US Army Corps
of Engineers®
Los Angeles District

Prado Basin Ecosystem Restoration and Water Conservation Study

APPENDIX Q

Hazardous, Toxic, and Radioactive Waste

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US Army Corps of Engineers

Los Angeles District

Geotechnical Branch, Geology & Investigations Section

HTRW Survey Report of the Prado Basin Feasibility Study Project

August 2018

ACRONYMS REFERENCE WITHIN THIS REPORT

AAI: All Appropriate Inquiry (ASTM abbreviated ESA method)

ASTM: American Society for Testing and Materials

CAA: Clean Air Act (federal environmental law)

CERCLA: Comprehensive Environmental Response Cleanup and Liability Act (federal environmental law)

CFR: Code of Federal Regulations

CWA: Clean Water Act (federal environmental law)

DTSC: Department of Toxic Substances Control (California environmental regulatory agency for soil)

EA: Environmental Assessment

EDR: Environmental Data Resources (private environmental data search record storehouse)

EIR: Environmental Impact Report (state environmental impact report)

EIS: Environmental Impact Statement (federal environmental reporting requirement)

ER: Engineering Regulation (Corps of Engineers internal regulations)

ERA: Ecological Risk Assessment

ESA: Environmental Site Assessment (general environmental reporting guideline by ASTM)

ESASs: Environmental Site Assessment Standards (category of environmental ASTM standards within the ASTM standards)

F4: Feasibility 4 (level 4 of the Corps of Engineers feasibility study process)

FS: Feasibility Study (CERCLA step)

HHRA: Human Health Risk Assessment

HTRW: Hazardous, Toxic and/or Radioactive Waste (Corps of Engineers program terminology)

IRA: Interim Removal Action (CERCLA step)

IRAP: Interim Removal Action Plan (CERCLA step)

LARWQCB: Los Angeles Regional Water Quality Control Board (California regulatory agency for Los Angeles area water)

LUST: Leaking Underground Storage Tank

NEPA: National Environmental Policy Act (federal environmental law)

NPL: National Priority List (list of USEPA Superfund sites)

OMRRR: Operation and Maintenance Repair, Rehabilitation, and Replacement (Corps of Engineers operations and maintenance phase for Civil Works projects)

OSHA: Occupational Safety and Health Act (federal safety law)

PAH: Poly Aromatic Hydrocarbon

PCE: Tetrachloroethylene

PED: Planning Engineering Design (Corps of Engineers combined planning and engineering process/phase; occurs prior to actual construction of project)

Phase I ESA: Phase I Environmental Site Assessment (ASTM method)

Phase II ESA: Phase II Environmental Site Assessment (ASTM method)

PPA: Project Partnership Agreement (Agreement between Corps and non-Federal Sponsor to construct, operate and maintain a project)

PRP: Potential Responsible Party

RAP: Remedial Action Plan (CERCLA step)

RCRA: Resource Conservation and Recovery Act (federal environmental law)

REC: Recognized Environmental Condition

RI: Remedial Investigation (CERCLA step)

RP: Responsible Party

SARA: Superfund Amendments and Reauthorization Act (federal environmental law amending CERCLA)

SFVSS: San Fernando Valley Superfund Site (CERCLA-USEPA regulated)

SI: Site Investigation (CERLCA step)

SWRCB: State Water Resources Control Board (California environmental regulatory agency for water)

TCE: Trichloroethylene

TSCA: Toxic Substances Control Act (federal environmental law)

LADUSACE: Los Angeles District U.S. Army Corps of Engineers

USDOT: U.S. Department of Transportation

USEPA: U.S. Environmental Protection Agency (federal environmental regulatory agency)

UST: Underground Storage Tank

VOC: Volatile Organic Carbon

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1.0 PURPOSE

The Corps of Engineers Los Angeles District has prepared a report that studies and outlines the alternative conceptual plans/features for Prado Basin Feasibility Study Civil Works project. The purpose of this survey report is to identify and list potential hazardous, toxic, and radioactive waste (HTRW) impacts to this Feasibility level Civil Works project.

2.0 SCOPE

This survey report was prepared in accordance with USACE ER 1165-2-132, "Hazardous, Toxic and Radioactive Waste (HTRW) Guidance for Civil Works Projects", dated June 26, 1992.

