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January 26, 2006

Ms. Selica Potter, Acting Clerk to the Board
State Water Resources Control Board
Executive Office
1001 I Street, 24th Floor
Sacramento, CA 95814



303 (d) Deadline:
1/31/06

694

Dear Ms. Potter:

Attached are Pacific Gas and Electric Company's (PG&E) detailed comments on the Draft Revision to the Federal Clean Water Act Section 303(d) list of Water Quality Limited Segments for California. Below is listed each of the seven water segments that the Company believes should not be listed and a summary of why.

*New
Data*

1. Feather River, North Fork (below Lake Almanor) listing for Mercury
There appears to be some confusion regarding the units of the Belden Forebay sample results used to determine listing and the evaluation guideline. None of the Belden Forebay samples exceeded the guideline and therefore the Feather River, North Fork above the Poe Reservoir should not be listed.
2. Feather River, North Fork (below Lake Almanor) listing for Temperature
It is incorrect to list this water segment for temperature because the draft listing is based on a guideline that has technical issues and is overly stringent compared to the U. S. Environmental Protection Agency (USEPA) criterion established in 1977.
3. Bear River (Amador Co, Lower Bear River Reservoir to Mokelumne River, N Fork) listing for Copper
The samples used to propose listing were collected prior to implementation of increased Federal Energy Regulatory Commission (FERC) required in-stream flow conditions for the Bear River. Therefore, the sample results do not reflect current water quality.
4. Lower Bear River Reservoir listing for Copper
The sampling results for 2002-03 used for the draft listing were below the capability of the analytical methods and therefore do not meet the Water Quality Control Policy Adopted September 2004. However, sample results that meet the Policy were all below the hardness based criteria of USEPA (California Toxic Rule) for freshwater, that is listed as a water quality objective/water quality criteria.

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5. Mokelumne River, North Fork listing for Copper

The samples used to propose listing were collected prior to implementation of increased FERC required in-stream flow conditions for the Bear River. Therefore, the sample results do not reflect current water quality.

6. Sugar Pine Creek (tributary to Lower Bear River Reservoir) listing for Copper

The sampling results used to determine listing for the 2002 sampling period that were used as the basis of listing were below the capability of the analytical methods. Therefore, these results do not meet the criteria established in the Water Quality Control Policy Adopted September 2004.

7. Willow Creek (Madera County) listing for Temperature

The new FERC license conditions for the Crane Valley Project require in-stream flows that will affect water temperature. The data used for the draft listing was acquired during the period 1986-1995 by PG&E during various studies related to the FERC relicensing process. This data was collected before the new license conditions were implemented. Temperature data for 2005 will be available in the first quarter of 2006 and in the future will be issued by the end of the current monitoring year.

We appreciate the opportunity to comment on the document. If you have any questions please contact Sara Everitt at (415) 973-0707.

Sincerely,



Alan A. Soneda
Manager Safety, Environmental and License Management

**Comments on the Draft of the SWRCB 303(d) List, September 2005, for Feather River,
North Fork (below Lake Almanor) Listing for Mercury**

Comment 9

Summary

The State of California is required under Clean Water Act section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list in September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of the Feather River, North Fork (below Lake Almanor) for mercury is based upon inaccurate interpretation of the data. There appears to be confusion regarding the units of the Belden Forebay data results and the evaluation guideline. None of the Belden Forebay samples exceeded the guideline and, therefore, the Feather River North Fork above the Poe Reservoir should not be listed.

Introduction

The data that the SWRCB used for the draft listing were acquired August 14, 2001 from Belden Forebay; and November 21, 2002 and June 16, 2003 from Poe Reservoir and Big Bend Dam Reservoir below Poe Powerhouse by the Company as part of the Poe Hydroelectric Project (Federal Energy Regulatory Commission [FERC] No. 2107) and the Upper North Fork Feather River (NFFR) Project (FERC No. 2105) relicense process, respectively.

The fish tissue monitoring plans were developed by two separate relicense collaborative groups, one for the Poe Project and one for the Upper NFFR Project. The collaborative groups consists of the representatives from the SWRCB, the U. S. Forest Service, Plumas County, Fish and Wildlife Service, and the Department of Fish and Game and was created to review and provide consultation on the data collected.

