



# State Water Resources Control Board



## Division of Water Rights

1001 I Street, 14<sup>th</sup> Floor • Sacramento, California 95814 • (916) 341-5300  
Mailing Address: P.O. Box 2000 • Sacramento, California • 95812-2000  
FAX (916) 341-5400 • Web Site Address: <http://www.waterrights.ca.gov>

**Winston H. Hickox**  
*Secretary for  
Environmental  
Protection*

**Gray Davis**  
*Governor*

*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>.*

**JUL 30 2003**

**ORIGINAL**

REGULATORY COMMISSION

2003 AUG 14 PM 2:01

Ms. Angela Risdon, Project Manager  
Pacific Gas and Electric Company  
Mail Code N11C  
P.O. Box 770000  
San Francisco, CA 94177

Dear Ms. Risdon:

### COMMENTS ON PROPOSED STUDIES AND "ENHANCED" TRADITIONAL LICENSING PROCESS, KILARC – COW CREEK HYDROELECTRIC PROJECT (FERC #606)

Pacific Gas & Electric Company (PG&E) has elected an "enhanced" traditional licensing process that follows the old FERC "traditional" regulations for relicensing the Kilarc-Cow Creek Project FERC #606 (Project). The premise of an "enhanced" traditional licensing process is that it allows for greater collaboration and consultation from stakeholders for the relicensing of a hydroelectric project. The California State Water Resources Control Board (SWRCB) staff agrees that an enhanced traditional licensing process offers opportunities not available in a traditional process, and that the enhanced process is intended to be a more open and efficient process.

With respect to the Project, SWRCB staff has endeavored to collaborate with PG&E to develop studies that assess natural background water quality and existing resource conditions such as hydrology, to determine impacts to beneficial uses caused by controllable factors due to the operation of the Project. SWRCB staff believes that PG&E is not taking advantage of consultation opportunities with state and federal agencies and other parties during this relicensing process. For example, SWRCB staff has been providing PG&E with clear direction regarding our informational needs, but this input and direction has been disregarded by PG&E. Consequently, study methodologies provided by PG&E will likely not provide adequate data to support an affirmative action regarding Section 401 water quality certification for the Kilarc-Cow Creek Project. Section 401 (water quality certifications) of the Clean Water Act (33 USC §1341: CWA) requires any applicant for a federal license or permit that may result in any discharge to navigable waters to obtain certification from the State that the discharge will comply with the applicable water quality standards identified in the basin plans developed by the Central Valley Regional Water Quality Control Board and adopted by the SWRCB.

In order for Kilarc-Cow Creek FERC relicensing related studies to provide information adequate upon which to base relicensing decisions, the following changes must be made to the proposed study plans:

Ms. Angela Risdon

- 2 -

JUL 30 2003

**Study 1: Stream Flow Monitoring and Study 2: Estimate Available Flow**

Characterization of the existing and natural background hydrology within project streams is essential in determining the effects of flow modifications on aquatic resources. An accurate depiction of the hydrology of the Kilarc-Cow Creek system will be necessary for aquatic habitat and temperature modeling, and instrumental in identifying any potential resource problems. Accurate hydrological information will be necessary for SWRCB to determine compliance with water quality objectives and protection of the beneficial uses identified in the Basin Plan.

Historic and current hydrologic data are sparse for streams in the Kilarc-Cow Creek project area. The Licensee intends to solve this problem by developing a synthesized hydrograph. SWRCB staff requests that Bruce McGurk, PG&E hydrologist, provide a written review of the methodology including all assumptions and limitations. The synthesized data will be checked against summarized flow recorded for less than one year in biweekly or continuous time steps. Unfortunately, only two flow-monitoring stations will be recording data continuously. The proposed measurements and flow calculations will likely not be enough to validate the synthesized impaired and unimpaired hydrology of the Kilarc-Cow Creek Project. In addition to the deficiency of the period of record for the project, water supply is difficult to determine for project streams due to contributions from a number of large springs and withdrawals through numerous diversions throughout the project area. SWRCB staff cannot support the use of the limited existing data to evaluate project effects on water quality. Therefore, continuous flow monitoring stations that will record data for at least one year are required at the following locations:

- North Canyon Creek above the North Canyon Creek Canal
- South Canyon Creek above the South Canyon Creek Canal
- Old Cow Creek above the Kilarc Main Canal
- Mill Creek above the Mill Creek - South Cow Creek Canal
- South Cow Creek above the South Cow Creek Main Canal
- Hooten Gulch below the Abbott Diversion and upstream of the confluence with South Cow Creek
- All operating project diversions at the point of diversion

In addition, because seepage from unlined canals may influence hydrology and water quality, conveyance losses through project canals should be determined.

**Study 5: Sediment Study**

SWRCB staff is concerned about the lack of precision associated with qualitative evaluations regarding sediment. The qualitative nature of the proposed sediment study does not allow SWRCB staff to conclusively determine whether project-impaired channel maintenance flows protect beneficial uses, and as a result, SWRCB staff will be forced to provide conservative recommendations if a 401 certification is issued.

