

8.14 Water Resources

8.14.1 Introduction

The Eastshore Energy Center (Eastshore) will be a nominal 115.5-megawatt (MW) intermediate/peaking load facility operating up to 4,000 hours per year using natural gas-fired reciprocating engine technology. The Eastshore facility will be located at 25101 Clawiter Road in the City of Hayward, Alameda County, California, on a 6.22 acre parcel owned by Eastshore Energy, LLC, the project owner. Major features of the Eastshore project include the following:

- Demolition of the existing site building, foundations and paved surface,
- Grading of site and installation of new foundations, piping and utility connections,
- Fourteen (14) nominal 8.4 MW (gross) Wartsila model 20V34SG natural gas-fired reciprocating engine – generator sets,
- Fourteen (14) state-of-the-art air pollution control systems representing Best Available Control Technology (BACT), one system per each of the 14 engines, consisting of a selective catalytic reduction (SCR) unit for oxides of nitrogen (NO_x) control and an oxidation catalyst unit for carbon monoxide (CO) and precursor organic compounds (POC) control,
- Fourteen (14) approximately 70-foot tall stacks, each with a separate continuous emissions monitoring system (CEMS),
- Acoustically-engineered main building enclosing all 14 engines,
- Closed loop cooling system consisting of multiple fan-cooled radiator assemblies outside of the main engine building,
- Two 10,000 gallon (each) aqueous (19% by weight) ammonia storage tanks and handling system serving the SCR units,
- One raw water storage tank, approximately 35,000 gallons,
- One nominal 225-kW diesel-fired emergency black start generator,
- One (1) either electric or 7.15 MMBtu/hr natural gas-fired heater (BAAQMD exempt), used for heating of the natural gas fuel to the reciprocating engines,
- Miscellaneous ancillary equipment,
- Pre-existing onsite water and wastewater service interconnections,
- Onsite 115 kV switchyard including switchgear and step-up voltage transformers,
- Approximately 1.1-mile 115 kV single-circuit transmission line interconnecting to PG&E's Eastshore Substation,
- Approximately 200-foot offsite natural gas line connection to PG&E Line 153,

- Chain-link security fencing enclosing the facility with a secured entrance on Clawiter Road, and
- 4.65-acre temporary construction laydown and parking area located immediately across Clawiter Road from the Eastshore site.

This section provides a discussion of the existing water resources in the vicinity of the Eastshore Energy Center (Eastshore) project site and assesses the potential effects of project construction and operations on water resources. Specifically, this chapter discusses the project and its potential effects in the following areas:

- Water supply and quality
- Disposal of wastewater
- Compliance with federal, state, and local water policies
- Stormwater discharge
- Flooding

8.14.2 Applicable Laws, Ordinances, Regulations, and Standards

Federal, state, and local LORS applicable to water resources and conformance are discussed in this section and summarized in Table 8.14-1.

8.14.2.1 Federal

The federal Clean Water Act authorizes the U.S. Environmental Protection Agency (EPA) to regulate discharges of wastewater and stormwater into surface waters by issuing National Pollutant Discharge Elimination System (NPDES) permits and setting pretreatment standards. In California, the Regional Water Quality Control Boards implement these permits at the state level, but EPA may exercise its jurisdiction at its discretion. Relevant NPDES permits are discussed below under State LORS.

8.14.2.2 State

8.14.2.2.1 State Water Resources Control Board and San Francisco Bay Regional Water Quality Control Board. Industrial and Municipal Stormwater NPDES Permits. The State Water Resources Control Board (SWRCB) implements regulations under the federal Clean Water Act requiring that point source discharges of stormwater (which is a flow of rainfall runoff in some kind of discrete conveyance such as a pipe, ditch, channel, or swale) associated with industrial activity that discharge either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit (SWRCB, 1997). The SWRCB has issued Waste Discharge Requirements (WDRs) for discharges of stormwater associated with industrial activities (such as the proposed project), excluding construction activities (NPDES Permit CAS000001, SWRCB Order 97-03-DWQ). The project will require a Stormwater Pollution Prevention Plan (SWPPP) that would specify management measures necessary to meet WDRs to ensure receiving water quality is protected. The SWRCB requires a Notice of Intent to be filed prior to any stormwater discharge from industrial activities, and that the SWPPP be implemented and maintained onsite. This statewide General Permit is currently undergoing a re-issuance process with the SWRCB; the project would comply with the current General Permit and with any revisions to the General Permit.

TABLE 8.14-1

Laws, Ordinances, Regulations, and Standards Applicable to Eastshore Power Plant Water Resources

