

FOLSOM

General Plan/Resource Management Plan



Chapter II: EXISTING CONDITIONS

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A. UNIT SUMMARY

Folsom Lake State Recreation Area (SRA) encompasses approximately 20,000 acres of water and land at the confluence of the North and South Forks of the American River in the Sierra Nevada Foothills. Located at the eastern edge of the Sacramento Metropolitan Area, the SRA is bisected by the boundaries of three counties (El Dorado, Placer, and Sacramento) as well as the City of Folsom (see Figure I-2). The Folsom Lake reservoir and Lake Natoma afterbay are the primary features of the SRA and account for roughly 11,500 acres of the unit area.¹ The remaining 8,500 acres of upland area is comprised mostly of a narrow band of shoreline. Recreation facilities on the lakes include a marina, boat launch areas, swimming beaches, campgrounds, landscaped picnic areas, food and equipment concessions, interpretive facilities, scenic overlooks, restrooms, trailheads and equestrian staging areas, and more than 90 miles of dirt trails and paved paths. Popular aquatic activities in the SRA include boating, personal water craft use, water skiing, sailing, windsurfing, rafting, rowing, paddling, swimming, and fishing. Upland activities include hiking, biking, picnicking, camping, and horseback riding.

Folsom Powerhouse State Historic Park (SHP) is a separate designated unit within the State Parks system, which is located within Folsom Lake SRA and is also administered by the Folsom Sector. The Folsom Powerhouse which represents one of the oldest hydroelectric facilities in the world and the nation's first power system to provide high-voltage alternative current over long distance transmission lines.

1. Existing Land Use

For the most part, land uses within the SRA are recreation related and reflect a range of activity and development intensity. Recreation uses tend to occur in discrete recreation centers with, in most cases, several miles of undeveloped shoreline separating each center. Non-recreation uses in the SRA are also prevalent and are related to operation of Folsom

¹ It should be noted that the surface area of Folsom Lake varies considerably as water levels fluctuate over the course of a year. In a typical year, water levels fluctuate by about 40 feet resulting in a fluctuation in surface area of about 4,000 acres.

Lake and Lake Natoma for the purposes of flood control, water supply, and power generation. The very existence of the SRA is the result of the Central Valley Project, which dammed the American River at Folsom and created the unit's two lakes.

Folsom Lake SRA and Folsom Powerhouse SHP are composed of both federal lands administered by the U.S. Bureau of Reclamation and State-owned lands acquired by the California Department of Parks and Recreation (State Parks). Federal lands in the two units include approximately 17,300 acres and the State lands comprise approximately 2,200 acres. Figure II-1 shows the location of State Parks-owned land within the SRA. The federal lands in both units are managed by State Parks through a lease agreement with Reclamation.

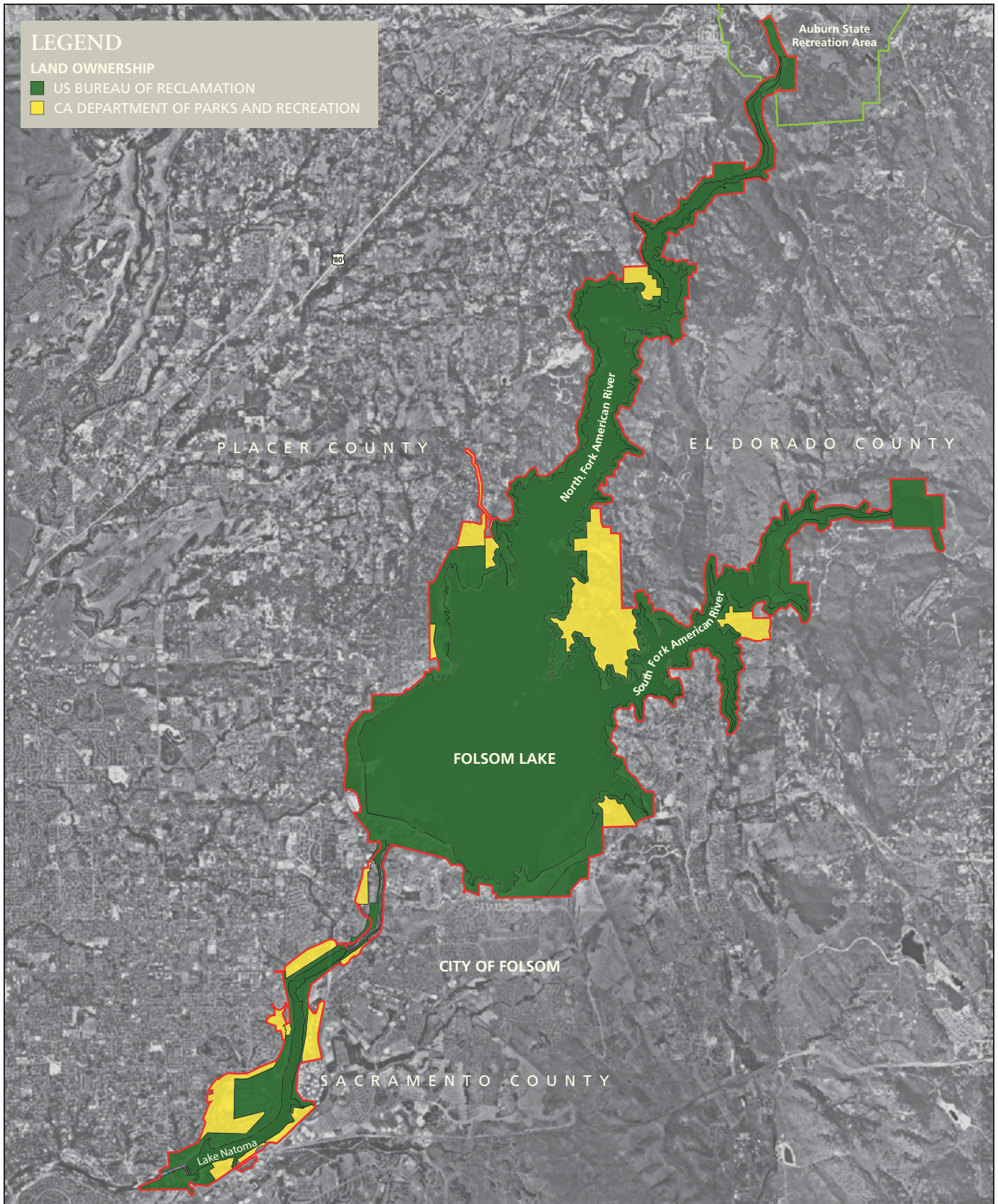
a. Folsom Lake

The visitor areas on Folsom Lake provide for a range of recreational activities, with most accommodating multiple recreation uses. Primary visitor areas serve as gateways to the SRA and have the most developed facilities, providing a wide range of visitor services with easy access from major travel routes. Secondary visitor areas provide access to the shoreline in more remote and less developed settings (refer to Figure II-2).

Granite Bay and Beals Point are the primary visitor areas on the western shoreline of Folsom Lake, with large day-use areas that include swim beaches, landscaped picnic areas, boat launch facilities, restrooms, snack food and beach equipment concessions, trailheads, and associated parking. In addition, Granite Bay includes a modest multi-use activity center (available for rent) and Beals Point includes a 69-site campground. The smaller and more remote Rattlesnake Bar visitor area provides boat launch facilities and informal access to the shoreline for fishing, swimming and picnicking.

On the eastern shoreline, Brown's Ravine and Folsom Point are primary visitor areas. Brown's Ravine is home to the Folsom Lake Marina which provides 675 wet slips, 175 dry storage spaces, boat launch areas, marine provisions and fueling station, small picnic area, and restrooms. Folsom Point includes a picnic area, boat launch facilities, and restrooms. Secondary visitor areas on the eastern shore include Skunk Hollow/Salmon Falls whitewater rafting take-out areas, Old Salmon Falls/Monte Vista trailhead and equestrian staging area, and Peninsula Campground with 104 campsites.

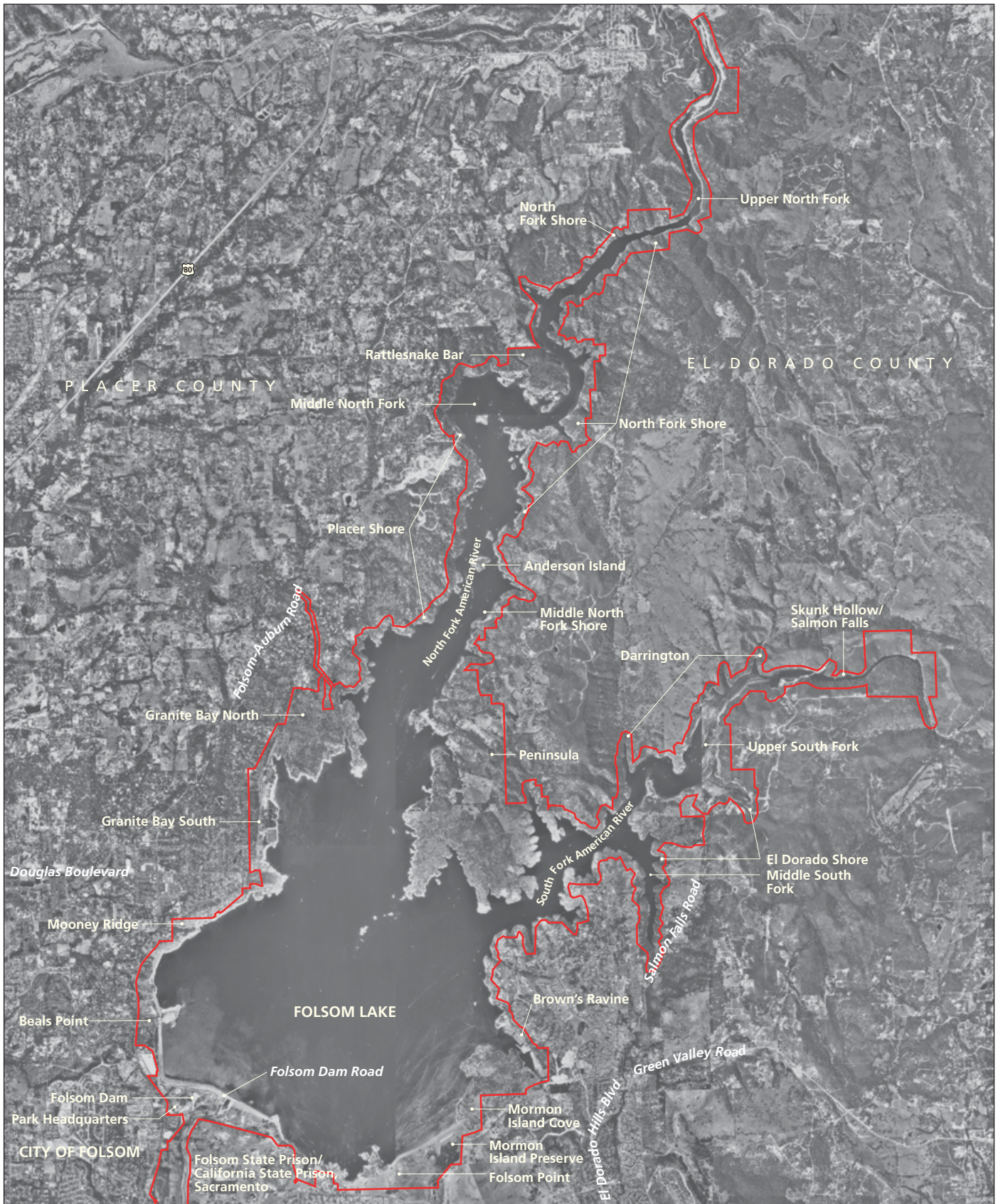
The SRA's system of trails and access points links all of the visitor areas on Folsom Lake. Recreation support facilities on Folsom Lake include the Park Headquarters compound at Folsom-Auburn Road and Folsom Dam Road which includes the Gold Fields District office



Folsom Lake State Recreation Area & Folsom Powerhouse State Historic Park
 General Plan/Resource Management Plan

Credit: Wallace Roberts & Todd, LLC

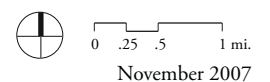
Figure II-1
FOLSOM LAKE STATE RECREATION AREA
LAND OWNERSHIP



Folsom Lake State Recreation Area & Folsom Powerhouse State Historic Park
 General Plan/Resource Management Plan

Credit: Wallace Roberts & Todd, LLC

Figure II-2
FOLSOM LAKE



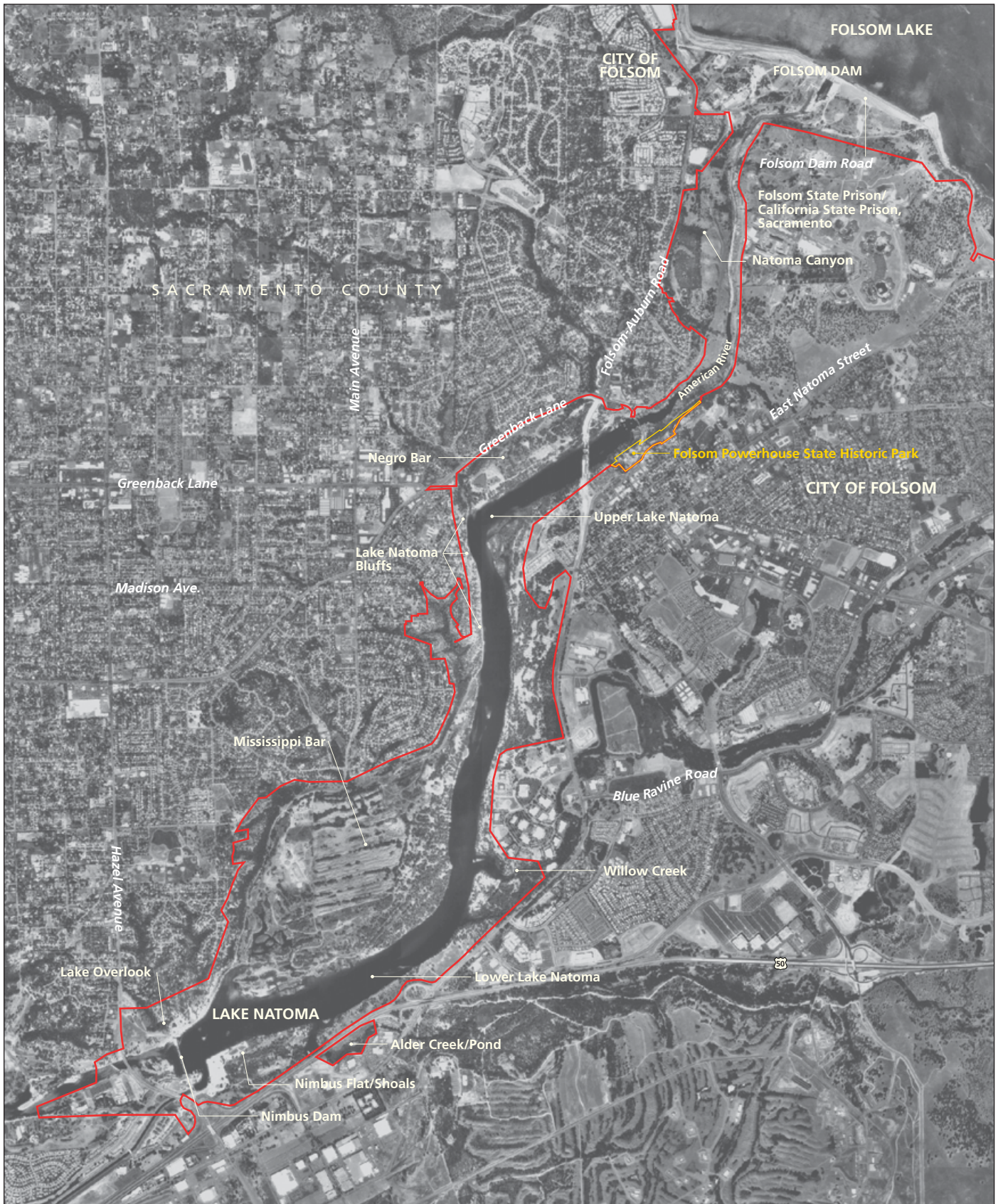
and Folsom Sector office of the California Department of Parks and Recreation (State Parks), the Central California Area Office of the U.S. Department of the Interior Bureau of Reclamation (Reclamation), corporation yards for each agency, and the American River Water Education Center (cooperatively managed by Reclamation and State Parks). Non-recreation uses on Folsom Lake are generally associated with Folsom Dam and the operation of the reservoir. Folsom Dam is a 1,400-foot long and 340-foot high concrete structure flanked by earthfill wing dams and dikes with a total length of about nine miles.

The primary function of Folsom Lake for eight months of the year—between October 1 and May 31—is flood control. During this time, Folsom Dam holds back a large portion of the winter storm runoff in the American River watershed, and later the watershed's snow melt. In the summer months, water from Folsom Lake is released to prevent saltwater intrusion in the San Joaquin Delta and thereby maintaining water quality, and to maintain minimum flows and temperatures to facilitate anadromous fisheries (salmon and steelhead). Water from Folsom Lake is also used throughout the year to meet the local demand for drinking water and power generation. The water allocated to these various uses is carefully regulated and involves several federal, State, and local agencies.

As a functioning reservoir, water levels on Folsom Lake normally fluctuate between 440 feet in early summer and 405 feet in early winter. In some years the reservoir is drawn down below 400' elevation due to variations in precipitation and/or downstream demands for Folsom Reservoir water such as Delta water quality or anadromous fisheries needs. For instance, in November 2007 Folsom Reservoir is at 380 feet elevation. These fluctuations have a direct effect on both the aquatic and upland recreation opportunities on the Lake.

b. Lake Natoma

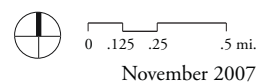
As the afterbay to Folsom Dam, Lake Natoma is essentially a wide spot in the American River characterized by sheltered waters and a highly scenic setting (refer to Figure II-3). As on Folsom Lake, the primary visitor areas on Lake Natoma accommodate multiple recreation uses and are separated by undeveloped shoreline. These areas include Nimbus Flat, California State University Sacramento (CSUS) Aquatic Center, and Negro Bar. The Nimbus Flat visitor area, located on the eastern shore of the lake just above Nimbus Dam, includes two small beaches, landscaped picnic areas, low docks for launching small watercraft, and restrooms. The CSUS Aquatic Center, which is operated by Sacramento State University under agreement with State Parks, is home to the university's water ski and rowing teams and also offers a full range of public courses and programs in watercraft



Folsom Lake State Recreation Area & Folsom Powerhouse State Historic Park
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Credit: Wallace Roberts & Todd, LLC

Figure II-3
LAKE NATOMA



instruction and aquatic safety. Facilities include an administrative building with offices and classrooms, equipment storage buildings, launch docks with mooring areas, and a small beach area. Located on the western shore, Negro Bar includes a full range of visitor facilities including a swim beach, landscaped picnic area, group campground, boat launch ramp, canoe/kayak concession, restrooms, and an equestrian staging area.

Secondary visitor areas on Lake Natoma include Willow Creek on the eastern shore and Lake Overlook and Mississippi Bar on the western shore. Each of the areas has limited facilities, but each provides water and trail access. The Willow Creek area includes a small picnic area, canoe and kayak concession, informal boat launch, vault toilets, and a small parking area. Lake Overlook, which provides sweeping views of Lake Natoma, the Sierra Foothills, and the Sacramento Valley from its vantage high above Nimbus Dam, includes a paved parking lot and trailhead. Mississippi Bar, the largest of the three areas, occupies a flat, river terrace between Lake Overlook and Negro Bar. The area is undeveloped, but has been highly modified by past mineral extraction activities. Significant portions of the area are covered with dredge tailings left over from early gold exploration and more recent aggregate mining. The area also includes several lagoons and ponds, some of which are accessible by canoe or kayak from Lake Natoma, as well as a heron rookery. Mississippi Bar represents a significant area of opportunity for future recreation and/or preservation.

Also located on Lake Natoma is the Folsom Powerhouse State Historic Park (SHP). Folsom Powerhouse SHP is a separate unit in the State Parks system that is managed by the Folsom Sector and is being addressed in this General Plan. The Folsom Powerhouse SHP is a premier cultural and interpretive attraction and is one of the oldest hydroelectric facilities in the world. The SHP includes the main powerhouse and associated buildings (including a gift shop), picnic area, restrooms, and a small parking area. Refer to Subsection d: Interpretive and Educational Resources, of this chapter for further information.

Non-recreation uses on Lake Natoma are generally associated with Nimbus Dam. The dam, which measures almost 1,100 feet in length and 76 feet in height, is designed to re-regulate flows into the American River and to generate electricity from water releases. Nimbus Dam includes two generators capable of producing more than 15,520 kilowatts of power. As a regulating reservoir, variations in water levels on Lake Natoma are much less than on Folsom Lake, generally between 2 and 4 feet only. Unlike Folsom, these variations are not seasonal, but can occur daily.

