EXECUTIVE SUMMARY

PACIFIC GAS AND ELECTRIC COMPANY HAS ASKED THE CPUC TO APPROVE ITS AUCTION PROPOSAL

Pacific Gas and Electric Company owns and operates the largest private hydroelectric power system in the nation. Situated in the Sierra Nevada, Southern Cascade, and Coastal mountain ranges of California, this system is strung along 16 different river basins. (See Figure ES-1; ES-2 through ES-10 are drawings of the hydroelectric systems and are provided at the end of the Executive Summary) The entire system extends 500 miles, from Mount Shasta to Bakersfield, and provides about five percent of California's electric energy. In addition, the land associated with the hydroelectric auction covers approximately 88,000 acres outside of Federal Energy Regulatory Commission (FERC) boundaries. Pacific Gas and Electric Company's hydroelectric power system took the better part of the last century to develop. The oldest powerhouses still in use date from the turn of the twentieth century, while the newest was completed in 1986.

The system that Pacific Gas and Electric Company proposes to auction includes:

- 68 powerhouses with 110 generating units having a total generation capacity of 3,896 megawatts (MW);
- Approximately 2.3 million acre-feet of reservoir capacity;
- 99 reservoirs, 174 dams, and 76 diversions that alter rivers;
- 184 miles of canals; 44 miles of flumes; 135 miles of tunnels; 19 miles of pipe; 5 miles of natural waterways;
- Its interest in approximately 140,000 acres of lands (52,000 acres inside FERC boundaries and 88,000 acres outside FERC boundaries);
- The right to use water to generate power (non-consumptive rights) and the right to consumptive water (approximately 200,000 acre feet) for municipal, industrial, and agricultural uses (consumptive rights);
- Remote control switching centers;
- Central service centers; fleet vehicles, communication systems, instrumentation, and monitoring equipment;
- Transferable regulatory licenses for each facility, including 26 licenses from FERC (three unlicensed projects); and
- Permits, agreements, and authorizations for each hydroelectric facility.

The California Public Utilities Commission (CPUC, or Commission) is considering Pacific Gas and Electric Company's request to break its hydroelectric system into several different lots or "bundles," and to auction off these bundles to the highest bidder. In addition, Pacific Gas and Electric Company proposes to auction its interest in all the land associated with the hydroelectric facilities. Auctioning the system in this manner is one way of determining its market value. Determining the market value of utility electric generation assets is a legal requirement placed on the Commission by statute (AB 1890, Brulte 1996). Pacific Gas and Electric Company has requested an auction; however, the Commission is considering alternative valuation methods, some of which may not involve an auction.

The Commission's staff has prepared an Environmental Impact Report (EIR) analyzing Pacific Gas and Electric Company's proposal, as required by the California Environmental Quality Act

(CEQA). CEQA requires that California State agencies consider the environmental consequences of their actions before they make decisions. This Draft EIR lists the environmental impacts Pacific Gas and Electric Company's auction proposal is likely to produce, and is currently being circulated for comments. The EIR finds that the auction and transfer of ownership would likely produce changes to the way the hydroelectric facilities are operated. Interestingly, the EIR's study of the way the hydroelectric facilities would be operated under new ownership raises concerns about the exercise of market power in California's electricity markets. The EIR also concludes that the sale of 88,000 acres of "watershed land" outside the FERC licensed land would likely spur logging, mining, and other land development.

As discussed below, the EIR concludes that the auction would produce 49 significant adverse effects on the environment. Two of those effects cannot be reduced or avoided or mitigated. Overall, the project effects could impact a range of resources, including: fish and other aquatic and terrestrial plants and animals, recreation, and consumptive water uses. In addition, the EIR identifies sixteen alternatives to the auction. The EIR ranks these alternatives according to how many impacts the alternative would avoid or mitigate. Nine alternatives would be environmentally superior to the auction. The best of these—having Pacific Gas and Electric Company retain its hydroelectric facilities under CPUC regulation—would avoid all of the auction's significant adverse environmental effects.

When the Commission acts on Pacific Gas and Electric Company's request, it will consider the auction's environmental effects as well as its economic and social effects. The auction's economic and social effects are being debated in a formal Commission proceeding (Application 99-09-053), which covers the auction's potential effects on customers and ratepayers, the appropriateness of the auction's design, the effects of the auction on the electricity market generally, and the effect of the auction on Pacific Gas and Electric Company's rate structure and accounts.

Hydroelectric Power

A typical ***hydroelectric project*** includes a ***reservoir*** at a high elevation where water is captured for later use. Water is diverted from the reservoir by various ***conveyance systems*** to a smaller ***forebay***, which regulates water flow into the powerhouse. From the forebay, water enters steeply descending pipes, called ***penstocks***, where the energy of the falling water is increased. In the ***powerhouse***, ***turbines***, spun by the pressurized water, turn ***generators***. Water is released into a ***tailrace***, where it either flows back into the natural stream channel or is stored and released to another powerhouse at an even lower elevation. A series of powerhouses can be located at successively lower elevations along a river to take advantage of the water's fall as it cascades from the higher mountain elevations.

HYDROELECTRIC FACILITIES AFFECT CALIFORNIA'S ELECTRICITY MARKETS, RIVERS, AND LANDSCAPE

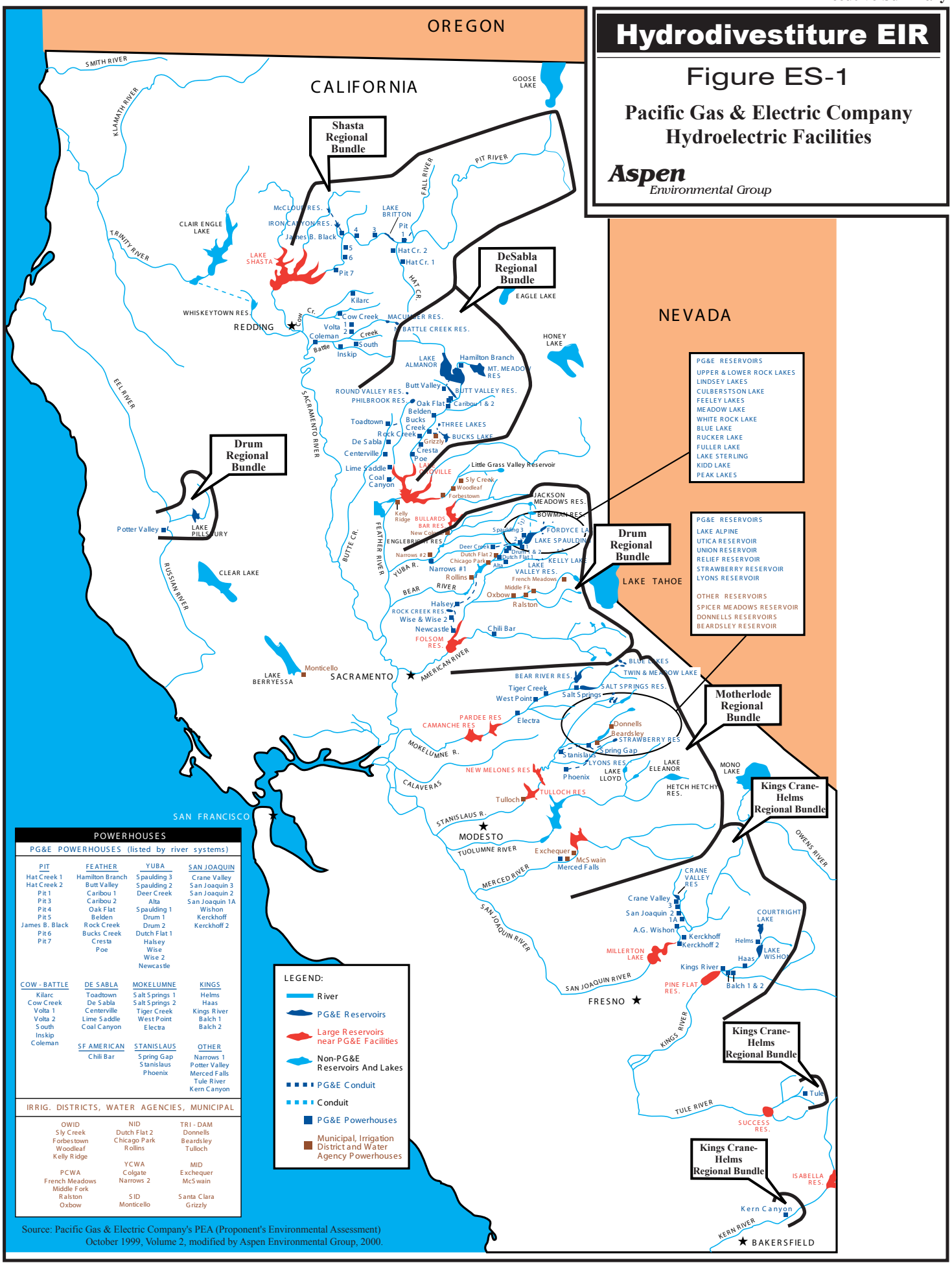
Pacific Gas and Electric Company's hydroelectric system can generate nearly 3,900 megawatts of power at maximum capacity, enough electricity for almost four million residences. Because hydroelectric generation has unique characteristics, Pacific Gas and Electric Company's facilities play an important role in California's electricity markets. In contrast with thermal power plants, which take

Hydrodivestiture EIR

Figure ES-1

Pacific Gas & Electric Company Hydroelectric Facilities

Aspen Environmental Group



Source: Pacific Gas & Electric Company's PEA (Proponent's Environmental Assessment) October 1999, Volume 2, modified by Aspen Environmental Group, 2000.

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time to warm up before they generate power, hydroelectric powerhouses can be brought on-line very quickly. As a result, Pacific Gas and Electric Company's hydroelectric power system is particularly valuable in maintaining a reliable statewide electrical system. In addition, hydroelectric systems store winter and spring water flows for release later in the year, when electricity demand is high. Another advantage of hydroelectric power is that its energy source—cascading water—is replenished annually, except during a drought. The electricity Pacific Gas and Electric Company's system produces costs relatively little to generate. As a result, Pacific Gas and Electric's hydroelectric system is a unique, inexpensive, and flexible source of electricity. Pacific Gas and Electric Company's hydroelectric system is, however, variable. In wet years it can produce 18,000 gigawatt-hours (GWh); in critically dry years it produces as little as 6,000 GWh.

The operation of Pacific Gas and Electric Company's hydroelectric generation facilities also has a pronounced effect on California's rivers. Hydroelectric facilities divert water from a natural river system. Rivers are replaced by a system of reservoirs and managed, man-made "conveyances," such as tunnels, canals, and concrete channels. During the dry season, water may flow in some rivers and streams only because of managed releases from the reservoirs. Many of Pacific Gas and Electric Company's hydroelectric facilities divert virtually the entire summertime flow of a river from the natural river channels into artificial channels that may parallel the river, or may be miles from the natural watercourse.

By collecting and storing water to generate electricity, Pacific Gas and Electric Company's hydroelectric system also has a pronounced effect on the landscape. Dams form reservoirs where rivers used to flow. These reservoirs obstruct the river's natural flow, but they also provide recreational opportunities and create their own habitat, different from the habitat the river would have provided. In addition, Pacific Gas and Electric Company owns a large amount of land surrounding its hydroelectric system. The watershed land has been kept in a largely undeveloped state, and provides both recreational opportunities and habitat for plants and animals.

PACIFIC GAS AND ELECTRIC COMPANY PROPOSES TO AUCTION ITS HYDROELECTRIC SYSTEM AND ASSOCIATED LAND IN SEPARATE LOTS, CALLED "BUNDLES"

Pacific Gas and Electric Company's facilities contain a wide range of "assets," including the hydroelectric system itself, associated land, and day-to-day equipment such as fleet vehicles, communications equipment and monitoring instruments (see box on p. ES-1). Existing environmental liabilities and obligations would also transfer to successful bidders. In order to sell these assets (and liabilities), Pacific

SHASTA REGIONAL BUNDLE

To the North, the Shasta Regional Bundle is located principally within the Southern Cascade Range. This region's assets include 28 generation units housed in 16 separate powerhouses. This region has 11 reservoirs with nearly 160,000 acre-feet of storage. This Regional Bundle comprises four local bundles: Hat Creek, Pit River, Kilarc-Cow Creek, and Battle Creek.

Gas and Electric Company proposes to package them into different lots, called "bundles". The bundles would be sold to the highest bidder or bidders.

Pacific Gas and Electric Company proposes to offer two types of bundles: "local" and "regional." According to Pacific Gas and Electric Company, the assets in each bundle belong together because of geography, hydrology, water rights, and system management requirements. Pacific Gas and Electric Company proposes to auction up to 20 local bundles. A local bundle may include a number of powerhouses, ancillary facilities, water conveyances, associated land, and various licenses, permits, contracts, agreements, and obligations. A local bundle may also include one or more "licenses" from the Federal Energy Regulatory Commission (FERC), which regulates hydroelectric facilities. These licenses contain a wide range of conditions controlling the operation of the facilities, many of which are designed to benefit the environment and beneficial uses of rivers and streams. The 20 local bundles are grouped into five regional bundles, based largely on geography, river systems, water rights, and operational and management history.

DESABLA REGIONAL BUNDLE

Also in the North, the DeSabla Regional Bundle lies on the western flank of the Sierra Nevada. Its assets include 25 generation units in 15 powerhouses. Three of the facilities—Hamilton, Lime Saddle, and Coal Canyon—are unique to the hydro system in that they are not subject to FERC regulations. The DeSabla Regional Bundle also contains 11 reservoirs, with over 1.3 million acre-feet of storage—over half of Pacific Gas and Electric Company's total reservoir capacity. Lake Almanor has more than 1.1 million acre-feet of usable storage, making it the largest reservoir in the auction. The DeSabla Regional Bundle comprises four local bundles: Hamilton Branch, Upper North Fork Feather River, Bucks Creek, and Butte Creek.

Depending on their qualifications and financial resources, bidders could bid on any combination of regional and local bundles. Pacific Gas and Electric Company proposes that the highest total bid for a regional bundle would prevail. The highest price could be realized from either a single bid for an entire regional bundle, or by adding up individual bids on the local bundles that make up a regional bundle. As a result, at the end of the auction, each regional bundle could be owned by one or several new purchasers. There could be as few as one and as many as 20 new owners of the hydroelectric assets.

THE RESULTS OF THE AUCTION WOULD BE FELT WHEN NEW OWNERS BEGIN TO RUN PACIFIC GAS AND ELECTRIC COMPANY'S HYDROELECTRIC SYSTEM

If the CPUC grants Pacific Gas and Electric Company's request to sell its hydroelectric system, the likely purchasers would—unlike Pacific Gas and Electric Company—not be utilities. As a result, the CPUC would most likely cease to regulate these facilities. Currently, certain specific facilities, such as powerhouses, reservoirs, and land near the hydroelectric facilities themselves are operated under terms specified by FERC in its 26 licenses. The auction would not change the extent of FERC's oversight within the boundaries of the FERC licenses. However, a large amount of land falls outside the boundaries of the FERC licenses and would not be subject to regulatory oversight

after an auction. In addition, three of the hydroelectric facilities are not currently subject to FERC oversight, and would not be subject to regulatory oversight by either FERC or the CPUC following an auction.

The auction itself is a single event, but the environmental changes the auction could produce would likely occur sometime after the auction. The EIR studies the environmental impacts resulting from a sequence of activities. This sequence starts with the auctioning of Pacific Gas and Electric Company's hydroelectric assets. The sequence continues through the transfer of ownership to the successful bidders, and then concludes with the operation, use, and management of the assets (including land) by new owners over time.

DRUM REGIONAL BUNDLE

In the Center-North of California, the Drum Regional Bundle lies mostly on the western flank of the Sierra Nevada and its foothills, west of Lake Tahoe. It also includes the Potter Valley Project, on the Coast Range. The assets in the Drum Regional bundle include 21 generation units in 14 powerhouses. There are 22 reservoirs in this bundle, with a storage capacity of 280,000 acre-feet. This bundle accounts for over 90 percent of the consumptive water that Pacific Gas and Electric Company contracts to others. The Drum Regional Bundle consists of four local bundles: North Yuba River (Narrows), Potter Valley, South Yuba River (Drum Spaulding), and Chili Bar.

In order to gauge the environmental impacts of auctioning Pacific Gas and Electric Company's hydroelectric facilities, the EIR determines the extent to which the auction and new ownership would change the way the facilities are operated. For example, a new owner might want to maximize profit by generating as much power as possible during times of peak demand. Other owners might want to maximize water supply reliability. New owners are likely to continue to honor formal agreements and contracts, but may not follow informal, non-binding practices and agreements that Pacific Gas and Electric Company has honored in the past. As a result, a sale to new owners could produce changes in the rate and timing of water releases. A sale could also produce changes in other areas, including: forestry or grazing practices on watershed land; recreational access and use of waterways, reservoirs, and land; and land development opportunities.

THE EIR STUDIES THE DIFFERENT WAYS NEW OWNERS WOULD USE PACIFIC GAS AND ELECTRIC COMPANY'S FACILITIES—INCLUDING WATERSHED LAND

The EIR studies the anticipated future operation of Pacific Gas and Electric Company's facilities under two scenarios. These scenarios capture a new owner or owners most likely operational strategies. The first is a "PowerMax" scenario, where the facilities are run so the maximum amount of power is generated at times of peak demand. Under the second scenario, the "WaterMax" scenario, the facilities would be operated to maximize the amount and reliability of water available for consumptive use.

The EIR compares operations under the PowerMax and WaterMax Scenarios to a "baseline" that mimics how Pacific Gas and Electric Company would operate the facilities. The baseline describes

expected operations of the Pacific Gas and Electric Company hydroelectric system under restructured industry conditions based on the year 2000. In order to describe the baseline accurately, the EIR engages in a thorough review of Pacific Gas and Electric Company's operation of its hydroelectric facilities.

Because the impacts of operating a hydroelectric system vary depending on the amount of rain and snowfall, the EIR compares PowerMax and WaterMax scenarios to the baseline in 24 different "water years." This comparison was done using computer modeling to simulate the effects of these two scenarios and the baseline in the 24 water years. The water years are based on historical data from 1975 to 1998. This approach accounts for annual variations in water availability. For land-based impacts, the EIR compares a new owner or owners's actions to baseline conditions in the year 2000.

THE AUCTION WOULD PRODUCE A CHANGE IN THE WAY THE HYDROELECTRIC FACILITIES ARE OPERATED

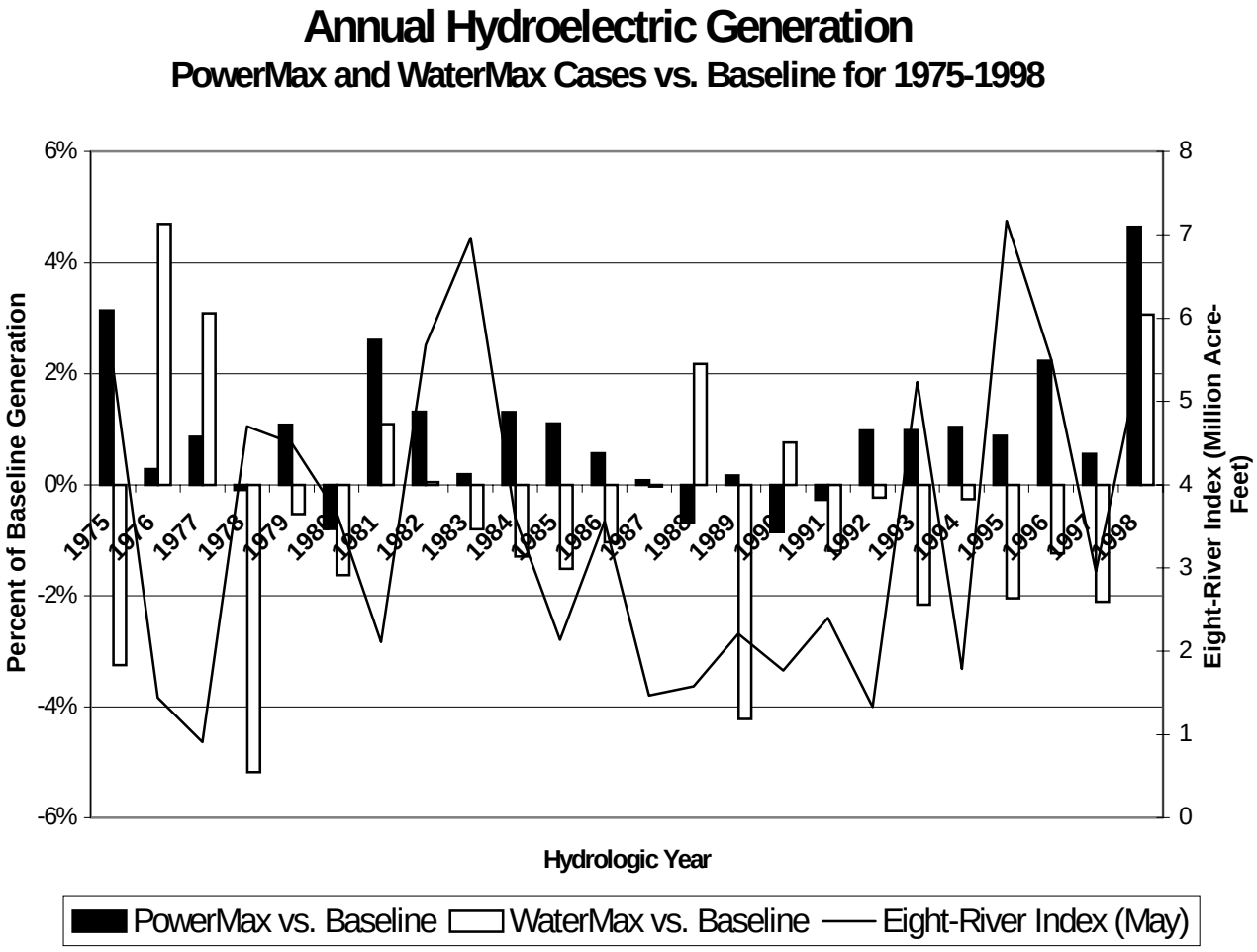
The EIR found that the auction would result in changes to the way the hydroelectric facilities are operated. By generating hydroelectricity in different ways, new owners would change the timing and the amount of water released into California's rivers. Operations by new owners under the PowerMax and WaterMax scenarios would differ from the baseline—and from each other—during each of the 24 different types of water years. These results are shown on the graphs of Annual Hydroelectric Generation. The graph shows both how much the amount of water in California's rivers varies, and how those variations affect the two different strategies of operating hydroelectric facilities (the eight-river index represents yearly flow variations of major rivers in the Sacramento and San Joaquin watersheds).

Interestingly, the availability of water does not require the hydroelectric facilities to be operated in a single uniform way. The two different scenarios produce significantly different amounts of generation—and release of water into California's rivers—in most of the different water years. In most years, operation under the PowerMax scenario would generate more electricity—and release more water—than under the baseline or the WaterMax scenarios. However, in dry years, such as 1976 and 1977 water years, the WaterMax scenario would generate the most power—and release the most water—because the WaterMax scenario saves water so that it can be used in dry and critically dry years.

Compared to the baseline of Pacific Gas and Electric Company's projected operations, a new owner who adopted the PowerMax scenario would generate more power—and release more water—each year in all but five of the 24 water years.

MOTHERLODE REGIONAL BUNDLE

In Central California, the Motherlode Regional Bundle sits on the western flank of the Sierra Nevada, west of Mono Lake. The assets include 12 generating units in eight powerhouses. The region has 18 reservoirs, with a storage capacity of 260,000 acre-feet. The region is made up of three local bundles: Mokelumne River, Stanislaus River, and Merced River.



However, the increased power generation would most likely occur in the last seven months of the year. This reflects the higher electricity prices occurring during that period, and a new owner's freedom to operate the hydroelectric facilities differently from the way Pacific Gas and Electric Company would. These changes in operations would produce different streamflows and different reservoir levels. The amount of water stored in reservoirs on most river basins would be lower than the baseline under the PowerMax scenario. The greatest difference is projected to be in the driest years.

Under the WaterMax Scenario, a new owner (or owners) would also operate the hydroelectric facilities differently from the baseline. Annual generation—and thus release of water into streams and rivers—would vary depending on the dryness of the year. In dry years, reservoirs would be drawn down to supply water. In wet years, generation would be less, because a WaterMax owner would save water for dry years rather than using it to generate electricity. As a result, there would

be less available wintertime storage capacity. However, a new WaterMax owner would produce less generation, and release less water during the autumn of normal and wet years because water would be saved for the next year.

NEW WAYS OF USING THE HYDROELECTRIC FACILITIES AND WATERSHED LAND WOULD PRODUCE ENVIRONMENTAL EFFECTS

The EIR uses its study of the operation of the hydroelectric facilities to identify environmental impacts using a two-step process. First, it determines what results—such as greater or lesser water flow in rivers—would occur that would be different from the baseline. Next, the EIR determines if these changes would produce adverse environmental effects—and if those effects would be significant. Where significant adverse impacts are identified, the EIR suggests mitigation measures to avoid or reduce those impacts.

KINGS CRANE-HELMS REGIONAL BUNDLE

Farthest South, the Kings Crane-Helms Regional Bundle is located on the western flank of the Sierra Nevada. This region's assets include 24 generating units in 14 powerhouses, including the unique Helms pumped storage facility. Helms generates power during peak demand times, and reverses itself to pump water uphill for storage during off-peak times. This bundle has nine reservoirs with only a little over 380,000 acre-feet of storage, only 50,000 of which are not associated with Helms. The region is made up of five geographically widespread local bundles: Crane Valley, Kerckhoff, Kings River, Tule River, and Kern Canyon.

The EIR concludes that the auction would negatively affect the environment in a number of ways. Two adverse environmental impacts are significant and unavoidable. Changes in operation of the hydroelectric facilities by new owners would harm fish. In addition, development of the watershed land by new owners would adversely affect air quality in local air basins.

