

129 FERC ¶ 61,026
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Sudeen G. Kelly, Marc Spitzer,
and Philip D. Moeller.

Pacific Gas and Electric Company

Project No. 2130-038

ORDER ON REHEARING

(Issued October 15, 2009)

1. On April 24, 2009, a new license was issued to Pacific Gas and Electric Company (PG&E)¹ under sections 4(e) and 15 of the Federal Power Act (FPA)² for the continued operation and maintenance of the Spring Gap-Stanislaus Hydroelectric Project No. 2130, an 88.65-megawatt (MW) project located on the Middle Fork Stanislaus River and South Fork Stanislaus River in Calaveras and Tuolumne Counties, California. PG&E and the California State Water Resources Control Board (Water Board) filed timely requests for rehearing and clarification of a number of the license conditions. Rehearing is granted in part and denied in part, for the reasons discussed below.

Background

2. The project is located within the Stanislaus National Forest, which is managed by the U.S. Department of Agriculture - Forest Service (Forest Service). The new license issued in April 2009 contains conditions to protect and enhance fish, wildlife, water quality, recreation, and cultural resources.³

¹ 127 FERC ¶ 62,070 (2009) (April 24, 2009 Order).

² 16 U.S.C. §§ 797(e) and 808 (2006), respectively.

³ The Spring Gap-Stanislaus Project includes four developments and is intricately connected with the following licensed hydroelectric projects in the Stanislaus River watershed: the South San Joaquin and Oakdale Irrigation Districts' Beardsley/Donnells Hydroelectric Project No. 2005 and Tulloch Hydroelectric Project No. 2067; Tri-Dam Power Authority's Sand Bar Hydroelectric Project No. 2975; and PG&E's Phoenix Hydroelectric Project No. 1061.

3. The April 24, 2009 Order incorporates conditions specified by the Water Board in its water quality certification⁴ issued pursuant to section 401 of the Clean Water Act.⁵ The order also incorporates the Forest Service's FPA section 4(e) terms and conditions.⁶ In addition, the order incorporates resource measures recommended by the Stanislaus Planning Action Team, a group of stakeholders that included PG&E, federal and state resource agencies, Water Board staff, and non-governmental organizations.

Requests for Rehearing and Clarification

4. PG&E requests rehearing to modify the April 24, 2009 Order to: (1) remove a segment of road, which the license order requires to be included within the project boundary, on the grounds that the road is not used solely for project purposes; (2) extend the two-year time limit to remove the Stanislaus Afterbay Dam; and (3) modify the license to reflect 12 revisions made by the Forest Service to its FPA section 4(e) terms and conditions.⁷ Further, PG&E requests the Commission clarify several aspects of the license conditions.⁸

5. On rehearing, the Water Board seeks to ensure that modifications to the terms of the project's certification as a result of its reconsideration be reflected in PG&E's license. In addition, the Water Board asks that the Commission revise the license to permit its future amendment to reflect potential future changes in the certification pursuant to state law procedures for administrative or judicial review.

⁴ See 127 FERC ¶ 62,070 at 64,200-216 (Appendix A).

⁵ 33 U.S.C. § 1341(a)(1) (2006).

⁶ See 127 FERC ¶ 62,070 at 64,216-240 (Appendix B).

⁷ PG&E seeks clarification regarding the deadline for submission of revised Exhibit G drawings, a request that is now moot in light of PG&E's submittal of the required drawings subsequent to the filing of its rehearing request.

⁸ PG&E seeks clarification regarding the Exhibit F drawings approved in the April 2009 order, a request that is now moot in light of PG&E's filing of its Exhibit F drawings subsequent to the filing of its rehearing request. PG&E also asks that we correct several typographical errors. We do not, on rehearing, correct typographical errors in the body of a license order, but take note of any such errors that come to our attention. We will, however, make any necessary corrections to the ordering paragraphs and license conditions.

Rehearing Issues

Article 203 – Forest Service Road 4N01

6. The April 24, 2009 Order determined that a six-mile-long segment of Forest Service Road 4N01, extending from State Highway 108 to the Spring Gap Forebay spur road, was necessary for project purposes and should consequently be brought into the project boundary.⁹ PG&E disagrees.