Concerns Regarding the Analytical Results

Upon review of the data that the SWRCB used to place the NFFR (below Lake Almanor) on the section 303(d) list, it is apparent that the units for the samples that were collected in Belden Forebay were wrongly compared to the OEHHA criterion. The fish tissue samples that were analyzed for mercury in the Belden Forebay were reported as parts per billion (ppb), the criterion is 0.3 Parts per million (ppm) or 300 ppb. Therefore, all of the seven fish tissue samples from Belden Forebay analyzed for mercury were well below the OEHHA criterion of 300 ppb. Based on the data, Upper NFFR should not be listed for mercury.

**Comments on the Draft of the SWRCB 303(d) List, September 2005, for Feather River,
North Fork (below Lake Almanor) Listing for Temperature**

Comment
(2)

Summary

The State of California is required under Clean Water Act (CWA) section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited stream segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list in September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of the Feather River, North Fork (below Lake Almanor) for failing to meet water temperature criteria is inappropriate for the reasons listed below.

1. The criterion used was developed for streams in Oregon and Washington;
2. it utilizes unpublished data and a paper that is not peer reviewed;
3. it utilizes a risk-based methodology (developed to characterize risk from exposure to a chemical pollutant) that is largely unproven as a temperature criteria, technique; and
4. it is overly stringent as compared to the U. S. Environmental Protection Agency (USEPA) criterion established in 1977.

Introduction

The data that the SWRCB used for the listing the North Fork Feather River (NFFR) was acquired during the period 1999, 2000, 2002, and 2003 by the Company as part of the Poe Hydroelectric Project (Federal Energy Regulatory Commission [FERC] No. 2107) relicense process, and the Rock Creek-Cresta Project (FERC No. 1962) water temperature monitoring program.

The annual water temperature monitoring plans were developed by two separate collaborative groups one for the Poe Project and the other for the Rock Creek-Cresta Project. The collaborative groups include representatives from the SWRCB, the U. S. Forest Service, Plumas County, the Fish and Wildlife Service, the National Park Service, and the Department of Fish and Game. The objective of these monitoring plans was to determine if existing flows adequately protect beneficial uses within the NFFR affected by project operations. The data collected as part of the relicensing studies were used to develop protection, mitigation, and enhancement measures intended to offset project affects on beneficial uses. These enhancement measures have been (in the case of Rock Creek-Cresta) or will be (in the case of Poe) identified in the respective licenses issued by the FERC.

All water temperature data has been provided to the consulting agencies for their review. As part of the FERC Rock Creek-Cresta Project license, the Company must use reasonable controls to maintain a mean daily average temperature criterion of 20°C or less to protect aquatic resources. Additionally, one of the objectives of the Rock Creek-Cresta monitoring efforts is to determine if the changes in operation, dictated by the new license, provide water temperatures that are protective of the aquatic resources within the project affected reaches.

Concerns Regarding SWRCB 303(d) Listing Policy

The Water Quality Control Policy adopted September 2004 objective is to establish a standardized approach for developing California's section 303(d) list. This approach is to achieve the overall goal of achieving water quality standards and maintaining beneficial uses in all of California's surface waters.

The guideline used was from Sullivan et. al. (2000). The report calculated the Annual Maximum (instantaneous maximum observed during the summer) upper threshold criterion for steelhead trout as 21°C. The risk assessment approach used by Sullivan et. al. (2000) suggests that an upper threshold for the Annual Maximum of 21°C for steelhead will reduce average growth 10% from optimum.

VS 1977 USEPA 24°C ADD TO COMMENT

There are many technical issues associated with the Sullivan et al. (2000) report and a few are discussed below.

1. The criteria were developed to protect Pacific Northwest salmonids. The steelhead occurring in Sierran streams are significantly different populations that exhibit different life history strategies and growth dynamics than Northwest populations. Northern steelhead are generally acclimated to colder stream temperatures. Consequently, they spend relatively longer time in their native streams, grow slower to out-migrant size, and return at an older age to spawn than their southern counterparts. Adopting "Annual Maximum upper threshold criteria" from these northern species (based on the Sullivan et al. report) and applying them to southern Sierran populations, without some field validation efforts is problematic.
2. The report cited is not peer reviewed.
3. The report uses risk-based methods applicable to evaluation of contaminants but unproven as a management tool for the development of temperature criteria. The method modifies an approach taken from laboratory studies that estimate the length of time it takes to observe 50% mortality in a population exposed to a given temperature (LT50); it then proposes (with little documentation and no field test) that an LT10 curve (the temperature where 10% mortality is observed) is more ecologically relevant. Natural variability in a sample can be well above 10% of the mean. The report admitted that the data from the EPA, used to document the relationship between LT50 and LT10, did not provide sufficient data to statistically test differences in the two curves. Nonetheless, Sullivan et al. (2000) used Chinook salmon data to develop a conversion factor from LT50 and LT10, then applied that to steelhead without any field or laboratory validation. Using the acute temperature analogy (LT10 curves), the report then applied the same 10% criteria to "Reduction In Maximum Growth" (RMG) to obtain the threshold temperatures for "Sub-lethal" affects. Sullivan et al. (2000) even state that "The criteria above assume 10% growth loss as the acceptable level of risk. There is uncertainty associated with this number, since there are relatively few quantitative data to base it on. Further research could help confirm acceptable risk levels."

