8.11 Soils and Agriculture

This section describes the potential effects of the construction and operation of the Humboldt Bay Repowering Project (HBRP) on soils and agricultural land. Section 8.11.1 describes the existing environment that could be affected, including agricultural use and soil types. Section 8.11.2 identifies potential environmental effects from project development. Section 8.11.3 discusses cumulative effects. Section 8.11.4 presents mitigation measures. Section 8.11.5 presents the laws, ordinances, regulations, and standards (LORS) applicable to agriculture and soils. Section 8.11.6 describes the required permits and provides agency contacts. Section 8.11.7 provides the references used to develop this section.

8.11.1 Environmental Setting

The HBRP is on Buhne Point, which is a small peninsula along Humboldt Bay. The site's general location is 3 miles south of Eureka on the north side of King Salmon Avenue, west of Northwestern Pacific Railroad tracks, and the north shoreline of Buhne Point. The 143-acre site is within an unincorporated area of Humboldt County just south of the Eureka city limit. The site has been operating as a power plant for more than 50 years.

Soil types for the project area are depicted in Figure 8.11-1, and the characteristics of soil mapping units in the vicinity of the proposed HBRP are summarized in Table 8.11-1 (McLaughlin and Harradine, 1965). The table summarizes texture, slope, soil grade, erosion susceptibility, and pH. Actual soil conditions in the project area could differ from what is described in the generalized soil descriptions because of the local grading and the presence of imported fill.

8.11.1.1 Agricultural Use and Important Farmlands

The proposed HBRP site is currently used for electrical power production. None of the areas on which the HBRP construction would occur are used for agricultural production. Figure 8.11-2 shows prime agricultural land within 1 mile of the HBRP. As the map shows, prime agricultural land is within the Elk River Valley and on portions of Humboldt Hill to the east of the HBRP. The HBRP would not involve conversion of agricultural lands to other uses.

8.11.1.2 Soil Types

Humboldt County is one of the few counties in California that does not have an official soil survey published by the U.S. Department of Agriculture. In 1965, soils within the western section of the County were surveyed in a joint effort by the University of California Davis and Humboldt County (McLaughlin and Harradine, 1965). Soils were rated for overall quality using for the following four factors: (1) character of the soil profile and its depth; (2) soil texture, slope, and nutrient level; (3) soil reaction (pH); and (4) susceptibility to erosion. The four factors are multiplied together to produce a composite rating index in accordance with the Storie Index Rating.

Storie Index Rating 1 soils (rating between 80 and 100) are well suited to general intensive agriculture. Grade 2 soils (rating between 60 and 80) are moderately suited for agricultural uses. Grade 3 soils (rating between 40 and 60) are only fairly suited for agricultural uses. Grades 4, 5, and 6 soils have poor suitability for agriculture uses.

Table 8.11-1 describes the soil mapping unit properties found at the HBRP site and within 1 mile of the surrounding area. Soils on the project site are most likely derived from young alluvial sediments of the Kerr Ranch, Franciscan, Yager, Wildcat, and Hookton formations that occupy floodplains, basins, and alluvial fans (see Section 8.8, Paleontological Resources, for more information). The soil type at the HBRP is mapped as "UI," indicating previously improved areas under residential, business, and industrial uses that are not specifically mapped.

Several subsurface investigations have been completed at the Humboldt Bay Power Plant property during which soil borings were collected (Pacific Gas and Electric Company [PG&E], 1985, 1987, 1988, 1989), (Woodward-Clyde, 1985). Information from these investigations confirms that soil at the HBRP site is primarily Hookton silty clay loam, Hk5 (PG&E, 2002) with some areas overlain by Bayside silty clay loam deposits, Ba6, as described below.