2. Adjacent Land Use

When the SRA was established in 1958, the area around it was largely rural. However, the visual and recreational amenity provided by the SRA's lakes and uplands have served as a magnet to development and the area has undergone significant urbanization over the past half century. Today, only the northern and northeastern-most boundaries of the SRA adjoin truly rural areas. The majority of the development in the immediate vicinity of the SRA is relatively low-density single-family residential, although commercial retail and employment development also occurs in the surrounding areas. Development is likely to continue in the unit vicinity during the planning horizon of this General Plan, particularly in El Dorado County, resulting in additional areas of interface between the SRA and neighbors. The upland areas of the SRA generally comprise a relatively narrow strip of shoreline above the high water mark which puts development on private property adjacent to the unit's boundary in close proximity to various SRA use areas. This raises a variety of issues associated with the impact of neighboring development on the SRA, including night sky impacts, access and encroachment problems, noise, concerns regarding wildfire, spread of invasive exotic plant species, and the impacts of pets on unit natural resources.

a. Folsom Lake

Folsom Lake straddles the boundaries of Placer County, El Dorado County, Sacramento County and the City of Folsom. The western shoreline of the Lake is located within Placer County and land uses that abut the western SRA boundary generally decrease in intensity from south to north. North of the Placer County boundary with the City of Folsom, residential development is located adjacent to SRA boundaries, particularly near Granite Bay where some of the highest density residential development in the unincorporated portion of the County abuts the SRA. North of Granite Bay, residential densities decrease, transitioning from suburban densities to large-lot estates with very large homes and finally to rural lands. Development patterns in this area have attempted to optimize visual access to the lake by building on lake-oriented slopes and ridgelines. This is particularly true in the Lakeshore area where large homes are perched on the ridge above the North Fork of the American River between Granite Bay and Horseshoe Bar. Most of the adjoining areas in Placer County that provide views of Folsom Lake have been developed.

The very north end of the SRA abuts the Auburn State Recreation Area on the North Fork of the American River. Auburn SRA includes 26,000 acres of federal lands along 40-miles of the North and Middle Forks of the American River that were set aside for the construction of the Auburn Dam. Primary recreation activities at Auburn SRA include swimming,

boating, fishing, camping, mountain biking, gold panning, off-highway motorcycle riding, and whitewater rafting. More than 100 miles of equestrian/hiking trails are located within Auburn SRA, including the Pioneer Express Trail along the North Fork of the American River which connects the Auburn and Folsom Lake SRA's.

The eastern shoreline of Folsom Lake is located within El Dorado County. As on the western shoreline, the lands abutting the SRA include residential development at densities that decrease from urban to rural as one moves north from the El Dorado County boundary with the City of Folsom. The most concentrated development abutting the eastern shoreline occurs above Brown's Ravine and north to New York Creek. Although densities decrease, residential development extends north along Salmon Falls Road to the South Fork crossing at Skunk Hollow. Lands adjoining the SRA in the Peninsula area are largely undeveloped at this point in time. These areas are designated in the El Dorado County General Plan for a mix of rural residential and agricultural uses.

The southern shoreline, stretching between Placer County in the west and El Dorado County in the east, is located in the City of Folsom (Sacramento County). Key uses along the southern shoreline include the 1,200-acre Folsom State Prison and California State Prison, Sacramento, and the offices of State Parks and Reclamation's Central California Area Office. These uses are located immediately south of, and below, Folsom Dam. To the west of prison, the SRA boundary is largely buffered from residential development by Folsom-Auburn Road, except in the area of Oak Avenue Parkway. To the east, new residential development in the area of East Natoma Street and Green Valley Road now backs onto the SRA boundary.

b. Lake Natoma

With the exception of the retail development that brackets Negro Bar at the intersections of Folsom-Auburn Road/Greenback Lane and Madison Avenue/Greenback Lane, single family residential development occupies most of the lands adjoining the west side of Lake Natoma. Retail and office development abuts SRA lands along the east side of Lake Natoma. Historic Downtown Folsom, a compact 5- by 3-block retail area along Leidesdorff and Riley streets, is located adjacent to Folsom Powerhouse SHP. South of Downtown, Folsom Boulevard generally serves as a boundary and buffer between the SRA and urban development. However, in the area of Parkshore Drive and Blue Ravine Road, a campus industrial office park is located west of Folsom Boulevard, and backs directly onto State lands. South of the office park, limited retail is located along the west side of Folsom Boulevard with major commercial centers, such as the Folsom Premium Outlets (between Natoma Station Drive

and Iron Point Road) and the Folsom Automall (at Highway 50) located along the east side of Folsom Boulevard opposite the SRA. South to Nimbus Flat, Highway 50 follows the SRA boundary separating it from industrial development to the east and south in unincorporated Sacramento County.

3. Significant Resource Values

Although designated as a State Recreation Area because of its recreation potential, the SRA also has significant resource values that need to be protected and managed. While the upland areas comprise only 30 percent of the total unit area, and often times consist of only a narrow strip of shoreline above the high water mark, they contain a variety of important natural and cultural resources. Natural communities within the SRA include chaparral, live oak woodland, blue oak woodland and savanna, annual grassland, riparian woodland, freshwater marsh, vernal pool, and open water. Cultural resources include the Folsom Powerhouse SHP, historic mining and settlement sites, as well as archaeological sites. The following is a summary of the key physical, natural, and cultural resources found in the SRA. A more detailed description of the SRA's resources is included in the *Folsom Lake State Recreation Area Resource Inventory (January 2004)*.

a. Physical Resources

1). *Climate*

The SRA is located where the transition from the Sacramento Valley to the Sierra Nevada Foothills begins. Meteorologically this means the SRA's weather and climate is more similar to the Valley than it is to the Sierra Nevada. As a result, winters are generally cool and moist and summers are hot and dry. Winter rains account for roughly 60 percent of the average annual rainfall, which is about 24 inches. Average annual snowfall is 0.1 inch. Summer high temperatures average in the mid-90s and low temperatures in the lower-60s. Winter high temperatures average in the low- to mid-50s, with low temperatures in the upper-30s.

The prevailing wind in the area is from the south due to marine breezes moving through the Carquinez Strait—a sea-level gap between the Coast Range and the Diablo Range—and the intervening flat terrain. In winter, these breezes diminish and winds from the north occur more frequently. Within the SRA, certain areas have more protection from the prevailing winds, including Nimbus Flat, Negro Bar, and other areas on the Lake Natoma shoreline. Other more exposed areas, such as the main body of Folsom Lake, are subject to these winds, which makes the lake attractive for sailing and windsurfing when winds occur.

2). Geology, Topography and Soils

Geology

The SRA is situated in the westernmost extent of the Sierra Nevada Foothills, between the Central Sierra Nevada and the Central Valley Geomorphic Provinces. Four primary rock divisions are found in the SRA—ultramafic intrusives, metamorphics, granodiorite intrusives, and volcanic mud flows—each associated with a particular part of tectonic history and each with distinct mineral resources.

Ultramafic rocks found in the SRA have been lifted as much as 20 miles vertically by the faulting and underthrusting of the earth's crust. Since outcrops of ultramafic rocks tend to be resistant to erosion, these outcrops often form topographic highs. The largest exposure of ultramafic rocks occurs on Flagstaff Hill in the Peninsula area, and in the area of Iron Mountain near New York Creek on the South Fork arm of Folsom Lake. Mineral resources associated with ultramafic rocks include chromite, minor nickel, talc, and asbestos. The richest chromite mining in the western foothills of the Sierra occurred in the area of Flagstaff Hill just northeast of Peninsula Campground. Currently, these mines are idle or abandoned.

Metamorphic rocks in the unit occur in a north-northwest trending band that generally extends from Rattlesnake Bar south through the Peninsula area to the southern limit of the SRA. These rocks represent ancient chains of volcanic islands and associated seafloor sediments that were added to the western margin of North America when a vast ocean plate was subducted beneath the continent. Mineral resources associated with metamorphic rocks include disseminated gold, lode gold, copper, and zinc. The metamorphic band that extends through the SRA is considered an area where undiscovered mineral deposits similar to known deposits are reasonably expected to exist.

Two areas of granodiorite intrusive rocks—named the Rocklin and Penryn Plutons—have intruded older metamorphic rocks along western shore of Folsom Lake. Dark-colored mafic dikes containing magnesium and iron-rich minerals occur near the edges of these plutons with the best examples found at low water in the Peninsula area. It is worth noting these plutons are more recent than is typical of the high Sierra and that the typical gold-bearing quartz veins associated with other Sierran granitic intrusions are not associated with these plutons.

Volcanic mud flows and consolidated alluvial deposits occur below Folsom Dam and are best observed as the Natoma Bluffs on the northwest side of Lake Natoma and at Nimbus Dam. Two units exist within the SRA, including the Mehrten Formation and the Pliocene Laguna

Formation. The bulk of the Natoma Bluffs exposes Merhten, a complex unit of volcanically derived sediments mixed with volcanic mudflows. Above the Merhten is the Laguna Formation, a sequence of gravel, sand, and silt derived mainly from granitic and metamorphic sources. Debris flow and stream deposits represent the mode of deposition for both units. Mineral resource associated with the Mehrten Formation is placer gold, which occurs in the bases of ancient stream deposits.

In addition to these primary geologic features, dredge deposits resulting from placer gold-mining activities are common within the SRA. These deposits—which consist of large gravel, cobbles, and boulders that have been washed clean of finer-grained sediment and left in large, unorganized heaps—cover the entire southeast side of Lake Natoma as well as a large portion of the northwest side. Dredge deposits represent a historical relict of the gold mining heyday of California.

Topography

The SRA is dominated by rolling hills and upland plateaus separated by major river canyons. Folsom Lake occupies the lower reaches of the canyons of the North and South Forks of the American River. Lake Natoma occupies a broad river valley that over the centuries has been deeply incised into sedimentary rocks. The margins of Folsom Lake and Lake Natoma have considerable topographic relief. Rolling hills and ridgelines surround Folsom Lake, and steep bluffs define a portion of Lake Natoma's western shore. Slopes are generally steep to moderately steep along the margins of Folsom Lake, the exceptions are at the Peninsula Campground area, Goose Flat, and the Granite Bay area. The highest elevation within the SRA is just over 800 feet and occurs in the hills on the Peninsula. The hillsides west of the North Fork, just outside the SRA, range from 800 to 900 feet elevation. The lower terraces at the south end of Lake Natoma are about 100 feet in elevation.

Soils

The majority of soils in the vicinity of Folsom Lake (e.g., Ahwahnee, Andregg, Caperton and Sierra) developed over granite bedrock and are extremely coarse, sandy, and drain rapidly. As a result, these soils are highly erodible and evidence of excessive erosion has been observed in numerous locations places along the western shore of the lake. This situation is worsened by off-road vehicle use and the ad hoc creation and use of informal trails along the shoreline. Areas of gabbritic or serpentine soil also exist in the SRA. The Peninsula area includes soils that were formed over serpentine bedrock. These soils are high in nickel, chromium, and

manganese, giving them corrosive qualities and limiting the varieties of plants that can grow in them. As a result, the gabbroic habitats are uncommon and supported species are generally classified as Threatened or Endangered.

Soils in the vicinity of Lake Natoma are predominantly very deep and excessively well-drained soils in the areas of dredge tailings (xerorthents) that were formed of material with a high content of gravel and cobbles derived from mixed rock sources. The material was deposited as tailings after most of the fine-earth material was washed from it and removed during gold dredging activities. Soils in the area of the American River below Folsom Dam and above Lake Natoma formed in material weathered from granitic rocks (Andregg), are moderately deep, well-drained, and located on foothills. These coarse sandy loam soils are suitable for irrigated pasture, orchards, and rangeland. The primary limitation on urban use is depth to bedrock.

Hazards

The SRA is located in a seismically active region. One major fault zone—the Bear Mountains Fault Zone—traverses the unit. This fault zone trends nearly north-south from Auburn to El Dorado Hills, crossing Folsom Lake in the upper reaches of the North Fork arm near Manhattan Bar Road, and the South Fork arm near New York Creek. This portion of the fault zone is inactive. The only recorded moderate earthquake in the Sierra Nevada Foothills is the 1975 Oroville earthquake with a Richter magnitude of 5.7. The risk of ground shaking at the SRA as a result of a significant earthquake event on the nearest major fault line (located in the Bay Area) is very low due to the distance from these major faults, the hard bedrock, and the thin soil cover.

Landslides, mudflows, and rockfalls are not considered a major hazard in the Folsom Lake portion of the unit as most soils are too thin and slopes are generally too low to create conditions for mass wasting, although the steep bluffs along the northwest side of Lake Natoma are unstable. These bluffs are known to spill rocks or chunks of loosely consolidated material onto the popular walking and cycling path at the base of the slope, especially after a rain storm or during groundshaking from a distant earthquake. Further studies should be performed on the Natoma bluffs to determine the best method to protect park users from rockfalls.

3). Hydrology

The SRA is located within the American River watershed, which covers approximately 2,100 square miles northeast of Sacramento. The watershed is divided into three major sub-basins, including North Fork, South Fork, and Lower Fork. The North Fork sub-basin is located above Folsom Lake to the northeast and contains 28 dams and 1,318 miles of naturally-occurring waterways. The South Fork is located above Folsom Lake to the southeast and contains 29 dams and 1,145 miles of naturally-occurring waterways. The Lower Fork sub-basin begins at Folsom Dam and extends 30 miles downstream to the mouth of the American River at the confluence of the Sacramento River. It contains 8 dams and 380 miles of naturally-occurring waterways.

Several major creeks flow directly into the SRA, including: Willow Creek, Alder Creek, Hinkle Creek, Mormon Ravine, New York Creek, Hancock Creek, Sweetwater Creek, Kelly Ravine, Pilot Creek, Cooper Canyon, Anderson Creek, Indian Springs Creek, Deep Ravine, Knickerbocker Creek, and Skunk Canyon. There is concern that the rapid increase in development surrounding the SRA is impacting many of these creeks. Runoff from urban development can alter natural flows and adversely affect water quality by contributing sediment, petroleum residue, lead, zinc and other nutrients to creeks and streams in the SRA.

The most dominant and unique hydrologic aspect of the SRA is the operation of Folsom Lake as a reservoir in the Central Valley Project system. The use of Folsom Lake for the purposes of flood control, water supply, power generation, and environmental benefit results in significant annual fluctuations in lake levels, which in turn impact recreation uses in the SRA.

Folsom Lake Levels

As a functioning reservoir, Folsom Lake water levels fluctuate throughout the year – on average between 444 feet in early summer (June) and 405 feet in early winter (December), although levels as high as 466 feet and as low as 347 feet have occurred over the last 30 years. As an example, in November 2007, the reservoir level is at 380 feet elevation. The allocation of lake water to various uses, the competition of these uses during certain times of the year, and the weather combine to contribute an element of unpredictability when it comes to lake levels.

During the flood control season between October and May, a capacity of between 440,000 and 670,000 acre-feet must be maintained to handle potential flood flows. Lake levels must be lowered to 427 feet to accommodate the minimum capacity and lowered to 390 to

accommodate the maximum. Since lake levels during this period typically range from 405 to 444 feet, it is often necessary to release water through Folsom Dam and reduce lake levels to accommodate flood flows during storm events. A number of flood control improvement and dam safety projects, proposed or underway, will have both construction and operational impacts on recreation. These projects are described below.

Beyond the flood control season, water levels are typically between 444 feet (June) and 417 feet (September). Water releases from Folsom Lake are used during this time to maintain water quality in the San Joaquin Delta and maintain minimum flows to support anadromous fish species downstream. These releases are described in more detail below. This is also the time when 75 percent of visits to the SRA occur, and since aquatic activities account for about 85 percent of all recreation visits to Folsom Lake, water releases during the summer months have a direct impact on recreation uses. Refer to Section C.1 of this chapter for further information on the impacts of Folsom Lake operations on recreation use in the SRA.

Flood Control Operations

Folsom Dam holds back a large portion of the winter storm runoff in the American River watershed. The majority of this runoff is generated during the rainy winter months from October to May. From May to July, rainfall runoff is replaced with snowmelt from the upper portions of the watershed. Early floodplain maps adopted by the Federal Emergency Management Agency (FEMA) indicate that the majority of flows generated by a 100-year storm in the watershed could be contained within Folsom Lake; however, major storm events in 1986 and 1997 caused record flood flows and raised concerns regarding the adequacy of existing flood control system that protects Sacramento. A series of investigations by local, State, and federal agencies concluded that Folsom Dam only provides flood protection for an 85-year storm event and that several of the dikes and both of the wing dams needed work to meet current federal dam safety standards. As a result, a number of measures and projects have been proposed and/or implemented to increase the level of protection provided by the flood control system. Refer to Section C.1 of this chapter for further information.

New interim operational procedures adopted in 1995 allow Reclamation and the Sacramento Area Flood Control District to control an additional 270,000 acre-feet of water within Folsom Lake and to provide up to 670,000 acre-feet of flood control storage. The original 5-year agreement on these interim operational procedures was extended twice until 2002. A new interim operation agreement was developed in 2004 and guides the current flood control operations.

In 2002 the ACOE and other flood control agencies approved a plan to raise Folsom Dam and the earthen dikes by seven feet, increasing their height from an elevation of 480.5 feet to 487.5 feet, to provide additional storage space in the reservoir during serious flood events. The *American River Watershed, California Long Term Study (Folsom Dam Mini-Raise Project)*, in association with the other flood protection measures, would increase the level of flood protection for Sacramento to a 213-year flood event.

However, in early 2005 it became apparent that the plans to enlarge the outlets in Folsom Dam, a critical part of the package of flood protection measures, was more difficult, riskier and much more costly than previously projected. Concurrent to the proposals to increase flood protection at Folsom Dam and Reservoir, Reclamation has been investigating its need to strengthen the existing earthen dams and dikes around the reservoir due to hydrologic, seismic and seepage concerns. In the fall of 2005, the ACOE and Reclamation began working together on a Joint Federal Project to improve both dam safety and flood control. A new gated auxiliary spillway around Folsom Dam is the central piece of the flood protection measures in this new joint federal project. This new spillway would run from Observation Point on the south side of the left wing dam down to the river below the existing spillways and outlets. The ACOE and Reclamation have outlined a variety of alternatives which include the auxiliary spillway and proposals to raise the dam and dikes anywhere from zero to seventeen feet. An EIR/EIS was completed for the Folsom Dam Safety and Flood Damage Reduction Project in April 2007. The Record of Decision (ROD) for this project was released in May 2007. The first construction contract for the spillway portion of this project was awarded in October 2007.

The Folsom Dam Safety and Flood Damage Reduction Project will result in some construction related-impacts to recreation use and facilities at Folsom Lake SRA. However, mitigation measures are included in the ROD to minimize these impacts. As the work on this project continues DPR and Reclamation will work together and with the other involved agencies to minimize and mitigate these impacts.

Once the various dam modification and raise projects are completed, a permanent re-operation plan for Folsom Lake will be prepared by ACOE and the Sacramento Area Flood Control Agency (SAFCA). As part of this plan, Reclamation and ACOE are evaluating the use of an advance release strategy based on improved weather forecasts using the Advanced Hydrologic Prediction System of the National Weather Service. This would allow lake levels to be reduced in advance of a forecasted major storm event.

Water Supply Operations

Although flood control is the primary purpose of Folsom Lake, the water stored in the reservoir is allocated to a variety of supply-related uses throughout the year. While these demands are currently met within the existing allocations of water from Folsom Lake (less than one-third of the contracted water is diverted), it is expected that increased diversions will be necessary to meet increased water supply demands from population growth and other needs.