The ER does not require a specific method for performing this HTRW Survey Report, but does require that HTRW concerns be assessed and impacts and their costs reported and/or approximated, as necessary for each Civil Works project. HTRW is a programmatic definition used throughout the USACE to assess impacts, list and approximate costs associated with environmental pollutants released to the environment on Corps property and Corps Civil Works projects. For this report, HTRW impact costs were not approximated. The relative impacts of HTRW to the project were assessed according to the Engineering Regulation ER 1165-2-132 According to this ER, HTRW definition includes both CERCLA Hazardous Substances and other non-CERCLA local/state pollutants. The Engineering Regulation Hazardous Substance definition is equivalent to the ASTM definition of Hazardous Substance, as they both originate from CERCLA. The Engineering Regulation definition of other local/state pollutants is equivalent to the ASTM and USEPA definition of other contaminants and petroleum contaminants as they both are non-CERCLA related.

The full ASTM Phase I ESA or AAI procedure was not followed and RECS were not identified for any HTRW concerns/impacts while preparing this report. Therefore, none of the following was performed: site specific reconnaissance/property visit; Sanborn Maps; historical aerial photos and topographic maps; personal property owner interviews; search of a commercial CERCLA/RCRA/other local/state pollutants environmental database; City Directory.

The analysis performed in this report is instead based on the summarized environmental pollutant information found and gathered only from the California State Water Resources Control Board (SWRCB) internet "Geotracker" environmental database. This report only considers known project-area HTRW impacts from HTRW releases onto those properties/sites listed on the Geotracker database and that still pose a threat to human health or the environment.

It is important to note that there may be <u>unknown</u> HTRW or pollutant impacts to the study area which were not fully disclosed and listed from Geotracker database. These types of <u>unknown</u> HTRW impacts could also consist of newly discovered HTRW or buried historical type HTRW that is not observed on the land surface or not found from the Geotracker list. Newly discovered HTRW is sometimes encountered during the PED or future construction phases of work for a typical Civil Works project. Also, newly discovered HTRW can sometimes be derived from residual (leftover) forms of contamination existing within the soils, soil vapor, air, surface water

and groundwater media from releases of HTRW from known and listed HTRW sites. This occurs when undefined portions of the remaining known residual HTRW releases are encountered at known HTRW properties.

The HTRW analysis for this report focused on the known residual and active releases of HTRW into the adjacent property and environment within a ¼ mile distance of the study area. The analysis does not include evaluation of hazardous materials stored or used at or near the study area. Generally, hazardous materials are not considered part of HTRW impacts, unless or until they have been released to the environment, at which point they would be considered a hazardous substance or waste, according to CERCLA and RCRA. Further details on how hazardous materials, hazardous waste and hazardous substances are regulated by law and addressed in Federal and State or Local environmental regulations and laws.

3.0 HTRW SURVEY REPORT

The Prado Basin project area is contained mostly within the flood plain and basin of the Santa Ana River behind Prado Dam. The current land use is a flood impoundment basin behind Prado Dam, a river floodplain and an open natural drainage basin of the Santa Ana River. The southern perimeter of the river is bounded by medium to light industrial land use and California State Highway 91. The north perimeter of the river is bounded by recent residential use and agriculture. The land use history of the study area indicated that HTRW impacts would be moderate primarily because of the light industrial activities.

A cursory review of the Geotracker environmental databases was performed and listed HTRW sites (properties) of potential concern were judged as to their significance according to type of HTRW active/residual releases and their impacts to human health and the environment.

The listed sites/properties of concern (RECs) were moved forward for recommendation for either a follow up ASTM Phase I or Phase II ESA HTRW survey. The Phase I ESA would include the full commercial environmental database review; historical topographic map and aerial map review; Sanborn Map and City Directory review; land/title search and could include a property owner interview and site visit as applicable. Low to medium impact RECs properties are typically not recommended for follow up Phase II ESA survey, but may require some additional monitoring, inspection and/or site visit or property owner survey.

The Phase II ESA site investigation is typically reserved only after conducting a full Phase I ESA. However, it could be implemented if RECs from the AAI screening are conclusively evident enough to preclude or skip the use of a Phase I ESA. In such case, the Phase II would involve additional steps of providing a field work plan and performing an actual environmental HTRW field site assessment. A Phase II site assessment would involve the collection and laboratory analysis of environmental samples to confirm the presence, extent and concentration of hazardous substances believed to have been released into the environmental media such as soil, sediment, groundwater, air and surface water.