LORS	Applicability	How Conformance Is Achieved	Agency/Contact
Federal			
Clean Water Act/Water Pollution Control Act. P.L. 92-500, 1972; amended by Water Quality Act of 1987, P.L. 100-4 (33 USC 466 et seq.); National Pollutant Discharge Elimination System (NPDES) (CWA, Section 402)	Prohibits discharge of pollutants to receiving waters unless the discharge is in compliance with an NPDES permit. Applies to all point-source discharges, including industrial wastewater and stormwater runoff, during both construction and operation.	Compliance with NPDES permit requirements from the California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB) (see below under State) and local agencies (see below under Local). See Subsections 8.14.6.2 (Stormwater Quality [Construction Phase]), 8.14.6.3 (Stormwater Quality [Operations Phase]), and 8.14.6.4 (Waste Discharge Requirements).	See below under State.
State			
Federal Clean Water Act (implemented by state of California) and Porter-Cologne Water Quality Control Act	Implements and enforces the federal NPDES permit program through conformance with beneficial uses and water quality objectives in the Basin Plan, as well as conformance with any applicable Total Maximum Daily Load requirements.	Sanitary wastewater streams are conveyed to the City of Hayward's municipal sewer system for treatment and disposal; discharges are regulated under an existing NPDES permit for Alameda County (NPDES Permit CA0038474, Order, R2-2004-0008). See Subsection 8.14.6.4 (Waste Discharge Requirements). Stormwater runoff is conveyed through the City of Hayward's storm drainage system; discharges are regulated under an existing NPDES permit for municipal stormwater (NPDES Permit CAS0029831, Order R2-2003-0021). See Subsection 8.14.6.3 (Stormwater Quality [Operations Phase]). Construction stormwater discharges on sites greater than 1 acre require compliance with statewide construction discharge permit (NPDES Permit CAS000002, Order No. 99-08-DWQ). See Subsection 8.14.6.2 (Stormwater Quality [Construction Phase]).	San Francisco Bay Regional Water Quality Control Board Lila Tang (510) 622-2425 LTang@waterboards.ca.gov San Francisco Bay Regional Water Quality Control board Stormwater Permitting Department Janet O'Hara 510-622-5681 JOhara@waterboards.ca.gov SWRCB Stormwater Program Dale Bower (510) 622-2323

TABLE 8.14-1
Laws, Ordinances, Regulations, and Standards Applicable to Eastshore Power Plant Water Resources

LORS	Applicability	How Conformance Is Achieved	Agency/Contact
California Water Code §461 and §13550, and SWRCB Resolution 75-58	Encourages the conservation of water resources and the maximum reuse of wastewater.	Stormwater discharges during operation of power plants require compliance with statewide program for industrial uses (NPDES Permit CAS000001, Order No. 97-03-DWQ). See Subsection 8.14.6.3 (Stormwater Quality [Operations Phase]). Does not apply to this project because the Eastshore project will use an insignificant amount of water for plant cooling.	SWRCB Stormwater Program Industrial General Permit Vic Pal (510) 622-2403 N/A
Local			
Alameda Countywide Clean Water Program	Assists in compliance of federal and state water quality regulations and requirements through the program's 2001-2008 Stormwater Quality Management Plan.	Discharges are regulated under an existing NPDES permit for municipal stormwater (NPDES Permit CAS0029831, Order R2-2003-0021). See Subsection 8.14.6.3 (Industrial Stormwater).	Alameda Countywide Clean Water Program 951 Turner Court, Room 300 Hayward, CA 94545 510-670-5543 watersheds@acpwa.org
City of Hayward, Hayward Municipal Code Section 11-2, Hayward Municipal Water System	Regulates connections to Hayward municipal water systems.	The Applicant will comply with Section 11-2 for all connections to the municipal water system and will obtain a Permit for Water Service Connection.	City of Hayward, Director of Public Works Department, (510) 583-4709
City of Hayward, Hayward Municipal Code, Section 11-3, Sanitary Sewer System	Regulates connections to Hayward municipal wastewater systems. Discharges are regulated under an existing NPDES permit for Alameda County (NPDES Permit CA0038474, Order, R2-2004-0008).	The Applicant will comply with Section 11-3 for all discharges to the sewer system and will obtain a Permit for Industrial Wastewater Discharge. The Applicant will comply with all permit conditions, including the following: discharge limitations, pretreatment requirements, peak flow restrictions, dewatering discharges, payment of fees, and monitoring and reporting requirements. See Subsection 8.14.6.4 (Waste Discharge Requirements).	City of Hayward, Director of Public Works Department, (510) 583-4709 Service Contacts: Edith Jacklin 510-583-4727 or for permit process procedures and appointments: (510) 881-7900
City of Hayward, Hayward Municipal Code Section 11-5, Stormwater Management and Urban Runoff Control Ordinance	Regulates connections to storm drainage facilities. Implements stormwater quality requirements consistent with federal permit (NPDES Permit CA0029831, Order R2-2003-0021)	The Applicant will comply with Section 11-5 for all discharges to the storm drain system. Applicant will demonstrate compliance with Alameda Countywide Clean Water Program.	City of Hayward, Director of Public Works Department, (510) 583-4709

On August 6, 2001, the Regional Water Quality Control Board, San Francisco Bay Region (SFBRWQCB), adopted Order R2-2003-0021. This Order is the NPDES Permit (NPDES No. CAS0029831) for municipal stormwater and urban runoff discharges within the County of Alameda. This Municipal Permit was issued pursuant to the EPA's Phase I Municipal Program, and requires municipalities to develop and implement a program addressing stormwater runoff pollution issues in development planning for public and private projects. Because the municipal stormwater standards would be enforced by the City of Hayward Department of Public Works, they are discussed below under local regulations.

Construction Stormwater NPDES Permit. The federal Clean Water Act effectively prohibits discharges of stormwater from most construction sites unless the discharge is in compliance with an NPDES permit. The SWRCB is the permitting authority in California and has adopted a statewide General Permit for Stormwater Discharges Associated with Construction Activity (NPDES Permit CAS000002, Order No. 99-08-DWQ) that applies to projects resulting in one or more acres of soil disturbance. The proposed project would result in disturbance of more than one acre of soil. Therefore, the project will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) that would specify site management activities to be implemented during site development meeting the requirements of the WDRs and ensuring receiving water quality is protected. These management activities will include construction stormwater best management practices (BMPs), dewatering runoff controls, and construction equipment decontamination. Monitoring and maintenance of BMPs is also required.