4. The Sullivan et. al. (2000) report makes reference to a U. S. Environmental Protection (USEPA) document from 1977 that suggests a higher criterion (24.0°C) for the protection of steelhead trout with an associated reduction in growth of 20% (Sullivan et. al. 2000). The Company believes that the USEPA criterion should be used for comparison to temperatures in the NFFR since these are not lethal temperatures and an Annual Maximum of 24°C was reported as acceptable to the USEPA in their 1977 report.

In addition, a report prepared by the Company in 2000, (*Water Temperature Objectives in the Rock Creek-Cresta Collaborative Process*) explains that the relevant literature shows considerable variability in trout temperature tolerances. The variability in the literature partly reflects differences in the way various laboratory studies were conducted (e.g., differences in acclimation temperatures), but may also be influenced by other factors that are more difficult to control in a particular experiment, such as physiological condition, state of health, season, photoperiod, and the race of fish being tested. It is therefore, more appropriate to examine the site-specific water temperature data and resources to make decisions on whether section 303(d) listing is appropriate for the NFFR. Because the Guideline has so many issues the Company believes that NFFR should not be listed on the 303(d) list for temperature.

**Comments on the Draft of the SWRCB 303(d) List, September 2005, for the Bear River
(Amador Co, Lower Bear River Reservoir to Mokelumne River, North Fork)
Listing for Copper**

Summary

The State of California is required under Clean Water Act section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list in September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of the Bear River (Amador Co, Lower Bear River Reservoir to Mokelumne River, North Fork) for copper is incorrect and does not meet the "weight of evidence" as defined by Water Quality Control Policy Adopted September 2004. The data used by the SWRCB for listing the river was acquired by the Company under an Annual Water Quality Monitoring Program required as part of the Federal Energy Regulatory Commission (FERC) relicensing process. The data were collected before the new license conditions for the in-stream flow requirements for the river were implemented; therefore, it is not accurate or verifiable. Data collected under the new in-stream flow conditions should be used to assess whether a listing is appropriate for this water segment.

Introduction

The Ecological Resources Committee (ERC) was established by the Mokelumne Relicensing Settlement Agreement (Settlement Agreement) FERC No. 137 (Project) to facilitate stakeholder involvement in the development and implementation of Project monitoring programs. Members of the ERC include the U. S. Forest Service, U. S. Bureau of Land Management, U. S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Boating and Waterways, the Foothill Conservancy, American Whitewater, Friends of the River, and the Natural Heritage Institute.

Water quality data have been collected since 2000 as part of the Project's license compliance annual water quality monitoring program. The water quality samples were analyzed for total copper content in 2000 to 2001 to investigate the historic use of a copper based aquatic herbicide in the Project's diversion canal to control growth of algae. After the presence of copper was identified, the Supplemental Water Quality Monitoring Program was implemented. Results of this study were given to the ERC and the SWRCB in a report titled, Supplemental Water Quality Monitoring Program March 2002 through September 2003, Technical and Ecological Services Report Number 026.11.04.7.

Revised In-stream Flow Conditions

As part of the Settlement Agreement, and the Forest Service 4(e) Conditions, minimum in-stream flows by month and water year type are specified for each stream reach of the Project.

The new FERC in-stream flow requirements for the Project were fully implemented October 2005. Water quality data for Bear River prior to 2005 is not representative of current stream conditions. The limited data collected after the implementation of the current in-stream flow conditions for the Bear River indicate reductions in dissolved copper concentrations and in general reflect background concentrations.

Monitoring will continue to be performed as part of the license required Mokelumne Annual Water Quality Monitoring Program, and will be provided to the ERC for ongoing review and consultation. Monitoring Reports are issued annually and are distributed by the end of the second quarter of the following year.

