶⁵ Brigham Report, 12/9/2024, 62.

Bases, Eastern, Cherry Point, N.C.⁶⁶ In 1970 “approximately 4,000 officers and men” “manned” the MCAS New River facility, and in 1983 on average about 5,037 people were assigned to the facility each month.⁶⁷

As I discussed in my December 9, 2024, report, by the mid-1950s barracks and amenities were located at the airfield. By the end of the 1950s, family housing construction was under way. New construction continued in subsequent decades.⁶⁸ Similar to Montford Point / Camp Johnson and Camp Geiger, the Marine Airfield / Air Station was separated from and had “prohibitive” travel distances to Hadnot Point, as discussed in the 1970 and 1986 base plans.⁶⁹

E. Rifle Range at Stone Bay, Onslow Beach, and Courthouse Bay

Dr. Longley’s report fails to give an accurate portrayal of Camp Lejeune by not adequately discussing Rifle Range at Stone Bay, Onslow Beach, and Courthouse Bay. At Rifle Range, Marines received their required yearly rifle requalification and at Onslow Beach, Marines participated in amphibious assault training and recreational activities.⁷⁰ At Courthouse Bay, there were amenities available both to those Marines and their families that lived there as well as to Marines onsite taking engineering courses.⁷¹ Dr. Longley does not mention that there were barracks and amenities available to Marines at each of these three areas.

As I wrote in my December 9, 2024, report, Marines lived at the Rifle Range when fulfilling this training because it was too far from Hadnot Point to travel there each morning, and both the 1970 Master Plan and the 1986 Master Plan Update described the Rifle Range as “isolated.”⁷²

⁶⁶ Brigham Report, 12/19/2024, 9, footnote 14.

⁶⁷ 1970 Base Guide, New River Marine Corps Air Station, Base_Guides_0000000328, at *000000334; and 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326950.

⁶⁸ Brigham Report, 12/9/2024, 9, 72-74.

⁶⁹ Brigham Report, 12/9/2024, 74; 1970 Master Plan, CLJA_USMCGEN_0000336978 at *0000337049; and 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326615.

⁷⁰ Brigham Report, 12/9/2024, 75, 77.

⁷¹ Brigham Report, 12/9/2024, 80, 83.

⁷² Brigham Report, 12/9/2024, 76.

In footnote 123 of his report, Dr. Longley notes that Onslow Beach was “where recon was historically” without providing further explanation or description.⁷³ Onslow Beach was well suited for amphibious landing training and warfare, which was one of the reasons that the Marine Corps selected the area that became Camp Lejeune for development.⁷⁴ Such training continued during the statutory period, as discussed by articles in *The Globe*.⁷⁵ During World War II, three barracks and a mess hall were built at Onslow Beach.⁷⁶ The 1986 Master Plan Update notes that minimal troop housing, (but no family housing) existed at Onslow Beach.⁷⁷ Among amenities at Onslow Beach that Marines could enjoy were a beach pavilion, a commissioned officers’ mess hall, and snack bars.⁷⁸ Onslow Beach was far enough from Hadnot Point that the area needed its own community facilities.⁷⁹

Courthouse Bay was and is the home of the engineering school at Camp Lejeune. It too dates to the earliest years of the base during World War II. As I discussed in my December 9, 2024, report, numerous courses of varying lengths were taught at the engineering school at Courthouse Bay during the statutory period.⁸⁰ A 1979 *Leatherneck* article stated that “3,000 or so students . . . graduate from Courthouse Bay each year.”⁸¹ The author of this article also noted that usually there were “600 to 650 students on board, which is close to camp capacity” and that Courthouse Bay was “25 miles from mainside [sic]—and several miles from the community of Sneads Ferry.”⁸² A June 1988 *Leatherneck* article stated that there were four companies at the engineering school, “Headquarters and Service Company, Combat Engineer Instruction

⁷³ Longley Report, 12/7/2024, 43, footnote 123.

⁷⁴ Brigham Report, 12/9/2024, 10-11, 77-78.

⁷⁵ See for example, “TAGLEX ‘D’ Day Saturday As Defending Forces Dig In,” *The Globe*, 4/22/1954, BRIGHAM_USA_0000014164; “President Kennedy Will See Landing,” *The Globe*, 4/12/1962, BRIGHAM_USA_0000020669; “Solid Shield-78, U.S. forces come to aid of embattled ‘Atlantis,’” *The Globe*, 6/1/1978, BRIGHAM_USA_0000028250; and C. Brown, “Wargame sets Camp Lejeune as mock battlefield,” *The Globe*, 5/12/1983, BRIGHAM_USA_0000040466, at *0000040468.

⁷⁶ Brigham Report, 12/9/2024, 78.

⁷⁷ Brigham Report, 12/9/2024, 78.

⁷⁸ Brigham Report, 12/9/2024, 78.

⁷⁹ Brigham Report, 12/9/2024, 78.

⁸⁰ Brigham Report, 12/9/2024, 82.

⁸¹ H. Richardson, “Blue Collar University,” *Leatherneck*, 8/1979, pdf page 5.

⁸² H. Richardson, “Blue Collar University,” *Leatherneck*, 8/1979, pdf pages 2-3.

Company, Engineer Equipment Instruction Company and Utilities Instruction Company” [and] that more than 4,500 students took the courses offered at the school each year.”⁸³ There was also housing at Courthouse Bay, including barracks and bachelor officers’ quarters and a small number of family housing units. Numerous amenities were available to Marines and their families at Courthouse Bay.⁸⁴ As at other areas of Camp Lejeune away from Hadnot Point, Courthouse Bay had amenities that Marines and their families could use, including a base exchange, a theater, a library, service clubs, and a number of recreational facilities.⁸⁵ Similar to the other areas discussed in this section, the distance from Courthouse Bay to Hadnot Point made travel “prohibitive.”⁸⁶ In September 1983, a *Globe* article referenced the distance from Courthouse Bay to “everything else.” In the article, Captain Ferguson stated: “We try to get special services active out here in Courthouse Bay . . . we’re so far away from everything else that we feel it is important to give our men something for entertainment.”⁸⁷

My discussion in this section of my report supports opinions 2 and 3 of this report regarding Dr. Longley’s belief in the centrality of Hadnot Point and his lack of examination of water treatment plants that provided water to other areas of the base.

V. Many Family Housing Areas Did Not Receive Contaminated Water and Many of the Activities of Daily Living Dr. Longley Discusses Took Place in Non-Contaminated Areas of the Base

A. Family Housing and Activities

Dr. Longley’s report fails to appreciate the significance of non-contaminated WTPs serving particular family housing areas at different times during the statutory period. In Section “VIII. Family Housing and Activities,” Dr. Longley discusses areas with family housing that received contaminated water including “Tarawa Terrace, Knox Trailer Park, Midway Park, Paradise Point, and Berkeley Manor.”⁸⁸ However, because Dr. Longley did not examine all the areas of the base and their respective WTPs at Camp Lejeune during the statutory period, this list

⁸³ V. Vanden Bout, “Engineering School, The ABCs of Moving Mountains And Building Bridges,” *Leatherneck*, 6/1988, 34.

⁸⁴ Brigham Report, 12/9/2024, 82-83.

⁸⁵ Brigham Report, 12/9/2024, 83.

⁸⁶ Brigham Report, 12/9/2024, 84.

⁸⁷ R. Braub, “Softball with a kick,” *The Globe*, 9/29/1983, 23.

⁸⁸ Longley Report, 12/7/2024, 24.

needs further explanation. At times during the statutory period, family housing at Tarawa Terrace I and II received contaminated water.⁸⁹ The Knox Trailer Park at times received contaminated water from the Tarawa Terrace WTP, but it also received water from the Montford Point / Camp Johnson WTP, which neither Plaintiffs, nor ATSDR have alleged had contaminated water.⁹⁰ Additionally and significantly, when the Holcomb Boulevard WTP started operations in 1972, it began serving areas that had been previously serviced by the Hadnot Point WTP, including family housing at Midway Park, Berkeley Manor, and Paradise Point as well as the officers' club at that location and the Naval Hospital and its associated housing.⁹¹ After its construction, the Holcomb Boulevard WTP, as I discuss earlier in this report, only intermittently supplied contaminated water to its service area during the statutory time period. It is also important to note that family housing beyond Hadnot Point and Tarawa Terrace, such as at the Geiger Trailer Park and at MCAS New River, were serviced by WTPs that were independent of the contaminated water systems identified by ATSDR.

B. Schools and Pools

Dr. Longley's report also fails to appreciate that certain schools and pools were serviced by non-contaminated WTPs. Section IX of Dr. Longley's report examines schools, and Section XIV discusses swimming pools.⁹² Regarding schools, he writes that by the late 1960s there were seven elementary schools and one high school at Camp Lejeune. This is correct, and I discussed schools on base during the statutory time period in my December 9, 2024, report, including a listing of schools in Tables 3 through 5. Table 4 of my report includes the Montford Point Elementary School, and DeLalio Elementary School, neither of which received contaminated water from the Tarawa Terrace or Hadnot Point WTPs. After the Holcomb Boulevard WTP went online in 1972, the Stone Street Elementary School, the Berkeley Manor Elementary School

⁸⁹ Per my December 9, 2024, report, Opinion Three, page 2, and my discussion of the ABC One-Hour Cleaners, pages 24-33, it is my opinion, based on numerous contemporaneous documents, that the cleaners started operations in or after June 1954. Dr. Longley did not discuss ABC One-Hour Cleaners, which was identified as a source of contamination, in his December 7, 2024, report. My review of the 1/14/2025 Longley and Maslia reports do not change this opinion due to their sole reliance on deposition testimony from decades later.

⁹⁰ Brigham Report, 12/9/2024, 56.

⁹¹ See Images 19 and 24 on pages 39 and 50, and pages 42-44, Brigham report 12/9/2024. As I note on pages 42-44, there were times intermittently between 1972 and 1985 that water from Hadnot Point WTP was pumped into the Holcomb Boulevard water system. The Watkins Boulevard family housing complex opened in 1977 and was never connected to the Hadnot Point WTP but would have received contaminated water when the Holcomb Boulevard distribution system received water from the Hadnot Point WTP, see Brigham Report, 12/9/2024, 49.

⁹² Longley Report, 12/7/2024, 28 and 37.

listed in Table 4, and the Brewster Junior High School and Camp Lejeune Senior High School listed in Table 5 did not receive contaminated water except when the Holcomb Boulevard system, on occasion, received water from the Hadnot Point WTP.⁹³

Similarly, those swimming pools not served by the Tarawa Terrace or Hadnot Point WTPs did not receive contaminated water.⁹⁴ Per Table 2 of my report of December 9, 2024, the pool at Montford Point / Camp Johnson, the two pools at MCAS New River, and the pool at the Paradise Point Officers' Club after 1972 received water from WTPs that were not contaminated.⁹⁵

My discussion in this section of my report adds support to opinions 2 and 3 of this report regarding Dr. Longley's belief in the centrality of Hadnot Point and his lack of examination of water treatment plants that provided water to other areas of the base.

VI. Off-Base Housing

Dr. Longley's report fails to account for the significant off-base housing for Camp Lejeune Marines. For most of the statutory period, there was a housing shortage at Camp Lejeune that required Marines and their families to live off base. As I discussed in my December 9, 2024, report, a housing shortage occurred during the Korean War that led the government to start a housing construction program.⁹⁶ The 1962 Base Guide listed wait times for housing that varied according to rank and housing needs for the Knox and Geiger Trailer Parks, Midway Park, Tarawa Terrace, and Paradise Point.⁹⁷ The 1966 Base Guide, published when the United States' and the Marine Corps' involvement in Vietnam was increasing, includes a several page discussion of Camp Lejeune housing. In the overall discussion of housing, it is noted that temporary government housing was unavailable. There is also discussion of "Inadequate Public Quarters," meaning unfurnished houses or furnished trailers. Although the 1966 Base Guide did

⁹³ Brigham Report, 12/9/2024, 87-94.

⁹⁴ The third completion report noted that the Montford Point swimming pool "will take untreated water directly from the distribution for filling and for makeup purposes." Although the water had "carbonic acid gas and iron," they could be removed through filtration, see, Carr and J. E. Greiner Company, "Completion Report Covering the Design of Camp Lejeune U.S. Marine Barracks New River, North Carolina for the U.S. Navy Bureau of Yards and Docks, Contract Numbers 6006 and 7795, October 1, 1942-December 18, 1943," Vol. III, CLJA_USMCGEN_0000209879, at *0000210110.

⁹⁵ Brigham Report, 12/9/2024, 84-87.

⁹⁶ Brigham Report, 12/9/2024, 24. Also see 1952 Base Guide, Base_Guides_0000000058, at *0000000065.

⁹⁷ 1962 Base Guide, Base_Guides_0000000077, at *0000000081.

not explicitly state that there was a housing shortage, the reference to inadequate quarters suggested a housing shortage existed. There were also instructions on locating private housing in the neighboring communities of Jacksonville and Swansboro.⁹⁸ One study of Camp Lejeune during the Vietnam Era states that despite the 4,810 family housing units on base, almost half of Camp Lejeune's 60,000 military personnel, including families had to secure housing off base.⁹⁹

The 1970 Camp Lejeune Master Plan identified housing as a problem at Hadnot Point. As I wrote in my December 9, 2024, report, in 1967 the Marine Corps Commandant requested that a master plan be prepared that would include an examination of Hadnot Point, including French Creek. The growth of the Force Troops—the Marines assigned to Camp Lejeune who supported the activities of the Second Marine Division, later designated 2d FSSG—necessitated construction at French Creek including the “new Force Troops Complex.”¹⁰⁰ The 1970 Master Plan noted: “The increase in supporting facilities for the troop units, and resultant housing for these additional units, has formed the largest single problem on the Base.”¹⁰¹

The 1986 Master Plan Update also addressed on and off base housing. The authors of this document noted that “military families with relatively high disposable incomes” drove the demand for off-base family housing.¹⁰² They further noted that as Camp Lejeune's population grew so did the population of Jacksonville and Onslow County.¹⁰³ The Master Plan Update further characterizes the relationship of the base to the city as symbiotic: the city and county benefited from the “economic stability” that the base provided and the “Camp Lejeune Complex relies upon the surrounding areas to provide civilian housing and many community support facilities, such as churches, movie theaters and commercial facilities.”¹⁰⁴

When focusing on family housing, the authors of the 1986 Master Plan Update reported in June 1984, “4,175 military personnel and 11,360 of their dependents” lived in on-base family

⁹⁸ 1966 Base Guide, Base_Guides_0000000098, at *0000000119-120.

⁹⁹ USMC, *Semper Fidelis, A Brief History of Onslow County, North Carolina, and Marine Corps Base, Camp Lejeune*, (2004), Brigham_USA_0000008862, at *0000008937.

¹⁰⁰ Brigham Report, 12/9/2024, 37-38 (including footnote 104), 47-48.

¹⁰¹ 1970 Camp Lejeune Master Plan, CLJA_USMCGEN_0000336978, at *0000337073.

¹⁰² 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326597.

¹⁰³ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326598.

¹⁰⁴ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326599.

housing while “7,750 military and 20,305 dependents resided in off-base housing.”¹⁰⁵ The authors concluded: “There is no real family housing deficiency as long as off-base-housing continues to be available and acceptable to military personnel.”¹⁰⁶

My discussion in this section of my report supports my opinion 4 of this report, that Marines and their families lived off-base.

VII. Marines and Their Families Could Leave Camp Lejeune and Use Off-Base Services and Participate in Off-Base Recreational Opportunities

I respectfully disagree with Dr. Longley’s conclusion that Marines would rarely leave base, as evidence exists that Marines were able to leave the base and, in fact, as I discuss above in Section VI of this report, many Marines and their families lived off base.¹⁰⁷

Even during World War II, Marines could leave Camp Lejeune. A front-page *Globe* article from November 1944 discussed leave and liberty passes.¹⁰⁸ A 1960 front-page *Globe* article discussed the process for Marines leaving base overnight, which differed based on the Marine’s rank, the length of time away, and how far they were traveling. A lower-level enlisted Marine (E-5 and below) needed only a “Liberty card” for the “routine, overnight” travel in an 85-mile radius from the base, and the article referred to such travel as “normal overnight liberty.”¹⁰⁹ Such Marines needed a “liberty pass” to travel for 72 to 96 hours in a 600-mile area (which according to the article encompassed Atlanta, Chattanooga, and New York City). In contrast: “Officers and staff noncommissioned officers are not required to have special liberty passes except when travel is to be through an area where regulations of another service require passes.”¹¹⁰

¹⁰⁵ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326702.

¹⁰⁶ 1986 Master Plan Update, CLJA_USMCGEN_0000326502, at *0000326710.

¹⁰⁷ Longley Report, 12/7/2024, 11. See also Brigham Report, 12/9/2024, 24.

¹⁰⁸ “New Liberty [illegible] Rules [illegible] Lejeune,” *The Globe*, 11/15/1944, BRIGHAM_USA_0000009726. Although the article was only partially imaged, it is clear that leave and liberty passes are the focus of the article.

¹⁰⁹ “Lejeune Liberty Travel Limits Extended, 600 Miles Authorized For 72-96 Hour Pass,” *The Globe*, 12/1/1960, BRIGHAM_USA_0000020208. The 85-mile radius had just been extended from 50 miles, which was one of the impetuses for *The Globe* article.

¹¹⁰ “Lejeune Liberty Travel Limits Extended, 600 Miles Authorized For 72-96 Hour Pass,” *The Globe*, 12/1/1960, BRIGHAM_USA_0000020208.

In 1970 the Marine Corps changed regulations regarding liberty cards (the cards required when lower-level Marines left base for overnight leave). Liberty cards were no longer required for those ranked E-4s and below unless a local commander required a card. Liberty passes remained a requirement for, “such occasions as 96-hour liberty in distant cities.”¹¹¹ The following week, *The Globe* published another story discussing the changed regulations, making clear that the “organization commanders” still had the discretionary power to grant leave.¹¹² The requirement for a 96-hour liberty pass continued into the 1980s.¹¹³

Besides Marine Corps regulations regarding leave, *The Globe* published information on business establishments that were “off-limits” to Marines, which indicates that Marines did leave the base and patronized businesses in Jacksonville that were not off-limits, reputable or otherwise. The front-page of the August 6, 1959, issue of *The Globe* contained an “OFF LIMITS” notice that stated two businesses in Jacksonville had been declared “out of bounds” in a recent base bulletin.¹¹⁴ A similar announcement appeared in *The Globe* the following March.¹¹⁵ In April 1962, an announcement in *The Globe* listed eight off-limit establishments “to all military personnel” in several counties including one in the Jacksonville area.¹¹⁶ A comparable announcement appeared in 1966.¹¹⁷ An article in *The Globe* from July 1969 urged Camp Lejeune members of the military to follow regulations and stated that the Jacksonville Military Police Detachment would “apprehend” anyone found in an off-limit establishment.¹¹⁸

Such announcements continued in the 1970s and 1980s. Following the killing of Navy Corpsmen at the Long Branch Bar in Jacksonville in February 1972, the Camp Lejeune

¹¹¹ “Liberty Cards,” *The Globe*, 9/18/1970, BRIGHAM_USA_0000022861.

¹¹² “For E-4’s and below, I.D. replaces liberty card,” *The Globe*, 9/25/1970, BRIGHAM_USA_0000022747.

¹¹³ “Car-related accidents,” *The Globe*, 11/4/1982, BRIGHAM_USA_0000035672, at *00000356674. This article discusses the death of a Marine killed when he was hit by a truck while on leave.

¹¹⁴ “Off Limits,” *The Globe*, 8/6/1959, BRIGHAM_USA_0000013586.

¹¹⁵ “Off Limits,” *The Globe*, 3/3/1960, BRIGHAM_USA_0000020078, at *0000020083.

¹¹⁶ “A[illegible] Off-Limits to [illegible]ary Personnel,” *The Globe*, 4/12/1962, BRIGHAM_USA_0000020669, at *0000020671.

¹¹⁷ “N.C. Off Limits Areas Outlined For Military,” *The Globe*, 9/29/1966, BRIGHAM_USA_0000021239 (listing off-limit areas throughout the state, including Jacksonville).

¹¹⁸ “Don’t Take A Chance: Observe Regulations,” *The Globe*, 7/11/1969, BRIGHAM_USA_0000019454, at *0000019458.

commanding general placed the bar temporarily in an off-limits status.¹¹⁹ The writer of a letter to *The Globe* editor in April 1976 asked several questions concerning an order dated December 1971 to the Quad-Command designating off-limit establishments. Among his questions were if the listed establishments were still operating outside Marine Corps guidelines and if more establishments had been added to the list. He requested that the list of off-limits establishments be updated.¹²⁰

Another indicator that Marines travelled off base is the advertisements that appeared in the base guides. The 1966 base guide had advertisements for automobiles, hotels, banks, variety stores, and listings for many other types of Jacksonville business establishments in its 24-page “Classified Buying Guide” section.¹²¹ The 1970 base guide contained several pages of advertisements and a 13-page classified buying section.¹²² In this guide an advertisement for the Cape Fear Hotel in Wilmington offered military rates while the Babcock Realty Company in Jacksonville informed Marines that they maintained a list of available rental housing in the area under the banner “Welcome Aboard!”¹²³ In the 1972 base guide, the “Classified Buying Section”

¹¹⁹ “Bar Placed Off Limits, Suspect held in fatal assault on Corpsman,” *The Globe*, 2/3/1972, BRIGHAM_USA_0000025033, at *0000025035. Also see, “Off-limits extended,” *The Globe*, 3/9/1972, BRIGHAM_USA_0000024841, at *0000024842.

¹²⁰ D. Brady, “Clarification on off limits areas,” *The Globe*, 4/29/1976, BRIGHAM_USA_0000024455, at *0000024459. For additional information on off-limits establishment in the 1980s see, for example, “Control Board reinstated,” *The Globe*, 10/30/1980, BRIGHAM_USA_0000034372; “4 adult businesses declared off-limits,” *The Globe*, 6/4/1981, BRIGHAM_USA_0000036853, at *0000036855; “Off-limits list revised,” *The Globe*, 12/9/1982, BRIGHAM_USA_0000036066, at *0000036068; K. Zabawczuk, “Off limit establishments,” *The Globe*, 2/16/1984, BRIGHAM_USA_0000037460, at *0000037461; and “Off-Limits,” *The Globe*, 2/21/1985, BRIGHAM_USA_0000032389, at *0000032428. This last document is an announcement listing off-limit establishments that also states violating the order can result in a court-martial including “a Dishonorable Discharge and confinement at hard labor for two years,” *ibid.*

¹²¹ 1966 Base Guide, Base_Guides_0000000098, at *0000000121-22, *000000141, *000000149, and *000000154-177. The 1967 base guide also had a 16-page “Classified Buying Section,” 1967 Base Guide, Base_Guides_0000000180, at *0000000236-51.

¹²² 1970 Base Guide, Base_Guides_0000000254, at *000000298, *000000300, *000000309, *000000312-324, and *000000326-327.

¹²³ 1970 Base Guide, Base_Guides_0000000254, at *000000318 and *000000321. The 1970 base guide for MCAS New River contained advertising and a classified buying guide similar to the 1970 base guide for Camp Lejeune, see 1970 Base Guide, New River Marine Corps Air Station, Base_Guides_0000000328, at *000000329, *000000358, and *000000373-390. The 1971 Base Guide for Camp Lejeune was similar to the 1970 Base Guide, see 1971 Base Guide, Base_Guides_0000000391, at *0000000424, *0000000438, and *0000000443-462.

was renamed “Military Yellow Page.”¹²⁴ The base guides for 1976 through 1979 also contain advertising from Jacksonville businesses. An advertisement for the Wilmington Hilton Inn offered a discount for the military for a “R & R Weekend Page.”¹²⁵ The 1977 base guide again contained a “Military Buyers Guide” as did the 1978 and 1979 base guides.¹²⁶ The same is true for the 1980 and 1984 base guides. An unsponsored half-page announcement in the 1984 base guide read: “Military Families! Welcome To The Installation and Our Fine Community.” Another announcement read “Advertise For Action In These Military ‘Yellow Pages.’”¹²⁷

My discussion in this section of my report supports opinions 2 and 4 of this report, regarding Dr. Longley’s belief in the centrality of Hadnot Point and that Marines left base for social and recreational purposes.

VIII. Filling of Water Buffaloes Away From Hadnot Point

In my December 9, 2024, report, in my fourth opinion, I opined that: “All of the [water treatment plants] at Camp Lejeune had the infrastructure to support the installation of standpipes used to fill water trailers in their respective areas.”¹²⁸ I discussed water trailers and standpipes on pages 97-104 of the report.¹²⁹ On pages 102-103 of my report, I discussed a diagram of a standpipe (Image 36) and noted:

A water-point standpipe is a rigid pipe which supplies water under pressure from an outlet high enough to service water trailers. The usual construction is a 2-in. pipe fastened to a vertical timber support. Several standpipes can be supplied from a common

¹²⁴ 1972 Base Guide, Base_Guides_0000000465, at *0000000541-57.

¹²⁵ 1976 Base Guide, Base_Guides_0000000559, at *0000000615; and “Military Classified Pages,” *0000000610-626; and 1979 Base Guide, Base_Guides_0000000759, “Military Buyers’ Guide,” *0000000806-824.

¹²⁶ 1977 Base Guide, Base_Guides_0000000627, at *0000000628, *0000000676, and *0000000678-94. The 1978 and 1979 base guides contained similar advertising, see 1978 Base Guide, Base_Guides_0000000695, at *0000000740-58; and 1979 Base Guide, Base_Guides_0000000759, at *0000000760, *0000000806, and *0000000807-824.

¹²⁷ 1980 Base Guide, Base_Guides_0000000829, at *0000000830, *0000000860, and *0000000861-870; and 1984 Base Guide, Base_Guides_0000000871, at *0000000872 and *0000000904-922; the announcements appear on *0000000906 and *0000000913.

¹²⁸ Brigham Report, 12/9/2024, 2.

¹²⁹ Brigham Report, 12/9/2024, 97-104.

underground header, ‘implying that they can be installed anywhere with existing underground potable water pipes, like those that existed during the statutory period not only at Mainside, but also at Camp Geiger, Camp Johnson, Courthouse Bay, and MCAS New River as well.’¹³⁰

In contrast to my report, Dr. Longley generally fails to account for the likelihood that water buffaloes were at times filled with non-contaminated water away from Hadnot Point. Dr. Longley mentions the filling of water buffaloes in finding six of his report that reads, in part, “the use of canteens and wheeled water tanks known as water buffaloes, . . .”¹³¹ In the body of his report, on page 34, Dr. Longley references Mr. Urquhart’s deposition when Mr. Urquhart describes his preparation “for field deployment” when he filled “the water buffaloes primarily at Hadnot Point locations.”¹³² Dr. Longley uses this testimony to assert that water buffaloes were primarily filled at Hadnot Point. To the extent that Plaintiff deposition testimony is considered a reliable source, Dr. Longley does not include testimony that establishes that water stations or fill points at Camp Lejeune were located, as Mr. Urquhart also testified, “throughout Camp Lejeune.” Mr. Urquhart further stated that “wherever your closest water site was where you went and got it [the water buffalo] filled.”¹³³ Dr. Longley also chose to not include Mr. McElhiney, Sr.’s testimony about alternative locations to fill water tanks:

Q: And do you know what the water source was for these tanks?

A: Yes.

Q: Can you please tell me?

A: I know of two water points. One was south by Courthouse Bay, and the other one was at the fuel depot in the industrial area.¹³⁴

¹³⁰ Brigham Report, 12/9/2024, 102.

¹³¹ Longley Report, 12/7/2024, 3.

¹³² Longley Report, 12/7/2024, 34.

¹³³ Deposition of Benjamin Urquhart, 11/13/2024, 74:5-10.

¹³⁴ Deposition of Gary McElhiney, Sr., 3/5/2024, 55:15-24. In this section of his report, on page 34, Dr. Longley cites two *Globe* articles. One is dated 6/18/1981, and discusses water purification in the field, “‘Camp Sweat’ Marines practice field plumbing,” *The Globe*, 6/18/1981, BRIGHAM_USA_0000036590 at *0000036597; and B. Bode, “Field Hygiene, Sanitation in the field takes on many forms,” *The Globe*, 10/15/1987, BRIGHAM_USA_0000029418, at *0000029433. The first of these articles is about a seven-week plumbing and water purification course at Courthouse Bay. The second article discusses field hygiene and a “Reverse Osmosis Water Purification Unit,” *ibid*. Neither article discusses the filling of water buffaloes.

Dr. Longley treats General Anthony Zinni's deposition testimony in much the same manner. While Dr. Longley cites select passages of General Zinni's testimony to underscore his opinion that Hadnot Point was the only location to fill water buffaloes, he does not include the portions of General Zinni's deposition testimony where he stated that water buffaloes were filled at Camp Geiger or other areas on the base:

Q: Do you know if the Infantry Training Regiment had its own water Buffalos while you were there?

A: Yes. Out of Camp Geiger, we were supported by the regiment and they had their own facilities out there.

Q: Okay. Did those water Buffalos fill up at Hadnot Point or were there fill-up points closer to Camp Geiger?

A: I think there were -- as I remember, there were fill-up points out at Camp Geiger. Pretty self-contained out there.¹³⁵

Further, when asked if it "would it be correct to say that there were multiple places on the Camp Lejeune military installation that had their own water Buffalo fill points," General Zinni answered: "I think. Yes. I think so. I don't think there was any one primary point unless you were main side [sic] and you were supporting the division."¹³⁶

These examples illustrate an issue that I have with Dr. Longley's use of deposition testimony. He relies on select passages from deposition testimony to support his findings without acknowledging testimony that supports alternative findings.

Additionally, Dr. Longley also fails to account for the fact that certain units were not under the operational control of the base commanding general, and thus more likely to fill water buffaloes at outlying areas of the base. On page 34 of his report, Dr. Longley discusses water buffaloes and their field use, citing General Zinni's deposition testimony that the 4th Service Support Group "had responsibility for providing this water."¹³⁷ However, as shown in Image 7, the 2d Force Service Support Group was stationed at Camp Lejeune in support of the 2d Marine Division, both of which were tenant units not under the operational control of the base commanding general. This means, the 2d Marine Aircraft Wing at MCAS New River, as well as the Infantry Training School at Camp Geiger, the Field Medical School and Service Support

¹³⁵ Deposition of Anthony Zinni, 5/28/2024 (Zinni Deposition), 62: 11-22.

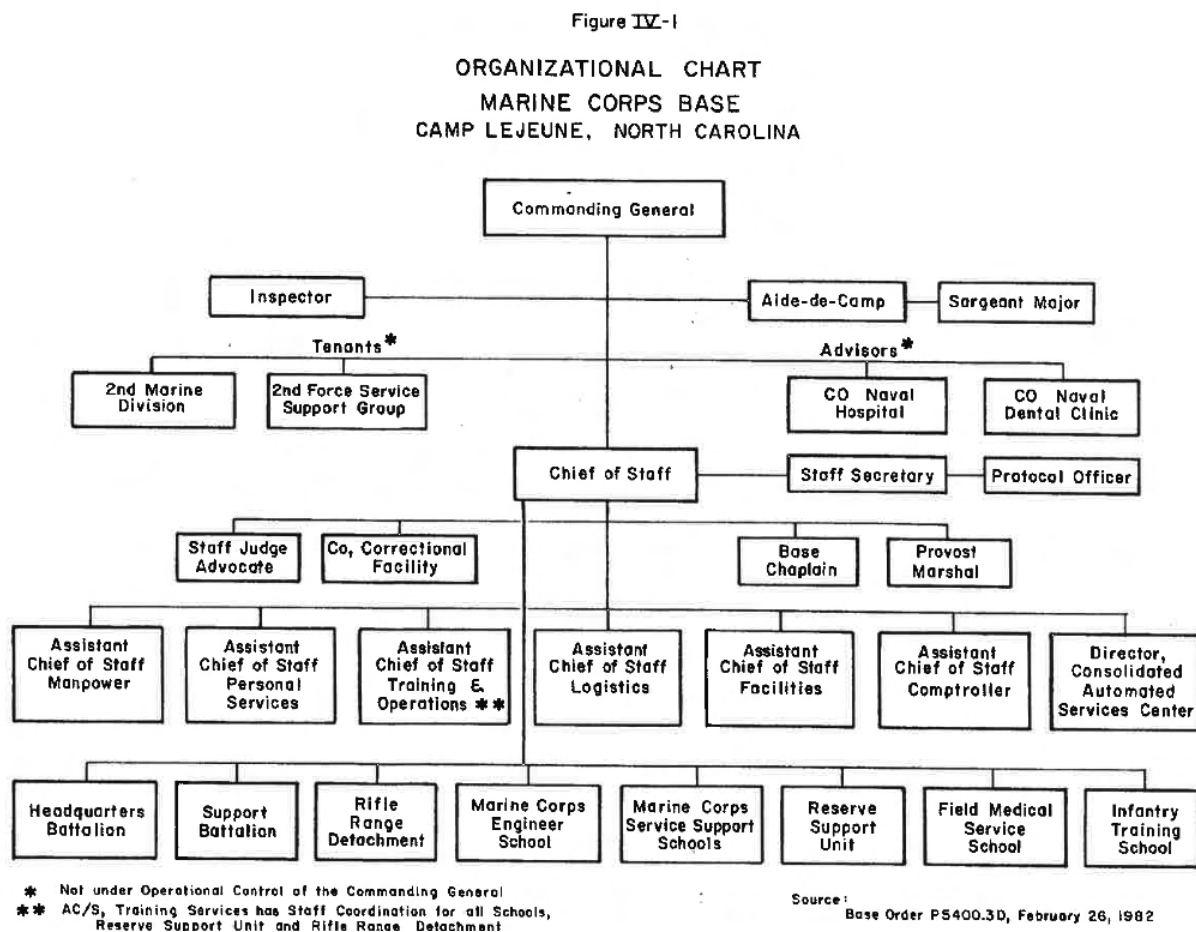
¹³⁶ Zinni Deposition, 5/28/2024, 62:23-63:4. Zinni also testified that he had never seen a water buffalo fill point," *ibid*, 63.

¹³⁷ Longley Report, 12/7/2024, 34.

School at Camp Johnson, and the Engineer School at Courthouse Bay did not routinely rely on the 2d Force Service Support Group to provide their water buffaloes in support of training.

Image 7 is an organizational chart of the commands at Camp Lejeune introduced as an exhibit during General Zinni's deposition.

Image 7
Organizational Chart, Marine Corps Base Camp Lejeune,
North Carolina, 2/26/1982¹³⁸



The note to the right of the single asterisk at the bottom of the chart reads: “Not under Operational Control of the Commanding General.” Missing from the organizational chart is

¹³⁸ Zinni Deposition, 5/28/2024, Exhibit 7, CLJA_WATERMODELING_01-0000323120.

MCAS New River, which was under the command of MCAS Cherry Point. Base Guides from 1966, 1972, 1980, and 1984 all noted the multiple commands at Camp Lejeune.¹³⁹

My discussion in this section of my report is the basis for opinions 1 and 6 of this report regarding Dr. Longley's methodological shortcomings and the discussion of water buffaloes at Camp Lejeune.

IX. Cars at Camp Lejeune

Dr. Longley makes an unsupported conclusion that most Marines lacked cars to travel off base. The second of Dr. Longley's findings reads in part: "A substantial part of the overall demographic historically was composed of young male Marines (under age of 25), and they typically lacked cars during much of the relevant time period."¹⁴⁰ Although I agree with Dr. Longley that young men were likely "a substantial" part of the Camp Lejeune population, I respectfully disagree with his assertion that they lacked cars. Throughout most of the statutory period, the documentation shows there was a considerable number of cars at Camp Lejeune. As I discussed in my December 9, 2024, report, this could also lead one to conclude that more cars would mean more traffic, a point I illustrate in my report through several sources.¹⁴¹

One such source, Image 28 in my December 9, 2024, report is the front page of *The Globe* dated August 10, 1972, and is an illustration of a traffic jam at Camp Lejeune presumably at the main gate. On the guard station are the words: "World's Largest Amphibious Training Base."¹⁴² This illustrates that there was a substantial population that lived off base and commuted onto the base each day, meaning their homes where they cooked, ate, and bathed, were unaffected by contamination. An email from Mike Partain to Dr. Longley corroborates traffic congestion during the morning and evening commutes from people entering and exiting the base.¹⁴³

¹³⁹ 1966 Base Guide, Base_Guides_0000000098, at *0000000103; 1972 Base Guide, Base_Guides_0000000465, at *0000000473; 1980 Base Guide, Base_Guides_0000000829, at *000000833; and 1984 Base Guide, Base_Guides_0000000871, at *000000875-79.

¹⁴⁰ Longley Report, 12/7/2024, 2.

¹⁴¹ Brigham Report, 12/9/2024, 62-63. I discuss in Section VII of this report, that Marines traveled off base into Jacksonville as shown by the Marine Corps' listing off-limits establishments in *The Globe* and off-base advertising in base guide yellow pages.

¹⁴² Brigham Report, 12/9/2024, 63.

¹⁴³ E-mail, M. Partain to K. Longley and J. Ensminger, 1/14/2025, CL_PLG-EXPERT_LONGLEY_0000000011.

In this section of my December 9, 2024, report, I also discussed long travel times on base between Hadnot Point and Montford Point / Camp Johnson in 1970 and between Hadnot Point and Montford Point, Camp Geiger, and MCAS New River in 1986.¹⁴⁴ To further illustrate the prevalence of cars on base during the statutory time period, I use other corroborating sources. For example, *Globe* articles reported on cars, including car accidents. An April 1954 *Globe* article discussed five automobile accidents at Camp Lejeune since the start of the year. The author of the article stated that there were more than 26,000 government and privately-owned vehicles on the base.”¹⁴⁵ Although the 1954 article did not distinguish between privately-owned and government-owned vehicles, an October 1961 *Globe* article did make that distinction stating that there were 22,000 “privately owned vehicles registered at Camp Lejeune.”¹⁴⁶ The following June a *Globe* article stated that there were more than 20,000 privately owned cars at Camp Lejeune and the Corps did not restrict “Marines or workers” from bringing cars on base.¹⁴⁷ The 1962 base guide contained information on where Marines reporting to Camp Lejeune could obtain base auto tags.¹⁴⁸

In his second finding, Dr. Longley states that Marines either walked or used the base’s bus system to get from one place to another and he included in his report a copy of the bus schedule published in *The Globe* in July 1970.¹⁴⁹ However, a February 1966 article from *The Globe* discussing traffic and parking problems at Camp Lejeune stated:

¹⁴⁴ Brigham Report, 12/9/2024, 62-63.

¹⁴⁵ E. Dansker, “Conduct Traffic Study Here to Determine Danger Spots,” *The Globe*, 4/8/1954, BRIGHAM_USA_0000013970, and at *0000013976.

I am not suggesting that all of the privately-owned cars on base belonged to Marines who lived on base. Any discussion of the number of cars on base or the number of parking permits or tags issued must include a recognition that Marines who lived off base and civilians who lived on or off base and drove automobiles on the base needed a base-issued parking permit or tag.

¹⁴⁶ “Slow Drivers Must Observe Speed Limits,” *The Globe*, 10/12/1961, BRIGHAM_USA_0000018652, at *0000018655.

¹⁴⁷ “Parking Space At A Premium Here At Base,” *The Globe*, 6/21/1962, BRIGHAM_USA_0000020751, at *0000020754. An October 1964 *Globe* article placed the number of privately owned vehicles at more than 21,000, see “Office of Law and Order, Base Provost Marshall Section,” *The Globe*, 10/15/1964, BRIGHAM_USA_0000022587, at *0000022598.

¹⁴⁸ 1962 Base Guide, at Base_Guides_0000000077, at *0000000080. The 1952 Base Guide, before the statutory period, also contained information on driver permits, automobile inspections, insurance, ownership, and traffic regulations, see 1952 Base Guide, Base_Guides_0000000058, at *0000000068.

¹⁴⁹ Longley Report, 12/7/2024, 2, 16.

One of the primary causes for traffic and parking congestion is the lack of the use of car pools, and personnel driving their cars to places they could reach within five minutes walking time.

Bus service is available to a number of locations in the Hadnot Point area which could alleviate the necessity of using privately owned vehicles to and from work.¹⁵⁰

In March 1972, four months before the bus schedule appeared in *The Globe*, the writer of an article stated there were: “38,000 privately owned vehicles at Camp Lejeune [that caused] a great deal of congestion, especially between the PX and traffic circle.”¹⁵¹ A year later a reported 40,000, or perhaps 50,000 cars were registered at Camp Lejeune.¹⁵²

Moving on to 1981, a *Globe* article reported about 39,800 privately owned vehicles entered Camp Lejeune through the main gate.¹⁵³ Six years later, near the end of the statutory period, the base commanding general asked for assistance from the area commanders to help

¹⁵⁰ “Traffic, parking problems here,” *The Globe*, 2/24/1966, BRIGHAM_USA_0000021050, at *0000021054.

¹⁵¹ G. Clock, “Crossing Holcomb tricky,” *The Globe*, 3/9/1972, BRIGHAM_USA_0000024840, at *0000024843.

¹⁵² “Decals Of A Different Color,” *The Globe*, 3/29/1973, BRIGHAM_USA_0000023583, at *0000023586. The text of the article reads: “More than 10,000 vehicles registered here within the past s[illegible] months already have the new decals, but do not have the expi[illegible] dates flanking the stickers. While 40,000 other motorists are gettin[g] entire works slapped on their bumpers, the ‘dateless’ stickers [illegible] applied for motorists without them.” As noted above, the 1962 base guide contained information on car registrations for Marines reporting to Camp Lejeune. The 1966, 1967, 1970, 1971, 1972, 1976, 1977, 1978, 1979, 1980, and the 1984 Camp Lejeune base guides all contain car registration information as does the 1970 MCAS New River Base Guide, see, 1966 Base Guide, Base_Guides_0000000098, at *0000000121-22; 1967 Base Guide, Base_Guides_0000000180, at *000000203; 1970 Base Guide, Base_Guides_0000000254, at *000000275; 1970 Base Guide, New River Marine Corps Air Station, Base_Guides_0000000328, at *000000339; 1971 Base Guide, Base_Guides_0000000391, at *000000423; 1972 Base Guide, Base_Guides_0000000465, at *0000000482-83; 1976 Base Guide, Base_Guides_0000000559, at *000000577; 1977 Base Guide, Base_Guides_0000000627, at *000000635; 1978 Base Guide, Base_Guides_0000000695, at *000000703; 1979 Base Guide, Base_Guides_0000000759, at *000000767; 1980 Base Guide, Base_Guides_0000000829, at *000000837; and 1984 Base Guide, Base_Guides_0000000871, at *000000884.

¹⁵³ D. Luttenberger, “PMO cracks down on vehicle violations,” *The Globe*, 7/23/1981, BRIGHAM_USA_0000036996, at *0000023586. This number likely does not include Marines and Marine families that lived on base, and it would double any vehicle that entered the base twice on a given day.

enforce parking regulations. The author of the article reported that illegally parked cars were “a significant problem” at Camp Lejeune.¹⁵⁴

My discussion in this section of my report is the basis for opinion 6 of this report, regarding Dr. Longley’s mischaracterization of modes of transportation on the base.

X. Conclusion

In this report I have detailed my criticism of Dr. Longley’s Expert Report dated December 7, 2024. As reflected in my opinions, my critique centers around Dr. Longley’s methodological shortcomings; his failure to consider areas of Camp Lejeune beyond Hadnot Point and Tarawa Terrace, including his narrow focus on only the two WTPs that pumped contaminated water; his incomplete discussion of water buffaloes; and his incorrect claims that Marines rarely left Camp Lejeune and very few Marines owned cars.

Regarding methodological shortcomings, there are numerous examples throughout his report in which Dr. Longley failed to provide citations for facts and the associated assertions. Other times he provided incomplete citations, such as citing *The Globe* without providing the article’s complete publication date, title, or page reference. Dr. Longley’s report also suffers from incorrect and misleading interpretations of film and photographic sources. Most egregiously, this includes his description of and citation to the image depicting President Nixon’s “visit to Camp Lejeune on October 30, 1971” that never occurred; a misrepresentation of the image of “Marines” filling a “water buffalo at Hadnot Point,” which was actually a photograph of New Jersey National Guardsmen filling a water buffalo in 2012; and his inaccurate caption of the Holcomb Boulevard WTP photograph. Other methodological issues with Dr. Longley’s report include a lack of corroborating material and use of a single document referencing a specific point in time to extrapolate and characterize events or experiences that occurred over the course of decades.

As I discussed in my December 9, 2024, report, Camp Lejeune was much more than Hadnot Point and Tarawa Terrace. As I have noted in this report, there is no doubt that Hadnot Point was the area of Camp Lejeune where many things occurred, but it was not the only area of the base where important activities took place. Many a Marine, for example, passed through the Infantry Training Regiment at Camp Geiger while others received training in their military occupational specialty at Montford Point / Camp Johnson or Courthouse Bay. Marines received rifle certification at the Rifle Range and participated in amphibious landing training at Onslow Beach. MCAS New River, although a part of Camp Lejeune, was under separate command. These areas were not adjacent to Hadnot Point and most had necessary amenities and services, negating the need for daily or frequent trips to Hadnot Point. These were the areas that surrounded the “county seat” or the suburbs of the urban center at Hadnot Point.

¹⁵⁴ “Traffic conditions,” *The Globe*, 5/7/1987, BRIGHAM_USA_0000029212, at *0000029214.

Montford Point / Camp Johnson, Camp Geiger, MCAS New River, Courthouse Bay, Rifle Range, and Onslow Beach all received non-contaminated water from their own WTPs or shared a WTP with another Non-Contaminated Area. Dr. Longley fails to acknowledge that fact. Dr. Longley also fails to address that after the Holcomb Boulevard WTP came online in 1972, it rarely pumped contaminated water and, when it did, the water came from the Hadnot Point WTP. Indeed, many family housing areas did not receive contaminated water and many of the activities of daily living that Dr. Longley discusses in his report—such as children attending school and people swimming in pools—took place in Non-Contaminated Areas of the base.

When discussing the filling of water buffaloes, Dr. Longley does not discuss the possibility that they could have been filled at areas of Camp Lejeune beyond Hadnot Point. Although he cites deposition testimony throughout his report, he does not discuss that some of the cited deponents stated that other filling stations existed at Camp Lejeune in Non-Contaminated Areas.

Two related topics of his report concern the assertion that Marines infrequently left Camp Lejeune and that few had cars that would have allowed such mobility. However, as I point out, in the back of most base guides were pages of advertisements from Jacksonville business owners. The off-limit business establishments posted by Marine Corps leadership is further evidence that Marines could and did leave the base. Furthermore, there was a substantial number of Marines that lived off base throughout the statutory period. And, as I have explained, the number of privately-owned cars on base often exceeded 20,000.

Overall, because Dr. Longley does not consistently adhere to accepted practices that historians employ, his report reflects an incomplete, inaccurate, and at times outright misleading exposition on Camp Lejeune during the statutory period. For the reasons discussed throughout this report and summarized in this conclusion section, I stand by the opinions expressed in my December 9, 2024, report.

EXHIBIT 5

Expert Report of Ari Kelman, Ph.D.

**In the United States District Court
for the Eastern District of North Carolina
Southern Division**

Case No.: 7:23-CV-897

Camp Lejeune Water Litigation

Prepared by



**Ari Kelman, Ph.D.
Chancellor's Leadership
Professor of History
The University of California, Davis
February 7, 2025**

Kelman – Report Table of Contents

Introduction and Expert Opinions	p. 1
Witness Qualifications	p. 2
Historical Methods, Historiography, Oral History	p. 3
The Longley Report	p. 9
Conclusion	p. 14

Introduction and Expert Opinions

The United States Department of Justice contacted me in January 2025 about the possibility of reviewing Dr. Longley's report of December 7, 2024, with limited focus on his methodology. Accordingly, I have prepared the following report, which focuses exclusively on methodological issues that I identified in Dr. Longley's report of December 7, 2024, including his collection, use, and citation of oral histories, as well as evidence more broadly. I offer the following three opinions, which, if I receive additional evidence or information, are subject to change:

- 1) In several instances in his report, Dr. Longley interchangeably references "oral histories," "interviews," "depositions," and other information conveyed verbally. This imprecision is not consistent with generally accepted practices among historians who use direct verbal communication as source material. Oral histories must meet a higher methodological standard than interviews or depositions. That standard includes, among other things, ensuring that oral history records are archived appropriately, making them available to historians, scholars, and other researchers who wish to access them. Therefore, as this report will demonstrate, Dr. Longley transgresses generally accepted standards among historians when he conflates depositions and interviews with the more demanding standards of oral histories.
- 2) Dr. Longley's collection and use of verbal communications for his report is inconsistent with the generally accepted standards employed by professional historians, who are taught to carefully question all of their sources—considering issues such as context, positionality, bias, and historiography, among many others—before crafting arguments or arriving at conclusions.
- 3) The citation practices that Dr. Longley employs in his report for verbal communications, visual images, and other important information also fall short of the generally accepted standards of professional historians. In many instances in his report, Dr. Longley does not provide accurate information about the source of an image he uses, and he sometimes fails to include proper citations for other key information or assertions, including facts that are not generally known.

Witness Qualifications

I received my PhD in history from Brown University in 1998. I have worked since then as a professional historian in academic settings, holding faculty positions at The University of Oklahoma, The University of Denver, The Pennsylvania State University, and The University of California, Davis, where I now serve as Chancellor's Leadership Professor of History. Among my responsibilities in my current role, I periodically offer PhD students seminars in historical methods, including providing practical training in how to collect and employ oral histories.

I am an expert in several subdisciplines of United States history: environmental history, with an emphasis on the history of the built environment and the production of cultural landscapes; the history of the Civil War; Native American history; public history and collective memory; and, most important for this report, historical methods, including oral history and historiography.

I am the author of three books: *Battle Lines: A Graphic History of the Civil War* (Hill and Wang, 2015); *A Misplaced Massacre: Struggling Over the Memory of Sand Creek* (Harvard University Press, 2013), which won numerous national awards, including the Bancroft Prize, often regarded as the most prestigious scholarly honor in the field of U.S. history; and *A River and Its City: The Nature of Landscape in New Orleans* (University of California Press, 2003), which won the Abbott Lowell Cummings Prize. I have also published some fifty essays and articles in publications like *The Nation*, *The New York Times*, *Slate*, *The Times Literary Supplement*, *The Journal of American History*, *The Journal of Urban History*, and *Reviews in American History*.

A Misplaced Massacre is a study of the politics of memory surrounding the infamous Sand Creek massacre of 1864. The book explores the way that historians, other scholars, and members of the public produce and consume knowledge about the American past. *A Misplaced Massacre* rests on written sources that I collected across a decade from archives, and also on approximately one hundred oral histories that I conducted during that same time, including with tribal elders, National Park Service employees, and landowners in southeastern Colorado. Based on standards generally accepted among oral historians, I archived original recordings of those materials at the

National Park Service's Western Archeological and Conservation Center, located in Tucson, Arizona, and the Sand Creek Massacre Visitor and Education Center, in Eads, Colorado.

I have received several prizes in recognition of my dedication to undergraduate teaching and graduate mentoring. I have also contributed to outreach endeavors aimed at K-12 educators and public history projects, including documentary films for the History Channel and PBS's *American Experience* series. Many grants and fellowships have supported my research throughout my career, including from the Guggenheim Foundation, the National Endowment for the Humanities, and the Huntington Library. In 2020, I was elected a member of the Society of American Historians, an organization of some four-hundred acclaimed scholars who work on U.S. history. I am currently writing a book titled *For Liberty and Empire: How the Civil War Bled into the Indian Wars* and editing the scholarly journal *Reviews in American History*.

Attached to this report, you will find my CV, which includes all of my single and co-authored publications for the last decade, as well as a selection of publications from years prior to that time. I have testified as an expert at deposition (May 2020) and trial (July 2020) in one case within the previous four years: *Ideker Farms, Inc. v. United States*, (CFC) 14-cv-183 L. My compensation as an expert witness on the Camp Lejeune Justice Act litigation is \$350 per hour.

Historical Methods, Historiography, Oral History

Historians rely upon an increasingly broad range of approaches to study the past. Some work from the bottom up; others prefer to work from the top down. Some believe that the past can best be understood by studying the actions of elite men; others insist that only by exploring the experiences of all people, including women and members of marginalized communities, can we properly account for the complexity and fluidity of change over time. Some argue that overweening economic structures left little room for individuals to make their mark on the world; others suggest that we should focus our gaze on contingencies or happenstance—often difficult to discern, almost always impossible to predict—as we do our best to chronicle the past.

In the end, historians are typically bound only by a shared methodology that can be traced back to late-nineteenth and early-twentieth century scholars who hoped to confer upon their discipline the elevated status afforded to the natural and physical sciences.¹ That methodology directs historians to examine documents found in repositories—archives of various kinds—where scholars are enjoined to work with different sorts of primary and secondary sources. Primary sources are first-hand accounts, documents produced by individuals who were eyewitnesses to an event or events. Secondary sources are second-hand accounts, documents produced by individuals who were not directly involved, who may, instead, have reconstructed what happened in a given place and time by looking at primary sources or at other secondary sources.

As mentioned previously, in *A Misplaced Massacre: Struggling Over the Memory of Sand Creek*, I explore the work of historians, considering how I and my colleagues produce knowledge, including how we test the accuracy of our documented assertions. I suggest that our methods are exacting by design, that they are “similar to the process of accretion.”² Historians, I explain, “frame questions about the past and then read, watch, or listen to huge numbers of ‘texts,’ the current term of art for their sources.”³ These texts can take the form of primary or secondary sources. I continue: “sifting through these materials,” historians “take notes, retaining tiny fragments of relevant information for later use. After doing this for months, years, even decades in some instances, they assemble the evidence they have collected, fashioning strata of ideas from an aggregate of facts, before arraying these layers, one atop the next, usually in the form of analytical narratives structured by a central argument.”⁴ I add that, in this way, “scholars transform fine-grained information into knowledge about the past,” before concluding that “this

¹ P. Novick, *That Noble Dream: The “Objectivity Question” and the American Historical Profession* (Cambridge University Press, 1988), 26-37.

² A. Kelman, *A Misplaced Massacre: Struggling over the Memory of Sand Creek* (Cambridge: Harvard University Press, 2013), 87.

³ Kelman, *Misplaced Massacre*, 87.

⁴ Kelman, *Misplaced Massacre*, 87.

is the historian's method," which "sits at the core of most historians' disciplinary identity, their sense of themselves as professionals both bound and elevated by shared scholarly practices."⁵

The process of interpretation, of analyzing sources and arriving at conclusions about the past, hinges on an additional element of what Marc Bloch, a leading authority on the discipline's methods, has called "the historian's craft."⁶ Bloch notes that historians do not merely reproduce words or phrases they find in their sources. Instead, they rely on their training to place these sources in proper context, to question their veracity, to determine if they display bias or bigotry that might inflect their meaning. In Bloch's telling, "from the moment when we are no longer resigned to purely and simply recording the words of our witnesses, from the moment we decide to force them to speak, even against their will, cross-examination becomes more necessary than ever. Indeed, it is the prime necessity of well-conducted historical research."⁷ Bloch notes that, "even those texts...which seem the clearest and the most accommodating will speak only when they are properly questioned."⁸ In other words, historians have a professional obligation to be more than just stenographers; carefully evaluating sources lies at the heart of their craft. These sources may be written records, typically housed in document repositories. They may be newspapers or different print media. They may be films, songs, or other forms of popular culture. And they may be oral histories, which, as noted below, should always be placed in archives.

In *The Oral History Manual*, Barbara Sommer and Mary Kay Quinlan define "oral history" as "primary-source material created in an interview setting with a witness to or a participant in an event or a way of life."⁹ Oral historians, they continue, do their work with "the purpose of preserving the information and making it available to others."¹⁰ Sommer and Quinlan offer many

⁵ Kelman, *Misplaced Massacre*, 87.

⁶ M. Bloch, *The Historian's Craft* (New York: Vintage Books, 1953), title.

⁷ Bloch, *The Historian's Craft*, 64.

⁸ Bloch, *The Historian's Craft*, 64.

⁹ B. Sommer and M. Quinlan, *The Oral History Manual*, 2nd ed. (Lanham, MD: Altamira Press, 2009), 1.

¹⁰ Sommer and Quinlan, *The Oral History Manual*, 1.

traits that define oral history, including “a structured, well-researched interview format,” “a controlled, recorded interview setting,” “probing follow-up questions that seek depth and detail,” “use of high-quality recording equipment,” “adherence to careful processing techniques,” and, finally, “provisions for making the interviews available to others at an accessible repository.”¹¹

Considering the professional obligation to archive sources, Donald Ritchie, Historian Emeritus of the United States Senate and the author of the leading primer on oral history, draws a sharp distinction between *interviews*, which he associates with journalistic practices, and *oral histories*, which, in his view, carry significantly greater value as evidence about the past but, as a result, also place significantly greater demands on scholars. “An interview becomes an oral history,” Ritchie indicates, “only when it has been recorded, processed in some way, made available in an archive, library, or other repository, or reproduced in relatively verbatim form for publication.”¹² He goes on to insist that “availability for general research, reinterpretation, and verification defines oral history.”¹³ Ritchie concludes: “by preserving the recordings and transcripts of their interviews, oral historians seek to leave a complete, candid, and reliable record as possible.”¹⁴

Historians have an additional methodological responsibility: documentation. They must cite their sources honestly, carefully, and transparently, offering colleagues an opportunity to assess their analyses and conclusions. Put bluntly, historians are not a trusting lot; the profession’s methods intentionally foster a disputatious culture. As students, historians are taught to check one another’s work, to return to original sources to verify interpretative rigor. They are encouraged to disagree, because out of scholarly conflict emerges a clearer picture of historical events. These arguments cannot be constructive without reference to scholarly apparatus: bibliography, footnotes or endnotes, the raw material from which historical arguments are crafted. Only when

¹¹ Sommer and Quinlan, *The Oral History Manual*, 1.

¹² D. Ritchie, *Doing Oral History*, 3rd ed. (Oxford: Oxford University Press, 2002, 2015), 8.

¹³ Ritchie, *Doing Oral History*, 8.

¹⁴ Ritchie, *Doing Oral History*, 8.

arguments are tested—when analysis of sources becomes sophisticated, acute, and refined—can the historiography, the scholarly literature, capture the complexity and richness of the past.¹⁵

As previously discussed, historians are taught by mentors and through best practices not to accept at face value what they are told by their sources, including oral histories. As Marc Bloch notes by way of analogy, “the most naïve policeman knows that a witness should not always be taken at his word.”¹⁶ Bloch underscores that historians, then, should never trust “historical evidence blindly.”¹⁷ They must, as noted previously, always question their sources—determining how best to use them, or even if they should be used—and scrutinize them to explore their background, their perspective, their honesty, their integrity, and whether they have an axe to grind or a position that they hope to advance. Again, this is a methodological expectation for historians in every instance, including when they choose to employ oral histories in their work.¹⁸

The methodological burden for historians who rely on verbal communications has actually been weightier than for historians who rely on more traditional written documents, because some scholars have been particularly suspicious of oral sources. These skeptics have suggested that oral histories should not be valued in the same way as written records, which, they contend, provide more reliable insight into the past. For example, some historians, questioning the utility of ethnographies collected from formerly enslaved people by employees of the Works Progress Administration during the Great Depression, pointed to the fallible nature of memory and to imbalances in power dynamics between interviewers and interviewees that may have skewed results.¹⁹ In a way, these critics suggested that oral histories conducted without close attention to

¹⁵ Novick, *That Noble Dream*, 220; J. Appleby, L. Hunt, and M. Jacob, *Telling the Truth about History* (New York: W.W. Norton & Company, Inc., 1994), 162; D. Fischer, *Historians' Fallacies: Toward a Logic of Historical Thought* (Harper Perennial, 1970), 309; and R. Evans, *In Defense of History* (London: Granta Publications, 1997), 166.

¹⁶ Bloch, *Historian's Craft*, 79.

¹⁷ Bloch, *Historian's Craft*, 79.

¹⁸ Bloch, *Historian's Craft*, 79.

¹⁹ “The Limitations of the Slave Narrative Collection,” *The Library of Congress*, <https://www.loc.gov/collections/slave-narratives-from-the-federal-writers-project-1936-to-1938/articles-and-essays/introduction-to-the-wpa-slave-narratives/limitations-of-the-slave-narrative-collection/>.

power imbalances could be coercive, more closely resembling depositions: narratives collected as sworn testimony with a goal of extracting information that sources may wish to distort or hide.

I would add that I believe there are other significant differences in the way that oral histories and depositions are collected, and those differences are typically rooted in the disparate professional methods of historians and attorneys. Although both kinds of researchers, historians and attorneys, seek information, oral historians are encouraged to acknowledge that the material they collect belongs to the person being interviewed. Michael Frisch, a renowned public and oral historian, suggests that historical researchers should never elevate themselves above the communities with which they engage. Rather than policing boundaries or reinforcing hierarchies, Frisch directs scholars to “share authority” with their subjects as a way of encouraging them to be more forthcoming with information that is, again, theirs.²⁰ Depositions, by contrast, are rooted in inequitable power dynamics.²¹ In my experience, deponents are questioned by attorneys who leverage their professional standing and the discomfort of the person being interviewed to glean information that can be used instrumentally through a process that is, by design, adversarial.

Historians sometimes use depositions as sources in their work. But when they do, they must, based on the historian’s craft, remain mindful of the differential power dynamics inherent in the deposition process, attending to how those dynamics may shape the sources upon which a scholar relies to reach conclusions about the past. The same guidance applies to oral histories, because historians should always approach all of their sources from a critical distance. And then, as noted above, only by providing access to their sources—by ensuring that they are archived correctly and cited carefully—can historians who rely on depositions, oral histories, or other information conveyed verbally enable other scholars or interested parties to examine the material used in reaching conclusions or constructing arguments. In short, only by fulfilling their methodological obligations can these historians allow their colleagues to determine whether sources have been used appropriately and whether conclusions or arguments are sound.

²⁰ M. Frisch, *A Shared Authority: Essays on the Craft and Meaning of Oral and Public History* (Albany: State University of New York Press, 1990), xv-xxiv.

²¹ C. Morrissey, “Beyond Oral Evidence: Speaking (Con)strictly About Oral History,” *Archival Issues* 17 (1992), 91.

On balance, though, as oral history methods have become more sophisticated, and when oral historians fulfil their responsibility to evaluate their sources carefully, scholars often recognize that the benefits of oral histories—providing access to subjects that otherwise might remain obscure or out of reach of researchers—outweigh the costs. And so, given methodological imperatives around the close examination of all historical sources and careful practice on the part of oral historians, the evidentiary weight of oral histories is typically no longer discounted, though many historians still prefer to rely on contemporaneous documents for evidence.²²

Regardless, professional practices and shared methodological norms dictate that scholars must always cite oral histories appropriately. Additionally, historians who are responsible for collecting oral histories that they use as evidence in their scholarship must make those materials, typically either in the form of the original recordings or verbatim transcriptions, available to other interested parties who wish to engage with their interpretations and conclusions.