The EIR finds that the auction would produce 47 significant adverse environmental impacts that can be mitigated and two that are unavoidable. These impacts would affect a wide range of environmental resources, including water and water quality, fish and aquatic biology, terrestrial plants and animals, recreation, aesthetics, and cultural—especially Native American—resources. Both the sale of the land and the operation of the hydroelectric facilities by new owners would produce these results. The auction's environmental effects and proposed mitigation measures are summarized in the EIR in Table S-1. This table is available separately for reference. Of the 49 significant impacts, 24 would be the result of hydroelectric operations, 20 would result from land development, and five would result from the effects of both factors. The mitigation measures, which range from requiring new owners to follow existing practices to specifying environmentally sound practices for purchased land, are designed to reduce or avoid as many impacts as possible.

CHANGES IN THE OPERATION OF THE HYDROELECTRIC FACILITIES WOULD AFFECT RIVERS AND RESERVOIRS

The EIR identifies environmental effects that could result from these differences in operation compared to the baseline. The significant environmental effects included reductions in

streamflows, and changes in reservoir levels. These changes would affect the plants and animals that depend on the rivers' water, and recreational opportunities.

Changes in hydroelectric operations could have a significant effect upon fish. At least 61 separate species of fish inhabit streams and reservoirs within the overall system. Of these, five species are listed as threatened or endangered under the State or Federal Endangered Species Acts. An additional nine species are of special management concern to state or Federal resource agencies. The hydroelectric facilities in seven of the 20 local bundles can only be operated in certain ways. Thus a new owner or owners would not be able to change their operations in a way that damaged aquatic resources. However, for the majority of the facilities, a change in operations could have a significant impact on fish. Some facilities are designed in a way that could allow mitigation of these impacts by instituting minimum flow for streams or storage requirements for the reservoirs. In other areas (Narrows Project and Potter Valley Project), mitigation may be infeasible or unable to reduce impacts to less than significant.

The EIR also identifies effects from changes in hydroelectric operations on recreation in many locations. The holders of FERC licenses must construct, maintain, and operate recreational facilities where possible to meet recreational demand, given the unique characteristics of each site and public safety concerns. Recreational facilities may include, for example, rest stops and parking areas, boat launching ramps, docks, picnic areas, camping areas, and recreational vehicle hookups. The water-based recreation provided by Pacific Gas and Electric Company's hydroelectric system is a major benefit to the people of California. Changes in the operation of Pacific Gas and Electric Company's hydroelectric system would affect these recreational opportunities, according to the EIR. The EIR concludes that changes in lake levels would affect boat launch areas and potentially reduce access to water-based recreation. In addition, changes in streamflows could harm commercial and non-commercial whitewater rafting by reducing the number of boatable days in the summer season. Finally, by affecting fish and fisheries, changes in operations could affect recreational fishing.

Key significant impacts of hydroelectric system operational changes, and the sections of the EIR that discuss those impacts include:

- Impacts related to hydrology and water quality (see Section 4.3.7);
- Impacts related to fish from changes to reservoir and river levels (see Section 4.4.7);
- Impacts related to adverse effects upon wildlife and plant species and associated habitats (see Section 4.5.7);
- Impacts related to the potential loss of reservoir and river recreational opportunities (see Section 4.6.7);
- Impacts related to exposure of cultural resources at reservoirs (see Section 4.7.7);

- Impacts to agricultural productivity due to changes in timing and availability of water (see Section 4.8.10);
- Impacts related to safety issues from changed water levels or releases (see Section 4.9.11)
- Impacts to air quality at other locations because of the changes in operations of the hydroelectric system (see Section 4.14.8);
- Impacts to visual character from changes in reservoir levels resulting in substantial reservoirs drawdown during the peak recreational season (see Section 4.15.9).

THE SALE OF WATERSHED LAND WOULD PROMOTE DEVELOPMENT AND OTHER USES OF THE LAND—AND PRODUCE ADVERSE ENVIRONMENTAL EFFECTS

The EIR also identifies impacts resulting from changes in land management by new owners. New owners could begin to develop the land, harvest timber and start mining. Approximately 95,000 acres of land that could be developed (some inside FERC boundaries, but mainly the watershed land outside FERC boundaries) are included in the proposed sale. This land is largely undeveloped by Pacific Gas and Electric Company, however the EIR assumes a new owner would have an economic incentive to develop this land. The EIR estimates that the land could support development equivalent to over 10,000 dwelling units. The principal impacts of development identified in the EIR are loss of wildlife habitat, adverse effects to threatened and endangered species, restriction of access to recreational areas or loss of recreational uses, and threats to cultural resources from disturbance. The development would also increase vehicle air emissions, traffic congestion, and demand for public services and utilities. In addition, the EIR discusses the incompatibility of development with adjacent land, and potential growth-inducing effects that may result from development. In many areas, adjacent land is managed by public agencies for public purposes such as wilderness recreation, and habitat protection.

Key significant impacts of land development, and the section of the EIR that discuss those impacts include:

- Impacts to sensitive habitats and species of invertebrates, amphibians, reptiles, birds, plants and mammals (see Section 4.5.7);
- Impacts related to the potential loss of access to water-based and land-based recreational opportunities and facilities (see Section 4.6.7);
- Impacts to known and unknown cultural resources (see Section 4.7.7);
- Impacts to the provision of local public services, including fire protection, police protection, public schools, and public parks (see Section 4.11.C7);
- Impacts related to exposure of public or workers to contaminated soil and or groundwater (see Section 4.9.7);
- Impacts related to fault rupture, groundshaking active faults, increased soil erosion or mass wasting, and soil instability (see Section 4.16.7);

- Impacts of increased vehicular trips (see section 4.12.7) and associated air quality impacts (see Section 4.14.9); and
- Impacts to the visual character of the land in the bundle (see section 4.15.7).

THE AUCTION WOULD ALSO AFFECT WATER USE AND WATER QUALITY

In addition, the EIR identifies changes that could occur to current consumptive use water contracts. Pacific Gas and Electric Company proposes to transfer more than 200,000 acre-feet of consumptive water rights to the new owners. Agreements with the Potter Valley Irrigation District, Placer County Water Agency, and Nevada Irrigation District account for over 90 percent of these 200,000 acre-feet of consumptive water use. The water contracts with these three agencies now support municipal, industrial, and agricultural uses. If the new owners do not renew these water contracts when they expire, this water could be used to support the consumptive water needs of about 1.3 million people elsewhere, possibly producing growth-inducing impacts. In addition, the water would no longer be available to its current users. The Potter Valley Irrigation District contract will expire in 2022. One Placer County Water Agency contract is known to expire in 2013, as will all the Nevada Irrigation District contracts. Current users would have their supply reduced or discontinued, if it were shifted to other users. This reduction in supply would have significant implications for downstream agricultural users and for water supply purveyors currently depending on this supply, and could support substantial growth elsewhere. In addition, water quality could be affected if streamflows were reduced in a way that was inconsistent with Basin Plans administered by the State Water Resources Control Board.

ALTERNATIVES ANALYZED IN DETAIL

1. No Project (A): Facilities are owned by Pacific Gas and Electric Company under CPUC regulation;
2. No Project (B): Facilities are owned by Pacific Gas and Electric Company as unregulated assets;
3. Proposed Pacific Gas and Electric Company Settlement: Facilities are owned by an unregulated affiliate of Pacific Gas and Electric Company, and certain restrictions are placed on the use of lands;
4. Proposed Settlement (Regulated): as above, only under CPUC regulation.
5. Bundled by River Basin: Assets are bundled by river basin rather than region.
6. Individual Bundles: Assets are offered only as Local Bundles, not as Regional Bundles;
7. Bundle Watershed Lands for Conservation: Watershed lands not required for generation are bundled separately and placed under conservation easements;
8. Decommissioning of Selected Facilities: Some facilities are not offered for sale but are decommissioned and removed; and
9. Environmental Composite Alternative. A combination of various environmentally beneficial components of several alternatives and specific mitigation concepts to reduce or avoid significant impacts.

MANY OF THE ALTERNATIVES TO THE AUCTION ARE ENVIRONMENTALLY SUPERIOR

In addition to assessing the potential impacts of the auction, the EIR studies and ranks a range of alternatives to determine whether different approaches could reduce or avoid the environmental problems the auction would cause. The EIR identifies 16 alternatives with the potential to meet most of the auction's objectives but that avoid or substantially lessen many of the auction's

significant adverse effects. The EIR evaluates nine of these alternatives in detail (see box). It also reviews seven "focused" alternatives more generally (see box next page). Details of the alternatives comparisons are provided in Tables S-2 and S-3. These tables are available separately for reference.

The EIR compared the environmental impacts of the alternatives to the impacts it concluded the auction would produce: two significant and unavoidable impacts, 47 significant, but mitigable, impacts, and no beneficial impacts. The EIR ranks alternatives according to how many of the auction's impacts the alternative would avoid, or reduce to a level of insignificance, or simply reduce by a certain amount. It is important to note that the ranking indicates how the alternatives compare to the auction, as CEQA requires. Thus, the analysis credits an alternative with achieving an improvement even when it produces a significant impact that requires mitigation, so long as the severity of that impact is less than the severity of the auction's impacts. However, this method of counting an alternative's improvements is not an effective measure for comparing alternatives with the environmentally superior No Project (A) alternative, which completely avoids all the auction's impacts.

The EIR concludes that nine of the sixteen alternatives (and focused alternatives) would be environmentally superior to the project. Notably, the alternative "No Project (A)," maintaining the facilities under the control of a regulated Pacific Gas and Electric Company, would avoid all of the auction's significant negative environmental effects. This alternative is the top-ranked alternative in the EIR. Most of the remaining superior alternatives would reduce or avoid some, but not all, of the impacts. One alternative would merely lessen the impact's intensity, but was still judged superior.

"FOCUSED" ALTERNATIVES EVALUATED IN LESS DETAIL

1. Single Owner (not Pacific Gas and Electric Company);
2 Bundles minus a single FERC Facility;
3. Partial/Interim Retention by Pacific Gas and Electric Company of Selected Facilities;
4. Environmental Enhancement;
5. Alternative Valuation;
6 Interim State Ownership; and
7. Alternate (Regulated) Ratemaking.

Of the alternatives that avoided or reduced only some impacts, the "Environmental Enhancement Alternative," Focused Alternative Four, achieved the best results. This alternative would avoid or reduce 31 of the auction's significant impacts, and result in 10 beneficial or neutral impacts. The Environmental Enhancement Alternative would preclude development of the land, eliminating timber harvesting, grazing and mining, increase flows in selected streams, and preserve many informal agreements allowing for maintenance of reservoir levels and recreational facilities, public access to land, continued collection and dissemination of data (for example, depth of snow packs), protection of cultural resources, maintenance of roadways, and other environmental management and stewardship programs. This alternative would also mitigate some of the hydroelectric facilities' existing effects by installing fish ladders and decommissioning selected facilities.

Focused Alternative Six, "Interim State Ownership" would avoid or reduce 39 of the auction's significant impacts but would have fewer beneficial or neutral results. This alternative would preclude development of the land, increase flows in selected streams and preserve many informal agreements related to maintenance of reservoir levels and public access to watershed lands. The Environmental Composite Alternative would avoid 35 impacts and result in four beneficial effects. Essentially, this alternative would achieve all the benefits of the Environmental Enhancement Alternative with the exception of installing fish ladders and decommissioning selected facilities.

Two other alternatives, based on the proposed settlement, fall lower in the alternatives ranking, but remain superior to the auction. In the proposed Pacific Gas and Electric Company settlement, there is no auction and the facilities are transferred to an unregulated affiliate of Pacific Gas and Electric Company. A variation of the proposed Pacific Gas and Electric Company settlement would follow the terms of the settlement but retain the facilities within Pacific Gas and Electric Company rather than transferring them to an unregulated affiliate. Both alternatives would increase streamflows and avoid adverse impacts to watershed land. The proposed settlement avoids or reduces 38 significant impacts from the project, while the retention version of the proposed settlement avoids or reduces 39 significant impacts. A more important distinction between them is that the proposed settlement raises market power concerns, which affect system reliability and air quality.

One alternative, "Bundle Lands for Conservation" avoids 22 of the auction's significant impacts, and has the potential to produce four beneficial or neutral impacts. As its name suggests, this alternative sells the watershed land separately to a buyer who will conserve them. As a result, it avoids impacts to the watershed land, but not to the rivers themselves.

Two other alternatives are superior to the auction, although they do not reduce as many impacts as the alternatives discussed above. Focused Alternative Three "Interim Retention" provides that Pacific Gas and Electric Company will retain some facilities until they are re-licensed by FERC. This alternative reduces the intensity of all the auction's impacts but does not avoid those impacts' effects. Alternative Five, "Bundle by River Basin," manages to reduce, but not avoid, two significant impacts of the auction. This alternative achieves this result by combining hydroelectric facilities that are on the same river into a single bundle, thus improving opportunities for co-ordination, and reducing unplanned spills of water. The other impacts would be the same as the auction under this alternative.

Environmental Topics Include:

4.1 Land Use
4.2 Forestry
4.3 Hydrology & Water Quality
4.4 Fisheries & Aquatic Biology
4.5 Terrestrial Biology
4.6 Recreation
4.7 Cultural Resources
4.8 Agriculture
4.9 Hazards & Hazardous Materials
4.10 Population, Housing & Employment
4.11 Public Services & Utilities
4.12 Transportation
4.13 Noise
4.14 Air Quality
4.15 Aesthetics
4.16 Geology, Soils & Mineral

Finally, five alternatives would produce impacts of roughly the same proportion as the auction. These alternatives are:

- Alternative 2, "No Project (B)" (the unregulated no project);
- Focused Alternative 1, "Single Owner, Not Pacific Gas and Electric Company;"
- Focused Alternative 2, "Bundles minus a Single Facility;"
- Focused Alternative 5, "Alternative Valuation;" and
- Focused Alternative 7, "Performance-Based Ratemaking, Regulated."

THE EIR'S ANALYSIS ALSO FINDS PROBLEMS WITH CALIFORNIA'S ELECTRICITY MARKETS

One interesting result of this study is what it reveals about California's electricity markets. California's extraordinary experience in the Summer of 2000 has produced concerns about the extent of anti-competitive behavior in energy markets. In addition, several parties in the CPUC's proceeding expressed concerns about the exercise of market power by new owners of hydroelectric facilities. As a result, the EIR includes a screening-level analysis to determine if, after the auction, a new owner would have the ability to exercise market power in a way that affects the environment. The EIR reviews some basic strategies for exercising market power to determine if those strategies would result in operations that differed significantly from the baseline, PowerMax, or WaterMax scenarios.

This study finds that a purchaser could amass market power by purchasing sufficient hydroelectric generation capacity. A purchaser could also amass market power by combining the purchase of hydroelectric units with the ownership of thermal plants. The EIR also finds—with certain caveats—that such market power could be exercised, and that the exercise of such market power could produce negative environmental effects by decreasing the supply and/or reliability of the electrical system during critical periods and by increasing air emissions. Some of the alternatives analyzed would also allow market power to be amassed, leading to similar environmental impacts.

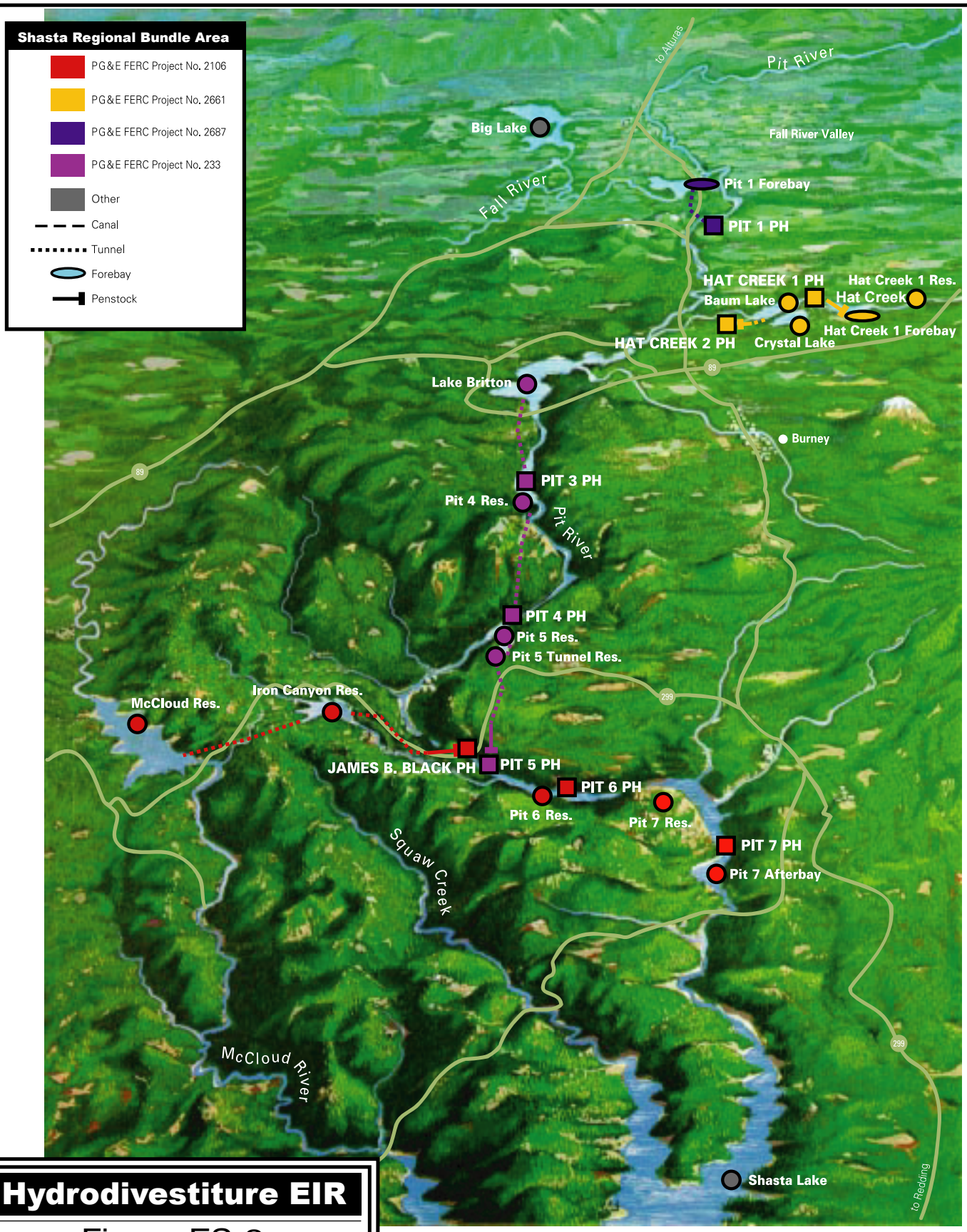
THE EIR IS CURRENTLY BEING CIRCULATED IN DRAFT FORM

The CEQA process is designed to inform the public of the environmental consequences of government decisions, and to ensure that public decision-making bodies make decisions with environmental consequences in mind. The process is designed to encourage participation by members of the public, by other agencies, and by organizations. The CPUC is seeking comments on the issues addressed in the EIR by circulating it for review and comment. The document released in November, 2000 is the Draft EIR. It is being circulated specifically to elicit comment. The CPUC will provide written responses to the comments it receives, and those responses, along with the Draft EIR, will become the Final EIR.

For more detailed information than what is presented in the Executive Summary, the reader should refer to information in the EIR itself. The EIR begins with a brief introduction of the project (Chapter 1), followed by two more detailed Chapters, the Project Description (Chapter 2) and the Approach to Environmental Analysis (Chapter 3). Chapter 4 presents the Environmental Analyses. CEQA Considerations (Chapter 5) contains the Cumulative Analysis and the Growth Inducement evaluation. Chapter 6 analyses alternatives to the project.

FOR ADDITIONAL INFORMATION PLEASE CHECK THE PROJECT WEBSITE

The Draft EIR and updates regarding the EIR process will be posted on the website at:
http://cpuc-pgehydro.support.net/

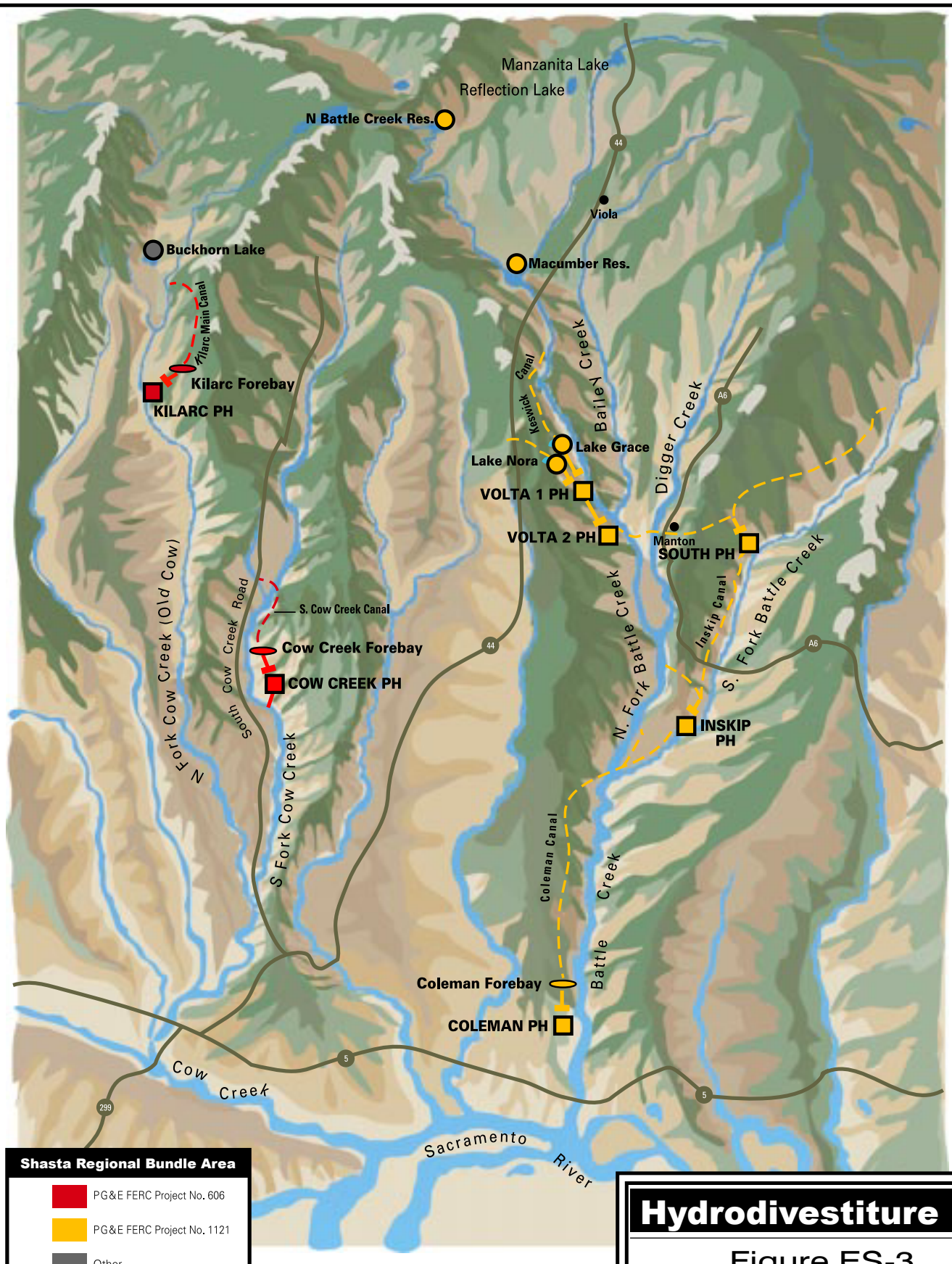


Hydrodivestiture EIR

Figure ES-2
Hydroelectric Developments on the Pit and McCloud Rivers and Hat Creek

Aspen Environmental Group

Source: Pacific Gas & Electric Company, August 2000.



