

This section describes existing recreational facilities in the project vicinity and presents an analysis of recreation-related impacts that could result from implementation of any of the three proposed project alternatives.

5.6.1 REGULATORY SETTING

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to recreation resources are applicable to the proposed project.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Department of Fish and Game

The California Department of Fish and Game (DFG) manages the Feather River State Wildlife Area, which comprises several management “units” on both the left (east) and right (west) banks of the Feather River (see Figure 5.1-1, “Conservation Areas in the Project Vicinity”). As shown in Figure 5.1-1, the Lake of the Woods Unit (described below under “Recreational Opportunities along the Feather River”) is located between the Feather River and the left bank levee, immediately adjacent to a portion of the Feather River Levee Repair Project (FRLRP) project area. DFG administers these units for multiple recreational uses, the most important of which are hunting and fishing. DFG regulates the types and levels of recreational use of these areas to ensure public safety and the protection of fish, wildlife, and plant resources. DFG may limit use within the units or portions of the units for safety reasons or to provide for the limited take of a species.

LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

Yuba County

The Yuba County (County) system of parks and recreational facilities is limited. The County does not have a parks and recreation department, nor does it have any regulations or general plan policies that would apply to the FRLRP.

City of Marysville

The City of Marysville maintains various recreation amenities in the floodplains of the Feather and Yuba Rivers. In particular, the City of Marysville’s Riverfront Park consists of a large complex of facilities, many of which (e.g., an off-highway vehicle [OHV] motocross course, sports fields, a nature area, a BMX track) are located in the river floodplain. The northern edge of the FRLRP project area is in the vicinity of some of the motocross/BMX facilities. One of the policies of the Open Space, Conservation and Recreation Element of the *City of Marysville General Plan* (City of Marysville 1985) is “To encourage compatible recreational uses in floodplains of the Feather and Yuba rivers.” This policy, among others, supports the broader goal

“To designate, protect, and conserve the natural resources, open space, and recreation lands in the city; and provide opportunities for recreation activities to meet citizens’ needs.”

5.6.2 ENVIRONMENTAL SETTING

SOURCES OF INFORMATION

Information for this section was obtained from individuals familiar with recreation resources in the project area and from various online and print documents, including Volumes I and II of the *Yuba County General Plan* (Yuba County 1994, 1996); the *City of Marysville General Plan* (City of Marysville 1985); the *Draft Environmental Impact Report for the Yuba-Feather Supplemental Flood Control Project* (Yuba County Water Agency 2003); the *Land Acquisition and Management Plan for the Feather-Bear Rivers Levee Setback Project* (Yuba County Water Agency 2004); the *Bear River and Western Pacific Interceptor Canal Levee Improvements Project Draft Environmental Impact Report* (Three Rivers Levee Improvement Authority 2004a); and the *Draft Environmental Impact Report for the Feather-Bear Rivers Levee Setback Project* (Three Rivers Levee Improvement Authority 2004b).

REGIONAL RECREATIONAL OPPORTUNITIES

Yuba County contains approximately 580 acres of neighborhood and community park and recreation facilities that are accessible to the public. Of these approximately 580 acres, roughly 270 acres are within the jurisdiction of the City of Marysville, including Riverfront Park, Ellis Lake, and scattered neighborhood parks. Olivehurst Public Utility District oversees approximately 13 acres of neighborhood parkland, the City of Wheatland maintains roughly 6 acres of parkland, and Brownsville has approximately 40 acres of parks. The remaining approximately 250 acres of park and recreation facilities are administered by the County Public Works Department (Yuba County 1994). Some of this acreage is located in the project vicinity and is discussed below under “Recreational Opportunities along the Feather River” and “Recreational Opportunities along the Yuba River.”

