

Final Environmental Assessment and Finding of No Significant Impact (FONSI)

Geologic Drilling & Aggregate Sampling Program, Upper
San Joaquin River Basin Storage Investigation, Fresno and
Madera Counties, California

EA/FONSI-06-54



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region

July 2006

FINDING OF NO SIGNIFICANT IMPACT
FOR THE GEOLOGIC DRILLING & AGGREGATE SAMPLING PROGRAM,
UPPER SAN JOAQUIN RIVER BASIN STORAGE INVESTIGATION, FRESNO
AND MADERA COUNTIES, CALIFORNIA

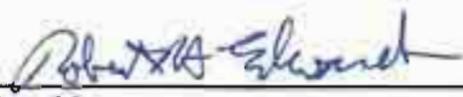
Recommended:

 7/10/2006
Natural Resources Specialist Date
South-Central California Area Office

Concur:

 7/10/06
Chief, Resources Management Division Date
South-Central California Area Office

Approved:

 7/11/06
Area Manager Date
For South-Central California Area Office

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
FINDING OF NO SIGNIFICANT IMPACT

**GEOLOGIC DRILLING & AGGREGATE SAMPLING PROGRAM, UPPER SAN
JOAQUIN RIVER BASIN STORAGE INVESTIGATION, FRESNO AND
MADERA COUNTIES, CALIFORNIA**

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the South-Central California Area Office of the U.S. Bureau of Reclamation (Reclamation), has determined that the proposed geologic drilling and aggregate sampling program at two potential dam sites on the Upper San Joaquin River is not a major Federal action significantly affecting the quality of the human environment; therefore an environmental impact statement is not required. This Finding of No Significant Impact is supported by Reclamation's Draft Environmental Assessment (EA) Number EA-06-54, *Geologic Drilling & Aggregate Sampling Program, Upper San Joaquin River Basin Storage Investigation, Fresno and Madera Counties, California* and is hereby incorporated by reference.

Background

Reclamation is proposing to conduct feasibility-level geologic drilling and aggregate sampling investigations (program) at two potential dam sites on the Upper San Joaquin River. The program would be conducted as part of the Upper San Joaquin River Basin Storage Investigation Project (USJRBSI), which is investigating the feasibility of implementing various alternatives to provide additional water storage capacity for the San Joaquin River watershed. The two potential dam sites are located upstream of Friant Dam on Millerton Lake about 25 miles northeast of Fresno, California, and are referred to by river mile (RM) as RM 274 and RM 279.

Findings

1. Geology & Soils – Minor disturbances to soils and geologic features would occur including 16 drill holes, up to 25 cubic yards of granite removed from the area and some minor trail improvements. These impacts are considered minor due to the small scale of impact and temporary nature of the project actions therefore the proposed action would not result in any significant impacts to geology or soils.
2. Water Quality – Increased levels of suspended sediments and elevated turbidity could occur in the vicinity of water-based drilling operations but due to the small area of impact and temporary nature of the activity the impacts would be minimal. Reclamation received a Water Quality Certification from the Central Valley Regional Water Quality Control Board for the activities that would be carried out under the proposed action that could impact water quality. Therefore, there would be no significant affect as a result of the proposed action.

3. Air Quality - Impacts to air quality resulting from the use of equipment would be below established *de minimus* thresholds, localized and short term in nature. Therefore, there would be no significant effect to air quality.

4. Aquatic Resources - Minor impacts to aquatic habitat would occur as a result of temporary water quality impacts. Use of the barge and boats to access the work areas would cause disturbances similar to recreational boating that takes place within Millerton Lake. A Spill Prevention and Countermeasure Plan has been developed to minimize the risk of a spill and lay out a contingency plan in case of equipment leaks. The proposed action includes work in a Water of the United States and would be completed in compliance with the requirements of a non-reporting U.S. Army Corps of Engineers Nationwide Permit #6 under Section 404. Therefore, the proposed action would not result in any significant impacts to aquatic resources.

5. Biological Resources including Threatened and Endangered Species - Some wildlife may be disturbed by or could temporarily move to avoid work areas. Impacts associated with the work would be similar to boat traffic which is common within the lake and other human disturbance associated with use of the recreation area. Equipment noise and the presence of people in the area could cause eagles to avoid the immediate areas where work is being performed. Avoidance measures would be implemented to prevent disturbance of valley elderberry plants and associated valley elderberry longhorn beetles that could be present on the plants. The U.S. Fish and Wildlife Service concurred with Reclamation's determination that the proposed action may affect but is not likely to adversely affect the bald eagle. The loss of a single grey pine is considered minimal since the grey pine is common and abundant in the area. Therefore, there would be no significant effect to biological resources.

6. Recreation – Temporary displacement impacts to recreational boaters, fishermen and hikers would occur from a trail closure expected to last two weeks and from the presence of the barge and drilling operations. These impacts would not be significant since the areas that would be impacted are small, the impacts are temporary and given existence of other recreational areas for boating and hiking exist in the area.

7. Noise - Some homes could be affected by the short duration fly over that are anticipated. Noise from the helicopter, drilling, blasting associated with the aggregate sampling and other associated work would temporarily drive wildlife to other areas. These impacts would be temporary and occur during daytime hours only therefore no significant impacts to noise would occur.

8. Cultural Resources - No historic properties or cultural resources were identified during a survey conducted for Reclamation of the area therefore no impacts to cultural resources would occur. Reclamation received concurrence from the State Historic Preservation Office that no historic properties will be affected by the drilling activities. No work will take place at the staging area nor will any blasting activities take place prior to the conclusion of the Section 106 process for these areas.

9. Indian Trust Assets - There are no tribes possessing legal property interests held in trust by the United States in the areas involved with this action, therefore Indian trust assets are not affected by this action.

10. Environmental Justice – No human health impacts would occur. The work proposed would take place on existing federal lands that are for the most part managed for recreational uses. The temporary impacts expected to occur would not disproportionately affect any minority or disadvantaged populations within the project area therefore no environmental justice related impacts would occur.

11. Socio-economic Resources - Carrying out the program would create an increase in the amount work and jobs in the immediate area which could have a slight positive impact on the local economy. No other socio-economic impacts would occur therefore no significant impact to socio-economic resources would occur.

12. Cumulative Effects – All impacts associated with the proposed action are minor, short-term, and temporary in nature leaving no lasting effects, therefore there are no cumulative impacts associated with this project.

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SECTION 1 PURPOSE AND NEED FOR ACTION

1.1 PURPOSE OF THE PROPOSED ACTION

The U.S. Bureau of Reclamation (Reclamation) is proposing to conduct feasibility-level geologic drilling and aggregate sampling investigations (program) at two potential dam sites on the Upper San Joaquin River. The investigations would be conducted as part of the Upper San Joaquin River Basin Storage Investigation Project (USJRBSI), which is investigating the feasibility of implementing various alternatives to provide additional water storage capacity for the San Joaquin River watershed. The two potential sites are located upstream of Friant Dam on Millerton Lake about 25 miles northeast of Fresno, California, and are referred to by river mile (RM) as RM 274 and RM 279.

1.2 NEED FOR THE PROPOSED ACTION

Completing the proposed geologic drilling and aggregate sampling investigations will provide Reclamation with geologic information necessary for more detailed cost estimates and will help determine what kind of dam would be best suited to these sites. This work is part of Reclamation's on-going USJRBSI feasibility study. The two locations selected for evaluation of coarse and fine aggregate are in the vicinity of 2 of the potential dam sites being evaluated in the USJRBSI study. The information gathered through the program will be used to further evaluate the feasibility of constructing a new dam and reservoir. A Feasibility Report and Environmental Impact Statement will be completed by Reclamation prior to any decision on whether to further pursue construction of a new dam.

RELATED EIS's, EA's and other Relevant Environmental Documents

The USJRBSI is one of five surface water storage studies recommended in the CALFED Bay-Delta Program Programmatic Environmental Impact Statement/Report Record of Decision of August 2000.

1.3 AUTHORITY

The USJRBSI is a joint feasibility study by the U.S. Department of the Interior, Bureau of Reclamation and the California Department of Water Resources (DWR). Investigation guidance derives from Federal feasibility study authorization provided in P.L. 108-7 (enacted February 2003) and the CALFED Programmatic Environmental Impact Statement/Report (EIS/R) Record of Decision.

SECTION 2 ALTERNATIVES

2.1 PROPOSED ACTION

The proposed action includes geologic drilling and aggregate sampling on the Upper San Joaquin River (USJR) in Millerton Lake (see Figure 1). The geologic drilling would occur at 8 locations at each of two potential dam sites located at RM 274 and RM 279. A total of 16 bore holes would be drilled on Reclamation land or within Millerton Lake. In addition to the geologic drilling, two aggregate sampling sites are located on the left abutment at RM 279 and on the left abutment at RM 274, each, near a prospective drill hole location.

Geologic Drilling

Drilling would occur between June and November of 2006. The drill sites are located approximately one and six river miles up-river from the entrance of Fine Gold Creek into Millerton Lake. Table 1 shows the approximate drilling locations, depths, county the drill hole is in, and indicates if the drilling would be land or water based.