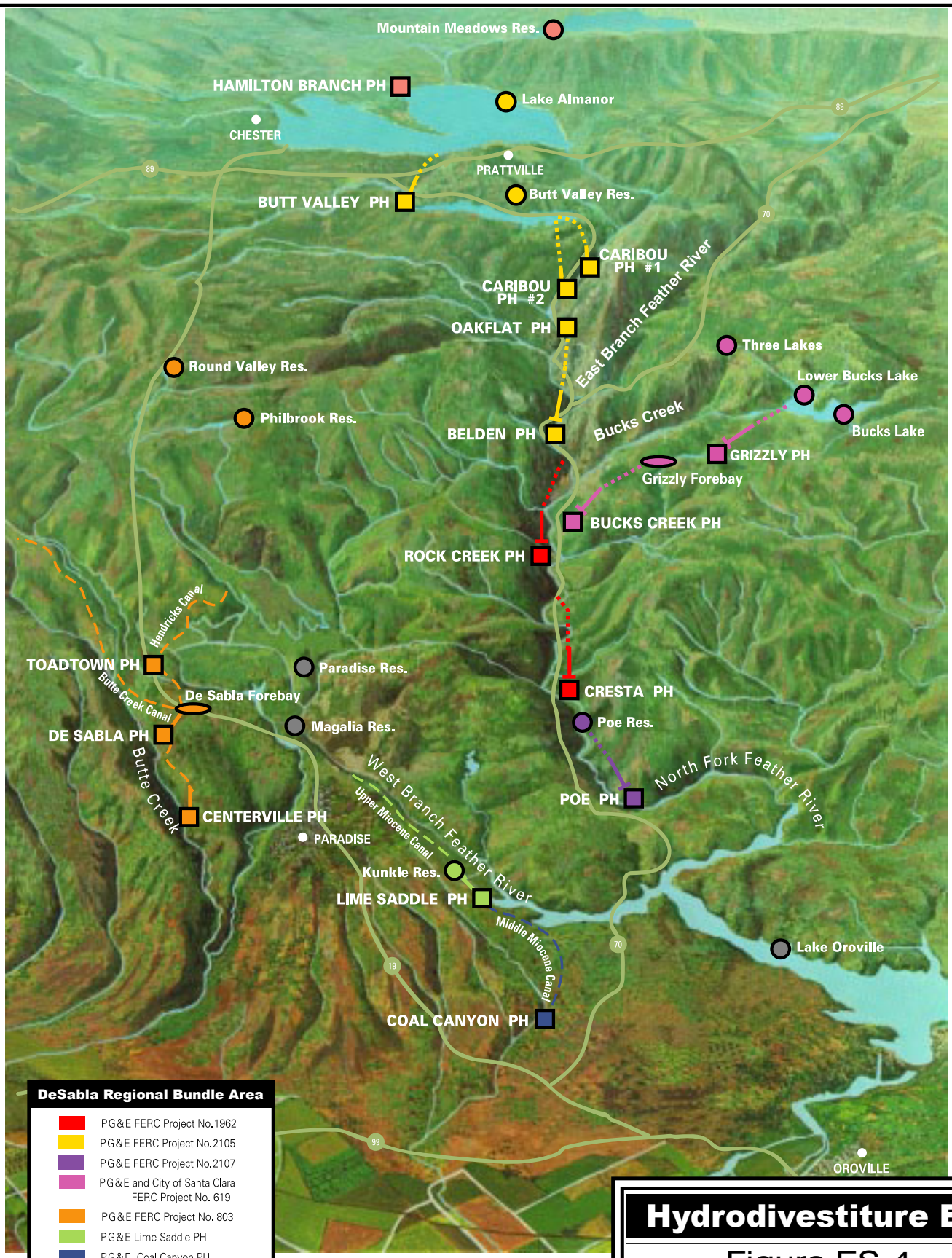
Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-3

Hydroelectric Developments on Cow and Battle Creeks

Aspen Environmental Group

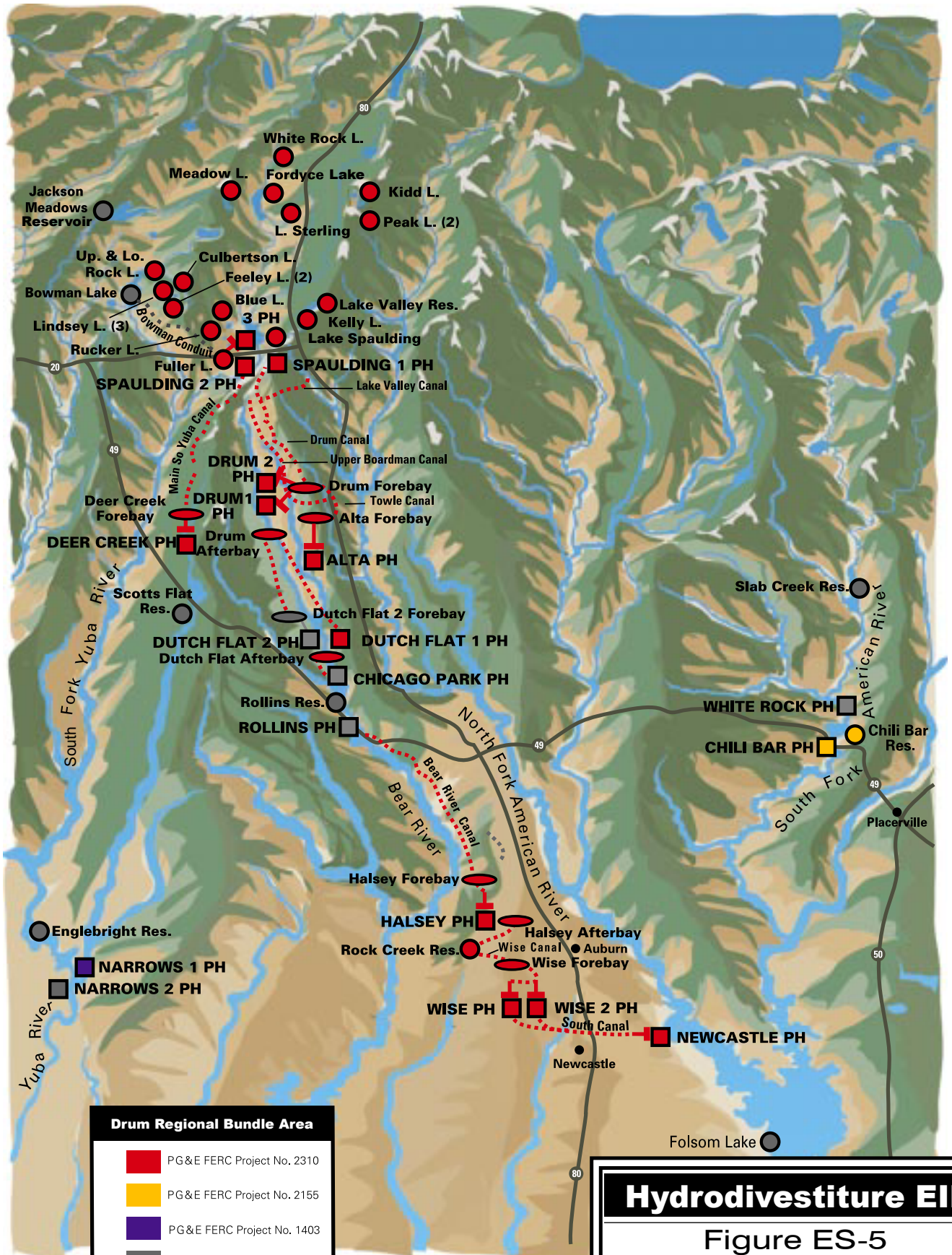


Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-4
Hydroelectric Developments on the Butte Creek and North Fork Feather River

Aspen Environmental Group



Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-5
Hydroelectric Developments on the Yuba, Bear, and American Rivers

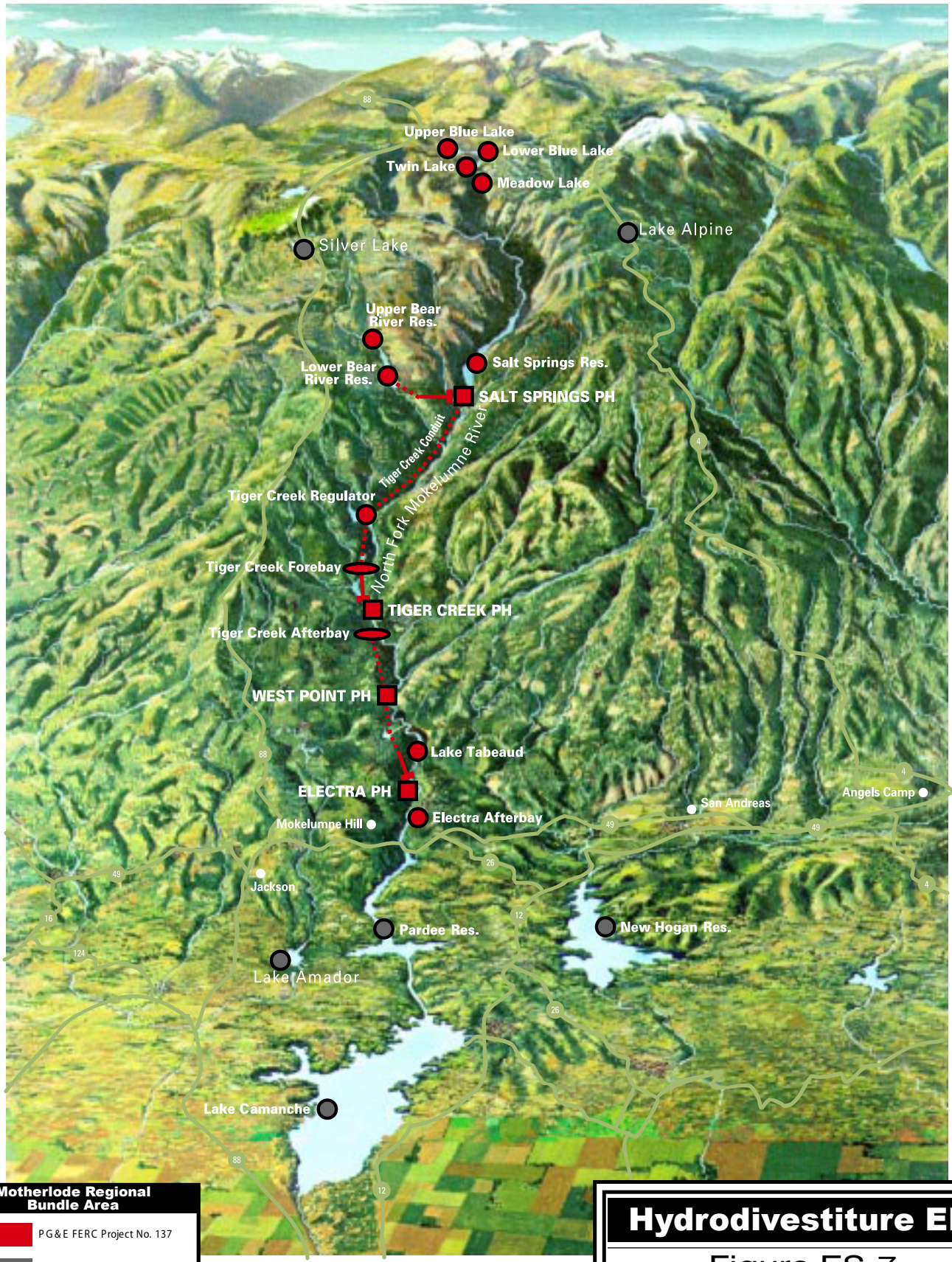
Aspen Environmental Group

Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-6
Hydroelectric Developments on the Eel River and East Fork of Russian River

Aspen Environmental Group



Motherlode Regional Bundle Area

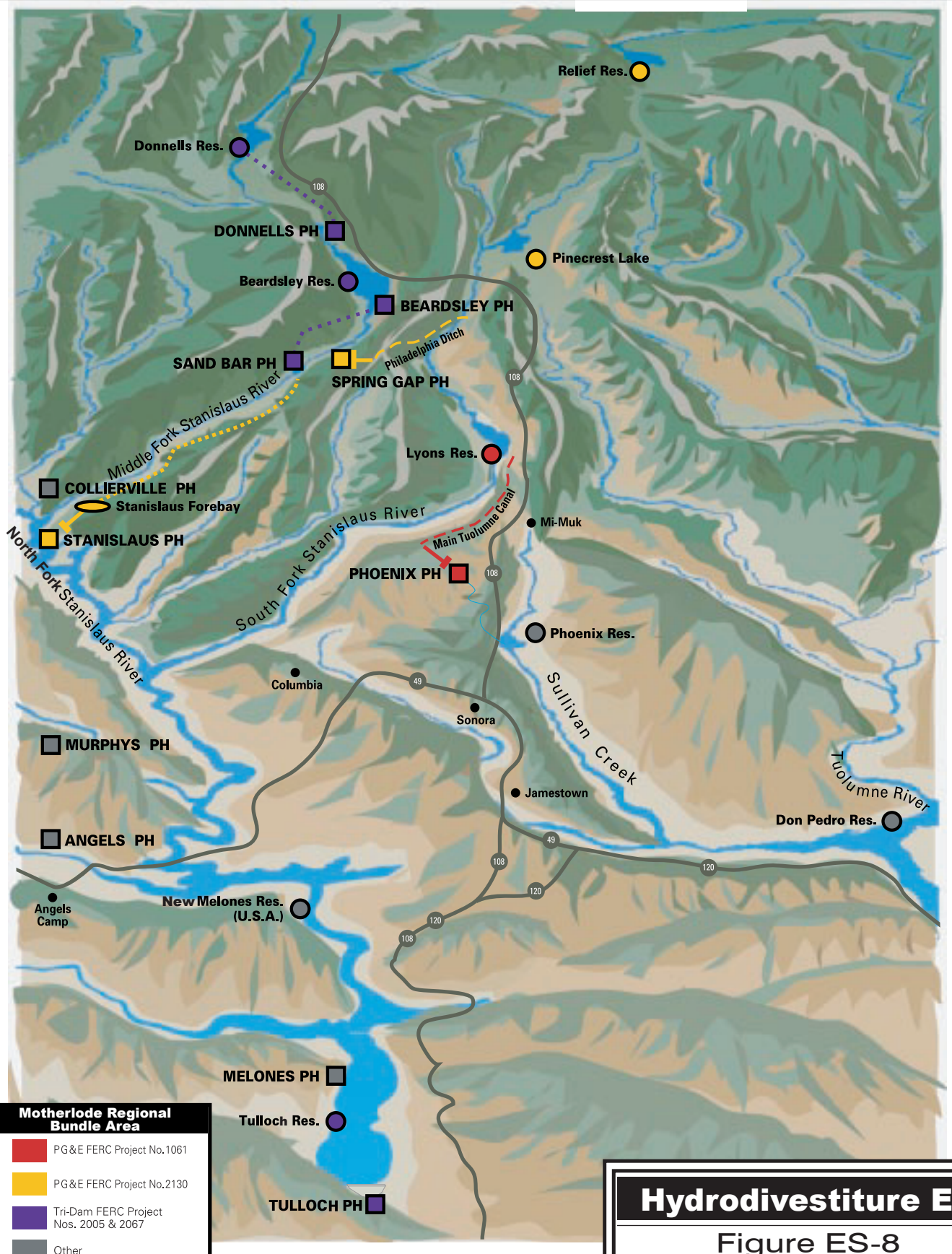
- PG&E FERC Project No. 137
- Other
- Canal
- Tunnel
- Forebay
- Penstock

Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-7
Hydroelectric Developments on the North Fork Mokelumne River

Aspen Environmental Group



Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-8
Hydroelectric Developments on the South, Middle and North Forks of Stanislaus

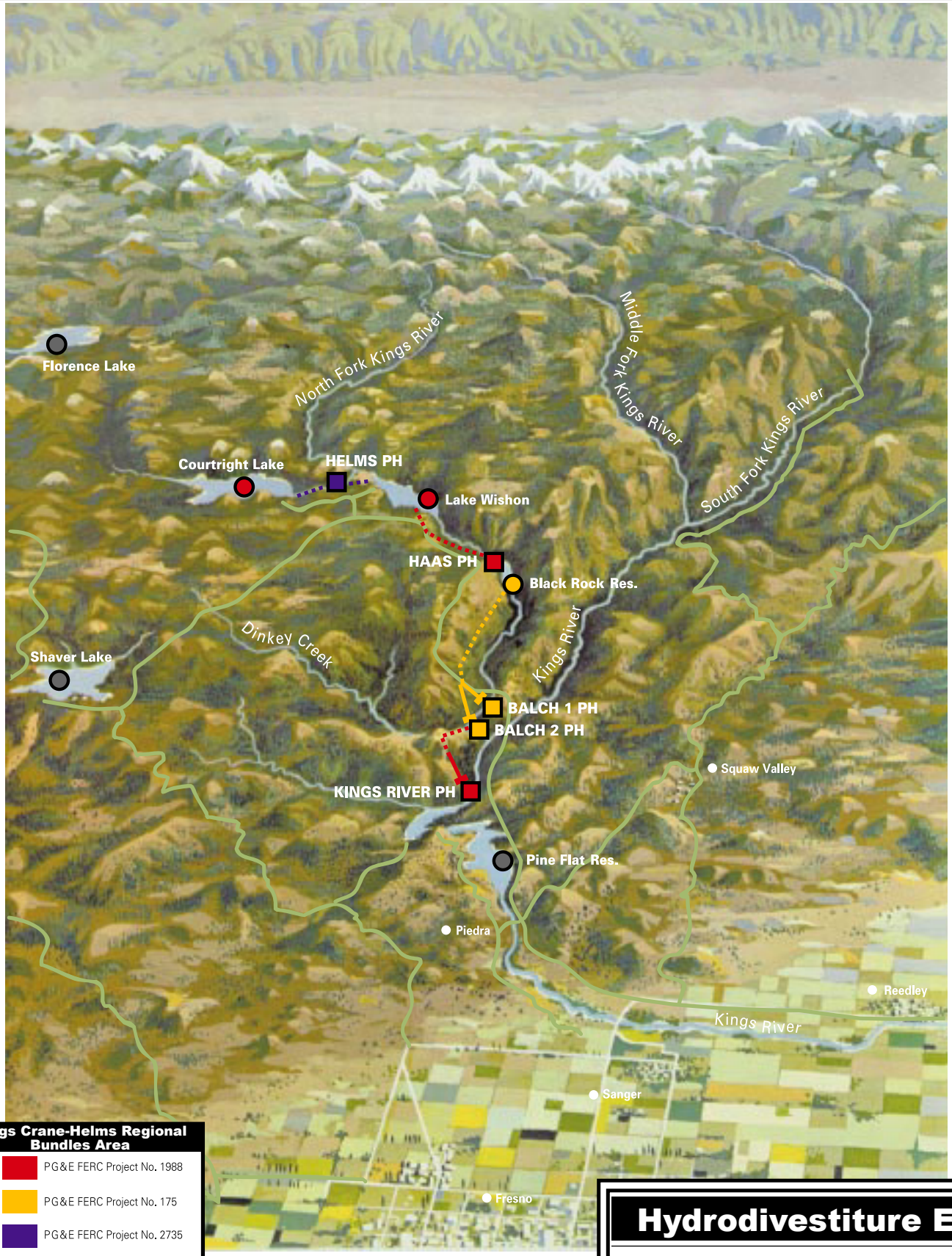
Aspen Environmental Group

Hydrodivestiture EIR

Figure ES-9
Hydroelectric Developments on the San Joaquin River

Aspen Environmental Group

Source: Pacific Gas & Electric Company, August 2000.



Source: Pacific Gas & Electric Company, August 2000.

Hydrodivestiture EIR

Figure ES-10

Hydroelectric Developments on the Kings River

Aspen Environmental Group

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
1. Land Use	Impact 1-1: New uses on project lands could be substantially incompatible with existing and planned adjacent uses.	Significant	**Mitigation Measures Identified in This Report** **Mitigation Measure 1-1:** Prior to or concurrent with the transfer of title for Local Bundles 1, 2, 4 through 8, 10 through 14, and 16 through 20, there shall be recorded against the Project Lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development on all or a portion of the parcels, as necessary to prevent the placement of new development where it could be incompatible with existing adjacent land uses.	Less than Significant
2. Forestry	Impact 2-1: The project could result in a reduction in regional forest inventories.	Less than Significant	None proposed.	Less than Significant
	Impact 2-2: The project may result in a decrease in productive timberlands.	Less than Significant	None proposed.	Less than Significant
3. Hydrology and Water Quality	Impact 3-1: The project could increase flood risk as a result of decreases in available reservoir storage due to changes in operations.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-1:** Prior to the transfer of title for the Mokelumne River Bundle (FERC 0137) and the Stanislaus River Bundle (FERC 2130), Pacific Gas and Electric Company shall prepare a High Flow Scheduling Plan acceptable to the CPUC that would be binding upon the new owner(s). The High Flow Scheduling Plan will document the steps necessary to ensure that the incidental flood control provided by the pertinent reservoirs under the baseline operation is maintained.	Less than Significant
	Impact 3-2: The project could alter geomorphology and reduce channel stability as a result of changes in high flows.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-2:** Prior to the transfer of title for the Upper North Fork Feather River bundle, the Bucks Creek bundle, the Mokelumne River bundle, or the Crane Valley bundle, Pacific Gas and Electric Company shall establish, in consultation with the Resources Agency, and in a manner satisfactory to the CPUC, maximum allowable migration limits or maximum deposition limits for geomorphically active and sensitive areas of the affected stream reaches identified	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			above. Prior to or concurrent with the transfer of title for these bundles, the new owner shall by binding written instrument, agree to monitor stream geomorphology and take counteractive measures as necessary to protect downstream sensitive areas. The monitoring program shall include cross section surveys in these reaches to establish a baseline condition for future comparison, a program for routine resurveying and monitoring to identify changes in channel form and bed and bank conditions, and a plan of action to modify operations if significant geomorphic changes are observed. The written instrument shall also specify that if operational changes fail to alleviate the geomorphic problems caused by the post-divestiture operations, physical measures to control erosion in eroding reaches or dredging of aggraded reaches shall be instituted.	
	Impact 3-3: The project could alter streamflows as a result of changes to the current program of cloud seeding.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-3:** Prior to or concurrent with the transfer of title for assets within the Motherlode or DeSabla bundles, the new owner shall, by binding written instrument, agree to continue Pacific Gas and Electric Company's current cloud seeding program or implement an enhanced program of cloud seeding.	Less than Significant
	Impact 3-4: The project could impair the development of long term and short term streamflow volume forecasts and flood flow forecasts as a result of the elimination or substantial reduction in the quantity or quality of cooperative gauging programs (including snow courses, and streamflow, lake level, and precipitation gauging).	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-4:** Prior to or concurrent with the transfer of title for any bundle, new owners shall by binding written instrument agree to assume Pacific Gas and Electric Company's current responsibilities for data collection and sharing agreements and arrangements with DWR, NWS, and USGS on a cooperative basis. The written instrument shall specify that the appropriate cooperating agency (i.e. DWR, NWS, or USGS) shall be consulted and grant approval prior to the modification or discontinuation of any existing cooperative gaging operations.	Less than Significant
	Impact 3-5: The project could reduce instream flows in bypass reaches to less than baseline flows, which could result in a significant impact on water quality,	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report**	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	inconsistent with the Basin Plan.		**Mitigation Measure 3-5:** Prior to or concurrent with the transfer of title of any bundles upstream of the impacted stream reaches identified in Tables 4.3-48 through 4.3-56, the new owner shall, by binding written instrument, agree to maintain flows in the impacted reaches at or above the long term minimum monthly averages determined in the OASIS baseline modeling, to the extent that natural streamflows equal or exceed this level. The new owner shall have the option to establish, in consultation with the California State Water Resources Control Board, and in a manner satisfactory to the CPUC, alternative minimum allowable streamflows that would ensure protection of the identified beneficial uses, consistent with the governing Basin Plan.	
	Impact 3-6: Project changes in reservoir operations and management could result in a significant impact on water quality inconsistent with the Basin Plan.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-6:** Prior to or concurrent with the transfer of title for any reservoir, the new owner shall by binding written instrument agree to ensure substantial compliance with the relevant Basin Plan for the reservoir and the downstream receiving waters.	Less than Significant
	Impact 3-7: Project changes in timber harvest practices or extent could result in a significant impact on water quality inconsistent with the Basin Plan.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-7:** Specific mitigations contained in the California Forest Practice Rules that should be applied to logging on current Pacific Gas and Electric Company lands include: • Restrictions on cutting trees and use of equipment adjacent to watercourses • Restrictions on winter operations • Requirements for installing and spacing of waterbreaks on skid trails and roads • Restrictions on the construction and removal of watercourse crossings • Restrictions on the type of logging equipment that can be used on steep	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			slopes and erosion hazard areas	
	Impact 3-8: Construction activities associated with development of Project Lands would involve earthmoving activities that could affect receiving water quality through increased sedimentation.	Less than Significant	**Mitigation Measures Proposed as Part of the Project** **Mitigation Measure 3-8:** Obtain and comply with the requirements of the General Construction Activity Stormwater Permit. **Mitigation Measures Identified in This Report** None proposed.	Less than Significant
	Impact 3-9: The project could result in land development that could affect water quality through increases in urban pollutants in stormwater runoff and septic system use.	Significant	**Mitigation Measures Proposed as Part of the Project** **Mitigation Measure 3-9:** Developers would be required to implement applicable requirements and standards established under the Federal and State NPDES urban stormwater runoff water quality programs where such regulations are implemented by the local jurisdiction. In addition, they would be required to install and operate septic systems and alternative wastewater systems in accordance with local requirements. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-9a:** Where NDPES stormwater management programs developed in accordance with current regulations have not been established by the jurisdiction with land development approval authority, or where the intensity or location of land development is determined by the local approving authority to present minimal threat to water quality, prior approval of new land use development projects, the applicant shall consult with the local planning authority to identify appropriate urban stormwater runoff Best Management Practices (BMPs) to be incorporated into project design to manage the quality of runoff from the proposed development. BMPs that may be used could include, but would not be limited to, those described in the California Stormwater Management Task Force Best Management Practices Handbook, the Bay Area Stormwater Management Agencies Associates (BASMAA) Design Guidance Manual, or other recommendations of the local jurisdiction. Monitoring of the effectiveness of stormwater quality controls shall be implemented as directed by the local approving authority. **Mitigation Measure 3-9b**: Where local jurisdictions have identified the need for improved septic and alternative wastewater system installation, monitoring, inspection, or siting requirements to minimize further water quality degradation, prior to approval of land use changes, the new owner or its successor-in-interest shall consult with the local jurisdiction during initial project design to identify the appropriate wastewater system design features, taking into account local hydrogeologic and soils conditions. If site-specific soils or hydrogeologic	Implementation of Mitigation Measures 3-9a and 3-9b would result in the impact being *less than significant.* Implementation instead of Alternative Mitigation Measure 3-9c would eliminate the significant impact altogether.