During the summer and fall months, water from Folsom Lake is released in part, for the purposes of maintaining water quality in the San Joaquin Delta. As water is pumped out of the Delta, water must be released from reservoirs upstream to prevent saltwater intrusion and maintain water quality. Due to its proximity to the Delta, Folsom Lake water is most often used when immediate infusions of fresh water are needed. Also during this time, cold water from Folsom Lake and other reservoirs is released to maintain minimum flows on the American, Sacramento, and other rivers for the purposes of protecting and restoring the natural production of federally-listed salmon and steelhead. At Folsom Lake, water managers work to keep enough cold water in the American River in summer to sustain these fish species while holding back enough to support spawning runs in the Fall before the temperatures drop and winter rains arrive. In short, balancing the need to maintain water quality in the Delta and minimum flows in various rivers to support anadromous fish species is a complex process that involves several federal and State agencies. It also contributes an element of unpredictability to water levels on Folsom Lake and to impacts on recreation use in the SRA.

b. Natural Resources

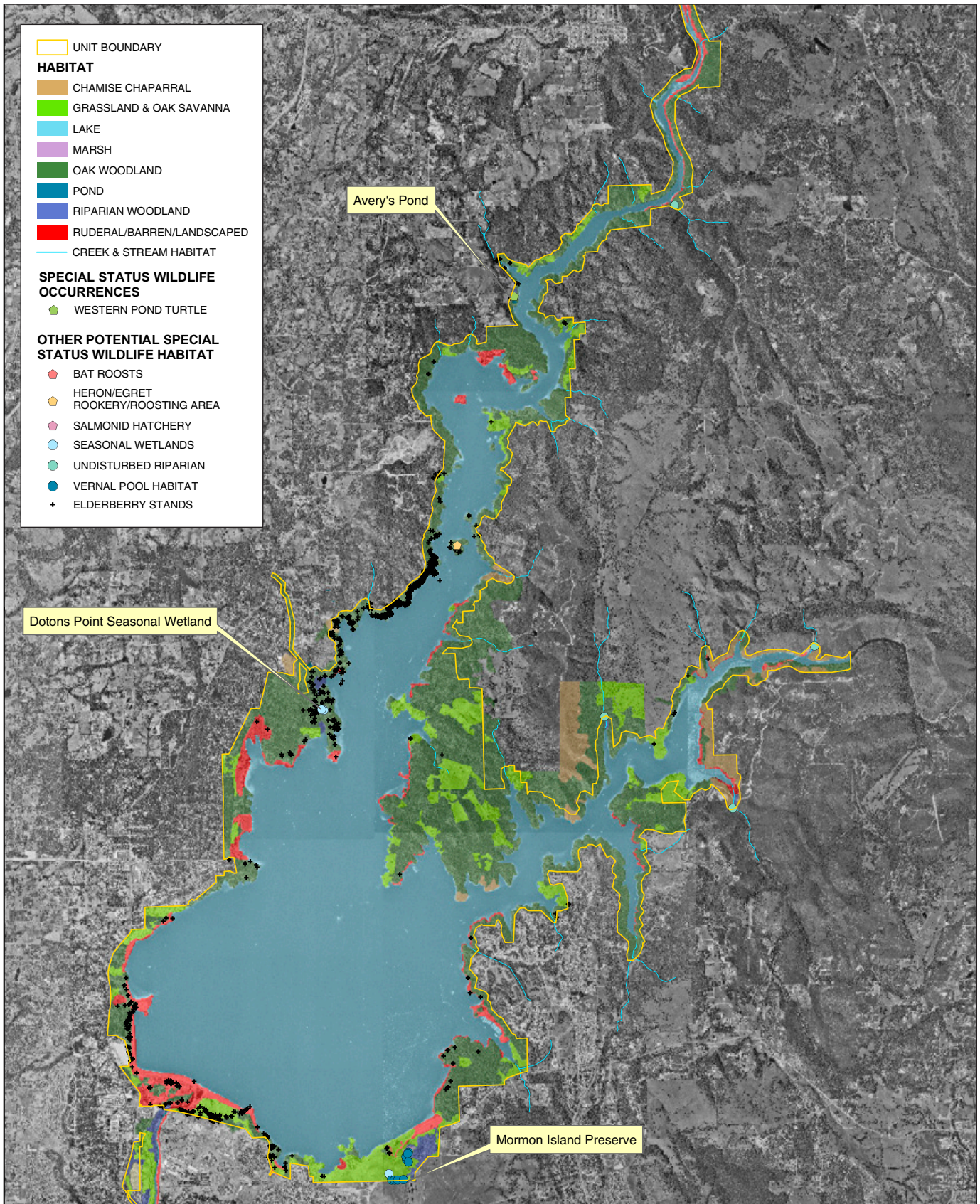
1). Plant Life

The SRA supports nine major vegetation communities typical of the lower foothills of California's Central Valley. These vegetation communities, in turn, provide habitat for a diverse mix of terrestrial and aquatic fauna, including several special status species. The unique mix of vegetation communities in the SRA is a product of complex interactions between natural and human influences that have shaped the region. The successful long-term protection and management of the SRA's vegetation must also take these interactions into account. Several special status plant species are known to occur or potentially occur in the SRA. For a complete list of plant species in the SRA, refer to the *Folsom Lake State Recreation*

Area Resource Inventory (January 2004). Figures II-4 and II-5 illustrate the location of vegetation communities in the SRA.² These communities include:

- The *Chamise chaparral* community is dominated by chamise, an evergreen shrub that accounts for more than 60 percent of the vegetative cover. Roughly 450 acres of chaparral can be found in the SRA, primarily along the steep south- and southwestern-facing slopes of the upper reaches of the South Fork of the American River. Chaparral is prone to frequent fires and cannot perpetuate itself in the absence of it. Where fire is not suppressed, chaparral typically burns on a 10 to 40-year cycle. Where fire is suppressed, grasses fill the openings created by dead chamise. Eleven special status plant species have the potential to occur in the SRA's chaparral community, particularly where this community occurs on gabbritic or serpentine soil types. Five of these plant species are federally listed as Threatened or Endangered.
- The SRA supports two types of oak dominated communities: *Interior live oak woodland and Blue oak woodland/savanna*. The Interior live oak woodland (about 3,900 acres in the SRA) ranges in appearance from closed canopy forest to open canopied woodland with a shrub layer of varying density and height. The Blue oak woodland/savanna (about 1,900 acres in the SRA) ranges in appearance from closed canopy forest to open canopied savanna with only a few trees per acre and a dense shrub layer or open grassland understory. Both communities provide a structurally diverse habitat that is attractive to wider range of resident species than found in other upland habitats in the SRA. Fourteen special status plant species have the potential to occur in the SRA's oak woodland and savanna communities.
- *California annual grassland* in the SRA is typically dominated by non-native annual grass species such as ripgut brome, soft chess, wild oats, and brachypodium. However, in a few locations, native grasses such as deergrass, purple needlegrass, and various native wildflowers are present in varying degrees. Roughly 1,100 acres of this community exist in the SRA. Invasive exotic species—such as yellow star thistle, medusa head, and mustard—are rapidly diminishing the habitat quality of the SRA's grasslands and associated and savanna areas. Occasional fires will help maintain grasslands. No special status plant species associated solely with grasslands are known to occur in the SRA.

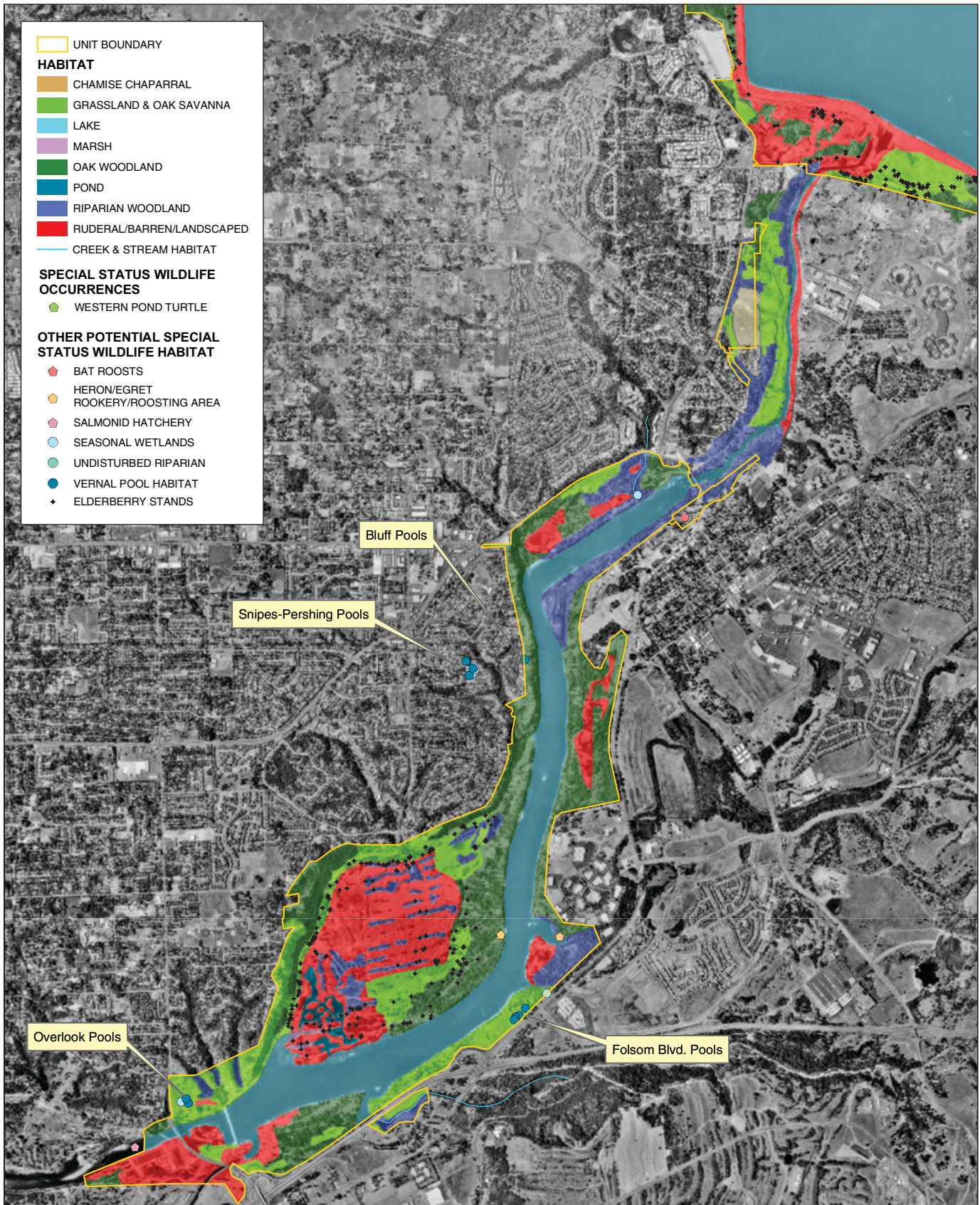
² It should be noted that the boundaries of each vegetation community were not surveyed but interpreted using aerial photos and some ground truthing. As such, the land area of each community is approximate and is intended for reference only.



Folsom Lake State Recreation Area & Folsom Powerhouse State Historic Park
 General Plan/Resource Management Plan

Source: LSA Associates, Jones & Stokes, USGS, CDPR

Figure II-4
FOLSOM LAKE VEGETATION AND HABITAT



Folsom Lake State Recreation Area & Folsom Powerhouse State Historic Park
General Plan/Resource Management Plan

Source: LSA Associates, Jones & Stokes, USGS, CDPR

Figure II-5
LAKE NATOMA VEGETATION AND HABITAT

- The *Cottonwood/willow riparian* communities in the SRA (about 390 acres) are dominated by Fremont cottonwood, black willow, arroyo willow, and narrowleaf willow, and occur along rivers, streams, and portions of the lake shoreline where moist soils support different vegetation than the drier upland areas. Although many riparian habitats in the SRA have been disturbed and/or fragmented, the structural diversity of this community supports a greater diversity of wildlife species. The only special status plant species known to occur in this community is the Northern California black walnut.
- Roughly 10 acres of *Freshwater Marsh* exist in the SRA, characterized by dense stands of perennial, emergent marsh vegetation, such as cattails and bulrush up to 5 meters in height. Dense stands of shorter-statured marsh plants are found at marsh edges, while the interiors are often broken by open patches of water, often choked with smartweed and floating pond weeds. A number of exotic non-native species, including Pampas grass, Yellow iris, and Giant reed grass are known to occur within freshwater marsh. No special status plant species associated solely with freshwater marsh habitat are known to occur within the SRA.
- *Northern claypan and Northern hardpan vernal pools* (between 0.5 and 2 acres in the SRA) are identified by low herbaceous vegetation of hydrophytic species and a shallow layer of impermeable clay soil that forms a water-tight basin. Water from winter rain and overland flow creates these shallow wetlands that typically dry up during the late spring and fill again the following winter. In early mid-spring, relatively undisturbed pools are dominated by native annuals such as Sacramento pogogyne, vernal pool buttercup, and downingia. These species give way in late spring/early summer to annual hairgrass, goldfields, and coyote thistle. Since vernal pools contain a large number of species that occur in no other habitat, this habitat constitutes one of the most sensitive in the SRA and may support up to seven special status plant species, including three that are federal and/or state listed species.
- *Seasonal wetlands* in the SRA are characterized by limited periods of surface water—generally no deeper than 1 or 2 feet and usually for a period of between 1 and 4 months—and/or soil saturation during the rainy season. These conditions support a plant community dominated by sedges, rushes, and spikerush. Seasonal wetlands comprise roughly 3-5 acres of the SRA, primarily along streams. All of the special status plant species that may occur in vernal pools may also occur in seasonal wetlands, depending on the degree of disturbance and hydrological conditions.

- *Lake shoreline fluctuation zones* on Folsom Lake support a mix of plant species that are adapted to wet environments and to drier, ruderal conditions. Following the annual drop in lake level, stands of common broadleaf forbs colonize the newly-exposed soils, producing wildflower displays from such species as miniature lupine, butter and eggs, mustard, and pearly everlasting. Later in the season, sparse non-native annual grasses including wild oat, ripgut brome, and Italian ryegrass dominate. Most of the shoreline zone plant community is arrested in an early successional stage by seasonal changes in water level and human activities, such as driving vehicles below waterline during low pool periods. No special status plant species are associated with this community.
- *Ruderal and barren areas* (roughly 1,040 acres in the SRA) exist along roadsides, in boat-launch aprons, camping and picnic areas, and other areas where human activity has compacted the soil or otherwise heavily impacted the vegetation. These areas also include the dredge deposits along the shores of Lake Natoma resulting from placer gold-mining activities. This community is dominated by a mix of weedy plant species typical of Northern and Central California. Common species include those found in the non-wetland areas of the shoreline fluctuation zone, as well as invasive exotic plant species such as Yellow star thistle, Italian thistle, and White sweet clover. No special status plant species are associated with this community.

2). *Animal Life*

The SRA's vegetation communities described above provide habitat for a diverse mix of terrestrial and aquatic fauna, including several special status species. Additionally, the SRA contains substantial aquatic habitat—lakes, ponds, river and stream habitat—that support a large number of fish species and other aquatic organisms. For a complete list of animal species in the SRA, refer to the *Folsom Lake State Recreation Area Resource Inventory (January 2004)*.

Animal Life and Habitat Types

Animal life in the SRA, outlined here by habitat type, includes:

- *Chamise chaparral* provides habitat for animal species that rely on its dense vegetation to provide cover. Most species are likely to forage in nearby woodlands and grasslands where palatable plant species and prey are more common and accessible. Common amphibian and reptile species include the Western fence lizard, California whipsnake, and Western rattlesnake. Birds, foraging primarily for seeds, include the Western scrub jay, White-crowned sparrow, and American goldfinch. The vegetation also provides good

foraging habitat for predatory birds, such as the Red-tailed hawk, Turkey vulture, and American kestrel. Numerous mammals inhabit this area, including various species of mole, mice, and rabbit. Larger species include the Bobcat, Coyote, and Mule deer. Four special status wildlife species are known or likely to occur in the vicinity of the SRA's chaparral community, including: California horned lizard, Peregrine falcon, Prairie falcon, and Bell's sage sparrow.

- The trees and shrubs of the *Interior live oak woodland* and *Blue oak woodland/savanna* provide much for animal species. Longhorn beetles and Underwing moths hiding in tree bark are a source of food for Acorn woodpeckers, Western fence lizards, and white-breasted nuthatches. Trees also provide locations for bird perching, food, and nesting. Large trees provide nesting sites for the golden eagle, bald eagle, and red-tailed hawk, which require the height of tall trees to protect their nests. Herons and egrets use foothill pines as nesting sites in locations where oak woodlands occur in the vicinity of Folsom Lake and Lake Natoma. The dense vegetation in oak woodlands also provides concealment for large predators, such as mountain lions and bobcats, as they hunt. Five special status wildlife species are known or likely to occur in the vicinity of the SRA's woodland community, including: Valley elderberry longhorn beetle, Golden eagle, Bald eagle, Sharp-shinned hawk, Cooper's hawk, and Long-eared owl.
- *California annual grassland* in the SRA supports similar fauna as the oak savanna habitats. The large number of herbivores and insectivores foraging in grasslands and savannas provide a substantial prey base for many predatory species, such as the Common king snake, Red-tailed hawk, and Coyotes. Most species of raptors, including Red-tailed hawk, White-tailed kite, and Golden eagle, will forage in these habitats and will sometimes nest in nearby trees. Introduced animal species observed in this habitat include the Starling, Rock dove, Wild turkey, and Virginia opossum.
- The *Cottonwood/willow riparian* communities in the SRA provide significant food, shelter, cover, and nesting opportunities for wildlife. Compared to the drier oak woodlands, the riparian woodland's insect diversity, dense understory vegetation, and presence of relatively mature canopy are better suited to migratory bird species – the Western kingbird, Common yellowthroat, Blue-gray gnatcatcher, and Tree swallow. Species such as the Red-shouldered hawk and Duskyfooted woodrat are adapted to live in the denser canopies and willow thickets of the riparian habitat. Common raptor species found in riparian woodlands include Red-tailed hawk, Cooper's hawk, and Sharp-shinned hawk. Where riparian woodlands pass through grassland or savanna

habitats, the dense vegetation and taller trees provide the only suitable retreat for species such as Mule deer and Gray fox. Ten special status wildlife species are known or likely to occur in the vicinity of the SRA's riparian areas, including: Valley elderberry longhorn beetle, California red-legged frog, Western pond turtle, Golden eagle, Bald eagle, Sharp-shinned hawk, Cooper's hawk, Willow flycatcher, Yellow warbler, and Yellow-breasted chat.

- With its unique combination of land, shallow water, and dense vegetation, *freshwater marsh* provides habitat for many species of wildlife. The water in marsh habitats supports the micro-invertebrates that serve as the base of most aquatic food chains while the presence of extensive vegetation supports many of the herbivorous species that begin the terrestrial food chain. Several species of bird nest only in the dense vegetation of emergent marsh, including the American bittern and Red-winged blackbird. Five special status wildlife species are known or likely to occur in the vicinity of the SRA's freshwater marsh areas, including: California red-legged frog, Western pond turtle, Tricolored blackbird, Northern harrier, and White-tailed kite.
- Since *seasonal wetlands and vernal pools* typically do not contain fish, several amphibians—the Western spadefoot and Pacific treefrog for instance—use vernal pools for egg laying and larval habitat. Herbivores, such as Mule deer and California vole that feed on grassland forage will take advantage of the greener vegetation growing in seasonal wetlands as the grass and other forage in upland areas dries out. Several species of crustacean are able to survive the extreme conditions of this habitat, primarily vernal pools, with an accelerated life cycle that is completed within the short period of time water persists in the pools. In addition, several species of Solitary bees are specialized to pollinate only vernal pool flowers during their blooming periods. Two special status wildlife species are known or likely to occur in the vicinity of the SRA's freshwater marsh areas, including: Vernal pool fairy shrimp and Western spadefoot toad.
- *Lake shoreline fluctuation zones and ruderal and barren areas* are typically frequented by wildlife species associated with open habitats, such as grasslands and oak savannas. Several species of birds, such as Rock wren and Rufous-crowned sparrow are commonly seen foraging in these areas. Ground squirrels will commonly burrow into exposed soils and shorebirds such as the Western sandpiper, spotted sandpiper, and killdeer will forage in the shallow water along the barren shoreline. Canada geese forage within areas of turf and lawn and larger mammals such as Mule deer, Mountain lion, and Black bear have been observed using these areas as movement corridors. The shoreline zone of Folsom

Lake is the most significant example of this corridor function in the SRA, particularly where the shoreline interconnects several oak woodland, grassland, and riparian woodland habitats. These habitat areas are effectively isolated until the water levels recede, allowing for wildlife to resume movement along the exposed lake shoreline zones. Although no special status plant species are associated with this community, there is potential habitat for the Valley elderberry longhorn beetle, a federal Threatened species.

Animal life and Structures

Various buildings, dams, water control facilities, bridges and related facilities in the SRA may provide refuge for animal species that have adapted to survival in built landscapes and/or require the dark, cave-like recesses of bridges and abandoned buildings. In developed areas, species such as Striped skunk, Raccoon, and Rock dove forage on human-associated refuse. Other species, such as the Brazilian free-tailed bat, Myotis bat, Cliff swallow, and Deer mouse will use built structures as refuge if they are located away from human activity for at least part of the day. The historic Folsom Powerhouse and surrounding structures are known to provide such habitat. The single special status species associated with structures in the SRA is the Pallid bat.

Lake Natoma and Folsom Lake

Folsom Lake supports both warm water and cold water fish species due to thermal stratification during the summer months. Thermal stratification results in an upper layer of warm water, a narrow zone of rapid temperature transition, and a lower layer of cold water. Warm water sport fish present in the lake are non-native and include Largemouth bass, Smallmouth bass, Spotted bass, Sunfish, and Black and White crappie. Cold water sport fish species include Rainbow trout, Brown trout, and Chinook salmon. Native warm water fishes present in the lakes include Sacramento squawfish, Hardhead, California roach and Sacramento sucker. These fish species are all associated with streams in the Sacramento-San Joaquin River system as well as streams in the Sierra Nevada foothills, and are presumed to have been historically present in the American River prior to construction of the Folsom and Nimbus Dams.

Chinook salmon and rainbow trout are annually stocked from hatcheries into Folsom Lake. Rainbow trout reproduce in the North and South Forks of the American River, but the vast majority of rainbow trout caught in the lake are hatchery released fish. Landlocked chinook salmon ascend tributaries of Folsom Lake to spawn, however, the California Department of Fish and Game (Fish and Game) has not found their progeny in Folsom Lake.

Lake Natoma is not a particularly productive fishery due to the effects of water temperature variability associated with the lake's function as a regulating afterbay for Folsom Dam. Water released from Folsom Dam gradually warms as it spreads over the wider portions of Lake Natoma, creating conditions more favorable for warm water fish species. Fish species found in the lake are generally the same as those found in Folsom Lake. While Fish and Game annually stocks the lake with rainbow trout, warm water species predominate.

While no special status fish species are known to occur in Folsom Lake or Lake Natoma, the cold water releases from these reservoirs are critical to creating favorable flow and temperature conditions for two special status anadromous salmonids that are found in the Lower American River below Nimbus Dam. Chinook salmon and Central Valley steelhead both occur seasonally in the river, including in the Nimbus Shoals area of the SRA just below Nimbus Dam.

Ponds

Although there are no naturally-occurring ponds in the SRA, numerous small ponds have been constructed at Mississippi Bar – the result of historic dredger mining activities and more recent aggregate mining reclamation. In addition, Avery's Pond is a 2- to 3-acre body of water that is part of an historic water conveyance feature that was excavated on the northwest shoreline of Folsom Lake in the area of Rattlesnake Bar. These ponds are all less than ten feet in depth and support extensive aquatic vegetation growth providing cover, nesting, and foraging habitat for aquatic fauna. Most animal species associated with the ponds are introduced, including the Red-swamp crayfish, sunfish, bass, catfish, bullfrog, and muskrat. Native species, such as the Western pond turtles and waterfowl such as mallards, move from creek systems into the ponds and terrestrial birds and mammals will come to open water areas to drink and feed. Two special status wildlife species are known or likely to occur in the vicinity of the SRA's pond habitat, including: California red-legged frog and Western pond turtle.