The SWRCB requires a Notice of Intent to be filed prior to construction activities, and that the SWPPP be implemented and maintained onsite. This statewide general permit is currently undergoing review by the SWRCB; the project would comply with the current general permit and with any relevant revisions to the permit adopted before or during project construction.

8.14.2.2.2 California Water Code Sections 461 and 13550, and SWRCB Resolution No. 75-58

Water Code section 461 states that the primary interest of the people of the state in the conservation of all available water resources requires the maximum reuse of recycled water in the satisfaction of requirements for beneficial uses of water. In addition, Water Code section 13550 specifically encourages the conservation of potable water resources and the maximum reuse of wastewater for industrial uses and other uses in areas where recycled water of adequate quality is available at reasonable cost.

SWRCB Resolution No. 75-58 adopted the "Water Quality Control Policy on the Use and Disposal of Inland Waters Used for Powerplant Cooling," which provides statewide water quality principles regarding power plants that depend upon inland waters for cooling. Resolution No. 75-58 included several guiding principles for cases where the SWRCB or any of the Regional Board have permit authority over a power plant project, and specifically encouraged the use of wastewater for power plant cooling.

California Water Code sections 461 and 13550 and SWRCB Resolution No. 75-58 usually apply to power plants, but are focused on the use of recycled water for cooling towers. Because the Eastshore project does not include cooling towers and uses insignificant

amounts of water (see Section 8.14.4.1 below), these sections do not apply.

8.14.2.3 Local Policies

8.14.2.3.1 City of Hayward Wastewater Discharge. The federal Clean Water Act requires that publicly owned treatment works regulate the discharge of industrial wastes into a sewer system subject to an NPDES permit. Accordingly, the City of Hayward has adopted detailed permit requirements for industrial dischargers. The discharge of any wastewater to the City's sewer system would be subject to the requirements of the City of Hayward Municipal Code section 11 article 3, which regulates the quantity and quality of discharges to the sewer system. The City of Hayward is under the authority of the East Bay Dischargers Authority. Eastshore wastewater will be discharged into the City of Hayward wastewater collection system. In accordance with the Wastewater Municipal Code, the Eastshore project would be required to obtain an Industrial Wastewater Discharge Permit (IWDP) from the City of Hayward's Water Pollution Control Division. The IWDP would specify the detailed project-specific requirements applicable to the Eastshore project, including pretreatment standards, flow restrictions, and sampling, monitoring, and reporting requirements. The application will be submitted during the detailed design phase when the necessary engineering data has been developed.

8.14.2.3.2 Alameda County and City of Hayward Stormwater Program. In 2001, a 17-member consortium of stormwater dischargers located in Alameda County submitted a permit re-application package for their existing NPDES permit. In 2003, the SFBRWQCB adopted Order R2-2003-0021. This Order is NPDES Permit No. CAS0029831, called the Alameda Countywide NPDES Municipal Stormwater Permit, for municipal stormwater and urban runoff discharges within the County of Alameda. The requirements of Order No. R2-2003-0021 cover 15 Bay Area cities including the City of Hayward, the unincorporated areas of Alameda County, and other special districts in the project area that discharge stormwater into the San Francisco Bay. The 17-member consortium named under this permit is member of the Alameda County Clean Water Program (ACCWP). The ACCWP prepared the Stormwater Quality Management Plan FY2002-2008 (Plan), which describes how the NPDES permit requirements will be fulfilled. There are five major sections to the Plan—the Background of the Program, the Program Description, the Component Work Plans, the Pollution Reduction Plans, and Performance Standards. The federal Clean Water Act requires stormwater dischargers to reduce pollutants to the maximum extent practicable. The Plan, in conjunction with the permit, adopted by the Regional Board, is designed to enable the consortium to meet that requirement.

The City of Hayward is a member of the ACCWP. The City of Hayward Water Pollution Source Control Division administers the City's individual Stormwater Program (City of Hayward Municipal Code Section 11, Article 5).

8.14.2.3.3 City of Hayward Municipal Water System. For potable water service, Eastshore will comply with section 11, article 2 of the City of Hayward Municipal Code for all connections to the municipal water system and will obtain a Permit for Water Service Connection. The permit is administered through the City of Hayward, Director of Public Works Department.

8.14.3 Hydrologic Setting

8.14.3.1 Surface Water

The Eastshore project site is located within the San Lorenzo Cone drainage basin. The basin drains an area of west Hayward, comprising some 9,700 acres, into South San Francisco Bay (Figure 8.14-1). The watershed of potential impact lies in the Arroyo de Alameda between Sulphur Creek and Mt. Eden Creek, the largest streams in the Eastshore vicinity. Sulphur Creek, located 2.5 miles to the northwest, and Mt. Eden Creek, located 1.25 miles to the south, are among the primary ephemeral streams in the area that flow into South San Francisco Bay.

Annual precipitation in Alameda County averages between 15 and 25 inches and can vary significantly depending on the location. Under the modified Köppen classification system, Bay Area climate is categorized as Marine West Coast Climate, with relatively mild temperatures and little fluctuation in temperature extremes because of proximity to the Pacific Ocean. Summers are cool and winters are mild (NOAA, 2005).