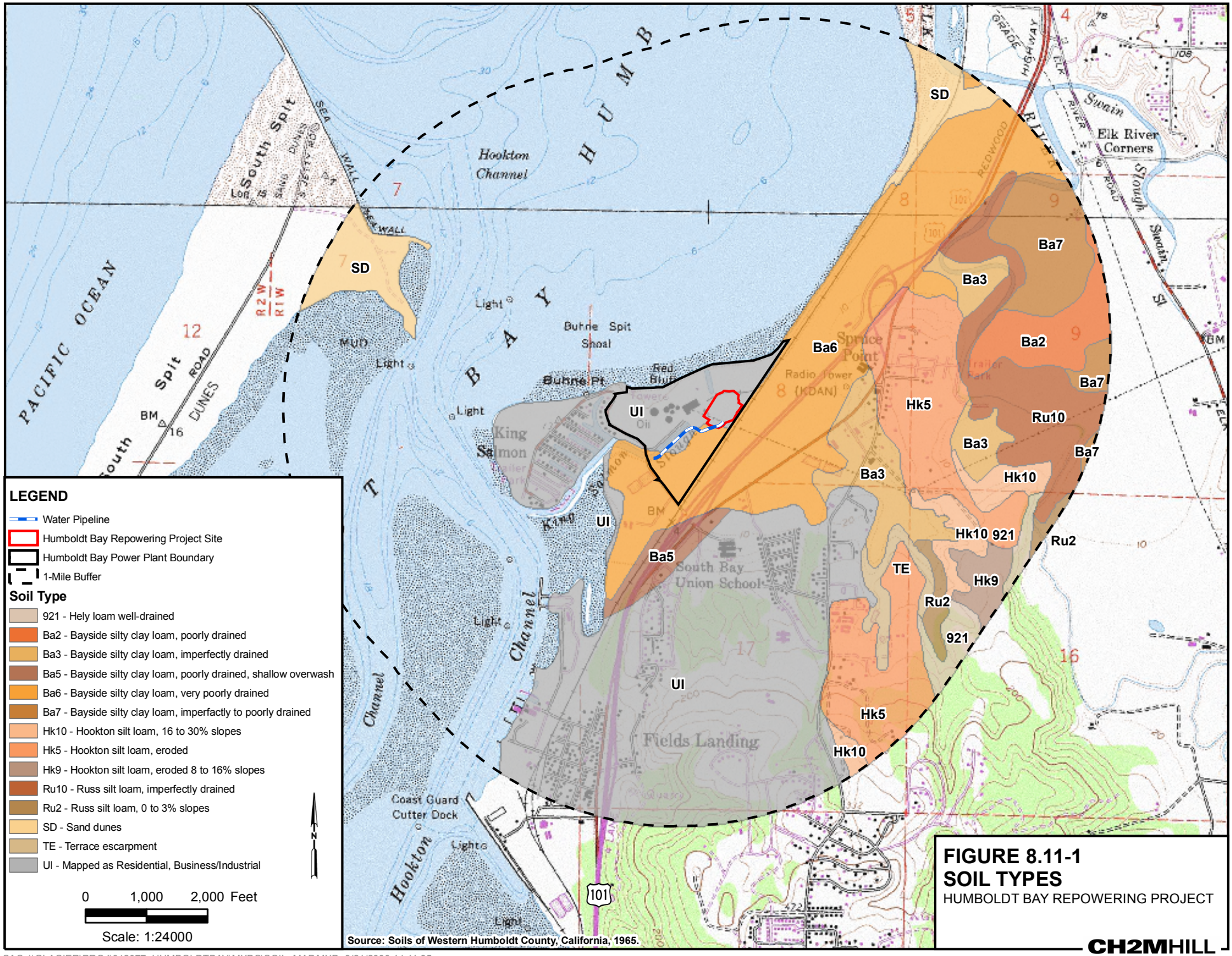
- **[Hk5] Hookton silty clay loam, eroded, 3 to 8 percent slope**. This soil occurs on the gently sloping dissections of the Hookton formation. The Hookton formation consists of interbedded shallow-water marine, estuarine, and fluvial deposits of sand, silty sand, chert-rich gravel, and clay that is about 1,100 feet thick below the site. This soil has a Storie Index Rating of 3.
- **[Ba6] Bayside silty clay loam, very poorly drained, 0 to 3 percent slope.** This soil is in very low lying areas of the Bayside and overlies the Hookton formation. Bayside soils are imperfectly to poorly drained, fine-textured basin soils, developed in sedimentary alluvium from the Franciscan and Wildcat formations in the North Coast Range Mountains. They occur at elevations from sea level to above 50 feet within about a 10-mile perimeter of Humboldt Bay. This soil has a Storie Index Rating of 5.

8.11.1.3 Potential for Soil Loss and Erosion

The factors that have the greatest effect on soil loss include steep slopes, lack of vegetation, and erodible soils having a large proportion of fine sands. The project site is nearly level due to past grading. Hookton soil is suitable for pasture land, as indicated by its uses in other areas of the County. Hookton soil will erode quickly on sloped areas that have been recently plowed before heavy rains and are typically poorly drained. The predominant surface soil condition is silty clay loam, with a water erosion potential of slight to moderate. An estimate of soil losses by water and wind erosion is provided in Section 8.11.2.4.

8.11.1.4 Other Significant Soil Characteristics

Based on the available soil mapping information and site-specific information determined during field visits, there does appear to be some potential for hydric soils to occur on the project site, as the Hookton and bayside soils are typically poorly drained. In addition, it is likely that project construction will encounter fill soils that have unsuitable soil properties. Should unsuitable soils be uncovered during excavation, there will be a contingency plan to remove and replace those soils with imported fill that has suitable compaction and bearing properties.