Creeks and Streams

Creeks and streams consist of naturally-occurring water courses that are tributaries to Folsom Lake and Lake Natoma. Eight perennial creeks and 22 intermittent/ephemeral streams flow into Folsom Lake. Three additional perennial/intermittent creeks enter Lake Natoma. Perennial creeks contain water throughout the year and support aquatic habitat as well as sparse to dense cover of aquatic and wetland plant species and stands of riparian woodland habitat. Intermittent streams flow only part of the year and provide zones of seasonally wet habitat providing water, forage, cover and movement corridors for terrestrial and aquatic

species. Ephemeral streams do not provide appreciable habitat for aquatic species since they typically dry following the end of each storm event and do not contain seasonal pools.

Native fish species, such as California roach and Sacramento sucker, can survive in the small pools of intermittent streams. Non-native fish, such as sunfish and golden shiner, will move up creeks where they compete with native fish for insects and crustaceans. Species such as the Western pond turtle have adapted to small residual pools during the dry months and can survive without any surface water for some time. Three special status wildlife species are known or likely to occur in the vicinity of the SRA's creek and stream habitats, including: California red-legged frog, Foothill yellow-legged frog, and Western pond turtle.

c. Cultural Resources

1). *History*

The SRA's location on the American River system is rich in history spanning more than 4,000 years. Early prehistoric groups, who may have been the ancestors of today's Washoe people, occupied base camps in the area and made seasonal foraging rounds in the foothills. At the time of European contact, the area lay within the territory of the Nisenan, the southern linguistic group of the Maidu tribe. Located far from Spanish missions and settlements, late eighteenth- and early nineteenth-century Nisenan retained their traditional lifeways longer than many of California's native peoples. The first severe impact of the colonization of California came in the 1830s, when a series of epidemics swept through the Central Valley.

In 1839, Johann Sutter established a fort on the Sacramento River. Many native Californians came under Sutter's control working either at his New Helvetia settlement or at other ranchos in the region. Sutter's Fort soon became the major stopping point for overland travelers coming down from the Sierra Nevada. Sutter's dominance of the regional economy was shortlived when, in 1848, Sutter's foreman, James W. Marshall, discovered gold in the South Fork of the American River. Within months the American River region was flooded with gold seekers from a myriad cultures and countries. The colorful names given to early mining settlements—Mormon Island, Alabama Bar, Sailor's Bar, and Negro Bar among others—give an impression of the range of origins of the area's inhabitants. Stores, saloons, roads, ferries, and bridges were built to supply the miners with various necessities.

By the 1850s, most of the gold which could be easily retrieved with simple tools had been taken from the hills and streams. Miners organized companies and turned to hydraulic mining. In the 1860s, Horatio Gates Livermore, owner of the Natoma Water and Mining

Company, dammed the American River to generate electricity and provide a steady supply of water for crops. Though the elder Livermore did not live to see the completion of the project, his sons oversaw the construction of the first Folsom Dam in the 1880s using convict labor. In July of 1895, the Folsom Hydroelectric Plant (Folsom Powerhouse) was the first in the nation to provide high-voltage alternative current over long distance transmission lines by bringing electric power to Sacramento over 22 miles away. The Powerhouse remained in operation until 1952, and in 1955 two new dams were completed at Folsom to generate hydroelectric power, prevent flooding, and provide water for agriculture and domestic use. The lakes created by these dams are a valued recreation resource and the reason for establishing the Folsom Lake State Recreation Area.

2.) Cultural Features

Portions of the SRA are represented by various prehistoric and historical archaeological site types. At present, a total of 229 archaeological sites have been identified within the SRA. Of these sites, 150 are prehistoric, 58 are historical, 21 have both a prehistoric and historical component, and 27 remain unaccounted for due to incomplete documentation. Both prehistoric and historical sites are most likely to be located along the original American River channels. Mining, settlement, and water development are dominant themes associated with historical archaeological sites identified within the SRA. Areas of documented historical activity, such as the hydraulic mining remnants and dredge tailing fields around Rattlesnake Bar and the City of Folsom, tend to yield the greatest number of historical sites. Previous archaeological research indicates that normal fluctuations in seasonal water levels at Folsom Lake—particularly between 400 and 466 feet ASL—have damaged, and sometimes entirely destroyed, prehistoric and historical archaeological sites within the SRA. This destructive process has been cited as a probable reason for the higher site densities encountered in survey areas below the normal 400-466 feet ASL fluctuation zone, where the Lake's deep pool protects sites from repeated exposure and erosion.

Both Folsom Dam and Nimbus Dam have been determined to be eligible for the National Register of Historic Places. Reclamation has proposed the two dams for listing on the Register as part of a Central Valley Project multiple property listing.

3.) Folsom Powerhouse State Historic Park (SHP)

Located in the City of Folsom on the shores of Lake Natoma, the Folsom Powerhouse is the most important historic and interpretive facility in the park. It represents one of the oldest hydroelectric facilities in the world and was the nation's first power system to provide high-voltage alternative current over long distance transmission lines for major municipal and

industrial use. The Powerhouse was operated by Pacific Gas and Electric Company until 1952 when the dam associated with the powerhouse was destroyed during the construction of the new Folsom Dam. Portions of the old Folsom Dam, canals and other structures are still present in the river gorge below the new Folsom Dam. The SHP complex includes: the main powerhouse and turbine room; lower powerhouse; associated forebay with wooden flumes and gates; blacksmith shop; ½-mile of the historic canal that fed the Powerhouse; picnic area; comfort station; and a small parking area. Significant improvements for this day use facility will be completed in 2007, including seismic upgrades, a larger parking area with room for buses, and a new visitor center located at the Powerhouse entrance.

Folsom Powerhouse is listed on the National Register of Historic Places (1981) as being significant in the areas of engineering and industry on the national level. It has been said that it represented a momentous advance in the science of generating and transmitting electricity. In 1895 the facility brought high-voltage alternating current over long distance transmission lines for the first time. It is also a National Historic Landmark, a National Historic Civil Engineering Landmark (1975), a National Historic Mechanical Engineering Landmark (1976) and is designated as California Registered Historical Landmark No. 633 (1958).

d. Interpretive and Educational Resources

Folsom Powerhouse SHP, American River Water Education Center, and the California State University Sacramento (CSUS) Aquatic Center are the primary interpretive and educational resources in the SRA. There is no visitor center in the SRA, but the public contact counter at the District/Sector Office located at the intersection of Auburn Folsom Road and Folsom Dam Road is an important source for public information regarding the SRA and other visitor services.

1). Folsom Powerhouse SHP

Folsom Powerhouse SHP provides tours, exhibits, and interactive activities that explore the historic hydro-electric generation and transmission of electricity. Inside the Powerhouse building, visitors can see the massive General Electric transformers—each capable of conducting from 800 to 11,000 volts of electricity—the Tennessee marble-faced control switchboard, and historic photos and exhibits on how the Powerhouse worked. Outside, visitors can access the forebays and canal system that brought the water to the Powerhouse from the dam. A blacksmith shop and bookstore are also open to the public and a new visitor center for the SHP will open to the public in 2008. Interpretive and education programs at the SHP are provided by the Friends of the Folsom Powerhouse, a non-profit charitable organization independent of State Parks.

2). American River Water Education Center

The American River Water Education Center, which is managed by Reclamation and State Parks, provides tours, exhibits, and interactive activities that explore the watershed of the American River and water conservation. Exhibits describe the physical and biological characteristics of the watershed as well as the history of human use, including the diverse interests in American River water today. Flooding and droughts, dam construction, and hydro-electric power production are illustrated in physical displays. An outdoor exhibit features water-efficient irrigation systems and plants that do well in the semi-arid climate of California. The Center was also once the starting point for public tours of Folsom Dam, a program that was temporarily cancelled due to security concerns in the wake of the terrorist attacks on September 11, 2001. This program was reinstated in Summer 2004, but only for school groups in grades 2 through 8. The Center, located within the Park Headquarters complex, is visited by roughly 20,000 school children annually.

3). CSUS Aquatic Center

The California State University Sacramento (CSUS) Aquatic Center is located on Lake Natoma at the south end of Nimbus Dam. The Center is a cooperative operation of the Associated Students of California State University Sacramento, the University Union of CSUS, California Department of Boating and Waterways (DBW), and State Parks. CSUS manages the Center through an operating agreement with State Parks. The Center serves as one of several DBW Boating Instruction Safety Centers (BISC) in the state, providing on-the-water and in-the-classroom boating safety education. The Center is also the home of CSUS' water ski and rowing teams and aquatic courses. Also offered are a full range of public courses in sailing, windsurfing, jet skiing, kayaking, rowing, canoeing, etc., as well as youth programs and summer camps. Facilities include an administrative building with offices and classrooms, equipment storage buildings, launch docks with mooring areas, and a small beach area.

4. Nimbus Fish Hatchery

While not a part of the State Recreation Area, the Nimbus Fish Hatchery is a Reclamation owned facility, managed by the Department of Fish and Game which does have a visitor center and interpretive displays related to anadromous fish life cycle, management and habitat.

e. Scenic Resources

The SRA represents a significant visual and scenic resource within the region. Although the manmade reservoirs were created for flood control, water supply and power generation, the resulting lakefront setting affords visitors with dramatic panoramas of the lakes and the surrounding natural landscape. The winding lake shoreline and hilly topography provide significant variety in both viewpoint orientation and available viewsheds, creating a wealth of viewing conditions and opportunities. In fact, there are few areas within the SRA that do not provide a positive viewing experience.

The SRA's most significant scenic resources are the dramatic and high quality panoramic views that are available. These panoramas include views across the lake, views from the lake, as well as views out over the surrounding non-SRA landscape. For instance, Lake Overlook above Nimbus Dam provides sweeping views of Lake Natoma and the Sierra Foothills to the north, while the view south extends to the Sacramento Valley and Mt. Diablo in the Bay Area. East-facing views from the western shores of Folsom Lake include the sweep of the lake surface in the foreground with the regionally characteristic landscape of rolling hills, open grasslands, and scattered oak and gray pine woodlands on the Peninsula. Each of these panoramas includes a unique combination of water, sky, and natural and built features.

The most distinctive landscape features in the SRA include: the steep gorges of the North and South Forks of the American River as they extend from Folsom Lake toward the Sierra Foothills; the rugged Peninsula area between the North and South Forks that lends a sense of wild undeveloped countryside; the Lake Natoma Bluffs rising 150 feet above the western shoreline of Lake Natoma between Negro Bar and Mississippi Bar; and the heavily vegetated shoreline of Lake Natoma that provides visual relief from the surrounding urban development. Unique built features in the SRA include the three bridges in Folsom that cross Lake Natoma—the historic truss bridge (1893), Rainbow Bridge (1917), and Lake Natoma Crossing (2000)—as well as the tall, slender brick building and associated structures that house the historic Folsom Powerhouse.

f. Recreation Resources

1). *Recreation Activities and Use*

With approximately 1.5 million visitors a year over the past 5 years, the SRA is one of the most popular in the State Park system. It is worth noting that, more than half of all visits to the SRA typically occur at just three major facilities: Granite Bay, Beals Point, and Folsom Point. Although the SRA accommodates year-round recreation, 75 percent of all visits occur during the warmer spring and summer months. At Folsom Lake, aquatic activities account

for about 85 percent of all recreation visits and the configuration and orientation of the Lake are such that certain users are attracted to certain areas. For instance, sailors prefer the open waters and high winds of the central area of the lake, while wake boarders and water skiers prefer the more sheltered waters of the narrow North and South forks of the American River. These areas are also preferred by boaters looking for quiet areas to cruise, drift, and swim.

At Lake Natoma, aquatic activities account for about half of all recreation visits. The sheltered waters—combined with the 5 mph speed limit for motorized watercraft—provide the perfect setting for paddling, rowing, and fishing. In fact, Lake Natoma is considered one of the best rowing locations in the world, due in large part to the facilities available at the CSUS Aquatic Center and the major rowing competitions hosted by CSUS at Nimbus Flat.

The SRA provides a wide range of land-based recreation opportunities for visitors who are not aquatic enthusiasts, including picnicking, camping, and trail use (walking, hiking, cycling, mountain biking, horseback riding, etc.). The extensive day-use facilities, 176 campsites, and some 90 miles of dirt trails and paved paths provide ample opportunity for landside recreation.

2). Recreation Facilities

The SRA includes a wide range of both aquatic and upland facilities. Support facilities are also present.

Aquatic

Aquatic facilities in the SRA include Folsom Lake Marina, various boat launch facilities, and the whitewater rafting facilities at Skunk Hollow/Salmon Falls. The Folsom Lake Marina includes 685 wet slips and 175 dry storage slips (see Table EC-1). The waiting list for slip rentals is several years long, due in part to increased urbanization in this area of El Dorado County. Commercial and private whitewater rafting are popular activities on the South Fork of the American River, one of the highest use rivers in the West. Boat launch facilities in the SRA include some 64 launch lanes across 9 day use areas on both lakes (see Table EC-2). These facilities accommodate launching at various lake levels on Folsom Lake. Facilities at Salmon Falls and Skunk Hollow are specifically intended to accommodate rafting activity (see Table EC-3). Between 50,000 and 60,000 commercial rafters take-out at Salmon Falls while as many as 24,000 private rafters take-out at Skunk Hollow. Both facilities receive heavy use during peak season weekends, which results in traffic congestion onto Salmon Falls Road and overflow parking on the shoulders of Salmon Falls Road for about ½-mile in each direction from the entrances.

Table EC-1: Folsom Lake Marina Facilities

<i>Boat Slips</i>	<i>Total</i>	<i>16-foot Slips</i>	<i>20-foot Slips</i>	<i>24-foot Slips</i>	<i>Waiting List (years) 16 and 20-foot/24-foot</i>
Wet	685	72	368	245	5/9
Dry	175	N/A	N/A	N/A	5/9
<i>Launch Ramps</i>	<i>Lanes</i>	<i>Slope (%)</i>	<i>Length (ft.)</i>	<i>Construction</i>	<i>Minimum Lake Level (ft.)</i>
Main Ramp	4	15	420	Asphalt/ concrete	395
Hobie Cove	3	15	323	Concrete	375
<i>Concessions</i>	<i>Services Provided</i>				
Snack Bar	Yes				
Supply Sales	Yes				
Fuel Station	Yes				
Boat Equipment Rentals	Yes				
<i>Parking</i>	<i>Vehicle Spaces</i>	<i>Vehicle/Trailer Spaces</i>		<i>Disabled Spaces</i>	<i>Construction</i>
Main Ramp		404		5	Asphalt
Hobie Cove	41	150		3	Asphalt
Day Use		122			Asphalt
<i>Restrooms/Other Facilities</i>	<i>Total</i>				
Restrooms	2				
Information Kiosks	1				
Picnic Tables	38				
Barbeques	16				
Drinking Water	Yes				

Source: State Parks; Folsom Lake Marina Concessionaire; Wallace Roberts & Todd, 2005.

Table EC-2: Boat Launch Facilities

<i>Folsom Lake</i>	<i>Lanes</i>	<i>Slope (%)</i>	<i>Length (ft.)</i>	<i>Width (ft.)</i>	<i>Construction</i>	<i>Minimum Lake Level (ft.)</i>
Granite Bay						
Stage 1	2	15	300	60	Concrete	395
Stage 2	10	10	250	700	Asphalt/concrete	426
Stage 3	10	10	250	700	Asphalt/concrete	435
Stage 4	14	15	180/250	330	Asphalt/concrete	425
5 Percent	4	5	1,200	60	Asphalt	408
Low Water	2	15	60	45	Concrete	360
Folsom Point	4	11	900	80	Asphalt	406
Brown's Ravine						
Main Ramp	4	15	420	60	Asphalt/concrete	395
Hobie Cove	3	15	323	60	Concrete	375
Rattlesnake Bar	2	2	300	40	Asphalt	425
Peninsula						
Day Use	1	15	260	30	Concrete	434
South Ramp	1	10	750	25	Asphalt/concrete	410
Beals Point	1	5	400	40	Gravel	420
Lake Natoma						
Negro Bar	2	5	200	60	Concrete	115
Nimbus Flat						
Main Ramp	2	1	60	30	Concrete	115
Alternate	1	1	30	30	Gravel	120
Willow Creek	1	1	35	12	Gravel	115

Source: State Parks; Wallace Roberts & Todd, 2005.

Table EC-3: Whitewater Rafting Facilities

<i>Skunk Hollow</i>				
<i>Parking</i>	<i>Vehicle Spaces</i>	<i>Disabled Spaces</i>	<i>Loading Area</i>	<i>Construction</i>
Day Use	35	2	Yes	Asphalt
<i>Restrooms/Other Facilities</i>		<i>Total/Description</i>		
Vault Toilets		2		
Picnic Tables		3		
Drinking Water		No		
Raft Drying Rails		Yes		
<i>Salmon Falls</i>				
<i>Parking</i>	<i>Vehicle Spaces</i>	<i>Vehicle/ Trailer Spaces</i>	<i>Disabled Spaces</i>	<i>Construction</i>
Day Use	32	12	1	Asphalt
<i>Restrooms/Other Facilities</i>		<i>Total/Description</i>		
Vault Toilets		2		
Picnic Tables		No		
Drinking Water		Yes		
Raft Drying Rails		No		

Source: State Parks; Wallace Roberts & Todd, 2005.

Upland

Upland facilities in the SRA include campgrounds, day use facilities, and trails. There are a total of 176 campsites in the SRA that accommodate tent, trailer, RV, and group campers (see Table EC-4). These sites are spread across three separate camping areas including Peninsula Campground, Beals Point Campground, and Negro Bar Group Campground. Full capacity is often reached at all three campgrounds on peak season weekends, particularly at the more accessible Beals Point and Negro Bar sites. Day use facilities are the primary gateways to the SRA and accommodate the majority of total visitors and recreational activities. Key facilities on Folsom Lake include Granite Bay, Beals Point, and Folsom Point. Lake Natoma facilities include Nimbus Flat, Negro Bar, and Folsom Powerhouse State Historic Park (see Table EC-5). These day use areas also include boat launch facilities as indicated in Table EC-2 above. The parking areas at Granite Bay and Beals Point often reach capacity by midday on peak season weekends causing traffic to backup along entrance roads and into surrounding neighborhoods.

The trail system in the SRA is extensive, linking most of the SRA's facilities and accommodating a variety of users, including walkers and hikers, equestrians, bicyclists, and mountain bikers. Although there are 94 miles of existing trails within the SRA, not all areas of the unit are accessible to all users and there is not a continuous trail connection around Folsom Lake. The demand for trail access continues to increase, and with this demand comes a growing concern about conflicts between the different kinds of trail users, particularly on multi-use trails. Currently there are 46 miles of pedestrian/equestrian trails, 20 miles of multi-use trails, 16 miles of Class I paved trails, 9 miles of mountain bike/pedestrian trails, and 3 miles of pedestrian-only trails (2 miles of which are ADA accessible) (see Table EC-6).

Many of the trails in the SRA have special designations as part of larger regional and national trail systems. The Class I paved trail between Beals Point and Nimbus Dam is part of the Jedediah Smith National Recreation Trail. In addition, the Pioneer Express Trail in the SRA that extends from the boundary with Auburn SRA to Beals Point is part of the Western States Pioneer Express Trail which is designated a National Recreation Trail.

Table EC-4: Campground Facilities

<i>Peninsula Campground</i>	<i>Total/Description</i>
Campsites	104 single
Restrooms	5
Showers	No
Hookups	No
Picnic Tables	104
Fire Pits	104
Drinking Water	Yes
Boat Ramps	1
<i>Beals Point Campground</i>	<i>Total/Description</i>
Campsites	49 single/20 RV
Restrooms	2
Showers	Yes
Hookups	Sanitary for RV sites
Picnic Tables	69
Fire Pits	69
Drinking Water	Yes
<i>Negro Bar Group Area</i>	<i>Total/Description</i>
Campsites	3 group
Restrooms	1
Hookups	No
Picnic Tables	17
Barbeques	15
Fire Pits	5
Drinking Water	Yes

Source: State Parks; Wallace Roberts & Todd, 2005.

Table EC-5: Day Use Facilities

<i>Beals Point</i>	<i>Total/Description</i>
Beach	Yes
Concession	Snack bar/beach equipment
Restrooms	3
Picnic Tables	53
Barbeques	31
Drinking Water	Yes
Trail Access	Lake Natoma/Granite Bay
Parking	387(including 8 disabled)
<i>Granite Bay</i>	<i>Total/Description</i>
Beach	Yes
Concession	Snack bar/beach equipment/boating equipment
Restrooms	5
Picnic Tables	100
Barbeques	42
Activity Center	Group use by reservation
Drinking Water	Yes
Equestrian Staging Area	Yes
Trail Access	Pioneer Express/Granite Bay/Beeks Bight-to Dotons/Beeks Bight ADA
Parking	677
<i>Old Salmon Falls</i>	<i>Total/Description</i>
Chemical Toilets	2
Drinking Water	No
Equestrian Staging Area	Yes
Trail Access	Brown's Ravine/Sweetwater Creek
Parking ¹	15
<i>Peninsula</i>	<i>Total/Notes</i>
Boat Ramp	Yes
Chemical Toilets	2
Picnic Tables	6 with ramadas
Drinking Water	No
Trail Access	No
Parking ¹	60
<i>Folsom Point</i>	<i>Total/Description</i>
Restrooms/Vault Toilets	2/2
Picnic Tables	50
Barbeques	46
Drinking Water	No
Trail Access	Brown's Ravine
Parking	77 (including 2 disabled)

Table EC-5: Day Use Facilities

<i>Observation Point²</i>	<i>Total/Description</i>
Picnic Tables	No
Restrooms/Toilets	No
Drinking Water	No
Trail Access	No
Parking	77 (including 2 disabled)
<i>Folsom Powerhouse</i>	<i>Total/Description</i>
Main Powerhouse	Museum
Concessions	Gift shop
Restrooms	1
Picnic Tables	10
Drinking Water	Yes
Trail Access	Powerhouse Loop
Parking ¹	35
<i>Willow Creek</i>	<i>Total/Description</i>
Concessions	Boating equipment
Boat Ramp	Yes
Vault Toilets	2
Picnic Tables	4
Barbeques	No
Drinking Water	No
Trail Access	Lake Natoma
Parking ¹	20 (including 1 disabled)
<i>Nimbus Flat</i>	<i>Total/Description</i>
Beach	Yes
Restrooms	2
Picnic Tables	37
Barbeques	11
Boat Ramp	2 small docks
Drinking Water	Yes
Trail Access	Lake Natoma
Parking	231 (including 8 disabled)
<i>Lake Overlook</i>	<i>Total/Description</i>
Restrooms/Toilets	No
Picnic Tables	No
Drinking Water	No
Equestrian Staging Area	Yes
Trail Access	Lake Natoma
Parking ¹	150

Table EC-5: Day Use Facilities

<i>Negro Bar</i>	<i>Total/Description</i>
Beach	Yes
Concessions	Boating equipment
Restrooms	2
Picnic Tables	32
Barbeques	4
Boat Ramp	Yes
Drinking Water	Yes
Trail Access	Lake Natoma
Parking	96 (including 4 disabled)

¹ Estimated capacity as vehicle spaces are not striped.

