

4.10 PUBLIC HEALTH AND SAFETY

SETTING

The current and past land uses on the site are primarily agricultural. The surrounding land uses are also primarily agricultural with some scattered rural residences. Several potential sources of public health and environmental hazards are associated with current and past land uses at the project site (Figure 3.7). These sources include:

- fuel tank usage;
- historic and recent pesticide and/or herbicide use, storage, and disposal;
- potential salt accumulation from agricultural land uses;
- discarded drilling mud from abandoned natural gas wells;
- spills and leakage from existing and abandoned fuel pipelines;
- possible presence of polychlorinated biphenyls (PCBs) in power transformers;
- electromagnetic fields generated by electrical overhead transmission lines;
- potential asbestos-containing materials present in existing buildings; and
- on-site canals and irrigation ditches that are not adequately fenced.

Seven aboveground fuel storage tanks have been identified within the project site; evidence of leakage or spills has been observed in the vicinity of three of the tanks (Earth Systems Environmental, 1990). Fuel releases from these tanks could have resulted in impacts to the subsurface soil and groundwater quality.

The primary types of crops grown on and near the project site include alfalfa, sugar beets, and corn (Earth Systems Environmental, 1990; The SWA Group, 1994a). Pesticides and/or herbicides are currently and have been used on the project site. The soils, shallow groundwater, and surface waterways at the site might be affected by the use, storage, and disposal of these chemicals, as well as by aerial spraying of adjacent fields.

Irrigation practices may have resulted in a buildup of salt concentration in surface and groundwater. Calcium, sodium, and boron salts have been identified in water wells within the project site (Duran, 1991). Nitrates may have accumulated in soils from fertilizer use and from livestock wastes; two dairies operate in the east-central portion of the project site. Water wells used for domestic or irrigation purposes and irrigation canals and ditches may provide conduits for contaminant migration to the groundwater.

Four exploratory natural gas wells were drilled and subsequently abandoned at the project site. Drilling muds, if buried on-site, could contain high concentrations of heavy metals and oil-based compounds, potentially impacting soil and groundwater quality (Earth Systems Environmental, 1990).

Three existing natural gas pipelines traverse the project site. Natural gas transmission lines transport flammable and explosive material under pressure. Escaping gases due to rupture, punctures, or leaks could accumulate in enclosed spaces; a source of ignition could cause an explosion. One fuel pipeline formerly traversed the project but was removed. Leaks or spills associated with existing and former fuel pipelines could have affected subsurface soil and groundwater quality.

Old transformers that use mineral oil as a heat-moderating fluid are present within the project site. These transformers may contain PCBs, a class of chemicals that tend to persist in the environment and have been found to cause cancer in test animals.

Two electrical overhead transmission lines traverse the project site, the Weber-Herdlyn 60-kilovolt (kV) transmission line and Rio Oso-Tesla 230-kV transmission line (Figure 3.7). The Weber-Herdlyn 60-kV line is being proposed for relocation along Byron Road. A 500-kV Rancho Seco-Tesla overhead transmission line has been proposed adjacent to the Rio Oso-Tesla line. PG&E has recently deferred the Rancho Seco-Tesla project. The centerline of a 1,000-foot wide alignment of the 230-kV Wesley/Tracy Transmission Line Project is located along the southwestern border of the project site (Figure 3.7). Objects near transmission lines that are not properly grounded (e.g., a fence) could develop an electric charge, causing a shock upon contact. Some studies of electromagnetic fields (EMF), such as those generated by transmission lines, suggest that EMF may have adverse human health impacts; however, there is no scientific consensus on the actual health effects of EMF exposure (Pennino, 1993). The California Department of Education has developed guidelines for setback of schools from overhead transmission lines to minimize possible EMF effects to school children.

Asbestos was a common component of building materials in the past. Several of the existing farm structures may include asbestos-containing materials. If any buildings currently at the project site were to be demolished or renovated, friable asbestos might be exposed, creating a human health risk.

Several on-site agricultural canals and ditches, used to convey water from the Byron-Bethany Irrigation District, as well as the Delta-Mendota Canal, could pose safety hazards to residents and animals, if not properly fenced or screened.