Comments on the Draft of the SWRCB 303(d), September 2005, List for the Lower Bear River Reservoir Listing for Copper

Summary

The State of California is required under Clean Water Act section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of Lower Bear River Reservoir for copper is incorrect and does not meet the "weight of evidence" as defined by Water Quality Control Policy Adopted September 2004. The data used by the SWRCB for listing the Lower Bear Reservoir was acquired by the Company under the direction of the Ecological Resources Committee (ERC) to investigate background water quality conditions upstream of the Mokelumne River Project Federal Energy Regulatory Commission License 137 (Project). The results for 2002- 2003 sampling period were mainly used for screening and are not accurate and verifiable for listing water segments. However, none of the samples collected during 2003 exceeded the water quality objective/water quality criteria for copper.

Introduction

The ERC was established by the Mokelumne Relicensing Settlement Agreement to facilitate stakeholder involvement in the development and implementation of Project monitoring programs. Members of the ERC include the U. S. Forest Service, U. S. Bureau of Land Management, U. S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Boating and Waterways, the Foothill Conservancy, American Whitewater, Friends of the River, and the Natural Heritage Institute.

Water quality data have been collected since 2000 as part of the Project's license compliance annual water quality monitoring program. The water quality samples were analyzed for copper content in 2000-01 to investigate the historic use of a copper based aquatic herbicide in the Project's diversion canal to control growth of algae. After the presence of copper was identified, the Supplemental Water Quality Monitoring Program was implemented. Results of this study were given to the ERC and the SWRCB in a report titled, Supplemental Water Quality Monitoring Program March 2002 through September 2003, Technical and Ecological Services Report Number 026.11.04.7.

Concerns Regarding the Analytical Results

The data collected from March 2002 to January 2003 used USEPA Method 220.0 for the analysis of copper. The results of many of the samples were below the capability of the laboratory's equipment and would not be appropriate for use to list water segments on California's Clean Water Act Section 303(d) list. A second laboratory was identified and American Public Health Association (APHA) Method 3113 (Standard Methods for the Examination of Water and

Wastewater, 18th Ed. 1992) was used to analyze for copper but this method is also inappropriate because the reporting limit is higher than the water quality objective/water quality criteria. This data is not accurate, verifiable and does not meet the “weight of evidence” criteria as described in the Water Quality Control Policy Adopted September 2004.

In February 2003, the Company altered the sampling and analytical techniques and began using the Department of Fish and Game’s Marine Pollution Studies Laboratory in Moss Landing, California in February 2003 in order to gain greater confidence in the results. This laboratory uses the USEPA Method 1638 (Determination of Trace Elements in Ambient Waters by Inductively Coupled Plasma-Mass Spectrometry) to analyze the copper samples. This laboratory’s method and equipment provided relevant sample results that is accurate, or verifiable and met the “weight of evidence” criteria.

Relevant Analytical Results

Evaluation of the samples collected during 2003 using the data analyzed by the Department of Fish and Game’s Marine Pollution Studies Laboratory show that none of 13 samples collected from the top, middle, and bottom of the reservoir exceed the hardness based criteria for USEPA (California Toxic Rule) for freshwater that are listed as the water quality objective/water quality criteria. Refer to the table below.

Sample Point	Date	Hardness (mg/l)	Dissolved Copper (µg/l)	CTR CCC (µg/l)	CTR CMC (µg/l)
Top of Reservoir	5/5/03	4.4	0.09	0.62	0.71
	6/3/03	4.0	0.122	0.57	0.65
	7/10/03	3.8	0.112	0.55	0.62
	8/21/03	6.3	0.1	0.84	0.99
	9/9/03	4.8	0.13	0.67	0.77
Middle of Reservoir	7/10/03	3.8	0.187	0.55	0.62
	8/21/03	7.4	0.13	0.97	1.16
	9/9/03	4.8	0.29	0.67	0.77
Bottom of Reservoir	5/5/03	4.2	0.15	0.6	0.68
	6/3/03	4.0	0.145	0.57	0.65
	7/10/03	3.8	0.376	0.55	0.62
	8/21/03	8.4	0.13	1.08	1.30
	9/9/03	4.6	0.19	0.64	0.74

The prior analytical results from the first two laboratories as described above is not appropriate for use for 303(d) listing. The results had limitations related to the analytical methods and lead to improper conclusions.