² These facilities are currently not available for public use due to ongoing Dam construction activities, and because of the new proposed spillway, Observation Point will no longer be available for public use.

Source: State Parks; Wallace Roberts & Todd, 2005.

Support

Support facilities in the SRA include the Park Headquarters complex. Located at the intersection of Folsom-Auburn Road and Folsom Dam Road, the complex is home to the Gold Fields District Office and Folsom Sector Office of State Parks and the Central California Area Office of the Bureau of Reclamation. Facilities include various maintenance and storage buildings as well as corporation yards for both agencies. The complex is also the location of the American River Water Education Center which provides tours, exhibits and interactive activities that explore the American River watershed and water conservation.

Table EC-6: Trail Facilities

<i>Trail</i>	<i>Start</i>	<i>Finish</i>	<i>Use</i>	<i>Length (Miles)¹</i>	<i>Surface</i>
Pioneer Express	SRA Boundary	Beals Point	Pedestrian Equestrian	21	Dirt
Los Lagos	Auburn-Folsom Road	Beeks Bight	Pedestrian Equestrian	1.5	Dirt
Granite Bay Multi-Use					
Granite Bay/Beals Point	Granite Bay Beach	Beals Point	Multi-use	2	Dirt
Granite Bay	Granite Bay Entrance	Beeks Bight	Multi-use	5	Dirt
Center Trail	Oak Point Beach	Beeks Bight	Multi-use	1	Dirt
Lake Natoma Paved					
East Trail	Folsom Truss Bridge	Nimbus Dam	Multi-use	6	Paved
West Trail	Beals Point	Nimbus Dam	Multi-use	10	Paved
Lake Natoma Dirt					
East Trail	Folsom Truss Bridge	Nimbus Dam	Multi-use	6	Dirt
West Trail	Beals Point	Lake Overlook	Pedestrian Equestrian	9	Dirt
Middle Ridge	Sunset/Main Avenues	Nimbus Dam	Pedestrian Equestrian	1	Dirt
Snowberry	Sunset/Main Avenues	Snipes Pershing Ravine	Pedestrian Equestrian	1.5	Dirt
Folsom Point/Brown's Ravine	Folsom Point	Brown's Ravine	Multi-use	4	Dirt
Brown's Ravine/Old Salmon Falls	Brown's Ravine	Old Salmon Falls	Pedestrian Equestrian	12	Dirt
Sweetwater Creek	Sweetwater Creek	Salmon Falls	Multi-use	2	Dirt
Darrington	Salmon Falls	Peninsula Campground	Mountain bike Pedestrian	9	Dirt
Pedestrian Trails					
Doton's Point (ADA)	Beeks Bight	Doton's Point	Pedestrian	1	Dirt
Powerhouse Loop	Powerhouse	Powerhouse	Pedestrian	1	Dirt
Peninsula (ADA)	Peninsula Campground	Peninsula Point (South)	Pedestrian	1	Dirt
				<i>Total</i>	<i>94</i>

Source: State Parks; Wallace Roberts & Todd, 2005.

4. Existing Facilities

In addition to the recreation facilities in the SRA described above, there are various circulation, utilities, and public service facilities.

a. Circulation

Regional access to the SRA is provided via two major freeways: Interstate 80 and Highway 50. Direct access from I-80 is provided via interchanges at Douglas Boulevard and Laird Road, while access from Highway 50 is provided via interchanges at Hazel Avenue, Folsom Boulevard, and Bidwell Street. Local access exists at several points along key roadways that abut or pass through the unit, including Douglas Boulevard, Auburn-Folsom Road/Folsom Boulevard, Natoma Street, Green Valley Road, Salmon Falls Road, and Hazel Avenue.

Bicycle and pedestrian access to the SRA is extensive. Several of the local streets listed above include bicycle lanes in addition to providing direct access to the SRA's recreation areas. Each recreation area provides formal or informal access to the trail system, and several connections exist where county or city streets and trails terminate at the SRA boundary providing additional access points. In addition, regional trail facilities, including segments of the American River Bikeway and the Pioneer Express Trail, provide pedestrian, bicycle, and equestrian access to and through the SRA from the surrounding region.

Public transportation to the SRA is provided by several agencies, including Folsom Stage Line, Roseville Transit, Sacramento Regional Transit, and Placer County Transit. Transit access to the SRA will improve greatly with the completion of the light rail extension by Sacramento Regional Transit from Mather Field/Mills Station to Downtown Folsom. Four of the proposed stations are located adjacent to the SRA—including at Hazel Avenue, Iron Point Road and Glenn Drive at Folsom Boulevard, and Downtown—and will permit direct access to Lake Natoma.

Planned roadway and/or intersection improvements may further improve access and circulation in the vicinity of the SRA, including Auburn-Folsom Road, East Natoma Street, Green Valley Road, El Dorado Hills Boulevard, and Hazel Avenue.

b. Utilities and Public Services

Existing water supply, wastewater, electric and gas, and telephone services are generally provided in the recreation sites and facilities in the SRA surrounded by development with access to urban services. In recreation sites where such services are not provided, but are in

close proximity to such infrastructure, services could be extended with relative ease. In more remote areas of the SRA where surrounding development is without urban services—or there is no surrounding development—SRA facilities are also without such services. In these areas, the number of visitors would not typically justify the cost of providing services.

Full urban services are provided to the following recreation areas in the SRA: Park Headquarters, Beals Point, Granite Bay, Browns Ravine, Folsom Point, Folsom Powerhouse, Nimbus Flat, and Negro Bar. Recreation sites that are without urban services, but to which nearby services could be easily extended, include: Observation Point, Mormon Island Wetland Preserve, Willow Creek, Mississippi Bar, and Lake Overlook. According to various utility representatives, the existing utility systems serving most recreation areas in the SRA have the capacity to accommodate additional park facilities. However, expansion at the Nimbus Flat and Lake Overlook recreation sites could be problematic. Given their location at the end of Sacramento County’s water supply distribution network, these areas could have problems with water pressure. In 2007, the County completed upgrades to an interceptor line that provides service the Folsom area. This is projected to provide sufficient sewer capacity to service ultimate planned growth in the urban services area.

B. PLANNING INFLUENCES

Planning for state parks often deals with issues that cross park and regional boundaries. Often federal, county, or other state agencies are responsible for providing oversight for various planning related policies and law, such as the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), the Clean Water Act-Section 404, the Americans with Disability Act of 1990, and more. And since the dams and lakes in the SRA are a critical part of the Central Valley Project, additional federal and state agencies are involved in their operation and maintenance. Numerous State Parks Resource Management Directives also help to guide planning processes.

The following are existing Central Valley Project, statewide, State Park System-wide, and regional planning influences that affect planning decisions at the Folsom Lake State Recreation Area.

1. System-wide Planning

a. Federal, State and Local Agencies

The very existence of the SRA is the result of the Central Valley Project, which dammed the American River and created Folsom Lake and Lake Natoma for the purposes of flood control, water supply, and power generation. Operation of the two reservoirs for these purposes involves several federal, State, and local agencies and results in a complex regulatory context.

Federal Agencies

Once construction of Folsom dam was completed in 1956 by the U.S. Army Corps of Engineers (ACOE), responsibility for their operation and maintenance was transferred to the U.S. Department of the Interior's Bureau of Reclamation (Reclamation). While Reclamation owns much of the land area within the SRA, a 1956 agreement was reached with State Parks for the purposes of developing, administering, and maintaining these lands as a state recreation area. Since that time State Parks has acquired, and continues to acquire, lands adjacent to the SRA in order to further its management objectives. Given their shared responsibilities for the operation of the reservoirs and adjoining lands, State Parks and Reclamation work closely on a variety of planning and management issues and projects. In fact, the headquarters for State Parks' Gold Fields District and Reclamation's Central California Area Office share the same office complex at Folsom-Auburn Road and Folsom Dam Road. The preparation of this combined General Plan/Resource Management Plan is an example of this relationship.

The ACOE continues to be involved in matters relating to the dams and reservoirs in the SRA. The ACOE works with the Sacramento Area Flood Control Agency (SAFCA), the State of California Reclamation Board and the U.S. Bureau of Reclamation to ensure the adequacy of the system to protect the Sacramento area from flooding, and designs and builds any system improvements deemed necessary. Finally, consistent with federal law, all federally-sponsored projects within the SRA by these agencies will be subject to environmental review under the National Environmental Policy Act (NEPA).

State Agencies

State agencies other than State Parks are involved in the SRA. The State of California Reclamation Board is the key State-level agency working with the federal agencies (Reclamation and ACOE), SAFCA, and local governments in establishing, planning, constructing, operating, and maintaining flood control works. The California Department of

Boating and Waterways (DBW) plans, develops, and funds boating facilities across the State, establishes boating regulations, assists with local boating law enforcement, and promotes boating safety and education. Aquatic centers across the State are the focus of boating safety and education by providing classroom and on-the-water training to boaters at a variety of skill levels and for a variety of boat types. The California State University, Sacramento (CSUS) Aquatic Center is located on Lake Natoma within the SRA. The California Department of Water Resources (Water Resources) is responsible for developing and managing the water resources of the State, including State Water Project. Folsom Lake is an integral part of the State's water supply.

California Department of Fish and Game manages the State's fish, wildlife, and plant resources and their respective habitats as mandated by the State Fish and Game Code. The agency maintains the State's threatened or endangered species and coordinates with the United States Fish and Wildlife Service (Fish and Wildlife Service) to enforce the Federal Endangered Species Act. The Central Valley Water Quality Control Board (Water Quality Control Board) regulates all waste discharges to land and water to manage water quality within the basin. Finally, all future development within the SRA by State Parks will be subject to environmental review under the California Environmental Quality Act (CEQA).

The Department of Conservation includes the California Geologic Survey, the Division of Mines and Geology and the Division of Oil, Gas and Geothermal Resources. In certain circumstances, for certain resources, Department of Conservation has some regulatory authority and responsibility. This includes enforcing the provisions of the State Mining and Reclamation Act of 1975 (SMARA), requires the reclamation of lands mined (within certain thresholds) and the return of these lands to productive use.

Local Agencies

The vulnerability of Sacramento to flooding, and the large number of people potentially at risk in the area, led State and local leaders to form the Sacramento Area Flood Control Agency (SAFCA) in 1989. SAFCA is a joint powers agency that represents several local municipalities and the American River Flood Control District in matters of flood control, resource management, and planning on the Lower American River. The agency also coordinates with the various federal and State agencies involved in flood control. SAFCA has also created the Lower American River Task Force to coordinate planning and resource management on this stretch of the river, which includes Lake Natoma. The Task Force has completed several management plans, as described below under Regional Planning Influences.

Other local agencies that have a regional planning influence on the SRA include the surrounding municipal jurisdictions whose plans and activities are relevant to the SRA and could affect the future development on adjacent lands or the involvement of State Parks. Municipal jurisdictions include the counties of Placer, El Dorado, and Sacramento, as well as the City of Folsom. Relevant planning efforts are described below under Regional Planning Influences.

b. State Park System-wide

The management and operation of Folsom Lake SRA will also be subject to the following rules, regulations and policies pertaining to all State Park units. These include, but are not necessarily limited to:

- Public Resources Code
- California Code of Regulations
- California State Park and Recreation Commission Statements of Policy
- Policies, Rules, Regulations, and Orders of the California State Park and Recreation Commission and the California Department of Parks and Recreation
- California Department of Parks and Recreation Operation Manual (DOM)
- California Department of Parks and Recreation Administration Manual (DAM)
- California State Parks System Plan
- California Outdoor Recreation Plan
- California Recreational Trails Plan
- California State Parks Mission Statement, The Seventh Generation – Strategic Vision and Initiatives of California State Parks
- The Central Valley Vision
- California State Parks Access to Parks Guidelines
- California Department of Parks and Recreation – Department Notices
- Various Resource Management Directives of the Department of Parks and Recreation.

2. Regional Planning Influences

As noted, Placer, El Dorado, and Sacramento Counties, and the City of Folsom, about the SRA boundary and undertake their own planning efforts that are relevant to the SRA and could affect the future use of adjacent lands or the involvement of State Parks. These efforts are summarized below.

a. Placer County

Countywide General Plan

No policies in the 1994 Placer County General Plan directly relate to the SRA, although several Plan policies are relevant and could affect future uses on adjacent lands or the involvement of State Parks. These policies relate to:

- Coordination with other public agencies with respect to the development of equestrian, pedestrian, and bicycle trails with connects to the countywide trail system;
- Protecting the watersheds of all water bodies associated with the storage and delivery of domestic water;
- Mitigating increases in stormwater peak flows and/or volume from new development on adjoining lands in the County and on properties immediately adjacent to the County;
- Coordination with other public agencies to preserve and protect significant biological resources, to preserve and enhance natural resources as open space, and to protect areas of natural resource value as open space.

Placer Legacy Open Space and Agricultural Conservation Program

Placer Legacy is intended to protect and conserve open space and agricultural lands in Placer County by: maintaining agricultural uses; protecting plant and animal diversity; protecting and expanding recreation areas; protecting scenic and historically significant areas and sites; establishing open-space buffers between communities; and ensuring public safety. The program, which is voluntary and non-regulatory, has resulted in: the planning for protection and improvement of seven watersheds; the development of strategies to protect, restore, and enhance natural areas; and focused efforts on grant funding, voluntary donations, and public/private sector partnerships. This program is relevant to the SRA in that the County intends to coordinate with other public agencies to establish visual and physical links among open space areas in order to create an open space system.

Community Plan Policies

The Granite Bay and Horseshoe Bar/Penryn Community Plans address most of the lands in unincorporated Placer County that abut the SRA. The Granite Bay Community Plan includes policies that directly address the SRA and surrounding lands, including:

- Coordination of trails development with State Parks;
- Providing regional trails with access to County and State parks;
- Discouraging urban/suburban development within the Folsom Lake Watershed;
- Preserving valuable natural features, such as rolling terrain, streams, scenic corridors, meadowlands, ridge tops, and significant stands of trees;
- Avoiding areas rich in wildlife or of a fragile ecological nature;
- Ensuring open space is linked visually and physically to form an open space system; and
- Preserving a variety of scenic vistas.

The Horseshoe Bar/Penryn Community Plan reflects many of the policy directions included in the Granite Bay Community Plan as they relate to the SRA and surrounding lands. However, the Horseshoe Bar/Penryn Community Plan is more directive as it relates to the SRA. For instance, the Plan includes guidelines for development within the Folsom Lake Watershed. These guidelines recommend that: commercial development be prohibited; residential development densities be transferred out of the watershed; larger lot sizes be used where transfers out the watershed are not possible; roads and sewers be located outside the watershed; best management practices for water quality be implemented where infrastructure must be located in the watershed; septic systems be allowed only on parcels 4.6 acres and larger; and greater setbacks be required where there are steep slopes, highly erosive soils, or other factors which may increase the likelihood of development adversely affecting the quality of the water in Folsom Lake.

Both the Granite Bay and Horseshoe Bar/Penryn Community Plans incorporate the County's Draft Trails Plan, which was never formally adopted. Placer County is also currently working with State Parks to extend the existing network of trails throughout the American River Canyon. As such, the County is preparing a North Fork American River Trail Plan for a multi-use trail that will begin at the confluence of the North and Middle Forks of the American River and end at Ponderosa Bridge, approximately 12.6 miles upstream. The trail is located entirely within the Auburn SRA.

b. El Dorado County

Countywide General Plan

The eastern half of the SRA is located in El Dorado County. A General Plan was adopted in 1996, but in 1999 the Superior Court, County of Sacramento, in the matter of *El Dorado County Taxpayers for Quality Growth, et al. v. El Dorado County Board of Supervisors and El Dorado County*, ruled that in certain respects the County failed to comply with the California Environmental Quality Act (CEQA) in the adoption of the General Plan. As a result, certification of the General Plan Environmental Impact Report (EIR) and adoption of the General Plan were set aside. In response to the Judgment and the Writ of Mandate, the County adopted a new General Plan in July 2004.

On March 15, 2005 the voters of El Dorado County approved the referendum on the plan adopted by the Board of Supervisors. This provided the opportunity for the County to return to the Sacramento County Superior Court to have the writ of mandate in the matter of *El Dorado County Taxpayers for Quality Growth, et al. v. El Dorado County Board of Supervisors and El Dorado County* lifted. On September 1, 2005 the Court ruled that the County had satisfied every term of the writ and it was discharged. The Courts ruling was appealed by the plaintiffs. On April 18, 2006 a settlement agreement was entered into by the County and the plaintiffs, settling the lawsuit resulting in the withdrawal of the appeal.

As in Placer County, no policies in the current El Dorado County General Plan directly relate to the SRA; however, several Plan policies are relevant and could affect the future development on adjacent lands or the involvement of State Parks. These policies relate to:

- Coordination with cities, State and federal government, schools and other local districts to develop and maintain an integrated network of countywide trails for public use and to provide public access to recreational resources, including rivers, lakes, and public lands;
- Maintaining areas of importance for outdoor recreation including areas of outstanding scenic, historic and cultural value; areas providing access to lake shores, beaches and rivers and streams; and areas which serve as links between major recreation and open space reservations including utility easements, banks of rivers and streams, trails and scenic highway corridors.
- Implementation of the River Management Plan for the South Fork of the American River;
- Pursuing lands that can be transferred to the County from federal, State, and other ownerships suitable and needed for public use;

- Protecting identified critical fish and wildlife habitat through any of the following techniques: utilization of open space, Natural Resource land use designation, clustering, large lot design, setbacks, etc.
- Including setbacks from all rivers, streams, and lakes in the Zoning Ordinance for all ministerial and discretionary development projects.

El Dorado County River Management Plan

The 2001 River Management Plan (RMP) establishes the operational rules for commercial and private boaters navigating the 20.7-mile segment of the South Fork of the American River between the Chili Bar Dam and Salmon Falls Road at the upper extent of Folsom Lake. As noted in the Recreation Resources section, commercial and private boaters on the South Fork take-out within the SRA. Commercial boaters are required to take-out at Salmon Falls while private boaters take out just east of the American River Bridge at Skunk Hollow. The RMP includes detailed educational, safety, transportation, monitoring, and agency coordination programs designed to implement the RMP. It also outlines permitting requirements, specifies the carrying capacity of the waterway, and identifies the regulations and ordinances that will operate the Plan.

Bikeway Master Plan and Hiking and Equestrian Trails Master Plan

El Dorado County has both a Bikeway Master Plan and a Hiking and Equestrian Trails Master Plan. The Bikeway Master Plan, adopted in 1979, represents the County’s first attempt to identify countywide bikeway improvement needs with the intent of developing a system of bikeway facilities to safely accommodate bicycle travel for both transportation and recreational purposes. The Plan defines the general location and classification of all existing and proposed regional bikeways in the County. It also provides for connectivity between cities and the unincorporated areas, between the County and adjoining counties, and access to recreational areas and regional parks – including Folsom Lake SRA. The bicycle routes established in the Bikeway Master Plan are considered part of both the Parks and Recreation Element and the Transportation and Circulation Element of the County General Plan. The County’s new General Plan calls for the update of the Bikeway Master Plan.

The Hiking and Equestrian Trails Master Plan, adopted in 1989 and amended in 1990, guides the creation of recreational trails for walking, hiking, and horseback riding. The Plan provides standards for general location, width, steepness, signage, offer of easement dedication, and other design standards.

c. Sacramento County

The southern portion of the SRA is located in Sacramento County. As in the other Counties, no policies in the Sacramento County General Plan directly relate to the SRA, although several key policies are relevant and could affect future uses on adjacent lands or the involvement of State Parks. These policies relate to:

- Permanently protecting areas of natural resource value, including wetlands preserves, riparian corridors, woodlands and floodplains, as open space;
- Maintaining open space and natural areas that are interconnected and of sufficient size to protect biodiversity accommodate wildlife movement and sustain ecosystems;
- Managing vegetation on public lands with special status species to encourage native species and discourage nonindigenous invasive species;
- Controlling human access to critical habitat areas on public lands to minimize impact upon and disturbance of threatened and endangered species.
- Encroachments within the designated floodway of Sacramento waterways shall be consistent with policies to protect marsh and riparian areas.
- Reducing bank and levee erosion by prohibiting erosive wake activity generated by recreational and commercial boating.
- Locating development to minimize visual intrusion in areas of scenic and/or cultural value including: recreation and historic areas; scenic highways; landscape corridors; State or federal designated wild and scenic rivers; visually prominent locations such as ridges, designated scenic corridors, and open viewsheds; Native American sacred sites.

