STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for

**PACIFIC GAS AND ELECTRIC COMPANY'S
REVISED MCARTHUR SWAMP MANAGEMENT PLAN –
IMPLEMENTATION OF THE WATERFOWL RESTORATION PROJECT**

SOURCE: Big Lake

COUNTY: Shasta

WATER QUALITY CERTIFICATION FOR FEDERAL PERMIT OR LICENSE

BY THE EXECUTIVE DIRECTOR:

I. Project Description

On March 19, 2003, the Federal Energy Regulatory Commission (FERC) issued a new license for Pacific Gas and Electric Company's (PG&E's or Applicant's) Pit 1 Hydroelectric Project (FERC Project No. 2687). Article 406 of the FERC license requires PG&E to develop a management plan for Hollenbeak Field, Rat Farm Pond, and the canals and drains located within the McArthur Swamp area and within the FERC Project boundary. The project is referred to as the Revised McArthur Swamp Management Plan – Implementation of the Waterfowl Restoration Project (McArthur Swamp Waterfowl Restoration Project or Project). The Project was developed in consultation with various stakeholders.

The Project area encompasses approximately 475 acres within areas known as Ash Field, Rat Farm Pond, and part of Hollenbeak Field. The area will be flooded with water diverted from Big Lake under a claim of riparian right. To help distribute the water in the fields during flood-up, approximately 133 acres of meandering swales and 18 acres of elevated mounds will be created. To control water levels, two new water control structures will be built: one in Central Drain; and a second structure in Ash Field. The drains and canals will be fenced.

New fencing will be composed of 4-strand barbwire, with the bottom wire positioned between 16 inches and 18 inches above the ground. The height of the bottom wire will allow for improved wildlife passage.

In order to meet grazing demands, additional stock watering locations (concrete or steel water troughs connected to the existing stock watering system) may be required in the fenced fields. PG&E will consult with the State Water Resources Control Board's (State Water Board) Division of Water Rights and register any new stock watering locations, if required.

Approximately 245-275 acres of Ash Field and 80-84 acres of Rat Farm Pond will be flooded annually from mid-October to mid-April, while 150-200 acres of Hollenbeak Field will be flooded annually from January through mid to late June. The flooded area will provide waterfowl nesting and brood habitat.

The area will be flooded using portable pumps positioned on the levees. One pump will be used to flood Ash Field and Rat Farm Pond, and another will be used to flood Hollenbeck Field. The pumps will be fitted with an inlet hose that can extend approximately 20-40 feet off the levee bank and will be equipped with floats. The floats will ensure the inlet hose pulls water from the top 3-4 feet of the lake surface. To prevent fish entrainment, the hose inlet will be screened with a "screen box" with 1/4 inch perforations. PG&E will use these pumps to divert a maximum of 807 acre-feet of water to annually flood Ash Field, Rat Farm Pond, and Hollenbeck Field. All water will eventually flow into McArthur Diversion Canal, a tributary to the Pit River.

Big Lake and adjacent lands are known to support federal and/or state listed wildlife species. The federal and state endangered Shasta crayfish (*Pacifastacus fortis*) is known to occur in Big Lake, primarily in the spring areas of northern Big Lake. Shasta crayfish are also found in small numbers along a section of the Big Lake levee. The majority of Shasta crayfish found along the Big Lake levee are in a small cove at the eastern end of the levee (Spring Rivers Ecological Sciences 2006.). Big Lake is also known to support the state fully protected rough sculpin (*Cottus asperrimus*) and the bigeye marbled sculpin (*Cottus klamathensis macrops*), a state species of special concern (PG&E 1993.). Both sculpin species are benthic (bottom-dwelling).

A visual depiction of the proposed Project is included in Figure 1 of this water quality certification.

II. Construction Activities

Project construction will take place in three areas: (1) Ash Field; (2) Rat Farm Pond; and (3) Hollenbeck Field, as described below.