IMPACTS AND MITIGATION MEASURES

Impacts to public health and safety are considered significant if the proposed project construction directly or indirectly were to create a potential public hazard, or involve the use, production, or disposal of materials that could pose a hazard to the public or environment.

MASTER PLAN

In recognition of existing site hazards that could affect the public health and the environment, the Draft Master Plan contains policies that would require detailed programs and studies to be prepared prior to submittal of the first Development Permit for affected areas. Specific programs/investigations to be undertaken include:

- Detailed mapping of underground fuel pipelines prior to development within 500 feet of the pipelines.
- Site assessments, incrementally of the entire site, to assess the presence of hazardous substances/wastes from historic pesticide/herbicide uses, effects to future residences within 1,000 feet of the on-site dairies, and other past and current land uses that could have been a source of release.
- Mapping of abandoned gas wells.
- Assessment of the public safety impacts of open canals in areas of development.
- Emergency Preparedness Plan.

The proposed project would include the addition of commercial and industrial businesses that would increase the volume of hazardous materials transported, stored, and used on-site. Numerous local, State, and Federal statutes and regulations pertain to the proper transport, use, storage, and disposal of hazardous materials and wastes. Each business would have specific permit and reporting requirements pertaining to the unique use, storage, handling, and disposal activities associated with that business. These requirements would be in place during operation of the proposed project.

Impact M4.10-1

Public and environmental health may be affected by potential historic pesticide and/or herbicide residues in the environment, as well as by future pesticide and/or herbicide applications off-site.

Agricultural chemicals have been used on and adjacent to the project site. Chemical residues may build up in the soil and groundwater if the chemicals used were persistent in the environment, had frequent rates of application, and tilling of the soil was not performed. Table 4.10-1 lists those agricultural chemicals identified by the San Joaquin County Agricultural Commissioner's Office as being used currently or in the past in the vicinity of the project. The majority of the chemicals used on the crops grown at the project site are not usually persistent in the environment with the exception of the organochlorine compounds (Hudson, 1993). Most of the herbicides are applied on an infrequent basis, with an average rate varying from about 1.5 times per year to every other year. The cultivation of fields on an annual or more frequent basis tends to accelerate the rate of natural degradation of agricultural chemicals (Barnes, 1993). Alfalfa crops have more frequent rates of chemical application than other types of crops grown, and the fields where alfalfa is grown are not cultivated on an annual basis. This suggests that there is a higher probability of finding chemical residues in the soil in fields where alfalfa has grown than other types of crops identified at the site.

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TABLE 4.10-1

AGRICULTURAL CHEMICALS CURRENTLY OR PREVIOUSLY USED ON THE PROJECT SITE AND ADJOINING LANDS

Agricultural Chemicals (Brand Names)	Compound Type	Method of Application	Crops
Pen Cap (P) ^{1,2}	Orthophosphorus	Aerial	Alfalfa
Lasso (H) ^{2,3}	Nitrogen	Directly into soil	Beans, corn
Treflan (H) ^{4,5}	Nitrogen	Directly into soil	Beans, alfalfa
Velpar (H) ^{4,5}	Nitrogen	Directly into soil	Sugar beets
Lorsban (P) ^{4,6}	Orthophosphorus	Aerial	Alfalfa
Comite (P) ²	Sulfite	Aerial/ground	Corn
MCPA (H) ⁴	Carboxylic acid	Aerial	Grain
Banvel (H) ^{2,7}	Organochlorine	Aerial	Grain
Sulfur Dust (P) ⁴	Inorganic	Aerial/ground	Sugar beets
Disyston (P) ⁸	Orthophosphorus	Aerial	Alfalfa, beans, grain
Orthene (P) ⁸	Orthophosphorus/nitrogen	Aerial/ground	Beans
2,4-D (H) ⁴	Organochlorine	Aerial/ground	Wheat, oats
Anthraquinone (BR) ⁴	Quinone	Aerial/ground	Corn
Toxaphene (P) ²	Organochlorine	Aerial/ground	Wheat
Systox (H) ⁴	Orthophosphate	Aerial/ground	Grains

Sources: BASELINE, 1992a; Hudson, 1993.