Eight bore holes would be drilled at each dam site (See Figure 2). One hole would be drilled over land on each side of the river at each of the potential dam sites (total of four over-land drill holes). Six holes would be drilled over water and into bedrock, at each of the two potential dam sites (total of twelve over-water drillings). Drill holes would be 2.98 inches in diameter and would be 50, 100, or 200 feet in depth. Drill sites were selected to correspond to potential dam axis, abutments, diversion tunnels, and/or appurtenant works. The holes at over-land sites would be completed as observation wells at the ground surface, with concrete and flush-mounted locking caps.

| Drill Hole | Northing* | Easting* | Drill Depth in feet | County | Land or Water Based Drilling |
|-------------------|------------------|-----------------|----------------------------|---------------|-------------------------------------|
| DH-06-1 | 2263132 | 6374486 | 50 | Fresno | Water |
| DH-06-2 | 2261980 | 6376400 | 100 | Fresno | Water |
| DH-06-3 | 2261041 | 6376025 | 200 | Fresno | Land |
| DH-06-4 | 2261249 | 6377107 | 200 | Fresno | Water |
| DH-06-5 | 2261585 | 6377287 | 200 | Madera | Water |
| DH-06-6 | 2262244 | 6377432 | 200 | Madera | Land |
| DH-06-7 | 2260108 | 6378220 | 100 | Madera | Water |
| DH-06-8 | 2258647 | 6376524 | 50 | Fresno | Water |
| DH-06-9 | 2268969 | 6383850 | 50 | Fresno | Water |
| DH-06-10 | 2269319 | 6383432 | 100 | Madera | Water |
| DH-06-11 | 2269792 | 6383683 | 200 | Fresno | Water |
| DH-06-12 | 2269972 | 6383089 | 200 | Madera | Land |
| DH-06-13 | 2270105 | 6383382 | 200 | Madera | Water |
| DH-06-14 | 2270282 | 6383895 | 200 | Fresno | Land |
| DH-06-15 | 2270556 | 6383505 | 100 | Madera | Water |
| DH-06-16 | 2271415 | 6384159 | 50 | Fresno | Water |

* Northing and Easting data provided in California State Plan IV

Over-water drilling would be conducted with a drilling barge. The barge is a platform mounted on pontoons which supports a Longyear model 34 skid-mounted core drill. The barge, with platform, is approximately 15 feet by 20 feet in size and is self propelled. This drilling barge

Figure 1. Geologic Drilling & Aggregate Sampling Program
San Joaquin River/Millerton Lake
Fresno & Madera Counties
5/1/2006

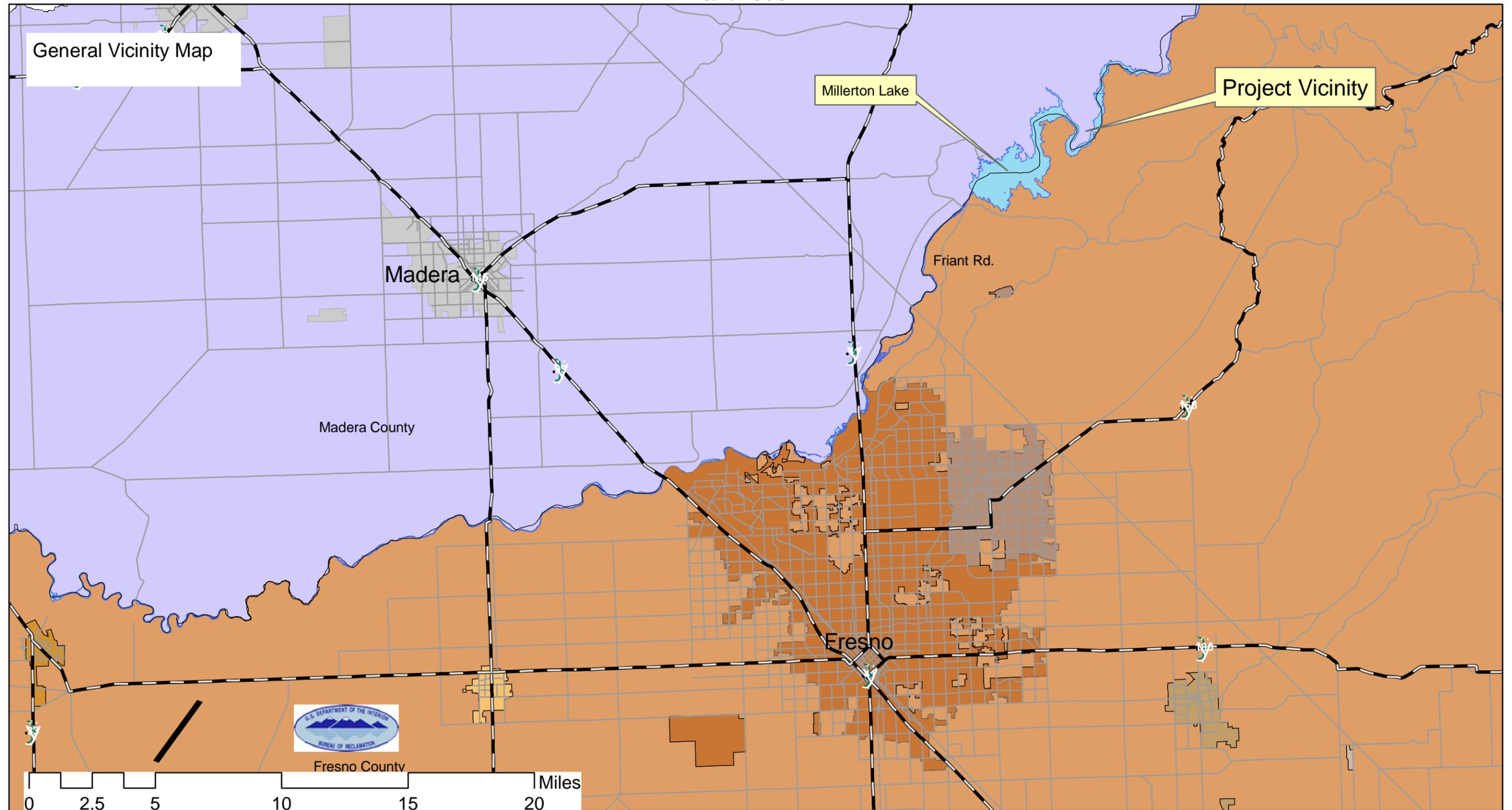
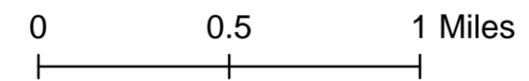
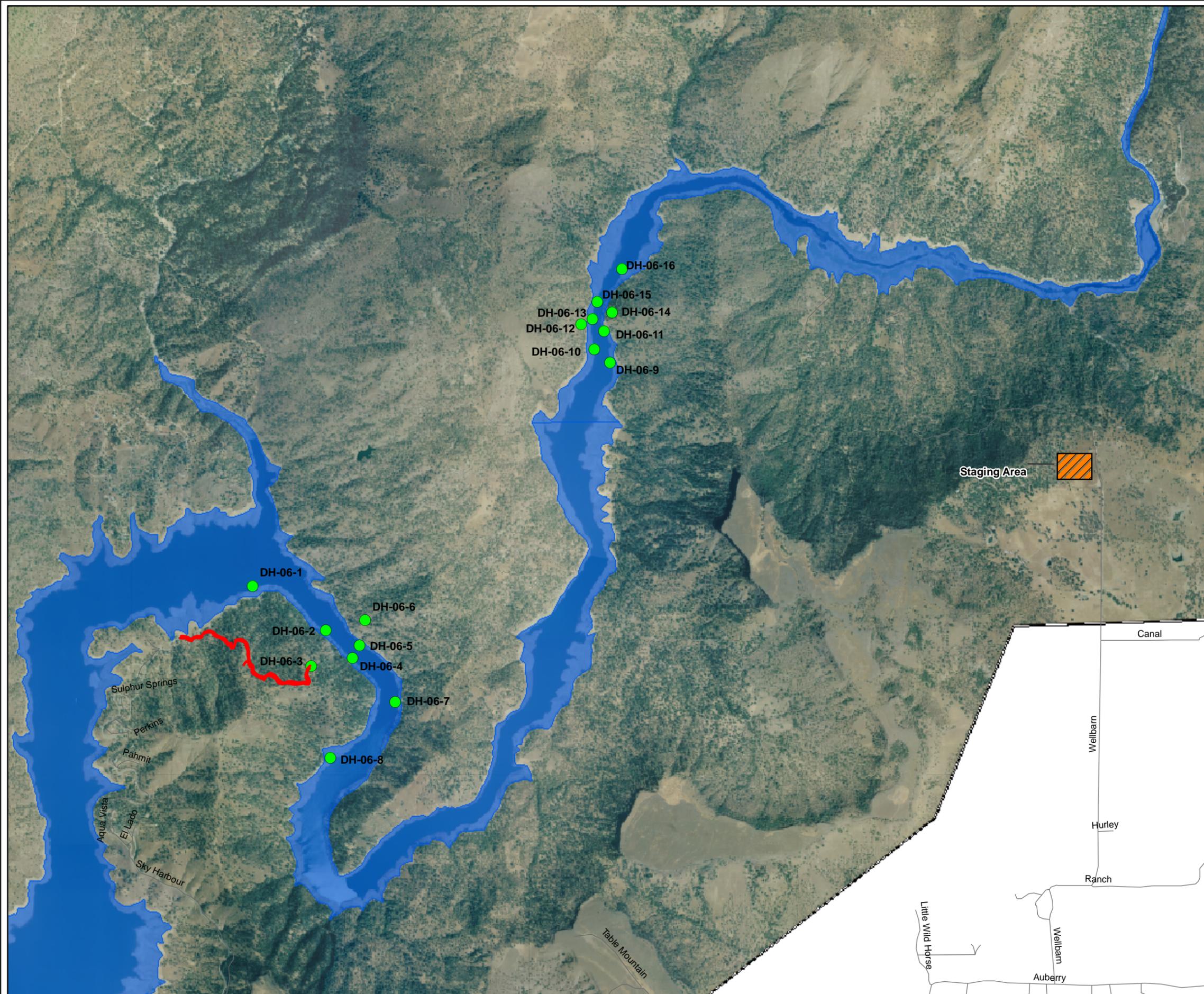


Figure 2.
Geologic Drilling &
Aggregate Sampling Program



Legend

- Drilling Sites
- Staging Area
- trail



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would motor to drilling sites in the lake, but may be assisted by a work boat. When in operation, the barge platform would be anchored at specific sites near the shoreline of the lake, and secured using a mooring system consisting of cables, deck winches and on-land and in-lake anchors. Marker buoys designating no wake zones, speed limits, and construction zones and restricted areas would be floated. Flagging and flashing lights would be deployed on the floating drilling platform and anchor cables to alert boaters operating in the vicinity.