Source: Soils of Western Humboldt County, California, 1965.

FIGURE 8.11-1
SOIL TYPES
HUMBOLDT BAY REPOWERING PROJECT

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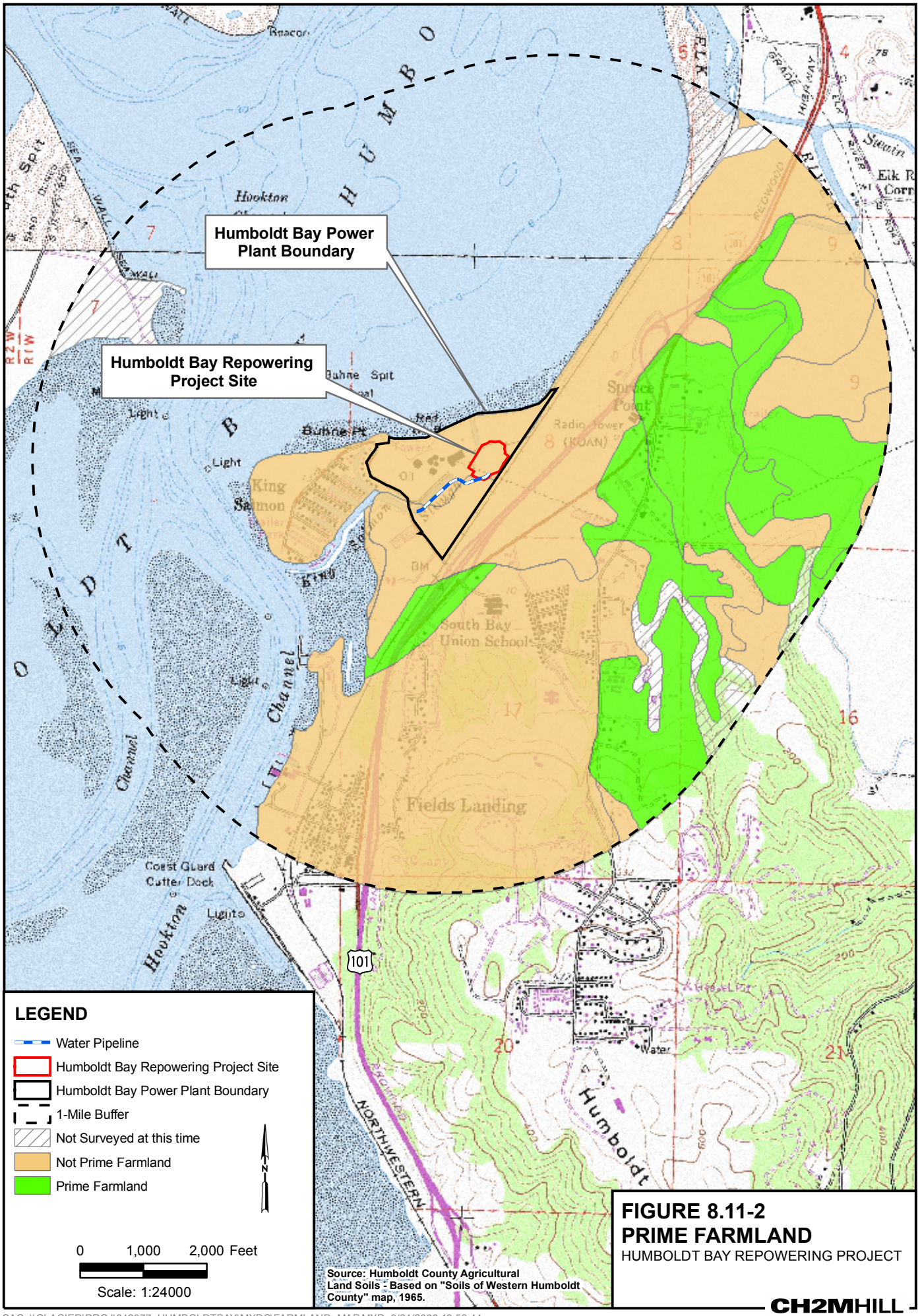

FIGURE 8.11-2
PRIME FARMLAND
HUMBOLDT BAY REPOWERING PROJECT

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TABLE 8.11-1
Soil Mapping Unit Descriptions and Characteristics