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			conditions cannot support adequate septic or alternative wastewater systems, other methods of wastewater collection, conveyance, and treatment shall be identified and used. **Alternate Mitigation Measure 3-9c*:*** Prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the Project Lands within the bundle, conservation easements running with the land (in a form and substance approved by the CPUC) precluding any further land use development on such Project Lands.	
	Impact 3-10: The project could result in changes in reservoir sediment management practices which could result in a significant impact on water quality, inconsistent with the Basin Plan.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 3-10**: Pacific Gas and Electric Company shall document all existing reservoir sediment management practices at Company facilities including information about the frequency, timing, and extent of current practices, the relevant regulations governing sediment management, and the history of past water quality problems resulting from sediment management at Company facilities. Prior to or concurrent with the transfer of title for any bundle, new owners shall, by binding written instrument, agree to become familiar with existing sediment management practices of the Company and to develop and enact sediment management plans to prevent significant water quality impacts within and downstream of all facilities.	Less than Significant
4. Fisheries and Aquatic Biology	Impact 4-1: Instream flow reductions within natural channels as a result of a new owner(s) operation of Pacific Gas and Electric Company's hydroelectric facility assets could adversely affect fishery and aquatic resources, especially special status species, through habitat or water quality degradation.	Significant	**Mitigation Measures Proposed as Part of the Project** Within the PEA (Pacific Gas and Electric Company, 1999a), Pacific Gas and Electric Company does not provide specific mitigation measures for each FERC and non-FERC licensed facility as part of the sale of hydroelectric assets to a new owner. Instead, Pacific Gas and Electric Company states that because a new owner will be required to operate according to existing agreements, and will be subject to environmental and resource regulations and directives in the same way that Pacific Gas and Electric Company is and has been, that aquatic resources will be protected. Pacific Gas and Electric Company offers to assist a new owner in understanding aquatic resource issues at each project, by providing the new owner with all non-privileged informational materials in its possession related to sensitive biological resources. Additionally, Pacific Gas and Electric Company proposes to transfer its BMPs to a new owner to provide guidance on procedures for complying with license conditions and applicable laws.	The identified significant impacts in the Shasta, DeSabla, Motherlode, and Kings Crane-Helms regional bundles, and South Yuba-Bear (Bundle 11)

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			Mitigation Measures Identified in This Report Prior to or concurrent with the transfer of title for any facility within the Shasta, DeSabla, Drum, Motherlode, or Kings Crane-Helms Regional Bundles, formalization of the informal agreements/operating practices or additional conditions detailed in the Bundle mitigation measures discussions below that pertain to the release of water into natural stream channels and/or to the maintenance of instream flows shall by written instrument be made binding upon the new owner. **Mitigation Measure 4-1a:** Prior to or concurrent with the transfer of title for the Pit River Bundle and in order to provide rearing habitat for coldwater fisheries and hardhead, the new owner shall by binding written instrument agree to maintain an interim minimum flow schedule for the McCloud River below Lake McCloud as follows: (1) 430 cfs in an Above Normal water year and 129 cfs in a Below Normal water year during the months of April and May; (2) 184 cfs from June through September in all water year types as measured in the McCloud River below Lake McCloud. These flows shall remain in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of the interim flows combined with consultation with the appropriate agencies and adoption of minimum instream flows will reduce this significant impact to a less than significant level. **Mitigation Measure 4-1b:** Prior to or concurrent with the transfer of title for Bundle 5, and in order to provide suitable April-May and October-November habitat for spawning resident rainbow and brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum flow in Below Normal water years of 21 cfs in the months of April and May and 53 cfs during the months of October through November in Hamilton Branch. These flows shall be in effect until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s)	within the Drum Regional Bundle, will be reduced to *less than significant* if the proposed mitigation measures are implemented (Table 4.4-50). Within the Drum Regional Bundle, mitigation to the less than significant level is not feasible for the Narrows Project (Bundle 9) or Potter Valley Project (Bundle 10) due to constraints involving State and Federally listed salmonids. As a result, the project could have *significant unavoidable*

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of the interim flows combined with consultation with the appropriate agencies and adoption of minimum instream flows will reduce this significant impact to a less than significant level. **Mitigation Measure 4-1c:** Prior to or concurrent with the transfer of title for Bundle 6, and in order to provide October-November spawning habitat for brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum instream flow of 82 and 64 cfs in Above and Below Normal water years respectively as measured below Oak Flat Powerhouse during the months of October and November until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of the interim flows combined with consultation with the appropriate agencies and adoption of minimum instream flows will reduce this significant impact to a less than significant level. **Mitigation Measure 4-1d:** Prior to or concurrent with the transfer of title for the Butte Creek Bundle, and in order to ensure adequate holding, spawning, and rearing habitat for State and Federally listed threatened spring-run chinook salmon and steelhead, the new owner, in a manner consistent with Pacific Gas and Electric Company's current informal operation, shall by binding written instrument agree to maintain a minimum 40 cfs flow below the Lower Centerville Diversion Dam year-round. Implementation of this mitigation measure will reduce this significant impact to a less than significant level. **Mitigation Measure 4-1e:** Prior to or concurrent with the transfer of title for the Butte Creek Bundle, and in order to ensure adequate year-round habitat for resident rainbow trout and brown trout, the new owner shall, in a manner consistent with Pacific Gas and Electric Company's current informal operation, by binding written instrument agree to release water into the West Branch Feather River below the Upper Miocene Diversion Dam at the level currently provided informally by Pacific Gas and Electric Company, which level shall be established by Pacific Gas and Electric Company in a manner satisfactory to the CPUC.	*unavoidable impacts* to fisheries resources in the streams and rivers associated with them (Table 4.4-50).

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			Mitigation Measure 4-1f: Prior to or concurrent with the transfer of title for the North Yuba River, and in order to provide adequate habitat for chinook and steelhead, the new owner shall by binding written instrument agree to maintain the following interim flows: • From the Narrows 1 and 2 Powerhouses tailrace to the confluence with Deer Creek for the months of October through December, the minimum flows shall be 1,868 cfs in Above Normal water years and 957 cfs in Below Normal water years. • In the Yuba River below the confluence with Deer Creek for the months of October through December, the minimum flows shall be 2,644 cfs in Above Normal water years and 799 cfs in Below Normal water years. These interim measures shall be in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new minimum instream flows. Implementation of the interim flows combined with consultation with the appropriate agencies and adoption of minimum instream flows will reduce the number of instances in which project operations would affect listed salmonids; however, it will not eliminate significant impacts because the details of future operations and their relationship to baseline is poorly understood. For this reason it is necessary to classify this significant impact as significant and unavoidable, because with the implementation of the recommended minimum flow schedule, there remains some potential for significant impacts. **Mitigation Measure 4-1g:** Prior to or concurrent with the transfer of title for the Potter Valley Bundle, and in order to provide suitable flows, the new owner shall, by binding written instrument, agree to maintain the interim flow schedule as developed and currently voluntarily implemented by Pacific Gas and Electric Company (Reid 1999) until such time as FERC amends the Potter Valley license establishing a permanent and new flow schedule. By requiring that the interim schedule be maintained until such time that FERC issues an order amending the license, the potentially significant impact to the migration and spawning of chinook and steelhead and juvenile chinook and	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			steelhead outmigration, will be reduced to less than significant. **Mitigation Measure 4-1h:** Prior to or concurrent with the transfer of title for the Potter Valley Project, and in order to provide suitable flows for steelhead rearing habitat between Scott and Cape Horn dams, the new owner shall by binding written instrument agree to maintain an interim minimum flow of 140 cfs between Scott and Cape Horn dams between June 1 and September 30. This agreement shall remain in place until such a point that the license is amended by FERC as discussed in Mitigation Measure 4-1g. By requiring that the interim schedule be maintained until such time that FERC issues an order amending the license, the significant impact to rearing steelhead will be reduced to less than significant. **Mitigation Measure 4-1i:** The new owner shall, by binding written instrument, agree to maximize releases from the surface of Lake Pillsbury when the water is available (above the crest of Scott Dam) and when the temperature of this water would be beneficial in triggering the outmigration of juvenile chinook. Such releases will be made to the best of the new owner's ability upon receiving a written request for this action from CDFG. Implementation of this mitigation measure will reduce this significant impact to the delay in migration to a level considered less than significant. **Mitigation Measure 4-1j:** No mitigation is feasible. Reduction of instream flows in the East Branch Russian River below those provided under baseline conditions could result in significant impacts to aquatic resources. According to the modeling, a significant reduction of instream flows by a new owner could occur in the East Branch Russian River during the trout rearing season. This is not expected to be an impact to the recreational fishery supported by CDFG. However, it would result in a significant impact to the resident native rainbow trout and non-salmonid species. Successful mitigation would require an increase in diversions from the Eel River. Because there are Federally listed species in the Eel River Basin, any increase in diversion away from this basin would lead to significant impacts to these species. For this reason, it is not possible to mitigate for the reduction in streamflows in the East Branch Russian River as a result of a new owners operations of Pacific Gas and Electric Company's Potter Valley Project. Therefore, this significant impact is considered significant and unavoidable. **Mitigation Measure 4-1k:** Prior to or concurrent with the transfer of title for the South Yuba River Bundle, and in order to provide spawning habitat for brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum flow of 94 or 42 cfs in Above and Below Normal water years respectively, as measured below Fordyce Lake during the months of October and November	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure will reduce this significant impact to a level considered less than significant. **Mitigation Measure 4-1l:** Prior to or concurrent with the transfer of title for the South Yuba River Bundle, and in order to provide spawning habitat for brown trout, the new owner shall by binding written instrument agree to maintain the following interim minimum flow schedule as measured below Jackson Meadows Reservoir: • Between April 1 and May 31 a minimum instream flow of 215 cfs in Above Normal water years and 84 cfs in Below Normal water years; • Between June 1 and September 30 a minimum instream flow of 175 cfs in Above Normal water years and 39 cfs in Below Normal water years; • Between October 1 and November 30 a minimum instream flow of 93 cfs in all water year types. This flow schedule shall remain in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow agreement. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure will reduce this significant impact to a level considered less than significant. **Mitigation Measure 4-1m:** Prior to or concurrent with the transfer of title for the Mokelumne River Bundle, and in order to provide rearing and spawning habitat for resident rainbow trout and spawning brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum flow of 119 and 39 cfs in	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			Above and Below Normal water years respectively, for the months of June through September. Additionally, a flow of 37 or 12 cfs in Above and Below Normal water years respectively, shall be released in the months of October and November. This schedule shall remain in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure will reduce this significant impact to a level considered less than significant. **Mitigation Measure 4-1n:** Prior to or concurrent with the transfer of title for the Mokelumne River Bundle, and in order to provide rearing and spawning habitat for resident rainbow trout and spawning brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum instream flow of 35 cfs between April 1 and September 30 as measured below Lower Bear Reservoir in all water year types. This schedule shall remain in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure will reduce this significant impact to a level considered less than significant. **Mitigation Measure 4-1o:** Prior to or concurrent with the transfer of title for the Mokelumne River Bundle, and in order to provide rearing and spawning habitat for resident rainbow trout and spawning brown trout, the new owner shall by binding written instrument agree to maintain the following interim minimum flows between October 1 and November 30 at the specified locations: • Below the tailrace of the Salt Springs #1 Powerhouse, a flow of 58 cfs in Above Normal water years and 35 cfs in Below Normal water years; • Below the Bear River, a 130 cfs flow in Above Normal water years and 51 cfs	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			flow in Below Normal water years; • Below Panther Creek, a 134 cfs flow in Above Normal water years and 55 cfs flow in Below Normal water years; • Below the Tiger Creek Afterbay, a 116 cfs flow in Above Normal water years and 22 cfs flow in Below Normal water years; • Below the Electra Powerhouse Discharge, a 607 cfs flow in Above Normal water years and 486 cfs flow in Below Normal water years; All minimum flows will be measured at the upstream end of the respective stream reach. This schedule shall remain in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of the minimum flows in this mitigation measure will reduce these significant impacts to a level considered less than significant. **Mitigation Measure 4-1p:** Prior to or concurrent with the transfer of title for the Stanislaus River Bundle, and in order to provide fall spawning habitat for brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum 27 cfs instream flow as measured below Relief Reservoir between October 1 and November 30 until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure would reduce the significant impact to a level considered less than significant. **Mitigation Measure 4-1q:** Prior to or concurrent with the transfer of title for the Stanislaus River Bundle, and in order to provide rearing and spawning habitat for	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			spawning rainbow and brown trout, the new owner shall by binding written instrument agree to maintain the following interim minimum flows from the Spring Gap Powerhouse discharge to the confluence with South Fork Stanislaus River: • In April and May, the minimum flows shall be 391 cfs regardless of water year type (based on WUA provided under baseline conditions); • In October and November, the minimum flows shall be 158 cfs in all water year types (based on WUA provided under baseline conditions). All minimum flows will be measured at the upstream end of the respective stream reach. This schedule shall remain in place until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure would reduce the significant impact to a level considered less than significant. **Mitigation Measure 4-1r:** Prior to or concurrent with the transfer of title for the Stanislaus River Bundle, and in order to provide fall spawning habitat for brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum flow of 61 cfs below Pinecrest Reservoir during the months of October and November until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure will reduce the significant impact to a level considered less than significant. **Mitigation Measure 4-1s:** Prior to or concurrent with the transfer of title for the Stanislaus River Bundle, and in order to provide fall spawning habitat for brown trout, the new owner shall by binding written instrument agree to maintain an interim minimum flow of 15 cfs in the river below Lyons Reservoir during the	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			months of October and November until consultation and agreement with appropriate resource agencies results in a new binding minimum instream flow. The new owner, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, shall perform an instream flow analysis and develop appropriate minimum flows that balance the protection of the stream section's fisheries resources with hydroelectric operations. The interim flow(s) identified above shall remain in effect until the new owner and resource agencies develop a binding agreement implementing the new instream flows. Implementation of this mitigation measure will reduce the significant impact to a level considered less than significant. **Mitigation Measure 4-1t:** Prior to or concurrent with the transfer of title for the Crane Valley Bundle, and in order to ensure protection of aquatic and fisheries habitat, the new owner, in a manner consistent with Pacific Gas and Electric Company's current informal practice, shall by binding written instrument agree to maintain a minimum 1 cfs flow below the Crane Valley Reservoir Dam year-round and 4 cfs or natural inflow (whichever is less) below Browns Creek Diversion Dam. Implementation of this mitigation measure would reduce the significant impact to a level considered less than significant.	
	Impact 4-2: Changes in the timing, magnitude, duration and frequency of reservoir levels as a result of new owner operation of Pacific Gas and Electric Company's hydroelectric facility assets could adversely affect fishery and aquatic resources, especially special-status species, through habitat or water quality degradation.	Significant	**Mitigation Measures Proposed as Part of the Project** Within the PEA, Pacific Gas and Electric Company does not provide specific mitigation measures for each FERC and non-FERC licensed project as part of the sale of hydroelectric assets to a new owner. Instead, Pacific Gas and Electric Company states that because a new owner will be required to operate according to existing agreements, and will be subject to environmental and resource regulations and directives in the same way that Pacific Gas and Electric Company is and has been, that aquatic resources will be protected. Pacific Gas and Electric Company offers to assist a new owner in understanding aquatic resource issues at each project, by providing the new owner with all non-privileged informational materials in its possession related to sensitive biological resources. Additionally, Pacific Gas and Electric Company proposes to transfer its BMPs to a new owner to provide guidance on procedures for complying with license conditions and applicable laws. **Mitigation Measures Identified in This Report** **Mitigation Measure 4-2a:** Prior to or concurrent with the transfer of title for the Pit River Bundle, and in order to provide adequate rearing habitat for rainbow, brook, and brown trout, the new owner shall by binding written instrument agree to maintain an interim cumulative (May through October) storage of at least 74,000 af	Less than significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			at Iron Canyon Reservoir in all water year types. This interim measure will remain in place until consultation and agreement with appropriate resource agencies results in new binding minimum pool levels. Where appropriate, a new owner shall perform, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, reservoir pool analysis and recommend appropriate minimum pool levels, which balance the protection of the reservoir's fisheries resources with hydroelectric development. The interim minimum pool level(s) identified above shall remain in effect until the new licensee and resource agencies either develop a binding agreement or reach an understanding, which results in a submitted recommendation to FERC, and FERC issuance of an Order amending the project license. **Mitigation Measure 4-2b:** Prior to or concurrent with the transfer of title for the Upper North Fork Feather River Bundle, the new owner, in a manner consistent with Pacific Gas and Electric Company's current informal operation, shall by binding written instrument agree to hold Lake Almanor above 800,000 af until September 1 of all years (except for dry and critically dry years), as well as maintain a minimum end-of-year reservoir storage volume carryover of 650,000 af. **Mitigation Measure 4-2c:** Prior to or concurrent with the transfer of title for the Bucks Creek Bundle, the new owner, in a manner consistent with Pacific Gas and Electric Company's current informal operation, shall by binding written instrument agree to maintain in Bucks Lake a minimum end-of-year reservoir storage volume carryover of 45,000 af. **Mitigation Measure 4-2d:** Prior to or concurrent with the transfer of title for the Potter Valley Bundle, and in order to provide suitable rearing habitat for resident salmonid species, the new owner shall by binding written instrument agree to maintain the following interim cumulative (May through October) storage volumes. These interim measures will remain in place until consultation and agreement with appropriate resource agencies results in new binding minimum pool levels. • Maintain minimum cumulative storage of 77,330 af for Lake Pillsbury for the months of May through October in a wet year; • Maintain minimum cumulative storage of 35,920 af for Lake Pillsbury for the months of May through October in a below normal year; Where appropriate, a new owner shall perform, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, reservoir pool analysis and recommend appropriate minimum pool levels, which balance the protection of the reservoir's fisheries resources with hydroelectric development. The interim minimum pool level(s) identified above shall remain in effect until the	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			new licensee and resource agencies either develop a binding agreement or reach an understanding, which results in a submitted recommendation to FERC, and FERC issuance of an order amending the project license. **Mitigation Measure 4-2e:** Prior to or concurrent with the transfer of title for the South Yuba River Bundle, and in order to provide suitable rearing habitat for resident salmonid species, the new owner shall by binding written instrument agree to maintain the following interim cumulative (May through October) storage volumes. These interim measures will remain in place until consultation and agreement with appropriate resource agencies results in new binding minimum pool levels. • Maintain minimum cumulative storage of 318,000 af for Jackson Meadows Reservoir for the months of May through October in all water year types; • Maintain minimum cumulative storage of 315,000 af for Bowman Lake for the months of May through October in all water year types; • Maintain minimum cumulative storage of 193,000 af for Fordyce Lake for the months of May through October in all water year types; • Maintain minimum cumulative storage of 292,000 af in Above Normal water years and 274,000 af in Below Normal water years for Rollins Reservoir for the months of May through October. Where appropriate, a new owner shall perform, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, reservoir pool analysis and recommend appropriate minimum pool levels, which balance the protection of the reservoir's fisheries resources with hydroelectric development. The interim minimum pool level(s) identified above shall remain in effect until the new licensee and resource agencies either develop a binding agreement or reach an understanding, which results in a submitted recommendation to FERC, and FERC issuance of an order amending the project license. **Mitigation Measure 4-2f:** Prior to or concurrent with the transfer of title for the Mokelumne River Regional Bundle, and in order to provide rearing habitat for resident salmonid species, the new owner shall by binding written instrument agree to maintain an interim cumulative (May through October) storage of at least 618,000 af in Above Normal water years and 567,000 af in Below Normal water years at Salt Springs Reservoir. This interim measure will remain in place until consultation and agreement with appropriate resource agencies results in new binding minimum pool levels.	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			Where appropriate, a new owner shall perform, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, reservoir pool analysis and recommend appropriate minimum pool levels, which balance the protection of the reservoir's fisheries resources with hydroelectric development. The interim minimum pool level(s) identified above shall remain in effect until the new licensee and resource agencies either develop a binding agreement or reach an understanding, which results in a submitted recommendation to FERC, and FERC issuance of an Order amending the project license. **Mitigation Measure 4-2g:** Prior to or concurrent with the transfer of title for the Mokelumne River Regional Bundle, and in order to provide suitable rearing habitat for salmonid species, the new owner shall by binding written instrument agree to maintain an interim cumulative (May through October) storage of at least 78,000 af at Strawberry Reservoir in all water year types. This interim measure will remain in place until consultation and agreement with appropriate resource agencies results in new binding minimum pool levels. Where appropriate, a new owner shall perform, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, reservoir pool analysis and recommend appropriate minimum pool levels, which balance the protection of the reservoir's fisheries resources with hydroelectric development. The interim minimum pool level(s) identified above shall remain in effect until the new licensee and resource agencies either develop a binding agreement or reach an understanding, which results in a submitted recommendation to FERC, and FERC issuance of an Order amending the project license. **Mitigation Measure 4-2h:** Prior to or concurrent with the transfer of title for the Kings Crane-Helms Regional Bundle, and in order to provide rearing habitat for salmonid species, in particular kokanee salmon, and warmwater species, including centrarchids, largemouth bass, spotted bass, and black crappie, the new owner shall by binding written instrument agree to maintain an interim cumulative (May through October) storage of at least 179,000 af at Bass Lake in all water year types. This interim measure will remain in place until consultation and agreement with appropriate resource agencies results in new binding minimum pool levels. Where appropriate, a new owner shall perform, in consultation with State and Federal resource agencies, and in a manner satisfactory to the CPUC, reservoir pool analysis and recommend appropriate minimum pool levels, which balance the protection of the reservoir's fisheries resources with hydroelectric development. The interim minimum pool level(s) identified above shall remain in effect until the new licensee and resource agencies either develop a binding agreement or reach an understanding, which results in a submitted recommendation to FERC, and FERC issuance of an Order amending the project license.	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
5. Terrestrial Biology	Impact 5-1: The project may result in adverse effects to wildlife and plant species listed and proposed for listing under the Federal Endangered Species Act and/or the California Endangered Species Act.	Significant	**Mitigation Measures Proposed as Part of the Project** No proposed mitigation was presented in the PEA for terrestrial biological resources. **Mitigation Measures Identified in This Report** **Mitigation Measure 5-1a:** Prior to or concurrent with the transfer of title for the pertinent bundles, the informal agreements/non-binding operating practices listed below shall by written instrument be made binding upon the new owner. • Pacific Gas and Electric Company voluntarily makes a minimum flow release of 200 cfs from the Pit 1 Powerhouse tailrace into the Pit River at all times of the year, per the request of CDFG, USFWS, and SWRCB. • Pacific Gas and Electric Company has committed to CDFG to release flushing flows from Pit 1 Dam two to three times a year to flush vegetation out of the Fall River Pond. • Pacific Gas and Electric Company constructed and maintains a fence to keep cattle off project levees on the south side of Big Lake, per an agreement with CDFG, CDF, and USFWS. • At Iron Canyon Reservoir, Pacific Gas and Electric Company informally maintains the reservoir at a level sufficient to make the Big Bend community boat ramp operational. This agreement also benefits biological resources since reservoir levels would be more stabilized allowing for shoreline emergent wetland vegetation to establish. • Pacific Gas and Electric Company currently has an informal agreement with CDFG which allows CDFG to conduct surveys for Shasta crayfish in the upper Tule River and Pit River associated with the Pit 1 project. This survey work is considered to be crucial in the recovery efforts for the species. • Pacific Gas and Electric Company is an active participant in the Lower McCloud Coordinated Resource Management Project (CRMP). A new owner would be expected to take over the responsibilities currently held by Pacific Gas and Electric Company as a member of the CRMP. • Pacific Gas and Electric Company is a participant in the Pit River Interagency Bald Eagle Management Plan and is currently implementing the mitigation	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation

			measures prescribed in this plan.
			
			Mitigation Measure 5-1b: Prior to the transfer of title for any bundle, Pacific Gas and Electric Company shall demonstrate that the new owner has received and reviewed the existing Best Management Practices (BMPs) of Pacific Gas and Electric Company for that particular bundle as noted in the preceding section, and the new owner shall either (1) commit in writing to adhere to those pertinent existing BMPs or (2) submit to the CPUC for its review and approval, and obtain approval of, substitute Best Management Practices that are protective of the environment to an equal or greater degree then Pacific Gas and Electric Company's existing BMPs.
			
			Mitigation Measure 5-1c: Prior to approval of any land use development change, timber harvest plan or additional mineral extraction activities on the Project Lands, the new owner shall undertake the following process:
			• Coordinate with the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG) and, when applicable, the United States Forest Service (USFS) and/or Bureau of Land Management (BLM) to determine the status of threatened and endangered species (TES) in the area of the proposed development, harvest or mineral extraction. As part of consultation, necessary surveys to be conducted shall be determined. The purpose of such surveys shall be to determine TES presence or absence in the area of the proposed development, harvest or mineral extraction, and within one mile of the proposed activity. At minimum, the TES listed in Table 4.5-75 shall be considered. Surveys shall conform to then-current USFWS and USFS protocols. A letter report that documents agency consultation, survey methodology, and a proposed means to document survey results shall be prepared by the new owner and submitted to the involved agencies.
			