7. Noting the order's acknowledgment that this segment of road "is not used exclusively to access project facilities during all seasons,"¹⁰ PG&E cites the Commission's comment in *Portland General Electric Company (Portland)* that "as a general matter the concept of roads being 'necessary' for a project must be restricted to roads used solely by a project."¹¹ PG&E contends the order does not take into account the extensive public use of Forest Service Road 4N01 to: (1) access portions of the Stanislaus National Forest that abut the road, including the Fraser Flat and Sand Bar Campgrounds, operated by the Forest Service, neither of which is within the project boundary or a project recreation facility; (2) access the South Fork Stanislaus River at various locations beyond the Spring Gap Forebay that are not within the project boundary, including the Crandall Peak Off Highway Vehicle area; and (3) move from Forest Service campgrounds and other Forest Service lands to the towns of Strawberry and Columbia and other points in Tuolumne County. PG&E adds that the road also is used by logging trucks to reach lands owned by Sierra Pacific Industries and the Forest Service, and observes that a portion of the road was paved in the early 1980s to accommodate this truck traffic.

8. Since the road segment is not used solely for project purposes, PG&E requests that it not be required to include the segment in the project boundary, as specified in the April 24, 2009 Order. PG&E suggests that maintenance responsibilities for this road be resolved through the road management plan process mandated by Forest Service section 4(e) Condition No. 27, which states that the "Licensee shall be responsible for a share of the cost of needed maintenance and repairs of Road 4N01 commensurate with the Licensee's use and Project induced use."

⁹ 127 FERC ¶ 62,070 at P 84. Article 203 directs that the revised Exhibit G drawings include the road segment within the project boundary.

¹⁰ *Id.*

¹¹ 117 FERC ¶ 61,112 at P 45 (2006).

9. In citing a single sentence in *Portland*, in which we observe that "as a general matter the concept of roads being 'necessary' for a project must be restricted to roads used solely by a project,"¹² PG&E overlooks the rest of the discussion in that order which considered how to determine if a road that is used for both project and non-project purposes should be included within a project boundary. The roads at issue in *Portland* were not used solely by the licensee, so the general principle that roads used solely by a project should be included in the project boundary could not be applied. Instead, we were required to review additional factors to determine whether multi-user, multi-purpose roads were needed for the project.

10. In *Portland*, we reasoned "that roads primarily serving other purposes and only incidentally providing access to project facilities" cannot "in most cases, be considered necessary for project purposes."¹³ We determined that "[i]f the licensees did not provide funding for these roads, the Forest Service and Jefferson County would no doubt ensure that the roads were improved and maintained so that they could be used for purposes that have nothing to do with this project."¹⁴ In view of this, we reached our "conclusion that the roads at issue primarily serve non-project purposes and thus are not needed as part of the project."¹⁵ We also explained that "inclusion of lands within a project boundary [including roads] results directly from a finding that lands, and licensee obligations in respect to those lands, serve project purposes."¹⁶

11. The facts here differ substantially from *Portland*. The Road 4N01 segment is not "only incidentally providing access to project facilities;" rather, it is the sole means of reaching the Spring Gap forebay, and for approximately half the year it serves no other

¹² 117 FERC ¶ 61,112 at P 45.

¹³ *Id.* at 45. See, e.g., *Southern California Edison Company*, 107 FERC ¶ 61,067 (2004). In responding to a licensee's objection to including in the project boundary roads leading to non-project works, we found that roads serving project purposes, e.g., as a means to reach a private boat ramp used by the licensee to access project features for maintenance purposes, were properly included in the project boundary.

¹⁴ *Id.* at P 46.

¹⁵ *Id.* at P 49.

¹⁶ *Id.* at P 44.

purpose than to provide PG&E access to project facilities.¹⁷ Thus, unlike the roads in *Portland*, for approximately half the year, PG&E is the only party on the road (during which time the Forest Service and the county have no cause to maintain and improve the road).¹⁸ Because this road is the only means of reaching the Spring Gap forebay, and because PG&E alone assumes the responsibility of keeping it open during the winter, we affirm the finding in the April 24, 2009 Order that Road 4N01 is necessary for project purposes and should be included within the project boundary.¹⁹

Article 302 – Stanislaus Afterbay Dam Removal

12. Article 302 requires PG&E to complete removal of the Stanislaus Afterbay Dam within two years of issuance of the April 24, 2009 Order. PG&E is concerned it may be unable to do so, pointing out that (1) it cannot start work until it receives certain permits, and while it intends to submit timely and complete applications, agency workloads and resource constraints may delay processing, and (2) in-river work may be conducted safely only under certain low streamflow conditions, conditions which do not occur in all years, and which also will require that PG&E reach agreements with operators to restrict flows at the upstream Beardsley/Donnells Development, the Sand Bar Project, and North Fork Stanislaus River Project.