Map Symbol	Map Unit Name and Description	Slope %	Storie Index Rating	Erosion Susceptibility	PH	Comments
Hk5	Hookton silty clay loam. Moderately deep, moderately well drained soils of a fine silty texture derived from warped and uplifted old marine terraces. Soil suited for clover, grasses, and dryland pasture.	3 to 8	3	Moderate	6.0	Permeability is moderately slow, the shrink-swell potential is moderate.
Hk10	Hookton silty clay loam. Shallow, eroded, moderately well drained soils of a fine silty texture, derived from warped and uplifted old marine terraces. Soil suited for grasses. Pasture value is low.	16 to 30	4	Moderate	6.0	Permeability is moderately slow and the shrink-swell potential is moderate.
Ba2	Bayside silty clay loam. Deep, fine-textured, poorly drained, reclaimed tidal marsh and small streams near Humboldt Bay. This is the most extensive of the Bayside series. Soil suited for silverweed and bent grasses. Pasture value is low.	0 to 3	4	Slight	6.2	Permeability is slow and the shrink-swell potential is high.
Ba3	Bayside silty clay loam. Deep, fine-textured soil, imperfectly drained, reclaimed tidal marsh and small streams. Soil is better drained than Ba2 soils. Pasture value is high.	0 to 3	3	Slight	6.2	Permeability is moderately slow to slow and the shrink-swell potential is moderately high.
Ba6	Bayside silty clay loam. Deep, fine-textured soil, poorly drained and found in low lying areas. Often affected by salts and the surface is frequently puddled. Soil supports pickleweed, saltgrass, and silverweed. Pasture value is low.	0 to 3	5	Slight	6.2	Permeability is slow and the shrink-swell potential is high.
Ru10	Russ silt loam. Moderately deep, imperfectly drained, coarse silty, alluvial soils developed from sedimentary alluvium originating in the Wildcat Formation. The soil is wet for significant periods of time and hydrophytic plants are difficult to control. Soil suited for permanent pasture.	0 to 3	2	Moderate	6.5	Permeability is moderately rapid in the upper portion and moderate to moderately slow at depth and the shrink-swell potential is moderate.
700DW	Miscellaneous land, Marsh	Not applicable	Not applicable	Not applicable	Not applicable	Sand dune and marsh land at south jetty.
TE	Terrace Escarpment, slopes greater than 70 percent, shallow soil less than one foot deep. Vegetation consists of brush and some grasses. Rock outcropping is prevalent.	70+	6	Not applicable	Not applicable	Steep rocky cliff areas.

8.11.2 Environmental Consequences

The following sections describe the potential environmental effects on agricultural production and soils during the construction and operation phases of the project.

8.11.2.1 Significance Criteria

The potential for impacts to agricultural and soils resources were evaluated with respect to the criteria described in the Appendix G checklist of the California Environmental Quality Act (CEQA). An impact is considered potentially significant if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps for the Farmland Mapping and Monitoring Program by the California Resources Agency, to non-agricultural use
- Conflict with existing zoning for agricultural use or a Williamson Act contract
- Involve other changes in the existing environment which, because of their location or nature, could result in conversion of Farmland to non-agricultural use
- Affect jurisdictional wetlands
- Result in substantial soil erosion
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (International Code Council, 1997), creating substantial risks to life or property

The following sections describe the anticipated environmental impacts on agricultural production and soils during plant construction and operation.

8.11.2.2 Prime and Unique Farmland

The HBRP is not on prime or unique farmland. The prime farmlands that are mapped within 1 mile of the HBRP site (see Figure 8.11-2) will not be affected by the proposed use. The HBRP site is not under a Williamson Act contract (Lewis, 2006). Construction of industrial buildings on property zoned for industrial use is not an adverse impact.

8.11.2.3 Jurisdictional Wetlands

Wetlands and waters of the United States protected under the Clean Water Act (CWA) and under the jurisdiction of the U.S. Army Corps of Engineers are on the Humboldt Bay Power Plant property, and there are seasonal wetlands within the area proposed for HBRP construction. Impacts to wetlands will be permitted under Section 404 of the CWA, and potential project impacts will be fully mitigated by replacement and enhancement. Also, Coastal Commission designated wetlands on the property will be fully mitigated. See Section 8.2, Biological Resources, for information regarding this permitting process and any associated mitigation measures. Best management practices (BMP) will be implemented to minimize impact to the wetlands or tidal marsh (see Section 8.2, Biological Resources, and Section 8.15, Water Resources).

8.11.2.4 Soil Erosion During Construction

Construction impacts on soil resources can include increased soil erosion and soil compaction. Soil erosion causes the loss of topsoil and can increase the sediment load in surface receiving waters downstream of the construction site. The magnitude, extent, and

duration of construction-related impact depend on the erodibility of the soil; the proximity of the construction activity to the receiving water; and the construction methods, duration, and season.

