3.12 Land Use, Planning and Zoning

This section discusses existing land uses, local General Plan Land Use designations and Zoning, and non-Federal land that could potentially be affected by the Folsom DS/FDR action. The Folsom DS/FDR action proposes construction modifications to the Folsom Facility. As described in Chapter 2, Project Description and Project Alternatives, this includes a variety of improvements to dams, dikes and spillways within El Dorado, Placer and Sacramento Counties. Portions of the Folsom Lake State Recreation Area are within Placer, Sacramento and El Dorado Counties. The City of Folsom directly abuts the Folsom Lake State Recreation Area to the south within Sacramento County. Folsom State Prison/California State Prison, Sacramento is adjacent to the project area within the City of Folsom.

3.12.1 Affected Environment/Existing Conditions

This section presents existing land uses and local General Plan Land Use designations and Zoning in the area around the Folsom Facility. It also includes properties and neighborhoods in or adjacent to proposed transportation haul routes. The project construction area and haul routes are defined in Chapter 2.

The affected environment includes many public recreation uses within the study area. This Land Use Section describes the various public recreation uses in general terms. A full analysis of the Folsom DS/FDR's impacts on recreation uses is included in Section 3.13, Recreation Resources.

3.12.1.1 Area of Analysis

The area of analysis is broken down into various federal, state, county and city jurisdictions. These include: Folsom Dam, jointly managed by Reclamation and the Corps; Folsom Lake State Recreation Area, owned by Reclamation and managed under a lease by the California Department of Parks and Recreation (DPR); and adjacent local jurisdictions of Placer, El Dorado, and Sacramento Counties and the City of Folsom, through which material would be transported. Figure 3.12-1 shows Folsom Reservoir and adjacent jurisdictions.

3.12.1.2 Regulatory Setting

The Folsom Lake State Recreation Area is managed by DPR in accordance with the Folsom Lake State Recreation Area General Plan. An update to the Folsom Lake State Recreation Area General Plan (1979) is currently being prepared by CDPR in partnership with Reclamation, and with a substantial amount of public participation. Since 1976, DPR has managed the land by lease or contract with Reclamation for the purpose of providing recreation opportunities to the public. The Folsom Lake State

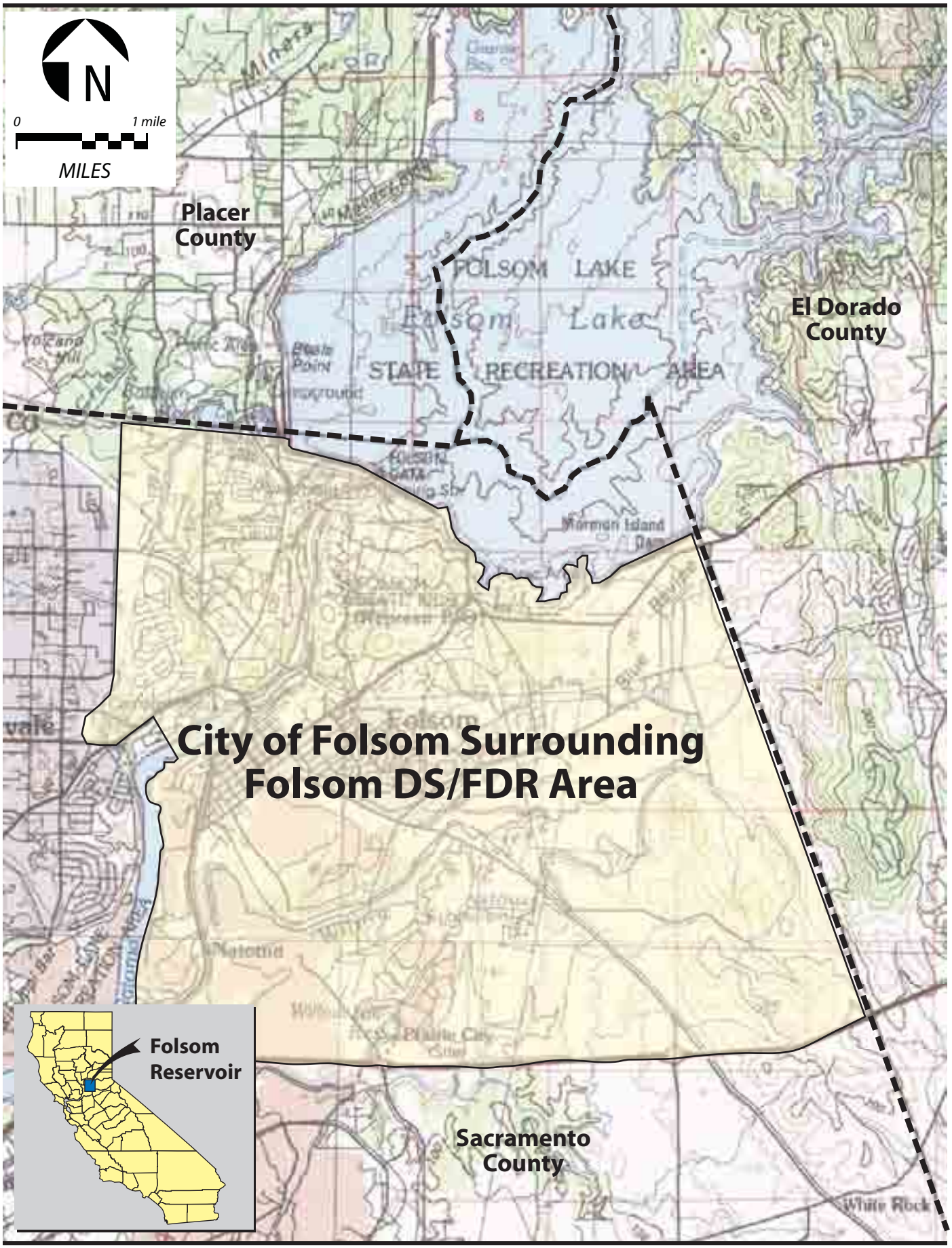

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Figure 3.12-1
Folsom Reservoir and Adjacent Jurisdiction

CDM

Recreation Area General Plan discusses management of various environmental resources including: vegetation, wildlife, geology, soils, cultural resources, and land use. Tree removal policies are also included within the General Plan. The Land Use Element of the General Plan discusses planning concepts for General Land Use, Transportation and Circulation, Water Use, Recreational Opportunities, Interpretation and Acquisition as they apply to recreational uses at Folsom Reservoir (DPR 1979).

Placer County has jurisdiction over a portion of the affected environment. Several planning documents pertain to this area. These documents include: Placer County General Plan, Placer County Zoning Ordinance, Placer County Tree Preservation Ordinance, and Granite Bay Community Plan. The General Plan Draft EIR was also reviewed for information.

Several planning documents pertain to the El Dorado County portion of the study area and include: El Dorado County General Plan, El Dorado County Zoning Ordinance, El Dorado County Interim Interpretive Guidelines for General Plan Policy 7.4.4.4 – Forest and Oak Woodland Resources (Public Review Draft), and Northwest El Dorado Hills Specific Plan. The General Plan Draft EIR was also reviewed for information.

A portion of the Folsom DS/FDR study area is within Sacramento County; however, this portion of the study area falls entirely within the City of Folsom. Therefore, Sacramento County planning agencies do not have jurisdiction within the Folsom DS/FDR study area.

City of Folsom planning documents pertaining to the Folsom DS/FDR study area include: City of Folsom General Plan, City of Folsom Zoning Ordinance, and City of Folsom Tree Preservation Ordinance. The Folsom General Plan Draft EIR was also reviewed for information.

3.12.1.3 Environmental Setting

Folsom Reservoir and Folsom Lake State Recreation Area

The primary land uses within the Folsom Lake State Recreation Area are recreation, flood management, water supply, and power generation. Recreation land uses are managed by DPR and include: water-related activities such as swimming, boating, fishing, waterskiing, and windsurfing; and non-water-related activities such as camping, hiking, mountain biking, the American River Bikeway, horseback riding, and picnicking. The park includes many facilities throughout all areas providing for boat launching and marina storage, day-use parking, camping areas, public restrooms and chemical toilets, equestrian staging areas, riding and hiking trails, bicycle trails, picnic areas with barbecues, and the Park Headquarters near the main dam. A paved road provides access throughout the park and to Folsom Reservoir (Wallace, Roberts, and Todd et al. 2003).

The Folsom Lake State Recreation Area General Plan is the key planning document for this area. DPR is currently in the process of updating the Folsom Lake State Recreation Area General Plan and Resource Management Plan. Information from the *Draft Resource Inventory for the Folsom Lake State Recreation Area,* April 2003 has been used for preparation of this section.

Placer County

The western portion of Folsom Reservoir is within Placer County from below Beal's Point at the southern end and includes approximately 15 miles of the western portion of the North Fork American River up to the City of Auburn. Several unincorporated communities exist adjacent to Folsom Reservoir. These include Granite Bay, Horseshoe Bar, Penryn, and Newcastle. According to the Placer County General Plan, adjacent generalized land uses to Folsom Reservoir include primarily Rural Residential, north of Horseshoe Bar Road; and Urban Residential, south of Horseshoe Bar Road to the Sacramento County line, with a small portion designated as agriculture. Granite Bay, Horseshoe Bar, and Penryn communities have their own Community Plans (Placer County 1994). Figure 3.12-2 shows the land use in Placer County.

The Folsom DS/FDR study area within Placer County includes existing roadways proposed for transport of construction materials from within the Folsom Reservoir boundary to dams and dikes in the Folsom Lake State Recreation Area. These roads include:

- Auburn-Folsom Road from the Placer County line north to Douglas Boulevard.
- Douglas Boulevard from the intersection of Auburn-Folsom Road east to the Folsom Reservoir park entrance.
- The main park road from the park entrance north, then meandering down to Doton's Point located within the Folsom Lake State Recreation Area.

Land uses adjacent to the Folsom Lake State Recreation Area and east of Auburn-Folsom Road within the Folsom DS/FDR study area include urban and suburban residential, and commercial and public recreation. The areas along the western portion of Folsom Reservoir, north of Douglas Boulevard, include high-end custom estate homes with some smaller high-end homes within subdivisions. This area is commonly known as Granite Bay. Auburn-Folsom Road is a major arterial and scenic road that spans the entire western portion of Folsom Reservoir from the City of Auburn to the Sacramento County/City of Folsom line. Land uses along the proposed haul route on Auburn-Folsom Road include a mix of general commercial and urban residential. The urban residential portion includes a mix of high-end custom homes, older tract homes and new homes, and mobile home parks. The route along Douglas Boulevard to the State Park entrance includes a mix of older and

newer subdivisions of single family homes. Several accessory uses exist within the residential areas including: schools, parks, churches, child-care facilities and necessary public and safety facilities. The general commercial land use areas include but are not limited to shopping centers, retail stores, restaurants, office buildings, and medical facilities (Placer County 1994).

Public recreation facilities include the American River Bike Trail, hiking and multi-use trails, horse assembly areas, and parking. These areas are between Folsom Reservoir and developed residential areas.

Zoning
Placer County zoning districts adjacent to the Folsom DS/FDR study area within the Folsom Lake State Recreation Area and along proposed transportation routes are listed below.

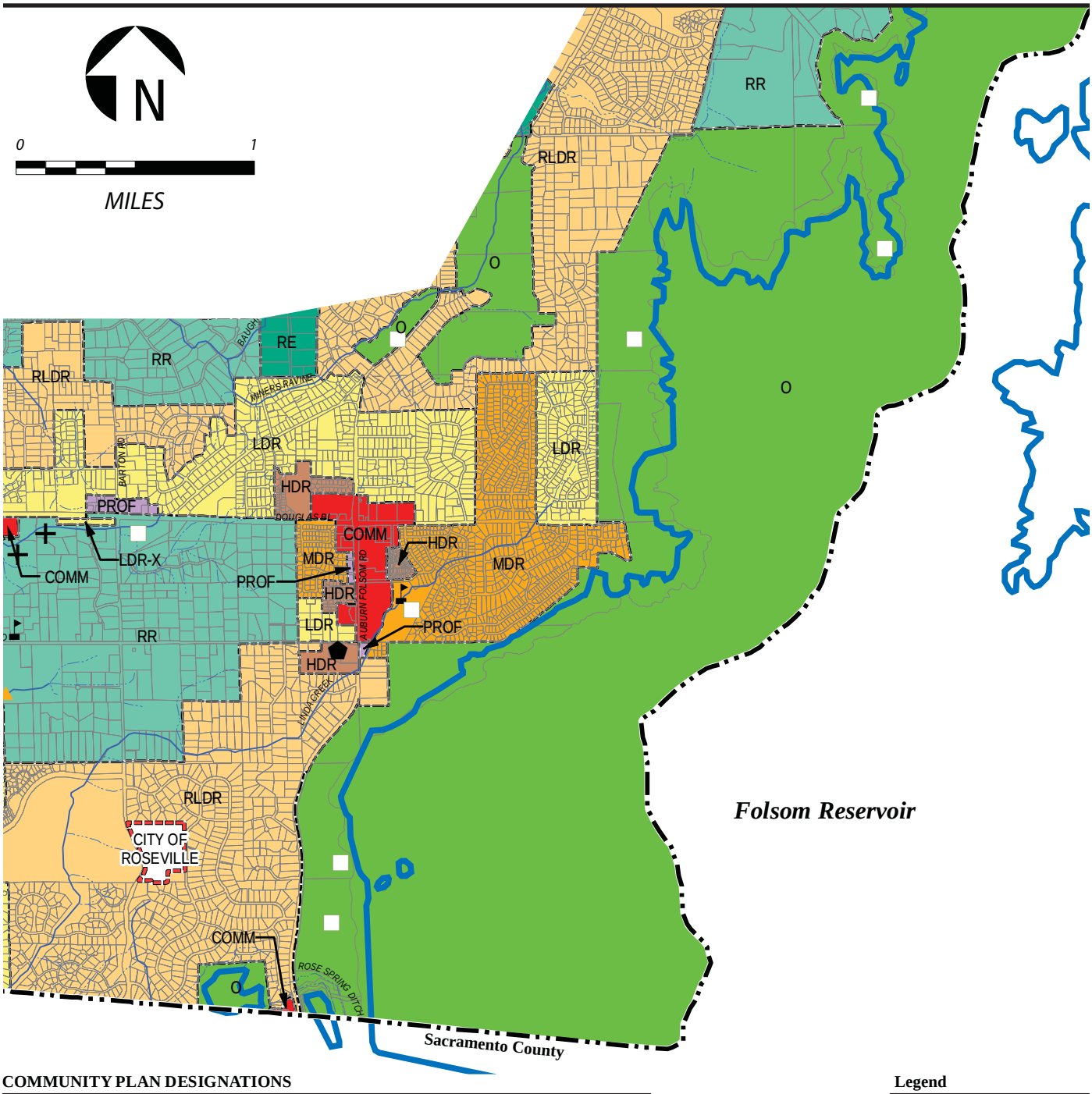
- Residential Single-Family (RS) along Douglas Boulevard. The intent for this zoning district is to provide for residential development of detached single family homes within subdivisions.

- Residential Multi-Family (RM) along Auburn-Folsom Road, south of Douglas Boulevard. The purpose of this zoning district is to provide for multi-family development on one lot, halfplexes, duplexes, apartments and other multi-family attached dwelling units such as condominiums and onsite recreational amenities. It is also the intent to have these developments located near community facilities, business centers and major streets.

- The Residential Agriculture (RA) zoning district is at the northern end of the study area adjacent to the Folsom Lake State Recreation Area. The intent of this zoning district is to stabilize and protect the rural residential characteristics of the area and provide an environment suitable for family life including agricultural uses.

- Office Professional (OP) within districts requiring Conditional Use (CU) Permit and Design Review approval (Dc) are along Auburn-Folsom Road. The OP zoning district is intended for development and operation of professional and administrative offices and personnel services instead of retail trade.

- Neighborhood Commercial (C1) is along Auburn-Folsom Road. The purpose of this zoning district is to provide areas for small-scale, day to day shopping and services for residents within an immediate neighborhood.



COMMUNITY PLAN DESIGNATIONS

COMM	Commercial	Density Receptor Parcel
PROF	Professional Office	Fire Station
HDR	High Density Residential 4 - 10 DU/Ac.	Golf
MDR	Medium Density Residential 2 - 4 DU/Ac.	Park
LDR	Low Density Residential 0.4 - 0.9 Ac. Min.	School
RLDR	Rural Low Density Residential 4.6 - 20 Ac. Min.	
RR	Rural Residential 2.3 - 4 Ac. Min.	
RE	Rural Estate 4.6 - 20 Ac. Min.	
O	Open Space	
- DL	Density Limit	
- X	Density Transfer Parcels	

Legend

- County Boundary
- CityLimits
- Parcels
- Lakes
- Intermittent
- Perennial

Source: Placer County Community Development Resource Agency IT/GIS Division

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Figure 3.12-2

Placer County Land Uses Surrounding Folsom DS/FDR Area

CDM

- Commercial Planned Development (CPD), Design Review required (Dc), CPD-Dc is along Auburn-Folsom Road and Douglas Boulevard. The intent of this zoning district is to provide excellence in site planning and building design for mixed-use community shopping centers, office parks, and other similar developments.

- Open Space (O) is between the Folsom Lake State Recreation Area and all developed areas. The intent of this zoning district is to preserve open space areas by limiting allowable land uses to low intensity agricultural and public recreational uses (Placer County 2003).

El Dorado County

The eastern portion of Folsom Reservoir is within El Dorado County. This includes the eastern portion of the North Fork American River within the reservoir boundary; and the South Fork American River within Folsom Reservoir down to the eastern edge of the Mormon Island Auxiliary Dam (MIAD). According to the El Dorado County General Plan, existing land uses adjacent to the Folsom DS/FDR study area include: Medium Residential, High Density Residential, Low Density Residential, Tourist Recreational, and Commercial. Figure 3.12-3 shows the land use in El Dorado County.

The study area within El Dorado County outside of the Folsom Lake State Recreation Area includes Green Valley Road from the Folsom City line to the Folsom Reservoir Marina entrance road. This route would be used for transport of material to and from areas within the Folsom Lake State Recreation Area. Land uses along this route include new planned unit developments, some currently under construction.

Zoning

El Dorado County zoning districts adjacent to the Folsom Lake State Recreation Area and along proposed transportation routes include the following:

- Recreational Facilities between Folsom Lake State Recreation Area and developed areas of El Dorado County. The intent of this zoning district is to allow for the development and maintenance of land suitable for public recreation and to protect lands from uses having an adverse effect on natural resources.

- One Family Residential at the north end of the El Dorado County study area within the Northwest El Dorado Hills Specific Plan area, north of the Specific Plan area, and along Green Valley Road. Planned unit developments are also located along Green Valley Road.

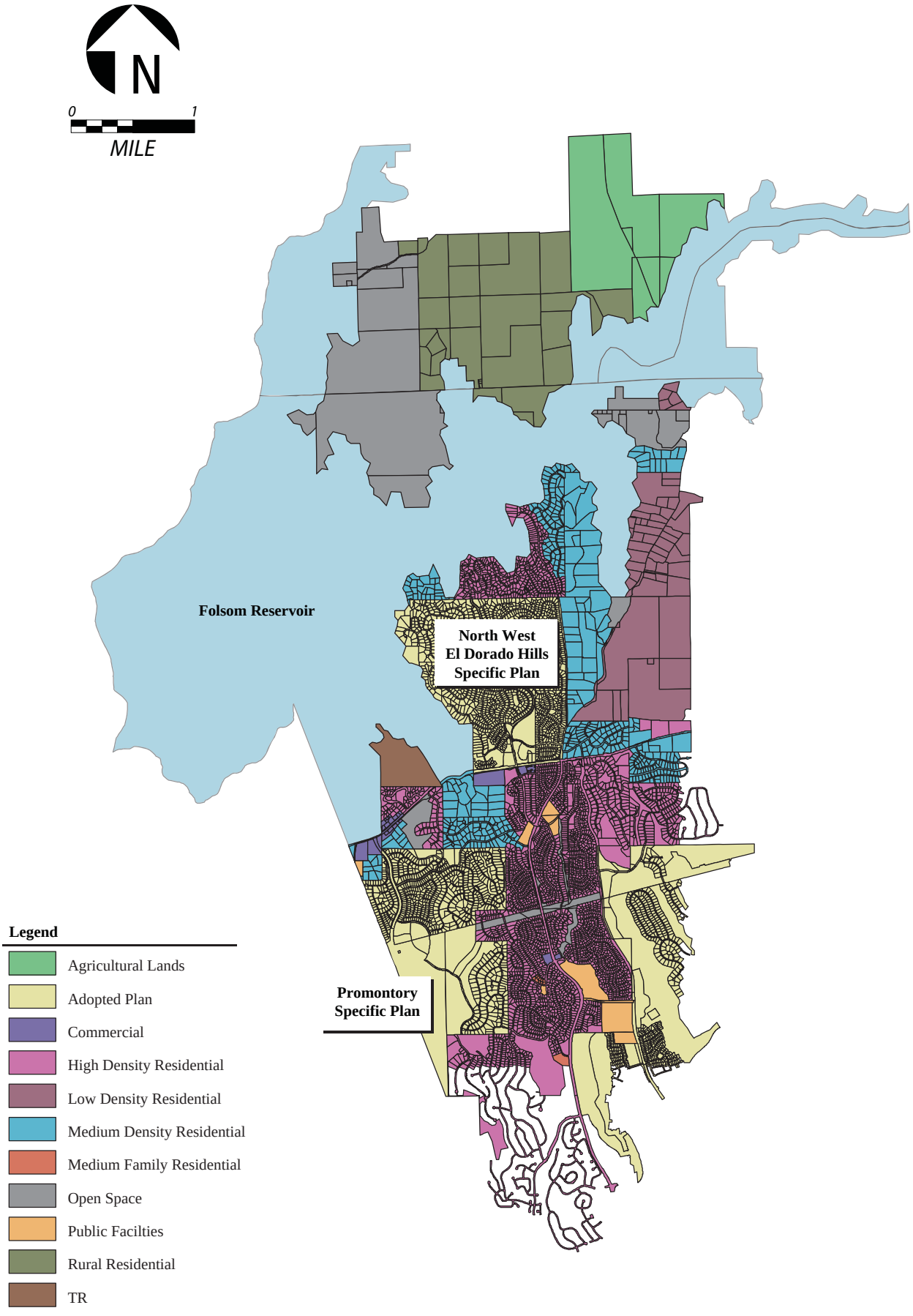

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Figure 3.12-3

El Dorado County Land Uses Surrounding Folsom DS/FDR Area

CDM

- Commercial uses along Green Valley Road. Allowed uses include commercial uses serving surrounding residential areas.

- Estate Residential 5 Acres along Green Valley Road. The purpose of this zoning district is to allow enough land for a one-family home and the ability to pursue horticulture and agriculture endeavors.

- One Half Acre Residential along Green Valley Road. The purpose of this zoning district is to allow enough land for a one-family home and limited ability to pursue horticulture and agriculture endeavors.

- Single Family Two Acres along Green Valley Road. The purpose of this zoning district is to allow for low-density suburban development with sufficient space for residents to pursue limited horticulture and agriculture endeavors.

Sacramento County
A portion of the Folsom DS/FDR study area is within Sacramento County; however, this portion of the study area falls entirely within the City of Folsom. Therefore, Sacramento County planning agencies do not have jurisdiction within the Folsom DS/FDR study area.

City of Folsom
The City of Folsom is within Sacramento County along the southern end of the Folsom Lake State Recreation Area down to State Route 50. The City borders El Dorado County to the east and Placer County to the north. Folsom Dam is within the city limits and the American River flows from Folsom Reservoir through the City of Folsom to Lake Natoma. Figure 3.12-4 shows the zoning for the City of Folsom near the Folsom DS/FDR study area.

The study area within the Folsom City limits includes existing roadways where material would be transported to and from sites within the Folsom Lake State Recreation Area.

Adjacent land uses outside of the Folsom Lake State Recreation Area and within the City of Folsom include: Folsom Prison/California State Prison, Sacramento, which are two state facilities adjacent to one another located south of Folsom Dam Road and north of Natoma Street; a gated community located at the southern end of Folsom Reservoir and east of Folsom State Prison; single family small lot subdivisions and new and older planned unit developments along East Natoma Street and Green Valley Road; and public recreation.

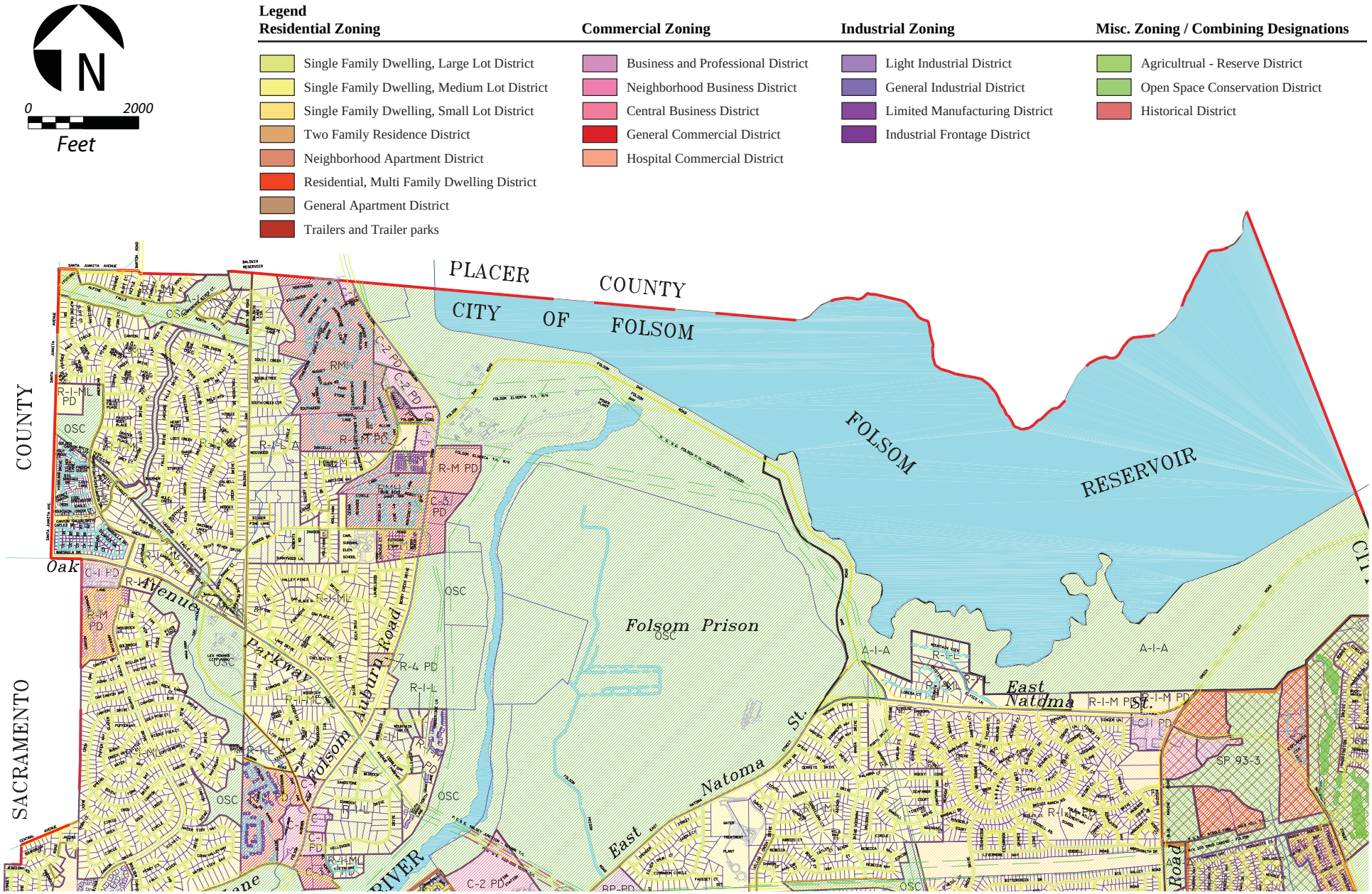

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Figure 3.12-4
City of Folsom Zoning Surrounding Folsom DS/FDR Area

CDM

Zoning
According to the City of Folsom Zoning Ordinance, zoning districts adjacent to Folsom Lake State Recreation Area and along proposed transportation routes include the following:

- A-1-A – Agricultural Reserve District is east of the prisons and provides a buffer between Folsom Reservoir and developed area to the south. This zoning district is intended to provide for interim agricultural and livestock grazing uses until community services are available for urban development. Minimum allowed lot area is 50 acres.

- R-1-L – Single Family Large Lot District north of East Natoma. This zoning district is intended for low-density, large-lot residential living.

- R-1-M PD – Single Family Dwelling Small Lot District Planned Development north and south of East Natoma to the intersection with Green Valley Road. This zoning district is intended for medium-density, small-lot residential living.

- OSC – Open Space Conservation District is at Folsom State Prison and California State Prison, Sacramento. The intent of this zoning district is to maintain these properties as open or undeveloped, or developed for permanent open uses such as parks and greenbelts.

- C-2-PD Central Business District Planned Development is along Auburn-Folsom Road north and south of the intersection with Folsom Dam Road. This zoning district is appropriate for a wide range of commercial activities serving the entire community including all sizes of shopping centers.

- RMH – Trailers and trailer parks are along Auburn-Folsom Road near the Placer County line. This zoning district is designated for mobile home parks defined as any tract of land where space is rented or held out for rent to one or more owners of mobile homes.

- C-1 – Neighborhood Business District on Auburn-Folsom Road at the Placer County line. This zoning district is for low-intensity commercial retail activities serving nearby residential areas.

3.12.2 Environmental Consequences/ Environmental Impacts

3.12.2.1 Assessment Methods

This environmental effects analysis uses both qualitative and quantitative methods to determine potential impacts to land use from construction of the project alternatives. Preliminary planning-level analyses from the PASS II Study Real Estate Plan are used to estimate the numbers and extent of parcels potentially affected by the various alternatives (Reclamation 2005g). However, as the preliminary parcel impacts from

the various raise alternatives may be overestimated, a site-specific analysis would be conducted to accurately assess impacts to any potentially affected parcel, if a raise feature is selected. It is anticipated that the site-specific analysis would conclude that the numbers and extent of parcels potentially affected would actually be less than estimated through the PASS II Study Real Estate Plan; hence, the impacts analysis presented herein is considered to be conservative.

This analysis also examines potential conflicts with local land use plans and zoning policies from the Folsom DS/FDR alternatives. The City of Folsom, Placer County and El Dorado County planning documents were used to determine if the action alternatives and the No Action/No Project Alternative would be in conflict with County and City plans and policies. Local agency conservation plans were used to determine if the project would be in conflict with any habitat or natural community conservation plan. Local Community Plans were also reviewed. General Plan Land Use designations refer to areas designated by the General Plan to allow for certain uses, based upon existing land uses and proposed future land uses. Consideration is given to trends in development and population increases. Zoning refers to areas defined as zoning districts, which allow for specific uses such as residential and commercial. Zoning districts define permitted uses, discretionary permitting requirements for other uses, development standards, and other issues determined by the local Planning Commission.

3.12.2.2 Significance Criteria

Implementation of the Folsom DS/FDR would result in a significant land use impact if it would:

- Conflict with an applicable land use plan, zoning policy, ordinance or regulation of an agency with jurisdiction over the project area that was adopted for the purpose of avoiding or mitigating an environmental effect;
- Conflict with any applicable habitat conservation plan or natural community conservation plan; or
- Create land use incompatibility or alter the existing land use function.

3.12.2.3 Environmental Consequence/Environmental Impacts

Environmental Consequence/Environmental Impacts of the No Action/No Project Alternative

The No Action/No Project Alternative could conflict with local planning policies related to Public Health and Safety goals.

The No Action/No Project Alternative would result in no improvements to the Folsom Facility. The conditions at Folsom Reservoir would remain similar to existing conditions and no additional flood damage reduction measures would be

implemented. The risks to public safety from a catastrophic flood or an earthquake capable of damaging the existing Folsom Facility would remain similar to existing conditions, but could actually increase over time because of future population growth and development.

The General Plan documents for Placer and El Dorado Counties, the City of Folsom, and the Granite Bay Community Plan all address the need to protect the public from flood inundation. There is a need to implement measures to improve public safety and to provide flood damage reduction in the area around the Folsom Facility. The expected future population growth in the region will only increase the need for these dam safety and flood damage reduction measures. The No Action/No Project Alternative would not result in the construction or implementation of the actions under the Folsom DS/FDR and the risks associated with flooding would remain similar to or greater than existing conditions; therefore, the No Action/No Project Alternative would be in conflict with these planning documents. The local planning policies, goals, objective and ordinance related to this issue are listed below.

Placer County

Flood Protection

- *Goal 4.F:* To protect the lives and property of the citizens of Placer County from hazards associated with development in floodplains and manage floodplains for their natural resource values.

Policies

- 4.F.6. The County shall continue to coordinate efforts with local, state, and federal agencies to achieve adequate water quality and flood protection.

- 4.F.7. The County shall cooperate with the Placer County Flood Control and Water Conservation District, surrounding jurisdictions, the cities in the County, and other public agencies in planning and implementing regional flood protection improvements.

Public Safety and Emergency Management Facilities

Flood Hazards

- *Goal 8.B:* To minimize the risk of loss of life, injury, damage to property, and economic and social dislocations resulting from flood hazards.

Placer County - Granite Bay Community Plan

Flood Hazard

- *Goal:* Protect the lives and property of the citizens of the Granite Bay area from unacceptable risk resulting from flood hazards.

- *Policies:* Continue to work closely with the U.S. Army Corps of Engineers and Resource Conservation District in defining existing and potential flood problem areas.

El Dorado County
Flood Hazards

- *Goal 6.4:* Protect the residents of El Dorado County from flood hazards.

- *Objective 6.4.1*: Development Regulations

  Minimize loss of life and property by regulating development in areas subject to flooding in accordance with Federal Emergency Management Agency (FEMA) guidelines, California law, and the El Dorado County Flood Damage Prevention Ordinance.

City of Folsom
Safety Element Goals and Policies

- *Goal 29:* To protect the lives and property from unacceptable risks resulting from natural and manmade hazards.

- *Policy 29.4* – The City shall work with the U.S. Army Corp of Engineers in developing standards for development within the inundation boundary resulting from a failure of Folsom Dam or the dikes retaining Folsom Reservoir.

The No Action/No Project Alternative would not conflict with local zoning policies or conservation or habitat management plans, nor would it result in any land use incompatibility issues. However, the No Action/No Project Alternative could conflict with local planning policies related to Public Health and Safety goals. The Placer County General Plan, Granite Bay Community Plan, El Dorado County General Plan and City of Folsom General Plan all state the importance of protecting lives and property from flood hazards. While Folsom Reservoir provides a substantial amount of existing flood protection, the need for additional flood protection measures have been identified by the Corps and Reclamation. The No Action/No Project Alternative would preclude the construction of additional dam safety and flood control measures at this time.