Ash Field

A series of meandering swales will be excavated within Ash Field to provide open water foraging areas. Swales will be between 40 and 200 feet wide (average width of 125 feet) by 18 inches deep. Swales will be contoured to drain south towards the Rat Farm Pond and into the McArthur Drain. The swale design will allow for controlled water management of Ash Field. Excavated soil from swale development will be used to create 11 acres of elevated mounds that will provide loafing areas and escape cover for waterfowl and other bird species. Elevated mounds will vary in height from 12, 18, and 24 inches. Depending on water levels at any given moment, mounds set at 12 and 18 inches will be partially or completely flooded during portions of the proposed flood regime. In addition to the swales being flooded, adjacent sections of field will be inundated. As water levels recede, only swales will hold water.

A water control structure will be installed in Ash Field and will be constructed in a natural swale that conveys water into an unnamed drainage ditch that borders the southern boundary of Ash Field. This structure will consist of two culverts cast in concrete (pre-cast structure) and fitted with manually operated screw gates. The footing for the water control structure will be approximately 40 feet wide by 24 feet long. Geotextile fabric will be installed over the existing location and backfilled with levee core material. To minimize/eliminate erosion, rip rap (energy dissipater) will be placed at the entrance and exit points of the water control structure. The

control structure will be incorporated into a newly constructed berm (approximately 400 feet long) that will tie into the existing levee around Rat Farm Pond. The berm will be approximately 3 feet high and 24 feet wide at the base (0.22 acres). The berm will be constructed of native material excavated from swale construction. This new section of berm is necessary because the existing section of Rat Farm Pond levee near the new water control structure is blown out.

The pump location for Ash Field will be located near an area where four Shasta crayfish were observed in the early 1990s, but have not been found since. (Spring Rivers Ecological Sciences 2009.) The pump intake will be positioned 20-45 feet from the levee bank, be suspended in the water column, and draw water off the top three feet of the lake surface. Because of these three factors, impacts to the Shasta crayfish and sculpin are not anticipated. (Spring Rivers Ecological Sciences 2010.)

During construction, a temporary equipment staging area that is 200 feet by 200 feet (0.92 acres) will be located adjacent to the Rat Farm Pond levee and the levee that borders Big Lake. The staging area will be lightly graded to accommodate heavy equipment; significant grading is not anticipated. A temporary access road will be created to provide access to the staging area from the existing Big Lake Levee road. The temporary access road will be no more than 50 feet long.

Approximately 300 linear feet of new rip rap will be added to the existing Big Lake Levee, on the land side. This new rip rap will be installed near a section of levee that previously failed. Rip rap will be delivered to this location via the existing Big Lake Levee road.

Rat Farm Pond

A network of shallow, meandering swales that are a minimum of 40 feet wide (average width 100 feet) and 18 inches deep will be constructed to provide foraging habitat. Excavated soil from swale construction will be mounded to create elevated mounds. Water will be managed from the new water control structure installed in Ash Field.

To facilitate the flooding of Rat Farm Pond, the section of levee that borders the pond to the northwest will be reshaped. This section of levee has not been maintained, is breeched in multiple locations, and is full of small mammal burrows. The section of levee that will be reshaped is approximately 2,500 feet long and will be roughly 24 feet wide at the base (1.38 acres). Material excavated from the swales will be used to reshape this levee section.

To facilitate access to the new water control structure in Ash Field, two rock crossings will be constructed within the reshaped levee. The rock crossings will be roughly 24 feet wide (width of levee) by 100 feet long (width of swale). Each crossing will be rocked with 3 inch to 6 inch unweathered rock that will be wheel-rolled by heavy equipment. The rocked crossings are required to provide all-terrain vehicle access to the water control structure because the swales will bisect the Rat Farm Pond levee in two different locations. Because Rat Farm Pond will be managed as one unit with Ash Field, the swales in Rat Farm Pond must be connected to the swales in Ash Field to allow for proper water conveyance.

Hollenbeak Field

To improve waterfowl use, a series of meandering swales (average width 125 feet), similar to those in Ash Field and Rat Farm Pond will be excavated. Swales will be excavated to drain into the northeast end of the Central Drain.