BMPs will be implemented during construction to minimize erosion. PG&E will also develop and implement an erosion and sediment control plan to reduce the impact of runoff from the construction site. Therefore, impacts from soil erosion are expected to be less than significant. Monitoring will involve inspections to ensure that the BMPs described in the erosion and sediment control plan are properly implemented and effective.

The potential for soil erosion in the HBRP project area stems mainly from water and wind. Estimates of erosion by water and wind are provided in the following sections.

8.11.2.4.1 Water Erosion

An estimate of soil loss during construction by water erosion is included in Table 8.11-2. This estimate was developed using the Revised Universal Soil Loss Equation (RUSLE2) program using the following worst-case assumptions:

- The HRBP construction site and area of disturbance totals a maximum of 15 acres, including approximately 2 acres of construction laydown area, 3 acres of access road, and 2 acres of construction worker parking.[1] Given the nearly level site conditions, active soil grading is expected over a 4-month period within the project site and laydown areas. The soil in the laydown area would then be covered with protective gravel along the access roadways or with construction material on dunnage in the material storage areas so that soil losses from that point would be negligible. Approximately half of the remaining 12 acres of potential disturbance (6 acres) would then be exposed for remaining 14-month construction period.
- Estimates of soil loss (in tons) were made for silty clayey loam with low to moderate organic matter using the RUSLE2 program.
- RUSLE2 rainfall erosivity conditions were obtained for the site from the National Oceanic and Atmospheric Administration (NOAA) website (NOAA, 2006).
- The site is relatively level with a 100-foot slope length and a 1.0 percent average slope.
- Soil losses were estimated for construction conditions (approximated using ”bare ground, smooth surface” soil conditions); for active grading conditions (approximated using ”bare ground, rough surface” soil conditions); and for implementation of construction BMPs (approximated using silt fence management conditions). No contouring or other surface management conditions were assumed. Unmowed dense grass conditions were assumed to estimate annual soil losses from the HRBP under a No Project alternative.

With the implementation of appropriate BMPs required under the National Pollutant Discharge Elimination System (NPDES) permit, the total project soil loss of 1.1 tons is a minor amount and would not constitute a significant impact.

[1] The total construction acreage estimate of 15 acres is an overestimate for the purposes of conducting a worst-case analysis. Actual construction disturbance will be less.

TABLE 8.11-2
Estimated Soil Loss by Water Erosion using RUSLE2 Model for the Project Construction Phase

Soil Loss Conditions (sandy loam)	Soil Loss (tons/acre/year)	Duration in Months (Site and Laydown Areas)	Estimated Soil Loss (tons)		
			Site (12 acres)	Laydown (3 acres)	Total
During Active Grading	6.8	4	27.2	6.8	34
During Construction	3.2	14	22.4	0	22.4
With Implementation of Construction BMPs	0.091	18	1.0	0.1	1.1
No Project	0.07	NA	0.84 tons/year	0.21 tons/year	1.05 tons/year

Source: RUSLE Model, July 2006

8.11.2.4.2 Wind Erosion

The potential for wind erosion of surface material is discussed in more detail in Section 8.1.2.2.2 and Appendix 8.1D (Air Quality: Construction Impacts). Table 8.11-3 summarizes the mitigated PM_{10} (particulate matter less than 10 micrometers) and $PM_{2.5}$ (particulate matter less than 2.5 micrometers) predicted to be emitted from the site from grading and the wind erosion of exposed soil.

TABLE 8.11-3
Particulate Emissions from Grading and Wind Erosion During Construction*

	PM_{10}	$PM_{2.5}$
Maximum Daily Fugitive Dust Emissions, lb/day	12.5	1.6
Average Annual Fugitive Dust Emissions, tpy	1.1	0.1

* Emissions reflect mitigation measures. From Tables 8.1D-3 and 8.1D-4. Appendix 8.1D to Section 8.1, Air Quality. Detailed calculations are provided in Attachment 8.1D-1.

8.11.2.5 Expansive Soils

Soils on the HBRP site and surrounding area do not contain excessive amounts of expansive clays (McLaughlin and Harradine, 1965). Seventy-two percent of the Hookton soil is sand and silt with the remaining 28 percent clay. Therefore, the project would not be subject to hazards posed by expansive soils. Also, in discussions with the Humboldt County Building Department, expansive soils were reported to be rare in Humboldt County (Walker, 2006).