Notes: P = Pesticide
H = Herbicide
BR = Bird Repellent (seeds)

- ¹ Also known as methyl parathion.
- ² Used in past; not used currently.
- ³ Also known as Alocchlor.
- ⁴ Used in past and currently.
- ⁵ Used in early spring.
- ⁶ Also known as Dursban.
- ⁷ Also known as Dicamba.
- ⁸ Used in past, probably not used currently.

The actual rate of degradation of agricultural chemicals depends on many variables, including soil type, soil fertility, climate, chemical type and initial chemical concentration. Both field and laboratory tests have been conducted to evaluate half-life¹ data for many agricultural chemicals. Half-life data are not available for all chemicals currently and formerly used on-site. However, the available data indicate that most organophosphorus compounds have half-lives of less than ten days to two months; organochlorine compounds tend to have a broader range of degradation rates, with half-lives ranging from one day to 14 years; half-life data are not readily available for the nitrogen compounds used at the site. The chemicals currently or formerly used at the site, for which data are available, which potentially have the greatest half-lives include Toxaphene (2 months to 14 years), Banvel (4 to 555 days), and 2,4-D (less than one day to several weeks). Based on the available data, and the assumption that agricultural chemicals used on crops are applied at relatively low

¹ A half-life is the period of time it takes a chemical to degrade to one-half its original concentration.

concentrations, and the typical site conditions, it is likely that most of the agricultural chemicals used at the site would have decayed to insignificant levels in six months or less.

For crops where organochlorine compounds are applied, the period for compounds to decay to insignificant levels may be longer, depending on the chemical and the concentration used and the type of crop cultivation. Therefore, for sites where organophosphorus compounds are used, use of the compound should cease several months prior to initiating construction. For sites where organochlorine compounds are used, use of the compound should cease several months to two years prior to construction, depending on the actual compound used and the applied concentration. Nitrogen compound use should also cease according to a similar schedule to organochlorine compounds because half-life data were not readily available to indicate otherwise.

Agricultural chemicals used at the site are applied either by ground or aerial spraying. Aerial spraying is usually performed early in the morning by either planes or helicopters (Hudson, 1993). In the future, agricultural chemicals sprayed on adjacent fields may drift onto the project site, potentially impacting public and environmental health. If spraying were performed by helicopter over cultivated fields, the dust generated may cause respiratory irritation.

If residual organic compounds were present in the near surface soils, future residents could be exposed to the chemicals in areas not covered by structures or paving (e.g., back yards).² This issue is addressed in more detail in Land Use and Agricultural Issues, Section 4.1.

The Draft Master Plan contains one Policy and one Implementation under Objective 2 in Potential Site Hazards (Appendix C) to mitigate public and environmental health impacts associated with pesticide and/or herbicide residues in the environment.

Mitigation Measure M4.10-1

(a) The following Implementation should be included under Objective 2 in Potential Site Hazards (Appendix C):

"b) In anticipation of the development of specific areas, pesticide and/or herbicide applications shall be reduced or eliminated six months prior to Development Permit submittal."

(b) The following Implementation under Objective 2 in Potential Site Hazards (Appendix C) should be added:

² The applicant collected a number of on-site randomly located, near surface soil samples to preliminarily assess the likelihood of near surface soils containing pesticide residues. The soils samples were analyzed by a California EPA-certified laboratory for organochlorine pesticides. None of the samples contained concentrations of pesticides above the levels of detection.

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"c) Aerial spraying shall be restricted within 500 feet of the nearest dwelling along the western site boundary."

(c) Implementation b) under Objective 6 in Potential Site Hazards (Appendix C) should be revised as follows:

"b) Site Searches. Prior to the submittal of any Development Permit for areas to be developed, the property owner shall submit a Site Assessment prepared in accordance with ASTM standards to assess the presence of any fuel. . ."

Impact M4.10-2

Potential health impacts may result from public exposure to PCBs associated with transformers or electromagnetic fields associated with overhead electrical lines.