Although no policies in the Sacramento County General Plan directly relate to the SRA, the County does have authority over land uses adjacent to Lake Natoma within unincorporated Sacramento County. This is due to the fact that Lake Natoma is part of the American River Parkway under the 1985 American River Parkway Plan (as described below). The County applies, as part of its Zoning Code, the Parkway Corridor (PC) Combining Zone within the Parkway to ensure land use compatibility and reduce visual intrusion on natural amenities.

American River Parkway Plan

In 1985, the California legislature acknowledged the statewide significance of the American River Parkway by adopting the American River Parkway Plan through the passage of the Urban American River Parkway Preservation Act (Public Resources Code § 5840). The Parkway Plan—a component of both the City and County of Sacramento general plans—

has authority over the land uses within the Parkway which extends from Downtown Sacramento at the confluence with the Sacramento River to Folsom Dam within the SRA. The Plan includes land use designations and policies that direct all recreation, restoration, preservation and development of facilities.

As noted, the geographic scope of the Parkway Plan includes Lake Natoma, an area that is formally managed in compliance with the existing Folsom Lake State Recreation Area General Plan. The Parkway Plan incorporates the Folsom Lake General Plan by reference thereby acknowledging its validity as the land use plan for Lake Natoma. In keeping with this collaboration, the Parkway Plan states:

“In order to facilitate the coordination in the planning and management of the American River Parkway, it should be the responsibility of the respective State and county agencies to inform each other of any large scale public or private improvement proposals, requests for entitlement of use, plans for large scale events, or proposed policy changes which would affect the Parkway.”

The County began the American River Parkway Plan Update in 2002. After developing and adopting a detailed update process, the County formed a citizen advisory committee of citizens representing various environmental, recreational, and community stakeholder groups to guide the Plan update, which was completed in 2006. The County is currently in the process of developing an Environmental Impact Report for the Plan update.

Floodway Management Plan

The 1998 Floodway Management Plan documents a broad range of resource issues and concerns and develops goals and recommendations to better manage resources. Many of the recommendations included in the Plan are intended to provide guidance to resource managers on issues involving multiple resources. A great deal of the management direction provided by the Floodway Plan is carried forward in the River Corridor Management Plan (see below). Specific recommendations are intended to encourage additional research, communication, and documentation of important resource conditions and management needs. As with the American River Parkway Plan, the Floodway Management Plan applies to Lake Natoma, an area that is formally managed in compliance with the Folsom Lake State Recreation Area General Plan.

River Corridor Management Plan for the Lower American River

The 2001 River Corridor Management Plan institutes a cooperative approach to managing and enhancing the Lower American River's aquatic and terrestrial ecosystems, flood-control systems, and recreation values within the framework of the 1985 American River Parkway Plan. The Plan also provides a significant foundation of policy and scientific research for the update of the Parkway Plan (currently underway). The Plan is used to inform resource managers and the community about the condition of American River Parkway resources and the goals, objectives, and recommendations for improving resource conditions in a cooperative manner. The Plan serves as a blueprint for enhancing Parkway resources so that entities working in the River can voluntarily coordinate their efforts and assess how they might be most effective in achieving the goals and objectives of the Plan.

The Recreation Management Element of the Plan includes specific recommendations relating to public access and trails, interpretation and education, land acquisition, adjacent land uses, public safety, public outreach, and operations and maintenance/recreation facilities. Specific recommendations related to the SRA include the acquisition of land for the Parkway—including the Snipes-Pershing property adjacent to Mississippi Bar recently acquired by State Parks—and coordination with State Parks on the completion of this General Plan for the SRA. The River Corridor Management Plan is not legally binding and does not alter the mission, authority, or responsibility of any management entity, nor does it alter the status or use of the Parkway Plan.

Preparation of the River Corridor Management Plan involved several federal, State, and local agencies, many of which are members of the Lower American River Taskforce which coordinated the work effort on the Plan. Key local agencies included the Sacramento Area Flood Control Agency (SAFCA), the City and County of Sacramento parks and planning departments, and Sacramento County Water Agency. State agencies included the departments of Fish and Game, Water Resources, and Parks and Recreation. Federal involvement included the Army Corps of Engineers, Fish and Wildlife Service, and Reclamation. A variety of community, fishing and boating, environmental, and recreation groups were also involved.

d. City of Folsom

The City of Folsom is located along the southern shore of Folsom Lake and straddles Lake Natoma. While no policies in the Folsom General Plan directly relate to the SRA, several key policies are relevant and could affect the future uses on adjacent lands or the involvement of State Parks. These policies relate to:

- Preservation and enhancement of existing natural vegetation, landscape features, and open space during new development.
- Incentives to encourage additional active parkland and open space, and preservation of natural habitat.
- Encouraging the preservation of open spaces and natural landscape features by means of clustered buildings, smaller lot sizes, or taller buildings.
- Bikeway and pedestrian master planning to link residential developments with sources of employment, public open spaces, parks, schools, neighborhood shopping areas, the central commercial district, other major recreational destinations, and adjoining communities.
- Providing routes for recreational travel including access to important recreational areas of the City, including Folsom Lake.
- Defining the border of sensitive habitat areas and open space with public access ways and orienting adjacent buildings toward such areas.
- Encouraging public access to recreational facilities and spaces through the publication of a trails and recreation guide which maps the trails, open spaces, and parks within the City of Folsom and shows the interconnection with adjacent recreation areas.
- Integrating City park sites with the Bikeways Master Plan and bicycle trails outside the City such as the American River Bike Path.
- Assisting State or County park rangers, i.e., Folsom Lake State Recreation Area, to provide leadership in programs that inform the community on topics such as conservation and fire safety.
- Working cooperatively with the County Department of Parks and Recreation, State Parks, Department of Corrections, and Department of Fish and Game in coordinating facility development and program offerings.

Bikeway Master Plan

The Bikeway Master Plan coordinates the expansion and integration of some 48 miles of proposed bike paths with the City's existing 95-miles bikeway system. The system is comprised of Class I, II, and III bike routes, undercrossings, and overcrossings that provide connectivity between City neighborhoods, neighboring communities, and Folsom Lake SRA. Trail facilities within the SRA are included in the City's Bikeway Master Plan as are proposed facilities that will require coordination between the City and State Parks, such as the Folsom Lake Trail that would extend from the Powerhouse Loop Trail in the SRA across Folsom State Prison lands to East Natoma Street.

e. Sacramento Area Council of Governments (SACOG)

The Sacramento Area Council of Governments (SACOG) is an association of local governments in the six-county Sacramento Region, including those noted in this Section as having a regional planning influence on the SRA – Placer, El Dorado, and Sacramento counties and the City of Folsom. SACOG provides transportation planning and funding for the region and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, SACOG approves the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air and airport land uses.

Regional Bicycle, Pedestrian, and Trails Master Plan

SACOG's Regional Bicycle, Pedestrian, and Trails Master Plan was mandated by the Metropolitan Transportation Plan (MTP) for 2025. The MTP takes an innovative regional approach to improving the transportation network by investing more resources than ever in alternatives to the automobile, as much as \$350 million to regional bicycle and pedestrian projects over the next 23 years. The Regional Bicycle, Pedestrian, and Trails Master Plan guides the long-term decisions for the Bicycle and Pedestrian Funding Program, adopted by the SACOG Board of Directors in September 2003.

The emphases of the bicycle and pedestrian plan and funding program are to provide facilities for walking and biking in the cities and towns of the region, and provide connections between cities and towns with the goal of integrating local plans to create a seamless regional bicycle and pedestrian system. This approach prioritizes local projects by their contribution to the regional network, providing key connections and access between communities, counties, and jurisdictions.

Local trail projects related to the SRA include:

- Class I bike path from the Powerhouse Loop trail in the SRA to East Natoma Street across Folsom State Prison lands;
- Class I bike path to close the gap between the Lake Natoma Crossing bridge and the Historic Truss Bridge;
- Mormon Islands Wetland Trail to connect with City of Folsom’s Humbug-Willow Creek Trail; and
- Folsom Lake SRA trail map and brochure.

The Master Plan was adopted by the SACOG Board of Directors in November 2004.

d. U.S. Bureau of Land Management

The Bureau has significant, though scattered, land holdings along the South Fork of the American River. In 2004, the Bureau completed a management plan to guide the use of these lands. As one of several agencies with jurisdiction over the American River, the Bureau began developing the Plan in 2002 through an extensive local citizen participation process that reflected the considerable private holdings—which are regulated by El Dorado County—along the river. The Plan provides a balanced management approach that allows public access and recreation while respecting adjacent private property. The Plan permits hiking, whitewater rafting, camping, hunting, and small-scale gold seeking consistent with habitat and historical protection goals. The Plan's Pine Hill Planning Unit abuts Folsom Lake, and a specific policy for this area states that the Bureau will evaluate the equestrian use of the trails system. The policy further states that the Bureau will not provide horse trailer parking, but rather would allow equestrian access through connections with the Folsom Lake SRA trail system.

e. Other Organizations

There are several ongoing efforts by regional conservation organizations to protect open space. These groups may provide opportunities for partnerships with State Parks in acquiring, or protecting by other means, important open space lands and significant habitat areas that abut the SRA. For instance, the American River Conservancy works with land owners in El Dorado County who are interested in selling or donating land. The Conservancy recently acquired an 8-mile greenbelt and hiking trail corridor along the South Fork that will eventually accommodate a trail between the SRA at Salmon Falls and

Highway 49 near Coloma. The Conservancy also owns and manages the Pine Hill Ecological Preserve – a 1,300-acre area of rare and endangered plant habitat adjacent to the SRA at Salmon Falls with the potential to be expanded to include a total of 5,000 acres.

In Placer County, the Placer County Land Trust works with landowners and conservation partners to permanently preserve natural open space and agricultural lands. The Trust is currently working with other groups to preserve critical lands adjacent to the North and Middle Forks of the American River. Among other organizations working in this area is Protect American River Canyons (PARC). In Sacramento County, the Sacramento Valley Conservancy has preserved more than 1,300 acres of open space and sensitive habitat areas. The Conservancy also participated along with other local groups and community members to assist State Parks in the acquisition of the Snipes-Pershing Ravine along the Lake Natoma Bluffs. The site provides a link between Orangevale and the American River Bikeway along the western shore of Lake Natoma in the SRA.

3. Demographics

The SRA is located in a fast growing and increasingly diverse metropolitan region. As a result, the SRA will have to accommodate both increased use and likely changes in use brought about by the cultural preferences of the population and new recreational activities over time.

a. Population and Trends

The Sacramento Region continues to attract new residents with its warm climate, recreational activities, educational resources, and career opportunities. In the period between 1990 and 2000, the Region added 370,000 new residents—an increase of 19 percent—for a total current population of approximately 1.94 million. The Sacramento Area Council of Governments (SACOG) projects that growth in the region will accelerate, adding another 928,000 residents (49 percent) and 510,000 jobs (60 percent) by 2025.³

At the local level, the counties and city within which the SRA is located will also continue to see tremendous growth to 2025. Placer County is projected to see the most significant growth with a population increase of 75 percent, followed by El Dorado County at 56 percent, and Sacramento County at 39 percent. The City of Folsom is projected to see a population increase of 42 percent.

³ The Sacramento Region is defined as the six-county area comprising the Sacramento Area Council of Governments (SACOG), including El Dorado, Placer, Sacramento, Sutter, Yuba, and Yolo Counties.

It is estimated that more than 1.5 million visitors currently access the SRA annually. It is likely that the projected increase in population both regionally and locally will also increase the number of visits to the SRA. As noted, 928,000 new residents will call the Sacramento Region home by 2025, and an additional 747,000 residents will be living in the counties and city that the SRA spans.

b. Population Diversity

The Sacramento Region is not only fast growing, but also diverse in many respects. With respect to race, 70 percent are White, 9 percent are Asian, 7 percent are Black or African-American, with the remaining 14 percent comprised of other races or a combination of races. At the county level, Sacramento is the most racially diverse in the Region with 64 percent of its population being White. El Dorado and Placer Counties are the least diverse with 90 percent and 89 percent of their respective populations being White. Seventy-eight percent of the City of Folsom population is White.

With respect to income, the median annual household income in the Sacramento Region is estimated to be about \$43,520. At the county level, Placer has the highest median annual household income at \$57,535, followed by El Dorado County at \$50,250, and Sacramento County at \$43,800. The City of Folsom has the highest median annual household income in the Region at \$73,175. Closely related to median annual household income is the proportion of households comprised by families and the level of home ownership. Not surprisingly, 73 percent of the households in El Dorado and Placer Counties and the City of Folsom are family households with owner occupancy levels between 73 and 76 percent. Sacramento County has a lower proportion of family households (66 percent) and owner occupancy (58 percent).

c. Visitation Characteristics

With more than 1.5 million visitors in 2000, the SRA is one of the most popular units in the State Park system. This is due to a combination of factors, including location of the SRA within a growing metropolitan area, good highway access, and opportunities for year-round use. Although the SRA provides for a variety of aquatic and upland pursuits year round, roughly 75 percent of all visits occur during the spring and summer months. Since water-related activities account for most visits to the SRA, the peak season begins as the weather warms and is usually in full swing by the Memorial Day weekend. High use levels continue through Independence Day and then gradually fall off until spiking again on the Labor Day weekend. Falling water levels on Folsom Lake and extremely hot weather are the key reasons for the drop off in attendance in the late summer.

Generally weekends are much busier than weekdays, with several recreation areas—Granite Bay, Beals Point, and Brown’s Ravine—reaching capacity by midday. The campgrounds at Beals Point and the Peninsula also reach capacity on summer weekends. On weekdays, peak use periods generally occur during the early morning and early evening hours with visitors running, cycling, walking dogs, or paddling on Lake Natoma. Surveys indicate that the SRA appears to have become predominantly a local destination for those interested in daily exercise and weekend activities. The majority of the SRA’s visitors currently tend to be located within a short walk or drive.

Folsom Lake SRA Visitor Survey

A major user survey effort was conducted during the summer of 2003 to characterize SRA visitors, their activities, likes and dislikes, and desires for additional facilities and programs. Three rounds of intercept surveying were completed in May, July, and September at various locations in the SRA in order to capture the full range of users. These surveys were supplemented by 400 telephone surveys completed in November and December. The findings of the survey effort are important to informing the future planning for the SRA. With respect to visitor characteristics, the survey found that neither gender dominates SRA use (51 percent female and 49 percent male) and that the median visitor age is 46. Half of all visitors have a bachelor degree or higher. Seventy-five percent of all visitors are White and the median annual household income of visitors is between \$68,750 and \$93,750. Eighty-five percent of visitors are local and live in a “95” zip code, and more than 84 percent recreate with friends and/or family. The months of May and July are the most popular with visitors.

With respect to visitor activities, 50 percent of users were participating in swimming; 43 percent were picnicking; 41 percent were participating in beach activities; and 40 percent were walking for fitness or fun. Visitors were also asked to select and rank the recreation activities most important to them. The top-ranked recreation activities include:

- Swimming;
- Bicycling on paved surfaces;
- Beach activities;
- Walking for fitness or fun;
- Picnicking in developed sites;
- Motor boating;
- Mountain biking;

- Whitewater rafting, kayaking, or canoeing;
- Fishing; and
- Hiking.

When asked to rate the adequacy of various SRA facilities and programs, visitors were most satisfied with the safety of areas and facilities, the number of paved bike trails, the number of equestrian trails, trail maintenance, and frequency of enforcement patrols. Visitors were least satisfied with the number of shower facilities at campgrounds, number of education and interpretive programs, number of fish cleaning stations, number of docks or temporary moorage, and screening between campsites. More than 74 percent rated their interaction with SRA staff as “somewhat positive” or “very positive” while about 11 percent were neutral. Roughly 13 percent did not interact with staff. Just over 1 percent of respondents rated their interaction with SRA staff as “somewhat negative” or “very negative.”

Finally, when asked to prioritize potential improvements to SRA facilities and programs, visitors ranked their desired improvements as follows:

- Developing more multi-use, non-motorized trails for horseback riding, hiking and/or mountain biking;
- Constructing more developed campgrounds with flush toilets, hot showers and food lockers;
- Increasing the presence of uniformed law enforcement personnel;
- Constructing more basic campgrounds with picnic tables, cold water and pit toilets;
- Increasing parking at day use picnic sites;
- Constructing a visitor center;
- Providing more educational programs and services;
- Providing more group picnic sites that accommodate large families or groups of 20 or more persons;
- Providing a second marina;
- Providing sheltered lodging facilities such as rustic cabins, tent cabins, etc.;
- Providing more boat launching facilities; and
- Constructing RV campgrounds with electrical and water hookups, sewer dump stations and pull-through sites.

d. Other Regional Destinations

Several regional recreational facilities in this part of Northern California offer similar recreational experiences. Reservoirs of comparable size to Folsom Lake within a fairly easy drive of Sacramento include Lake Oroville to the north, Lake Berryessa to the west, and Lake Camanche to the south. Lake Oroville is a 15,500-acre reservoir resulting from the damming of the Feather River in Butte County. The reservoir is the centerpiece of the 28,450-acre Lake Oroville SRA that includes a visitor center, swim beach and picnic area, 3 formal boat launch areas, 210 developed campsites (including 6 group sites and 8 boat-in campgrounds), and about 6 miles of trails.

Lake Berryessa is a 19,250-acre reservoir created by the damming of Putah Creek in Napa County. The Bureau of Reclamation provides two large day use areas, several smaller and dispersed day use areas, and a launch ramp. Seven resorts around the reservoir are managed by concessionaires under contract with Reclamation and provide camping (688 short- and 1,300 long-term sites), day use, boating facilities (including marinas), and food services. To the south is Lake Camanche in Calaveras County. The reservoir is operated by the East Bay Municipal Utility District and is the result of the damming of the Mokelumne River. The 7,700-acre reservoir offers a full service marina, boat rentals, and boat launch facilities provided on both the north and south shores. It also includes more than 300 campsites, an RV park, housekeeping cottages, equestrian stables and trails, and day use areas with picnic tables, barbeques, and food and equipment concessions.

Several smaller reservoirs are located along the I-80 and Highway 50 corridors east of the SRA. Facilities along Highway 50 in El Dorado County include Jenkinson Lake, Ice House Reservoir, Union Valley Reservoir, and Loon Lake Reservoir. Facilities along I-80 in Placer and Nevada Counties include Lake Spaulding, Donner Lake, and Stampede Reservoir. Most of these reservoirs are located on National Forest Service lands and provide boat launch facilities and rentals, as well as a full range of camping and trail facilities. However, access roads to most of these reservoirs are closing during the winter since they are located at higher elevations than Folsom Lake SRA.

While other regional recreation destinations offer similar opportunities, they do not provide the physical setting, range of activities, and access that make Folsom Lake SRA unique. The SRA provides a variety of landscapes from rugged canyons along the North and South Forks of the American River, to the rolling hills and upland plateaus above Folsom Lake, to the bluffs and broad river plain of Lake Natoma. These settings showcase many “classic” California landscapes, including chaparral, blue oak woodland and savanna, and willow

riparian plant communities. In addition, few regional recreation destinations provide as diverse a range of recreation opportunities as Folsom Lake SRA. Fishing, swimming, water skiing, sailing, windsurfing, jet skiing, wake boarding, rowing, whitewater rafting, canoeing and kayaking are available for aquatic enthusiasts. On land, hiking, jogging and running, road and mountain biking, horseback riding, and camping provide opportunities for exercise, education, and interpretation.

Perhaps the most unique aspect of the SRA when compared to other regional recreation destinations is its easy access. Located in a metropolitan area of nearly 2 million people, and bracketed by the I-80 and Highway 50 corridors, the SRA is easily reached from within the Sacramento region, the Central Valley, and the San Francisco Bay Area. This makes the SRA a very popular day-use destination. In addition, as development surrounding the SRA has increased, nearby residents tend to consider the SRA as an extension of their own backyard. Whether it is an early morning run, bike, or paddle, or an evening walk or sail to wind down the workday, the SRA has become an important part of the daily routine for many residents.

It is this distinct range of settings and activities that attract both neighbors and those from farther afield to the SRA. In this way, the SRA serves both as a local urban park and as a regional natural habitat and open space area. Each role will continue to be in high demand as the local and regional population continues to grow.

4. Public Input

The planning process for this General Plan provided a number of opportunities for public input and elicited meaningful contribution from a wide range of stakeholders. In addition to agency involvement at the local, state, and federal levels, numerous user groups (e.g., runners and walkers, hikers and horseback riders, cyclists and mountain bikers, boaters and sailors, paddlers and rowers, fisherman, and more), conservation groups, neighboring residents, and other concerned parties provided input. Each was encouraged to participate through a series of stakeholder meetings, three community workshops, six newsletters, online and offline comment forms, and the project website. Hundreds of e-mails, letters, comments forms, and telephone calls were recorded. Over 350 people attended the community workshops and the project mailing list swelled to more than 600 names.

a. Stakeholder Meetings

In October 2002, a series of agency stakeholder and focus group meetings were held to clarify roles, identify issues to be addressed in the plan, and provide support for completion of the Resource Inventory document. Four meetings were held and facilitated by the planning team with individual sessions for trails and upland recreation stakeholders, aquatic recreation stakeholders, natural and cultural resource stakeholders, and neighboring uses stakeholders. Approximately 100 people attended the four meetings over a two-day period.

Each meeting was two hours long and intended to introduce the attendees to the planning team and the project, and to gather input on key issues related to the meeting's topic area with respect to the SRA. It also provided an opportunity for the stakeholders to introduce themselves, their interest in the project, and the role they saw themselves playing in the planning process. The project background and planning process were described, including future opportunities for the attendees to provide the planning team with input. Comments were recorded and a questionnaire specifically geared to the meeting topic area was distributed to the attendees so that they could provide additional information. More than half of all attendees completed the questionnaire.