A new water control structure will be constructed in the Central Drain to hold water in Hollenbeak Field during the flood period. This structure will consist of two culverts cast in concrete (pre-cast structure) and fitted with manually operated screw gates. The footing for the water control structure will be approximately 40 feet wide by 24 feet long. Geotextile fabric will be installed over the existing location and backfilled with levee core material. To minimize/eliminate erosion, rip rap (energy dissipater) will be placed at the entrance and exit points of the water control structure.

To properly manage water in Hollenbeak Field, approximately 2,000 linear feet by 40 feet wide (1.8 acres) of the Central Drain will be re-contoured and a slight "hump" in the drain will be removed. This grading will be accomplished with an excavator positioned on the bank of the drain and via the temporary access road constructed to access Hollenbeak Field and the temporary equipment staging area.

To facilitate construction, a temporary equipment staging area 200 feet by 200 feet will be located immediately adjacent to the Central Drain and approximately 1,000 feet northeast of the Rat Farm Boat Launch. The location of the staging area was chosen because it is located behind two locked gates and away from the public. A temporary access route from the boat launch to the staging area will also be necessary. The access route will parallel the Central Drain, as the majority of this route will also be used as the access to regrade approximately 2,000 linear feet of the Central Drain. The temporary access route will only be lightly graded to smooth out any big humps or low dips; significant grading will not be required.

The location of the portable water pump that will be used to flood Hollenbeak Field will be located approximately one mile west of a small cove at the eastern end of Big Lake known to support the Shasta crayfish. The pump intake will be positioned 20-45 feet from the levee bank, be suspended in the water column, and draw water off the top three feet of the lake surface. Because of these three factors, impacts to the Shasta crayfish and sculpin are not anticipated. (Spring Rivers Ecological Sciences 2010.)

III. Regulatory Authority

Water Quality Certification and Related Authorities

The Federal Clean Water Act (33 U.S.C. §§ 1251-1387) was enacted "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a).) Section 101 of the Clean Water Act (33 U.S.C. § 1251 (g)) requires federal agencies to " co-operate with the State and local agencies to develop comprehensive solutions to prevent, reduce and eliminate pollution in concert with programs for managing water resources."

Section 401 of the Clean Water Act (33 U.S.C. §1341) requires every applicant for a federal license or permit which may result in a discharge into navigable waters to provide the licensing or permitting federal agency with certification that the Project will be in compliance with specified provisions of the Clean Water Act, including water quality standards and implementation plans promulgated pursuant to section 303 of the Clean Water Act (33 U.S.C. § 1313). Clean Water Act section 401 directs the agency responsible for certification to prescribe effluent limitations and other limitations necessary to ensure compliance with the Clean Water Act and with any other appropriate requirement of state law. Section 401 further provides that state certification conditions shall become conditions of any federal license or permit for the project. The State Water Board is designated as the state water pollution control agency for all purposes stated in

the Clean Water Act and any other federal act. (Wat. Code, § 13160.) The State Water Board's Executive Director has been delegated the authority to issue a decision on a water quality certification application. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)

The application for water quality certification was received and accepted as complete on July 6, 2011. The State Water Board provided public notice of the application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the State Water Board's website on August 18, 2011. No comments were received. The United States Army Corps of Engineers (ACOE) has determined a Nationwide permit #27 under section 404 of the Clean Water Act is required for the Project.

Water Quality Control Plans and Related Authorities

The California Regional Water Quality Control Boards (Regional Water Boards) adopt, and the State Water Board approves, water quality control plans (basin plans) for each watershed basin in the State. The basin plans designate the beneficial uses of waters within each watershed basin, and water quality objectives designed to protect those uses pursuant to Section 303 of the Clean Water Act. (33 U.S.C. § 1313.) The beneficial uses together with the water quality objectives that are contained in the basin plans constitute State water quality standards.

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) adopted, and the State Water Board and the U.S. Environmental Protection Agency approved, the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Sacramento-San Joaquin Basin Plan). The Sacramento-San Joaquin Basin Plan designates the beneficial uses of water to be protected along with the water quality objectives necessary to protect those uses.