Older electrical transformers on-site may contain PCBs, which are a potential health and environmental hazard. A release of PCBs could occur from damage to transformers from weather, vandalism, equipment failure, or during maintenance activities.

Incidents of childhood leukemia and adult acute and chronic myeloid leukemia have been correlated to EMF exposure (Feychting and Ahlbom, 1992; Floderus, et al., 1992); however, there is no scientific consensus on the actual health effects of EMF exposure. Induction effects from proximity to transmission lines is primarily a nuisance, with the exception of interference with cardiac pacemakers.

The Draft Master Plan contains Policies and Implementations under Objective 2 in Electric and Magnetic Fields (Appendix C) that would serve to mitigate potential impacts associated with EMF. These include establishment of minimum setback distances for residences (25 feet) and non-residential buildings (10 feet) from transmission line easements and annual compilation of information pertaining to EMF exposure.

Mitigation Measure M4.10-2

The following measures are recommended to be added as Implementations under Objective 2 in Electric and Magnetic Fields (Appendix C):

"d) Prior to development permit submittal for areas containing electrical transformers, the developer shall request that PG&E investigate whether existing electrical transformers on the site contain PCBs and whether there are any records of spills from such equipment. If PCB-containing equipment (50 to 500 parts per million PCBs in the oil) or PCB equipment (over 500 parts per million) were identified, this equipment shall be replaced with non-PCB containing equipment prior to construction. Any identified spill areas shall be evaluated for cleanup. ~~The developer will be responsible for the costs of testing and replacing PCB-containing transformers, but would be reimbursed by PG&E if the testing indicated exceedance of the concentration criteria.~~

- "e) ~~The developer shall request information from PG&E on the calculated strengths of the electric and magnetic fields generated by the electric transmission lines that traverse the site. This information shall be compiled prior to construction and shall be used as part of the public information packet on EMF exposure; the data package shall be updated annually. The~~ An information packet shall be prepared by the developer; the packet shall include a summary of major studies regarding EMF effects and a list of reference studies, with copies available to residents upon request. The information packet shall be updated annually.*
- "f) Any metal structures or objects located within and adjacent to transmission line easements shall be grounded to avoid nuisance induction effects such as shocks (experienced upon initial contact)."*

Impact M4.10-3

Asbestos, if present in existing farm structures, could cause adverse health impacts to workers during renovation and/or demolition.

Asbestos may be present in building materials in existing on-site structures. Demolition or renovation of structures that have asbestos-containing materials may adversely affect the health of workers through inhalation of airborne asbestos particles.

The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) has adopted regulations and policies to implement asbestos demolition and renovation requirements developed by EPA in the National Emission Standards of Hazardous Air Pollutants (NESHAP) regulations. Facilities subject to regulation include all structures, buildings, and equipment, except single family dwellings and apartments with fewer than four units. However, single family dwellings and apartments are also subject to regulation if the zoning of the parcel is other than residential, or the building had been used for or is being removed for a commercial or public use, or is being used as a training burn exercise.

After the SJVUAPCD has received a demolition notification and is satisfied that NESHAP has been complied with, the SJVUAPCD would issue a demolition release form. The release form would be submitted with a demolition permit application to the County Community Development Department as proof of NESHAP compliance.

Mitigation Measure M4.10-3

The following are recommended to be added as Objective 7 to the Draft Master Plan under Potential Site Hazards (Appendix C):

"Objective:

"To protect the public from exposure to asbestos-containing materials.

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"Policy:

"Demolition or renovation of structures that were built prior to the 1970s or are suspected to incorporate asbestos-containing materials shall be surveyed and abated as required by State and County guidelines and regulations.

"Implementation:

"a) Structures that would be removed or renovated as part of the project shall be screened or surveyed for the presence of asbestos-containing materials. Removal of structures shall only occur after obtaining a demolition release form from SJVUAPCD and a demolition permit approved by the Planning Division of the Community Development and Environmental Health Department. If asbestos were present, renovation and/or demolition shall be undertaken only by licensed asbestos abatement contractors trained in proper asbestos removal and disposal procedures."