			• Surveys shall be undertaken in accordance with the agreed methodology, and shall be conducted over a period of two seasons. Upon completion, they shall be provided to the relevant agencies. The surveys and resulting reports shall also address the following:
			
			  • The potential for interruption of migratory deer corridors or sensitive deer areas (such as fawning areas) for the Salt Springs deer herd and the Railroad Flat deer herd;
			  • The potential for interruption of migratory corridors for furbearers;
			  • The potential for and effects of habitat fragmentation as a result of the proposed activity;
			  • The effects on TES of erosion, slope instability, point source pollution and	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			the introduction of exotic animal and plant species resulting from the proposed activity. • If, as a result of the surveys, no TES are detected within the area of the proposed activity, or within one mile of the area of proposed activity, no further mitigation for TES shall be required under this measure. • If TES are detected, prior to receiving approvals for the proposed activity, the new owner shall prepare a Biological Resource Protection Plan outlining the measures that are necessary to reduce impacts to TES to a less than significant level and, as part of implementation of the proposed activity, shall carry out such measures. The Biological Resource Protection Plan shall mandate avoidance of TES and TES habitat to the fullest extent possible. Avoidance measures may include buffer zones and set backs from sensitive species habitat, restricted construction time periods, and seasonal construction restrictions. Where avoidance is not feasible, the Biological Resource Protection Plan shall require that the new owner shall minimize impacts using a combination of on-site and off-site habitat preservation measures, including establishing habitat conservation easements on nearby comparable land, purchase and protection of comparable habitat and habitat enhancement. **Alternate Mitigation Measure 5-1c:** As an alternative to Mitigation Measure 5-1c, above, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	No Impact
	Impact 5-2: The project may result in adverse effects to non-listed special-status wildlife and plant species (i.e., species of concern, BLM, and USFS sensitive) and associated habitats.	Significant	**Mitigation Measures Proposed as Part of the Project** There are no proposed mitigations presented in the PEA for terrestrial biology. **Mitigation Measures Identified in This Report** **Mitigation Measure 5-2a:** Prior to or concurrent with the transfer of title for the pertinent bundles, the informal agreements/non-binding operating practices listed below shall by written instrument be made binding upon the new owner. • Pacific Gas and Electric Company voluntarily makes a minimum flow release of 200 cfs from the Pit 1 Powerhouse tailrace into the Pit River at all times of the year, per the request of CDFG, USFWS, and SWRCB. It is expected that	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			the new FERC license will have defined flow release requirements. • Pacific Gas and Electric Company has committed to CDFG to release flushing flows from Pit 1 Dam two to three times a year to flush vegetation out of the Fall River Pond. This action is also likely to be a requirement in the new FERC license. • Pacific Gas and Electric Company constructed and maintains a fence line to keep cattle off project levees on the south side of Big Lake, per an agreement with CDFG, CDF, and USFWS. Maintenance of this fence needs to continue but may not be included as a new FERC license condition. • At Iron Canyon Reservoir, Pacific Gas and Electric Company informally maintains the reservoir at a level sufficient to make the Big Bend community boat ramp operational. This agreement also benefits biological resources since reservoir levels would be more stabilized allowing for shoreline emergent wetland vegetation to establish. • Pacific Gas and Electric Company is an active participant in the Lower McCloud Coordinated Resource Management Project (CRMP). New owner would be expected to take over the responsibilities currently held by Pacific Gas and Electric Company as a member of the CRMP. • Pacific Gas and Electric Company has an informal agreement with the CDFG that ensures that the reservoir level at Macumber Reservoir does not drop below 12 feet. • Pacific Gas and Electric Company is involved in the work being done in the Feather River Basin. Pacific Gas and Electric Company has been a voluntary contributor to erosion control and stream restoration project. • Pacific Gas and Electric Company agrees bald eagle nest location information is to be include in biological survey work. New owner to be provided information on location of sensitive biological resources. • Small instream releases to West Branch Feather River at Miocene Diversion. No regulatory requirement to do so. • Pacific Gas and Electric Company's FERC license requirements for instream flow releases at Lower Centerville Diversion Dam is normally 40 cfs, but allows for a reduction to ten cfs in dry years. Downstream reaches of the stream	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			provide salmon habitat, and in the past years Pacific Gas and Electric Company informally agreed with CDFG not to exercise this reduction. • Pacific Gas and Electric Company agreements which include Benmore Canyon and Trout Creek are documented in a 1991 Pacific Gas and Electric Company video entitled "Preservation and harvesting: A Story of Cooperation." • Granger-The permit documents a Pacific Gas and Electric Company agreement to operate USFS campgrounds around Lake Pillsbury. • Pacific Gas and Electric Company participates in Bald Eagle monitoring at Lake Pillsbury. • Tiger Creek Afterbay is voluntarily kept at two feet above normal minimum operating elevation in order to provide water for the Amador County Water Agency (AWCA). • Pacific Gas and Electric Company holds Upper and Lower Blue Lakes, Twin Lake, Meadow Lakes and Tabeaud Lake at near full through the summer. • Pacific Gas and Electric Company imposes voluntary ramping rates below Salt Springs Dam, Tiger Creek Afterbay, and Electra Diversion for public safety. • Pacific Gas and Electric Company has revised its operating procedures for Tiger Creek and West Point powerhouse to prevent sudden surges and fluctuations. **Mitigation Measure 5-2b:** Prior to the transfer of title for any bundle, Pacific Gas and Electric Company shall demonstrate that the new owner has received and reviewed the existing Best Management Practices (BMPs) of Pacific Gas and Electric Company for that particular bundle as noted in the preceding section, and the new owner shall either (1) commit in writing to adhere to those pertinent existing BMPs or (2) submit to the CPUC for its review and approval, and obtain approval of, substitute Best Management Practices that are protective of the environment to an equal or greater degree then Pacific Gas and Electric Company's existing BMPs. **Mitigation Measure 5-2c:** Prior to approval of any land use development change, timber harvest plan or additional mineral extraction activities on the Project Lands, the new owner shall undertake the following process: • Coordinate with the United States Fish and Wildlife Service (USFWS), the	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation

			California Department of Fish and Game (CDFG) and, when applicable, the United States Forest Service (USFS) and/or Bureau of Land Management (BLM) to determine the status of special-status species in the area of the proposed development, harvest or mineral extraction. As part of consultation, necessary surveys to be conducted shall be determined. The purpose of such surveys shall be to determine special-status species presence or absence in the area of the proposed development, harvest or mineral extraction, and within one mile of the proposed activity. At minimum, the special-status species listed in Table 4.5-76 shall be considered. Surveys shall conform to then-current USFWS and USFS protocols. A letter report that documents agency consultation, survey methodology, and a proposed means to document survey results shall be prepared by the new owner and submitted to the involved agencies.
			
			• Surveys shall be undertaken in accordance with the agreed methodology, and shall be conducted over a period of two seasons. Upon completion, they shall be provided to the relevant agencies. The surveys and resulting reports shall also address the following:
			
			  • The potential for interruption of migratory corridors or sensitive breeding areas;
			  • The potential for and effects of habitat fragmentation as a result of the proposed activity;
			  • The effects on special-status species of erosion, slope instability, point source pollution and the introduction of exotic animal and plant species resulting from the proposed activity.
			
			• If, as a result of the surveys, no special-status species are detected within the area of the proposed activity, or within one mile of the area of proposed activity, no further mitigation for special-status species shall be required under this measure.
			
			• If special-status species are detected, prior to receiving approvals for the proposed activity, the new owner shall prepare a Biological Resource Protection Plan outlining the measures that are necessary to reduce impacts to special-status species to a less than significant level and, as part of implementation of the proposed activity, shall carry out such measures. The Biological Resource Protection Plan shall mandate avoidance of special-status species and special-status species habitat to the fullest extent possible. Avoidance measures may include buffer zones and set backs from sensitive species habitat, restricted construction time periods, and seasonal	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			construction restrictions. Where avoidance is not feasible, the Biological Resource Protection Plan shall require that the new owner shall minimize impacts using a combination of on-site and off-site habitat preservation measures, including establishing habitat conservation easements on nearby comparable land, purchase and protection of comparable habitat and habitat enhancement. **Alternate Mitigation Measure 5-2c:** As an alternative to Mitigation Measure 5-2c, above, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	No Impact
	Impact 5-3: The project could result in habitat degradation as measured by potential habitat fragmentation and disruption to migration corridors.	Significant	**Mitigation Measures Proposed as Part of the Project** No proposed mitigation presented in the PEA for terrestrial biological resources. **Mitigation Measures Identified in This Report** **Mitigation Measure 5-3a:** Prior to or concurrent with the transfer of title for the pertinent bundles, the informal agreements/non-binding operating practices listed below shall by written instrument be made binding upon the new owner. • Pacific Gas and Electric Company voluntarily makes a minimum flow release of 200 cfs from the Pit 1 Powerhouse tailrace into the Pit River at all times of the year, per the request of CDFG, USFWS, and SWRCB. • Pacific Gas and Electric Company has committed to CDFG to release flushing flows from Pit 1 Dam two to three times a year to flush vegetation out of the Fall River Pond. • Pacific Gas and Electric Company constructed and maintains a fence to keep cattle off project levees on the south side of Big Lake, per an agreement with CDFG, CDF, and USFWS. • At Iron Canyon Reservoir, Pacific Gas and Electric Company informally maintains the reservoir at a level sufficient to make the Big Bend community boat ramp operational. This agreement also benefits biological resources since reservoir levels would be more stabilized allowing for shoreline emergent wetland vegetation to establish.	Less then Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			• Pacific Gas and Electric Company currently has an informal agreement with CDFG which allows CDFG to conduct surveys for Shasta crayfish in the upper Tule River and Pit River associated with the Pit 1 project. This survey work is considered to be crucial in the recovery efforts for the species. • Pacific Gas and Electric Company is an active participant in the Lower McCloud Coordinated Resource Management Project (CRMP). A new owner would be expected to take over the responsibilities currently held by Pacific Gas and Electric Company as a member of the CRMP. • Pacific Gas and Electric Company is a participant in the Pit River Interagency Bald Eagle Management Plan and is currently implementing the mitigation measures prescribed in this plan. **Mitigation Measure 5-3b:** Prior to the transfer of title for any bundle, Pacific Gas and Electric Company shall demonstrate that the new owner has received and reviewed the existing Best Management Practices (BMPs) of Pacific Gas and Electric Company for that particular bundle as noted in the preceding section, and the new owner shall either (i) commit in writing to adhere to those pertinent existing BMPs or (ii) submit to the CPUC for its review and approval, and obtain approval of, substitute Best Management Practices that are protective of the environment to an equal or greater degree then Pacific Gas and Electric Company's existing BMPs. **Mitigation Measure 5-3c:** Prior to approval of any land use development change, timber harvest plan or additional mineral extraction activities on the Project Lands, the new owner shall undertake the following process: • Coordinate with the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG) and, when applicable, the United States Forest Service (USFS) and/or Bureau of Land Management (BLM) to determine the status of relevant species and habitats in the area of the proposed development, harvest or mineral extraction. As part of consultation, necessary surveys to be conducted shall be determined. The purpose of such surveys shall be to determine habitat value and migration corridors in the area of the proposed development, harvest or mineral extraction, and within one mile of the proposed activity. At minimum, the special-status species listed in Tables 4.5-71 through 4.5-80 shall be considered. Surveys shall conform to then-current USFWS and USFS protocols. A letter report that documents agency consultation, survey methodology, and a proposed means to document survey results shall be prepared by the new owner and submitted to the involved agencies.	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation

			prepared by the new owner and submitted to the involved agencies.
			
			• Surveys shall be undertaken in accordance with the agreed methodology, and shall be conducted over a period of two seasons. Upon completion, they shall be provided to the relevant agencies. The surveys and resulting reports shall also address the following:
			
			  • The potential for interruption of migratory corridors or sensitive breeding areas including the habitats and vegetation types within current CDFG deer herd designations for holding areas, fawning areas, and migratory corridors;
			  • The potential for and effects of habitat fragmentation as a result of the proposed activity;
			  • The effects of erosion, slope instability, point source pollution and the introduction of exotic animal and plant species resulting from the proposed activity on habitat value.
			
			• If, as a result of the surveys, no relevant resources are detected within the area of the proposed activity, or within one mile of the area of proposed activity (i.e. deer use, migration corridors), no further mitigation for shall be required under this measure.
			
			• If relevant resources are detected, prior to receiving approvals for the proposed activity, the new owner shall prepare a Biological Resource Protection Plan outlining the measures that are necessary to reduce fragmentation and migration corridor impacts to a less than significant level and, as part of implementation of the proposed activity, shall carry out such measures. The Biological Resource Protection Plan shall mandate avoidance of migration corridors to the fullest extent possible. Avoidance measures may include buffer zones and set backs from corridors, restricted construction time periods, and seasonal construction restrictions. Where avoidance is not feasible, the Biological Resource Protection Plan shall require that the new owner shall minimize impacts using a combination of on-site and off-site habitat preservation measures, including establishing habitat conservation easements on nearby comparable land, purchase and protection of comparable habitat and habitat enhancement.
			
			Alternate Mitigation Measure 5-3c: As an alternative to Mitigation Measure 5-3c, above, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with
				No Impact

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	
	Impact 5-4: The project may result in adverse effects to sensitive native plant communities, including wetlands and riparian corridors.	Significant	**Mitigation Measures Proposed as Part of the Project** No proposed mitigation was presented in the PEA for terrestrial biological resources. **Mitigation Measures Identified in This Report** **Mitigation Measure 5-4a:** Prior to or concurrent with the transfer of title for any bundle, the informal agreements/non-binding operating practices listed for that bundle in the preceding section shall by written instrument be made binding upon the new owner. **Mitigation Measure 5-4b:** Prior to the transfer of title for any bundle, Pacific Gas and Electric Company shall demonstrate that the new owner has received and reviewed the existing Best Management Practices (BMPs) of Pacific Gas and Electric Company for that particular bundle as noted in the preceding section, and the new owner shall either (1) commit in writing to adhere to those pertinent existing BMPs or (2) submit to the CPUC for its review and approval, and obtain approval of, substitute Best Management Practices that are protective of the environment to an equal or greater degree then Pacific Gas and Electric Company's existing BMPs. **Mitigation Measure 5-4c:** Prior to approval of any land use development change, timber harvest plan or additional mineral extraction activities on the Project Lands, the new owner shall undertake the following process: • Coordinate with the United States Army Corps of Engineers (USCOE), the United States Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG) and, when applicable, the United States Forest Service (USFS) and/or Bureau of Land Management (BLM) to determine status of wetlands and sensitive plant communities in the area of the proposed development, harvest or mineral extraction. As part of consultation, the need for surveys to be conducted shall be determined. The purpose of such surveys shall be to determine the presence or absence of wetlands or sensitive plant communities in the area of the proposed development, harvest or mineral extraction, and within one mile of the proposed activity. Surveys shall conform to then-current USCOE, USFWS and USFS protocols. A letter report that documents agency consultation, survey methodology, and a proposed means to document survey results shall be prepared by the new owner and submitted	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			to the involved agencies. • If required based on preliminary findings, when wetlands and other vegetation is most discernible, surveys shall be undertaken in accordance with the agreed methodology, and shall be conducted between February 1 and June 30. Upon completion, they shall be provided to the relevant agencies. • If, as a result of the surveys, no wetlands or sensitive plant communities are detected within the area of the proposed activity, or within one mile of the area of proposed activity, no further mitigation shall be required under this measure. • If wetlands or sensitive plant communities are detected, prior to receiving approvals for the proposed activity, the new owner shall prepare a Resource Protection Plan outlining the measures that are necessary to reduce impacts to wetlands or sensitive plant communities to a less than significant level and, as part of implementation of the proposed activity, shall carry out such measures. The Resource Protection Plan shall mandate avoidance of wetlands or sensitive plant communities habitat to the fullest extent possible. Avoidance measures may include buffer zones and set backs from sensitive habitat, restricted construction time periods, and seasonal construction restrictions. Where avoidance is not feasible, the Resource Protection Plan shall require that the new owner shall minimize impacts using a combination of on-site and off-site preservation measures, including establishing conservation easements on nearby comparable land, purchase and protection of comparable habitat and habitat enhancement. **Alternate Mitigation Measure 5-4c:** As an alternative to Mitigation Measure 5-4c, above, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the Watershed lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	
	Impact 5-5: Changes in hydroelectric operations could result in adverse effects to non-fisheries biotic resources including riparian and lacustrine vegetation communities.	Significant	**Mitigation Measures Proposed as Part of the Project** Within the PEA (PG&E Co., 1999a), Pacific Gas and Electric Company does not provide specific mitigation measures for each FERC and non-FERC licensed project as part of the sale of hydroelectric assets to a new owner. Instead, Pacific Gas and Electric Company states that because a new owner will be required to operate according to existing agreements, and will be subject to environmental and	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			resource regulations and directives in the same way that Pacific Gas and Electric Company is and has been, that aquatic resources will be protected. Pacific Gas and Electric Company offers to assist a new owner in understanding aquatic resources issues at each project, by providing the new owner with all non-privileged informational materials in its possession related to sensitive biological resources. Additionally, Pacific Gas and Electric Company proposes to transfer its BMPs to a new owner to provide guidance on procedures for complying with license conditions and applicable laws. **Mitigation Measures Identified in This Report** Mitigation measures are provided in the Fisheries Section (Section 4.4).	
6. Recreation	Impact 6-1: The project would substantially diminish existing water-based recreational opportunities or the condition of water-based recreational facilities.	Significant	**Mitigation Measures Proposed as Part of the Project** For all five watershed regional bundles addressed in this section, there are no mitigation measures proposed by the project applicant for potential recreation impacts associated with the proposed transfer of ownership. **Mitigation Measures Identified in This Report** **Mitigation Measure 6-1a*:*** Access issues, Bundle 1: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors in interest) agree to continue to allow public access across the Hat Creek Watershed Lands that provide access to Hat Creek. **Mitigation Measure 6-1b*:*** Access issues, Bundle 2: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors in interest) agree to continue to allow public access across Project Lands that provide access to the Pit River south of the Pit 1 Forebay Dam. **Mitigation Measure 6-1c:** Access issues, Bundle 2: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors in interest) agree to continue to allow public access across Project Lands that provide access to the Pit River in the vicinity of Fall River Mills. **Mitigation Measure 6-1d*:*** Reduced lake level issues, Bundle 2: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors in interest) agree to maintain lake levels at Lake Britton above the 2,747-feet above sea level from Memorial Day to Labor day unless a drought year has been identified. **Mitigation Measure 6-1e:** Access issue, Bundle 2: Prior to or concurrent with the transfer of title, the Project Lands shall become burdened by a recorded non-exclusive easement requiring the new owner and successors-in-interest to	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			continue to allow public access across the Lake Britton Watershed Lands for the Pacific Crest Trail and the Department of Parks and Recreation campground on Lake Britton. **Mitigation Measure 6-1f:** A river corridor management plan to preserve public access for recreation purposes over Pacific Gas and Electric Company Watershed Lands between Cassel Bridge and the upper end of Lake Britton (through and including Section 12) shall be developed in consultation with the BLM, Pit River Tribe, and members of the public prior to or concurrent with the transfer of title. Prior to or concurrent with the transfer of title, the new owner (or successors-in interest) shall by binding written instrument, agree to allow continued access to Lake Britton Watershed Lands in accordance with the completed plan. **Mitigation Measure 6-1g:** A river corridor management plan to preserve public access for recreation purposes over Pacific Gas and Electric Company Watershed Lands between Fall River Mills and the Pit 1 Forebay shall be developed in consultation with the BLM, Pit River Tribe, and members of the public prior to the or concurrent with the transfer of title. Prior to or concurrent with the transfer of title, the new owner (and successors-in-interest) shall, by binding written instrument, agree to allow continued access to non-FERC Lands along the Fall River in accordance with the completed plan. **Mitigation Measure 6-1h:** Access Issue, Bundle 5: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow continued public access to the Hamilton Branch Watershed Lands for recreational purposes. **Mitigation Measure 6-1i:** Access Issues, Bundle 6: Prior to or concurrent with transfer of title, the new owner (and successors-in-interest) shall, by binding written instrument agree to allow continued public access to the North Fork of the Feather River in sections 17 and 19. **Mitigation Measure 6-1j:** Reduced lake levels issues, Bundle 7: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to maintain lake levels at Bucks Lake above 5,135-feet above sea level from Memorial Day to Labor Day unless a drought year has been identified for the river basin by the Department of Water Resources. **Mitigation Measure 6-1k:** Yuba River flow issues, Bundle 9: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to maintain flows in the Yuba River below Englebright Dam above 700 cfs for the months of October, November, and December and to work with the CDFG and other stakeholders to	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			ensure that flows are maintained for the unique angling experience in this location. **Mitigation Measure 6-1l:** Eel River recreation flows, Bundle 10: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to adopt and maintain a recreation resource flow release requirement from the Cape Horn Dam of a continuous 24 hour flow of 500 cfs for a continuous period of nine days starting on the Saturday following the last seasonal week of 1000 cfs flows on the Middle Fork Eel River above the confluence with the main Eel River. The timing of the release shall be scheduled to provide 500 cfs at Hearst by 8:00 AM, and should continue for a nine day period ending no earlier than 4:00 PM on the ninth day at Hearst. **Mitigation Measure 6-1m:** Eel River recreation flows, Bundle 10: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to a recreation resource flow release requirement from Scott Dam of a continuous 24 hour flow of 700 cfs for a continuous period of nine days starting on the Saturday following the last seasonal week of 1000 cfs flows on the Middle Fork Eel River above the confluence with the main Eel River. The timing of the release shall be scheduled to provide 700 cfs at Soda Creek by 8:00 AM, and should continue for a nine day period ending no earlier than 4:00 PM on the ninth day at Van Arsdale Reservoir. **Mitigation Measure 6-1n:** Eel River flows, Bundle 10: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to develop and maintain in an updated condition publicly available flow forecast information for those portions of the Eel River influenced by project operations. The update lead time and reliability of forecasted information shall be aimed at providing boaters, and other members of the river-using public with functionally relevant trip planning information. **Mitigation Measure 6-1o:** Lake Spaulding lake levels issue, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to maintain Lake Spaulding lake levels during months where boat recreation takes place at baseline conditions to ensure that water-based recreation that relies on the boat ramp is not diminished. **Mitigation 6-1p:** Kidd Creek streamflows, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to make formal the current informal agreements with the CDFG pertaining to Kidd Creek stream flows such that a 5 cfs minimum flow would continue under new ownership. **Mitigation Measure 6-1q:** South Yuba River flows below Spaulding Dam, Bundle	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			11: Prior to or concurrent with the transfer of title, the new owner (and successors-in-interest) shall by binding written instrument agree to adopt and maintain minimum flow release requirements at Spaulding Dam of 10 cfs during the months of June, July, August and September. **Mitigation Measure 6-1r:** South Yuba River flows below Spaulding Dam, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to adopt and maintain minimum flow release requirements at Spaulding Dam of 700 cfs for one weekend in the month of June for normal and below normal years, as determined by the Department of Water Resources. **Mitigation Measure 6-1s:** Fordyce Creek flows below Fordyce Dam, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to adopt and maintain minimum flow release requirements pre-scheduled on weekends in normal and below normal water years at Fordyce Dam to include 600 cfs for two consecutive weekends (at least 8:00 AM to 6:00 PM) in the summer months and one weekend in the late season, and 200 cfs on one weekend in the late season months. **Mitigation Measure 6-1t:** Chili Bar Operations, Bundle 12: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to operate the Chili Bar license as a regulating facility integrated with the rest of SMUD's South Fork of the American River facilities. The purpose of the agreement shall be to maximize the storage capacity of Chili Bar Reservoir, avoid unnecessary daily spills at the dam and lost power production at the Chili Bar Powerhouse, and moderate the hourly/daily release pattern downstream to mitigate expected impacts on water based recreational uses and opportunities. The agreement shall consider water and streamflow activities, other instream resource issues. **Mitigation Measure 6-1u:** Recreational facilities, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to upgrade access and parking facilities, and sanitary facilities for the Electra Afterbay and powerhouse area to ensure the full water-based recreational use potential of these lands and water bodies. **Mitigation Measure 6-1v:** Recreational facilities, Bundle 13: Prior to or concurrent with the transfer of title, the new owner and successors-in-interest shall by binding written instrument agree to allow continued recreational use of the lands in the vicinity of the Highway 49 bridge or Middle Bar; with access suitable to Bureau of Land Management and Department of Boating and Waterways for the purposes of	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			providing adequate whitewater boating. **Mitigation Measure 6-1w:** Recreational opportunities, Bundle 13: Prior to or concurrent with the transfer of title, the new owners shall by binding written instrument (binding upon successors-in-interest) agree to reserve for unimproved recreational activities and opportunities the undeveloped FERC Licensed Lands at Upper and Lower Bear River Reservoirs. **Mitigation Measure 6-1x:** Trail access, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to improve the portage trail between Lower and Upper Bear River Reservoirs to provide safe access when the dam is spilling and to maintain that trail so as to provide a minimum of safe but primitive access (including the portaging of small watercraft) to the Upper Bear River Reservoir. **Mitigation Measure 6-1y:** Recreational facilities, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to provide for the continued development of recreational facilities consistent with the present recreational facilities whether or not through a lease agreement with the Bear River Lake Resort (or any subsequent lessee) and to review on a recurrent 5-year basis capacity and facility conditions with the USFS to ensure ongoing conformance with reservoir-wide recreation resource values. **Mitigation Measure 6-1z:** Public access, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to maintain public access to the FERC Licensed Lands along Panther and Tiger Creeks. **Mitigation Measure 6-1aa:** Facilities maintenance, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to maintain the recreational facilities at Upper and Lower Blue Lake Reservoirs, and Twin Lake Reservoir. **Mitigation Measure 6-1bb:** Land use, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to limit land uses and resource activities on Watershed Lands at Upper Blue Lake, Twin Lake, Meadow Lake, and Upper Bear River Reservoirs, and in the eastern arm of Lower Bear River Reservoir to wilderness-compatible types and levels. **Mitigation Measure 6-1cc:** Public access, Bundle 13: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access on Watershed Lands along Panther and Tiger Creeks, within 50 feet of the edge of the channel-edge.	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			Mitigation Measure 6-1dd: Public access, Bundle 13: Prior to or concurrent with transfer of title, the new owner shall by a binding written instrument (binding upon successors-in-interest) agree to allow public access to Watershed Lands upstream of the Tiger Creek Afterbay. **Mitigation Measure 6-1ee:** Mokelumne River Bundle: Prior to or concurrent with the transfer of title, the new owner shall agree to modify the existing diversion structure located on the Watershed Lands upstream of the Tiger Creek Afterbay to a condition (binding upon successors-in-interest) that provides for safe passage for whitewater boating (portage or otherwise) to the satisfaction of the United States Forest Service, Bureau of Land Management, and California Department of Boating and Waterways. **Mitigation Measure 6-1ff:** Public access, Bundle 13: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) to allow public access to the channel and the riparian zone of those portions of Watershed Lands located on, or immediately adjacent to, the main and North Fork Mokelumne Rivers between the Electra Diversion Dam and Electra powerhouse FERC Licensed Lands. **Mitigation Measure 6-1gg:** Strawberry Reservoir operations, Bundle 14: Prior to or concurrent with the transfer of title, the new owner shall agree to make formal (and binding upon successors-in-interest) all informal agreements on the operational regime of Strawberry Reservoir be made formal to ensure that present operations in the months of May through September be continued in the future to maintain present reservoir recreational opportunities. **Mitigation Measure 6-1hh:** Relief Reservoir operations, Bundle 14: Prior to or concurrent with the transfer of title, the new owner shall agree to implement a recreation resource flow release requirement (binding upon successors-in-interest) from Relief Reservoir that limits flows to under 50 cfs for at least 30 percent of the days of July and August. **Mitigation Measure 6-1ii:** Public access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to manage Watershed Lands south of the developed portion of Kennedy Meadows Resort in accordance with the Forest Plan and Wild and Scenic River recommendations for the benefit of the recreating public. **Mitigation Measure 6-1jj:** Public access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access to a 1/4 mile wide corridor along the Middle Fork Stanislaus River and Deadman Creek to provide for the ongoing benefits of the recreating public and to facilitate the maintenance of Wild	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			and Scenic River "Outstandingly Remarkable Values." **Mitigation Measure 6-1kk:** Land use, Bundle 14: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree that land use and land management practices on the Spring Gap Powerhouse FERC Licensed Lands should be compatible with the present USFS management objectives on adjacent USFS lands and that should those management objectives become more restrictive in the future for enhancing public resource values, the practices on Project Lands shall change accordingly. **Mitigation Measure 6-1ll:** Public access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access to the existing Sand Bar Flat to Beardsley trail, the footbridge, and for access to the river from the trail. **Mitigation Measure 6-1mm:** Public access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access to the Stanislaus River and the Middle Fork Stanislaus River, as well as the fishing access trail near the powerhouse for access to the Stanislaus River and the Middle Fork Stanislaus River. **Mitigation Measure 6-1nn:** Reservoir operations, Bundle 16: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to continue requesting from the Bureau of Reclamation annual variances of the Miller-Lux Agreement to keep Bass Lake at higher elevations during summer months in order to benefit recreational opportunities. **Mitigation Measure 6-1oo:** Fisheries, Bundle 16: Implement Mitigation Measure 4-2h pertaining to Crane Valley Bundle fishery resources (see Section 4.2). **Mitigation Measure 6-1pp:** Whitewater boating, Bundle 18: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to continue to allow commercial whitewater boating activities on the Keller Ranch property or, prior to or concurrent with the transfer of title, the Keller Ranch property shall be conveyed to the Forest Service or an appropriate state or federal agency with a provision that the land shall be managed to support recreation use and opportunities along the Kings River.	
	Impact 6-2: The project would substantially diminish existing land-based recreational opportunities or the condition of	Significant	**Mitigation Measures Proposed as Part of the Project** There are no mitigation measures proposed by the project applicant for potential recreation impacts associated with the proposed transfer of ownership.	Implementation of Mitigation Measures 6-