The Project must protect the beneficial uses of two water bodies: Big Lake (from where the water is diverted) and the Pit River (where the water is discharged). The Sacramento-San Joaquin Basin Plan does not identify any existing beneficial uses for Big Lake, but indicates that the beneficial uses of any identified water body also apply to its tributary streams. Therefore, the beneficial uses identified for Fall River apply to Big Lake, its tributary. Existing beneficial uses of Fall River are identified as: municipal and domestic supply; irrigation; stock watering; power; contact recreation; canoeing and boating; non-contact recreation; warm and cold freshwater habitat; and wildlife habitat. Municipal and domestic supply, irrigation, stock watering, recreation (contact and other non-contact), warm and cold freshwater habitat, warm and cold spawning habitat, and wildlife habitat are identified as existing beneficial uses of the Pit River, while canoeing and rafting are identified as a potential beneficial use.

The State Water Board reviewed and considered the plans and Project description provided by the Applicant. Further, the State Water Board considered the Sacramento-San Joaquin Basin Plan, existing water quality conditions and Project-related controllable factors.

Managed wetlands operations in the Central Valley Region must comply with the Central Valley Water Board's Irrigated Lands Regulatory Program (ILRP). The ILRP regulates discharges from irrigated land. Its purpose is to prevent discharges from irrigated lands from impairing the waters that receive the discharges. The ILRP allows dischargers to seek regulatory coverage individually or as a member of a coalition. The Applicant should consult with the Central Valley Water Board to determine the appropriate type of water quality monitoring and reporting (individual or coalition) required for this Project.

Construction General Permit

Projects disturbing one or more acres of soil or that disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, may need to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit; Water Quality Order 2009-0009-DWQ and NPDES No. CAS000002, as amended by Order No. 2010-0014-DWQ). The Applicant should consult with the State Water Board to determine whether coverage is necessary for the construction phase of this Project. Construction activity subject to the Construction General Permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility.

California Environmental Quality Act

The State Water Board is the lead agency for the purpose of California Environmental Quality Act (CEQA) compliance. On June 26, 2012, the State Water Board issued a draft negative declaration (ND) for public comment. No comments were received. The State Water Board hereby determines that the proposed Project will not have a significant effect on the environment. The State Water Board considered the ND in connection with the issuance of this water quality certification. The State Water Board finds that there is no substantial evidence in the record that the Project will have a significant effect on the environment. The ND reflects the State Water Board's independent judgment and analysis. The State Water Board approves the ND. All documents and other information that constitute the public record for this Project shall be maintained by the Division of Water Rights and shall be available for public review at the following address: State Water Board, Division of Water Rights, 1001 I Street, Sacramento, California 95814.

IV. Discussion

The construction activities associated with this Project have the potential to increase suspended sediments and the discharge of foreign matter into Big Lake and the Pit River. Consequently, these construction activities could negatively impact the beneficial uses and/or cause exceedences of the water quality objectives of Big Lake and the Pit River as set forth in the Sacramento-San Joaquin Basin Plan. In order to prevent construction activities from violating water quality standards, the Applicant has adopted protective measures as part of the Project description.

The Project will result in a permanent impact to 6.34 acres of wetland habitat and therefore has the potential to negatively impact biological resources. Such impacts are offset by the creation of approximately 475 acres of waterfowl wintering and nesting habitat for both upland and shorebird species. Based on the amount of habitat created by the Project, in addition to the conditions imposed by this certification, the permanent impacts to wetland habitat are considered less than significant.

In order to ensure that the Project operates to meet water quality standards as anticipated, and to ensure that the Project will continue to meet state water quality standards and other appropriate requirements of state law over its lifetime, this certification imposes conditions regarding monitoring, enforcement, and potential future revisions. Additionally, California Code

of Regulations, title 23, section 3860 requires imposition of certain mandatory conditions for all water quality certifications, which are included in this certification.

The State Water Board finds that, with the conditions and limitations imposed under this certification, the proposed Project will be protective of the state water quality standards and other appropriate requirements of state law.

State Water Board staff reviewed and considered the environmental documents; any proposed changes incorporated into the Project are required as a condition of approval to avoid significant effects to the environment. The State Water Board will file a Notice of Determination within five days of issuance of this certification.