Therefore, the impacts of the No Action/No Project Alternative on land use would be potentially significant. Based on the analysis presented above, it is anticipated that the environmental impacts of the No Action/No Project Alternative (i.e., future environmental conditions if no action is taken relative to the Folsom DS/FDR) would exceed the significance criteria defined herein. However, unlike a significant impact associated with an action alternative, no mitigation can be required for significant impacts associated with the No Action/No Project (i.e., within the regulatory framework of NEPA and CEQA, a project applicant cannot be required to mitigate

the impacts that would result from taking no action). As such, the impacts identified above for the No Action/No Project Alternative are considered to be significant, adverse, and unmitigable.

3.12.2.4 Environmental Consequences/Environmental Impacts

The following information applies to all Folsom DS/FDR alternatives and would have the same effect for each alternative. The sections following this provide qualitative and preliminary quantitative impact analysis for each individual alternative.

All Folsom DS/FDR alternatives are described in detail in Chapter 2. The Folsom DS/FDR includes the transport of material to and from construction sites around the Folsom Facility. The transport of material along city and county roads would not result in the need for road improvements or widening. A new connector road intersecting with Auburn-Folsom Road may be constructed on Reclamation property, however, to access the Dike 5 area.

All of the alternatives as proposed would be beneficial to local jurisdictions for meeting flood protection policies and goals described in their General Plans. Placer and El Dorado Counties, the Granite Bay Community, and the City of Folsom each have policies and goals within their General Plan documents expressing the need to continue to provide or improve flood protection. Some of the goals are listed above in Section 3.12.2.3.

Placer and El Dorado Counties and the City of Folsom include conservation policies within their General Plan documents. The Folsom Lake State Recreation Area General Plan also includes policies for conservation of resource areas within its boundary. There is no formal conservation planning document specifically for Folsom Reservoir and the surrounding area. There are no conflicts to these plans with mitigation incorporated, according to state and federal guidelines and permitting requirements for wetlands, vegetation, and wildlife protection.

Table 3.12-1 summarizes potential land use actions by project alternative.

Environmental Consequences/Environmental Impacts of Alternative 1

Construction activities under Alternative 1 could affect existing land use policies.

Construction activities under Alternative 1 would not interfere with existing land use or zoning designations in the study area, as described in the affected environment section. The only potential impacts to land use plans and policies would be scenic and noise issues that could result from construction activities. Section 3.7, Visual Resources, and Section 3.10, Noise, discuss these impacts and provide appropriate mitigation. Alternative 1 would not conflict with local General Plan documents.

Table 3.12-1
Potential Land Use Actions for Folsom DS/FDR Alternatives

Main Features Having Potential to Result in Land Use Impacts	***Implementation of Those Features Under Alternative 1***	***Implementation of Those Features Under Alternative 2***	***Implementation of Those Features Under Alternative 3***	***Implementation of Those Features Under Alternative 4***	***Implementation of Those Features Under Alternative 5***
New embankment, easement, or potential parcel acquisition (Mooney Ridge and other impacted areas)	None	Construction of flood protection berms (and acquisition of associated flood protection structure and access easements if on non-Federal property)	Construction of flood protection berms (and acquisition of associated flood protection structure and access easements if on non-Federal property)	Construction of flood protection berms (and acquisition of associated flood protection structure and access easements if on non-Federal property)	Construction of flood protection berms (and acquisition of associated flood protection structure and access easements if on non-Federal property)
		Acquisition of flood easements (occasional flowage easements) on impacted property	Acquisition of flood easements (occasional flowage easements) on impacted property	Acquisition of flood easements (occasional flowage easements) on impacted property	Acquisition of flood easements (occasional flowage easements) on impacted property
		Possible acquisition in fee title (less than 5 parcels affected) , including 1 possible relocation*	Possible acquisition in fee title (less than 5 parcels affected), including 1 possible relocation*	Possible acquisitions in fee title (less than 10 parcels affected) , including 6 possible relocations*	Property acquisition likely (45 parcels affected) , including 37 possible relocations*

*The estimated numbers and extent to which parcels are potentially impacted by the various raise alternatives are the result of preliminary planning-level analyses from the PASS II Study Real Estate Plan. As the preliminary parcel impacts from the raise alternatives may be overestimated, more accurate site-specific analyses would be conducted if a raise feature is selected. As such, the impacts analysis reflected in the table above is considered to be conservative, and the actual impacts of the selected alternative would probably be less, depending on the results of the site-specific analyses.

Definitions of terms used in Table 3.12-1 are provided below:

- Access easement = Grants the right of access.
- Acquisition in fee title = Acquisition of ownership. Parcel would be acquired in its entirety, probably in fee at appraised value.
- Flood easement = see "occasional flowage easement" below.
- Flood protection berm = Also referred to as a new embankment. A flood protection berm is a small embankment built in low elevation areas as a flood protection measure to reduce or eliminate the flooding of non-federal property. These flood protection features would be a simple berm constructed of earthen material excavated at the specific site or imported from within the boundaries of the reservoir, from the closest area with stockpiled material. These flood protection features could also be constructed as a parapet wall or another type of suitable structure.
- Flood protection berm easement = Grants the right to build, maintain, repair, operate, and replace a flood protection berm.
- New embankment = see flood protection berm above.
- Occasional flowage easement = Flood easement; grants the right to occasionally flood, as determined necessary and appropriate during extreme storm events. Property owner retains fee ownership; however, such an easement may restrict the construction of new structures and/or uses for human habitation within the easement area.
- Relocation = The impacted property owner is paid fair market value for their property, provided assistance to locate comparable housing and is entitled to relocation benefits and services in accordance with Public Law 91-646.

Therefore, construction activities under Alternative 1 would have no effect on existing land use or zoning designations. Construction impacts of Alternative 1 on land use policies related to noise and scenic resources would be less than significant with mitigation.

Construction of Alternative 1 may conflict with local tree preservation ordinances, specifically as a result of direct or indirect impacts to protected oak woodlands.

Oak woodlands are present within the construction areas and staging areas for Alternative 1 and may be affected by construction activities. These woodlands are protected under county and city tree ordinances.

Activities implemented for Alternative 1 may result in indirect adverse impacts to vegetation and wetlands identified as sensitive by the state, counties, or cities, including increased erosion and sedimentation, damage to roots of oaks and other tree species adjacent to areas where heavy equipment would be operated, dust impacts to roadside vegetation, and colonization of exposed substrate by exotic plant species.

These impacts would be potentially significant but mitigable. Mitigation measures related to sensitive wetlands and vegetation including native oak trees, erosion and sedimentation control, protective fencing, dust control, and invasive non-native plant species control described in Section 3.5, Terrestrial Vegetation and Wildlife, would reduce these impacts to less than significant levels.

Therefore, the effects of Alternative 1 on land use would be less than significant..

Environmental Consequences/Environmental Impacts of Alternatives with Raise features (Alternatives 2 through 5)

The following text applies to all project alternatives with raise features (i.e., Alternatives 2 through 5; Alternative 1 does not include any raise features) and would have a potential increase in impact related to raise height. For each alternative with a raise feature, qualitative impact assessments as well as preliminary quantitative impact analysis of potentially affected parcels are provided in the following sections.

Effects to Federal Parcels

Under an extreme flood or Probable Maximum Flood (PMF) event, an emergency increase in reservoir water surface elevation would cause a temporary inundation of lands surrounding Folsom Reservoir.

The effect of emergency inundation of undeveloped federal parcels would be an indirect, temporary, physical change to land use. Therefore, the impact to land use would be less than significant.

Temporary inundation of undeveloped federal parcels during an extreme storm event would be less than significant.

If necessary to prevent flooding of non-federal property surrounding Folsom Reservoir in an extreme flood or PMF event, a new flood protection berm(s) could be constructed on undeveloped federal property.

The construction of a flood protection berm(s) on undeveloped federal property would not preclude existing land use function or operation. Therefore, the effect of a flood protection berm(s) on undeveloped federal property would be less than significant on land use.

Construction of new flood protection berm(s) on federal property in relation to current land use would be less than significant.

A flood protection berm on a federal parcel could affect existing land use policies related to scenic impacts.

The construction of new flood protection berm(s) could change the visual nature of the affected areas.

This impact would be potentially significant to land use. Mitigation Measures LU-1 through LU-3 would be implemented as needed to reduce this impact to a less than significant level.

Effects to Non-Federal Parcels
If necessary to prevent flooding of non-federal property surrounding Folsom Reservoir in an extreme flood or PMF event, a flood easement (occasional flowage easement) would be acquired and/or a new flood protection berm would be constructed on impacted non-federal parcel(s). The construction of a flood protection berm on a non-federal parcel would also require the acquisition of associated flood protection structure and access easements.

These actions could change the existing land use function or operation of an impacted non-federal parcel if, and to the extent that, the associated physical improvements and/or use restrictions effectively preclude continuation of the existing day-to-day (i.e., normal) land use function or operation. A flood protection berm on a non-federal parcel could affect existing land use policies related to current land uses.

These impacts would be potentially significant to land use. Mitigation Measures LU-1 through LU-3 would be implemented as needed to reduce these impacts to a less than significant level.

If substantial inundation of non-federal property surrounding Folsom Reservoir could not be avoided through other flood protection measures (such as a flood protection berm) under an extreme flood or PMF event, fee title would be acquired for the impacted non-federal parcel.

The acquisition in fee title of an impacted non-federal parcel could preclude the existing land use function if, and to the extent, it is determined that existing day-to-day land use function or operation would no longer continue once acquired.

The effect of acquiring fee title for an impacted non-federal parcel and associated discontinuation of the existing land use function or operation would be a significant and unavoidable impact to land use.

Environmental Consequences/Environmental Impacts of Alternative 2
Actions under Alternative 2 would have the potential to change existing land use for parcels that could be inundated under a severe storm event.

A 4-foot raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower elevation areas are primarily located in Mooney Ridge, north of Granite Bay, and certain areas along the eastern shoreline.

To address the potential for flooding related to a 4-foot raise, Reclamation, the Corps, or SAFCA, as the Corps non-Federal sponsor, and any one of these referred to in the discussion below as the responsible agency, would pursue structural or real estate remedies, or a combination of both, in cooperation with affected non-federal property owners. Probable remedies in lower elevation areas would include construction of new flood protection berms (and associated access and flood protection structure easements if berms are located on non-federal property) and/or acquisition of flood easements on impacted non-federal parcels. A potential easement acquisition area in Placer County at Mooney Ridge is within the Medium Density Residential (MDR) and Open Space (O) land use designations according to the Granite Bay Community Plan. Placer County Zoning for this area is Residential-Single Family (RS-B-10 and RS-B-20) and Open Space. A potential easement acquisition area north of Granite Bay in Placer County is within the Rural Residential (RR) and O land use designations according to the Granite Bay Community Plan and the Placer County General Plan. Placer County Zoning for these areas is O and RA-BX-20. A potential easement acquisition area in El Dorado County at the New York Creek area is within the High Density Residential land use designation according to the El Dorado County General Plan. El Dorado County Zoning for this area is One-Family Residential (R1), Open Space and Recreational Facilities. A potential easement acquisition area in El Dorado County at the Browns Ravine area is within the Northwest El Dorado Hills Specific Plan Single Family Residential land use designation, according to the Northwest El Dorado Hills

Specific Plan, and Commercial and Medium Density Residential, according to the El Dorado County General Plan. El Dorado County Zoning for these areas is One-Family Residential and One-Family Residential Planned Development (R1-PD), Recreational Facilities, Commercial along Green Valley Road, Estate Residential Five-Acre, One-Half Acre Residential, and Single-family Two-Acre.

Where flood easements are acquired and/or where flood protection berms are constructed (and associated flood protection structure and access easements acquired if berms are located on non-Federal property) in order to address the potential for flooding, the responsible agency would acquire such easements according to State and Federal guidelines.

According to Corps guidelines (Corps 2006), properties encumbered by flood easement would be restricted as follows:

- No structure for human habitation shall be constructed or maintained on the easement premises.
- No other structure shall be constructed or maintained on the land except those that have been approved in writing by the responsible agency.
- No excavation shall be conducted or fill placed on the land without approval of the responsible agency.

With a 4-foot raise, Reclamation's preliminary planning-level analysis also indicates the acquisition in fee title of approximately four non-federal properties as a possible scenario, including one residential property, for which the property owner would be entitled to fair market value, assistance with replacement housing and relocation benefits and services in accordance with Public Law 91-646. If property were acquired in fee by the United States, land use and zoning would be Federal use only. However, efforts would be made to develop a structural solution that would eliminate the need for acquisition of real estate rights (easements or fee title) or relocation. Because the non-federal parcels potentially impacted by this alternative are identified through the use of coarse planning-level analyses, the number and extent of parcels potentially affected by this alternative may be overestimated. Detailed site-specific analyses would be conducted should this raise feature be selected. The need for, location, number, and impacts of flood protection berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document, if this raise feature is selected and further designed.

Because this alternative could potentially change the existing land use of parcels around Folsom Reservoir, this impact would be potentially significant to land use.

Mitigation Measures LU-1 through LU-3 would be implemented as needed to reduce this impact to a less than significant level.

Construction of new flood protection berms under Alternative 2 may conflict with existing land use policies related to scenic impacts.

New flood protection berms would be a potentially significant impact to scenic resources and may not comply with Granite Bay design guidelines. However since these would be for the purpose of improving dam safety and flood damage reduction, it is likely that the effects of this alternative would not conflict with local General Plan documents. Mitigation measures discussed in Section 3.12.4 would be implemented as needed to assist in reducing these impacts to a less than significant level.

Therefore, this impact to scenic resource policies would be less than significant.

Construction activities under Alternative 2 could affect existing land use policies related to noise and scenic impacts.

Potential impacts to land use plans and policies would be scenic and noise issues that could result from construction activities. Section 3.7, Visual Resources, and Section 3.10, Noise, discuss these impacts and provide appropriate mitigation.

Therefore, the effect of construction activities under Alternative 2 on existing land use policies related to noise and scenic impacts would be less than significant with mitigation.

Construction of the project may conflict with local tree preservation ordinances, specifically as a result of direct or indirect impacts to protected oak woodlands.

Oak woodlands are present within the construction areas and staging areas for Alternative 2 and may be affected by construction activities. These woodlands are protected under county and city tree ordinances.

Activities implemented for Alternative 2 may result in indirect adverse impacts to vegetation and wetlands identified as sensitive by the state, counties, or cities, including increased erosion and sedimentation, damage to roots of oaks and other tree species adjacent to areas where heavy equipment would be operated, dust impacts to roadside vegetation, and colonization of exposed substrate by exotic plant species.

These impacts would be potentially significant but mitigable. Mitigation Measures related to sensitive wetlands and vegetation including native oak trees, erosion and sedimentation control, protective fencing, dust control, and invasive non-native plant

species control described in Section 3.5, Terrestrial Vegetation and Wildlife, would reduce these impacts to less than significant levels.

Inundation caused by an increase in the reservoir pool elevation during extreme storm events could adversely affect native oaks.

Inundation caused by an increase in the reservoir pool elevation during extreme storm events could adversely affect native oaks if the inundation is of sufficient duration. Blue oaks can be sensitive to inundation for as few as seven days, and evergreen oaks are likely to be more sensitive. Inundation above the ordinary high water mark (OHWM) is anticipated to be a rare event and even for a 151 to 200-year flood would last 2.5 to 4 days.

This impact would be potentially significant but mitigable. Mitigation Measures related to emergency inundation of oak woodlands and described in Section 3.5, Terrestrial Vegetation and Wildlife, would reduce the impact to a less than significant level.

Environmental Consequences/Environmental Impacts of Alternative 3

A potential 3.5-foot parapet wall raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower lying areas are primarily located in Mooney Ridge, north of Granite Bay, and along the eastern shoreline.

The environmental consequences/environmental impacts from construction of Alternative 3 would be essentially the same for land use as those described for Alternative 2 (Section 3.12.2.7).

Environmental Consequences/Environmental Impacts of Alternative 4

A 7-foot raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower lying areas are primarily located in Mooney Ridge, north of Granite Bay, and along the eastern shoreline.

The environmental consequences/environmental impacts from construction of Alternative 4 would be the same for land use as those described for Alternative 2 (Section 3.12.2.7), with the following exceptions:

- More potentially impacted parcels due to the 7-foot raise height. Additional acquisition of flood easements and/or construction of larger flood protection berms (and acquisition of associated flood protection structure and access easements if necessary). Affected Placer County and El Dorado County land use

designations and zoning designations for Alternative 4 are the same as those described under Alternative 2 (Section 3.12.2.7).

- With a 7-foot raise, Reclamation's preliminary planning-level analysis also indicates the acquisition in fee title of approximately nine non-federal properties as a possible scenario, including approximately six residential properties, for which the property owners would be entitled to fair market value, assistance with replacement housing and relocation benefits and services in accordance with Public Law 91-646. If property were acquired in fee by the United States, land use and zoning would be Federal use only. However, efforts would be made to develop a structural solution that would eliminate the need for acquisition of real estate rights (easements or fee title) or relocation. Because the non-federal parcels potentially impacted by this alternative are identified through coarse planning-level analyses, the number and extent of parcels actually affected by this alternative may be overestimated. Detailed site-specific analyses would be conducted should this raise feature be selected. The need for, location, number, and impacts of flood protection berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document, if this raise feature is selected and further designed.

Because this alternative could potentially change the existing land use of parcels around Folsom Reservoir, this impact would be potentially significant to land use. Mitigation Measures LU-1 through LU-3 would be implemented as needed to assist in reducing this impact to a less-than-significant level.

Environmental Consequences/Environmental Impacts of Alternative 5

The 17-foot earthen raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower lying areas are primarily located in Mooney Ridge, north of Granite Bay, and along the eastern shoreline.

The environmental consequences/environmental impacts from construction of Alternative 5 would be the same for land use as those described for Alternative 2 (Section 3.12.2.7), with the following exceptions:

- More potentially impacted parcels due to the 17-foot raise height. Additional acquisition of flood easements and/or construction of larger flood protection berms (and acquisition of associated flood protection structure and access easements if necessary). Affected Placer County and El Dorado County land use designations and zoning designations for Alternative 5 are the same as those described under Alternative 2 (Section 3.12.2.7), except in the Mooney Ridge area where additional land use and zoning designations are affected. Parcels within the Low Density Residential (LDR) land use designation would also be

affected which includes the RS-B-X (10,000 sf min.) zoning district according to the Placer County Zoning Ordinance.

- With a 17-foot raise, Reclamation's preliminary planning-level analysis also indicates the acquisition in fee title of approximately 45 non-federal properties as a possible scenario, including as many as 37 residential properties, for which the property owners would be entitled to fair market value, assistance with replacement housing, and relocation benefits and services in accordance with Public Law 91-646. If property were acquired in fee by the United States, land use and zoning would be Federal use only. However, efforts would be made to develop a structural solution that would eliminate the need for acquisition of real estate rights (easements or fee title) or relocation. Because the non-federal parcels potentially impacted by this alternative are identified through coarse planning-level analyses, the number and extent of parcels actually affected by this alternative may be overestimated. Detailed site-specific analyses would be conducted should this raise feature be selected. The need for, location, number, and impacts of flood protection berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document, if this raise feature is selected and further designed.

Because this alternative could potentially change the existing land use of parcels around Folsom Reservoir, this impact would be potentially significant to land use. Mitigation Measures LU-1 through LU-3 would be implemented as needed to assist in reducing this impact to a less than significant level.

If substantial inundation of non-federal property surrounding Folsom Reservoir under an extreme flood or PMF event could not be avoided through other flood protection measures (such as a flood protection berm), fee title would be acquired for the impacted non-federal parcel(s).

The acquisition in fee title of some impacted non-federal parcel(s) under Alternative 5 is probably unavoidable and this action would preclude the existing land use function.

Thus, the effect of acquiring fee title of impacted non-federal parcel(s) would be a significant and unavoidable impact to land use under Alternative 5.

3.12.3 Comparative Analysis of Alternatives

The No Action/No Project Alternative would likely conflict with local General Plans because it would not reduce safety risks associated with flooding and it would not implement any dam safety or flood damage reduction measures.

Table 3.12-1 compares the potential land use actions of each of the alternatives including construction of new flood protection berms, acquisition of easements, and/or fee title acquisition. Alternative 1 would not affect land use since no new flood protection berms would be constructed, and real estate rights (easements or fee title) would not be acquired. From preliminary planning-level analyses, the land use effects of Alternatives 2 and 3 would be the same: approximately 64 potentially impacted parcels (via easement and/or flood protection berm, or fee title acquisition), with less than five parcels possibly involving acquisition in fee title, including one possible relocation. Alternative 4 would result in approximately 92 potentially impacted parcels but less than 10 parcels affected by possible acquisition in fee title, including six possible relocations. Alternative 5 potentially impacts approximately 175 parcels, with 45 parcels affected by possible acquisition in fee title, including 37 possible relocations. Depending upon the real estate and/or construction solution(s) selected to mitigate for potential inundation due to raise heights of Alternatives 2 through 5, the impacts to land use could be significant. If a raise feature is selected, efforts would be made to avoid, or mitigate, significant land use impacts. Additionally, the need for, location, number, and impacts of flood protection berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document if a raise feature is selected.

All of the action alternatives could result in impacts to native oak trees and woodlands which are considered special status or protected species according to Placer County, El Dorado County, and the City of Folsom. Oak woodland vegetation impacted by construction will be compensated for at a ratio stipulated in the USFWS Coordination Act Report. By mitigating impacts identified in Section 3.12.2 according to measures identified in Section 3.5.4, the impact resulting from construction of the project would be less than significant.

3.12.4 Mitigation Measures

The following mitigation measures would reduce potentially significant impacts to a less than significant level:

LU-1: If a raise feature is selected, the determination regarding structural solutions (i.e., flood protection berms) and/or acquisition of real estate rights (easements or fee title) for any impacted non-federal parcel will be made on a case by case basis and will depend upon feasibility, cost, and acceptability to the landowner(s). Efforts will be made to design and construct flood protection structures that will reduce or eliminate the need for building flood protection berms and/or acquiring real estate rights (easements or fee title), including potential relocation of residents, on impacted non-federal parcels.

LU-2: The responsible agency will follow the procedures of local jurisdictions for zoning district changes, as needed to provide flood protection measures.

LU-3: To lessen visual impacts of flood protection berms and reduce potential conflict with local visual resource policies, a berm will be located on a parcel so as to conceal it in the viewshed, if practical, and/or construction materials will be used to make the berm less visually conspicuous.

3.12.5 Cumulative Effects

Table 5-1 provides a list of past, present and probable future projects in the general vicinity of the Folsom DS/FDR study area that are included in the cumulative effects analysis. Any land use action taken, such as building a flood protection structure and/or acquisition of real estate rights (easements or fee title), that could change the existing land use operation or function of an impacted parcel would be a potentially significant impact to land use. It is unlikely that the projects identified in Table 5-1 would have any notable adverse impact on local land use designations or zoning designations. Therefore, the cumulative effect of the Folsom DS/FDR action would be less than significant.

3.13 Recreation Resources

This section presents potential impacts to recreation resources from construction of the Folsom DS/FDR alternatives.

3.13.1 Affected Environment/Existing Conditions

3.13.1.1 Area of Analysis

The study area assessed as part of the evaluation of recreational resources included all portions of the Folsom Lake State Recreation Area (FLSRA) available for recreational use. This area consists of Folsom Reservoir, including marinas, boat launching facilities, whitewater rafting facilities, and terrestrial facilities, including campgrounds, day use facilities, other facilities (i.e., Folsom Dam, the California State University Sacramento [CSUS] Aquatic Center at Nimbus Flat), and numerous hiking trails throughout the FLSRA. Terrestrial areas outside of trails and developed sites are generally not accessible to recreational users. Therefore, these areas are not a focus of this study.

3.13.1.2 Regulatory Setting

Reclamation holds title to virtually all lands and all recreation areas immediately surrounding Folsom Reservoir. One exception is certain land underlying the Jedediah Smith Bike Trail (also known as the American River Bike Trail), which is owned by the California Department of Parks and Recreation (DPR). Reclamation has a long-term agreement with DPR to manage recreation on Reclamation's lands designated as part of the FLSRA.

The DPR planning process is integrated with Reclamation's Resource Management Planning (RMP) Process. The DPR, in partnership with Reclamation, recently began work on the integrated FLSRA General Plan and Resource Management Plan Update. This process will update the current general plan, as well as the long-range vision for the area. The General Plan will guide the protection of natural and cultural resources, provide for and manage recreational opportunities, and outline the future development of public facilities. Alternative plan concepts have been developed, with general direction common to all alternatives. Resource and visitor capacity issues have been identified for major use areas within the FLSRA, as well as ways of addressing them. The revised joint integrated project is being prepared to meet the requirements of both agency planning processes. A draft of the General Plan/RMP and DEIR/DEIS are currently being finalized and will soon be distributed to the public. For additional details refer to http://www.parks.ca.gov. For details on the RMP process, refer to the RMP handbook, http://www.usbr.gov/pmts/planning/RMPG/rmpg.pdf.

3.13.1.3 Environmental Setting

FLSRA is an important local, regional, and state recreation resource (Figure 3.13-1).

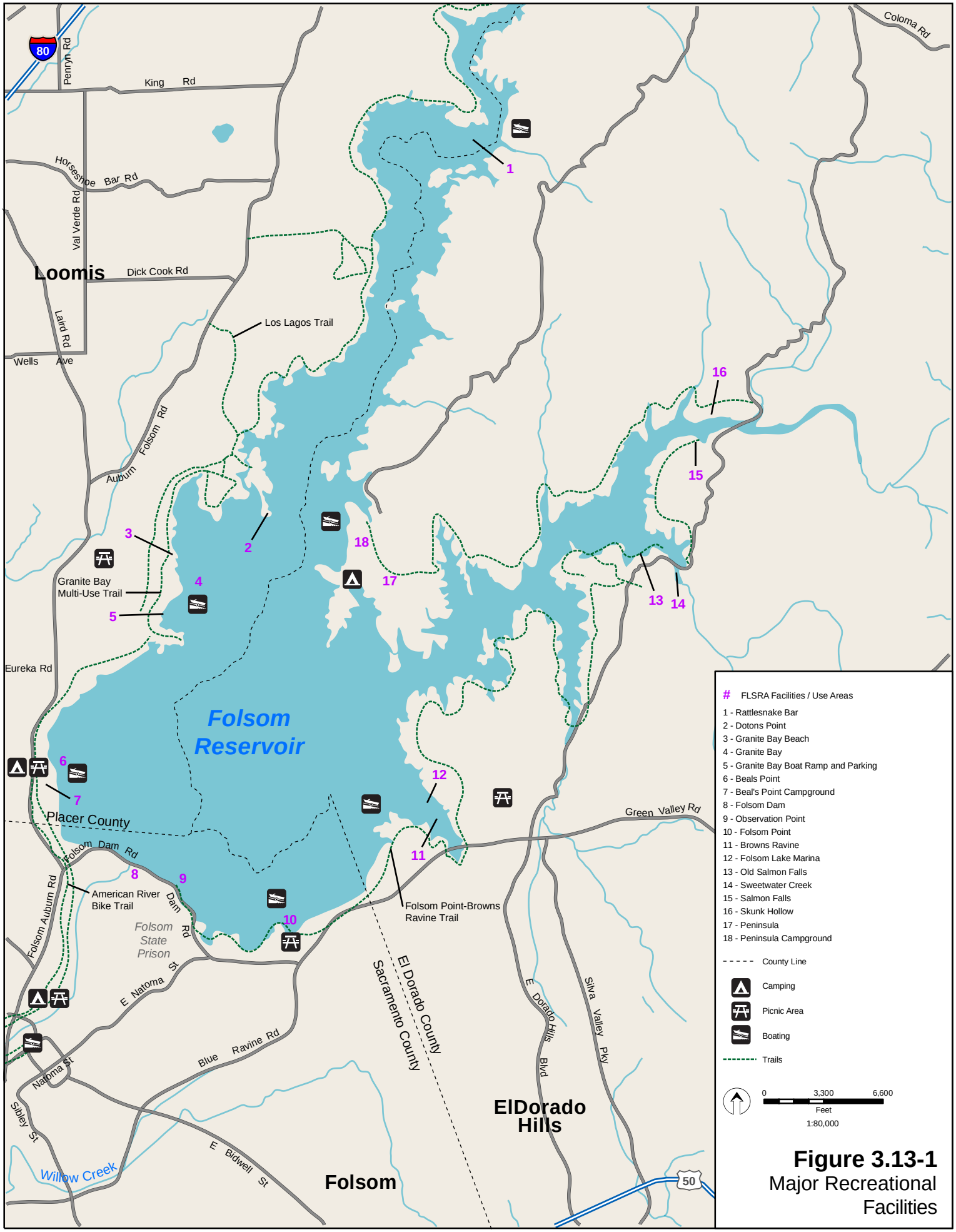

Figure 3.13-1
Major Recreational Facilities

Source: ENTRIX

Folsom Reservoir, the primary feature in the FLSRA, supports numerous water-based activities, such as boating, waterskiing, and fishing. The reservoir's upper arms are designated slow zones for quiet cruising, fishing, and nature appreciation. The shoreline provides sandy swimming beaches, both formal (with lifeguard services) and informal. Summer water temperatures average 72ºF, enhancing both water-oriented and shoreline activities. Land-based activities such as hiking, biking, picnicking, camping, and horseback riding also attract visitors. The reservoir serves flood control, water supply, and power generation purposes, and as a result reservoir levels typically fluctuate from a high of 466 feet in late winter or early spring to 405 feet during late fall.

With more than 1.5 million visitors in 2000, the FLSRA is one of the most popular sites within California for recreation in the DPR system. Recreation activities in the FLSRA have changed significantly since the first facilities were opened to the public in 1958, and even since the first General Plan for the FLSRA was adopted in 1979. The popularity of personal watercraft (jet skis), wake boarding, sailing, and bass fishing tournaments has transformed the boating environment on Folsom Reservoir. Land-based recreational activities have also changed over the years. When the FLSRA first opened, the trails were used primarily by equestrians and hikers. The popularity of running in the 1970s and mountain biking in the 1980s have greatly increased trail use. With urban development surrounding the southern half of the FLSRA, paved trails now play an important part in the region's growing transportation network as more people commute via bicycle. These changes affect the character and level of use in the FLSRA, how existing facilities are used, and what future facilities may be needed.

Throughout the year, permitted special events are held at various locations in the FLSRA. Events include bass fishing tournaments, yacht races, mountain bike races, triathlons, mountain bike triathlons, adventure races, running races, and summer camps. Past race events have included, but are not limited to: Future Pro Tour Amateur Bash Fishing Tournament at Granite Bay, Big Blue Adventure's Folsom Lake Sports Adventure Race at Granite Beach, Nissan Xterra USA Championship Real Mountain Bike Triathlon at Granite Bay and surrounding trails, Folsom Lake Yacht Club Series at Browns Ravine, American Bass Tournament at Browns Ravine, California State University Sacramento operates an aquatic center at Lake Natoma. During the summer CSUS utilizes Folsom Point at Folsom Reservoir for their youth wake board and water ski camp.

This section discusses existing conditions for recreation resources in the Folsom Reservoir area. It describes existing recreation resources in terms of attendance levels, visitor capacity, types of facilities present, activities available, and management issues. Much of the information cited is from a Resource Inventory for FLSRA prepared by Wallace, Roberts, and Todd, et. al 2003 under a contract with DPR for revision of the General Plan/RMP. DPR provided most of the resource

information to Wallace, Roberts, and Todd for preparation of the resource inventory document. Recreation resources are divided into aquatic-based day use areas, other types of day use areas, camping areas, and areas that support use of the North and South Forks of the American River. A discussion of trails is also provided, describing their connections to other adjacent parks and nearby communities.

Folsom Reservoir Areas

Browns Ravine

The Folsom Lake Marina is the only marina facility in the FLSRA (Figure 3.13-1). Annual attendance in 2000 was 66,856 visitors. On the east side of the reservoir, at Browns Ravine, the facility includes 685 wet slips and 175 dry storage slips. Currently, there is a five-year waiting list for one of the 72 sixteen-foot slips and 368 twenty-foot slips. A nine-year wait currently exists for one of the 245 twenty-four-foot slips. In recent years, interest in slip rentals has increased significantly due to the difficulty in launching during peak season weekends due to the lack of ramp and parking capacity at the main launch area. The maximum usable elevation for boat ramp facilities at Browns Ravine is 468 feet. Based on 1985 to 2004 California Data Exchange Center (CDEC) data, the elevation of Folsom Reservoir has not been over 466 feet. There is an alternative boat ramp at Hobie Cove that only has a maximum usable elevation of 426 feet. The alternative boat launch at Hobie Cove provides no relief during the peak season for use at Browns Ravine, since it only becomes available in the fall when reservoir levels have dropped sufficiently to make this facility operational.

Folsom Point

Folsom Point is off East Natoma Street between Folsom Dam Road and Green Valley Road. This is the most popular day use area on the eastern shore of Folsom Reservoir. Attendance in 2000 was 112,120 visitors. Facilities here include a shaded picnic area with tables and barbeques, two vault toilets, and parking for 77 vehicles. Folsom Point also includes the largest formal boat launch facilities on this side of the reservoir. The Folsom Point boat launch facility has 129 parking spaces. The maximum usable boat ramp elevation at Folsom Point is 468 feet. The popularity of Folsom Point for the staging of special aquatic events causes both the aquatic and day use facilities to reach capacity quickly during peak season weekends.

The picnic area at Folsom Point appears to be eroded and worn due to heavy foot traffic and informal parking off paved surfaces. Access to the shoreline is informal.

CSUS uses the Dike 8 area of Folsom Reservoir for waterskiing lessons.

Observation Point

The Observation Point parking lot is on the Folsom Dam Road at the eastern end of the Dam. This area offers a panoramic view of Folsom Reservoir. In the past, Observation Point was a popular place for meeting, fishing and swimming. When

reservoir levels are low, the Observation Point also provides a good starting place for hiking. The informal trail along the eastern shoreline leads to Browns Ravine. However, Observation Point is now closed to public access and has been since September 11, 2001, due to security concerns associated with threats to Folsom Dam.

Observation Point was previously used as a staging area for the installation of a temperature control intake device, and the construction of the Corp's Folsom Modifications Project offices and formal staging area. The Observation Point parking lot site was slated for use as a staging area for the outlet modifications phase of the Corp's projects at the Folsom Reservoir to improve flood damage reduction for Sacramento.

It is doubtful that the paved portion of the Observation Point area will be available for public use in the future, due to current security restrictions that are not likely to be relaxed. The area below the paved portion of Observation Point is still open to fishing, but only from a boat.

Beal's Point Day Use Area
Attendance at Beal's Point in 2000 was 219,986 visitors. This facility provides a 1,000-foot long swim beach (summer season only) and concessions facility with a snack bar, beach equipment rentals, restrooms, and paved parking for about 400 vehicles. A large grassy area along the reservoir includes picnic tables, barbeques, and restroom facilities. The paved multi-use Jedediah Smith Memorial Trail begins at Beal's Point and connects to Lake Natoma and the American River Parkway. This is a national recreation trail. The unpaved multi-use Granite Bay Trail connects Beal's Point to other facilities along Folsom Reservoir. The aquatic facilities at Beal's Point include an informal boat launch ramp, but the area does not have separate parking for vehicles and boat trailers. The informal boat launch ramp is an unpaved ramp that is available for use at specific reservoir elevations only. Ski/wake board boats and larger boats cannot use the ramp. Ramp use is available for personal watercraft and other very light boats.