8.14.3.2 Groundwater

Groundwater underlying the project area is contained in the South East Bay Plain Groundwater Basin (SEBP), an alluvial aquifer system consisting of poorly consolidated to unconsolidated lenses of gravel, sand, silt, and clay. The SEBP Basin covers an area of about 115 square miles, and underlies the communities of Oakland, Alameda, San Leandro, San Lorenzo, and the northern part of the City of Hayward, including the Eastshore project site (Figure 8.14-2). Based on a water budget study developed for the mid 1990s, it is estimated that the net effect of withdrawal and recharge results in a net recharge to the SEBP Basin of about 3,000 acre-feet/year. Water quality above 200 feet contains relatively high concentrations of TDS, chloride, nitrate, and sulfate; whereas, water quality improves at about 200 feet below ground surface (bgs) with total dissolved solids of less than 450 mg/l (DWR 2004).

8.14.3.3 Flooding Potential

As shown on Figure 8.14-3, the plant site is not located within a flood hazard zone as defined by the Federal Emergency Management Agency (FEMA).

8.14.4 Water Use and Disposal

This section characterizes the sources of water needed at the Eastshore facility and how that water would be conveyed for offsite disposal. Also see Section 7 (Water Supply) for additional information.

8.14.4.1 Water Sources and Use

Potable water for the Eastshore site will be provided by the City of Hayward (see “will serve” letter in Appendix 7A) through existing connections onsite. The City of Hayward obtains its potable water supply under contract with the City of San Francisco Public Utilities Department. The ultimate source of potable water in the City of Hayward is the City of San Francisco’s Hetch Hetchy water supply system. Potable water uses for the Eastshore project will include maintenance use (fire fighting systems and engine closed loop

cooling), service use (turbo washing, power house and plant uses, and personnel uses), and miscellaneous uses such as washing equipment, and watering lawns.

Water requirements for Eastshore are presented in Table 8.14-2 and shown in Figures 2.2-6A and 2.2-6B, Water Balance Diagram. Average water use is based on water use during both operational and non-operational conditions. Under these annualized conditions, Eastshore would require approximately 1.61 acre-feet of water per year (afy). Peak water use is based on a 25 percent peaking factor over average water use. Makeup water associated with maintenance of the closed-loop cooling system represents about one-sixth of the total project water use.

TABLE 8.14-2
Daily and Annual Water Use Operations

Water Use	Water Source	Daily Use (gpm)		Annual Use (afy)
		Average	Maximum*	
Potable Water	City of Hayward	1.0	1.25	1.61

* Includes 25 percent peaking factor over Water Balance.

gpm = gallons per minute
afy = acre-feet per year

In addition to the above, water will be used during construction for dust and erosion control, equipment washing, and other short-term uses. The amount of water used for dust and erosion control is anticipated to be 15 acre-feet during the construction period, and the amount of water for equipment washing is expected to be 0.04 acre-feet during the construction period. Prior to plant startup, a small amount of additional water (estimated to be 164 gallons) will be used for hydrostatic testing. The source of construction water will be the City of Hayward’s potable water system.

8.14.4.2 Wastewater Discharge

This subsection characterizes the volume and quality of wastewater that would be generated by Eastshore and the method of disposal. Estimated daily and annual wastewater discharge rates are provided in Table 8.14-3.

TABLE 8.14-3
Operational Wastewater Discharges

Waste Discharge Stream	Discharge Location	Daily Discharge (gpm)		Annual Discharge (mgy)
		Average	Maximum*	
Plant wastewater sump	City of Hayward sanitary sewer system (if testing shows acceptable for discharge, otherwise trucked offsite)	0.47	0.59	0.14
Domestic wastewater	City of Hayward sanitary sewer system	0.26	.32	0.08

* Includes 25 percent peaking factor over Water Balance.

mgy = million gallons per year

A relatively small amount of industrial wastewater will be generated by this project. The facility's freshwater requirements will be minimal as there are no cooling towers to generate significant industrial wastewater.

Wastewater would be generated only from domestic sources (for example, toilets, sinks) and minor plant uses. Because water will not be used for industrial processes, wastewater quality will likely be similar to typical sanitary wastewater generated by office uses. Domestic wastewater generated at the Eastshore facility will be discharged to the City of Hayward sanitary sewer system. This volume would be considered a *de minimus* increase in demand on the sewer system; that is, it would not be measurable within the overall dry weather flow and well within the treatment, conveyance, and disposal capacities of the City of Hayward's sanitary sewer system.

8.14.5 Precipitation, Stormwater Runoff, and Drainage

Table 8.14-4 provides average and maximum historical rainfall in Hayward, California.

TABLE 8.14-4
Average Monthly Rainfall near the Proposed Project Site

Precipitation	Total	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	28.2	4.8	3.1	5.4	2.3	1.3	0.0	0.1	0.1	0.0	1.0	4.9	5.1

Source: NOAA, 1999

Stormwater runoff under current conditions partially drains to the existing storm drain system maintained by the City of Hayward. The areas to the north and east of the existing building do not currently drain offsite. Existing runoff volume is estimated to be approximately 1.95 cubic feet per second (cfs), which is the capacity of the existing line discharging to the City of Hayward system.

8.14.6 Effects on Water Resources

Significance criteria are derived from the California Environmental Quality Act Appendix G checklist. The project is considered to have a potentially significant effect if it would –

- Substantially alter the existing drainage pattern of the site or area, as well as alter the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite or in flooding on- or offsite.
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (for example, the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).

- Place within a 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Cause inundation by seiche, tsunami, or mudflow.