The initial round of stakeholder meetings—and subsequent community workshop—raised trail use and facilities as an issue that warranted additional consultation and analysis. In response, three meetings were held with a select group of trails stakeholders to better understand trail users concerns and needs, formulate appropriate goals and guidelines for the SRA's trail system, and lay the groundwork for the preparation of a trail management plan subsequent to adoption of this General Plan.

b. Community Workshops

Three community workshops attended by more than 350 people were held over the course of the project. Not only did the workshops inform and update the public on the planning project, but also they informed the planning team of issues and concerns that only those very familiar with the SRA could know.

1). Community Workshop #1: "Issues and Opportunities"

An initial community workshop was held in November 2002 to introduce the project to the general public, present the findings of the draft inventory of the SRA's resources, and solicit public input on key planning issues and opportunities to be addressed during the process. Large map exhibits illustrating various SRA characteristics and resources were displayed for public viewing and members of the planning team were on hand to clarify the data and

answer questions. Attendees were also invited to provide written comments and more than 60 comment sheets were collected at the workshop or mailed to the planning team. For the most part, the comments and feedback received at this Workshop were similar to those raised at the stakeholder meetings held the previous month. Key issues identified, include:

- Re-designating Lake Natoma as a separate State Park unit from Folsom Lake State Recreation Area as a way to protect and enhance its peaceful and picturesque character;
- Developing an artificial whitewater slalom course as proposed as part of the Bay Area Olympic bid;
- Maintaining facilities in the SRA to a higher standard;
- Fire management along the SRA boundaries, particularly where it adjoins residential areas;
- Lack of natural and cultural resource interpretation; and
- Trail system expansion, user education, and enforcement.

Roughly 130 people attended the workshop and provided input.

2). Community Workshop #2: "Exploring Alternatives"

In the months following the first workshop, alternative concepts for the SRA were prepared by the planning team based on the input received from agency and other stakeholders, general public, SRA visitors, and State Parks and Reclamation management and staff. These alternatives were the subject of a second community workshop in June 2003. The purpose of this workshop was to review a preliminary set of alternative concepts for the SRA, and solicit public input to assist the planning team in preparing a preferred SRA concept.

The alternative concepts presented at the workshop incorporated a range of ideas and options relating to land use, facilities, and management issues. Two alternative concepts were presented—Alternative #1: Enhancement with Minor Additions and Alternative #2: Enhancement with Major New Expansion—for land use, aquatic facilities, upland facilities, and trail facilities. Preliminary management zones and land use designations, management alternatives, and management issues across alternatives were also presented. Viewing stations were set up to illustrate the alternative concepts, and several of these stations allowed workshop participants to select alternatives or answer questions directly on the displays as a means of gauging support for the concepts.

Key findings of the second workshop include:

- Support for Alternative #1 with respect to upland facilities (camping and day use);
- Support for Alternative #1 with respect to aquatic facilities (boat launch ramps, marina, etc.);
- Support for Alternative #2 with respect to trail facilities (trails, trailheads, etc.);
- Expanded opportunities for interpretation and education;
- Minor expansion of concessions and special events;
- Continued acquisition to expand the SRA; and
- Elimination of off-road vehicle access.

Roughly 110 people attended the workshop and provided input.

3). Community Workshop #3: "Draft General Plan"

Using the input received at the second workshop, the planning team re-evaluated and re-worked the preliminary alternative concepts based on those concepts that had significant support from the public, State Parks, and Reclamation. This evaluation allowed the planning team to develop a draft preferred SRA concept that provided the basis for this General Plan. The final community workshop(s) will be held in Winter 2008 to present the draft General Plan to the public. The purpose of these workshops will be to provide an overview of the preferred concept and draft plan as a kickoff to the public review period.

C. ISSUES AND ANALYSIS

This section summarizes key issues that were identified by the planning team during the planning process. The intent is to highlight important issues that are addressed by the General Plan goals and guidelines in Chapter 3 of this Plan.

1. The SRA and Reservoir Operations

The operation of Folsom Lake as a reservoir for the purposes flood control, water supply, power generation, and environmental enhancement results in the significant fluctuation of water levels over the course of a year. Water levels have a direct impact on the access to and quality of water dependent recreation activities at Folsom lake since water levels determine the availability of boat ramps, beaches, mooring sites, and other facilities that depend largely on water depth or surface area. Water levels also impact the quality of recreation activities that are not water dependent but are enhanced by the proximity to water, such as picnicking,

camping, and trail use. This is particularly true of picnicking as the distance between the shade of picnic facilities and the water's edge increases. In general, the quality of the recreation experience at Folsom Lake begins to diminish as water levels drop during the summer months and on into the fall.

a. Existing Reservoir Operations

Flood control is the primary purpose of Folsom Lake. During the flood control season between October and May, a portion of the total capacity of Folsom Lake must be maintained to handle potential flood flows. During this time, water levels can be lowered to between 427 and 390 feet during storm events (lake levels during this period typically range from 444 to 405 feet). Since only about 25 percent of annual SRA visits occur during the flood control season, winter flood control operations typically have relatively little impact on recreation use at Folsom Lake. An exception to this pattern occurs in years when the water level is dropped in the spring in response to a late storm and there is insufficient run-off to re-fill the reservoir. Such years can have a significant impact on recreation use throughout the summer season.

Beyond the flood control season, when water levels are typically between 444 feet (June) and 417 feet (September), water from Folsom Lake is released to meet local drinking water and power generation demand, maintain water quality in the San Joaquin Delta, and maintain minimum flows and temperatures to support anadromous fish species downstream. This is also the time when 75 percent of visits to the SRA occur. Since aquatic activities account for about 85 percent of all recreation visits to Folsom Lake, water releases during the summer months have a direct impact on recreation uses.

b. Future Reservoir Operations

There are several flood control and water supply projects and proposals in the works that will affect the operation of Folsom Dam and water levels in the reservoir, which in turn will affect the future planning, operation, and maintenance of the SRA (refer to text on hydrology in Section A.3.a in this chapter).

1). Flood Control Projects

A number of measures to increase the flood protection of the Folsom Dam flood protection system have been proposed and/or implemented over the past two decades by the primary agencies responsible for flood protection, the ACOE, Sacramento Area Flood Control Agency (SAFCA), the California State Board of Reclamation and the Department of Water Resources. These projects include the proposed Folsom Dam Modification Project and the

Folsom Dam Mini-Raise Project. More recently due to the difficulty and cost of enlarging the outlets in Folsom Dam, a critical part of the Folsom Dam Modification Project and the whole package of flood improvement projects, the ACOE and Reclamation combined forces to work on a joint federal project to improve both dam safety and flood control. A new gated auxiliary spillway around Folsom Dam is the center piece of the flood protection measures (in lieu of enlarging the outlets) in the new Folsom Dam Safety and Flood Damage Project. The project may also include a 3.5 foot raise of the dams and dikes. If this 3.5 foot raise is determined to be necessary to meet flood protection objectives, additional environmental analysis may be conducted for this raise. The EIR/EIS for the Folsom Dam Safety and Flood Damage Project was completed in April 2007 and the Record of Decision was issued in May 2007.

Folsom Reservoir is currently operated with a normal high pool elevation of 466 feet. Most of the recreation facilities within Folsom Lake SRA are located between this normal high pool elevation of 466 feet and the current top of the Dam elevation of 480.5 feet. During extreme flood events these recreation facilities are subject to flooding. The Folsom Dam Safety and Flood Damage Project will increase the ability to release water downstream (primarily via the new spillway) and will reduce the vulnerability of these facilities getting inundated in an extreme flood event. While a raise of the dams and dikes may increase the number of facilities that might be subject to inundation in the case of an extreme flood event, the increased flood protection will reduce the potential for facilities to get inundated. The Folsom Dam Safety and Flood Damage Project will not alter the 466 foot normal high pool operating level of the reservoir.

In addition to the above facility improvements, new interim operational procedures adopted in 1995 allow Reclamation and SAFCA to control an additional 270,000 acre-feet of water within Folsom Lake and to provide up to 670,000 acre-feet of flood control storage. A new interim operational agreement was developed by Reclamation and SAFCA in 2004. Once all of the proposed flood protection facility improvements have been made to the Folsom Dam flood control system, it is anticipated that a plan for permanent re-operation of Folsom Dam and Reservoir will be developed and adopted. It is anticipated that this permanent re-operation will utilize forecast based operations.

2). Water Supply Projects

The water stored in Folsom Lake is allocated to a variety of supply-related uses in compliance with contractual, legal and regulatory obligations.. Water from Folsom Lake is also allocated for the purposes of maintaining water quality in the San Joaquin Delta and for maintaining

minimum flows on the American, Sacramento, and other rivers to protect and restore the natural production of federally-listed salmon and steelhead fish species. These releases are somewhat unpredictable and make it difficult to determine the cumulative impact of future water supply projects on Folsom Lake water levels and hence the recreation facilities on the lake.

c. Impacts of Future Reservoir Operations

Not only will future reservoir operations affect lake levels, but the various flood control projects associated with future operations involve major construction activities that will directly affect recreation in the SRA.

1). *Lake Levels*

As noted, water levels on Folsom Lake normally fluctuate between 444 feet in early summer (June) and 405 feet in early winter (December), although levels as high as 465 feet and as low as 347 feet have occurred over the last 30 years. The normal operating full pool of the reservoir is 466 feet. Several studies have attempted to correlate visitor use to water levels on Folsom Lake. A 1989 study (*Folsom Reservoir Re-operation Study Recreation Impact Assessment*, Chuck Watson Environmental Consulting for California State Parks) estimated that the maximum potential visitor use drops by 70 percent as lake levels fall from 435 feet to 400 feet. Considering the elevation of boat ramps and other recreation facilities on Folsom Lake, it is no surprise that visitor use would drop significantly as levels fall below 425 feet (see Table EC-7). In a 1995 study (*Folsom Reservoir Re-operation Recreation Impact Study*, Dave Martinez for SAFCA), the loss in potential recreation use from re-operation of Folsom Lake using existing water demand conditions was estimated to be between 47,000 and 60,000 visits annually – about 2 percent of total use. A similar study completed in 1998 (*Folsom Reservoir Re-operation Recreation Impact Study*, MTZ Associates for SAFCA in Appendix E of American River Next Step, SAFCA Information Report) using existing *and* projected water demand conditions to the year 2030 estimated a loss in potential recreation use to be between 9,700 visits under existing conditions and 83,000 visits under future conditions. It is unclear why the visitor impact resulting from existing water demand conditions differed between the 1995 and 1998 studies.

It is worth noting that both studies recommended money for facility enhancement, such as improving access to Folsom Lake at lower water levels, as a means of offsetting lost recreation use. Lost recreation use means lost revenue for State Parks. The 1989 study estimated annual revenue losses of between \$67,000 and \$575,000. Concession operations are also directly affected by lower water levels. Concessionaires on Folsom Lake include the Folsom Lake

Marina operator and boat rental and food operators at Beals Point and Granite Bay. At the marina, boats must be removed from the slips at a water level of 412 feet. At Beals Point, the distance to the water's edge from parking, picnic, and other facilities becomes significant when the lake level falls below 430 feet. At Granite Bay, access to the water is greatly reduced when the Stage 2 ramp goes out of service at 425 feet.

Within the 1995 Final EIR/EIS for Interim Re-operation of Folsom Dam and Reservoir, the SAFCA committed to funding the extension of the Hobie Cove and Browns Ravine Marina Boat Ramps to ensure boaters have access to the reservoir at all foreseeable reservoir levels. Additionally, SAFCA committed to fund additional DPR personnel for patrol and maintenance when re-operation reduces reservoir levels to a point where increase patrol and maintenance is required.

In the past, State Parks has used large tents to create shaded areas near the shoreline, and temporary parking areas have been established below the high water mark at Beals Point and Granite Bay to ease public access to the water for swimming and beach activities. Under existing operations, a general rule of thumb used by park managers and staff at Folsom Lake SRA to determine if it has been a good year on the water is whether or not Folsom Lake Marina is open through the Labor Day weekend.

Table EC-7: Boat Launch Facility Operations by Lake Level

<i>Facility</i>	<i>Lanes</i>	<i>Minimum Lake Level (ft.)</i>	<i>Maximum Lake Level (ft.)</i>
Granite Bay			
Stage 1	2	395	420
Stage 2	10	426	435
Stage 3	10	435	450
Stage 4	14	425	466
5 Percent	4	408	466
Low Water	2	360	410
Folsom Point			
	4	406	406
Brown's Ravine			
Main Ramp	4	395	465
Hobie Cove	3	375	426
Rattlesnake Bar			
	2	425	468
Peninsula			
Day Use	1	434	467
South Ramp	1	410	466
Beals Point			
	1	420	466

Source: State Parks; Wallace Roberts & Todd, 2005.

The complicating factors in assessing the impact of various flood control and water supply projects on future Folsom Lake water levels include the summer releases for maintaining San Joaquin Delta water quality and downstream anadromous fisheries. Releases to the Delta in particular are somewhat unpredictable. When these factors are combined with a permanent re-operation plan for Folsom Lake—to be prepared once the Folsom Dam Safety and Flood Damage Reduction Project is completed—and increased diversions needed to meet water supply demands, it becomes extremely difficult to estimate the cumulative impacts of these projects on future water levels. When a permanent re-operation plan is developed and environmental review completed, the impacts to lake levels and recreation will be analyzed.

Environmental analyses completed for the re-operation plans generally predict lower water levels during winter months—particularly December through February—when recreation use on Folsom Lake is at its lowest. Environmental analysis completed for the Water Forum Agreement found that water levels would drop below 412 feet (the elevation at which Folsom Lake Marina must close) during summer months on average between 4 and 6 more years based on the 70-year hydrological record. However, when re-operation is combined with future water demand for all purposes, there is the potential for significant impacts on recreation use in the SRA in years when Folsom Lake is lowered and subsequent precipitation and runoff are insufficient to refill the reservoir. This situation has already occurred in recent years when in 1997 and 2001, water levels dropped to 395 and 414 feet respectively, the reservoir was insufficiently refilled, and a low water summer season at the SRA resulted. As the various demands for Folsom Lake water increase as projected, it will become increasingly difficult for water managers to retain water throughout the summer months and low water years will become more frequent. In 2004 for instance, water levels in Folsom Lake were not dropped particularly low in the winter when compared to previous seasons; however, spring and summer releases to the Delta and downstream fisheries combined with below average precipitation and runoff resulted in low water conditions during the summer season.

2). Construction

The proposed flood protection and dam safety projects will result in construction related-impacts to recreation use and facilities at Folsom Lake SRA. These impacts will occur over the course of the project. Borrow operations in or around Folsom Reservoir, construction staging areas and construction activities will all have some impact on recreation use. The ROD for the project contains mitigation measures to minimize the impacts to recreation. State Parks and Reclamation will continue to work with the other involved agencies to address impacts to recreation as specific project plans and activities develop and occur.

The original proposals to raise Folsom Dam included a provision to construct a temporary bridge across the canyon below the Dam to accommodate the traffic that would be displaced from the Folsom Dam Road. A federal authorization in 2004 approved construction of a permanent bridge. The ACOE and the City of Folsom are moving forward with a joint project to construct a permanent bridge across the canyon below Folsom Dam.

A Draft EIR/EIS for the new Folsom Dam Bridge was released in Spring 2006 and a final EIR/EIS was issued later in 2006. The alignment of the new bridge and roadway will run from the current alignment of Folsom Dam Road at Observation Point to a new intersection with Folsom-Auburn Road just south of the current intersection with Folsom Dam Road. The Folsom Dam Bridge project will require the re-alignment of portions of the paved bike path between Lake Natoma and Beal's Point and may involve relocation of some Reclamation and CDPR administrative facilities. Some habitat mitigation will also be required. Construction of the new bridge began in 2007 and work on the bridge is anticipated to be completed in early 2009.

In separate actions and decisions from the bridge project, Folsom Dam Road has been closed to public use. In 2003, as a result of security concerns raised following the attacks of September 11, 2001, Folsom Dam Road was closed indefinitely to public use. Reclamation analyzed the permanent future of Folsom Dam Road in an EIS that was finalized in 2005.

3). Planning for Future Reservoir Operations

While it is difficult to determine with any certainty how the SRA will be affected by various flood control and water supply projects on Folsom Lake associated with future reservoir operations, it is necessary to plan for the potential impacts nonetheless. With respect to future water levels, recreation planning should consider improving water access to lower water levels by extending existing boat ramps and ensuring that any marina development and expansion be operable at lower than current elevations. However, any increase in water access must be carefully considered relative to the surface area on Folsom Lake available for boating at various water levels. In this way, the provision of related upland facilities (such as parking) may be balanced with the desired boating capacity (refer to Section C.5 in Chapter 3). This General Plan maximizes the efficiency of existing boat launch facilities on Folsom Lake and provides the opportunity to extend launch ramps if warranted by continued low water levels.

The Folsom Dam Safety and Flood Damage Reduction Project will increase the ability to release water downstream and will reduce the vulnerability of these facilities getting inundated in an extreme flood event. However, future recreation planning on Folsom Lake

should also consider the impacts of short term inundation in the instance that an extreme flood event requires utilization of the surcharge space. Such impacts on recreation facilities and resources in the SRA could be substantial and may require significant clean-up and repair. This General Plan provides for the preparation of a Flood Response Plan in cooperation with the Army Corps of Engineers (ACOE), the Sacramento Area Flood Control Agency (SAFCA) and other appropriate agencies to minimize the risk and potential damage to recreation facilities from inundation and provide funding mechanisms for post-event clean-up and resource mitigation. In the response to comments for the Final EIR/EIS for the American River Watershed Long Term Study (2002) SACFA committed to work with State Parks to develop or fund a flood response plan for flood proofing or post-flood rehabilitation of existing facilities. The General Plan/Resource Management Plan is direction to follow up in completion of such a plan.

Finally, future planning in the SRA should consider the construction-related impacts of various flood control and dam safety projects on SRA resources. These projects will likely involve long-term construction activity that will have some impacts on recreation facilities. This General Plan seeks to avoid and minimize the impacts of these projects on SRA resources by calling for State Parks and Reclamation to work closely with the U.S. Army Corps of Engineers and other agencies to mitigate adverse impacts to recreation facilities and resource areas in a manner that is consistent with the vision and direction for these areas as provided in the General Plan/Resource Management Plan. The ROD for the Folsom Dam Safety and Flood Damage Reduction Project contains mitigation measures to minimize and address impacts to recreation and other resources. State Parks and Reclamation will continue to work with the other involved agencies to address impacts to recreation as specific project plans and activities develop and occur.

2. Future of Mississippi Bar

Mississippi Bar is an undeveloped, one-square-mile river terrace along the western shore of the Lake Natoma between Lake Overlook and Negro Bar. While the area includes a rich variety of habitat types, including interior live oak woodland, blue oak woodland and savanna, grassland, and riparian woodland, the majority of Mississippi Bar represents a highly disturbed landscape. This is due to the fact that the area played a significant role in the exploration for gold in the American River during the 1850s. Within a few short years after gold was discovered by James W. Marshall upriver on the South Fork, most of the gold which could be easily retrieved with simple tools had been taken from the hills and streams and major engineering efforts were required to extract the remaining big gold deposits under

rivers or in prehistoric riverbeds. Hydraulic mining was used to mine the American River in the area of Mississippi Bar, a byproduct of which was dredge tailings – piles of washed cobblestones up to several stories high. These tailings were subsequently mined for their value as aggregate.

Today, the interior areas of Mississippi Bar reflect a landscape of dredge tailings as well as lagoons and ponds that were created in an attempt to restore the area when the aggregate mining activity ceased in the 1990s. Although some of these lagoons and ponds are accessible by canoe or kayak from Lake Natoma, recreation facilities at Mississippi Bar are limited to Shadow Glen Stables, a trailhead at Sunset/Main avenues, the paved Lake Natoma bike path, and various dirt equestrian/pedestrian trails that criss-cross the area. In short, Mississippi Bar represents a significant area of opportunity for the restoration of riparian wetlands, the development and enhancement of recreation opportunities, and the preservation and interpretation of historic cultural resources.

In the past Mississippi Bar has been considered by the U.S. Army Corps of Engineers and other agencies as a potential borrow site for proposed Folsom Dam Mini-Raise Project (refer to Chapter II, Section C.1 for further information). The current plans to provide additional flood protection at Folsom Dam/Reservoir do not include utilizing Mississippi Bar as a borrow site. If in the future Mississippi Bar is again considered as a borrow site, State Parks and Reclamation want to ensure that there is adequate mitigation of any possible impacts on existing natural, cultural, and recreation resources and that the area is returned to a condition consistent with the vision, goals and guidelines for this specific area outlined in this General Plan.

This General Plan addresses the future use of this area as recreation resource while restoring natural resources and providing for historic interpretation. Refer to guidelines in Section D.4 in Chapter III related to the Mississippi Bar management zone.

3. Trails

The trail system in the SRA is extensive (more than 90 trail miles) and links most of the SRA's facilities. It also accommodates a variety of users, including walkers and hikers, horseback riders, cyclists, and mountain bikers. Given the increasingly urban setting around the SRA, the demand for trails will continue to grow. However, the SRA's narrow land base

combined with steep topography around both lakes significantly limits the opportunities to develop new trail facilities. Within this context, increased trail use in recent years has raised concerns about conflicts between different trail users.

