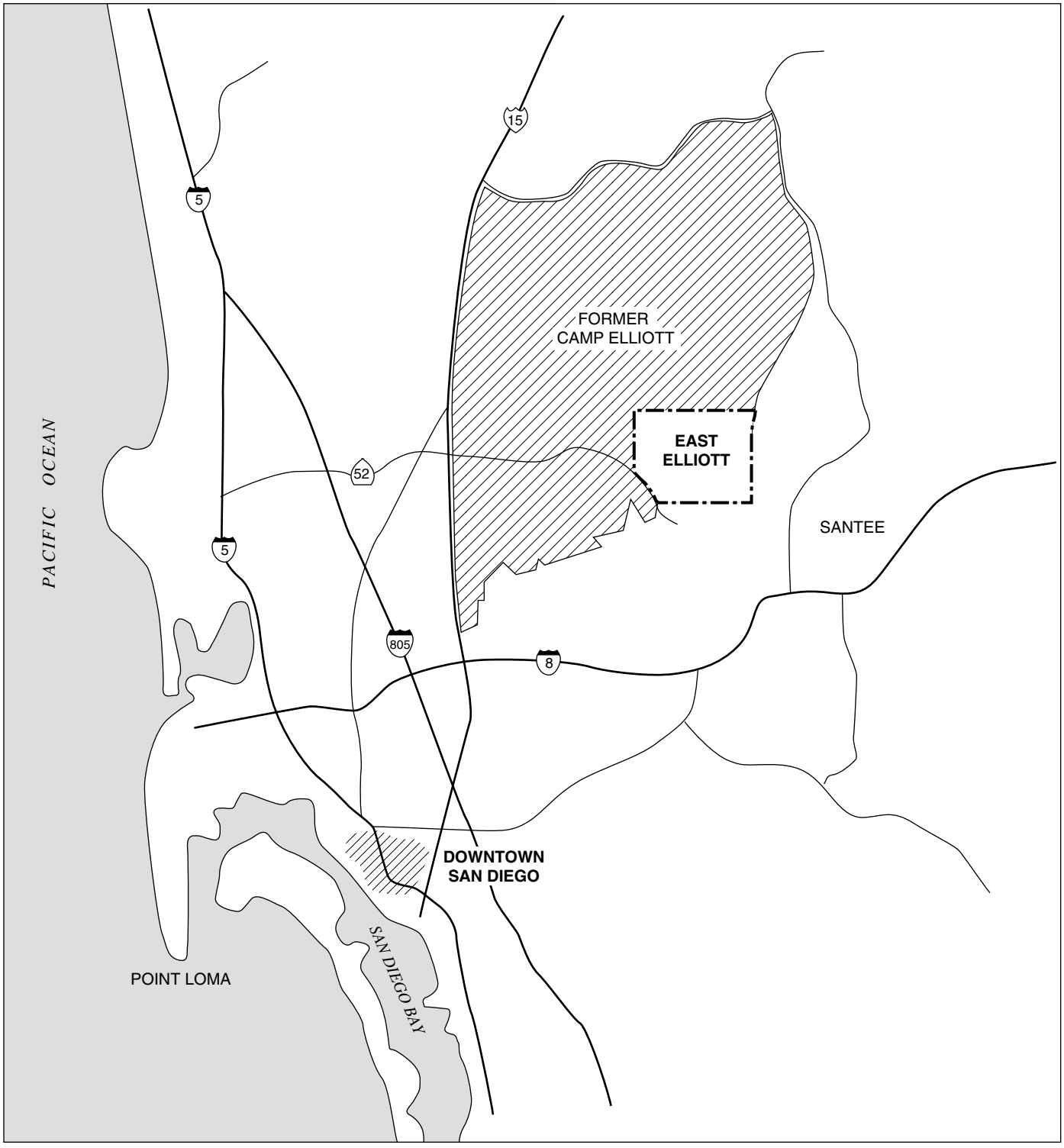
1.0 INTRODUCTION

1.0.0.0.1 At the request of the U.S. Army Corps of Engineers, Huntsville Center (CEHNC), Montgomery Watson has prepared this Engineering Evaluation/Cost Analysis (EE/CA) for the East Elliott portion of Camp Elliott, a former United States Marine Corps (USMC) weapons training center. This EE/CA was prepared under the Defense Environmental Restoration Program (DERP) - Formerly Used Defense Sites (FUDS). Montgomery Watson received Delivery Order 0019 from CEHNC to perform this EE/CA under Contract Number DACA-87-92-D-0019.