13. In particular, PG&E notes that the U.S. Bureau of Reclamation (Bureau of Reclamation), which owns the land underlying the dam, has indicated that removing the

¹⁷ As noted in PG&E’s submission, “[t]ypically, the road is closed to the public sometime in November, usually after the first snow, and re-opened sometime in April after snow melt.” PG&E’s *Request for Rehearing*, Exhibit A, Affidavit of Scott Lee at P 8.

¹⁸ Recognizing this, the Forest Service imposes Condition No. 27, which states that “[s]now removal on Road 4N01 . . . shall be performed so as to minimize erosion during runoff periods,” with the licensee “responsible for maintenance and replacement of aggregate that is damaged or lost due to snow plowing on the aggregate surfaced portion of Road 4N01” and “for a share of the cost of needed maintenance and repairs of Road 4N01 commensurate with the Licensee’s use and Project induced use.”

¹⁹ See, e.g., *City of Petersburg, Alaska*, 104 FERC ¶ 62,151 at P 12 (2003), in which the licensee, in proposing to revise the project boundary to remove a fish hatchery, removed a road to the hatchery that also served as an access road to the powerhouse, leading to our statement that “[b]ecause the access road is the only reasonable means for [the licensee] to quickly access the project for maintenance or in the case of an emergency, that part of the road not also needed by the hatchery and others should be retained in the project boundary as a project work.”

steel and timber portion of the structure, as contemplated by the final Environmental Impact Statement (EIS), may not meet the Bureau of Reclamation's long term stewardship needs. PG&E requests its license be revised to include provisions directing it and providing time for it to consult with the Bureau of Reclamation to resolve the scope of demolition. Accordingly, on rehearing, PG&E asks that the order be modified to provide that removal of the Stanislaus Afterbay Dam be completed "as early as reasonably practicable," contingent on PG&E being able to: (1) perform the work safely and with favorable hydrologic conditions; (2) reach agreement with the Bureau of Reclamation on the scope of the demolition; and (3) secure all necessary permits, operating agreements, and approvals.

14. In the event PG&E can show it has diligently pursued all authorizations and agreements necessary to undertake this project, and that despite its best efforts has been unable to obtain authorizations and agreements in time to complete removal of the Stanislaus Afterbay Dam by April 24, 2011, the Commission may consider extending the existing two-year deadline. However, PG&E has yet to demonstrate sufficient cause for us to alter what we believe is a reasonable and realistic schedule to complete the activities specified in Article 302. PG&E should aggressively pursue the authorizations, agreements (especially those with the Bureau of Reclamation), and actions necessary to be able to complete the removal of the afterbay dam prior to April 2011.

FPA section 4(e) Conditions

15. The Forest Service filed initial section 4(e) terms and conditions for the Spring Gap-Stanislaus Hydroelectric Project on November 30, 2004, then filed revisions to these terms and conditions on August 29, 2006, November 30, 2006, April 10, 2007, and October 3, 2007. PG&E points out that the April 24, 2009 Order does not reflect the revisions presented in the August 29, 2006 filing. The Forest Service's 4(e) conditions described in Appendix B of the April 24, 2009 Order will be modified to incorporate the revisions contained in the Forest Service's August 29, 2006 filing, which affect relatively minor aspects of Condition Nos. 4, 6, 9, 10, 11, 17, 20, 22, 23, 37, 38, and 41. The modified conditions are set forth in Appendix B of this order.²⁰

²⁰ For ease of administering the license, we are attaching to this order a revised Appendix B that includes all the FPA section 4(e) conditions, as corrected and updated, and supersedes Appendix B of the April 24, 2009 Order.

**Amendments to the License to Reflect Changes in
the Water Quality Certification**

16. The Water Board is concerned that revisions to the project's water quality certification resulting from its decision on petitions for reconsideration of the certification be reflected in PG&E's license. On June 16, 2009 – subsequent to the PG&E and Water Board requests for rehearing – the Water Board acted in Order No. WR 2009-0039 to revise Condition Nos. 4, 5, 7, 9, and 16 of the Water Quality Certification. Pursuant to Ordering Paragraph (D) of the April 24, 2009 Order,²¹ we are revising PG&E's license to include those revisions.²² The revised Water Quality Certification requirements are specified in Appendix A of this order.