Comments on Draft of the SWRCB 303(d) List, September 2005, for the Mokelumne River, North Fork Listing for Copper

Summary

The State of California is required under Clean Water Act section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list in September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of the Mokelumne River, North Fork for copper, is incorrect and does not meet the "weight of evidence" as defined by Water Quality Control Policy Adopted in September 2004. The data used by the SWRCB for the listing the Mokelumne River North Fork was acquired by THE COMPANY under an Annual Water Quality Monitoring Program required as part of the Federal Energy Regulatory Commission (FERC) relicensing process. The data were collected before the new license condition in-stream flow requirements for the North Fork Mokelumne River were implemented. Data under the new in-stream flow requirements should be used to assess whether a listing is appropriate for this water segment. The results for 2001- 2002 sampling period were mainly used for screening and are not considered accurate and verifiable for listing water segments on the 303(d) list due to the new in-stream flows.

Introduction

The Ecological Resources Committee (ERC) was established by the Mokelumne Relicensing Settlement Agreement FERC No. 137 (Project) to facilitate stakeholder involvement in the development and implementation of Project monitoring programs. Members of the ERC include the U. S. Forest Service, U. S. Bureau of Land Management, U. S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Boating and Waterways, the Foothill Conservancy, American Whitewater Affiliation, Friends of the River, and the Natural Heritage Institute.

Water quality data have been collected since 2000 as part of the Mokelumne River Project's (FERC No. 137) license compliance annual water quality monitoring program. The water quality samples were analyzed for total copper content in 2000 to 2001 to investigate the historic use of a copper based aquatic herbicide in the Project's diversion canal to control growth of algae. After the presence of copper was identified, the Supplemental Water Quality Monitoring Program was implemented. Results of this study were given to the ERC and the SWRCB in a report titled, Supplemental Water Quality Monitoring Program March 2002 through September 2003, Technical and Ecological Services Report Number 026.11.04.7.

Revised In-stream Flow Conditions

As part of the Mokelumne Settlement Agreement, and the Forest Service 4(e) Conditions, minimum in-stream flows by month and water year type were specified for each stream reach of the Project.

The new FERC in-stream flow requirements for the Mokelumne River Project (FERC No. 137) were fully implemented in October 2005. Water quality data for Mokelumne River North Fork prior to 2005 is not representative of current stream conditions. The limited data collected after the implementation of the in-stream flow conditions for the Mokelumne River North Fork indicate reductions in dissolved copper concentrations and in general reflect background.

Monitoring will continue to be performed as part of the license required Mokelumne Annual Water Quality Monitoring Program, and will be provided to the ERC for ongoing review and consultation. Monitoring Reports are issued annually and are distributed by the second quarter of the following year.

Comments on the Draft of the SWRCB 303(d) List, September 2005, for Sugar Pine Creek (Tributary to Lower Bear River Reservoir) Listing for Copper

Summary

The State of California is required under Clean Water Act section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list on September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of Sugar Pine Creek (tributary to Lower Bear River Reservoir) for copper is incorrect and does not meet the "weight of evidence" as defined by Water Quality Control Policy Adopted September 2004. The data used by the SWRCB for the listing Sugar Pine Creek was acquired by the Company under direction of the Ecological Resources Committee (ERC) to investigate background water quality conditions upstream of the Mokelumne River, Project Federal Energy Regulatory Commission (FERC) License 137 (Project). The results for sampling period 2002 – 2003 for Sugar Pine Creek were mainly screening purposes and not appropriate for listing water segments on the 303(d) list.

Introduction

The ERC was established by the Mokelumne Relicensing Settlement Agreement to facilitate stakeholder involvement in the development and implementation of Project monitoring programs. Members of the ERC include the Forest Service, U. S. Bureau of Land Management, U. S. Fish and Wildlife Service, California Department of Fish and Game, California Department of Boating and Waterways, the Foothill Conservancy, American Whitewater, Friends of the River, and the Natural Heritage Institute.

Water quality data has been collected since 2000 as part of the Project's license compliance annual water quality monitoring program. The water quality samples were analyzed for copper content in 2000-01 to investigate the historic use of a copper based aquatic herbicide in the Project's diversion canal to control growth of algae. After the presence of copper was identified, the Supplemental Water Quality Monitoring Program was implemented. Results of this study were given to the ERC and the SWRCB in a report titled, Supplemental Water Quality Monitoring Program March 2002 through September 2003, Technical and Ecological Services Report Number 026.11.04.7.