"b) A demolition permit, to be approved by the County Community Development Department and the Environmental Health Department, shall be required prior to all proposed building demolition."

Impact M4.10-4

Materials disposed of at the small household landfill on the site may have affected soil and groundwater quality.

It is unknown whether hazardous materials were disposed of in the household landfill located in the center of the site (Figure 3.7) (Earth Systems Environmental, 1990). If hazardous materials were present, they could migrate into the underlying groundwater, possibly affecting groundwater resources, or affect the public during excavation.

Mitigation Measure M4.10-4

The following is recommended to be added as an Implementation under Objective 6 in Potential Site Hazards (Appendix C):

"e d) It must be demonstrated that disposed materials currently in the on-site landfill do not constitute a health or environmental hazard. Such demonstration shall be achieved through removal of disposed material in conjunction with soil sampling and groundwater sampling prior to construction in and within 500 feet of the affected area(s) to ensure minimum exposure to nearby residents and provide access for possible remediation activities, if needed."

Alternatively, a health risk assessment could be performed to determine whether an engineered cap would effectively mitigate environmental and public health impacts associated with the landfill.

Impact M4.10-5

Open water bodies within the project site could provide active breeding sites for mosquitoes, potentially causing an environmental nuisance condition and disease transmission.

The project site is located on the margin of the Sacramento-San Joaquin Delta, a region of extensive waterways. The project site, through the creation of detention basins and maintenance of wetland areas, could contribute to the proliferation of pests and transient vector mosquito breeding sites. The mosquitoes could present a nuisance condition or health hazard if not properly controlled.

The Draft Master Plan provides mosquito abatement measures for potential breeding areas within the Mountain House Creek corridor, including water level control systems, bank design, and shoreline configurations, draining areas during mosquito breeding periods (June-October), maintenance of aquatic plants, stocking insectivorous fish, and promoting biological controls (Appendix 6-A).

Mitigation Measure M4.10-5

The following Implementation should be added under Objective 1 in Mosquito Abatement (Appendix C):

- "a) ~~As part of the Flood Control/Storm Drainage Plan, specific plans shall include an implementation schedule and maintenance requirements for mosquito abatement for all wetlands and open bodies of water within the specific plan area. Documentation of approval of proposed implementation and maintenance schedules by San Joaquin County Mosquito Abatement District for mosquito abatement shall be included in specific plans. The Flood Control/Storm Drainage Plans shall include general criteria and standards for implementation schedules and maintenance requirements for all wetlands or open bodies of water within the specific plan area. Implementation and maintenance schedules shall be approved by the Mosquito Abatement District prior to the construction of the improvements and shall include Mosquito Abatement operations to be assumed by the District.~~*

The following Implementation should be added to the Mosquito Abatement Program (Appendix 6-A of the Draft Master Plan):

- "m) ~~Implementation and Maintenance Schedules. Specific plans shall include a schedule for implementing and maintaining mosquito abatement procedures for all wetlands and open bodies of water. The schedules shall be reviewed and approved by San Joaquin County Mosquito Abatement District. Construction plans for any detention basins and any plans for wetland enhancement/maintenance shall include implementation and maintenance schedules. Implementation and maintenance plans shall be developed in consultation with the Mosquito Abatement District.~~*

Impact M4.10-6

The development of the project may increase the potential for public exposure to explosives, fire, or the release of materials during railway accidents on the railway line crossing the northern portion of the project site.

The proposed project would include residential, commercial, and industrial land uses adjacent to the Southern Pacific Transportation Company's railroad track traversing the northern portion of the site parallel to Byron Road. Fewer than ten freight trains per day travel through the site at speeds of about 40 miles per hour. The frequency and travel speed of trains may be increased if commuter rail service were added in the future as planned. Trains may transport hazardous materials, which,

in the event of an accident, could cause an explosion, fire, or release of hazardous materials. In the event of a release of hazardous gas, vapor, or liquids, air and water quality could be affected. There would be a greater potential for accidents to occur at the at-grade railroad crossings with the increase in vehicle traffic that would accompany project development. Any of these incidents could affect people and property in the vicinity of the tracks.