The Longley Report

In his report, Dr. Longley uses what he calls “oral histories” when it appears that he should label his sources more accurately: as interviews. For example, on Page 10 of his report, he writes:

Many Marines and their dependents drank from the water fountains provided around the base as well as from hoses and jugs spread across Camp Lejeune. The only equivalent to today’s wide selection of bottled drinks would have been the canteens that the Marines carried. However, they filled these canteens with base tap water from taps, commonly found in the logistics support areas, primarily at Hadnot Point, or from the big jugs of tap water stationed around base to provide for the Marines during training.²³

²² J. Webster, “‘Filling the Gaps’: Oral Histories and Underdocumented Populations in *The American Archivist*, 1938-2011,” *The American Archivist* 79 (2016), 256 and T. Charlton, L. Myers, and R. Sharpless, *History of Oral History: Foundations and Methodology* (Lanham, MD: Altamira Press, 2007), 43-44.

²³ Longley Report, 12/7/2024, 10.

In Footnote 21, Dr. Longley cites his source for these claims: “Oral History via Zoom with Allan Howard, 30 August 2024.” When asked for the full text of that oral history, Dr. Longley produced only general notes from an interview that he conducted with his source, Mr. Howard.²⁴ Although notes may suffice when conducting interviews, they do not alone meet the standard for a professional oral history. As Donald Ritchie explains in his primer on method, *Doing Oral History*, “Note taking makes some researchers feel more comfortable because it helps focus their attention—as they listen to what is being said—on the exact points they anticipate later using. But there is no reason not to record and take notes at the same time.”²⁵ Ritchie allows that “note takers may make honest mistakes in what they hear”²⁶ but adds: “Note takers also run the risk of hearing only what they want to hear rather than what the interviewee actually says.”²⁷

Readers cannot know whether Dr. Longley made honest mistakes in what he heard or whether he heard what he wanted to hear rather than what Mr. Howard actually said when interviewed. That is exactly the reason for Ritchie’s and Sommer and Quinlan’s methodological prescriptions to record, transcribe, and archive interviews if a scholar wants them to be considered oral histories: so that the interviewer and other interested parties can verify the validity of how the source material is being used. Dr. Longley should be aware of his methodological responsibilities, because on Page 47 of his report, he indicates that Ritchie’s *Doing Oral History* and Sommer and Quinlan’s *The Oral History Manual* guided his approach to the practice of oral history.²⁸

Dr. Longley falls short methodologically in a similar way when he uses evidence derived from Mr. Ensminger. On Page 19 of his report, Dr. Longley discusses Marines who washed weapons in the showers at Camp Lejeune, noting that “another oral historian, former Master Sergeant Ensminger, says it was not the authorized method for cleaning weapons, but it happened a lot.” Readers cannot know if Dr. Longley meant to write “in another oral *history*” rather than “another

²⁴ Oral History of Allan Howard, 8/30/2024, Via Zoom, CL_PLG-EXPERT_LONGLEY_0000000014.

²⁵ Ritchie, *Doing Oral History*, 104.

²⁶ Ritchie, *Doing Oral History*, 104.

²⁷ Ritchie, *Doing Oral History*, 104.

²⁸ Longley Report, 12/7/2024, 47.

oral *historian*.” Regardless, for evidence of his claim about the use of showers as a location for cleaning weapons, he points in Footnote 46 to “Oral historian statement, Ensminger.”²⁹ Again, as with the case noted above of Mr. Howard, when asked for a complete transcript of his interview with Mr. Ensminger, Dr. Longley produced only notes—dated January 7, 2024, a month after Dr. Longley’s December 7, 2024 report—from an interview with his source.³⁰ This discrepancy of timing and method leaves the collection and content of the source shrouded in uncertainty.

Dr. Longley’s use of the interview with Mr. Ensminger points to another methodological shortcoming in his report: a failure to critically evaluate his sources. Donald Ritchie writes in *Doing Oral History* that “just as historians who uncover archival evidence must interpret it and put it in historical context, oral historians recognize that the words they record are not ‘unvarnished history.’”³¹ In his book *The Morenci Marines: A Tale of Small Town America and the Vietnam War*, Dr. Longley appears to agree with Ritchie’s argument. Writing about the promise and peril of oral history, Dr. Longley acknowledges that “historians who use oral history understand the obstacles that exist in employing such materials. The narratives are often compiled many years after the events they describe. In that time, memories fade and details disappear.”³² He goes on to add: “Furthermore, the events become viewed through filters shaped to protect a memory or promote a particular perspective that bears either positively or negatively on the subject.” And yet, Dr. Longley fails to bring this caution to bear in his own report.³³

It is unsurprising that litigants, including Dr. Longley’s subjects, have a vested interest in the outcome of litigation. Still, it is incumbent on professional historians to evaluate all of their sources—including for Dr. Longley in this case to consider the impact of his interviewees’ potential biases on his analysis. Mr. Ensminger, mentioned above, has testified before Congress

²⁹ Longley Report, 12/7/2024, 19.

³⁰ Interview with MSgt. (ret.) Jerry Ensminger, 1/07/2025, CL_PLG-EXPERT_LONGLEY_0000000012.

³¹ Ritchie, *Doing Oral History*, 13.

³² K. Longley, *Morenci Marines: A Tale of Small Town America and the Vietnam War* (Lawrence: University Press of Kansas, 2013), 7.

³³ Longley, *Morenci Marines*, 7.

in favor of various Camp Lejeune initiatives, including the Janey Ensminger Act and the Camp Lejeune Justice Act of 2022.³⁴ So, too, has Mr. Partain.³⁵ Nowhere in his report, including in his citations, does Dr. Longley mention this Congressional testimony. Dr. Longley also never makes it clear how—or if—he has adjusted his analysis or conclusions to factor in Mr. Ensminger’s and Mr. Partain’s potential biases and how those biases may have impacted the information they conveyed verbally. To be clear, there is nothing inherently wrong with those biases. No source and no historian is perfectly objective. The historian’s craft, therefore, demands that scholars make it clear how they grapple with their positionality and the positionality of their sources.

In addition to the issues above, another methodological concern appears in Dr. Longley’s report: inconsistencies between his factual claims and the information provided in the plaintiffs’ depositions and declarations. For example, on Page 12 of his report, Dr. Longley writes: “From the start, the goal was to keep the Marines on base, spending their time and money there to prevent challenges from developing between sometimes rowdy Marines and locals.”³⁶ But two of the four deponents he relied on to substantiate this claim, Mrs. Tukes and Mr. McElhiney, Sr., mostly lived off base: Mr. McElhiney, Sr. lived on base for a bit more than four of twenty-three years of service;³⁷ Mrs. Tukes lived on base about a year of her several decades in the area.³⁸

The same issue arises around Dr. Longley’s claims regarding the filling of so-called water buffaloes. On Page 36 of his report, Dr. Longley writes: “In the field there was water available

³⁴ Mr. Ensminger’s Congressional testimony can be found in numerous locations, including the following: <https://www.govinfo.gov/content/pkg/CHRG-110hhrg37793/pdf/CHRG-110hhrg37793.pdf>; <https://www.veterans.senate.gov/services/files/4A964881-45E3-41F5-B057-02DD324527D2>; <https://www.judiciary.senate.gov/imo/media/doc/12-3-13EnsmingerTestimony.pdf>; and <https://www.congress.gov/114/chrg/CHRG-114shrg21348/CHRG-114shrg21348.pdf>.

³⁵ Mr. Partain’s Congressional testimony can be found in numerous locations, including the following: https://republicans-science.house.gov/_cache/files/e/2/e2d4a1f2-d82e-45e9-b284-449754bf6aff/6917E476C613D3421FFAF940A8975922.091610-partain.pdf; <https://www.veterans.senate.gov/services/files/071BA053-6068-4305-9337-5243828435C4>.

³⁶ Longley Report, 12/7/2024, 12.

³⁷ McElhiney, Sr. deposition, 3/5/2024, 44, 53, 63, 75, 84-85, 87, 90-91, 103, 105, 118-119.

³⁸ J. Tukes deposition, 4/11/2024, 35-38; J. Tukes deposition, 1/15/2025, 45-46; W. Tukes, Jr., deposition, 1/15/2025, 20-21.

for washing skin that was drawn from the sources at Hadnot Point and carried into the field in water buffaloes.” Mr. McElhiney, Sr., meanwhile, notes that while he knew that water buffaloes could be filled at Hadnot Point, he also indicated that there was a fill point at Courthouse Bay.³⁹ Mr. Ensminger, for his part, allows that water buffaloes “could have been” filled at Camp Geiger, but says that he used fire hydrants, which were dangerous.⁴⁰ Finally, Mr. Urquhart mentions having used “a big spigot” to fill water buffaloes and gives no indication that he had any trouble with that method, before adding that water buffaloes were filled at “water stations throughout Camp Lejeune.”⁴¹ In sum, Dr. Longley failed to consider material facts from his own cited documents, which falls short of generally accepted practices among professional historians.

Furthermore, Dr. Longley’s citation practices are inconsistent and fail to meet professional standards of transparency and accuracy. For example, Footnote 85 of Dr. Longley’s report comes at the end of a long paragraph filled with information presented as facts about training activities at Camp Lejeune. Historians are not required to cite every fact included in their work. Common knowledge, like the fact that Abraham Lincoln served as president during the Civil War, need not be footnoted. But the paragraph that ends with Footnote 85 contains information specific to Marines stationed at Camp Lejeune, including facts that are not common knowledge: that the daily routine of Marines at Camp Lejeune featured vigorous exercise; that days at Camp Lejeune often began as early as 6 am with a regimen of calisthenics; that Marines at Camp Lejeune “often performed hours of resistance exercises with their body weight;” and that Marines sometimes carried packs that weighed as much as sixty pounds on marches as long as fifty miles.⁴²

That Dr. Longley includes only a single footnote at the end of the paragraph mentioned above is not necessarily a problem. Paragraph citations, if they are organized appropriately, can provide adequate information. In this case, though, Dr. Longley’s citation lists three sources: two films and an oral history. There are no time codes listed for the films, making it impossible to check

³⁹ Longley Report, 12/7/2024, 36 and McElhiney, Sr., deposition, 3/5/2024, 55. See also McElhiney Exhibit 5.

⁴⁰ Interview with MSgt. (ret.) Jerry Ensminger, 1/07/2025, CL_PLG-EXPERT_LONGLEY_0000000012.

⁴¹ Urquhart deposition, 11/13/2024, 74-76.

⁴² Longley Report, 12/7/2024, 31-32.

whether the sources support the facts cited. It appears that the oral history has, as with the cases mentioned above, not been appropriately archived. And only a single page of notes has been recorded. As a result, it is again not possible to carefully examine Dr. Longley's sources or his conclusions. In addition, Dr. Longley's report does not accurately reflect facts as recorded in his notes. As indicated above, Dr. Longley suggests that marches at Camp Lejeune could stretch to fifty miles. But notes from his conversation with Mr. Howard indicate that marches were only fifteen miles. These are recurring problems in his report; this paragraph is just one example.⁴³

Finally, Dr. Longley sometimes fails to include citations for the images used in his report. This lack of sourcing is particularly challenging because there are images or illustrations on almost every page of Dr. Longley's report. And many pages—for example, Page 13—contain two or even three images. These images often have discursive captions below them, likely written by Dr. Longley. Without offering his readers consistent citations, though, the point of origin of these materials remains mysterious, rendering futile any effort to assess the connections between Dr. Longley's images, his analysis, and his conclusions, including his report's expert opinions.⁴⁴

Conclusion

Leaving aside the particulars of this litigation, Dr. Longley's report displays significant methodological shortcomings. He sometimes describes interviews and other material apparently conveyed verbally as "oral histories," lending these sources unearned evidentiary authority. He also has not transcribed or archived at least some of the materials he labels oral histories, rendering it impossible to assess whether these materials support his conclusions. In addition, he occasionally fails to provide adequate citations for facts, assertions, and images. Moreover, he has not adequately evaluated all of his sources for bias, suggesting either credulousness in how he utilizes evidence in his report, or, worse still, the possibility of tendentious misconstruals. As a result, Dr. Longley's report fails to meet the standard practices used by professional historians, including some of the scholars whom he claims in his report shaped his approach to oral history.

⁴³ Longley Report, 12/7/2024, 32 and Oral History of Allan Howard, 8/30/2024, Via Zoom, CL_PLG-EXPERT_LONGLEY_0000000014.

⁴⁴ Longley Report, 12/7/2024, 13.

ARI KELMAN

Chancellor's Leadership Professor of History
The University of California, Davis
akelman@ucdavis.edu

EDUCATION:

Brown University. Ph.D., History, May 1998. Dissertation: "A River and Its City: An Environmental History of New Orleans." Chairs: John L. Thomas and James T. Patterson. Readers: Andrew Isenberg and Naomi Lamoreaux.

Brown University. M.A., History, May 1993.

University of Wisconsin-Madison. B.A. earned with distinction, History, May 1991. Honors Thesis: "Motivation to Fight in the 'Iron Brigade': A Study of 'Manly Courage' in the Civil War." Directors: Jeanne Boydston and Richard Sewell.

EMPLOYMENT EXPERIENCE:

University of California, Davis. Faculty Advisor to the Chancellor and Provost, 2021-present.

University of California, Davis. Interim Dean of the College of Letters and Science, 2020-2021.

University of California, Davis. Associate Dean for Academic Programs and Planning, College of Letters and Science, 2017-2020.

University of California, Davis. Chancellor's Leadership Professor of History, 2016-present.

The Pennsylvania State University. McCabe Greer Professor of the American Civil War Era, 2014-2016.

University of California, Davis. Associate Vice Provost and Director of University Honors, 2013-2014.

University of California, Davis. Professor of History, 2013-2014.

University of California, Davis. Associate Professor of History, 2005-2013.

University of Denver. Chair, Department of History, 2004-2005.

University of Denver. Associate Professor of History, 2004-2005.

University of Denver. Assistant Professor of History, 2000-2004.

University of Oklahoma. Assistant Professor of Geography, 1998-2000.

University of Oklahoma. Assistant Professor of History, 1998-2000.

University of Oklahoma. Reach for Excellence Honors Professor, 1998-2000.

TEACHING AND RESEARCH FIELDS:

Civil War and Reconstruction, U.S. West and Borderlands, Native American History, Public History and Historical Memory, Environmental History, Urban History, Historical Geography.

ALL PUBLICATIONS FROM THE LAST TEN YEARS AND SELECTED BEYOND:

BOOKS:

For Liberty and Empire: How the Civil War Bled into the Indian Wars. (New York: Basic Books, Under Contract).

The Indian Wars: A Very Short Introduction. (New York: Oxford University Press, Under Contract).

Battle Lines: A Graphic History of the Civil War. With Jonathan Fetter-Vorm. (New York: Hill and Wang, 2015).

A Misplaced Massacre: Struggling over the Memory of Sand Creek. (Cambridge, MA: Harvard University Press, 2015). New paperback edition.

A Misplaced Massacre: Struggling over the Memory of Sand Creek. (Cambridge, MA: Harvard University Press, 2013). Received the 2014 Bancroft Prize, 2014 Avery O. Craven Book Award, 2014 Tom Watson Brown Book Award, 2014 Robert M. Utley Book Award, and the 2015 Antoinette Forrester Downing Book Award.

A River and Its City: The Nature of Landscape in New Orleans. (Berkeley: University of California Press, 2006). New paperback edition.

A River and Its City: The Nature of Landscape in New Orleans. (Berkeley: University of California Press, 2003). Received the 2004 Abbott Lowell Cummings Award.

SCHOLARLY ESSAYS AND BOOK CHAPTERS:

"The Civil War and Reconstruction." In Nicholas Guyatt (ed.), *The Oxford Illustrated History of the United States.* (New York: Oxford University Press, under contract).

"Seeing the Trees: Searching for Environmental Justice along the Banks of Sand Creek." In Mary Mendoza and Traci Brynne Voyles (eds.), *Not Just Green, Not Just White: Race, Justice, and Environmental History.* (Lincoln: University Nebraska Press, 2025), 321-347.

"After the Opening: Shared Authority and Multivocality at the Sand Creek Massacre National Historic Site." In Christina Gish Hill, Matthew Hill, and Brooke Neely (eds.), *Native Parks, National Sovereignty: Experiments in Collaboration.* (Norman: The University of Oklahoma Press, 2024), 117-134.

"Ripples of Memory from Sand Creek." *Parks Stewardship Forum: The Interdisciplinary Journal of Place-Based Conservation*, 39 (2023), 461-473.

"Vanishing Indians." In Kevin Kruse and Julian Zelizer (eds.), *Myth America: Historians Take on the Biggest Lies and Legends About Our Past.* (New York: Basic Books, forthcoming 2023), 189-201.

"From Manassas to Mankato: How the Civil War Bled into the Indian Wars." Kent Blansett, Cathleen Cahill, Andrew Needham (eds.), *Indian Cities: Histories of Indigenous Urbanism.* (Norman: University of Oklahoma Press, 2022), 84-103.

"Go West." *Reviews in American History*, 47 (March 2019), 1-2.

ALL PUBLICATIONS FROM THE LAST TEN YEARS AND SELECTED BEYOND (cont.):

SCHOLARLY ESSAYS AND BOOK CHAPTERS (cont.):

- "Boundaries of Memory at Sand Creek." In Gary W. Gallagher and J. Matthew Gallman (eds.), *Civil War Places: Seeing the Conflict through the Eyes of Its Leading Historians*. (Chapel Hill: University of North Carolina Press, 2019), 49-55.
- "The Sand Creek Massacre in History and Memory." *The Essential Civil War Curriculum* (October, 2018), <https://www.essentialcivilwarcurriculum.com/the-sand-creek-massacre.html>.
- "Sand Creek." In Andrew Lichtenstein and Alex Lichtenstein (eds.), *Marked, Unmarked, Remembered: A Geography of American Memory*. (Morgantown: West Virginia University press, 2017), 61-65.
- "Comment: Borderlands of Violence." *Journal of the Early Republic*, 37 (Summer 2017), 349-352.
- "The Civil War West: A Special Issue." (Guest Editor.) *The Journal of the Civil War Era*, 6 (December 2016), 479-591.
- "Reconstruction in the U.S. West." In Greg Downs and Kate Masur, *Reconstruction: The Official National Park Service Handbook*. (Washington: Eastern National Press, 2016), 124-135.
- "For Liberty and Empire: Remembering Sand Creek, Rethinking the Civil War." *Common-place* (May 2014), <http://www.common-place-archives.org/vol-14/no-02/kelman/#.XL9ZeZnKgWo>.
- "What's in a Name? The Fight to Call Sand Creek a Battle or a Massacre." In Ronald K. Wetherington and Frances Levine (eds.), *Battles and Massacres on the Southwest Frontier: Historical and Archaeological Perspectives*. (Norman: University of Oklahoma Press, 2013), 116-133.
- "Boundary Issues: Clarifying New Orleans's Murky Edges." Reprinted in Char Miller (ed.), *Cities and Nature in the American West*. (Reno: University of Nevada Press, 2010), 195-204.
- "In Harm's Way." *Public Works History*, 88 (Winter 2006), 3.
- "Even Paranoids Have Enemies: Rumors of Levee Sabotage in New Orleans's Lower Ninth Ward." *Journal of Urban History*, 35 (July 2009), 627-639.
- "Forgetting to Remember." *Habitus*, 4 (Fall-Winter 2008), 62-79.
- "New Orleans' Blessing, New Orleans' Curse." Reprinted in Lester Faigley (ed.), *Backpack Writing: Reflecting, Arguing, Informing, Analyzing, Evaluating*. (New York: Pearson-Longman, 2008), 217-221.
- "Boundary Issues: Clarifying New Orleans's Murky Edges." *Journal of American History*, 94 (December 2007), 695-703.
- "New Orleans's Phantom Slave Insurrection of 1853: Racial Anxiety, Urban Ecology, and Human Bodies as Public Spaces." In Andrew Isenberg (ed.), *The Nature of Cities: New Directions in Urban Environmental History*. (Rochester: University of Rochester Press, 2006), 3-23.
- "The Necropolis of the South." Reprinted in Howard Chudacoff (ed.), *Major Problems in American Urban and Suburban History*. (Boston: Houghton-Mifflin, 2005), 155-161.
- "'The Cat Became the Companion of the Crawfish': The Struggle to Reclaim New Orleans's Wetlands." *Historical Geography*, 32 (Fall 2004), 157-180.

ALL PUBLICATIONS FROM THE LAST TEN YEARS AND SELECTED BEYOND (cont.):

SCHOLARLY ESSAYS AND BOOK CHAPTERS (cont.):

“A Referendum on the River: The Mississippi Jetties Controversy.” *Gulf South Historical Review*, 19 (Fall 2003), 46-71.

“Deadly Currents: John Ross’s Decision of 1861.” Reprinted in Albert Hurtado (ed.), *Major Problems in American Indian History*. (Boston: Houghton-Mifflin, 2001), 285-299.

“Forests and Other River Perils: Henry Shreve, The Mississippi Steamboat, and Public Memory.” In Craig Colten (ed.), *Transforming New Orleans and its Environs: Centuries of Change*. (Pittsburgh: University of Pittsburgh Press, 2000), 45-63.

“Deadly Currents: John Ross’s Decision of 1861 Sheds Light on Race and Sovereignty in the Cherokee Nation.” *Chronicles of Oklahoma*, LXII (spring 1995), 80-103.

REVIEW ESSAYS:

“The Myth of the Vanishing Indian.” *The Times Literary Supplement*, (July 18, 2019), 12.

“Black Lives Mattered.” *The Times Literary Supplement*, (December 7, 2016), 4-7.

“Slaving for Profits.” *The Times Literary Supplement*, (April 1, 2015), 7-8.

“Lies and Steals.” *The Times Literary Supplement*, (February 11, 2015), 7-8.

“‘We Are All Americans’: Native Peoples in the National Narrative.” *Reviews in American History*, 42 (December 2014), 661-669.

“Perimeters of Pain.” *The Times Literary Supplement*, (July 26, 2013), 8-9.

“An Impertinent Discourse.” *The Times Literary Supplement*, (February 24, 2012), 7-8.

“The Hills are Alive.” *The Nation*, (July 4, 2011), 34-37.

“Before Macbeth.” *The Times Literary Supplement*, (April 22, 2011), 24.

“Nature’s Ghosts.” *The Nation*, (May 10, 2010), 34-36.

“Freedom Road.” *The Times Literary Supplement*, (May 29, 2009), 3-5.

“For What?” *The Times Literary Supplement*, (July 25, 2008), 7.

“Lincoln Before the Legend.” *The Times Literary Supplement*, (January 11, 2008), 27.

“Silent Witness.” *The Nation*, (September 10, 2007), web edition.

“John Brown’s Bodies.” *The Times Literary Supplement*, (February 16, 2007), 3-4.

“Unnatural Disaster.” *The Nation*, (October 2, 2006), 32-36.

“Cities of Gold: San Francisco and Denver Despoil their Hinterland.” *Journal of Urban History*, 32 (September 2006), 891-899.

ALL PUBLICATIONS FROM THE LAST TEN YEARS AND SELECTED BEYOND (cont.):

REVIEW ESSAYS (cont.):

“Water Damaged: Disaster History in New Orleans and on the Gulf Coast.” *Reviews in American History*, 34 (June 2006), 222-230.

“Nature Bats Last: Some Recent Works on Technology and Urban Disaster.” *Technology and Culture*, 47 (April 2006), 391-402.

“We Are the Valley: Environmental History Reaches for Much.” With D. Graham Burnett. *The Times Literary Supplement*, (January 21, 2000), 35.

EXPERT WITNESS EXPERIENCE (retained by the United States Department of Justice):

Frank Labruzzo, Bernard D’Arcangelo, Mary Rose Labruzzo D’Arcangelo, Clarissa M. Balfour Trust, Clarissa M. Balfour, Trustee and Orpheum Street, Inc. (“Plaintiffs”) v. United States of America (Court of Federal Claims).

The State of Mississippi et al., v. United States of America (Court of Federal Claims).

Big Oak Farms, et. al. v United States of America (Court of Federal Claims).

Ideker Farms, et. al. v. United States of America (Court of Federal Claims).

PUBLIC HISTORY, POPULAR WRITING, COMMUNITY OUTREACH:

The Edge of the American West. Co-founder and co-editor, 2007-2014.

The History Project. Principal Investigator, secondary school outreach program, 2007-2014.

PBS, The American Experience Documentary Series. Senior creative consultant and on-camera commentator for *New Orleans*, 2005-2007.

The History Channel. Series consultant for *Ten Days That Unexpectedly Changed America*, 2004-2006.

“In the Shadow of Disaster: Rebuilding in Harm’s Way.” *The Nation*, (January 2, 2006), 13-14.

National Public Radio. Commentator for *Forum, The Ian Masters Show, Insight, On Point*, 2005-2006.

“Rebuilding in the Shadow of Disaster: What To Do About New Orleans...And What Not To Do.” *House and Garden*, (November 2005), 78.

“And a Pony.” *Grist*, (October 24, 2005).

BBC Radio, Consultant for “Katrina” and “When the Music Stopped” radio documentaries, 2005.

“The President Dressed Up Like a Democrat.” *The Sacramento Bee*, (September 23, 2005), B-7.

“From Cotton Port to Beach Town: Galveston’s 1900 Hurricane.” *Slate*, (September 23, 2005).

“America’s Underclass Exposed.” *The Christian Science Monitor*, (September 12, 2005), 9.

“Don’t Blame Nature for this Disaster.” *Baltimore Sun*, (September 4, 2005), 5-C.

PUBLIC HISTORY, POPULAR WRITING, COMMUNITY OUTREACH (cont.):

“City of Nature.” *Slate*, (August 31, 2005).

“Patriot Acts Then and Now.” *The Denver Post*, (July 6, 2003), E-1.

The National Humanities Center. Secondary school education consultant, 1998-2000.

PBS, The American Experience Documentary Series. On- and off-camera consultant for *Secrets of a Master Builder*, 1998-1999.

AWARDS, GRANTS, HONORS, AND FELLOWSHIPS:

RESEARCH:

Elected a member of the Society of American Historians, 2020.

Guggenheim Foundation Fellowship, 2019-2020.

Antoinette Forrester Downing Book Award, 2015. Presented by the Society of Architectural Historians for *A Misplaced Massacre: Struggling Over the Memory of Sand Creek*.

Robert M. Utley Book Award, 2014. Presented by the Western History Association for *A Misplaced Massacre: Struggling Over the Memory of Sand Creek*.

Tom Watson Brown Book Award, 2014. Presented by the Society of Civil War Historians for *A Misplaced Massacre: Struggling Over the Memory of Sand Creek*.

Bancroft Prize, 2014. Presented by the Trustees of Columbia University for *A Misplaced Massacre: Struggling Over the Memory of Sand Creek*.

Avery O. Craven Book Award, 2014. Presented by the Organization of American Historians for *A Misplaced Massacre: Struggling Over the Memory of Sand Creek*.

“Top Young Historian,” History News Network, 2007.

The Huntington/National Endowment for the Humanities Summer Seminar, 2005. “The Redemptive West: Nationhood and Healing in the Post-Civil War American West.”

National Endowment for the Humanities Research Fellowship, 2004-2005.

Temple Hoyne Buell Foundation Research Fellowship, 2004-2005.

Colorado State Historical Fund Education Grant, 2004-2005.

Abbot Lowell Cummings Award, 2004. Presented by the Vernacular Architecture Forum for *A River and Its City: The Nature of Landscape in New Orleans*.

Colorado Endowment for the Humanities Program Grant, 2002.

Louisiana Endowment for the Humanities Publishing Subvention Grant, 2001-2002.

National Endowment for the Humanities Summer Institute, 1999. “The Built Environment of the American Metropolis, Public and Private Realms”

AWARDS, GRANTS, HONORS, AND FELLOWSHIPS (cont.):

RESEARCH (cont.):

Martha Joukowsky Dissertation Prize, 1998. Runner-up.

John Nicholas Brown Center for the Study of American Civilization Fellowship, 1997.

American Historical Association Littleton-Griswold Research Grant, 1996.

Historic New Orleans Collection Williams Research Fellowship, 1995.

TEACHING:

UC Davis Distinguished Graduate Teaching and Postdoctoral Mentoring Award, 2018.

UC Davis Distinguished Undergraduate Teaching Award, 2012.

University of Denver Learning Effectiveness Program LEP Teaching Award, 2002.

Brown University President's Award for Excellence in Teaching, 1995.

PUBLIC AND PROFESSIONAL SERVICE:

Cliopatria Award, 2008. Presented for *The Edge of the American West*.

PROFESSIONAL PRESENTATIONS AND INVITED LECTURES:

"Indian Cities: Forging Connections Between Indigenous and Urban History." Plenary session. Western History Association annual meeting. Portland, Oregon, October 29, 2022.

"For Liberty and Empire: How the Civil War Bled into the Indian Wars." Public Lecture. The Peninsula Foundation, Peninsula, Ohio, October 21, 2022

"Indigenous Urbanism During the Era of the Civil War." Invited Lecture. Vanderbilt University. Nashville, Tennessee, October 28, 2019.

"What Does Public History's Future Look Like?" Invited Lecture. Boise State University. Boise, Idaho, October 3, 2019.

"Public History, History's Publics." Invited Lecture. Pontificia Universidad Católica de Chile. Santiago, Chile, September 16, 2019.

"From Manassas to Mankato: How the Civil War Bled into the Indian Wars." Invited Lecture. The University of Cambridge. Cambridge, United Kingdom, May 13, 2019.

"From Manassas to Mankato: How the Civil War Bled into the Indian Wars." James P. Jones Lecture. Florida State University. Tallahassee, Florida, March 7, 2019.

"From Manassas to Mankato: How the Civil War Bled into the Indian Wars." Invited Lecture. Duke University. Durham, North Carolina, January 9, 2019.

"From Manassas to Mankato: How the Civil War Bled into the Indian Wars." Invited Lecture. The Huntington Library. San Marino, California, September 14, 2018.

PROFESSIONAL PRESENTATIONS AND INVITED LECTURES (cont.):

- “For Liberty and Empire: How the Civil War Bled into the Indian War.” Invited Lecture. University of Paris. Paris, France, May 28, 2018.
- “Transnational Histories of Settler Colonialism.” Invited Lecture. University of Tel Aviv. Tel Aviv, Israel, March 26, 2018.
- “The Civil War as an Indian War.” The George M. Blackburn Lecture. Central Michigan University. Mount Pleasant, Michigan, April 21, 2017.
- “For Liberty and Empire: How the Civil War Bled into the Indian Wars.” The C. Ruth and Calvin P. Horn Lecture. The University of New Mexico. Albuquerque, New Mexico, February 23, 2017.
- “Remembering Sand Creek.” Invited Lecture. Colorado College. Colorado Springs, Colorado, October 3, 2017.
- “Battle Lines: A Graphic History of the Civil War.” Invited Lecture. Northwestern University. Evanston, Illinois, February 3, 2016.
- “For Liberty and Empire: How the Civil War Bled into the Indian Wars.” The Hampton Lecture. The University of Montana. Missoula, Montana, October 30, 2015.
- “From Manassas to Minnesota: The Civil War as an Indian War.” Invited Lecture. The University of Minnesota. Minneapolis, Minnesota, October 1, 2015.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Plenary session. Organization of American Historians annual meeting. St. Louis, Missouri, April 17, 2015.
- “Graphic History, Public History, Historical Narrative.” Invited Lecture. University of Massachusetts, Boston. Boston, Massachusetts, March 3, 2015.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. The University of Georgia. Athens, Georgia, December 4, 2014.
- “Remembering Sand Creek, Rethinking the Civil War.” The Ray Allen Billington Lecture. The Huntington Library. San Marino, California, November 11, 2014.
- “Historical Trauma as Historical Memory.” Invited Lecture. United States Holocaust Memorial Museum. Washington, District of Columbia, November 6, 2014.
- “Graphic History, Public History, Historical Narrative.” Invited Lecture. Cornell University. Ithaca, New York, October 27, 2014.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. The University of California, Berkeley. Berkeley, California, October 10, 2014.

PROFESSIONAL PRESENTATIONS AND INVITED LECTURES (cont.):

- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. The National Museum of the American Indian. Washington, District of Columbia, October 9, 2014.
- “The Civil War as Indian War.” Invited Lecture. The University of Colorado, Boulder. Boulder, Colorado, September 19, 2014.
- “How Graphic a Graphic History?” Invited Lecture. The University of Virginia. Charlottesville, Virginia, September 17, 2014.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. El Tesoro Cultural Center. Denver, Colorado, October 13, 2013.
- “The Indian Wars and Western Public Memory.” Commenter. Western History Association annual meeting. Tucson, Arizona, October 12, 2013.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. The University of Oklahoma. Norman, Oklahoma, September 24, 2013.
- “Remembering the Civil War in Indian Country.” Invited Lecture. The University of Tulsa. Tulsa, Oklahoma, September 23, 2013.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. The University of Texas-Austin. Austin, Texas, September 20, 2013.
- “For Liberty and Empire: Sand Creek and the American Civil War.” Invited Lecture. The William P. Clements Center for Southwest Studies. Dallas, Texas, September 19, 2013.
- “An American Empire in the West: Sand Creek and the Civil War.” Invited Lecture. The University of Washington. Seattle, Washington, May 7, 2013.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Invited Lecture. School of American Research. Santa Fe, New Mexico, February 27, 2013.
- “Massacres and Memory: The Civil War as a War of Empire.” Invited Lecture. The University of New Mexico. Albuquerque, New Mexico, February 26, 2013.
- “Public History and Public Memory: Sand Creek and the Civil War.” Invited Lecture. Colorado State University, Colorado Springs. Colorado Springs, Colorado, February 22, 2013.
- “Sand Creek, The Civil War, and American Empire.” Invited Lecture. Colorado State University. Fort Collins, Colorado, February 21, 2013.
- “History, Memory, Sand Creek.” Invited Lecture. Colorado Historical Society. Denver, Colorado, February 19, 2013.
- “Rethinking Public History.” Invited Lecture. The University of Colorado, Boulder. Boulder, Colorado, February 18, 2013.

PROFESSIONAL PRESENTATIONS AND INVITED LECTURES (cont.):

- “Digital Urban Environmental Histories: New Visualizations and Models.” Commenter. American Society for Environmental History annual meeting. Madison, Wisconsin, March 31, 2012.
- “A Misplaced Massacre: Struggling Over the Memory of Sand Creek.” Presenter. Western Historical Association annual meeting. Lake Tahoe, Nevada, October 14, 2010.
- “Blogging History: Explorations in a New Medium.” Roundtable. The Organization of American Historians annual meeting. Seattle, Washington, March 27, 2009.
- “Boundary Issues: Clarifying New Orleans’s Murky Edges.” Invited lecture. The Mahan Symposium, The University of South Alabama, Mobile, Alabama, March 8, 2007.
- “Assessing the Aftermath: Historical Perspective and Progress Reports on Post-Hurricane Recovery Efforts in Louisiana.” Plenary roundtable. The American Society for Environmental History annual meeting, Baton Rouge, Louisiana, March 2, 2007.
- “The Levee after Katrina.” Invited lecture. The American Society for Environmental History annual meeting, Baton Rouge, Louisiana, February 28, 2007.
- “Remembering Katrina.” Invited lecture. The Ethel and Herman L. Midlo International Center for New Orleans Studies, The University of New Orleans, New Orleans, Louisiana, February 27, 2007.
- “Forgetting to Remember Sand Creek.” Invited lecture. The University of British Columbia Department of History, Vancouver, British Columbia, December 8, 2006.
- “Living and Dying on the Levee in New Orleans.” Invited lecture. The University of British Columbia Department of History, Vancouver, British Columbia, December 7, 2006.
- “New Orleans Going Forward.” Plenary roundtable. The Urban History Association annual meeting, Tempe, AZ, October 20, 2006.
- “Living in Harm’s Way: Considering the Environmental History of New Orleans in light of Hurricane Katrina.” Plenary roundtable, The American Studies Association annual meeting, Washington, DC, November 4, 2005.
- “Katrina: An Environmental History.” Invited lecture. Institute for Governmental Affairs, University of California, Davis, Davis, California, October 25, 2005.
- “A Misplaced Massacre: History, Memory, and the Struggle to Preserve Sand Creek in the New West.” Invited lecture. Environmental Studies Residential Program, University of Colorado, Boulder, Colorado, November 23, 2004.
- “Remembering Sand Creek.” Invited lecture. Provost’s lecture, University of Denver, Denver Colorado, October 20, 2004.
- “New Orleans’s Phantom Slave Insurrection of 1853: Racial Anxiety, Urban Ecology, and Human Bodies as Public Spaces.” Invited lecture. “The Nature of Cities: New Perspectives in Urban Environmental History,” Shelby C. Davis Center for Historical Studies, Princeton University, Princeton, New Jersey, December 18, 2003.

PROFESSIONAL PRESENTATIONS AND INVITED LECTURES (cont.):

- “The Built Environment.” Commentator. The American Society for Environmental History annual meeting. Denver, Colorado, March 22, 2002.
- “The ‘Nature’ of Environmental Change under the Law.” Chair and commentator. The Legal History Society annual meeting, Chicago, Illinois, November 15, 2001.
- “The Unnatural History of Natural Disasters.” Commentator. The Western History Association annual meeting, San Diego, California, October 18, 2001.
- “Bays and Shorelines: Key Sites for Environmental Histories.” Chair. The American Society for Environmental History annual meeting, Durham, North Carolina, March 31, 2001.
- “Public Space and Environmental History: New Orleans and the Mississippi.” Presenter. The American Society for Environmental History annual meeting. Tacoma, Washington, March 18, 2000.
- “Privatizing Public Landscapes: ‘Progressive’ Transformations of New Orleans’s Waterfront.” Presenter. Western History Association annual meeting, Sacramento, California, October 17, 1998.
- “Forests and Other River Perils: Henry Shreve, Mississippi Steamboats, and Public Memory.” Invited lecture. Tulane University, New Orleans, Louisiana, October 16, 1998.
- “Rethinking New Orleans’s Riverfront.” Invited lecture. The John Nicholas Brown Center for the Study of American Civilization, Brown University, Providence, Rhode Island, April 12, 1998.
- “The Second Battle of New Orleans: Race and Public Space in the 1958 Mississippi Riverfront Expressway Controversy.” Presenter. The American Studies Association annual meeting, Washington, D.C., November 1, 1997.
- “Who Owns Big Muddy’s Mud?” Presenter. The American Society for Environmental History annual meeting, Baltimore, Maryland, March 8, 1997.
- “Warehouses as Walls on the Waterfront: A Sense of Place on the Mississippi Riverfront.” Presenter. The Social Science History Association annual meeting, New Orleans, Louisiana, October 12, 1996.

PROFESSIONAL SERVICE:

- Pacific Coast Branch of the American Historical Association. President, 2024-president.
- Gilder Lehrman Institute of American History. Scholarly board, 2021-present.
- National Humanities Center. Fellowship application referee, 2018-present.
- American Philosophical Society. Fellowship Application referee, 2018-present.
- George and Ann Richards Civil War Era Center. Advisory board, 2018-present
- Reviews in American History*. Editor-in-Chief, 2018-present.
- Oxford University Press. Board of delegates, 2017-present.
- University of Nebraska Press “Many Wests” series. Editor, 2017-present.
- University of Virginia Nau Center for Civil War History. Board of directors, 2017-present.

PROFESSIONAL SERVICE (cont.):

American Historical Review. Article referee, 2005-present.

Harvard University Press. Manuscript referee, 2005-present.

Journal of American History. Article referee, 2004-present.

National Endowment for the Humanities. Fellowship application referee, 2006-present.

Oxford University Press. Manuscript referee, 2005-present.

Pacific Historical Review. Article referee, 2003-present.

University of Georgia Press Southern environmental history series. Editorial board, 2005-present.

Yale University Press. Manuscript referee, 2006-present.

National Council on Public History Annual Conference. Program Committee, 2019-2020.

National Council of Public History. Board of directors, 2020-2024.

Western History Association. Council, 2020-2024.

Pacific Coast Branch of the American Historical Association. Nominating committee chair, 2019-2021.

Society of Civil War Historians. Chair, Tom Watson Brown Prize Committee, 2018-2019.

Society for the History of the Early American Republic. Program committee, 2018-2019.

Western Historical Association. Robert M. Utley Prize committee, 2018-2019.

Journal of American History. Editorial board, 2015-2018

The University of Minnesota Department of History external review. Committee chair, 2017.

American Historical Association, Pacific Coast Branch. Executive committee, 2011-2015.

Environmental History. Editorial board, 2010-2015.

American Council of Learned Societies. Fellowship application referee, 2006-2012.

Encyclopedia of Environmental History. Editorial board, 2005-2012.

Massachusetts Institute of Technology Press. Manuscript referee, 2005-2012.

Journal of the Early Republic. Article referee, 2005-2007.

National Science Foundation. Fellowship application referee, 2005-2007.

American Society for Environmental History Conference. Planning committee, 2003.

American Society for Environmental History Conference. Chair, planning committee, 2002.

American Society for Environmental History Conference. Program committee, 2002.

PROFESSIONAL SERVICE (cont.):

The University of Oklahoma Conference, "The Role of Museums in the Modern World." Chair, planning committee, 2000.

UNIVERSITY AND DEPARTMENTAL SERVICE:

University of California, Davis. Chair, faculty subcommittee for chancellor search committee, 2016-2017.

University of California, Davis. Campus free expression committee, 2016-2017.

The Pennsylvania State University. History department promotion and tenure committee, 2014-2016.

The Pennsylvania State University. Chair, undergraduate education reform committee, 2015-2016.

The Pennsylvania State University. AD14 review committee for history department head, 2014-2015.

University of California. Coordinating Committee on Graduate Affairs, 2012-2013.

University of California, Davis. Chair, history graduate program committee, 2007-2013.

University of California, Davis. Vice Chair, Graduate Council, 2012-2013.

University of California, Davis. Senate Committee to Investigate the Pepper-Spray Incident of November 2011, 2011-2012.

University of California, Davis. Graduate Council, 2011-2012.

University of California, Davis. Native American Studies search, 2011-2012.

University of California, Davis. Native American Studies search, 2008-2009.

University of California, Davis. Chair, antebellum gender historian search, 2006-2007.

University of California, Davis. Asian American historian search, 2005-2006.

University of Denver, Writing across the Disciplines Committee. Chair, 2003-2005.

University of Denver, Marsico Initiative Steering Committee. Co-chair, 2002-2005.

University of Denver, Department of History. Latin American historian search, 2003-2004.

University of Denver Undergraduate Council. 2002-2004.

University of Denver, Program in Judaic Studies. Director search, 2002-2003.

University of Denver, Department of History. Tenure and promotion committee, 2001-2002.

University of Denver, Division of Arts, Humanities, and Social Sciences. Graduate program planning committee, 2001-2002.

University of Denver, Division of Arts, Humanities, and Social Sciences. Humanities/Social Sciences CORE lecturer search, 2001-2002.

University of Denver, Program in Judaic Studies. Historian search, 2000-2001.

UNIVERSITY AND DEPARTMENTAL SERVICE (cont.):

University of Oklahoma, Department of Geography. Ecologist search, 1999-2000.

University of Oklahoma Honors College. Native Americanist search, 1999-2000.

University of Oklahoma, Interdisciplinary Perspectives in the Environment Program. Executive committee, 1998-2000.

University of Oklahoma Honors College. Historian of science search, 1998-1999.

University of Oklahoma Honors College. Labor historian search, 1998-1999.

University of Oklahoma, Department of History. U.S. historian, pre-1750 search, 1998-1999.

EXHIBIT 6

Response to Dr. Brigham and Dr. Kelman Reports dated 2/7/25

Dr. Kyle Longley

I. Summary and Overview.

I have reviewed the reports of Dr. Brigham and Dr. Kelman dated February 7, 2025.¹ Dr. Brigham largely continues to repeat arguments from his earlier report dated December 9, 2024, relying on limited sources and broad oversimplifications, as I highlighted in my prior report of January 13, 2025. Dr. Kelman has conducted no primary research on the topic of the history of the base and cites no original documents nor original witness statements or testimony. His efforts to critique my research methods lack adequate context as discussed below, and he seeks to define too narrowly the nature of “oral history” which may appropriately be used in an expert report.

The main problem with Dr. Brigham’s analysis, as stated in my prior report dated January 13, 2025, is that he uses source material that fails to fully substantiate his points, and he relies too heavily on narrow sources, mainly government ones. He fails to provide evidence to support his arguments. These include his contention that people in the outlying areas of Camp Lejeune rarely went to Hadnot Point or other areas that had the historically contaminated water as per the publications by the Agency for Toxic Substances and Disease Registry’s (“ATSDR”). There is an absence of data to support Dr. Brigham’s claims that residents only used the PXs, swimming pools, recreational facilities, and clubs in the outlying areas and did not go to Hadnot Point. He fails to refute the fact that the limited existence of facilities in the outlying areas of the base provided an impetus to residents to visit the central Hadnot area. Dr. Brigham seeks to argue that distances and traffic congestion limited movement, but this contention discounts the robust bus and public transportation system and the normal circulation of the Marines and others around the base. Dr. Brigham’s report fails to refute the centrality of Hadnot Point for purposes of access to jobs, the main PX, the Naval Hospital complex, school facilities supplied water by Hadnot Point, and recreational and cultural activities.

The criticisms by Dr. Kelman and Dr. Brigham of the use of “oral history” sources in my reports are of limited import since such sources only played a small part in my reliance materials. Beyond that, their effort to narrowly constrict the definition of “oral history” ignores the fact that there are many varieties of historical evidence sources that come in the form of personal recollection and eyewitness statement. The sources of facts for historians are multitudinous and include archived reports, statements by individuals captured in old documents, quotations and paraphrases from people related by journalists in news and periodical articles and pieces, recorded statements, sworn affidavits and declarations, transcripts of testimony, formally recorded (audio and/or video) “oral histories” that are saved in archives and repositories, and less formal oral input that a historian may receive from an individual and use in an analysis or a report without having recorded or transcribed the same. A historian as with other authors and experts does not need to record and place in an archive every source they speak with. Often, for example, an author will cite to a personal communication he or she had with a source, without having necessarily recorded it. In interacting with a living individual as a source of information, the resultant documentation

¹ The reports issued to date by Jay L. Brigham, Ph.D. were dated 12/9/24 and 2/7/25. The report issued by Ari Kelman, Ph.D. was dated 2/7/25. My prior reports were dated 12/7/24 and 1/13/25.

can run from something as informal as a note taken by the researcher, to something as formal as a full-blown audio/video recorded interview to be kept in an archive. However, there is no methodological prerequisite to the effect that unless the person is interviewed formally, recorded, and the recording is stored, the information from that person cannot be used. Indeed, publications and reports may often simply cite to the source individual and the fact that the author made notes of the interaction.

It is noteworthy that neither Dr. Brigham nor Dr. Kelman has conducted any interviews of their own with individuals who spent time at Camp Lejeune during the pertinent historical period of time. Their reports criticize mine for purportedly not including enough oral history yet fail to include any oral history of their own, as they define it. Neither Government-retained historian has undertaken work to speak with and interview any of the surviving individuals who lived and worked on the base during the statutorily relevant time period (1950s to 1980s). The Government's experts seek to dismiss my reports due to the fact that the witness statement and oral history sources I have used are limited, yet without seeking to obtain any other witness statements or oral histories to assist the Court with understanding the true facts of the matter on the merits. The Government's experts contend that my reports should be excluded due to perceived limitations on oral history sources, when they have used no such sources whatsoever.

Turning to historical witnesses who lived through relevant events and are still alive, so as to draw upon their statements and recollections, is a widely accepted part of a historian's methodology, and is a tool not only used by historians but also by scholars in anthropology, sociology, and political science. The failure on the part of Dr. Brigham and Dr. Kelman to engage in any witness communications or interviews with relevant living witnesses for purposes of understanding the historical facts of Camp Lejeune is a significant weakness in their reports. Their refusal to incorporate personal experiences of people at Camp Lejeune during the statutory period forecloses them from reliance on this time-honored tool of a historian's research methodology.

In addition to not conducting any witness interviews nor undertaking to collect any oral history information of their own, as they define it, Dr. Brigham and Dr. Kelman also fail to access or cite other types of witness statements or materials. They cite no diaries, letters, memoirs, or other such documents from people who served and were otherwise at the base during the pertinent times relating their recollections and experiences particularly with regard to using the water or being at contaminated or uncontaminated areas of the base. There is no input from any people who lived in the outlying areas that Dr. Brigham seeks to focus upon. For example, while Dr. Brigham seeks to press the case that a Marine could have resided or worked at the Courthouse Bay or Rifle Range areas, he includes no actual information derived from any interviews or discussions with any individuals who had spent time at those areas from the 1950s to 1980s.

I agree that for purposes of thoroughness of historical research, the more sources the better. Certainly, if had I had more time and resources, I would conduct more interviews and discussions with people who lived or worked at various relevant areas of the base at relevant times. For purposes of this report, and to further confirm that my original reports were accurate, I have conducted an additional oral history discussion with the well-known fact witnesses and historians Jerry Ensminger and Mike Partain, and with this report I am providing an audio-video "Zoom" style electronic recording of the entire interview. The topics addressed in the interview focus on

the points of contention as between myself and the Government's experts on the merits, and also abide by a basic oral history template. As the matter herein proceeds and Plaintiffs and witnesses are called to testify, it is likely that additional light will be shed on the topics. As historians, we must use a method which is accumulative and iterative. While I do not agree with much of the input of Dr. Brigham and Dr. Kelman, I welcome it as further work to get to the truth. Likewise, I welcome any additional information from witnesses which may emerge as the cases proceed, as they may serve to uncover additional facts.

I acknowledge that oral histories have challenges (as do most primary sources) as raised by Dr. Kelman. However, Dr. Kelman has limited experience with the subject as it pertains to working with eyewitnesses as oral historians. Dr. Kelman's own curriculum vitae and his publications reflect that his areas of specialization include the 19th Century as well as topics such as the Jewish experience. In his books, he has written on subjects distanced in time to the point that any first-hand eyewitnesses were deceased at the time of his research. See Kelman's *Battle Lines: A Graphic History of the Civil War* (Hill and Wang, 2015). For example, in writing of the Sand Creek incident in 1864, those he spoke to obviously had not been at the incident, and so, his focus with them became the nature of the cultural memory of the matter. See Kelman, *A Misplaced Massacre: Struggling Over the Memory of Sand Creek* (Harvard University Press, 2013).

Dr. Kelman critiques my work based on what he faults as reliance on statements of Plaintiffs that could be biased. He casts doubt on the usefulness of witness documents related to court proceedings such as affidavits, depositions, and courtroom testimony. However, he himself has cited testimony from proceedings that followed the Sand Creek incident, in his above-mentioned book. More broadly, it is not logical or practical to contend that witness testimony under oath for purposes of court proceedings is in some manner too unreliable or biased to be used by a historian. The purpose of court proceedings is to access the truth. The method of American judicial proceedings includes rules of procedure and evidence meant to maximize the ability of the process to glean the truth. Witnesses are placed under oath and can be cross-examined. This in itself is a reliable methodology when combined with analysis and corroboration from other sources.

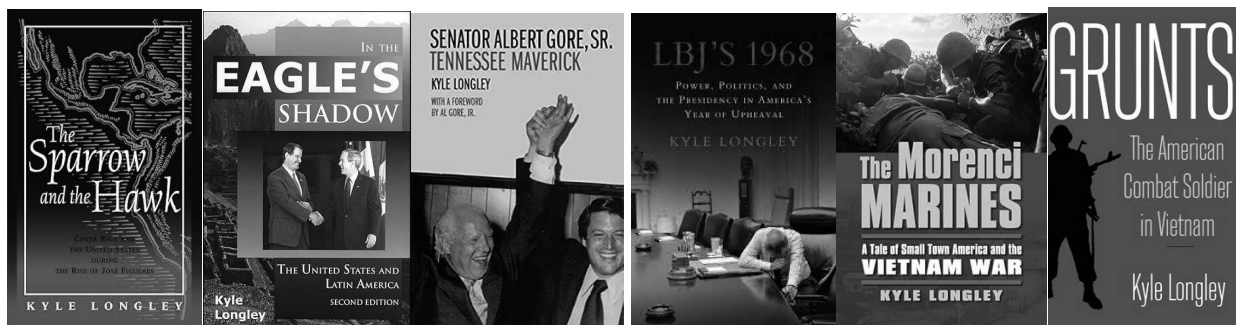
Dr. Kelman in his past publications has drawn on documentation of human memories such as legal documents, testimony and letters. See Kelman, *A Misplaced Massacre*, Chapter 1 (citing letters and testimony by John Chivington). Each format carries its own potential biases and weaknesses that must be tested when applied, just like a formally recorded oral history interview. However, the possible presence of those biases and weaknesses is not grounds to reject the use of such materials wholesale. History inevitably must include a human and subjective component and part of the interpretative and accumulative methodology of the historian is to account for that reality. While some in the historical field may question the use of oral history, many such as my colleague, Dr. Don Ritchie² (whom Dr. Kelman acknowledges as a leader in the field), have shown its importance as a tool.

I have employed the basic historian's methodology of working through documents and sources of all sorts, for many years, going back to my first book published in 1997 and continuing through my most recent works. It appears the Government in seeking to refute my reports did not

² See generally https://en.wikipedia.org/wiki/Donald_A._Ritchie.

provide access to Camp Lejeune Marines and surviving eyewitnesses and former residents for its own historian experts so that they could perform their own interviews on the key issues.

The reliability of my methodology is further reflected by the fact that I have a robust publication record nor has my work to my knowledge ever been refuted based on grounds of purported methodological deficiencies. I direct the Court to my work as an author of ten books, including several prize-winning ones, multiple journal articles and scholarly essays, and a host of other written materials published in outlets such as *Time* or *Newsweek*. My point is not to self-aggrandize but to note that I have a long track record of heavily reviewed and scrutinized work, subject to examination and critique by editors, reviewers, and the audiences. Reviews of my work corroborate the reliability of my methodology.³ Some of my key publications have been:



Dr. Brigham's report also reflects reliance to an indeterminate amount on "staff." For example, he states that he "participated in a telephone call with Mr. John Lyles, Chief Archivist of the Marine Corps History center at Quantico, VA, after which my staff collected command chronologies for many of the Marine Units stationed aboard Camp Lejeune." (Brigham 2/7/25 report, p. 5). By contrast, for purposes of my reports I worked on the matter extensively including traveling to and exploring historical records collections and archives personally over four days. I examined collections, command chronologies and photographs myself rather than reviewing material pre-selected by others. Again, Dr. Brigham describes that "members of my staff conducted research at the Library of Congress." (Brigham 2/7/25 report, p. 5). The reliance on others to perform primary document inspection and exploration raises the question of whether and how material was pre-screened, pre-selected, or pre-excluded, before the historian received it, something I seek to avoid.

³ For sample book reviews, see: *The Sparrow and the Hawk: Costa Rica and the United States during the Rise of Jose Figueres* (1997). Winner of the A.B. Thomas Prize for outstanding book from the Southeastern Council on Latin American Studies; Charles D. Ameringer, *Hispanic American Historical Review* (1998) 78:1, p. 147; *Senator Albert Gore, Sr.: Tennessee Maverick* [foreword by Vice President Al Gore] (2004), Mike Bowen, "The Martyr of Moderation," H-Net, H-Tennessee, March 2005, <https://www.h-net.org/reviews/showrev.php?id=10333>; *Grunts: The American Combat Soldier in Vietnam* (first edition, 2008), reviewed by Peter Kindsvatter, *Pacific Historical Review* (2009), 78:4, 655-657; see also Seth Givens, *Army History* (2011) 79: pp. 57-58; *The Morenci Marines: A Tale of Small Town America and the Vietnam War*, Winner of the Best Book in Arizona History and the Southwest Book Award, reviewed by Joe Abodeely, *Journal of Arizona History*, 56:4 (Winter 2015), 494; *LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval*, reviewed by Patrick Sharma, *Diplomatic History*, 43:3 (June 2019): 583-586; and see Tim Stanley, *Literary Review*, April 2018; William Allison, H-NET, Dec. 2018, <https://www.h-net.org/reviews/showrev.php?id=52648>.

The Government experts criticize my citation form for oral history sources. (*E.g.*, Kelman 2/7/25 report, pp. 1, 10). However, the format of a written expert report used in a legal proceeding need not be in its editorial and formal parameters identical to a submission accepted and published in an academic journal or in a book. The citations and descriptions I used were practical and functional and accompanied by a reference list. (See the reliance lists provided for the reports). The reliance list for my report dated December 7, 2024 is lengthy and detailed, with 198 entries. The entries related to witness or individual interviews, discussions, or written or oral testimony, are clear and detailed. (See my 12/7/24 report, reliance list, at item nos. 127 (Allan Howard, oral history by Zoom, 8/30/24); 128 (Allan Howard declaration, 11/26/24); 129 (Allan Howard deposition, 2/16/24); 130 (Gary McElhiney declaration, 11/25/24); 131 (Gary McElhiney deposition, 4/11/24); 133 (Jacqueline Tukes deposition, 4/11/24); 134 (Jacqueline Tukes declaration, 11/26/24); 135 (Benjamin Urquhart deposition, 11/26/24); 136 (Anthony Charles Zinni deposition, 5/28/24); 148 (Jerry Ensminger oral history); and see my 1/13/25 report, reliance list, at item nos. 2 (Ensminger oral history/email); 3 (Mike Partain oral history); 28 (Terry Dyer deposition, 4/10/24); 31 (Zinni deposition, *supra*); 34 (William Walters deposition, 5/20/24); 35 (James Claude Branham deposition, 10/16/24)).

The vast majority of the reliance list items are documentary versus relying on speaking to eyewitnesses. My citations in my report footnotes and in reliance lists reflect that I drew on a wide variety of sources, including government documents, archival materials, newspapers and magazines, and many others. In fact, the vast majority of these reliance materials were not “oral histories” in the sense of facts gleaned from personal conversations with witnesses, but rather, historical materials dating back further in time. Many of those cited materials themselves include facts and information related to news article writers by individuals in the past, or other such materials. For example, articles from the base publication the *Globe* include much relevant content. All of these sources were appropriate for use and consideration by a historian.

Some of the sources that Dr. Brigham cites are also ones that I have cited. In that sense, there is agreement among us as to some of the reliable sources. For example, Dr. Brigham describes how, as a component of his methodology, he or his staff reviewed publications reflecting ATSDR work, including ATSDR, “Summary of the Water Contamination Situation at Camp Lejeune,” Nov. 12, 2024; and M. Maslia, et al., *Reconstructing Historical VOC Concentrations in Drinking Water for Epidemiological Studies at a U.S. Military Base: Summary of Results*, Water, 8, 449 (2016). I agree that these texts are reliable and useful.

Below, I further address various topics brought up by the Government’s historians.

II. Going Off Base, Water Buffaloes, and Cars.

Dr. Brigham in his report seeks to address the topics of going off-base, use of water buffaloes, and use of cars. (Brigham 2/7/25 report, pp. 29-39). He overstates my position on the matter, ignoring the distinctions drawn in my report and failing to obtain any new oral history or witness interviews or statements to assist with the critique of my historical methodology or to refute the facts presented in my report with more intensive primary source research.

Dr. Brigham seeks further to develop facts supporting the proposition that the Marines often went off the Camp Lejeune base. (Brigham 2/7/25 report, pp. 29-32). In the end, of course, for purposes of the named Plaintiffs in these matters, to the extent they (or relevant relatives) are still alive, it is their own testimony (along with each Plaintiff's relevant individual records and documents) which will be most important as to where each individual Plaintiff spent time on the base. Beyond that, we do not deny that Marines could take leave or go off-base to places such as Jacksonville, NC. Likewise, civilians who worked on the base typically resided off-base.⁴ Nonetheless, factors existed encouraging those on the base to stay on the base, as I have previously discussed. For Marines with limited income, the costs of going off base were a consideration. Marines on the base often lacked cars, which limited their ability to leave the base. Marines with leisure time were aware of the presence of quality social, athletic, entertainment and cultural activities offered at Camp Lejeune, with the major facilities such as Goettge Memorial Field House located at Hadnot Point (and others which I have outlined extensively). Marines and families also could obtain lower-cost, subsidized meals and commodities from the stores at Hadnot Point. (See my 12/7/24 report, pp. 11-30).

Dr. Brigham seeks to cite various advertisements supporting the existence of activities off-base or outside of Hadnot Point on the base. One important point to note in this regard is the development of the area over time. For example, while earlier issues of the *Globe*, e.g., for May 29, 1975,⁵ or June 5, 1975,⁶ had few or no advertisements about or features discussing attractions or businesses off-base, later issues of the publication included more advertisements and content regarding off-base locations. In that regard, an issue of the *Globe* dated October 10, 1985 reflected advertisements for off-base hotels and car lots.⁷ Meanwhile, the earlier issues reflect less content about off-base than on-base activities. See, e.g., the *Globe*, June 5, 1975, at page 2, referencing Jacksonville in "K-9 guard dog" article; evening classes offered by Eastern Carolina University at Camp Lejeune High School in same article; referencing Onslow Beach and Main Exchange in article entitled "Looking behind the shield" – discussing how "[w]e also saw a lot of dirty soldiers in the Exchange Saturday afternoon and they bought more 'comfort' than health items. But before you get all mad and say, 'Yea, I saw 'em too', think about the real reason that huge Exchange is in business. The real reason is still the troops and we hope they aren't dirty all the time;" on the same page another article entitled "Get thrifty with Navy relief" describes "Camp Lejeune, a city within a base." See also *id.* at p. 3 (photo caption references crabbing recreation at recreational area "located on the New River in Tarawa Terrace;" article on gas pumps references "gasoline pumps at the Midway Park Exchange Service Station" and "[t]he Hadnot Point and MCAS, New River stations;" article entitled "Reaching the goal" referencing Naval Medical Field Research Laboratory, Naval Regional Medical Center and Naval Regional Dental Center; photo caption

⁴ Also, senior enlisted personnel and officers, typically married, could live off base, but they worked on it.

⁵ The *Globe*, 29 May 1975, Vol. 31, No. 22, available at <https://www.dvidshub.net/publication/issues/60238>.

⁶ The *Globe*, 5 June 1975, Vol. 31, No. 23, available at <https://www.dvidshub.net/publication/issues/60237>.

⁷ The *Globe*, 10 Oct. 1975, Vol. 41, No. 41, available at <https://www.dvidshub.net/publication/issues/58953>. See page 7 (advertisement for Holiday Inn "weekend room specials" and restaurant located at 701 North Marine Boulevard – this was a Jacksonville address, today identified as 701 N Marine Blvd, Jacksonville, NC 28540); page 8 (ad for "Military TV & Stereo," with locations at 2113 Lejeune Blvd [Jacksonville, NC 28546], 238 S. Wilmington Highway [Jacksonville], and 721 Court Street [Jacksonville]); page 11 (ads for law firm, jewelry store, natural foods store, in Jacksonville); etc.

reflecting “change of command ceremonies at WPT Field here” [WPT Field refers to William P.T. Hill Field, dedicated as the Base Parade Ground in 1967⁸]).