During the initial round of stakeholder meetings in October 2002, and again in the first community workshop in November 2002, it became clear that trails represented the primary recreation resource issue. In particular, the tension between equestrians and mountain bikers was brought into sharp focus. Equestrians raised concerns about mountain bikers riding on designated equestrian/pedestrian trails and the dangers of mixing these two uses on one trail. Equestrians cited examples of horses being spooked by bikers, of riders being thrown, and of horses being injured. In addition, equestrians wanted to ensure that the push for multi-use trails in the SRA does not come at the expense of equestrian/pedestrian trail miles. The primary concern of mountain bikers is the lack of trail miles in the SRA designated for bike use – a use that continues to increase in popularity. At this time, mountain bikes are permitted on 45 miles of the 94 miles of trails in the SRA while equestrians have access to 66 trail miles. Also, single-use mountain bike trails total only 9 miles compared to the 46 miles designated for equestrian use only. In addition, mountain bikers are concerned that their reputation with equestrians has been damaged by a handful of bikers who ride illegally on equestrian/pedestrian trails and who do not practice proper trail etiquette.

In order to respond to these issues more fully, the planning team held three working sessions with a select group of trails stakeholders. The planning team heard that while additional trail miles would be nice, there is a significant need for multi-use access to the trail system. The planning team also heard that in order to do this without significantly adding trail miles, parallel paths would be necessary on existing trails. In addition, trail users called for increased patrol and enforcement as well as education efforts to increase awareness on trail etiquette if more trail miles in the SRA are to be designated multi-use. The trail stakeholder group helped to inform the overall goals and objectives for the SRA's trail system under this General Plan and lay the groundwork for the preparation of a Trail Management Plan once the General Plan is adopted.

This General Plan provides clear direction for the preparation of the Trail Management Plan. It envisions a SRA trail system that provides the broadest possible public benefit; balances the demands of a diverse and constantly growing user population; is flexible enough to respond to changes in recreational demand over time; is part of a larger, integrated regional system with connections to and access

from other trail systems; and balances the need to expand with enhancement of the existing facilities. Refer to guidelines in Section C.3b. in Chapter III (guidelines VISIT-34 through VISIT-65) related to trails.

4. Marina Capacity

The Folsom Lake Marina at Brown's Ravine is the only marina facility in the SRA. It includes 685 wet slips and 175 dry storage slips. Currently, there is a 5-year waiting list for a sixteen-foot or twenty-foot slip, and a 9-year wait for a twenty-four-foot slip. Interest in slip rentals has increased significantly in recent years in direct proportion to the growth in residential development nearby. In order to determine if a market for expanded marina capacity in the SRA exists, the planning team completed a preliminary survey of similar marina facilities in the region—including at Lake Oroville, Lake Camanche, Pardee Lake, Bear Lake, Lake Tahoe, and the San Joaquin Delta—and reviewed documented trends in the California boating industry. The survey found that:

- Slips at a majority of the marina facilities surveyed were completely sold out during the peak season (May through October);
- While these facilities provided similar slip sizes to Folsom Lake Marina (16-25 feet), the demand is greater for larger rather than smaller slips;
- Facilities nearer to large urban centers experience greater demand for slips and such facilities attract more local use; and
- The demand for slips at Folsom Lake Marina is higher than at any other facility surveyed.

Based on the survey findings, the planning team determined that a market exists for expanded marina capacity in the SRA. Several potential locations for a second marina, including New York Creek, Peninsula, Dike 5, and Buzzard Cove, were selected based solely on the suitability of underwater topography from an engineering standpoint, i.e. good basin elevation with reduced deepening dredging volumes. A number of criteria were then used to determine the suitability of these locations from a landside perspective, including:

- Sufficient upland area to support needed landside facilities, such as parking and access, office and concessions, restrooms and public use amenities, etc.;
- Suitable access, including distance from main roads and services availability;

- Compatibility with both management zone land use designation and surrounding land use; and
- Potential impacts on the SRA's natural and cultural resources.

Based on this analysis, the planning team determined that none of the potential locations was suitable for a second SRA marina facility. For instance, while suitable access and services could be easily provided at the New York Creek and Dike 5 locations, inadequate upland area for landside facilities and incompatibility with surrounding land uses ruled these locations out. A marina at the Peninsula location would be too far from a large concentration of users and significant upgrades to Rattlesnake Bar Road would be required. In addition, such a facility would likely have significant impacts on some of the SRA's most sensitive natural and cultural resource areas and would not be in keeping with the Conservation designation of the Peninsula management zone. Finally, the Buzzard Cove location while suitable for access and compatibility with surrounding land uses and SRA resources would require the acquisition of neighboring property to provide the necessary landside facilities.

The planning team then focused on various options for expanding the slip capacity of the existing marina at Brown's Ravine without the need to dredge the basin. A single point buoy berthing alternative would yield only 36 additional slips (a 5 percent increase) and provide little control and stability on buoyed vessels. A double point alternative, which would improve the stability of buoyed vessels, would yield 290 additional slips (a 42 percent increase). A more aggressive double point alternative could accommodate 490 additional slips (a 71 percent increase) by limiting the space between boats to 5 feet. However, it was determined that any form of buoy berthing may not be practical at Folsom Lake where significant annual drawdowns in the reservoir—typically about 40 feet each year—would result in the need for significant cable maintenance using this approach. It was also determined that any significant increase in slip capacity at Brown's Ravine would likely require development of major landside facilities, such as parking, restrooms, concessions, etc. Due to the limited amount of upland area at Brown's Ravine, and the proximity of neighboring residential development, it is also likely that a portion of such landside facilities would have to be constructed on the southern shore of Brown's Ravine at Mormon Island Point.

After discussions with the Folsom Lake Marina concessionaire and representatives of the California Department of Boating and Waterways, it was determined that the most appropriate means of expanding slip capacity at Brown's Ravine would be to extend the existing dock system. Two alternatives were analyzed: a 150-foot dock expansion yielding 260 additional slips (a 38 percent increase); and extensions to the maximum length possible

without the need for dredging the basin yielding 460 additional slips (a 68 percent increase). However, it was determined that the second alternative would be infeasible since the design, use, and maintenance of such long docks—some would be up to 800 feet long—would be extremely difficult. In any case, it is likely that the expansion of slip capacity using this approach would require improvements to the existing mooring system, including the possibility of a system that automatically adjusts to fluctuating water levels. It is possible that improvements to the existing breakwater will be necessary to reduce the exposure of extended docks to wind and wave energy off Folsom Lake.

As noted earlier in this Section, it is important that recreation planning on Folsom Lake consider improved water access to lower water levels by extending existing boat ramps and ensuring that any marina development and expansion be operable at lower than current elevations. While dredging of Brown's Ravine may not be required to accommodate the various expansion alternatives analyzed in the preparation of this General Plan, dredging could be pursued as a means of extending the boating season by allowing access to Folsom Lake at lower water levels. Currently, boats at the marina are pulled from the water when levels drop below 412 feet—water levels in a typical year drop to about 405 feet—which in a good year does not occur until after Labor Day.

This General Plan calls for a 30-50 percent expansion in slip capacity at Folsom Lake Marina (between 200 and 340 additional slips) and the necessary upland facilities to support such expansion. It also calls for further detailed study into what, if any, structural improvements are needed to increase slip capacity, such as to the existing breakwater and dock system. Dredging of Brown's Ravine could be used to extend the boating season at Folsom Lake Marina.

Refer to guidelines in Section C.3a. in Chapter III (guidelines VISIT-16 through VISIT-18) related to marina capacity. Also refer to policies in Section D.26 in Chapter III related to the Brown's Ravine management zone.

5. Traffic Congestion at Major Day Use Areas

With more than 1.5 million visitors to the SRA each year, and only a handful of major access points, several facilities in the SRA reach capacity by midday on peak season weekends. These facilities include Beals Point, Granite Bay, and Brown's Ravine. As the day use and boat launch parking lots at these facilities fill and eventually reach capacity—at which point access to the SRA is closed—traffic will backup along entrance roads and onto major access

routes and local streets. In the case of Granite Bay, traffic can backup along Douglas Boulevard all the way to Folsom-Auburn Road. The result is traffic delays, illegal parking, pedestrian hazards, noise, and access difficulties for SRA neighbors. Traffic congestion is also an issue in the Skunk Hollow/Salmon Falls area when parking areas reach capacity and queuing for the whitewater rafting take-out areas backs up onto Salmon Falls Road.

This General Plan addresses access and circulation improvements at several facilities as a means of reducing delays, improving visitor experience, and minimizing the effects of SRA operations on surrounding neighbors. Improvements proposed include the reconfiguration of entrances at Beals Point and Granite Bay, the use of temporary electronic message boards in various locations to inform and direct approaching SRA visitors, and the use of radio public service announcements.

Refer to guidelines in Section C.3.e in Chapter III related to circulation. Also refer to guidelines in Sections D.14 and D.16 in Chapter III related to the Beals Point and Granite Bay South management zones.

6. Camping

There are three campgrounds in the SRA providing a total of 176 campsites that accommodate tent, trailer, RV, and group campers. Peninsula Campground includes 104 family campsites. Beals Point Campground includes 49 family campsites and 20 RV sites. Negro Bar Campground is comprised of 3 reservation-only group campsites, two of which are designed to accommodate 50 people and the third site 25 people. Full capacity is often reached at all three campgrounds on peak season weekends.

There are several issues related to camping in the SRA, particularly with respect to Beals Point. Due to the proximity of Beals Point Campground to urban development, there has been an increase in law enforcement problems at the campground, including partying and underage drinking, drug dealing, and violent crimes. This has also had the effect of diminishing the quality of the camping experience at this facility – the District has received many complaints regarding the visitor experience here. These problems are exacerbated by the dense layout of the campground with its many small sites and minimal vegetation screening that provides little privacy. Finally, access to Beals Point for campers with reservations can be difficult during peak season weekends when the day use parking area fills and traffic backs up onto Folsom-Auburn Road.

Other camping-related issues in the SRA include the need for additional group camping facilities and the demand for showers at Peninsula Campground. This General Plan addresses these issues as a means of improving access and providing a visitor experience that is in keeping with the vision for the SRA.

It should be noted that the continued demand for camping facilities statewide, coupled with the limited additional capacity developed by State Parks in the last decade, has resulted in a severe shortage of campsites in the state. Many campsites in the State Parks system are reserved months in advance and campgrounds tend to reach capacity every weekend during the peak season – 6.5 million people camped at State Parks facilities in 2001-02. In response, the State Park System Plan (2002) proposes the development of some 20,000 additional campsites over the next 20 years. In order to make this happen, State Parks must carefully balance this need with the particular natural and cultural resources present at each park unit. At Folsom Lake SRA, this General Plan must determine if family camping remains an appropriate use at Beals Point, and if not, where this camping capacity may be relocated.

This General Plan proposes the conversion of a portion of the family camping at Beals Point to group camping and the relocation of the family camping capacity to another location within the SRA – most likely to Peninsula Campground.

Refer to guidelines in Section C.3b. in Chapter III related to camping (guidelines VISIT-30 through VISIT-33). Also refer to guidelines in Sections D.5, D.14, and D.22 in Chapter III related to the Negro Bar, Beals Point, and Peninsula management zones.

7. Wildland-Urban Interface

The interface between the SRA and adjacent lands raises several complex issues related to the proximity of urban and rural development to the SRA. While the majority of urban and rural development surrounding the SRA is residential in nature and of low intensity and scale—exceptions include more intense non-residential uses that abut the SRA in the City of Folsom—neighboring development does raise several concerns.

First, the proximity of development results in visual intrusion where visitors can see outside development from within the SRA. When land was originally acquired in the 1950's to create the reservoirs, little consideration was given to the potential for urban encroachment. As the Folsom area continues to urbanize, homes are being built on the ridgelines overlooking Folsom Lake. In fact, views of the lake are a key selling point for such real estate.

Residential development on overlooking hillsides and ridgelines has an adverse effect on views from the SRA since homes here tend to be silhouetted against the sky and significantly alter the skyline and the perception of the SRA as a rural, natural area. On Folsom Lake, examples of the visual intrusion of development on the SRA include Granite Bay and Brown's Ravine on Folsom Lake. On Lake Natoma, views from the SRA are generally more limited and of higher quality due to the dense riparian vegetation along the shoreline and the Lake Natoma Bluffs. Although some visual intrusion from development does occur in the area of Lake Overlook and Nimbus Flat, simple buffering and screening here would soften the interface between the SRA and adjacent lands. The reality is that it is difficult for State Park to influence development activity outside of the SRA.

Second, there are locations in the SRA where noise is an issue. In these locations, visitors are affected by noise coming from beyond the SRA or neighbors are affected by noise coming from within the SRA. For visitors, noise coming from outside the SRA is limited to those locations proximate to major roadway routes that parallel or cross the SRA, including Nimbus Flat on Lake Natoma where Highway 50 and Hazel Avenue pass close by, and Negro Bar in the area of the Lake Natoma Crossing (Folsom Boulevard), and Folsom Bridge (Riley Street). For neighbors, noise coming from inside the SRA is generally the result of traffic backups at popular day use facilities that reach capacity on peak season weekends, and from water-based activities on Folsom Lake. The noise from power boats and jetskis on Folsom Lake can travel great distances depending upon atmospheric conditions and wind direction (see discussion of a "quiet day" on Folsom Lake below). In addition, music coming from boats moored or floating in nearshore areas does generate complaints from lakeside neighbors, particularly in the lower reaches of the North and South Forks of the American River.

Third, access is an important interface issue for two reasons. First, several facilities in the SRA—such as Beals Point, Granite Bay, and Salmon Falls/Skunk Hollow—reach capacity by midday on peak season weekends, which results in traffic delays, illegal parking, pedestrian hazards, noise, and access difficulties for neighbors of the SRA. Second, informal access to the SRA from abutting neighborhoods is a concern with homeowners often adding gates to access the SRA property or completely removing property line fencing and extending their yard use into the SRA. In rare instances, homeowners use SRA lands as a dump site for yard waste and personal refuse.

Finally, the proximity of residential development to the natural areas of the SRA raises the issue of wildfire safety, particularly in the northern portions of the SRA along the North and South Forks of the American River. In these more remote rural areas of unincorporated Placer and El Dorado counties, emergency response times are higher and the natural landscape within the SRA poses the highest risk of wildfires and property loss. A Draft Prescribed Fire Management Plan has been prepared concurrently with this General Plan and relevant land use policies are incorporated as appropriate.

State Parks and Reclamation have a number of policies which address fire and fuel management. State Parks goal is to prevent unplanned human caused wildfires and to protect people, property, natural and cultural resources from unplanned and unwanted wildfires. State Parks develops wildfire management plans which outline the prevention, suppression and restoration activities associated with wildfires.

State Parks manages wildland properties which contain native plant communities and ecosystems which are fire prone or fire-dependent. Fire is a natural process and condition under which these plant communities evolved. Buildings and developments constructed adjacent to park units with wildland-urban interface are at risk from wildfires. Many of the risk factors for these structures are associated with siting, design and construction materials. State Parks expects adjacent property owners and jurisdictions to provide appropriate setbacks, fuel clearance on their own property and the use of appropriate building materials to help reduce wildfire risk. State Parks policy is to prohibit the construction and maintenance of fuelbreaks and fuel modification zones except under specific circumstances, including: where required by State law; where previous legal commitments were made; or park vegetation within 130 feet of a habitable non-Department structure which is at specific risk of ignition from wildfire.

State Parks policy and goal is to restore fire to its proper role as a natural ecological process in native ecosystems. The Department develops prescribed fire programs for appropriate park units for the purpose of restoring and maintaining native plant communities and structure, improving wildlife habitat, the control of exotic species and other ecological purposes. State Parks develops unit prescribed fire management plans, which provide programmatic direction, and project burn plans to guide and implement the prescribed fire program.

Refer to guidelines in Section C.3e in Chapter III related to circulation, Section C.3f in Chapter III related to visual resources and aesthetics, and Section C.4e in Chapter III related to wildfire management.

8. Off-Road Vehicle Use

At several locations in the SRA, including at Rattlesnake Bar and Beals Point on Folsom Lake, visitors drive their vehicles off designated roadways and parking areas to access the water. Some visitors also drive along shoreline areas not previously accessible at high water. This activity becomes prevalent later in the peak season as lake levels drop and shoreline areas become exposed. Off-road vehicle use impacts SRA resources in several ways. First, shoreline vegetation above high water is affected as visitors establish pioneer routes between designated roadways and parking areas and the shoreline itself. Second, the erosion caused by vehicles can prevent the growth of shoreline vegetation below high water in the lake fluctuation zone, vegetation that can slow and reduce stormwater runoff by allowing percolation into the soil. As a result, fine-grained soils are washed into Folsom Lake when the first rains of the winter season arrive, which in turn contributes to reduced water quality in the SRA. Third, as lake levels drop and archaeological resources located below high water become exposed, there is increased risk that these resources may be damaged or destroyed by off-road vehicle activity. Finally, littering below high water becomes a problem since trash receptacles are generally not provided.

Off-road vehicle use in the SRA results in increased operational costs for State Parks from the patrol of exposed shoreline areas, barricading and temporary signing of areas closed to vehicle use, litter removal, and maintenance of access roads below the high water. This General Plan addresses off-road vehicle use in the SRA by restricting vehicles to designated roads and parking areas and by providing formal shoreline access in limited locations as appropriate. Refer to guidelines in Section C.4d. in Chapter III related to off-road vehicle use.

9. Whitewater Course

Whitewater kayaking interests have periodically expressed the desire for a year-round artificial whitewater kayaking course utilizing the drop from Lake Natoma around Nimbus Dam to the river below in the area of Nimbus Shoals. This concept was recently raised as part of the bid by the San Francisco Bay Area Sports Organizing Committee (BASOC) for the 2012 Olympics. While the Bay Area was unsuccessful in its bid for the 2012 games, interest in the potential for an artificial whitewater kayaking course at Nimbus Dam increased, including by the River City Paddlers, a local paddling group based in Sacramento, who sponsored a preliminary concept study of the idea. Also, whitewater kayaking interests

have expressed a desire that the scope of Reclamation’s plan to replace the fish diversion structure at Nimbus Dam be broadened to include the development of this structure as a multi-purpose facility that would provide both fish passage and whitewater recreation.

The existing fish diversion structure is an in-stream weir below Nimbus Dam that diverts anadromous fish (salmon) from the American River to the Nimbus Fish Hatchery. Reclamation is currently working through design concepts to replace this structure with a channel across Nimbus Shoals to the Hatchery. Based on preliminary design analysis Reclamation has determined that a multi-purpose fish diversion channel which provides both fish passage and whitewater recreation is not a feasible or desirable option. In light of this, government and whitewater paddling stakeholders have met to discuss other opportunities to enhance whitewater recreation in this area. There may be opportunities to create a play/wave hole or other water feature in conjunction with the removal of the existing fish diversion weir.

This General Plan addresses whitewater recreation in the area of the Nimbus Dam by supporting such opportunities within the confines of this Plan. Refer to guidelines in Sections D.1 and D.2 in Chapter III related to the Nimbus Flat/Shoals and Nimbus Dam management zones.

10. Folsom Lake Quiet Day

Over the course of the planning process for the General Plan, a collection of neighbors and trail users proposed the establishment of a weekly “quiet day” on Folsom Lake whereby the use of motorized boats would be restricted. The planning team received several letters, e-mails, and phone calls on the concept, which eventually received the support of a local planning advisory council and a Board Supervisor in El Dorado County. Several issues were cited by these members of the public, including:

- Adverse effects of motorized boat noise on the experiences of non-motorized boaters (sailors, canoeists, paddlers) and swimmers, upland visitors to the SRA, and nearby residents, particularly in the canyon areas of the North and South Fork arms of the American River; and
- Compatibility and safety of non-motorized boaters and swimmers on Folsom Lake that may be difficult to see in open waters and are adversely affected by the wakes from motorized boats. Designated areas for non-motorized boaters and swimmers and was suggested.

The reality of establishing a weekly “quiet day” on Folsom Lake is that it would displace a great many SRA visitors, particularly during the peak season. This General Plan proposes other means of addressing noise and safety concerns on Folsom Lake without singling out a particular type of SRA visitor, including the extension of the 5 mph zone on the North Fork from Mormon Ravine down to Rattlesnake Bar and monitoring boat noise on Folsom Lake during high use periods to document existing conditions and determine the need for adopted standards. Refer to guidelines in Sections D.30 through D.34 in Chapter III related to the Folsom Lake aquatic management zones.

11. State Indian Museum

The 1979 General Plan for the SRA reserved a 28-acre grassland area—commonly referred to as “Museum Flat”—on the eastern shore of Lake Natoma between Willow Creek and Nimbus Flat as a possible future site for the California Indian Heritage Center. Despite a 1991 study on the proposal, and a more detailed follow-up in 1993, a decision was never reached on where the facility should be located. In August 2002, Senate Bill 2063 established the California Indian Cultural Center and Museum under State Parks and a task force to recommend a location, design, content, and governing structure. The center is anticipated to include:

- A 60,000 square foot building, 3 acres of parking, and an entrance from Folsom Boulevard;
- Village site with examples of traditional dwellings and other structures;
- Native plant garden;
- Campfire/ceremonial meeting area;
- Playing field for traditional games and events; and
- Access to Lake Natoma for demonstrations.

As with the 1979 General Plan, this Plan also reserves the Museum Flat area as a potential site for the future California Indian Heritage Center. In October 2004, the task force recommended that two sites be considered and that further analysis be conducted to determine which is most feasible. At that time the preferred location was located on the Lower American River east of Discovery Park in the City of Sacramento. The second choice is the Museum Flat site within the SRA. The taskforce re-confirmed the Lower American River as the preferred site in a 2005 decision. However, plans for a site along the Lower American River did not work out, and the task force decided to focus planning for the

Center at a site in West Sacramento near the confluence of the Sacramento and American Rivers. The task force is working with the City of West Sacramento regarding the land for the site and planning for the Center continues at the West Sacramento site. The General Plan/Resource Management Plan will reserve the Museum Flat location as a potential site for the Center until plans for West Sacramento as the preferred site are finalized. . Refer to guidelines in Section D.9 related to the Natoma Shore South management zone.

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