Mitigation Measure M4.10-6

(a) *Policy a) under Objective 1 in Emergency Preparedness should be modified as follows:*

"a) Safety and protection services shall be provided to the community in the event of fire and natural disasters (including flooding and earthquakes), and emergencies resulting from accidents, including emergencies involving releases of hazardous materials."

(b) *Implementation b) under Objective 1 In Emergency Preparedness should be modified as follows:*

"b) Natural Disaster Response. Response shall be by Fire District staff with backup by OES staff. Earthquake preparedness and flood response training shall be an integral part of the Incident Action Plan."

(b) (c) *The following should be added to Emergency Preparedness (Appendix C):*

"Objective:

"To be prepared to respond to emergencies, including those involving releases of hazardous materials, associated with freight transport along railroads.

"Policy: Emergency response shall be provided for the community for the protection of the public.

"Implementation:

"a) Specific plans shall establish buffer zones between structures proposed in areas adjacent to railroads and the track right-of-way to reduce potential public safety impacts from railway accidents. The specific plan for Neighborhood J shall include safety criteria for determining buffer zone widths north of Byron Road where residential uses are proposed.

"b) Specific plans shall contain requirements for businesses and public institutions located adjacent to the railway buffer zones to maintain emergency contingency and evacuation plans in the event of a railway accident.

"c) The ~~Emergency Preparedness~~ Incident Action Plan for the project shall include a component on emergency response to railway accidents, including those involving releases of hazardous materials. This component shall be consistent with emergency response programs developed by owners of the railway right-of-way. The ~~Emergency Preparedness~~

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Incident Action Plan for _____ project shall be prepared in cooperation with the County Office of Emergency Services and completed prior to submittal of the first Development Permit for specific plan areas adjacent to railroad rights-of-way for all land uses."

Impact M4.10-7

Increased development along the natural gas pipelines traversing the site could increase the risk of pipeline rupture and fire or explosion which could result in death and injury or property damage.

Excavation or other subsurface penetration in the vicinity of buried natural gas pipelines could result in pipeline rupture and ignition of leaking gas, casing explosion and/or fire. Pipelines within high population density areas generally present higher hazards. The proposed project would result in increased population density in certain areas along the pipelines. The Class Location designation,³ set by the PUC, would be changed from Class I (very low density) to Class II or III (higher density and occupancy) depending on the number of buildings for human occupancy within 220 yards of the pipeline and the number of occupants. If the Class Location were changed to a higher class, the PUC could require that the pipeline be operated at a lower pressure to reduce the fire and explosion risk. The reduction in pressure would result in lower volumes of gas delivered through the pipeline. Underground vaults or pits containing pressure-regulating equipment for natural gas pipelines are required to be sealed, vented, or vaulted to reduce hazards associated with gas accumulation. Nearby trenches or vaults containing other utilities may accumulate gas due to a leak from the nearby natural gas pipeline.

Mitigation Measure M4.10-7

(a) The following Objective, Policy, and Implementation are recommended to be added to Potential Site Hazards (Appendix C):

"Objective:

"To minimize the risk of human injury or property damage in the event of an explosion and/or fire at a natural gas pipeline.

"Policy:

"A Pipeline Safety Plan shall be part of the ~~Emergency Preparedness~~ Incident Action Plan, developed to minimize risks associated with natural gas pipelines within the project site.