In other words, the historical facts changed over time. As of the 1950s, the area and surrounding areas were less developed. The general prevalence of motor vehicle ownership was reduced. By the 1980s, the base and surrounding off-base areas all had been further developed. The costs of motor vehicles had come down relative to wages and a greater number of individuals owned their own cars.

While people could and did go off-base, the historical evidence shows the existence of factors that would have encouraged Marines and others to not leave the base. Again, as one goes further back in time, generally the pay was lower, the access to private transportation to leave the base was less, and the build-up of stores, hotels, restaurants and other venues off the base was less than later on. As time progressed, in the 1970s, the military transitioned to an All-Volunteer Force and the pay increased as well as subsidies for housing and other benefits. The prevalence of motor vehicles for personal use increased.

Regardless of whether Marines had transportation options, Jacksonville was not a large city and also, had less amenities earlier in the 1950s to ‘80s time frame compared to later. *See, e.g.*, in a transcript of an interview of MSgt. Ralph Freeman, USMC (Retired), by L.J. Kimball, dated 11 Aug. 1999, where Mr. Freeman described that he was at Lejeune including in 1943, 1962, and 1965 (*id.* at pp. 13, 45, 49-51), and emphasizing: “Q: Did you get a chance to go out on liberty into Jacksonville? A: Not in Jacksonville. Wasn’t anything go on liberty for.”⁹

In addition, like many base-adjacent towns across the country, Jacksonville had issues of prostitution, crime, and other maladies that made visiting it unattractive for many. Further, compared to other large bases like Camp Pendleton, Camp Lejeune did not have as many off-base attractions and amenities as it was in a more rural environment. Near Camp Pendleton are such off-base communities such as Oceanside, San Clemente, and Carlsbad with hotels, restaurants, stores, and beautiful beaches stretching many miles.

As noted in my prior reports, military policies and the very design and infrastructure of Camp Lejeune itself reflect intentional efforts by the military to encourage servicemembers and married couples to stay on base which I have outlined in detail in my prior reports. The military kept prices down at PXs and ensured the ready presence of other benefits such as health care, entertainment, and schools on base. Further, the best and biggest facilities were at Hadnot Point, the nerve center of the base. It was at Hadnot Point that the central hospital complex was to be found. The main parade grounds were located there. The large Goettge auditorium for sports and other events was located at Hadnot Point. The main Marine barracks facilities were in the area. Most single people lived at Hadnot Point historically as compared to other base areas. And, beyond Hadnot Point, many of the married couples and families resided at the Tarawa Terrace community which, according to the ATSDR reports, was also historically subjected to the contaminated water.

⁸ The *Globe*, 15 Dec. 1967, Vol. 23, No. 50, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_61073.pdf.

⁹ Available at U.S. Marines website, <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Freeman.pdf>.

With regard to the issue of the filling and use of water buffalo mobile water tankers, while different locations did exist where they could be filled, the historical evidence reflects that the best and most common place to do so was at the industrial park at Hadnot Point where the main logistics units had their headquarters. The large standpipes at Hadnot Point (noted by Dr. Brigham at Brigham 2/7/25 report, pp. 32-36) had the water pressure and height to load the largest water supply trucks and water buffaloes in the quickest time. Further, the single-Marine barracks were located there. In this regard, see also the oral history recording provided herewith reflecting my interview with Jerry Ensminger and Mike Partain, where they relate additional facts on the water buffalo topic. (See March 10, 2025 Ensminger and Partain oral history recording in that regard)

While there were other filling locations on base, the commanders understood, as outlined in testimony and other evidence I have cited previously, that Hadnot Point was the best place (fastest and easiest) to get water. It should surprise no one that has studied military bases that there were better and more convenient, versus worse and less convenient, places on base to do anything from steam-cleaning a truck to dumping materials. Dr. Brigham notes that Camp Geiger had services but does not offer information on when these came online or how much people used them. Meanwhile, the 2d Force Service Regiment/2d Force Service Support Group were a chief resource and stationed primarily at the industrial area at Hadnot Point.

In his report, Dr. Brigham also seeks to highlight historical references to traffic congestion at Camp Lejeune to support the inference that that this congestion limited movement around the base and kept individuals in outlying areas around the base from leaving them to go inward to Hadnot Point. I agree that traffic during peak times when civilian workers and others drove into the base in the morning and left in the evening created some challenges. Nonetheless, base-wide mobility was readily available including by means of public transportation which the Marines provided (for free) and which reached central parts of the base as have outlined in detail in my 12/7/24 report at pages 15-17 and 1/13/25 report at pages 11-13. Further, this was after all a military base with fixed and very limited entry and exit points. The congestion when off-base civilians came in for work purposes did not mean the base roads in general were congested. (See March 10, 2025 Ensminger and Partain oral history recording in that regard).

Dr. Brigham in his report at pages 36-39 cites the number of car registrations on base increasing over time. He notes that *The Globe* in a 1962 article stated that there were 22,000 privately owned vehicles registered at Camp Lejeune and per sources cited, that number increased to 38,000 in 1972 to 39,800 in 1981. (Brigham 2/7/25 report, pp. 37-38). Again, however, I never disputed that there were cars on base. Rather, as I have noted, there is historical evidence that cars were less available in the past, and for many young Marines, cost prohibitions limited their purchases of motor vehicles until the creation of the All-Volunteer Force and the introduction of cheaper foreign vehicles in the 1970s.

Also, the increasing number of vehicles cuts both ways for purposes of this matter. It is true that greater numbers of vehicles meant an enhanced ability for some individuals residing on the base in contaminated areas like Hadnot Point or Tarawa Terrace to leave the base. But by the same token, it also meant that individuals located in outlying areas of the base such as Onslow Beach, Camp Geiger, Rifle Range or New River Air Station, or in communities like Holcomb Boulevard during times it was not contaminated, had a greater ability to travel easily from those

areas to the contaminated areas. As more cars became available, part of their use would have been to allow more travel from the outlying areas of the base to Hadnot Point area and its facilities. Over time, greater mobility would have provided individuals and families not only with more of an ability to leave the base, but also, more of an ability to travel to other areas on the base, not least of which, the central attractions of Hadnot Point.

With more motor vehicles, for example, wives of married Marines could more easily access the main PX at Hadnot Point, the many social clubs at Hadnot Point where major events occurred, or the middle and high schools at Hadnot Point or tied to its water system where many children attended and had extracurricular activities. More mobility made it easier for those residing outside of the Hadnot Point area to travel to the Hadnot Point area for a variety of reasons such as to swim in the Hadnot Point indoor pools, to engage in or attend athletic activities, to go to concerts and major events like July 4th and the Marine Corps Birthday celebrations and dances, and to receive medical care at the Naval Hospital. This was outlined in my prior reports, but it is worth citing additional historical materials. For example, the below article from the *Globe* from 1974 alludes to the well-frequented nature of the Main Exchange located at Hadnot Point:

' Children, children, everywhere!!!

Open Line:

Children, children, children everywhere — especially in the Main Exchange. Most of them are there without being accompanied by a parent, or at least it seems so. Why must customers be constantly caught up in a game of “Cops and Robbers,” attacked by a bundle of fury bounding from beneath racks of clothing or from some other unsuspecting place.

The Exchange is a place where all of us should be able to go and shop without having to constantly be on the lookout for someone else's children or becoming so frustrated that we leave the store with uncompleted shopping lists.

No, moms and dads, I love children and feel they need to be protected, especially when out in public places. They are your responsibility and you should not leave it up to others to look out for their safety and well-being while you yourself browse throughout the Exchange. If you do not intend to take care of your children while you are shopping then you should not bring them in the Exchange to run wild. Not only do they upset other patrons, they often destroy or mutilate property to such an extent it has to be surveyed.

Oh, I know you are not one to shy away from your responsibility of paying for any damages done, but why shy away from the greater responsibility of controlling your children?

Just recently I was in the store and a lady brought a small child to the Manager's Office, stating the child had followed her to her car twice and she did not even know the child. The word was passed for someone to come pick the child up. Eventually an unconcerned mother arrived, spanked the child, sent it on its way to the Toy Department and she went to the Ladies Department. Parents, aren't you concerned what could happen to your child?

Article from 1974 on number of children at Main PX at Hadnot Point, the Camp Lejeune *Globe*, 13 June 1974.¹⁰

The article expressly discusses the “Main Exchange.” It discusses the prevalence of children there, and alludes to “moms and dads” who travel from time to time to the Exchange, described as a “store,” with their “shopping lists.” The article further references how the Exchange contained both a “Ladies Department” and a “Toy Department.” The reasonable inference to draw from this document is that as of 1974, the Main Exchange functioned like a department store as well as grocery store, and drew parents and families to it. It was located in the Hadnot Point area.

¹⁰ The *Globe*, 13 June 1974, Vol. 30, No. 24, available at <https://www.dvidshub.net/publication/issues/60297>.

family news



SHOPPING SPREE WINNER — Mrs. Jean Mechuta, piles her grocery cart to overflowing at the Hadnot Pt., Commissary during a five minute shopping spree, sponsored by the C. Lloyd-Johnson Company, Nov. 5. During the 5 minute period Mrs. Mechuta bagged \$367.04 worth of groceries. Her tally for the most items of one kind was meat. When asked what she would do with all the food, she smiled and said, "I have six children, that's all the explanation I need." Besides Mrs. Mechuta, there were two other winners, plus entries submitted by commissary shoppers here and at all military installations in 1975, will be eligible for a Grand Shop-a-thon. Winners will be selected at random and announced in December. Mrs. Mechuta is married to MGySgt. Edward Mechuta, Communication Company, Headquarters Battalion, 2d Marine Division.

The Globe, 13 Nov. 1975, Vol. 31, No. 46, p. 6.¹¹

The photo and accompanying caption text from a 1975 issue of the *Globe* likewise indicates that parents and families traveled to Hadnot Point to shop. The above photo reflects food items and a shopping cart being used by a woman at the Hadnot Point Commissary to participate in a contest to collect as much as she could in five minutes.

The 1969 feature excerpted below also reflected details as to the nature and use of the large Naval Hospital complex as of that time and underscores its importance to the whole community.

¹¹ Available at <https://www.dvidshub.net/publication/issues/60213>.

Naval Hospital Marks 26th Anniversary

By SGT. ANDY FIELDS

This week, the Naval Hospital celebrates more than a quarter-century of service to the World's Most Complete Amphibious Training Base—Camp Lejeune.

The hospital, presently commanded by Captain J.H. Suitor, U.S. Navy, was commissioned on May 1, 1943 at a construction cost of \$7,500,000. On that date, patients were admitted as transfers from the then temporary Field Hospital, which up to that time had provided care for the sick and injured of the former Marine Barracks, New River.

The Naval Hospital, is a self-contained activity under the command and support control of the

Bureau of Medicine and Surgery, Navy Department. Coordination control is exercised by the Commanding General, Marine Corps Base.

The mission of the hospital includes support for military personnel and dependents of Marine Corps Base, Force Troops, 2d Marine Division, Marine Corps Air Station, New River, and Marine Corps Air Station, Cherry Point, North Carolina. The hospital also cares for retired personnel.

The authorized operating bed capacity is 600. This can be expanded to care for as many as 1,117. The highest patient load during World War II was 2,087 and during the Korean Conflict

the peak census was 1,865, including many Army patients. At present, average occupied beds, total 460.

Since commissioning, the hospital has admitted approximately 87,000 military patients and 77,500 others. A total of more than 45,500 births have been recorded.

In March 1958, the hospital assumed responsibility for outpatient care of dependents, a mission previously assigned to the Base Dispensary. In order to provide this support, Wards 1 and 2 were converted into outpatient clinics. The clinics average approximately 10,000 patient visits per month.

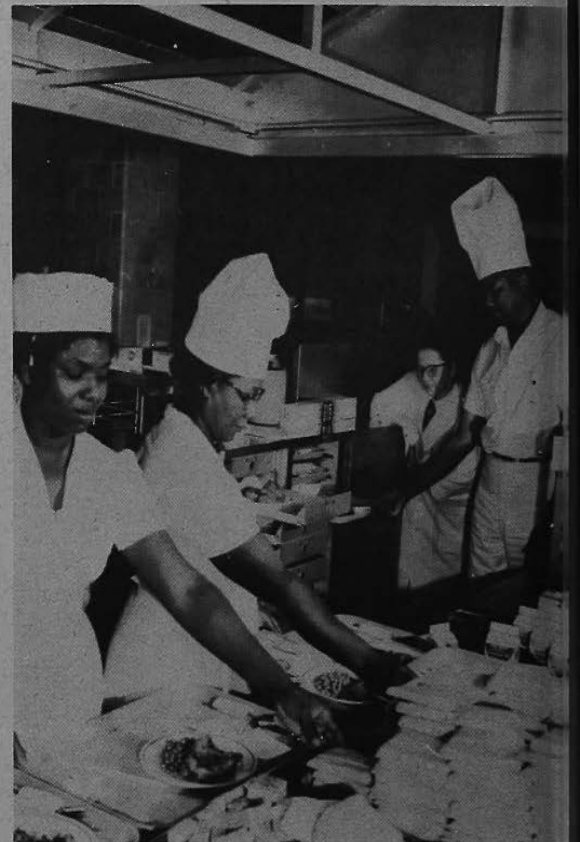
Constructed to fill a war-time need, the hospital has added pro-

gressively to its initial medical capabilities. Services now available include general medicine, general surgery, orthopedic surgery, obstetrics, gynecology, pediatrics, ophthalmology, urology, radiology, pathology, pharmacy, physical therapy, otorhinolaryngology, dentistry and neuropsychiatry.

The population supported in-

cludes more than 32,000 military, 36,000 dependents and some 400 retired personnel.

In addition, active support is furnished all civilian medical activities in the vicinity on a humanitarian basis. Although not a teaching hospital, it is fully accredited by the Joint Commission on Accreditation of Hospitals.



COOKS prepare some "medicine" — hot chow.

The Globe, 2 May 1969, Vol. 25, No. 18, p. 10.¹²

The above feature from 1969 describes that as of that date, the Naval Hospital facility had been in existence for more than 25 years in service to Camp Lejeune. The population as of then that was "supported" included "more than 32,000 military" and "36,000 dependents" as well as "400 retired personnel." The hospital had been commissioned in 1943. The hospital's purpose was "support for military personnel and dependents of Marine Corps Base, Force Troops, 2d Marine

¹² Available at <https://www.dvidshub.net/publication/issues/60911>.

Division, Marine Corps Air Station, New River, and Marine Corps Air Station, Cherry Point, North Carolina. The hospital also cares for retired personnel.” The hospital then had 600 beds which could be expanded up to 1,117 beds. “At present, average occupied beds, total 460.” Since when it was commissioned (i.e., from 1943 to 1969) the hospital according to the story had recorded “87,000 military patients” and “77,500 others.” It included “[a] total of more than 45,500 births have been recorded.” The article goes on to report that “[i]n March 1958, the hospital assumed responsibility for outpatient care of dependents” who had previously been “assigned to the Base Dispensary.” “The clinics average approximately 10,000 patient visits per month.”¹³ The centrality of Hadnot Point clearly is demonstrated by the health care facilities.

III. The Outlying Areas.

Dr. Brigham tries to sow seeds of doubt about the centrality of Hadnot with his fixation on the outlying areas. No one has argued that people did not live in different parts of the base such as Camp Geiger, Camp Johnson, New River/MCAS, Onslow Beach, the Rifle Range, or Courthouse Bay. But with few exceptions, Dr. Brigham’s report lacks statistics such as on numbers of people over time at various locations. His report also fails to acknowledge that people could live in one area but work in another; particularly, Hadnot Point. As noted, Hadnot facilities included both barracks, motor pools and machinists’ shops and garages for maintenance, schools, the hospital, and administrative offices. My prior reports outlined these facts through the use of oral histories, command chronologies, issues of the *Globe* and other relevant documents.

Below are some further relevant examples of the importance of Hadnot Point in the everyday life of Camp Lejeune. In the article below from 1967, it is described how wives from all over base gathered for an orientation, with reference to presentations at the Camp Theatre and a reception at the Marston Pavilion:

¹³ The *Globe*, 2 May 1969.

4 GLOBE, FRIDAY, AUG. 4, 1967

500 Wives Entertained At Orientation Program

More than 500 military wives attended the Wives Orientation Program held here July 27. The first program, held in March for enlisted wives, met with such popularity that the Marine Corps Base sponsored a second program for all military wives -- officer and enlisted, Navy and Marine -- whose husbands are stationed here.

The purpose of the program was to familiarize wives with military living at Camp Lejeune and in the surrounding community.

Chaplain Frank R. Morton,

Base Protestant Chaplain, opened the program at 9 a.m. with an invocation. Following an introduction by Base Sergeant Major J.C. Palma and a welcome address by Major General Joseph O. Butcher, Commanding General, Marine Corps Base, presentations were given by representatives of various base organizations.

Fourteen presentations, augmented with picture slides, information pamphlets and other visual aids, explained services, recreational facilities and assistance programs available at

Camp Lejeune. Mr. W.R. Page, Jacksonville Chamber of Commerce President, explained facilities available in Jacksonville and the surrounding area.

Comments overheard following the program indicated that the program was beneficial to wives new to military life, as well as those new to Camp



WIVES PROGRAM--Wives of Camp Lejeune servicemen await busses at the recent Wives Orientation Program conducted here. The two part program included presentations at the Camp Theatre and a reception at Marston Pavilion.



GUEST SPEAKER-- W. R. "Pete" Page, Jacksonville Chamber of Commerce President welcomed more than 500 military wives to this area and outlined facilities available in the city. He told of the churches, banks, schools, shopping centers and recrea-

Base programming at Camp Theatre and Marston Pavilion, the *Globe*, 4 Aug. 1967.¹⁴

The Camp Lejeune Base Theater is located in on the Main Service Road at C Street, in the Hadnot Point area of Camp Lejeune.¹⁵ The Marston Pavilion is also located in the Hadnot Point area.¹⁶ The fact that the event is for wives is significant since historically the predominance of the

¹⁴ The *Globe*, 4 Aug. 1967, Vol. 23, No. 31, p. 4, available at <https://www.dvidshub.net/publication/issues/61097>.

¹⁵ See official U.S. Marines map available at https://www.mcieast.marines.mil/portals/33/documents/contracting/contracting_map.pdf.

¹⁶ See *id.*

service members was male and the wives would have included ones residing at married-Marine housing areas on-base including Tarawa Terrace.

Other historical articles reflect that such orientation programs or sessions for the wives were events that occurred repeatedly over time, as opposed to being one-off events that only occurred once in the 1950s to 80s time frame. *See, e.g.*, an article in a March 1967 issue of the *Globe*¹⁷ describing an “Enlisted Wives Orientation Program” that was “fully supported by the Staff NCO, Midway Park and Tarawa Terrace Wives Club” and which would be held “in the Hadnot Point Staff NCO Club.” The article describes that “[s]ome of the topics to be covered are Base housing, schools, Marine Corps Exchange services, Special Service Activities, Religious Programs, Legal Assistance, role of the Provost Marshal, Hospital care, Civil Service Employment, Navy Relief and the Red Cross.” In addition, to make it easier for wives to attend, “free limited baby sitting service will be offered at the Midway Park and Tarawa Terrace Nurseries.” Further, round trip transportation was being provided by “[b]ase busses” including with stops at Tarawa Terrace, Midway Park and Camp Geiger.

There were many other events at Hadnot Point that drew large groups over the years. The photo below from a 1973 issue of the *Globe* highlights the Marine Corps Birthday, in its caption noting that a mother held her child to shelter her from the cold that “more than 9,000 spectators” braved to attend ceremonies honoring the Corps 198th Anniversary:

¹⁷ The *Globe*, 9 March 1967, Vol. 23, 10, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_61119.pdf.

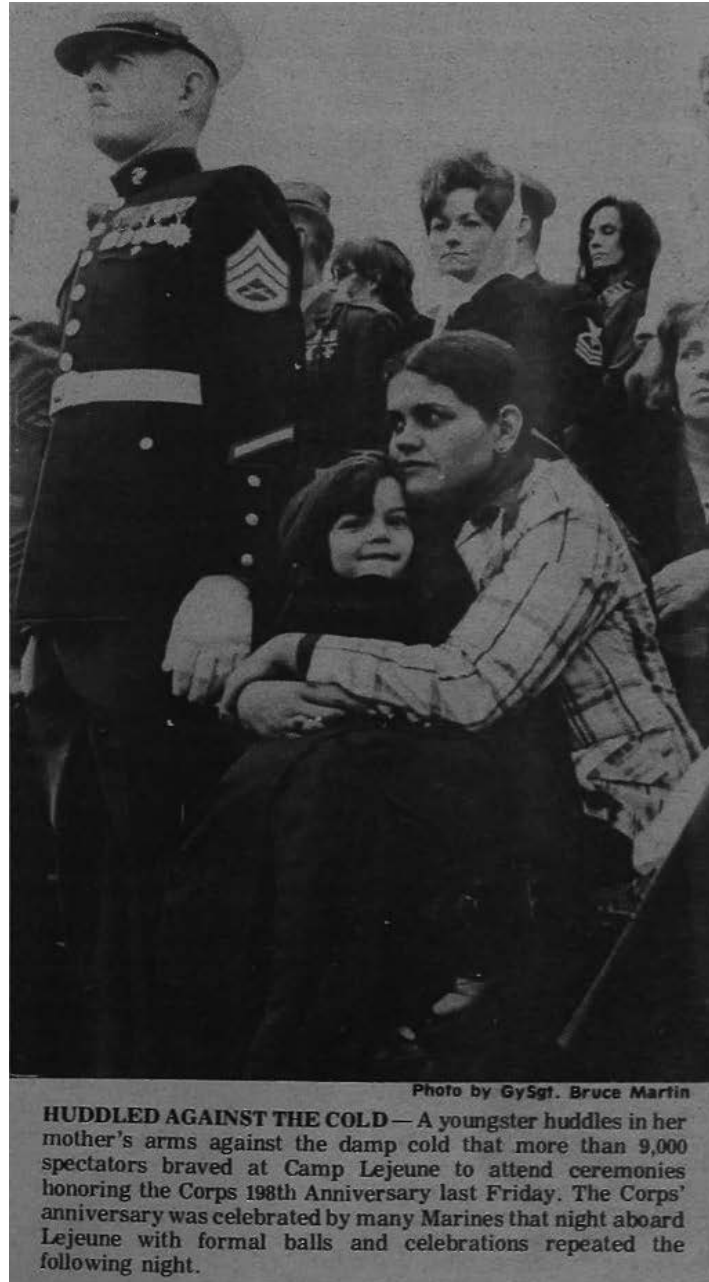


Photo by GySgt. Bruce Martin
HUDDLED AGAINST THE COLD— A youngster huddles in her mother's arms against the damp cold that more than 9,000 spectators braved at Camp Lejeune to attend ceremonies honoring the Corps 198th Anniversary last Friday. The Corps' anniversary was celebrated by many Marines that night aboard Lejeune with formal balls and celebrations repeated the following night.

The Globe, 15 Nov. 1973, p. 5.

Dr. Brigham's contentions that I only focused on the Hadnot Point and Tarawa Terrace areas of the base and failed to account for other areas is incorrect. My December 7, 2024 report discusses other areas of the base such as New River (12/7/24 report, p. 7), Holcomb Boulevard (*id.* at p. 10), Knox Trailer Park, Midway Park, Paradise Point, and Berkeley Manor (*id.* at p. 24), etc. Having said that, there was no requirement that the subject matter of my report be organized in the manner Dr. Brigham prefers. I have included ample content in my reports discussing parameters of the base as a whole, both for everyday life and training. Further, to the extent there is a focus on Hadnot Point, it is an organic result of the very fact of Hadnot Point's centrality. Furthermore, the fact that the allegedly historically contaminated areas were centered

on Hadnot Point, Tarawa Terrace and Holcomb Boulevard makes appropriate a focus on those areas. Nonetheless my focus has not been myopic.

As I stated at page 2 of my report: “I am advised that the primary contaminated communities/systems per the ATSDR studies and publications with regard to the drinking water issues at Lejeune were three: the Hadnot Point/Mainside barracks region (Hadnot water system), the Tarawa Terrace area (Tarawa Terrace water system), and the Holcomb Boulevard area (Holcomb Boulevard water system). I reviewed other regions and areas of the base and referenced them below as may be relevant.” (12/7/24 report, p. 2). Accordingly, I focused on the Hadnot, Tarawa and Holcomb areas of the base as those were the areas designated and found by the ATSDR agency as being the areas with contamination in the finished water. I included detail regarding historical facts as to those areas but also addressed topics that went beyond them even while including them such base infrastructure, the fire stations, the bus routes, the schools, the roads, and other aspects of the base. As noted, I also discussed the water buffaloes which traversed multiple areas; the evidence as per my prior reports is that they were in large part replenished and re-filled from standpipes located in the industrial park at Hadnot Point.

One important category of infrastructure facilities in Hadnot Point or using its water was the schools. Middle and high school facilities that were located at Hadnot Point or were nearby and drew from its water system served married families with children generally not merely those who lived in Hadnot Point. These schools were attended by numerous students over the years during the statutory period, as reflected by the citations to Command Chronologies and information on the schools from the *Globe* in my 12/7/24 report, pages 29-39.

Further, the available information reflects that the high school and junior high were centers of not only education, but also of other cultural and social activities that brought together parents, children and other members of the community for events on grounds of schools located in the Hadnot Point area (or dependent on its water). Historical records reflect that school students would go on excursions to other areas of the base that drew on the Hadnot Point water system, such as Naval Hospital (until 1983 when the hospital moved to a new facility¹⁸):

¹⁸ See U.S. Marines website, “Welcome to Naval Medical Center Camp Lejeune,” <https://camp-lejeune.tricare.mil/About-Us>.



The Globe, 9 May 1974.¹⁹

In the above 1974 captioned photo, it is described that students from Lejeune High School (located in the Hadnot Point area) went to plant flowers at the Naval Hospital (also located in the Hadnot Point area).

The article below taken from a 1970 issue of the *Globe* describes the homecoming celebration at the Camp Lejeune high school and emphasizes the centrality of the middle and high school to people on base:

¹⁹ The *Globe*, 9 May 1974, Vol. 30, No. 13, p. 5, available at <https://www.dvidshub.net/publication/issues/60302>.



The Globe, 13 Nov. 1970.²⁰

In the above-excerpted article, LCpl. Ken Plant wrote that “[d]espite the loss of the game, Lejeune High's Homecoming was an overwhelming success as a new queen was crowned, an exciting football game played, a very entertaining half time, and a swinging homecoming dance.” Further, the author described how “[h]omecoming events came to an end Saturday night as the Camp Lejeune High School Auditorium rocked to the heavy sound of the ‘Grapes of Wrath,’ a local rock group in Jacksonville. The dance was a smash when the class queens and their escorts ‘socked-it-to’ a surprise filled pinata.” Here, the vigorous and clear journalistic prose of the servicemember author is noted. I have found the *Camp Lejeune Globe* to be a reliable and accurate publication and it is apparent the writers sought to provide useful reporting and base news (just like towns across the country). The bottom half of the article is shown below:

²⁰ Vol. 26, No. 46, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_60762.pdf.



The Globe, 13 Nov. 1970.²¹

Other historical *Globe* articles reinforce a continuity of many of the base activities and periodic traditional events, even as in other respects, over time at the base there was change. There was continuity in terms of the base high school for purposes of events like sports. Compare the article above from 1970 regarding the football game at the high school to the article below from nine years earlier, 1961, regarding a high school football game:

²¹ Vol. 26, No. 46, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_60762.pdf.

Devilpups Go Against Ayden In State Playoff Tilt Saturday

Two undefeated high school football teams—one with an explosive offense and the other with a very stingy defense—will lock horns at Kinston Saturday night to see who takes the first step toward a regional football title. Camp Lejeune High's Devilpups, who have averaged almost 30 points per game this season, will try to extend their first undefeated season in history to 10 straight against Ayden, a team that has given up only four touchdowns all season in winning 10 games. The only two mutual opponents testify to an even contest between Ayden and Camp Lejeune. Ayden knocked off Havelock in their season opener, 6-0, and a week later the Devilpups racked the same team, 26-19; Lejeune then forced a come-from-behind win over Beaufort by a 14-7 score, and Ayden edged the Seadogs by the same margin in the following week, 7-0.

Strong Offense

Lejeune's total offense rolled up 2,327 yards this season to 1,000 for their opponents, but 636 of their opponents' yards came through the air. The Devilpups appear to have solved that problem as they wiped out the Quantico eleven in their last game, 35-0, by picking off six enemy aeriels.

Coach Tom McGhee has a tough all-around backfield in quarterbacks Jim Barrett, the junior with the sling-shot arm, and Bob Richards, who runs a devastating ground game; halfback speedsters Dick Dube, Rick Lowder, Ned Paulson, and Al Kyle; and talented fullback Randy Fridley.

Prucitt Leads Defense

The Devilpups' defense is built around linemen Ron Prucitt and Dick Batdorff and defensive backs Lowder and Dube.

"Prucitt carried this club a long way through the early part of the season, before some of our other boys developed. He's a big, strong boy and I think he's an excellent college prospect," Coach Tom McGhee said.

Prucitt at 6'1", 205, anchors a line which includes Ends Dan Partow, 6'4", 205, and Chuck Polon, 6', 165, Prucitt and Bob Jaffe, 6', 200, at tackles, Dick Batdorff, 5'9", 180, and Charles Churchill, 5'10", 165, at the guards and the lightest man on the team, Gary Ward, 5'8", 135, at center.



TD TIME—Fullback John Parrinello (40) follows his blockers in for the Marines' first touchdown Sunday at Ft. Lee. Leading the way on this play, which covered 27 yards, are tackle Tom Montgomery (67), guard Norm Hafler (64) and end Lee Russ (80). (Photo by Pvt. P. W. Freeland, MCB Photo Lab)

The Globe, 9 Nov. 1961, p. 14.

Indeed, such traditions are mainstays throughout normal town environments in our nation and the same also existed at Camp Lejeune. Each year, during football season, the Camp Lejeune Devilpups would play. At the base there was only one high school: the one in the area served by the Hadnot Point water system during the 1950s onward until when the Holcomb Boulevard water system opened in 1972.²² Likewise, each season, each year, to each game, parents attended, both to see their children and to socialize with each other and be entertained. Other siblings of children on the teams would come, for the same reasons from all over the base. There would be associated events such as post-game homecoming dances. The historical dominance of males aboard the base

²² See The Few the Proud website, at <https://tftptf.com/images/5.pdf> (Holcomb water plant built in 1972).

also would have encouraged sports activities as young men traditionally enjoy engaging various sports as well as watching sports matches including basketball, baseball, wrestling, and others in which the high schoolers also participated.

Sports and events also occurred at the schools including at Tarawa Terrace, something I outlined in my original report for both schools and summer programs. It is important to note that Tarawa was such a large residential community that it had its own primary school, which was connected as well to its water system by my understanding. Below is an image of the flag raising ceremony occurring at the Tarawa Terrace 1 Elementary School, located in the Tarawa Terrace area which according to the ATSDR was contaminated during pertinent times:



The Globe, 2 May 1969.

In the photo, the figure of a teacher in the background reminds us that it was not just children who spent time at the schools at Tarawa Terrace or at Hadnot Point, but also teachers, as well as other staff, maintenance workers, and so forth.

In focusing on the lesser facilities available in the areas of the base outside of Hadnot Point, Dr. Brigham fails to provide much detail for countering our points about the centrality of Hadnot Point. He offers no statistical or numerical information on the use of the facilities outside of Hadnot Point, such as stores, recreational and cultural facilities. He fails to provide data as to how many individuals used the outlying swimming pools, PXs, or clubs, although it is clear from documents that the best facilities were at Hadnot Point. Meanwhile, the documentary records I have cited in my prior reports in this matter and herewith reflect that as a practical matter, it is clear that people from all over the base, including the soldiers and their families, often frequented Hadnot Point.

Mr. Brigham's preoccupation with the outlying areas distracts from the full picture of the historical facts. In this regard, the perspective is analogous to that of other government actors who

have been criticized – including by academic historians – for seeking to present limited and selective information in connection with contamination events and environmental disasters such as nuclear test release radiation exposures, Agent Orange characteristics and exposures, and as to burn pits. See, e.g., Jacob Hamblin and Linda Richards, *Making the Unseen Visible: Science and the Contest Histories of Radiation Exposure*, Ed Martini, *Agent Orange: History, Science, and the Politics of Uncertainty*, and Joseph Hickman, *The Burn Pits: The Poisoning of America's Soldiers*.²³ These works reflect that in other analogous incidents, on one or more occasions there was reported by historians to be evidence that government officials or actors and/or interested private companies at first denied a relevant chemical exposure connection or after one was discovered, sought to delay investigations and obstruct access to data and information.

IV. Oral Histories.

Dr. Brigham and Dr. Kelman spend much time focusing on the oral history information that I cited. They seek to critique my work based on how I only did a limited number of interviews, and I did not record and archive each interaction or communication. First, if one reviews the oral history-related citations in my reports, most are documented and with those documents having been produced. See my 12/7/24 report, reliance list item nos. 128 (Allan Howard declaration, 11/26/24); 129 (Allan Howard deposition, 2/16/24); 130 (Gary McElhiney declaration, 11/25/24); 131 (Gary McElhiney deposition, 4/11/24); 133 (Jacqueline Tukes deposition, 4/11/24); 134 (Jacqueline Tukes declaration, 11/26/24); 135 (Benjamin Urquhart deposition, 11/26/24); 136 (Anthony Charles Zinni deposition, 5/28/24); 28 (Terry Dyer deposition, 4/10/24); 31 (Zinni deposition, *supra*); 34 (William Walters deposition, 5/20/24); and 35 (James Claude Branham deposition, 10/16/24). There should not be an issue of the reliability of any of these source materials for purposes of use and consideration by an expert opining or explaining as to matters regarding the relevant history of Camp Lejeune. Written witness testimony in court proceedings is a historically accepted source of content which can be used and cited in historical writings and historical analyses.

Of the reliance items that were citations to “oral history” per se, these are cited in the reliance list for my 12/7/24 report at item number 148 (described as Jerry Ensminger oral history); and the reliance list for my 1/13/25 report, at item nos. 2 (Ensminger oral history/email); and 3 (Mike Partain oral history). To rebut defendant’s experts on this newly raised issue, I have conducted an additional interview of Partain and Ensminger, and we recorded it as a formal oral history session. The content of the recorded oral history corroborates and corresponds to the prior information I had received from them that I had not formally recorded and saved by audio or video due to time constraints. In addition, to further refute the critique by Defendant’s historians, I submit a declaration from Mr. Partain, who while not a retained expert in this matter, does have specialized historian credentials, knowledge, and experience particularly with regard to Camp Lejeune water issues. Mr. Partain is at the same time, a named Plaintiff in this matter but this does not negate his status as a historian and extensive work on the matter for many years. With regard to Mr. Ensminger, he has been a primary source for Mr. Partain for historical facts, and is a historian

²³ Jacob Hamblin and Linda Richards, eds., *Making the Unseen Visible: Science and the Contested Histories of Radiation Exposure* (Corvallis: Oregon State University Press, 2023); Ed Martini, *Agent Orange: History, Science, and the Politics of Uncertainty* (Amherst: University of Massachusetts Press, 2012); Joseph Hickman, *The Burn Pits: The Poisoning of America's Soldiers* (New York: Hot Books, 2016).

himself, due to his own longstanding involvement in efforts to develop the historical facts of the base for the public record. (See Partain declaration dated March 17, 2025).

As to the oral history by Zoom of Allan Howard that my prior report cited, it should be noted that I also cited written testimony of Mr. Howard. See my 12/7/24 report, compare reliance list item no. 127 (Allan Howard, oral history by Zoom, 8/30/24); to nos. 128 (Allan Howard declaration, 11/26/24 and 129 (Allan Howard deposition, 2/16/24).

Defendant's experts question the use of the depositions and court testimony as a form of oral history, arguing that such sources are unreliable. In fact, oral history information can be documented in a variety of forms. Source material for a historian's analysis runs the gamut from oral history fragments embedded in the form of persons quoted or paraphrased in old *Globe* articles, to documented "oral history" written transcripts available to the public;²⁴ to testimony on history matters in the form of oral or written statements in federal congressional hearings and proceedings;²⁵ to courtroom testimony, to recorded "oral history" interviews which are then archived in some manner. Further, testimony in a court proceeding, given that it is under oath and subject to cross-examination, can be very reliable and useful. I believe that all such sources and materials can be useful especially when corroborated by other research which I have done, wherein I have cited to and incorporated a variety of facts gleaned from archive records, government documents, newspapers, and magazines.

The information I obtained from the limited number of interviews I performed has helped supplement other more dry and technical materials by giving them a human dimension. Also, the statements by these living oral histories reflect some of the prospective testimony that could be offered at trial. My understanding is that as of the date of this report no trials have occurred. Mr. Partain and Mr. Ensminger (for his deceased daughter's estate) are both named Plaintiffs as are other sources I have cited such as Ms. Tukes and Mr. Howard. Accordingly, their testimony including by written declarations or deposition transcripts may be relevant and useful. If possible, and if the Court allowed, I would want to further supplement my opinions based upon Plaintiff or witness testimony occurring in the future.

In summary, I believe that it is important to consider a variety of sources of information when seeking to understand, from a historical perspective, the many facets of the relevant Camp Lejeune topics. The information I have located, researched and cited is hoped to assist for the purposes of assessing the nature of the activities of the Marines, wives, children and civilians at the base during the pertinent times. The historical summary and reliance material items may be of use at trial. For example, if a given Plaintiff can recall that they went to the high school, it may be relevant to have the fact historically confirmed that during pertinent times, the sole high school on base was served by Hadnot Point water for many years. I have cited sources that shed light on

²⁴ See, e.g., Oral Memoirs of Michael Partain, interview conducted by Amanda Hill, March 6, 2014, for the Community Veterans History Project and the Lone Sailor Memorial Project, University of Central Florida, available online at <https://richesmi.cah.ucf.edu/omeka/items/show/5085>.

²⁵ See, e.g., U.S. Senate Committee on the Judiciary, The Freedom of Information Act: Safeguarding Critical Infrastructure Information and the Public's Right to Know, Full Committee Hearing, March 13, 2012, available at <https://www.judiciary.senate.gov/committee-activity/hearings/the-freedom-of-information-act-safeguarding-critical-infrastructure-information-and-the-publics-right-to-know/> including testimony by Jerry Ensminger, Retired Marine Sergeant, Camp Lejeune Marine Base.

other subjects revolving around Hadnot Point such as the use of the year-round indoor swimming pools, the religious activities, and the shopping and social opportunities. Historical materials document the administrative and mechanical jobs at Hadnot Point and attractions such as the popular bowling alley and various officer and enlisted clubs. By exploring a variety of materials, I have sought to drill down and report on the human dimensions of life at the base of relevance. It is natural that such an effort includes not merely reviewing archived materials and records but also communicating with people who lived there during the statutory period and incorporating facts from their first-person accounts.

As for the methodology of oral history, I am a very experienced oral historian, having used the methodology for nearly three decades of work. I take steps to ensure my method is reliable. I do not use witness reports in a vacuum, but rather, as I did here, I also search out other historical sources with which to compare the input from living individuals with whom I can communicate and who have first-person knowledge. I constantly test for bias and mistakes through the use of multiple primary sources for reference and comparison. I have done oral history work before including with prominent figures such as Vice President Al Gore, Senator Eugene McCarthy, Senator George McGovern, Bill Moyers, Joseph Califano, as well as many veterans and their families. Over the years, moreover, I have worked with many people in the field, and I am a close friend and colleague the eminent Don Ritchie, whom Dr. Kelman cited. (Kelman report p. 10). I have collaborated with many other historians and scholars who have used oral histories over the years, including those associated with the public history program at Arizona State where I taught for nearly twenty-five years as well as during my time as director of the LBJ Presidential Library.

In terms of oral histories or interviews, Dr. Brigham does not recite having himself or his staff have any communications or interviews with any surviving Camp Lejeune eyewitnesses. There is no citation to material reflecting that Dr. Brigham or Dr. Kelman took any oral histories from any former service member or civilian residents on the base who are still surviving. This includes no oral histories or other first-person accounts with any individuals who drank or may have been exposed to the contaminated water from the 1950s through the 1980s. Nor does it appear that either defense expert was provided by the Defendant with any oral histories that are available in the public record regarding Camp Lejeune and that could have been supplied to them. The lack of use of transcripts or other eyewitness/Lejeune resident oral history materials is especially puzzling since Camp Lejeune-related oral history transcripts appear on the official U.S. Marines website. This fact reflects that the Marines must believe oral history information does have some use. *See, e.g.*, transcript of oral history interview of Sgt. Maj. Ihor Sywanyk, by L.J. Kimball, dated 29 July 1999, at pp. 10 (went to Camp Lejeune in February of 1964), 21 (back to Lejeune again in 1980), 25 (again to Lejeune in 1984), 36 (describes changes to base area over time);²⁶ transcript of oral history interview of Sgt. Maj. Mary Sabourin, by L.J. Kimball, 26 July 1999, at pp. 6 (first at Lejeune in 1945, worked at the main PX), 9 (“Then I was assigned to the PX [Post Exchange] and the PX system. At first, they thought, well, maybe we’ll send you over to our club. See, in the women’s area, that, I don’t know whether it’s the library, or, sort of that nicer building that’s not a barracks, that was our club [Building 62]. The women’s club, that only women could go to. Well, men could come, but they had to have a woman escort them into the club. So, about a week I worked in the club was, you know, then we had beer and all the rest. And then I went over

²⁶ Available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Sywanyk.pdf>.

to the main PX. Do you know where the Chaplain's offices are? The little low building? That was our main PX [Building 37]."), 20 ("I think I was in Jacksonville once and I can't remember anything there. All I can remember from Camp Lejeune into Jacksonville, there was nothing on the highway. It seems to me I remember a sort of a big tent that was probably a beer joint. You know, and that's all that was there.... There was nothing.... I guess I was just satisfied to stay on the base."), 28 (went back to Lejeune in 1953 to go to Leadership School in the women's area not Camp Geiger).²⁷ See also oral history interview of MSgt. Bruce and Virginia Morris, by L.J. Kimball, 22 Sept. 1999, pp. 41 (went to Lejeune in 1949, worked at the "Sales Commissary"), 42 (the Sales Commissary was "[s]ame as the Commissary now," and you could buy coffee and cigarettes), 43 (old commissary was located across the street from new one), 65-66 (back to Lejeune in 1956 or 1958), 73 (describing how during four year tour at Camp Lejeune from 1959 to 1963 they initially lived in a trailer, then got quarters at Tarawa Terrace; at the time those who lived at Tarawa Terrace included "staff NCOs" and officers who lived at "the edges" in "the duplexes around Tarawa I and Tarawa II," there were also civilians who worked in the schools, and "Warrant Officers and I think Second Lieutenants lived in duplexes around the edges of Tarawa Terrace."), 77 (at that time they had the same Commissary/PX).²⁸ And see transcript of interview of Sgt. Maj. Nathaniel James, USMC (Retired), by L.J. Kimball, 20 Aug. 1999, pp. 9 (came to Lejeune in 1961), 11 (in 1963, returned to Lejeune and was at area of Montford Point, later known as Camp Johnson, went to Service Support School at Camp Geiger), 21 (back to Lejeune in 1971, was a First Sergeant in the H&S Battalion, aka DSSG, which later was called FSSG), 37 (as a Gunnery Sergeant he lived at Berkley Manor community).²⁹ See also transcript of interview of Gy. Sgt. Margaret (Maggie) Flanagan, by L.J. Kimball, 29 July 1999, pp. 50-51 (was at Lejeune including in 1960 as military spouse/civilian and worked as a civilian at Headquarters Marine Corps, until retired in 1972), 65-68 (also graduated from NCO Leadership School, Class #10 Camp Lejeune, 11 December 1953; as to going to Jacksonville, her answer was "[n]ot really," because "[w]e didn't have cars").³⁰

The ability of the Government to compile oral history transcripts for other purposes, such as in the above examples found on the Marine Corps website, raises the question of why the Government did not authorize its expert witness historians to do so here.

Dr. Brigham does state that he "participated in a telephone call with Mr. John Lyles, Chief Archivist of the Marine Corps History center at Quantico, VA." Brigham 2/7/25 report, p. 5. However, his report does not list any reliance documents in that regard nor any recordings, thereby reflecting how not all oral communications with sources of information used in a historian expert report may be documented by a recording or a transcript.

I agree oral histories can have a bias (as do almost all sources) and some limitations if not effectively vetted and tested. Being aware makes it where you recognize the shortcomings and

²⁷ Available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Sabourin.pdf>.

²⁸ Available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Morris.pdf>.

²⁹ Available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/James.pdf>.

³⁰ Available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Flanagan.pdf>.

then find other sources to corroborate them. Would I have liked to have more time to do more, of course, but the Court unlike my academic colleagues has strict deadlines and also there are practical limits on what can be done. But I would be more than willing to work with Dr. Brigham, Dr. Kelman, or other historians on the matter should the Court find it useful to obtain more oral history information, including not only from individuals who resided or work at Hadnot Point or Tarawa Terrace but also who resided or worked in the outlying areas. From a perspective of data compilation and historical accuracy, having a larger sample would be optimal and would open up avenues to further developing the story of life at Camp Lejeune during the statutory period, and linking it to other data pertaining to the water contamination and the related and asserted health issues including latent disease issues.

I believe the ultimate efforts to diminish or dismiss oral histories made by the defense experts herein allows the inference that the Defendant knows, or predicts, that oral history evidence may not correspond with their desired framing. Dr. Brigham had every opportunity to conduct his own and started his research earlier than I started mine. Yet instead of pursuing oral history interviews or research as a tool in his methodology, he has avoided using the tool and dismisses it as having bias or limited scope. The same might be said for Dr. Kelman, a respected 19th Century historian who obviously had no living people around to conduct interviews with when he published on events such as the Civil War or an Indian massacre in 1864, although he did conduct interviews of people living today about their once-removed memories of Sand Creek. Instead of dismissing the opportunity to engage in generating or compiling oral history materials here, Dr. Brigham and his research assistants could have done their own work on the matter.

In his report, Dr. Kelman laments that there is not a full transcript of the oral history for Allan Howard on 30 August 2024. (Kelman 2/7/25 report p. 10). However, what I documented and provided were adequate notes reflecting my short interview. The main point of the oral history was to confirm what he had said in his *fully transcribed deposition* and fleshing out a few details such as whether he participated in athletics. The full text of the notes is as follows:

Oral History of Alan Howard, 30 August 2024, Via Zoom

1. When asked if played any sports while at Camp Lejeune, he responded: He did no intramural or organized sports. However, he started running on his own like the growing sports craze of the late 1970s. He would run to stay in shape and be ready for the long humps and PT. Ultimately, he competed in a half marathon while in training.
2. When asked if there were any manuals or written instructions provided regarding the use of water, he responded there were no instructions handed out and rarely any directions. Squad leaders paid attention to the issue and passed along the need to stay hydrated. He reemphasized that he always had additional canteens of water just in case others needed more water as some did not plan well.
3. When asked what other forms of water management beyond being equipped with canteens were there, he responded that medics and leaders distributed salt tablets. Unfortunately, he noted that this made you even more thirsty.

4. When asked do you remember any other designations of your unit, he responded he always was within the company distributed as a weapons platoon where he carried a 27.5 pound machine gun and on marches a 60 pound rut. It was a hard and tiring duty for someone barely weighing 160 pounds, especially during the hot months when he lost a lot of weight during heavy training.

5. When asked to please describe PT training, he noted that there were all kinds of exercises involving body weight resistance exercises such as pull-ups, sit ups, push ups, use the weapons at resistance that included aerobic and anaerobic exertion. If in shorts, tank tops, and running shoes, they often did 6-7 mile runs. At other times, they carried their gear and dressed in camo gear and marched 4 miles, but sometimes up to 15 miles depending on the day. They also ran obstacle courses, climb ropes, and other physical training. Mr. Howard emphasized it drove the instructors and leaders crazy to see Marines sitting around.

The water for these exercises were spread at the beginning and end which determined consumption as they would get water from big jugs or their canteens filled with water from their own bays or on maneuvers the water buffaloes.

6. When asked what did you drink if not at meals or out of canteens, he noted: Almost always drank water, never soda. He did like the sugar infused Kool Aid, but no caffeine and only the occasional beer. But, mostly he drank water at meals and when in the field. Rarely anything else.

See my 12/7/24 report, reliance list item 127.

It was a good representation of what Mr. Howard said, even without quotes around the sentences or a transcribed transcript. Dr. Kelman in this regard never conducted any research on the topic of Camp Lejeune on his own to seek to refute the content from Mr. Howard, nor does he acknowledge that Howard is consistent across his interview, declaration and deposition, each of which provides further context and validation/corroboration. *See* reliance list from my 12/7/24 report, items 127 (Howard, Allan. Oral History by author via Zoom, 30 Aug. 2024) 128 (Declaration of Allan Howard, In re: Camp Lejeune Water Litig., 26 Nov. 2024) and 129 (Video Deposition of Allan Wayne Howard, Dayton, Ohio, 16 Feb. 2024).

Dr. Kelman and Dr. Brigham critique that I did not have a large number of oral histories. However, as noted, my time and resources were limited. And, my methodology also used other tools, including the many other categories of items found in my reliance lists. As those show, I was not working in a vacuum and for purposes of preparing my reports I have consulted numerous other sources. Further, some of those other sources in fact contained within them their own oral history materials including citations and references to depositions, statements at congressional hearings, content from the 2011 documentary, “Semper Fi: Always Faithful,” and content from Mike Magner’s book, *A Trust Betrayed*. These materials, credible and reliable in themselves, reflect numerous other witness contacts and interviews from which content was drawn.

Obviously, with unlimited time and resources, interviews can be conducted in larger numbers and transcribed. I have done this often for purposes of my published books and to this day have retained quite a few on tape or other formats. When I work on a book project it can take many years. My note taking is something that I have done at other times and based on my familiarity with the work habits and methods of other authors is comparable. Further, as to all of my books, essays, and articles, never once to my knowledge has anyone questioned my techniques or the outcomes of the oral histories I have conducted.

In addition, Dr. Kelman contends that “Dr. Longley’s use of the interview with Mr. Ensminger points to another methodological shortcoming in his report: a failure to critically evaluate his sources.” (Kelman 2/7/25 report, at p. 11). This is untrue and how does he even know? Was he part of the process? Was he with me when I reviewed hundreds of documents and thousands of pages of materials? I am a professional practicing historian and always test the information, no matter what type of primary source. With regard to Ensminger, his statements regarding pertinent facts as to the base are set in a context of prior congressional hearing testimony and statements that Ensminger has provided, including but not limited to:

- a. Testimony of Ensminger on file with U.S. Senate.³¹
- b. Testimony of Ensminger on file with U.S. Senate, dated June 8, 2011.³²
- c. Testimony of Ensminger on file with the U.S. House of Representatives.³³
- d. Oral statement of Ensminger, written prepared statement, and questioning responses, at pages 17-29, 31-43, in *Poisoned Patriots: Contaminated Drinking Water at Camp Lejeune*, Hearing before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, U.S. House of Representatives, June 12, 2007.³⁴
- e. Statements by Ensminger found in US DHHS ATSDR meetings of the Camp Lejeune Community Assistance Panel (CAP) meetings, e.g., Dec. 6, 2007, transcribed in verbatim form.³⁵
- f. Statement of Ensminger and Partain regarding EPA ban on TCE, Dec. 9, 2024.³⁶

I checked Ensminger’s statements against these and other such as those in the documentary, “Semper Fi.” I understand and always critique oral histories as well as all sources for bias, truthfulness, and context, and then corroborate them as much as possible. Once more, I have been employing this methodology for over 30 years in the course of researching and writing my books,

³¹ <https://www.veterans.senate.gov/services/files/B995DDE1-E066-42A4-BB1B-785669D6537E>.

³² <https://www.veterans.senate.gov/services/files/4A964881-45E3-41F5-B057-02DD324527D2>.

³³ https://republicans-science.house.gov/_cache/files/6/b/6b43caeb-0acd-4d78-b745-3c3e625cf2d1/432B71F13EA7D7AA6B09FFA2BDB7741E.061208-ensminger.pdf.

³⁴ <https://www.govinfo.gov/content/pkg/CHRG-110hhrg37793/pdf/CHRG-110hhrg37793.pdf>

³⁵ https://www.atsdr.cdc.gov/camp-lejeune/media/pdfs/CAPtranscript12_07.pdf.

³⁶ <https://www.ewg.org/news-insights/statement/2024/12/statement-jerry-ensminger-and-mike-partain-final-epa-tce-ban>.

essays, and articles. I have read reviews of my published works by others who have scholarly qualifications and not once have I been aware of a reviewer questioning my methods or conclusions related to any of the oral histories included in my work.

Dr. Kelman contends that in order to be used as a reference or reliance source for an expert historian report in litigation, oral history information must be “archived appropriately.” (Kelman 2/7/25 report p. 1). This is not correct. There is no federal rule or other legal obligation that oral history information must somehow be placed in a library in order to be useful or usable. The same is also true of historical records. While desired, many archives do not have the space or other resources to store all the information, especially those not transcribed. People often, myself included, keep the oral histories with their personal archives. In thirty years, I have never once had some request to review my oral histories, showing this is a red herring regarding efforts to question the oral histories used in the report.

Dr. Kelman also contends that “[o]ral histories must meet a higher methodological standard than interviews or depositions.” (Kelman 2/7/25 report, p. 1). I disagree. For example, depositions are a form of witness testimony under oath (oral histories are not). They are regularly admitted in court and at trials under the rules of evidence. It is inaccurate to suggest that depositions cannot function as a reliable source of historical evidence. In fact, in court cases, experts in a variety of fields commonly cite to and rely on deposition testimony as well as other forms of testimony under oath, i.e., trial testimony transcripts, sworn declarations or sworn affidavits. Ironically, Kelman does not have any problem in citing court documents in his own work. In his book, *A River and Its City: The Nature of Landscape In New Orleans*, his bibliography has citations for 25 different court cases where he uses testimony and court proceedings in his research.³⁷

Dr. Brigham echoes Dr. Kelman stating, “I do not consider deposition testimony or declarations to be oral histories.” (Brigham 2/7/25 report p. 5). First, this criticism is limited by the fact that where it serves his cause, Dr. Brigham himself cites deposition testimony. (Brigham 2/7/25 report, pp. 2 (citing Zinni, McElhiney, Urquhart testimony), 33-35 (same); and see Brigham 12/9/24 report, pp. 26 (citing Melts deposition), 28 n. 84 (same)). Second, the fact remains that depositions and declarations are perfectly acceptable materials which are often cited by many types of non-historian experts in their reports in cases. Why, then, would declarations and depositions and other testimony be set aside as a source to consider for a historian? Certainly, deposition testimony and sworn statements can provide valuable and relevant information for a historian and can be cited and relied on by historians in a wide variety of contexts.

Dr. Brigham writes in his report that “Dr. Longley relies exclusively on declarations and depositions, which were taken or written decades after the training, for his discussion of what occurred during such training.” (Brigham 2/7/25 report, p. 14). He earlier stated: “These depositions were taken in 2024, and the declarations were written in 2024, some 40 years after these individuals were at Camp Lejeune. Without additional source material, Dr. Longley cannot make assertions about what transpired at other times during the 34-year statutory period to corroborate his assertions regarding water use.” (Brigham 2/7/25 report, p. 13). Implicit in such statements is also the idea that I did not take into consideration how people’s memory might have

³⁷ Ari Kelman, *A River and Its City: The Nature of Landscape In New Orleans* (Berkeley: University of California Press, 2003), 255.

been affected or that there was bias. But, I would also point out that many memories remain very strong and can be validated in many different ways, which I have often done.

To make the point, I have reviewed Dr. Kelman's work, *A Misplaced Massacre*, whose title I noted he developed because his original thoughts on the location of the massacre were wrong which highlights the value of working on a project for many years (it appears this project took at least a decade or more from start to finish). The oral histories in the book coming in the form of transcripts or media of interviews of living persons were taken decades after the massacre itself, one that occurred on November 29, 1864. No massacre participants, victims or eyewitnesses remained alive at the time when Dr. Kelman researched his book published in 2013. Dr. Kelman's book itself cites to individuals who themselves had accumulated substantial historical knowledge about the massacre, such as Alexa Roberts, former National Parks Superintendent of the Sand Creek Massacre Site and now Board Chair of the Sand Creek Massacre Foundation.³⁸ In his book, he notes that his interview with Glenn Morrison involved taking notes, not reliance on a recording.³⁹ This would appear identical to the less formal recording or documenting he criticizes in my reports. With regard to interviews and conversations he conducted with his sources, at no point in his book is it clear about how he ruled out the issues of bias or memory flaws.

I agree with the statement that with regard to the information in declarations and depositions, "[a]s Dr. Kelman discusses, such sources could be biased." (Brigham 2/7/25 report, p. 14, emphasis added). But that does not *per se* exclude those as sources. Rather, because I recognize this potential for bias, I make sure to test the findings of the oral histories against other primary sources. In this regard, obtaining and using oral history as a historian does not happen in a vacuum, but rather occurs as part of a process involving spending significant time exploring the assertions against the numerous other documents that I have examined over the course of my research on the topic.

While the scope of Dr. Kelman's critique extends primarily only to the topic of oral histories, the fact is that the vast majority of the sources used for my original expert report came not from oral histories but from a myriad of other historical documentary and other sources, all of which are credible and reliable. In fact, of the 198 total reliance list identified citation items in the reliance list, only 10 of them (Items 127-131, 133-136, 148) – about 5% -- reflect an oral history interview, declaration, or deposition testimony. And of those ten items, only two (items 127, 148) were specifically oral history entries. Thus, even if one were to accept the conclusions of Kelman, which I reject fully, the vast majority of my report and opinions remains unscathed.

V. Diving into the Minutiae and the Search for the Minor Mistakes.

When people struggle to critique the substance of an argument in my classes or my profession, they often digress to the minutiae and minor mistakes to try to distract people from their failure. That is true here. First, what Dr. Brigham and Dr. Kelman fail to understand with this

³⁸ See website article entitled, "Former National Park Superintendent: 'Striking Similarities' Between Thacker Pass and Sand Creek Massacre Sites, 12 Sept. 2022, <https://www.protectthackpass.org/former-national-park-superintendent-striking-similarities-between-thacker-pass-and-sand-creek-massacre-sites/>.

³⁹ Ari Kelman, *A Misplaced Massacre: Struggling Over the Memory of Sand Creek* (Cambridge: Harvard University Press, 2013), p. 301.

exercise is that we are not writing an article for the *American Historical Review* or the *Journal of Military History*, and certainly not a book. The work was done over months, not years as often the case with many research projects. One of my projects, *The Morenci Marines*, which Dr. Kelman noted, took thirteen years to research and write from start to finish, during a process which included gathering large quantities of data, including numerous oral histories in traditional forms of collection. This prize-winning book showcased my research abilities, but it only had loose deadlines for completion, and so I had the luxury of taking extra time to refine its content. With *The Morenci Marines*, I wrote a 300-plus page book that became the basis of a PBS documentary, “On Two Fronts.”⁴⁰

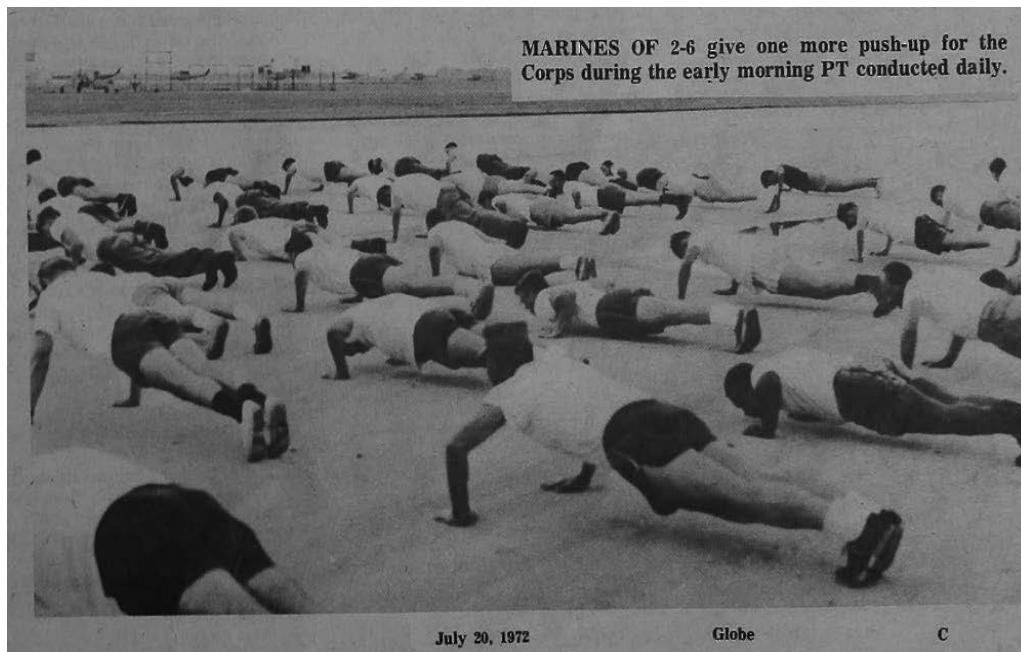
By contrast, for purposes of this case, I received five months for research and about six weeks to write the long narrative (approximately 110 double spaced pages) without the support of research assistants. I did not just call John Lyles at the Marine Corps Archive (as Dr. Brigham did), but I spent four days there doing research from the finding aids that Lyles and his staff compiled for me about life at Camp Lejeune. I went document by document, reviewing a large quantity of materials and taking notes when relevant (not all research reviewed makes it to the narrative but often still informs it), reviewing everything possible and assimilating the materials into my overall knowledge base. Thus, I could have thrown a host of additional materials into the footnotes and the reliance list with more time, but that is the point of how the historian’s methodology is accretive and accumulative. The methodology used as I researched and prepared the report of December 7, 2024 and the rebuttal of January 13, 2025 was proper.

Both Dr. Brigham and Dr. Kelman state that they want historical standards of publication followed. If that is the norm, then so would be asking people to review books or articles for historical journals being considered experts in their particular fields. Kelman would not want his book on the Sand Creek Massacre of 1864 reviewed by someone who studies the German military during World War II or a colonial American historian because those people have not read the exhaustive bibliography or done primary research in the field over years. Dr. Brigham apparently has not been a practicing professional in the field in over 30 years and focused on rural electrification with limited publications. Dr. Kelman is mainly known for his work as a mid-19th Century historian who has written on a massacre of Native Americans during the civil war and a history of the environment of New Orleans, primarily in the 19th Century. It is unlikely that a major historical journal such as the *Journal of American History* (the flagship journal of American history) or *Journal of Military History* would have asked either to review a publication related to a topic on military history focused on the Marines in the period after 1941. It is more likely such a journal would reach out to people like Heather Venable, Allan Millett, John Curatola, or Aaron O’Connell, all experts on the historical topic of the Marine Corps in the 20th Century.