In addition, numerous rivers, creeks, and reservoirs are used for recreation in Yuba County. Where access is available, fishing, hunting, picnicking, rafting, tubing, and swimming are the dominant recreational uses on the Feather, Yuba, and Bear Rivers. Developed day use and overnight facilities for camping, picnicking, and boating are available at upstream sites, including Camp Far West, Lake Mildred, Lake Francis, Merle Collins Reservoir, Englebright Reservoir, and New Bullards Bar Reservoir. Tahoe and Plumas National Forests occupy more than 56,000 acres of land in northeastern Yuba County and offer a wide variety of recreational opportunities (Yuba County 1994).

RECREATIONAL OPPORTUNITIES ALONG THE FEATHER RIVER

The lower Feather River flows from Oroville Dam to its confluence with the Sacramento River, largely past private land. Common activities along the Feather River include boat and shore fishing, pleasure boating, hunting, swimming, sightseeing, picnicking, and camping. Boat access between Oroville and Marysville is provided at Riverfront Park and near Live Oak, Gridley, and Biggs. Undeveloped access points downstream of Marysville are located along Garden Highway (State Water Resources Control Board 1997).

The primary recreation site in the FRLRP project vicinity is the Feather River State Wildlife Area, most of which is located south of Marysville and Yuba City near the confluence of the Feather and Bear Rivers in both Yuba and Sutter Counties. This wildlife area, which is managed by DFG, comprises several management units (California Department of Fish and Game 2006). The following management units are located along the Feather River and in the FRLRP project vicinity:

- ▶ The Abbott Lake Unit is a 439-acre site east of Garden Highway and north of Star Bend Road in Sutter County. This unit is adjacent to the right (west) bank levee of the Feather River and across the river from project Segment 2.
- ▶ The Star Bend Unit is a 50-acre site located along the left bank of the Feather River at Star Bend in Yuba County. This unit is near Segment 2.
- ▶ The O'Connor Lakes Unit is a 471-acre site east of Garden Highway and south of Star Bend Road in Sutter County. This unit is adjacent to the right bank levee of the Feather River and across the river from project Segment 1.
- ▶ The Lake of the Woods Unit is a 698-acre site along the left bank levee of the Feather River in Yuba County. It is immediately adjacent to Segment 1. The unit is accessible only by boat.

The four units in the project vicinity—Abbott Lake, Star Bend, O'Connor Lakes, and Lake of the Woods—are shown in Figure 5.1-1. This figure also shows the location of Bobelaine Audubon Sanctuary, which is discussed below and in Section 5.5, “Terrestrial Biological Resources,” and the location of the Corps Marysville–Yuba City mitigation area.

Use of the public lands in the Feather River State Wildlife Area for all forms of recreation (e.g., hunting, fishing, hiking, motor biking) is currently estimated at about 5,000 user days annually. A user day is equivalent to a single person visiting a site for a day. One person may be responsible for multiple user days if he or she visits a site more than once during a year. Hunting (using shotguns only) is available within the management units from July through January, as well as during spring turkey season (late March through early May); usage of the area for this purpose is moderate. For example, estimated usage of the Lake of the Woods Unit by hunters and anglers from July through January is 1,500 user days; in the Star Bend Unit, this figure is about 500 user days, and the lands north of Star Bend, including the Abbott Lake Unit, are used at about the same rate (Three Rivers Levee Improvement Authority 2004b, Whitmore, pers. comm., 2006). Estimated annual usage of the O'Connor Lakes Unit by hunters and anglers is approximately 1,000 user days (Whitmore, pers. comm., 2006). Game animals in the wildlife area include quail, pheasant, rabbit, turkey, and deer.

Annual usage of the Lake of the Woods Unit by nonhunters (e.g., hikers, bird-watchers) outside the July-through-January hunting season is estimated at 500 user days; at Star Bend and points north, usage is estimated at 150 user days in each location. The level of annual recreation use at the O'Connor Lakes Unit by hikers and other nonhunters is estimated at 300 recreation user days (Whitmore, pers. comm., 2006). Access to the existing levees within these wildlife management units is currently very limited; vehicles are prohibited from driving on the levee except on ramps, and parking is limited to an area at the Star Bend Boat Ramp. The existing levee is used for

walk-in access only, and unauthorized vehicles can be cited (Three Rivers Levee Improvement Authority 2004b).