There are two management issues with respect to this recreation area, visitor capacity and unrestricted access to the shoreline. During peak season weekends, the parking area generally fills by midday, causing traffic to back up onto Auburn-Folsom Road and surrounding neighborhood streets. This also makes it difficult for campers with reservations to enter the FLSRA. Regarding unrestricted access to the shoreline area, when reservoir levels fall, the shoreline becomes exposed allowing motorized vehicles to access the shoreline.

The structures, parking lot, and roads at Beal's Point range in elevation from 465 feet to 475 feet. When the reservoir surface level reaches 466 feet, water levels are just below the road, parking lot, restrooms/dressing room building, and concessions

building. At 466 feet, the beach area would be inundated, although turf areas for picnicking, sunbathing, and other passive uses are still usable.

Granite Bay

The most popular day use facility in the FLSRA is Granite Bay with a series of facilities spread over three distinct subareas. It is on the west side of the reservoir off Folsom-Auburn Road. Attendance in 2000 was 507,712 visitors. The Main Beach area includes a 1,200-ft long guarded swim beach (summer season only), snack bar and beach equipment concessions, restrooms, a grassy picnic area, tot lot, and a paved parking area for vehicles. The North Granite area is popular for fishing, horseback riding, and hiking. This area includes an informal beach area at Oak Point, equestrian staging area, Doton's Point, and Beek's Bight. An activity center just north of the Main Beach is available by reservation for group use and includes a small picnic area.

Trail facilities at Granite Bay include the equestrian and pedestrian Pioneer Express Trail running north to Auburn State Recreation Area (SRA), 8 miles of unpaved multi-use trails running through the area, and a unpaved pedestrian and Americans with Disabilities Act (ADA) only trail in the Beek's Bight area.

The boat launch area capacity varies with water levels (Table 3.13-1). At high water, there are 10 lanes available, while at low water only two lanes available. As with Beal's Point, capacity is a major concern at Granite Bay, particularly during peak season weekends when the day use parking area at Main Beach and the parking area and launch ramps at the launch area fill by midday. Access is another concern: there is only one entrance to Granite Bay at Douglas Boulevard and significant backups occur along the roadway and onto Auburn-Folsom Road when the parking areas fill. In addition, there is no external access to the sprawling and relatively remote North Granite area. Unrestricted vehicle access along the shoreline at low water is also a concern in the North Granite area. Unrestricted vehicle access causes erosion, potentially impacts water quality, damages vegetation, and threatens cultural resources below the high water line.

Maximum usable elevation of the boat launches areas range from about 400 to 470 feet. Currently, when the reservoir surface level is at 466 feet, only one 12-lane ramp and the two-lane boat launch ramp are usable. Elevations of the structures (other than the boat launch ramps), parking lot, and roads at Granite Bay range from approximately 465 to 475 feet.

Table 3.13-1 Boat Launch Capacity at Granite Bay Day Use Area					
	Lanes	***Slope (%)***	***Width (feet)***	***Minimum useable reservoir level (feet)***	***Maximum useable reservoir level (feet)***
Stage 1	2	15	60	395	420
Stage 2	10	10	700	426	435
Stage 3	10	10	700	435	450
Stage 4	14	15	330	425	466
5 percent	4	5	60	408	466
Low water	2	15	45	360	410

Source: Wallace, Roberts, and Todd, et. al 2003, DPR 2006

Other Day Use Areas

Old Salmon Falls

Old Salmon Falls is on Salmon Falls Road in El Dorado County between Browns Ravine and the whitewater rafting facilities at the South Fork of the American River. The upper portion of the facility is just off Salmon Falls Road, commonly referred to as Falcon Crest, and includes an informal parking area used as an equestrian staging area and access to a hiking and horseback riding trail that drops down to the site of the old (closed) Monte Vista campground about one mile to the west. From Falcon Crest, a narrow road drops down to a lower area on the shore of Folsom Reservoir. Facilities here include a small, unpaved parking area and portable toilet. This area is used for fishing, swimming, and as a trailhead for the Browns Ravine and Sweetwater Trails.

Issues related to the Old Salmon Falls area include unrestricted vehicle access to the shoreline, particularly when reservoir levels are low, that could lead to damage and erosion, and possible erosion problems on State land and trails resulting from the country-estate residential subdivision currently under construction on the nearby hills above the reservoir. The north and south parking lots, restroom facilities, and trail access points would be completely inundated at 475 feet. Under existing conditions, the reservoir has not reached this level.

Sweetwater Creek

Sweetwater Creek is midway between Old Salmon Falls and the Salmon Falls Bridge. A widened shoulder just off Salmon Falls Road doubles as an informal parking area where a gate marks the trailhead for the Sweetwater Trail. This unpaved multi-use trail runs east about 2 miles to the Salmon Falls Bridge and the Darrington Trail. An informal trail runs west from here to Old Salmon Falls and the Browns Ravine Trail.

Rattlesnake Bar on the northeast shore of Folsom Reservoir provides two boat launch lanes and an equestrian staging area. Portions of the road accessing the

launch lanes would be inundated at 470 feet; and the boat launch areas become unusable at elevations greater than 468 feet.

Peninsula
The Peninsula day use facility is about 1 mile north of the Peninsula Campground on the eastern shore of Folsom Reservoir. Due to its remote location, this facility is used primarily by boat-in users. The site consists of a small concrete boat ramp, pre-cast concrete vault toilet, picnic tables with ramadas and barbeques, and a small informal beach area.

The south boat ramp elevations range between 410 and 466 feet and the north ramp between 434 and 467 feet.

Peninsula Campground
The Peninsula Campground is at the tip of the peninsula that separates the North and South Forks of the American River. This facility occurs in what is the most natural and least disturbed portion of the FLSRA. The area is characterized by rolling hills, open grasslands, and scattered oak and pine groves. Access to the site is provided by Rattlesnake Bar Road, which connects to Highway 49 at Pilot Hill about 9 miles away. The campground includes 104 sites that can accommodate a maximum trailer length of 18 feet and RV length of 24 feet. The facility also includes five restrooms (no showers), one boat ramp, and a small amphitheater suitable for group use. Located nearby is temporary seasonal housing for four DPR employees, a permanent park ranger residence, and a small maintenance yard. The maximum usable boat ramp elevation at Pennisula Campground is 466 feet. Most of the campsites would be inundated at 475 feet.

Beal's Point Campground
The Beal's Point Campground is adjacent to the popular Beal's Point day use area. The facility includes 49 single campsites, 20 RV sites with electrical hook-ups, a sanitary dump station, two restrooms, and showers. The RV sites were constructed as mitigation for the loss of the family campsites at Negro Bar that were removed for the construction of the Lake Natoma crossing. Campers have easy access to all of the day use facilities provided at Beal's Point, including trails, the beach, boat launch, picnic area, and snack bar.

Folsom Reservoir River Access Areas
Commercial and private whitewater rafting are popular activities on the South Fork of the American River. The 21-mile run between Chili Bar Dam near Highway 193 and Salmon Falls Road at the upper extent of Folsom Reservoir is the highest use river segment in the West. The river offers a diversity of rafting experiences, with Class I through Class III rapids, along with classic scenery and narrow rocky gorges all within relatively easy reach of Sacramento. Several agencies have jurisdiction in this run of the American River: the U.S. Bureau of

Land Management (BLM) owns 12.5 miles of river frontage; Reclamation owns 1.5 miles of river frontage between Hospital Bar and Salmon Falls Road, which is managed by DPR; and El Dorado County is responsible for permitting river use by commercial outfitters.

There are currently about 40 commercial rafting outfitters on the South Fork with 67 permits in existence. These outfitters must obtain river use permits from El Dorado County which specify, among other things, the number of weekday and weekend trips permitted, the number of rafts and rafters per group, and insurance requirements. Permits are not required for private boats. The current daily boater total threshold is 3,200 boaters on two days during any one season.

Skunk Hollow and Salmon Falls
The FLSRA facilities at Salmon Falls and Skunk Hollow (in El Dorado County where Salmon Falls Road crosses the South Fork) are specifically intended to accommodate rafting activity on the river. According to DPR staff, approximately 9,000 commercial boats take-out at the Salmon Falls facility (they are prohibited to do so at Skunk Hollow), or between 50,000 and 60,000 boaters. Facilities here include a large area for bus parking and queuing, informal take-out area, four vault toilets, and drinking water. It is estimated that as many as 4,000 additional private boats (roughly 24,000 boaters) take-out at the Skunk Hollow facility. Facilities here include a small paved parking area for 37 vehicles, a raft loading zone with drying rails, two vault toilets, a paved path from the river up to the parking area, and several picnic tables. A total of 45 parking spaces are provided at Salmon Falls. Both the Skunk Hollow and Salmon Falls facilities receive heavy use during peak season weekends. Both facilities are often used as a parking area for the nearby Darrington and Sweetwater Trails in addition to the 20 parking spaces at the Darrington Trailhead.

Folsom Reservoir Trails
The trail system in the FLSRA is extensive, linking most of the FLSRA's facilities, and accommodating a variety of users including walkers and hikers, horseback riders, cyclists, and mountain bikers. Although there are over 90 miles of existing trails within the FLSRA, there are many areas that are not accessible by trail and there is not a continuous trail connection around the reservoir. Due to the narrow land base and steep topography around both Folsom Reservoir and Lake Natoma, the opportunities to develop new trail facilities are limited. Within this context, the demand for trail access continues to increase for all types of trail uses, including pedestrian, equestrian, mountain bikes, and hard-surface bicycling. The increased demand also results in a growing concern about conflicts between the different kinds of trail users, particularly on multi-use trails, which are open to all users. The following is a description of trails in the FLSRA that are in the vicinity of Folsom Reservoir.

Pioneer Express Trail
The Pioneer Express Trail connects the cities of Auburn and Sacramento and passes through the FLSRA. This segment of the Pioneer Express Trail is also part of the American Discovery Trail, the nation's first coast-to-coast non-motorized recreation trail. The trail enters the northeastern corner of the FLSRA at Cardiac Hill and follows the western shoreline of the North Fork of the American River through Rattlesnake Bar and Granite Bay to Beal's Point. This 21 mile segment of dedicated unpaved trail is for equestrian and pedestrian users only. From Beal's Point west, the Pioneer Express Trail follows the American River Bike Trail along the western shore of Lake Natoma to Nimbus Dam (10 miles), and continues west along the American River Parkway 23 miles to Discovery Park in downtown Sacramento. The lower American River between Nimbus Dam and the confluence with the Sacramento River at Discovery Park has been designated as a National Wild and Scenic River. The Folsom DS/FDR would not affect flows and recreation resources on the lower American River or affect the Wild and Scenic River designation.

Los Lagos Trail
This 1.5-mile equestrian and pedestrian trail is on a 200-foot wide strip of land that extends through the residential subdivision of Los Lagos. The trail begins at Auburn-Folsom Road and runs south into the FLSRA connecting with the Pioneer Express Trail just north of Granite Bay at Beek's Bight.

Doton's Point ADA Trail
This pedestrian-only trail is a scenic 1-mile spur that extends from a trailhead near the Granite Bay equestrian staging area at Beek's Bight to the end of Doton's Point on Folsom Reservoir.

Granite Bay Multi-Use Trails
There are 8 miles of unpaved multi-use trails in the sprawling Granite Bay area of the FLSRA. The 2-mile Granite Bay/Beal's Point Trail connects Granite Bay and the day use area at Beal's Point. The Granite Bay Trail extends 5 miles from the main entrance to Granite Bay at Douglas Boulevard to Beek's Bight and Doton's Point in the northern area of the facility. The 1-mile Center Trail is essentially a shortcut across Oak Point instead of following the Granite Bay Trail along the shoreline.

Folsom Point/Browns Ravine Trail
This unpaved multi-use trail extends 4 miles between Folsom Point and Browns Ravine. The trail begins in the day use area at Folsom Point and ends at the Browns Ravine/Old Salmon Falls trailhead at Browns Ravine.

Browns Ravine/Old Salmon Falls Trail
This unpaved equestrian and pedestrian trail begins at the Browns Ravine equestrian staging area and trends north along the eastern shoreline of Folsom Reservoir to the trailhead parking area at Old Salmon Falls about 12 miles away.

Sweetwater Trail
A widened shoulder just off Salmon Falls Road between Old Salmon Falls and Salmon Falls Bridge doubles as an informal parking area where a gate marks the trailhead for the Sweetwater Trail. This unpaved multi-use trail extends east about 2 miles to the commercial raft take-out facility at Salmon Falls Bridge and the Darrington Trail. An informal trail extends west from here to Old Salmon Falls and the Browns Ravine Trail.

Darrington Trail
The trailhead for this popular trail is at a small unpaved parking area at the north end of the Salmon Falls Road bridge over the American River just above the whitewater rafting facility at Skunk Hollow. This rugged 9-mile trail for mountain bikers and pedestrians follows the western shoreline of the South Fork high above the waterline, rounds the peninsula that separates the North and South Forks, and terminates at the Peninsula Campground.

Peninsula ADA (pedestrian only)
The Peninsula trail is at the Peninsula Campground and extends from the south boat launch south along the Folsom Reservoir shoreline about 1 mile.

Mormon Island Cove Trailhead
The Mormon Island Cove Trailhead is located at the east end of MIAD. Parking is provided for approximately 30-40 vehicles. This facility was constructed by El Dorado County as mitigation for the Green Valley Road widening project.

Connections to External Trail Systems
There are several connections to the FLSRA's trail system from outside jurisdictions. In Placer County, a multi-use trail enters the FLSRA at Sterling Pointe running along Lomida Lane off Auburn-Folsom Road. In El Dorado County, the 1997 Trails Master Plan includes a proposal to create the 10-mile Salmon Falls-Knickerbocker Trail that would connect with the Sweetwater Trail at the Salmon Falls Bridge. The trail would generally follow Salmon Falls Road to Pilot Hill and then Pilot View north to the Knickerbocker Trail.

In the City of Folsom, several connections to the FLSRA's trail systems exist. Folsom-Auburn Road provides a Class II bike lane that allows easy access to the West Lake Natoma Bike Trail and the FLSRA facilities along it, such as Beal's Point, American River Water Education Center, Negro Bar, and Lake Overlook. Access points include Berry Creek Drive and Crestridge Lane. Class II bike lanes

along Greenback Lane provide access to facilities at Negro Bar and the West Lake Natoma Bike Trail at American River Canyon Drive and at Folsom-Auburn Road. Class II bike lanes along East Natoma Street and Green Valley Road provide access to Folsom Point and Browns Ravine. Finally, Class II bike lanes along Folsom Boulevard essentially parallel the East Lake Natoma Bike Trail, with access points at the Lake Natoma Crossing, Young Wo Circle, Parkshore Drive, Natoma Station Drive, and Nimbus Flat.

There are many locations in the FLSRA where private landowners have established informal connections to the existing trail network. These connections often involve the installation of a gate in fences along property lines that abut DPR land.

3.13.2 Environmental Consequences/Environmental Impacts

3.13.2.1 Assessment Methods

This analysis evaluates impacts to recreation by estimating the potential loss of visitors at each site as a result of construction of any of the alternatives. The analysis estimates total annual impacts and impacts during the peak recreation season based on monthly visits. Based on average 2002 to 2005 visitation, about 78 percent of total recreation at the FLSRA occurs during the peak season of May through September and 22 percent of recreation occurs during the off-peak season of October through April (DPR 2006). Therefore, any effects to recreation sites during the peak season months would affect substantially more visitors than effects during off-peak season months.

Construction of any of the alternatives is expected to occur from late 2007 to 2013 or 2014, depending on the alternative. Granite Bay, Beal's Point, and/or Folsom Point would be used as staging areas for construction activities and processing of materials. The sites used vary for each alternative; Section 2.2.4.11 describes activities at each of these sites. The length of the construction period varies at each location and by alternative. Table 3.13-2 shows the expected timeframe of construction activities at Granite Bay, Beal's Point, and Folsom Point under each alternative.

Construction activities could affect recreation by temporarily interrupting recreation or fully closing a facility, increasing truck traffic in the facility, impeding access to the facility, or impeding use of trails within the FLSRA. This analysis assumes varying levels of effects at each facility. Each alternatives discussion presents these assumptions. In summary, all recreation at Folsom Point would be interrupted under all alternatives, between 0 and 50 percent of recreation at Beal's Point would be interrupted, and between 0 and 50 percent of recreation at Granite Bay would be interrupted. Some trail related recreation between Browns Ravine and Folsom Point and at Mooney Ridge could be affected.

Table 3.13-2 Construction Activity Timeframe	
Granite Bay	
Alternative 1	None
Alternative 2	Late summer (August, September) 2013
Alternative 3	Late summer 2009
Alternative 4	Late summer 2013 to end 2014
Alternative 5	Late summer 2013 to end 2014
Beal's Point	
Alternative 1	Fall 2007 to early Summer (May, June) 2009
Alternative 2	Fall 2007 to early Summer 2009
Alternative 3	Spring 2008 through Summer 2008
Alternative 4	Fall 2007 to end 2009
Alternative 5	Fall 2007 to end 2012
Folsom Point	
Alternative 1	Fall 2007 to end 2012
Alternative 2	Fall 2007 to end 2013
Alternative 3	Fall 2007 to end 2013
Alternative 4	Fall 2007 to end 2013
Alternative 5	Fall 2007 to end 2013

This analysis assumes that recreation use would not change at Rattlesnake Bar, Skunk Hollow/Salmon Falls, the Peninsula area, and at Lake Natoma. Water related recreation use at Folsom Lake Marina would not change as a result of implementing any alternative and water surface elevations would not change substantially at Folsom Reservoir as a result of any of the action alternatives.

Potential impacts to recreation are evaluated based on average visitation during the years 1996 to 2005 visitation levels and projected future visitation levels through 2014, the end of scheduled construction. Visitation data from 1996 to 2005 were provided for the entire FLSRA, not separated by facility. Instead, data was separated by paid day use, free day use, overnight camping, and total attendance. Many day use areas do not have entrance stations and many users enter by foot or bicycle. These free day users generally do not get counted; therefore, DPR estimates likely underestimate the actual number of visitors at FLSRA. From 1996 to 2005, average total visitation was 1,232,197 visitors. This was the best available data to use for this analysis. To estimate visitation at Granite Bay, Beal's Point, and Folsom Point in 2005, this analysis uses the percentage of total visitors at the affected facilities in year 2000. In 2000, total attendance at FLSRA was more than 1.5 million. Table 3.13-3 shows 2000 visitation levels at Granite Bay, Beal's Point, and Folsom Point and the respective percentages of total visits.

Table 3.13-3 Attendance at Granite Bay, Beal's Point, and Folsom Point as a Percentage of Total FLSRA 2000 Attendance		
	Attendance	***Percentage of Total FLSRA Facility Attendance***
Granite Bay	507,712	46%
Beal's Point	219,986	20%
Folsom Point	112,120	10%
Total (above facilities)	839,818	76%
Total FLSRA facility attendance	1,111,260	-

Based on the above percentages and 10 year average visitation (1996 to 2005), visitation levels in 2006 were estimated to be 566,811 at Granite Bay, 246,439 at Beal's Point, and 123,220 at Folsom Point. These values are used to project future use at the FLSRA.

The California Department of Finance (DOF) provides population estimates and projections for all California counties. This analysis relies on DOF population data to estimate future visitation at the FLSRA. The analysis assumes that visitation at FLSRA will increase relative to population growth in Sacramento, El Dorado, and Placer Counties. From 2001 to 2005, population increased an average of 2.24 percent per year. DOF projections indicate that population in the three counties will grow an average of 2.07 percent per year from 2007 to 2014. Therefore, this analysis assumes that during the 2007 to 2014 construction period, visitation at FLSRA will increase 2.1 percent per year.

3.13.2.2 Significance Criteria

Impacts from the action alternatives would be significant if:

- Recreational use at major recreation sites and trails would be substantially reduced (more than 10 percent loss in annual visitation or any long-term reductions in visitation[1]) as a result of construction.
- Truck traffic or other construction activities would substantially reduce access to or interfere with recreational activities at the FLSRA.
- Special events at the FLSRA would require cancellation.
- Displaced recreation from sites affected by construction would substantially contribute to overcrowding or exceed the facility capacity at other recreation sites (including sites within the FLSRA).

[1] For this analysis, long-term is defined as greater than 1 year.

3.13.2.3 Environmental Consequences/Environmental Impacts

Environmental Consequence/Environmental Impacts of the No Action/No Project Alternative

Under the No Action/No Project Alternative, construction of staging and recreation centers and development of borrow areas within the reservoir would not occur. Various corrective actions to Folsom Dam and related facilities would not occur. Therefore there would be no impact to recreation.

Table 3.13-4 displays estimated recreation use from 2007 through 2014. Based on DOF population projections, visitation is estimated to increase 2.1 percent per year. Therefore, total visitation at Granite Bay, Beal's Point, and Folsom Point would increase from about 956,000 visitors in 2007 to about 1,106,000 visitors in 2014. Under the No Action/No Project Alternative, the DPR would complete their RMP, which would result in improved recreation infrastructure. Some of the major improvements include: converting some of the campgrounds at Beal's Point to group campsites, and improving traffic flow at the Beal's Point and Granite Bay entrance stations to avoid traffic problems on Folsom-Auburn Road. New and improved facilities could attract even more visitors to the FLSRA than estimated in Table 3.13-4.

Table 3.13-4
Recreation Use at Granite Bay, Beal's Point, and Folsom Point under the No Action/No Project Alternative

Site/area	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*
Granite Bay	578,714	590,867	603,275	615,944	628,878	642,085	655,569	669,336
Beal's Point	251,615	256,899	262,293	267,802	273,425	279,167	285,030	291,015
Folsom Point	125,807	128,449	131,147	133,901	136,713	139,584	142,515	145,508
Total	956,136	976,215	996,715	1,017,647	1,039,016	1,060,836	1,083,114	1,105,859

Environmental Consequences/Environmental Impacts of Alternative 1

Table 3.13-5 summarizes assumptions about the percentage of recreation affected at each facility under Alternative 1 and the proposed construction period. Under Alternative 1, there would be no construction activity at Granite Bay. Table 3.13-6 shows estimated losses in visitation to Granite Bay, Beal's Point, and Folsom Point during the construction period, compared to the No Action/No Project Alternative. The following sections identify and evaluate potential recreation impacts of Alternative 1.

Table 3.13-5 ***Timeframe of Construction at FLSRA Facilities under Alternative 1***			
FLSRA Site	***% of Visitors Affected***	***Construction Timeframe***	***# of Peak Recreation Season Affected***
Granite Bay	0%	None	0
Beal's Point	10%	Fall 2007 to early Summer (May, June) 2009	1.5
Folsom Point	100%	Fall 2007 to end 2012	5

Table 3.13-6 ***Loss of Visitors During Construction Period Under Alternative 1***								
Facility	***2007***	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***
Granite Bay	-	-	-	-	-	-	-	-
Beal's Point	742	25,690	13,143	-	-	-	-	-
Folsom Point	3,712	128,449	131,147	133,901	136,713	139,584	-	-
Total	4,455	154,139	144,290	133,901	136,713	139,584	-	-

Construction could result in a substantial loss of recreational use at Granite Bay

Granite Bay would not be affected by this alternative; therefore, there would be no impacts to recreation at Granite Bay from Alternative 1.

Construction could result in a substantial loss of recreational day use at Beal's Point

Construction at Beal's Point is scheduled to begin in Fall 2007, or later. All efforts would be made to start major construction at Beal's Point after the peak recreation season is over. Depending on when construction begins, work in this area would continue through early summer of 2009. There would be an in-reservoir staging area at the southwest end of Beal's Point so that no public parking is used for construction activities. Beal's Point would include contractor's offices, parking, stockpiling of and equipment, as well as other staging area-related activities. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas. There could be some borrow development at Beal's Point that could affect recreation. If excavation at Beal's Point is necessary, a processing plant could potentially be constructed in-reservoir, south of the Beal's Point parking lot, adjacent to the RWD. The picnic facilities and restrooms on the south end of Beal's Point would be open to the public during construction. The boat launch facility at Beal's Point would be closed to the public. The staging area would more than likely block access to the boat launch.

It is assumed that about 10 percent of recreation at Beal's Point would be interrupted each year during the construction period. The major recreational facilities at the north end of Beal's Point would still be accessible to the public. The north end area includes a beach, restrooms, picnic tables, and concessionaires. The walking and bike trails, or suitable detours would continue to be available to the public through the entire construction period. The south end facilities, except the boat ramp would be open to the public; however, the nearby proximity of construction could deter visitors to the area. Construction would affect recreation for a little less than 2 years. This analysis estimates a loss of about 25,690 visits during 2008 and about 13,143 visits during 2009. Because effects would occur longer than one year, this impact to day use recreation would be potentially significant.

After construction, if appropriate, the government would turn over the construction platform and processing area at Beal's Point to DPR. Reclamation would cover the staging area in road base aggregate, or another suitable material. If borrow activity occurs at Beal's Point, the beaches would be re-contoured as appropriate.

During construction, the loss of day use recreation at Beal's Point would be potentially significant. Mitigation Measures RC-1 through RC-8 would reduce the impact to less than significant.

Construction could result in a substantial loss of use at the Beal's Point Campground.

The campground facilities would still be open to the public during construction. Construction would occur on the opposite side of the dikes from the campground. A small staging area would be located north of the campground. Construction would not occur anywhere on the campground or result in any closure of camping facilities. Construction activities would generate noise and traffic that could affect use of the campground adjacent to Beal's Point. Noise levels would be mitigated to the extent possible through the mitigation measures in Section 3.10.4. Increased noise levels could result in some decreased recreational use of the campground.

The loss of use at the Beal's Point Campground over the construction period would be potentially significant. Mitigation Measures in Section 3.10.4 and RC-1 through RC-8 would reduce the impact to less than significant.

Construction could result in a substantial loss of recreational use at Folsom Point.

Construction is scheduled to start at Folsom Point in Fall of 2007. Construction would likely start after the peak recreation season and ensue through 2012. Folsom Point would be the main staging area along the reservoir's southern edge for construction on the Auxiliary Spillway, the main dam, the Left Wing Dam, and MIAD. Folsom Point would include contractor's offices, parking, staging of material, and processing and stockpiling of borrow materials, as well as other staging

area-related activities. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas.

All recreation at Folsom Point would be interrupted during the construction period. Visitors would not be able to access Folsom Point facilities, including the boat launch or the parking lots. Recreation would be affected for about 6 years. Losses in annual recreation visits are estimated to range from about 128,400 in 2008 to 139,600 in 2012.

This would be a significant and unavoidable impact to recreation at Folsom Point. The government would implement Mitigation Measures RC-1 through RC-8, but impacts would still be significant while Folsom Point is closed.

Construction traffic and construction activities could interrupt and interfere with recreation at Beal's Point.

Construction traffic would include the trucking of borrow materials and processed materials. Formal internal haul routes within the reservoir would be established that connect all of the dikes and dams to a primary borrow area and a primary processing area. Public traffic would be restricted on these roads. This would decrease construction traffic on public roads within the Beal's Point area.

Internal haul roads would be constructed above the normal high waterline to ensure that the hauls roads are available except in extreme conditions. Construction vehicles would rarely need to use the main entrance at Beal's Point from Auburn-Folsom Road. Construction traffic would occur during the scheduled hours of the identified construction period. Construction traffic would not occur on weekends with scheduled special functions or on holiday weekends that would interfere with recreation. During off-peak seasons, recreational use within the Beal's Point facility is generally low; construction traffic would not cause major interruptions to recreation. During the peak summer season, recreational use is high on weekdays and weekends. If public access routes are used, construction traffic would slow down visitors to Beal's Point, but visitors would not be excluded.

A small staging area and or a transition would be constructed north of Beal's Point Campground to store and transport materials to Dikes 5 and 6. All construction activities would occur on the water side of the dikes away from the campground. Some construction noise would be audible from the campground. All reasonable mitigation measures would be used to reduce to noise impacts, which would include, but would not be limited to using portable noise barriers, limiting construction work to daytime (7:00 a.m. to 7:00 p.m.) and off-season periods (October through April), and erecting staging areas as far from the campground as possible. A detailed list of

mitigation measures to reduce noise levels is presented in Section 3.10.4. Construction traffic would occur from the staging areas to the construction areas. There may be some increased wait times to access the facility; as well as minor construction within the facility.

Impacts to the Beal's Point recreation facilities would be significant during the construction period. Mitigation Measures RC-1 through RC-8 would be taken to reduce interruptions to recreation activities from construction traffic during the peak season. After mitigation, impacts to recreation at Beal's Point would be less than significant.

Construction traffic and construction activities could interrupt and interfere with recreation at Folsom Point.

Because of the full closure of Folsom Point, onsite construction traffic and construction activities would not interfere with recreation at Folsom Point facilities.

Construction could result in lost recreational use on trails at Granite Bay and Beal's Point.

FLSRA has many paved and dirt multi-use trails for biking, walking, hiking, and horse riding. A dirt multi-use trail extends from Granite Bay south to Beal's Point. Construction on Dikes 4, 5, and 6 and potential borrow activity north of Beal's Point could limit access to the trail. The Pioneer Express Trail, an equestrian and pedestrian trail, also extends from Beal's Point to Granite Bay. The American River Bike Trail extends from downtown Sacramento and ends at the Beal's Point recreation area. Use of these trails would be interrupted intermittently during the construction period. Parts of the trails may be closed to the public or may be removed to accommodate construction activities.

This would be a temporary significant impact. Mitigation Measures RC-9 and RC-10 would reduce the impact to less than significant.

Construction could result in lost recreational use on Folsom Point-Browns Ravine trail.

The Folsom Point-Browns Ravine multi-use trail extends northeast from Folsom Point to Browns Ravine. The trail runs across MIAD and along the reservoir's edge to Browns Ravine. Construction activities would restrict public access to the Folsom Point-Browns Ravine trail from Folsom Point the entire time that the Folsom Point staging area is used. Signs would be posted that redirect visitors to trail access at Browns Ravine. Restricted access to Folsom Point-Browns Ravine trail from Folsom Point would be a temporary significant and unavoidable impact.

During construction on MIAD, the portion of the trail that runs over MIAD would be closed to the public. The parking lot to access the trail from MIAD would also be closed. Under Alternative 1, construction on MAID would occur from 2008 to 2010. During this time, the government would allow use of other portions of Folsom Point-Browns Ravine trail subject to public safety considerations.

Loss of recreational use on this trail would be a temporary, significant and unavoidable impact.

Construction could result in cancellation of special events scheduled at FLSRA.

Section 3.13.1.3 describes some special events held annually at the FLSRA sites. Special events attract both participants and spectators. Many special events, including triathlons, other races, and bass fishing tournaments are held at Granite Bay. Under Alternative 1, construction would not occur at Granite Bay; therefore, there would be no impacts to special events.

Construction activities at Beal's Point would not occur during weekends when special events are scheduled to take place. All construction areas would be blocked off from the public. Additional efforts may be necessary to accommodate crowds within a smaller designated area.

Some scheduled events at Folsom Point would need to change venues to a different area of the FLSRA or be cancelled until construction is complete. The FLSRA already is overcrowded during the summer season; therefore, it would be difficult to schedule additional special events during this time at unaffected areas of the FLSRA. If special events occur during the off-peak season, organizers would likely be able to find an alternative FLSRA location to hold the event. Fishing tournaments out of Browns Ravine would be unaffected by construction.

The government would implement Mitigation Measure RC-7. If cancellation of any event occurs because of construction, this impact would be significant and unavoidable.

Construction could displace visitors from Beal's Point and Folsom Point and substantially contribute to overcrowded conditions at other regional recreation sites.

Because of potential interruptions to recreation at Beal's Point and the full closure of Folsom Point, visitors would need to find alternate recreation opportunities. During the off-peak season, other facilities at FLSRA would be able to accommodate displaced users. The FLSRA is typically over crowded during the peak season and would not likely accommodate all displaced visitors. The remaining areas of the 3-county region offer multiple recreation opportunities, including many parks and swimming areas. Boaters could travel to nearby reservoirs in the Sierra foothills or

the Sacramento-San Joaquin Delta. The surrounding counties, including Yolo, Yuba, and San Joaquin County also have outdoor recreational and boating opportunities. Displaced visitors would be able to find a comparable substitute for recreation at FLSRA; however, many of these sites are also overcrowded during the peak season, especially boating facilities. Not all displaced visitors from FLSRA would go to the same recreation areas. Some visitors may opt for non-outdoor recreational substitutes.

Visitors would be displaced during the construction season at each facility. This analysis assumes that 10 percent of visitors would be affected annually at Beal's Point. Displaced visitors during the off-peak season would not result in substantial overcrowding at other recreation sites. When construction occurs during the peak season, more visitors could be affected. Most recreational facilities at Beal's Point would continue to be open for public use during construction; therefore, fewer visitors would be displaced than if the facility were completely closed. The majority of visitors at Beal's Point are not boaters; therefore, the multitude of other regional recreation areas would be able to accommodate visitors interested in hiking, swimming, or picnicking.

This impact would be less than significant.

Folsom Point would be closed for about 6 years. Any displaced visitors from Folsom Point that travel to other recreation areas for boating activities would contribute to overcrowding. The magnitude and duration of displaced visitors, especially boaters, from Folsom Point to other facilities would create overcrowding.

This impact would be significant and unavoidable. The government would implement Mitigation Measures RC-1 through RC-8; however, impacts from overcrowding would still be significant.

Installation and operation of security measures could interrupt recreation at FLSRA facilities.

Proposed security measures include appropriate level of access controls, intrusion detection, supplemental lighting and Closed Circuit television (CCTV) components throughout the Folsom Dam facilities. Installation of security cameras would require the construction of 30' steel towers on each end of Dikes 4, 5, 6, and 7, and MIAD. Once installed the cameras would be able to only monitor critical access control devices. Cameras would be installed at Beal's Point to monitor access control points of Folsom Dam and the Right Wing Dam. Construction associated with the security measures would be coordinated with construction activities of the Folsom DS/FDR.

Installation at Beal's Point includes a fixed camera tower at the southern edge of the public parking lot near the RWD. Installation of the tower would restrict part of the

parking lot from public use for a short period of time. The staging area at Beal's Point would be set up for construction at the RWD and Dikes 4, 5, and 6. Installation of the security camera would not interfere with additional recreation. The security cameras would video recreation activity around the recreation sites; however, recreation would not be affected. Increased security could improve public safety at the recreation site.

This would be a less than significant impact.

Installation of camera towers and lighting on the dikes could temporarily affect existing bike and pedestrian trails that run atop the dikes. Permanent lighting could improve recreation opportunities on trails.

This impact would be less than significant with Mitigation Measures RC-6, RC-9 and RC 10.

Installation of camera towers on MIAD at the left and right abutments would require some construction work. The Folsom Point-Browns Ravine trail over MIAD would be restricted to the public during construction work on MIAD. Installation of the security measure would occur during the same period.