Some critiques highlight the lack of experience with the topic of military history. On page 13 of his report, Dr. Kelman discusses my noting that days for Marines could begin at 6 a.m. with “a regimen of calisthenics” and that Marines “often performed hours of resistance exercises with body weight.” (Kelman 2/7/25 report, p. 13). He claims that these were “fact that are not common knowledge.” That reflects his lack of experience with the information under review. Anyone who

⁴⁰ See transcript of PBS segment, “On Two Fronts: Latinos and Vietnam,” Arizona PBS, Sept. 17, 2015, available at <https://azpbs.org/horizonte/2015/09/on-two-fronts-latinos-and-vietnam/> (describing relation between the book and the documentary projects).

served or has studied the military, especially the Marine Corps, knows about the seriousness and extensiveness of fitness activities and training in both boot camp and in contexts of advanced infantry training as well as subsequent training when units focus on staying fit. There are so many sources that make this common knowledge for anyone that has spent any time studying the subject. See generally E.B. Sledge's *With the Old Breed* (WWII), Philip Caputo's *Rumor of War* (Vietnam), Nate Fick's *One Bullet Away* (Afghanistan/Iraq), and many more books on experiences of soldiers including during the eras of Vietnam, Iraq and Afghanistan to see how common this description is. One could also visit the Texas Tech University Vietnam War's oral history collection and read the many manuscripts with discussions of training. Here, the points I make regarding physical activity, training and fitness are corroborated by numerous articles and photos from *The Globe*, such as the one below:



Marines doing physical training at Camp Lejeune, the *Globe*, 20 July 1972.

Dr. Brigham complains: “Throughout Dr. Longley’s report, there are numerous images and pictures that have no citations or incomplete citations.” (Brigham 2/7/25 report, p. 11). However, the length and detail of the reliance lists for my reports reflect a diligent effort to cite all sources thoroughly and completely.

Dr. Kelman states that his assignment was just a “limited focus on his [Longley’s] methodology.” (Kelman 2/7/25 report, p. 1). Dr. Kelman did not review my substantive conclusions or engage in his own historical research on the substance of the relevant facts about Camp Lejeune. The Government employed Dr. Kelman to review my methodology, but did not allow Dr. Kelman to go and do any oral histories of his own or for that matter, any primary research in the archives, the source materials, the science reports, or elsewhere to provide him with an ability to contextualize the information.

Beyond that, there was a focus on the minutiae to try to distract readers from the substantive arguments. Dr. Brigham described that “[t]he mischaracterization of the image of President Nixon

allegedly visiting Camp Lejeune, the photograph of the water buffalo, and the photograph of the Holcomb Boulevard WTP are especially egregious oversights for a trained historian such as Dr. Longley and make me further call into question his findings.” (Brigham 2/7/25 report, p. 19). Indeed, here I appreciate his input, as he (or his assistants) is correct, but he seeks to inflate scattered errors into something much bigger. There was a mistake made in finalizing the report with regard to the photo of President Nixon, confusing a visit to Camp Pendleton with Camp Lejeune. It was an isolated mistake out of a lengthy report. Further, the mere fact that President Nixon did not visit the base does not diminish the fact that other presidents did visit the base, including during the statutory period, including President Kennedy in 1962 with the Shah of Iran (he also visited Camp Bogue and President Reagan in 1983 (and later outside the 1950s to 80s period, Bill Clinton, George W. Bush, and Barack Obama and Franklin Roosevelt before during WWII).⁴¹



John Kennedy at Camp Lejeune on April 14, 1962 (*The Daily News*, 4 Sept. 2020).

⁴¹ Calvin Shomaker, “U.S. President Who Visited Camp Lejeune While in Office,” *The Daily News*, 4 September 2020.



John Kennedy at Camp Lejeune on April 14, 1962 (*The Daily News*, 4 Sept. 2020).⁴²



Ronald Reagan at Camp Lejeune, 4 Nov. 1983 (The Ronald Reagan Library, C18099-12).⁴³

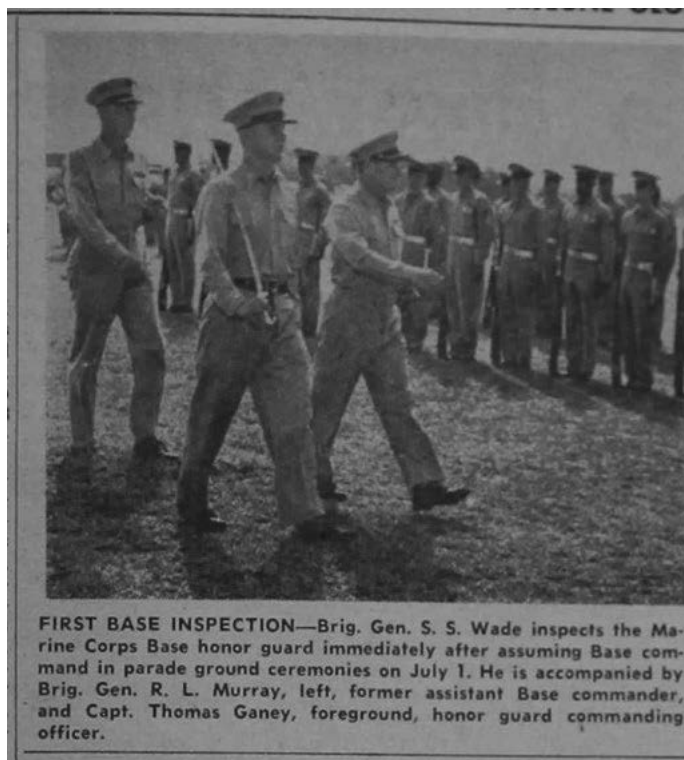
⁴² https://www.jdnews.com/news/u-s-presidents-who-visited-camp-lejeune-while-in-office/article_38787c91-67f4-5dfc-8ed4-366617b67731.html.

⁴³ President Reagan and Nancy Reagan attend Memorial Service for Lebanon and Grenada Casualty Victims, Camp Lejeune, North Carolina,” 4 Nov. 1983, C18099-12, <https://www.reaganlibrary.gov/archives/audiovisual/white-house-photo-collection-galleries/grenada-and-lebanon> [accessed 28 Feb. 2025].

Other major political figures as well as important and eminent military figures over the years visited the base, each time drawing crowds of individuals to the main parade grounds and other parts of the Hadnot Point area. As some examples:



Camp Lejeune *Globe*, 12 April 1979, Vol. 35, No. 15, p. 1.⁴⁴



Camp Lejeune *Globe*, 9 July 1959, p. 3.⁴⁵

⁴⁴ <https://www.dvidshub.net/publication/issues/59792>.

⁴⁵ <https://www.dvidshub.net/publication/issues/62007>.

ASSISTANT CMC TO ATTEND
Ceremonies tomorrow

Leading a long list of VIPs at tomorrow's change of command and retirement ceremonies will be Gen. Earl E. Anderson, Assistant CMC.

The ceremony will be held at W.P.T. Hill Field at 10 a.m. BrigGen. Herbert L. Wilkerson will assume command of Marine Corps Base from retiring MajGen. Carl A. Youngdale. The new commanding general's promotion to brigadier general is scheduled for today.

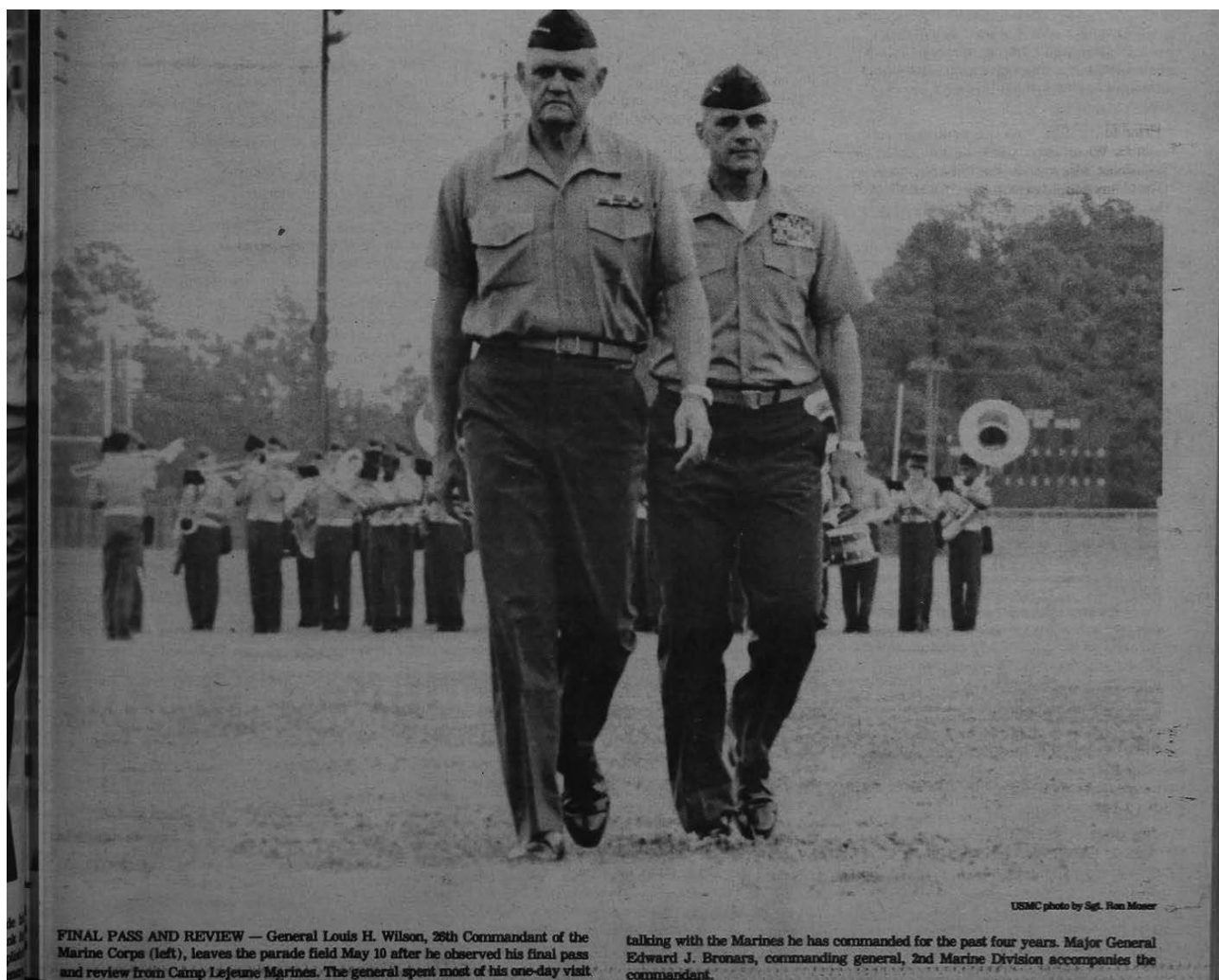
All base personnel, dependents, guests and other interested persons are invited to attend tomorrow's ceremonies. In case of inclement weather, the event will be held in Goettge Memorial Field House.

Gen. Anderson will be representing the Commandant of the Marine Corps at the Change of Command and Gen. Youngdale's retirement.

Several hundred special guests are expected to attend the ceremonies. The list includes military officials of local commands, a number of prominent members of Jacksonville and surrounding communities, numerous retired Marines living in the area and some officers and enlisted Marines from other duty stations.

Camp Lejeune *Globe*, 29 June 1972, Vol. 28, No. 26, p. 3.⁴⁶

⁴⁶ <https://www.dvidshub.net/publication/issues/60727>



Camp Lejeune Globe, 17 May 1979, Vol. 35, No. 20, p. 7.⁴⁷

The articles cited above reflect how political figures and luminaries periodically visited the base. Crowds would descend on Hadnot Point for these occasions. Further, Hadnot Point and its main parade grounds were used extensively for other significant events drawing large crowds involving luminaries who were not presidents or political or military figures. See my prior references in my reports to such events as a concert of the Guess Who, changes of commands, July 4th ceremonies, the Marine Corps Birthday in November, and other events central to the base when people from all over the base congregated by the thousands to celebrate, participate or attend. Just to make the point, below are additional examples:

⁴⁷ <https://www.dvidshub.net/publication/issues/59787>



Hundreds gathered for Marine Corps Ball at Goettge Gymnasium, the *Globe*, 15 Nov. 1973.




An estimated 15,000 gather for the fireworks at main parade ground, the *Globe*, 9 July 1959.

Dr. Brigham is also correct that the caption to the demonstrative photo of people filling water buffalo was not from Camp Lejeune. It was intended as a demonstrative photo showing what a water buffalo looked like, and this was an editing mistake in the caption. (See Brigham 2/7/25 report, p. 17). Likewise, another photo caption was erroneous, reciting a 1960s date when it was actually 1972. (See Brigham 2/7/25 report, p. 18). These honest and minor mistakes do not invalidate my work, my methodology or my opinions. Perfection is difficult in history and in this regard, Dr. Kelman agrees that the method of a historian is one of “accretion.” (Kelman report 2/7/25, p. 4). The overwhelming majority of my citations found in my December 7, 2024 report’s 132 footnotes and numerous reliance list items have not been challenged.

VI. Conclusion.

In conclusion, I used a normal and acceptable methodology. I conducted numerous hours of research in different archives including assembling the items that were cited in my reports as well as cataloguing ideas and stories that corroborated many of my assertions but never made it into the reports. This is part of the professional and practicing historian’s process. I have closely followed standard methods of reporting information while using a variety of methodological tools including oral histories, but also others. I have sought to apply the same methods for my reports in this case as were employed in my long list of books, articles, and essays. I acknowledge the scattered errors alluded to above, but they do not invalidate the methodology or the central arguments and conclusions in my reports.

Dated: March 17, 2025.



Dr. Kyle Longley
Executive Director of the Society for Military History
Henry Salvatori Professor of American Values and Traditions
Professor of History
Chapman University
Orange, California 92866
longley@chapman.edu

RELIANCE LIST

1. Jerry Ensminger and Mike Partain, recording of oral history interview, 10 March 2025.
2. Ari Kelman, *Battle Lines: A Graphic History of the Civil War* (Hill and Wang, 2015).
3. Ari Kelman, *A Misplaced Massacre: Struggling Over the Memory of Sand Creek* (Harvard Univ. Press, 2013).
4. Book review of Longley, *The Sparrow and the Hawk: Costa Rica and the United States during the Rise of Jose Figueres*, Charles D. Ameringer, *Hispanic American Historical Review* (1998) 78:1, p. 147. Available at <https://read.dukeupress.edu/hahr/article/78/1/147/145059/The-Sparrow-and-the-Hawk-Costa-Rica-and-the-United>.
5. Review of Longley. *Senator Albert Gore, Sr.: Tennessee Maverick*, Mike Bowen, "The Martyr of Moderation," H-Net, H-Tennessee, March 2005, available at <https://www.h-net.org/reviews/showrev.php?id=10333>.
6. Review of Longley, *Grunts: The American Combat Soldier in Vietnam*, Peter Kindsvatter, *Pacific Historical Review* (2009), 78:4, 655-657. Abstract at <https://online.ucpress.edu/phr/article-abstract/78/4/655/78969/Review-Grunts-The-American-Combat-Soldier-in?redirectedFrom=fulltext>.
7. Review of *Grunts*, Seth Givens, *Army History* (2011) 79: pp. 57-58. Available at <https://www.jstor.org/stable/e26296818>.
8. *The Morenci Marines*, review by Joe Abodeely, *Journal of Arizona History*, 56:4 (Winter 2015), 494, available at <https://www.jstor.org/stable/i40158893>.
9. *LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval*, review by Patrick Sharma, *Diplomatic History*, 43:3 (June 2019): 583-586, available at <https://academic.oup.com/dh/article-abstract/43/3/583/5307911>.
10. *LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval*, review by, Tim Stanley, *Literary Review*, April 2018, available at <https://literaryreview.co.uk/a-valediction-to-power>.
11. *LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval*, review by William Allison, H-NET, December 2018, <https://www.h-net.org/reviews/showrev.php?id=52648>.
12. ATSDR, "Summary of the Water Contamination Situation at Camp Lejeune," Nov. 12, 2024, available at <https://www.atsdr.cdc.gov/camp-lejeune/about/summary-of-the-water-contamination-situation.html>.
13. M. Maslia, et al., Reconstructing Historical VOC Concentrations in Drinking Water for Epidemiological Studies at a U.S. Military Base: Summary of Results, *Water*, 8, 449 (2016).
14. The Camp Lejeune *Globe*, 29 May 1975, Vol. 31, No. 22, available at <https://www.dvidshub.net/publication/issues/60238>.
15. The *Globe*, 5 June 1975, Vol. 31, No. 23, available at <https://www.dvidshub.net/publication/issues/60237>.
16. The *Globe*, 10 Oct. 1975, Vol. 41, No. 41, available at <https://www.dvidshub.net/publication/issues/58953>.
17. Transcript of interview of MSgt. Ralph Freeman, USMC (Retired), by L.J. Kimball, dated 11 Aug. 1999, available at

- <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Freeman.pdf>.
18. The *Globe*, 13 June 1974, Vol. 30, No. 24, available at <https://www.dvidshub.net/publication/issues/60297>.
 19. The *Globe*, 13 Nov. 1975, Vol. 31, No. 46, p. 6, available at <https://www.dvidshub.net/publication/issues/60213>.
 20. The *Globe*, 2 May 1969, Vol. 25, No. 18, p. 10, available at <https://www.dvidshub.net/publication/issues/60911>.
 21. The *Globe*, 4 Aug. 1967, Vol. 23, No. 31, p. 4, available at <https://www.dvidshub.net/publication/issues/61097>.
 22. U.S. Marines map available at https://www.mcieast.marines.mil/portals/33/documents/contracting/contracting_map.pdf.
 23. The *Globe*, 9 March 1967, Vol. 23, No. 10, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_61119.pdf.
 24. The *Globe*, 15 Nov. 1973, Vol. 29, No. 16, available at <https://www.dvidshub.net/publication/issues/64562>.
 25. The *Globe*, 9 May 1974, Vol. 30, No. 13, p. 5, available at <https://www.dvidshub.net/publication/issues/60302>.
 26. The *Globe*, 13 Nov. 1970, Vol. 26, No. 46, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_60762.pdf.
 27. The *Globe*, 13 Nov. 1970, Vol. 26, No. 46, p. 1, available at https://media-cdn.dvidshub.net/pubs/pdf_60762.pdf.
 28. The *Globe*, 9 Nov. 1961, Vol. 17, No. 45, available at <https://www.dvidshub.net/publication/issues/61712>.
 29. The *Globe*, 2 May 1969, Vol. 25, No. 18, available at <https://www.dvidshub.net/publication/issues/60911>.
 30. Jacob Hamblin and Linda Richards, *Making the Unseen Visible: Science and the Contest Histories of Radiation Exposure*.
 31. Ed Martini, *Agent Orange: History, Science, and the Politics of Uncertainty*.
 32. Joseph Hickman, *The Burn Pits: The Poisoning of America's Soldiers*.
 33. Partain declaration dated March 17, 2025.
 34. Oral Memoirs of Michael Partain, interview conducted by Amanda Hill, March 6, 2014, for the Community Veterans History Project and the Lone Sailor Memorial Project, University of Central Florida, available online at <https://richesmi.cah.ucf.edu/omeka/items/show/5085>.
 35. U.S. Senate Committee on the Judiciary, The Freedom of Information Act: Safeguarding Critical Infrastructure Information and the Public's Right to Know, Full Committee Hearing, March 13, 2012, testimony by Jerry Ensminger, Retired Marine Sergeant, Camp Lejeune Marine Base, available at <https://www.judiciary.senate.gov/committee-activity/hearings/the-freedom-of-information-act-safeguarding-critical-infrastructure-information-and-the-publics-right-to-know/>.
 36. Transcript of interview of Sgt. Maj. Ihor Sywanyk, by L.J. Kimball, dated 29 July 1999, available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Sywanyk.pdf>.

37. Transcript of interview of Sgt. Maj. Mary Sabourin, by L.J. Kimball, 26 July 1999, available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Sabourin.pdf>.
38. Transcript of interview of MSgt. Bruce and Virginia Morris, by L.J. Kimball, 22 Sept. 1999, available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Morris.pdf>.
39. Transcript of interview of Sgt. Maj. Nathaniel James, USMC (Retired), by L.J. Kimball, 20 Aug. 1999, available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/James.pdf>.
40. Transcript of interview of Gy. Sgt. Margaret (Maggie) Flanagan, by L.J. Kimball, 29 July 1999, available at <https://www.lejeune.marines.mil/Portals/27/Documents/EMD/Cultural-Resources/Oral%20History%20Project/Flanagan.pdf>.
41. Testimony of Ensminger on file with U.S. Senate, available at <https://www.veterans.senate.gov/services/files/B995DDE1-E066-42A4-BB1B-785669D6537E>.
42. Testimony of Ensminger on file with U.S. Senate, dated June 8, 2011, available at <https://www.veterans.senate.gov/services/files/4A964881-45E3-41F5-B057-02DD324527D2>.
43. Testimony of Ensminger on file with the U.S. House of Representatives, available at https://republicans-science.house.gov/_cache/files/6/b/6b43caeb-0acd-4d78-b745-3c3e625cf2d1/432B71F13EA7D7AA6B09FFA2BDB7741E.061208-ensminger.pdf.
44. Oral statement of Ensminger, written prepared statement, and questioning responses, at pages 17-29, 31-43, in *Poisoned Patriots: Contaminated Drinking Water at Camp Lejeune*, Hearing before the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, U.S. House of Representatives, June 12, 2007, <https://www.govinfo.gov/content/pkg/CHRG-110hhrg37793/pdf/CHRG-110hhrg37793.pdf>.
45. ATSDR Camp Lejeune Community Assistance Panel (CAP) meeting transcript, Dec. 6, 2007, available at https://www.atsdr.cdc.gov/camp-lejeune/media/pdfs/CAPtranscript12_07.pdf.
46. Statement of Ensminger and Partain regarding EPA ban on TCE, Dec. 9, 2024, <https://www.ewg.org/news-insights/statement/2024/12/statement-jerry-ensminger-and-mike-partain-final-epa-tce-ban>.
47. Ari Kelman, *A River and Its City: The Nature of Landscape In New Orleans* (Berkeley: University of California Press, 2003), 255.
48. “Former National Park Superintendent: ‘Striking Similarities’ Between Thacker Pass and Sand Creek Massacre Sites, 12 Sept. 2022, <https://www.protectthackerpass.org/former-national-park-superintendent-striking-similarities-between-thacker-pass-and-sand-creek-massacre-sites/>.
49. PBS segment, “On Two Fronts: Latinos and Vietnam,” Arizona PBS, Sept. 17, 2015, available at <https://azpbs.org/horizonte/2015/09/on-two-fronts-latinos-and-vietnam/>.
50. E.B. Sledge, *With the Old Breed*, Presidio Press (1981).
51. Philip Caputo, *A Rumor of War*, Henry Holt and Co. (1977).
52. Nate Fick, *One Bullet Away*, Houghton-Mifflin (2005).
53. *The Globe*, 20 July 1972, available at <https://www.dvidshub.net/publication/issues/60727>.

54. Calvin Shomaker, "U.S. President Who Visited Camp Lejeune While in Office," *The Daily News*, 4 Sept. 2020, available at https://www.jdnews.com/news/u-s-presidents-who-visited-camp-lejeune-while-in-office/article_38787c91-67f4-5dfc-8ed4-366617b67731.html.
55. Photo of President Reagan and Nancy Reagan at Memorial Service for Lebanon and Grenada Casualty Victims, Camp Lejeune, North Carolina, 4 Nov. 1983, C18099-12, <https://www.reaganlibrary.gov/archives/audiovisual/white-house-photo-collection-galleries/grenada-and-lebanon> [accessed 28 Feb. 2025].
56. *The Globe*, 12 April 1979, Vol. 35, No. 15, p. 1, available at <https://www.dvidshub.net/publication/issues/59792>.
57. *The Globe*, 9 July 1959, p. 3, available at <https://www.dvidshub.net/publication/issues/62007>.
58. *The Globe*, 29 June 1972, Vol. 28, No. 26, p. 3, available at <https://www.dvidshub.net/publication/issues/60727>.
59. *The Globe*, 17 May 1979, Vol. 35, No. 20, p. 7, available at <https://www.dvidshub.net/publication/issues/59787>.
60. *The Globe*, 9 July 1959, available at <https://www.dvidshub.net/publication/issues/62007>.
61. U.S. Marines website, "Welcome to Naval Medical Center Camp Lejeune," <https://camp-lejeune.tricare.mil/About-Us>.
62. The Few the Proud website, at <https://tftptf.com/images/5.pdf>.

EXHIBIT 7

1 UNITED STATES DISTRICT COURT
2 FOR THE EASTERN DISTRICT OF NORTH CAROLINA
3 SOUTHERN DIVISION
4 Civil Action No. 7:23-CV-00897
5

6 - - - - -)
7 IN RE: CAMP LEJEUNE WATER LITIGATION)
8 - - - - -)
9

10 Thursday, March 27, 2025
11
12
13

14 Videotaped Deposition of JAY L.
15 BRIGHAM, PH.D., a witness herein, called for
16 examination by Counsel for Plaintiffs in the
17 above-entitled matter, taken at the Offices of
18 Keller Postman, 1101 Connecticut Avenue, NW, Suite
19 1100, Washington, D.C. 20036, pursuant to
20 agreement, the witness being duly sworn by
21 Joe Strickland, RPR, CRR, CRC, a Certified
22 Stenographic Reporter and Notary Public in and for
23 the District of Columbia, the proceedings being
24 taken down by Stenotype by Joe Strickland, RPR,
25 CRR, CRC, and transcribed under his direction.

1 APPEARANCES:

2
3 On behalf of the Plaintiffs Leadership Group:

4 JOHN S. HUGHES, IV
5 Wallace and Graham
6 525 North Main Street
7 Salisbury, North Carolina 28144
8 704-633-9434
9

10 On behalf of the U.S. Department of Justice,
11 Civil Division

12 CINDY M. HURT, ESQ.
13 HANLEY W. GIBBONS, ESQ.
14 1100 L Street, NW LST 4085
15 Washington, D.C. 20005
16 202-307-5788
17 Cindy.M.Hurt@usdoj.gov
18 Hanley.W.Gibbons@usdoj.gov
19

20 Also Present by Videoconference:

21 Deanna Havai, Motley Rice
22 Dennis Reich, Mark Doby, Sharon Sprayregen,
23 Whitney Wallace, Zina Bash, SPAC, Jmens
24

25 VIDEOGRAPHER: Bradley Loy

C O N T E N T S

WITNESS: JAY BRIGHAM, PH.D.

EXAMINATION BY:	PAGE
Mr. Hughes.....	4
Ms. Hurt.....	214

E X H I B I T S

EXHIBITS	DESCRIPTION	PAGE
Exhibit 1	Brigham Report: 12-9-2024	44
Exhibit 2	Second Brigham Report: 2-7-2025	113
Exhibit 3	Benz Deposition, 1-10-2023	140
Exhibit 4	Longley Report: 12-2024	154
Exhibit 5	Second Longley Report: 1-13-2025	156
Exhibit 6	Longley Report: 3-17-2025	176
Exhibit 7	Brigham Report: Harrington 2007	188
Exhibit 8	Photo: Mr. and Mrs. McElhiney	190
Exhibit 9	Photo: Mr. McElhiney	191
Exhibit 10	Depository Pages: Well log images	193
Exhibit 11	Partain thesis	197
Exhibit 12	Photos for The Globe	210

1 MS. HURT: Objection to form.

2 THE WITNESS: No, I have not.

3 BY MR. HUGHES:

4 Q. Okay. In this matter you've had people
5 assisting you doing the work; correct?

6 MS. HURT: Objection to form.

7 THE WITNESS: I've had people assisting
8 me. I've also done quite a bit of work. It's a
9 collaborative effort with my staff.

10 BY MR. HUGHES:

11 Q. And you use the word "staff" in your
12 report?

13 A. I do.

14 Q. Okay. How many people are covered by
15 that term, "staff," for purposes of this project?

16 A. The staff includes four of my senior
17 research associates and then about four more
18 research associates.

19 Q. Okay. The DOJ was kind enough to
20 provide us with some supplemental information in
21 the last day or two. It indicated some people
22 that I want to ask you about and see if they were
23 staff or if they were involved in helping with the
24 work on this project. Okay?

25 A. Okay.

1 Q. The first is Annemarie Moore. Do you
2 know if she was involved?

3 A. Yes, she was.

4 Q. And then Clara Barclay?

5 A. Yes, to a lesser degree.

6 Q. Jai -- J-A-I Alterman.

7 A. Yes, Jai Alterman was.

8 Q. Jennifer Lapp, L-A-P-P?

9 A. Yes, Jennifer was also involved.

10 Q. Karen Luu, L-U-U?

11 A. Yes, she was. Correct. Karen was also
12 involved.

13 Q. Peter James?

14 A. Yes.

15 Q. Rori Cochran?

16 A. Yes.

17 Q. Clifford -- gosh, I'm going to spell
18 this one -- O-R-A-T-O-K-H-A-I?

19 A. Yes, Oratokhai. At the beginning, but
20 he didn't have a lot of involvement.

21 Q. Sarah, with an H, Casella,
22 C-A-S-E-L-L-A?

23 A. Yes, again her -- she was also involved,
24 more so at the beginning.

25 Q. Daphne N-G-O?

1 A. Yes, Daphne was last summer.

2 Q. Randy Scott?

3 A. He was also involved.

4 Q. And Jenna Hill -- J-E-N-N-A Hill. Was
5 she involved?

6 A. Yes, she was.

7 MR. HUGHES: And when we go off, I can
8 give you any spellings.

9 BY MR. HUGHES:

10 Q. And it looks like the amount of the
11 bills that your firm has sent to date to the
12 Government for the work on this cases and out at a
13 little over \$843,000. Does that sound correct?

14 A. Yes, approximately correct, yeah. Yes,
15 excuse me. I should say yes.

16 Q. At any time -- strike that.

17 Can you think of any other staff that
18 helped you on the project besides the ones we
19 named?

20 A. The other name that appears on some of
21 those would be Ari Kelman.

22 Q. Kelman, the other historian expert the
23 Government has retained?

24 A. Yes.

25 Q. Have you looked at his report?

1 sorry; I did not think he was correct when he
2 stated that the B29s used the Bosch spark plugs.

3 BY MR. HUGHES:

4 Q. Right. But other parts of his testimony
5 like about B29s, you were not challenging; fair?

6 A. Again, you know that report was written
7 18 years ago. I don't remember. I think my
8 recognition as I sit here today is my primary
9 point of challenge was the Bosch spark plugs.

10 Q. And he was testifying more than 40 years
11 after World War II; right?

12 A. If my memory serves me right, that was a
13 preservation deposition taken in the late 90s.

14 Q. Okay.

15 A. So it would certainly be at least four
16 decades or more after he would have been stationed
17 at Harrington Army Airfield.

18 Q. And you would agree that testimony by a
19 living witness who had gone through historical
20 events decades earlier can have value? That is a
21 general statement.

22 MS. HURT: Objection to form.

23 THE WITNESS: Well, again, as a general
24 statement, I will agree with that. But testimony,
25 like all historical evidence that historians use,

1 needs to be evaluated. My assignment for the
2 Harrington Army Airfield case was if TCE was used
3 or not used. And that is why I focused on the
4 Bosch spark plug comments, and not really his
5 other comments about B29s.

6 I do now recall that he said they had a
7 TCE vapor degreaser there that had been made, but
8 we never found any reference to that either. And
9 there were other discussions. But really the
10 point of reference and the point of my interest
11 was the Bosch spark plugs.

12 Q. I understand. Are you aware that there
13 are oral histories on the U.S. Marines website for
14 people that served at Lejeune as far back as the
15 40s?

16 A. I just have become aware of that, yes.

17 Q. Why didn't you review any of those in
18 connection with any of your work in this matter?

19 A. I did. My staff and I -- myself in
20 conjunction with my staff, we did an extensive
21 review of the websites, and I never came across
22 those oral histories. I never became aware of
23 them until recently.

24 Q. Have you looked at them now that you
25 have been aware of them?

1 A. I have not. One of my staff members is
2 taking a cursory look at some of them.

3 Q. And they're addressed in one of the
4 Longley's reports, which we will get to him. Have
5 you reviewed Longley's -- all of his reports?

6 A. Yes.

7 Q. Do you know what a BUMEDS is --
8 B-U-M-E-D-S?

9 A. I do not.

10 Q. Or NAVNEDS, N-A-V-N-E-D-S?

11 A. I believe I have seen that word, but I
12 don't recall what it means.

13 Q. Are you aware that there are historical
14 regulations pertaining to the Navy and to the
15 operation of its bases and sometimes they are
16 called by in shorthand things like NAVNED?

17 A. I now realize -- I think you are using
18 the shorthand. So BUMED might be Bureau of
19 Medicine.

20 Q. Yes.

21 A. And NAVNED would be navigation -- I
22 don't remember the rest of it.

23 Q. Do you know whether a complete set of
24 the historical Navy regulations exists to cover
25 the only time period from say the 40s to the 80s?

1 of the people that were there?

2 A. As I said, I'm very wary of using
3 deposition testimony because I see a lot of
4 contradictions in it. I'm not sure --
5 Mr. Urquhart said everything that was filled at
6 Hadnot Point, but then there were a lot of filling
7 stations all over the base. That seems somewhat
8 contradictory to me.

9 Q. Do you think the deposition testimony is
10 something that a historian can consider as part of
11 methodology?

12 A. It's certainly something you can
13 certainly consider it, yes.

14 Q. Do you think that sworn affidavits or
15 sworn declarations under oath are materials that a
16 historian can consider as part of his or her
17 historical methodology?

18 A. I think they can be considered. But as
19 I believe I testified to not too long, they have
20 to be weighed and considered along with other
21 sources.

22 Q. And one of the historian's jobs is to
23 weigh and consider different sources of evidence
24 and different incoming information; correct?

25 A. Yes.

1 Q. Okay. And as additional information
2 comes in, a historian may, as a matter of
3 methodology, need to revise, amend, or correct
4 what they said earlier; right?

5 A. That's part of a process of historical
6 writing.

7 Q. And in this case, Dr. Longley issued an
8 initial report which identified President Nixon as
9 having been at Camp Lejeune. You remember that?

10 A. Yes, I do.

11 Q. And your report refuted that and showed
12 evidence that President Nixon never was at Camp
13 Lejeune during the time period; correct?

14 A. Yes, that's correct.

15 Q. And a supplemental report where he found
16 that President Kennedy had been at Lejeune in the
17 60s and I think President Reagan had been at
18 Lejeune. Do you remember that?

19 A. Yes. Kennedy obviously in the early 60s
20 and I believe President Reagan was in 1983 after
21 the Beirut disaster, for lack of a better word.

22 Q. Before you saw that in Dr. Longley's
23 report, were you aware that Kennedy or Reagan had
24 been at Lejeune during the time period?

25 A. When I was reviewing The Globe, I

1 asked to address -- I'm not saying those are not
2 important, but they were not germane to what I was
3 writing about in my report. I could write a
4 report with all of those types of people visiting.
5 It would be a very long report, but it certainly
6 could have been done.

7 BY MR. HUGHES:

8 Q. Don't you think it's germane if there is
9 an issue, if you go out of your way to say
10 Dr. Longley was incorrect. President Nixon wasn't
11 there.

12 MR. HURT: Objection to form.

13 THE WITNESS: Which begs the question
14 were other Presidents there, but then you don't
15 even mention that. Do you see what I'm talking
16 about?

17 MS. HURT: Objection to form.

18 THE WITNESS: I understand your
19 questions. I just don't know that I agree with
20 it. We were reviewing Dr. Longley's report for
21 accuracy and we found these inaccuracies. And so
22 that's why I wrote about them in my February
23 report.

24 BY MR. HUGHES:

25 Q. Right. And the reason why Longley had

1 cited to the Nixon photo was he was trying to
2 establish that major figures would come to Hadnot
3 and speak and, therefore, servicemembers and
4 others would come to see them. Do you remember
5 that topic in Longley's report?

6 MS. HURT: Objection to form.

7 THE WITNESS: I do.

8 BY MR. HUGHES:

9 Q. Okay.

10 A. I do remember that discussion, and I do
11 not disagree with Mr. Longley that people went to
12 Hadnot Point to see such speakers. Speakers such
13 as an important person like a President or a
14 Governor, Secretary of Defense, whoever it may be,
15 as well as entertainment. I don't disagree with
16 the characterization that Hadnot Point was the
17 center of activity at Camp Lejeune.

18 Q. You don't disagree with that?

19 A. No, my point is that there were other
20 areas of Camp Lejeune as well.

21 Q. I understand. A historical
22 methodology -- can we call it a search for the
23 truth, or no?

24 A. Well, that begs the question: What is
25 historical truth? You say that every generation

1 writes its own history. That doesn't mean all
2 past generations were being dishonest.

3 Q. Right.

4 A. All historians, whether it is
5 Dr. Longley, Dr. Kelman, or myself, are doing our
6 best to seek an understanding of what we are
7 writing about, doing this kind of public history
8 or academic history.

9 Q. You mentioned public history. Do you
10 agree this there is a category called the public
11 historian?

12 A. Yes, I very much agree that there is a
13 field of public history. There is a journal about
14 public history. I consider the work that I do,
15 and those who work for me, as a form of public
16 history. Public history, I've heard told, is a
17 very broad area that can include -- a person I was
18 in graduate school with the Director of the
19 American Museum at the Smithsonian. That is
20 public history. People who work there are public
21 history. There are all kinds of fields of public
22 history.

23 Q. Okay. You know if Michael Partain would
24 be reasonably called a public historian?

25 A. I believe he -- based upon his

1 activities, research activities and his education,
2 I think he fits the bill.

3 Q. Okay. So am I correct that one topic
4 you and your team were not asked to look at was
5 the history of the disclosure of information
6 regarding the opening of ABC Dry Cleaners?

7 MS. HURT: Objection to form and
8 foundation.

9 THE WITNESS: I want to make sure I
10 understand your question. So when you say the
11 disclosure, do you mean previous attempts to
12 locate information on the opening?

13 BY MR. HUGHES:

14 Q. What I mean is the contamination is
15 discovered, according to the timelines, around
16 1980. Does that match your recollection looking
17 at the general facts?

18 A. Yeah, 1980, the early 1980s concern
19 started to be expressed.

20 Q. At that point we had some empirical
21 water sampling and lab analysis of samples from
22 the base. Do you have a general understanding
23 that that happened?

24 A. I do.

25 Q. Okay. Now, Mike Partain's timeline,

1 THE WITNESS: Correct.

2 BY MR. HUGHES:

3 Q. There are different references to the
4 total number of people that may have passed
5 through the gates of Lejeune during that time
6 period could have been a million people. Have you
7 seen that?

8 A. I have seen numbers of around a million,
9 yes.

10 Q. And given what I just walked you through
11 in terms of longevity and dates, would you agree
12 it's reasonable to conclude that there are
13 thousands of people alive today that lived or
14 worked at Lejeune during that statutory time
15 period?

16 MS. HURT: Objection to form.

17 THE WITNESS: Yes.

18 BY MR. HUGHES:

19 Q. Okay. And your team has not interviewed
20 a single one of them; correct.

21 A. Correct.

22 Q. Are you aware that there is a
23 court-ordered repository of documents in this
24 case?

25 A. I don't know if I am or not.

1 Q. I take it you've never -- you and your
2 staff have never gone to look at the documents in
3 a court ordered repository in this case?

4 A. I know we've never had such an
5 undertaking, no.

6 Q. Are you aware that sometimes in large
7 litigations a permanent archive of repository
8 documents would be created?

9 A. Yes.

10 Q. Would you agree from a historian's
11 perspective that could be a good thing to help
12 preserve historical information; correct?

13 A. It's certainly possible, yes.

14 Q. Would you agree that if the court were
15 to order a permanent repository archive of all the
16 Lejeune documents and data that have been brought
17 forward for this litigation, if a court ordered
18 that, from a historian's perspective that would be
19 a good thing?

20 MS. HURT: Objection to form.

21 THE WITNESS: Well, as a historian, I'd
22 like to have everything kept.

23 BY MR. HUGHES:

24 Q. So is that a yes?

25 A. Yes.

1 A. I would go with one of the conclusion
2 and if I was drafting that sentence on page 26, I
3 would add the word "likely."

4 Q. Okay. And that's an iterative aspect to
5 history. Right? The historical method is
6 sometimes you have to correct things; right?

7 MS. HURT: Objection to form.

8 THE WITNESS: As I said, yes, you do
9 have to correct things. I said earlier, every
10 generation likes to write its own history.

11 BY MR. HUGHES:

12 Q. I understand. So in Dr. Longley's case,
13 he had to correct the Nixon reference; right?

14 A. Yes.

15 Q. And there was a demonstrative photo of a
16 water buffalo which was captioned as being at
17 Hadnot, but it wasn't. He had to correct that;
18 correct?

19 A. Correct.

20 Q. There was a photo of the Holcomb
21 Boulevard water treatment plant which I believe he
22 was -- said the photo was dated from one year but
23 it was actually dated from another year. You
24 remember that?

25 A. Yes.

1 Q. And in his subsequent reports, following
2 your identification of those errors, he tried to
3 fix them; correct?

4 MS. HURT: Objection to form.

5 THE WITNESS: Yes.

6 BY MR. HUGHES:

7 Q. And that's a proper part of an
8 historical methodology; right?

9 MS. HURT: Objection to form.

10 THE WITNESS: Yes.

11 BY MR. HUGHES:

12 Q. Water buffalos -- on the bottom of page
13 2 they talk about water buffalos.

14 A. One moment. Okay. I'm there.

15 Q. So first, you reference water buffalos
16 or water bulls. Where did get the phrase "water
17 bulls"? Do you remember?

18 A. I do remember. When I was on base in
19 May of this past year, we were told by Marines
20 that they call them water bulls. So I put both in
21 to try to be inclusive.

22 Q. Yes, sir. Okay. Do you have an
23 understanding of how the historical water buffalos
24 were filled mechanically. In other words, do you
25 have an understanding of whether they were filled

1 land.

2 BY MR. HUGHES:

3 Q. On page 26 of your report you cite to
4 the deposition of Mr. Melts; correct?

5 A. Yes, that's correct.

6 Q. And you cite to how the ATSDR cited to
7 the Melts deposition; correct? That's at the top
8 of the page.

9 A. Yes, footnote 75 is reference to the
10 ATSDR documents.

11 Q. Yes.

12 A. And then that continues into footnote 76
13 and footnote 77.

14 Q. Are you aware that Mr. Melt's deposition
15 is linked on the timeline on the website, The Few,
16 the Proud?

17 A. Yes.

18 Q. And you are aware that there are places
19 in that deposition where Mr. Melts testifies to
20 the effect that ABC was running in 1953; correct?

21 MS. HURT: Objection to form.

22 THE WITNESS: Correct.

23 BY MR. HUGHES:

24 Q. Okay. If we keep going, on page 27 we
25 have an image on the Camp Lejeune High School

1 yearbook from 1954; correct?

2 A. Yes.

3 Q. How did you all find that, if you know?

4 A. This was -- I was made aware of that by
5 the DOJ. I went to Classmates.com and bought my
6 own copy -- reproduction of this document.

7 Q. Okay. Do you know why the Model and
8 Hobby Shop ad is reversed on the right-hand side?
9 It's upside down.

10 A. Yes, it's really upside-down, and I
11 don't know why that happened, unless somebody put
12 the book together wrong.

13 Q. The viewpoint for that is that the Model
14 and Hobby Shop, as best you can tell, was on the
15 same premises as what ABC Dry Cleaners ended up
16 being on. And so your inference is if the Hobby
17 Shop was in the yearbook in 1954, then the dry
18 cleaners couldn't have replaced it for the whole
19 year of 1954. Is that fair?

20 MS. HURT: Objection to form.

21 BY MR. HUGHES:

22 Q. Put it in your own words.

23 A. That's fine. Other documents talk about
24 that the ABC One Hour Cleaners went in where the
25 Hobby Shop had been. So my inference is not just

1 based on the yearbook.

2 Q. Okay. And so the difference between the
3 1953 date and the 1954 date is less than a year;
4 correct?

5 MS. HURT: Objection to form.

6 THE WITNESS: It would be approximately
7 ten months.

8 BY MR. HUGHES:

9 Q. And you don't have any knowledge of
10 whether that ten months makes any significant
11 difference in the water modeling analysis; right?

12 MS. HURT: Objection to form.

13 BY MR. HUGHES:

14 Q. How are you using the word
15 "significant"?

16 A. If you look at the reports by the
17 Plaintiffs' experts on Phase 1, they indicate that
18 even if you move the start date for ABC ahead or
19 back by 10 months, the contamination still occurs
20 and grows and gets to the levels that the ATSDR
21 estimated using a curve that's pretty similar,
22 whether it's the 52 days or the 54 days.

23 But the question I'm asking you is, you
24 don't have an opinion one way or another as to
25 whether it makes a difference in the analysis;

1 correct.

2 MS. HURT: Objection to form.

3 THE WITNESS: I have done a lot of these
4 TCE cases and you asked initially about the
5 Harrington Army Airfield.

6 BY MR. HUGHES:

7 Q. Yes, I did.

8 A. I have a lay person's knowledge, like
9 fate and transport, and that's all it is. So I
10 know some time difference can make a little bit of
11 change, but I'm not qualified to say how much.

12 Q. Fair enough. Then we get to the grand
13 opening ad on page 28. How did you guys find this
14 back issue of the Jacksonville Daily News?

15 A. This was provided to me by the
16 Department of Justice.

17 Q. So when you say that, does that mean
18 they found it and gave it to you, versus your team
19 finding it?

20 A. My team looked and looked and looked and
21 they were unable to find a back issue of the
22 Jacksonville Daily News.

23 Q. Yes, sir. But then your client found it
24 for you?

25 MS. HURT: Objection to form.

1 THE WITNESS: We were looking for it.
2 We had heard about it. We couldn't find it. It
3 was given to us. We tried to find it again
4 ourselves, but we were unable to.

5 BY MR. HUGHES:

6 Q. And the yearbook, that's another one you
7 couldn't find, your team couldn't find it, but the
8 Government could find if for you?

9 MS. HURT: Objection to form.

10 THE WITNESS: Again, I don't recall how
11 I became aware of the yearbook. I went out, as I
12 said, on Classmates.com and was able to view the
13 page in question, so I bought it.

14 BY MR. HUGHES:

15 Q. But you had been told about this first;
16 right?

17 A. Yeah, I was provided with the entire
18 page.

19 Q. All right. The bottom of page 27, a
20 grand opening advertisement.

21 A. Right.

22 Q. Sitting here today, do you know whether
23 ABC One Hour Cleaners was in operation on June 28,
24 1954?

25 MS. HURT: Objection to form.

1 A. I see now. Thank you.

2 Q. Have you revised any of your opinions
3 since the date of the February 7th, 2025, report?

4 A. Well, you previously asked and as I
5 responded, Dr. Longley did correct the errors --
6 Dr. Longley's most recent report he made
7 corrections to some of the errors that I pointed
8 out in this report, if that makes sense.

9 Q. Yes, sir. On page 1, you say -- first
10 numbered paragraph, you talk about three instances
11 where you say that: Dr. Longley entirely and
12 egregiously misrepresents the source material;
13 correct?

14 A. Which point was that under, sir? Okay,
15 thank you.

16 Q. We talked about it earlier. You find
17 three instances where Dr. Longley's report was
18 incorrect. The first was the Nixon photo, the
19 second one was the demonstrative photo of water
20 buffalos at Hadnot Point, and the third was the
21 date range for the Holcomb water plant. Are those
22 the three instances you are talking about?

23 A. Yes, they are.

24 Q. And your understanding is he has sought
25 to correct those three in his subsequent report?

1 A. Yes.

2 Q. Okay. Now page 1, the numbered
3 paragraph 2 --

4 A. Okay.

5 Q. -- at the end of it you say -- first
6 page: Although Hadnot Point is the center of many
7 activities at Camp Lejeune, there are other areas,
8 et cetera.

9 So you will agree with me, correct, that
10 during our historical time period Hadnot Point was
11 the center of many activities at Camp Lejeune?

12 MS. HURT: Objection to form.

13 THE WITNESS: Yes, I have never denied
14 that.

15 BY MR. HUGHES:

16 Q. Top of page 2, you note -- you discussed
17 other water treatment plants, the ones aside from
18 Hadnot and Tarawa. And you said the ATSDR did not
19 conclude that those other water treatment plants
20 were further contaminated; correct?

21 A. That's what I said.

22 Q. Having said that, you are not aware of
23 whether there were significant levels of
24 trichloromethane found in the New River Air
25 Station system in the early 1980s; correct?

1 Q. Do you agree that there are things in
2 Dr. Longley's report that are not included in your
3 report?

4 A. I would say quite a bit.

5 Q. And there are things in your report that
6 are not in Dr. Longley's report; correct?

7 A. Again, I would say there is quite a bit.

8 Q. On page 3 of your second report, towards
9 the bottom you cite to Mike Magner's book. Do you
10 see that?

11 A. Yes, I'd do: A Trust Betrayed.

12 Q. Did you read the book?

13 A. I have the book. I reviewed it. I'm
14 not going to say I read it word by word. When I
15 purchased these books, I was looking for
16 historical information.

17 Q. Did you find Mike Magner's book to be
18 reliable as far as you could tell?

19 MS. HURT: Objection to form.

20 THE WITNESS: I just don't recall. It's
21 been nearly a year ago.

22 BY MR. HUGHES:

23 Q. Okay. But you did cite it in your
24 report; correct?

25 A. I certainly listed it here. I don't

1 recall if I cited it in the body of my report.

2 Q. Fair enough. And then on page 4 -- this
3 is your second report February 2nd, 2025 -- top of
4 page 4, you cite to reports prepared by ATSDR;
5 correct?

6 A. Yes, I do.

7 Q. Including a summary of the water
8 contamination situation at Camp Lejeune dated 2024
9 from the website; correct?

10 A. Yes.

11 Q. And the Maslia publication in the
12 journal called Water from 2016; correct?

13 A. Yes.

14 Q. And there is no caveat here. In other
15 words, I don't see here whether as a historian you
16 commented that either one of these publications
17 was not entirely reliable; correct?

18 MS. HURT: Objection to form.

19 THE WITNESS: I did not say that.

20 BY MR. HUGHES:

21 Q. As far as you know, those two
22 publications are entirely reliable; correct?

23 MS. HURT: Objection to form.

24 THE WITNESS: I certainly think they are
25 reliable.

1 THE WITNESS: Yeah, corroborative
2 sources would good.

3 BY MR. HUGHES:

4 Q. And you understand since the time of his
5 first report, Dr. Longley, he's endeavored to do
6 more work. He, for example, took the formal oral
7 history recording of Mr. Partain and
8 Mr. Ensminger, which has been provided; correct?

9 A. Yes.

10 Q. On page 13 of your report, you see
11 numbered paragraph 6?

12 A. Yes.

13 Q. Okay. And it talks about six lines
14 down, how the depositions were taken in 2024 -- or
15 the declaration was in 2024, but that was four
16 years after the individuals were at Lejeune. You
17 see that?

18 A. Yes.

19 Q. And as we discussed, you are aware now
20 that on the U.S. Marines official website there
21 are oral histories of individuals that relate to
22 historical events going all the way back to World
23 War II; correct?

24 A. Yes.

25 Q. And so clearly, in some cases oral

1 histories can be of oral historians who are being
2 asked to recall events from decades earlier and it
3 can be a meaningful and valuable process; correct?

4 MS. HURT: Objection to form.

5 THE WITNESS: That's correct. That is
6 exactly what I was saying in the paragraph just
7 discussed.

8 BY MR. HUGHES:

9 Q. Well, what -- tell me what you are
10 saying. I was focused on the reference to
11 40 years after.

12 A. Okay. The deposition was taken in 2024,
13 and the declarations were written 2024, some
14 40 years after these individuals were at Camp
15 Lejeune. So that is certainly the case.

16 My concern, what I was pointing out was
17 really the last sentence where I wrote: Without
18 additional source material, Dr. Longley cannot
19 make assertions about what transpired at other
20 times during the 34-year statutory period.

21 So this goes to something else we were
22 talking about, point-in-time references.
23 Sometimes they are very, very good at telling us
24 exactly what happened at a given time in history.
25 But I think all historians, we have to be careful

1 we don't extrapolate too much from those types of
2 documents.

3 Q. Okay. So one phrase there to focus on
4 is "additional source material"? Right?

5 A. Yes.

6 Q. And that goes back to what we talked
7 about about additional source material can be
8 helpful; correct?

9 A. Yes.

10 Q. All right. Then if we go to page 18 on
11 this report.

12 A. I'm there.

13 Q. On page 18, we see the screenshot from
14 Longley's first report where he had a photo of the
15 water treatment plant near Holcomb Boulevard and
16 it was captioned 1960s. But you went behind -- or
17 your team did -- and you found that fact-checking
18 it, actually that picture was from August 10th,
19 1972; correct?

20 A. That's correct.

21 Q. And so your point -- one of your points
22 is that the photo is actually of the Holcomb
23 Boulevard plant in '72, while that is also
24 consistent with what we read from the ATSDR about
25 when the Holcomb plant opened; correct?

1 Q. Right. And you considered it relevant
2 to this issue of when ABC Dry Cleaners started;
3 right?

4 A. Absolutely.

5 Q. But that work -- to your knowledge, no
6 work like that was done back in 2012; right?

7 MS. HURT: Objection to form and
8 foundation.

9 THE WITNESS: Not to my knowledge, no.
10 BY MR. HUGHES:

11 Q. And as of 2012, if you look at page 6 of
12 Dr. Longley's report, the VA was actually using
13 the Partain website to train it's own people.

14 MS. HURT: Objection to form and
15 foundation.

16 BY MR. HUGHES:

17 Q. You see the VA slide on page 6; right?

18 A. I'm looking at it right now.

19 Q. Did you all fact-check this? Do we
20 know? Did you fact-check this?

21 A. This should have been fact-checked, yes.

22 Q. And do you have any reason to critique
23 it or dispute it sitting here today?

24 MS. HURT: Objection to form.

25 THE WITNESS: I have no reason to think

1 Q. And on the timeline they would have
2 seen, if they looked long enough, the reference to
3 ABC starting in 1953; correct?

4 MS. HURT: Objection to form.

5 THE WITNESS: Yes, looking at it, they
6 would have.

7 BY MR. HUGHES:

8 Q. Look at page 13, if you will. Do you
9 see a bigger image of the bus schedule on page 13?

10 A. Yes.

11 Q. This one is the youth activities bus
12 schedule; correct? It says it at the top.

13 A. Yes.

14 Q. And this is cited as coming from The
15 Globe, July 26, 1962; right?

16 A. Right.

17 Q. You all would have fact-checked it?

18 A. Yes.

19 Q. And sitting here today, you don't have a
20 critique; correct?

21 A. No, I don't.

22 Q. And if we go to page 14, you see a photo
23 from The Globe from '83 showing a cultural event,
24 the Guess Who rock band at Camp Lejeune; right?

25 A. Yes, indeed.

1 Q. If you go to page 16, you can see a
2 picture of the bowling alley at Hadnot in 1964
3 from The Globe; right?

4 A. Yes.

5 Q. And y'all fact-checked that as well?

6 A. Correct.

7 Q. Page 17, the cattle cars. Now, in
8 Longley's report here he says: Brigham also omits
9 mention of cattle cars. Do you see that sentence,
10 page 17?

11 A. Yes, that's just what I was reading.

12 Q. Is that true? Did you omit mention of
13 cattle cars in your first report?

14 A. I did not discuss cattle cars.

15 Q. Why not?

16 A. Well, again, it really was not what I
17 was tasked to do in my report.

18 Q. Your report talks about travel.

19 A. Well, yes, it does. But it's really
20 more the areas of the base.

21 Q. Which the cattle cars would go to?

22 A. That's true.

23 Q. But your point is the omission was not
24 malicious in nature; right?

25 A. No.

1 at 14:34.

2 (Whereupon, the deposition was recessed
3 from 2:34 p.m. to 2:43 p.m.)

4 We are on the record at 14:43.

5 BY MR. HUGHES:

6 Q. Dr. Brigham, let's mark and show you
7 Exhibit Number 6.

8 (Whereupon, Deposition Exhibit
9 No. 6 was marked for
10 identification.)

11 MY MR. HUGHES:

12 Q. I will represent this is a copy of
13 Dr. Longley's report dated March 17th, 2025. Have
14 you seen this one before?

15 A. Yes.

16 Q. All right. Have you and your group done
17 fact-checking on it to your knowledge?

18 A. We have reviewed it. My staff, we've
19 gone through it. I'm not sure of the degree of
20 fact-checking we did on the first report.

21 Q. Are there any Nixon type inaccuracies in
22 it as we sit here today that you are aware of?

23 A. None come to mind right now.

24 Q. If you look at page 2, first full
25 paragraph beginning "It is noteworthy..." do you

1 months? Am I doing my math right? It would be an
2 awful lot to do to get an expert report together
3 in four months. I had a lot of people doing a lot
4 of different things.

5 Q. Okay. All right. So from a perspective
6 of being an expert historian in a case, four
7 months -- if you had your druthers, you would
8 rather have more than four months to do a project
9 like this; is that true?

10 A. It is true. Because there are many
11 things in historical research that are out of the
12 historian's control, like how many hours can you
13 work at the Archives? How many hours can you go
14 to the Library of Congress? You don't want to be
15 gone forever. But four-month would be a very
16 tight schedule. Obviously that changed, which was
17 helpful.

18 Q. If you look at page 25 going to 26 of
19 this report from Dr. Longley, do you see the
20 string cites with excerpts from other oral
21 histories on the U.S. Marines website?

22 A. You said 25 on to 26?

23 Q. Yes.

24 A. Yes, I see this. I've seen this before.

25 Q. And you can see how it is referencing

1 here things like the commissary, NCOs, Tarawa
2 Terrace, et cetera; correct?

3 A. Yes, I see those things you just
4 mentioned.

5 Q. Would you agree that culling this sort
6 of information can be useful in terms of
7 historical methodology on a topic like the history
8 of Lejeune and the water contamination and water
9 use at Lejeune?

10 MS. HURT: Objection to form.

11 THE WITNESS: Yes, it certainly could
12 prove useful.

13 BY MR. HUGHES:

14 Q. At page 27, do you see the notes for the
15 Allan Howard witness dated August 2024? Do you
16 see that?

17 A. Yes, toward the bottom, yes.

18 Q. Now, as I understand your testimony, a
19 formal full-fledged oral history would have a
20 recording and a transcript. It wouldn't be just
21 be paraphrase or a summary; correct?

22 A. Correct.

23 Q. However, you will agree that a
24 historian, it's not required for a historian have
25 to have a reliable methodology for him only to use

1 A. Yes.

2 Q. But you would also agree that
3 Mr. Partain can still be a reliable public
4 historian, notwithstanding the fact that he came
5 to a different conclusion than you did as to the
6 start date?

7 MS. HURT: Objection to form.

8 THE WITNESS: Yes. In the instance of
9 ABC One Hour Cleaners, my choice of June of 1954
10 is based on the research that my staff and I did.
11 BY MR. HUGHES:

12 Q. I understand. Do you think that someone
13 needs to have a Ph.D. in history to be qualified
14 as an expert in history for court purposes?

15 A. No, I know people who don't have Ph.D.s
16 who have given testimony in court.

17 Q. As historians?

18 A. Yes.

19 Q. As historian experts?

20 A. Yes.

21 Q. Give me an example.

22 A. A number of years ago I had a
23 navigability for title project, and a person from
24 a firm similar to MorganAngelBrigham testified and
25 the individual had his master's degree.

1 Q. From what you've seen of Mr. Partain,
2 could he be qualified as a historian expert?

3 MS. HURT: Objection to form.
4 Foundation.

5 THE WITNESS: I can't say one way or
6 another. I'd have to just do more review.

7 BY MR. HUGHES:

8 Q. Okay. Well, we encourage you to do
9 that. If you look at page 6 going into page 7 of
10 his report, at the bottom of page 6, he says: A
11 final goal of this paper and project is to
12 memorialize this work in an academic database such
13 as the University of Central Florida's
14 STARS(Showcase of Text, Archives, Research and
15 Scholarship) Digital Repository and preserve the
16 Camp Lejeune Community Digital Archive in a
17 sustainable manner for future scholars to utilize.
18 Do you see that language?

19 A. Yes.

20 Q. From what you have seen of the The Few
21 and the Proud website, would you agree with me
22 that it has useful historical information on it?

23 MS. HURT: Objection to form.

24 THE WITNESS: Yes.

25 BY MR. HUGHES:

EXHIBIT 8

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA

IN RE:)
) Case No. 7:23-cv-00897
CAMP LEJEUNE WATER LITIGATION)
)
)
This Document Relates to:)
ALL CASES)
_____)

- - -
APRIL 3, 2025
- - -

Videotaped deposition of RODNEY KYLE
LONGLEY, Ph.D. conducted at The U.S. Department of
Justice, 411 W. Fourth Street, Suite 800, in Santa
Ana, California, commencing at 9:36 A.M. PST on the
above date before Pamela Cotten, CSR, RDR, Certified
Realtime Reporter, Certificate No. 4497.

- - -

1 A P P E A R A N C E S:

2

For the Defense:

3

U.S. DEPARTMENT OF JUSTICE
4 BY: HANLEY GIBBONS, ESQ.
CINDY HURT, ESQ.
5 P.O. Box 340, Ben Franklin Station
Washington, D.C. 20044
6 hanley.w.gibbons@usdoj.gov
cindy.hurt@usdoj.gov

7

8

9 For the Plaintiffs:

10 WALLACE AND GRAHAM, PA
BY: JOHN S. HUGHES, IV
11 525 North Main Street
Salisbury, North Carolina 28144
12 704.633.5244
Fax - 704.633.9434
13 jhughes@wallacegraham.com

14

15 ALSO PRESENT:

16 MICHAEL KELLEY, Videographer
(714) 904-0891

17

18

19

20

21

22 (Appearances continued on the following page)

23

24

25

A P P E A R A N C E S (Continued):

ALSO PRESENT REMOTELY VIA ZOOM:

JESSICA ANS, ESQ.
U.S. DEPARTMENT OF JUSTICE

SARA J. MIRSKY, ESQ.
U.S. DEPARTMENT OF JUSTICE
SHARON SPRAYREGEN, ESQ.
U.S. DEPARTMENT OF JUSTICE

LESLIE LaMACCHIA, ESQ.
Bell Legal Group
WHITNEY WALLACE, ESQ.
Wallace & Graham, P.A.

JAY BRIGHAM, Ph.D.
Morgan, Angel, Brigham & Associates, LLC
PETER C. JONES, M.A.
Senior Research Associate
Morgan, Angel, Brigham & Associates, LLC
ANNEMARIE MOORE, Ph.D.
Senior Research Associate
Morgan, Angel, Brigham & Associates, LLC
DENNIS REICH, ESQ.
PLG

1 A But, again, if that's the question, that's
2 easy to address.

3 Q Understood.

4 A But I would go back and say there was one
5 thing I would point out, Dr. Kelman, for example,
6 critiquing common knowledge about what life was like
7 on -- in terms of physical training and things like
8 that, a military historian would have no doubt that
9 that is common knowledge. You as a former officer
10 would have no doubt, that is just common knowledge.
11 But, again, I don't think he had an expertise in
12 military history or 20th Century history to be able
13 to understand. I wouldn't go back and critique him
14 on some of his 19th century choices.