In addition to the lands managed by DFG as part of the Feather River State Wildlife Area, the Bobelaine Audubon Sanctuary, a registered state ecological reserve, is located on more than 430 acres on the west (Sutter County) side of the Feather River, 12 miles south of Yuba City (Figure 5.1-1). Managed by the Sacramento Audubon Society, the reserve is a remnant of the 2- to 5-mile-wide river forests that historically bordered the rivers in California's Central Valley. The Bobelaine reserve offers a variety of recreational activities, including picnicking, hiking along more than 5 miles of trails, and viewing numerous species of mammals and more than 190 species of birds, and it is a destination for field trips. Hunting and fishing are prohibited (Yuba Sutter Tourism Board 2004, Sacramento Audubon Society 2006).

Beyond the activities associated with the wildlife and habitat areas described above, recreationists currently use the Feather River channel and floodway adjacent to the project area for rafting, tubing, and swimming where access allows these uses. The tops of the levees are also used for bicycle riding, walking, and jogging. The City of Yuba City maintains the Feather River Levee Bike Trail along the right bank of the Feather River from Northgate Drive on the north to Shanghai Bend Road on the south. However, most levee areas in the project vicinity are not considered formal recreation facilities.

The Star Bend Boat Launch and Fishing Access, located 0.5 mile north of the Lake of the Woods Unit, is the only developed public recreation facility that intersects the project area. The 9-acre facility, owned by DFG and maintained by the County Public Works Department, provides a one-lane boat launch ramp, a picnic table, and parking for approximately 20 boat trailers; no camping or recreational vehicle access is provided (Whitmore, pers. comm., 2006).

Near the confluence of the Feather and Yuba Rivers, the City of Marysville maintains various recreation amenities in the floodplains of both rivers as part of its Riverfront Park. Riverfront Park consists of a large complex of facilities, several of which (e.g., an OHV motocross course, sports fields, a nature area, a BMX track, a boat ramp) are located in the river floodplain. The northern edge of the FRLRP project area is in the vicinity of some of the motocross/BMX facilities.

RECREATIONAL OPPORTUNITIES ALONG THE YUBA RIVER

Few public recreation facilities exist along the Yuba River below New Bullards Bar Dam (U.S. Bureau of Reclamation 1997). From Englebright Lake to the Feather River at Marysville, the river flows past mostly private lands, restricting public access; however, limited public access is available at the SR 20 crossing 5 miles downstream of Englebright Lake, at the end of Hallwood Boulevard and approximately 8 miles upstream of the confluence of the Yuba and Feather Rivers. Access is also provided through Riverfront Park in Marysville. Although powerboat access is available from launches on the Feather River near the confluence with the Yuba River, boats traveling up the river are constrained by flows and cannot pass Daguerre Point Dam approximately 12 miles upstream of the confluence. Despite the lack of public recreation facilities, fishing is common along the Yuba River. Anglers can fish from shore at access points available to the public, from boats that travel upstream of the Feather River, and from drift boats

launched near the SR 20 crossing (State Water Resources Control Board 1997). Prime fishing season is March through May and August through November, and winter fishing is popular in December through February.

A portion of the Marysville Unit of the Feather River State Wildlife Area is located along the Yuba River (Figure 5.1-1). The Marysville Unit totals approximately 85 acres and is located on separate sites adjacent to the city of Marysville. A 14.5-acre site associated with the Marysville Unit is located along the right (north) bank levee of the Yuba River in Marysville, several thousand feet upstream of the north end of the project area. Access is provided via Sampson Street or 14th Street.