The Over-water Equipment Includes:

- Diamond drill rig, power pack and control panel
- Stock tank and circulating pump
- Drill rods, core barrels, diamond bits and tools
- Water supply pump and 1 ½ inch PVC water line
- Safety/warning lights and buoys
- Anchoring equipment, ropes and cables

Water needed for the drilling operation would be pumped from Millerton Lake to a stock tank on the barge. Drill water would be re-circulated in the stock tank with very minor amounts of water returned to the lake. Drill cuttings would be shoveled/removed from the stock tank and hauled out along with sediment-filled filter socks via boat for disposal. Rock core would be boxed and transported to the staging area by boat. Drill cuttings of mostly sand would be filtered from the drilling water and hauled out by boat for disposal. The volume of cores would be approximately ½, ¼ and ⅛ of a cubic yard for drilling holes 200, 100 and 50 feet deep, respectively.

All over-water drilling sites are accessible only by water. Equipment will be barged both to and from the sites from a non-public dock at the Millerton Lake State Recreation Area (SRA) South Shore Area, use of which is being provided by State of California Department of Parks and Recreation (CDPR). Daily access to the barge site will be by boat from the South Shore State Recreation Area at Millerton Lake.

Over-land drilling would be conducted with equipment similar to that identified above for over-water drilling, other than the barge platform. The drill would use either an Atlas Copco CS100 P4 skid-mounted drill rig or a Longyear model 28 skid rig. Rock core would be boxed and transported from the drill site to the staging area by helicopter or all-terrain vehicle (ATV). Drill cuttings consisting mostly of fine and medium sand would be filtered from the drilling water and spread on the ground surface. Minimal hand excavation is planned at each site for the purpose of leveling the drill rig. Most leveling would be accomplished with leveling legs attached to the rig and with timber blocking. Upon completion of each hole, the drill pad excavation would be backfilled with excavated material and returned to its natural slope.

Daily access to over-land sites at RM 279 and on the north side of the lake at RM 274 would be by boat from Millerton Lake Marina to a foot path leading to the drill sites. The boat would shuttle personnel, hand tools and provide support to the barge-drilling operations. Because the over-land sites are remote and not accessible by road, most drilling equipment would be hauled by truck to a flat staging area and then airlifted by helicopter on a static line to the drill sites. The helicopter would hover over the drill site while equipment is disconnected from the static line.

The drill site on the south side of Millerton Lake at RM 274 is accessible by the existing San Joaquin River Gorge Trail (SJRGT), which begins at the Fine Gold Day Use Area (FDUA) (See Figure 2). Distance to the drill site is approximately one mile and daily transportation of personnel, hand tools and fuel to the site would be accomplished with the use of an ATV. To allow ATV use of the SJRGT some improvement to the trail would have to be made between the trailhead at the FDUA and the drill site, a distance of approximately 1 mile. Temporary widening of the existing SJRGT at selected locations would be necessary to accommodate ATV travel, and would require the use of a track-hoe excavator or other specialty trail improvement equipment. All trail improvements would be limited to the existing trail footprint and are considered trail maintenance.

Aggregate Sampling

Aggregate sampling will be done at one site at RM 274 and one site at RM 279. The exact location of the sampling sites will be determined in the field prior to the work being done based on field conditions and rock suitability. The water level fluctuations of reservoir makes picking exact locations impractical since higher or lower water levels could inundate the selected locations. The general vicinities for the sites will be between the high and low waterline on the shore near DH-06-8 at the RM 274 site and near DH-06-16 at the RM 279 site (see Figure 2). The sampling will entail the collection of material for laboratory testing. One of the three following methods will be used to free rock for collection a) a single shot (possibly with delays) will create a localized blast that will separate the material from exposed rock surface b) use of expansive grout to fracture the exposed rock surface or c) using mechanical devices to hydraulically fracture the exposed rock surface. At each of the sites small scale drilling would be undertaken. Several small diameter holes (approximately 3-inch diameter) will be drilled vertically through the rock walls at a distance approximately seven feet back from the wall face. Drilling will be performed with a rotary drill (similar to a jack-hammer) and compressor staged from a barge floating on Millerton Lake. If blasting is used to complete the work holes will be loaded with explosive material and detonators. The material dislodged by the blasting will be gathered and hauled out of the reservoir via the barge. No material dislodged will be allowed to fall into the water or be left at the site. If expansive grout is used all of the grout material will be removed from the site with the dislodged rock. In all cases any remaining loose rock will be pried from the wall resulting in semi-smooth rock similar to naturally occurring rock exposures.

A total of no more than 25 cubic yards (CY) of material would be removed (about 12 CY per site). The material would be removed during weekdays (weekend operation would not be permitted). Mobilization, haul, and demobilization would be via barge. The material collected would be transferred to Reclamation at the LaPlaya Use Area. A portion of that material collected would be sent to Reclamation's Materials Engineering and Research Laboratory in Denver, Colorado for material quality and crusher testing the remainder of the material would be collected for disposal near the dam and the Friant-Kern Canal at an existing storage area.

If blasting is choose as the preferred method then a procedure for noise abatement, dust control, fly rock protection, and safety would be developed as needed. The air blast pressure would be measured at a distance of 200 feet at both sites to document the intensity of the blasts. The blast size would be the smallest possible to allow for material removal, and would be confined to the wall face. Dust and debris would be limited by the use of sand bags, blasting mats, rock fences, and other protective measures. Dust clouds would not be generated from the blasting operation although some smoke would be produced from the explosives and some cloudiness produced

from the rock fall. Sounds produced from the blast would consist of a popping sound as the detonators ignite and a 'bang', similar to a car backfiring, when the charge detonates. Overpressures would not be generated. Blast mats would be placed over area to be blasted to prevent fly-rock. A safety zone would be created prior to blast by blasting personnel.

Spill prevention control and countermeasure plans and a spill hazard analysis for both over-water and over-land drilling have been drafted and would be implemented. A Fire Prevention and Suppression Plan for land-based drill sites has been drafted as well and would be implemented.

2.2 NO ACTION

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake about at RM 274 and RM 279 of the San Joaquin River. Information needed to complete the USJRBSI study which includes evaluating the feasibility of construction of a dam at the two sites could not be completed.

2.3 REASONABLE ALTERNATIVES

Other alternatives considered for gathering the necessary information for the USJRBSI study were similar to the proposed action but larger in scope with potentially greater environmental impacts. The proposed action was developed by modifying the original plan for implementing the program to minimize environmental impacts.

and deep depth to bedrock. Two upland soil groups, shallow depth and deep depth, are found in this geographic region and typically developed on igneous rocks.

3.2 WATER QUALITY

Water quality in the San Joaquin River varies considerably along the river's length. Above Millerton Lake water quality is generally excellent. The upper reaches of the San Joaquin River originate in large drainage areas high on the west side of the Sierra Nevada. The water is generally soft with low mineral concentrations. Water is nutrient- and mineral- poor due to the insolubility of the granite substrate.

3.3 AIR QUALITY

Air quality in the San Joaquin Valley Air Basin (SJVAB) is regulated by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD), which consists of Merced, Madera, Fresno, Kern, Kings, San Joaquin, Stanislaus, and Tulare counties. The entire SJVAB is designated nonattainment with respect to the National and State ozone (O₃) and particulate matter 10 microns in aerometric diameter or less (PM₁₀) standards, and the urban areas of Fresno, Modesto, and Stockton are nonattainment for the National and State carbon monoxide (CO) standards (California Air Resources Board, 1996).

3.4 AQUATIC RESOURCES

Millerton Lake becomes thermally stratified during summer months and therefore supports a two-stage fishery with coldwater species residing in deep water and warmwater species inhabiting surface waters and areas near shore. Of the large number of fish species that inhabit Millerton Lake, most are introduced game species or forage species (United States Fish and Wildlife Service, 1983). The principal warmwater game species are largemouth bass (*Micropterus salmoides*), smallmouth bass (*M. dolomieu*), spotted bass (*M. punctulatus*), bluegill sunfish (*Lepomis macrochirus*), and striped bass (*Morone saxatilis*); the principal forage species is threadfin shad (*Dorosoma pretense*). Coldwater game species include rainbow trout (*Oncorhynchus mykiss*) and brown trout (*Salmo trutta*).

The only known landlocked population of American shad (*Alosa sapidissima*) is present in Millerton Lake. American shad spawn in the San Joaquin River upstream of Millerton Lake and in the portion of the reservoir upstream of Temperance Flat, which is the most riverine portion of the reservoir with turbulent flows (Pacific Gas & Electric, 1990). Several native species also reside in Millerton Lake, including Sacramento sucker (*Catostomus occidentalis*), Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento blackfish (*Orthodon microlepidotus*), hitch (*Lavinia exilicauda*), and hardhead (*Mylopharodon conocephalus*).

Temperance Flat, in upper Millerton Lake, has a gently sloping shoreline, shallow water, and well-developed shoreline vegetation. It is likely that this area provides good spawning and nursery habitat for important game fish species such as largemouth bass and spotted bass.

3.5 BIOLOGICAL RESOURCES INCLUDING THREATENED & ENDANGERED SPECIES

Millerton Lake hosts a diverse wildlife community, both resident and seasonal. The upper San Joaquin River area is a relatively rich wildlife region of the Sierra foothills. Forest canopy varies considerably by slope and aspect, while the shrub and ground cover layer is greatly affected by land uses such as cattle grazing. Wildlife in the higher elevation portions of the watershed is typical of the mid-elevation Sierra Nevada.