3.1 Summary of Geotracker Environmental Database Search Listing

The following table below shows the 2018 EDR Inc. and Geotracker listings of all known CERCLA/RCRA type environmental records and data from potential HTRW sites or properties, with addresses that could be mapped within approximately ¼ mile distance of the project study area. As previously mentioned, it contains only those listings that have HTRW impact to the project.

This search yielded a list of approximately six properties that are considered as having a potential HTRW impact to the project. All of these six properties have had releases of hazardous substances or other pollutants into the environment and were being managed as contaminated properties by environmental regulatory agencies of either the CA DTSC and/or RWQCB. All of these properties have undergone previous HTRW investigations equal to either an ASTM Phase II or Phase I ESA. Some of the properties have also undergone some form of remedial action to reduce or remove the pollutants from the environment. Analysis of the releases, past and present and future property use indicates that some of the sites have more of a potential HTRW impact to the study project than others. All seven of a low HTRW impact. All seven low impacted HTRW properties are shown on Map Figure 1 at back of this report.

Table 1
Results of the Geotracker Database Inquiry/Search

Database	Brief Database Description	Records Found
State Records		
SWRCB and DTSC Geotracker	State Water Resources Control Board (Santa Ana Regional Water Quality Control Board) and DTSC Listed: • City of Corona Municipal Airport (includes 3 LUST sites) (**Low Impact**) • former Alcoa Aluminum Plant (**Low Impact**) • former Dallope Dairy (**Low Impact**) • former Green Acres Elementary (**Low Impact**) • former Green Waste River Ranch (**Low Impact**) • former Brine Ponds (**Low Impact**) • former City of Corona Golf Course (**Low Impact**)	7
Total <u>Mapped and Listed</u> Records Found		**7**

Further discussion of the results, project conditions and recommendations for this HTRW Survey Report are found in the following sections.

4.0 DISCUSSION OF THE GEOTRACKER ENVIRONMENTAL DATABASE SEARCH SITES THAT ARE IMPACTS

The Geotracker environmental database inquiry/search results reported within this HTRW Survey Report include seven listed HTRW sites total (Table 1). All of these listed and mapped sites are properties with low HTRW impact or concern. This is because each property or site still has residual pollutants or hazardous substances that are not a high threat to the study project, because much of the Eco restoration activities will not involve heavy excavations/disturbance or groundwater pumping in the close vicinity of these sites. The majority of Eco restoration activities will also be situated inside the immediate floodplain of the Santa Ana river, which is far enough away from these sites for them to have any long term threat. Also, there is a low threat because all of these sites have been in closed environmental regulatory case file status and are no longer subject to ongoing enforcement by DTSC or SARWQCB. Also, some of the sites consist of HTRW that was mostly confined to soil within these properties and is therefore less mobile and less likely to be encountered. The discussion for the three medium impacted HTRW sites is as follows:

5.0 PROJECT IMPACTS

The HTRW Impact is: There is a low HTRW from the seven known HTRW sites as mapped.

6.0 GROUNDWATER CONDITIONS

The groundwater exists in the form of an unconfined aquifer throughout most of the project study area. This aquifer contains a shallow aquifer that is connected regionally to the Santa Ana River. Parts of this aquifer contain perched groundwater that is semi-connected to the aquifer. The shallow aquifer extends from approximately 4 feet below ground surface to approximately 100 feet below ground surface. The general water quality of this aquifer is non drinkable because it contains high amounts of TDS.

There are some existing areas within the aquifer in the vicinity of the project site that are contaminated with petroleum due to releases from former leaking underground storage tanks/piping and past spills. Four of these sites are known HTRW sites in relation to the project and have been identified in this report as Dallope Dairy, Corona Golf Course, Corona Airport and Alcoa Aluminum Plant.

7.0 SUMMARY OF HTRW SURVEY REPORT

This report identifies seven separate properties that propose a low HTRW impact to the project features and are located within 1/4 mile of the study project.

The severity of threat for all seven lowimpact HTRW sites exists is based solely on the Geotracker environmental database screening and record listing that still shows residual petroleum/solvent and metals related contamination exists at each of these sites. A low impact

exists, even though limited remediation and follow up site investigation/monitoring and official regulatory agency closure and no further action approval has occurred for each of these sites.