Ms. Angela Risdon

- 3 -

JUL 30 2003

The objectives of the sediment study are stated to be the determination of project effects on sediment transport characteristics and stream stability. This study should also evaluate how altered sediment transport caused by the project affects substrate sizes critical for freshwater habitat, and describe the overall sediment transport regime for the project. PG&E should conduct Wolman pebble counts during their Rosgen stream characterization in both impaired and unimpaired streams, to determine whether project streams are spawning gravel limited, the project affects gravel recruitment and/or movement, and the size classes of substrates that are available in project streams. These reaches potentially support several anadromous fish species, and the proposed qualitative surveys may miss project-caused differences in substrate availability and/or embeddedness between impaired and unimpaired reaches in mesohabitats where spawning sized gravels exist. Fines deposited in spawning habitat located in pools, riffles, and pocket water should not be visually estimated, but instead, calculated according to accepted protocols in those mesohabitats that may be used for spawning. This may include sampling for particle size distribution, tracer gravel studies to determine substrate response to varying flows, suspended sediment sampling, or measuring bed scour and deposition with a scour chain. In addition, spawning gravels may be trapped by project structures, as indicated by the frequency of dredging that occurs in the Kilarc and Cow Creek forebays. The placement of sediment spoils piles should be identified to determine whether they are contributing sediments to project reaches. Finally, project spillways should be assessed to determine whether they are contributing sediment to project streams.

#### Study 9: Aquatic Habitat Survey

PG&E should conduct habitat mapping at flows of at least 30 cfs for the Old Cow bypass reach and at least 50 cfs in the South Cow Creek bypass reach. Delineating habitat at low flows, as preferred by PG&E, yields habitat mosaic information that is not representative of more moderate flows. The habitat mapping should include a record of conditions at the time of mapping, and any data gaps caused by lack of visibility or an inability to access sections of streams safely should be recorded. If such data gaps occur, the Licensee should supplement the mapping with habitat mapping at lower flows.

#### Study 10: Passage Barrier Study

Studies to determine whether obstructions in the project reaches are barrier to fish passage should be conducted quantitatively, and should include diversion dams, as well as waterfalls and critical riffles. The barriers should be observed to determine the flow level at which the potential barrier may become an obstruction to fish. Fish passage requirements should be agreed upon prior to the assessment. In addition, the flow level at which the studies are conducted should be obtained using a flow meter.

#### Study 11: Instream Flow Study

The lack of unimpaired and impaired hydrology data for project streams, in addition to the inability of the Licensee to complete habitat mapping prior to mesohabitat sampling, may have a

Ms. Angela Risdon

- 4 -

JUL 30 2003

significant affect on the validity of the instream habitat modeling. SWRCB staff do not support the Instream Flow Study proposed by PG&E on May 21, 2003, for two reasons: 1) it does not adequately address between and within mesohabitat variability; and 2) habitat mapping was not complete on South Cow Creek and Old Cow Creek. Instead, SWRCB staff support and advocate the use of the California Department of Fish and Game's proposed mesohabitat sampling protocol described during the conference calls dated May 27<sup>th</sup> and 28<sup>th</sup>, 2003. CDFG's "Basic Sampling Design - Rule of Three Protocol" allows the Licensee to select representative mesohabitat types and transects in a manner that reduces the inter and intra mesohabitat variability associated with choosing a maximum number of transects prior to reduction in the field by professional judgment. SWRCB staff fail to see how the selection of at most 18 - 20 transects per project reach, "randomly based on the most limiting habitat type within a reasonable distance from an access point and that could be safely reached at the high calibration flow" will adequately represent mesohabitats and habitat variability in project streams, particularly when mesohabitat type frequency and distribution data have not been collected for the entire project area, will adequately model aquatic habitat(s), and will provide defensible information suitable for inclusion in the relicensing decision making process.

#### Study 12: Fish Population Studies

Fish populations in all unscreened canals must be characterized via the same survey methods being used to characterize fish in the bypass reaches. Unscreened canals may be providing additional habitat for fish, and data must be collected to determine whether minimum flows, fish exclusion, and/or habitat enhancement are necessary.

#### Study 13: Potential Effects of Entrainment on Fish

Mill Creek Canal, North Canyon Creek Canal, South Canyon Creek Canal, Kilarc Canal, and South Cow Creek Canal and the two powerhouse tailraces should be evaluated to determine whether they are providing false attraction flows. Fish may be utilizing some or all of the canals, depending on the quality and extent of fish screening, so habitat should be assessed for each canal to determine whether the habitat should be maintained or fish need to be excluded.