Important deer winter ranges and bear habitat exist in the Temperance Flat area. San Joaquin mule deer (*Odocoileus hemionus*) are year-round residents of the area and mix with migratory herds from higher elevations (United States Forest Service, 2004). Generally, migratory deer move from summer range, elevation 5,000 to 8,000, to lower elevations around mid-October, or later with any significant winter storm (California Department of Fish and Game, 2004). Four major river crossings used by mule deer during migration in the Mammoth reach of the San Joaquin River include near Chawanakee at Dam 6, below the confluence of Rock Creek and the river, the confluence of Shake Flat Creek and the river, and the Mammoth Pool area. Additionally, mule deer cross the San Joaquin River at the confluence of Jackass Creek (Southern California Edison Company, 2003). Avian guilds comprise a number of bird species for oak woodland, and riparian habitats occur throughout the area (United States Forest Service, 2004).

Threatened, Endangered, and Protected Species

This action area lies within the Millerton West, Millerton East and Friant quadrangles. A species list for these quadrangles and the adjacent Academy Quadrangle was obtained from http://sacramento.fws.gov/es/spp_list.htm on April 4, 2006 (document number 060404051114). Eleven federally listed species under the jurisdiction of U.S. Fish and Wildlife Service (USFWS) were identified. One species under the jurisdiction of the Nation Marine Fisheries Service (NMFS) was identified - Central Valley Steelhead (*Onchorhynchus mykiss*). To this list, records of federally listed species from the California Natural Diversity Database (CNDDDB) (California Department of Fish and Game, 2005) that were recorded within 5 miles of drill site and trail locations were added. Two other species were added, including Hartweg's golden sunburst (*Pseudobahia bahiafolia*), which is known from the vicinity south and west of the South Shore area, and the peregrine falcon (*Falco peregrinus*) which range widely and occur in the San Joaquin River drainage (Table 2).

Baseline for Critical Habitat and Listed Species

"Critical habitat" is defined in section 3(5)(A) of the Federal Endangered Species Act and includes:

- Areas within a listed species' current (at time of listing) range that contain the physical or biological features that are essential to that species' conservation or that for some reason require special management; and
- Areas outside the species' current range that the secretary determines to be essential to its conservation.

Primary constituent elements (PCEs) are those physical and biological features of designated or proposed critical habitat essential to the conservation of the species, including, but not limited to: (1) space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and (5) habitats that are protected from disturbance or are representative of the historic geographic and ecological distributions of a species (ESA §3(5)(A)(i), 50 CFR §424.12(b)).

Table 2. Federally protected species¹ and critical habitat under the jurisdiction of USFWS or NMFS that were identified for Millerton West, Millerton East, Friant and Academy quadrangles, with additional species added from the CNDDDB and knowledge of local distributions.

| Common Name | Scientific Name | Status - Federal | Status - State | Critical Habitat in Action Area |
|-----------------------------------|--|------------------|----------------|---------------------------------|
| Bald eagle | <i>Haliaeetus leucocephalus</i> | FT | SE | No |
| Blunt-nosed leopard lizard | <i>Gambelia (=Crotaphytus) sila</i> | FE | SE | No |
| California red-legged frog | <i>Rana aurora draytonii</i> | FT | -- | No |
| California tiger salamander | <i>Ambystoma californiense</i> | FT | -- | No |
| Central Valley Steelhead | <i>Onchorhynchus mykiss</i> | FT | -- | No |
| Conservancy fairy shrimp | <i>Branchinecta conservatio</i> | FE | -- | No |
| Delta smelt | <i>Hypomesus transpacificus</i> | FT | ST | No |
| Fresno kangaroo rat | <i>Dipodomys nitratooides exilis</i> | FE | SE | No |
| Giant garter snake | <i>Thamnophis gigas</i> | FT | -- | No |
| Golden eagle | <i>Aquila chrysaetos</i> | -- | -- | No |
| Hartweg's golden sunburst | <i>Pseudobahia bahiifolia</i> | FE | SE | No |
| Peregrine falcon | <i>Falco peregrinus</i> | FD | SE | No |
| San Joaquin kit fox | <i>Vulpes macrotis mutica</i> | FE | ST | No |
| San Joaquin Valley orcutt grass | <i>Orcuttia inaequalis</i> | FT | SE | No |
| Succulent owl's-clover | <i>Castilleja campestris ssp. succulenta</i> | FT | SE | No |
| Valley elderberry longhorn beetle | <i>Desmocerus californicus dimorphus</i> | FT | -- | No |
| Vernal pool fairy shrimp | <i>Branchinecta lynchi</i> | FT | -- | No |
| Vernal pool tadpole shrimp | <i>Lepidurus packardii</i> | FT | -- | No |

¹ Protected under the Endangered Species Act; Bald and Golden Eagle Protection Act; Migratory Bird Treaty Act

² Includes its host plant, *Sambuccus mexicana*.

There is no critical habitat in the action area for species under the jurisdiction of USFWS. The nearest critical habitat is for California tiger salamander (CTS), and for vernal pool associated species. The critical habitat for these species would not be affected, as the action area does not overlap these locations and all activity would take place down-slope of the critical habitat. Aerial conveyance of materials would not cross critical habitat.

Species Not Expected to Occur in Action Area

All but four species identified in Table 2 would not be expected to occur in the action area. Blunt-nosed leopard lizards (BNLL) prefer alkali sink scrub or open grassland habitats. They could be found on the valley floor, but would not be expected to occur in the action area, that includes foothill woodland habitat with an associated steeply graded understory of annual grassland and lake habitats. Fresno kangaroo rats have not been observed since the early 1990's, even though searches of designated critical habitat at presumed preferred habitat have been made (P. Kelly, pers. Comm.). This species also prefers alkali scrub sink or annual grassland with sparsely covered habitat (USFWS 1994). The nearest existing suitable habitat for BNLL and FKR is several miles away.

There are several vernal pool affiliated species, including CTS, conservancy fairy shrimp, San Joaquin Valley orcutt grass, succulent owl's clover, vernal pool fairy shrimp and vernal pool tadpole shrimp. There is no vernal pool habitat in the action area. Although CTS can occur in upland areas in oak savannah and grassland habitat up to a mile away from wetland breeding sites, which can include vernal pools, ephemeral streams and stock ponds that lack predatory fish, these habitats are mostly too far from the action area to be of concern. An exception is the unit 2 of critical habitat for CTS in Fresno County, south of the Millerton Lake Marina which is within travel distance of dispersing CTS. However, the project work activity would occur at the lakeshore and in developed areas that would not support CTS. Additionally, most activity would occur during the summer and early fall, outside of periods when CTS would be expected to occur above ground.

Hartweg's golden sunburst is known from areas south and west of the South Shore area in the low foothills, but this plant is localized in its distribution, being primarily found on the western facing slope of pure stands of annual grassland south and west of the action area. It would not be found in the higher elevation areas with foothill woodland and its associated understory of annual grassland.

There are no records for California red-legged frog in the action area and the closest record is from 1950, from about 60 miles away (CNDDDB 2005). Lake Millerton does not provide suitable habitat for this species and the small ephemeral seeps and streams have rocky substrates that are not likely to harbor this species.

Delta smelt are found in the Sacramento-San Joaquin Delta and in lower reaches of the Sacramento and San Joaquin Rivers. The San Joaquin River connects the project to this area. However, because the project related activities will occur at such a great distance from areas inhabited by Delta smelt and from its critical habitat, this species and its habitat will not be affected by the proposed project.

Mendota Dam and Friant Dam on the San Joaquin River downstream of the project area prevent Central Valley Steelhead from reaching the project area from the Pacific Ocean and the Sacramento-San Joaquin Delta therefore this species will not be affected by the proposed project.

Giant garter snakes are found in slow moving streams, ponds, canals, marshes and rice-fields in the Central Valley, at lower elevation than the proposed project. The closest population to the action area is known from Mendota Pool, approximately 25 miles west of the project area (CNDDDB 2005). They would not be found in habitats in the project area.

San Joaquin kit fox (SJKF) historically occurred in several native plant communities in the San Joaquin Valley (USFWS 1998). Dens appear to be scarce in areas of shallow soil because of the proximity of bedrock (O'Farrell and Gilbertson 1979 *in* USFWS 1998). The closest record for

SJKF to the action area is just west of the town of Friant (CNDDDB 2005) in flat and rolling grassland habitat. The nearest project activities will occur several miles from this site at Millerton Lake State Recreation Area South Shore Area, and further away in relatively steep and rocky areas dominated by foothill woodland vegetation and populated by coyotes. Although SJKF occupy areas populated by coyotes (*Canis latrans*), the steep rocky woodland areas of the project site, which are inhabited by coyotes are an environment unlikely to support SJKF and would be unaffected by the proposed project.

Species Expected to Occur in Action Area

The bald eagle is known to occur in the action area. Bald eagles are known to frequent Lake Millerton, particularly in the wintertime, when maximal counts of eagles are recorded. Arrival of eagles may occur in early October. Telemetry studies of banded eagles revealed that the lakes population breeds on the Great Slave Lake area of Canada, Northwest Territories. These features are essential for conservation because without them juveniles cannot forage and grow to adulthood.

Golden eagles are known to nest in an area approximately 2 miles away from the staging area or about 3.5 miles from the RM279 work site.

Peregrine falcons are a large, wide ranging falcon found in open country along lakes or river systems and canyons or gorges and are known to occur in the San Joaquin River drainage could occur in the project area. They have been de-listed from federal threatened status (USFWS 1999) but are protected under the Migratory Bird Treaty Act of July 3, 1918 (16 U.S.C. § 703 et seq.). Breeding occurs from early March through late August, with peak from early May to late June (Verner and Boss 1980).

Valley elderberry plants, which serve as habitat for the valley elderberry longhorn beetle, have been identified in the vicinity of work areas. The presence of valley elderberry plants indicated that valley elderberry longhorn beetles may be present.

Vegetation

Vegetation around Millerton Lake is mostly foothill woodland and grassland habitat, and riparian vegetation along the shoreline. Adjacent hillsides are foothill pine (*Pinus sabiniana*) - blue oak (*Quercus douglasii*) woodland with abundant grass/forb and shrub understory. Open grassland and savanna type habitat conditions also exist in some areas. Vernal pools and associated special status plant and animal species do not occur along this stretch of the San Joaquin River. Several large basalt tables known to have vernal pools surround the canyon, well above elevation 1,600. Upland vegetation is dominated by foothill woodland with areas of open grassland and rock outcroppings. The predominant vegetation includes foothill pine, blue oak, and interior live oak (*Q. wislizeni*).