8.11.2.6 Compaction During Construction and Operation

The HBRP would result in soil compaction during construction of foundations, paved roadway, and parking areas. Soil compaction increases soil density by reducing soil pore space. This, in turn, reduces the ability of the soil to absorb precipitation and transmit gases for respiration of soil microfauna. Soil compaction can result in increased runoff, erosion, and sedimentation.

Before use as construction laydown areas, minimal grading is expected because the proposed laydown areas are relatively flat. After grading, runoff from the site and laydown areas will either occur as overland flow or percolate to groundwater. However, the laydown area will likely be graveled (at least on roadways) to provide all weather use and further minimize soil erosion potential. Heavy equipment stored onsite will be placed on dunnage to protect it from ground moisture. Once construction is completed, the gravel will be either removed from the site or incorporated into the site paving.

The HBRP site will be mostly covered or paved after construction, except for minor landscaped areas. The project linears will be constructed in previously developed areas on the project site that will be protected after construction. Soils will be prepared (loosened or amended) in areas required to establish vegetation for visual screens or landscaping after project construction. For this reason, the overall anticipated effects of compaction during construction are considered to be less than significant.

Operation of the HBRP would not result in impacts to the soil from erosion or compaction. Routine vehicle traffic during plant operation will be limited to existing roads, all of which will be graveled or paved, and standard operational activities should not involve the disruption of soil. Therefore, impacts to soil resources from project operations would be less than significant.

8.11.2.7 Effects of Emissions on Soil-Vegetation Systems

There is a concern in some areas that emissions from a generating facility, principally nitrogen (NO_x) from fuel combustion, would have an adverse effect on soil-vegetation systems in the project vicinity. This is a concern where environments highly sensitive to nutrients or salts, such as serpentine habitats, are downwind of the project.

In this case, the dominant land use immediately around the project is open land and urban uses (industrial, commercial, or residential). The local geologic maps do not indicate the presence of ultramafic (serpentine) bedrock in the project area. The addition of small amounts of nitrogen to the industrial and commercial areas would be insignificant because of the paucity of vegetation in these areas. Within the more vegetated residential or commercial agriculture areas, the addition of small amounts of nitrogen would be insignificant within the context of fertilizers, herbicides, and pesticides typically used by homeowners or farmers.

8.11.3 Cumulative Effects

As previously described, the subject site is zoned industrial and the construction and operation would have less than significant effects on prime agricultural land. The project's effects on soil erosion, sedimentation, and compaction would be minor to negligible and insignificant, particularly with the implementation of BMPs. Therefore, the potential for cumulative impacts of the proposed HBRP project combined with other projects would be insignificant.

8.11.4 Mitigation Measures

BMPs will be used to minimize water and wind erosion at the site during construction. These measures typically include mulching, physical stabilization, dust suppression, berms,

ditches, and sediment barriers. Water erosion will be mitigated through the use of sediment barriers, and wind erosion potential will be reduced significantly by keeping soil moist or by covering soil piles with mulch or other wind protection barriers. These temporary measures would be removed from the site after completion of construction, and the site will be paved or completely covered. Therefore, soil erosion loss at that point should be negligible.

Erosion control measures would be required during construction to help maintain water quality, protect property from erosion damage, and prevent accelerated soil erosion or dust generation that destroys soil productivity and soil capacity.

8.11.4.1 Temporary Erosion Control Measures

Temporary erosion control measures would be implemented before construction begins, and would be evaluated and maintained during construction. These measures typically include revegetation, mulching, physical stabilization, dust suppression, berms, ditches, and sediment barriers. These measures would be removed from the site after the completion of construction.

Physical stabilization, such as temporary erosion control matting, may be required depending on the time of year revegetation is performed. If required, revegetation of non-landscaped areas disturbed by construction would be accomplished using locally prevalent, fast-growing plant species compatible with adjacent existing plant species.

During construction of the project and the related laydown areas, dust erosion control measures would be implemented to minimize the wind-blown loss of soil from the site. Water of a quality equal to or better than existing surface runoff would be sprayed on the soil in construction areas to control dust during revegetation.

Sediment barriers slow runoff and trap sediment. Sediment barriers include straw bales, sand bags, straw wattles, and silt levees. They are generally placed below disturbed areas, at the base of exposed slopes, and along streets and property lines below the disturbed area. Sediment barriers are often placed around sensitive areas such as wetlands, creeks, or storm drains to prevent contamination by sediment-laden water.

The site will be constructed on relatively level ground; therefore, it is not considered necessary to place barriers around the property boundary. However, some barriers would be placed in locations where offsite drainage could occur to prevent sediment from leaving the site. If used, sediment barriers would be properly installed (staked and keyed), then removed or used as mulch after construction. Runoff detention basins, drainage diversions, and other large-scale sediment traps are not considered necessary due to the level topography. Soil stockpiles, including sediment barriers around the base of the stockpiles, would be stabilized and covered.