1.0.0.0.2 East Elliott comprises the southeastern corner of former USMC Camp Elliott, a training facility that was active in the 1940s and 1950s. East Elliott is approximately 12 miles northeast of downtown San Diego adjacent to the city of Santee (Figures 1-1 and 1-2). Ordnance and explosives (OE) has been found within East Elliott and may pose hazards to the public. Section 2.1 presents a more detailed site description and history of former Camp Elliott and East Elliott.

1.1 EE/CA PURPOSE AND OBJECTIVES

1.1.0.0.1 In accordance with *Removal Action Planning for Ordnance and Explosive Waste Sites Procedural Document* (CEHNC, 1995), the purposes of the EE/CA are to characterize the hazards that may be present at East Elliott; to assess potential risks associated with the hazards; to identify removal action alternatives; to evaluate the alternatives based on the criteria of effectiveness, implementability, and cost; and to propose the selected alternative. The EE/CA process is roughly analogous to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) remedial investigation/feasibility study (RI/FS) process, with the exception that the EE/CA is less comprehensive than the RI/FS in site characterization and is more focused on identification and evaluation of remedial alternatives. The EE/CA process described in the CEHNC Removal Action Planning guidance is also in substantial compliance



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SCALE IN MILES

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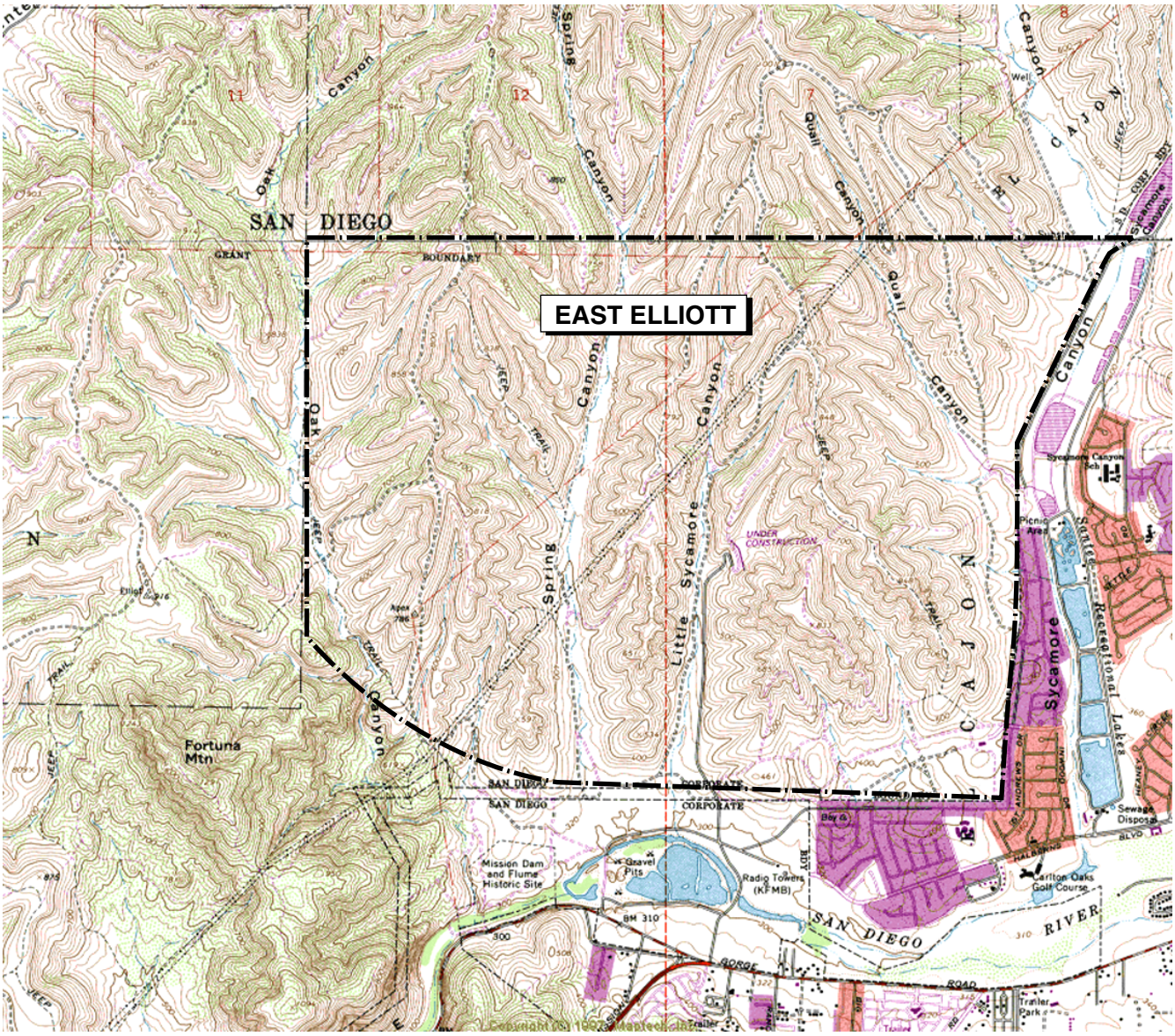
MONTGOMERY WATSON