3.6 RECREATION

Millerton Lake is a major low-elevation recreation destination in the region, providing a variety of recreation opportunities, including fishing, swimming, boating, and water skiing. Several developed recreation facilities associated with the Millerton Lake SRA are present along the reservoir margins, including boat launching areas, developed campgrounds and day use areas, and recreation residences. The primary launching area is located on the south side of the reservoir near Friant Dam. This launch area is accessible by paved road and includes large paved parking areas and several boat ramps. Smaller, less heavily used boat launches are located elsewhere on the lake. Paved and unpaved roads provide access to the lake's shoreline. The area upstream of Big Bend, beginning at about RM 274.5, is relatively remote and accessible only by

boat or unpaved roads. Dispersed use occurs along the entire shoreline and along the San Joaquin River upstream from Millerton Lake. The San Joaquin River Trail traverses the southern portion of Millerton Lake to Temperance Flat. The Temperance Flat area is relatively undeveloped and is accessible only by boat or a few mostly unpaved roads.

The SJRGT connects the FDUA picnic area in the SRA to the BLM primitive campground off Smalley Road, crosses a footbridge, and climbs the terrain north of the river.

3.7 NOISE

Noise at Millerton Lake is generally affected by the presence of boats and personal watercraft and vehicular traffic in areas with paved roadways.

3.8 CULTURAL RESOURCES

Cultural resources is a term used to describe both archaeological sites and the “built environment” such as dams, roadways, and buildings. The National Historic Preservation Act (NHPA) and other Federal laws and regulations protect and promote scientific study of cultural resources, specifically historic properties. Historic properties are any prehistoric or historic district, site, building, structure, or object which meet certain criteria outlined in the NHPA eligible for inclusion in the National Register of Historic Places. Examples are archaeological sites such as lithic scatters; bedrock mortars; or camp sites, and historic sites such as homesteads; irrigation canals and structures; and bridges.

Section 106 of the NHPA requires Federal agencies to: 1) consider the affects of an undertaking on historic properties, and 2) consult with the State Historic Preservation Office, tribes, interested parties, and the public regarding these affects. Before conducting Section 106, the Area of Potential Effects (APE) must first be identified. Reclamation has determined the APE includes lands located at RM 274 and RM 279 that will be impacted by test drilling and test blasting, including staging areas and ATV access trails.

A cultural resource survey of the APE was conducted by Far Western Anthropological Research Group (Far Western), Inc. and documented in a March 17, 2006 letter report to Reclamation. The survey was conducted to evaluate the affects the preferred alternative would have on potential historic properties pursuant to Section 106 of the NHPA (16 U.S.C. 470f). No historic properties were identified during the survey conducted by Far Western.

3.9 INDIAN TRUST ASSETS

Indian trust assets (ITAs) are legal interests in assets that are held in trust by the U.S. Government for federally recognized Indian tribes or individuals. The trust relationship usually stems from a treaty, executive order, or act of Congress. The Secretary of the Interior is the trustee for the United States on behalf of federally recognized Indian tribes. “Assets” are anything owned that holds monetary value. “Legal interests” means there is a property interest for which there is a legal remedy, such a compensation or injunction, if there is improper interference. Assets can be real property, physical assets, or intangible property rights, such as a lease, or right to use something. Indian trust assets can not be sold, leased or otherwise alienated without United States’ approval. Trust assets may include lands, minerals, and natural resources, as well as hunting, fishing, and water rights. Indian reservations, rancherias, and public domain allotments are examples of lands that are often considered trust assets. In some cases, Indian trust assets may be located off trust land.

Reclamation shares the Indian trust responsibility with all other agencies of the Executive Branch to protect and maintain Indian Trust assets reserved by Indian tribes, or individual Indians by treaty, statute, or Executive Order.

The nearest Indian trust assets are located on the trust lands of the Table Mountain Rancheria about 2.5 miles south of DH-06-3.

3.10 ENVIRONMENTAL JUSTICE

The February 11, 1994, Executive Order requires federal agencies to ensure that their actions do not disproportionately impact minority and disadvantaged populations.

3.11 SOCIO-ECONOMIC RESOURCES

California's population is estimated to increase from about 34 million in 2000 to about 48 million by 2030. The population of the San Joaquin Valley is expected to increase from approximately 3.6 million people in 2000 to about 6.5 million people by 2030. In the San Joaquin River basin, the population is expected to nearly double from about 1.8 million to nearly 3.4 million by 2030. The areas surrounding Millerton Lake include some small communities and housing near the lake with large areas of undeveloped natural lands.

SECTION 4 ENVIRONMENTAL CONSEQUENCES

Proposed Action Alternative

Under the Proposed Action Alternative all work described in the Proposed Action heading under Section 2 would take place.

No Action Alternative

As described in Section 2, the No Action Alternative provides a base condition for comparison with the Proposed Action. Under the No Action Alternative the proposed geologic drilling or aggregate sampling program would not take place.

4.1 GEOLOGY & SOILS

Proposed Action Alternative

A total of 16 holes approximately 2.98-inches in diameter would be drilled at two potential dam site locations to gather geologic information. The drill holes would be completed to depths shown in Table 1 using both water-based drilling operations and land-based drilling operations. The small diameter drill holes would naturally fill with silt and sediment from the surrounding environment leaving no lasting effects of the drilling.

In addition, aggregate sampling would occur on the shore of Millerton Lake near drill hole DH-06-8 and drill hole DH-06-16. The aggregate sampling would remove up to 25 CY of rock from the shore. The material removed would be hauled out of the area by barge. Some of the material collected would be sent to Denver for testing and the remainder would be hauled off for disposal. Removal of up to 25 CY of granite rock from the area is minor given the abundance of granite rock in the area.

The blast size for the aggregate sampling would be the smallest possible to allow for material removal, and would be confined to the rock wall face or area considered suitable. Dust and debris impacts would be minimized through the use of sand bags, blasting mats, rock fences, and other protective measures. All loose rock would be pried from the wall resulting in semi-smooth rock similar to naturally occurring rock outcrops to preserve aesthetics and to prevent any potential safety concerns from loose rock. The material dislodged by the blasting will be gathered and hauled out of the reservoir via the barge. No material dislodged will be allowed to fall into the water or be left at the site. Rock will be stored at a previously disturbed storage area near the Friant-Kern Canal and Friant Dam.

Improvements to the SJRGT at selected locations would be completed to accommodate ATV travel, and would require the use of a track-hoe excavator or other specialty trail improvement equipment. Trail improvements would entail some additional minor disturbances to previously disturbed soil and be limited to the existing trail footprint and is considered trail maintenance.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to geology or soils would occur.

4.2 WATER QUALITY

Proposed Action Alternative.

Water-based drilling may increase suspended sediments and elevate turbidity above natural levels. Though drilling activities could contribute to suspended sediment and increase turbidity due to the small area this project would directly affect, and the short duration of turbidity events, very minor impacts to aquatic habitat would occur. A Spill Prevention and Countermeasure Plan has been developed to minimize the risk of a spill and lay out a contingency plan in case of an equipment leak. Absorbent pads and “oil booms” would be available at the drilling sites in case of an oil or hydraulic fluid leak.

Section 401 of the Clean Water Act establishes a program to allow States and Tribes to review and approve, condition, or deny all Federal permits or licenses that might result in a discharge to State or Tribal waters, including wetlands. The Central Valley Regional Water Quality Control Board (RWQCB) administers the 401 program for the Central Valley region of California. The drilling aspects of the proposed action are regulated under Section 401. Reclamation has applied for and received a 401 Water Quality Certification from the RWQCB.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to water quality would occur.

4.3 AIR QUALITY

Proposed Action Alternative

Fossil-fuel powered equipment including a drill rig, ATV, barge, helicopter, trail improvement equipment, and vehicles to transport workers to and from Millerton Lake would be used. The duration of the entire program would be no more than 6 months. Impacts to air quality would be localized and short term in nature. All program activities would be carried out in accordance with applicable Federal, State, and local laws and regulations concerning the prevention and control of air pollution. The lack of heavy construction and construction equipment and the short term nature of the work support the determination that implementation of the program is not expected to exceed Environmental Protection Agency (EPA) established *de minimus* thresholds of 50 tons of volatile organic carbon (VOC) or nitrous oxide (NO_x) (based on severe nonattainment status for ozone) or 70 tons of particulate matter 10 microns or smaller (PM₁₀) (based on severe nonattainment status for PM₁₀) there for a conformity analysis is not necessary.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to air quality would occur.

4.4 AQUATIC RESOURCES

Proposed Action Alternative

Though drilling activities could contribute to suspended sediment and increase turbidity due to the small area this project would directly affect, and the short duration of turbidity events, very minor impacts to aquatic habitat would occur. Use of the barge and boats to access the work areas would cause disturbances similar to recreational boating that takes place within Millerton

Lake. A Spill Prevention and Countermeasure Plan has been developed to minimize the risk of a spill and lay out a contingency plan in case of equipment leaks.

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects, infrastructure development and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation. The drilling aspects of the proposed action includes work in a Water of the United States and would be completed in compliance with the requirements of a U.S. Army Corps of Engineers (USACE) Nationwide Permit #6 (NWP 6) under Section 404. The NWP 6 does not require reporting to USACE as long as all permit conditions are met.

No work would take place in areas considered wetlands.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to aquatic resources would occur.

4.5 BIOLOGICAL RESOURCES INCLUDING THREATENED AND ENDANGERED SPECIES

Proposed Action Alternative

Some wildlife may be disturbed by or could temporarily move to avoid work areas. Boat traffic is common within the lake and the area is also an active recreation area for hiking and other outdoor activities. The effects of the program on wildlife are expected to be similar to the effects caused by existing boat traffic and effects from human recreational use of the area.