15 Q That's fair enough.

16 A Yeah.

17 Q But would you be able to analyze his
18 historical methodologies for how he arrived at his
19 conclusions?

20 A I would to a point. For example, I would
21 question him wholeheartedly on how he determined how
22 I evaluated my oral history and bias and things like
23 that. Much like I would not question him on that, I
24 would trust him as a professional that he had
25 already made those decisions, and given the long

1 track record I have in that area, I would think he
2 would respect that.

3 Again, as I noted in Report 3, nobody has
4 ever came back and questioned my oral histories.

5 Q Would you say that the sources you relied
6 on, then, were biased in some way?

7 A All sources are biased.

8 Q Okay.

9 A Everything has been used and any -- whether
10 it is Dr. Kelman's work or wherever it may be, you
11 always have to try to ascertain what the bias is.
12 You have to understand the context of something --
13 for example, Dr. Kelman has never interviewed
14 someone that actually was alive for the event. He
15 interviewed people about their memory of the event.
16 He didn't interview anyone from the massacre in 1864
17 for the obvious reasons. So that's a different
18 beast than interviewing somebody about memory.

19 Q Interesting.

20 Did you address the potential biases
21 anywhere in your report?

22 A No. You do that in the -- when you are
23 evaluating the sources themselves. For example, a
24 government report depends on who is writing the
25 report. Is the Marine Corps writing the report? Is

1 the EPA writing the report? You try to do that to
2 the best of your ability throughout the process of
3 evaluating your research. And I think that's
4 something that I, you know -- again, anything can
5 have a bias. And, again, you got to contextualize
6 it. You can't put a document that is from the 1960s
7 and then try to use the current context to say that
8 1960s document within -- what is going on in 2025.
9 You wouldn't want to do that with DADT. "Don't Ask,
10 Don't Tell." It is a very different discussion in
11 the 1990s than it is in 2025, although it has almost
12 come full circle.

13 Q So I understand your point. My question is
14 did you describe that process anywhere in your
15 report?

16 A No. You don't do that. That's not
17 what's -- a description in a book or things of that
18 order. As a professional historian, it is
19 understood that you are going to be testing your
20 materials, much like I would not question
21 Dr. Kelman's oral history for his book on Sand Creek
22 the oral histories he did with National Park Service
23 because I know he understands that the National Park
24 system person that he interviewed extensively has a
25 bias because she is running the monument. And she

1 is also afraid of what could be interpreted, and so,
2 like with anything, you understand people a lot of
3 times what they say isn't always exactly what
4 they -- they always have that context in mind.

5 Q Okay.

6 MR. HUGHES: I'm going to ask that we go
7 off the record for a bit and talk. I've gotten some
8 texts from co-counsel, and I need to talk to y'all
9 about it off the record. Is that okay?

10 MS. HURT: Sure.

11 MR. GIBBONS: Yeah, can we wait just like
12 five minutes or is this urgent?

13 MR. HUGHES: They have a concern about
14 people that are showing up on the -- on the
15 attendance and they are highly concerned that this
16 reading of assistance, being on without advance
17 permission is not what leadership agreed to. So I
18 need to get you on the phone with them as soon as we
19 can.

20 MR. GIBBONS: Okay. All right. Let's take
21 a break. Give me one second.

22 VIDEO OPERATOR KELLEY: This is the end of
23 Media File Number 2. We are now going off the
24 record. The time is 11:21 a.m.

25 (Recess taken.)

1 VIDEO OPERATOR KELLEY: This is the
2 beginning of Media File Number 3. We are now going
3 on the record. The time is 11:36 a.m.

4 MR. HUGHES: This is John Hughes for the
5 plaintiffs. I'm putting on the record that from the
6 plaintiffs' point of view, the language in the
7 deposition protocol about attendance and the
8 language about assistance or people assisting the
9 litigation does not mean that automatically parties
10 can have experts attend depositions without advance
11 approval. We are fine with continuing this
12 deposition today with Dr. Brigham or people on his
13 team on the attendance. We ask that before the next
14 deposition of an expert that the lead counsel talk
15 to each other and see if they can work out a
16 protocol for that.

17 What we suggest is that the protocol would
18 be that if either side wants to have experts on
19 depositions of other experts, that they give advance
20 notice so there's notice and consent.

21 And so that is my statement for the record.
22 And I understand that Mr. Gibbons' position is that
23 the plaintiffs themselves have had experts on one or
24 more occasions without advance consent and so he is
25 not willing to agree to a protocol right now, but

1 Maslia, a retained expert of the plaintiffs,
2 attended the expert depositions of Remy Hennet and
3 Alex Spiliotopoulos with no prior coordination, and
4 the United States did not object then. The United
5 States maintains that any person who is assisting in
6 litigation includes experts attending all other
7 expert depositions.

8 MR. HUGHES: Okay. Thanks for letting me
9 speak, and I understand what you said.

10 You want to continue with your questioning?

11 MR. GIBBONS: Sure.

12 BY MR. GIBBONS:

13 Q Dr. Longley, I apologize for that. I
14 believe we were talking about bias and sources, oral
15 histories, or other materials. I would like to go
16 back to that.

17 I believe you said that your position is
18 that a professional historian does not need to
19 explain in detail how they evaluated their sources
20 for bias because it is an inherent part of a
21 historian's practice. Is that correct?

22 A That is correct.

23 Q And as we've already discussed, the
24 targeted readers for this report are not generally
25 other historians but primarily the Court.

1 don't have -- many of them don't have
2 Ph.D.s but they are still
3 practicing.")

4 THE WITNESS: So I don't think I made any
5 kind of -- again, Bob Caro does not have a Ph.D. nor
6 does Meacham nor does Doris Kearns Goodwin, but most
7 people would recognize them as -- David McCullough.
8 I can give you a whole litany. So I wouldn't say
9 they had to have a Ph.D. You can be a good
10 researcher without a Ph.D. and so that is not a
11 qualification that obviously has to be there.

12 BY MR. GIBBONS:

13 Q Okay. I understand. Sorry. Maybe I
14 misinterpreted your answer. I apologize.

15 A No apologies necessary. I just didn't
16 think I had said that. If my membership found out
17 that I had said something like that, they would come
18 find me.

19 Q You acknowledged in several of your books,
20 I think specifically in Grunts, that bias always
21 enters into the process as we discussed earlier,
22 correct?

23 A Correct.

24 Q Okay.

25 A And, again, you try to test that bias and

1 again through corroboration, understanding it's
2 there, and cognizant of it, but then weighing that
3 against a variety of factors.

4 (The document referenced below
5 was marked Deposition Exhibit 9 for
6 identification and is appended
7 hereto.)

8 BY MR. GIBBONS:

9 Q I'm going to enter Exhibit 9. What is
10 going to be Exhibit 9 is an excerpt from Grunts,
11 American Combat Soldier in Vietnam.

12 You authored this book, correct?

13 A Yes.

14 Q Do you recognize this passage from your
15 book?

16 A Which one?

17 Q This entire page. Do you --

18 A Yes, I recognize the page. I'm sorry. I
19 thought you were already referring to something
20 specific.

21 Q Okay. Okay. Beginning on Roman numeral XX
22 of the text toward the end, the last paragraph says:

23 "There are many challenges in the
24 use of materials employed in the
25 study. Oral histories and memoirs,

EXHIBIT 9

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
SOUTHERN DIVISION

IN RE: :
CAMP LEJEUNE WATER :
LITIGATION :
: No. 7:23-CV-897
This Document Relates to: :
ALL CASES :

VOLUME II

CONTINUED REMOTE VIDEOTAPED DEPOSITION OF
ARI KELMAN, PH.D.

Tuesday, April 8, 2025

12:02 p.m.

REPORTED BY: CAROL A. KIRK, RPR/RMR/CSR

GOLKOW, a Veritext Division
1650 Market Street, Suite 5150
Philadelphia, Pennsylvania 19103
877.370.3377
deps@golkow.com

R E M O T E A P P E A R A N C E S

- - -

On behalf of the Plaintiffs:

WALLACE AND GRAHAM, P.A.

BY: JOHN HUGHES, ESQUIRE

jhughes@wallacegraham.com

MARK DOBY, ESQUIRE

mdoby@wallacegraham.com

NOELLE MUSOLINO, ESQUIRE

nmusolino@wallacegraham.com

525 North Main Street

Salisbury, North Carolina 28144

704-633-5244

On behalf of the Defendant:

UNITED STATES DEPARTMENT OF JUSTICE

ENVIRONMENTAL TORTS LITIGATION

BY: CINDY M. HURT, ESQUIRE

Cindy.M.Hurt@usdoj.com

HANLEY GIBBONS, ESQUIRE

Hanley.W.Gibbons@usdoj.com

1100 L. Street, NW

Washington, DC 20005

202-307-5788

ALSO PRESENT:

Jerry Ensminger

Jessica Ans, DOJ

Brian McGee, Videographer

- - -

INDEX TO EXAMINATION

WITNESS	PAGE
ARI KELMAN, PH.D.	
CROSS-EXAMINATION (CONT'D) BY MR. HUGHES	120

1 describe as interviews, oral communication that
2 does not meet the same standard as an oral history
3 in their work.

4 And in those instances, they do not
5 have an obligation to record that, to transcribe
6 it, or to archive it.

7 MR. HUGHES: If we look at page
8 11. Let's see. Page 10. Yeah.

9 BY MR. HUGHES:

10 Q. At the top of page 10, you see four
11 lines down where it says in part, "Notes may
12 suffice when conducting interviews," right?

13 You agree with that, right, that
14 statement?

15 A. One moment. I just want to read it
16 carefully, if that's okay.

17 Q. Yes, sir. Take your time.

18 A. I do agree with the statement, yeah.

19 Q. Okay. If we go to page 11, top of
20 the page. At the top of the page you reference
21 Mr. Ensminger and that Dr. Longley produced notes
22 dated January 2024, but his report was dated
23 December -- I think what you mean there is
24 January -- do you see the reference to January 7,

1 2024?

2 A. I do.

3 Q. Okay. Is that an error.

4 A. I don't believe so, but I don't
5 have --

6 Q. Okay. Should the date say 2025 --

7 A. Oh.

8 Q. -- instead of 2024?

9 A. Apologies. I think you're correct.
10 I think that that should -- I think it was dated
11 January 7, 2025.

12 Q. Okay. And so is that an error in
13 your report?

14 A. It does look like it, yes.

15 Q. Okay. Does that error, in your
16 opinion, disqualify you as a historian expert in
17 this case?

18 A. No.

19 Q. Okay. Let me show you -- okay.

20 MR. HUGHES: Can the court
21 reporter -- can y'all put -- it's
22 number --

23 A. Can I --

24 Q. Oh, yeah, go ahead. Yes, sir, go

1 MS. HURT: Objection to form.

2 A. I believe that they were.

3 Q. Okay. Are you aware that
4 Dr. Longley provided an errata sheet for his first
5 report at his deposition on April 3rd?

6 A. I was not aware of that.

7 Q. Okay. Are you aware that under the
8 federal rules, a party has a duty to supplement a
9 report or correct a report when they learn that in
10 some material respect, the disclosure is
11 incomplete or incorrect?

12 MS. HURT: Objection to form and
13 foundation.

14 A. I was not aware of that.

15 Q. Okay. Do you believe that if an
16 expert during the process of a case learns they
17 had a mistake and corrects it, do you believe that
18 should disqualify the expert?

19 MS. HURT: Objection to form and
20 foundation.

21 A. It would depend on the kind of
22 mistake that they had made, I would say.

23 Q. Okay. All right. You wrote a book
24 called A River and Its City, correct?

1 A. Yes.

2 Q. And that book was published in 2006?

3 A. I thought it was published --
4 I thought it was published in 2003.

5 Q. It could be. I'm reading from the
6 University of California Press.

7 Was it published, to your
8 recollection, in the early 2000s?

9 A. It was. I think you're probably
10 looking at the paperback edition. There was a new
11 paperback edition.

12 Q. You know what? You must be right,
13 because there's some book reviews from 2004.

14 Have you read any book reviews of
15 your book, A River and Its City?

16 A. I have never read a single review of
17 my work.

18 Q. Okay. Do you know who Gay Gomez is?

19 A. I do not.

20 Q. Okay. You don't know of a Gay Gomez
21 who is an assistant professor at McNeese State
22 University?

23 A. I've never heard of that person.

24 Q. Okay. Are you aware that there's a

1 journal called Louisiana History, the Journal of
2 the Louisiana Historical Association?

3 A. Yes.

4 Q. Okay. It sounds like you weren't
5 aware, but were you aware before now that
6 Professor Gomez published a book review of your
7 book, A River and Its City, in the Louisiana
8 History, Journal of the Louisiana Historical
9 Association in its issue which was Summer 2004
10 Volume 45, Number 3, Page 359?

11 Were you aware of that before now?

12 A. I was not.

13 Q. Okay. And in Professor Gomez's
14 review, she says that there was "an error needs
15 correction," and she cited the following
16 inaccuracy. She said that your book said there
17 were three steamboat accidents that were described
18 as occurring in a little over -- a little more
19 than a month. But, in fact, the accidents spanned
20 from November 1849 to December 1850.

21 Are you aware of that?

22 A. No.

23 Q. Okay. Do you recall whether your
24 book, A River and Its City, referenced various

1 steamboat accidents?

2 A. It did.

3 Q. Okay. And does the time range of
4 November 1849 to December 1850 sound accurate in
5 terms of when those accidents were?

6 A. You're going to have to forgive me.
7 It was a long time ago, and I cited many more
8 steamboat accidents than just that. So the
9 particulars of this case -- sorry. When I say
10 "this case," of the instance that you're
11 describing, I just don't know.

12 Q. Okay. And so you don't recall
13 whether you characterized those three accidents as
14 occurring in a little more than a month?

15 A. No. But if I'm understanding you
16 correctly, it sounds like what -- sorry. Is it
17 Professor Gomez? Is that right?

18 Q. Yeah.

19 A. It sounds like what they found is --
20 again, if I'm understanding you correctly, it
21 sounds like if what they found is that I wrote
22 that something happened between November and
23 December, and I got the dates wrong, and,
24 actually, instead of it being in a little over a

1 month, it was a little over a year and a month.

2 Q. Yeah.

3 A. Is that correct? That instead of --
4 it was from November of 1849 to December of 1850,
5 not December of 1849?

6 Am I understanding you?

7 Q. Yes, sir.

8 A. Okay.

9 Q. Here's what she said, and I've given
10 people the cite. I'm not going to make it an
11 exhibit, but I've give the cite so people know
12 what it is.

13 She said, "Finally, an error needs
14 correction: Three steamboat accidents - dated
15 November 15, 1849, December 14, 1850, and
16 December 17, 1850 - are described as occurring 'in
17 just a little more than month.'" That's what she
18 said.

19 Does that ring any bell to you in
20 terms of that part of your book?

21 A. No. But I take her at her word at
22 that time.

23 Q. Okay. And if that's correct, would
24 you believe that disqualifies you from being an

1 historian expert on methodological grounds or
2 reliability grounds?

3 MS. HURT: Objection to form and
4 foundation.

5 A. No. At the risk of defending
6 myself, what I would say is that that error sounds
7 a little bit like the one that you discovered in
8 my expert report.

9 It's the sort of thing that a
10 critical reader looking at what I've written could
11 suss informations out relatively easily where
12 I had gone awry.

13 So there's no effort to mislead the
14 reader. This is a simple error, and the sort of
15 thing that does every now and again regrettably
16 crop up in my work.

17 Q. I understand.

18 The same review said "I also saw it
19 but did not find a detailed list of maps and other
20 illustrations that appear in the work. While
21 captions and a seemingly incomplete map section in
22 the work cited provides some information,
23 including dates and repositories, perhaps the next
24 edition of the book could include a listing that

1 Can you go to page 41. One second.

2 THE WITNESS: Thank you for
3 increasing the size.

4 MR. HUGHES: Okay. Can you go
5 forward to page 51. I'm sorry. It's
6 not 41. It's 51.

7 Okay. Let's see. Yeah.

8 BY MR. HUGHES:

9 Q. So this is an order the Court
10 entered in the Ideker case. And you can see
11 halfway down the page where it says, "The
12 government presented as its first witness
13 Dr. Ari Kelman, an environmental historian."

14 Do you see that?

15 A. I do.

16 Q. Okay. And the next sentence says,
17 "Dr. Kelman testified that properties next to the
18 Missouri River have always been subject to
19 extensive flooding," right?

20 A. It does say that.

21 Q. Okay. Have you seen this order
22 before?

23 A. I don't recall.

24 Q. Okay. If you look at the bottom

1 sentence on the screen, it says, "Dr. Kelman's
2 opinions were based solely on the review of
3 documents concerning historical flood events
4 identified in public records; he did not consult
5 the plaintiffs regarding their experience of
6 flooding on the representative tracks before or
7 after the MRRP."

8 Do you see that language?

9 A. I do.

10 Q. Okay. Is that true? Did you review
11 any information from the plaintiffs in that case,
12 to your recollection?

13 A. Hold on.

14 No, I don't think that's entirely
15 accurate. I did look at depositions of the
16 plaintiffs.

17 MR. HUGHES: Okay. Let me go down
18 a little further and see if it flushes
19 it out.

20 If you can go down to the
21 paragraph that says "However."

22 Keep going down a little bit.

23 Let's find it. One sec.

24 Okay. Yeah, go to page 64,

1 page 63, 64. Sorry.

2 Okay. Yeah.

3 BY MR. HUGHES:

4 Q. All right. So if you look at the
5 top of page 64, it says, "However, as stated
6 above, the Court gives Dr. Kelman's testimony
7 little weight. Dr. Kelman conducted no interviews
8 with the representative plaintiffs regarding their
9 expectations or what information they had
10 available when forming their expectations despite
11 acknowledging that such information is relevant to
12 its opinions," and cites to a transcript.

13 Do you see that?

14 A. I do.

15 Q. And then it says, "On
16 cross-examination, Dr. Kelman admitted that the
17 representative plaintiffs' personal observations
18 for the period of time they lived on the river and
19 how that was managed are relevant and important
20 considerations."

21 Do you see that?

22 A. I do.

23 Q. Okay. Does that summary by the
24 Court match your recollection of the case?

1 A. It matches my recollection of what's
2 being described here.

3 Q. Can you elaborate on your answer.

4 A. Well, the case is broader than just
5 this. It appears to me that -- I'm going to read
6 this again.

7 "As stated above" -- yeah, I did not
8 do any interviews with the representative
9 plaintiffs. That is accurate. I had their
10 depositions, which I consulted to have a sense of
11 their expectations.

12 I did believe that their
13 expectations were relevant, and I believe that
14 their personal observations for the period of time
15 they lived on the river was also relevant.

16 Q. Okay. Do you know if you did a
17 written report in that case?

18 A. I did.

19 Q. Do you have it?

20 A. Not at hand, no.

21 Q. Is it something you could dig up
22 easily, or no?

23 A. I expect I could find it given a few
24 minutes.

1 Q. Okay. With regard to Dr. Brigham,
2 let me -- I'm going to summarize something and ask
3 you if you've heard of it before.

4 Dr. Brigham gave testimony in a case
5 called the Raytheon case involving Herington
6 H-e-r-i-n-g-t-o-n Army Air Force Base.

7 In that case, he did an expert
8 report that was filed at Docket Number 284-1 in
9 which he referred to inspections of bombers that
10 occurred every 6,000 miles and every 1,000 miles.

11 When he was deposed, he was asked
12 about it, and he said -- and this was in his
13 deposition excerpts filed at Document 284-2. He
14 was asked whether his statements on 1,000-mile
15 inspections and 6,000-mile inspections were in
16 error. And his answer was, "I may be in error
17 there."

18 And he went on to explain that
19 1,000-mile inspections appeared to be related to
20 automobiles, not to bombers.

21 Here's my question: Were you aware
22 before now that in a prior case, Dr. Brigham had
23 said in a deposition that he may have been in
24 error in his written expert report?

1 MS. HURT: Objection to form.

2 A. No, I was not aware of that.

3 MR. HUGHES: Okay. Those are all
4 the questions I have.

5 MS. HURT: I'd like to note on the
6 record that our prior agreement that no
7 new exhibits would be entered into
8 today's deposition, while that was not
9 the case and that didn't happen,
10 Mr. Hughes discussed several documents
11 without providing the documents to the
12 witness.

13 And so I think that kind of
14 violates the spirit of our agreement, if
15 not the word. So I just want to put
16 that on the record.

17 MR. HUGHES: Well, I guess I'll
18 put on the record that we were planning
19 to depose him last time on some of the
20 book reviews, and I did go pull other
21 book reviews, and so I understand what
22 you're saying.

23 However, I think it's fair game to
24 ask him about errors that are in public

EXHIBIT 10

Kyle Longley

Executive Director of the Society for Military History
Henry Salvatori Professor of American Values and Traditions
Director of War, Diplomacy and Society Program
Professor of History
Chapman University
One University Drive
Orange, CA 92866

24536 Acadia Drive
Corona, CA 92883
kylelongley63@gmail.com
480.516.5475 (cell)
longley@chapman.edu

EDUCATION

UNIVERSITY OF KENTUCKY

Ph.D. in History, August 1993

TEXAS TECH UNIVERSITY

M.A. in History and Comparative Literature, August 1989

ANGELO STATE UNIVERSITY

B.A. in History and Mathematics, *summa cum laude*, May 1987

GRADUATE PREPARATION

Dissertation Director: Dr. George Herring

Doctoral Fields, Examination in March 1991

Modern Asia

U.S. Foreign Relations

20th Century America

Modern Latin America

Outside Fields: Political Science and Anthropology

Language: Spanish

TEACHING AND EDUCATIONAL EXPERIENCE

SOCIETY FOR MILITARY HISTORY, March 2023-present

Executive Director

CHAPMAN UNIVERSITY, July 2020-present

Henry Salvatori Professor of American Values and Traditions (August 2022-present)

Director of the War, Diplomacy, and Society Program (July 2020-July 2024)

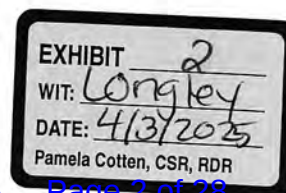
Professor of History (2020-present)

ARIZONA STATE UNIVERSITY, 1995-2020

Full Professor (2004-2020)

Snell Family Dean's Distinguished Professor (2003-2020)

Associate Professor (1998-2004)



Assistant Professor (1995-1998)
 Professor in the School of Historical, Philosophical, and Religious Studies (1995-2020)
 Professor in the School of Politics and Global Studies (2008-2020)
 Affiliate:
 Barrett, The Honors College
 Center for Law and Global Affairs, Sandra Day O'Connor Law School
 Center on the Study of the Future of War
 School of Transborder, Chicana/o and Latina/o Studies
 Center for Religion and Conflict
 LYNDON B. JOHNSON LIBRARY
 Director, July 2018-April 2019
 THE UNIVERSITY OF TEXAS, Faculty Associate in the Robert S. Strauss Center (2011-present)
 THE CITADEL, visiting assistant professor of history (1994-1995)
 CENTRE COLLEGE, visiting assistant professor of history (1993-1994)
 UNIVERSITY OF KENTUCKY, instructor and teaching assistant (1989-1993)
 TEXAS TECH UNIVERSITY, academic advisor for women's athletics (1988-1989), teaching assistant (1987-1988)

PUBLICATIONS

BOOKS:

In Harm's Way: A History of the U.S. Military (with Gene Smith and David Coffey). New York: Oxford University Press, February 2019.
LBJ's 1968: Power, Politics, and the Presidency in America's Year of Upheaval. New York: Cambridge University Press, February 2018.
The Enduring Legacy: Leadership and National Security Affairs during the Presidency of Ronald Reagan [co-editor and contributor with Brad Coleman (VMI), University Press of Kentucky, June 2017].
The Morenci Marines: A Tale of a Small Town America and the Vietnam War. Lawrence: University of Kansas Press, November 2013, 351 pp. [Electronic and Paperback version, Spring 2015]
 -Winner, Best Book in Arizona History, 2014, from the Arizona/New Mexico Book Co-op Committee
 -Winner, Southwest Book Award, 2015, from the Arizona Historical Society & Pima County Historical Society
Grunts: The American Combat Soldier in Vietnam. New York: Routledge, October 2008. 285 pp. [2nd edition, Fall 2016, 6th Reprint, May 2014]
 -Selection of the Military History Book Club, September 2009
 -Required Reading for Incoming Students at the United States Military Academy
Deconstructing Reagan: Conservative Mythology and America's Fortieth President, editor and contributor. New York: Routledge, 2006. 171 pp.
Senator Albert A. Gore Sr.: Tennessee Maverick [foreword by Vice President Al Gore]. Baton Rouge: Louisiana State University Press, 2004, 350 pp.
In the Eagle's Shadow: A History of Latin America and the United States. Malden, MA: Wiley-

Blackwell, 2002. 340 pp. [second edition April 2009]

-Recommended reading by the U.S. State Department and U.S. Southern Command

The Sparrow and the Hawk: Costa Rica and the United States during the Rise of José Figueres, 1942-1957. Tuscaloosa: University of Alabama Press, 1997. 239 pp. [Reprint and Electronic Version 2014]

-Winner of the A. B. Thomas Book Prize for outstanding book published in 1997 from the Southeastern Council on Latin American Studies

Applied Number Sense. Midland: L&L Publishing, 1983. 116 pp.

ONGOING RESEARCH

The Forever Soldiers: Americans at War in Afghanistan and Iraq (In editing stage at University of North Carolina Press for publication in Spring 2025).

Days in the Life: LBJ (Under contract with Cambridge University Press for submission in January 2025)

Making Hell on Earth: The Burn Pits and Their Impact on People and the Environment (research project begun Spring 2024).

ESSAYS IN COLLECTED VOLUMES

"The Obsession: The Reagan Administration and Central America," in Brad Coleman and Kyle Longley, *The Enduring Legacy: Leadership and National Security Affairs during the Presidency of Ronald Reagan* (Lexington: University Press of Kentucky, 2017): 211-38.

"U.S. Troops as an Instrument in Foreign Policy in Cold War Latin America: The Case Studies of the Dominican Republic (1965) and Grenada (1983)" in Christos Frentzos and Antonio Thompson, eds., *The Routledge Handbook of U.S. Diplomatic and Military History, 1865-Present* (New York: Routledge Press, 2013): 258-278.

"The Congress and the Vietnam War: Senate 'Doves' and Their Impact on the War" in David Anderson and Jon Ernst, eds., *The War That Never Ends: New Perspectives on the Vietnam War* (Lexington: University of Kentucky Press, 2007): 289-310.

"The 'Reluctant' Volunteer: The Origins of Senator Albert A. Gore's Opposition to the Vietnam War," in Randall Woods', *The New Anti-Imperialists: Senate and House Opposition to the Vietnam War* (New York: Cambridge University Press, 2003): 204-36.

"When Nationalism Confronted Hegemony: The U.S. Challenge to the Cuban Revolution, 1959-1962," in Jonathan M. Nielson's, *Paths Not Taken: Speculations on American Foreign Policy and Diplomacy, Ideals, Interests and Power* (Westport: Praeger Publishers, 2000): 109-30.

ARTICLES

"Costa Rica and the Environment: The 'Switzerland of the Americas'?" *Discurso* (Southeastern Council on Latin American Studies) 10 December 2020,

[https://discursorevista.com/f/costa-rica-the-environment-the-\"switzerland-of-the-americas\"?blogcategory=Policy](https://discursorevista.com/f/costa-rica-the-environment-the-\)

"The Vietnam War by Ken Burns and Lynn Novick: A Review," *Diplomatic History* (June 2018): 396-400.

"Between Sorrow and Pride: Memory of the Morenci Nine and the Vietnam War in Small Town

- America," *Pacific Historical Review* (February 2013): 1-30.
- "Domestic Politics with Global Consequences: International Implications of Anti-Immigrant Fervor in Arizona SB1070," *Review of Faith and International Affairs* (March 2011): 32-43.
- "Target Number One: Foreign Relations and the Tennessee Senate Race of 1970," *Diplomatic History* (September 2004): 529-47.
- "White Knight for Civil Rights?: Senator Albert A. Gore Sr. and the Civil Rights Movement," *Tennessee Historical Quarterly* (Fall 1998): 114-130.
- "Internationalizing the Teaching of American Foreign Relations: Incorporating the Foreign Perspective into the Classroom," *AHA Perspectives* (November 1996): 23-26, 30.
- "Resistance and Accommodation: The United States and the Nationalism of José Figueres, 1953-1957," *Diplomatic History* 18 (Winter 1994): 1-28.
- "Peaceful Costa Rica, the First Latin American Battleground of the Cold War: The United States and the Costa Rican Revolution of 1948," *The Americas* L (October 1993): 149-75.
- "Resisting Domination: The Relationship Between the United States and José Figueres," *South Eastern Latin Americanist* 36 (Winter 1993): 6-18.

ENCYCLOPEDIAS

- Senior Editor, *The Oxford Encyclopedia of Latin America*, Oxford University Press, 2018-present.
- Associate Editor, *Encyclopedia of United States-Latin American Relations*, three volumes, Thomas Leonard, ed., Washington, D.C.: Congressional Quarterly Press, 2012).
Winner of a *Choice* Outstanding Academic Title, January 2013.

ENCYCLOPEDIA ARTICLES

- "Al Gore," in Donald Critchlow and Phil Vandermeer, eds., *The Encyclopedia of Modern American Politics*. New York: Oxford University Press, 2012.
- "The Rio Conference, 1947," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "The Bogotá Conference, 1948," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "Bill Clinton," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "The Baltimore Affair," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "José Figueres," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "Nicaraguan-Costa Rican Border Battle, 1948," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- J. William Fulbright, in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "Act of Bogotá," in Thomas Leonard, ed., *Encyclopedia of United States-Latin American Relations*. Washington, D.C.: Congressional Quarterly Press, 2012.
- "Panama Canal," in Stanley I. Kutler, ed., *Dictionary of American History*. New York: Charles

- Scribner's Sons, 2002.
- "contras," in Stanley I. Kutler, ed., *Dictionary of American History*. New York: Charles Scribner's Sons, 2002.
- "U.S.-Latin American Relations," in Stanley I. Kutler, ed., *Dictionary of American History*. New York: Charles Scribner's Sons, 2002.
- "U.S.-Cuban Relations," in Stanley I. Kutler, ed., *Dictionary of American History*. New York: Charles Scribner's Sons, 2002.
- Contributor of forty entries to *The Cold War: A Complete Guide*, Thomas Parish, ed., New York: Holt, 1996.

COMPUTER MATERIALS

- "The Age of Imperialism and World War I," U.S. Department of Education project for the Phoenix Union High School system instructor development. (January 2003).
- "The United States in the Cold War," U.S. Department of Education project for the Phoenix Union High School system instructor development. (February 2003).
- Online Study Guide for George Herring's *America's Longest War* for McGraw-Hill, <http://www.mhhe.com/herring> (November 2002)
- "The United States and Nicaragua during the Sandinista/Contra War," course pack developed for Bell and Howell subsidiary Xanadu, <http://www.xanadu.com/coursepacks/> (August 2001)

BOOK AND JOURNAL REVIEWS:

- Vanessa Walker, *Principles in Power: Latin America and the Politics of U.S. Human Rights*, Society for Historians of American Foreign Relations, *Passport*, September 2021.
- John Lindsay-Poland, *Plan Colombia: U.S. Ally Atrocities and Community Activism* for the *American Historical Review*. Fall 2019.
- Greg Daddis, *Withdrawal: Reassessing America's Final Years in Vietnam* for *Diplomatic History*, March 2018.
- Jeffrey A. Engel, *When the World Seemed New: George H. W. Bush and the End of the Cold War* for H-DIPLO, March 2018.
- Russell Crandall, *The Salvador Option: The United States and El Salvador* for H-DIPLO, January 2018.
- Beth Bailey and Richard Immerman, eds., *Understanding the Wars in Iraq and Afghanistan* for *Diplomatic History*, Fall 2016.
- Malcolm Byrne, *Iran-Contra: Reagan's Scandal and the Unchecked Abuse of Presidential Power* for H-DIPLO, November 2015.
- Sandra Scanlon, *The Pro-War Movement: Domestic Support for the Vietnam War and the Making of Modern American Conservatism*, forthcoming in *The Register of the Kentucky Historical Society*, Spring 2016.
- Linda Tamura, *Nisei Soldiers Break Their Silence: Coming Home to Hood in Pacific Historical Review*, January 2014.
- Andrew Wiest, *The Boys of '67: Charlie Company's War in Vietnam*, *Michigan War Studies Review*, September 2013, <http://www.miwsr.com/2013-076.aspx>
- Introduction of Terry Anderson's *Bush's Wars* for H-DIPLO 5 April 2012, <http://www.h-net.org/~diplo/roundtables/PDF/Roundtable-XIII-22.pdf>
- Review of Greg Grandin and Gilbert Joseph, eds., *A Century of Revolution: Insurgent and*

- Counterinsurgent Violence During Latin America's Long Cold War*, 14 May 2012, <http://www.h-net.org/~diplo/roundtables/PDF/Roundtable-XIII-27.pdf>
- Review of Jeremy Kuzmarov, *The Myth of the Addicted Army: Vietnam and the Modern War on Drugs in Diplomatic History* (March 2011): 399-402.
- Review of Campbell Craig and Frederik Logevall, *America's Cold War: The Politics of Insecurity* in *Society of Historians of American Foreign Relations Perspectives* (Summer 2010): 21-23.
- Introduction of Bradley Lynn Coleman, *Colombia and the United States: The Making of an Inter-American Alliance, 1939-1960*, 4 March 2010, <http://www.h-net.org/~diplo/roundtables/PDF/Roundtable-XI-17.pdf>
- Review of James Mann, *The Rebellion of Ronald Reagan: A History of the End of the Cold War* for H-DIPLO, 6 November 2009, <http://www.h-net.org/~diplo/roundtables/PDF/Roundtable-XI-5.pdf>.
- Review of Jeremy Kuzmarov, "Modernizing Repression: Police Training, Political^[SEP] Violence, and Nation-Building in the 'American Century,'" *Diplomatic^[SEP] History* (April 2009) on H-DIPLO (9 June 2009) <https://exchange.asu.edu/exchweb/bin/redir.asp?URL=http://www.h-net.org/~diplo/reviews/PDF/AR233.pdf>
- Review of Don Bohning, *The Castro Obsession: U.S. Covert Operations Against Cuba, 1959-1961* in *Cuban Studies* volume 39 (2007), 124-26.
- Review of Robert D. Johnson, *Congress and the Cold War* and David Barrett, *The CIA and Congress: The Untold Story from Truman to Kennedy* in *Diplomatic History* (September 2007).
- Review of Melvin Small, *At the Water's Edge: American Politics and the Vietnam War* in *The Register of the Kentucky Historical Society* (Winter 2006): 200-201.
- Review of Gretchen Murphy, *Hemispheric Imaginings: The Monroe Doctrine and Narratives of U.S. Empire* in the *American Historical Review* (December 2006): 1510-1511.
- Review of Lewis L. Gould, *The Most Exclusive Club: A History of the Modern United States Senate* in *The Register of the Kentucky Historical Society* (Autumn 2006): 766-777.
- Review of Alan McPherson, *Yankee No!: Anti-Americanism in U.S.-Latin American Relations* in the *American Historical Review* (Winter 2004): 539-40.
- Review of Lara Putnam, *The Company They Kept: Migrants and the Politics of Gender in Caribbean Costa Rica, 1870-1960* in *Hispanic American Historical Review* (February 2004): 167-68.
- Review of Joseph A. Palermo, *In His Own Right: The Political Odyssey of Senator Robert F. Kennedy* in *The Register of the Kentucky Historical Society* (Summer 2002): 415-16.
- Review of Eric Roorda, *The Dictator Next Door: The Good Neighbor Policy and the Trujillo Regime in the Dominican Republic, 1930-1945* and G. Pope Atkins and Larman C. Wilson, *The Dominican Republic and the United States: From Imperialism to Transnationalism* in *Diplomatic History* (Summer 2000).
- Review of Deborah J. Yashar, *Demanding Democracy: Reform and Reaction in Costa Rica and Guatemala, 1870s-1950s* in *The Americas* (July 1998): 171-72.
- Review of Jean Grugel, *Politics and Development in the Caribbean Basin: Central America and the Caribbean in the New World Order*, in the *Journal of American History* (June 1996): 293-94.

- Review of Paul Coe Clark, Jr., *The United States and Somoza, 1933-1956: A Revisionist Look in the South Eastern Latin Americanist* 37 (Spring 1994): 56-57.
- Review of Samuel Z. Stone, *The Heritage of the Conquistadors: Ruling Classes in Central America from Conquest to the Sandinistas in Mesoamérica* 14 (December 1993): 325-27.
- Review of Thomas D. Schoonover, *The United States in Central America, 1860-1911: Episodes of Social Imperialism and Imperial Rivalry in the World System in the South Eastern Latin Americanist* 37 (Summer 1993): 57-58.

COMMUNITY SERVICE MATERIALS

- "The History Behind Attacks on the Military Records of Politicians Like Tim Walz," *Time*, 29 August 2024.
- "Presidents on the Election Sidelines: Like Job Biden, Lyndon B. Johnson Took Himself Out of a Reelection Race but Struggled With His Role," *The Dispatch*, 19 August 2024.
- "History Shows What Biden Needs to Do at the DNC to Help Harris Win," *Time*, 19 August 2024.
- "The History Behind Why a BYU Volleyball Game Went Viral," *Washington Post*, 16 September 2022.
- "Learning From Past Blunders Is Crucial for New Army Program," *Washington Post*, 11 August 2022.
- "The 1950s Congressman Whose Career Explains the Texas GOP's Extremism," *Washington Post*, 7 July 2022.
- "The Last Twenty 20 Years Have Remade the Nature of Military Service: Here's How," *Washington Post*, 11 November 2021.
- "The Olympics Have Long Been an Arena for the Fight Between Racism and Equality," *Washington Post*, 23 July 2021.
- "The U.S. War on Drugs Helped Unleash the Violence in Colombia Today," *Washington Post*, 8 June 2021.
- "Our Politics Is No Uglier or Dysfunctional Than in the Past," *Washington Post*, 14 May 2021.
- "Lyndon Johnson's Vision for Voting Rights Offers a Vision for Protecting Them," *Washington Post*, 8 April 2021.
- "Harassing the Biden Bus Could Backfire on the Republicans: In a Close Election, the Backlash Against Boorish Behavior Can Make an Impact," *Washington Post*, 2 November 2020.
- "The Real Meaning of Memorial Day: Families That Endure the Loss of Service Members Deserve a Day of Collective Remembrance," *Washington Post*, 24 May 2020.
- "What Democrats Need to Know to Win Latinos: To Avoid a Disappointing 2020 Turnout, the Party Needs to Understand the Nuances of the Latino Electorate," *New York Times*, 20 November 2019 [with Arnold Garcia].
- "What Happens When You Kill the Messenger in Nicaragua," *Statfor Worldview*, 23 October 2019.
- "Historians on Trump: We've Never Seen Anything Like This," *CNN*, 4 October 2019 [with Lisa Cobbs, Ken Osgood, Jeremi Suri].

"Why Donald Trump Is Just Following in Ronald Reagan's Footsteps on Race," *Washington Post*, 4 August 2019.
 "Anti-Americanism, Venezuelan Style," *Statfor Worldview*, 16 July 2019.
 "Why It's Wrong to Attack Joe Biden on Civil Rights," *Washington Post*, 1 July 2019.
 "President Johnson's Private vs. Public Reaction to Martin Luther King's Assassination," *Newsweek*, 3 April 2018.
 "Lyndon Johnson's Trip Around the World," *New York Times*, 2 January 2018.
 "Even in the 1960s, the NRA Dominated Gun Control Debates," *Washington Post*, 5 October 2017.
 "In Handling North Korea, Restraint Is Donald Trump's Only Option," *Washington Post*, 28 August 2017.
 "The Heavy Price of War," *New York Times*, 12 August 2017.
 "The Grunts War," *New York Times*, 17 February 2017.
 "LBJ and the Days of America on Fire," *San Antonio Express News*, 27 September 2016.
 "Morenci Paid Heavy Price in the Vietnam War," *Arizona Republic*, 30 August 2016.
 "Empty Chairs at a Vietnam War Conference," *Austin American Statesman*, 26 April 2016.
 "Lying Our Way Into War? We've Done It Before," *Arizona Republic*, 10 August 2014.
 "Can Women Be Brave in Combat? You Bet," *Arizona Republic*, 25 May 2014.
 "Always Faithful: The Morenci Nine and the Vietnam War," *Arizona Veterans Magazine*, Spring 2014.
 "Remembering the Meaning of Veterans Day," *Eastern Arizona Courier*, 4 November 2013.
 "Another View of Veteran's Day," *Austin American Statesman*, 8 November 2013.
 "The College Trap," *Austin American Statesman*, 23 August 2013.
 "Mr. Obama, Tear Down That Wall: The Border Fence and Its Effect on U.S. Relations with Latin America," *Austin American Statesman*, 22 July 2013.
 "While We Were Sleeping: The United States Ignores the Backyard China Is Cultivating," *Austin American-Statesman*, 6 July 2013.
 "The Future Builds on the Past," *Austin American-Statesman*, 19 May 2013.
 "Reflecting on the Effort to Bring the Vietnam Memorial to Fruition," *Austin American-Statesman*, 10 November 2012.
 "Leroy Cisneros: Just One Vietnam War Hero to Honor," *Arizona Republic*, 8 April 2012.
 "Americans Can No Longer Ignore Role in Ongoing Mexican Drug War," *Austin American-Statesman*, 11 September 2011.
 "ASU Professor Was Model for Excellence in Teaching: In Honor of Professor Dempsey Watkins," *San Angelo Standard-Times*, 19 November 2010 [with Arnold Garcia].
 "When Bias Dictates Law," *Austin American Statesman*, 27 April 2010.
 "Morenci 9 Leave Local Legacy from Vietnam," Contributing Writer, *The Copper Era* (Morenci/Clifton Arizona), 28 February 2007.
 "In Courting Old Enemies in Iraq, the U.S. Is Flirting with Disaster," *Austin American-Statesman*, 9 June 2004.
 "The Parenting of a True-Blue Populist," *Los Angeles Times*, 1 September 2002.
 "The United States and the Muslim World," in *The September 11 Reader* for the Arizona Humanities Council, February 2002.
 "Bush Must Avoid Endless Warfare as Ratings Crutch," *Arizona Republic*, 1 March 2002.

EDITOR OF THE SERIES, "Global History," Harlan-Davidson, 2002-2012.

Paul Dosal (University of South Florida), *Cuba Libre: A Brief History of Cuba* (April, 2006).

Jurgen Buchenau (University of North Carolina-Charlotte), *The Crucible of Blood: A Brief History of the Mexican Nation* (April 2008)

DOCUMENTARY CONSULTING

Mylene Moreno, "On Two Fronts: Latinos and the Vietnam War, Souvenir Pictures (Los Angeles)

James Mirabello, "La Lucha: The Struggle" Spark Media (Washington D.C.)

PROFESSIONAL ACTIVITIES/UNIVERSITY SERVICE/COMMUNITY SERVICE

UNIVERSITY SERVICE:

Chapman University

University Faculty Personnel Committee, August 2020-2023

Director, War, Diplomacy, and Society Program, 2020-2024

Arizona State University

Associate Director, School of Historical, Philosophical, and Religious Studies (SHPRS), April 2012-May 2014

Head of the History Faculty, April 2013-May 2014

Member of Provost Committee on International Student Assimilation, 2014-present

Member of Provost Taskforce on Redesign of the Online Program, 2013-present

Director of Graduate Studies, History Unit, 2012-2013.

History Unit, Chair, History Unit Seven-Year Review, August 2010-2011.

History Unit, Chair of Personnel and Advisory Committee, August 2011-August 2012.

History Unit, Member, Personnel and Advisory Committee, August 2010-2012.

Dean of College of Liberal Arts and Sciences Committee on Excellence, August 2008-August 2011.

Dean's Fellow, College of Liberal Arts and Sciences, 2009-2010.

Member of Graduate College Committee on Diversity Fellowships, August 2009-August 2011.

Academic Senate Committee on Rules and Bylaws Unification for Arizona State University Campuses, August 2008-2011.

President's Committee on Ten Year Review of Arizona State University Athletic Department for NCAA, August 2008-June 2009.

Member of the Intercollegiate Athletic Board, August 2008-2012.

Member of Provost's Task Force on Issues of Graduation and Retention, August 2007-present

Member of Dean of College of Liberal Arts and Sciences Committee on Retention, July 2007-2011.

Member of the Executive Committee, Dean of College of Liberal Arts and Sciences, September

2007-August 2011.

Chair of Department of History, Personnel and Advisory Committee, August 2007-August 2008
Director of Graduate Studies, 2004-2006.

Chair, Department of History, Carnegie Initiative on the Doctorate, 2003-2005.

Director of Undergraduate Studies, 2000-2003.

Chair of the Department of History Seven Year Review Committee, 2002-2003.

Host of Discovery Tour for the Department of History, 2002.

Discovery Tour Leader for Incoming Undergraduates in CLAS, Fall 2000-2001.

Member of Department of History Preparing Future Faculty Committee, 1999-present.

Chair of Department of History Undergraduate Curriculum Committee, 1999-2001.

Member of Department of History Graduate Admissions Committee, 1999-2005.

Member of the Department of History Personnel Advisory Committee, 1997.

Member of the Department of History Committee on Undergraduate Teaching, 1996-2000.

President, History Graduate Student Association, 1990-1992, University of Kentucky.

Member of Symposium Committee on "Perspectives on the Chinese Democracy Movement of 1989,"
University of Kentucky, (1989-1990).

Graduate Representative on Department of History Speaker Selection Committee, University of
Kentucky, (1989-1991).

Member of Dean of Arts and Sciences Committee on Sexual Harassment, Texas Tech University,
(1988-1989).

President, Phi Alpha Theta, Texas Tech University (1988-1989).

President, Phi Alpha Theta, Angelo State University (1986-1987).

PROFESSIONAL SERVICE:

Council Member, Society for Historians of American Foreign Relations, 2019-2022.

Program Committee, American Historical Association, 2014-2016.

Robert Ferrell Book Prize Committee, Society for Historians of American Foreign Relations,
August 2012 –2013.

Organization of American History Distinguished Lecturer Board, 2004-2011.

President, Pacific Coast Branch of the American Historical Association, August 2011-August 2012
(3000 members).

Program Chair, Pacific Coast Branch of the American Historical Association, 2010 Meeting.

Organizer and host for "Breaking Down the Walls: Increasing Discourse and Exchanging
Ideas," 2010.

Program Committee, Pacific Coast Branch-American Historical Association, June 2007-August 2008.

Member, Frederick Jackson Turner Book Prize Committee, Organization of American Historians,
2005-2006.

Member of Program Committee for the Conference on Inter-American Relations, 2002.

Chair, A.B. Thomas Book Prize, South Eastern Council on Latin American Studies, 1998-2004.

Organizer and host of the Third Conference on Inter-American Relations, Arizona State University,
February 1998.

Member of Program Committee for the Southern Historical Association meeting in November 1997.

Member of Program Committee for the Conference on Inter-American Relations in September 1996.

Member of the Society for Historians of American Foreign Relations, the American Historical
Association, the Southern Historical Association, the Organization of American History, and

the South Eastern Council on Latin American Studies.

COMMUNITY SERVICE:

Consultant and analyst on politics and foreign affairs:

New York Times

Newsweek

Washington Post

Los Angeles Times

Associated Press

Arizona Republic

Nashville Tennessean

Boston Globe

ABC News

Austin-American Statesman

San Antonio Express News

JiJi Press

Jornol do Brazil

Slate

Time

Philadelphia Inquirer

CNN

Speakers Bureau, Phoenix Committee on Foreign Relations, 2006-2011.

Member of Phoenix Committee on Foreign Relations, 2004-present.

Arizona Humanities Council, Speaker's Bureau Participant, 2004-2012.

Professional Consultant, Asylum Consultants and Expert Services, 2002-present.

Political Consultant to Craig Columbus, Congressional Candidate for the 5th Congressional District, 2002.

Executive Board Member of Leadership for America's Children and Families Political Action Committee, 2002-2010.

Advisor to the Mission to the Americas Hurricane Relief Efforts for Central America, 1998-2000.

HONORS AND AWARDS

The Organization of American Historians, Distinguished Lecturer Designation, 2003-2010.

The Snell Family Dean's Distinguished Professorship, October 2003-present.

Angelo State University Distinguished Alumnus, 2005.

Lyndon B. Johnson Foundation Grant, April 2001.

Arizona State University, College of Liberal Arts and Sciences, Research Award, September 1999.

A.B. Thomas Book Award for outstanding book published in 1997 on Latin American Studies by the Southeastern Council on Latin American Studies, March 1998.

Arizona State University, College of Liberal Arts and Sciences Travel Grant, May 1997.

Franklin D. Roosevelt Foundation travel grant, November 1996.

Arizona State University, College of Liberal Arts and Sciences Research Grant, October 1996.

Moody Fellowship, Lyndon B. Johnson Foundation, October 1995.

Arizona State University, Faculty Development Grant, October 1995.

The Citadel Development Foundation Grant, December 1994.
Franklin D. Roosevelt Foundation Travel Grant, April 1992.
A. D. Kirwan Scholarship for outstanding graduate student in history, University of Kentucky, April 1992.
Harry S. Truman Foundation Travel Grant, January 1992.
W. Stull Holt Fellowship, Society for Historians of American Foreign Relations, 1991-1992.
University of Kentucky Graduate Council Dissertation Year Fellowship, 1991-1992.
David Vigness Scholarship for outstanding student in Latin American history, Texas Tech University, 1988.
Carr Scholarship for outstanding student-athlete, Angelo State University, 1987.
West Texas Historical Association Scholarship for outstanding student in history, Angelo State University, 1987.
Carr Academic Scholarship, Angelo State University, 1983-1987.
Fasken Foundation Academic Scholarship, 1983-1987

TEACHING HONORS AND AWARDS

Professor of the Year Finalist, 2010.
Zebulon Pearce Teaching Award for Outstanding Teacher in the Humanities, 2008.
Arizona State University President's Professor nominee, 2008.
Arizona State University Professor of the Year nominee, 2008.
Associated Students of Arizona State University Centennial Professor for outstanding teacher, 2003-2004.
ASU Habitat for Humanity, "Making the World a Cooler Place to Live" Teaching Award, Fall 2001
Mentor Appreciation Award, Preparing Future Faculty Program, August 2001.
Kappa Alpha Fraternity, National Teacher of the Year Award, Summer 2001.
College of Liberal Arts and Sciences, Outstanding Teacher Award Nominee, 2001, 2002
Arizona State University, College of Liberal Arts and Sciences, Grant for Improving Undergraduate Education, September 1998, September 1999.

TEACHING

COURSES TAUGHT

Centre College

HIS 14B [U.S. history, 1865-present]
HIS 40A [Modern Latin America]
HIS 47A [U.S. foreign relations, 1775-1920]
HIS 47B [U.S. foreign relations, 1920-present]

The Citadel

HIS 103 [Western Civilization, beginning to 1660]

HIS 104 [Western Civilization, 1660-present]
HIS 410 [U.S. Foreign Policy since 1945]
HIS 489 [History of the Vietnam War]
HIS 498 [History of Central America]

Arizona State University

HIS 111 [United States History, 1865-present]
HST 204/POS 191/REL 200/ENG101 [War, Culture, and Memory, Learning Community, lead faculty]
HIS 300 [The United States and World War II]
HIS 300 [American Interventions in the Third World]
HIS 306 [Undergraduate Research Seminar on 1980s in Historical Perspective]
HIS 314 [The American Cinema during the Cold War]
HST 340 [American Military History]
HON 394 [The Vietnam War]
HON 394 [America as a Global Superpower]
HON 394 [America's Guerrilla Wars]
HON 394 [Biography in the "American Century"]
HON 394 [The Wars of the Modern Middle East]
POS 394 [America as a Global Superpower]
POS 394 [America's Guerrilla Wars]
HIS 415 [U.S. Foreign Relations, 1775-1920]
HIS 416 [U.S. Foreign Relations, 1920-present]
HIS 464 [U.S.-Latin American Relations]
HIS 475 [The American Experience in Vietnam]
HIS 494/ENG 494 [American Literature and the Holocaust]
HIS 498 [The United States and World War II]
HIS 498 [The United States in the Cold War]
HST 498 [The American Experience in Vietnam]
HST 590 [The Social Constructions of Masculinity and Their Impact on U.S. Foreign Relations]
HST 591 [Twentieth Century America]
HST 591 [The United States and the World]
HST 598 [U.S. Military History]
HIS 598 [Twentieth Century U.S. Foreign Relations]
HIS 598 [U.S. History, 1865-1920]
HIS 598 [U.S. History, 1920-present]
HST 598 [The South in a Modern Era: A Region in Flux]
POS 598 [Qualitative Methods in U.S. International Relations]

President's Community Enrichment Program, "Adventures in Learning"

AIL 101 [The Most Dangerous Place in the World? A History of U.S.-Latin American Relations]
AIL 101 [America's Longest War: The American Experience in Vietnam]
AIL 101 [Distant Chords of Memory: War, Culture, and Memory in the United States]

AIL 101 [A Crucible of Blood: The History of Mexico]
AIL 101 [Lands of Jungles and Mountains: A History of Latin America]
AIL 101 [The Closest of Neighbors, Often the Most Distant of Friends: U.S.-Mexican Relations]
AIL 101 [An Eagle Circling the World: America as a Global Superpower]
AIL 101 [In Search of Monsters to Destroy: U.S. Military Interventionism in the World]
AIL 101 [American History A to Z: From John Adams to Peter Zenger (and a lot in between), 1620-1900]
AIL 101 [American History A to Z: From the Atomic Bomb to Emilio Zapata (and a lot in between), 1900-2013]
AIL 101 [The American Way of War]
AIL 101 [Immigration in the Modern World]

Chapman University

HIST 296 Historiography: Americans at War
HIST 252 War and Film
HIST 337 World War II on the International Level
HIST 500 Core Readings in War and Society
HIST 510A War and Popular Culture
HIST 510B Presidents at War
HIST 510C The American Way of War
HIST 520 Methodology in the Writing of International Relations

DIRECTOR OF RESEARCH AT UNDERGRADUATE AND GRADUATE LEVEL

CHAPMAN UNIVERSITY

Director:

Jonathan Banks
Michael MacInnes
Jillian Bass
Christen Kadkhodia
Francesca Lichauco
Nick Durrell
Dane Hanson
Devin Clarke
Justin Reid
Doug Morrow
Kyle Missbach
Brian Corteville
Jim McCain
Grayson Jones

Committee Member:

Bo Kent
Joseph Dickinson
Winston Andrus
Gregory Falcon
Randy Felder

ARIZONA STATE UNIVERSITY

SUN ANGEL UNDERGRADUATE RESEARCH AWARDS

Brittany Shumate, "Toward a Colorblind Society?: The Reagan Administration and the Renewal of the Voting Rights Act," 2002.
Erika Neff, "Religion and Foreign Policy: The Origins of Jimmy Carter's Human Rights Policy," 1997.