5.6.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

Thresholds for determining the significance of impacts related to recreation are based on the environmental checklist form in Appendix G of the California Environmental Quality Act Guidelines (State CEQA Guidelines) and professional standards and practices. A project alternative would have a significant impact on recreation if it would:

- ▶ increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;
- ▶ include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment;
- ▶ substantially restrict or reduce the availability or quality of existing recreational opportunities in the project vicinity; or
- ▶ implement operational or construction-related activities related to the placement of project facilities that would cause a substantial long-term disruption of any institutionally recognized recreational activities. Institutionally recognized recreational activities are those associated with an established publicly or privately operated recreational facility, or those actively administered or promoted by a public or private entity.

None of the three project alternatives would involve the construction of additional recreational facilities or expansion of existing facilities. Therefore, the second significance threshold does not apply to the FRLRP.

IMPACT ANALYSIS

Alternative 1 – The Levee Strengthening Alternative

Impact
LS-5.6-a

Temporary Changes in Recreational Opportunities during Levee Repairs. Construction noise could disrupt recreational uses in the project area, particularly in areas adjacent to the existing levee alignment. Some wildlife species present in or inhabiting natural areas are likely to be disturbed by noise and by the presence of project construction crews and equipment. Portions of the Feather River State Wildlife Area in project Segment I may need to be closed temporarily to hunting and other recreational activities for safety reasons

while adjacent sections of the existing Feather River levee are being repaired. There would be no public access to the Star Bend Boat Launch and Fishing Access for several days while levee repairs were conducted in this area. Although these temporary disturbances may affect the recreation experience for bird-watchers, hunters, boaters, and other recreational users, displaced recreational uses could be accommodated by other nearby facilities (Whitmore, pers. comm., 2006). For this reason, and because of the temporary nature of this effect, this impact would be **less than significant**.

Several recreation areas are in the project vicinity, and recreational uses in these areas and along the Feather River channel could be temporarily affected by noise and visual disturbance from construction activities associated with levee repairs. The recreation areas nearest to the project site are the Star Bend Boat Launch and Fishing Access; the Bobelaine Ecological Reserve; and four units of the DFG-managed Feather River State Wildlife Area—the Abbott Lake, Star Bend, O'Connor Lakes, and Lake of the Woods Management Units. Except for the Star Bend facilities and the Lake of the Woods Management Unit, these areas are on the west side of the Feather River and not on the project site (i.e., outside the levee repair and strengthening area) (Figure 5.1-1). The Lake of the Woods Unit stretches along the entire length of project Segment 1 below Star Bend, adjacent to the existing left bank levee of the Feather River. The Star Bend Unit lies between the river channel and the existing left bank levee, within Segment 2. The existing levee is approximately 1,000–3,000 feet east of the unit boundary (Figure 5.1-1). The Star Bend Boat Launch and Fishing Access is accessible from Feather River Boulevard near the Algodon Road intersection and is within project Segment 1.

In addition to the prescribed recreational activities in these designated areas, recreationists also use the Feather River channel in the project vicinity for rafting, tubing, and swimming where access allows these uses, and the top of the existing levee is used for bicycle riding, walking, and jogging. The northern edge of the FRLRP project area is in the vicinity of some Marysville Riverfront Park facilities (i.e., MotoCross/BMX facilities) and portions of project construction could be visible or audible from these locations.

Because the levee repair and strengthening activities do not involve breaching the existing levee, some limited work on or adjacent to the levee could commence before the end of the “flood season” (i.e., before April 15). The entire construction period is expected to occur over 2 years. Therefore, project construction could coincide with a portion of the spring turkey-hunting season in the Feather River State Wildlife Area, which begins in late March and continues until early May, and with a portion of the July-through-January hunting season for other game. The construction period would also coincide with the period of summer recreation along the channel and floodway. Therefore, it can be assumed that hunters, anglers, and other recreationists could be present during the construction period for each levee segment, and that recreational activities could be disturbed by construction activity.