"Implementation:

"a) Building sites within 220 yards of high pressure gas pipelines shall be chosen to minimize the risk of human injury or property damage in the event of an explosion and/or fire at the pipeline. The project densities in the vicinity of the pipelines should be limited to

³ A Class Location unit is an area that extends 220 yards on either side of the centerline of any continuous one-mile length of natural gas pipeline. The Class Location designation is determined by the number and type of buildings within the Class Location unit. Class I corresponds to a density of 10 or fewer buildings intended for human occupancy within an area of 220 yards by 1 mile; Class II corresponds to a density of greater than 10 to 46 buildings; Class III corresponds to a density of greater than 46 buildings, or the placement of a building or well-defined outside area of public assembly that is occupied by 20 or more persons at least 5 days a week for 10 weeks in any 12 month period; Class IV corresponds to a building with four or more stories (49 CFR § 192.5).

those allowed for a Class I Location designation, which corresponds to a density of 10 or fewer buildings intended for occupancy within an area of 220 yards on either side of the centerline of any continuous one-mile length of natural gas pipeline. **Alternatively, the Class Location designation should be revised by the PUC and alternative routes for future gas pipelines should be identified by the developer and approved by the PUC.**

"b) Vapor barriers and/or vents shall be included in designs for utility trenches that are not under the jurisdiction of the PUC crossing or within 100 feet of the high pressure gas pipelines to reduce the potential for the migration and accumulation of gas, leaked from a pipeline, in utility trenches. The design of the utility trenches shall be reviewed and evaluated by the Department of Public works prior to final map approval."

~~(b) The proposed land use map in areas underlain by fuel pipelines should adhere to current PUC class location designation density specifications. Alternatively, the Class Location designation should be revised by the PUC and alternative routes for future gas pipelines should be identified by the developer and approved by the PUC.~~

Impact M4.10-8

Improperly abandoned wells, wells without appropriate sanitary seals, and agricultural canals may act as conduits for agricultural chemical migration, potentially affecting surface and groundwater quality, or may represent a safety hazard.

Agricultural chemicals which are applied to soils and vegetation may migrate to groundwater via domestic or irrigation wells that do not have adequate surface protection, or to surface waters via agricultural canals.

Mitigation Measure M4.10-8

The following Implementations are recommended to be added to the Draft Master Plan under Objective 2 in Potential Site Hazards:

"d) A component of the required site assessment for pesticide and herbicide residues shall include an investigation of the location and condition of currently used and abandoned water wells. Wells in use that do not have appropriate sanitary seals shall be retrofitted to protect groundwater quality. Wells that are no longer in use shall be properly abandoned by a licensed well driller. All necessary work shall be completed prior to construction.

"e) **On-site agricultural canals and ditches, used to convey water from BBID, as well as the Delta-Mendota Canal, will be properly fenced and screened by the developer, as may be required by BBID to eliminate site hazards and to prohibit interference with water flow to agricultural BBID customers.**"

SPECIFIC PLAN I

Specific Plan I indicates that potential public health impacts associated with the project site are limited to an abandoned gas well and two and natural gas lines. The additional potential site hazards associated with former agricultural use, fuel tanks and pipelines, electrical transformers and transmission lines, and asbestos-containing materials identified in the Draft Master Plan are not discussed.

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Impact S4.10-1 (C,O,M)

Proposed landscaping within utility line easements may not conform to PG&E requirements.

Improvements within transmission line easements must conform to PG&E's approved land uses. Potentially acceptable land uses within easements include automobile parking, limited fencing, limited landscaping, roadways, ponds, and recreational areas. All land uses within easements would be subject to PG&E approval. Specific Plan I shows trees planted within utility line easements.

Mitigation Measure S4.10-1 (C,O,M)

Specific Plan I should limit proposed landscaping within utility line easements to trees and shrubs that would not exceed 15 feet in height at maturity.

Impact S4.10-2 (C,O,M)

Mosquito abatement is likely to be required within Specific Plan I areas. An implementation and maintenance schedule for mosquito abatement was not included as part of the storm drainage and flood protection system in Specific Plan I, as required by the Draft Master Plan.

Waterways and wetland areas provide breeding grounds for mosquitoes. The Draft Master Plan includes a Mosquito Abatement Program (Appendix 6-A of the Draft Master Plan). As part of this program, specific plans are required to provide implementation and maintenance schedules for complying with abatement procedures. Mitigation Measure 4.10-5 recommends adding maintenance schedules to the proposed Mosquito Abatement Program. If that measure were included in the Program, this impact would be less-than-significant.

Mitigation Measure S4.10-2 (C,O,M)

Refer to Mitigation Measure M4.10-5.