Threatened, Endangered, and Protected Species

Of the species federally listed as threatened or endangered, or proposed as threatened or endangered, only the bald eagle and potentially valley elderberry longhorn beetles could occur in the action area. Valley elderberry plants, which serve as habitat for the valley elderberry longhorn beetle, have been identified in the vicinity of work areas. Bald eagles are known to frequent Millerton Lake, particularly in the wintertime, when maximal counts of eagles are recorded though arrival of eagles may occur in early October. Equipment noise and the presence of people in the area could cause bald eagles to avoid the immediate areas where work is being performed. Avoidance measures would be implemented to prevent disturbance of valley elderberry plants and associated valley elderberry longhorn beetles that could be present on the plants.

Reclamation has determined that the proposed action would have no effect on listed species or their designated critical habitat with the exception of the bald eagle. In the case of the bald eagle Reclamation has determined that the proposed project may affect but is not likely to adversely affect the species and has requested concurrence from the USFWS on the effects determination.

Equipment noise and the presence of people in the area could cause golden eagles and peregrine falcons to avoid the immediate areas where work is being performed. The work is not expected to affect the golden eagle nest area due to the distance from the work areas.

The project will protect against take of migratory birds including bald eagle, golden eagle and peregrine falcon. Airspace will be clear before aggregate sampling begins to preclude any

adverse effects from fly rock. Tree felling will occur only if an active nest is not present in the subject tree, or only after any nesting in such a tree has ceased naturally. No tree will be felled so as to take a migratory bird or a nest thereof. No activity will occur to take migratory birds, parts thereof, including their nest or egg. No activity will be taken to cause abandonment of a nest by a migratory bird.

Vegetation

A single grey pine would be cut down to allow for a larger, safer unloading zone and to remove a serious obstruction to helicopter operations prior to the helicopter fly-in at the DH-06-6. The tree would be felled next to, and sub-parallel to, an existing nearby fallen grey pine, and would be left uncut once initially felled. In addition, some trimming of vegetation is expected as a result of the trail improvements near DH-06-3.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to biological resources would occur.

4.6 RECREATION

Proposed Action Alternative

As the barge would be anchored at several locations in the lake during the investigation, marker buoys (designating no wake zones, speed limits, and construction zones/restricted areas), and flagging and flashing lights would be deployed on the floating drilling platform and anchor cables to alert boaters operating in the vicinity of the work. The barge and drilling operations could displace some recreational boaters and fisherman to other areas temporarily.

Improvements to the SJRGT would necessitate portions of the trail be temporarily closed to the public. A portion of the SJRGT would also be closed when drilling is in progress which for DH-06-3 between approximately mid-September and mid-October 2006. A sign will be posted at the FDUA warning trail users of the work. Also the trail would be closed for drilling work at DH-06-14 between approximately mid-July and mid-August 2006. A sign would be posted at Wellbarn Road or in the vicinity warning of trail closures. All trail closures would be coordinated with the C DPR. Closure of the SJRGT would temporarily displace some recreational hikers to other trails in the area or other portions of the SJRGT.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to recreation would occur.

4.7 NOISE

Proposed Action Alternative

Noise associated with the barge and drilling would be similar to recreational boating noise that is common in the area. Daily drilling operations would occur Monday through Saturday between approximately 6 am to 6 pm. Helicopter transports are estimated to be necessary about every 3 weeks with no more than 15-20 trips leaving from the staging area to the work areas in any one day. The helicopter transport trips would occur during day light hours and would be delivering material to and from the staging area and work areas. The staging and work areas are not located

near sensitive noise receptors such as churches, hospitals, schools, etc. Some homes could be affected by the short duration fly over that are anticipated. Noise from the helicopter, drilling, blasting associated with the aggregate sampling and other associated work could temporary drive wildlife to other areas.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts from noise would occur.

4.8 CULTURAL RESOURCES

Proposed Action Alternative

A cultural resource survey of the APE was conducted by Far Western Anthropological Research Group (Far Western), Inc. and documented in a March 17, 2006 letter report to Reclamation. The survey was conducted to evaluate the affects the preferred alternative would have on potential historic properties pursuant to Section 106 of the NHPA (16 U.S.C. 470f). No historic properties were identified during the survey conducted by Far Western.

As a result of the findings documented in the March 17, 2006 letter report, Reclamation concludes that no historic properties will be affected pursuant to 36 CFR Part 800.4(d)(1) by implementing the preferred alternative. Before implementation of the proposed action alternative, Reclamation is required to consult with the State Historic Preservation Office (SHPO) on the findings documented in the letter report and the determination of affect pursuant to 36 CFR Part 800.3(c)(3). Upon receiving concurrence from the SHPO, Reclamation may implement the actions outlined in the proposed action alternative.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to archeological or cultural resources would occur.

4.9 INDIAN TRUST ASSETS

Proposed Action Alternative

There are no tribes possessing legal property interests held in trust by the United States in the areas involved with this action, therefore Indian trust assets are not affected by this action.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to Indian trust assets would occur.

4.10 ENVIRONMENTAL JUSTICE

Proposed Action Alternative

Implementing the program would only cause minor temporary impacts to the environment. No human health impacts would occur. The work proposed would take place on existing federal lands that are for the most part managed for recreational uses. The temporary impacts expected

to occur would not disproportionately affect any minority or disadvantaged populations within the project area.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no environmental justice impacts would occur.

4.11 SOCIO-ECONOMIC RESOURCES

Proposed Action Alternative

Carrying out the program could create a small temporary increase in the amount work and jobs in the immediate area which could have a slight positive impact on the local economy.

No Action Alternative

Under the no action alternative, Reclamation would not complete geologic drilling and aggregate sampling investigations at two potential dam sites upstream of Friant Dam on Millerton Lake at RM 274 and RM 279 of the San Joaquin River and no impacts to socio-economic resources would occur.

4.12 CUMULATIVE EFFECTS

Due to the short-term duration and the temporary nature of the impacts associated with this project, there are no cumulative impacts associated with this project. Approval would not have highly controversial or uncertain environmental effects or involve unique or unknown environmental risks. One potential outcome from the information gathered through carrying out the activities of the program could lead to a recommendation to Congress to implement the construction of a new dam. The future cumulative affects of any possible future construction activities and their impacts would be analyzed in future environmental analyses and, at present, are speculative and beyond the scope of the Federal action analyzed in this environmental assessment.

SECTION 5 CONSULTATION AND COORDINATION

During the preparation of the Environmental Assessment, the U.S. Bureau of Reclamation coordinated with the proponents of the proposed action.

Fish and Wildlife Coordination Act (16 USC Sec. 651 et seq.)

The Fish and Wildlife Coordination Act requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources. This environmental assessment was provided to the U.S. Fish and Wildlife Service for their review and comment. No significant, unavoidable impacts to wildlife would occur under the Proposed Action and no further coordination/consultation would be needed with the U.S. Fish and Wildlife Service or the California Department of Game and Fish.

Endangered Species Act (16 USC Sec. 1521 et seq.)

Section 7 of the Endangered Species Act requires federal agencies, in consultation with the Secretary of the Interior, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitats of these species. Reclamation has determined that the proposed action would have no effect on listed species or their designated critical habitat with the exception of the bald eagle. In the case of the bald eagle Reclamation has determined that the proposed project is not likely to adversely affect the species as determined by the analysis in its environmental assessment and has requested the U.S. Fish and Wildlife Service's concurrence on that determination.

Migratory Bird Treaty Act (16 USC Sec. 703 et seq.)

The Migratory Bird Treaty Act implements various treaties and conventions between the U.S. and Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Subject to limitations in the Act, the Secretary of the Interior (Secretary) may adopt regulations determining the extent to which, if at all, hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting of any migratory bird, part, nest or egg would be allowed, having regard for temperature zones, distribution, abundance, economic value, breeding habits and migratory flight patterns. The proposed action would have no effect on birds protected by the Migratory Bird Treaty Act.

National Historic Preservation Act (15 USC Sec. 470 et seq.)

Section 106 of the National Historic Preservation Act requires federal agencies to evaluate the effects of federal undertakings on historical, archeological and cultural resources. No features or resources have been identified that could be impacted by the Proposed Action.

Executive Order 11988 – Floodplain Management and Executive Order 11990 – Protection of Wetlands

Executive Order 11988 requires federal agencies to prepare floodplain assessments for actions located within or effecting floodplains, and similarly, Executive Order 11990 places similar requirements for actions in wetlands. The Proposed Action would not affect either floodplains or wetlands.

Clean Water Act (33 USC Sec. 1251 et. seq.)

Section 404 of the Clean Water Act establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects, infrastructure development and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation. The drilling aspects of the proposed action includes work in a Water of the United States and would be completed in compliance with the requirements of a USACE NWP 6 under Section 404. The NWP 6 does not require reporting to USACE as long as all permit conditions are met.

Section 401 of the Clean Water Act establishes a program to allow States and Tribes to review and approve, condition, or deny all Federal permits or licenses that might result in a discharge to State or Tribal waters, including wetlands. The RWQCB administers the 401 program for the Central Valley region of California. The drilling aspects of the proposed action are regulated under Section 401. Reclamation has applied for and received a 401 Water Quality Certification from the RWQCB.