Effects of construction activity on recreationists in areas along the right bank levee of the Feather River are expected to be minor because of the distance between these areas and construction sites across the river. Remnant riparian vegetation along the river would provide a partial buffer between public use areas along the right bank levee and construction sites on the east side of the river, providing some visual screening and noise attenuation. Construction activity is not expected to substantially disrupt recreational opportunities near the left bank levee (i.e., Lake of the Woods, Star Bend facilities, and recreation in unmanaged areas) because use of these areas is

only moderate, construction would proceed linearly, and disturbance would not affect individual sites for long periods. Furthermore, overall disturbance would be temporary, and recreationists could adapt to disturbance by using other nearby areas that provide similar recreational opportunities. Construction activity along the northern portion of Segment 3 is not expected to disrupt activities at Marysville Riverfront Park facilities for the same reasons described above (distance from construction activities, temporary nature of construction activities). In addition, park facilities nearest the project site consist of MotoCross/BMX tracks, which are uses that would not be adversely affected by construction noise.

Annual use of all the public lands in the Feather River State Wildlife Area is estimated at about 5,000 user days (Three Rivers Levee Improvement Authority 2004b). Hunter and angler use of the Lake of the Woods and Star Bend Management Units, the units closest to the proposed construction activity, is estimated at 1,500 and 350 user days, respectively, from July through January. Annual usage of these areas by nonhunters outside the July-through-January hunting season is estimated at 500 and 150 user days, respectively (Three Rivers Levee Improvement Authority 2004b). Because none of the wildlife management units experiences heavy use, each can be assumed to be able to accommodate additional visitors who may be temporarily displaced from a unit closer to the construction areas.

In the Lake of the Woods Management Unit (which is generally within project Segment 1), some wildlife is likely to be disturbed by nearby construction, but no boundaries or obstacles would prevent their movement to quieter areas nearby. Portions of the Feather River State Wildlife Area may need to be closed to hunting temporarily for safety reasons while sections of the existing levee are being repaired. However, hunters in this unit could move to other areas not subject to disturbance. Similarly, recreationists along the river channel or the levee top could move to other areas where there is less disturbance.

The Star Bend Boat Launch and Fishing Access in project Segment 1 is one of only a limited number of boat launch facilities in the project vicinity. The boat launch area is also used for parking by recreationists using the Feather River State Wildlife Area, as vehicle access to the levees is prohibited. Levee repairs in Segment 1 would cross the Star Bend Boat Launch and Fishing Access and would temporarily prevent access to the boat launch and associated parking area as the repairs intersect the existing access road over the top of the levee. However, construction efforts would proceed along each project segment in a linear fashion, only disturbing a particular area for a relatively short period. In addition, a temporary access road could be provided to the Star Bend Boat Launch and Fishing Access during a portion of the time that levee repairs intersect the existing access road. Overall, project construction is expected to prevent public access to the Star Bend Boat Launch and Fishing Access for no more than 2–3 days (Wanket, pers. comm., 2006). Loss of public access to the Star Bend Boat Launch and Fishing Access for 2–3 days would not substantially restrict or reduce the availability or quality of existing recreational opportunities in the project vicinity or cause a substantial long-term disruption of any institutionally recognized recreational activities.

Any temporary disruption of recreational opportunities near the project area resulting from construction disturbance is likely to be accommodated by other existing facilities in the area. Levee repairs are likely to result in a shift of recreational activity to different wildlife management units and other recreational facilities; however, numerous other recreational

opportunities are available in the project vicinity and the region, and a temporary shift in use of facilities affected by construction activities to other facilities would not be expected to accelerate the physical deterioration of any one facility. Disturbance of recreational opportunities near the project area would not substantially restrict or reduce the availability or quality of existing recreational opportunities in the project vicinity and would not cause a substantial long-term disruption of institutionally recognized recreational activities. Therefore, this impact would be less than significant.