8.14.6.1 Drainage

The project site is located in a densely developed industrial and commercial area approximately 14 miles southeast of downtown Oakland. The project site is zoned Industrial and is currently occupied by a warehouse building and parking lot. The warehouse building is slated for demolition. An existing stormwater collection system covers the majority of the site. The existing stormwater runoff from the south side of the site to the City of Hayward storm drain system will be maintained. A new similar system will be added to the north of the site and discharge into retention basin and then into the City of Hayward storm drain system (Figure 8.14-4). Stormwater runoff calculations are presented in Appendix 8.14.

8.14.6.2 Stormwater Quality (Construction Phase)

During construction, approximately 6.22 acres of land associated with the plant site and approximately 4.6 acres of land located on adjacent property to be used as a temporary construction laydown and parking area, plus a very small area for the termination of the 200-foot gas line would be disturbed. The 4.65-acre property that will be used for construction laydown and parking is currently vacant. Surface water impacts are anticipated to be related primarily to short-term construction activity and consist primarily of increased potential for turbidity due to erosion of newly excavated or placed soils. Activities, such as grading, can potentially increase rates of erosion during construction. In addition, construction materials could contaminate runoff or groundwater if not properly stored and used. Compliance with engineering and construction specifications, following approved grading and drainage plans, and adhering to proper material handling procedures will ensure effective mitigation of these short-term impacts. BMPs for erosion control will be implemented. Additionally, erosion and sediment controls, surface water pollution prevention measures, and other BMPs will be developed and implemented for construction in accordance with the NPDES Construction Permit issued statewide by the State Water Quality Control Board and local agency requirements.

To qualify for the NPDES General Construction permit, the construction contractor will be required to develop a SWPPP (prior to beginning construction), to reduce or prevent the offsite migration of sediment and other pollutants, and to reduce the effects of runoff from the construction site to offsite areas. BMPs implemented during construction will be required to meet the technology-based standards of the permit and must ensure that violations of receiving water standards do not occur. BMPs will be site-specific and will be modified during construction depending on the phase of construction and weather conditions. BMPs will be selected from a menu of options to most appropriately reflect site conditions and meet regulatory requirements; BMPs to be contained in the SWPPP will include erosion controls (such as soil binders), sediment controls (such as gravel barriers and silt fencing), masonry and paint waste management controls, hazardous material protected programs, material storage and waste management controls, tracking controls

(such as protected construction site entrances), wind erosion controls, dry weather flow management, and training components. The overall approach to mitigating the effects of construction on stormwater quality is described in Appendix 8.14A (SWPPP Overview).

8.14.6.3 Stormwater Quality (Operations Phase)

As described above, stormwater from the site will be discharged to the City of Hayward storm drain system.

Compliance of industrial stormwater operations requires preparation of a SWPPP for industrial operations. The industrial SWPPP will require a suite of good housekeeping requirements including steps to identify and mitigate pollutants and conditions of concern. BMPs to be implemented during operations will be selected to address the potential pollutants generated onsite and will address industrial areas exposed to the elements, material loading and storage areas, dust generating activities, spill and leak prevention, potential non-stormwater flows and prohibitions on discharge of certain non-stormwater flows (such as boiler blowdown), waste handling, and employee training. Inspections and monitoring (including sampling) will also be conducted per the permit requirements. The overall approach to mitigating the effects of project operation on stormwater quality is described in Appendix 8.14A (SWPPP Overview).

Through the statewide industrial stormwater permit program, all potential pollutants generated during the industrial phase will be sufficiently mitigated such that the beneficial uses of downstream receiving waters will be protected and water quality standards established in the Plan will not be violated. Therefore, impacts from water quality during the operations phase will be less than significant.

8.14.6.4 Waste Discharge Requirements

Wastewater from miscellaneous plant uses will be discharged to the City of Hayward sanitary sewer facilities. There is no cooling tower blowdown to be discharged to the sewer system, and therefore, no cooling water for industrial uses is required for this facility.

Quality and quantity of industrial wastewater discharges to the City of Hayward's sanitary sewer system must be in compliance with an Industrial Wastewater Discharge Permit to be issued by the City of Hayward. Discharge from the Eastshore project would be well within the City of Hayward's discharge limitations because of the relatively small amounts of overall discharge (Figure 8.14-3). Therefore, impacts on the wastewater system, including the ultimate water quality objectives for treated wastewater, would be less than significant.

8.14.6.5 Groundwater

The Eastshore project would not make any direct use of groundwater resources.

8.14.6.6 Flooding Potential

The general region is flat and there are no significant dams or levees in the project vicinity. Additionally, the project site is also flat and would remain generally flat after development. The site grading and drainage will be designed to comply with all applicable federal, state, and local regulations. The general site grading will establish a working surface for construction and plant operating areas, and will provide positive drainage from buildings and structures

to reduce the potential of onsite flooding hazards. The project is not located in a flood hazard zone, as defined by FEMA, indicating it is likely in a moderate, minimal hazard area.

The project would not expose people or structures to significant risk of loss, injury, or death resulting from a levee or dam failure. The project is located approximately 2 miles from the San Francisco Bay and the potential for inundation from seiche, tsunami, or mudflow, is low.

8.14.7 Mitigation

This section presents mitigation measures proposed to reduce impacts on water resources in areas affected by the project.