UNDERGRADUATE HONORS THESES

Chiara Hommel, "A Morning in Vietnam: The Lives of the Nurses Who Served," May 2018 [director]
Megan Manning, "J.D. Manning: The Life of a World War II Draftee," May 2018 [director]
Caroline Fish, "A Ghost Set in Stone: The Memorialization of Nathan Bedford Forrest in Tennessee," May 2016 [director]
Kathryn Rodriguez, "Comparing the Scars of War: Comparative Oral Histories of Vietnam and Iraq Veterans," May 2013 [director]
Natalie Paasch, "Tears in the Desert: Life in the Japanese Internment Camps at Poston and Gila Bend, Arizona," May 2013 [director]
Kelly Roberson, "Terrorism to the South: The Argentine Bombings of the 1990s and Their Immediate and Long Term Effects," April 2013 [director]
Seth Pate, "A Chinese Move Toward Democracy?: Its Impact on U.S. Foreign Relations," April 2008 [director]
Breanna Gormley, "Battling Neighbors: The United States Response to the Honduran-El Salvadoran 'Soccer War,'" April 2008 [director]
Erika Neff, "A Man Ahead of His Times: The Religious and Philosophical Origins of Jimmy Carter's Human Rights Policy," May 1998 [director]
Margaret Barney-O'Neill, "Food Will Win the World: Herbert Hoover and American Food Relief to Poland, 1917-1921," May 1997 [director]

M.A. THESES

Christopher Dean, "The Court Martial of Littleton Waller: A Study in the Atrocity in War in Early Twentieth Century America," July 2009 [director]
Major Timothy Cochran (US Army), "Creating the Many Flag's Campaign: The United States and South Korea and the Decision to Commit ROK Troops into South Vietnam, 1964-

1965," July 2004 [director]
 Brad Krones, "But the Smoke Brought Action: Patrick Hurley and the China Policy," June 2003 [director]
 Jeffrey Lindberg, "Advice and Dissent: Senator Wayne Morse and United States Foreign Relations, 1945-1964," August 1998 [director]
 Laura Spannagel, "Popular Culture as Political Protest: Reagan and the Central American Crisis," August 1997 [director]
 Eugenie Heebe, "American Foreign Relations During the Cold War: Historiographical and Research Analyses," December 1997 [director]

PH.D. DISSERTATIONS

Completed:

Sabrina Thomas, "The Value of Dust: The Amerasian Issue in American Politics and Diplomacy, 1975-1991," March 2015 [director]
 Jean-Marie Stevens, "'They Fought as Bravely as Any American Fighting Men': Conservative Republicans and the Attempt to Save American Exceptionalism from the Loss in Vietnam, 1975-1991," October 2014 [director]
 Jon Flashnick, "'Blood is Thicker than Water: Anglo-American Rapprochement in the Mid-Nineteenth Century, 1823-1872," May 2014 [director], instructor Glendale Community College.
 Blake Jones, "The Prophet from Plains?: The Religious Origins of President Jimmy Carter's Worldview," April 2013 [director], Assistant Professor, Ohio Valley University
 Winner of the Michael Steiner Award for best dissertation, ASU SHPRS, May 2013
 Brock Ruggles, "Political Punk and the Radical Tradition in Music: The USA, 1979-1991" [director].
 Penny Moon, "'We Have Got to Lead Them in the Ways of Peace:' The Catholic Peace Fellowship in the Vietnam Era," June 2001 [director], Assistant Professor, Bethel College

PH.D. QUALIFYING COMMITTEE

Completed:

Sabrina Thomas, winner of Graduate College Diversity Fellowship [Modern U.S. foreign relations, chair]
 Carlos López, winner of Graduate College Diversity Fellowship [Modern U.S. military history, chair]
 Jon Flashnick [Modern U.S. foreign relations, chair]
 Jean Marie Stevens [Modern U.S. foreign relations, chair]
 Brock Ruggles [Modern United States, chair]
 Mark Ashurst-McGee [Modern United States, chair]
 Penny Moon [Modern United States, chair]
 Joan Miller [Modern U.S. military history, chair]
 Blake Jones [Modern U.S. foreign relations, chair]

James Holeman [Modern U.S. foreign relations, chair]

MEMBER OF A COMMITTEE

UNDERGRADUATE HONORS THESES

Anthony Ricci, "The Snowden Effect: Examining the Legal, Policy, and Political Implications of the Revelations about the NSA Bulk Collection Metadata Program," April 2014
[David Gartner, O'Connor School of Law, director]

Lindsay Hughes, "Democracy to Communism and Back: The Rhetorical Debate on Central America during the 1980s," December 2006 [Shel Simon, Department of Political Science, director]

Adam Michael, "An Analysis of the Political Maneuvering of Two Congress of Vienna Delegates, Prince Klemens Metternich of Austria and Lord Robert Castlereagh of Great Britain," May 2001 [Victoria Thompson, director]

Ron Von Burg, "Revolutionary War Diaries and the American Military Experience," May 1997
[Susan Gray, director]

MA THESES

Completed:

Ted Martens, "Cross Border Partnership and Tourism Management of International Parks: A Case Study of La Amistad," [Timothy Dallen, Department of Recreation Management and Tourism, director]

Eric Nedergaard, "Refusing the Line: The Legacy of the Civil War and the Black Cadets at West Point," July 2003 [Brooks Simpson, director]

Fred Amis, "A Tale of Two Dams: Environmentalism in Nebraska," June 2001 [Phil Vandermeer, director]

Bruce Mehren, "Delayed Conquest: Nicaragua and the Mosquito Shore, 1502-1894," May 1999
[Lew Tambs, director]

James Frusetta, "The United States Balkan Legations and the Macedonia Question, 1919-1941"
[Stephen Batalden, director]

Joy Margheim, "U.S.-Mexican Copyright Relations in the Twentieth Century," December 1996
[Beth Luey, director]

PH.D. DISSERTATIONS

Completed:

James Labar, "The Salt River Project: How Projects Shape the Essence of Organization" [Jann Warren Findley, director]

Brian D'Haeseleer (American University), "From Jungles to the Mountains: The American Counterinsurgency Experience in El Salvador, 1979-1992," [Max Friedman, director]

Aaron Moulton (University of Arkansas), "The Transnational 'Cold' War in the Greater

Caribbean Basin: Revolutionary Exiles, Presidents, Counterrevolutionary Exiles, Dictators, and the United States, 1944-1954" [Randall Woods, director]

Roger Meade, "Discoveries and Collisions: The Atom, Los Alamos, and the Marshall Islands," April 2014 [Phil Vandermeer, director]

Benjamin Hruska, "Baptized by Saltwater": Acts of Remembrance and Commemoration Surrounding the *USS Block Islands, CVE-21 & CVE-106*," April 2012 [Victoria Thompson, director]

Jill Horohoe, "The First Ladies of the Early 20th Century: Studies in Femininity in the Progressive Era," May 2010 [Gayle Gullett, director]

Michael Casavantes, "Polishing The Jewel: The Role Of The Arizona Republic In The Growth And Development Of Phoenix: 1920-1974" [Phil Vandermeer, director]

Jay Precht, "'The Lost Tribe Wanders No More': A History of the Coushatta Tribe of Louisiana" May 2006 [Peter Iverson, director]

Matthew Makley, "'These Will be Strong': A History of the Washoe People" May 2006 [Peter Iverson, director]

Jason Gart, "Under the Radar: The Rise of the Electronics and Aerospace Industries in Cold War Arizona, 1945-1968," June 2006 [Noel Stowe, director]

Stephen Sloan, "Negotiating a Senate of Place in the Modern Salt River Valley: Urbanites in the Desert," August 2003 [Noel Stowe, director]

Rob Robinson, "Vice and Tourism on the U.S.-Mexico Border: A Comparison of Three Communities in the Era of U.S. Prohibition," July 2002 [Arturo Rosales, director]

Daniel D'Oney, 'The Cruellest Lies Are Often Told in Silence': The Houma Tribe Between 1699 and 2000" May 2002 [Peter Iverson, chair]

Bruce Zachary, "A Nascent Federalism: Federal Urban Relations, Public Housing in Phoenix, Arizona and San Diego, California, 1933-1949," July 2001 [Brad Luckingham, director]

Matt McCoy, "Desert Metropolis: Image Building and the Growth of Phoenix, 1940-1965," August 2000 [Brad Luckingham, director]

Jakko Puisto, "'This Is My Reservation, I Belong Here:' The Salish Kootenai Struggle Against Termination," August 2000 [Peter Iverson, director]

Patrick Lukens-Espinoza, "Mexico, Mexican Americans and the FDR Administration's Racial Classification Policy: Public Policy in Place of Diplomacy," December 1999 [Arturo Rosales, director]

Russell Smith, "Edward Grigg, British Conservatism, and the Empire," August 1998 [Roger Adelson, director]

PH.D. QUALIFYING COMMITTEE

Completed:

Jakko Puisto, [Modern United States, Peter Iverson, chair]

Rob Robinson [Modern United States, Arturo Rosales, chair]

Russell Smith, [Modern United States, Roger Adelson, chair]

Mara Rutten [Modern United States, Peter Iverson, chair]

Doug Seefeldt [Modern United States, Peter Iverson, chair]

Jaime Ruiz [Modern United States, Arturo Rosales, chair]

Bruce Zachary [Modern United States, Brad Luckingham, chair]
Matthew McCoy [Modern United States, Brad Luckingham, chair]
Jeff Shepherd [Modern United States, Peter Iverson, chair]
Sam Schmeding [Modern United States, Robert Trennert and Steve Pyne, chairs]
Stephen Sloan [Modern United States, Peter Iverson and Noel Stowe, chairs]
Mark Ashurst-McGee [Modern United States, chair]
Laurie Arnold [Modern United States, Peter Iverson, chair]
Scott Scratton [Modern United States, Noel Stowe, chair]
James Labar, [Modern United States, Noel Stowe, chair]
Alton Carroll [Modern United States, Peter Iverson, chair]
Jay Precht [Modern United States, Peter Iverson, chair]
Matthew Makley [Modern United States, Peter Iverson, chair]
Judy Comer-Schultz [Modern United States, Noel Stowe, chair]
Eric Nedergarrd [Modern United States, Brooks Simpson, chair]
Darby Moore [Modern United States, Noel Stowe, chair]
Susan Lenox [Modern United States, Phil Vandermeer, chair]
Jill Horohoe [Modern United States, Noel Stowe, chair]

TEACHING MENTOR FOR GRADUATE STUDENTS/PREPARING FUTURE FACULTY PROGRAM

Jaime Aguila [1996-1998]
Lisa Dyea [1996-1998]
Adam Sowards [1998]
Elizabeth Carney [1998]
Penny Moon [1997-2000]
Sam Schmeding [1999-2000]
Paul Heitter [1997-1998]
Greg Lewis [1997-1998]
Timothy Braatz [1997-1998]
Stephen Sloan [1998-2000]
Bruce Zachary [1998-2000]
Bruce Petersen [1998-1999]
Matt McCoy [1998-2000]
Shawn England [2000]
Tim Cochran [2002-04]
Kara Carroll [2005-2007]
Jon Flashnick [2005-2007]
Jean-Marie Stevens [2007-2012]
Bonnie Thompson [2007-2009]
Blake Jones [2008-2013]
James Holeman [2008-present]
Sabrina Thomas [2009-present]

RESEARCH PAPERS PRESENTED

- "When the War Never Ends: Veterans and the Vietnam War," Austin Community College History Symposium Featured Speaker, October 2019 (20 pages).
- "The Forever Soldiers: Americans at War in Afghanistan and Iraq," Charles C. Griffin Memorial Lecture, Vassar College, September 2019 (16 pages)
- "Is This Treason: The October Surprise that Wasn't," Center for Presidential History and Clements Center for Southwest Studies, Southern Methodist University, March 2019 (14 pages).
- "As a Result, I Will Not Seek Re-election: The March 31, 1968 Speech," Robert Maxwell Lecture, Stephen F. Austin University, Nacogdoches, Texas, February 2019 (16 pages).
- "Is This Treason?: The October Surprise that Wasn't," University of Oklahoma, Norman, Oklahoma, October 2018 (14 pages).
- "The Election of 1968: The Short and Long-Term Consequences," Humanities Texas Fall Workshop, Austin, Texas, October 2018 (15 pages)
- "The Year of the Continuous Nightmare," National Endowment for the Humanities Summer Seminar, Southern Methodist University, Dallas, Texas, June 2018, (20 pages)
- "As a Result, I Will Not Seek Re-election: The March 31, 1968 Speech," Sivert O. and Marjorie Allen Skotheim Memorial Lecture, Whitman College, Walla Walla, Washington, April 2018 (16 pages).
- "An Obsession: The Reagan Administration and Central America," U.S. State Department, June 2017 (15 pages)
- "The Mouse that Roared: Oscar Arias Versus the Reagan Administration Over Peace in Central America," Clements Center Conference, University of Texas, Austin, Texas, January 2017 (22 pages).
- "Coming Home: The Challenges of Contemporary Veterans in the Classroom," Roundtable Discussant, American Historical Association Annual Meeting, Denver, Colorado, January 2016 (10 pages).
- "Teaching U.S. History in the Global Context," Roundtable Discussant, American Historical Association Annual Meeting, Denver Colorado, January 2016 (10 pages).
- "The Morenci Marines: A Tale of Small Town Vietnam and the Vietnam War," Center for the American West, University of Colorado, Boulder, Colorado, October 2016 (15 pages)
- "The Morenci Marines: A Tale of Small Town Vietnam and the Vietnam War: Incorporating the Story into the Secondary Classroom" Featured Speaker at the Arizona Council for History Education, August 2016 (15 pages)
- "The Past, Present, and Future of Cuba and Its Relationship with the United States, Fletcher School of Law and Diplomacy, Tufts University, November 2015 (10 pages)
- "The Morenci Marines: A Tale of Small Town America and the Vietnam War," The Helen Devitt Jones Memorial Lecture, The Vietnam Center and Archive, Texas Tech University, October 2015 (15 pages)
- "An Obsession: The Reagan Administration and Central America, 1981-1989," John A. Adams Center for Military History and Strategic Analysis, Virginia Military Institute, November 2014 (10 pages)
- "Living Historical Memory: The Morenci Marines, Public and Living Histories," Institute for Historical Studies, University of Texas-Austin, February 2014 (12 pages)
- "Red, White, and Blue to the Corps, 1966: The Morenci Nine and the Decision to Join," McMullen Symposium, United States Naval Academy, September 2013 (10 pages).
- "Between Sorrow and War: The Morenci Nine and the Memory of the Vietnam War in Small

- Town America," Presidential Address for the Pacific Coast Branch of the American Historical Association, San Diego, California (17 pages)
- "Roundtable on Terry Anderson's *Bush's Wars*," Pacific Coast Branch of the American Historical Association, Seattle, Washington, August 2011 (9 pages)
- "Roundtable on Latin America and the Long Cold War," Pacific Coast Branch of the American Historical Association, Seattle, Washington, August 2011 (10 pages)
- "Domestic Politics with Global Consequences: International Dimensions of Arizona SB 1070," Nyack College and National Association of Evangelicals, Washington, DC, November 2010.
- "Macho Presidents: Masculinity and Constructions of the Self and Its Impact on Modern American Presidents," Pacific Coast Branch of the American Historical Association, Santa Clara, California, August 2010 (10 pages).
- "War in the West: The Case of the Mining Towns during the Vietnam War," Pacific Coast Branch of the American Historical Association, Santa Clara, California, August 2010 (10 pages).
- "Roundtable on George Herring's *From Colony to Superpower*," Society for Historians of American Foreign Relations, Madison, Wisconsin, June 2010 (12 pages)
- "Big Daddy from the Perdenales: A Roundtable on the Legacy of Lyndon Johnson," Pacific Coast Branch of the American Historical Association, Albuquerque, New Mexico, August 2009 (8 pages).
- "The Forgotten Neighbors: The History of the United States and Latin America," The Robert and Alma Wade Lecture, Kentucky Wesleyan University, April 2009 (22 pages)
- "Grunts: The American Combat Soldier in Vietnam," University of Kentucky, April 2009 (15 pages)
- "Grunts: The American Combat Soldier in Vietnam," Vanderbilt University, April 2009 (15 pages)
- "Grunts: The American Combat Soldier in Vietnam," Baylor University, March 2009 (15 pages)
- "Grunts: The American Combat Soldier in Vietnam," Texas Christian University, March 2009 (15 pages)
- "Grunts: The American Combat Soldier in Vietnam," Texas A&M University, March 2009 (15 pages)
- "Grunts: The American Combat Soldier in Vietnam," Library of Congress, November 2008 (15 pages)
- "Views from the Beneath the Jungle Canopy: The American Grunts in Vietnam," Conference on the History of American Military Occupations, New York Military Affairs Symposium, October 2008 (12 pages)
- "Uncle Sam's Banana Wars: The History of U.S. Military Occupation in Latin America in the 1920s and 1930s," Conference on the History of American Military Occupations, New York Military Affairs Symposium, October 2008 (20 pages)
- "Grunts: The American Combat Soldier in Vietnam," Salzman Center for War and Peace Studies, Columbia University, October 2008 (15 pages)
- "The American Combat Soldier in Vietnam," New Jersey Vietnam Veterans Memorial Foundation, October 2008 (10 pages)
- "The Legacy of Ronald Reagan in the Modern World," Pacific Historical Association Branch of the American Historical Association, Pasadena, California, August 2008 (10 pages)

- "Anti-Americanism in Latin America: Its Origins and Manifestations," U.S. Southern Command, Miami, Florida, August 2008 (11 pages)
- "Latin America and the World," in "Space, Place and Latin America: A Roundtable on the Intersection of History and Geography in Inter-American Relations," Society for Historians of American Foreign Relations, Reston, Virginia, June 2007 (10 pages)
- "The Current Condition of U.S.-Latin American Relations," Command Staff and Strategic Planning Department, United States Military Academy, West Point, New York, May 2007 (20 pages)
- "Strategic Turning Points in Insurgencies: Case Studies in American History," Corps of Cadets, United States Military Academy, West Point, New York, May 2007 (15 pages)
- "The Short, Sweet Dream of Clive Garcia, Jr. USMC of Morenci, Arizona," Arizona Historical Society Annual Meeting, Pinetop, Arizona, April 2007 (twelve pages)
- "The Cowboy and the Caudillo: George W. Bush and Hugo Chavez in Contemporary U.S.-Venezuelan Relations," Roundtable Discussion Chair, Society for Historians of American Foreign Relations, Lawrence, Kansas, June 2006 (8 pages).
- "Senator Albert Gore, Sr. and the Issue of Civil Rights," Southern Festival of Books (also carried by C-SPAN), November 2005 (12 pages).
- "The Last Campaign: Senator Albert Gore and the 1970 Senate Race," National Press Club, December 2004 (10 pages).
- "Senator Albert Gore, Sr.: Tennessee Maverick," Southern Festival of Books (also carried by C-SPAN), Memphis, Tennessee, October 2004 (11 pages).
- "Red, White, and Blue to the Core: The Morenci 9 and the Decision to Join the Marine Corps, July 1966," Arizona Historical Society Annual Meeting, Safford, Arizona, April 2004 (twelve pages).
- "Latin America as Testing Ground: The United States in Latin America and Keys to Understanding Contemporary U.S. Foreign Relations," U.S. State Department, October 2003, Washington, D.C. (twenty pages).
- "Target Number One: Albert Gore Versus the White House and the Impact of Foreign Policy Issues on the 1970 Senate Campaign," Tennessee Conference of Historians, September 2003, Nashville, Tennessee (eleven pages).
- "In Search of a Hero: Conservative Mythology and the Creation of the Cult of Reagan," Pacific Coast Branch, American Historical Association, Tucson, Arizona, August 2002 (ten pages).
- "The United States and Latin America," Arizona Book Fair, Phoenix, Arizona, April 2002. (six pages)
- "The Muslim World and the United States," Series of seven lectures given throughout Arizona for the Arizona Humanities Council, Fall 2001-Spring 2002. (fifteen pages).
- "A Tennessee Volunteer's Views on Cuba: Senator Albert Gore, Sr. and the Bay of Pigs," Southern Historical Association, Louisville, Kentucky, November 2000 (eleven pages).
- "International Dimensions of the Costa Rican Civil War of 1948," Center for Latin American Studies, University of Kansas, April 1999 (fifteen pages).
- "Liberal, Populist, Progressive: The Political Philosophy of Senator Albert A. Gore, Sr.," Vanderbilt University, November 1998 (twenty pages).
- "White Knight for Civil Rights?: The Civil Rights Record of Senator Albert A. Gore, Sr.," Gore Center, Middle Tennessee State University, November 1997 (ten pages).

- "The Last Populist?: The Political Career of Senator Albert A. Gore, Sr.," Vassar College, October 1997 (fifteen pages).
- "A Small Town Boy in a Big World: The Foreign Policy Attitudes and Actions of Senator Albert A. Gore, Sr. during the Stormy 1960s," Society for Historians of American Foreign Relations, Washington D.C., June 1997 (eleven pages).
- "Putting the Dove in the Cross Hairs: The U.S. Response to the Esquipulus II Accords," Society for Historians of American Foreign Relations, Boulder, Colorado, June 1996 (twelve pages).
- "Geopolitical Weapons of the Weak: Responses of the Developing World to the United States," Society for Historians of American Foreign Relations, Annapolis, Maryland, June 1995 (twenty pages).
- "The Switzerland of the Americas?: Images, Myths, and Stereotypes in U.S.-Costa Rican Relations," South Eastern Council on Latin American Studies, Chapel Hill, North Carolina, March 1995 (eleven pages).
- "Internationalizing the Teaching of U.S. Foreign Relations: Incorporating the Foreign Perspective into the Classroom," Association of Writing Across the Curriculum, Charleston, South Carolina, February 1995 (ten pages).
- "Operating Outside Normal Channels: The Creation of Ties Between the Partido Liberación Nacional of Costa Rica and the Vital Center Liberals in the United States," Council on Inter-American Relations, Jacksonville, Florida, August 1994 (fourteen pages).
- "Resistance, Accommodation, and Subordination: Third World Responses to the United States in the Postwar Era," American Foreign Policy Center, Ruston, Louisiana, April 1994 (twenty pages).
- "Caught Between Feuding Neighbors: The U.S. Response to the Somoza-Figueres Rivalry, 1948-1955" South Eastern Council on Latin American Studies, Lafayette, Louisiana, April 1994 (eleven pages).
- "The U.S. Response to the Sian Captivity: Problems of the Understanding Complexities of Rural Societies," Society for Historians of American Foreign Relations, Charlottesville, Virginia, June 1993 (twelve pages).
- "Resisting Domination: The United States and the Nationalism of José Figueres, 1953-1957," Society for Historians of American Foreign Relations, Hyde Park, New York, June 1992 (ten pages).
- "Dependent Resistance: The History of U.S.-Costa Rican Relations," Ohio Valley Historical Conference, Richmond, Kentucky, October 1990 (eleven pages).
- "U.S.-Costa Rican Relations during the Revolution of 1948: The Origins of the Containment Policy in Latin America," Society for Historians of American Foreign Relations, College Park, Maryland, August 1990 (twelve pages).
- "The Costa Rican Revolution of 1948," Southwest Social Sciences Association, Houston, Texas, March 1988 (eleven pages)
- Featured speaker at the Texas Math and Science Teachers state convention, Austin, Texas, 1984, San Antonio, Texas, April 1986.

PUBLIC PRESENTATIONS SINCE 2001

- "The Drive for Peace in the World," Orange County United Nations Council, October 2022.

- "The New Politics of Latin America," Orange County World Affairs Council, July 2022.
- "As a Result, I Will Not Seek Re-election: The March 31, 1968 Speech," Georgetown Public Library, January 2019.
- "The LBJ Library in Historical Perspective," Longhorn Village, Austin, Texas, December 2018.
- "LBJ's 1968: The Year of the Continuous Nightmare," Book People Bookstore, Austin, Texas, September 2018.
- "LBJ and 1968: A Roundtable Discussion with Bill Moyers, Lynda Robb, and Tom Johnson," LBJ Library, Austin, Texas, June 2018.
- "The Russians Tanks Are Rolling: The U.S. Response to the Warsaw Pact Invasion of Czechoslovakia in 1968," Association of Former Intelligence Officers, Arizona Chapter, December 2017.
- "The Dirty Bastards Are Out to Embarrass Us: The Pueblo Crisis of 1968 and Understanding the North Koreans," Arizona Foreign Service Retirees Association, November 2017.
- "The Lasting Statement: The 14 Points in Historical Perspective," Scottsdale Public Library, November 2017.
- "The United States and World War I: Honoring the American Contribution in the Great War," Scottsdale Public Library, April 2017.
- "Honoring Our Veterans: Commemorating the 50th Anniversary of the Vietnam War," Scottsdale Public Library, November 2016.
- "The Ghosts of Isolationist Pasts: The Historical Origins of Isolationism in U.S. Foreign Policy," Wiseguises II, Scottsdale, Arizona, October 2016.
- "The Terrible Year of 1968 and the Legacy of Vietnam on Society and the Presidency," Front and Center Radio Talk Show, September 2016.
- "The Morenci Marines and the Legacy of Service," Sunday Sound Off, NBC Channel 12, Phoenix, Arizona, July 2016.
- "The Morenci Marines: A Tale of Small Town America and the Vietnam War," Salem State University, November 2015.
- "Greenlee County Vietnam Veterans and the Sacrifice and Service," American Legion Post, Clifton, Arizona, May 2015.
- "Vietnam Veterans and the Welcome Homes," Arizona State University/Pat Tillman Center, Glendale, Arizona, February 2015.
- "American Combat Soldiers in Vietnam: The Lasting Legacies," Veterans Heritage Hour Radio Show, Scottsdale, Arizona, February 2015.
- "The Morenci Marines: A Tale of Small Town America and the Vietnam War," Safford Public Library Monthly Series, November 2014.
- "Where Have All the Children Come From? Understanding the Origins of the Recent Central American Refugee Crisis, Wiseguises II, Scottsdale, Arizona, October 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Dale Center, University of Southern Mississippi, Gulfport, Mississippi, October 2014.
- "Morenci Marines: A Tale of a Small Town and the Vietnam War," Clements Center for the Study of the Southwest, Southern Methodist University, Dallas, Texas, September 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Texas Christian University, Fort Worth, Texas, September 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Texas A&M International University, Laredo, Texas, April 2014.

- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," University of Oklahoma, Norman, Oklahoma, April 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Oklahoma State University, Stillwater, Arizona, April 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," United States Naval War College Eight Bells Symposium, Newport, Rhode Island, March 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Corps of Cadets, United States Military Academy, West Point, New York, March 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Tucson Festival of Books, Tucson, Arizona, March 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Burton Barr Public Library, Phoenix, Arizona, February 2014.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," Eastern Arizona University, Thatcher, Arizona, January 2014.
- "The Marines of Morenci," Arizona Horizon Program, PBS Channel Eight, November 2013.
- "The Morenci Marines: A Tale of a Small Town and the Vietnam War," SHPRS Community Forum, Phoenix Arizona, November 2013.
- "Guantanamo Bay and the Politics of Human Rights and Foreign Policy," Public History Community Engagement Project, October 2013.
- "All Politics Is Global: Foreign Policy in Past and Present Presidential Elections," School of Historical, Philosophical, and Religious Studies Community Forum, October 2012.
- "The Morenci Nine and the Vietnam War," Mesa Rotary Club, October 2012.
- "The International Dimensions of Arizona SB1070," Arizona Foothill Democrats Club, October 2010.
- "The Great Depression and New Deal," Arizona Academic Decathlon Coach's Conference, September 2010.
- "Grunts: The American Combat Soldier in Vietnam," Carefree Lion's Club, March 2010.
- "Grunts: The American Combat Soldier in Vietnam," Voice of America Radio, Washington, D.C., November 2008.
- "The Veterans of Greenlee County and Their Impact on America and the World," Memorial Day Service, Veterans of Foreign Wars and Vietnam *Veteranos*, Clifton, Arizona, May 2007.
- "The Mexican Revolution of 1910 in Modern Mexican History," International Baccalaureate Program, Westwood High School, Mesa, Arizona, April 2007.
- "The Reagan Legacy: Conservative Mythology and Ronald Reagan," WORT Radio, Madison, Wisconsin, February 2007.
- "Red Tide Rising?: The Rise of the Latin American Left and Its Impact on U.S.-Latin American Relations," The Phoenix Committee on Foreign Relations, Phoenix, Arizona, January 2007.
- "The Troop Surge in Iraq: President Bush's Speech and International Public Opinion," *The Arizona Republic* Forum, Phoenix, Arizona, January 2007.
- "Red Tide Rising?: The Rise of the Latin American Left and Its Impact on U.S.-Latin American Relations," The Woodside Group, Cave Creek, Arizona, January 2007.
- "Always Faithful: The Morenci 9, Small Town America, and the Vietnam War," Arizona Historical Society, Tucson, Arizona, November 2006.
- "Grunts: The American Combat Soldier in Vietnam," Scottsdale Public Library, Arabian

- Branch, November 2006.
- ““Always Faithful: The Morenci 9, Small Town America, and the Vietnam War,” Daughters of the American Revolution, Mesa, Arizona, October 2006.
- “Brazil: The Sleeping Giant?” World Affairs Council, Scottsdale, Arizona, April 2006.
- “The Gadsden Purchase,” Yuma Crossing State Historic Park, Yuma, Arizona, March 2006.
- “Always Faithful: The Morenci 9, Small Town America, and the Vietnam War,” Yuma Crossing State Historic Park, Yuma, Arizona, March 2006.
- “The Closest of Neighbors, Often the Most Distant of Friends: The United States and Mexico,” Maricopa Southeast Regional Library, Gilbert, Arizona, January 2006.
- “As American as Cherry Pie: The History of American Dissent in U.S. Foreign Policy,” the Woodside Group, Cave Creek, Arizona, January 2006.
- “The History of Dissent in America,” The Pat McMahon Show, KAZTV, Phoenix, Arizona, October 2005.
- “The Vietnam War & Its Lasting Impact on the United States,” Maricopa Country Library, Mustang Branch, Scottsdale, Arizona, May 2005.
- “The Vietnam War in Historical Context,” Kerr Cultural Center, Scottsdale, Arizona, April 2005.
- “Senator Albert Gore, Al Gore, and the Current State of Affairs in America,” The Charles Goyette Show, Air America Phoenix, KPHX, Phoenix, Arizona, March 2005.
- “Senator Albert Gore, Sr.: Tennessee Maverick,” The Book Club, WFGH Radio, Abingdon, Virginia, January 2005.
- “In the Eagle’s Shadow: The United States and Latin America,” The Woodside Group, Cave Creek, Arizona, January 2005.
- “Always Faithful: The Morenci 9, Small Town America, and the Vietnam War,” John Wesley Powell Museum, Page, Arizona, December 2004.
- “Always Faithful: The Morenci 9, Small Town America, and the Vietnam War,” Northern Arizona University, Flagstaff, Arizona, December 2004.
- “The Gadsden Purchase,” Salazar-Ajo Library, Ajo, Arizona, November 2004.
- “The Closest of Neighbors, Often the Most Distant of Friends: The United States and Mexico,” Maricopa County Library, Foothills Branch Library, Glendale, Arizona, November 2004.
- “Senator Albert Gore, Sr.: Tennessee Maverick,” John Siegenthaler’s “Word on Words,” Nashville Public Television, Nashville, Tennessee, October 2004.
- “Presidential Elections and American Foreign Policy,” Tempe Public Library and the Arizona Humanities Council, Tempe, Arizona, October 2004.
- “The United States and Mexico: The Challenges of Coexistence,” International Press Club and Greater Phoenix Economic Council, Phoenix, Arizona, October 2004.
- “The United States and Mexico: Shared Visions, Competing Interests,” Foreign Press Association and the Greater Phoenix Chamber of Commerce,” Phoenix, Arizona, October 2004.
- “Always Faithful: The Morenci 9, Small Town America, and the Vietnam War,” University of Arizona, Tucson, Arizona, April 2004.
- “The Overthrow of Jean-Bertrand Aristide in Haiti,” The Mike Newcomb Show, Air America Phoenix, KPHX, Phoenix, Arizona, March 2004.
- “The Closest of Neighbors, Often the Most Distant of Friends: The United States and Mexico,” Florence Community Library, Florence, Arizona, February 2004.
- “In the Eagle’s Shadow: The United States and Latin America,” Tempe Historical Museum,

Tempe, Arizona, February 2004.

"Always Faithful: The Morenci 9, Small Town America, and the Vietnam War," Morenci High School, Morenci, Arizona, November 2003.

"Always Faithful: The Morenci 9, Small Town America, and the Vietnam War," Eastern Arizona College, Thatcher, Arizona, November 2003.

"Always Faithful: The Morenci 9, Small Town America, and the Vietnam War," Tempe Historical Museum, Tempe, Arizona, November 2003.

"The United States and the Muslim World," Phoenix Public Library, Phoenix, Arizona, December 2001.

"The United States and the Muslim World," Arizona State University Downtown Center, Phoenix, Arizona, November 2001.

"The United States and the Muslim World," Lake Havasu Public Library, Lake Havasu, Arizona, November 2001.

"The United States and the Muslim World," Tempe Public Library, Tempe, Arizona, October 2001.

"The United States and the Muslim World," Maricopa County Library, Glendale Branch, Glendale, Arizona, October 2001.

PEOPLE WILLING TO PROVIDE LETTERS OF RECOMMENDATION:

Dr. Laura Belmonte
Dean of Liberal Arts and Human Sciences
Virginia Tech University
200 Stranger Street
Blacksburg, Virginia 24061
(918)906-2134
belmonte@vt.edu

Dr. Marisa Cianciarulo
Dean of the Dale E. Fowler School of Law
Doy and Dee Henly Chair in Law
Chapman University
One University Drive
Orange, California 92866

Dr. Chouki El-Hamel
Professor of History
Arizona State University
Box 874302
Tempe, Arizona 85287
Cell: (480)735-1441
Chouki@asu.edu

EXHIBIT 11

Invoice for Services



Date 8/1/2024

Invoice # 1077

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Monday, July 8, 2024	Online research for case to create a bibliography	2 hours	\$700
Wednesday, July 9, 2024	More work on bibliography and research and preparation for meeting	1 hour	\$350
Thursday, July 11, 2024	Meeting with research legal group	1 hour	\$350
Friday, July 12, 2024	Secondary Reading and taking notes	2 hours	\$700
Saturday, July 13, 2024	Secondary Reading and taking notes	2 hours	\$700
Monday, July 15, 2024	Secondary Reading and taking notes	2 hours	\$700
Tuesday, July 16, 2024	Organizing Materials and emails gathering Information from previous researchers in the field	1 hour	\$350
Friday, July 19, 2024	Zoom meeting with former congressional staffer and Rand expert	1 hour	\$350
Saturday, July 20, 2024	Secondary Reading and taking notes	2 hours	\$700
Sunday, July 21, 2024	Secondary and Primary Document Reading and taking notes	2 hours	\$700
Monday, July 22, 2024	Organizing materials and reading and taking notes on secondary and primary sources	2 hours	\$700
Tuesday, July 23, 2024	Taking notes on primary sources	2 hours	
Wednesday, July 24, 2024	Reading theses and taking notes on Secondary sources	2 hours	\$700
Thursday, July 25, 2024	Reading theses and taking notes on Digital community archive	2 hours	\$700
Friday, July 26, 2024	Conversation with Chief Marine Corps Archivist, John Lyles Reading and taking notes on digital	.5 hours	\$175

	archive project and theses	1 hours	\$350
Sunday, July 28, 2024	Reading government primary documents	1.5 hours	\$525
Monday, July 29, 2024	Reading government primary documents	2 hours	\$700
Tuesday, July 30	Reading and organizing new materials in recently obtained folder of materials	1 hour	\$350

Totals		30 hours	\$10,500
--------	--	----------	----------

Total to be Paid for July for July 2024: \$10,500

Invoice for Services

Date 9/1/2024

Invoice # 1079

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Thursday, August 1, 2024	Reading government and primary documents	2 hours	\$700
Saturday, August 3, 2024	Reading government and primary documents	1 hours	\$350
Tuesday, August 6, 2024	Reading <i>The Globe</i>	2 hours	\$700
Sunday, August 11, 2024	Review of finding aids for the archives	1 hours	\$350
Monday, August 12, 2024	Onboarding and collection of materials to Review with initial overview of early collections	3 hours	\$1050
Tuesday, August 13, 2024	Review of personal collections in Marine Corps Archive	5 hours	\$1750
Wednesday, August 14, 2024	Meeting with Leslie and Zack to review materials found Review of personal collections in Marine Corps Archive	.75 hours 5 hours	\$262.50 \$1750
Thursday, August 15, 2024	Review of photographic collections in Marine Corps Archive	3 hours	\$1050
Friday, August 16, 2024	Mapping of Command Chronologies	1 hours	\$350
Tuesday, August 20, 2024	Corresponding with head of National Archives II unit and the Naval Historical and Heritage Archive.	.5 hours	\$175
	Writing narrative from materials at the Marine Corps	.5 hours	\$175
Friday, August 23, 2024	Meeting with leadership team	.75 hours	\$262.50
Sunday, August 25, 2024	Reading and taking notes for deposition	1 hour	\$350
Monday, August 26, 2024	Reading journal articles and taking notes and working on documents provided for plaintiff	1 hour	\$350
Tuesday, August 27, 2024	Reading and taking notes on deposition	1 hour	\$350
Wednesday, August 28, 2024	Reading Command Chronologies Reading <i>The Globe</i>	1 hour 1 hour	\$350 \$350
Thursday, August 29, 2024	Reading and taking notes from deposition	1 hour	\$350
Friday, August 30, 2024	Meeting with leadership team Oral History with plaintiff Organizing and Transcribing oral history	1 hour .5 hour .5 hour	\$350 \$175 \$175
Totals		33.5 hours	\$11725

Total to be Paid for August 2024: \$11,725

Invoice for Services

Date 10/1/2024

Invoice # 1080

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Sunday, September 1	Transcribing notes from oral history and reading of <i>The Globe</i>	1 hour	\$350
Wednesday, September 4	Working on deposition and taking notes	1 hour	\$350
Sunday, September 8	Reading and researching materials from in preparation for tour	1 hour	\$350
Monday, September 9	Working on <i>The Globe</i> , November-December 1977	2 hours	\$700
	Working on <i>Field and Hygiene and Sanitation Manual</i>	1.5 hours	\$525
Tuesday, September 10	Tour of base with Mike Partain and Jerry Ensminger	5 hours	\$1750
Wednesday, September 11	Reading and organizing command chronologies	2 hours	\$700
	Reading <i>The Globe</i>	1 hour	\$350
Saturday, September 14	Reading Command Chronologies	1 hour	\$350
Tuesday, September 17	Organizing notes on command chronologies and <i>The Globe</i> for meeting	1 hour	\$350
Wednesday, September 18	Meeting with leadership team	.75 hour	\$262.50
Thursday, September 19	Working on research	1.5 hours	\$525
Friday, September 20	Research and organizing materials for submission	1.0 hour	\$350
Saturday, September 21	Working on <i>the Globe</i> and organizing materials for submission	1.0 hour	\$350
Sunday, September 22	Working on research for submission	1.5 hours	\$525
Tuesday, September 24	Work on <i>The Globe</i> and Command Chronologies	1.0 hour	\$350
Thursday, September 26	Meeting with team leaders	.5 hours	\$175
Friday, September 27	Working on research for general narrative	1.0 hour	\$350
Monday, September 30	Research and writing report on life at Camp Lejeune	1.0 hour	\$350
Totals		25.75 hours	\$9012.50

Total to be Paid for September 2024: \$9,012.50

Invoice for Services

Date 11/1/2024

Invoice # 1081

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Tuesday, October 1, 2024	Transcribing notes from <i>The Globe</i>	1.0 hour	\$350
Thursday, October 3, 2024	Research on the narrative in existing materials	1.0 hour	\$350
Sunday, October 6, 2024	Research and writing on the narrative	2 hours	\$700
Monday, October 7, 2024	Research and writing on the narrative	1.5 hours	\$525
Tuesday, October 8, 2024	Research and writing on the narrative	1.5 hours	\$525
Wednesday, October 9, 2024	Research and writing on the narrative	1.0 hour	\$350
Thursday, October 10, 2024	Meeting with leadership team	.25 hours	\$87.50
	Research and writing on the narrative	1.5 hours	\$525
Friday, October 11, 2024	Research and writing on the narrative	1.5 hours	\$525
Saturday, October 12, 2024	Research and writing on the narrative	1.0 hour	\$350
Sunday, October 13, 2024	Research and writing on the narrative	1.0 hour	\$350
Monday, October 14, 2024	Research and writing on the narrative	1.5 hours	\$525
Tuesday, October 16, 2024	Research and writing the narrative	1.5 hours	\$525
Wednesday, October 17, 2024	Research and writing the narrative	1.0 hour	\$350
Thursday, October 18, 2024	Research and writing the narrative	1.0 hour	\$350
Friday, October 19, 2024	Research and writing the narrative	1.5 hours	\$525
Saturday, October 20, 2024	Research and writing the narrative	1.5 hours	\$525
Sunday, October 21, 2024	Research and writing the narrative	1.5 hours	\$525
Monday, October 22, 2024	Research and writing the narrative	1.0 hours	\$525
Tuesday, October 23, 2024	Research and writing the narrative	1.0 hour	\$350
Wednesday, October 24, 2024	Research and writing narrative	1.0 hour	\$350
Wednesday, October 30, 2024	Online meeting with membership committee	.4 hours	\$140
Thursday, October 31, 2024	Editing and writing the narrative	1.0 hours	\$350
Totals		27.65 hours	
Total to be Paid for October 2024:			\$9677.50

Invoice for Services

Date 12/1/2024

Invoice # 1083

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Sunday, November 3, 2024	Writing on the narrative	1.0 hour	\$350
Monday, November 4, 2024	Meeting with Leadership Team	.5 hours	\$175
	Research and writing on the narrative	1.0 hour	\$350
Tuesday, November 5, 2024	Research and writing on the narrative	1.0 hour	\$350
Wednesday, November 6, 2024	Research and writing on the narrative	1.0 hour	\$350
Thursday, November 7, 2024	Research on the narrative	1.0 hour	\$350
Friday, November 8, 2024	Writing the narrative	1.0 hour	\$350
Saturday, November 9, 2024	Research and writing the narrative	1.0 hour	\$350
Sunday, November 10, 2024	Research and writing the narrative	1.0 hour	\$350
Monday, November 11, 2024	Writing narrative	1.0 hour	\$350
Wednesday, November 13, 2024	Meeting with Leadership Team	.5 hours	\$175
Friday, November 15, 2024	Writing narrative and collecting photos	1.0 hours	\$350
Saturday, November 16, 2024	Writing narrative	1.0 hour	\$350
Monday, November 18, 2024	Writing narrative and research	1.0 hour	\$350
Wednesday, November 20, 2024	Reviewing depositions and research	1.0 hour	\$350
	Meeting with leadership team	.5 hour	\$175
Friday, November 22, 2024	Phone call with leadership team	.5 hour	\$175
Saturday, November 23, 2024	Writing narrative and research	2.0 hours	\$700
Sunday, November 24, 2024	Writing the narrative and research	3.0 hours	\$1050
Monday, November 25, 2024	Writing the narrative and research	3.0 hours	\$1050
Tuesday, November 26, 2024	Writing the narrative and research	2.0 hours	\$700
Wednesday, November 27, 2024	Writing the narrative and research	3.0 hours	\$1050
Friday, November 29, 2024	Writing the narrative and research	3.0 hours	\$1050
Saturday, November 30, 2024	Writing the narrative and research	3.0 hours	\$1050
Totals:		34 hours	\$11900

Total to be Paid for November 2024: \$11,900

Invoice for Services

Date 1/1/2025

Invoice # 1086

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Sunday, December 1, 2024	Rewriting narrative and research	4 hours	\$1400
Monday, December 2, 2024	Rewriting narrative and research	5 hours	\$1750
Tuesday, December 3, 2024	Meeting with leadership team on Rewriting narrative and research	.5 hours 2 hours	\$175 \$700
Wednesday, December 4, 2024	Meeting with leadership	.5 hours	\$175
Thursday, December 5, 2024	Editing narrative and reviewing research	1.5 hours	\$525
Sunday, December 8, 2024	Reviewing materials, articles, and processing final edits	1.5 hours	\$525
Thursday, December 19, 2024	Reviewing government historian's report	1 hour	\$350
Friday, December 20, 2024	Reviewing government historian's report Meeting with research team	1 hour 1 hour	\$350 \$350
Saturday, December 21, 2024	Meeting with research team	3.5 hours	\$1225
Sunday, December 22, 2024	Research and writing on response	1.0 hour	\$350
Monday, December 23, 2024	Research and writing on response Phone call to expert	1.0 hour .5 hours	\$350 \$175
Tuesday, December 24, 2024	Research for report response	1.0 hour	\$350
Thursday, December 26, 2024	Research and writing on response	1.5 hours	\$525
Friday, December 27, 2024	Research and writing on response	1.5 hours	\$525
Saturday, December 28, 2024	Research and writing a response	1.5 hours	\$525
Sunday, December 29, 2024	Research and writing a response	2.0 hours	\$700
Monday, December 30, 2024	Meeting with research team	1.0 hour	\$350
	Research and writing a response	1.0 hour	\$350
Tuesday, December 31, 2024	Research and writing a response	1.5 hours	\$525
Total for December 2024		35 hours	\$12250

Invoice for Services

Date 2/1/2025

Invoice # 1087

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Wednesday, January 1, 2025	Researching and writing the response	2 hours	\$700
Thursday, January 2, 2025	Research and writing the response	2 hours	\$700
Friday, January 3, 2025	Team meeting	.75 hours	\$262.50
	Research and writing the response	1.0 hour	\$350
Sunday, January 5, 2025	Research and writing the response	2.0 hours	\$700
Monday, January 6, 2025	Research and writing the response	2.5 hours	\$875
Tuesday, January 7, 2025	Doing oral histories	1.0 hours	\$350
	Research and writing the response	2.0 hours	\$700
Wednesday, January 8, 2025	Research and writing the response	2.0 hours	\$700
Thursday, January 9, 2025	Research and writing a response	1.5 hours	\$525
Friday, January 10, 2025	Writing the response	1.5 hours	\$525
Saturday, January 11, 2025	Gathering materials for response	1.0 hours	\$350
Sunday, January 12, 2025	Gathering materials for response	1.5 hours	\$525
	Meeting with team	1.25 hours	\$437.50
Monday, January 13, 2025	Final editing of rebuttal	1.0 hour	\$350
Total for January 2024		23 hours	\$8150

Invoice for Services

Date 3/1/2025

Invoice # 1090

Kyle Longley
24536 Acadia Drive
Corona, CA 92883
Phone: (480)516-5475
Email: longley@chapman.edu; Kylelongley63@gmail.com

Billed To:

Bell Legal Group
219 Ridge Street
Georgetown, SC 29940

Date:	Description of Services	Hours Worked	Rate
Wednesday, February 5, 2025	phone call with leadership	.25 hour	\$87.50
Tuesday, February 11, 2025	reading and analyzing government response	1 hour	\$350
Wednesday, February 12, 2025	analyzing government response and reporting	1 hour	\$350
Thursday, February 20, 2025	phone call with leadership	.75 hour	\$262.50
Friday, February 21, 2025	research and writing on response to rebuttal	2.0 hours	\$700
Saturday, February 22, 2025	research and writing on response to rebuttal	.5 hour	\$175
Sunday, February 23, 2025	research and writing on response to rebuttal	2.0 hours	\$700
Monday, February 24, 2025	research and writing on response to rebuttal	1.5 hours	\$525
Tuesday, February 25, 2025	phone call with leadership	1.5 hours	\$525
	Research and writing on response	1.0 hour	\$350
Wednesday, February 26, 2025	research and writing on rebuttal	1.5 hours	\$525
Total for February 2025		13.0 hours	\$4550

Camp Lejeune, North Carolina Travel Invoice-Kyle Longley

Travel from Corona, CA to Camp Lejeune, North Carolina, Sunday, September 8 (left home at 8:30 AM)-
Wednesday, September 11 (9 PM returned home)

Airfare		\$1114.94 ¹
Hotel		\$550.31
Rental Car	\$235.13	
Gas for Rental Car	\$11.35	\$246.48
Personal Car Parking at Ontario	\$96	
Mileage to and from the Ontario Airport (60 miles at \$.67/mile)	\$40.20	\$136.20
Meals:		
Lunch 9.8.24	\$8.58	
Dinner 9.8.24	\$13.05	
Lunch 9.9.24	\$11.45	
Breakfast 9.10.24	\$16.39	
Lunch 9.10.24	\$15.40	
Dinner 9.10.24	\$20.00	
Lunch 9.11.24	\$17.99	
		\$102.86
Total Requested for Reimbursement:		\$2150.79

¹ This bill reflects being asked to change the flight twice to fit the schedule. I paid for a personal upgrade out of my own pocket for the final ticket. This was the last one charged for travel beyond that.

Marine Corps Archives (Quantico, VA) Travel Invoice-Kyle Longley

Travel from Corona, CA to Quantico, VA and Marine Corps Archives, Sunday, August 11 (left home at 8:45 AM)-
Friday, August 17 (1:30 AM returned home)

Airfare		\$1087.96
Hotel		\$1052.26 ¹
Cabs and Lyft		
Lyft to Ontario Airport (8/11/24)	\$53.80	
DCA-hotel (8/12/24)	\$120	
Lyft to Rental Car (8/12/24)	\$15.94	
Lyft to DCA from Stafford (8/16/24)	\$80.40 ²	
Lyft Ontario Airport-home (8/17/24)	\$61.93	
	Subtotal:	\$332.07
Rental Car (including gas paid)		\$220.50
Meals:		
8.11.24 [dinner]	\$12 [Delta]	
8.12.24 [dinner]	\$31.38 [Umi]	
8.13.24 [snack]	\$3.69 [Courtyard Hotel: on hotel bill]	
8.13.24 [snack]	\$5.25 [Marine University Café]	
8.13.24 [dinner]	\$43.23 [Portofino] ³	
8.14.24 [lunch]	\$15.99 [Merge Café] ⁴	
8.14.24 [snack]	\$6.32 [Courtyard Hotel: on hotel bill]	
8.15.24 [snack]	\$3.85 [Marine University Café]	
8.15.24 [dinner]	\$34.86 [Olla Café & Bar]	
8.16.24 [dinner]	\$24.71 [Nature Table's Bistro]	
	Subtotal:	\$181.28
Total Requested for Reimbursement:		\$2874.07

¹ The bill reflects a subtraction of food bought while at that hotel that has been added below under meals.

² I originally had a rental car at DCA scheduled (\$480 for five days). However, my flight from Atlanta was delayed, and we arrived after midnight. I took a taxi to Stafford and then got a rental the next day that I used until Friday when I returned in a Lyft. The costs were actually less than the rental car would have been.

³ I bought dinner for my colleague, and I have subtracted his costs. I had been instructed earlier that we would do federal per diem so I did not separate the bill (and in some areas lost the receipt).

⁴ Another meal that I picked up the costs of a staffer at the Marine Corps Archive. Once more, I had been instructed to function as I normally do on a federal per diem.

EXHIBIT 12

DECLARATION OF MIKE PARTAIN

I, Michael Partain, of full age, pursuant to section 1746 of title 28 of the United States Code, hereby declare under penalty of perjury as follows:

1. According to one of the founders of Public History, Robert Kelly, “Public History refers to the employment of historians and the historical method outside of academia: in government, private corporations, the media, historical societies and museums, even in private practice. Public Historians are at work whenever, in their professional capacity, they are part of the public process. An issue needs to be resolved, a policy must be formed, the use of a resource or the direction of an activity must be effectively planned and an historian is called upon to bring in the dimension of time: this is Public History.”¹
2. My discovery of the Camp Lejeune drinking water issue came shortly after my diagnosis with male breast cancer in April of 2007. The discovery came with a phone call from my father as I was leaving a post-operative doctor’s appointment following my radical right mastectomy. My father informed me that he had just watched a CNN news story involving a retired Marine Master Sergeant who testified to Congress earlier that day about how the government was studying the children born at Camp Lejeune from 1968 to 1987 due to their exposures to toxic drinking water at Camp Lejeune, my place of birth in January of 1968. Prior to my diagnosis, I worked as a claims adjuster for State Farm Insurance and before that, I was a History teacher at the International Baccalaureate High School in Bartow, Florida. My undergraduate degree is in History and I subsequently completed my Master’s Degree in History in 2021. My thesis was on Camp Lejeune.
3. After the phone call from my father, I rushed home and immediately turned on the TV to view the story my father had called me about and called Capitol Hill. I spoke with the office of Congressman Bart Stupak and left a message requesting they pass my contact information to Msgt. Jerry Ensminger, USMC (Ret). By the time I first spoke to Mr. Ensminger a few days later, he, along with Maj. Tom Townsend USMC (Ret) had been working on the Camp Lejeune drinking water contamination issue for ten years. I had a lot to learn in order to catch up. For the next six months, Jerry and I spoke regularly, often past midnight, as he briefed me on both the course of events and the historical details surrounding the drinking water contamination. During this time, I also began to examine the Marine Corps’ website, government inquiries and timeline.
4. It was during this time that Jerry and I realized that we needed a historical timeline of events with citations to help us educate both the media and members of Congress. The timeline itself was modeled after a homework assignment I used to give my I.B. students with their history assignments with one important modification. Due to the fact that we were openly calling into question the Marine Corp’s established narrative of the historical record, each entry on the timeline was hyper-linked to the actual Marine Corps, Navy, EPA or State of North Carolina document from which the entry was made. This enabled the reader to instantly fact check our information. Concurrently with the timeline project,

¹ Kelley, Robert. “Public History: Its Origins, Nature, and Prospects.” *The Public Historian*, vol. 1, no. 1, 1978, pp. 16–28. JSTOR, <https://doi.org/10.2307/3377666>. Accessed 16 Mar. 2025.

Andrea Byron, a dependent child exposed aboard the base, and I took the website started by Jeff Byron and continued by Mr. Ensminger (and now with me involved), “The Few, The Proud, The Forgotten,” and revamped the website to serve as a platform for the Camp Lejeune timelines and the documents the public had at our disposal regarding the contamination events. This project was completed by the Fall of 2008.

5. Throughout this fight for justice, Mr. Ensminger has been one of my primary sources of knowledge for Camp Lejeune and the drinking water contamination. His time aboard the base, his training as a Marine Corps drill instructor and subsequent twenty-five-year career with the Marine Corps has made him an indispensable asset to the community. Simply put, we would never have been able to achieve any form of justice had it not been for Mr. Ensminger and his undying love for his daughter, Janey. My father and grandfather were both Marine officers and while I have knowledge of the Marine Corps culture and history, without Mr. Ensminger, I would not have been able to curate, interpret, and evaluate the mountains of documents pertaining to Camp Lejeune.
6. Following my first visit to Capitol Hill with Mr. Ensminger in January of 2009, it became readily apparent that in order for us to gain any headway with Congress, we had to locate, organize, and educate our community. Many of the Marines and their families who served aboard Camp Lejeune during the contamination period from 1952-1987 left the base and returned back to small town America. My family was no exception and we settled in Florida two years after my father left the Marine Corps. My education in the field of History was critical in this regard, as we were engaged in a fight for justice with what I termed the “Institution of honor integrity”. Mr. Ensminger held me and all of us involved to a high standard of conduct, as would be expected of any historian who would otherwise be accused of bias. As Mr. Ensminger told me and countless others, “don’t speculate, don’t be sensationalistic and if you can’t back up your statements with a document or fact, keep your mouth shut! Because, if you don’t and make an unsubstituted claim to the media or congress, our credibility and our fight is over.” I applied the academic standards I learned as an undergraduate, the skill sets acquired as a teacher and the investigative nature of my work as a claims adjuster for property and liability claims to all of my research and work for the Camp Lejeune drinking water issue.
7. One of the roles Mr. Ensminger, Mr. Townsend and I have undertaken over the years has been to serve as representatives of the community to the government agency tasked with investigating the health effects for our exposures at Camp Lejeune. The Agency for Toxic Substances and Disease Registry (ATSDR) was tasked by Congress under Title 42 to investigate National Priority Listed (NPL) sites such as Camp Lejeune. The main product of their work for NPL sites is what is called a Public Health Assessment (PHA). Camp Lejeune’s PHA was initially issued in 1997. Our group was established in 2005 and termed the Community Assistance Panel (CAP). The CAP was comprised of members of the community and academic specialists who volunteered their time. Mr. Ensminger and Mr. Townsend were founding members of the CAP and I joined in 2007. Our meetings were held at the CDC in Atlanta every quarter and were recorded and transcribed by a court recorder. The CAP served as a vital conduit between the government scientists and the community.

8. Initially, our CAP meetings were attended by the Navy's Judge Advocate General attorneys along with members of the Department of the Navy. In April 2009, the voluminous handwritten Freedom of Information Act request submitted by Mr. Townsend along with investigations and research completed by Mr. Ensminger and I led to the ATSDR's withdrawal of their PHA for Camp Lejeune due to errors, missing documentation and the omission of benzene in their assessment. The withdrawal of the Camp Lejeune PHA was monumental because prior to this event, the agency had never rescinded a PHA for an NPL contamination site. Shortly after the April meeting, the Department of the Navy stopped sending their representatives from Camp Lejeune and attorneys to the ATSDR's CAP meetings. Instead, they sent a note taker to record and relay information between the ATSDR, the CAP and the Department of the Navy. It was also at this time that we discovered, through the ATSDR, the Department of the Navy had created a password-protected electronic document portal housing the documents and investigations into the estimated one million plus gallon fuel leak emanating from the base fuel depot over a 50-year period. The fuel from this leak was the source of the benzene missed in the initial ATSDR PHA for Camp Lejeune, to my understanding. The discovery of the electronic portal and subsequent media stories led to an inquiry by the Senate Judiciary Committee to ascertain whether or not the Navy was withholding other key documents about the Camp Lejeune drinking water contamination.
9. Sadly, Mr. Townsend passed away before the Camp Lejeune Justice Act was passed into law. Jerry and I continue to serve on the ATSDR CAP and have been involved in the projects undertaken by the ATSDR including but not limited to the health studies for Camp Lejeune, the Camp Lejeune water modeling projects, and the first of its kind Cancer Incidence Study on Camp Lejeune utilizing the cancer registries for all of the states in the U.S. Our role as CAP members was to provide information about the community and the base and suggestions for future studies. Often, we found ourselves functioning as fact checkers of the historical background used by the ATSDR in their work. Our meetings were open to the public and many times, members of the Camp Lejeune community at large were in attendance. Mr. Ensminger and I interviewed these people to expand our knowledge aboard the base, the history and the day-to-day lives of others who lived, served and worked at Camp Lejeune. In turn, we interacted with the scientists of the ATSDR to provide information for their work that many times was not otherwise available.
10. In one instance, we were shocked to discover that the Department of the Navy had failed to provide the well operation logbooks and the water treatment plant operation logbooks to the ATSDR scientists working on the water models for Camp Lejeune. Without these materials, the scientist had to make scientific estimates on which group of wells operated for a water treatment plant on any given day and what volume of water each well produced. These critical documents should have been retained under CERCLA documentation retention requirements when the base was listed on the NPL in 1989, to my understanding. Mr. Ensminger and I located a surviving water treatment plant operator to assist the ATSDR with their understanding of how the base's water treatment systems operated during the contamination period. This same former water treatment

plant operator also turned over to me well logbooks and a water treatment plant logbook he found in the trash in the 1990s for one of the water treatment systems aboard the base. It was not from one of the systems (Hadnot, Tarawa, Holcomb) under investigation by the ATSDR. But these surviving logbooks showed that such logbooks indeed used to exist, but now the others had apparently been lost by the Department of the Navy. I showed these documents to the ATSDR scientists and kept these documents until I turned them over to be placed in the document repository created by a Court Order in this ongoing matter, where they now can be found. The historical logbooks we recovered had entries dating back decades, as far back as the 1960s or earlier.

11. A testament to the validity of our work on Camp Lejeune is the fact that between Mr. Ensminger and myself, we have been asked to testify eleven times before Congress about the Camp Lejeune contaminated drinking water issue and we have both been guests to the White House for the Presidential signing of both of Camp Lejeune legislations. Our work was also memorialized in the award-winning documentary titled: “Semper Fi: Always Faithful”, released in 2011.
12. According to the ATSDR, up to an estimated one million Marines, Sailors, their families and base employees were exposed to the contaminated drinking water at Camp Lejeune between 1952 through 1987. Unlike their civilian counterparts across the country, the day-to-day life and operations aboard domestic military bases are not preserved for posterity and study beyond what is known as Command Chronologies. The base newspaper, The Globe, does provide us with an insightful weekly snapshot of base life and is a useful tool. Military communities aboard bases, like Camp Lejeune, are transitory in nature. A military base is a closed community inaccessible to the general public. Without preservation, critical knowledge about life during the Camp Lejeune drinking water contamination will be left to speculation. Our population is also aging and fading into history.
13. As a Historian, I feel that I have an obligation to raise the following question to the Court: as an element of appropriate relief under the Camp Lejeune Justice Act, may the Court consider taking steps to Order that there be a program to actively record the oral histories from this community? Camp Lejeune represents one of the biggest, if not the largest documented public drinking water contamination exposure event in this country’s history. Do we not owe it to future historians and public health scientists to capture as much information as we can about the exposed population at Camp Lejeune? Unfortunately, some, like my father, have passed. However, many others, like my mother and myself, remain. Through us and others, we have a collective memory which I respectfully submit needs to be preserved. In this digital age, it is a far less daunting task than when the World War II Oral History projects were first undertaken in the late 1980s, forty years after the close of the war. Yet, clearly it was felt by the Marines that recording these oral histories for World War II survivors was worthwhile forty or more years after the fact, as such oral histories can be found on the Marines website today.²

² See <https://www.lejeune.marines.mil/Offices-Staff/Environmental-Mgmt/Cultural-Resources/Preservation-in-Action/Oral-History-Project.aspx>.

14. In the context of Camp Lejeune, many who passed through the base from the 1950s to the 1980s are still alive. The time elapsed from 1955 to 2025 is 70 years but from 1985 to 2025 is only 40 years. There are many living individuals who were at Camp Lejeune during the relevant period and were exposed to and consumed the contaminated water. Obtaining their oral histories could be of great assistance for future work to assess and analyze the effects of the water and chemical exposures and could be combined with obtaining DNA and blood samples and medical data for future scientific study.
15. It is also my hope that the document repository that has now been created by Court Order may be sustained into the future so that materials can be protected and archived, for the benefit of the service members, their families, their descendants, the general public and for purposes of medical science and other academic study and research. One or more universities may have an interest in assisting with such a project.

I declare under penalty of perjury that the foregoing is true and correct. Executed on March 17, 2025 in HOMOSESSA, Florida.

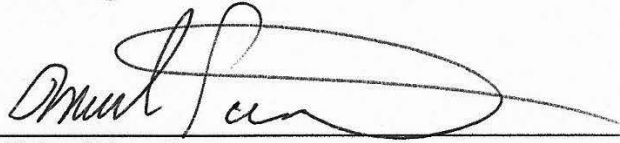

Michael Partain

EXHIBIT 13



Camp Lejeune Globe, June 1, 1978, Vol. 35, No. 22, p. 4.¹

¹ <https://www.dvidshub.net/publication/issues/59990>



Water plant

Keeping nine million gallons flowing every day

By SSgt. Arvel "J" Edward Hall

Water, the transparent, odorless, tasteless fluid known to some as H₂O and others as aquapura, flows through the underground pipe-vein network of the base water system at the rate of nine million gallons a day to meet the needs of the base.

That nine million gallons of water is some of the purest in the country according to Willard R. Price. He should know because he's the general foreman at the Hadnot Point Water Treatment Plant. Price has been employed there for the past 25 years, originally hired as a helper back in 1953. He says the pure water comes from approximately 100 deep wells on the base and is so pure when pumped from the ground it requires a minimum amount of treatment before it is used.

There are eight water treatment plants located throughout the Camp Lejeune area, including the New River Air Station and Rifle Range plants," said Price.

...that nine million gallons of water is some of the purest in the county...

Last year, the plants treated more than 3 1/2 billion gallons of water to be used by persons working and residing here (including the fire department). This works out to an average of over 83,000 gallons of water per person.

All the water treatment plants are staffed by civil service workers. Round-the-clock work crews labor seven days a week to insure water is continually available.

The work never stops, not even during electrical failures, because the plants are capable of pumping water independently by utilizing their own auxiliary power sources. The power source consists of gasoline engines mounted next to the water pumps. During an emergency, the engines are started to replace the electric engines as a power source to the pumps. These engines are checked weekly to see they are in satisfactory condition to handle an emergency anytime.

Iron, calcium and magnesium are removed by a special lime treatment and sand filtering process. This method reduces water hardness from 170 parts-per-million to 60 parts-per-million. The most noticeable visual difference in the water is the elimination of a red tint caused by excessive amounts of iron in the water. An example of excess iron in water can sometimes be found on porcelain where it appears as a rust-colored stain.

...this works out to an average of over 63,000 gallons of water per person...

Bacteria is eliminated by adding chlorine to the water.

While at the plant, water receives a chemical analysis every two hours to be sure water quality remains constant. Samples are also collected each week and taken to the Environmental Laboratory where a chemical and bacterial analysis is conducted by a chemist to insure all safety and sanitary standards are adhered to. In addition to this, the base also conforms to the current Federal Safe Drinking Water Act.

Water pumped into the Hadnot Point Water Treatment Plant is stored in a 750,000-gallon raw water reservoir. From there it is pumped through the plant where it is treated, analyzed and filtered into two clear water reservoirs; a two-million-gallon tank and a 750,000-gallon capacity tank. The ready-to-use-water in these two tanks will be used and replaced approximately 1 1/2 times a day. From the clear water reservoirs it is pumped directly into the usable water system or into one of 16 water storage towers around the base to control water demand.

Satisfying the base water demand at the rate of nine million gallons a day is a lot of thirst quenching, but for the base water treatment plants, it's all in a day's work.

SKIMMING — George Milton, a water plant employee, removes foreign matter from a settling basin with a skimmer. This is done to prevent oil, twigs and other particles from blocking water filters. (USMC photo by SSgt. Arvel "J" Edward Hall)



JUST IN CASE — Auxiliary gasoline engines receive weekly checks by water plant employees at Camp Lejeune, N.C., George D. Milton oils one of the engines used to supply emergency power to water pumps. (USMC photo by SSgt. Arvel "J" Edward Hall)

Camp Lejeune Globe, June 1, 1978, Vol. 35, No. 22, p. 4.²

The work never stops, not even during electrical failures, because the plants are capable of pumping water independently by utilizing their own auxiliary power sources. The power source consists of gasoline engines mounted next to the water pumps. During an emergency, the engines are started to replace the electric engines as a power source to the pumps. These engines are checked weekly to see they are in satisfactory condition to handle an emergency anytime.

Camp Lejeune Globe, June 1, 1978, Vol. 35, No. 22, p. 4.³

² <https://www.dvidshub.net/publication/issues/59990>

³ <https://www.dvidshub.net/publication/issues/59990>

the water.

While at the plant, water receives a chemical analysis every two hours to be sure water quality remains constant. Samples are also collected each week and taken to the Environmental Laboratory where a chemical and bacterial analysis is conducted by a chemist to insure all safety and sanitary standards are adhered to. In addition to this, the base also conforms to the current Federal Safe Drinking Water Act.

Water pumped into the Hadnot Point Water Treatment Plant is stored in a 750,000-gallon raw water reservoir. From there it is pumped through the plant where it is treated, analyzed and filtered into two clear water reservoirs; a two-million-gallon tank and a 750,000-gallon capacity tank. The ready-to-use-water in these two tanks will be used and replaced approximately 1½ times a day. From the clear water

Camp Lejeune Globe, June 1, 1978, Vol. 35, No. 22, p. 4.⁴

⁴ <https://www.dvidshub.net/publication/issues/59990>



OLD GLORY goes up at Tarawa Terrace 1 Elementary School as the school chorus provides mood with the "Star Spangled Banner."

Camp Lejeune Globe, May 2, 1969, Vol. 25, No. 18, p. 4.⁵

⁵ <https://www.dvidshub.net/publication/issues/60911>

Schools Set Open House During Education Week

Camp Lejeune dependent schools will open their doors to visiting parents, beginning Friday, November 13, in observance of American Education Week, November 11-17.

Stone Street School, the Camp Junior-Senior High School and the Camp Geiger School will hold Open House throughout the week of November 13-16, while Tarawa Terrace School will observe the occasion with Open House on Tuesday only. The school will feature in addition regular classes in the morning and a special afternoon educational program.

Monford Point School Open House will be held on Tuesday and Wednesday, November 13-14, while the Brewster and Midway Park Schools will welcome parents to its classes on Wednesday and Thursday, November 14-15.

All the base dependent schools except the Camp Geiger School, which has no lunch facilities, have extended invitations for parents to lunch with their chil-

dren. Parents are asked to notify school officials in advance as to whether they accept the invitations and if so, on what days, so schools may prepare additional food quantities in advance.

Schools aboard the base will be open on the days indicated as follows: Stone Street, hours 8:15 a.m. to 2 p.m. for lower grades, 2:30 p.m. for upper grades; Camp Junior High School, 11:15 a.m. to 12:15 p.m.; Brewster School, 11 a.m. to 12:30 p.m.; Tarawa Terrace School, Midway Park School, 11:15 a.m. to 12:30 p.m. grades; Camp Junior High School, 8:30 a.m. to 3:09 p.m.; remaining elementary schools schedule same as Stone Street.

School lunch hours are as follows, in accordance with student class schedules: Stone Street, 10:30 a.m. to 12:15 p.m.; Brewster School, 11:15 a.m. to 12:30 p.m.; Tarawa Terrace School, Midway Park School, 11:15 a.m. to 12:30 p.m.

Issue Room.

Bulletins

ID CARDS

Due to the indefinite extension of military personnel who would have been released before Feb. 28, 1963, the ID Cards of some dependents will expire in the immediate future.

It is, however, considered impractical at this time to issue new cards to dependents of personnel who are retained involuntarily.

No eligible dependent will be denied any privileges. Expired ID cards for dependents whose sponsors are still on active duty will be honored.

FLU SHOTS

Influenza vaccine is now available for all military dependents, six years old and over, in the Camp Lejeune area.

An inoculation team from the Base Dispensary, using a 'jet' inoculator, will be located at various housing areas as listed below.

Wed., Nov. 14 — 2:30-4:00 p.m. Camp High School Cafeteria.

Mon., Nov. 19 — 2:30-3:00 p.m., Camp Geiger Community Center; 4:00-5:00 p.m., Midway Park Community Center.