Concerns Regarding the Analytical Results

The data collected was analyzed using USEPA Method 220.0 for the analysis of copper. The results of all the samples were below the capability of the laboratory's equipment and would not be appropriate for use to list water segments on California's Clean Water Act Section 303(d) list.

In summary, all the samples collected from Sugar Pine Creek are not accurate, or verifiable and fail to meet the "weight of evidence" criteria as described in the Water Quality Control Policy Adopted September 2004. Sugar Pine Creek should not be listed on the 303(d) list because the sample results are not accurate due to limitations related to the analytical method, which in turn leads to improper conclusions.

Comments on the Draft of the SWRCB 303(d) List, September 2005, for the Willow Creek (Madera County) Listing for Temperature

Summary

The State of California is required under Clean Water Act (CWA) section 303(d) and federal regulations 40 CFR Part 130 to prepare a list of water quality limited segments. This list is required to be updated every two years and the State Water Resources Control Board (SWRCB) published a draft revised 303(d) list in September 2005.

Pacific Gas and Electric Company (Company) believes the proposed listing of Willow Creek (Madera County) for water temperature is based on data that no longer represents the actual water quality conditions in Willow Creek. The new Federal Energy Regulatory Commission (FERC) license conditions for the Crane Valley Project (Project) (FERC No. 1354) require in-stream flows that are likely to reduce water temperature. The data the SWRCB used for the listing was acquired during the period 1986-1995 by the Company during various studies related to the FERC relicensing process. This data was collected before the new license conditions were implemented in 2003. Temperature data under the new in-stream flow requirements should be used to assess whether a temperature listing is appropriate for this water segment.

Introduction

The new FERC license requires a plan for monitoring water temperatures in Project-affected stream reaches from May 1 to October 31 for a 6-year period after license issuance. This plan was prepared by the Company and approved by FERC in 2004. The license further requires agency consultation with the U.S. Forest Service (FS), U. S. Fish and Wildlife Service, the California Department of Fish and Game, and the SWRCB. The objective of the annual water temperature monitoring is to evaluate water temperatures under new FERC required flows and operations. Annual water temperature monitoring reports will be provided to the agencies listed above for their review and comment by the end of the current monitoring year.

Revised In-stream Flow Conditions

The new Crane Valley Project license and its FS condition 4(e) require minimum in-stream flows in specific stream reaches of the Project and were implemented for the most part in October 2003. Water temperature data for Willow Creek prior to 2003 is not representative of current stream conditions. The new in-stream flow conditions provide greater minimum flows in Willow Creek than were the case in the 1980s and 1990s, particularly in warmer months of the year. 2005 is the first year of water temperature data collection under the new in-stream flow requirements and it will be submitted to the agencies by the first quarter 2006. Additionally, data will be collected through 2010 and shared with the SWRCB and other agencies. This data will provide an accurate representation of the temperature conditions of Willow Creek under the newly implemented flow regime.

Concerns Regarding SWRCB 303(d) Temperature Listing Policy

Pursuant to California Water Code section 13191.3(a), the State Policy for Water Quality Control (Policy) describes the process by which the SWRCB and Regional Water Quality Control Boards will comply with the listing requirements of Section 303(d) of the federal CWA. The Policy objective is to establish a standardized approach for developing California's section 303(d) list in order to achieve the overall goal of achieving water quality standards and maintaining beneficial uses in all of California's surface waters (SWRCB 2004).

The guideline used to provide the standard for temperature assessments was from Sullivan et. al. (2000). The report calculated the Annual Maximum (instantaneous maximum temperature observed during the summer) upper threshold criterion for steelhead trout as 21°C. The risk assessment approach used by Sullivan et. al. (2000) suggests that an upper threshold for the Annual Maximum of 21°C for steelhead will reduce average growth 10% from optimum. We believe this report has many technical issues such as:

1. The criterion used was developed for streams in Oregon and Washington;
2. it utilizes unpublished data and a paper that is not peer reviewed;
3. it utilizes a risk-based methodology (developed to characterize risk from exposure to a chemical pollutant) that is largely unproven as a temperature criteria, technique.; and
4. it is overly stringent as compared to the U. S. Environmental Protection Agency (USEPA) criterion established in 1977.

Additionally, we believe this approach, a single temperature criteria, does not take into account seasonal variations, elevation, and stream conditions. A river system is very complex and using one temperature does not take into account the variations that are part of the health of the river environment. For this reason and the change in in-stream flow conditions, the Company believes that Willow Creek should not be listed on the 303(d) list for temperature.