FORMER CAMP ELLIOTT (EAST ELLIOTT)

GENERAL LOCATION MAP

FIGURE 1-1



USGS Topographic Maps (Terrain Navigator),La Mesa and Poway, CA Quads.

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MONTGOMERY WATSON

FORMER CAMP ELLIOTT (EAST ELLIOTT)

PHYSICAL SITE FEATURES

FIGURE 1-2

with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (USEPA, 1993a).

1.1.0.0.2 The EE/CA process is particularly applicable to sites with potential OE contamination because presumptive remedies exist. Removal action alternatives typically include institutional controls, physical removal of the explosive/chemical hazard, or detonation in place if it can be shown that the residual debris no longer constitutes a risk to public health or the environment.

1.1.0.0.3 The objectives for East Elliott are consistent with the objectives for the general EE/CA process (CEHNC, 1995), and are as follows:

- characterize the presence of OE at the site and assess its associated risk;
- identify removal action objectives and potentially applicable or relevant and appropriate requirements (ARARs) for the removal action;
- identify removal action alternatives;
- evaluate removal action alternatives, comparing their effectiveness, implementability, and cost; and
- present the preferred removal action alternative(s).

1.2 DEFINITIONS

1.2.0.0.1 Based on applicable guidance, regulations, and related documents, the following terms have been used throughout this EE/CA:

> **Ordnance and Explosives (OE):** OE is an umbrella term to include anything related to munitions designed to cause damage to personnel or material through explosive force, incendiary action, or toxic effects, such as bombs and guided and ballistic missiles; artillery, mortar, and rocket ammunition; small arms ammunition; antipersonnel and antitank land mines; demolition charges; pyrotechnics; grenades, torpedoes, and depth charges; containerized and uncontainerized high explosives and propellants; depleted uranium projectiles; toxic military chemical agents; and all items or components similar

or related in nature or otherwise designed to cause damage to personnel or material (USACE, 1996).

Unexploded Ordnance (UXO): Ordnance and explosives that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material, and remain unexploded by either malfunction, design, or other cause (USACE, 1996).

Inert Ordnance: An ordnance item that has functioned as designed, leaving an inert carrier. Ordnance or munitions manufactured to serve a specific training purpose. Fragments from exploded ordnance (USACE, 1996).

OE exposure: A member of the public being in immediate proximity to OE. An individual does not have to be aware of the presence of the ordnance item for an exposure to occur (QuantiTech, Inc., 1995a).

1.2.0.0.2 Based on known uses of OE at the site and results of previous removal actions and investigations (see Section 2.2), OE suspected to be present at East Elliott is conventional ordnance (i.e., ordnance excluding chemical, biological, or nuclear munitions).