Tues., Nov. 20 — 4:00-5:00 p.m., Tarawa Terrace Community Center.

Camp Lejeune Globe, Nov. 8, 1962, p. 3, available in archived digital collection online.⁶

SPORTS BANQUET — Lejeune High School will hold annual Fall Sports Banquet Nov. 22 at 6:30 p.m. at Lejeune High School. The banquet will be held for students participating in Football, Soccer, Tennis and Volleyball. Involved parents will be contacted.

NEEDLECRAFT FAIR — There will be a judged needlecraft fair at the Jack Amyette Recreation Center Nov. 15 from 10 a.m. to 6 p.m. and on Nov. 16 from 1 to 6 p.m. Categories are knitting, crocheting, canvaswork, tatting, embroidery, rug making and weaving. Entry fee is one dollar for up to three pieces and fifty cents for each additional piece. Ribbons and a Best of Show prize will be awarded.

Camp Lejeune Globe, Nov. 13, 1975, Vol. 31, No. 46, p. 6.⁷

⁶ <https://www.dvidshub.net/publication/issues/61597> (last accessed 3/7/25).

⁷ <https://www.dvidshub.net/publication/issues/60213>



USMC photo by Sgt. Ralph Paulk

SHOPPING CENTER FIRE — A fire, estimated to have caused \$11,000 worth of structural damage to the Tarawa Terrace Shopping Center Exchange outlet, was responsible for this debris on March 24. The fire was reported at approximately 4 a.m. and was brought under control 20 minutes later by Base firemen.

Fire damages shopping center

By 2ndLt. Debbie Harris

An early morning fire in the Tarawa Terrace shopping complex here March 24 resulted in an estimated \$11,000 in structural damage and an additional \$25,000 in inventory damage.

The fire, confined mainly to the exterior of the Marine Corps Exchange outlet, was reported by a housing resident just before 4 a.m. The blaze was under control in just 20 minutes, according to Hoskin S. Bass, Base fire chief. The 11 firemen who responded to the alarm were aided in fighting the fire by a heavy rain.

Other shops connected to the exchange outlet, including the snack bar, post office, bank and beauty salon, received minor smoke damage.

An investigation has concluded that the cause of the fire was a faulty power transformer in a canopy over the entrance to the exchange outlet.

Camp Lejeune Globe, March 29, 1979, Vol. 35, No. 13, p. 3.⁸

⁸ <https://www.dvidshub.net/publication/issues/59794>

SIT DOWN — Five-year-old Erin Allen seems to be having trouble controlling her dog during a pet show April 27 at Tarawa Terrace I Elementary School here. Six kindergarten classes put on the pet show after completing studies on pets and their care.

USMC photo by PFC Steven Shaw



Camp Lejeune Globe, May 3, 1979, Vol. 35, No. 18, p. 8.⁹

Worship Services

Clip n' Save

Protestant Chapel — Sunday: Morning Worship at 9:15 a.m. and 11 a.m., Evening Service at 6 p.m.; Monday: Bible Study at 7:30 p.m.; Wednesday: Communion at 11:45 a.m.

Courthouse Bay Chapel — Sunday: Catholic Mass at 10 a.m., Protestant Worship at 11:15.

Camp Geiger Chapel — Sunday: Adult Bible Study at 9 a.m., Catholic Mass at 10 a.m., Protestant Worship at 11 a.m.

Camp Johnson Chapel — Sunday: Adult Bible Class at 8:45 a.m., Protestant Worship at 9:30 a.m.; Saturday: Catholic Mass at 5 p.m.

Naval Hospital Chapel — Sunday: Catholic Mass at 10 a.m., Protestant Worship at 11 a.m.; Weekdays: Catholic Mass at 11:45 a.m.

Jewish Chapel — Friday: Sabbath Service at 8 p.m.; Sunday: Serviceman's Breakfast at 9:30 a.m., Sunday School at 10:30 a.m.

St. Nicholas Orthodox Chapel — Sunday: Divine Liturgy at 10:30 a.m.

St. Francis Xavier Chapel — Saturday: Sacrament of Penance at 4 p.m., Mass at 5 p.m.; Sunday: Mass at 9 a.m., 11

a.m. and 5 p.m.; Weekdays: Mass at 11:45 a.m. and 4:45 p.m.; Wednesday: Prayer Group at 8 p.m.

Midway Park (meets in Community Center) — Sunday: Protestant Worship at 9:15 a.m.

Base Sunday School — Sunday: Stone Street Elementary School at 9:15 a.m.

Stone Street Worship Service — Sunday: Protestant Worship and Sunday School at 9:15 a.m.

Tarawa Terrace Elementary School No. 2 — Sunday: Sunday School at 9:30 a.m., Protestant Worship at 11 a.m.

French Creek Area — Sunday: Protestant Services in Bldg. 312 at 11 a.m.

Tarawa Terrace Community Center — Sunday: Catholic Mass at noon

Christian Science — Contact Chaplain Chris Langton, MWSG-27, Cherry Point, N.C., autovon 582-5844.

Latter Day Saints (meets in conference room, Bldg. 37) — Sunday: Priesthood Meeting at 11 a.m.

Camp Lejeune Globe, May 3, 1979, Vol. 35, No. 18, p. 8.¹⁰

⁹ <https://www.dvidshub.net/publication/issues/59789>

¹⁰ <https://www.dvidshub.net/publication/issues/59789>

Major General R. McC. Tompkins, base commanding general, recently paid a visit to Tarawa Terrace 1 Elementary School for morning colors.

The occasion was a program whose theme was to "promote a better understanding of the American way of life."

The school's chorus, under the direction of Mrs. Roberta Spicer, was featured as they sang the "Star Spangled Banner" unaccompanied during the flag raising.

They followed with "This Land Is Your Land" and "It's a Grand Old Flag."

The ceremony ended with the singing of the Marine Corps Hymn during which the students stood at attention.

Camp Lejeune Globe, May 2, 1969, Vol. 25, No. 18, p. 4.¹¹

¹¹ <https://www.dvidshub.net/publication/issues/60911>

School Schedule

Camp Lejeune Dependents' School's summer session will begin June 9, and run through July 18.

P. Talmadge Lancaster, Superintendent, Camp Lejeune Dependents' Schools, announced recently that summer sessions will be held at Tarawa Terrace I Elementary School for students of grades one through six who reside at Marine Corps Air Station (MCAS), New River, Tarawa Terrace I and II, Knox Trailer Park, Midway Park, and Camp Geiger Trailer Park.

Students of these grades who reside at the Rifle Range, Courthouse Bay, Hospital Point, Paradise Point, and Berkeley Manor will attend classes at Berkeley Manor Elementary School.

Brewster Junior High School will host all junior and senior high school students, grades seven through twelve.

Transportation will be provided if necessary, and parents are reminded to adjust their leave accordingly.

Camp Lejeune Globe, May 2, 1969, Vol. 25, No. 18, p. 4.¹²

¹² <https://www.dvidshub.net/publication/issues/60911>

Religious Services

PROTESTANT

Sunday

- 0800 Base Chapel, Episcopal Service/Holy Communion
- 0830 Rifle Range, Stone Bay, Worship Service
- 0830 Correctional Custody
- 0900 Base Brig #1, Worship Service
- 0915 Naval Hospital, Worship Service
- 0915 Base Chapel, Worship Service
- 0915 Paradise Point, Sunday School, Stone Street School
- 0930 MCAS Chapel, Sunday School
- 0945 Tarawa Terrace, Sunday School, Tarawa Terrace Elementary School II.
- 1000 Camp Geiger, Worship Service and Holy Communion
- 1000 Base Brig #2, Worship Service
- 1000 Montford Point Sunday School
- 1045 Courthouse Bay, Worship Service, Bldg. BB 16
- 1100 Tarawa Terrace, Worship Service, Tarawa Terrace Elementary School II.
- 1100 Midway Park Comm. Bldg. Worship Service
- 1130 MCAS Chapel, Worship Service
- 1100 Base Chapel, Worship Service
- 1100 Montford Point Chapel, Worship Service
- 1700 2d Marines, Bldg. #206, Worship Service
- 1800 Camp Geiger, Evening Worship Service
- 1830 Base Chapel, Bible Study
- 1900 MCAS Chapel, Worship Service
- 1915 Stone Street School: Youth Fellowship
- 1930 Base Chapel, Evening Fellowship

ROMAN CATHOLIC MASSES AND CONFESSIONS

Saturday

- 1700-1800 Base Chapel - Confessions
- 1800-1900 Base Chapel - Mass
- 1900-2030 Base Chapel - Confessions

Sunday

- 0730 Camp Geiger - Mass
- 0730 Base Chapel - Mass
- 0830 MCAS Chapel - Mass
- 0830 Camp Geiger - Mass
- 0900 Base Chapel - Mass
- 0930 Montford Point - Mass (Confessions at 0900)
- 0930 Courthouse Bay - Mass (Confessions at 0900)
- 0930 MCAS Chapel - Mass
- 1015 Base Chapel - Mass
- 1100 Naval Hospital - Mass
- 1100 Stone Bay - Mass (Confessions at 1030)
- 1130 Base Chapel - Mass
- 1230 Midway Park - Mass (Confessions at 1200)
- 1700 Base Chapel - Mass

Sunday

- 1230 Base Chapel - Baptisms

Camp Lejeune Globe, May 2, 1969, Vol. 25, No. 18, p. 4.¹³

¹³ <https://www.dvidshub.net/publication/issues/60911>



WINNERS — The Tarawa Terrace II Elementary School held it's annual Science Fair April 28 in the school auditorium. Selected were winners from each class and grade level. Over all winners are, (from left) Tina Pose, third place and the daughter of Staff Sergeant and Mrs. David Pose; Paul Zimmerman, second place, son of Major and Mrs. J.M. Zimmerman; Michelle Hamerla, fifth place and daughter of Staff Sergeant and Mrs. Donald Hamerla; Joey Strange, fourth place and son of Master Gunnery Sergeant and Mrs. J.R. Strange. Floyd Lewis, (kneeling) son of Lieutenant Colonel and Mrs. Floyd C. Lewis, took the top honors with his entry of how to purify water. (USMC photo by Cpl. Stephen M. Rogers)

Camp Lejeune Globe, May 1, 1980, Vol. 36, No. 18, p. 9.¹⁴

¹⁴ <https://www.dvidshub.net/publication/issues/59713>

TT and Geiger dependents clinics reopening

The Tarawa Terrace and Camp Geiger Dependents' Clinics are scheduled to reopen in order to reduce the number of dependent wives and children driving long distances to receive medical care at the Center Hospital at Camp Lejeune.

The Tarawa Terrace Community Clinic will be open to military dependents residing in Tarawa Terrace, Knox Trailer Park and Midway Park, Sept. 2. Operating hours are from 8 a.m. to 3:30 p.m. on an appointment basis.

Dependents living in the area west of New River and/or north of Highway 17 will be able to use the Camp Geiger Dependents Clinic beginning Sept. 22. This Clinic will provide medical care on a walk-in basis as well as by appointments.

Combat Correspondents meeting scheduled

The William T. Perkins Memorial Chapter of the United States Marine Corps Combat Correspondents Association will hold its monthly meeting at the Driftwood Lounge, Lejeune Blvd., today at 7:30 p.m.

The association is composed of photographers, radio-television announcers and journalists, who have, or are serving on active duty in the Marine Corps. Those who work in the three fields, but do not have the job designation, are also eligible for an associate membership.

Bob Kinsman, president of the local "CCers," urges all members and those interested in joining the Combat Correspondents to attend the meeting.

Library starts new hours

Beginning Sept. 1, Camp Lejeune's Base Library, will have new hours of operation. The new hours will be Monday - Friday, 10 a.m. to 9 p.m. and Saturdays, Sundays and Holidays from 2 to 6 p.m.

Camp Lejeune Globe, Aug. 21, 1975, Vol. 31, No. 34, p. 3.¹⁵

Tarawa Clinic reopens

The Tarawa Terrace Community Clinic reopens Sept. 2. The Clinic was closed for the summer months due to the Medical Officer shortage, but more physicians are reporting for duty at Camp Lejeune and the TT Clinic can again be adequately staffed.

Eligible beneficiaries from Tarawa Terrace, Knox Trailer Park and Midway Park are the only persons authorized to use the Clinic.

Operating hours are Monday through Friday from 8 to 11:30 a.m. and from 1 to 3:30 p.m. The Clinic is closed Thursday afternoons.

An immunization clinic will be held every Tuesday and Wednesday from 8 to 10 p.m.

All visits are by appointment only and no walk-ins will be seen except in emergencies. For appointments call 451-1076 or 2162.

Camp Lejeune Globe, Aug. 21, 1975, Vol. 31, No. 34, p. 6.¹⁶

¹⁵ <https://www.dvidshub.net/publication/issues/64523>

¹⁶ <https://www.dvidshub.net/publication/issues/64523>

Bookmobile schedule

MONDAY AT TARAWA TERRACE I

11:45 - 12:15 Cape Gloucester Circle
12:20 - 1:05 Intersection of Matanikau St. &
E. Pelelu Drive
1:10 - 1:55 Tinian Road parking area
2:00 - 2:45 Water Treatment Plant on
Tarawa Blvd.
2:50 - 3:35 Talasea Place.

TUESDAY AT BERKLEY MANOR

11:40 - 12:10 Intersection of Washington St.
& Michigan Ave.
12:15 - 12:45 Intersection of Colorado Ave.
& Florida Ave.
12:50 - 1:20 Maryland Ave. opposite water
tank
1:25 - 1:55 Near Berkley Manor Dump Sta-
tion, Bldg. No. 612

2:00 - 2:30 Arizona St. near qtrs. No. 5229
2:35 - 3:05 Vermont Court
3:10 - 3:50 Michigan Ave. near qtrs.
No. 5018

WEDNESDAY AT COURTHOUSE BAY AND RIFLE RANGE

11:30 - 1:00 Mess Hall
1:05 - 1:30 Dependent housing area
2:30 - 3:30 Rifle Range

THURSDAY AT KNOX TRAILER PARK, TT II, & MIDWAY PARK

12:25 - 12:55 Knox Trailer Park, near mail
boxes
1:05 - 1:40 Agana Place, TT II
1:45 - 2:15 Rendova Place, TT II
2:30 - 3:05 Parking lot near qtrs. No. 1078
Midway Park
3:10 - 3:50 Butler Drive parking lot near
qtrs. No. 622

Camp Lejeune Globe, Aug. 3, 1978, Vol. 35, No. 30, p. 8.¹⁷

¹⁷ <https://www.dvidshub.net/publication/issues/59979>

1975 - 1976

Children missing a bus become the parent's responsibility. Additional transportation will not be provided. Conduct of children and responsibilities of parents, teachers, and bus operators are contained in Base Order P4600.IC. Students return to Quarters on the same number buses unless otherwise noted.

School will begin Aug. 26 and the official school hours for schools will be as follows.

Lejeune High School
Brewster Junior High
All elementary
Kindergarten, Tarawa Terrace

First session
Second session

Transportation will not be provided for students residing in Berkeley Manor except for kindergarten students. Rifle Range, Courthouse Bay, and (NRMC) Hospital bus will service the following schools: Stone Street, Lejeune High, and Brewster School.

+NOTE - Return to Quarters on Bus 3,9

+NOTE — Return to Quarters on Bus 10 and 12

STOPS
RR-43 (Rifle Range)
BB-35 (Courthouse Bay)
H-51NRM (Hospital)
Surgeons Row

STOP
Camp Knox Bus Shelter

TIME	BUS
11:50 a.m.	1
11:51 a.m.	10
11:52 a.m.	10
11:53 a.m.	10
11:54 a.m.	1
11:55 a.m.	1
11:56 a.m.	1
11:57 a.m.	1
11:58 a.m.	1
11:59 a.m.	1
Noon	1
12:01 p.m.	1

TIME	BU
11:00 a.m.	
11:20 a.m.	
11:47 a.m.	
11:48 a.m.	

TIME	BU
8:30 a.m.	

+NOTE — Return to Quarters on Bus 11

Tarawa Terrace Shopping Nursery	8:00 a.m.
2447 Tarawa Blvd.	8:02 a.m.
2357 Tarawa Blvd.	8:03 a.m.
2137 Tarawa Blvd.	8:04 a.m.
2013 Tarawa Blvd.	8:05 a.m.
Camp Knox Bus Shelter	8:10 a.m.

From: Paradise Point To: Brewster School	
STOPS	TIME
2700 Seth Williams Blvd.	8:30 a.m.
2514 St. Mary's Drive	8:33 a.m.
2321 St. Mary's Drive	8:34 a.m.
2314 St. Mary's Drive	8:35 a.m.
2222 St. Mary's Drive	8:36 a.m.
2118 St. Mary's Drive	8:37 a.m.
3200 Seth Williams Blvd.	8:30 a.m.
3100 Seth Williams Blvd.	8:31 a.m.
3000 Seth Williams Blvd.	8:32 a.m.

STOPS	TIM
138 Tarawa Blvd.	8:28
189 Tarawa Blvd.	8:29 a
222 Tarawa Blvd.	8:30 a
268 Tarawa Blvd.	8:31 a
2447 Tarawa Blvd.	8:32 a
2357 Tarawa Blvd.	8:33 a
2137 Tarawa Blvd.	8:34 a
2013 Tarawa Blvd.	8:35 a
Midway Park Theater	8:37

Summer School Bus Schedule

SUMMER SCHOOL BUS SCHEDULE

Buses will stop only at scheduled stops. Summer School buses will be designated "SCHOOL BUS." Students should be at the scheduled stops five minutes prior to the time indicated.

PARADISE POINT

STOPS	TIME	BUS
Berkeley Manor		
USNH Qtrs H-51	0735	1
Surgeons Row	0734	1
3200 Seth Williams Dr.	0742	1
3000 Seth Williams Dr.	0743	1
2700 Seth Williams Dr.	0745	1
2222 St. Mary's Dr.	0735	2
2314 St. Mary's Dr.	0736	2
2514 St. Mary's Dr.	0737	2

CAMP HIGH SCHOOL

STOPS	TIME	BUS
2222 St. Mary's Dr.	0735	2
2314 St. Mary's Dr.	0736	2
2514 St. Mary's Dr.	0737	2
2700 Seth Williams Dr.	0740	2
3000 Seth Williams Dr.	0743	2
3200 Seth Williams Dr.	0744	2

CAMP KNOX

STOPS	TIME	BUS
Tarawa Terrace School		
Bus Shelter	0750	7

STOPS	TIME	BUS
Camp High School		
Bus Shelter	0737	8

STOPS	TIME	BUS
Berkeley Manor School		
Bus Shelter	0737	8

MIDWAY PARK

STOPS	TIME	BUS
Tarawa Terrace School		
Midway Park Theater	0735	7

TARAWA TERRACE I AND II

STOPS	TIME	BUS
Tarawa Terrace School		
1200 Inchon St.	0745	9
1314 Inchon St.	0746	9
1424 Inchon St.	0747	9

STOPS	TIME	BUS
Berkeley Manor School		
136 Tarawa Blvd.	0725	8
189 Tarawa Blvd.	0726	8
222 Tarawa Blvd.	0727	8
268 Tarawa Blvd.	0728	8

2447 Tarawa Blvd.	0730	8
2357 Tarawa Blvd.	0731	8
2137 Tarawa Blvd.	0732	8
2013 Tarawa Blvd.	0733	8

STOPS	TIME	BUS
Camp High School		
136 Tarawa Blvd.	0725	8
189 Tarawa Blvd.	0726	8
222 Tarawa Blvd.	0727	8
268 Tarawa Blvd.	0728	8
2447 Tarawa Blvd.	0730	8
2357 Tarawa Blvd.	0731	8
2137 Tarawa Blvd.	0732	8
2013 Tarawa Blvd.	0733	8

RIFLE RANGE

STOPS	TIME	BUS
Berkeley Manor School		
RR-43	0707	11

COURTHOUSE BAY

STOPS	TIME	BUS
Berkeley Manor School		
BB-35	0730	11

RETURN TO QUARTERS

Students return to quarters on same numbered bus.

Camp Lejeune Globe, June 14, 1968, Vol. 24, No. 24.¹⁹

¹⁹ <https://www.dvidshub.net/publication/issues/61036>

Mr., Mrs., Miss, Ms., Mr., Mrs., Miss,

members of the Wives' Club of the Orient, July 29, 7-11 p.m. at the TT Community Center, Bldg.

the 8 a.m. classes.

according to plan and the high school.

School registration for Lejeune dependents

A new school year for Camp Lejeune dependents will begin this year on Aug. 28. Parents are reminded that school offices aboard the Base are being kept open during the summer months to accept student registration. Parents are encouraged to register their children as early as possible so that school officials can finalize equipment and supply orders.

Registration is being held through Aug. 18. Birth Certificates are required for kindergartners and first graders unless the student went to kindergarten last year. Then, the kindergarten report card can be used.

Students entering kindergarten may register from 8 to 12 mornings and 1 to 3:30 afternoons, Monday through Friday, at the following areas:

DELALIO—For students from the Air Station and Geiger Trailer Park, Tarawa Terrace 1—For students from all other areas.

BERKELEY MANOR—For students from Berkeley Manor, Delalio—For students from the Air Station and Geiger Trailer Park.

STONE STREET—For students from Paradise Point, Rifle Range, Hospital Point and Courthouse Bay.

TARAWA TERRACE 1—For students from Tarawa Terrace 1 and Midway Park.

TARAWA TERRACE 2—For students from Tarawa Terrace 2 and Knox Trailer Park.

Students in grades 7 and 8 from all areas may register through Aug. 18 at BREWSTER JUNIOR HIGH SCHOOL from 8 to 12 mornings and afternoons Monday through Friday.

Students in grades 9-12 from all areas may register through Aug. 18 at Camp Lejeune High School from 8 to 12 mornings and 1 to 4 afternoons, Monday through Friday.

Provisions have also been announced for the physical examination of all pre-school children entering the Base schools. Pre-school children physicals will be conducted at the Base Dispensary, Bldg. 15 in accordance with the following schedule:

Date	Hour	Children Whose Surname Begins With
AUG. 7	1:30 p.m.	A-H
AUG. 8	1:30 p.m.	I-M
AUG. 9	1:30 p.m.	N-R
AUG. 10	1:30 p.m.	S-Z
AUG. 11	1:30 p.m.	Stragglers

Children who have formerly attended school are not required to be examined nor is there sufficient medical staff to permit their routine physicals.

Dependent children requiring college entrance or other types of physicals will have to make the necessary arrangements through the Naval Hospital.

Football physicals are scheduled to be conducted at the Naval Hospital at 8 a.m. Saturday, Aug. 5 at Ward 1.

4 Globe July 20, 1972

Youth Activities bus service

Bus transportation for Youth Activities will be provided for the second session of the summer program as was for the first. The second session will be held from July 24 through August 17.

The following schedule lists the times that buses will stop at the stops indicated. All times are a.m. Students will return home on the same number bus they take to the sessions in the morning. Motor Transport officials advise students to be at bus stops five minutes prior to the scheduled pick-up times. The buses will stop only at scheduled stops, and the buses will be designated as 'ACTIVITIES'.

BUS NO. 1

Naval Hospital and Paradise Point to Stone St. School, Golf Course, Tennis Court, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

NOTE: All junior students residing in the 3100, 3200, 3300 and 3400 blocks of Paradise Point will walk to Stone St. School, except those that have swimming the first class, who may ride buses 1, 2 and 3.

BUS NO. 2
Paradise Point to Golf Course, Tennis Court, Stone St. School, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

BUS NO. 3
Paradise Point to Golf Course, Tennis Court, Stone St. School, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

BUS NO. 4
Berkeley Manor to Golf Course, Tennis Court, Stone St. School, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

BUS NO. 5
Berkeley Manor to Golf Course, Tennis Court, Stone St. School, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

Ave., 7:48; 5641 Delaware Ave., 7:49; 5167 Delaware Ave., 7:50; 5225 Arizona St., 7:51.

BUS NO. 6
Berkeley Manor to Golf Course, Tennis Court, Stone St. School, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

BUS NO. 7
Tarawa Terrace 1 and 11 to Hobby Shop, Area 5 Pool, Bowling Alley, Area 2 Pool, Boat House, Marston Pavilion, Stone St. School, Tennis Courts and Golf Course.

BUS NO. 8
Midway Park, Camp Knox to Golf Course, Tennis Courts, Stone St. School, Marston Pavilion, Boat House, Area 2 Pool, Bowling Alley, Area 5 Pool and Hobby Shop.

BUS NO. 9
Rifle Range, Courthouse Bay to Hobby Shop, Area 5 Pool, Bowling Alley, Area 2 Pool, Boat House, Marston Pavilion, Stone St. School, Tennis Court and Golf Course.

Return to quarters transportation will be accomplished over reverse routes of buses commencing at 11:30.

SHUTTLE SYSTEM

For students having to transfer between classes, the following system will prevail: Senior students to take bus no. 2 will depart the Hobby Shop at 9:50 to the Area 5 Pool, Bowling Alley, Boat House, Marston Pavilion, Tennis Courts, and the Golf Course. Those students to take bus no. 5 will depart the Golf Course at 9:50 to the Tennis Courts, Marston Pavilion, Boat House, Bowling Alley, Area 5 Pool and the Hobby Shop. Junior students to take bus no. 7 will depart the Stone St. School at 9:20. Also, at 10:20 bus no. 7 will depart the Area 5 Pool to other classes. Bus no. 8 will depart the Area 2 Pool at 9:20 and at 11:30 for other classes. This bus will also depart the Stone St. School at 10:20 for other classes.



Camp Lejeune Globe, July 20, 1972, p. 4.²⁰ Another bus schedule is above.

²⁰ <https://www.dvidshub.net/publication/issues/60727>

Lejeune offers wide range of Base housing



FAMILY AFFAIR — A young Marine and his family look over one of the many housing units available for Camp Lejeune Marines and their dependents at one of the six housing developments. (USMC photo by Sgt. Ron Moser)

By PFC Rick Butker

More than 15,000 people here utilize on-base housing. Military members and their families have a wide range of housing available to them.

The Housing Referral Office takes care of all on-base housing needs for Camp Lejeune and MCAS(H), New River. "We have 4,454 houses at Tarawa Terrace I and II, Midway Park, Berkeley Manor, Paradise Point, the Air Station, and mobile home lots at Knox Trailer Park available for servicemen qualifying for them," said Edna J. Rasnick, housing project manager. "The only requirement needed is a serviceman must have a dependent living with him.

"If a Marine meets this qualification, all he has to do is bring in a copy of his original orders, fill out an application and he'll be in line," said Rasnick.

According to Rasnick, the waiting period varies. "When someone calls and asks us how long they will have to wait for a house, we can't give them a definite time. There isn't an 'average' waiting period," she said. "There are 34 separate waiting lists and a number of factors determine which list you are put on."

The guidelines that determine housing needs are allocated by rank and the size of the family. "Officer's housing is divided into four grades, and enlisted housing into two," said Rasnick. In the enlisted ranks, privates up to corporals with less than two years service comprise one grade. Corporals with over two years to sergeants major makes up the second enlisted grade.

Each grade, enlisted and officer, has a certain number of houses for Marines in that grade.

Location of housing also is determined by rank and family size.

For example, Midway Park and Tarawa Terrace II are for lower grade enlisted Marines, while Tarawa Terrace I and Berkeley Manor are for higher grade Marines.

"When someone comes in the office," said Rasnick, "they fill out an application which tells us how many children they have, their ages and sex, preference of housing location, and other things. From this, we find the category which they fall under. For example, a sergeant might need a three-bedroom, two-bath house at the Air Station, so we

would put him on that specific list.

"We follow Department of Defense directives on things like bedroom requirements and rank breakdowns in all cases."

If someone wants something a little different than the housing office offers, there is one place they can go.

Knox Trailer Park is also controlled by the Housing Referral Office. It has no houses, only lots for mobile homes. It is available to any Marine who owns a mobile home. The only provision is he has a dependent living with him. "It doesn't matter what rank he is, as long as he meets the other requirements," Rasnick added.

To the Marine reporting aboard Camp Lejeune, the rules and regulations at the Housing Referral Office might seem a bit confusing, and they might wonder how anything gets done through the maze of directives, charts, pay grades and other things. "It isn't that bad," Rasnick continued. "It only takes a short time to learn all the things necessary to qualify for housing. And then the only thing left is to wait."

So if a Marine needs and qualifies for housing, waiting list or no waiting list, he'll get it.

Camp Lejeune Globe, June 1, 1978, Vol. 35, No. 22, p. 9.²¹

²¹ <https://www.dvidshub.net/publication/issues/59990>



'BREAK A LEG' — Maryrose Bezoenik gives encouragement to Stacy Roland (center), 4-year-old daughter of Staff Sergeant and Mrs. James Roland, and 5-year-old Lavern Wicker, daughter of Staff Sergeant and Mrs. Hence Wicker, before they performed for the dance revue May 24 at the Midway Park Community Center. Bezoenik has taught dancing here for four years. (USMC photo by LCpl. Denise L. Moreth)

Camp Lejeune Globe, June 1, 1978, Vol. 35, No. 22, p. 9.²²

²² <https://www.dvidshub.net/publication/issues/59990>

Meanwhile... back at base

Thanksgiving Day services

Thanksgiving services will be conducted at several places of worship here, Nov. 26 and 27.

There will be a Thanksgiving Eve communion service at the Protestant Chapel beginning at 7:30 p.m., Nov. 26. At the same time, services will be conducted at the Tarawa Terrace II Elementary School.

A Thanksgiving Day service will be held in the Catholic Chapel at 9 a.m., Nov. 27. Starting at 11:30 a.m., an Ecumenical Service will take place at the Naval Hospital.

PTO will hold auction

An auction, sponsored by the PTO will be held at Stone St. Elementary School Nov. 22 at 4 p.m. The school will be open for browsing Nov. 21 between 2 and 4 p.m.

Anyone wanting to donate auctionable items, except clothing, should bring them to the school Nov. 21.

For further information call Susanne Willis at 353-7566.

Camp Lejeune Globe, Nov. 20, 1975, Vol. 31, No. 47, p. 3.²³

²³ <https://www.dvidshub.net/publication/issues/60212>

CINEMA

MIDWAY PARK FAMILY THEATER 7 p.m.

COURTHOUSE BAY 7 p.m.

NAVAL HOSPITAL 7 p.m.

RIFLE RANGE 7 p.m.

MONTFORD POINT OUTDOOR 7 p.m.

GEIGER INDOOR 7 p.m.

CAMP THEATER 7 p.m.

AIR STATION 7 p.m.

DRIVE-IN 7 p.m.

ON SLOW BEACH 7 p.m.

FRENCH CREEK OUTDOOR 7 p.m.

Today	Fri.	Sat.	Sun.	Mon.	Tues.	Wed.	Thurs.
N	O	P	Q	R	S	T	U
M	N	O	P	Q	R	S	T
L	M	N	O	P	Q	R	S
K	L	M	N	O	P	Q	R
J	K	L	M	N	O	P	Q
I	J	K	L	M	N	O	P
G	H	I	J	K	L	M	N
D	E	F	G	H	I	J	K
C	D	E	F	G	H	I	J
B	C	D	E	F	G	H	I
A	B	C	D	E	F	G	H

+Note — There will be a double feature at the Camp Theater on Nov. 24. The Mysterious Island of Captain Nemo and Winterhawk will be playing beginning at 7 p.m. Also, Rollerball will be seen at the Camp Theater on the 25 and 26 Nov. replacing The Girl From Petrovka.

A — PAPER MOON (PG RT 103) Adventure story of a bright nine year old girl and the con man she adopts. Stars Ryan O'Neal and Tatum O'Neal.

B — YOU'LL LIKE MY MOTHER (PG RT 93) Drama about a Vietnam war widow who is pregnant and decides to visit her mother-in-law. Stars Patty Duke and Rosemary Murphy.

C — RETURN TO MACON COUNTY (PG RT 89) Two All-American youths meet a horrible fate when they enter Macon County. Stars Nick Nolte and Don Johnson.

D — THE LEGEND OF HELL HOUSE (PG RT 94) Four people venture into a haunted house to see if there is truly life after death. Stars Roddy McDowall.

E — DAY OF THE LOCUST (R RT 144) Studio life in Hollywood leads to the destruction of a variety of people during the depression. Stars Donald Sutherland.

F — INNOCENT BYSTANDERS (PG RT 111) John Craig becomes a decoy in an international double-crossing between three countries. Stars Stanley Baker.

G — BLACK CHRISTMAS (R RT 98) Christmas Eve turns into a night of horror as a series of mysterious deaths and disappearances occur. Stars Olivia Hussey.

H — KID BLUE (PG RT 100) A young cowboy decides to become an aristocrat whether they like it or not. Stars Dennis Hopper and Warren Oates.

I — CARBON COPY (PG RT 91) Childhood friends meet again but now one's a cop and the other a criminal. Stars Robert Hossier and Charles Aznavour.

J — WINTERHAWK (PG RT 89) Winterhawk seeks help from the white man to help cure a smallpox epidemic and ends up having his braves brutally beaten.

K — THE MYSTERIOUS ISLAND OF CAPTAIN NEMO (PG RT 97) Adventure story of a group of people marooned on a mysterious island. Stars Omar Sharif and Ambrose Bly.

L — ROLLERBALL (R RT 123) Futuristic portrait of a world's favorite sport where war, poverty and ignorance have been eliminated. Stars James Caan and John Houseman.

M — THE GIRL FROM PETROVKA (PG RT 103) Comedy drama about a correspondent who falls in love with a student in Russia. Stars Goldie Hawn and Hal Holbrook.

N — CLEOPATRA JONES AND THE CASINO OF GOLD (R RT 96) A crime fighting super-lady cracks a narcotics ring. Stars Tamara Dobson and Stella Stevens.

O — AMAZING GRACE (G RT 98) A retired porter decides its time for a change and decides to run for mayor. Stars Moms Mabley and Slappy White.

P — THE ASPHYX (PG RT 99) A scientist attempts to make himself and his family immortal. Stars Robert Stephens and Robert Powell.

Q — CONDUCT UNBECOMING (PG RT 107) Military drama of two officers, one who lives for the service and the other who wants a discharge. Stars Michael York and Richard Attenborough.

R — HOMEBODIES (PG RT 98) Six elderly resort to violence to keep from being evicted from their homes. Stars Peter Brocco and Francis Fuller.

S — SHAFT'S BIG SCORE (R RT 105) Shaft returns to the screen when a friend is killed and robbed of a quarter of a million dollars. Stars Richard Roundtree.

T — BLAZING SADDLES (R RT 93) A western satire that puts all of Mel Brooks comedy and talent on the screen. Stars Cleavon Little and Gene Wilder.

U — WHITE LINE FEVER (PG RT 90) An Air Force veteran starts a trucking business but runs into trouble when he lashes out against organized crime. Stars Jan Michael Vincent.

Camp Lejeune Globe, Nov. 20, 1975, Vol. 31, No. 47.²⁴

²⁴ <https://www.dvidshub.net/publication/issues/60212>



Camp Lejeune Globe, Nov. 20, 1975, Vol. 31, No. 47.²⁵

²⁵ <https://www.dvidshub.net/publication/issues/60212>

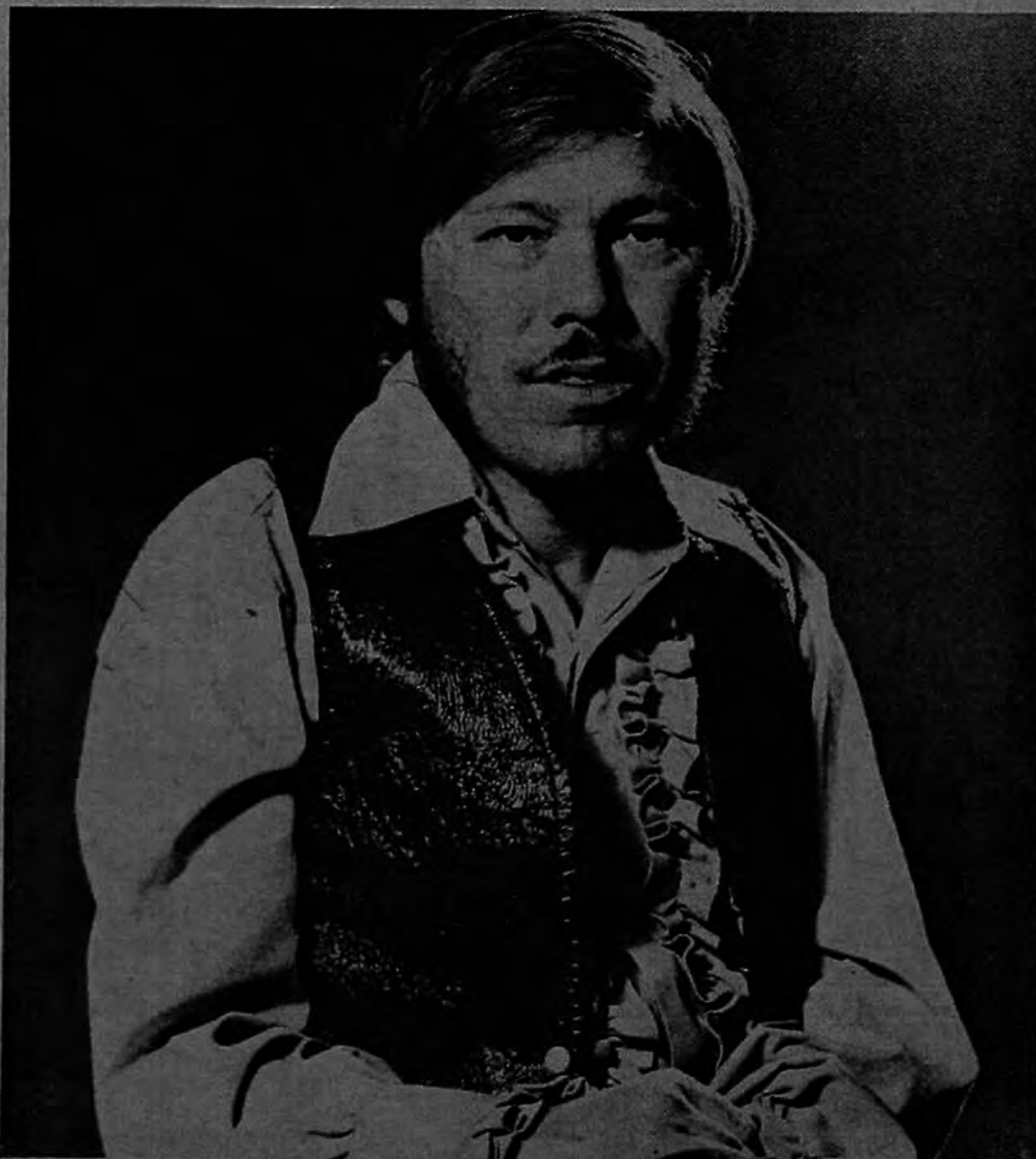


Pearls of the Pacific

The Base Special Services will present the Hawaiian revue "Pearls of the Pacific" at 7:30 p.m. May 27, at the Base Theater. Featured in this live performance will be the dangerous and exciting Flaming Knife Dance of Samoa and, of course, the beautiful Hawaiian Hula Dancers. The show-stopper is the Fire Walk of Tahiti routine that has dazzled theater goers the world over. There will also be a movie, "The Onion Field", that will follow the performance. Admission for both the show and the movie will be \$2 at the door.

Camp Lejeune Globe, May 1, 1980, Vol. 36, No. 18, p. 12.²⁶

²⁶ <https://www.dvidshub.net/publication/issues/59713>



COUNTRY MUSIC — Larry Anderson and Hadnot Point from 9 p.m. to 1 a.m. June 22
The Country Travelers will appear at to provide country listening pleasure.

Camp Lejeune Globe, June 20, 1974, Vol. 30, No. 25.²⁷

²⁷ <https://www.dvidshub.net/publication/issues/60296>

Flouri Opens

The Marine "finest," the Non-commissioned Officers, night witness Grand Opening newly renovated room at the Point Club.

Music, dance a feast-like bunched the gay sphere of the Corps' "fine NCO Club in the try."

Highlight of evening was the March' led Gen. J.O. Butcher his lady.

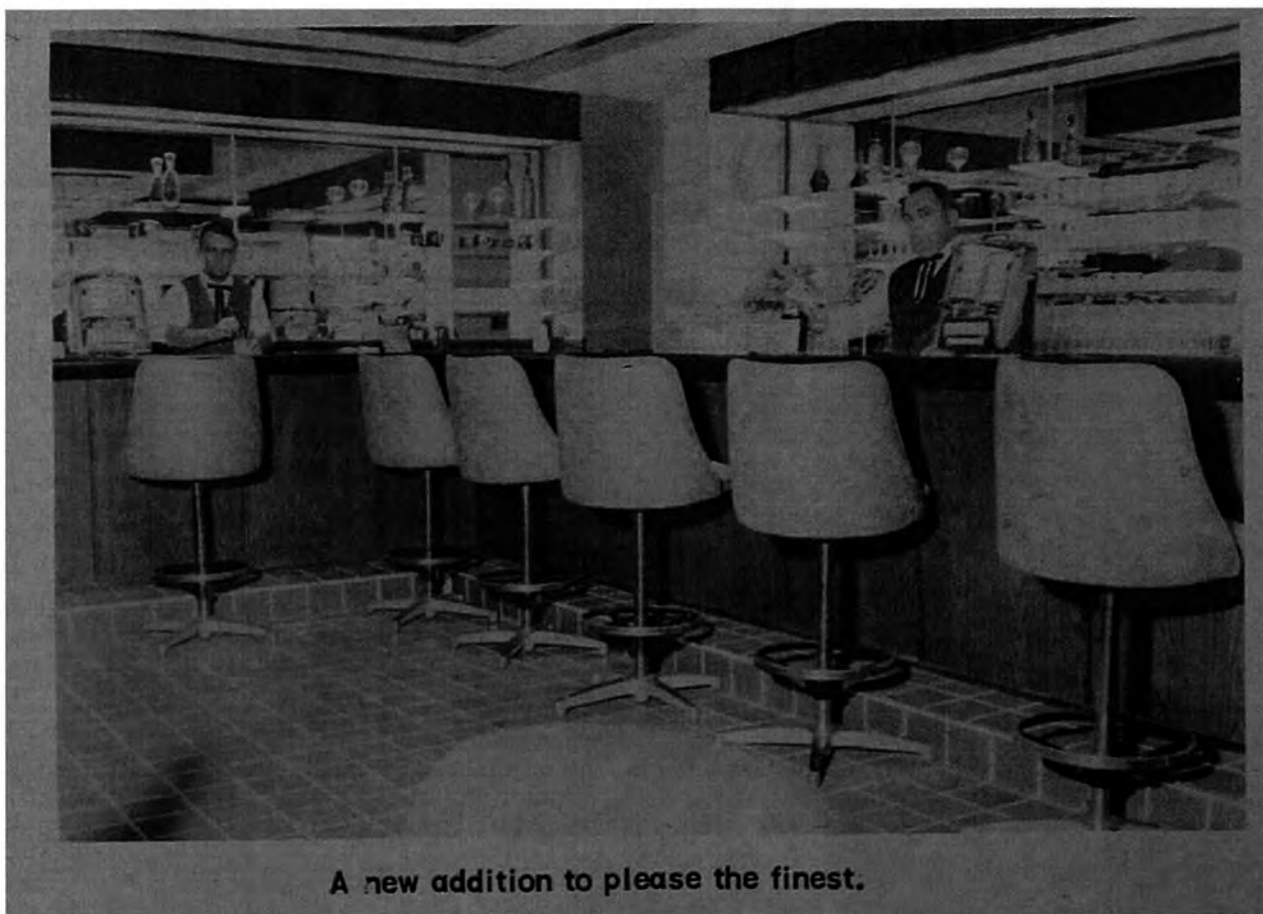
Following the cutting ceremony Base Command BrigGen. E.B. er, 2d Division mander, Col. Lean, represent of Force Troop their ladies



MajGen. J.O. Butcher prepares to cut the ribbon with the assistance of MGySgt. Clinard, club treasurer. Accompanying the general in the foreground are SgtMaj. and Mrs. Palma, Mrs. Butcher, BrigGen. and Mrs. Wheeler. In the rear are Col. MacLean, SgtMaj. and Mrs. Long.

Camp Lejeune Globe, June 21, 1968, Vol. 24, No. 25.²⁸

²⁸ <https://www.dvidshub.net/publication/issues/61034>



Camp Lejeune Globe, June 21, 1968, Vol. 24, No. 25.²⁹

²⁹ <https://www.dvidshub.net/publication/issues/61034>



Newly rennovated ballroom prior to gala opening

Camp Lejeune Globe, June 21, 1968, Vol. 24, No. 25.³⁰

³⁰ <https://www.dvidshub.net/publication/issues/61034>



Singer Denise Scott was one of the many entertainers during the festive evening.

Camp Lejeune Globe, June 21, 1968, Vol. 24, No. 25.³¹

³¹ <https://www.dvidshub.net/publication/issues/61034>



TINA GLAVE joins with Jack Rogers and the Moderns in celebrating the grand opening of the all new Hadnot Point Staff Club. The celebrities will perform this Saturday and Sunday evenings. Reservations, may be made at the club. The charge will be \$2.00 per person.

Camp Lejeune Globe, June 14, 1968, Vol. 24, No. 24, p. 11.³²

Charlie Albertson entertains at COM

COM
 Aug. 22 - Paradise Point - Happy Hour from 5 p.m. to 9 p.m. Special Buffet from 6:30 to 9 p.m. Charlie Albertson entertains from 8:30 p.m. to 10 p.m. MCAS - Happy Hour from 4:30 to 6:30 p.m. Beefeaters Buffet from 7 to 10 p.m. Spirals perform from 9 p.m. to 1 a.m.
 Aug. 23 - Paradise Point - Brunch served from 9 to 1 p.m. The Hesitations perform from 9 to 1 a.m. MCAS - Dinner served from 7 to 10 p.m. Blue Exit entertains from 9 p.m. to 1 a.m.
 Aug. 24 - Paradise Point - Brunch served from 9 p.m. to 1 a.m. Shrimp-a-peel from 5:30 to 8 p.m.
 Aug. 26 - MCAS - Mongolian Barbeque from 6 p.m. to 10 p.m. The Spirals perform from 9 p.m. to 1 a.m.
 Aug. 27 - Paradise Point - Beefeaters Buffet. Blue Exit entertains from 8 p.m. to midnight.
SNCO CLUB
 Aug. 21 - Steak night at Hadnot Point and free eating in the Dining Room at 7 p.m.
 Aug. 22 - Hadnot Point - Phase I entertains from 8 p.m. to 1 a.m. Courthouse Bay - The Sundowners perform from 9 p.m. to 1 a.m. MCAS - Arrow entertains from 9 p.m. to 1 a.m.
 Aug. 23 - Hadnot Point - Band of Gold performs from 9 p.m. to 1 a.m. MCAS - Broken returns from 9 p.m. to 1 a.m.
 Aug. 24 - MCAS - The Spirals entertain from 8 p.m. to midnight.

NCO CLUB
 Aug. 22 - Freedom Express entertains from 8:30 p.m. to 12:30 a.m. at Hadnot Point
 Aug. 23 - Harvest performs from 8:30 p.m. to 12:30 a.m. at Hadnot Point.
 Aug. 24 - Super Grit entertains at Hadnot Point from 7:30 to 11:30 p.m.
 Aug. 27 - Southeast entertains at Hadnot Point from 7:30 to 11:30 p.m.

SERVICE CLUBS
 Aug. 24 - Central Area - Scavengers entertain from 6:30 to 10:30 p.m. Courthouse Bay - Sundowners perform from 6:30 to 10:30 p.m.
 Aug. 25 - MCAS - Good Times entertain from 7 to 11 p.m.
 Aug. 26 - Camp Geiger - 14 Carat Black performs from 6:30 to 10:30 p.m. Area 5 - Sundowners entertain from 6:30 to 10:30 p.m.
 Aug. 27 - Rifle Range - Shauna performs from 6:30 to 10:30 p.m. Onslow Beach - Count Four entertains from 6:30 to 10:30 p.m. Camp Johnson - Sunrise performs from 5:30 to 9:30 p.m.
 Aug. 28 - Area 1 - Misty entertains from 6:30 to 10:30 p.m. Area 2 - Sun Rise performs from 6:30 to 10:30 p.m.

USO
 Aug. 22, 23, 24 - This week's free movies at the USO are HALLS OF MONTEZUMA and FIVE CARD STUD.



COUNTRY ENTERTAINMENT - Charlie Albertson performs at the COM Aug. 22.

Camp Lejeune Globe, Aug. 21, 1975, Vol. 31, No. 34, p. 5.³³

³² <https://www.dvidshub.net/publication/issues/61036>

³³ <https://www.dvidshub.net/publication/issues/64523>

OWC holds sign-up coffee for members

NEW LIFE SINGERS — All junior and senior high school students are welcome to join the New Life Singers. A Welcoming Party is scheduled Aug. 24 from 5 to 8:30 p.m. at Marston Pavilion. The first practice will be held Aug. 31 at Stone Street School from 6 to 8 p.m. For further information call Lynda Christenson at 455-1778 or Pam Steffey at 353-6046.

OWC GROUP 1 COFFEE — The wives of Base Material (OWC Group 1) are holding a sign-up coffee on Aug. 28 from 10

a.m. to noon at the COM. A special presentation of paintings by Pam Ek is featured. Cost is \$1.50. For reservations call Mrs. C.M. Day at 353-5941 by noon Aug. 25. Cancellations must be made no later than noon Aug. 26.

FALL DANCE CLASSES — New classes are now being formed in ballet, acrobatics and tap. The one hour classes will be held in the Tarawa Terrace and Midway Park Recreation Centers for 10 weeks for a registration fee of \$10. Dependents ages six through teens are welcome to

attend. Registration for the Tarawa Terrace classes will be held at the center on Aug. 23 and Sept. 6 from 10:30 a.m. to noon. For Midway Park classes, registration will be held from 1 to 2 p.m. on Aug. 23 and from 9 to 10 a.m. on Sept. 6. For further information, contact Mary Rose Bezonik at 353-0473.

SNCO WIVES CLUB MEETING — The SNCO Wives Club meeting will be held at the Hadnot Point SNCO Club Aug. 21 beginning at 7:30 p.m.

JOIN OWC GROUP II — The

board and senior hostesses of OWC Group II invite the wives of all officers of Headquarters Battalion, 2d Marine Division, to a coffee held in the Lejeune Room of the COM. The coffee begins at 10 a.m. on Aug. 26 and cost is \$1.50 for refreshments. For reservations call Barbara McGowan at 347-6238 by Aug. 22. Cancellations must be received by noon Aug. 25.

BATON CLASSES OFFERED — Fall classes in baton will begin Sept. 8 and will run to Dec. 9. All dependents are welcome for the

14 lessons in intermediate beginning classes. Cost is payable at registration held 23 and Sept. 6 from 10:30 a.m. to noon at the Tarawa Terrace Annex. For further information contact Debby Hardin at 353-6046.

JACKSONVILLE COMMUNITY CHORUS — Jacksonville Community Chorus welcomes new members. Attend their first practice at the First Christian Church, Gum Branch Road, Sept. 8 beginning at 7:30 p.m. For further information, call 347-

Camp Lejeune Globe, Aug. 21, 1975, Vol. 31, No. 34, p. 6.³⁴

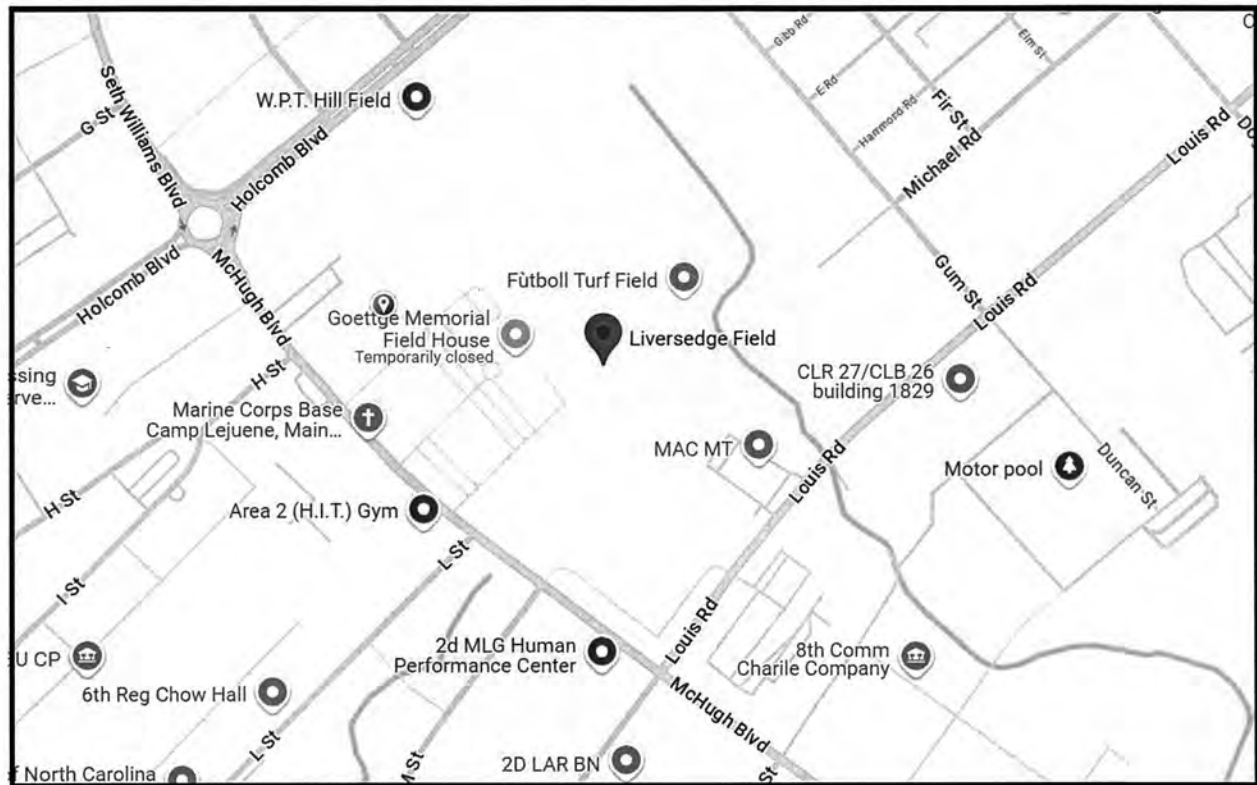


Camp Lejeune Globe, May 9, 1974, Vol. 30, No. 15.³⁵

³⁴ <https://www.dvidshub.net/publication/issues/64523>

³⁵ <https://www.dvidshub.net/publication/issues/60302>

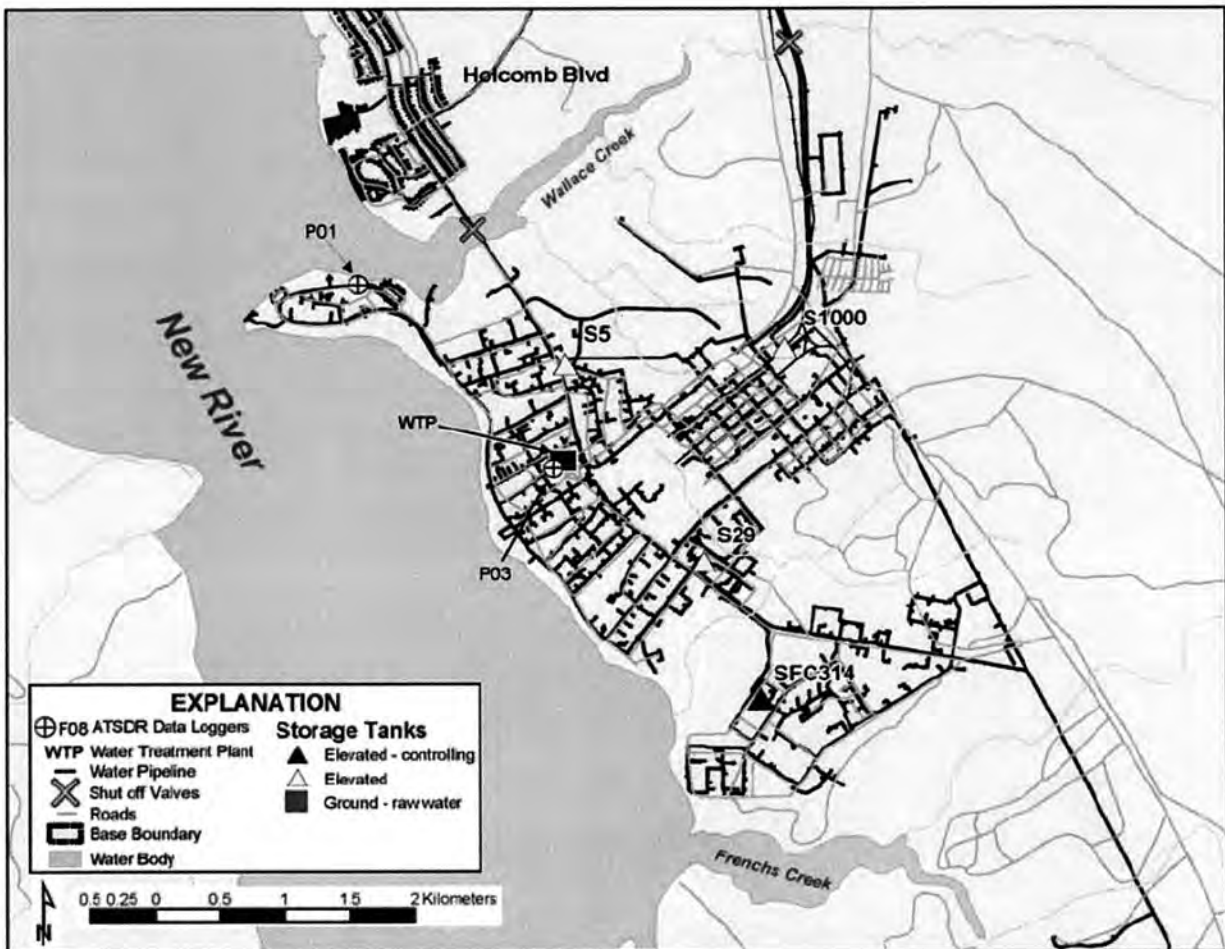
Goettge Memorial Field House -- Liversedge Field:



Liversedge Field in the overall Hadnot Point area:



Image from Maslia:



Hadnot Point water treatment plant service area and water-distribution system

The image above comes from Jason B Sautner, M. L. Maslia, C Valenzuela, J W Green, Field Testing of Water-Distribution Systems at US Marine Corps Base, Camp Lejeune, North Carolina, in Support of an Epidemiologic Study, 2004.



Historical Pageant Set For Saturday

Liversedge Field is the place for this Saturday, Nov. 10, the traditional cake cutting, a colorful pageant and a rededication of the colors, followed by championship midget league football game, will be waiting.

Major General Berkeley will open the festivities by cutting this year's birthday cake at 10 a.m. There will be a brief ceremony followed by the historical uniform pageant and narration of

Marine Corps uniforms—past and present.

After the pageant, a color guard representing Marine Corps Base, 2d Marine Division, Force Troops and New River Air Facility will mass the colors for rededication by Father Frances Kelly, Base Chaplain.

The 2d Division Band will provide the background music throughout the festivities.

At 10:30 a.m., the Colts and the Redskins will battle it out for the Midget League football championship. These boys, dependents of Marine personnel here, are from 10 to 14 years old.

Force Troops Drum and Bugle Corps will be featured during the half-time pause of the game with drill and music.

The public is cordially invited to attend the entire morning's festivities and visitor passes

will be available at the main gate from 8:30 a.m. to 1 p.m.

At noon Friday, Nov. 9, the annual birthday dinner featuring

command mess halls, Marine personnel are authorized to bring guests aboard for the feast.

charcoal broiled steak will be served in all operating quad-

Personnel drawing commuted rations will be charged \$1, guests and dependents, \$1.20; and children under 12, \$.60 for the annual birthday dinner.

Jacksonville Birthday Message

The Mayor, City Council, and all citizens of Jacksonville pause to add their tribute in these troubled times and extend their sincere congratulations to the

Camp Lejeune Globe, Nov. 8, 1962, p. 3, available in archived digital collection online.³⁶

³⁶ <https://www.dvidshub.net/publication/issues/61597> (last accessed 3/7/25).



Camp Lejeune Globe



VOL. 20

CAMP LEJEUNE, N. C., THURSDAY, JANUARY 30, 1964

NO. 5



LET'S HAVE SOME CAKE—A cake commemorating the 11,000th landing aboard the USS OKINAWA, LPH-3, was presented to WO-1 Joseph A. Rike by the ship's baker as squadron pilots look on. WO Rike made the 11,000th landing during carrier qualifications off the coast of N. C. on Jan. 16. The cake was flown ashore in a UH34D helicopter by HMM-263's executive officer, Maj. A. R. Bousquet, cockpit of helicopter. (Photo by LCpl. W. C. Barker.)

HQMC Announces Drive To Retrain 'Over' MOSs

Headquarters Marine Corps has issued a new listing of MOSs which are understaffed and understaffed and has ordered a new campaign to retrain men from overstrength skills. To fill up the "short" specialties—the new listing

2171	X		X
2211	X		
2212		X	
2213		X	
2219	X		X
2221	X		X
2231	X		
2334	X		X

(See OVER MOS's, Page 1)

2d Mar. Division Celebrates Its 23rd Birthday Tomorrow With Ceremonies

The 2d Marine Division celebrates its 23rd anniversary tomorrow with a parade and review scheduled to start on the Base Parade Ground at 10:30 a. m.

On its 23rd birthday the 2d Marine Division finds itself constantly training for combat, while striving for peace. This training is being carried on by other members of the Division even while their comrades pause here to commemorate their founding. From the snow-swept slopes of upstate New York, to the sunny tropic skies of Vieques and onto the foreign shores of the Mediterranean, Marines of the Division keep in constant combat condition.

The anniversary ceremonies on the parade field will be highlighted by the presentation of Unit Requalification Awards for Calendar Year 1963. The 10th Marines will receive the Regimental Trophy; 2d Bn., 10th Marines will be presented the Subordinate Battalion Trophy; Hq. Bn. will be awarded the Separate Battalion Trophy and R&S Co., 2d Recon. Bn., will be awarded the Subordinate Company/Battery Trophy.

Vice Admiral John S. McCain, Jr., USN, Commander Amphibious Forces Atlantic Fleet with headquarters at

Norfolk, Va., will be the reviewing officer.

Tomorrow, following the colorful parade and review,

The center section of today's GLOBE is a special supplement paying tribute to the officers and men of the 2d Marine Division on the occasion of the Division's 23d anniversary.

There will be a special holiday dinner at all Division mess-halls. Families and guests of

Marines have been invited and will be charged the standard fee in accordance with existing regulations.

The citizens of Jacksonville and the surrounding area are cordially invited to witness the ceremonies on the Camp Lejeune Parade Ground. Vehicle passes will not be required.

Spectators are urged to park their cars in either the Base Exchange parking area or at the Goettge Memorial Field House.