The impact would be less than significant.

Environmental Consequences/Environmental Impacts of Alternative 2

Table 3.13-7 presents assumptions about the percentage of recreation affected at each facility under Alternative 2 and the proposed construction period. Table 3.13-8 shows estimated losses to Granite Bay, Beal's Point, and Folsom Point during the construction period under Alternative 2, compared to the No Action/No Project Alternative. The following sections identify and evaluate potential recreation impacts of Alternative 2.

Table 3.13-7
Timeframe of Construction at FLSRA Facilities under Alternative 2

FLSRA Site	*% of Visitors Affected*	*Construction Timeframe*	*# of Peak Recreation Season Affected*
Granite Bay	0%	Late summer (August, September) 2013	0.5
Beal's Point	10%	Fall 2007 to early Summer (May, June) 2009	1.5
Folsom Point	100%	Fall 2007 to end 2013	6

Table 3.13-8 ***Loss of Visitors During Construction Period Under Alternative 2***								
Facility	***2007***	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***
Granite Bay	-	-	-	-	-	-	-	-
Beal's Point	742	25,690	13,143	-	-	-	-	-
Folsom Point	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-
Total	4,455	154,139	144,290	133,901	136,713	139,584	142,515	-

Construction could result in a substantial loss of recreational use at Granite Bay

Under Alternative 2, construction at Granite Bay would occur during the late summer, roughly August through October, in 2013. The Granite Bay staging area would be north of Granite Bay on the east side of Dike 1, which is outside of major a recreational activity at Granite Bay. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas. There would be no borrow activity at Granite Bay under this alternative. The Granite Bay staging area would support the construction on Dikes 1, 2, and 3, including contractor's offices, parking, construction, materials storage, as well as other staging area-related activities. All recreation facilities at Granite Bay would be available for public use. Construction on Dikes 1, 2, and 3 would not result in any losses to recreational use at Granite Bay.

This impact would be less than significant.

Construction could result in a substantial loss of recreational use at Beal's Point

Impacts to Beal's Point would be similar to Alternative 1. Because of construction effects and restricted use of the boat launch, it is assumed that about 10 percent of recreation at Beal's Point would be interrupted during the construction period. All facilities, except the boat launch, would remain open to the public.

During construction, the loss of day use recreation at Beal's Point would be significant. Mitigation Measure RC-1 through RC-8 would reduce the impact to less than significant.

Construction could result in a substantial loss of use at the Beal's Point Campground.

Impacts to Beal's Point Campground would be similar to Alternative 1.

The loss of use at the Beal's Point Campground over the construction period would be significant. Mitigation Measures in Section 3.10.4 and RC-1 through RC-8 would reduce the impact to less than significant.

Construction could result in a substantial loss of recreational use at Folsom Point

Construction is scheduled to start at Folsom Point in the Fall of 2007. Construction would likely start after the peak recreation season and ensue through 2013. Folsom Point would be the main staging area along the reservoir's southern edge for construction on the Auxiliary Spillway, the main dam, the Left Wing Dam, Dikes 7 and 8, and MIAD. All recreation at Folsom Point would be interrupted during the construction period. The boat ramp at Folsom Point would be closed for public use. Recreational use of the facility would be lost for over 6 years. Annual losses in visits are estimated to range from about 128,400 in 2008 to 142,500 in 2013. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas.

This impact would be a significant and unavoidable impact to recreation at Folsom Point during the construction period. The government would implement Mitigation Measures RC-1 through RC-8, but impacts would still be significant while Folsom Point is closed.

Construction traffic and activities could interrupt or interfere with recreation at Beal's Point and Granite Bay.

Construction traffic would include the trucking of borrow materials and processed materials. Formal internal haul routes within the reservoir would be established that connect all of the dikes and dams to a primary borrow area and a primary processing area. Public traffic would be restricted on these roads. An internal haul route would be constructed from Beal's Point to Granite Bay. Construction trucks would use this route to the extent possible to haul materials. This would reduce the effects of construction traffic on recreation at these facilities.

Internal haul roads would be constructed above the normal high waterline to ensure that the hauls roads are available except during extreme conditions. When water levels are high and internal roads are inundated, construction vehicles would need to use the main entrances to Beal's Point from Auburn-Folsom Road and to Granite Bay from Douglas Boulevard. Construction traffic would occur during scheduled hours of the identified construction period. Construction traffic would not occur during weekends with scheduled special events or holiday weekends that would interfere with recreation. During off-peak seasons, recreational use within the Beal's Point and Granite Bay facilities are generally low; construction traffic would not cause major interruptions to recreation. During the peak summer season, recreational

use is high on weekdays and weekends. If public access routes are used, construction traffic would slow down visitors and increase wait times to access Beal's Point and Granite Bay.

A small staging area would be constructed north of Beal's Point Campground to store and transport materials to Dikes 5 and 6. All construction activities would occur on the water side of the dikes away from the campground. Some construction noise would be audible from the campground. All reasonable mitigation measures would be used to reduce to noise impacts, which would include, but would not be limited to using portable noise barriers, limiting construction work to daytime (7:00 a.m. to 7:00 p.m.) and off-season periods (October through April), and erecting staging areas as far from the campground as possible. A detailed list mitigation measures to reduce noise levels is presented in Section 3.10.4. Construction traffic would occur from the staging area to the construction areas. There may be some increased wait times to access the facility; construction traffic would not interfere with public traffic within the facility.

Impacts to the Beal's Point and Granite Bay recreation facilities would be significant during the construction period. Mitigation Measures RC-1 through RC-8 would be taken to reduce interruptions to recreation activities from construction traffic during the peak season. After mitigation, impacts to recreation at Beal's Point and Granite Bay would be less than significant.

Construction traffic could cause major interruptions to recreation at Folsom Point.

Because of full closure at Folsom Point, onsite construction traffic would not affect recreation at Folsom Point facilities.

Construction could result in lost recreational use on trails at Granite Bay and Beal's Point.

FLSRA has many paved and dirt multi-use trails for biking, walking, hiking, and horse riding. A dirt multi-use trail extends from Granite Bay south to Beal's Point. Construction on Dikes 4, 5, and 6 and potential borrow activity north of Beal's Point could limit access to the trail. The Pioneer Express Trail, an equestrian and pedestrian trail, also extends from Beal's Point to Granite Bay. The American River Bike Trail extends from downtown Sacramento and ends at the Beal's Point recreation area. Use of these trails would be interrupted intermittently from late 2007 to the early summer of 2009 peak season, and the latter half of the 2013 summer season. Parts of the trails may be closed to the public or may be removed to accommodate construction activities.

This would be a significant impact. Mitigation Measures RC-9 and RC-10 would reduce the impact to less than significant.

Construction could result in lost recreational use on Folsom Point-Browns Ravine trail.

The Folsom Point-Browns Ravine multi-use trail extends northeast from Folsom Point to Browns Ravine. The trail runs across the MIAD and along the reservoir's edge to Browns Ravine. Construction activities would restrict public access to the Folsom Point-Browns Ravine trail from Folsom Point the entire time that the Folsom Point staging area is used. Signs would be posted that redirect visitors to trail access at Browns Ravine. Restricted access to Folsom Point-Browns Ravine trail from Folsom Point would be a temporary significant and unavoidable impact.

During construction on MIAD, the portion of the trail that runs over MIAD would be closed to the public. The parking lot to access the trail from MIAD would also be closed. Under Alternative 2, construction on MAID would occur from 2008 to 2011. During this time, the government would allow use of other portions of Folsom Point-Browns Ravine trail subject to public safety considerations. However, loss of recreational use on this trail during MIAD construction would be a temporary, significant and unavoidable impact.

Loss of recreational use on this trail would be a temporary, significant and unavoidable impact.

Construction could result in cancellation of special events scheduled at FLSRA.

Section 3.13.1.3 describes some special events held annually at the FLSRA sites. Special events attract both participants and spectators. Many special events, including triathlons, other races, and bass fishing tournaments are held at Granite Bay. Alternative 2 would not interrupt recreation at Granite Bay facilities; therefore, these special events could be held during construction periods. Construction activities would not occur during weekends when special events take place. All construction areas would be blocked off from the public. Additional efforts would be necessary to accommodate crowds within a smaller designated area.

Effects to special events at Beal's Point and Folsom Point would be the same as Alternative 1. Events would likely be able to occur as planned at Beal's Point during the construction period. Events scheduled at Folsom Point would need to be relocated, rescheduled, or cancelled.

The government would implement Mitigation Measure RC-7 and RC-9. If any events are cancelled, this would be a significant and unavoidable impact.

Construction could displace visitors and substantially contribute to overcrowded conditions at other regional recreation sites.

Because of potential interruptions to recreation at Beal's Point and full closure of Folsom Point, visitors would need to find alternate recreation opportunities. During the off-peak season, other facilities at FLSRA would be able to accommodate displaced users. The FLSRA is typically over crowded during the peak season and would not likely accommodate all displaced visitors. The remaining areas of the 3-county region offer multiple recreation opportunities, including many parks, swimming areas and boating opportunities. The surrounding counties, including Yolo, Yuba, and San Joaquin County also have outdoor recreational and boating opportunities. Displaced visitors would be able to find a comparable substitute for recreation at FLSRA; however, many of these sites are also overcrowded during the peak season, especially boating facilities. Not all displaced visitors from FLSRA would go to the same recreation areas. Some visitors may opt for non-outdoor recreational substitutes.

Visitors would be displaced during the construction season at each facility. Granite Bay offers boating and non-water related activities. Construction would not affect recreation at Granite Bay. Visitors would still be able to use all facilities, including boat ramps.

This impact to Beal's Point and Granite Bay would be less than significant.

This analysis assumes that 10 percent of visitors would be affected annually at Beal's Point. Displaced visitors during the off-peak season would not result in substantial overcrowding at other recreation sites. When construction occurs during the peak season, more visitors could be affected. Most recreational facilities at Beal's Point would continue to be open for public use during construction. The majority of visitors at Beal's Point are not boaters; therefore, the multitude of other regional recreation areas would be able to accommodate visitors interested in hiking, swimming, or picnicking.

Displaced visitors from Beal's Point would not result in substantial overcrowding at other facilities. This would be a less than significant impact.

Folsom Point would be entirely closed for 6 peak recreation seasons. Any displaced visitors from Folsom Point that travel to other recreation areas for boating activities would contribute to overcrowding. The magnitude and duration of displaced visitors, especially boaters, from Folsom Point to other facilities would create overcrowding.

This impact would be significant and unavoidable. The government would implement mitigation measure RC-1 through RC-8; however, impacts from overcrowding would still be significant.

Installation and operation of security measures could interrupt recreation at FLSRA facilities.

Impacts would be the same as described for Alternative 1.

Environmental Consequence/Environmental Impacts of Alternative 3

Table 3.13-9 presents assumptions about the percentage of recreation affected at each facility and the scheduled construction period. Table 3.13-10 shows estimated losses to Granite Bay, Beal's Point, and Folsom Point during the construction period, compared to the No Action/No Project Alternative. The following sections identify and evaluate potential recreation impacts of Alternative 3.

Table 3.13-9
Timeframe of Construction at FLSRA Facilities under Alternative 3

FLSRA Site	% of Visitors Affected	Construction Timeframe	# of Peak Recreation Season Affected
Granite Bay	0%	Late summer 2009	0.5
Beal's Point	10%	Spring through summer 2008	1
Folsom Point	100%	Fall 2007 to end 2013	6

Table 3.13-10
Loss of Visitors During Construction Period Under Alternative 3

Facility	2007	2008	2009	2010	2011	2012	2013	2014
Granite Bay	-	-	-	-	-	-	-	-
Beal's Point	-	21,985	-	-	-	-	-	-
Folsom Point	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-
Total	3,712	150,435	131,147	133,901	136,713	139,584	142,515	-

Construction could result in a substantial loss of recreational use at Granite Bay.

Under Alternative 3, impacts to Granite Bay would be the same as Alternative 2, except construction would occur during the latter part of the 2009 peak season as opposed to the latter part of the 2013 peak season under Alternative 2. Construction would not affect any recreation facilities at Granite Bay.

This impact would be less than significant.

Construction could result in a substantial loss of recreational use at Beal's Point.

Under this alternative, construction at Beal's Point is scheduled to begin in Spring 2008 and end in Summer 2008. Construction activities at Beal's Point would include contractor's offices, parking, staging of material, and concrete production, as well as other staging area-related activities. A construction platform would be constructed so

that no public parking would be occupied by construction staging and activities. The construction platform would be near some picnic facilities and restrooms, but they would still be open to the public. The boat launch facility at Beal's Point would be closed to the public because the staging area would more than likely block access to the boat launch. If excavation is necessary, there could be some borrow development at Beal's Point that could affect recreation. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas.

Because of construction effects and restricted use of the boat launch, it is assumed that about 10 percent of recreation at Beal's Point would be interrupted during the construction period. All facilities, except the boat launch, would remain open to the public. This analysis estimates a loss of about 22,000 visits during the 6-month construction period.

Because it is expected that only 10 percent of recreation would be affected and construction would be less than one year, this impact would be less than significant.

Construction could result in a substantial loss of use at the Beal's Point Campground.

Impacts to Beal's Point Campground would be similar to Alternative 1. However, under this Alternative, substantial amounts of visitors would not be affected because the construction period is shorter, as described above.

The loss of use at the Beal's Point Campground over the construction period would be less than significant.

Construction could result in a substantial loss of recreational use at Folsom Point.

Impacts to Folsom Point under Alternative 3 would be the same as Alternative 2.

Impacts would be significant and unavoidable. The government would implement Mitigation Measures RC-1 through RC-8 to mitigate the loss of boating facilities, but impacts would still be significant while Folsom Point is closed.

Construction traffic could result in substantial interruptions to recreation at Beal's Point and Granite Bay.

Impacts from construction traffic would be the same as Alternative 2.

Impacts to the Beal's Point and Granite Bay recreation facilities would be significant during the construction period. Mitigation Measures RC-1 through RC-8 would be taken to reduce interruptions to recreation activities from construction

traffic. After mitigation, impacts to recreation at Beal's Point and Granite Bay would be less than significant.

Construction could result in lost recreational use on trails at Granite Bay and Beal's Point.

Impacts from construction traffic would be the same as Alternative 2.

Impacts would be less than significant with Mitigation Measures RC-9 and RC-10.

Construction would result in lost recreational use on Folsom Point-Browns Ravine Trail.

Impacts to Folsom Point-Browns Ravine trail would be the same as Alternative 2.

This would be a temporary, significant and unavoidable impact.

Construction could result in cancellation of special events scheduled at FLSRA.

Effects to special events would be the same as Alternative 2. Events would likely be able to occur as planned at Granite Bay and Beal's Point during the construction period. Events scheduled at Folsom Point would need to be relocated, rescheduled, or cancelled.

Mitigation Measure RC-7 would be implemented. If cancellation of events occurs, this would be a significant and unavoidable impact.

Construction could displace visitors and substantially contribute to overcrowded conditions during more than one peak season at other regional recreation sites.

Impacts of Alternative 3 would be the same as Alternative 2. Displaced visitors from Granite Bay and Beal's Point would not cause substantial overcrowding at other recreation sites.

This impact would be less than significant.

Displaced visitors from Folsom Point would cause substantial overcrowding at other facilities. *This impact would be significant and unavoidable.*

Installation and operation of security measures could interrupt recreation at FLSRA facilities.

Impacts would be the same as described for Alternative 1.

Environmental Consequences/Environmental Impacts Alternative 4

Table 3.13-11 summarizes assumptions about the percentage of recreation affected at each facility and the proposed construction period. Table 3.13-12 shows estimated losses to Granite Bay, Beal's Point, and Folsom Point during the construction period, compared to the No Action/No Project Alternative. The following sections identify and evaluate potential recreation impacts of Alternative 4.

Table 3.13-11
Timeframe of Construction at FLSRA Facilities Under Alternative 4

FLSRA Site	*% of Visitors Affected*	*Construction Timeframe*	*# of Peak Recreation Season Affected*
Granite Bay	25%	Late summer 2013 to end 2014	1.5
Beal's Point	50%	Fall 2007 to end 2009	2
Folsom Point	100%	Fall 2007 to end 2013	6

Table 3.13-12
Loss of Visitors During Construction Period Under Alternative 4

Facility	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*
Granite Bay	-	-	-	-	-	-	46,683	163,892
Beal's Point	3,712	128,449	131,147	-	-	-	-	-
Folsom Point	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-
Total	7,425	256,899	262,293	133,901	136,713	139,584	189,198	163,892

Construction could result in a substantial loss of recreational use at Granite Bay.

Under Alternative 4, construction at Granite Bay would occur during the late summer 2013 and continue through 2014. The Granite Bay staging area would be north of Granite Bay on the east side of Dike 1, which is outside of major a recreational activity at Granite Bay. The Granite Bay staging area would support the construction on Dikes 1, 2, and 3, including contractor's offices, parking, construction, materials storage, as well as other staging area-related activities. There would be borrow development in the northern parts of Granite Bay under this alternative, which would affect recreation at Granite Bay. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas. It is assumed that about 25 percent of recreation at Granite Bay would be interrupted during the construction period. Recreation would be affected for almost 2 years. This analysis estimates a loss of about 46,700 visits during the latter half of 2013 and about 167,000 in 2014.

This impact would be a significant and unavoidable impact. Mitigation Measures RC-1 through RC-8 would be implemented, but would not reduce this impact to less than significant.

Construction could result in a substantial loss of recreational use at Beal's Point.

Under Alternative 4, construction at Beal's Point would begin in November 2007 after the peak recreation season and ensue through 2009. There would be an in-reservoir staging area at the southwest end of Beal's Point so that no public parking is used for construction activities. Beal's Point would include contractor's offices, parking, stockpiling of and equipment, as well as other staging area-related activities. Borrow development at the southern end of Beal's Point would occur under this alternative. A processing plant would be constructed in-reservoir at the southern end of the facility. Borrow development would affect recreational use in this area. The picnic facilities and restrooms on the south end of Beal's Point would be open to the public; however, the public would likely avoid these facilities during construction. The boat launch facility at Beal's Point would be closed to the public. The staging area would block access to the boat launch. There could be borrow development at the northern part of Beal's Point depending on materials needed. During the preparation of the plans and specifications, the lead construction agency would coordinate with DPR on the potential to use temporary construction access, staging areas, haul routes and permanent stockpiles as future recreation areas.

It is assumed that about 50 percent of recreation at Beal's Point would be interrupted during the construction period. This analysis estimates a loss of about 128,500 visits during 2008 and about 131,100 visits 2009.

This impact would be a significant and unavoidable impact. Mitigation Measures RC-1 through RC-8 would be implemented, but would not reduce this impact to less than significant.

Construction could result in a substantial loss of use at the Beal's Point Campground.

Impacts to Beal's Point Campground would be similar to Alternative 1; however, construction activities would be greater and would occur over a longer period.

The loss of use at the Beal's Point Campground over the construction period would be potentially significant. Mitigation Measures in Section 3.10.4 and RC-1 through RC-8, would be implemented, but would not reduce this impact to less than significant.

Construction could result in a substantial loss of recreational use at Folsom Point.

Impacts to Folsom Point under Alternative 4 would be the same as Alternative 2.

Impacts would be significant and unavoidable.

The government would implement Mitigation Measures RC-1 through RC-8 but impacts would still be significant while Folsom Point is closed.

Construction traffic could result in substantial interruptions to recreation at Beal's Point and Granite Bay.

Impacts under Alternative 4 would be the same as Alternative 2.

Impacts to the Beal's Point and Granite Bay recreation facilities would be significant during the construction period. Mitigation Measures RC-1 through RC-9 would be taken to reduce interruptions to recreation activities from construction traffic during the peak season. After mitigation, impacts to recreation at Beal's Point and Granite Bay would be less than significant.

Construction could result in lost recreational use on trails at Granite Bay and Beal's Point.

Impacts under Alternative 4 would be the same as Alternative 2.

Impacts would be less than significant with Mitigation Measures RC-9 and RC-10.

Construction could result in lost recreational use on Folsom Point-Browns Ravine Trail.

Impacts to Folsom Point-Browns Ravine trail would be the same as Alternative 2.

This would be a temporary, significant and unavoidable impact.

Construction could result in cancellation of special events scheduled at FLSRA.

Effects to special events would be the same as Alternative 2. Events at Granite Bay and Beal's Point would be able to occur during the construction period. Events scheduled at Folsom Point would need to be relocated, rescheduled, or cancelled.

Mitigation Measure RC-7 would be implemented. If cancellation of events occurs, this would be a significant and unavoidable impact.

Construction could displace visitors and substantially contribute to overcrowded conditions at other regional recreation sites.

Overcrowding would likely occur during the peak summer seasons. Boaters at Granite Bay would be displaced for 1.5 peak summer seasons. This analysis estimates that about 128,000 visitors could be displaced in the 2014 peak summer season. This could result in substantial overcrowding at other recreation sites.

This impact would be significant and unavoidable.

Under this alternative, about 50 percent of visitors at Beal's Point would be displaced for 2 peak seasons. This analysis estimates that about 128,000 visits could be displaced in 2008 and 131,000 visits in 2009. The amount and duration of displaced visitors from Beal's Point would cause substantial overcrowding at other recreation sites.

This impact would be significant and unavoidable. Similar to Alternatives 1 through 3, displaced visitors from Folsom Point for 6 peak seasons would cause substantial overcrowding; this impact would be significant and unavoidable.

Installation and operation of security measures could interrupt recreation at FLSRA facilities.

Impacts would be the same as described for Alternative 1.

Environmental Consequences/Environmental Impacts Alternative 5

Table 3.13-13 presents assumptions about the percentage of recreation affected at each facility and the proposed construction period. Table 3.13-14 shows estimated losses to Granite Bay, Beal's Point, and Folsom Point during the construction period, compared to the No Action/No Project Alternative. The following sections identify and evaluate potential recreation impacts of Alternative 5.

Table 3.13-13
Timeframe of Construction at FLSRA Facilities under Alternative 5

FLSRA Site	*% of Visitors Affected*	*Construction Timeframe*	*# of Peak Recreation Season Affected*
Granite Bay	50%	Late summer 2013 to end 2014	1.5
Beal's Point	50%	Fall 2007 to end 2012	5
Folsom Point	100%	Fall 2007 to end 2013	6

Table 3.13-14
Loss of Visitors During Construction Period Under Alternative 5

Facility	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*
Granite Bay	-	-	-	-	-	-	46,683	163,892
Beal's Point	3,712	128,449	131,147	133,901	136,713	139,584	-	-
Folsom Point	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-
Total	7,425	256,899	262,293	267,802	273,425	279,167	189,198	163,892

Construction could result in a substantial loss of recreational use at Granite Bay.

Under Alternative 5, construction at Granite Bay would occur during the late summer 2013 and continue through 2014. There would be borrow development in the northern parts of Granite Bay under this alternative. It is assumed that about 50 percent of recreation at Granite Bay would be interrupted during the construction period. This analysis estimates a loss of about 46,700 visits during the latter half of 2013 and about 163,900 in 2014.

This impact would be a significant and unavoidable impact. Mitigation Measures RC-1 through RC-8 would be implemented, but would not reduce this impact to less than significant.

Construction could result in a substantial loss of recreational use at Beal's Point.

Under Alternative 5, construction at Beal's Point would begin in Fall 2007 after the peak recreation season and ensue through 2012. Effects would be similar to Alternative 4, but more borrow development would occur. Borrow development on both the southern and northern ends of Beal's Point would occur under this alternative. The length and magnitude of construction would be larger under this alternative relative to Alternative 4.

It is assumed that about 50 percent of recreation at Beal's Point would be interrupted during the construction period. This analysis estimates annual losses in recreation ranging from about 128,500 visits during 2008 to about 139,000 visits during 2012.

This impact would be a significant and unavoidable impact. Mitigation Measures RC-1 through RC-8 would be implemented, but would not reduce this impact to less than significant.

Construction could result in a substantial loss of use at the Beal's Point Campground.

Impacts to Beal's Point Campground would be similar to Alternative 1; however, construction activities would be greater and would occur over a longer period.

The loss of use at the Beal's Point Campground over the construction period would be potentially significant. Mitigation Measures in Section 3.10.4 and RC-1 through RC-8 would be implemented, but would not reduce this impact to less than significant.

Construction could result in a substantial loss of recreational use at Folsom Point.

Impacts to Folsom Point under Alternative 5 would be the same as Alternative 2. *Impacts would be significant and unavoidable. The government would implement Mitigation Measures RC-1 through RC-8, but impacts would still be significant while Folsom Point is closed.*

Construction traffic could result in substantial interruptions to recreation at Beal's Point and Granite Bay.

Alternative 5 involves more construction than all the other alternatives. More borrow material is required to support construction activities; therefore, more trucks would be needed to haul materials. *Impacts to the Beal's Point and Granite Bay recreation facilities would be significant during the construction period. Mitigation Measures RC-1 through RC-8 would be taken to reduce interruptions to recreation activities, but construction traffic would cause a significant and unavoidable impact to recreation.*

Construction could result in lost recreational use on trails at Granite Bay and Beal's Point.

Impacts under Alternative 5 would be the same as Alternative 2.

Impacts would be less than significant with Mitigation Measures RC-9 and RC-10.

Construction could result in lost recreational use on Folsom Point-Browns Ravine Trail.

Impacts to Folsom Point-Browns Ravine trail would be the same as Alternative 2.

This would be a temporary, significant and unavoidable impact.

Construction could result in cancellation of special events scheduled at FLSRA.

Effects to special events would be the same as Alternative 2. Events at Granite Bay and Beal's Point would be able to occur during the construction period. Events scheduled at Folsom Point would need to be relocated, rescheduled, or cancelled.

Mitigation Measure RC-7 would be implemented. If cancellation of events occurs, this would be a significant and unavoidable impact.

Construction could displace visitors and substantially contribute to overcrowded conditions at other regional recreation sites.

Overcrowding would likely occur during the peak summer seasons. Under this alternative, construction would displace about 50 percent of visitors at Beal's Point for 5 peak seasons and 50 percent of visitors at Granite Bay for 1.5 peak seasons.

The amount and duration of displaced visitors from Granite Bay and Beal's Point would cause substantial overcrowding at other recreation sites.

Similar to Alternatives 1 through 4, displaced visitors from Folsom Point would cause substantial overcrowding. Mitigation Measures RC-1 through RC-8 would be implemented, but this impact would be significant and unavoidable.

Installation and operation of security measures could interrupt recreation at FLSRA facilities.

Impacts would be the same as described for Alternative 1.

3.13.3 Comparative Analysis of Alternatives

Table 3.13-15 summarizes effects of the five action alternatives on recreation resources during the construction period. Construction on most alternatives would begin at the end of the 2007 peak season. The potential interruptions to recreation are dependent on the length of the construction period and the facility being affected. If construction takes longer than identified in the schedule, impacts to recreation would increase.

Table 3.13-15
Comparison of Alternatives Recreation Impacts Loss of Visits During Construction Season

	2007	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*Total 2007 to 2014*
Granite Bay									
Alternative 1	-	-	-	-	-	-	-	-	-
Alternative 2	-	-	-	-	-	-	-	-	-
Alternative 3	-	-	-	-	-	-	-	-	-
Alternative 4	-	-	-	-	-	-	46,683	163,892	210,575
Alternative 5	-	-	-	-	-	-	46,683	163,892	210,575
Beal's Point									
Alternative 1	742	25,690	13,143	-	-	-	-	-	39,575
Alternative 2	742	25,690	13,143	-	-	-	-	-	39,575
Alternative 3	-	21,985	-	-	-	-	-	-	21,985
Alternative 4	3,712	128,449	131,147	-	-	-	-	-	263,308
Alternative 5	3,712	128,449	131,147	133,901	136,713	139,584	-	-	673,506
Folsom Point									
Alternative 1	3,712	128,449	131,147	133,901	136,713	139,584	-	-	673,506
Alternative 2	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-	816,021
Alternative 3	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-	816,021
Alternative 4	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-	816,021
Alternative 5	3,712	128,449	131,147	133,901	136,713	139,584	142,515	-	816,021

Granite Bay is the most used facility at FLSRA; therefore, any interruptions to recreation at Granite Bay would affect more visitors relative to less used facilities. Alternative 1 would not have any construction at Granite Bay. Alternatives 2 and 3 would have some construction north of Granite Bay, but would not interrupt recreation at the facilities. Alternative 4 and 5 would have the most impacts to

recreation at Granite Bay because borrow activity could occur and construction would ensue over a longer period.

Under Alternatives 1, 2, and 4, recreation at Beal's Point would be interrupted in late 2007 through 2009. Alternative 4 would affect about 50 percent of the recreation because of increased borrow activity. Alternative 3 would have the shortest construction period at Beal's Point; therefore it would have the fewest impacts to recreation at Beal's Point.

Folsom Point would be fully closed under all the alternatives. Alternative 1 has a shorter scheduled construction period; therefore, it would have fewer impacts to recreation than the other alternatives. Impacts would be the same under Alternatives 2 through 5.

3.13.4 Mitigation Measures

This section identifies preliminary mitigation measures for impacts to recreation under the Folsom DS/FDR alternatives. Reclamation and the Corps would continue to coordinate with DPR to identify opportunities to avoid significant recreation impacts at FLSRA. If significant recreation impacts cannot be avoided, the agencies would work within their guidance and authority to provide mitigation for these impacts. Final determination by the federal agencies on actual mitigation measures will be specified in the Record of Decision (ROD). Potential mitigation measures could include but are not limited to the measures listed below.

RC-1: All construction-related damages to recreation facilities would be replaced in kind by the appropriate agency, in accordance with policy and guidance.

RC-2: The lead construction agency, would post signage and public announcements to inform the public of construction activities, facility closures at Folsom Point, and potential increased crowding and waiting times at Beal's Point and Granite Bay.

RC-3: Construction, borrow and staging areas would be sited as far away from recreation areas as practical in order to minimize recreation impacts, as determined by the lead construction agency. When a staging area cannot be moved or relocated, appropriate measures would be taken for noise and safety considerations.

RC-4: Borrow development, staging and construction activities would be re-contoured by the lead constructing agency, as appropriate, to pre construction conditions, or to contours which do not pose a safety hazard.

RC-5: After all construction activities are complete at Beal's Point, Folsom Point, or Granite Bay, all disturbed recreation areas and facilities would be restored as closely as possible to pre-construction conditions.

RC-6: The lead construction agency would include in the plans and specifications, if appropriate, a plan to ensure that the entrance stations at Beal's Point, Folsom Point and Granite Bay would meet public safety and traffic requirements during construction.

RC-7: Construction hours would be scheduled to minimize impacts during peak recreation use periods, holidays, and special events, as practical.

RC-8: The lead construction agency would develop a traffic management plan for all public roads within the recreation areas where both public and construction traffic occur. The plan would include measures such as flagmen and appropriate signage. The traffic plan would be submitted to the appropriate entities, or included in the Plans and Specifications for construction. An appropriate mile per hour speed limit would be imposed in all public areas close to construction. Construction crews and traffic would utilize internal haul routes, to the extent practical.

RC-9: Suitable detours would be established, with appropriate signage, for any bike, equestrian, or pedestrian trails that are interrupted by construction, per agency guidance and policy. Public service announcements would also be distributed and posted to inform the public of route changes.

RC-10: Any damage to existing improved trails from construction would be repaired in kind after construction is completed by the lead construction agency, per agency policy and guidance.

3.13.5 Cumulative Effects

Table 5-1 describes the projects included in the cumulative analysis. Besides, the Folsom DS/FDR, the other projects would not restrict access to or use of major recreation sites at the FLSRA. The Folsom Dam Road Closure will continue to redirect traffic through city streets and may cause further traffic interruptions to those trying to access FLSRA facilities. The New Folsom Bridge should relieve some of the traffic interruptions. Construction of the bridge should not have any direct effect on FLSRA facilities. The DPR, in partnership with Reclamation, recently began work on the integrated FLSRA General Plan and Resource Management Plan Update. This process would update the current general plan, as well as the long-range vision for the area. The General Plan will result in improvements to the FLSRA facilities.

The Folsom DS/FDR impacts to recreation would be cumulatively considerable during the construction period because of the magnitude of potential decreases in visitation at FLSRA facilities.

3.14 Public Services and Utilities

Public services and utilities include electricity, natural gas, water, stormwater, wastewater, solid waste, telecommunications, roads, police, fire, and parks and recreation. The following section discusses the regulatory setting, the existing conditions, and the potential effects of the Folsom DS/FDR alternatives on public services and utilities. A discussion of existing recreational resources in the Folsom Facility area and impacts from the Folsom DS/FDR to such resources are discussed in greater detail in Section 3.13, Recreation Resources, and Chapter 4, Socioeconomics.

3.14.1 Affected Environment/Existing Conditions

3.14.1.1 Area of Analysis

The area of analysis for this section includes the area surrounding the Folsom Facility, but does not include the American River or Lake Natoma, downstream of Folsom Dam. The area of analysis generally follows the 500-foot contour line around the entire Folsom Facility, and also includes all potential borrow, staging, and construction areas.

3.14.1.2 Regulatory Setting

This section describes the federal and state regulatory setting for public services and utilities.

Solid Waste

Federal

At the federal level, the USEPA regulates the management of non-hazardous solid waste according to the Resource Conservation and Recovery Act (RCRA), Subtitle D (USEPA 2005b). Under RCRA, the USEPA is also in charge of regulating the handling and disposal of hazardous wastes.

State

Under the jurisdiction of the California Environmental Protection Agency (California EPA), the California Integrated Waste Management Board (CIWMB) is charged with managing solid waste. Title 14 , Chapter 3, of the CCR, addresses minimum standards for solid waste handling and disposal (CIWMB 2004).

Public Services

Federal

***Police and Fire*:** There are no federal regulations specifically associated with the provision of police, or fire services. Local county and city departments establish their own guidelines and rules regarding services.

State

Police: There are no specific state regulations related to police service. Local county and city departments establish their own guidelines and rules regarding services.

Fire: The California Office of the State Fire Marshal (COSFM) indirectly regulates fire services by regulating buildings and controlling substances that could cause fires (COSFM 2003). Local county and city departments establish their own guidelines and rules for fire services.

Parks and Recreation: The California State Park and Recreation Commission approves general plans for State Parks, classifies units of the State Park system, and establishes general policies on the protection and development of State Parks (DPR 2004).

3.14.1.3 Environmental Setting

The following section provides a description of the existing utilities and public services at the Folsom Facility, starting at the northwest end of the reservoir and continuing counter-clockwise around the reservoir. Information was obtained from the 2002 *American River Watershed Investigation Long-Term Study Final Supplemental Plan Formulation Report EIS/EIR* by the Corps, the 2006 *Folsom Bridge SEIS/SEIR by the Corps,* and the DPR 2003 *Folsom Lake State Recreation Area Resource Inventory* by Wallace, Roberts, and Todd et al., consultation with Reclamation, and various site visits.

Rattlesnake Bar

There are no water or sewer pipelines at Rattlesnake Bar. There is a well system but it is no longer in operation. There are porta-potties and pre-cast concrete vault toilets (pre-cast concrete restrooms with lined pits that store waste until it can be pumped out and taken to a treatment plant) available in the parking lot. The entrance kiosk to Rattlesnake Bar has telephone service and electrical service provided by PG&E. Power lines extend to the well and lights in the parking lot.