**Impact
LS-5.6-b**

Long-Term Changes in Recreational Opportunities Resulting from Levee Repairs. In the long term, recreational opportunities along the left bank levee of the Feather River would not be adversely affected by levee repairs. Levee repair and strengthening of the existing levee would not change Feather River flood stage elevations, and hence would not alter the duration or frequency of inundation of recreational facilities relative to existing conditions. After completion of construction activities, the project site would be restored and reclaimed as appropriate to preexisting conditions. Recreational opportunities after project construction are expected to be available to the extent that these opportunities are available under preproject conditions. No substantial changes in recreational opportunities would be associated with levee repair and strengthening of the existing levee. This impact would be **less than significant**.

Short-term effects of project construction on recreational opportunities are addressed above in the discussion of Impact LS-5.6-a. Long-term recreational opportunities along the left bank levee of the Feather River (i.e., Lake of the Woods, Star Bend facilities, and recreation in unmanaged areas) would not be adversely affected by levee repairs. Levee repair and strengthening of the existing levee would occur in place and would not involve levee setbacks; therefore, no changes in Feather River flood stage elevations would occur after completion of construction activities. Therefore, no existing recreational facilities would be inundated more frequently or for longer periods than under existing conditions. In addition, after project construction, the project site would be restored and reclaimed as appropriate to preexisting conditions.

Recreational opportunities in the Feather River State Wildlife Area, at the Star Bend Boat Launch, along the levee top, and in the Feather River channel are expected to be available after project construction to the extent that these opportunities are available under preproject conditions. No substantial changes in recreational opportunities would be associated with levee repair and strengthening of the existing levee. This impact would be less than significant.

Alternative 2 – The Levee Strengthening and ASB Setback Levee Alternative

**Impact
ASB-5.6-a**

Temporary Changes in Recreational Opportunities during Levee Repairs and Setback Levee Construction. Construction noise could disrupt recreational uses in the project area, particularly in areas adjacent to the existing levee. Some wildlife species present in or inhabiting natural areas are likely to be disturbed by noise and by the presence of project construction crews and equipment. Portions of the Feather River State Wildlife Area in project Segment I may need to be closed temporarily to hunting and other recreational activities for safety reasons while adjacent sections of the existing Feather River levee are being repaired. There would be no public access to the Star Bend Boat Launch and Fishing Access for several days while levee repairs were conducted in this area. Although these temporary disturbances may affect the recreation experience for bird-watchers, hunters, boaters, and other recreational users, displaced recreational uses could be accommodated by other nearby facilities (Whitmore, pers. comm., 2006). For this reason, and because of the temporary nature of this effect, this impact would be **less than significant**.

This impact would be the same as Impact LS-5.6-a, described under Alternative 1 above. The Lake of the Woods Unit stretches along the entire length of project Segment 1 below Star Bend, and the existing left bank levee is approximately 1,000–3,000 feet east of the Star Bend Unit, which is within Segment 2. Recreational uses in these areas and others along the Feather River channel could be temporarily affected by noise and visual disturbance from construction activities associated with levee repairs in Segments 1 and 3 and by the removal of the existing levee in Segment 2. However, effects of construction activity on recreationists in public use areas along the right bank levee of the Feather River channel are expected to be minor because of the distance between these areas and construction sites across the river. Riparian vegetation would partially buffer the noise and screen views of the project construction sites.

As described in Impact LS-5.6-a, any temporary disruption of recreational opportunities near the project area resulting from construction disturbance is likely to be accommodated by other existing facilities in the area. There would be no public access to the Star Bend Boat Launch and Fishing Access for a short period during completion of Segment 1 levee repairs in this area. However, access would be restricted for only 2–3 days. Disturbance of recreational opportunities near the project area would not substantially restrict or reduce the availability or quality of existing recreational opportunities in the project vicinity and would not cause a substantial long-term disruption of institutionally recognized recreational activities. Therefore, this impact would be less than significant.