- Implement BMPs designed to minimize soil erosion and sediment transport during construction of the plant site and project linear features. Implement and maintain appropriate erosion and sediment controls for disturbed construction areas in the manner described in the SWPPP Overview (Appendix 8.14B). Implement and maintain BMPs for material management in accordance with the SWPPP Overview.
- Implement the requirements of the ACCWP Stormwater Quality Management Plan by designing and installing structural BMPs (such as the planned stormwater detention basin) as directed by the City of Hayward during the application process.
- Conduct operations at the plant site in accordance with the statewide General Permit for Industrial Activities, as recommended by the City of Hayward. Implement a suite of good housekeeping requirements including steps to identify and mitigate pollutants and conditions of concern. Select BMPs to be implemented during operations to address the potential pollutants generated onsite, and to address industrial areas exposed to the elements, material loading and storage areas, dust generating activities, spill and leak prevention, potential non-stormwater flows and prohibitions on discharge of certain non-stormwater flows, waste handling, and employee training. Conduct inspections and monitoring (including sampling) per the requirements of the statewide General Permit. Design and implement the BMPs to prevent or control pollutants potentially associated with the operation of the plant from entering storm drains in accordance with the final Stormwater Pollution Prevention Plan.

The mitigation measures proposed are prescribed by stormwater and erosion control management programs mandated under the NPDES permitting system. These programs have been in place for a number of years and the prescribed measures have proven effective. Under the General NPDES Permits for Construction and Industrial Stormwater, for example, various specific measures are prescribed, and a program of monitoring is required. Compliance with these programs should ensure that all residual impacts associated with the proposed project are mitigated to a level of less than significant.

8.14.8 Proposed Monitoring Plans and Compliance Verification Procedures

Routine monitoring and compliance verification would be required as part of the industrial discharge permit and construction/operation stormwater NPDES permitting of the project.

8.14.9 Cumulative Impacts

The Eastshore project will not cause or contribute to cumulative impacts on water resources. Good engineering practices and BMPs will be used in the project design and operation. Stormwater discharge will adhere to a SWPPP and to state and local agency water quality standards. The ACCWP has written the Stormwater Quality Management Plan FY2002-2008 (Plan) which is a countywide program that stemmed from the Regional NPDES permit and describes how the NPDES Permit requirements will be fulfilled. The Eastshore project compliance with the Plan, administered by the City of Hayward, constitutes compliance with a regional water quality program further ensuring that cumulative impacts on local waterways are avoided. Drainage volumes and peak flow rates from the site will be designed to be in accordance with the amount of flow allowed by the City of Hayward storm drain system. No significant impacts on surface water or groundwater quality are expected during construction or operation of the project.

8.14.10 Permits Required

A summary of required permits is provided in Table 8.14-6.

8.14.11 Agency Contacts

Agency contacts and required permits are listed in Table 8.14-6.

TABLE 8.14-6
Permits and Permitting Agencies for Eastshore Water Resources

Permit	Schedule	Agency
Industrial Wastewater Discharge Permit	Minimum of 90 days prior to the commencement of the discharge	City of Hayward, Director of Public Works Department, (510) 583-4709 Service Contacts: Edith Jacklin 510-583-4727 or for permit process procedures and appointments: (510) 881-7900
Use of the National Pollution Discharge Elimination System General Permits for Construction and Operation	Submit Notice of Intent to use the permit at least 30 days in advance of use, prepare SWPPP for local review for construction, second SWPPP for operation	SWRCB Stormwater Program (916) 341-5537
Application for Use of Municipal Storm Drain System	TBD	City of Hayward, Director of Public Works Department, (510) 583-4709
Application of Service for Municipal Water	60 days prior to the start of construction.	City of Hayward, Director of Public Works Department, (510) 583-4709

8.14.12 References

Alameda Countywide Clean Water Program online information:

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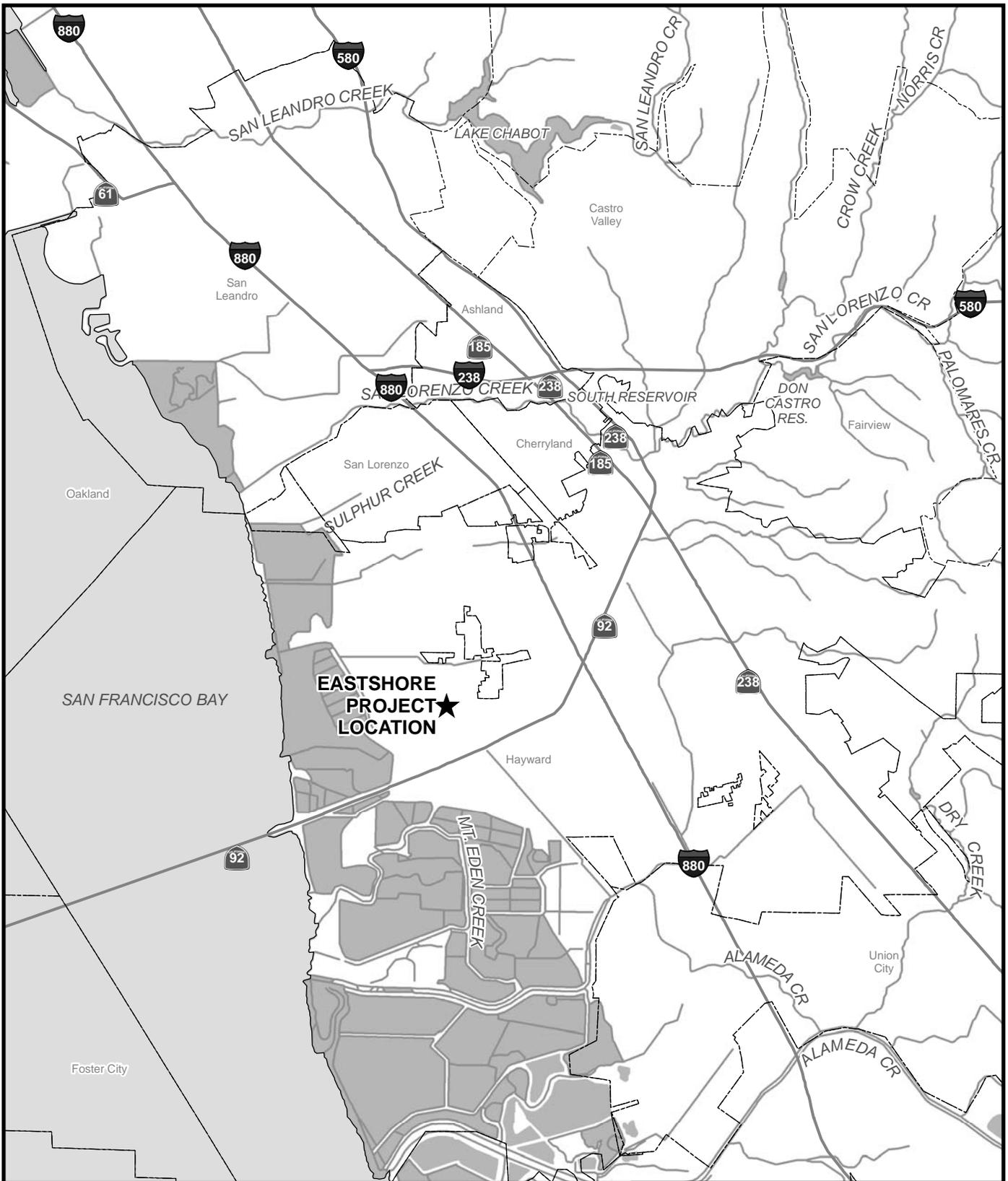
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LEGEND