Horseshoe Bar (Sterling Point, Eden Rock)

There are no public utilities at Horseshoe Bar.

Granite Bay

Granite Bay is generally divided into three main areas, the Granite Bay boat launch area in the south, the Granite Bay Main Beach just north of the boat launch area, and Oak Point, Doton's Point, and Beeks Bight north of the Main Beach. The boat launch area has Stage 1 through 4 boat ramps as well as a 5 percent boat ramp. The Main Beach includes a snack bar, concessions, restrooms, and an activity center. There are no major buildings that require utilities past the Main Beach.

There are three restrooms at the Granite Bay Main Beach, one restroom at the Stage 4 boat ramp, and one restroom at the 5 percent boat ramp that are connected to San Juan Water District (SJWD) water system. Sewer connects to a leach field system.

There are four lift stations in Granite Bay; three serve the three restrooms at the Main Beach and one serves the Stage 4 boat ramp. There is also a lift station for the new restroom at the 5 percent boat ramp.

SJWD provides water services for the residence, shop, and kiosk restrooms at the Main Beach. Sewer is connected to a septic tank and leach fields.

Utilities at the entrance kiosk, the residence, the shop, and concession stand at the Main Beach include telephone and electricity.

Restrooms at the activity center, Main Beach, and Stage 4 boat ramp have electricity as do all boat ramps.

There are no utilities at the Horse Assembly Area, Oak Beach, Beeks Bight, or Doton's Point. The Horse Assembly Area has a porta-pottie and Oaks Beach, Beeks Bight, and Dotons Point have pre-cast concrete vault toilets.

Beal's Point

All restrooms at Beal's Point have flush toilets with sewer and water service. SJWD provides water through a water line that extends from Folsom-Auburn Road to the campgrounds, two restrooms and showers, the food concession, restrooms next to the food concession, and restrooms in the day use parking lot area. Placer County provides the sewer service with three sewer lift stations, one at the food concession and two at the Beal's Point Campground. An existing sewer pipeline runs through the upper right abutment of Dike 4 and extends towards Auburn-Folsom road (Sherer 2006). Telephone lines extend to the kiosk, lifeguard tower, and food concession.

PG&E provides electricity for Beal's Point and underground lines extend to restrooms, food concession, and RV campsites. Electric water heaters are used to heat water for showers and at the food concession and restrooms. Propane gas heaters heat water for the RV sites. Of the 69 campsites at the Beal's Point Campground, 20 are RV campsites with electrical hookups.

DPR Gold Fields Headquarters/Bureau Headquarters

Water and sewer lines are connected to the City of Folsom lines on Auburn Road. Electricity is provided by Sacramento Municipal Utility District (SMUD), Western Area Power Administration (WAPA), and PG&E. Telephone and internet services are provided to the DPR/Reclamation headquarters by SBC fiber-optic cables that use the existing SMUD 12 kV line. Hot water is heated by propane.

Main Dam
The City of Roseville shares an 84-inch raw water pipeline with SJWD that extends from the right abutment of the Main Concrete Dam towards the SJWD Sydney N. Peterson Water Treatment Plant (Peterson water treatment plant) just south of Beal's Point.

A 42-inch raw water pipeline, referred to as the Natomas Pipeline extends from the left abutment of the main concrete dam and provides water to the City of Folsom and Folsom State Prison.

Below the right abutment of the main concrete dam is the Folsom Powerplant. The Folsom Powerplant has three generating units with an average generating capacity of 198,720 kW**.**

Corps Resident Office
The Corps Resident office receives power from a SMUD 12 kV line that was a formerly abandoned 112 kV PG&E power line. An 8-inch fire protection pipeline is connected to the existing 42-inch Natomas Pipeline to provide fire protection to the Corps Residence Office.

Observation Point
There are no public utilities at Observation Point. The parking lot and kiosk are currently closed to the public.

Folsom Point
Folsom Point has two pre-cast concrete vault toilets in the day use area and a restroom at the boat launch area.

A 3-inch water main and a sewer line extend to the kiosk and restrooms at the boat launch. Sewer lift stations transport sewage back to East Natoma Road.

The Folsom Point kiosk has electricity that is connected to the City of Folsom utility lines on East Natoma Road.

MIAD area
A power line extends to a shed at the east end of MIAD.

Browns Ravine
Browns Ravine is the only marina at the Folsom Facility. It has flush toilets and a store. Water and sewer lines extend from El Dorado Irrigation District utilities off Green Valley Road to restrooms in the parking lot. Two El Dorado Irrigation District lift stations serve the restrooms. Electricity and telephone service is available for the shop and restrooms.

Storm drains and a culvert are installed in the Browns Ravine parking lot.

Old Salmon Falls (Falcon Crest, Jack Shack, Monte Vista)
The Old Salmon Falls parking lot has a porta-pottie and the Falcon Crest area has drinking fountains. The Monta Vista campground is not in operation and does not have a septic system but does have drinking fountains.

Sweetwater Creek
There are no public utilities or restrooms at Sweetwater Creek.

Salmon Falls (Lower half of South Fork American River, west of Skunk Hollow)
Salmon Falls has a parking lot, four pre-cast concrete vault toilets, and drinking water. There is no public water or sewer service. Telephone service is available but is not in use.

Skunk Hollow (Lower Half of South Fork American River)
Skunk Hollow has no public utilities. There are two pre-cast concrete vault toilets at the end of the parking lot.

Peninsula
The Peninsula has a campground with 104 camp sites, five restrooms, two boat ramps, and small amphitheatre. The restrooms at the Peninsula are flush toilets. The sewer system consists of a collection system and leach field, where waste is gravity fed to a lift station and then to a leach field. There are also pre-cast vault toilets in the parking lot. The Peninsula campground has a potable water system that pumps well water into a 50,000 gallon tank and delivers water to the five restrooms and various drinking fountains.

Mormon Island Wetlands Preserve
Currently there are no utilities at Mormon Island Wetlands Preserve. An unpaved road and parking lot provide access to the area.

Easements and Parcel Leases
Several agencies and companies have easements or parcel leases in the vicinity of the Folsom Facility. The easements provide the utility owners with permanent and guaranteed access to pipelines or transmission lines for maintenance and repair purposes (Wallace, Roberts, and Todd et al. 2003). Table 3.14-1 below provides a list of the easements and parcel leases and a general description of their location.

Table 3.14-1 ***Easements and Parcel Leases at the Folsom Facility***		
Company/Agency	***Easement/Parcel Lease***	***Location***
City of Folsom	42-inch raw water pipeline (Natomas Pipeline) (transitions to a 60-inch raw water pipeline).	Left abutment of Main Concrete Dam.
City of Roseville	84-inch raw water pipeline (shared with SJWD).	Extends from right abutment of Main Concrete Dam to Peterson water treatment plant.
	60-inch pipeline that connects to the 84-inch pipeline.	Runs south of Peterson Water Treatment Plant towards Folsom Auburn Road.
WAPA	Two overhead power lines.	Both originate from the Folsom Powerhouse. One extends west through the unit to Folsom Auburn Road, the other follows the American River south.
SMUD	230 kilovolt transmission line.	Along the northern boundary of Folsom Prison; carries electricity from WAPA facilities to the City of Folsom.
	12 kV power line.	Uses a 115 kV PG&E abandoned line and provides power to Corps Resident Office.
PG&E	115 kV electric tower line.	Passes through the Folsom Facility in the areas of Rattlesnake Bar and Granite Bay.
	Small distribution line - less than 50 kV .	Extends from the 115 kV line to Peninsula Campground.
	Newcastle Powerhouse.	End of Newcastle Road off Rattlesnake Road, east of Rattlesnake Bar.
El Dorado Irrigation District	Raw water intake facility that includes intake pipelines, a surge tank, and pump station.	South Fork of American River near Planeta Way.
	30-inch raw water pipeline.	From the intake facility.
SJWD	84-inch raw water pipeline (shared with City of Roseville).	Extends from right abutment of Main Concrete Dam to Peterson water treatment plant.
	51,200 gallon potable water hydropneumatic tank.	Mooney Ridge off the end of Skyway Lane, south of Granite Bay.
	Leases a parcel of land called Parcel C.	North end of Peterson water treatment plant.

Source: (Wallace, Roberts, and Todd et al. 2003, Corps 2002, Corps 2006).

Landfills

The Sacramento County (Kiefer) Landfill currently serves the City of Folsom.

Roads

Roads surrounding the Reclamation Central California Area Office provide operation and maintenance access to the main dam, powerplant, and pumping plant and generally remain closed to the public. The remaining roads at the Folsom Facility are managed by DPR as part of the Folsom Lake State Recreation Area and are open to

the public. There are several access roads and trails that run along the top of dams and dikes or over them.

Public Services

Police: The Folsom Police Department provides police services for the City of Folsom and has a total staff of 103 (City of Folsom 2002b).

Fire: Four fire stations in the City of Folsom, with a total staff of approximately 74, provide fire/rescue and emergency medical services (City of Folsom 2002a).

Parks and Recreation: The majority of the land around Lake Natoma and Folsom Reservoir is owned by Reclamation. In 1956, DPR entered into agreement with Reclamation to manage the recreation facilities at the Folsom Lake State Recreation Area and Lake Natoma (Wallace, Roberts, and Todd et al. 2003). DPR is generally responsible for maintenance of the recreation facilities, trails, roads, and parking lots within the Folsom Facility.

Existing Potential Inundation of Utilities

Under existing conditions, Folsom Reservoir's high water elevation is approximately 466 feet and it rarely rises above this elevation; however, a severe storm event could cause levels to rise above this elevation. Beal's Point, Granite Bay, and Browns Ravine range in elevation from 465 to 475 feet (Reclamation et al. 2006). If the reservoir were to reach an elevation of 470 feet, portions of Beal's Point, Granite Bay, and Browns Ravine could be inundated, including several utilities, roads, and parking lots. Salmon Falls Road, which crosses the South Fork American River, would have all restroom facilities, trails, and parking lots completely inundated at an elevation of 482 feet (Reclamation et al. 2006). Under existing conditions, the potential for the reservoir to reach an elevation above 466 feet is low.

3.14.2 Environmental Consequences/Environmental Impacts

3.14.2.1 Assessment Methods

This impacts analysis takes into consideration the potential effects on public services and utilities from the five action alternatives and the No Action/No Project Alternative. The analysis takes into account the potential for borrow activities to require the relocation of utilities. Alternatives 1, 2 and 3 would require the least amount of borrow and would likely be able to avoid most utility relocations.

In addition to site visits and consultation with Reclamation, the following documents were used to describe the potential effects of the alternatives on public services and utilities:

- American River Watershed Long-Term Study Final Supplemental Plan Formulation Report EIS/EIR by the Corps, 2002

- Folsom Lake State Recreation Area Resource Inventory by CDPR, 2003
- PASS II, by Reclamation, Corps, SAFCA, DWR, State Reclamation Board, 2006
- Folsom Bridge SEIS/SEIR, by the Corps, 2006.

3.14.2.2 Significance Criteria

Impacts to public services and utilities would be considered potentially significant if Folsom DS/FDR actions would:

- Require the construction, expansion, or re-location of infrastructure or facilities for electricity, natural gas, water, wastewater, stormwater, and telecommunications, which could result in interruptions in service or adverse environmental effects;
- Exceed landfill capacity with waste generated by the project;
- Damage existing parking lots, roads, or trails at the Folsom Facility;
- Create a demand for public services that substantially exceeds the capacity of public service agencies (by increasing response times or requiring large increases in staff); or
- Impair or interfere with emergency or evacuation plans.

3.14.2.3 Environmental Consequences/Environmental Impacts

Environmental Consequence/Environmental Impacts of the No Action/No Project Alternative

The environmental consequences/impacts of the No Action/No Project Alternative would remain similar to existing conditions. Without the Folsom DS/FDR, there would be no impacts to existing utilities as no relocations would be required. There would be no changes in public services.

The No Action/No Project Alternative would have no effect on utilities or public services.

Environmental Consequences/Environmental Impacts of Alternative 1

Electricity

Construction activities could require the relocation of electricity infrastructure.

Several power lines and utility poles may require relocation during construction, including:

- A power line that connects to a shed at the east end of MIAD;

- Approximately five wood poles and 1,500 feet of conductor of the existing SMUD 12-kilivolt (kV) service to the Corps Resident Office;
- A 4,160 – volt power line that serves Reclamation's yard on the right abutment of the Main Concrete Dam could require relocation of seven poles and approximately 2,000 feet of conductor; and
- Power lines that serve the Folsom Point entrance kiosk.

The relocation of electrical infrastructure above could result in interruptions in service.

This impact would be potentially significant. Mitigation Measures PSU-1 and PSU-2 would reduce the impact to a less than significant level.

Electricity would be required to power processing and concrete batch plants.

In order to sort and crush borrow material and to create concrete, processing plants and concrete batch plants would be established in several areas around Folsom Reservoir. The processing plants and concrete batch plants would have the option of either using diesel powered generators or extending existing electricity infrastructure. If existing electricity infrastructure is used, this could require the extension of existing infrastructure such as towers, power lines, or poles. The construction/relocation of electrical infrastructure could result in interruptions in service.

This impact would be potentially significant. Mitigation Measures PSU-1 and PSU-2 would reduce the impact to a less than significant level.

Electricity may be required for various types of construction equipment.

Various types of construction equipment could require power to operate. Construction crews would likely use onsite generators or existing electricity infrastructure. This could require the extension of existing power lines. This would be unlikely to result in interruptions in service and would not affect any other existing utilities.

This impact would be less than significant.

Construction activities may require the temporary raising of power lines.

Several overhead power lines cross the entrance of Granite Bay. During construction, large vehicles may need to have these power lines raised in order to safely pass under them. In any instances where overhead lines could create obstacles for construction

vehicles, agencies would likely temporarily raise the power lines with large poles in order to avoid utility relocations and interruptions in service.

This impact would be less than significant.

During construction, a new substation would be constructed.

To provide a source of power for various aspects of the Main Concrete Dam and Auxiliary Spillway, a new substation would need to be constructed. This substation would tie into existing SMUD power. Construction of this substation could result in interruptions in service.

This impact would be potentially significant. Mitigation Measures PSU-1 and PSU-2 would reduce the impact to a less than significant level.

Installation and operation of security measures would have impacts to utilities.

The installation of stoplights, lights, cameras, and intercoms around the Main Concrete Dam, MIAD, Dikes 4,5, 6, and 7, Left Wing Dam, Right Wing Dam, Beal's Point, and Folsom Pumping Plant, would require electricity. In order to provide power to these security features, power lines would be installed in trenches. A temporary power source such as a generator, or an upgrade of the solar power source currently in use, could be utilized until a permanent power source could be constructed. Construction actions including digging trenches and the placement of concrete poles for cameras could damage existing utilities. The conversion to a permanent power source could result in interruptions in service.

This impact would be potentially significant. Mitigation Measures PSU-1 and PSU-2 would reduce the impact to a less than significant level.

Natural Gas

No known existing natural gas infrastructure or facilities exist in the study area, therefore there would be no impacts to natural gas.

Water

Construction of the Auxiliary Spillway would require the relocation of water infrastructure.

The chute alignment for the new Auxiliary Spillway would cross a portion of the aboveground 42-inch diameter raw water pipeline (Natomas Pipeline), which provides water to the City of Folsom and the California Department of Corrections water treatment facilities. Approximately 300 feet of the existing pipeline may need to be relocated. The City of Folsom has stated that it will not accept interruptions in service for more than several hours. In addition, an 8-inch diameter fire protection pipeline and metering station that serve the Corps Resident Office would also have to

be relocated. Mitigation Measure WS-1 in Section 3.2, Water Supply, would reduce this impact to a less than significant level.

This impact would be less than significant with implementation of Mitigation Measure WS-1.

Construction activities could require the relocation of existing water infrastructure.

Construction and borrow activities could require the relocation of existing water infrastructure including:

- An existing 3-inch water main that serves the entrance kiosk and restroom facilities at the boat launch at Folsom Point; and

The relocation of water infrastructure listed above could result in interruptions in service.

This impact would be potentially significant. Mitigation Measure PSU-1 would reduce this impact to a less than significant level.

Wastewater

Construction activities could require the relocation of existing wastewater facilities.

Construction activities around the Folsom Facility may lead to the damage or removal of existing restroom facilities. Mitigation Measure RC-1 in Section 3.13 states that any damaged or removed recreation facilities would be replaced in kind; therefore this impact would be less than significant.

This impact would be less than significant with implementation of Mitigation Measure RC-1.

Construction activities would require the relocation of existing wastewater infrastructure.

A mounded leach field of approximately 7,500 square feet at the Corps Resident Office would need to be relocated to a site adjacent to the existing septic tank before construction of the Auxiliary Spillway.

This impact would be potentially significant. Mitigation Measure PSU-1 would reduce this impact to a less than significant level.

Construction activities would likely result in the need for additional restroom facilities.

Construction workers onsite would likely require additional restrooms in various construction areas. Contractors would likely rent porta-potties for the duration of the construction.

This impact would be less than significant.

Construction activities could require relocation of wastewater infrastructure at Dike 4.

Construction activities at Dike 4 could require the relocation of an existing sewer pipeline that runs through the upper right abutment of Dike 4 and out towards Auburn-Folsom Road. This could result in interruptions in service.

This impact would be potentially significant. Mitigation Measure PSU-1 would reduce the impact to a less than significant level.

Construction activities could require the relocation of existing wastewater infrastructure at Folsom Point.

Borrow activities in the vicinity of Folsom Point could require the relocation of an existing sewer line that serves the restroom facilities at the boat launch.

This impact would be potentially significant. Mitigation Measure PSU-1 would reduce this impact to a less than significant level.

Stormwater

Construction activities would not require the relocation of existing infrastructure or the installation of new stormwater infrastructure; therefore, there would be no impact to stormwater infrastructure.

Solid Waste

Construction activities would generate solid waste.

Construction activities would generate various types of solid waste, such as litter, and miscellaneous construction waste such as concrete or steel, that would require disposal in a landfill. Construction activities could also generate hazardous wastes that would require proper disposal. All non-hazardous waste would be trucked to a local landfill for disposal. Because construction is expected to continue through the end of 2014, a large quantity of waste could be sent to the local landfill.

This impact would be potentially significant but Mitigation Measures PSU-3 through PSU-5 would reduce the impact to a less than significant level.

Construction activities would generate borrow material waste.

Excavation at certain borrow areas may result in quantities of material that are not suitable for use as shell or filter material for dikes or dams. Any excess borrow material would be applied to MIAD or placed in the reservoir and would not affect existing landfills.

This impact would be less than significant.

Telecommunications
Construction activities could require the relocation of telecommunications infrastructure.

Telephone and internet is provided to the Corps Resident Office by SBC, which uses SMUD's 12 kV poles. The fiber-optic cables for telephone and internet could need to be relocated and would follow the new 12 kV alignment. Telephone service to a Reclamation station uses several existing 4,160 volt power poles that provide power to the Reclamation Office. If the 4,160 volt power line and poles require relocation, two telephone poles and approximately 500 feet of wire would also need to be relocated. The relocation of telecommunication infrastructure could result in interruptions in service.

This impact would be potentially significant. Mitigation Measures PSU-1 and PSU-2 would reduce this impact to a less than significant level.

Roads
Construction activities could damage existing roads.

Construction activities such as the use of heavy equipment, could damage existing roads throughout the Folsom Facility. Mitigation Measure RC-1 in Section 3.13 would reduce this impact to less than significant by replacing all damaged facilities in kind.

This impact would be potentially significant. Mitigation Measure RC-1 in Section 3.13 would reduce this impact to less than significant.

Construction activities could require alterations to Folsom Dam Road on top of the Right Wing Dam and Left Wing Dam.

The Right Wing Dam may require a retaining wall near the intersection of the road and the crest of the upstream side of the road. A transition section could be required between Right Wing Dam and the Main Concrete Dam if the construction activities result in a difference in crest elevation.

In addition, the road on top of Left Wing Dam could have to be removed during construction. A new road would be installed with a metal beam guardrail on the downstream side and a concrete parapet wall on the upstream side. The road may

also require a transition section if there is a difference in the crest elevation of Left Wing Dam and the Main Concrete Dam. Construction of these features would not affect any other existing roads or trails. This road is not open to the public and would therefore be considered less than significant. During construction, alternate routes would be made available to Reclamation for operation and maintenance access.

This impact would be less than significant.

A new Auxiliary Spillway would require construction of a maintenance access road and access ramp.

The new Auxiliary Spillway would require construction of a new access road to allow Reclamation access for operation and maintenance. This new access road would likely run across the new spillway and would connect to the new bridge access road that would be constructed by the Corps as part of the Folsom Bridge project. This road could be bench-cut into the slope of the spillway inlet channel. The new access road would be built to withstand semi-trucks with oversized loads.

In addition to an access road, a vehicle ramp would be constructed to allow vehicle access into the Auxiliary Spillway channel. The new ramp would be constructed of concrete and would enter on the northern face near the start of the spillway channel, would angle toward the river channel, and then exit through the training walls onto the floor of the spillway channel. The new access road and access ramp would be unlikely to affect existing roads or utilities.

This impact would be less than significant.

Construction of a new Auxiliary Spillway could require armoring of the existing Folsom Powerplant access road.

The existing access road to the Folsom Powerplant may require armoring to prevent erosion damage from releases by the new Auxiliary Spillway. This would not affect any other existing roads or utilities. During construction, alternate routes would be made available to Reclamation for operation and maintenance access.

This impact would be less than significant.

Relocation of the Natomas Pipeline would require construction of a new access turnout.

The Natomas Pipeline, which would be relocated because of the new Auxiliary Spillway, would likely be placed between the new Auxiliary Spillway channel and the new Folsom Bridge Road. City of Folsom employees would require access to this pipeline for operation and maintenance. Access could be difficult because the new Folsom Bridge Road would be on an embankment in this area. One option would be

to construct a turnout and shoulder turn lane on the north side of Folsom Bridge Road, which would be accessible to westbound traffic. Construction of a turnout and shoulder turn lane would not affect existing roads or utilities.

This impact would be less than significant.

Construction of the Auxiliary Spillway could require the re-alignment of the access road to Left Wing Dam toe and the existing stilling basin.

A portion of the existing access road from Folsom Dam Road to the Corps Resident Office, the toe of Left Wing Dam, and the stilling basin would need to be realigned because of the new Auxiliary Spillway control structure and chute, and the new Folsom Bridge Road embankment. The new sections of the road would be paved and would still allow access from the Left Wing Dam toe to the Corps Resident Office and the toe of the Main Concrete Dam and stilling basin. This would not affect any other existing roads or utilities. During construction, alternate routes would be made available to Reclamation for operation and maintenance access.

This impact would be less than significant.

Construction activities would require the development of new internal haul roads.

In order to provide access to all areas around the reservoir, a series of in-reservoir roads would be constructed. These roads would likely consist of soil and gravel and would be constructed when the reservoir is low. When the reservoir fills, these roads would become inundated and could require reconstruction each year. The construction of in-reservoir roads would not affect any existing roads or utilities because it would occur in the reservoir.

This impact would be less than significant.

Public Services

Construction activities could increase emergency response times to the Folsom Facility.

Construction activities such as the stockpiling of materials or equipment may block sections of existing roadways or parking lots within the Folsom Facility. Several existing paved or unpaved roads could be removed during construction of the dikes and dams. This could reduce the number of access routes available to emergency vehicles or increase the response times if emergency vehicles are forced to take longer routes.

This impact would be potentially significant. Mitigation Measure PSU-6 would reduce the impact to a less than significant level.

Construction activities could create the need for additional police staff.

Construction activities would not create the need for additional police staff. Contractors would be responsible for hiring 24-hour security for the construction site.

This impact would be less than significant.

Construction activities could create the need for additional fire protection staff.

Construction workers could be working in potential fire risk areas to excavate borrow materials and to perform other construction activities. Although the potential for fires would exist, it is unlikely that additional fire staff would be needed to address the fire risk. No new buildings or facilities would be constructed that would require additional fire protection staff. Construction crews would take precautions to reduce the chances of fire (see Section 3.17, Public Health and Safety).

This impact would be less than significant.

Construction activities could create the need for additional parks and recreation staff.

Construction activities would not require additional parks and recreation staff. All security would be the responsibility of the contractor.

This impact would be less than significant.

Construction activities could increase the emergency staff to population ratio.

A large number of construction workers would be onsite at all times during the seven years of construction, and certain recreation areas would also remain open to the public during construction. The Folsom Facility has over 2,000 parking spots and can accommodate well over 2,000 people per day. Because construction workers at the Folsom Facility are not expected to exceed 300 people per shift on any given day, workers would be unlikely to exceed the Folsom Facility's visitor capacity and would therefore have little impact on the emergency staff to population ratio.

This impact would be less than significant.

Environmental Consequences/Environmental Impacts of Alternative 2
Electricity
Because Alternative 2 would involve construction on Dikes 1 through 3, several utilities, in addition to those described under Alternative 1, could require relocation.

The impacts to electricity would be similar to Alternative 1 with the following additional impact:

- Several power lines running beneath the boat launch area in front of Dike 3 could require relocation.

Mitigation Measures PSU-1 and PSU-2 would reduce any potentially significant impacts to a less than significant level.

Natural Gas
No existing natural gas infrastructure or facilities exist in the study area; therefore, there would be no impacts to natural gas.

Water

Construction activities could require the relocation of existing water infrastructure.

Construction and borrow activities could require the relocation of existing water infrastructure including:

- Water pipelines running beneath the boat launch area in front of Dike 3 that provide water service to the restrooms at the boat launch.

- An existing 3-inch water main that serves the entrance kiosk and restroom facilities at the boat launch at Folsom Point; and

The relocation of water infrastructure listed above could result in interruptions in service.

This impact would be potentially significant. Mitigation Measure PSU-1 would reduce this impact to a less than significant level.

The remaining impacts to water would be the same as those discussed for Alternative 1. Mitigation Measures PSU-1 would reduce any potentially significant impacts to a less than significant level.

Wastewater
The impacts to wastewater would be the same as Alternative 1. Mitigation Measures PSU-1 (Section 3.13) would reduce any potentially significant impacts to a less than significant level.

Stormwater
Construction activities would not require the relocation of existing infrastructure or the installation of new stormwater infrastructure; therefore, there would be no impact to stormwater infrastructure.

Solid Waste
The impacts to solid waste would be the same as Alternative 1. Mitigation Measures PSU-3 through PSU-5 would reduce any potentially significant impacts to a less than significant level.

Telecommunications
The impacts to telecommunications would the same as Alternative 1. Mitigation Measures PSU-1 and PSU-2 would reduce any potentially significant impacts to a less than significant level.

Roads
The remaining impacts to roads would be the same as Alternative 1. Mitigation Measure RC-1 in Section 3.13 would reduce any potentially significant impacts to a less than significant level.

Public Services
The impacts on public services would be the same as Alternative 1. Mitigation Measure PSU-6 would reduce any potentially significant impacts to a less than significant level.

New Embankments/Flood Easements
A series of new embankments/flood easements could be constructed around the Folsom Facility to raise areas of low elevation. The number of new embankments/flood easements and their locations have not yet been determined.

Construction of new embankments/flood easements could require the relocation of utilities.

Construction of new embankments/flood easements could require the relocation of utilities.

This impact would be potentially significant. Mitigation Measures PSU-1 and PSU-2 would reduce these impacts to a less than significant level.

Construction of the new embankments/flood easements could require new roads.

Construction of new embankments/flood easements could require the construction of new roads to allow construction and maintenance vehicles access. This would not affect existing roads.

This impact would be less than significant.

Construction of the new embankments/flood easements would be unlikely to affect public services.

Construction of the new embankments/flood easements would be unlikely to have any effects on police, fire, or parks and recreation services.

There would be no impact to public services.

Inundation
An increase in flood storage could inundate utilities during a severe storm event.

Because this alternative includes a potential raise of the dams and dikes, this would potentially increase the flood storage capacity at Folsom Reservoir. During a severe storm event, utilities around the Folsom Facility could become inundated. The potential for such a severe storm is very low and the inundation period would only last a few days until the water could be released.

This impact would be potentially significant but could be reduced to a less than significant level with Mitigation Measure PSU-7.

Environmental Consequences/Environmental Impacts of Alternative 3
The environmental effects of Alternative 3 would be the same as those discussed under Alternative 2. Mitigation Measures PSU-1 through PSU-7, RC-1, and WS-1 would reduce any impacts to a less than significant level.

Environmental Consequence/Environmental Impacts of Alternative 4
The environmental effects of Alternative 4 would be the same as those discussed under Alternative 2. Mitigation Measures PSU-1 through PSU-7, RC-1, and WS-1 would reduce any impacts to a less than significant level.

Environmental Consequences/Environmental Impacts of Alternative 5
The impacts under Alternative 5 would be similar to Alternative 2, but would not involve any impacts associated with construction of the new Auxiliary Spillway. The impacts under Alternative 5 would also be similar to Alternative 1, but would involve construction on Dikes 1 through 3, and would involve a raise and the potential for new embankments.

Electricity
Construction activities would require the relocation of electricity infrastructure.

Several power lines may require relocation during construction, including:

- Power lines running beneath the boat launch area in front of Dike 3;
- An existing power line that connects to a shed on the east end of MIAD; and
- The power lines that serve the Folsom Point entrance kiosk.

The relocation of electrical infrastructure could result in interruptions in service.

This impact would be potentially significant but Mitigation Measures PSU-1 through PSU-2 could reduce this impact to a less than significant level.

The remaining impacts to electricity from Alternative 5 would the same as Alternative 1. Mitigation Measures PSU-1 through PSU-2 would reduce any impacts to less than significant.

Natural Gas
No existing natural gas infrastructure or facilities exist in the study area; therefore there would be no impacts to natural gas.

Water
Construction activities could require the relocation of existing water infrastructure.

Construction and borrow activities could require the relocation of existing water infrastructure including:

- An existing 3-inch water main that serves the entrance kiosk and restroom facilities at the boat launch at Folsom Point; and
- Water pipelines beneath the Dike 3 boat launch that serve the restrooms at the boat launch.

These relocations could result in interruptions in service.

This impact would be potentially significant but Mitigation Measure PSU-1 would reduce this impact to a less than significant level.

Wastewater
These impacts would be the same as Alternative 1, except the leach field at the Corps Resident Office would not require relocation because the Auxiliary Spillway would not be constructed. Mitigation Measures PSU-1 and RC-1 in Section 3.13 would reduce any impacts to less than significant.

Stormwater
Construction activities would not require the relocation of existing stormwater infrastructure or the installation of new stormwater infrastructure; therefore, there would be no impact to stormwater infrastructure.

Solid Waste
These impacts would be the same as Alternative 1. Mitigation Measures PSU-3 through PSU-5 would reduce any potentially significant impacts to a less than significant level.

Telecommunications
The Auxiliary Spillway would not be constructed under Alternative 5; therefore there would be no impacts to telecommunications.

Roads
Construction activities could damage existing roads.

Construction activities such as the use of heavy equipment, could damage existing roads throughout the Folsom Facility. Mitigation Measure RC-1 in Section 3.13 would reduce this impact to less than significant by replacing all damaged facilities in kind.

This impact would be potentially significant. Mitigation Measure RC-1 in Section 3.13 would reduce this impact to less than significant.

Construction activities could require alterations to Folsom Dam Road on top of the Right Wing Dam and Left Wing Dam.

The Right Wing Dam may require a retaining wall near the intersection of the road and the crest of the upstream side of the road. A transition section could be required between Right Wing Dam and the Main Concrete Dam if the construction activities result in a difference in crest elevation.

In addition, the road on top of Left Wing Dam could have to be removed during construction. A new road would be installed with a metal beam guardrail on the downstream side and a concrete parapet wall on the upstream side. The road may also require a transition section if there is a difference in the crest elevation of Left Wing Dam and the Main Concrete Dam. This road is not open to the public and would be considered a less than significant impact. Construction of these features

would not affect any other existing roads or trails. During construction, alternate routes would be made available to Reclamation for operation and maintenance access.

This impact would be less than significant.

Construction activities would require the development of new internal haul roads.

In order to provide vehicle access to all areas around the dam, a series of in-reservoir roads would be constructed. These roads would likely consist of soil and gravel and would be constructed when the reservoir is low. When the reservoir fills, these roads could become inundated and could require reconstruction each year. The construction of in-reservoir roads would not affect any existing roads or utilities because it would occur in the reservoir.

This impact would be less than significant.

Public Services
The impacts to public services would be the same as Alternative 1. Mitigation Measure PSU-6 would reduce any potentially significant impacts to a less than significant level.

New Embankments/Flood Easements
A series of new embankments/flood easements could be constructed around the Folsom Facility to raise areas of low elevation. The numbers of new embankments/flood easements and their locations have not yet been determined.

The impacts to utilities and public services would be the same as Alternative 2. Mitigation Measures PSU-1 to PSU-2 would reduce any potentially significant impacts to a less than significant level.

Inundation
These impacts would be the same as Alternative 2. These impacts would be potentially significant but could be reduced to less than significant with Mitigation Measure PSU-7.

3.14.3 Comparative Analysis of Alternatives

The impacts analysis discussed above considers the potential impacts of obtaining borrow material from all of the potential borrow areas, however, for the smaller potential raises, it is unlikely that 100 percent of all the borrow areas would need to be used. Although the impacts to utilities are generally similar for Alternatives 2 through 5, Alternatives 1 and 3 would require less borrow material and, therefore, would be able to avoid the relocation of most of the existing utilities. Alternatives 1

through 3 would still require the relocation of utilities for the Auxiliary Spillway and the relocation of the Natomas Pipeline.

Alternative 4, the 7-foot raise, would require more borrow material than alternatives 1 and 3, and could require utility relocations in order to obtain borrow from the borrow areas. This alternative would also require utility relocations associated with the new Auxiliary Spillway. The Natomas Pipeline would have to be relocated. A potential 7-foot raise would likely require the construction of more new embankments/flood easements than Alternatives 2 and 3.

Alternative 5 would require the most amount of borrow material from the actual borrow sites and, therefore, could require the most utility relocations associated with borrow areas. It would also have the greatest flood storage capacity and could potentially inundate a larger area then the other alternatives. This would increase the potential for several utilities to become submerged under water. Alternative 5 would also require the largest quantity of new embankments/flood easements to raise up low elevation areas surrounding the reservoir. This could cause additional utility relocations. One important difference between Alternative 5 and the remaining alternatives would be the lack of a new Auxiliary Spillway. Alternative 5 would not require all of the utility relocations that would be needed during construction of an Auxiliary Spillway, nor would it require the relocation of the Natomas Pipeline.

Alternative 1 would require the least amount of borrow material from the actual borrow sites and would therefore likely be able to avoid utility relocations associated with borrow areas. This alternative would not create any additional flood storage capacity. Construction of the Auxiliary Spillway would likely require relocation of existing utility poles and utility lines and would also require the relocation of the Natomas Pipeline. New embankments/flood easements would not be constructed under this alternative as there would be no raise.