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ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER RESOURCES CONTROL BOARD CERTIFIES THAT THE CONSTRUCTION AND OPERATION OF THE REVISED MCARTHUR SWAMP MANAGEMENT PLAN – IMPLEMENTATION OF THE WATERFOWL RESTORATION PROJECT will comply with sections 301, 302, 303, 306, and 307 of the Clean Water Act, and with applicable provisions of State law, if the Applicant complies with the following terms and conditions during the Project activities certified herein.

PROJECT SPECIFIC CONDITIONS

CONDITION 1. All construction activities will begin after August 15 or the end of the ground bird nesting season as indicated by the California Department of Fish and Game.

CONDITION 2. All construction activities will occur during the dry season, as outlined in the application for water quality certification and supporting environmental documents. If an uncharacteristic, isolated storm event occurs the Applicant shall consult with the State Water Board before proceeding.

CONDITION 3. The Applicant will submit a Statement of Water Diversion and Use to the State Water Board for each claim of riparian right to be utilized for this Project as required in California Water Code section 5101.

CONDITION 4. Upon completion of construction, the Applicant will implement the Project's seeding plan as described in the application for water quality certification and its supplements.

CONDITION 5. Prior to the discharge of water into McArthur Canal in the three years following the construction of the Project (anticipated to be 2013, 2014, and 2015), the Applicant will collect water samples from the following locations:

a. Three samples: one sample in each of the three fields proposed for flooding;
b. One sample at the confluence of McArthur Canal and McArthur Drain;
c. One sample above the head gate structure near the intersection of the Rat Farm Road and road to the Tule River Boat Launch (near fair grounds);
d. One sample downstream of the twin culverts located near the Rat Farm Boat launch;
e. One sample in the Lee Drain upstream of the confluence with the Central Drain; and
f. One sample in the unnamed ditch that borders Ash Field to the south.

Water samples will again be collected 1 to 5 days after water draw-down starts. Water samples will be collected at the following locations:

a. One sample at the confluence of McArthur Canal and McArthur Drain;
b. One sample downstream of the twin culverts located near the Rat Farm Boat launch;
c. One sample above the head gate structure near the intersection of the Rat Farm Road and road to the Tule River Boat Launch (near fair grounds); and
d. One sample immediately downstream of the confluence of the Lee Drain and the unnamed ditch that borders Ash Field to the south.

At a minimum, the Applicant shall sample for turbidity to ensure compliance with water quality criteria outlined in the Sacramento-San Joaquin Basin Plan. Additionally, prior to any discharge to surface waters, the Applicant shall consult with the Central Valley Water Board to determine if additional water quality parameters should be analyzed. A copy of such consultation shall be provided to the Deputy Director. An annual water quality compliance report will be submitted to the Deputy Director. If after three years, sample results reveal no significant change in water quality, sampling may be discontinued following Deputy Director approval.

CONDITION 6. The Applicant must consult with the Central Valley Water Board and comply with all requirements of the ILRP, as applicable.

CONDITION 7. The Applicant must develop a grazing management plan in consultation with the Central Valley Water Board. The grazing management plan must address the long-term grazing management for the Project area. At a minimum the grazing management plan must contain visual monitoring requirements and standards to minimize impacts. The Applicant shall provide documentation of consultation with the Central Valley Water Board and any comments when submitting the grazing management plan to the Deputy Director for approval. The final grazing management plan is subject to approval by the Deputy Director. The Deputy Director may require modifications as part of the approval.

CONDITION 8. A portable water pump will be used to convey water directly from Big Lake into the various fields for flooding. To avoid potential impact to benthic species such as the Shasta crayfish, the design and siting of the portable pump shall be carried out as described in this water quality certification and the ND. The pump intakes will be positioned 20-45 feet from the levee bank, be suspended in the water column, and draw water off the top three feet of the lake surface. To prevent fish entrainment, the hose inlet will be screened with a "screen box" with 1/4 inch perforations, or as specified by the Department of Fish and Game.