Very little dewatering of the floodplain shallow groundwater aquifer and only shallow excavation into floodplain soils will likely occur during future project construction activities for the various Eco restoration alternatives being considered for this study project. Also, much of the activity will remain inside the immediate floodplain of the Santa Ana river. This activity is not likely to encounter petroleum/solvent and metals related contaminants that remain in the shallow soils and shallow aquifer due to past releases to groundwater from these seven sites, since they are a fairly distant to the project features.

The true extent of the undefined portions of the known residual groundwater and/or soils contamination at all 3 properties is not known at this time. Only the extent of the known residual and unmapped groundwater plumes and/or soils contamination is currently being addressed. There is some possibility that future activities related to construction dewatering and excavation for the various Eco restoration features will encounter portions of both the unmapped plumes or yet to be mapped additional plumes of residual petroleum contaminated groundwater and/or soils, if they exist.

Residual petroleum, solvent and metal related contamination exists within approximately a 1/4 mile distance to the study project floodplain footprints and is therefore a material threat (REC), but is a low HTRW impact to the Corps of Engineers Prado Basin study project.

8.0 RECOMMENDATIONS

8.1 ASTM Phase I and Phase II ESA.

An ASTM Phase I ESA will need to be performed for this project during PED phase to further evaluate the impacts of HTRW from the seven low impact listed HTRW sites/properties. There is historical and environmental compliance database information that can be obtained during the Phase I ESA and procedures followed that is not available from a cursory search of the Geotracker database. Therefore, the Phase I will be needed to completely identify and/or confirm the presence of any additional known sites/properties within a 1/4 mile distance of the project study area that were not found as part of the Geotracker database performed for this report and to confirm the low impact REC rating for the seven known properties.

A Phase II ESA may also need to be performed for any one of the seven low impact properties and any additional low impact properties that may be found and identified during the Phase I ESA. It is low potential that this work will need to be done, given that the Eco restoration work is relegated to immediate floodplain of the channel, which is a good distance away from the seven known HTRW sites. This work at a minimum will require obtaining HTRW groundwater data from existing wells and/or collection and sampling of groundwater samples from the existing shallow aquifer groundwater monitoring wells in the area near these three sites. Numerous existing wells and future existing wells are available at the Corona Airport and the LADUSACE Alcoa Dike. The wells at Alcoa Dike will be installed and monitored for HTRW contaminants directly related to the three medium impact sites as part of the upcoming 2019

construction activities for this project. **It is important to note that these wells are forecasted to be abandoned in place by the LADUSACE at end of construction.**

It is not known at this time whether the Prado Basin study project will become federally authorized and advance to the USACE Project Engineering Design phase. **If this occurs, it is highly recommended that the LADUSACE project construction engineer and design engineer be notified by the Prado Basin study and project manager to request that these wells be kept in place and not abandoned.** These wells could continue to be monitored and provide valuable HTRW groundwater data as part of the Prado Basin study project. The Prado Basin project manager and study team should coordinate Prado Basin PED activities closely with Alcoa Dike LADUSACE Construction Engineer to ensure that this opportunity is not lost.

8.2 Groundwater Discharge during Construction of Prado Basin Alternative Features.

The water discharge from any future dewatering construction related activities related to Prado Basin study will need to be prepared by the Construction Contractor and permitted prior to release according to the SARWQCB 401 waste discharge permit process. The discharge must occur in a manner that is protective of both the existing groundwater and surface water resources in the area. This may likely involve conforming all discharge of dewatering water to the specific permit written for this project and with additional considerations to the existing HTRW and contaminant conditions known for this project area.

The discharge permit must be added by the LADUSACE to the PED construction specifications as required submittal. This will ensure that the permit is included as part of the future study project construction activities.