3.14.4 Mitigation Measures

The following mitigation measures, in addition to compliance with all federal and state rules and regulations, would reduce all potentially significant impacts to a less than significant level:

PSU-1: Coordinate with utility companies and other relevant agencies before construction to locate existing utilities and avoid damage. Avoid the relocation of utilities whenever possible. Provide notification of any potential interruptions in services to the appropriate agencies.

PSU-2: Stage utility relocations to minimize interruptions in service.

PSU-3: Consult with local landfills to select licensed landfills with adequate capacity to receive the wastes.

PSU-4: Recycle construction wastes whenever possible.

PSU-5: Dispose of hazardous wastes at licensed hazardous waste facilities.

PSU-6: Prior to construction, consult with local police, fire, and CDPR staff to develop and implement emergency response plans and establish emergency vehicle routes.

PSU-7: Notification will be provided to the appropriate agencies if any additional utilities could be inundated as a result of the implementation of the Folsom DS/FDR.

Mitigation Measures WS-1 (see Section 3.2.4) and RC-1 (See Section 3.13.4) would also serve to reduce potential public services and utilities impacts during construction to a less than significant level.

3.14.5 Cumulative Effects

This section contains analysis of potential cumulative effects, that is, the effects of each of the five Folsom DS/FDR alternatives in addition to those past, present, and reasonably foreseeable projects that would have similar impacts. The projects in consideration for this cumulative analysis are listed in Table 5-1 in Chapter 5, Cumulative Effects.

Electricity
There could be cumulative impacts associated with electricity.

The Corps' New Folsom Bridge Project and the Folsom DS/FDR would both require electricity during construction to operate equipment. This could exceed the capacity of existing energy infrastructure and could require new energy infrastructure. The Folsom DS/FDR's contribution to the cumulative condition would be less than significant. Electricity demands for equipment throughout the construction period are not expected to exceed capacity of existing electricity infrastructure and would not require additional infrastructure beyond the extension of existing power lines and the construction of a substation. In addition, generators would likely be used onsite to provide power for equipment. Besides the security measures and the alterations to the main dam and Auxiliary Spillway, the majority of the Folsom DS/FDR actions would only require electricity for the duration of the construction period.

This impact would be less than significant.

Natural Gas/Stormwater
The Folsom DS/FDR actions would not have any impacts on natural gas or stormwater; therefore, there would be no cumulative impact.

Water
There would be no cumulative effects on water infrastructure or facilities.

The Folsom DS/FDR and the projects in Table 5-1 would not increase the demand for water and would not require new water infrastructure or facilities other than a temporary water supply for the City of Folsom.

This impact would be less than significant.

Wastewater
There would be no cumulative effects on wastewater infrastructure or facilities.

The Folsom DS/FDR and the projects in Table 5-1 would not increase the amount of wastewater generated and would not require new wastewater infrastructure or facilities.

This impact would be less than significant.

Solid Waste
There could be potentially cumulative effects on existing landfills.

Many of the construction projects, including this Folsom DS/FDR, would create waste that would be sent to landfills. These projects could contribute to a reduction in the capacity and life of the local landfills. The Folsom DS/FDR would not contribute significantly to the cumulative condition. As describe in the mitigation measures, the Folsom DS/FDR would select only licensed landfills with adequate capacity to accept the waste. In addition, waste from the Folsom DS/FDR would be temporary and would only last through the duration of the construction period.

This impact would be less than significant.

Telecommunications
There would be no cumulative effects on telecommunications infrastructure or facilities.

The Folsom DS/FDR and the projects in Table 5-1 would not increase the demand for telecommunications and, therefore, would not require new telecommunications infrastructure or facilities.

This impact would be less than significant.

Roads
There would be no cumulative effects associated with existing roads in the Folsom Facility.

The Folsom DS/FDR and the projects in Table 5-1 would not increase the demand for roads and would not require any additional roads beyond the temporary internal haul routes or other temporary roads needed during construction. Mitigation measures will require all roads, parking lots, or trails removed during construction to be replaced.

This impact would be less than significant.

Public Services
There would be no cumulative effects on public services.

The Folsom DS/FDR and the projects in Table 5-1 would not increase the demand for public services and would not require any additional public services staff.

This impact would be less than significant.

3.15 Hydropower Resources

This section presents potential impacts to hydropower resources from construction of the Folsom DS/FDR alternatives.

3.15.1 Affected Environment/Existing Conditions

The following description of the hydropower resources associated with the Folsom DS/FDR was primarily obtained from the following sources unless otherwise noted:

- *American River Watershed Long-Term Study Final Supplemental Plan Formulation Report/Environmental Impact Statement/Environmental Impact Report* dated February 2002 prepared jointly by the United States Army Corps of Engineers, Sacramento Area Flood Control Agency, and the State of California Reclamation Board.

- *Folsom Dam Road Access Restriction Final Environmental Impact Statement,* dated April 2005 prepared by the U.S. Bureau of Reclamation.

3.15.1.1 Area of Analysis

The study area assessed as part of the evaluation of hydropower resources included Folsom Dam and Nimbus Dam, and associated hydropower generation facilities.

3.15.1.2 Regulatory Setting

Hydropower operations are regulated by the Federal Energy Regulatory Commission (FERC) pursuant to the Federal Power Act and the Electric Consumers Protection Act. Both laws require balancing of power generation with conservation of natural resources.

3.15.1.3 Environmental Setting

Central Valley Project Hydropower System

Folsom Dam is part of the Central Valley Project (CVP) hydropower system that extends from the Cascade Range in the north to the plains along the Kern River approximately 500 miles to the south. The CVP was built primarily to provide the Central Valley with water supply, flood control, and hydropower generation. Although the CVP emphasizes irrigation and flood control, features of the project such as Folsom Dam also provide domestic and industrial water supply, water quality enhancement, environmental CVP Improvement Act benefits, recreation, and hydropower generation (Reclamation 2005a).

The CVP hydropower system consists of eight powerplants and two pumping-generating plants. This system is fully integrated into the Northern California Power System and provides a substantial portion of the hydropower available for use in northern and central California. The installed power capacity of the system is 2,044,350 kilowatts (kW). By comparison, the combined capacity of the

368 operational hydropower plants in California is 12,866,000 kW. Pacific Gas and Electric Company (PG&E) is the area's major power supplier, with a generating capacity from all sources of over 20 million kW (Reclamation 2005a, Corps 2002).

Folsom Dam and Reservoir

Reclamation constructed Folsom Powerplant at the foot of Folsom Dam on the north side of the river. Water from the dam is released through three 15-foot-diameter penstocks (i.e., pipelines) to three generating units. Each generating unit has a capacity of 66,240 kW, with a combined average generating capacity of 198,720 kW (CDPR 2004a, Reclamation 2005a). Based on a 10-year average, Folsom Dam generates (net) between approximately 35 gigawatt hours (GWh) (September through December) and 70 GWh (February through June) (http://www.usbr.gov/power/data/sites/folsom/ folsomgr.pdf). Water is supplied to the three 74,000 horsepower turbines that drive the generators through three 560-foot-long, 15-foot-diameter penstocks that run through the right abutment of the Main Concrete Dam. The capacity of the three power penstocks is approximately 8,000 cfs (Corps 2002, CDPR 2002).

By design, the facility is operated as a peaking facility. Peaking plants schedule the daily water release volume during the peak electrical demand hours to maximize generation at the time of greatest need. At other hours during the day, there may be no release (and no generation) from the plant. The facility is dedicated first to meeting the requirements of the CVP facilities and preferred customers. The remaining electricity from the plant is marketed to various customers in Northern California. On average, the powerplant produces about 10 percent of the power used in Sacramento each year, and about 0.3 percent of the total projected power generation in the State. It also supplies power to the local pumping plant to provide domestic water supply to the cities of Folsom and Roseville, Folsom State Prison, and San Juan Water District. The powerplant has been increasingly relied upon to support local electrical loads during system disturbances (Reclamation 2005a).

To avoid sudden water surface elevation fluctuations in the lower American River, Nimbus Dam and Lake Natoma, downstream of Folsom Dam, are operated as regulating facilities for releases from Folsom Reservoir. Nimbus Powerplant, also constructed and operated by Reclamation, is located on the right abutment of Nimbus Dam, on the north side of the river. The Nimbus Powerplant consists of two generating units, with a generating capacity of approximately 17,000 kW and release capacity of approximately 5,100 cfs. Water is supplied to two 9,400 horsepower turbines that drive the generators through six 46.5-foot-long by 13.75-foot by 15.95-foot penstocks. Electricity is generated from this facility continuously throughout the day (Corps 2002).

3.15.2 Environmental Consequences/Environmental Impacts

3.15.2.1 Assessment Methods

The methods used to assess impacts to hydropower resources consisted of the evaluation of any changes to hydropower generation during construction of an alternative compared to that which would be generated under the No Action/No Project Alternative. In addition, changes in hydropower generation output over the course of a daily or weekly cycle resulting from construction of an alternative when compared to the No Action/No Project Alternative were also evaluated.

3.15.2.2 Significance Criteria

Impacts to hydropower resources would be potentially significant if construction of the Folsom DS/FDR would:

- Result in a reduction of total hydropower output; or
- Change the ability of the Folsom Powerplant to operate as a peaking facility (i.e., if construction under an alternative would alter the Powerplant's ability to generate hydropower at appropriate times of the day).

3.15.2.3 Environmental Consequences/Environmental Impacts

Environmental Consequence/Environmental Impacts of the No Action/No Project Alternative

The No Action/No Project Alternative would not change reservoir operations; therefore, it would not reduce hydropower or change the system's ability to operate.

Under the No Action/No Project Alternative, there would be no impact to hydropower and the Folsom Powerplant would continue to operate in a manner consistent with current and past operations.

The No Action/No Project Alternative would have no effect on hydropower resources.

Environmental Consequences/Environmental Impacts of Alternative 1

Alternative 1 construction activities would not change reservoir operations; therefore, it would not reduce hydropower or change the system's ability to operate.

Under Alternative 1, there would be no impact to hydropower during construction because Folsom Dam would be operated in a manner consistent with current and past operations.

Alternative 1 construction activities would have no effect on hydropower resources.

Environmental Consequences/Environmental Impacts of Alternative 2
Alternative 2 construction activities would not change reservoir operations; therefore, it would not reduce hydropower or change the system's ability to operate.

Under Alternative 2, there would be no impact to hydropower during construction because Folsom Dam would be operated in a manner consistent with current and past operations.

Alternative 2 construction activities would have no effect on hydropower resources.

Environmental Consequence/Environmental Impacts of Alternative 3
Alternative 3 construction activities would not change reservoir operations; therefore, it would not reduce hydropower or change the system's ability to operate.

Under Alternative 3, there would be no impact to hydropower during construction because Folsom Dam would be operated in a manner consistent with current and past operations.

Alternative 3 construction activities would have no effect on hydropower resources.

Environmental Consequences/Environmental Impacts of Alternative 4
Alternative 4 construction activities would not change reservoir operations; therefore, it would not reduce hydropower or change the system's ability to operate.

Under Alternative 4, there would be no impact to hydropower during construction because Folsom Dam would be operated in a manner consistent with current and past operations.

Alternative 4 construction activities would have no effect on hydropower resources.

Environmental Consequences/Environmental Impacts of Alternative 5
Alternative 5 construction activities would not change reservoir operations; therefore, it would not reduce hydropower or change the system's ability to operate.

Under Alternative 5, there would be no impact to hydropower during construction because Folsom Dam would be operated in a manner consistent with current and past operations.

Alternative 5 construction activities would have no effect on hydropower resources.

3.15.3 Comparative Analysis of Alternatives

None of the Folsom DS/FDR alternatives would have impacts to hydropower generation.

3.15.4 Mitigation Measures

No mitigation measures are required.

3.15.5 Cumulative Effects

The Folsom DS/FDR actions would have no impacts to hydropower generation; therefore, there would be no cumulative impacts.

3.16 Population and Housing

This section presents demographic data from the 2000 U.S. Census and analyzes the effects of the Folsom DS/FDR alternatives on population and housing.

3.16.1 Affected Environment/Existing Conditions

3.16.1.1 Area of Analysis

The Folsom DS/FDR area encompasses the areas surrounding Folsom Reservoir, including the construction footprint and adjacent properties. The area of analysis for the population and housing analysis is defined as the potential construction, staging, and borrow areas and local transportation routes for hauling construction materials plus properties and neighborhoods adjacent to these areas and routes, all located within the designated 2000 Census Tracts and Block Groups listed below. The Folsom DS/FDR area is within unincorporated portions of Placer County and El Dorado County and within the City of Folsom in Sacramento County. These areas are growing in population with new housing developing rapidly. The two counties and the City of Folsom have General Plan documents and Zoning Ordinances that include measures to plan for the housing and services needed to accommodate the increased population. As indicated above, the affected environment is broken down into State and local jurisdictions including: Folsom State Prison, Placer County, El Dorado County, Sacramento County, and the City of Folsom. There are no housing units or residents within the Folsom Lake State Recreation Area. The 2000 Census Tracts and Block Groups used for this analysis include the following:

- Folsom State Prison/California State Prison, Sacramento (Sacramento County) – Block Group 1, Census Tract 83
- Placer County – Block Groups 1, 2 and 3, Census Tract 206.01 and Block Group 2, Census Tract 206.05
- El Dorado County – Block Group 1, Census Tract 307.01 and Block Group 1, Census Tract 307.02
- City of Folsom (Sacramento County) – Block Groups 1, 2 and 4, Census Tract 82.10; Block Group 1, Census Tract 84.02 and Block Group 2, Census Tract 85.01

Figure 3.16-1 shows the Census geographic area used for determining Block Groups and Census Tracts to include within the Folsom DS/FDR area.

N

Not to Scale

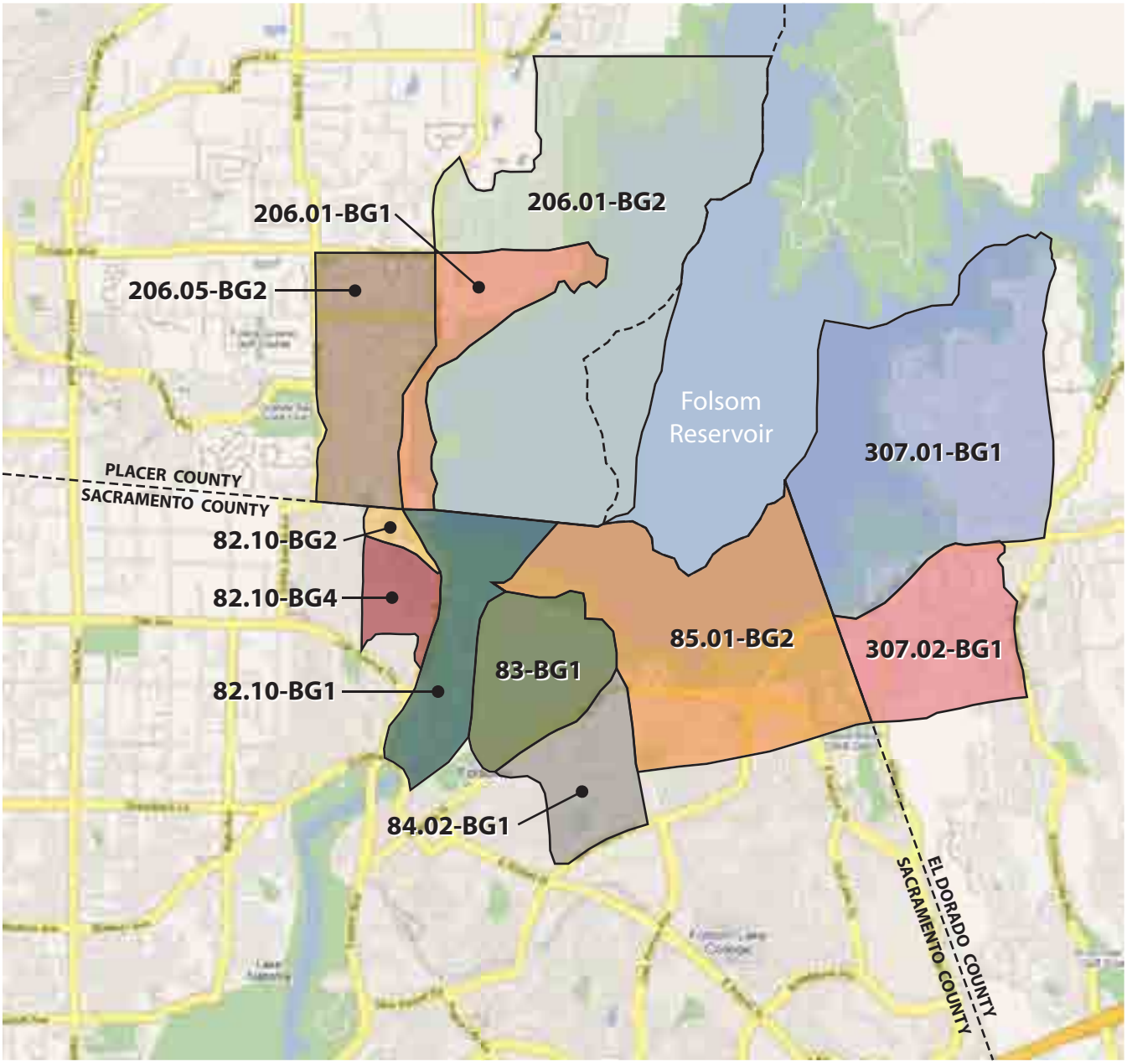

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Figure 3.16-1

Population and Housing - Census Geographic Area

CDM

3.16.1.2 Regulatory Setting

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act)

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), commonly referred to as the Uniform Act, is the Federal law that provides the minimum standards for relocation assistance requirements for persons affected by Federally funded projects or programs. Under this Act, any person who is displaced or whose property is acquired because of a Federally funded project or program must receive fair and equitable treatment and is eligible for assistance during the relocation process.

3.16.1.3 Environmental Setting

Most of the data were obtained from the 2000 U.S. Census. Additional information sources are noted. Table 3.16-1 is the consolidated Demographic Characteristics of the entire Folsom DS/FDR area by Census Tract and Block Group. This information is also included separately for Folsom State Prison/California State Prison as well as Placer County, El Dorado County, and the City of Folsom.

Table 3.16-1
Demographic Characteristics of the Folsom DS/FDR Area

Parameter	Block Group 1, Census Tract 307.01, El Dorado County	Block Group 1, Census Tract 307.02, El Dorado County	Block Group 1, Census Tract 206.01, Placer County	Block Group 2, Census Tract 206.01, Placer County	Block Group 3, Census Tract 206.01, Placer County	Block Group 2, Census Tract 206.05, Placer County	Block Group 1, Census Tract 82.10, Sacramento County	Block Group 2, Census Tract 82.10, Sacramento County	Block Group 4, Census Tract 82.10, Sacramento County	Block Group 1, Census Tract 83, Sacramento County	Block Group 1, Census Tract 84.02, Sacramento County	Block Group 2, Census Tract 85.01, Sacramento County
Population												
2000 Census	5,108	746	1,435	4,719	271	2,295	459	711	1,733	6,842	4,280	2,815
Percentage under 18	34.4%	29.4%	25.6%	25.9%	24.4%	26.8%	17.2%	8.7%	13.8%	0.23%	31.17%	37.09%
Percentage 65 or over	6.4%	10.9%	12.5%	11.7%	21.8%	10.0%	11.1%	45.7%	42.6%	1.20%	6.80%	3.37%
Racial Composition												
White	89.0%	92.0%	93.4%	92.8%	91.5%	92.3%	88.0%	91.0%	94.8%	35.63%	89.42%	87.71%
African American	1.1%	0.3%	0.1%	0.8%	0.0%	0.5%	0.0%	1.4%	0.4%	35.52%	0.61%	0.96%
Native American	0.4%	0.9%	0.5%	0.6%	0.7%	0.5%	0.0%	0.1%	0.2%	0.95%	0.72%	0.46%
Asian	4.7%	2.0%	2.4%	2.3%	0.7%	2.0%	5.9%	4.8%	1.7%	1.29%	3.60%	4.37%
Other or mixed	4.8%	4.8%	3.6%	3.4%	7.0%	4.6%	6.1%	2.7%	2.9%	26.62%	5.65%	6.50%
Hispanic or Latino	5.5%	2.8%	4.7%	4.4%	8.5%	5.0%	4.6%	3.0%	2.5%	27.19%	7.76%	8.13%
Median household income	$99,728	$109,025	$79,912	$101,851	$74,821	$101,617	$87,417	$29,500	$35,543	$56,042	$75,698	$100,250
Per-capita income	$42,695	$45,197	$33,670	$50,118	$36,209	$44,201	$42,830	$24,064	$30,396	$12,245	$25,269	$30,370
Below poverty level	2%	0.0%	3.2%	2.9%	0.0%	5.1%	3.9%	5.9%	3.8%	53.34%	3.78%	1.94%

Source: 2000 U.S. Census, US Census Bureau 2004a

Folsom State Prison/California State Prison - Sacramento

Folsom State Prison and California State Prison, Sacramento (CSPS) are within the same Census Tract and Block Group and within the City limits of Folsom. Folsom State Prison is a medium security prison for men, housing Level II and Level III inmates. A minimum security unit is also at Folsom State Prison (California Department of Corrections and Rehabilitations 2006a). CSPS is adjacent to Folsom State Prison and houses maximum security inmates with long sentences as well as inmates perceived as management problems from other institutions and is a Department of Corrections Medical hub for Northern California.

Folsom State Prison and CSPS are within Census Tract 83, Block Group 1, Sacramento County, California. The majority of individuals are listed as living within group quarters. Table 3.16-2 displays the racial and ethnic breakdown of the Folsom State Prison and the CSPS populations.

Table 3.16-2
Race and Ethnic Demographics within Folsom State Prison and CSPS

Race/Ethnicity	*Population*	*Percent of Total Prison and CSPS Population*
White	2,438	35.63%
Black or African American	2,430	35.52%
American Indian and Alaska Native	65	0.95%
Asian	88	1.29%
Other or Mixed	1,821	26.61%
		100.00%
Hispanic or Latino[(1)]	1,860	27.19%

(1) Hispanics or Latinos are also included in the population totals for the five racial groups listed above because Hispanic and Latinos are considered an ethnic group and not a racial group according to the U.S. Census. Therefore the percentages total over 100%. Hispanics or Latinos are separated out because some are included in the white racial group; however, according to Federal guidelines for Environmental Justice, Hispanics and Latinos are considered a minority group.

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

The population of both facilities is currently over maximum capacity and there are no imminent plans to expand the capacity of either facility. The population of both facilities as of March 2006 is 7,374 which is an increase of approximately 8.4 percent since 2000.

Table 3.16-3 shows the age and gender breakdown of residents within Folsom State Prison and CSPS.

Table 3.16-3 Age Demographics by Gender within Folsom State Prison and CSPS			
Age	***Male***	***Female***	***Total***
Under 5 Years*	2	2	4
5 to 17 Years*	7	5	12
18 to 21 Years	319	2	321
22 to 29 Years	1,809	3	1,812
30 to 39 Years	2,536	5	2,541
40 to 54 Years	1,784	19	1,803
55 to 64 Years	263	4	267
Over 65 Years	81	1	82
Total	6,801	41	6,842
Median Age	35.1	43.3	35.1

*The 2000 Census Data includes employees and their families who live on site.
Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

Placer County

Placer County is one of the fastest growing counties in California with a population increase of 44 percent between 1990 and 2000, and an increase of 24 percent between 2000 and 2004 (U.S. Census Bureau 2004a). The population of Placer County was 307,004 in 2004, 248,399 in 2000, and 172,796 in 1990. Census 2000 data for the area surrounding the Folsom DS/FDR footprint were analyzed for statistical information. Census Tracts 206.01 (Block Groups 1 and 2) and 206.05 (Block Group 2) are within the Folsom DS/FDR area. This information was used to determine the existing housing and population demographics of the area. The total 2000 population within these two Census Tracts was 8,720, 3.5 percent of the entire Placer County population. The race and ethnic demographics of the Placer County population as compared to the population that occurs within Folsom DS/FDR portion of Placer County are listed in Table 3.16-4.

Table 3.16-4 Race and Ethnic Demographics within Placer County Folsom DS/FDR Area			
Race/Ethnicity	***Placer County***	***Placer County Study Area Block Groups***	***Percent of Placer County Study Area Population***
White	220,053	8,089	92.8%
Black or African American	2,031	54	0.6%
American Indian and Alaska Native	2,199	49	0.6%
Asian	7,317	193	2.2%
Other or Mixed	16,799	335	3.8%
		8,720	100%
Hispanic or Latino[(1)]	14,566	415	

(1) Hispanics or Latinos are also included in the population totals for the five racial groups listed above because Hispanic and Latinos are considered an ethnic group and not a racial group according to the U.S. Census. Therefore the percentages total over 100%. Hispanics or Latinos are separated out because some are included in the white racial group; however, according to Federal guidelines for Environmental Justice, Hispanics and Latinos are considered a minority group.

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

Placer County's population is projected to exceed 456,000 by 2020 (EDD 2004), an increase of approximately 83 percent from year 2000 Census figures.

Table 3.16-5 shows the age and gender breakdown of residents within all of Placer County compared to the Folsom DS/FDR area residents that occur within Placer County.

Table 3.16-5
Age Demographics by Gender within Placer County Folsom DS/FDR Area

Age	*Placer County*		*Placer County Study Area Block Groups*		*Percentage of Total County Population*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Under 5 Years	8,027	7,897	216	182	2.7%	2.3%
5 to 17 Years	25,430	24,404	969	902	3.8%	3.7%
18 to 21 Years	5,742	5,012	145	150	2.5%	3.0%
22 to 29 Years	9,697	9,439	143	138	1.5%	1.5%
30 to 39 Years	18,286	19,193	438	521	2.4%	2.7%
40 to 54 Years	29,295	30,370	1,282	1,354	4.4%	4.5%
55 to 64 Years	11,238	11,809	656	604	5.8%	5.1%
Over 65 Years	14,177	18,383	517	503	3.6%	2.7%
Totals	121,892	126,507	4,366	4,354	3.6%	3.4%
Median Age	37.1	38.8	42.8	43.4		

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

A total of 3,195 housing units were listed in the 2000 Census statistics for the Placer County Block Groups within the Folsom DS/FDR area. Occupied units totaled 3,115 and 80 units were listed as vacant. The occupied units were listed as 2,905 or 93.3 percent owner occupied and 210 or 6.7 percent renter occupied units. The average household size was 2.74 people.

Table 3.16-6 presents the economic statistics for the Folsom DS/FDR area population within Placer County. The income levels within the Folsom DS/FDR area of Placer County were higher than the overall county median household income and the per-capita income. The percentages of people living below the poverty level for each block group are less than the overall Placer County percentage.[1] The median value for owner occupied homes for each block group is higher than the overall Placer County median value for owner occupied homes. The median contract rent prices for Census Tract 206.05 Block Group 2 was significantly less than the overall

[1] In 1999, the poverty threshold for a two-person household was annual income of $10,869 (U.S. Census Bureau 2004a)

Placer County median contract rent price.[2] Based on the above statistics the Folsom DS/FDR area appears to be a more affluent area within Placer County.

Table 3.16-6
Economic Statistics in Placer County Folsom DS/FDR Area

	Census Tract 206.01 Block Group 1	***Census Tract 206.01 Block Group 2***	***Census Tract 206.05 Block Group 2***	**Census Tract 206.01, Block Group 3**	***Placer County***
Median Household Income 1999	$79,912	$101,851	$101,617	$74,821	$57,535
Per-capita income	$33,670	$50,118	$44,201	$36,209	$27,963
Percentage Below Poverty Level	3.2%	2.9%	5.1%	0.0%	12%
Median Value for Owner Occupied Homes	$283,900	$388,100	$385,000	$339,700	$213,900
Median Contract Rent	$1,179	$1,138	$383	Not reported	$687

Source: U.S. Census Bureau 2004a

El Dorado County

El Dorado County is also growing at a steady rate with a total population of 172,889 in 2004,156,299 in 2000, and 125,995 in 1990. This represents a 10.6 percent increase between 2000 and 2004 and a 24 percent increase between 1990 and 2000 Census figures.

Census data for the area surrounding the Folsom DS/FDR footprint was analyzed for statistical information. Census Tracts 307.01 Block Group 1 and 307.02 Block Group 1 are within the Folsom DS/FDR area. This information was used to determine the existing housing and population demographics of the area. The total 2000 population within these two Census Tracts was 5,854, 3.7 percent of the entire El Dorado County population.

[2] A representative from the Placer County Redevelopment Agency was contacted for an explanation as to why the median rent prices within the block group was so low compared to the other block groups within the project area and all of Placer County. The contact explained that no formal analysis has been done to justify this difference and that these areas include large estate-type homes and owners may be renting rooms and/or cottages and secondary units to family and friends or employees who work on their property. (Auerbach 2006)

The race and ethnic demographics of the El Dorado County population as compared to the Folsom DS/FDR area population that occurs within El Dorado County are listed below in Table 3.16-7.

Table 3.16-7
Race and Ethnic Demographics within El Dorado County Folsom DS/FDR Area

Race/Ethnicity	*El Dorado County*	*El Dorado County Study Area Block Groups*	*Percent of El Dorado County Study Area Population*
White	140,209	5,231	89.4%
Black or African American	813	60	1.0%
American Indian and Alaska Native	1,566	26	0.4%
Asian	3,328	257	4.4%
Other or Mixed	10,383	280	4.8%
Total		5,854	100.0%
Hispanic or Latino[(1)]	14,566	302	

(1) Hispanics or Latinos are also included in the population totals for the five racial groups listed above because Hispanic and Latinos are considered an ethnic group and not a racial group according to the U.S. Census. Therefore the percentages total over 100%. Hispanics or Latinos are separated out because some are included in the white racial group; however, according to Federal guidelines for Environmental Justice, Hispanics and Latinos are considered a minority group.

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

El Dorado County's population is projected to exceed 221,000 by 2020 (EDD 2004), an increase of approximately 41 percent from year 2000 Census figures. Table 3.16-8 shows the age and gender breakdown of residents within all of El Dorado County compared to the Folsom DS/FDR area residents that occur within El Dorado County.

Table 3.16-8
Age Demographics by Gender within El Dorado County Folsom DS/FDR Area

Age	*El Dorado County*		*El Dorado County Study Area Block Groups*		*Percentage of Total County Population*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Under 5 Years	4,688	4,258	213	198	4.5%	4.7%
5 to 17 Years	16,323	15,523	801	765	4.9%	4.9%
18 to 21 Years	3,636	3,127	110	81	3.0%	2.6%
22 to 29 Years	5,600	5,171	96	103	1.7%	2.0%
30 to 39 Years	10,367	11,161	389	478	3.8%	4.3%
40 to 54 Years	20,786	20,968	883	880	4.2%	4.2%
55 to 64 Years	7,647	7,710	235	215	3.1%	2.8%
Over 65 Years	8,916	10,418	212	195	2.4%	1.9%
Totals	77,963	78,336	2939	2915	3.8%	3.7%
Median Age	38.8	40	38.5	39		

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

A total of 1,990 housing units were listed in the 2000 Census statistics for the two El Dorado County Block Groups within the Folsom DS/FDR area. Occupied units totaled 1,924 and 66 units are listed as vacant. The occupied units were listed as

1,648 or over 85 percent owner occupied and 276 or almost 15 percent renter occupied units. The average household size was 2.94 people. The types of residences existing within the Folsom DS/FDR area include: custom homes on 1, 2 and 5-acre parcels, new and older single family homes on small lots and a limited amount of multi-family planned unit development (El Dorado 2006). Most of the residences are within the Northwest El Dorado Hills Specific Plan area.

Table 3.16-9 presents the economic statistics for the Folsom DS/FDR area population within El Dorado County.

Table 3.16-9
Economic Statistics El Dorado County Folsom DS/FDR

	Census Tract 307.01 Block Group 1	***Census Tract 307.02 Block Group 1***	***El Dorado County***
Median Household Income 1999	$99,728	$109,025	$51,484
Per-capita income	$42,695	$45,197	$25,560
Percentage Below Poverty Level	1.8%	0%	15%
Median Value for Owner Occupied Homes	$335,700	$203,900	$194,400
Median Contract Rent	$1,153	$1,625	$617

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

Based on the above statistics the Folsom DS/FDR area appears to be a more affluent area within El Dorado County.

Sacramento County

A portion of the Folsom DS/FDR area is within Sacramento County, however, this portion falls entirely within the City of Folsom. Therefore, Sacramento County statistics related to population and housing were not analyzed.

City of Folsom

The City of Folsom is located within Sacramento County and, like the neighboring counties, Sacramento County and the City of Folsom are growing at a steady rate with a total population of 63,960 in 2004, 51,884 in 2000, and 29,802 in 1990. This represents a 23.3 percent increase between 2000 and 2004 and a 74.1 percent increase between 1990 and 2000.

Census data for the area surrounding the Folsom DS/FDR footprint was analyzed for statistical information. Census Tracts 82.10 (Block Groups 1, 2 and 4), 84.02 (Block

Group 1) and 85.01 (Block Group 2) are within the Folsom DS/FDR area. Census Tract 83 is also within the City of Folsom; however, this is the Folsom State Prison and CSPS. Folsom State Prison's and CSPS's population and housing information is explained above in a separate subsection and is not included in this section. The City of Folsom Block Groups were used to determine the existing housing and population demographics of the area. The total 2000 population within these Block Groups was 9,998, or 19.2 percent of the entire City of Folsom population.

The race and ethnic demographics of the City of Folsom population as compared to the Folsom DS/FDR area population that occurs within the City of Folsom are listed below in Table 3.16-10. Folsom State Prison is not included in this table.

Table 3.16-10
Race and Ethnic Demographics within City of Folsom Non-Prison Folsom DS/FDR Area

Race/Ethnicity	*City of Folsom*	*Folsom Non-Prison Study Area Block Groups*	*Percent of Folsom Non-prison Study Area Population*
White	40,415	8,990	89.9%
Black or African American	3,109	70	0.7%
American Indian and Alaska Native	302	48	0.5%
Asian	3,731	367	3.7%
Other or Mixed	4,327	523	5.2%
		9,998	100.0%
Hispanic or Latino[(1)]	4,914	646	

(1) Hispanics or Latinos are also included in the population totals for the five racial groups listed above because Hispanic and Latinos are considered an ethnic group and not a racial group according to the U.S. Census. Therefore the percentages total over 100%. Hispanics or Latinos are separated out because some are included in the white racial group; however, according to Federal guidelines for Environmental Justice, Hispanics and Latinos are considered a minority group.

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

The City of Folsom's population is projected to exceed 76,333 by 2020 (SACOG 1990), an increase of approximately 47.1 percent from year 2000 Census figures.

Table 3.16-11 shows the age and gender breakdown of residents within all of the City of Folsom compared to the Folsom DS/FDR area residents that occur within the City of Folsom except Folsom State Prison and CSPS.