1.3 REGULATORY AND ADMINISTRATIVE BACKGROUND

1.3.0.0.1 In 1980, Congress enacted CERCLA. OE is included in the CERCLA definition of pollutants and contaminants that require a remedial response (Department of the Army, 1993b). In 1983, the Environmental Restoration Defense Account (ERDA) was established for environmental restoration at active Department of Defense (DOD) installations and FUDS. The DOD designated the Army as the sole manager for environmental restoration at closed installations and formerly used properties. In 1984, the Secretary of the Army assigned this mission to the U.S. Army Corps of Engineers (USACE). CEHNC, also known as the U.S. Army Engineering and Support Center, Huntsville (USAESCH), has been designated as USACE's Center of Expertise (CX) and Design Center for OE-related activities, and is responsible for the design and successful implementation of all Department of the Army OE remedial activities required by CERCLA, including those associated with FUDS.

1.3.0.0.2 In 1986, the Superfund Amendments and Reauthorization Act (SARA) amended certain aspects of CERCLA, some of which related directly to OE contamination. Chapter 160 of SARA established the DERP. One of the goals specified for the DERP is "correction of environmental damage (such as detection and disposal of unexploded ordnance) which creates an imminent and substantial endangerment to the public health or welfare, or to the environment." The DERP requires a CERCLA response action whenever an "imminent and substantial endangerment" is found at:

- a facility or site that is owned by, leased to, or otherwise possessed by the United States and under the jurisdiction of the Secretary of Defense;
- a facility or site that was under the jurisdiction of the Secretary of Defense and owned by, leased to, or otherwise possessed by the United States at the time of actions leading to contamination; or
- a vessel owned or operated by the DOD.

1.3.0.0.3 In accordance with the *Removal Action Planning for Ordnance and Explosive Waste Sites Procedural Document* (CEHNC, 1995), an EE/CA must be completed for all non-time-critical removal actions (i.e., those requiring a response no sooner than 6 months after a determination has been made that a response is necessary). For sites meeting the non-time-critical criteria, the EE/CA process can substitute for the full RI/FS process, where the removal action is the first and only action expected at a site, and where no other data are available (CEHNC, 1995).

1.4 ROLES AND RESPONSIBILITIES

1.4.0.0.1 This EE/CA is being conducted by CEHNC and Montgomery Watson on behalf of the DOD. Any future removal actions will be coordinated by CEHNC and the U.S. Army Corps of Engineers, Los Angeles District (CESPL).

1.4.0.0.2 The public is encouraged to review and comment on the proposed removal activities described in this EE/CA. To gain a more thorough understanding of the activities

associated with these proposed removal activities, the public is encouraged to review relevant documents maintained in the information repositories for this facility at the following locations:

San Diego City Library, Tierrasanta Branch
4978 La Cuenta Drive
San Diego, CA 92101
(619) 573-1384

San Diego County Library, Santee Branch
9225 Carlton Halls Blvd.
Santee, CA 92071
(619) 448-1863

1.4.0.0.3 Section 2.2 of this EE/CA summarizes some of the relevant documents maintained at the Tierrasanta and Santee libraries.

1.5 REPORT ORGANIZATION

1.5.0.0.1 The remaining portion of this document is organized as follows:

- Section 2.0, Site Characterization, describes the site and activities that occurred in the area. It also describes the results of the field investigations that were performed to support this EE/CA and summarizes the risk to the public from the remaining OE at the site.
- Section 3.0, Identification of Removal Action Objectives, identifies the removal action objectives and ARARs for the performance of the removal action (including institutional controls and clearance operations).
- Section 4.0, Identification and Analysis of Removal Action Alternatives, identifies a series of potential removal action alternatives and independently evaluates each alternative with respect to the criteria of effectiveness, implementability, and cost.
- Section 5.0, Comparative Analysis of Removal Action Alternatives, presents a comparative analysis of the removal action alternatives.
- Section 6.0, Recommended Removal Action Alternative, presents the conclusions drawn from the interpretation of data presented in Sections 4.0 and 5.0, and recommends the alternative(s) to be implemented for site remediation.