17. The Water Board is not only concerned about including revisions resulting from its reconsideration of its initial decision, but also seeks assurance that PG&E's license may be amended to reflect changes in the Water Quality Certification requirements that could occur as a result of further review of its decision. To this end, the Water Board proposes modifying Ordering Paragraph (D) of the April 24, 2009 Order to permit amendment to achieve consistency with “such water quality certification conditions as may be required by the California Water Resources Control Board pursuant to state law procedures for administrative and judicial review of its certification.” In recognition of the fact that the Water Board's decision on petitions for reconsideration may not be the last word on this matter, we will revise Ordering Paragraph (D) as requested.²³ In the

²¹ Ordering Paragraph (D) of the April 24, 2009 Order, 127 FERC ¶ 62,070 at 64,188-89, states that:

Authority is reserved to the Commission to amend this license to include such water quality certification conditions as may be required by the California Water Resources Control Board upon resolution of the petitions for reconsideration filed by the Tuolumne Utilities District and the licensee of the water quality certification . . . to modify existing conditions of this license as necessary to achieve consistency with any such certification conditions.

²² For ease of administering the license, we are attaching to this order a revised Appendix A that includes all the certification conditions, as revised, and supersedes Appendix A of the April 24, 2009 Order.

²³ In doing so, we note that Conditions Nos. 29 through 32 of the water quality certification already provide for future revisions as needed to respond to: judicial review; revisions to state or federal statutes and regulations; monitoring results which indicate continued operation of the project would violate water quality objectives or impair rivers' (continued...)

event that the Water Board's final decision is subsequently revised, PG&E's license will be amended to incorporate such further revisions.

Requests for Clarification

Article 401(a)

18. PG&E seeks clarification and revision of the table in Article 401(a) summarizing the various plans and drawings required by the Water Board's water quality certification and the Forest Service's section 4(e) conditions, specifying the agencies that must be consulted in preparing the plans and drawings, and the deadlines for submitting the plans and drawings to the Commission to for approval.

19. PG&E maintains that because Forest Service Condition No. 14 on pesticide use and Condition No. 25 on project-related signs do not require the submission of plans or drawings, their inclusion in the table is confusing and they should be deleted.²⁴ We disagree. While Condition No. 14 does not require PG&E to prepare a plan on pesticide use per se, it does require PG&E to submit a written request describing its annual planned use of pesticides for approval. That request must also be submitted to the Commission for approval. Similarly, for Condition No. 25, PG&E must obtain Forest Service approval of the location, design, size, color, and message for signs regarding safety issues. Whatever information is provided to the Forest Service for its approval must also be submitted to the Commission for approval.²⁵

20. As noted above, the table in Article 401(a) establishes deadlines for submitting to the Commission for approval the various plans and documents required by the Forest Service section 4(e) conditions and the Water Board's certification conditions. PG&E asks that we modify a number of the deadlines in Article 401(a) to match the deadlines

beneficial uses; new or revised water quality standards and implementation plans; and to coordinate the project's operations with other hydrologically connected water development projects.

²⁴ PG&E's *Request for Rehearing* at 12.

²⁵ In response to PG&E's concern that it may prove impractical to submit information to the Commission 60 days in advance of every pesticide use or sign installation, we clarify that while we expect PG&E to comply with this 60-day notice period with respect to routine matters, we do not expect PG&E to observe this notice period when urgent action is required to respond to unanticipated pest infestation or matters of public safety.

for submitting the required plans and documents to the Water Board or the Forest Service for their review and approval. We agree, and we accordingly will modify the deadlines in Article 401(a) relating to Forest Service Condition No. 29 (Recreation Facilities) and Water Board Certification Condition No. 8 (Fish Screens) to match the deadlines established by the agencies.

21. PG&E notes that both the Water Board's Condition No. 15 and Article 401(a) require the submission of a Spill Channel Management Plan within six months of license issuance. PG&E states that, to the extent the Commission wishes the plan submitted already be approved by Water Board, the deadline for filing the plan with the Commission should be extended to "no later than two weeks from when such plans and drawings are approved by the agency." We decline to do so. Generally, we try to match our deadlines with those of each relevant agency with the expectation that the licensee will be able to prepare the required plan and file them with each agency in advance of the deadline to allow for agency review and approval of the plans in a timeframe that allows for the plan's timely submission to the Commission.

22. PG&E asks that we revise the deadline in the Article 401(a) table for submitting the Soil Erosion Plan required by Water Board Condition No. 13. Rather than filing the plan with the Commission within one year of license issuance, PG&E asks that the deadline be changed to "prior to beginning construction of the Stanislaus Power Tunnel fish screen or removal of the Stanislaus Afterbay Dam," as is stated in Condition No. 13. We decline to do so. The plan is a necessary component of the Stanislaus Power Tunnel fish screen installation and the detailed design drawings and plans for the fish screen are due by the end of the first full calendar year after license issuance, i.e., by December 31, 2010.²⁶ That is when we expect the soil erosion plan as well, and we will revise Article 401(a) to so require.