Table 3.16-11
Age Demographics by Gender within City of Folsom Non-Prison Folsom DS/FDR Area

Age	*City of Folsom*		*City of Folsom Non-prison Study Area*		*Percentage of Total County Population*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Under 5 Years	1,788	1,803	305	321	17.1%	17.8%
5 to 17 Years	4,571	4,395	1,092	1,041	23.9%	23.7%
18 to 21 Years	1,094	736	172	187	15.7%	25.4%
22 to 29 Years	3,533	1,864	279	283	7.9%	15.2%
30 to 39 Years	6,583	4,431	685	802	10.4%	18.1%
40 to 54 Years	5,671	5,671	1,295	1,273	22.8%	22.4%
55 to 64 Years	1,666	1,666	372	390	22.3%	23.4%
Over 65 Years	2,660	2,660	598	903	22.5%	33.9%
Totals	27,566	23,226	4,798	5,200	17.4%	22.4%
Median Age	35.4	36.6	45	46.9		

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

A total of 3,938 housing units were listed in the 2000 Census statistics for the Folsom Block Groups within the Folsom DS/FDR area. Occupied units total 3,811 and 127 units were listed as vacant. The occupied units were listed as 3,198 or 84% owner occupied and 613 or 16% renter occupied units. The average household size was 2.45 people. The types of residences surveyed within the Folsom DS/FDR area include: custom estate homes overlooking Folsom Reservoir, single family small lot planned unit developments, and multi-family planned developments.

Table 3.16-12 presents the economic statistics for the Folsom DS/FDR area population within the City of Folsom, not including Folsom State Prison and CSPS. Based on the statistics in Table 3.16-12, the Folsom DS/FDR area had a wide range of income levels. Census Tract 82.10, Block Groups 2 and 4 listed lower median household incomes than other areas within the City and study area; however, the median value for owner occupied homes was over the City median. Census Tract 82.10, Block Group 1 had a high median household income level and a low median value for owner occupied home. Only Census Tract 85.01, Block Group 2 had consistently higher economic values than other blocks within the City of Folsom and appears to be a more affluent area within the City of Folsom.

Table 3.16-12 Economic Statistics for City of Folsom Non-Prison Folsom DS/FDR Area						
	Census Tract 82.10 Block Group 1	***Census Tract 82.10 Block Group 2***	***Census Tract 82.10 Block Group 4***	***Census Tract 84.02 Block Group 1***	***Census Tract 85.01 Block Group 2***	***City of Folsom***
Median Household Income 1999	$87,417	$29,500	$35,543	$75,698	$100,250	$73,175
Per-capita income	$42,830	$24,064	$30,396	$25,269	$30,370	$30,210
Percentage Below Poverty Level	3.9%	5.9%	3.8%	3.8%	1.9%	6.8%
Median Value for Owner Occupied Homes	$203,300	$276,400	$260,600	$206,300	$257,300	$228,700
Median Contract Rent	$1,100	$838	$821	$904	$1,470	$867

Source: U.S. Census Data 2000 (U.S. Census Bureau 2004a)

3.16.2 Environmental Consequences/Environmental Impacts

3.16.2.1 Assessment Methods

This environmental effects analysis uses both qualitative and quantitative methods to determine potential impacts to population and housing from construction of the Folsom DS/FDR action alternatives. The significance criteria listed below were used to qualitatively assess the impacts of each alternative. Preliminary planning-level analyses from the PASS II Study Real Estate Plan provide estimates of the numbers and extent of parcels potentially affected by the various alternatives (Reclamation 2005g). However, as the preliminary parcel impacts from the various raise alternatives may be overestimated, a site-specific analysis would be conducted to accurately assess impacts to any potentially affected parcel, if a raise feature is selected. It is anticipated that the site-specific analysis would conclude that the numbers and extent of parcels potentially affected would actually be less than estimated through the PASS II Study Real Estate Plan; hence, the impacts analysis presented herein is considered to be conservative.

3.16.2.2 Significance Criteria

Implementation of the Folsom DS/FDR action would result in a significant population or housing impact if it would:

- Induce substantial population growth in an area, either directly or indirectly.

- Displace substantial numbers of existing housing units, necessitating construction of replacement housing elsewhere.

- Displace substantial numbers of residents, necessitating construction of replacement housing elsewhere.

3.16.2.3 Environmental Consequences/Environmental Impacts

Environmental Consequences/Environmental Impacts of the No Action/No Project Alternative

The No Action/No Project Alternative would result in no improvements to the Folsom Facility. The conditions at Folsom Reservoir would remain similar to existing conditions and no additional dam safety and flood damage reduction measures would be implemented.

The No Action/No Project Alternative would have no effect on population growth in the area since the Folsom DS/FDR purpose is to modify existing structures for dam safety/security and flood damage reduction.

No displacement of housing or residents would occur as a direct result of the No Action/No Project Alternative. The risk of displacement to population and housing in the Folsom DS/FDR area from a severe storm event and potential inundation would remain similar to existing conditions, but would increase over time with the projected future population growth and development.

Environmental Consequences/Environmental Impacts of Alternative 1

Actions under the Folsom DS/FDR are construction-related actions only and would not cause, either directly or indirectly, a population increase or decrease. The Folsom DS/FDR would have no long-term effect on population and housing within the area. Alternative 1 would not have any effect on housing or displacement of people.

Environmental Consequences/Environmental Impacts of Alternative 2

Alternative 2 could require one possible residential relocation as a result of property acquisition in order to address temporary flooding during extreme storm events.

Under Alternative 2, a 4-foot raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower elevation areas are primarily located in Mooney Ridge, north of Granite Bay, and certain areas along the eastern shoreline.

To address the potential for flooding related to a 4-foot raise, Reclamation, the Corps, or SAFCA, as the Corps non-Federal sponsor, and any one of these referred to in the discussion below as the responsible agency, would pursue structural or real estate remedies, or a combination of both, in cooperation with affected non-federal

property owners. Probable remedies in lower elevation areas would include construction of new flood damage reduction berms (and associated access and flood damage reduction structure easements if berms are located on non-federal property) and/or acquisition of flood easements on impacted non-federal parcels.

Where flood easements are acquired and/or where flood damage reduction berms are constructed (and associated flood damage reduction structure and access easements acquired if necessary) in order to address the potential for flooding, the responsible agency would acquire such easements according to State and Federal guidelines.

According to Corps guidelines (Corps 2006), properties encumbered by flood easement would be restricted as follows:

- No structure for human habitation shall be constructed or maintained on the easement premises.
- No other structure shall be constructed or maintained on the land except those that have been approved in writing by the responsible agency.
- No excavation shall be conducted or fill placed on the land without approval of the responsible agency.

With a 4-foot raise, Reclamation's preliminary planning-level analyses indicate that property title of up to four non-federal parcels could potentially be acquired in fee, including one residential property. Impacted property owner(s) would be entitled to fair market value, assistance with replacement housing, and relocation benefits and services in accordance with Public Law 91-646. However, efforts would be made to develop a structural solution that would eliminate the need for acquisition of real estate rights (easements or fee title) or relocation.

Because the non-federal parcels potentially impacted by this alternative are identified through the use of coarse planning-level analyses, the number and extent of parcels potentially affected may be overestimated. Detailed site-specific analyses would be conducted should this raise feature be selected. The need for, location, number, and impacts of flood damage reduction berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document, if this raise feature is selected and further designed.

In the event that a flood damage reduction berm would be constructed (and associated easements acquired if the berm is located on non-federal property), and/or a flood easement would be acquired on an impacted non-federal parcel, these actions would not require the relocation of residents or displacement of houses.

The potential acquisition of one residential property under Alternative 2 would not result in the displacement of a substantial number of residents or existing housing units that would necessitate construction of replacement housing elsewhere. As discussed above, in the event that acquisition of property fee title would be required, relocation assistance to the impacted residential property owner(s) would be implemented. The impacted property owner(s) would be entitled to fair market value, assistance with replacement housing, and relocation benefits and services in accordance with Public Law 91-646. As indicated above, Placer County is one of the fastest growing counties in California and El Dorado County is also growing at a steady rate. It is anticipated that replacement housing for the one residential property that could potentially be acquired in fee would be available within the existing housing inventory or within new housing from continued growth in the area. Further, as indicated above, efforts would be made to design and construct flood damage reduction structures that would reduce or eliminate the need for acquisition of fee title of impacted properties that would result in residential relocations. The determination regarding structural solutions and/or acquisition of real estate rights (easements or fee title) for any impacted non-federal parcel would be made on a case-by-case basis and would depend upon feasibility, cost, and acceptability to the landowner(s).

Population and housing impacts under Alternative 2 would be less than significant.

Environmental Consequences/Environmental Impacts of Alternative 3
Alternative 3 could require one possible residential relocation as a result of property acquisition in order to address temporary flooding during extreme storm events.

Under Alternative 3, a 3.5-foot parapet wall raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower elevation areas are primarily located in Mooney Ridge, north of Granite Bay, and certain areas along the eastern shoreline.

The environmental consequences/environmental impacts from construction of Alternative 3 would be essentially the same for population and housing as those described for Alternative 2.

Environmental Consequences/Environmental Impacts of Alternative 4
Alternative 4 could require six possible residential relocations as a result of property acquisition in order to address temporary flooding during extreme storm events.

A 7-foot raise could result in an increase in the reservoir pool elevation during extreme storm events, and this could flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower elevation areas are primarily located in Mooney Ridge, north of Granite Bay, and certain areas along the eastern shoreline.

The environmental consequences/environmental impacts from construction of Alternative 4 would be the same for population and housing as those described for Alternative 2, with the following exceptions:

- More potentially impacted parcels due to the 7-foot raise height. Additional acquisition of flood easements and/or construction of larger flood damage reduction berms (and acquisition of associated flood damage reduction structure and access easements if necessary).

- With a 7-foot raise, Reclamation's preliminary planning-level analysis also indicates the acquisition in fee title of approximately nine non-federal properties, including approximately six residential properties, for which the property owners would be entitled to fair market value, assistance with replacement housing and relocation benefits and services in accordance with Public Law 91-646. However, efforts would be made to develop a structural solution that would eliminate the need for acquisition of real estate rights (easements or fee title) or relocation.

Because the non-federal parcels potentially impacted by this alternative are identified through the use of coarse planning-level analyses, the number and extent of parcels potentially affected may be overestimated. Detailed site-specific analyses would be conducted should this raise feature be selected. The need for, location, number, and impacts of flood damage reduction berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document, if this raise feature is selected and further designed.

Flood damage reduction berms and/or occasional flowage easements would not require the relocation of residents or displacement of houses.

The potential acquisition of six residential properties under Alternative 4 would not result in the displacement of a substantial number of residents or existing housing units that would necessitate construction of replacement housing elsewhere. As discussed above, in the event that acquisition of property fee title would be required, relocation assistance to the impacted residential property owner(s) would be implemented. The impacted property owner(s) would be entitled to fair market value, assistance with replacement housing, and relocation benefits and services in accordance with Public Law 91-646. As indicated above, Placer County is one of the fastest growing counties in California and El Dorado County is also growing at a steady rate. It is anticipated that replacement housing for the six residential properties that could potentially be acquired in fee would be available within the existing housing inventory or within new housing from continued growth in the area. Further, as indicated above, efforts would be made to design and construct flood damage reduction structures that would reduce or eliminate the need for acquisition

of fee title of impacted properties that would result in residential relocations. The determination regarding structural solutions and/or acquisition of real estate rights (easements or fee title) for any impacted non-federal parcel would be made on a case-by-case basis and would depend upon feasibility, cost, and acceptability to the landowner(s).

Population and housing impacts under Alternative 4 would be less than significant.

Environmental Consequences/Environmental Impacts of Alternative 5
Alternative 5 could require 37 possible residential relocations as a result of property acquisition in order to address temporary flooding during extreme storm events.

The 17-foot earthen raise could result in a substantial increase in the reservoir pool elevation during extreme storm events, and this could be expected to flood lower elevation areas beyond the boundaries of the Folsom Facility. The lower elevation areas are primarily located in Mooney Ridge, north of Granite Bay, and certain areas along the eastern shoreline.

The environmental consequences/environmental impacts from construction of Alternative 5 would be the same for population and housing as those described for Alternative 2, with the following exceptions:

- More potentially impacted parcels due to the 17-foot raise height. Additional acquisition of flood easements and/or construction of larger flood damage reduction berms (and acquisition of associated flood damage reduction structure and access easements if necessary).

- With a 17-foot raise, Reclamation's preliminary planning-level analysis also indicates the acquisition in fee title of approximately 45 non-federal properties, including as many as 37 residential properties, for which the property owners would be entitled to fair market value, assistance with replacement housing, and relocation benefits and services in accordance with Public Law 91-646. However, efforts would be made to develop structural solutions wherever possible that would eliminate the need for acquisition of real estate rights (easements or fee title) or relocation.

Because the non-federal parcels potentially impacted by this alternative are identified through the use of coarse planning-level analyses, the number and extent of parcels potentially affected may be overestimated. Detailed site-specific analyses would be conducted should this raise feature be selected. The need for, location, number, and impacts of flood damage reduction berms and/or acquisition of real estate rights (easements or fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document, if this raise feature is selected and further designed.

Flood damage reduction berms and/or occasional flowage easements would not require the relocation of residents or displacement of houses.

The potential acquisition of 37 residential properties under Alternative 5 would not result in the displacement of a substantial number of residents or existing housing units that would necessitate construction of replacement housing elsewhere. As discussed above, in the event that acquisition of property fee title would be required, relocation assistance to the impacted residential property owner(s) would be implemented. The impacted property owner(s) would be entitled to fair market value, assistance with replacement housing, and relocation benefits and services in accordance with Public Law 91-646. As indicated above, Placer County is one of the fastest growing counties in California and El Dorado County is also growing at a steady rate. It is anticipated that replacement housing for the 37 residential properties that could potentially be acquired in fee would be available within the existing housing inventory or within new housing from continued growth in the area. Furthermore, as indicated above, efforts would be made to design and construct flood damage reduction structures that would reduce or eliminate the need for acquisition of fee title of impacted properties that would result in residential relocations. The determination regarding structural solutions and/or acquisition of real estate rights (easements or fee title) for any impacted non-federal parcel would be made on a case-by-case basis and would depend upon feasibility, cost, and acceptability to the landowner(s).

Population and housing impacts under Alternative 5 would be less than significant.

3.16.3 Comparative Analysis of Alternatives

The No Action/No Project Alternative would have no effect on population growth in the Folsom DS/FDR area and no displacement of housing or residents would occur as a direct result of the No Action/No Project Alternative.

Alternative 1 would not result in effects on population and housing since no new flood damage reduction berms would be constructed, and real estate rights (easements or fee title) would not be acquired. Alternatives 2 through 5 could result in impacts to population and housing. Raise heights of these action alternatives could result in property acquisition that could require relocation of a small number of residents, except perhaps Alternative 5. From preliminary planning-level analyses, the population and housing impacts of Alternatives 2 and 3 would be the same with one residential property possibly affected. Alternative 4 would possibly affect 6 residential properties. Alternative 5 would possibly affect 37 residential properties. If a raise feature is selected, efforts would be made to avoid or mitigate population and housing impacts. Additionally, the need for, location, number, and impacts of flood damage reduction berms and/or acquisition of real estate rights (easements or

fee title) would be further analyzed and disclosed in more detail in a supplemental environmental compliance document if a raise feature is selected.

3.16.4 Mitigation Measures

There would be no significant impacts on population and housing; therefore, no mitigation measures are required.

3.16.5 Cumulative Effects

Table 5-1 provides a list of past, present and probable future projects in the general vicinity of the Folsom DS/FDR area that are included in the cumulative effects analysis. No significant impact on population and housing would occur as a result of the Folsom DS/FDR action. It is unlikely that the projects identified in Table 5-1 would have any impact on population and housing in a negative way. Therefore, the cumulative effect of the Folsom DS/FDR action would be less than significant.

3.17 Public Health and Safety

This section describes potential public health and safety concerns, including risks posed by hazardous, toxic, and radiological wastes (HTRW) within the study area that are relevant to the alternatives.

3.17.1 Affected Environment/Existing Conditions

3.17.1.1 Area of Analysis

The area of analysis includes Folsom Reservoir as well as areas identified as construction areas, staging areas, and borrow areas for the alternatives. No effect on public safety in other areas is expected because no construction activities would occur outside of these identified areas. Potential effects on the lower American River due to floods or releases from the reservoir are discussed in Section 3.1, Hydrology, Water Quality, and Groundwater.

3.17.1.2 Regulatory Setting

Public Safety

Federal Regulations

The Federal Guidelines for Dam Safety require that dams be designed, inspected, and maintained to protect the structural integrity of the dam and appurtenant structures and ensure protection of human life and property. The following documents contain the requirements for design floods for dams that are the responsibility of federal agencies:

- Federal Guidelines for Dam Safety, Federal Emergency Management Agency (FEMA) Publication FEMA 93, June 1979, reprinted April 2004.

- Federal Guidelines for Dam Safety: Selecting and Accommodating Inflow Design Floods for Dams, FEMA Publication FEMA 94, October 1998, reprinted April 2004.

The Corps and Reclamation both have obligations and interests in the Folsom Facility (which includes the Folsom Dam and appurtenant facilities) but differ in respect to congressional objectives, mandates, authorities, funding and timelines. Reclamation is responsible for operation and maintenance of the Folsom Facility as part of the Central Valley Project (CVP). The Corps' interest in the Folsom Facility is primarily as flood protection and wetlands and waterways regulation and permitting.

Hazardous, Toxic, and Radiological Wastes

Federal Regulations

Hazardous materials, hazardous substances, and hazardous wastes are regulated under various federal laws including:

- Resource Conservation and Recovery Act (RCRA, 42 United States Code 692);
- Hazardous Material Transportation Act (HMTA);
- Clean Water Act (CWA);
- Comprehensive Environmental Response Compensation and Liability Act (CERCLA, 43 United States Code 9601);
- Superfund Amendment Reauthorization Act (SARA) Title 3;
- 40 CFR 260-279 Federal Regulations on hazardous waste management;
- 40 CFR, Section 301 et seq. Emergency Planning and Community Right to Know Act; and
- Toxic Substances Control Act (15 United States Code 2601).

Under RCRA, the U.S. Environmental Protection Agency (USEPA) regulates the generation, transportation, and disposal of hazardous wastes (USEPA 2005c). The USEPA requires permits for the treatment, storage, and/or disposal of hazardous wastes and tracks the wastes from generation through to disposal (USEPA 2005c). The USEPA delegates some of this authority, such as permitting, to individual states.

The Department of Transportation through the HMTA regulates transportation of hazardous materials. Transporting hazardous materials requires special handling, packaging, placarding, and manifesting of cargoes. Various laws, including the SARA and HMTA, govern day-to-day management of hazardous materials. These laws define the requirements for storage of hazardous materials, safe handling practices, and employee training.

State Regulations
California state laws that regulate activities involving hazardous materials, hazardous substances, or hazardous waste include:

- Hazardous Waste Control Law (California Health and Safety Code section 25100);
- Title 17, Public Health (California Code of Regulations);
- Title 19, Public Safety (California Code of Regulations);
- Title 22, Division 4.5 - Environmental Health Standards for the Management of Hazardous Waste (California Code of Regulations);

- Title 26, Toxics (California Code of Regulations); and
- California Department of Motor Vehicles, Hazardous Waste and Materials Transportation Requirements (Vehicle Code Section 31303).

The California Department of Toxic Substances Control (DTSC) administers the Federal RCRA for the state, and enforces the California Health and Safety Code. According to the California Government Code (Section 65962.5), DTSC is required to compile and update lists of hazardous materials sites, including land designated as hazardous waste sites and hazardous waste disposals on public lands. The California Government Code (Section 65962.5) also requires the State Water Resources Control Board to compile and update hazardous materials site lists, including underground storage tanks for which an unauthorized release report is filed, and solid waste disposal facilities from which there is a migration of hazardous wastes.

Other agencies that enforce hazards or hazardous materials regulations include the California Highway Patrol, the Regional Water Quality Control Boards, and local fire departments.

3.17.1.3 Environmental Setting

Seismology/Earthquakes

The study area is in the Foothills Fault system which consists of northwest trending vertical faults and is divided into two zones, the western Melones Fault zone and the western Bear Mountains Fault zone. The west trace of the Bear Mountains Fault zone transects the upper reaches of the North Fork arm and crosses the South Fork arm of Folsom Reservoir. The last major movement of this system occurred 140 million years ago and the United States Geological Survey has not designated the Bear Mountains Fault as an active fault (Corps 2006b). Additional details on seismic activity are provided in Section 3.6.1.

Landslides

As discussed in Section 3.6, Soils, Minerals, and Geological Resources, factors that influence slope stability include slope inclination, bedrock geology, geologic structure, geomorphology, weathering, vegetation, and granitic rocks. Studies along the Highway 50 corridor have shown slides to occur where metamorphic and granitic rocks are in contact as well as where metamorphic and Tertiary sedimentary rocks are in contact. These geologic conditions are present within the study area where the sedimentary Laguna Formation overlies the metamorphic bedrock and along the north side of Folsom Reservoir where the Mehrten Formation tops the granite hills. Despite these geologic formations, landslides are not a major hazard in the study area because soils are thin and the slopes are not particularly steep (Wallace, Roberts, and Todd et al. 2003).

Fire Risk

During the dry season, the area surrounding the reservoir is at risk for fires, particularly at the interface between residential development and open space. From Granite Bay to the middle of MIAD (Placer and Sacramento Counties), the fire threat is moderate to high. From the middle of MIAD north towards Browns Ravine (Sacramento and El Dorado Counties), the fire threat is very high according to the California Fire Alliance Fire Planning and Mapping website (California Fire Alliance 2004).

Floods/Leakage

Folsom Reservoir is in close proximity to an urban area and serves as flood management for the entire Sacramento metropolitan area. A comprehensive Facility Review conducted by Reclamation in 2000 identified deficiencies in the Folsom Facility. A flood with a more frequent return period than originally anticipated could overtop the Main Concrete Dam, MIAD, and dikes. In addition, several of the dikes and the Right and Left Wing Dams surrounding Folsom Reservoir do not meet current standards for filters. This creates the potential for seepage and piping and increases the static instability of the dikes.

Reservoir Levels

The retention structures at the Folsom Facility have a crest elevation of 480.5 feet above mean sea level (483.1 feet in NAVD 88). Between 1985 and 2006, water elevation in Folsom Reservoir fluctuated between 347.14 feet (November 3, 1998) and 465.51 feet (June 21, 1993).[1]

Recreation Areas

The area surrounding the Folsom Facility is operated as a state recreational park. The reservoir and recreation area are used by visitors for hiking, biking, running, camping, picnicking, horseback riding, water-skiing, swimming, and boating.

Hazardous Waste

Hazardous materials are defined by the State of California as:

> *…any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would*

[1] Source: http://cdec.water.ca.gov/cgiprogs/selectQuery?station_id=FOL&dur_code =D&sensor_num=6&start_date=1985&end_date=now

> *be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.*[2]

Hazardous, toxic, or radioactive materials include, but are not limited to, the following:

- Asbestos
- Construction and demolition debris
- Drums
- Landfills or solid waste disposal sites
- Pits, ponds, or lagoons
- Wastewater
- Fill, dirt, depressions, and mounds
- Underground storage tanks
- Wastewater treatment plants
- Stormwater runoff structures
- Transformers that may contain polychlorinated biphenyls (PCBs)

In May 2005, the Corps conducted an environmental site assessment (ENSA) for the Folsom Dam Modification Project. The ENSA included records research, interviews, and field surveys within a 1.5-mile radius of the Folsom Dam. A one-mile buffer was added for the records research to account for potential groundwater migration and contaminant transport. In addition to identifying about 70 HTRW sites within the study area, the report identified two potential hazardous sites within the area of analysis. The first site, located near the Left Wing Dam, had total petroleum hydrocarbons (TPH) at 1,900 mg/kg detected in a single soil sample at 7 to 9 feet below ground surface when it was sampled during a geotechnical exploration in 2004. The second potential hazardous site is the foundation of MIAD. The gravel used for the MIAD foundation may have been mined from an area where naturally occurring asbestos rock exists. It is unknown whether the asbestos is friable.[3]

To include the construction areas being evaluated as part of the Folsom DS/FDR EIS/EIR, another database records search was performed for a corridor extending along the west and south borders of the reservoir. A one-mile buffer was included to account for potential groundwater migration and contaminant transport. A map showing the area searched and an overview of the identified HTRW sites is shown in

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2 California Health and Safety Code, Division 20, Chapter 6.95, Section 25501(k)

3 USACE 2005. *Environmental Site Assessment Folsom Dam Modification, Sacramento County California Draft.* May.

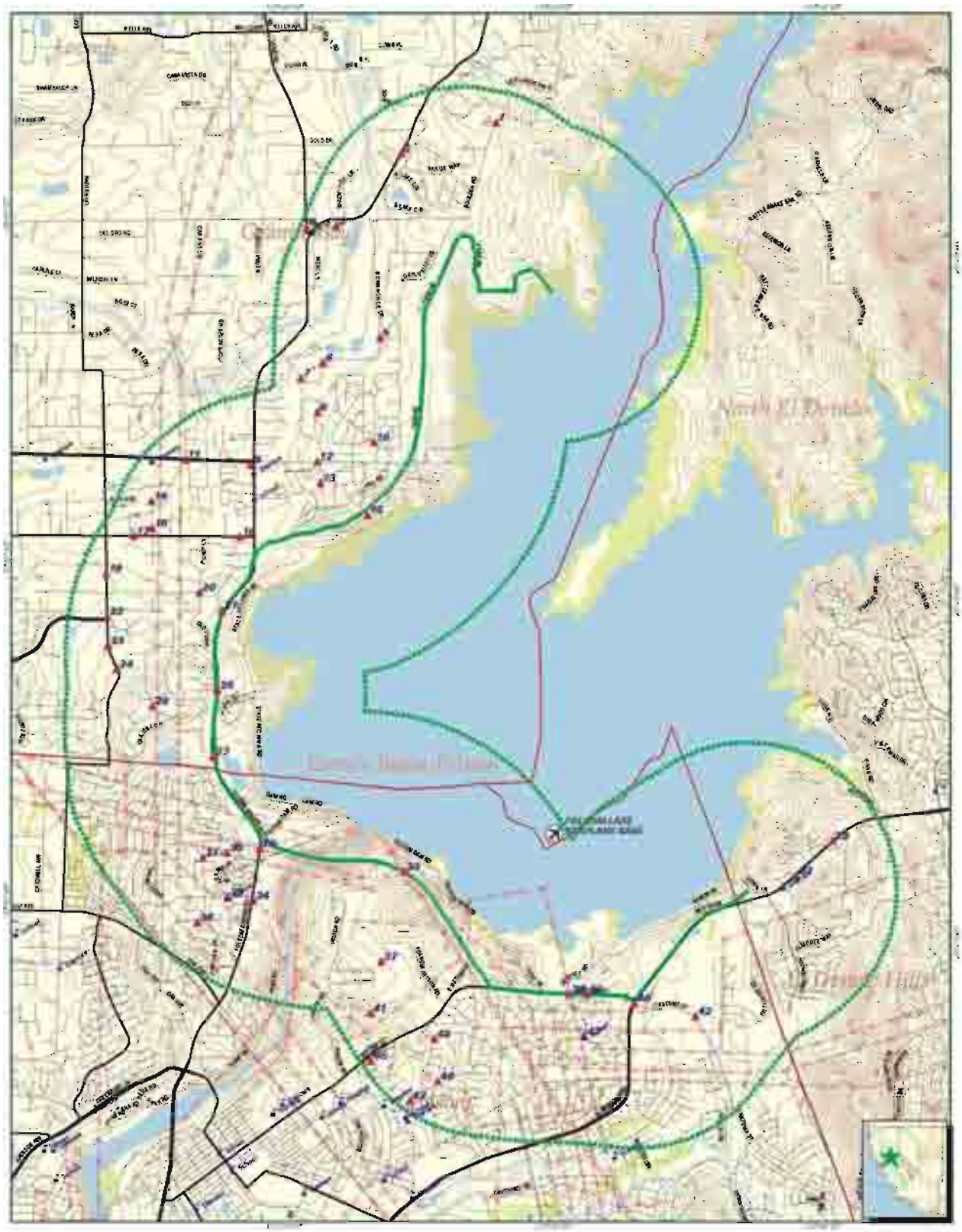
Figure 3.17-1. The databases for which sites were identified are summarized in Table 3.17-1.[4]

Table 3.17-1
Map Findings Summary

Federal Records Databases	***Date EDR Contacted Agency***	***Number of Sites***
Emergency Response Notification System (ERNS)	1/12/2006	5
Hazardous Materials Information Reporting System (HMIRS)	1/16/2006	10
FIFRA/TSCA Tracking System (FTTS)	3/20/2006	1
Section Seven Tracking System (SSTS)	3/6/2006	1
Facility Index System (FINDS)	1/3/2006	14
State and Local Records Databases	***Date EDR Contacted Agency***	***Number of Sites***
No Further Action (NFA)	3/15/2006	1
State Landfill	3/15/2006	1
California Water Resources Control Board – Waste Discharge System (CA WDS)	3/21/2006	1
Cortese Hazardous Waste and Substances Sites List	2/6/2006	9
Recycling Facilities (SWRCY)	1/9/2006	1
Leaking Underground Storage Tanks (LUST)	1/16/2006	7
California Facility Inventory Database (CA FID UST)	12/28/1998	9
Spills, Leaks, Investigation & Cleanup Cost Recovery Listing (SLIC)	1/16/2006	1
Sacramento Co. Contaminated Sites (CS)	1/30/2006	7
Underground Storage Tank Facilities (UST)	1/9/2006	2
Hazardous Substance Storage Container Database (HIST UST)	7/26/2001	15
Aboveground Storage Tank Facilities (AST)	1/30/2006	4
Placer Co. Master List (MS)	3/20/2006	23
Statewide Environmental Evaluation and Planning System (SWEEPS UST)	6/3/2005	16
California Hazardous Material Incident Reporting System (CHMIRS)	2/20/2006	9
Deed Restriction Listing (DEED)	1/3/2006	1
Voluntary Cleanup Program Properties (VCP)	3/15/2006	1
Clandestine Drug Labs (CDL)	2/8/2006	2
Sacramento Co. Master List (ML)	1/30/2006	22
Facility and Manifest Data (HAZNET)	2/24/2006	42

FIFRA – Federal Insecticide, Fungicide, & Rodenticide Act
TSCA – Toxic Substances Control Act
EDR – Environmental Data Resources

[4] EDR 2006. *EDR DataMap Corridor Study for Folsom Dam (Inquiry Number 01637093.lr).* March 23.



Folsom, CA

Environmental Data Resources Inc

Listed Sites
Earthquake Epicenters (Richter 5 or greater)
Search Boundary
Roads
Major Roads
Waterways
Railroads
Contour Lines
Pipelines
Powerlines
Fault Lines
Water
Superfund Sites
Federal DOD Sites
Indian Reservations BIA
100-Yr Flood Zones
Wetlands

N

0 1
Miles

Figure 3.17-1
EDR DataMap™ - Corridor Study - Folsom Dam

CDM

Based on the database research results, 205 sites with potential to affect public health and safety during construction were identified within a 1-mile radius of the corridor. However, many of the sites reported by the database search identify generators of hazardous waste or owners of storage tanks that hold potentially hazardous materials. The existence of these generators and storage facilities does not necessarily indicate that the contents have been released to the environment in such a way that would affect construction of the dam improvements. In addition, some sites reported by the database search have received closure from the governing agency indicating that the contamination was found to be sufficiently contained. No record reviews or site inspections were performed on the sites identified from the database searches. However, based on the database information, the following sites were identified as potentially contaminated sites warranting further evaluation:

- ARCO #2140 (Map Location #9 – 8555 Auburn-Folsom Road, Granite Bay). Gasoline was discharged at the site in 1993 and methyl-tert-butyl-ether (MTBE) was found affecting the drinking water aquifer. The site is currently under post remedial action monitoring.

- Beacon #3642-Former (Map Location #9 – 6990 Douglas Boulevard, Granite Bay). Diesel was discharged at the site in 2000 and MTBE was found affecting the drinking water aquifer. The site is currently under remedial action.

- Haag Property (Map Location #13 – 9232 Barton Road, Granite Bay). In 2000, this residential property had fill material contaminated with a nitrogen-based residual explosive from a blasting operation at another site. The DTSC determined that the soil poses no risk of chemical contamination but does present a potential risk due to physical contamination of the soil. The owners applied for the Voluntary Cleanup Program to address the site. Although the DTSC issued no further action for DTSC, no additional information was provided as to the outcome of the site.

- Green Valley Gas and Food (Map Location #32 - 381 Green Valley Road, El Dorado Hills). A leaking gasoline underground storage tank (UST) was reported on this site in 2000. A work plan and preliminary assessment were conducted in 2004. The site is currently conducting pollution characterization.

- WAPA-Folsom Substation (Map Location #33 - Folsom Dam Road, Folsom). This site was reported in the Sacramento contaminated sites list as having waste oil. However, no closure date was provided for this site.

- Folsom Prison (Map Location #37 – north of Folsom City, Represa). Folsom Prison operates a license plate manufacturing plant onsite that uses caustic stripping bath liquids and paint sludges. In addition, the prison has an evaporation pond for cannery wastewater, a scrap metal disposal area, light

industrial areas, and a firing range. The prison is part of the Voluntary Cleanup Program to address the contamination. Several remedial actions were completed at the site. Groundwater monitoring is on-going.

- California State Prison Garage (Map Location #38 – 560 East Natoma Street, Folsom). This site was reported in the Sacramento contaminated sites list as having an unknown substance released that affects groundwater. However, no closure date was provided for this site.

- Folsom State Prison (Map Location #38 – 560 East Natoma Street, Represa). This site was reported in the Sacramento contaminated sites list as having diesel released to the soil in 1989. However, no closure date was provided for this site.

- Folsom Prison – Green Valley (Map Location #38 – 560 East Natoma Street, Represa). This site was reported in the Sacramento contaminated sites list as having gasoline released to the soil in 1998. However, no closure date was provided for this site.

- California Department of Food and Agriculture (CDFA) Folsom Facility (Map Location #39 – 600 East Natoma Street, Folsom). This site was reported in the California State Spills, Leaks, Investigation & Cleanup (SLIC) database as having an open case. However, no further information was provided for this site.

Appendix H of this Draft EIS/EIR presents a complete list of the databases searched and information concerning the governing agencies, the 205 sites identified in the Folsom DS/FDR corridor vicinity, and a map locating all sites. Although the agency lists are updated regularly, there may be contaminated sites that have not yet been identified and therefore are absent from the databases. A complete Phase I ENSA was not performed for the Folsom DS/FDR corridor because such investigations tend to remain valid for only six months and, as a result, are typically done after selection of the preferred alternative and closer to construction.

3.17.2 Environmental Consequences/Environmental Impacts

3.17.2.1 Assessment Methods

Impacts on public safety at Folsom Reservoir were evaluated based on the potential for human exposure to hazardous conditions during construction.