**Impact
ASB-5.6-b**

Long-Term Changes in Recreational Opportunities Resulting from Levee Repairs and Setback Levee Construction. Implementing levee repairs along project Segments 1 and 3 would have little or no effect on recreational uses in the Lake of the Woods Management Unit or along the Feather River channel in these project segments. Implementing the levee setback in Segment 2 would slightly modify Feather River flood stage elevations in the project vicinity during high flows, possibly affecting recreational uses, and could affect survival rates of wildlife following high-flow periods, which could temporarily affect associated wildlife-related recreation. The changes in Feather River flood stage elevations that would result from expansion of the Feather River floodway in Segment 2, however, would be infrequent, of short duration, and during periods when river stage is already high; therefore, no new effects on recreational uses are expected. Sections of the existing Feather River levee would be left in place as part of the proposed project, which would minimize losses of wildlife that could adversely affect long-term recreational activities. This impact would be **less than significant**.

Long-term changes in recreational opportunities in project Segments 1 and 3 would be exactly the same as described for Impact LS-5.6-b under Alternative 1 above. As described for Impact LS-5.6-b, implementing levee repairs along Segments 1 and 3 would not affect recreational uses in the Lake of the Woods Management Unit or along the Feather River channel in these project segments.

Some aspects of flood operations with implementation of the levee setback in Segment 2 have the potential to adversely affect recreational opportunities; these include changes in Feather River flood stage elevations and effects on the survival of wildlife that take refuge on the existing levee during high river flows.

Under Alternative 2, much of the existing Feather River levee along the setback levee alignment in project Segment 2 would be removed to allow water to flow into the setback area during high river stage. Setting back the levee in Segment 2 would widen the floodway and lower the flood

stage in this river reach (see Section 5.3, “Water Resources and River Geomorphology”). However, the change in the river’s flood stage would not be substantial enough, frequent enough, or of long enough duration to have a noticeable effect on river-based recreational opportunities.

Removing the existing levee has the potential to lower the chance of survival of wildlife that take refuge on this high ground during inundation of the floodway, possibly resulting in reduced populations and slower repopulation of flooded areas after the water level declines, causing recreational opportunities to temporarily decrease. Recreational activities (e.g., walking, jogging, and cycling) that take place on the existing levee would be displaced by removal of the levee. However, portions of the existing levee would be retained in Segment 2 after the setback levee is complete. The levee sections that would remain in place are expected to provide sufficient high ground to prevent substantial losses of wildlife that could adversely affect recreational activities such as bird-watching. In addition, any habitat restoration or creation that may occur in the levee setback area would likely increase wildlife populations in the vicinity and improve wildlife-related recreational activities. Other recreational opportunities, such as hiking and jogging, are expected to be available on the new levee in project Segment 2 and on the current levee in Segments 1 and 3 to the extent that these opportunities are available on the existing levee. No substantial changes in recreational opportunities would be associated with removal of the existing levee in Segment 2. This impact would be less than significant.

Alternative 3 – The Levee Strengthening and Intermediate Setback Levee Alternative

Impact
IS-5.6-a

Temporary Changes in Recreational Opportunities during Levee Repairs and Setback Levee Construction. Construction noise could disrupt recreational uses in the project area, particularly in areas adjacent to the existing levee. Some wildlife species present in or inhabiting natural areas are likely to be disturbed by noise and by the presence of project construction crews and equipment. Portions of the Feather River State Wildlife Area in project Segment 1 may need to be closed temporarily to hunting and other recreational activities for safety reasons while adjacent sections of the existing Feather River levee are being repaired. There would be no public access to the Star Bend Boat Launch and Fishing Access for several days while levee repairs were conducted in this area. Although these temporary disturbances may affect the recreation experience for bird-watchers, hunters, boaters, and other recreational users, displaced recreational uses could be accommodated by other nearby facilities (Whitmore, pers. comm., 2006). For this reason, and because of the temporary nature of this effect, this impact would be **less than significant**.