CONDITION 9. Prior to the construction of any stockponds, the Applicant will consult with the State Water Board and obtain all necessary permits.

CONDITION 10. The Applicant shall implement the "Wetland Mitigation and Monitoring Plan for McArthur Swamp," dated February 2011, except as modified by regulatory agencies, permits, and approvals.

GENERAL CONDITIONS

CONDITION 11. All management practices described in the application for water quality certification and supplemental information are hereby incorporated by reference and are conditions of approval of this certification. Notwithstanding any more specific conditions in this certification, the Applicant shall comply with all measures described in the application for water quality certification and its supplements.

CONDITION 12. Control measures for erosion, excessive sedimentation and turbidity shall be implemented and be in place at commencement of, during and after any ground clearing activities, excavation, or any other Project activities that could result in erosion or sediment discharges to surface waters.

CONDITION 13. Construction material, debris, spoils, soil, silt, sand, bark, slash, sawdust, rubbish, steel, or other organic or earthen material from any construction activity shall be prevented from entering surface waters.

CONDITION 14. No unset cement, concrete, grout, damaged concrete, concrete spoils, or wash water used to clean concrete surfaces shall contact or enter surface waters.

CONDITION 15. All equipment must be washed prior to transport to the Project site and must be free of sediment, debris and foreign matter. All equipment using gas, oil, hydraulic fluid or other petroleum products shall be inspected for leaks prior to use and shall be monitored for leakage. Stationary equipment (motors, pumps, generator, etc.) shall be positioned over drip pans or other types of containment. Spill and containment equipment (oil spill booms, sorbent pads, etc.) shall be maintained onsite at all locations where such equipment is used or staged.

CONDITION 16. All imported riprap, rocks, and gravels used for construction shall be pre-washed.

CONDITION 17. Erosion control blankets, liners with berms, and/or other erosion control measures shall be used for any stockpile of excavated material to control runoff resulting from precipitation.

CONDITION 18. All construction debris and trash shall be contained and regularly removed from the work area and staging area during construction activities. Upon completion, all Project-generated debris, building materials, excess material, waste, and trash shall be removed from all the Project sites for disposal at an authorized landfill.

CONDITION 19. A copy of this water quality certification shall be provided to the contractor and all subcontractors conducting the work, and copies shall remain in their possession at the Project site. The Applicant shall be responsible for work conducted by its contractor or subcontractors.

CONDITION 20. The Deputy Director and the Central Valley Water Board's Executive Officer (Executive Officer) shall be notified one week prior to the commencement of ground disturbing activities, and upon request, a construction schedule shall be provided to agency staff in order for staff to be present onsite, to answer any public inquiries during construction, and to document compliance with this water quality certification.

CONDITION 21. If at any time an unauthorized discharge to surface waters (including rivers or streams) occurs or monitoring indicates that the Project has or could soon be in violation with water quality objectives, the associated Project activities shall cease immediately and the Deputy Director and the Executive Officer shall be notified. Associated activities may not resume without approval from the Deputy Director.

CONDITION 22. Unless otherwise specified in this water quality certification or at the request of the State Water Board, data and/or reports must be submitted electronically in a format accepted by the State Water Board to facilitate the incorporation of this information into public reports and the State Water Board's water quality database systems in compliance with California Water Code section 13167.

CONDITION 23. The State Water Board's approval authority includes the authority to withhold approval or to require modification of a proposal or plan prior to approval. The State Water Board may take enforcement action if the Applicant fails to provide or implement a required plan in a timely manner.

CONDITION 24. The State Water Board reserves the authority to modify the conditions of this water quality certification to incorporate load allocations developed in a total maximum daily load by the State Water Board or a Regional Water Board.

CONDITION 25. The State Water Board may add to or modify the conditions of this water quality certification, as appropriate, to implement any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.

CONDITION 26. The State Water Board may add to or modify the conditions of this water quality certification as appropriate to coordinate the operations of this Project and other hydrologically connected water development projects, where coordination of operations is reasonably necessary to achieve water quality standards or protect beneficial uses of water.