3.17.2.2 Significance Criteria

Using the environmental checklist form in Appendix G of the State CEQA Guidelines as a base, effects on public safety would be significant if an alternative would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or through reasonable

foreseeable upset and accident conditions resulting in the release of hazardous materials into the environment;

- Emit hazardous emissions or handle hazardous materials, substances, or waste within a one-quarter mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including areas where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.17.2.3 Natural Disasters

Natural disasters occur when natural phenomenon (e.g., earthquake, landslides) result in fatalities or property damages. Common natural phenomena that could potentially result in natural disasters at the Folsom Reservoir include earthquakes, landslides, fires, and floods.

3.17.2.3.1 Environmental Consequences/Environmental Impacts

Environmental Consequence/Environmental Impacts of the No Action/No Project Alternative

Under the No Action/No Project Alternative, no new construction would occur. Thus, no change to risk of public safety as a result of a wildland fire or landslide would occur under the No Action/No Project Alternative. Although this alternative would result in no change in public safety because persons would not be exposed to additional hazards associated with construction of flood management facilities, the existing risks to the public from current dam deficiencies, such as failure due to seismic (earthquake), static (seepage), and hydrologic concerns (probable maximum flood events), would remain. Failure of the Folsom Facility would result in flood impacts on downstream populations. Folsom Reservoir is in an urban setting and flood flows could flow through the Sacramento metropolitan area.[5] Due to the current deficiencies in the dam, the No Action/No Project Alternative would have the potential to result in serious property damage and loss of human life in the event of a seismic or maximum flood event. This would be a significant and unavoidable impact.

[5] Reclamation 2005c. *Folsom Dam - Safety of Dams – Corrective Action Study Scoping Report, Folsom Dam Central Valley Project, California.*

The No Action/No Project Alternative would have significant impacts related to public safety. Based on the analysis presented above, it is anticipated that the environmental impacts of the No Action/No Project Alternative (i.e., future environmental conditions if no action is taken relative to the Folsom DS/FDR) would exceed the significance criteria defined herein. However, unlike a significant impact associated with an action alternative, no mitigation can be required for significant impacts associated with the No Action/No Project (i.e., within the regulatory framework of NEPA and CEQA, a project applicant cannot be required to mitigate the impacts that would result from taking no action). As such, the impacts identified above for the No Action/No Project Alternative are considered to be significant, adverse, and unmitigable.

Environmental Consequences/Environmental Impacts of Alternative 1
Excavation of borrow material would not result in landslides.

Alternative 1 would not result in significant adverse effects associated with landslides. As described in Section 3.6.1.3, landslides are not a major hazard in the study area because soils are thin and the slopes are not particularly steep. Excavation would be conducted in a manner to further minimize the potential for landslides (e.g., excavation may be terraced to stabilize slopes).

Impacts associated with landslides would be less than significant.

During construction of Alternative 1, an impact to public safety would occur if construction activities reduced the integrity of the existing Folsom Facility such that leakage occurs or the structures can no longer retain flood flows.

Construction activities would be designed, staged, and scheduled in such a manner to prevent compromising existing structures, particularly during the wet weather season. Many of the improvements, such as jet grouting and installation of drains, shear key elements, and tendons, involve intrusive activities to existing flood management structures and could diminish structural integrity of the structure either temporarily or permanently if not designed or installed correctly. Placement of fill on top of existing dams and dikes, such as for the overlay of the MIAD and the raising of the elevations of the dams and dikes, could also have a detrimental effect on existing structures if not designed or constructed properly. In addition, conducting blasting near existing structures or near a fault could cause structural damage or damage to foundations thereby reducing the integrity of the existing Folsom Facility such that leakage occurs or the structures can no longer retain flood flows. This impact would be mitigated by having the Folsom Facility improvements designed and the construction schedule phased by California-licensed professional civil and structural engineers and the construction work performed by licensed professional contractors. Designs and plans would also require reviews and permits per local, state and federal laws.

These requirements are already established as part of the Folsom DS/FDR, and would reduce this impact to a less than significant level.

Construction activities could increase hazards by the placement of construction equipment in waterways, roadways, or other areas potentially accessible by park visitors.

For example, popular recreation areas, such as Beal's Point, are in the immediate vicinity of construction borrow areas. Although these areas would be closed off to the public while they are under construction to reduce hazards to the public, blockage of existing roadways could also interfere with existing emergency evacuation plans. Adequate signage and notification would be required per Section 659 of the Harbors and Navigation Code (California Administrative Code, Title 14, Section 7000) to reduce the potential for these potential hazardous conditions.

The placement of construction equipment in areas potentially accessible by park visitors would be a potentially significant impact. Mitigation Measure PHS-1 would reduce this impact to a less than significant level.

Construction would increase the risk of fire.

During the dry season, the area surrounding the reservoir is at risk for fires, particularly at the interface between residential development and open space. Construction activities, particularly those that may result in accidental spills of flammable liquids, could further aggravate the risk of fire. Mitigation measures would be implemented to reduce these risks, such as proper housekeeping procedures at construction sites.

The risk of fire would be a potentially significant impact. Mitigation Measure PHS-2 would reduce this impact to a less than significant level.

Environmental Consequences/Environmental Impacts of Alternative 2

There would be no appreciable difference between the impacts of Alternative 1 and Alternative 2 regarding construction design and scheduling, blockage or closure of roads for construction, construction activities in waterways or other areas accessible by park visitors, potential landslides, and fire risks. Implementation of Mitigation Measures PHS-1 and PHS-2 would mitigate these impacts to a less than significant level.

Similarly, new embankments and/or flood easements that could be constructed around the reservoir under Alternative 2 to prevent flooding in areas of low elevation also could result in additional impacts to public health and safety. The number of new embankments/flood easements required and their exact locations have not been determined. However, typical construction of the new embankments would involve the use of scrapers, loaders, and other equipment to create earthen berms and the

creation of access roads for construction and maintenance. The nature of the impacts from these activities would not be substantially different from the impacts addressed under Alternative 1 and would be mitigated to a less than significant level by implementation of Mitigation Measures PHS-1 and PHS-2.

Environmental Consequence/Environmental Impacts of Alternative 3
Impacts of Alternative 3 would not be substantially different from the impacts addressed under Alternative 2 and would be mitigated to a less than significant level by implementation of Mitigation Measures PHS-1 and PHS-2. There would be no other appreciable difference between the impacts of Alternative 2 and Alternative 3 for the impacts regarding construction design and scheduling, lowering of reservoir levels, blockage or closure of roads for construction, construction activities in waterways or other areas accessible by park visitors, potential landslides, fire risks, construction of new embankments/flood easements, and inundation from dam/embankment raises. Implementation of Mitigation Measures PHS-1 and PHS-2 would mitigate these impacts to a less than significant level.

Environmental Consequences/Environmental Impacts of Alternative 4
There would be no appreciable difference between the impacts of Alternative 3 and Alternative 4 for the impacts regarding construction design and scheduling, lowering of reservoir levels, blockage or closure of roads for construction, construction activities in waterways or other areas accessible by park visitors, potential landslides, fire risks, construction of new embankments/flood easements, and inundation from dam/embankment raises. Implementation of Mitigation Measures PHS-1 and PHS-2 would mitigate these impacts to a less than significant level.

Environmental Consequences/Environmental Impacts of Alternative 5
There would be no appreciable difference between the impacts of Alternative 3 and Alternative 5 for the impacts regarding construction design and scheduling, lowering of reservoir levels, blockage or closure of roads for construction, construction activities in waterways or other areas accessible by park visitors, potential landslides, fire risks, construction of new embankments/flood easements, and inundation from dam/embankment raises. Implementation of Mitigation Measures PHS-1 and PHS-2 would mitigate these impacts to a less than significant level.

3.17.2.4 Hazardous, Toxic, and Radiological Waste

Exposure to hazardous materials and contaminated soil and groundwater along urbanized portions of the Folsom DS/FDR corridor could occur during construction of the preferred alternative. This section describes the potential impact of exposure to hazardous substances from construction of the Folsom DS/FDR.

3.17.2.4.1 Environmental Consequences/Environmental Impacts

Environmental Consequence/Environmental Impacts of the No Action/No Project Alternative

Under the No Action/No Project Alternative, no new construction would occur. No change in public safety with respect to hazardous, toxic, and radiological wastes is expected because no persons would be exposed to hazardous, toxic, and radiological wastes associated with the construction of flood management facilities. Existing conditions of the Folsom Facility also do not currently expose people to hazardous, toxic, and radiological wastes.

The No Action/No Project Alternative would have no effect on health and safety related to hazardous, toxic, or radiological waste.

Environmental Consequences/Environmental Impacts of Alternative 1

Development of soil borrow in the vicinity of Dike 8 may expose workers to health and safety effects.

As discussed in Section 3.6.2.3, soil in the area of Dike 8 is derived from schist containing minute amounts of asbestos-like fibers. During borrow removal, processing, and placement at MIAD, friable, asbestos fibers may be released during construction. Engineering controls would be required during disturbance of the concrete foundation to protect construction crews and the general public.

This impact would be potentially significant. Mitigation Measures GR-1 (See Section 3.6.4), PHS-3, PHS-4, and PHS-5 would reduce impacts to a less than significant level.

Construction activities could result in exposure to hazardous materials.

Some construction activities would require the use of hazardous materials and their use could result in accidental spills at construction sites. In addition, all earthwork has the potential to uncover hazardous materials in the soil, groundwater, or sediment. Excavation or borrow development could expose hazards left in the area from previous construction activities. Spillway modifications could result in resuspension of sediments that may contain contaminants such as mercury. Depending on the concentrations, the introduction of these contaminants in the reservoir could require closures or warnings for swimming and fishing. (Refer to Section 3.1, Hydrology, Water Quality, and Groundwater and Section 3.5, Terrestrial Vegetation and Wildlife, for additional information regarding mercury contamination.). The contractor needs to be prepared to implement appropriate protocols for proper handling and disposal of hazardous materials should they be encountered during construction to protect construction crews and the general public; and to provide proper notification to the general public, as needed.

This impact would be potentially significant. Mitigation Measures HWQ-1 and HWQ-2 (See Section 3.1.4), PHS-1, PHS-3, PHS-4, and PHS- 5 would reduce impacts to a less than significant level.

Environmental Consequences/Environmental Impacts of Alternative 2

As with Alternative 1, Alternative 2 could involve the development of borrow material containing asbestos-like fibers, the use of hazardous materials that could result in accidental spills at construction sites, and earthwork that has the potential to uncover hazardous materials in the soil, groundwater, or sediment. One difference between Alternatives 1 and 2 would be that new embankments/flood easements could be constructed around the reservoir under Alternative 2 to prevent flooding in areas of low elevation. The number of embankments required and their exact locations have not been determined; however, typical construction of the new embankments/flood easements would involve the use of scrapers, loaders, and other equipment to create earthen berms, and the creation of access roads for construction and maintenance. The nature of the impacts from these activities would not be substantially different from the impacts addressed under Alternative 1 and would be mitigated to a less than significant level by implementation of Mitigation Measures GR-1, HWQ-1, HWQ-2, PHS-1, PHS-3, PHS-4, and PHS- 5.

Other than the new embankments/flood easements, there would be no appreciable difference between the impacts of Alternative 1 and Alternative 2 for these elements. Mitigation Measures identified for Alternative 1 are applicable to Alternative 2.

Environmental Consequence/Environmental Impacts of Alternative 3

As with Alternative 2, Alternative 3 could involve the development of borrow material containing asbestos-like fibers, the use of hazardous materials that could result in accidental spills at construction sites, and earthwork that has the potential to uncover hazardous materials in the soil, groundwater, or sediment. There would be no appreciable difference between the impacts of Alternative 2 and Alternative 3 for these elements. Mitigation Measures identified for Alternative 2 are applicable to Alternative 3.

Environmental Consequence/Environmental Impacts of Alternative 4

As with Alternative 2, Alternative 4 could involve the development of borrow material containing asbestos-like fibers, the use of hazardous materials that could result in accidental spills at construction sites, and earthwork that has the potential to uncover hazardous materials in the soil, groundwater, or sediment. There would be no appreciable difference between the impacts of Alternative 2 and Alternative 4 for these elements. Mitigation Measures identified for Alternative 2 are applicable to Alternative 4.

Environmental Consequences/Environmental Impacts of Alternative 5
As with Alternative 2, Alternative 5 could involve the development of borrow material containing asbestos-like fibers, the use of hazardous materials that could result in accidental spills at construction sites, and earthwork that has the potential to uncover hazardous materials in the soil, groundwater, or sediment. There would be no appreciable difference between the impacts of Alternative 2 and Alternative 5 for these elements. Mitigation Measures identified for Alternative 2 are applicable to Alternative 5.

3.17.3 Comparative Analysis of Alternatives

There would generally be no difference between the alternatives for impacts to public health and safety due to natural disasters or hazardous, toxic, and radiological waste. However, Alternatives 4 and 5 would require the largest quantities of borrow material and would therefore have a greater chance of encountering hazards in the soils. Alternatives 1 through 4 would require excavation in the reservoir for a new Auxiliary Spillway and could therefore encounter mercury in the sediments. Although there would be no excavation in the reservoir for a new Auxiliary Spillway, construction activities at MIAD under Alternative 5 could encounter mercury in the sediment.

3.17.4 Mitigation Measures

Adherence to the following mitigation measures would satisfy the regulatory requirements regarding hazard identification and would mitigate potentially significant impacts to a less than significant level.

PHS-1: A public safety management plan will be prepared and implemented to maintain public safety during all phases of construction. Components of the plan will address:

- Public notification of the location and duration of construction activities, pedestrian/bicycle path/trail closures, and restrictions on reservoir use (i.e., boating, water skiing, fishing, swimming);
- Verification with local jurisdictions that construction blockage of existing roadways will not interfere with existing emergency evacuation plans;
- Adequate signage regarding the location of construction sites and warning of the presence of construction equipment;
- Fencing of construction staging areas and of construction areas if dangerous conditions exist when construction is not occurring; and

- Temporary walkways (with appropriate markings, barriers, and signs to safely separate pedestrians from vehicular traffic) and detour signage where an existing sidewalk or pedestrian/bicycle path/trail will be closed during construction.

PHS-2: Prior to initiating construction activities, the responsible Federal agency in consultation with the appropriate city, county, and State fire suppression agencies will prepare and implement a Fire Management Plan. The plan will include fire prevention and response methods including fire precaution, presuppression, and suppression measures consistent with the policies and standards in the affected jurisdictions.

PHS-3: Conduct a Phase I ENSA at all construction sites before beginning construction. Reclamation and the Corps will require that site-specific environmental site assessments be performed for all sites where construction will be conducted. As necessary, a soil and groundwater characterization program will be developed and implemented at all excavation locations in proximity to listed hazardous waste sites identified in the Phase I ENSA. The soil and groundwater characterization program will identify those excavation areas that will require development and implementation of appropriate remediation measures. Mitigation Measure PHS-5 described below applies only to areas where contact with contaminated soil or groundwater is suspected.

PHS-4: Prepare and implement a Worker Health and Safety Plan prior to the start of construction activities. The Contractor will prepare a Health and Safety Plan that should, at a minimum, identify:

- All contaminants that could be encountered during excavation activities (e.g., potential asbestos in the gravel used for the foundation of the Folsom Dam, TPH in soil);
- All appropriate worker, public health, and environmental protection equipment and procedures;
- Emergency response procedures;
- Most direct route to a hospital; and
- Site Safety Officer.

The plan will require documentation that all workers have reviewed and signed the plan.

PHS-5: Prior to initiation of construction activities, the Contractor will be required to prepare a Hazardous Material Management Plan for review by the responsible Federal agency. The purpose of this plan is to have an established plan of action if

hazardous materials are encountered during construction and to establish best management practices (BMPs) to reduce the potential for exposure to hazardous wastes. The plan will:

- Define a protocol for proper handling and disposal of hazardous materials if they are encountered during construction;
- Define a protocol for proper emergency procedures and handling and disposal of hazardous materials if an accidental spill occurs during construction; and
- Establish BMPs to reduce the potential for spills of HTRW.

Typical BMPs to reduce the potential for spills may include, but are not limited to:

- Having a spill prevention and control plan with a designated supervisor to oversee and enforce proper spill prevention measures;
- Providing spill response and prevention education for employees and subcontractors;
- Stocking appropriate clean-up materials onsite near material storage, unloading and use areas;
- Designating hazardous waste storage areas away from storm drains or watercourses;
- Minimizing production or generation of hazardous materials onsite or substituting chemicals used onsite with less hazardous chemicals;
- Designating areas for construction vehicle and equipment maintenance and fueling with appropriate control measures for runon and runoff; and
- Arranging for regular hazardous waste removal to minimize onsite storage.

HWQ-1 and HWQ-2 (see Section 3.1.4) and GR-1 (see Section 3.6.4) would also serve to reduce potential public health and safety impacts during construction to a less than significant level.

3.17.5 Cumulative Effects

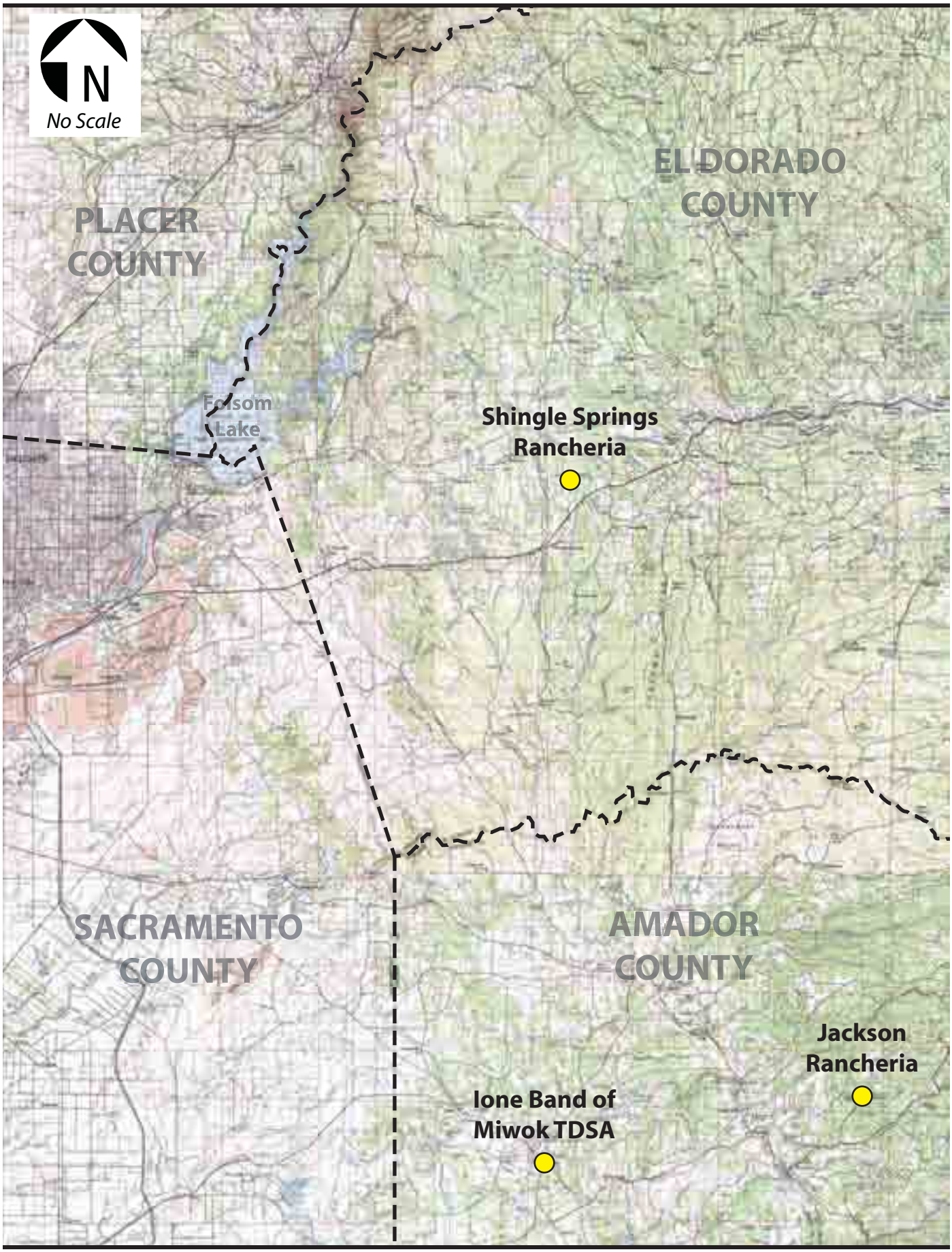
Cumulatively, the Folsom DS/FDR actions would have a beneficial effect on public health and safety with respect to natural disasters. The Folsom DS/FDR actions would reduce current dam deficiencies, such as potential failure due to seismic (earthquake), static (seepage), and hydrologic concerns (probable maximum flood events), and provide greater protection to downstream populations in the Sacramento metropolitan area from potential flood impacts. Effects on public health and safety

with respect to hazardous, toxic, and radiological waste were found not to have the potential to contribute to cumulative effects because the effects are either temporary or have no potential to be additive to other projects. Therefore, the Folsom DS/FDR actions would not have an adverse cumulative effect on public health and safety.

3.18 Indian Trust Assets

Indian Trust Assets (ITAs) are defined as legal interests in property held in trust by the United States government for Indian tribes or individuals, or property protected under United States law for Indian tribes and individuals. Federal agencies are required to take responsibility for protection and maintenance of ITAs. EISs should consider impacts to ITAs when the potential for impacts exist.

As shown in Figure 3.18-1, ITAs are not present within the area or adjacent to the Folsom Facility. Therefore, there would be no impacts to ITAs from the Folsom DS/FDR actions (U.S. Census Bureau 2001).



W:\REPORTS\Folsom EIR\Graphics\ITAs Near Project Area_Fig3.18-1.ai 11/01/06 JJT

Figure 3.18-1
ITAs Near the Folsom Facility

CDM

3.19 Environmental Justice

This section addresses the degree to which the Folsom DS/FDR alternatives would comply with federal and state regulations and guidelines pertaining to environmental justice by identifying potentially disproportionately high and adverse human health or environmental effects on minority and/or low-income populations. The applicable federal and state environmental justice regulations and guidelines are described below in Subsection 3.19.1.2.

3.19.1 Affected Environment/Existing Conditions

3.19.1.1 Area of Analysis

The study area is broken down into State and local jurisdictions including: Folsom State Prison/California State Prison - Sacramento (CSPS), Placer County, El Dorado County, Sacramento County, and City of Folsom. The 2000 Census Tract Block Groups used for this analysis include the following:

- Folsom State Prison/California State Prison, Sacramento (Sacramento County) – Block Group 1, Census Tract 83
- Placer County – Block Groups 1, 2 and 3, Census Tract 206.01 and Block Group 2, Census Tract 206.05
- El Dorado County – Block Group 1, Census Tract 307.01 and Block Group 1, Census Tract 307.02
- City of Folsom (Sacramento County) – Block Groups 1, 2 and 4, Census Tract 82.10; Block Group 1, Census Tract 84.02 and Block Group 2, Census Tract 85.01

The study area for the environmental justice analysis is the area in which the collective environmental effects resulting from the Folsom DS/FDR alternatives would be likely to occur. Figure 3.16-1, in Section 3.16, Population and Housing, shows the census tracts and block groups included in the Folsom DS/FDR study area.

3.19.1.2 Regulatory Setting

Federal Environmental Justice Regulations and Guidelines

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations," established the priority of analyzing environmental justice for any action that could cause disproportionately high and adverse impacts to a minority and/or or low-income population. All federal agencies are required to include analysis of environmental justice within EISs. Minority population is defined as including all non-white racial groups and Hispanics of any

racial group; low-income population is defined based on federal poverty thresholds (Council of Environmental Quality 1997).

Two principles are central to the analysis of environmental justice under Executive Order 12898:

- Fair treatment of all people regardless of race, color, nation of origin or income; and
- Promotion of public participation by minority and/or low-income populations.

Reclamation and the Corps have guidelines for analysis of environmental justice in EAs and EISs. Potential disproportionately high and adverse impacts to minority and/or low-income populations should be discussed and reasonable mitigation measures established as necessary. Active engagement of minority and low-income communities within the public scoping and involvement processes should be promoted. Consideration of minority cultural and language needs should be addressed when developing public involvement programs.

State Environmental Justice Regulations and Guidelines

California State Government Code Section 65040.12(e) defines environmental justice as the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations and policies. The Office of Planning and Research (OPR) is the coordinating agency in State government for environmental justice programs. OPR is responsible for developing guidelines for incorporating environmental justice into general plans.

Enacted at the same time as Government Code Section 65040.12, Public Resources Code Sections 71110-71116 designate the California Environmental Protection Agency (CalEPA) as the public agency to implement the state's environmental justice programs. Specifically, CalEPA is required to "promote enforcement of all health and environmental statutes within its jurisdiction in a manner that ensures the fair treatment of people of all races, cultures, and income levels, including minority populations and low income populations of the state." See Public Resources Code § 71110. CalEPA's other broad responsibilities include the implementation of environmental justice in the design and implementation of programs, policies and activities, the implementation of enforcement efforts, the design of public participation activities, and conducting health and environmental research and data collection. Pursuant to this law, CalEPA has developed a model environmental justice mission statement and convened a Working Group and an Advisory Group to develop an agency-wide strategy for identifying and addressing any gaps in existing programs, policies, or activities that could impede the achievement of environmental justice. On October 7, 2003, the Advisory Group finalized and published their

Environmental Justice Recommendations to the Working Group, which provide a set of comprehensive recommendations to establish and implement an effective environmental justice program at CalEPA.

Beyond these general environmental justice laws, there is currently no state requirement or specific guidance for addressing environmental justice under CEQA. However, it is in recognition of the environmental justice principles and policies under Government Code Section 65040.12 and Public Resources Code Sections 71110-71116 and the still-developing statewide approach to environmental justice, the subject issue is addressed in this section.

Placer and El Dorado Counties' General Plans and the City of Folsom's General Plan do not include guidelines related to environmental justice.

3.19.1.3 Environmental Setting

Table 3.19-1 shows the demographic and income breakdown for each block group in the study area. Based on this information, there is one block group with a population consisting primarily of minority and low-income individuals. Block Group 1, Census Tract 83 consists of the Folsom State Prison and the CSPS, and is located adjacent to the Folsom DS/FDR area, within the City of Folsom. As indicated in Table 3.19-1, year 2000 U.S. Census data indicates that Block Group 1, Census Tract 83 consists of over 50 percent minority individuals and 53.3 percent of low-income individuals, defined as living below the federal poverty level.

Section 3.18, Population and Housing, defines the race and ethnic demographic breakdown within the area of analysis. Household income is also discussed in the Section 3.18 for the area of analysis.

Folsom State Prison/California State Prison - Sacramento

Folsom State Prison and CSPS are within the same census tract and block group, and within the city limits of Folsom. Folsom State Prison is a medium security prison for men, housing Level II and Level III inmates. A minimum security unit is also at Folsom State Prison (California Department of Corrections and Rehabilitations [CDCR] 2006a). Adjacent to Folsom State Prison, CSPS houses maximum security inmates with long sentences and inmates perceived as management problems from other institutions.

CSPS is also a medical hub for Northern California. This facility provides a Psychiatric Services Unit, enhanced outpatient (EOP) and EOP Administrative Segregation levels of healthcare. An Outpatient Housing Unit and Correction Treatment Center are also located at the facility (CDCR 2006b). A total of 7,367 inmates were housed at the two prisons as of March 31, 2006 (CDCR 2006b).

Table 3.19-1
Demographic and Income Data of Environmental Justice Study Area

Parameter	*Applicable Environmental Justice Threshold*[1]	*Block Group 1, Census Tract 307.01, El Dorado County, CA*	*Block Group 1, Census Tract 307.02, El Dorado County, CA*	*Block Group 1, Census Tract 206.01, Placer County, CA*	*Block Group 2, Census Tract 206.01, Placer County, CA*	*Block Group 3, Census Tract 206.01, Placer County, CA*	*Block Group 2, Census Tract 206.05, Placer County, CA*	*Block Group 1, Census Tract 82.10, Sacramento County, CA*	*Block Group 2, Census Tract 82.10, Sacramento County, CA*	*Block Group 4, Census Tract 82.10, Sacramento County, CA*	*Block Group 1, Census Tract 83, Sacramento County, CA*	*Block Group 1, Census Tract 84.02, Sacramento County, CA*	*Block Group 2, Census Tract 85.01, Sacramento County, CA*
Total Population		5,108	746	1,435	4,719	271	2,295	459	711	1,733	6,842	4,280	2,815
Total Minority Population[2]		737	69	139	467	40	247	71	76	124	4,493	643	465
Minority Percentage	50% or more	14.4%	9.2%	9.7%	9.9%	14.8%	10.8%	15.5%	10.7%	7.2%	65.7%	15.0%	16.5%
Median Household Income		$99,728	$109,025	$79,912	$101,851	$74,821	$101,617	$87,417	$29,500	$35,543	$56,042	$75,698	$100,250
Percentage Below Federal Poverty Threshold		1.8%	0.0%	3.2%	2.9%	0.0%	5.1%	3.9%	5.9%	3.8%	53.3%	3.8%	1.9%

Source: 2000 U.S. Census unless noted otherwise, U.S. Census Bureau 2004a
[1]Based on Environmental Justice – Guidance Under the National Environmental Policy Review Act, Council on Environmental Quality (CEQ), 1997, page 25.
[2]Total population minus "white alone" plus Hispanics/Latinos who are white alone.

Folsom State Prison and CSPS are located in Census Tract 83, Block Group 1, Sacramento County. Table 3.19-2 shows the majority of the prison population to be minorities at 65.7 percent of the population in 2000.

Table 3.19-2
Race and Ethnic Demographics within Block 1, Census Tract 83 (Folsom State Prison and CSPS)

Race/Ethnicity	*Number*	*Percentage of Study Area Population*
White alone	2,438	35.6%
Black or African American	2,430	35.5%
American Indian and Alaska Native	65	1.0%
Asian	88	1.3%
Other or Mixed	1,821	26.6%
Total	6,842	100.0%
Hispanic or Latino	1,860	27.2%
Total minority	4,493	65.7%

Source: US Census Data 2000 (U.S. Census Bureau 2004a)

The majority of the prison population was reported as having incomes below the poverty level. U.S. Census 2000 reports 77 people living in 36 households with a median household income of $56,042. Because these households are in the same census block group as the prisons, separate racial and income data are not available for them. The 2000 Census reported no families living below poverty level in the block group. Discussions with prison public information officers indicate that individuals living within these households are prison employees and their families and are not institutionalized individuals (Cocke 2006; Lucchi 2006).

3.19.2 Environmental Consequences/Environmental Impacts

3.19.2.1 Assessment Methods

The U.S. Environmental Protection Agency's (USEPA) guidance for determining whether there is a minority community where environmental justice effects could occur gives both quantitative and qualitative measures: if the affected area's minority population is over 50 percent, and if the minority population in the affected area is "meaningfully greater" than that in the general population.

U.S. 2000 Census data was used to identify the percentage of minority and low income populations within the study area to determine if environmental justice impacts would occur. Data indicated the percentage of individuals who are listed as minorities in census block groups in the study area. The demographic analysis also identified percentages of study area residents living below the poverty level.

3.19.2.2 Significance Criteria

Implementation of the proposed actions of the Folsom DS/FDR would result in a significant environmental justice impact if they would:

- Expose a minority or low-income population to disproportionately high and adverse impacts or hazards; or
- Not take efforts to encourage public participation within predominately minority or low-income population segments.

3.19.2.3 Environmental Consequences/Environmental Impacts

Environmental Consequences/Environmental Impacts of the No Action/No Project Alternative

Under the No Action/No Project Alternative, construction of the Folsom DS/FDR improvements at the Folsom Facility would not occur. All income levels and populations would be at the same risk if seismic, hydrologic, or static problems or a major flood occurred at the Folsom Facility. Appropriate measures would be taken to protect the prison population from any hazardous effects. Because there would be no disproportionate effect to minorities or low income populations, the No Action/No Project Alternative would have no impact relative to Environmental Justice.

The No Action/No Project Alternative would have no impact to Environmental Justice.

Environmental Consequences/Environmental Impacts of Alternative 1

Actions under Alternative 1 would not result in environmental justice impacts.

The majority of the population in the study area is not a minority and is living above the Federal poverty threshold. Therefore, based on demographics identified in Table 3.19-1, there would not be a disproportionate impact to minority or low-income populations or property in the majority of the study area. Folsom State Prison/CSPS and prison employee households (Block Group 1, Census Tract 83) indicated low income and minority groups above 50 percent. Therefore, environmental justice could be an issue if implementation of the Folsom DS/FDR disproportionately affects the prison population, including inmates and workers and families living on the prison grounds.

Construction activities could temporarily increase noise, traffic, and air emissions in the vicinity of the site. Several phases of construction planned for the Alternative 1 would occur around the Main Concrete Dam and Left Wing Dam, which could increase noise levels near the prison. Construction activities would also occur in multiple areas surrounding the Folsom Facility, which would increase noise for other communities. The effects of increased noise would be experienced by all people within the surrounding areas of the Folsom Facility. Therefore, there would be no

disproportionate effect of increased noise on Block Group 1, Census Tract 83, including the prison population.

Increased traffic from construction activities would also affect a wide range of income levels and races in the study area. Traffic could increase along the Highway 50 and Interstate 80 corridors and in the City of Folsom. These increases would affect all drivers and would not have any disproportionately high and adverse effects to minority and/or low-income populations. In general, because construction is planned throughout the study area, any effects would fall on all residents within the study area. Disproportionately high and adverse effects to minority and/or low-income populations would not occur from construction of Alternative 1.

Alternative 1 would also close recreation sites in the Folsom Lake State Recreation Area. The Folsom Lake State Recreation Area is used by people of all income levels and race. Closure of the recreation areas would not affect prisoners or disproportionately affect workers or families living on the prison grounds.

As described in Section 2, the formulation, screening, and selection of alternatives to be considered for the Folsom DS/FDR included public outreach and community input, including attendance at local scoping meetings (see Appendix A, Public Scoping Report). Additional focused efforts to solicit public participation within predominately minority or low-income population segments were not conducted relative to the Folsom DS/FDR, given the unique circumstances of the subject population (i.e., inmates within Folsom State Prison and CSPS).

This impact would be less than significant.

Environmental Consequences/Environmental Impacts of Alternative 2
Impacts of Alternative 2 related to environmental justice would be the same as Alternative 1.

Environmental Consequences/Environmental Impacts of Alternative 3
Impacts of Alternative 3 related to environmental justice would be the same as Alternative 1.

Environmental Consequences/Environmental Impacts of Alternative 4
Impacts of Alternative 4 related to environmental justice would be the same as Alternative 1.

Environmental Consequences/Environmental Impacts of Alternative 5
Impacts of Alternative 5 related to environmental justice would be the same as Alternative 1.

3.19.3 Comparative Analysis of Alternatives

There would be no significant impacts under any of the Folsom DS/FDR action alternatives with regard to environmental justice.

3.19.4 Mitigation Measures

There would be no significant environmental justice impacts; therefore, no mitigation measures are required.

3.19.5 Cumulative Effects

The Folsom DS/FDR would have no significant environmental justice impacts and would not contribute to any cumulative environmental justice impacts.