SECTION 6 REFERENCES

- California Air Resources Board. 1996. Amendments to the Designation Criteria and to the Area Designations for State Ambient Air Quality Standards, Amendments to the San Joaquin Valley and Southeast Desert Air Basin Boundaries, and Maps of Area Designations for the State and National Ambient Air Quality Standards. January.
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- California Department of Fish and Game (DFG). 2005. California Natural Diversity Database (CNDDDB), 2005. <http://www.dfg.ca.gov/whdab/html/cnddb.html>.
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- Pacific Gas & Electric. 1990. Study of American shad at Millerton Lake, Kerckhoff Project (FERC No. 96-015), Report 026.11-90.7. Prepared by Stephen Ahern and Steve Cannata, Technical and Ecological Services. November.
- Southern California Edison Company. 2003. Draft Technical Study Reports for the Big Creek Hydroelectric Projects (FERC Project Nos. 67, 120, 2085, and 2175)
- United States Fish and Wildlife Service. 1983. Appraisal Report, Enlarged Friant Dam and Millerton Lake Alternative, Enlarging Shasta Lake Investigation. Prepared for United States Bureau of Reclamation and California Department of Fish and Game. November.
- U.S. Fish and Wildlife Service (USFWS). 1998. Recovery plan for upland species of the San Joaquin Valley, California. Region 1. Portland, OR. 319pp.
- United States Fish and Wildlife Service. 1994. Recovery Plan for Upland Species of the San Joaquin Valley, California. September.
- United States Forest Service. 2004. Scoping Letter to the U.S. Bureau of Reclamation, Division of Planning. April 15.

3. Archaeological consultant. The Tribes do not understand what the goals and objectives are pertaining to the present work being conducted by your archaeological contractor, Shelly Davis-King. On May 8, 2006, Mrs. Davis-King conducted a preliminary site tour of the Temperance Flat Dam project with tribal representatives. During this meeting, Mrs. Davis-King stated she is not preparing an official report, nor is she conducting ethnographic or archaeological work. She stated she was collecting information on possible cultural sites and resources or 'places of concern' which may be impacted by the Temperance Dam project. Please explain how Mrs. Davis-King's work relates to the Section 106 process and clearly define her scope of work and the rationale behind it. Tribal representatives also wish to know why the Tribes were not consulted by the BOR regarding selection of qualified archaeological contractors for this project.

4. Proposed Drilling and Blasting at Temperance Flat. We are concerned with the impacts these activities are going to have on possible cultural resources in the area, as well as environmental impacts. In regard to cultural resource investigation documented in the letter report dated March 17th, 2006, we question why a Native American monitor was not a part of some element of the fieldwork that generated this report. Since this is a possible Traditional Cultural Property area, we are recommending cultural monitors be present during drilling and blasting phase of the project. The Tribe also has the following questions/concerns:

- a) As a federally recognized Tribe we would like to request copies of the archeological reports referenced in the cultural resource investigation report: CA-MAD-94, -2112, and -2124/H.
- b) As per page 21 of the Draft Environmental Assessment (EA), has concurrence from the SHPO been received by BOR in regard to the findings documented in the March 17th cultural resource survey letter report?
- c) In regard to Section 3.5 of the Draft EA (Biological Resources including Threatened and Endangered Species) it is stated on page 14 of the EA "all but two species identified in Table 2 would not be expected to occur in the action area." In order to back up a statement such as this the text that follows should account for the status of each species in Table 2, including the two that are deemed present and the sixteen species that the report is claiming do not occur in the action area. However, the text only mentions nine species that would not be expected to occur on the action area, leaving seven species totally unaccounted for and lacking explanation. These include the CA red-legged frog, Central Valley Steelhead, Delta Smelt, Giant garter snake, Golden eagle, Peregrine falcon, and San Joaquin kit fox. An obvious omission or error of this type is cause for any informed reader of the EA question the quality of the report.
- d) The Tribe has knowledge of Bald Eagle roosting areas in the immediate vicinity of the action area, and concern that the activities, in particular the blasting, could adversely affect the Golden eagles.

5. Native American Monitors. At the March 28, 2006 meeting, you stated the BOR would not provide Native American monitors during the construction phase of the project. We believe it is irresponsible not to have Native American monitors present during all phases of the project, given the large presence of cultural/archaeological resources in the immediate area. Congress has appropriated tens of millions of tax dollars toward the studies for the Temperance Flat Dam, yet the BOR budget for Native American tribal concerns are almost non-existent. Please explain the reasons for this policy.

6. Mitigation of loss of Power Generation. The BOR has not explained what the costs will be to compensate the utility companies, such as PG & E, for possible loss of their hydroelectric facilities and power generation revenues. Please provide a detailed explanation of how the utility companies will be compensated in actual/projected costs.

7. Archaeological Records and Area of Potential Effects (APE). We are requesting from the BOR, all archaeological, ethnographic, and historic reports associated with the construction of Friant Dam, or any other projects affiliated with the Temperance Flat area. Please explain how the Area of Potential Effects (APE) will be determined.

8. Inventory and Evaluation of Historic Properties. Please provide an explanation of how the BOR intends to inventory and evaluate all existing Historic Properties within the APE of the proposed Temperance Flat Dam project.

Thank you very much, we appreciate your cooperation and look forward to your response to our questions in a timely manner. Please feel free to contact us should you have further questions.

Sincerely,



Elaine Fink,
Tribal Chairperson,
North Fork Rancheria

cc: State Historic Preservation Officer
Advisory Council on Historic Preservation

Responses to North Fork Rancheria's Comment Letter

Comments in your letter commingle issues specific to the Draft EA for the Geologic Drilling & Aggregate Sampling Program, Upper San Joaquin River Basin Storage Investigation, Fresno and Madera Counties, California (EA) and issues specific to the overlying Upper San Joaquin River Basin Storage Investigation Feasibility Study (USJRBSI). Comments specific to the EA will be responded to by number as they were raised in your letter. Comments related to the overlying and ongoing USJRBSI will be referred to the staff working on the Feasibility Report and its associated Environmental Impact Statement (EIS) for consideration in the development of these reports.

1. Consultation. Reclamation concurs with your request for Government - to - Government consultation. Reclamation sent a letter to the North Fork Rancheria (Tribe) dated June 16, 2006, expressing Reclamation's willingness to meet in a Government-to-Government forum to share views on the USJRBSI. On June 22, 2006, Reclamation's acting Area Manager for the South-Central California Area Office, and his staff met with the Tribe. In deference to the Tribe's verbal request, the June 22, 2006 meeting was deemed a "briefing". Reclamation continues to welcome a Government-to-Government dialogue on the overlying USJRBSI (the USJRBSI includes the possibility of a new Temperance Flat Dam) with the Tribe in the near future and at the Tribe's convenience. While the Program covered by this EA is a small part of the USJRBSI Feasibility Study the possibility of a new dam is beyond the scope of the geologic drilling and aggregate sampling covered in this EA. An Environmental Impact Statement (EIS) is being developed to address the result of the overall USJRBSI Feasibility Study.
2. Section 106 Compliance. The March 28, 2006 and May 8, 2006 meetings referred to in your letter are related to the overall USJRBSI Plan Formulation Report (PFR). Reclamation recognizes the importance and sensitivity of Native American concerns with respect to USJRBSI and work is currently underway to gather information that will allow us to assess impacts to areas of Native American concern. The PFR is collecting only generalized information because no decisions will be made by this document. Additionally, more detailed ethnographic efforts are anticipated for the alternative identified in the Feasibility Study (FS) and EIS.

Reclamation will not have a specific undertaking with respect to construction of a new dam and /or reservoir until such time as Congress authorizes the project after completion of the EIS. The March 28, 2006 meeting was designed to start the assessment process in anticipation of analyzing impacts if a project is authorized by Congress. Reclamation will have a formal undertaking for the USJRBSI only if it is approved by Congress. However, Reclamation is initiating the Section 106 compliance process as part of the USJRBSI, as we do not feel we can wait entirely to begin this process until such time as a project is authorized. The scope of the initial stages of this compliance process, however, will be limited and will

be focused on comparing alternatives as part of the FS and EIS. Information collected as part of our compliance for the FS and EIS will be refined and expanded in a comprehensive fashion if a specific project is authorized by Congress.

As the geologic drilling and aggregate sampling activities constitute actions with the potential to effect historic properties, they are considered a separate undertaking subject to Section 106 review which is distinct from the larger USJRBSI study. Consequently, Reclamation sent letters of inquiry to local Indian tribes on March 22, 2006 related to the drilling activities, and on June 19, 2006 related to the aggregate sampling and helicopter staging areas.

3. Archaeological consultant. Reclamation plans to conduct ethnographic work proposed for USJRBSI in two phases. The first phase, being prepared for the PFR, is designed to provide a broad brush overview of Native American concerns for each alternative. More detailed work will result during the FS and EIS portion of the USJRBSI study.

Reclamation is responsible for identifying historic properties within the potential area of potential effect once a project is defined. The 36 CFR Part 800 regulations require that federal agencies consult with potentially affected Indian tribes to identify possible sites of religious or cultural significance. We are in the process of identifying these values.

4. Proposed Drilling and Blasting at Temperance Flat. Reclamation appreciates your concern regarding environmental and cultural resource impacts; however, we are not required to have Native American monitors during our standard inventory (survey) process. We are, however, required to contact tribes regarding sites of religious or cultural significance which could potentially be impacted by an undertaking. This effort is separate from our cultural resources field inventory, which is directed at identifying historic and prehistoric cultural resources with surface manifestations.
 - a. Copies of site records may be requested through the Southern San Joaquin Valley Information Center located at California State University, Bakersfield.
 - b. The State Historic Preservation Officer (SHPO) has concurred with our determination that no historic properties would be affected by the geologic drilling and aggregate sampling activities.
 - c. Additional information has been added under the heading "Species Not Expected to Occur in Action Area" on pages 14 and 15 explaining further why California red-legged frog, Central Valley steelhead, Delta smelt, giant garter snake, and San Joaquin kit fox are not expected to occur in the action area. More detailed information related to golden eagle and

peregrine falcons occurrence in the area has been added under the heading “Species Expected to Occur in Action Area” on page 15 and under the heading “Threatened, Endangered, and Protected Species” on page 20. Reclamation’s determination of effects under Section 7 of the Endangered Species Act for listed species was submitted to the U.S. Fish and Wildlife Service (Service) for their concurrence. Reclamation received concurrence on June 29, 2006, from Service with our determination that the program is not likely to adversely affect bald eagles.