CONDITION 27. The State Water Board reserves authority to modify this water quality certification if monitoring results indicate that continued operation of the Project could violate water quality objectives or impair the beneficial uses of Big Lake, the Pit River, or their tributaries.

CONDITION 28. This water quality certification is contingent on compliance with all applicable requirements of the Sacramento-San Joaquin Basin Plan. The Applicant must notify the Deputy Director and Executive Officer within 24 hours of any unauthorized discharge to surface waters.

CONDITION 29. Notwithstanding any more specific conditions in this certification, the Project shall be operated in a manner consistent with all water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act. The Applicant must take all reasonable measures to protect the beneficial uses of waters of Big Lake, the Pit River, and their tributaries.

CONDITION 30. This water quality certification does not authorize any act which results in the taking of a threatened, endangered or candidate species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (ESA) (Fish & Game Code §§ 2050-2097) or the federal ESA (16 U.S.C. §§ 1531 - 1544). If a "take" will result from any act authorized under this water quality certification or water rights held by the Applicant, the Applicant must obtain authorization for the take prior to any construction or operation of the portion of the Project that may result in a take. The Applicant is responsible for meeting all requirements of the applicable ESAs for the Project authorized under this water quality certification.

CONDITION 31. In the event of any violation or threatened violation of the conditions of this water quality certification, the violation or threatened violation is subject to any remedies, penalties, process or sanctions as provided for under applicable state or federal law. For the purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation

constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this water quality certification.

CONDITION 32. In response to a suspected violation of any condition of this water quality certification, the State Water Board or Central Valley Water Board may require the holder of any federal permit or license subject to this water quality certification to furnish, under penalty of perjury, any technical or monitoring reports the State Water Board deems appropriate, provided that the burden, including costs, of the reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. (Wat. Code, §§ 1051, 13165, 13267 and 13383.) The State Water Board may add to or modify the conditions of this water quality certification as appropriate to ensure compliance.

CONDITION 33. No construction shall commence until all necessary federal, state, and local approvals are obtained.

CONDITION 34. Any requirement in this water quality certification that refers to an agency whose authorities and responsibilities are transferred to or subsumed by another state or federal agency, will apply equally to the successor agency.

CONDITION 35. The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this water quality certification, to the State Water Board for prior review and written approval. If the State Water Board is not notified of a significant change to the Project, it will be considered a violation of this water quality certification.

CONDITION 36. The Applicant must provide State Water Board staff access to Project sites to document compliance with this water quality certification.

CONDITION 37. The State Water Board may provide notice and an opportunity to be heard in exercising its authority to add or modify any of the conditions of this water quality certification.

CONDITION 38. This water quality certification is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to California Water Code section 13330 and California Code of Regulations, title 23, Division 3, Chapter 28, Article 6 (commencing with Section 3867).

CONDITION 39. Certification is not intended and shall not be construed to apply to any activity involving a hydroelectric facility and requiring a FERC license or an amendment to a FERC license unless the pertinent water quality certification application was filed pursuant to California Code of Regulation, title 23, Section 3855, subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

CONDITION 40. Certification is conditioned upon total payment of any fee required under California Code of Regulations, title 23, Division 3, Chapter 28.

Thomas Howard
Executive Director

8/30/2012
Date

Figure 1: Project Map

References:

PG&E. 1993. Pit 1 Project, FERC NO. 2687, application for new license, December, 1993, Vol. 1. Report E3-fish, wildlife, and botanical resources, section E3.1, fish resources. Pacific Gas and Electric Company, Technical and Ecological Resources, San Ramon, California.

Spring Rivers Ecological Sciences. 2006. Shasta crayfish technical review committee 2005 annual report. Cassel, California. Prepared for Pacific Gas and Electric Company, San Ramon, California.

Spring Rivers Ecological Sciences. 2009. Shasta Crayfish Technical Review Committee summary report. Prepared for Pacific Gas and Electric Company, San Ramon, California.

Spring Rivers Ecological Sciences. 2010. Potential impacts of water pumping for Revised McArthur Swamp Management Plan on the endangered Shasta crayfish (*Pacifastacus fortis*). Prepared for Pacific Gas and Electric Company, San Ramon, California. September 8, 2010.