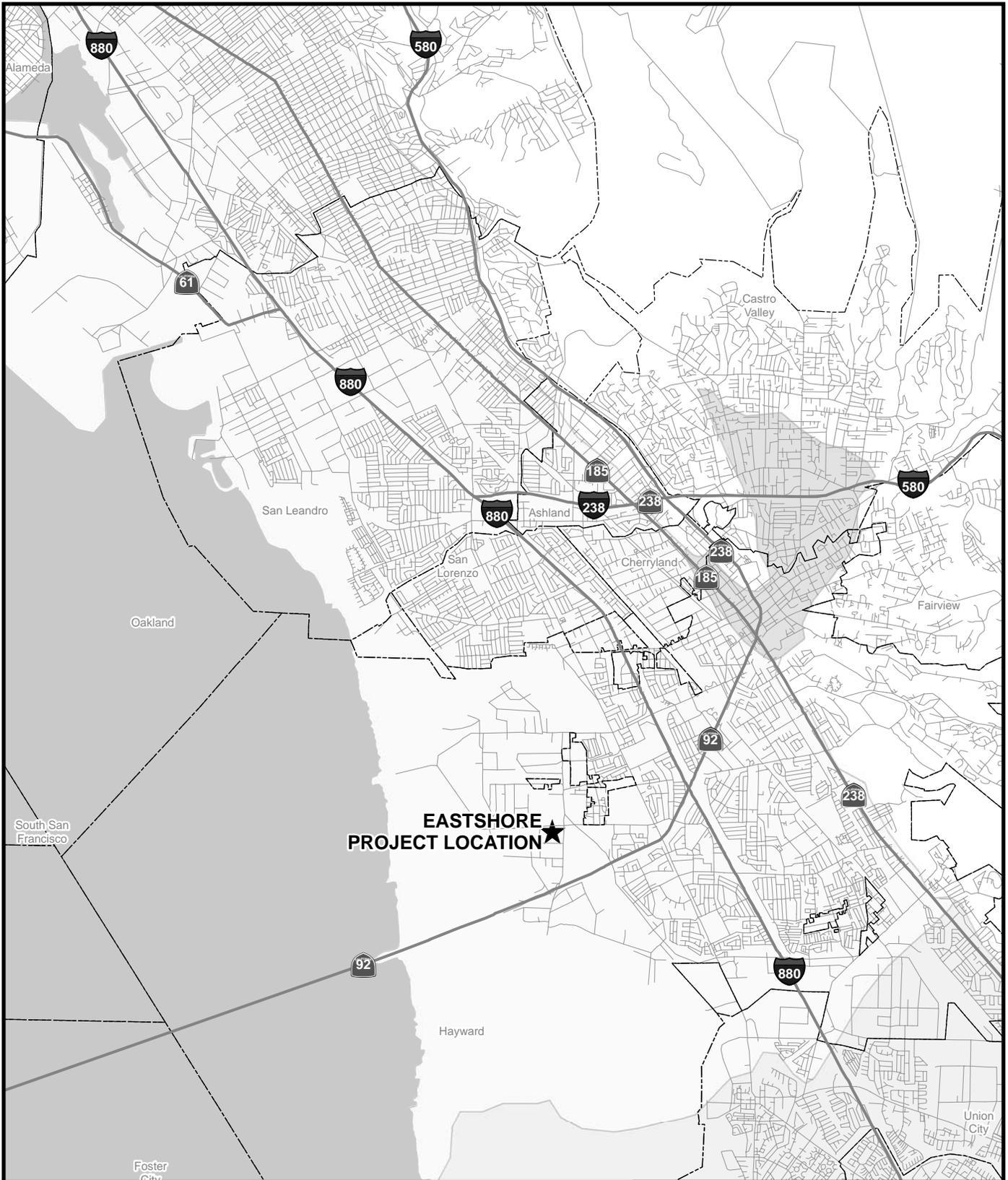
Water Bodies



0 0.75 1.5 Miles
SCALE IS APPROXIMATE

FIGURE 8.14-1
SURFACE WATER FEATURES
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA