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	land-based recreational facilities**.**		**Mitigation Measures Identified in This Report** **Mitigation Measure 6-2a:** Access for the Pacific Crest Trail, Bundle 2: Prior to or concurrent with the transfer of title, Project Lands shall become burdened by a recorded non-exclusive easement requiring the new owner (and successors-in-interest) to allow public access to the Pacific Crest Trail over the Pit 3 Dam. **Mitigation Measure 6-2b:** Dispersed recreation, Bundle 2: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow and maintain public access for recreational purposes. **Mitigation Measure 6-2c:** Dispersed Recreation, Bundle 5: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access to the area around Mountain Meadows Reservoir for recreational purposes. **Mitigation Measure 6-2d*:*** Logging impact on land-based recreation, Bundle 6: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree that logging in the Lake Almanor area shall be conducted outside the period between Labor Day and Memorial Day at least a quarter mile from any recreational facilities such as campgrounds and trails. **Mitigation Measure 6-2e:** Access issue, Bundle 6: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access to the Last Chance Campground for recreational purposes. **Mitigation Measure 6-2f:** Campgrounds issue, Bundle 6: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to continue operation of the Lake Almanor Campground, Almanor Scenic Overlook, East Shore Picnic Area, Last Chance Campground, and Lake Almanor Overflow Campground. **Mitigation Measure 6-2g:** Access to the North Fork of the Feather River Area, Bundle 6: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow continued public access to the North Fork of the Feather River in Section 33. **Mitigation Measure 6-2h:** Loss of Soda Springs Historic Site, Bundle 6: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to continue operation and maintenance of the Soda Springs Historic Site. **Mitigation Measure 6-2i:** Loss of Yellow Springs Campground, Bundle 6: Prior to	Measures 6-2a through 6-2w will reduce the potential project impact on land-based recreational opportunities and facilities to a *less than significant* level. Alternatively, implementation of Alternate Mitigation Measure 6-2 together with implementation of Mitigation Measures 6-2a through 6-2w would reduce to a *less than significant* level impacts associated with a new owner operating the facilities and maintaining the land, and would

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to continue operation and maintenance of the Yellow Springs Campground. **Mitigation Measure 6-2j:** Access to Kelly Lake and Lake Valley Reservoir Watershed Lands, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to continue present relationships with resorts on the Lake Valley Reservoir and Kelly Lake lands. Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow continued public access on these same lands for recreational activities associated with Lake Valley and Kelly Lake resorts. **Mitigation Measure 6-2k:** Golden Quartz Trail access, Bundle 11: Prior to or concurrent with the transfer of title, Project Lands shall become burdened by a recorded non-exclusive easement requiring the new owner (and successors-in-interest) to allow extension of and public access over the Golden Quartz Trail and Sierra Discovery Trail to ensure regional connectivity of trails in the region. **Mitigation Measure 6-2l:** Lake Valley Reservoir Lands, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to develop a recreation management plan to maintain adequate public access for summer and winter recreation and to implement measures in the resulting plan to continue the current level of recreational use on Project Lands northwest of Lake Valley Reservoir. **Mitigation Measure 6-2m:** Grouse Lakes Vehicle Control Area access, Bundle 11: Prior to or concurrent with the transfer of title, Project Lands shall become burdened by a recorded non-exclusive easement requiring the new owner (and successors-in-interest) to allow use of Lindsey Lakes Trail to ensure regional connectivity of trails in the Grouse Lakes Vehicle Control Area. **Mitigation Measure 6-2n:** Lang Crossing access, Bundle 11: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow continued public access to Lang Crossing recreational activities including the Bear Valley Group Picnic Area. **Mitigation Measure 6-2o:** Trail access, Bundle 13: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access on Project Lands at Upper Blue Lake and Meadow Reservoirs, and on the potential trail route around Twin Lake Reservoir (and appropriate corridors to provide adequate recreation values). **Mitigation Measure 6-2p:** Recreational access, Bundle 14: Prior to or concurrent	would eliminate altogether the impacts associated with land development, mining or timber harvest expansion under a new owner.

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access from the Deadman Parking area (variable-width through the presently developed portion of Kennedy Meadows Resort) to the south end of the parcel along the existing access road and trail. **Mitigation Measure 6-2q:** Lyons Dam access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to ensure continued full foot traffic access to and across, and the angling uses of, the crest of Lyons Dam. **Mitigation Measure 6-2r:** Public trail access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access on the South Fork Stanislaus River Watershed Lands, including the Sugar Pine Railroad Trail, and any additional lands needed to maintain the function of this trail for recreational purposes and a reasonable corridor to maintain high resource values. **Mitigation Measure 6-2s:** Watershed Land public access, Bundle 14: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to allow public access on the Lyons Reservoir Watershed Lands, including the alignment of the Sugar Pine Railroad, and any additional lands needed to ensure the continued function of this trail for recreational purposes. **Mitigation Measure 6-2t:** Facilities maintenance funding, Bundle 16: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to uphold Pacific Gas and Electric Company's $6,000,000 funding commitment for resource mitigation and improvement measures as terms of relicensing the Crane Valley license. This would include transfer of Pacific Gas and Electric Company's agreement with the Forest Service to partially fund rehabilitation of Lakeside Picnic Area and The Forks Campground at Bass Lake. **Mitigation Measure 6-2u:** Facilities repair, Bundle 16: Prior to or concurrent with the transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to carry out the conditions of Pacific Gas and Electric Company's informal agreement with the US Forest Service to complete the repair of flood damage to USFS lands caused by the Brown's Ditch Diversion washout in 1997, an effort estimated to cost $1,000,000. **Mitigation Measure 6-2v:** Resort operation, Bundle 16: Prior to or concurrent with the transfer of title, Pacific Gas and Electric Company shall transfer to the new owner the existing lease arrangement (which shall be made binding upon	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			successors-in-interest) that allows Wishon Village resort to operate on Watershed Lands near Wishon Reservoir. **Mitigation Measure 6-2w:** Public access, Bundle 20: Prior to or concurrent with transfer of title, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to provide permanent public access to the reach of the Kern River between the diversion dam and the Kern Canyon powerhouse. **Alternate Mitigation Measure 6-2w:** As an alternate to Mitigation Measure 6-2w, above, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the Watershed Lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber interest or mineral extraction activities.	
	Impact 6-3: The project would cause reduced use of affected recreation areas, resulting in substantial adverse local economic effects.	Significant	**Mitigation Measures Proposed as Part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 6-3a:** Implementation of Mitigation Measure 6-1m would reduce the project's potential economic impact on commercial whitewater rafting opportunities in the Chili Bar Bundle, resulting from changes in hydrologic operations to a *less than significant* level. **Mitigation Measure 6-3b:** Implement Mitigation Measure 6-1pp.	Less than Significant
7. Cultural Resources	Impact 7-1: The project could result in the damage or destruction of known and/or unknown cultural resources.	Significant	**Mitigation Measures Proposed as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 7-1a:** Prior to transfer of ownership of any Project Lands, the new owner shall identify a qualified cultural resources specialist (who is a member of the Registry of Professional Archaeologists), who shall assume responsibility for the following activities: • Maintaining a library of documentation regarding cultural resources on all lands acquired by the new owner as a result of the project. • Ensuring compliance with FERC license conditions, CRMPs or Heritage Resources Management Plans, BMPs, and conditions of sale regarding cultural resources. • Maintaining relations with, and addressing concerns of Native American	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			groups with respect to lands or sites of significance in lands owned, and of archaeological collections in storage by the new landowner. • Consulting with SHPO and other Federal and State agencies, when appropriate. • Ensuring that subsequent buyers of Project Lands are aware of cultural resources constraints on areas subject to purchase. After the new owner has identified the qualified cultural resources specialist, Pacific Gas and Electric Company shall provide to the cultural resources specialist for the new owner, upon transfer of title, all materials regarding cultural resources present on Project Lands, regardless of confidentiality status under Section 583 of the California Public Utilities Code. **Mitigation Measure 7-1b:** Prior to approval of any land use development change, a qualified cultural resource specialist shall develop a plan for implementation in connection with such development that addresses the cultural resources, including sites of significance to Native Americans, that are identified or determined likely to be present on-site, including: • Documentation of cultural resources investigations, including consultation with appropriate Native American groups, to an acceptable professional standard for submittal to the appropriate CHRIS Information Center, and to the cultural resources specialist designated pursuant to Mitigation Measure 7-1a. • Avoidance of identified significant resources to the extent feasible. • If avoidance is not feasible, development and implementation of mitigation measures, pursuant to Section 21083.2 of the Public Resources Code and Section 15064.5(f) of the CEQA Guidelines. **Mitigation Measure 7-1c**: If any previously unidentified cultural resources are discovered during soil-disturbing activities for land use development changes or mining activities, all soil-disturbing work within 100 feet of the find shall cease. Activities could continue on other parts of the development site. The developer or landowner shall provide contingency funding and a sufficient time allotment to allow a determination of the significance of the resource by a qualified consultant, and if appropriate, development and implementation of avoidance or mitigation measures pursuant to Section 21083.2 of the Public Resources Code and Section 15064.5(f) of the CEQA Guidelines. Avoidance of significant resources shall always be given first consideration, and shall be attempted to the extent feasible.	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			Mitigation Measure 7-1d: If human remains are encountered during construction of any new land use development or mining activities, work shall cease within a 100-foot radius of the remains, the county coroner shall be contacted immediately, and the process set forth in Section 15064.5(e)(1-2) of the CEQA Guidelines shall be followed. **Mitigation Measure 7-1e**: Prior to approval of any land use development change or additional mineral extraction activities on the Project Lands that would result in modifications to a structure over 45 years in age, the new owner shall: • Retain a qualified Cultural Resource Specialist (who meets the U.S. Secretary of Interior's Standards and has experience with the type of historic resource under analysis) to determine if the structure is historically significant under CEQA Guidelines Section 15064.5. • If a historic structure is determined to be significant, any modifications and/or destruction of the structure shall be avoided. • If a historic structure is determined to be significant and avoidance is not feasible, then an adaptive reuse plan shall be developed consistent with CEQA Guidelines Section 15064.5(b). **Mitigation Measure 7-1f:** All THPs or major Amendments to THPs submitted after divestiture shall comply with all provisions described in Protecting Archaeological Sites in California's Timberlands: A Guide for Licensed Timber Operators and Timberland Owners, prepared by the California Department of Forestry and Fire Protection. The THP or Amendment shall include, at a minimum, the procedures delineated in Mitigation Measure 7-1c, 7-1d, and 7-e, including a plan for addressing resources that are known to be present. **Alternate Mitigation Measure 7-1:** As an alternative to Mitigation Measures 7-1a through 7-1f, above, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	
	Impact 7-2: The project could result in constraints on Native American access to culturally or historically significant lands or	Significant	**Mitigation Measures Identified as Part of the Project** None proposed. **Mitigation Measures Identified in This Report**	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	landforms.		**Mitigation Measure 7-2a:** Implement Mitigation Measure 7-1a. **Mitigation Measure 7-2b:** Prior to the transfer of title for any bundle, the new owner shall by binding written instrument (binding upon successors-in-interest) agree to provide reasonable access to, when given reasonable notice by, Native American groups who have identified ethnographic or heritage resource values on the Project Lands to which access is deemed important. **Mitigation Measure 7-2c:** The informal practice currently employed by Pacific Gas and Electric Company that allows access by Native Americans to the Project Lands surrounding and including Bass Lake for collecting native vegetation materials shall, by written instrument, be made binding on the new landowner. Mitigation Measure 7-2d: Prior to approval of any land use development change, the new owner shall consult with the Native American Heritage Commission and with Native American groups likely to be interested in access to the land proposed for development to determine appropriate measures to ensure that Native American people whose ethnographic resources and heritage values are represented on the land shall continue to enjoy reasonable access to the land and sustainable use of the resources, through continued implementation of the agreements required by Mitigation Measure 7-2b or the dedication of access easements, or adequate compensatory measures, or some combination of such measures.	
	Impact 7-3: Changes in hydroelectric operations and reservoir management could result in damage or destruction of cultural resources.	Significant	**Mitigation Measures Identified as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 7-3a:** Upon the transfer of title for any bundle containing a reservoir, the new owner shall hire a qualified consultant to prepare a Cultural Resources Management Plan (CRMP) for any FERC-Licensed facility that is not already covered by one. Each such CRMP shall include the following: • Cultural resources surveys of reservoirs during the lowest water levels of the year for archaeological, historical, and ethnographic resources. All resources shall be evaluated for significance. • Measures for protection or stabilization of the resources identified in the survey above. • An annual monitoring program to assess the effectiveness of the measures included in the CRMP. The CRMP shall be updated as a result of these	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			surveys, if new resources are discovered within the reservoirs, or if the protection and/or stabilization measures are determined to be insufficient. The cultural resources specialist appointed by the new owner shall be responsible for maintaining records regarding the results of the monitoring and any changes to the CRMPs. The draft CRMP shall be submitted to the SHPO for its review and approval within 18 months of the transfer of title. Prior to the transfer of title for any such bundle containing a facility that is not covered by a CRMP, the new owner shall by binding written instrument agree to follow diligently the process set forth herein for preparing a CRMP and to be bound by such CRMP once it is approved by the SHPD. Also, prior to the transfer of title for any bundle for which a CRMP or Heritage Resources Management Plan exists, the new owner shall by binding written instrument agree to implement the terms of such plans. Prior to the transfer of title, such plans shall be reviewed by a Cultural Resources Specialist to ensure that they meet the provisions specified above, and shall be amended as specified above if they do not. This requirement shall include plans that have been developed as part of a relicensing effort, but have not been finalized or incorporated into a renewed FERC license. Additionally, the new owner must provide notice to all parties involved in development of the plan that said new owner is assuming responsibility for compliance with the plan upon transfer of title, and shall provide the contact information for the new owner's cultural resources specialist. The new owner shall further notify interested parties that plan provisions can be modified upon request for and initiation of additional consultation, in the event that an interested party believes such consultation is warranted due to discovery of previously unknown cultural resources or to changes in project operation that have the potential to adversely affect cultural resources. **Mitigation Measure 7-3b:** Prior to the transfer of title for Bundle 18, the new owner of Balch Camp shall prepare a Cultural Resource Management Plan to the satisfaction of the CPUC, and shall do so in consultation with the SHPO, the Native American Heritage Commission, the Sierra National Forest, the Cold Springs Rancheria, and any other concerned Native Americans in the Kings River region (e.g., the Dunlap Band of Mono). The Plan shall include consideration of alternatives including, but not limited to: • Continued operation of Balch Camp as project headquarters, under strict guidelines to protect and preserve the archaeological and ethnographic resources and values at the site from impacts of routine camp operation and maintenance as well as from any non-routine development or demolition, and	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			providing for on-going consultation with the interested parties; • Gradual decommissioning of Balch Camp, with provision for protection and preservation of the archaeological and ethnographic resources and values at the site from impacts both prior to and subsequent to decommissioning Balch Camp; or • Prompt scheduled decommissioning of Balch Camp and removal of all non-significant structures and facilities, with provision for the facility site to be placed in protective status that ensures the safety and securing of archaeological and ethnographic resources and values at the site. Regardless of the alternative, the Plan shall provide for adequate protection of rock art at the site, for appropriate protection for and treatment of human remains, and for on-going consultation with the Cold Springs Rancheria and the Sierra National Forest.	
8. Agriculture	Impact 8-1: Loss of grazing opportunities on project lands could result in increased local grazing pressure on remaining leases.	Less than Significant	None proposed.	Less than Significant
	Impact 8-2: Non-renewal of a water delivery agreement after its expiration date may affect agricultural productivity.	Significant	**Mitigation Measures Identified as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 8-2:** Prior to the transfer of title for Bundles 10 and 11, Pacific Gas and Electric Company shall extend the terms of the existing water delivery contracts with Placer County Water Agency and Potter Valley Irrigation District in their respective bundles so that these agreements extend to the same time period as the FERC license extends.	Less than Significant
	Impact 8-3: The project could result in changes in timing and availability of water which could impact downstream agricultural productivity.	Significant	**Mitigation Measures Identified as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 8-3:** Prior to the transfer of title for Bundles 10 and 11, Pacific	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	productivity.		Gas and Electric Company shall amend the water delivery agreements with Potter Valley Irrigation District and Sonoma County Flood Control and Water Conservation District (for Bundle 10) and Placer County Water Agency (for Bundle 11) to guarantee delivery of water according to specific crop needs of each area.	
9. Hazards & Hazardous Materials	Impact 9-1: The project could involve construction modifications to hydroelectric facilities that could expose the public or workers to contaminated soil and/or groundwater or hazardous building materials.	Significant	**Mitigation Measures Proposed as Part of the Project** Pacific Gas and Electric Company will transfer Phase 1 Site Assessments to the new owner(s). **Mitigation Measures Identified in This Report** **Mitigation Measure 9-1a**: Prior to or concurrent with the transfer of title for Bundles 1, 2, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, and 18, Pacific Gas and Electric Company shall provide reports of all contamination surveys, and remedial actions, as well as maps of the areas of contamination, to the new owner(s). **Mitigation Measure 9-1b**: Prior to any site modification activities involving soil disturbance at the sites identified as having material recognized environmental conditions, abandoned mines or other ERR sites, or in the event that additional site investigations find evidence of contamination, hazardous materials spills, or some other adverse environmental condition, environmental samples consisting of, but not limited to, a Site Modification Plan shall be prepared to address and mitigate possible effects of the contamination. The Site Modification Plan should be prepared by environmental professionals and include soil and/or groundwater sampling as appropriate. If analyses of environmental samples do not identify the presence of contaminants, no further mitigation is required. If analyses of environmental samples identify contamination that could present a threat to human health and the environment, appropriate state and local agencies shall be contacted for guidance on how to proceed with site remediation. Site remediation measures shall incorporate, at the very least, the following: • Specific measures to protect workers and the public from exposure to potential site hazards. • Certification that the proposed remediation measures would clean up the contaminants, dispose of the wastes, and protect public health in accordance with federal, state, and local requirements. • Commencement of work in the areas of potential hazards shall not proceed until the site remediation plan has been completed and approved by the regulating agency. • In the event that features or materials that could present a threat to human	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			health or the environment are discovered or caused during site modification activities, work in that immediate area shall cease immediately. A qualified environmental professional shall evaluate the find and make appropriate recommendations, which shall be followed.	
	Impact 9-2: The project could result in land development that could expose the public or workers to contaminated soil and/or groundwater.	Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures were identified as part of the project. **Mitigation Measures Identified in This Report** **Mitigation Measure 9-2a**: Implement Mitigation Measure 9-1(a). **Mitigation Measure 9-2b**: Implement Mitigation Measure 9-1(b). **Mitigation Measure 9-2c**: Prior to land development on the Bundles identified as having Abandoned Mine Lands (AML) sites (Bundles 1, 2, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16 and 18), an environmental professional shall conduct a site assessment of the area using procedures and guidance established in The California Department of Toxic Substances Control's (DTSC) Abandoned Mine Lands Preliminary Assessment Handbook. Development options shall comply with the conclusions of the site assessments. **Alternative Mitigation Measure 9-2**: As an alternative to Mitigation Measures 9-2a, 9-2b and 9-2c, above, prior to or concurrent with the transfer of title for Bundles 1, 2, 5, 6, 7, 8, 10, 11, 12, 13, 14, 16, or 18, there shall be recorded against the Watershed Lands within the bundle conservation easements running with the land and (in an form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	Less than Significant
	Impact 9-3: The project would not substantially increase the transport, storage, or use of hazardous materials at hydroelectric facilities and new land that could be developed.	Less than Significant	**Mitigation Measures Proposed as Part of the Project** Pacific Gas and Electric would include for provision of operations and maintenance services by knowledgeable and experienced personnel for the first two years of ownership by the new owner(s). Pacific Gas and Electric would transfer non-privileged public safety and worker health and safety information applicable to the facilities. **Mitigation Measures Identified in This Report** None required.	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	Impact 9-4: The project could increase risks to workers and the public should reservoir levels, water releases, and/or facility maintenance be managed improperly.	Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures were identified as part of the project. **Mitigation Measures Identified in This Report** **Mitigation Measure 9-4a**: Prior to or concurrent with the transfer of title for Bundle 18, the new owner shall by binding written instrument agree to implement the Agreement on Sharing Operating Plans at Pine Flat Reservoir During Critical Flood Control Periods, executed on September 29, 1998 between the Army Corps of Engineers, Department of Water Resources, and Pacific Gas and Electric Company. **Mitigation Measure 9-4b**: Prior to or concurrent with the transfer of title for each bundle, the new owner shall by binding written agreement commit to implement the measures specified in: • Pacific Gas and Electric Company's Hydro Bulletins related to maintenance of water conveyance facilities. The bulletins specifically include Nos. 29, 35, 40, 43, 45, 48, 62, 63, 82, 85, 86, PG-G090, PG-G091 and PG-G092.	Less than Significant
	Impact 9-5: The project could increase risks to public safety from fire hazards should operating practices or land management change.	Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures were identified as part of the project. **Mitigation Measures Identified in This Report** **Mitigation Measure 9-5a:** Prior to or concurrent with the transfer of title for any bundle, the new owner shall by binding written instrument agree to adopt Pacific Gas and Electric Company's Fire and Risk Control Manual, including Standard Practice No. 245-2 titled Fire Precaution Procedures in Hazardous Fire Areas, as its own standard operating protocol until such time as it develops its own similarly detailed and equally effective Fire and Risk Control Manual and associated standard practices. **Mitigation Measure 9-5b:** Such lands to be developed shall become burdened by conditions, covenants, (CC&Rs) that require implementation of Public Resources Code 4291.	Less than Significant
10. Population, Employment, and Housing	Impact 10-1: Development of Project Lands would result in population growth.	Less than Significant	None proposed.	
11. Public Services and	Impact 11-1: The project could reduce the supply and/or reliability	Significant	**Mitigation Measures Proposed as Part of the Project**	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
Utilities	of electricity generated by hydroelectric power.		No mitigation measures have been identified. **Mitigation Measures Identified in This Report** **Mitigation Measure 11-1:** Measures acceptable to the CPUC shall be taken to prevent the exercise of market power by new owners.	
	Impact 11-2: The project could significantly increase electricity demand should development occur on project lands.	Less than Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures have been identified. **Mitigation Measures Identified in This Report** None proposed.	
	Impact 11-3: The project could result in the loss of consumptive water to existing users.	Significant	**Mitigation Measures Proposed as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 11-3:** Prior to the transfer of title for Bundles 10 and 11 in the Drum Regional Bundle, Pacific Gas and Electric Company shall extend the terms of the existing water delivery contracts with Nevada Irrigation District, Potter Valley Irrigation District, and Placer County Water Agency, in their respective bundles.	Less than Significant
	Impact 11-4: The project could increase water demand through land use intensification.	Significant	**Mitigation Measures Proposed as Part of the Project** None **Mitigation Measures Identified in This Report** **Mitigation Measure 11-4:** For any new development on Project Lands, the owner shall ensure that an adequate water supply, suitable for its intended uses, is available from a public water supply system, community water supply system, or individual wells, and is supplied to the development. **Alternate Mitigation Measure 11-4:** Prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the property conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further development.	Less than Significant
	Impact 11-5: Implementation of the project could result in substantial adverse impacts on	Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures are proposed as part of the project.	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	substantial adverse impacts on local public services and utilities providers.		**Mitigation Measures Identified in This Report** **Mitigation Measure 11-5a**: Prior to approval of any development, the new owner or developer shall consult with the appropriate county planning agency, as well as with the appropriate utilities and/or service provider(s), to determine what measures must be implemented to ensure adequate service to the proposed development. Necessary measures shall be implemented. Such measures may include, but shall not be limited to, the following: • Establishment of a Mello-Roos Community Facilities District (CFD); • Provision of infrastructure integral to the project; • Reduction or other modification to the project to reduce the projected demand to an acceptable level; or • Payment of in-lieu fees. If no provider for a particular utility or public service currently serves the potential project site, the developer shall secure a provider for those services prior to approval of the land development.. **Mitigation Measure 11-5b:** For land development in Bundles 5 through 12 and Bundles 16 through 20, new development shall be required to offset the costs associated with the addition of new police protection services, i.e., additional officers, and/or equipment. **Mitigation Measure 11-5c**: For the Poe Land Area (Bundle 6), the DeSabla-Centerville and Coal Canyon Land Areas (Bundle 8), the Lake Valley Reservoir, Rollins Reservoir, Halsey Forebay/Lake Arthur, and Rock Creek Land Areas (Bundle 11), and the Tiger Creek, Lake Tabeaud, and Lower Bear River Reservoir Land Areas (Bundle 13), and to the extent consistent with State law and local requirements, new development shall be required to offset the costs associated with the addition of new school facilities, e.g., additional staff and/or classrooms. **Mitigation Measure 11-5d**: For Bundles 1, 2, 3, and 4 Land Areas located within the jurisdiction of Shasta County, new land development shall be required to dedicate parklands or the payment of in-lieu fees in accordance with Shasta County development standards. Per Shasta County General Plan Policy PF-e, dedication shall be required only if the lands and fees so obtained will be maintained and administered by a local public agency which provides community recreation services. For Land Areas within Bundles 5 through 20, new land development shall be	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			required to dedicate parklands or the payment of in-lieu fees. Dedication shall be required only if the lands and fees so obtained will be maintained and administered by a local public agency which provides community recreation services. **Mitigation Measure 11-5e**: For the Lake Valley Reservoir and Rollins Reservoir Land Areas (Bundle 11), the Stanislaus River and Lyons Reservoir Land Areas (Bundle 14), the Bass Lake, Manzanita Lake, and San Joaquin #2 Land Areas (Bundle 16), the Kerckhoff Reservoir Lake Area (Bundle 17), and the Wishon Reservoir Land Area (Bundle 18), new development shall be required to offset the costs associated with the addition of new fire protection services, i.e., additional officers and/or equipment. **Mitigation Measure 11-5f**: Prior to or concurrent with the transfer of title for any bundle, the new owner shall by binding written instrument agree to adopt and implement the Pacific Gas and Electric Company's Fire and Risk Control Manual, including Standard Practice No. 245-2, titled Fire Precaution Procedures in Hazardous Fire Areas, as its own standard operating protocol until such time as it develops its own similarly detailed Fire and Risk Control Manual and associated standard practices. **Mitigation Measure 11-5g**: For publicly accessible project roads on any properties, not otherwise managed under agreement with the USFS or other federal land management agency, the new owner shall maintain project roads to a minimum standard of USFS Maintenance Level III, and in accordance with USFS standard maintenance specifications as applicable. 11.3.f.2 **Mitigation Measure 11-5h**: The new owner of any facility or property shall comply with Public Resources Code Section 429 regarding fire protection and shall condition the development, sale, lease, or transfer of any property with a requirement to comply with this section of the Public Resources Code **Alternate Mitigation Measure 11-5:** As an alternative to Mitigation Measures 11-5a, prior to or concurrent with the transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	No Impact
	Impact 11-6: The project could result in reduced telecommunications capacity among the hydroelectric power facilities, between the facilities	Significant	**Mitigation Measures Proposed as Part of the Project** **Mitigation Measure 11-6:** As a condition of sale, Telecommunications Service Agreements (TSAs) between new bundle owners and Pacific Gas and Electric Company, and Interim Telecom Service Agreements (ITSAs) between individual new bundle owners would be required	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	and the ISO, and with public health and safety officials in the event of emergency. In addition, it could result in the construction of redundant telecommunications facilities.		new bundle owners would be required. Creating and adhering to such agreements would ensure that telecommunications services capacity between and among hydroelectric power Projects and operators, between operators and the ISO, and with emergency management personnel throughout the hydroelectric power system continues undiminished. Adhering to such agreements would mitigate the need for new owners to immediately establish an independent telecommunication system, thus enabling them to continue operations in the same manner after acquisition of the hydroelectric projects. Either party would be able to discontinue receiving services provided by the other party, but each party would be obligated to provide the services agreed upon to the other party for the entire term. Compensation for physical rental space (in communication vaults and on telecommunications towers) and circuit charges would be established by researching the comparable rental rates charged by service providers and the average rates paid for circuits. The Pacific Gas and Electric Company would have the right to change the rates annually with at least a three (3) month advance notice to the other party. Each party would be responsible for maintaining its equipment in accordance with industry standards. Either party would be able to engage the other party to perform services such as routine and unscheduled maintenance. The labor for these services would be billed at Pacific Gas and Electric Company's standard labor rates, based upon classification of the worker, then in effect. These proposed mitigation measures would apply to all new owners and all projects, and are proposed as part of this project. **Mitigation Measures Identified in This Report** **Alternate Mitigation Measure 11-6:** As an alternative to the mitigation measure proposed as part of the project to reduce the number of agreements and parties involved, and to reduce the potential for sharing of confidential data among generators, each of the regional telecommunications bundles shall be auctioned separate from the generation assets to a telecommunications vendor (regulated by the CPUC and FCC as a telecommunications provider) that will sign agreements with the generators and Pacific Gas and Electric Company as necessary.	
12. Trans-portation	Impact 12-1: The project could cause increased vehicular trips resulting from changes in land use and/or new employment	Significant	**Mitigation Measures Proposed as part of the Project** None. **Mitigation Measures Identified in This Report**	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	opportunities.		**Mitigation Measure 12-1:** Prior to the approval of development on the Land Areas of Hat Creek (Bundle 1), Pit 1, Pit 3, and Lake Britton (Bundle 2), Shingletown (Bundle 4), West Lake Almanor/Prattville, Southeast Lake Almanor, and Humbug Valley (Bundle 6), Bucks Creek/Bucks Lake (Bundle 7), Lake Pillsbury (Bundle 10), Lake Valley Reservoir, Lake Spaulding/Drum Penstock Forebay, Dutch Flat-Bear River North of Rollins Reservoir, and Halsey Forebay/Lake Arthur (Bundle 11), Lake Tabeaud/Electra Powerhouse (Bundle 13), Bass Lake and Bass Lake/Manzanita Lake (Bundle 16), and Wishon Reservoir (Bundle 18), a traffic study shall be completed by a licensed traffic engineer to evaluate potential traffic impacts of the proposed development and to identify the methods and/or physical improvements that would reduce peak hour traffic flows on local and regional roadway segments and intersections to a less-than-significant level as determined by the local jurisdiction and Caltrans. These measures shall be implemented prior to, or in conjunction with, project development and could include, but are not limited to, the following actions: • Compliance with established street standards, requiring new roadways to comply with such standards or existing roadways to be upgraded; • Identification of design treatments to increase the vehicular capacity of existing intersections and/or roadway links, such as street widening, the provision of additional lanes (e.g., through or turn lanes through re-striping or street widening) or additional roadway features designed to improve speeds (e.g., provision of shoulders); • Development of parking standards, such as the prohibition of parking on key roadways to increase capacity (where capacity could not be increased by other design solutions); • Provision of traffic signals that are properly spaced and interconnected (i.e., properly phased) in order to maximize progression and minimize acceleration/deceleration; • Establishment of speed restrictions that relate to the design and operational characteristics of roadways; • Minimization or elimination of conflicting traffic movements, such as turning lanes and curb parking, as well as traffic conflicts along roadway, collector, and/or arterial streets;	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			• Provision of new roadways and/or intersections; and • Encourage the implementation of Transportation Demand Management (TDM) programs to reduce traffic volumes. In summary, these measures would be developed to ensure that all new development is served by roadways and intersections of adequate capacity and design to provide reasonable vehicular access. **Alternate Mitigation Measure 12-1:** As an alternative to Mitigation Measure 12-1, above, prior to or concurrent with the transfer of title for Bundles 1, 2, 4, 6, 7, 10, 11, 13, 16, and 18, there shall be recorded against the Project Lands within the Land Areas specified in Mitigation Measure 12-1 conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development of such lands.	No Impact
	Impact 12-2: The project could restrict access across Project Lands, resulting in the potential disruption of existing travel patterns.	Significant	**Mitigation Measures Proposed as part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 12-2:** Prior to or concurrent with the transfer of title for Bundles 1, 2, 3, 4, 5, 10, 11, 13, and 18, the Project Lands shall become burdened by recorded non-exclusive easements requiring the new owner to allow access on roads across Project Lands as delineated below for the respective bundles: **Bundle 1: Hat Creek** • Access Road at the south end of McCloud Reservoir which provides access to Big Bend Road to the SE • Big Bend Road near Little Roaring Creek which provides access to Cove Road and SR 299 • Cove Road near Little Roaring Creek which provides access to SR 299 **Bundle 2: Pit River** • Pit River Access Road at Bush Bar to Lake Britton which provides access to Big Bend Road, Lake Britton, and SR 89 **Bundle 3: Kilarc-Cow Creek** • Whitmore Road east of Fern Spring which provides access to Bateman Road	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			to the east and SR 44 to the southwest **Bundle 4: North Battle Creek** • Wildcat Road at Baldwin Creek which provides access to Manton Road to the south, SR 44 to the north **Bundle 5: Hamilton Branch** • Lake Almanor Road on the southeast side of Amador Lake which provides access to SR 36 to the north and SR 89 to the south • Prattville Butt Reservoir Road along the eastside of Butt Reservoir which provides access to SR 89 to the north and SR 70 to the south • Humbug Humboldt Road three miles west of Butt Valley Reservoir which provides access to SR 70 to the south • Butte County Road, south of Bucks Lake which provides access to SR 70 to the west and the town of Quincy to the east **Bundle 10: Potter Valley** • Elk Mountain Road, northside of Pillsbury Lake which provides access to Eel River Road to the southwest and SR 20 to the south • Elk Mountain Road on the north side of Eel River; Eel River Road on the south side which provides access to Potter Valley Road to the east and Lake Pillsbury to the west. **Bundle 11: South Yuba River** • French Lake Road which provides access to Jackson Meadows Road to the Northeast North Bloomfield Granite Road to the west • Road on the west side of Fuller Lake which provides access to North Meadow Lake Road to SR 20 • Road west of Spaulding Powerhouse which provides access to North Meadow Lake Road to SR 20 **Bundle 13: Mokelumne River** • Blue Lakes Road, east of Blue Lake and Lower Blue Lake which provides	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			access to SR 4 to the south and SR 88 to the north **Bundle 18: Kings River** • Trimmer Springs Road which provides access to access road southeast to Verplank Ridge	
13. Noise	Impact 13-1: Change in operations of the hydroelectric powerhouses would not result in substantial increases in dBA levels above the existing ambient noise conditions.	Less than Significant	None proposed.	Less than Significant
	Impact 13-2: Potential land use changes associated with the Watershed Lands would contribute substantial noise levels above the existing ambient noise conditions.	Significant	**Mitigation Measures Proposed as part of the Project** None. **Mitigation Measures Identified in This Report** **Mitigation Measure 13-2a:** Prior to approval of any new development on Project Lands, a Construction Noise Mitigation Plan shall be prepared for implementation during construction of the proposed development in order to mitigate construction noise impacts on existing residential receptors within 1,000 feet of the construction activities. Examples of mitigation strategies that should be included in any such Construction Noise Mitigation Plan include the following: • All construction activities, except in an emergency, shall be limited to the daytime hours between 7:00 a.m. to 6:00 p.m., Monday through Friday. • Air compressors and generators used for construction shall be surrounded by temporary acoustical shelters if within 300 feet of a sensitive receptor. • All construction staging shall be performed as far as possible from occupied buildings. **Mitigation Measure 13-2b:** New mining activities on Project Lands shall be limited to locations that are at least 1,600 feet from the nearest sensitive noise receptors (assumed to be residences). **Mitigation Measure 13-2c:** Any new land use development (including single family homes) shall, where feasible, be set back at least 500 feet from Native American sacred sites, designated wilderness areas, National Forest lands, and State parks. The land use development areas would generally have good noise attenuation, so the 500-foot setback should reduce noise to the current	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			background levels. Where such setbacks are not feasible, equally effective mitigation strategies shall be employed (e.g., building orientation, landscaping, intervening or natural or artificial barriers) to ensure that noise levels at the property lines abutting such noise-sensitive lands are increased by less than five dBA (Ldn or CNEL) as a result of the new development. **Alternate Mitigation Measure 13-2:** As an alternative to Mitigation Measures 13-2a, 13-2b, and 13-2c, prior to or concurrent with transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	No Impact
14. Air Quality	Impact 14-1 Changes in hydroelectric operations could affect operations at other power plants.	Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures have been identified. **Mitigation Measures Identified in This Report** **Mitigation Measure 14.1:** Measures acceptable to the CPUC shall be taken to prevent the exercise of market power by the new owner(s).	Less than Significant
	Impact 14-2: The project land development could contribute substantial emissions to the local air basin, which could cause the degradation of the local air quality conditions or would contribute to a new or existing violation of the National or State Ambient Air Quality Standards.	Significant	**Mitigation Measures Proposed as Part of the Project** No mitigation measures have been identified. **Mitigation Measures Identified in This Report** **Mitigation Measure 14.2:** Prior to approval of any new land use development or expansion of timber harvest or mineral extraction activities on Project Lands within Bundles 1,2,4,5,6,7,8,10,11,13, 16, and 18, an Air Quality Mitigation Plan shall be prepared for implementation during construction and operation of the proposed development in order to mitigate air quality impacts. Such plan shall address each of the following components: *Dust Suppression* General dust suppression mitigation measures that must be used (as appropriate) for land development, timber harvest and mining include the following: • All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities (i.e., active construction areas) shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. • Apply water or soil stabilizers as needed to unpaved parking lots, staging	Significant and Unavoidable

