

SECTION 7.0

Water Supply

This section describes the proposed water supply for the Eastshore Energy Center (Eastshore). A map of the project site is presented in Section 2.0 (Figure 2.1-1). Section 7.1 discusses the source and uses of water. Section 7.2 discusses water quality. Section 7.3 addresses permits and permitting agencies. Section 7.4 provides the references used to prepare this section.

Water requirements for Eastshore are minimal and are presented in Table 7.0-1. As shown in the table, Eastshore will require approximately 1.6 acre-feet of water in a typical year. Much of the water used will be potable. Additional information about water resources is provided in Subsection 8.14.

TABLE 7.0-1
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

7.1 Water Supply

The reciprocating engine technology being used at Eastshore will be supported by a closed-loop cooling system, which requires almost no make-up water while operating. As a consequence, the small quantity of water required for plant services will be met by the City of Hayward via existing connections on-site. 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 general plant maintenance use, service use (turbo washing, power house and plant uses, and personnel uses), and miscellaneous exterior uses such as washing equipment, watering lawns, etc.

7.2 Water Quality

Table 7.2-1 summarizes the quality of potable water from City of Hayward municipal water supply system.

TABLE 7.2-1
City of Hayward Potable Water Quality

Parameter	Concentration
Turbidity	.25 – 1.0) NTU
Color	<5 - 25 units
pH	7.6 – 9.8
Total Alkalinity (as CaCO ₃)	6 -150 mg/l
Total Dissolved Solids	20 – 210 mg/l
TOC	0.9 – 3.0 ppm
Phosphate	ND
Fluoride	<0.1 – 0.2 mg/l
Chloride	<3 - 25 mg/l
Hardness (as Ca CO ₃)	8 - 150 mg/l
Calcium	3 - 30 mg/l
Magnesium	<0.5 – 12.3 mg/l
Sodium	3 - 26 mg/l
Potassium	<0.5 – 1.4 mg/l
Silica	4.4 – 7.2 mg/l
Sulfate	1 - 42 mg/l
Copper	1.3 - 126 mg/l
Lead	<1 – 11.8 mg/l

Source: City of Hayward, 2005.

7.3 Permits and Permitting Agencies

Permits required and the permitting agencies for water use are listed in Table 7.3-1. See Table 8.14-6 for additional permits related to water resources.

TABLE 7.3-1
Permits and Permitting Agencies for VPP Water and Wastewater

Permit	Schedule	Agency
Application of Service for Municipal Water	60 days prior to the start of construction.	City of Hayward Public Works Department 777 B Street 4th Floor Hayward, CA 94541 Edith Jacklin (510) 583-4727

7.4 References

City of Hayward. 2005. 2005 Water Quality Report

City of Hayward on-line connection information link <http://www.hayward-ca.gov/webware/Default.aspx?Message=153&t=-1>