Mitigation measures, such as watering exposed surfaces, are used to reduce PM_{10} emissions during construction activities. Mitigation measures to control fugitive dust emissions during construction activities are discussed in Section 8.1.2.2.2 (Air Quality: Construction Emissions). The PM_{10} reduction efficiencies are taken from the South Coast Air Quality Management District (SCAQMD) CEQA Handbook (1993) and were used to estimate the effectiveness of the mitigation measures. Table 8.11-4 summarizes the mitigation measures

from SCAQMD and North Coast Unified Air Quality Management District (NCUAQMD) and PM_{10} reduction efficiencies.

TABLE 8.11-4
Mitigation Measures for Fugitive Dust Emissions

Mitigation Measure	PM_{10} Emission Reduction Efficiency
Water active sites as frequently as necessary to prevent fugitive dust plumes.	34-68% [a]
Enclose, cover, water twice daily, or apply non-toxic soil binders, according to manufacturer's specifications, to exposed piles (i.e., gravel, sand, dirt) with that remain inactive for longer than 10 days.	30-74% [a]
Cover open-bodied trucks or wet and load to provide at least one foot of freeboard when used for transporting materials having the potential to cause visible emissions.	Not specified and site specific.[b]
Use water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.	Not specified and site specific.[b]
Limit vehicle speeds to 15 miles per hour within the construction site.	Not specified and site specific
Apply asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts.	Not specified and site specific.[b]
Sweep paved roads within construction site at least twice daily (or less during periods of precipitation) on days when construction occurs to prevent accumulation of dirt.	Not specified and site specific
Inspect construction equipment vehicle tires and wash as necessary to remove dirt prior to entering paved roadways. Provide gravel ramps at least 20 feet in length at tire cleaning station. Gravel or treat unpaved exits from the construction site to prevent trackout to public roadways.	Not specified and site specific.[b]

[a] SCAQMD CEQA Handbook, Table 11-4 (1993); Personal communication with Eric Bruckner, NCUAQMD (2006) stated that the district uses SCAQMD mitigations.

[b] NCUAQMD, Rule 104.4.0.

8.11.4.2 Permanent Erosion Control Measures

Permanent erosion control measures on the site will include graveling, paving, and drainage systems. Vegetation is the most efficient form of erosion control because it keeps the soil in place and maintains the landscape over the long-term. Vegetation reduces erosion by absorbing raindrop impact energy and holding soil in place with fibrous roots. It also reduces runoff volume by decreasing erosive velocities and increasing infiltration into the soil. All vehicle and construction traffic will remain on paved roads or graveled areas to avoid revegetated areas.

8.11.5 Applicable Laws, Ordinances, Regulations, and Standards

Federal, state, county, and local LORS applicable to agriculture and soils are discussed below and summarized in Table 8.11-5.

TABLE 8.11-5
Laws, Ordinances, Regulations, and Standards for Agricultural and Soil Resources

Jurisdiction	LORS	Purpose	Regulating Agency	Applicability (AFC Section Explaining Conformance)
Federal	Federal Water Pollution Control Act of 1972: Clean Water Act of 1977 (including 1987 amendments)	Regulates storm water discharge from construction and industrial activities	North Coast RWQCB, Region 1, under SWRCB. U.S. Environmental Protection Agency may retain jurisdiction at its discretion.	Section 8.11.5.1
	Natural Resources Conservation Service (1983), *National Engineering Handbook*, Sections 2 and 3	Standards for soil conservation	Natural Resources Conservation Commission	Section 8.11.5.1
State	Porter-Cologne Water Quality Control Act of 1972; Cal. Water Code 13260-13269: 23 CCR Chapter 9	Regulates storm water discharge	CEC and North Coast RWQCB, under SWRCB	Section 8.11.5.2
	California Air Resources Board/California Environmental Protection Agency	Regulates fugitive dust emissions	NCUAQMD	Section 8.11.5.2
	CCC, North Coast District, Coastal Act of 1976	Regulates development along coast not covered by County	CCC	Section 8.11.5.2
Local	Grading Permit	Grading and excavation on private lands	Humboldt County Community Development and Service Department, Building Division.	Sections 8.11.5.3
	Encroachment Permit	Permit for all work within public rights-of-way	Humboldt County Community Development and Service Department, Public Works Division.	Sections 8.11.5.3