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			areas and roads, and, as feasible, pave all access roads. • Apply approved chemical soil stabilizers, or vegetative cover, to exposed earth surfaces in inactive construction areas. • Enclose, cover, water, or apply soil binders to exposed stock piles (i.e. sand, gravel, dirt). • Replace ground cover in disturbed areas as quickly as possible. • Limit dust generating activities during periods of high winds (over 15 mph). • Install wind breaks at windward side(s) of construction areas. • Wheel washers shall be installed where project vehicles and/or equipment exit onto paved streets from unpaved roads. Vehicles and/or equipment shall be washed prior to each trip. • Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than one percent. • Paved streets shall be swept (water sweeper with reclaimed water recommended) at the end of each day if substantial volumes of soil material have been carried onto adjacent paved, public roads from the project site. • Limit vehicle speeds to 15 mph on unpaved roads (construction and other impacted traffic). • Post signage with contact information and/or local Air District's phone number for the public. • All trucks hauling dirt, sand, soil, or other loose material should be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114. • Limit area subject to excavation, grading, and other construction activity at any one time. *General Construction:*	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			General construction mitigation for the land development to reduce the overall impact of construction activities (including the overall impact to traffic and associated traffic delay emissions), such as the following: • Provide temporary traffic control as needed during all phases of construction to improve traffic flow, as deemed appropriate. • Minimize construction-related activities disruptions to traffic flow during peak hours to the greatest feasible extent. • Use available emissions offset credits to mitigate construction emissions that exceed significance thresholds. *Land Development:* General mitigations for emissions from new land development to limit residential equipment emissions (i.e., water heaters, stoves, etc.) and associated vehicle emissions shall include strategies such as the following: • Provide for the use of energy-efficient lighting and process systems such as, low-NOx water heaters, furnaces, and boiler units. • Include installation of solar water heaters for at least 25 percent of the residential units, and orient buildings to take advantage of solar heating and natural cooling and use passive solar designs. • Increase wall and attic insulation beyond Title 24 requirements. • Limit the amount or type of woodburning device installed (i.e. EPA Phase II certified woodstoves instead of open hearth). • Design streets to maximize pedestrian access to transit stops where feasible. • Provide transit amenities, e.g., onsite/offsite bus turnouts, passenger benches, or shelters where deemed appropriate. • Contribute to traffic-flow improvements (i.e., right-of-way, capital improvements, etc.) that reduce traffic congestion and do not significantly increase roadway capacity. • Equip residential structures with electric outlets in the front and rear of the structures to facilitate use of electrical lawn and garden equipment.	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			• Provide for, or contribute to, dedication of land for off-site bicycle trails linking the development to designated bicycle commuting routes in accordance with the regional Master Plans. • Contribute to the provision of synchronized traffic signals on roadways impacted by the project, and as deemed necessary. • Provide/contribute to pedestrian access between bus service and major transportation points within the project where deemed feasible. • Include neighborhood park(s) or other recreational options, such as trails, within the development to minimize vehicle travel to off-site recreational uses. • Incorporate mixed uses, where permitted by local development regulations, to achieve a balance of commercial, employment, and housing options within the project site (i.e., provide ancillary services within walking distance of the project (no further than 1,500 feet) such as cafeterias, health clubs, automatic tellers, post office, etc.). • Include neighborhood telecommunications/telework infrastructure. *Heavy Equipment:* Heavy equipment (i.e. graders, bulldozers, forestry machines, mining machinery, etc.) can emit large quantities of NOx, and PM10. Mitigation methods, such as the following, shall be employed to reduce emissions from heavy equipment: • All heavy equipment including, but not limited to, bulldozers, backhoes, compactors, loaders, motor graders and trenchers, and cranes, dump trucks and other heavy duty equipment, will be properly maintained and the engines tuned to the engine manufacturer's specifications. • Oxidizing soot filters shall be installed on all suitable heavy equipment construction equipment. • A good faith effort shall be given to use available certified low-NOx emission heavy-duty equipment; including alternative fueled construction equipment and electrically driven equivalents (provided they are not run via a portable generator set). • Minimize equipment idling time (e.g., 10 minute maximum). • The hours of operation of heavy equipment and/or the amount of equipment in	

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			use shall be limited to minimize short-term impacts. • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak-hour of vehicular traffic on adjacent roadways. • Implement activity management (e.g., rescheduling activities to reduce short-term impacts). **Alternate Mitigation Measure 14-2:** As an alternative to Mitigation Measures 14-2a, above, prior to or concurrent with the transfer of title for any bundle listed in Mitigation Measure 14-2a, there shall be recorded against the Project Lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	
15. Aesthetics	Impact 15-1: The project could substantially degrade visual character due to intensification of land development.	Significant	**Mitigation Measures Proposed as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 15-1a:** For all bundles, new development shall be clustered away from scenic resources and public parks and recreational areas. The scale, massing, height, materials, colors, and textures of buildings shall be designed to harmonize with neighboring development. New development shall be screened from public view by maintaining 50-foot buffers from any designated scenic highway and by developing or retaining visual barriers, such as trees and bushes, to maintain the natural character of public viewsheds to the greatest degree feasible. **Mitigation Measure 15-1b:** For all bundles, prior to approval of any new land use development, an exterior lighting plan shall be prepared and submitted to the appropriate Planning and Building Agency for review and approval, and measures specified therein to reduce light and glare shall be implemented. **Mitigation Measure 15-1c:** In order to mitigate timber harvest impacts associated with Impact 15-1, all timber cutting, other than salvage, shall be screened from public view by maintaining 200 foot buffers from any designated scenic highway, key recreation resource area, residence, and/or designated scenic resource area. **Alternate Mitigation Measures 15-1a, 15-1b, and 15-1c:** As an alternative to Mitigation Measures 15-1a, 15-1b, and 15-1c, above, prior to or concurrent with the	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			transfer of title for any bundle, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities	
	Impact 15-2: The project could degrade visual character due to operational changes in reservoir levels resulting in substantial draw down of reservoirs during the peak recreational season (Memorial Day to Labor Day).	Significant	**Mitigation Measures Proposed as Part of the Project** None proposed. **Mitigation Measures Identified in This Report** **Mitigation Measure 15-2:** Mitigation measures addressing reservoir levels in Section 4.6, Recreation, would mitigate aesthetic impacts resulting from a substantial reservoir draw down to a less than significant level.	Less than Significant
16. Geology, Soils, and Minerals	Impact 16-1: The project could result in land development that could be subject to surface fault rupture.	Significant	**Mitigation Measures Proposed as Part of the Project** Implement requirements and standards established under the provision of the Alquist-Priolo Earthquake Fault Zoning Act. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-1a:** There shall be no development within the Alquist-Priolo Earthquake Fault Zones in Bundles 1, 2, and 10. **Mitigation Measure 16-1b:** Prior to approval of development within Bundle 1, Bundle 2, or Bundle 10, geologic reports shall be prepared and recommendations identified in the geologic report consistent with the then most recent Guidelines for Evaluating the Hazard of Surface Fault Rupture (CDMG Note 49) shall be implemented. **Alternate Mitigation Measure 16-1:** As an alternative to Mitigation Measures 16-1a and 16-1b, above, prior to or concurrent with the transfer of title for Bundles 1, 2, or 10, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	Less than Significant No Impact
	Impact 16-2: The project could result in land development that could increase the number of people and amount of property exposed to hazards associated with strong groundshaking on	Significant	**Mitigation Measures Proposed as Part of the Project** Implement seismic safety requirements set forth in the California Building Code. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-2:** New development in Bundles 1,2 and 10 shall not be sited in areas subject to near-field effects, or to other such locations that may be	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	active faults.		subject to strong groundshaking and related secondary effects as identified through site-specific geotechnical studies prepared in accordance with UBC/CBC standards. **Alternate Mitigation Measure 16-2:** As an alternative to Mitigation Measure 16-2, above, prior to or concurrent with the transfer of title for Bundles 1, 2, and 10, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	No Impact
	Impact 16-3: The project could result in land development that could result in increased soil erosion or mass wasting during construction or occupancy.	Significant	**Mitigation Measures Proposed as Part of the Project** Implement county ordinances pertaining to grading and erosion control. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-3:** Prior to the transfer of title for any bundle, Pacific Gas and Electric Company shall demonstrate that the new owner has received and reviewed the existing Best Management Practices (BMPs) of Pacific Gas and Electric Company for that particular bundle that relate to erosion control, geotechnical procedures, and slope stability, and the new owner shall either (i) commit in writing to adhere to those pertinent all such existing BMPs, or (ii) submit to the CPUC for its review and approval, and obtain approval of, substitute Best Management Practices that are protective of the environment to an equal or greater degree then Pacific Gas and Electric Company's existing BMPs.	Less than Significant
	Impact 16-4: The project could result in timber harvesting operations that could result in increased soil erosion or mass wasting.	Less than Significant	**Mitigation Measures Proposed as Part of the Project** Implement regulations and standards established under the Forest Practices Act (CCR Title 14). **Mitigation Measures Identified in This Report** None proposed.	Less than Significant
	Impact 16-5: The project could result in mining operations that could result in increased soil erosion or mass wasting.	Less than Significant	**Mitigation Measures Proposed as Part of the Project** Implement regulations and standards established under the Surface Mining and Reclamation Act (SMARA, California Code of Regulations, Title 14, Division 2, Chapter 8) **Mitigation Measures Identified in This Report**	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			None proposed.	
	Impact 16-6: The project could result in land development on or within soils in which shrink-swell (expansion) potential, slope, or shallow depth to rock could damage structures and/or create unstable rock or soil conditions.	Significant	**Mitigation Measures Proposed as Part of the Project** Implement County grading and erosion control ordinances, CBC standards pertaining to expansive soils, and applicable State and local requirements pertaining to use of explosives for blasting. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-6:** In Bundles 1 through 8, 11, and 13, avoid development of new structures and associated infrastructure on slopes in excess of 30 percent unless it can be demonstrated through geotechnical engineering studies prepared in accordance with State regulations and local standards that development will not adversely affect site conditions. Development on unstable or steep slopes shall not occur unless appropriate cut-and-fill methods and slope stabilizing measures have been identified, and approved by the local building authority. All grading shall be prepared in accordance with local grading and erosion control ordinances. **Alternate Mitigation Measure 16-6:** As an alternative to Mitigation Measure 16-6, above, prior to or concurrent with the transfer of title for Bundles 1 through 8, 11 and 13, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	Less than Significant No Impact
	Impact 16-7: The project could result in a change in hydrological operations that could affect existing informal erosion control plans, which could result in new or exacerbated erosion problems.	Significant	**Mitigation Measures Proposed as Part of the Project** None identified. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-7a:** Prior to the transfer of title for Bundle 6, the new owner shall consult with the Lake Almanor Shoreline Protection Committee and shall develop appropriate measures to minimize erosion that could result from changes in operation of project facilities. The new owner shall by binding written instrument agree to comply with such measures. **Mitigation Measure 16-7b:** Prior to the transfer of title for Bundle 16, the new owner shall by binding written instrument agree to honor the commitments Pacific Gas and Electric Company made in the Final Phase 1 Agreement and in the Bass Lake Shoreline and Water Surface Management Plan.	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
	Impact 16-8: The project could result in development that could limit availability of mineral resources classified as MRZ-2 by the State Geologist or important mineral lands recognized in local land use planning, or the project could cause changes in land use or hydrologic operations could result in termination of existing mining lease agreements which would reduce availability of mineral resources.	Significant	**Mitigation Measures Proposed as Part of the Project** None identified. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-8:** Land development proposals shall identify and consider the location and proximity of areas classified as MRZ-2 by the State Geologist or any special mineral resource land use or zoning designations adopted by the local jurisdiction with approval authority of discretionary projects, and development shall avoid identified MRZ-2 areas to the extent feasible. If such areas cannot be avoided, any change in land use that could affect the availability of MRZ-2 resources shall be subject to the applicable requirements of the Public Resources Code Section 2762 in consultation with the local planning jurisdiction. Alternate Mitigation Measure 16-8: As an alternative to Mitigation Measure 16-8 above, prior to or concurrent with the transfer of title for bundles with areas classified as MRZ-2, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any further land use development, or expansion of timber harvest or mineral extraction activities.	Less than Significant
	Impact 16-9: The project could result in land development in areas where significant mineral resources may exist but have not yet been identified, causing the loss of availability of these mineral resources.	Significant	**Mitigation Measures Proposed As Part of the Project** None identified. **Mitigation Measures Identified in This Report** **Mitigation Measure 16-9:** Prior to approval of any proposed new development on Project Lands where MRZ-2 areas classified by the State Geologist have not been identified, geologic and minerals resources maps and databases prepared by CDMG and USGS, and available at the time of proposed development, shall be reviewed to determine the potential for significant mineral resources. The review, which shall identify the type and extent of mineral deposits, shall be used to site proposed development, to the extent feasible, to avoid potential mineral lands conflicts. If such areas cannot be avoided, any change in land use that could affect the availability of identified resources shall be subject to the applicable requirements of the Public Resources Code (Section 2762) and in consultation with the local planning jurisdiction. **Alternate Mitigation Measure 16-9:** As an alternative to Mitigation Measure 16-9 above, prior to or concurrent with the transfer of title for any bundles, there shall be recorded against the lands within the bundle conservation easements running with the land and (in a form and substance approved by the CPUC) precluding any	Less than Significant

Table S-1 Summary of Project Impacts and Mitigation by Resource

Resource	Impact Statement	Effect Before Mitigation	Mitigation	Effect After Mitigation
			further land use development, or expansion of timber harvest or mineral extraction activities.	
	Impact 16-10: The project could result in a change in hydrological operations and maintenance practices, which could result in new or exacerbated erosion or slope instability problems.	Significant	**Mitigation Measures Proposed as Part of the Project** None identified. **Mitigation Measures Identified in This Report** Mitigation Measure 16-3 would reduce this impact to a less than significant level.	Less than Significant

The Alternatives and Focused Alternatives analyzed in the EIR are listed here (see boxes). Information on these are provided in Tables S-2 and S-3, which follow.