- d. There have been many sites documented along the shores of Lake Millerton as bald eagle roost areas and/or trees. Reclamation has coordinated with the Service and received concurrence from Service that the activities involved in the program are not likely to adversely affect the bald eagle. In addition, there is a known golden eagle nest site located approximately 2 miles away from any potential work area. The nest site is over 3 miles away from the nearest potential blast site. Given the distance and the fact that only 2 short blasts may occur the activities are not expected to adversely affect the golden eagles.
5. Native American Monitors. Reclamation conducts inventories to identify historic properties in compliance with 36 CFR Part 8004(b). Such inventories involve the identification of sites of religious significance, and tribal involvement is crucial in these efforts. However, Reclamation has no contractual authority to hire individuals for monitoring purposes during field survey and/or construction.
6. Mitigation for loss of Power Generation. No loss of power generation will occur as a result of the geologic drilling or aggregate sampling activities. Any loss of power that could result from the USJRBSI will be addressed in the Feasibility Report and EIS for the overlying study.
7. Archaeological Records and Area of Potential Effects (APE). Friant Dam was constructed prior to the passage of the National Historic Preservation Act and there were no cultural resource studies conducted at that time. Copies of the two letter reports prepared as a result of the archeological survey conducted in support of the proposed drilling program have been provided to the Tribe. If the Tribe would like copies of the Squaw Leap Archeological District National Register nomination, Reclamation will be pleased to provide it.
8. Inventory and Evaluation of Historic Properties. Cultural resources inventory will not be started until there is a better defined alternative since it is infeasible to conduct inventories at each of the four current alternatives. Once the PFR is completed, Reclamation may begin the inventory process for identifying archeological sites and for identifying site of religious and cultural significance. Surveys for both types of resources will commence once the alternatives are identified for consideration in the feasibility study and funding is available.

Specific survey strategies will be developed in consultation with SHPO, interested Tribes, and members of the public, as appropriate (36 CFR Part 800.4).

Reclamation will engage in more detailed ethnographic work to help define sites of religious and cultural significance, as required by the 36 CFR Part 800 regulations. As noted above, the details of this work will be worked out in consultation with participating tribes and Indian groups.

It is currently planned that the evaluation of identified cultural resources to determine if they are eligible for inclusion in the National Register will not be conducted until Congress authorizes the project. Once a project is authorized then Reclamation will determine which of the cultural resources are historic properties. This will be done within the context of a research design and it will undoubtedly include some subsurface testing. As before, this effort will be coordinated with the SHPO, Indian tribes, and interested members of the public.

During the public information meeting held in Fresno on June 13, 2006 it was verbally communicated that the option to raise the existing Friant Dam was no longer being considered as a stand-alone option. This was the first mention of such a decision and there was no documentation in the printed material confirming the decision. There was no explanation of the process or findings which led to the decision not to continue to evaluate the feasibility of raising Friant Dam. When the staff was directly confronted on this topic, the facts surrounding the decision were again brushed over. Similarly the option to develop groundwater banking has been abandoned as well as the possibility of a third dam location upriver from river mile 279 (Temperance Flat), and the option to transport water through a tunnel system to a pump-back power production facility at the Fine Gold Creek Location.

The staff involved in the public notification meetings is seldom composed of the same group of persons who conducted the prior meeting. With the apparent rapid turnover in staff for this project, familiarity with project details is lacking. Additionally the time, and resultant money involved in replacing key team members produces very little confidence in their ability to complete the job in a cost affective and timely manner.

The staff continues to justify their work as not posing a significant or lasting effect on the area; however, this work is being conducted with the hope of building a dam which will have a significant and lasting effect. If it is truly believed that these studies will not result in any serious or lasting effects, then why is so much money being wasted on the study?

The only public support which has been voiced in the local area seems to be from farmers who want more water and developers who want to build in the current flood plain of the Friant Dam. The study was initially instated as a way to get water to restore the San Joaquin River and help clean the Delta. Some of the water would be reserved for residential use and recreation opportunities. To date there has been no mention of additional water being provided for agriculture, yet this has not been brought to light in the local media. As such much of the support currently given for the project is given for false reasons and incomplete information.

Shannon Lodge
Local Resident/Geologist

Pc. Honorable Lois Wolk, Chair, Assembly Water, Parks & Wildlife Committee
Steve Evans, Friends of the River

Responses to Shannon Lodge's Comment Letter:

Comments in your letter commingle issues specific to the Draft EA for the Geologic Drilling & Aggregate Sampling Program, Upper San Joaquin River Basin Storage Investigation, Fresno and Madera Counties, California (EA) and issues specific to the overlying Upper San Joaquin River Basin Storage Investigation Feasibility Study (USJRBSI). Comments specific to the EA will be responded in the order in which they were raised in your letter. Comments related to the overlying and ongoing USJRBSI will be referred to the staff working on the Feasibility Report and its associated Environmental Impact Statement (EIS) for consideration in the development of these reports.

Geotechnical drilling investigations occurring on federal lands and under the jurisdiction of federal employees are exempt from state, county, and local drilling regulations and permitting, provided all federal permits and clearances have been issued as required by law. Reclamation has all the necessary permits, approvals, and authorizations to begin drilling operations as stated in the "Draft Environmental Assessment, Geologic Drilling and Aggregate Sampling Program, Upper San Joaquin River Basin Storage Investigation, Fresno and Madera Counties, California".

Drill holes located at overland sites will be completed as observation holes and Fresno and Madera Counties will be informed of the drilling program. All drill holes will be completed in accordance with federal Reclamation drilling standards and abide by the State of California Water Well Standards where appropriate. Reclamation will ensure that the drill holes do not constitute a significant pathway for poor quality water, pollutants, or contaminants, and do not constitute a public nuisance or hazard.

Public notices were sent out notifying the news agencies about the availability of the draft EA. In addition, notices were mailed to everyone on the mailing list for the overlying USJRBSI study and to property owners surrounding Millerton Lake.

The only 2 short periods of time during which passage between the main body of the lake and upstream areas are expected to occur are related to safety closures during the aggregate sampling excavation portion of the program. The 2 closures are expected to last no more than a few hours and would take place on weekdays.

The proposed geologic drilling will reduce the width of the lake in the immediate area that drilling is occurring and will involve reduced speed zones and authorized personnel only restrictions but passage around the worksite will be allowed. In the event of an emergency response, vessels would be able to communicate with the drill crew in order to navigate around the barge safely or request assistance. Reclamation is working with the State of California Department of Parks and Recreation to establish appropriate speed limits and other restrictions to ensure to public safety over the duration of the project. No full closure of boat traffic is expected to occur from the geologic drilling portion of the program. Water levels in the lake will not be altered to accommodate any work associated with this program.

There are access points on the San Joaquin River Trail that will allow users to utilize sections of the trail that do not require temporary closure for this work to take place. The actual portions of the trail that will be closed are small in length so if a user were trying to access a specific area of the trail they would be able to reach any area except the immediate work site from an upstream access point or a downstream access point. Signs will be posted to notify people of closures at appropriate trail access points.

The helicopter staging area will be used to allow a helicopter to pick up equipment and supplies to deliver them to the land based drill sites. Drilling equipment will be hauled to the staging area on the day of the airlift. The use of the staging area is expected to require fewer than 10 vehicle trips in any given day on the rural road to the staging area. Vehicular access to the area will not occur everyday during the program activities and though a portion of the road to access the site is a narrow rural road the increase use attributed to access of the staging area throughout the 6 month duration may cause very minor inconveniences to local users who use the road across Federal property to gain access to their property. A maximum of six airlifts originating from the staging area will occur during the duration of the project. Each airlift is anticipated to require less than one day to complete the task. Estimated time between airlifts is approximately three weeks, plus or minus one week. The length of the rural road behind the locked gate to be used to access the staging area is relatively short, less than a quarter of a mile, further minimizing any possible inconveniences or delays that would be caused by the increase in traffic on the road. As noted above notices of availability of the Draft EA were sent to property owners surrounding Millerton Lake this was accomplished by compiling data from county parcel ownership data. In addition, notices were sent to everyone on the mailing list for the overlying USJRBSI study.

Reclamation has completed a cultural resources investigation for the proposed geologic operations stated in the “Draft Environmental Assessment, Geologic Drilling and Aggregate Sampling Program, Upper San Joaquin River Basin Storage Investigation, Fresno and Madera Counties, California”. The cultural resource investigation is documented in a report titled “Archaeological Survey of Geological Sampling Locations, Upper San Joaquin River Basin Storage Investigation Project.”

Results from the investigation have determined that only one cultural resource was encountered in the general vicinity during the survey. This consisted of a historic-era mining adit located about 150 feet south of drill hole DH-06-14 on the east side of Millerton Lake near river mile 279. Reclamation will maintain a 100-foot setback from the adit with the drill rig. The report concludes that no impacts to cultural resources will occur as long as drilling and excavation take place within the proposed areas. The investigation and report were conducted by Far Western Anthropological Research Group, Inc., under contract to Montgomery Watson Harza on behalf of the Reclamation.

Additionally, a report by the U.S. Bureau of Land Management, on behalf of Reclamation, titled Millerton Lake Area Historic Mines Characterization Report is currently in progress (completion is expected 7/06). The intent of the report was to

research and characterize historic mining activities near Millerton Lake in the upper San Joaquin River drainage.

The information gathered during the geologic investigations will be used in the alternatives development and analysis process that is underway in the Feasibility Study. The Feasibility Study will culminate with a Feasibility Report and Environmental Impact Statement/Environmental Impact Report (EIS/EIR). The EIS/EIR that is prepared for the USJRSBI will include a detailed evaluation of the final range of alternatives. Alternative development is currently underway and as we mentioned at the meeting it does not currently appear that a 25 foot raise of Friant Dam would be a viable stand alone alternative. The process of alternatives development and screening will be documented in the Plan Formulation Report (PFR), and prior to the public release of the PFR we will hold a public information meeting to preview the screening process.

The impacts associated with the geologic investigation program covered in the Draft EA are all temporary and short-term in duration leaving no lasting effects and therefore no cumulative impacts would occur as a result of carrying out this program.

Paragraphs 2 and 4 on page 2 – Comment Noted.