#### Study 17: Special Status Wildlife Surveys and Study 19: Foothill Yellow-legged Frog Surveys

According to the "Preliminary Field Planning" section of Seltenrich and Poole (2002), "a minimum of two surveys is recommended to increase the probability of detection. These two site visits would include a tadpole survey in the late spring/early summer followed by a second survey for juveniles/subadults and adults in the late summer. If more detailed information is required regarding habitat utilization, identification of breeding sites, and microhabitat use, surveys for all life stages of FYLFs should be conducted." SWRCB staff are charged with protecting beneficial uses, including cold freshwater habitat, and may require additional surveys to determine the effects of project operations on the habitat and different life stages of freshwater life. Among these beneficial uses are fish and wildlife needs. Therefore, the SWRCB also should consider fish and wildlife needs in its recommendations.

Ms. Angela Risdon

- 5 -

JUL 30 2003

In addition, surveys for Northwestern Pond Turtle must be robust enough to adequately determine the presence or absence of this species in the project area. Recreational Resources:

SWRCB staff provided comments dated October 4, 2002 on the First Stage Consultation Document (FSCD) that stated the following: "Existing and potential beneficial uses within the project reaches listed by the Basin Plan are irrigation, stock watering, power, contact and non-contact recreation, cold freshwater habitat, cold migration habitat, warm and cold spawning habitat, wildlife habitat, municipal and domestic supply, canoeing and rafting (CRWQCB 1998)<sup>1</sup>." "NGOs and recreationists may provide valuable information on achieving recreation goals and objectives. The results of these interviews should be recorded and presented in the recreation assessment. In addition, an effort should be made to identify recreationists who use areas other than Kilarc Forebay, as there are more areas that are accessible to the public where recreational activities take place. It may be necessary to distribute surveys, for example, at local areas where fishing licenses are sold or where tourist information is available." SWRCB staff has not been provided with any studies that are planned to assess recreational resources. The Licensee must conduct an assessment of recreational resources in the Project Area.

#### Project Operations

A description of the frequency and duration of spill from Kilarc and Cow Creek forebays, records about the frequency of dredging quantity and composition of material that has been dredged during previous maintenance operations, and records of the frequency of debris removal from diversions and the screens and ladders at South Cow Creek diversion should be provided.

If you or your staff have any questions regarding this matter, please do not hesitate to contact me. My mailing address is 1001 I St., P.O. Box 2000, Sacramento, CA 95812-2000. My telephone number and e-mail address are (916) 327-9149 and "abfecko@waterrights.swrcb.ca.gov," respectively.

Sincerely,



A. Britt Fecko  
Environmental Scientist

cc: See Mailing List next page.

---

<sup>1</sup> California Regional Water Quality Control Board-Central Valley Region. 1998. The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board, Central Valley Region, Fourth Edition, The Sacramento River Basin and the San Joaquin River Basin.

**COW CREEK HYDROELECTRIC PROJECT (FERC #606)**  
**Mailing List**

Mr. Dave Steindorf  
Chico Paddleheads  
179 Valley Ridge Drive  
Paradise, CA 95964

Magalie R. Salas, Secretary  
(Filed Electronically)  
Federal Energy Regulatory  
Commission  
888 First Street, N.E.  
Washington, DC 20426

Ms. Anne Manji  
Department of Fish and Game  
601 Locust Street  
Redding, CA 96001

Ms. Jean Baldrige  
ENTRIX, Inc  
590 Ygnacio Valley Road, Suite 200  
Walnut Creek, CA 94596

Mr. Jim Pedri  
Assistant Executive Officer  
Regional Water Quality Control Board  
Central Valley Region  
415 Knollcrest Drive  
Redding, CA 96002

Mr. Dennis Heiman  
Regional Water Quality Control Board  
Central Valley Region  
415 Knollcrest Drive, Suite 100  
Redding, CA 96002

Ms. Alexis Strauss, Director  
Water Division  
U.S. EPA - Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

Mr. Steve Wald  
CA Hydropower Reform Coalition  
2140 Shattuck Avenue, 5th Floor  
Berkeley, CA 94704

Mr. Jerry Mensch  
CA Sportfishing Protection Alliance  
2553 Stonehaven Drive  
Sacramento, CA 95827

Ms. Debbie Giglio  
U.S. Fish and Wildlife Service  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95821-6340

Mr. Steve Edmondson  
National Marine Fisheries Service  
777 Sonoma Ave., #325  
Santa Rosa, CA 95403

Mr. Eric Theiss  
National Marine Fisheries Service  
650 Capitol Mall 8-300  
Sacramento, CA 95814

Mr. Charlton Bonham  
Trout Unlimited  
828 San Pablo Avenue, Suite 208  
Albany, CA 94706

Mr. Kevin Lewis  
Shasta Paddlers  
6069 Hornbeck Lane  
Anderson, CA 96007

Mr. Jim Crenshaw, President  
CA Sportfishing Protection Alliance  
1248 East Oak Avenue, Suite D  
Woodland, CA 95776

Mr. Curtis Knight  
California Trout  
P.O. Box 650  
Mt. Shasta, CA 96067