8.11.5.1 Federal LORS

8.11.5.1.1 Federal Water Pollution Control Act of 1972 and the Clean Water Act of 1977

The Federal Water Pollution Control Act of 1972, commonly referred to as the Clean Water Act following an amendment in 1977, establishes requirements for discharges of stormwater or wastewater from any point source that would affect the beneficial uses of waters of the United States. The CWA effectively prohibits discharges of stormwater from construction

sites unless the discharge is in compliance with an NPDES permit. The State Water Resources Control Board (SWRCB) is the permitting authority in California and has adopted a statewide general permit for stormwater discharges associated with construction activity (General Construction Permit; SWRCB, 1999) that applies to projects resulting in 1 or more acres of soil disturbance. The HBRP would result in disturbance of more than 1 acre of soil. Therefore, the project will require the preparation of a stormwater management plan. The requirements are described in greater detail in Section 8.15, Water Resources.

The CWA's primary effect on agriculture and soils within the project area consist of control of soil erosion and sedimentation during construction, including the preparation and execution of erosion and sedimentation control plans and measures for soil disturbance during construction.

8.11.5.1.2 U.S. Department of Agriculture Engineering Standards

The U.S. Department of Agriculture, Natural Resources Conservation Service, *National Engineering Handbook*, 1983, Sections 2 and 3, provide standards for soil conservation during planning, design, and construction activities. The project would need to conform to these standards during grading and construction to limit soil erosion.

8.11.5.2 State LORS

8.11.5.2.1 California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1972 is the state equivalent of the federal CWA, and its effect on the HBRP would be similar. The California Water Code requires protection of water quality by appropriate design, sizing, and construction of erosion and sediment controls. The discharge of soil into surface waters resulting from land disturbance may require filing a report of waste discharge (see Water Code Section 13260a). The Regional Water Quality Control Board (RWQCB), which controls surface water discharges, may become involved if soil erosion threatens water quality.

8.11.5.2.2 NCUAQMD Fugitive Dust Mitigation Standard

The NCUAQMD regulates particulate material (fugitive dust emissions) resulting from development in Humboldt County. NCUAQMD adopts mitigation measures from the SCAQMD CEQA Handbook, Table 11-4 (SCAQMD, 1993) and requires a site-specific fugitive dust emission control plan prior to construction (Bruckner, 2006).

8.11.5.2.3 Coastal Development Permit

The California Coastal Commission (CCC) would have jurisdiction over coastal development at the project site, but for the exclusive authority of the California Energy Commission (CEC) to permit thermal power plants larger than 50 megawatts (MW) in California. The CCC was established in 1972 through a voter initiative (Proposition 20) and made permanent by the Legislature with adoption of the California Coastal Act of 1976. The CCC partners with local cities and counties to regulate the use of land and water in the coastal zone. The CCC retains original permit jurisdiction over certain specific lands (tidelands and public trust lands) (see Section 8.6, Land Use).

8.11.5.3 Local LORS

The Humboldt County Community Development and Service Department, Building Division, is the lead agency for grading permits and for encroachment permits. Project plans

are reviewed within the Building Division for approval of the grading permit (Walker, 2006). When the projects may affect public rights-of-way, the project plans are forwarded to the Public Works Division for review and approval of the encroachment permit (Walker, 2006).

8.11.6 Permits and Agency Contacts

Permits required for the project, responsible agencies, and proposed schedule are shown in Table 8.11-6. A grading permit will be obtained from the Humboldt County Building Department before construction begins. Other permits may include an encroachment permit from the Humboldt County Public Works Department. Federal and state permits include industrial wastewater discharge permits, as discussed in Section 8.15, Water Resources. A Coastal Development permit will be required by the CCC. A fugitive dust emissions plan will be required by the NCUAQMD, as discussed in Section 8.1, Air Quality.

TABLE 8.11-6
Permits and Agency Contacts for HBRP Agriculture and Soils

Permit or Approval	Schedule	Agency Contact	Applicability
Humboldt County Plan Approval and Permit	1.5 months prior to construction	Heather Walker, Administration Humboldt County Building Department 3015 H Street Eureka, CA 95501 (707) 445-7541	Grading for projects in unincorporated parts of Humboldt County
Humboldt County Plan review and encroachment permit	1.5 months prior to construction	Ken Freed, Humboldt County Public Works Department 3015 H Street Eureka, CA 95501 (707) 445-7205	Grading or trenching in a public rights-of- way in unincorporated parts of Humboldt County
Construction Activity, Stormwater and NPDES Permit	Prior to construction	North Coast RWQCB 5550 Skylane Boulevard, Suite A Santa Rosa, CA 95403 (707) 576-2220	Regulation of stormwater discharge from site and linear facilities during construction

8.11.7 References

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