High State Of Readiness To Be Maintained; CMC

"My principal target is to maintain the high state of readiness in which the Marine Corps finds itself today."

With this statement in the opening moments of radio interview in Japan, Gen. Wallace M. Greene, Corps Commandant, basically described the goal he has set for every Marine and for himself, as the 23rd Commandant of the Marine Corps.

Beginning his tenure as Commandant, Gen. Greene, started off on an 11-day whirlwind tour of Marine Corps units and instal-

conjunction with the Army and hydrofoil landing craft are being tested in cooperation with the Navy.

Gen. Greene does not favor the pro-pay program in that it is too difficult to administer fairly and squarely for all who may deserve it. He does feel however, that the recent pay increase is one step closer to adequate pay for servicemen. The Commandant believes that if the Marine Corps is to keep its highly qualified men, their pay will have to be fairly close to that which they could expect

Camp Lejeune Globe, Jan. 30, 1964, p. 1.³⁷

³⁷ <https://www.dvidshub.net/publication/issues/61463>

Gridiron action begins

It's that time of year again

Fall is here. And with the cooler temperatures and Howard Cosell on Monday night, the football leagues around Camp Lejeune prepare for gridiron action.

According to the information this sportsdesk has acquired, Division will field both touch and tackle football leagues. Tackle leagues will also be formed in both Force Troops and Marine Corps Base. The local Youth Football League seems to be having a little problem getting off

the ground according to Base Special Services, due to a lack of interest.

Already H&S Bn. from MCB has scrimmaged with a Force Troops team on W.T Hill Field. Both teams managed to score a few touchdowns, but many simple mistakes plagued both teams. Tackles were missed, interceptions were picked off and loose pigskins were abundant. In turn, coaches hollered and substituted freely. But this is what the game is all about. If you

don't do the job you get replaced until you want that position back again. Just a few will give up the fight and turn in the pads but that's just the minority and the rest will stick it out.

To those who manage to stick out the long, bruising season, the rewards are yours. To the coaches who form unorganized masses into a well disciplined machine, good luck. And for all of you who look forward to an exciting season of football...wait no longer it's here.

Camp Lejeune Globe, Aug. 21, 1975, Vol. 31, No. 34, p. 7.³⁸

Serv Co. Leader In Intramural Action

Service Company, Marine Corps Base opened the 1964 Intra-Battalion Basketball season January 13th with a win over Headquarters Company 56-53 and has been steamrolling over company competition.

Camp Lejeune Globe, Jan. 30, 1964, p. 1.³⁹

³⁸ <https://www.dvidshub.net/publication/issues/64523>

³⁹ <https://www.dvidshub.net/publication/issues/61463>

Games are played under the National High School Basketball rules at 5 p. m. at the Goettge Field House. Members of the winning team will receive individual awards. Upon completion of this tournament a team will be selected from participants to represent Headquarters and Service Battalion in the Base Intramural Basketball Tournament which will begin February 24th.

Camp Lejeune Globe, Jan. 30, 1964, p. 1.⁴⁰

What the word on physical fitness means

WASHINGTON, D.C. — With the issuance of a new Marine Corps Order on physical fitness, weight control and military appearance comes a set of definitions of words Marines will probably be hearing about more often in the future.

The definitions are clear and concise. So that all hands get a first hand chance to read and understand them without having to rely on someone's interpretation, here they are as contained in MCO 6100.3G:

Physical Fitness: "Physical fitness for a Marine means the maintenance of a healthy body, the endurance to withstand the stress of prolonged activity and adverse environment, the capacity to endure the discomforts that accompany fatigue and the maintenance of combat-effectiveness. Physical fitness as used in this order is a part of the individual Marine's professional qualifications, whereas medical qualifications relate to the determination with regard to the physical fitness of their Marines and this determination is then considered in the overall evaluation of the individual Marine's professional qualifications. Medical officers, on the other hand, determine the Marine's medical qualifications.

Stamina: "Stamina is a combination of muscular and cardiovascular endurance and is the most important aspect of fitness for Marines. Cardiovascular fitness should be the basis for all physical training from the standpoint of its contribution to the overall health and longevity of the individual. Muscular endurance, which is closely associated with cardiovascular endurance, is that physical characteristic which will allow

prolonged activity without undue fatigue. For Marines, this represents the ability to march long distances with heavy loads or to work long hours and still maintain the reserve to carry on in an emergency."

Strength: "Strength is defined as the ability to manipulate weight or, for a Marine, his or her own body weight. A certain amount of body strength is necessary for appearance, confidence and load-carrying ability. It is essential that Marines be able to move themselves effectively and efficiently."

Maximum Allowable Weight Standards: These are the standards which set by height, the minimum and maximum weights for all Marines regardless of age. These standards are set in a chart for men and women.

Overweight: This condition exists when the Marine's weight exceeds the maximum allowable weight standards as found in the chart mentioned above. Marines who exceed the maximum allowable weight standards will be referred to the medical officer for physical evaluation to determine the cause and, if any, remedial action.

Military Appearance: "That appearance which is neat, trim, and presents the military image traditionally associated with the Marine Corps. The evaluation of a Marine's military appearance is the responsibility of his commanding officer. The medical officer's responsibility is to certify a Marine's health and ability to participate in a physical exercise program and/or to prescribe a diet, if required, to return the Marine to an acceptable military appearance."

20 Nov. 1975

Globe

5

Camp Lejeune Globe, Nov. 20, 1975, Vol. 31, No. 47, p. 5.⁴¹

⁴⁰ <https://www.dvidshub.net/publication/issues/61463>

⁴¹ <https://www.dvidshub.net/publication/issues/60212>

Lejeune boxers host six teams in tourney

Photos by Sgt. Dan Haberer

Toney Wilson
106 lb.
Inter-Service
Champ



Roger Stafford
132 lb.
Inter-Service
Champ

The Camp Lejeune Boxing Team will host six teams in a tournament, to be held here, at the Goettge Memorial Field House, this Friday and Saturday, at 7:30 p.m.

Teams to compete in this tournament are: High Point, N.C. AAU, Cincinnati, Ohio AAU, Plainfield, N.J. AAU, Wilmington, N.C. Police Dept., Norfolk, Va. Navy and the Army from Ft. Bragg.

Many of the Marines who will do battle for the Camp Lejeune team are well known in this area as well as nationally.

Little Toney Wilson will start things off for the Leathernecks in the 106 lb. class. Toney is defending Inter-Service champ as well as Silver medalist in the CISM games.

Jimmy James a well known, very experienced fighter does it up for us in the 112 lb. bout. Jimmy is a three time All-Marine champ, two time Inter-service champ, two time gold medalist in the CISM games, and was an alternate in the 1972 Olympics.

Toney Santana will be in the ring for the Marines in the 125 lb. class. This is Toney's first year fighting for the Corps, but is no stranger to the ring. He has won the crown of New York State Golden Gloves champ twice.

In the 132 lb. class Roger Stafford will be doing his thing for the Lejeune team. Stafford has been fighting in this area for over two years and has the crowns to prove it. Roger has won the All-Marine and Inter-Service Championship twice, the N.C. Golden Glove and AAU champ, as well as being nationally ranked fourth.

George Haynes is doing it up for the Marines in the 139 lb. class. George has been with the team for two years and is known for his fast hand. In his last outing against the New Jersey AAU team he showed knock out power as he put his man away early in the first round.

At 147 lbs. "Smoken" J.C. Wade will be there to give anybody a run for their money. Wade, an All-Marine champ and nationally ranked number eight, is a real power puncher, with lots of style.

A new face on the team is Tim Turner, at 156 lbs. This is Tim's first year on the Lejeune team.

Another new, Shelton Milner, is fighting in the 165 lb. class. Shelton has been boxing for three years, and recently won the 2d Marine Division and the FMFLant championships.

Last on the card is All-Marine Light Heavyweight Leon Spinks. Leon is two time defending National AAU champ, Silver medalist in the Pan American games, and his most recent fight last weekend in New York helped give the American team a 6-4 team victory over the Russians.

In all the Marines have another good team again this year and everyone should try and make a night of seeing them in action this weekend. The admission is free and open to the public.

J.C. Wade
147 lb.
All-Marine
Champ



Leon Spinks
178 lb.
National AAU
Champ

Camp Lejeune Globe, Nov. 20, 1975, Vol. 31, No. 47, p. 7.⁴²

⁴² <https://www.dvidshub.net/publication/issues/60212>

Time for flu shots again

The Naval Regional Medical Center here has scheduled Jan. 11-12 as dates for Camp Lejeune personnel to receive flu shots.

Shot clinics will be open from 8 a.m. to 3:45 p.m. on these dates at Goettge Memorial Field House. A dependents clinic will be conducted from 8 a.m. to 3:45 p.m. Jan. 5 for those not making it to the field house.

The shots are mandatory for active duty personnel and dependents must be 18 or older to receive them.

Camp Lejeune Globe, Jan. 5, 1978, Vol. 34, No. 1, p. 1.⁴³



Participants and spectators

Bicentennial scrapbook

The week

An estimated 12,000 servicemen, their families and friends gathered at Liversedge Field Monday to witness the 200th anniversary ceremonies.

The one-hour presentation included a National Marine Corps and Camp Lejeune Bicentennial first appearance of the Marine Corps Band, commanded by SSgt. William May, wore uniform.

Guest of Honor for the event was LtGen. Division Commander. Accompanying LtCol. Marine Corps Base, BrigGen. F.W. T. CG, Force Troops-2d FSSG.

After rededication of unit colors by Capt. nessed a special Bicentennial performance.

The ceremony included the firing of three of Marines who gave their lives from New year.

Marines, dressed in authentic period uniform, narrator related the story of each era.

The traditional cutting of the birthday cake. Poggemeyer cut the first piece of cake in honor.

BrigGen. Tief cut the second piece of cake. the oldest Marine here. Oren is 53 years old.

BrigGen. Miller then cut a piece of cake. who is 17 years old. Summa has served in

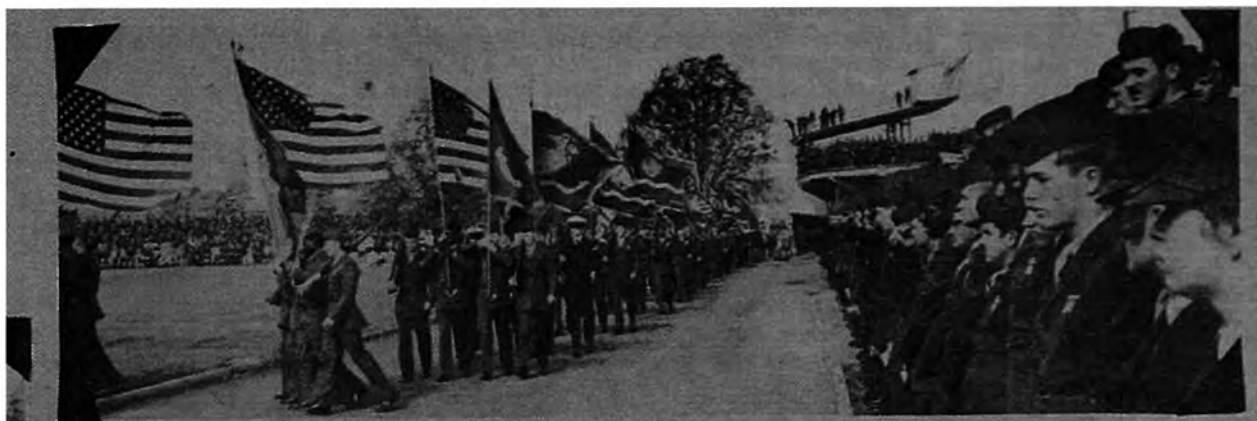


Youngest Marine

Camp Lejeune Globe, Nov. 13, 1975, Vol. 31, No. 46.⁴⁴

⁴³ <https://www.dvidshub.net/publication/issues/60039>

⁴⁴ <https://www.dvidshub.net/publication/issues/60213>



Entering the field



Camp Lejeune Globe, Nov. 13, 1975, Vol. 31, No. 46.⁴⁵

⁴⁵ <https://www.dvidshub.net/publication/issues/60213>

Boxing news

The Camp Lejeune Boxing team will be the host of six boxing teams in a tournament to be held here, at the Goettge Memorial Field House Nov. 21 and 22.

Teams to compete in this tournament are; High Point, N.C. AAU, Cincinnati, Ohio AAU, Plainfield, N.J. AAU, Wilmington N.C. Police Dept., Norfolk, Va. Navy, and the Army from Ft. Bragg.

Admission is free for both days.

Camp Lejeune Globe, Nov. 13, 1975, Vol. 31, No. 46, p. 8.⁴⁶

⁴⁶ <https://www.davidshub.net/publication/issues/60213>

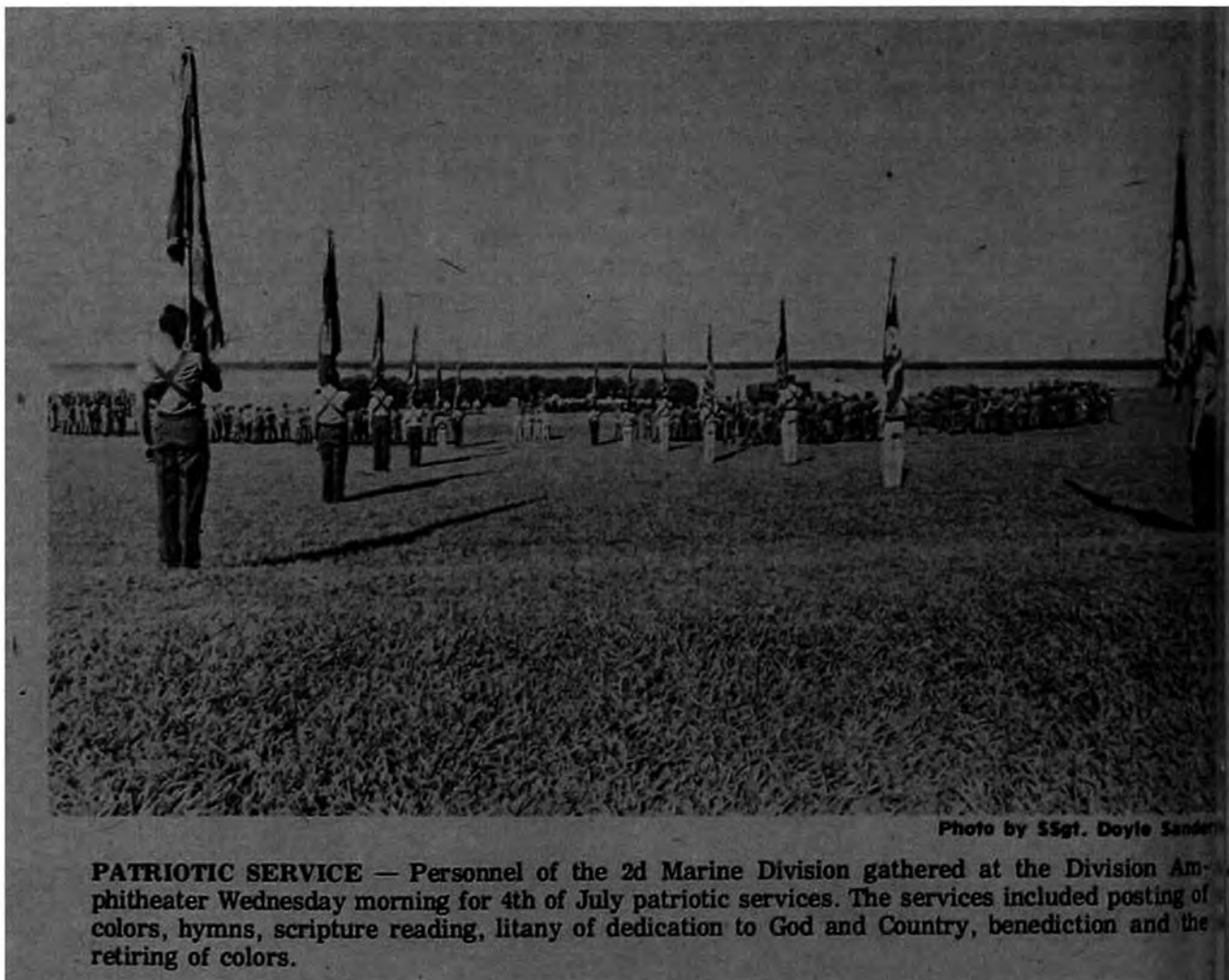


Photo by SSgt. Doyle Sanders

PATRIOTIC SERVICE — Personnel of the 2d Marine Division gathered at the Division Amphitheater Wednesday morning for 4th of July patriotic services. The services included posting of colors, hymns, scripture reading, litany of dedication to God and Country, benediction and the retiring of colors.

Camp Lejeune Globe, July 3, 1975, Vo. 31, No. 27, p. 2.⁴⁷

⁴⁷ <https://www.dvidshub.net/publication/issues/64518>



BEHIND THE SCENES—Act. MSgt. Andrew Redder, Base Special Services, helps Act. SSgt. Michael Baker, 2nd Explosive Ordnance Disposal Plt., unload packaged fireworks in preparation for

Camp Lejeune's first 4th of July pyrotechnic display. Three EOD men set off the colorful explosives in a roped-off area of the parade ground.

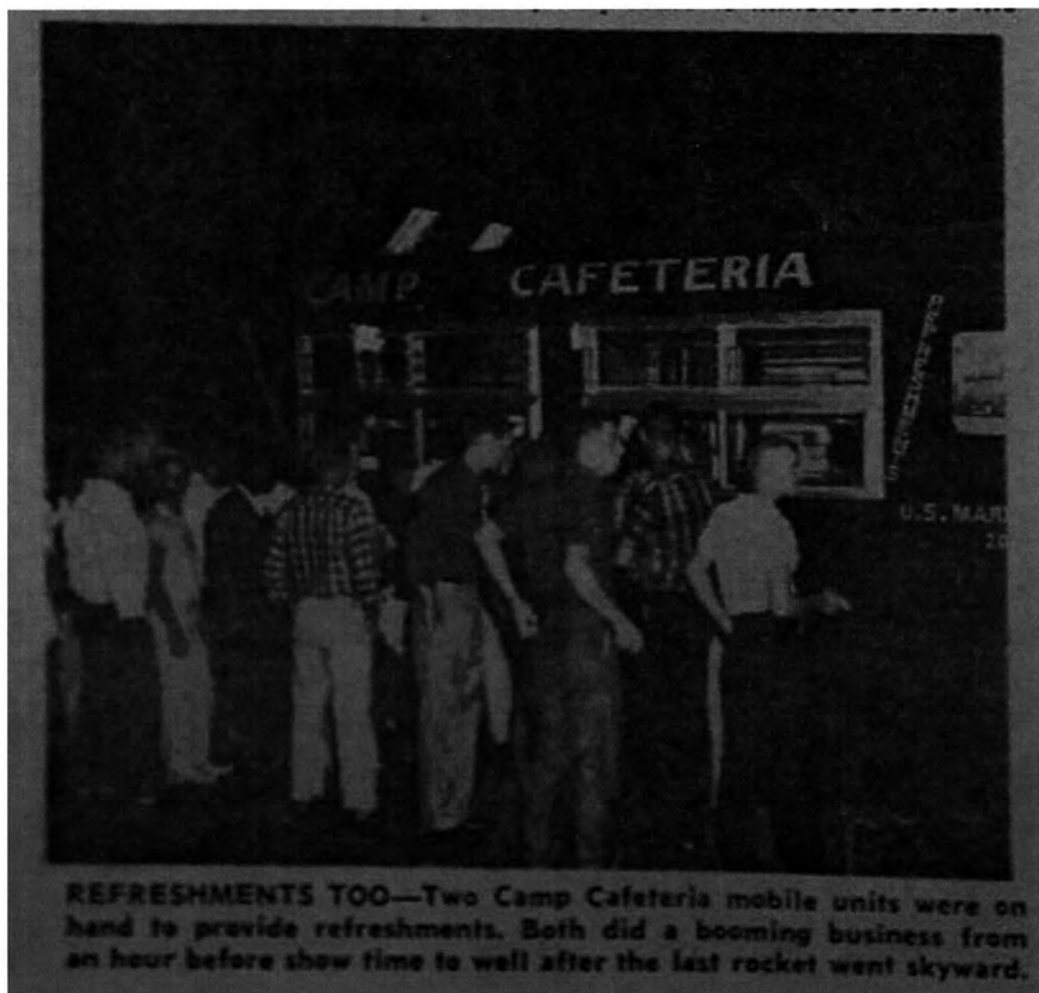


AN ESTIMATED 15,000—Several reports estimated that more than 15,000 turned out to witness the fireworks show. The parade ground bleachers, above, were filled to capacity some 45 minutes before the

first rocket burst. Every piece of available real estate in sight of the parade ground was overflowing with spectators.

Camp Lejeune Globe, July 9, 1959, p. 6.⁴⁸

⁴⁸ <https://www.dvidshub.net/publication/issues/62007>



Camp Lejeune Globe, July 9, 1959, p. 6.⁴⁹

⁴⁹ <https://www.dvidshub.net/publication/issues/62007>

3/6 outruns Div. in cross-country

A two-event quarterly cross-country meet was held by Division last week with 3-6 emerging victorious over a field of 40 Division Marines. The meet consisted of a 30-man platoon competition and a 7-man team match. Each event was run on a 2.7 mile course at Molly Pitcher Field behind the Staff NCO barracks.

In the 30-man platoon meet held June 21, 3-6 topped the field with a time of 18:05. Second was 2d Recon Bn. with a time of 18:20 while 2d Eng. Bn. ran a close third at 18:31. Rounding out the field of contenders was Hq. Bn. in fourth place clocked at 19:15. Second Service Bn. also ran, but was disqualified for having only a 29-man team.

Each unit was eligible to enter 35 men in the meet, with the finishing time of the 30th man across the line counting as the team time.

Leading the 7-man team competition was 3-6 with a total of 47 pts. In second place was 2d Eng. Bn. with 52 pts. while 2d Recon Bn. placed third with 76 pts. Fourth place was captured by Hq. Bn. with 81 pts. and 2d Service Bn. was fifth with 105 pts. In sixth and final place was 2d Motor Transport Bn. with 113 pts.

As the first five members of the 7-man team crossed the line, they were numbered according to the order in which they finished. The numbers were added and the team with the lowest total point count was declared the winner.

Outstanding individual honors of a team member went to A.J. LaPierre, 2d Eng. Bn., with a course time of 14:30. Fastest time recorded by anyone was 14:20 by Wayne R. Steele, 1-2, who entered the meet independently.

H&S Bn.
MCES
ITR
MCSSS
Naval Hosp.
Base Mat. Bn.
RR Det

Goettge Memorial Field House will be closed July 3, for the Navy Relief Rally. No noon leagues will play.

DIVISION PLAY-OFFS ON TAP

Division intramural softball play-offs are scheduled to begin July 16. Top teams from the Western and Eastern Divisions will meet to decide the over-all championship.



HOME STRETCH — Division cross-country runners head into the final stretch of their 2.7 mile run through the woods adjacent to Molly Pitcher Field. 3-6 took both events in the meet held June 21-22. (Photo by LCpl. Barb Majewski)

Camp Lejeune Globe, June 29, 1972, Vol. 28, No. 26, p. 8.⁵⁰

⁵⁰ <https://www.dvidshub.net/publication/issues/60727>



Division Fitness Centers Using 'Universal Gyms'

It's called a "universal gym." That monster in the pictures, that is. It serves eight body-building functions, all of which may be operated simultaneously.

Division Special Services has installed one of these gyms in all Division fitness centers, to the tune of \$2,500 each. They are located in the 2d, 6th, 8th and 10th Marines areas.

"We hope these new gyms will encourage more men to work out daily," said Lieutenant Philip Bellini, Division Recreation Officer. "Each unit replaces the weights presently in use, and is much easier to use."

Several exercises, previously limited to weights alone, can be performed on the universal gym. Marines can use each unit for curls, dips, as a lat machine, for military presses, hip flexing, pull-ups, and bench pressing.

The FSR Fitness Center, located in the Industrial Area, also has a unit for Force Troops personnel.

Camp Lejeune Globe, July 18, 1969, Vol. 25, No. 29, p. 9.⁵¹

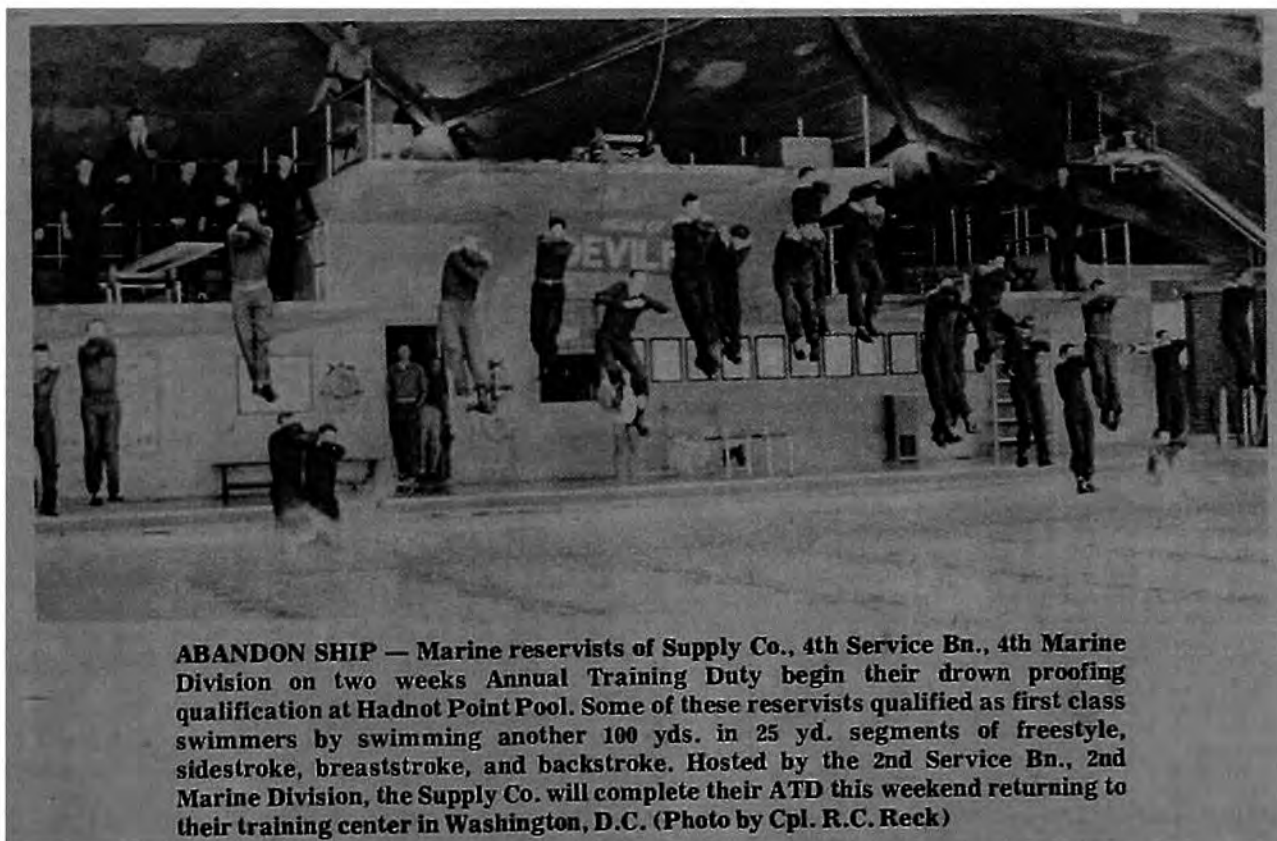
⁵¹ <https://www.dvidshub.net/publication/issues/60898>



AWARD WINNING BIRDS Lynn Franklin and Deborah Kilgore receive Certificates of Achievement from Gunner Sergeant Charles R. Cunningham, commissioner of girl's softball, and Mrs. Ann Greer, president of the Camp Lejeune Girl's Activities Club at the Little League field in Tarawa Terrace. Both girls, members of the Woodpeckers, received the awards for participation in the girl's club activities. They were also cited as honorable mentions for the All Star Girls Softball Team. The presentations were made to honor the girls who will be leaving with their families for another Marine Corps Base. Teammates and rival bluebirds join in the congratulations. (Photo by LCpl. Don Abood.)

Camp Lejeune Globe, July 18, 1969, Vol. 25, No. 29, p. 9.⁵²

⁵² <https://www.dvidshub.net/publication/issues/60898>



Camp Lejeune Globe, July 20, 1972, p. 5.⁵³

⁵³ <https://www.dvidshub.net/publication/issues/60727>



Camp Lejeune Globe, May 9, 1974, Vol. 30, No. 15, p. 5.⁵⁴

⁵⁴ <https://www.dvidshub.net/publication/issues/60302>

Expanded clinic services open to all

Retired military personnel and dependents here who need immediate treatment and evaluation of acute medical care problems can now utilize the Acute Care Clinic, located on Ward 5-A of the Naval Regional Medical Center.

The clinic is staffed by a physician, an assistant or nurse practitioner and two hospital corpsmen. Because of limited personnel, it is recommended that medical problems that can reasonably wait until the next workday be handled through the appointment systems of the Primary Care or Pediatrics clinics.

The clinic operates from 4:30 to 9 p.m., Monday through Friday and 8 a.m. to 9 p.m., Saturday, Sunday and holidays.

The clinic is not intended to be an extension of regular hours of either of these facilities.

Appointments for same-day acute care may be made by calling the appointment desk at 451-4505/4611 for patients age 12 and older, or the Pediatrics Clinic at 451-4303/4380 for children under 12.

Well-baby and routine pediatrics care can be obtained by calling the appointment desk during normal working hours.

Camp Lejeune Globe, April 26, 1979, Vol. 35, No. 17.⁵⁵

⁵⁵ <https://www.dvidshub.net/publication/issues/59790>

Naval Hospital Marks 26th Anniversary

By SGT. ANDY FIELDS
This week, the Naval Hospital celebrates more than a quarter-century of service to the World's Most Complete Amphibious Training Base—Camp Lejeune.

The hospital, presently commanded by Captain J.H. Sultor, U.S. Navy, was commissioned on May 1, 1943 at a construction cost of \$7,500,000. On that date, patients were admitted as transfers from the then temporary Field Hospital, which up to that time had provided care for the sick and injured of the former Marine Barracks, New River.

The Naval Hospital, is a self-contained activity under the command and support control of the

Bureau of Medicine and Surgery, Navy Department. Coordination control is exercised by the Commanding General, Marine Corps Base.

The mission of the hospital includes support for military personnel and dependents of Marine Corps Base, Force Troops, 2d Marine Division, Marine Corps Air Station, New River, and Marine Corps Air Station, Cherry Point, North Carolina. The hospital also cares for retired personnel.

The authorized operating bed capacity is 600. This can be expanded to care for as many as 1,117. The highest patient load during World War II was 2,087 and during the Korean Conflict

the peak census was 1,865, including many Army patients. At present, average occupied beds, total 460.

Since commissioning, the hospital has admitted approximately 87,000 military patients and 77,500 others. A total of more than 45,500 births have been recorded.

In March 1958, the hospital assumed responsibility for outpatient care of dependents, a mission previously assigned to the Base Dispensary. In order to provide this support, Wards 1 and 2 were converted into outpatient clinics. The clinics average approximately 10,000 patient visits per month.

Constructed to fill a war-time need, the hospital has added pro-

gressively to its initial medical capabilities. Services now available include general medicine, general surgery, orthopedic surgery, obstetrics, gynecology, pediatrics, ophthalmology, urology, radiology, pathology, pharmacy, physical therapy, otorhinolaryngology, dentistry and neuropsychiatry.

The population supported in-

cludes more than 32,000 military, 36,000 dependents and some 400 retired personnel.

In addition, active support is furnished all civilian medical activities in the vicinity on a humanitarian basis. Although not a teaching hospital, it is fully accredited by the Joint Commission on Accreditation of Hospitals.



COOKS prepare some "medicine" — hot chow.

Camp Lejeune Globe, May 2, 1969, Vol. 25, No. 18, p. 10.⁵⁶

⁵⁶ <https://www.dvidshub.net/publication/issues/60911>



Camp Lejeune Globe, March 29, 1968, p. 4.⁵⁷

⁵⁷ <https://www.dvidshub.net/publication/issues/61050>



ROMPER ROOM — The Navy Relief Children's Waiting Room, Ob-Gyn Clinic, Naval Reg. Medical Center, was officially opened June 30 in a ribbon-cutting ceremony. The waiting room was used as a nursery for children of mothers attending the clinic.

Camp Lejeune Globe, July 3, 1975, Vo. 31, No. 27, p. 6.⁵⁸

1.

⁵⁸ <https://www.dvidshub.net/publication/issues/64518>



USMC photo by SSgt. James W. Gladstone

A FRANTIC FIVE — Kathy Masters charges through a grocery aisle April 4 at the Hadnot Point commissary here during her five-minute shopping spree. Masters, fourth prize winner in the March 30 drawing, checked out with three full carts of food valued at \$341.93. The commissary had set aside \$500 for her spree. She received the balance in cash.

Camp Lejeune Globe, April 12, 1979, Vol. 35, No. 15, p. 8.⁵⁹

⁵⁹ <https://www.dvidshub.net/publication/issues/59792>

' Children, children, everywhere!!!

Open Line:

Children, children, children everywhere — especially in the Main Exchange. Most of them are there without being accompanied by a parent, or at least it seems so. Why must customers be constantly caught up in a game of "Cops and Robbers," attacked by a bundle of fury bounding from beneath racks of clothing or from some other unsuspecting place.

The Exchange is a place where all of us should be able to go and shop without having to constantly be on the lookout for someone else's children or becoming so frustrated that we leave the store with uncompleted shopping lists.

No, moms and dads, I love children and feel they need to be protected, especially when out in public places. They are your responsibility and you should not leave it up to others to look out for their safety and well-being while you yourself browse throughout the Exchange. If you do not intend to take care of your children while you are shopping then you should not bring them in the Exchange to run wild. Not only do they upset other patrons, they often destroy or mutilate property to such an extent it has to be surveyed.

Oh, I know you are not one to shy away from your responsibility of paying for any damages done, but why shy away from the greater responsibility of controlling your children?

Just recently I was in the store and a lady brought a small child to the Manager's Office, stating the child had followed her to her car twice and she did not even know the child. The word was passed for someone to come pick the child up. Eventually an unconcerned mother arrived, spanked the child, sent it on its way to the Toy Department and she went to the Ladies Department. Parents, aren't you concerned what could happen to your child?

Camp Lejeune Globe, June 13, 1974, Vol. 30, No. 24.⁶⁰

⁶⁰ <https://www.dvidshub.net/publication/issues/60297>

Package store open longer

During the holidays, Nov. 24 through Dec. 31, the Consolidated Package Store at Hadnot Point (Bldg. 1401) will remain open from 10 a.m., until 9 p.m., Monday through Saturday. The hours at Tarawa Terrace will remain the same, 10 a.m. to 9 p.m. Monday through Saturday, and 1 p.m., to 6 p.m. on Sunday.

Camp Lejeune Globe, Nov. 20, 1975, Vol. 31, No. 47, p. 3.⁶¹

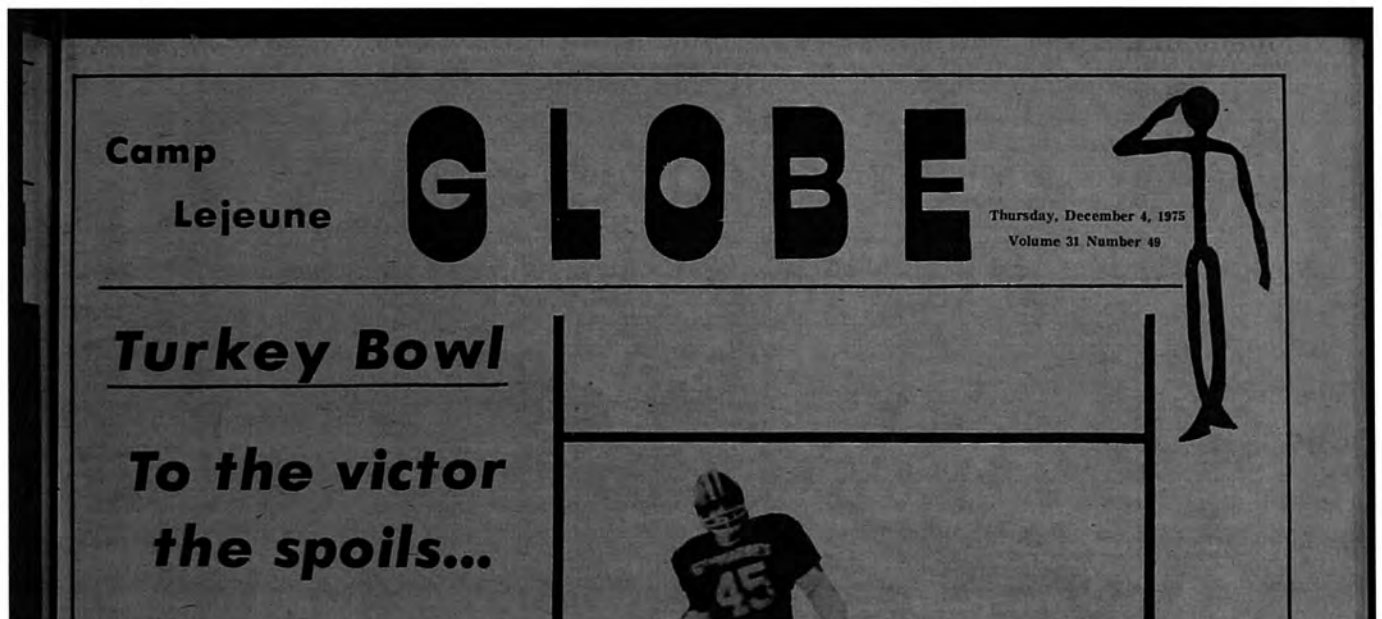
⁶¹ <https://www.dvidshub.net/publication/issues/60212>

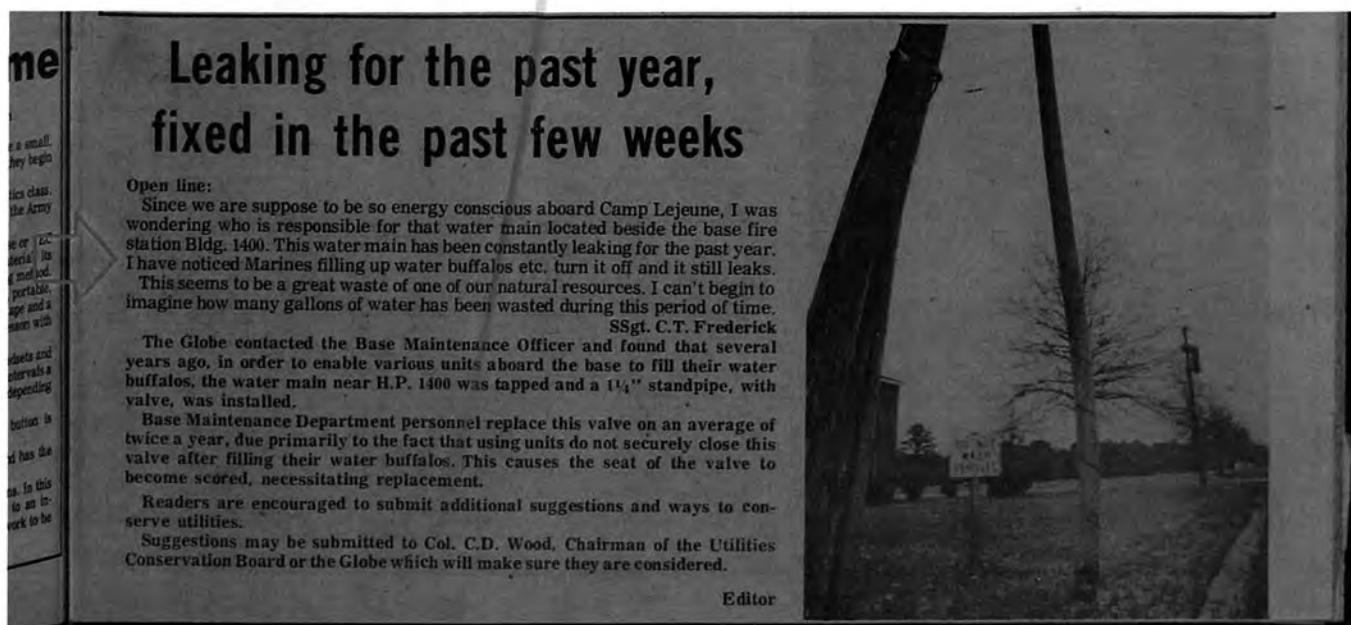
Longley's January 2025 report, p. 23 –



Large and Tall Standpipe at Building 1400 at Hadnot Point
The Globe, 4 December 1975

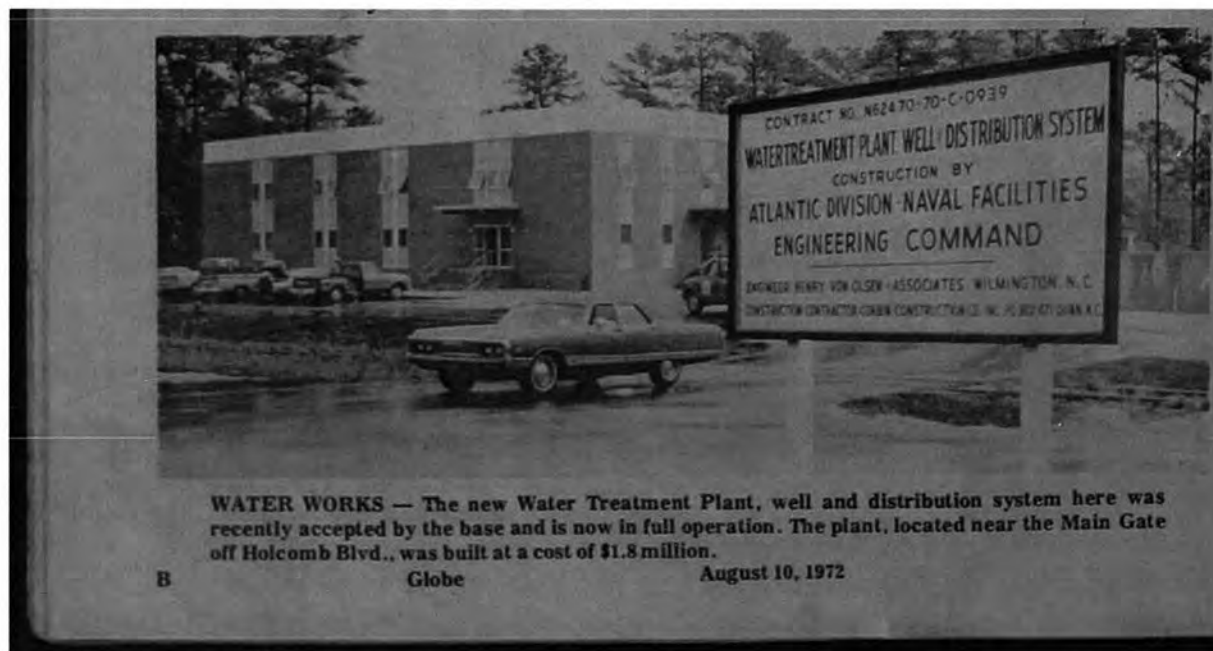
Cover photo:





Online here: <https://www.dvidshub.net/publication/issues/60210>

From the Globe, August 10, 1972 –



From: <https://www.dvidshub.net/publication/issues/60724>

EXHIBIT 14

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NOVARTIS PHARMACEUTICALS
CORPORATION and NOVARTIS AG,

Plaintiffs,

v.

BRECKENRIDGE PHARMACEUTICAL,
INC.,

Defendant.

Civil Action No. 14-1043-RGA

NOVARTIS PHARMACEUTICALS
CORPORATION and NOVARTIS AG,

Plaintiffs,

v.

ROXANE LABORATORIES INC.,

Defendant.

Civil Action No. 14-1196-RGA

NOVARTIS PHARMACEUTICALS
CORPORATION and NOVARTIS AG,

Plaintiffs,

v.

PAR PHARMACEUTICAL INC.,

Defendant.

Civil Action No. 14-1289-RGA

ORDER DENYING MOTIONS TO PRECLUDE

Plaintiff has moved to exclude one of Defendants' experts, Dr. Partridge. (D.I. 119).¹ Defendants have moved to exclude one of Plaintiff's experts, Dr. Roush. (D.I. 121). Briefing was completed on July 5, 2016.

While I acknowledge the "gate-keeper" function of a federal trial judge, it is not so important that it be done pretrial when the trial is a bench trial. *See In re Salem*, 465 F.3d 767, 777 (7th Cir. 2006); *United States v. Brown*, 415 F.3d 1257, 1269-70 (11th Cir. 2005); *Warner Chilcott Labs. v. Impax Labs., Inc.*, 2012 WL 1551709, *23-24 (D.N.J. Apr. 30, 2012). Live testimony and cross-examination are much more likely to result in a correct decision from me about whether the experts are giving appropriate scientific testimony. Thus, while I am denying the motions for now, each side may make (and, indeed, in order to preserve the issue, must make) objections at appropriate times. I expect the parties will lay appropriate foundations for these two experts as parts of their cases. Failure to make a timely appropriate objection will result in the objection being waived. The Court will only consider evidence actually adduced at trial (whether through cross-examination or testimony from other witnesses) in ruling on any renewed motion.

A few comments on the two motions:

Partridge. I think Dr. Partridge can testify about whether a POSA would have been motivated to pick the C40 position. Simply because he could not identify where all his data came from at deposition does not mean he will be unable to do so at trial. I am rather dubious of the use of the drawing to calculate a distance (D.I. 130 at p.9) if it is offered to prove what the distance actually is, but, if that is what Plaintiffs are trying to do, they are welcome to try. I think

¹ Citations are only to the docket in Civ. Act. No. 14-1043. The same motions have been filed in the other two cases.

Dr. Partridge can testify about how a POSA would have interpreted skin graft assay data. Lastly, Dr. Partridge is not an oncologist or an expert on immunology, but the line between what a medicinal chemist can testify about, and what an expert in a related discipline can testify about, is something best resolved in the context of the trial testimony upon a timely objection.

Roush. Defendants argue that Dr. Roush can not testify about non-obviousness unless he conducts his own lead compound analysis, in particular, whether rapamycin would be a lead compound. As I understand it, Plaintiffs have another expert, Dr. Fung, who will testify that rapamycin was a lead compound. Dr. Roush's testimony is about whether "the prior art would have supplied [a POSA] with a reason or motivation to modify a lead compound [rapamycin] to make the claimed compound [everolimus] with a reasonable expectation of success." *Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1292 (Fed. Cir. 2012). Defendants have the burden of proof. Thus, I do not understand why Dr. Roush cannot conclude that there was not a "reason or motivation" or there was not a "reasonable expectation of success," and, having so concluded, call this "non-obviousness." I note also that I am the one who is going to have to make the legal conclusion of whether Defendants proved obviousness. What will be important is what Dr. Roush has to say about the facts (that is, "reason or motivation" and "reasonable expectation of success"). [I imagine that Dr. Fung can testify that rapamycin is not a lead compound and call that non-obviousness too].

Defendants also pick a few pieces of deposition testimony by Dr. Roush, and argue that he so misunderstands the law that his opinions relating to "non-obviousness" are unreliable. The deposition passages (quoted at D.I. 122, pp. 13, 14, 16-17) are quite opaque. I cannot say he misstated the law at the time of his deposition. And, even if he did, that is not a reason to

exclude his trial testimony.

The Motions to Preclude (D.I. 119, 121) are **DENIED** without prejudice.

August 18, 2016
Date

Richard G. Anderson
United States District Judge

EXHIBIT 15

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

VIFOR FRESENIUS MEDICAL CARE)	
RENAL PHARMA LTD. and VIFOR)	
FRESENIUS MEDICAL CARE RENAL)	
PHARMA FRANCE S.A.S.,)	
)	
Plaintiffs,)	C.A. No. 20-911-MN
)	
v.)	
)	
TEVA PHARMACEUTICALS USA, INC.,)	
)	
Defendant.)	

ORDER

At Wilmington, this 16th day of May 2022,

WHEREAS, between them, the parties have filed three motions seeking to preclude the testimony of three experts at trial (D.I. 222, 223, 224), and Plaintiffs additionally moved to strike portions of two of Defendant's experts' Supplemental Rebuttal Reports (D.I. 227);

WHEREAS, should this case proceed to trial, it will be a bench trial (*see* D.I. 32);

WHEREAS, "[w]hen the role of the gatekeeper to admit or exclude evidence (the judge) and the role of the factfinder to assess and weigh the evidence . . . (the jury) are one and the same, the judge who becomes the factfinder as well as the gatekeeper . . . should not be required to waste judicial time." *In re Unisys*, 173 F.3d 145, 155–58 (3d Cir. 1999).

WHEREAS, having reviewed the motions to preclude, the Court has determined that it can better address the issues in context at trial when the Court can hear testimony and better understand the bases for the experts' opinions;

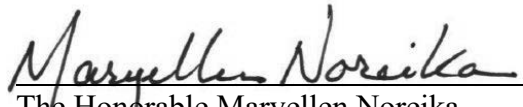
WHEREAS, with respect to Plaintiffs' motion to strike (D.I. 227), the Court agrees with Defendant that, although the change to correct the errant citation may appear small, the effect of it may have had a material effect on the response from Defendant's experts;

WHEREAS, the *Pennypack* factors weigh in favor of denying Plaintiffs' motion to strike because Plaintiffs suffer no unfair prejudice as a result of Defendant being able to squarely address a corrected version of Dr. Wright's report, Plaintiffs may cure any prejudice in a supplemental reply report, admitting the contested portions of the report would not disrupt the Court's orderly proceedings, and the contested portions of Defendant's reports were not produced in bad faith;

THEREFORE, IT IS HEREBY ORDERED that

1) the motions to preclude (D.I. 222, 223, 224) are DENIED with leave to renew during trial to the extent appropriate.¹

2) Plaintiffs' motion to strike (D.I. 227) is DENIED.²


The Honorable Maryellen Noreika
United States District Judge

¹ A district court "may conditionally admit the expert testimony subject to a later Rule 702 determination." *UGI Sunbury LLC v. A Permanent Easement for 1.7575 Acres*, 949 F.3d 825, 833 (3d Cir. 2020). Accordingly, at trial, the parties may submit and test contested expert testimony. The parties may then reraise their respective *Daubert* motions at or after trial, with the Court's permission.

² To the extent that Plaintiffs need to reply to the new reports, the parties shall meet and confer and agree to a procedure for Plaintiffs to do so.

EXHIBIT 16

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO
Judge Robert E. Blackburn**

Criminal Case No. 04-cr-00103-REB-02

UNITED STATES OF AMERICA,

Plaintiff,

v.

2. GEORGE ALAN WEED,

Defendant.

**ORDER RE: DEFENDANT WEED'S PROFFER
OF EXPERT WITNESS TESTIMONY**

Blackburn, J

The matter before me is the **Government's Response and Objection to Defendant Weed's Proffer of Expert Witness Testimony** [#947], filed December 20, 2006. I deny the objections without prejudice.

The government objects pursuant to Fed.R.Evid. 702¹ to defendant's proffer of the testimony of Darrell Dunham, a lawyer and law professor, who will opine as to "whether the certificates [sic] entitled 'The Reserve Foundation Trust Certificate' contains material misrepresentations of fact or law." Rule 702 of the Federal Rules of Evidence governs the admissibility of expert witness testimony. This rule provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may

¹ The government objects also on the basis of relevance under Rule 401 and attendant jury confusion under Rule 403, arguing that Dunham's proposed testimony does not address the issue whether the document he has been asked to interpret, in fact, contains material misrepresentations. I agree with defendant, however, that Dunham's conclusion that the trust certificate did, in fact, insure investors' deposits is relevant to the crimes of which defendant is accused.

testify thereto in the form of an opinion or otherwise, if
(1) the testimony is based upon sufficient facts or data, (2)
the testimony is the product of reliable principles and
methods, and (3) the witness has applied the principles and
methods reliably to the facts of the case.

FED.R.EVID. 702. As interpreted by the Supreme Court, Rule 702 requires that an expert's testimony be both reliable, in that the witness is qualified to testify regarding the subject and uses a reliable method that is reliably applied, and is relevant, in that it will assist the trier in determining a fact in issue. ***Daubert v. Merrell Dow***

Pharmaceuticals, Inc., 509 U.S. 579, 589-92, 113 S.Ct. 2786, 2795-96, 125 L.Ed.2d 469 (1993); ***Truck Insurance Exchange v. MagneTek, Inc.***, 360 F.3d 1206, 1210 (10th Cir. 2004). The Supreme Court has described the court's role in weighing expert opinions against these standards as that of a "gatekeeper." ***See Kumho Tire Company, Ltd. v. Carmichael***, 526 U.S. 137, 147, 119 S.Ct. 1167, 1174, 142 L.Ed.2d 248 (1999). I have broad discretion in determining whether expert testimony is sufficiently reliable and relevant under these standards to be admissible. ***Truck Insurance Exchange***, 360 F.3d at 1210; ***Smith v. Ingersoll-Rand Co.***, 214 F.3d 1235, 1243 (10th Cir. 2000).

The government's first objection to Dunham's qualifications to testify in this matter is imponderous. Although Dunham's professional background is in commercial law generally, not insurance law specifically, the field of commercial law certainly is sufficiently broad to allow him to opine as to matters involving trusts and insurance contracts.

The government claims next that Dunham's opinion is premised on the allegedly erroneous assumption that "the funds disappeared under conditions such that St. Paul

would be liable on its policy if The Reserve Foundation Trust were to bring suit.”

However, the government’s attempt to prove the falsity of this assumption relies on facts that are still themselves matters for proof to the jury. I am not willing at this early juncture to say that the government’s reading of the evidence is so clearly correct that any other interpretation must be false. Although Dunham’s assumption in this regard may go to the weight of his opinion, it does not affect its admissibility.

Dunham’s reliance on the opinion of another lawyer familiar with the law of St. Vincent and the Grenadines provides no basis for disqualification of his opinion either. The government’s objection in this regard is squarely met by Fed.R.Evid. 703, which allows an expert witness to rely on facts or data not otherwise admissible in evidence if such evidence is “of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject.” Nor is Dunham’s application of legal principles espoused in the Restatement (Second) of Trusts to interpret the document fatal. The government makes no showing suggesting that this veritable treatise is not instructive in interpreting the law of St. Vincent and the Grenadines. Here again, the alleged flaw goes to the weight, but not the admissibility, of the expert’s opinion.

For these reasons, the government’s objections are for now overruled. My decision in this regard is without prejudice to the government’s ability to raise objections to the expert’s testimony, under Rule 702 or otherwise, if further development of the evidence at trial suggests that such objections are viable.

THEREFORE, IT IS ORDERED that the **Government’s Response and Objection to Defendant Weed’s Proffer of Expert Witness Testimony** [#947], filed December 20, 2006, is **DENIED AND OVERRULED WITHOUT PREJUDICE**.

Dated March 30, 2007, at Denver, Colorado.

BY THE COURT:

s/ Robert E. Blackburn
Robert E. Blackburn
United States District Judge

EXHIBIT 17

**UNITED STATES DISTRICT COURT
DISTRICT OF MAINE**

CITY OF BANGOR,)	
)	
Plaintiff)	
)	
v.)	Civil No. 02-183-B-S
)	
CITIZEN COMMUNICATIONS)	
COMPANY,)	
)	
Defendant & Third)	
Party Plaintiff)	
)	
v.)	
)	
BARRETT PAVING MATERIALS, INC. et al,)	
)	
Third Party Defendants.)	

ORDER ON PENDING DAUBERT MOTIONS

Before the Court are four motions by the City of Bangor seeking to exclude various expert witnesses from testifying at the bench trial in this matter. The Court has considered both the written submissions of the parties, as well as the arguments offered at the hearings on these motions. In addition, the Court has considered the testimony it has heard from the four proposed experts at the hearings.

In considering these motions, the Court has been guided by Federal Rule of Evidence 702, as interpreted by the Supreme Court's decisions in both Daubert v. Merrill Dow Pharmaceuticals, 509 U.S. 579 (1993) and Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999).

The Court's analysis is further guided by the First Circuit's decision in Ruiz-Troche v. Pepsi-Cola, 161 F.3d 77 (1st Cir. 1998). As the First Circuit explained in that decision, Daubert requires "the trial judge to evaluate an expert's proposed testimony for both reliability and relevance." Id. at 80-81. In determining the reliability of any expert testimony, the First Circuit cautioned in Ruiz-Troche that:

“Daubert does not require that a party who proffers expert testimony carry the burden of proving to the judge that the expert's assessment of the situation is correct. . . . It demands only that the proponent of the evidence show that the expert's conclusion has been arrived at in a scientifically sound and methodologically reliable fashion.”

Ruiz-Troche, 161 F.3d at 85.

If the Court finds that any expert's testimony meets this bar and is relevant to the factual issues at hand, it is generally admitted and then subjected to “the adversary process” of “competing expert testimony and active cross-examination.” Ruiz-Troche, 161 F.3d at 85.

The issue of whether any given expert's opinion is based on a sufficient factual basis is ordinarily best resolved by this adversary process and the Court will exclude an expert from testifying only if it appears that an expert's opinion is so fundamentally unsupported that it can offer no assistance to the fact finder.

With this standard in mind, the Court announces its decisions on each of the four pending Daubert motions:

(1) Plaintiff's Motion to Exclude Testimony of Glen C. Gustafson (Docket # 299)

Dr. Gustafson is offered as an expert in the interpretation of aerial photographs. There is no dispute that Dr. Gustafson is qualified in this field of expertise. Rather, it appears that Plaintiff's concerns focus on the documents and exhibits this expert has relied upon in reaching his opinions as well as whether some of these opinions are actually the result of specialized knowledge.

In short, the Court is satisfied that Dr. Gustafson's testimony is both relevant and reliable. The issues raised by Plaintiff go to the credibility and weight of that testimony – issues that are best resolved at trial and do not serve as a basis for excluding this witness

from testifying at trial. Therefore, the Court DENIES this Motion without prejudice to Plaintiff renewing its objections at trial.

**(2) Plaintiff's Motion to Exclude Testimony of Dr. J. Craig Swanson
(Docket # 303)**

Dr. Swanson is offered as an expert in hydrodynamics, including river dynamics. Based on the testimony offered at the hearing, the Court finds no basis for excluding Dr. Swanson from testifying at trial. Rather, the Court preliminarily finds that Dr. Swanson's testimony satisfies Daubert's reliability requirement.

Moreover, it became clear at the hearing that much of Dr. Swanson's testimony will be offered in response to various expert testimony that will be offered by the City through RMT. In light of the connection, the relevance of Dr. Swanson's opinions are best examined at trial after the Court has heard the related opinions to be offered by Plaintiff through its own experts.

Plaintiff has raised two "fairness issues" in connection with this Motion that the Court must address. First, with respect to the ArcView program, as the Court has already noted on the record, it has relied on Defense counsel's representations that it does not intend to elicit testimony from Dr. Swanson regarding additional research he has done since his deposition into how ArcView program operates. Defense counsel has represented to the Court that this additional research does not serve as the basis for Dr. Swanson's opinions and apparently has not altered those opinions. To the extent that the City wishes to cross-examine Dr. Swanson on why he conducted any additional research and why he can answer certain questions now that he could not answer at his earlier deposition, the City is free to do so. In the Court's assessment, this issue goes to the credibility of Dr. Swanson and the weight that may ultimately be given to his opinions.

With respect to the WQMAP program, Plaintiff was apparently offered a no-cost "viewer" of the program but refused it and now comes before the Court complaining that it has not had a full and fair opportunity to explore this program, which serves as a basis

for Dr. Swanson's opinions. In short, having failed to exhaust the opportunities that were made available, the Court finds that Plaintiff's fairness objection is without merit. Before requesting exclusion on this basis, Plaintiff was obligated to review the offered materials and present to the Court a more detailed argument as to why the "viewer" was by itself insufficient. This discovery issue should have been pressed by Plaintiff in the days and weeks following Dr. Swanson's deposition in February 2004, if not earlier. Having failed to pursue this matter then, the Court finds Bangor's current "unfairness" claims to be untimely and without merit.

For the reasons just explained, the Court DENIES the Motion to Exclude the Testimony of Dr. Swanson without prejudice to Plaintiff renewing its objections at trial.

(3) Plaintiff's Motion to Exclude Testimony of Jonathan Arnold (Docket # 296)

Mr. Arnold is offered as an expert in economics, including financial statement analysis. At the hearing, Mr. Arnold's opinions were summarized as falling into three separate categories: (1) that Citizens did not get any meaningfully economic benefit from its ownership and operation of Bangor Gas Works, (2) that there was a market for the sale of tar and no economic incentive to waste tar, and (3) that holding Citizens liable for clean-up of discharges into the sewer would violate principles of economic efficiency and fairness.

Having listened to Mr. Arnold's testimony at the hearing, the Court is satisfied that Mr. Arnold's opinions were arrived at using sound economic principles. Thus, the Court finds that Mr. Arnold's opinions are reliable and admissible under Daubert. For this reason, the Court DENIES this Motion to Exclude his Testimony without prejudice to Plaintiff renewing its objections at trial.

As the Court has already indicated, it has serious concerns regarding the relevance of some of Mr. Arnold's opinions, especially opinions falling into the second and third categories. At trial, the Court may well limit Mr. Arnold's testimony pursuant to Federal Rules of Evidence 402 or 403. In addition, the Court may also limit Mr. Arnold's

testimony to the extent it determines that the particular testimony does not assist the trier of fact. See F.R.E. 702.

(4) Plaintiff's Motion to Exclude Testimony of Keith E. Johnson (Docket # 298)

Mr. Johnson is offered as an expert in engineering. In the course of discovery, Mr. Johnson has conducted an investigation of the Old Stone Sewer. In short, the Court is satisfied that Mr. Johnson is competent to testify in this case as a fact witness regarding many relevant matters in this case. As was discussed at the hearing, his lay testimony may include opinions to the extent they fall under F.R.E. 701.

With respect to Mr. Johnson's expert opinions on the origin of the tar-like material he observed in the pipes during his investigation, the Court's preliminary assessment is that there has been no foundation laid for Mr. Johnson's qualifications to give such an expert opinion, nor has the Court been presented with any reliable methodology that Mr. Johnson has used to conclude that any material he observes was not deposited by the tides. Therefore, this expert testimony is excluded without prejudice.

All other issues, which Plaintiff has highlighted in both its motion papers and the hearing, are best flushed out via the adversary process and do not serve as a basis for excluding Mr. Johnson from testifying at the upcoming trial.

As just explained, the Court GRANTS IN PART AND DENIES IN PART this Motion to Exclude his Testimony without prejudice to Plaintiff renewing its objections at trial and without prejudice to Defendant attempting to establish a foundation for the expert opinions that have been preliminarily excluded by this Order.

SO ORDERED.

/s/ George Z. Singal
Chief United States District Judge

Dated this 7th day of September 2005.