CH2MHILL



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Groundwater Basin

 Castro Valley

Santa Clara Valley

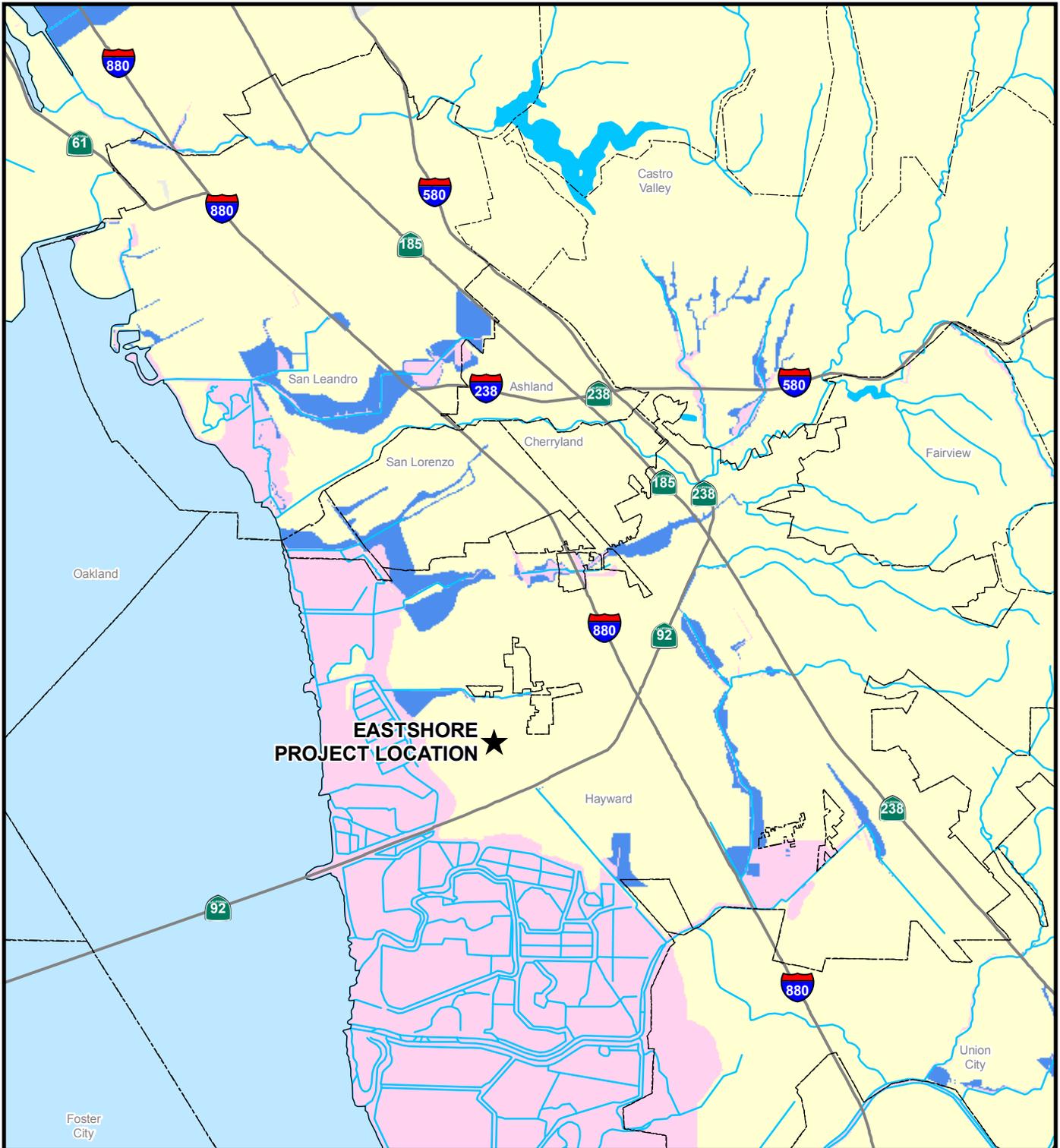
 Alameda East Bay

 Niles Cone



0 0.75 1.5 Miles
SCALE IS APPROXIMATE

FIGURE 8.14-2
GROUNDWATER BASINS
EASTSHORE ENERGY CENTER
HAYWARD, CALIFORNIA



LEGEND

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <p>A An area inundated by 100-year flooding, for which no Base Flood Elevations have been determined.</p> <p>V An area inundated by 100-year flooding with velocity hazard (wave action); no Base Flood Elevations have been determined.</p> <p>X An area that is determined to be outside the 100- and 500-year floodplains.</p> <p>X500 An area inundated by 500-year flooding; an area inundated by 100-year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from the 100-year flooding.</p> | <p>D An area of undetermined but possible flood hazards.</p> <p>ANI Area Not Included</p> <p>UNDES Undescribed</p> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|

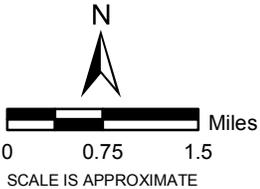


FIGURE 8.14-3
FEMA
 EASTSHORE ENERGY CENTER
 HAYWARD, CALIFORNIA