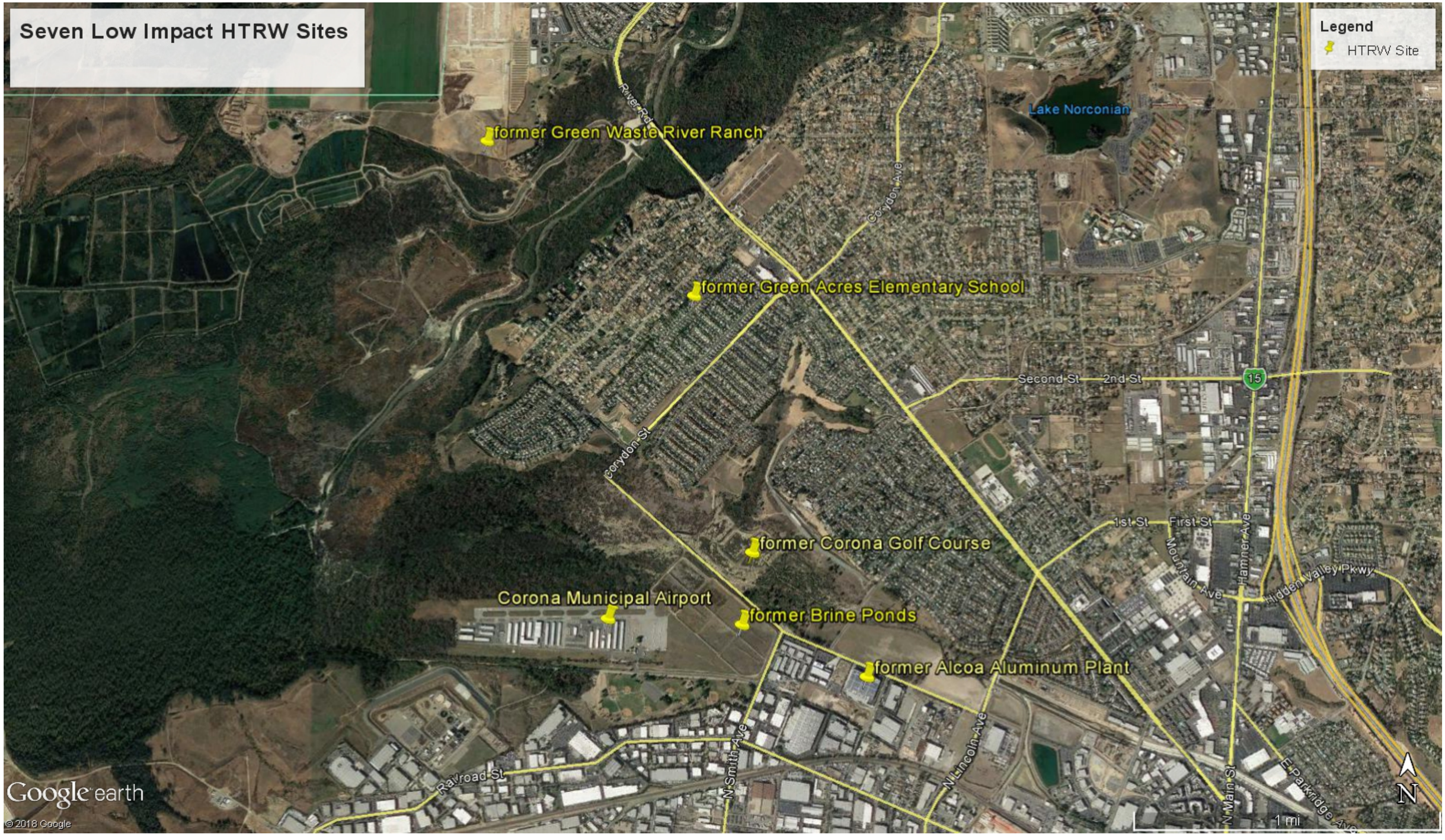
8.3 HTRW Environmental Compliance during Construction of Prado Basin Alternative Features.

Prior to construction, the construction contractor will need to prepare a pollution prevention plan to reduce the potential for accidental release of fuels, pesticides, and other materials. This plan will include the designation of refueling locations, emergency response procedures, and definition or reporting requirements for any spill that occurs. Equipment for immediate cleanup shall be kept at the staging area for immediate use. This plan will also include pesticide application activities such as storage, handling of herbicides, and application methods. This will be needed to reduce the potential for an accidental release of toxic materials from construction vehicles (e.g., oil and diesel fuel).

The pollution prevention plan must be added by the LADUSACE to the PED construction specifications as required submittal. This will ensure that the plan is included as part of the future study project construction activities. The plan should require the following: fueling and servicing of construction vehicles only in protected areas; the protected areas should be contained within an isolated or impervious area located a safe distance from the active flow path of the Santa Ana River or related surface waters; spills or leaks should be cleaned up immediately, reported

properly and any contaminated soil should be disposed of properly.

Map Figure 1: Showing seven low impact HTRW Sites.



Map Figure 1. Seven low impact HTRW sites.