ALTERNATIVES ANALYZED IN DETAIL

1. No Project (A): Facilities are owned by Pacific Gas and Electric Company under CPUC regulation;
2. No Project (B): Facilities are owned by Pacific Gas and Electric Company as unregulated assets;
3. Proposed Pacific Gas and Electric Company Settlement: Facilities are owned by an unregulated affiliate of Pacific Gas and Electric Company, and certain restrictions are placed on the use of lands;
4. Proposed Settlement (Regulated): as above, only under CPUC regulation.
5. Bundled by River Basin: Assets are bundled by river basin rather than region.
6. Individual Bundles: Assets are offered only as Local Bundles, not as Regional Bundles;
7. Bundle Watershed Lands for Conservation: Watershed lands not required for generation are bundled separately and placed under conservation easements;
8. Decommissioning of Selected Facilities: Some facilities are not offered for sale but are decommissioned and removed; and
9. Environmental Composite Alternative. A combination of various environmentally beneficial components of several alternatives and specific mitigation concepts to reduce or avoid significant impacts.

Focused Alternatives Evaluated in Less Detail

1. Single Owner (not Pacific Gas and Electric Company);
2 Bundles minus a single FERC Facility;
3. Partial/Interim Retention by Pacific Gas and Electric Company of Selected Facilities;
4. Environmental Enhancement;
5. Alternative Valuation;
6 Interim State Ownership; and
7. Alternate (Regulated) Ratemaking.

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
1. Land Use	**Impact 1-1:** New uses on Project Lands could be substantially incompatible with existing and planned adjacent uses.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	UNK	O
2. Forestry	**Impact 2-1:** The project could result in a reduction in regional forest inventories.	Less than Significant	Less than Significant	0	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (E)	L/S (L)	L/S (E)	L/S (L)
	Impact 2-2: The project may result in a decrease in productive timber lands.	Less than Significant	Less than Significant	0	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (E)	L/S (L)	L/S (E)	L/S (L)
3. Hydrology and Water Quality	**Impact 3-1:** The project could increase flood risk as a result of decreases in available reservoir storage due to changes in operations.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (L)	S/M (G)	S/M (E)	UNK	S/M (L)
	Impact 3-2: The project could alter geomorphology and reduce channel stability as a result of changes in high flows.	Significant	Less than Significant	0	S/M (E)	S/M (L)	L/S (L)	S/M (E)	S/M (E)	S/M (E)	UNK	S/M (L)
	Impact 3-3: The project could alter stream flows as a result of changes to the current program of cloud seeding.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	S/M (E)	S/U (G)	S/M (E)
	Impact 3-4: The project could impair the development of long term and short term stream flow volume forecasts and flood flow forecasts as a result of the elimination or substantial reduction in the quantity or quality of cooperative gauging programs (including snow courses, and stream flow, lake level, and precipitation gauging).	Significant	Less than Significant	0	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/U (G)	O

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 3-5: The project could reduce instream flows in bypass reaches to less than baseline flows, which could result in a significant impact on water quality, inconsistent with the Basin Plan.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	UNK	S/M (L)
	Impact 3-6: Project changes in reservoir operations and management could result in a significant impact on water quality inconsistent with the Basin Plan.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	S/M (L)	S/M (L)
	Impact 3-7: Project changes in timber harvest practices or extent could result in a significant impact on water quality inconsistent with the Basin Plan.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 3-8: Construction activities associated with development of Project Lands would involve earthmoving activities that could affect receiving water quality through increased sedimentation.	Less than Significant	Less than Significant	0	L/S (E)	0	0	L/S (E)	L/S (E)	0	L/S (E)	O
	Impact 3-9: The project could result in land development that could affect water quality through increases in urban pollutants in stormwater runoff and septic system use.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 3-10: The project could result in changes in reservoir sediment management practices, which could result in a significant impact on water quality, inconsistent with the Basin Plan.	Significant	Less than Significant	0	S/M (E)	S/M (E)	0	S/M (E)	S/M (E)	S/M (E)	UNK	O

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
4. Fisheries and Aquatic Biology	**Impact 4.1:** Instream flow reductions within natural channels as a result of a new owner(s) operation of PG&E Company's hydroelectric facility assets could adversely affect fishery and aquatic resources, especially special status species, through habitat or water quality degradation.	Significant	Significant	0	S/U (E)	S/U (L)	S/U (L)	S/U (E)	S/U (E)	S/U (E)	UNK	S/U (L)
	Impact 4.2: Changes in the timing, magnitude, duration and frequency of reservoir levels as a result of new owner operation of Pacific Gas & Electric Company's hydroelectric facility assets could adversely affect fishery and aquatic resources, especially special-status species, through habitat or water quality degradation.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (L)
5. Terrestrial Biology	**Impact 5-1:** The project may result in adverse effects to wildlife and plant species listed and proposed for listing under the Federal Endangered Species Act and/or the California Endangered Species Act.	Significant	Less than Significant	0	S/M (E)	B/N	B/N	S/M (E)	S/M (E)	B/N	S/M (E)	B/N
	Impact 5-2: The project may result in adverse effects to non-listed special status wildlife and plant species (i.e., species of concern, BLM, and USFS sensitive) and associated habitats.	Significant	Less than Significant	0	S/M (E)	B/N	B/N	S/M (E)	S/M (E)	B/N	S/M (E)	B/N
	Impact 5-3: The project could result in habitat degradation as measured by potential habitat fragmentation and disruption to migration corridors.	Significant	Less than Significant	0	S/M (E)	B/N	B/N	S/M (E)	S/M (E)	B/N	S/M (E)	B/N

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 5-4: The project may result in adverse effects to sensitive native plant communities, including wetlands and riparian corridors.	Significant	Less than Significant	0	S/M (E)	B/N	B/N	S/M (E)	S/M (E)	B/N	S/M (E)	B/N
	Impact 5-5: Changes in hydroelectric operations could result in adverse effects to non-fisheries biotic resources including riparian and lacustrine vegetation communities.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	S/M (L)	S/M (L)
6. Recreation	**Impact 6-1:** The project would substantially diminish existing water-based recreational opportunities or the condition of water-based recreational facilities.	Significant	Less than Significant	0	S/M (E)	S/M (L)	L/S (L)	S/M (E)	S/M (E)	S/M (L)	UNK	L/S (L)
	Impact 6-2: The project would substantially diminish existing land-based recreational opportunities or the condition of land-based recreational facilities.	Significant	Less than Significant	0	S/M (E)	S/M (L)	L/S (L)	S/M (E)	S/M (E)	S/M (L)	S/M (E)	L/S (L)
	Impact 6-3: The project would cause reduced use of affected recreation areas, resulting in substantial adverse local economic effects.	Significant	Less than Significant	0	S/M (E)	S/M (L)	L/S (L)	S/M (E)	S/M (E)	S/M (L)	UNK	L/S (L)
7. Cultural Resources	**Impact 7-1**: The project could result in the damage or destruction of known and/or unknown cultural resources.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 7-2: The project could result in constraints on Native American access to culturally or historically significant lands or landforms.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (E)	S/M (L)	S/M (E)	L/S (L)

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 7-3: Changes in hydroelectric operations and reservoir management could result in damage or destruction of cultural resources.	Significant	Less than Significant	0	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (L)
8. Agriculture	**Impact 8-1:** Loss of grazing opportunities on Project Lands could result in increased local grazing pressure on remaining leases.	Less than Significant	Less than Significant	0	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (E)	L/S (L)	L/S (E)	L/S (L)
	Impact 8-2: Non-renewal of a water delivery agreement after its expiration date may affect agricultural productivity.	Significant	Less than Significant	0	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	UNK	S/M (L)
	Impact 8-3: The project could result in changes in timing and availability of water which could impact downstream agricultural productivity.	Significant	Less than Significant	0	S/M (E)	S/M (G)	S/M (G)	S/M (E)	S/M (G)	S/M (E)	S/U (G)	S/M (E)
9. Hazards & Hazardous Materials	**Impact 9-1:** The project could involve construction modifications to hydroelectric facilities that could expose the public or workers to contaminated soil and/or groundwater or hazardous building materials.	Significant	Less than Significant	0	S/M (L)	L/S (L)	L/S (L)	S/M (E)	S/M (E)	S/M (E)	L/S (G)	S/U (E)
	Impact 9-2: The project could result in land development that could expose the public or workers to contaminated soil and/or groundwater.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 9-3: The project would not substantially increase the transport, storage, or use of hazardous materials at hydroelectric facilities and new land that could be developed.	Less than Significant	Less than Significant	0	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (E)	L/S (L)	L/S (E)	L/S (L)

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 9-4: The project could increase risks to workers and the public should reservoir levels, water releases, and/or facility maintenance be managed improperly.	Significant	Less than Significant	0	S/M (E)	L/S (L)	L/S (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)
	Impact 9-5: The project could increase risks to public safety from fire hazards should operating practices or land management change.	Significant	Less than Significant	0	S/M (E)	L/S (L)	L/S (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)
10. Population, Employment, and Housing	**Impact 10-1:** Development of Project Lands would induce population growth.	Less than Significant	Less than Significant	0	L/S (E)	0	0	L/S (E)	L/S (E)	0	L/S (E)	O
11. Public Services and Utilities	**Impact 11-1**: The Project could reduce the supply and/or reliability of electricity generated by hydroelectric power. **PowerMax / WaterMax**	Less than Significant	Less than Significant	0	L/S (E)	L/S (G)	L/S (G)	L/S (L)	L/S (G)	L/S (E)	UNK	L/S (G)
	Impact 11-1: With Market Power	Significant	Less than Significant	0	S/M (G)	S/M (G)	S/M (G)	S/M (E)	S/M (E)	S/M (E)	0	S/M (G)
	Impact 11-2: The project could significantly increase electricity demand should development occur on Project Lands.	Less than Significant	Less than Significant	0	L/S (E)	0	0	L/S (E)	L/S (E)	0	L/S (E)	O
	Impact 11-3: The project could result in the loss of consumptive water to existing users.	Significant	Less than Significant	0	S/M (E)	L/S (L)	L/S (L)	S/M (E)	S/M (E)	S/M (E)	UNK	S/M (E)
	Impact 11-4: The project could increase water demand through land use intensification.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 11-5: The project could result in substantial adverse impacts on local public services and utilities providers.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 11-6: The project could result in reduced telecommunications capacity among the hydroelectric power facilities between facilities and the ISO, and with public health and safety officials in the event of an emergency. In addition, it could result in the construction of redundant telecommunications facilities.	Significant	Less than Significant	0	0	0	0	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (E)
12. Transportation	**Impact 12-1**: The project could cause increased vehicular trips resulting from change in land uses and/or new employment opportunities.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 12-2: The project could restrict access across Project Lands, resulting in the potential disruption of existing travel patterns.	Significant	Less than Significant	0	S/M (E)	S/M (L)	L/S (L)	S/M (E)	S/M (E)	L/S (L)	S/M (E)	L/S (L)
13. Noise	**Impact 13-1:** Change in operations of the hydroelectric powerhouses would not result in substantial increases in dBA levels above the existing ambient noise conditions.	Less than Significant	Less than Significant	0	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (E)	L/S (E)	L/S (L)	L/S (L)
	Impact 13-2: Potential land use changes associated with the Watershed Lands would contribute substantial noise levels above the existing ambient noise conditions.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
14. Air Quality	**Impact 14-1:** Changes in hydroelectric operations could affect operations at other power plants. **PowerMax / WaterMax**	Less than Significant	Less than Significant	0	L/S (E)	L/S (E)	L/S (E)	L/S (E)	L/S (E)	L/S (E)	UNK	L/S (E)

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 14-1: With Market Power	Significant	Less than Significant	0	S/M (E)	S/U (G)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	0	S/M (E)
	Impact 14-2: The project land development could contribute substantial emissions to the local air basin, which could cause the degradation of the local air quality conditions or would contribute to a new or existing violation of the National or State Ambient Air Quality Standards.	Significant	Significant	0	S/U (G)	0	0	S/U (E)	S/U (E)	0	S/U (E)	O
15. Aesthetics	**Impact 15-1:** The project could substantially degrade visual character due to intensification of land development.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 15-2: The project could degrade visual character due to operational changes in reservoir levels, resulting in substantial drawdown of reservoirs during the peak recreational season (Memorial Day to Labor Day)	Significant	Less than Significant	0	S/M (E)	S/M (L)	L/S	S/M (E)	S/M (E)	S/M (E)	UNK	L/S (L)
16. Geology, Soils and Minerals	**Impact 16-1:** The project could result in land development that could be subject to surface fault rupture.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 16-2: The project could result in land development that could increase the number of people and amount of property exposed to hazards associated with strong ground shaking on active faults.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 16-3: The project could result in land development that could result in increased soil erosion or	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	mass wasting during construction or occupancy.											
	Impact 16-4: The project could result in timber harvesting operations that could result in increased soil erosion or mass wasting.	Less than Significant	Less than Significant	0	L/S (E)	0	0	L/S (E)	L/S (E)	0	L/S (E)	O
	Impact 16-5: The project could result in mining operations that could result in increased soil erosion or mass wasting.	Less than Significant	Less than Significant	0	L/S (E)	0	0	L/S (E)	L/S (E)	0	L/S (E)	O
	Impact 16-6: The project could result in land development on or within soils in which shrink-swell (expansion) potential, slope, or shallow depth to rock could damage structures and/or create unstable rock or soil conditions.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 16-7: The project could result in a change in hydrological operations that could affect existing informal erosion control plans, which could result in new or exacerbated erosion problems.	Significant	Less than Significant	0	S/M (E)	L/S (L)	L/S (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)	S/M (L)
	Impact 16-8: The project could result in development that could limit availability of mineral resources classified as MRZ-2 by the State Geologist or important mineral lands recognized in local land use planning, or the project could cause changes in land use or hydrologic operations which could result in termination of existing mining lease agreements, which would reduce availability of mineral resources.	Significant	Less than Significant	0	S/M (E)	S/U (G)	S/U (G)	S/M (E)	S/M (E)	S/U (L)	S/M (E)	S/U (G)

Table S-2 Comparison of the Impacts of the Alternatives

Resource	Impact Statement	Project Impact		Alt. 1	Alt. 2*	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8**	Alt. 9
		Before Mitigation	After Mitigation									
	Impact 16-9: The project could result in land development in areas where significant mineral resources may exist but have not yet been identified, causing the loss of availability of these mineral resources.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	0	S/M (E)	O
	Impact 16-10: The project could result in a change in hydrological operations and maintenance practices, which could result in new or exacerbated erosion or slope instability problems.	Significant	Less than Significant	0	S/M (E)	0	0	S/M (E)	S/M (E)	S/M (E)	S/M (G)	S/M (L)

Key to Symbols:

S/U = Significant and unavoidable

S/M = Significant, but may be reduced to less than significant with inclusion of mitigation measures

L/S = Less than significant

L/S/M = Less than significant, but supplemental mitigation has been suggested

0 = No impact would occur

B/N = Impact would be beneficial or neutral

UNK = Unknown level of impact

(G) = Impact would be greater (or less favorable) than the project

(L) = Impact would be less (or more favorable) than the project

(E) = Impact would be equal (or similar) to the project

* If, and only if, the legal theory espoused by Pacific Gas and Electric Company (that the market valuation of Pacific Gas and Electric Company's hydroelectric facilities would have the result of creating an unregulated status for those facilities without any further action from the CPUC) were to prove true, the significant impacts of this alternative would be unmitigated and, thus remain significant and unavoidable.

** This column indicates impact for facilities that would be decommissioned. The remaining hydroelectric plants would have impacts similar to the project.

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
1. Land Use	**Impact 1-1:** New uses on Project Lands could be substantially incompatible with existing and planned adjacent uses.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
2. Forestry	**Impact 2-1** The project could result in a reduction in regional forest inventories.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (L)	L/S (E)
	Impact 2-2 The project may result in a decrease in productive timber lands.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (L)	L/S (E)
3. Hydrology and Water Quality	**Impact 3-1:** The Project could increase flood risk as a result of decreases in available reservoir storage due to changes in operations.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
	Impact 3-2: The project could alter geomorphology and reduce channel stability as a result of changes in high flows.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
	Impact 3-3: The project could alter stream flows as a result of changes to the current program of cloud seeding.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)
	Impact 3-4: The project could impair the development of long term and short term stream flow volume forecasts and flood flow forecasts as a result of the elimination or substantial reduction in the quantity or quality of cooperative gauging programs (including snow courses, and stream flow, lake level, and precipitation gauging).	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 3-5: The project could reduce instream flows in bypass reaches to less than baseline flows, which could result in a significant impact on water quality, inconsistent with the Basin Plan.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
	Impact 3-6: Project changes in reservoir operations and management could result in a significant impact on water quality inconsistent with the Basin Plan.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
	Impact 3-7: Project changes in timber harvest practices or extent could result in a significant impact on water quality inconsistent with the Basin Plan.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
	Impact 3-8: Construction activities associated with development of Project Lands would involve earthmoving activities that could affect receiving water quality through increased sedimentation.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	0	L/S (E)	0	L/S (E)
	Impact 3-9: The project could result in land development that could affect water quality through increases in urban pollutants in stormwater runoff and septic system use.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 3-10: The project could result in changes in reservoir sediment management practices, which could result in a significant impact on water quality, inconsistent with the Basin Plan.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
4. Fisheries and Aquatic Biology	**Impact 4-1:** Instream flow reductions within natural channels as a result of a new owner(s) operation of PG&E Company's hydroelectric facility assets could adversely affect fishery and aquatic resources, especially special status species, through habitat or water quality degradation.	Significant	Significant	S/U (E)	S/ U (E)	S/M (L)	S/M (L)	S/ U (E)	S/M (L)	S/ U (E)
	Impact 4-2: Changes in the timing, magnitude, duration and frequency of reservoir levels as a result of new owner operation of Pacific Gas & Electric Company's hydroelectric facility assets could adversely affect fishery and aquatic resources, especially special-status species, through habitat or water quality degradation.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
5. Terrestrial Biology	**Impact 5-1:** The project may result in adverse effects to wildlife and plant species listed and proposed for listing under the Federal Endangered Species Act and/or the California Endangered Species Act.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	B/N	S/M (E)
	Impact 5-2: The project may result in adverse effects to non-listed special status wildlife and plant species (i.e., species of concern, BLM, and USFS sensitive) and associated habitats.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	B/N	S/M (E)
	Impact 5-3: The project could result in habitat degradation as measured by potential habitat fragmentation and disruption to migration corridors.	Significant	Less then Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	B/N	S/M (E)

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
	Impact 5-4: The project may result in adverse effects to sensitive native plant communities, including wetlands and riparian corridors.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	0	S/M (E)
	Impact 5-5: Changes in hydroelectric operations could result in adverse effects to non-fisheries biotic resources including riparian and lacustrine vegetation communities.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
6. Recreation	**Impact 6-1:** The project would substantially diminish existing water-based recreation opportunities or the condition of water-based recreational facilities.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
	Impact 6-2: The project would substantially diminish existing land-based recreational opportunities or the condition of land-based recreational facilities.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	0	S/M (E)
	Impact 6-3: The project would cause reduced use of affected recreation areas, resulting in substantial adverse local economic effects.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
7. Cultural Resources	**Impact 7-1:** The project could result in the damage or destruction of known and/or unknown cultural resources.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	0	S/M (E)
	Impact 7-2: The project could result in constraints on Native American access to culturally or historically significant lands or landforms.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
	Impact 7-3: Changes in hydroelectric operations and reservoir management could result in damage or destruction of cultural resources.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
8. Agriculture	**Impact 8-1:** Loss of grazing opportunities on Project Lands could result in increased local grazing pressure on remaining leases.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (L)	L/S (E)
	Impact 8-2: Non-renewal of a water delivery agreement after its expiration date may affect agricultural productivity.	Significant	Less than Significant	S/M (E)	S/M (E)	S/U (L)	L/S (L)	S/M (E)	S/M (L)	S/M (E)
	Impact 8-3: The project could result in changes in timing and availability of water which could impact downstream agricultural productivity.	Significant	Less than Significant	S/M (E)	S/M (E)	L/S (L)	L/S (L)	L/S (E)	L/S (E)	L/S (E)

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
9. Hazards & Hazardous Materials	**Impact 9-1:** The project could involve construction modifications to hydroelectric facilities that could expose the public or workers to contaminated soil and/or groundwater or hazardous building materials.	Significant	Less than Significant	S/M (E)	S/M (E)	L/S (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
	Impact 9-2: The project could result in land development that could expose the public or workers to contaminated soil and/or groundwater.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 9-3: The project would not substantially increase the transport, storage, or use of hazardous materials at hydroelectric facilities and new land that could be developed.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (L)	L/S (E)
	Impact 9-4: The project could increase risks to workers and the public should reservoir levels, water releases, and/or facility maintenance be managed improperly.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)
	Impact 9-5: The project could increase risks to public safety from fire hazards should operating practices or land management change.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (E)	S/M (E)	S/M (E)	S/M (E)
10. Population, Employment, and Housing	**Impact 10-1:** Development of Project Lands would induce population growth.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	0	L/S (E)	0	L/S (E)
11. Public Services and Utilities	**Impact 11-1**: The project could reduce the supply and/or reliability of electricity generated by hydroelectric power. **PowerMax / WaterMax**	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	L/S (G)	L/S (E)	L/S (G)	L/S (E)
	Impact 11-1: With Market Power	Significant	Less than Significant	S/M (G)	S/M (E)	S/M (L)	S/M (G)	S/M (E)	S/M (E)	S/M (E)
	Impact 11-2: The project could significantly increase electricity demand should development occur on Project Lands.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	0	L/S (E)	0	L/S (E)
	Impact 11-3: The project could result in the loss of consumptive water to existing users.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)
	Impact 11-4: The project could increase water demand through land use intensification.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
	Impact 11-5: Implementation of the project could result in substantial adverse impacts on local public services and utilities providers.	Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	0	L/S (E)	0	L/S (E)
	Impact 11-6: The project could result in reduced telecommunications capacity among the hydroelectric power facilities between facilities and the ISO, and with public health and safety officials in the event of an emergency. In addition, it could result in the construction of redundant telecommunications facilities.	Significant	Less than Significant	L/S/M (E)	L/S/M (E)	L/S/M (L)	0	L/S/M (E)	0	L/S/M (E)
12. Transportation	**Impact 12-1:** The project could cause increased vehicular trips resulting from change in land uses and/or new employment opportunities.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 12-2: The project could restrict access across Project Lands resulting in the potential disruption of existing travel patterns.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
13. Noise	**Impact 13-1:** Change in operations of the hydroelectric powerhouses would not result in substantial increases in dBA levels above the existing ambient noise conditions.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	L/S (L)	L/S (E)	L/S (L)	L/S (E)
	Impact 13-2: Potential land use changes associated with the Watershed Lands would contribute substantial noise levels above the existing ambient noise conditions.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	B/N	S/M (E)	0	S/M (E)
14. Air Quality	**Impact 14-1:** Changes in hydroelectric operations could affect operations at other power plants. **PowerMax / WaterMax**	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (E)	UNK	L/S (E)	L/S (E)	L/S (E)
	Impact 14-1: With Market Power	Significant	Less than Significant	S/M (G)	S/M (E)	S/M (L)	S/U (G)	S/M (E)	S/U (G)	S/M (E)
	Impact 14-2: The project land development could contribute substantial emissions to the local air basin, which could cause the degradation of the local air quality conditions or would contribute to a new or existing violation of the National or State Ambient Air Quality Standards.	Significant	Significant	S/U (E)	S/U (E)	S/U (L)	0	S/U (E)	0	S/U (E)
15. Aesthetics	**Impact 15-1:** The project could degrade visual character due to intensification of land development.	Significant	Less than Significant	S/U (E)	S/U (E)	S/U (L)	B/N	S/U (E)	0	S/U (E)

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
	Impact 15-2: The project could degrade visual character due to operational changes in reservoir levels, resulting in substantial drawdown of reservoirs during the peak recreational season (Memorial Day to Labor Day)	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
16. Geology, Soils and Minerals	**Impact 16-1:** The project could result in land development that could be subject to surface fault rupture.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 16-2: The project could result in land development that could increase the number of people and amount of property exposed to hazards associated with strong ground shaking on active faults.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 16-3: The project could result in land development that could result in increased soil erosion or mass wasting during construction or occupancy.	Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	0	L/S (E)	0	L/S (E)
	Impact 16-4: The project could result in timber harvesting operations that could result in increased soil erosion or mass wasting.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	B/N	L/S (E)	0	L/S (E)
	Impact 16-5: The project could result in mining operations that could result in increased soil erosion or mass wasting.	Less than Significant	Less than Significant	L/S (E)	L/S (E)	L/S (L)	B/N	L/S (E)	0	L/S (E)
	Impact 16-6: The project could result in land development on or within soils in which shrink-swell (expansion) potential, slope, or shallow depth to rock could damage structures and/or create unstable rock or soil conditions.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 16-7: The project could result in a change in hydrological operations that could affect existing informal erosion control plans, which could result in new or exacerbated erosion problems.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	L/S (L)	S/M (E)	L/S (L)	S/M (E)
	Impact 16-8: The project could result in development that could limit availability of mineral resources classified as MRZ-2 by the State Geologist or important mineral lands recognized in local land use planning, or the project could cause changes in land use or hydrologic operations which could result in termination of existing mining lease agreements, which would reduce availability of mineral resources.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/U (G)	S/M (E)	S/U (G)	S/M (E)

Table S-3 Comparison of the Impacts of the Focused Alternatives

Resource	Impact Statement	Project Impacts		F Alt 1	F Alt 2	F Alt 3	F Alt 4	F Alt 5	F Alt 6	F Alt 7
		Before Mitigation	After Mitigation							
	Impact 16-9: The project could result in land development in areas where significant mineral resources may exist but have not yet been identified, causing the loss of availability of these mineral resources.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	0	S/M (E)	0	S/M (E)
	Impact 16-10: The project could result in a change in hydrological operations and maintenance practices, which could result in new or exacerbated erosion or slope instability problems.	Significant	Less than Significant	S/M (E)	S/M (E)	S/M (L)	S/M (L)	S/M (E)	S/M (L)	S/M (E)

Key to Symbols:

S/U = Significant and unavoidable

S/M = Significant, but may be reduced to less than significant with inclusion of mitigation measures

L/S = Less than significant

L/S/M = Less than significant, but supplemental mitigation has been suggested

0 = No impact would occur

B/N = Impact would be beneficial or neutral

UNK = Unknown level of impact

(G) = Impact would be greater (or less favorable) than the project

(L) = Impact would be less (or more favorable) than the project

(E) = Impact would be equal (or similar) to the project