This impact would be the same as Impact ASB-5.6-a, described under Alternative 2 above. Although portions of the intermediate setback levee alignment are located to the west of the ASB setback levee alignment, the potential short-term effects on recreational opportunities during construction would be the same for the two alternatives.

As described in Impact ASB-5.6-a under Alternative 2 above, any disruption of recreational opportunities resulting from construction disturbance near the project area would be short term and temporary. For most recreational activities, individuals diverted from using locations near the construction area could be accommodated by other existing facilities in the area. Disturbance of recreational opportunities near the project area would not substantially restrict or reduce the availability or quality of existing recreational opportunities in the project vicinity and would not cause a substantial long-term disruption of institutionally recognized recreational activities. Therefore, this impact would be less than significant.

Impact
IS-5.6-b

Long-Term Changes in Recreational Opportunities Resulting from Levee Repairs and Setback Levee Construction. Implementing levee repairs along project Segments 1 and 3 would have little or no effect on recreational uses in the Lake of the Woods Management Unit or along the Feather River channel in these project segments. Implementing the levee setback in Segment 2 would slightly modify Feather River flood stage elevations in the project vicinity during high flows, possibly affecting recreational uses, and could affect survival rates of wildlife following high-flow periods, which could temporarily affect associated wildlife-related recreation. The changes in Feather River flood stage elevations that would result from expansion of the Feather River floodway in Segment 2, however, would be infrequent, of short duration, and during periods when river stage is already high; therefore, no new effects on recreational uses are expected. Sections of the existing Feather River levee would be left in place as part of the proposed project, which would minimize losses of wildlife that could adversely affect long-term recreational activities. This impact would be **less than significant**.

This impact would be the same as Impact ASB-5.6-b, described under Alternative 2 above. Long-term changes in recreational opportunities in project Segments 1 and 3 would be exactly the same as described previously, resulting in less-than-significant effects. Some aspects of flood operations with implementation of the levee setback in Segment 2 have the potential to adversely affect recreational opportunities; these include changes in Feather River flood stage elevations and effects on the survival of wildlife that take refuge on the existing Feather River levee during high river flows. The change in river stage that would result from expansion of the floodway, however, would be infrequent, of short duration, and during periods when river stage is already high, and no new effects on recreational uses are expected. Under Alternative 3, much of the existing Feather River levee along the setback levee alignment in Segment 2 would be removed to allow water to flow into the setback area during high river stage. However, portions of the existing levee would be retained in Segment 2 after the setback levee is complete. The levee sections that would remain in place are expected to provide sufficient high ground to prevent substantial losses of wildlife that could adversely affect long-term recreational activities. In addition, any habitat restoration or creation that may occur in the levee setback area would likely increase wildlife populations in the vicinity and improve wildlife-related recreational activities. Other recreational opportunities, such as hiking and jogging, are expected to be available on the new levee in project Segment 2 and on the current levee in Segments 1 and 3 to the extent that these opportunities are available on the existing levee. No substantial changes in recreational opportunities would be associated with removal of the existing levee in Segment 2. This impact would be less than significant.

5.6.4 MITIGATION MEASURES

ALTERNATIVE 1 – THE LEVEE STRENGTHENING ALTERNATIVE

No mitigation is required for Impact LS-5.6-a or Impact LS-5.6-b.

ALTERNATIVE 2 – THE LEVEE STRENGTHENING AND ASB SETBACK LEVEE ALTERNATIVE

No mitigation is required for Impact ASB-5.6-a or Impact ASB-5.6-b.

**ALTERNATIVE 3 – THE LEVEE STRENGTHENING AND INTERMEDIATE SETBACK LEVEE
ALTERNATIVE**

No mitigation is required for Impact IS-5.6-a or Impact IS-5.6-b.

5.6.5 EFFECTS REMAINING SIGNIFICANT AFTER MITIGATION

All impacts of the three proposed project alternatives on recreation would be less than significant.