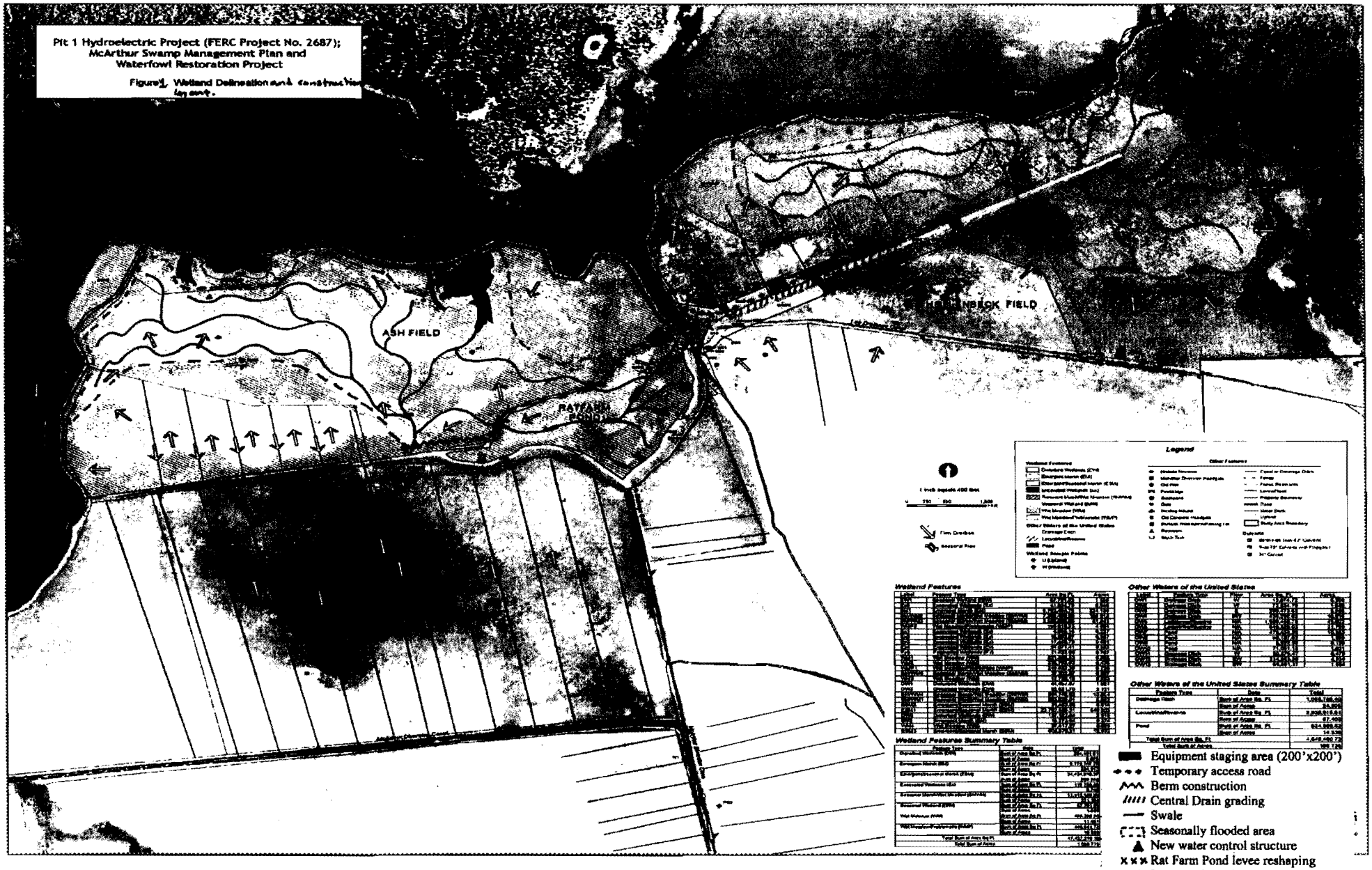

Figure 1: Project Map