23. In addition, we will modify Article 401(a) to clarify that the monitoring plans required by Water Board Condition No. 8 and Forest Service Condition No. 39 must be filed for Commission approval within six months of license issuance. Any subsequent modifications to those plans must also be submitted to the Commission for approval.

24. As requested by PG&E, we are adding the Bureau of Reclamation as an entity to be consulted on the final construction plans for removal of the Stanislaus Afterbay Dam, which are required by Water Board Certification Condition No. 11. Also, as requested by PG&E for Water Board Condition No. 16 (Coordinated Operations Agreement), we are deleting the Forest Service, U.S. Fish and Wildlife Service, and the California Department of Fish and Game as entities to be consulted on any changes to the

²⁶ See Water Board Condition No. 8.

Coordinated Operations Agreement, since these resource agencies are not parties to the Agreement.

Article 401(c)

25. At the time the April 24, 2009 Order was issued, PG&E and the Forest Service were engaged in negotiations regarding a Recreation Settlement Agreement that contemplated cost-sharing to rehabilitate and rebuild certain Forest Service facilities. In view of the potential for the terms of this agreement to affect project facilities or operations, Article 401(c) requires PG&E to file a license amendment application for "Project changes based on a recreation settlement agreement." PG&E states it has now executed a Recreation Settlement Agreement with the Forest Service and avows the terms of that agreement will not result in any changes to facilities or operation within the project boundary. Therefore, PG&E requests that Article 401(c) be revised to remove the requirement to file a license amendment application for project changes based on the Recreation Settlement Agreement.

26. We find no cause to modify the Article 401(c). Provided the terms of the existing PG&E and Forest Service agreement do not affect project facilities or operations, Article 401(c) does not come into play, and there will be no need for PG&E to file an application to amend its license. However, should that situation change, an amendment may be necessary. Accordingly, we retain Article 401(c) in case of any subsequent modifications to the terms of the Recreation Settlement Agreement that could affect aspects of project facilities or operations which might merit amending the existing license.

Article 201(a) – Installed Capacity of Project

27. PG&E objects to the April 24, 2009 Order's description of the existing installed capacity of the Spring Gap development as being 6.0 MW and the Stanislaus development as being 81.9 MW "due to the limiting generator capacities." PG&E states that the annual charges in Article 201(a) should be calculated based on an installed capacity of 98 megawatts (MW): 7.0 MW for the Spring Gap development and 91.0 MW for the Stanislaus development.

28. The Commission refers to the capacity value used for annual charge billing in Article 201(a) as the "authorized capacity," and defines this capacity as the lesser of the turbine or generator capacity for a project. After reviewing the approved Exhibit A and the authorized capacity for the project, as stated in Article 201(a) of the order, we find that the authorized capacity should be 88.65 MW based on the information presented in the approved Exhibit A and not 87.9 MW as set forth in Article 201(a). As with the authorized capacity value in the order, this capacity reflects that the generator capacity is the limiting capacity for both developments.

Water Rights

29. The April 24, 2009 Order refers to "downstream water rights *held* by Tuolumne Utilities."²⁷ PG&E declares it holds these water rights. The Water Board objects to this description as well, contending it should not be interpreted as a determination and declaration of the legal status of water rights under state law. We clarify that this phrase represents the Tuolumne Utilities District's description of its rights, and is not intended as an affirmation of the validity of any claimed rights.

The Commission orders:

(A) In response to PG&E's and the California Water Resources Control Board's requests for rehearing and clarification, the April 24, 2009 Order is revised and clarified as discussed herein.

(B) Ordering Paragraphs and Articles of the April 24, 2009 Order are revised as indicated.

(1) Ordering Paragraph (B)(2), in the forth paragraph the maximum hydraulic capacity is changed from 63 cfs to 61 cfs.

(2) Ordering Paragraph (B)(2), the nine identified Exhibit F drawings are filed in this FERC Project No. 2130 proceeding, not in FERC Project No. 2310.

(3) Ordering Paragraph (D) is revised to read as follows.

This license is subject to the conditions of the water quality certification issued by the California Water Resources Control Board on September 15, 2008 and revised on June 16, 2009, under section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1), as those conditions are set forth in Appendix A to this order. Authority is reserved to the Commission to amend this license to include such water quality certification conditions as may be required by the California Water Resources Control Board pursuant to state law procedures for administrative and judicial review of its certification, and to modify the existing conditions of this license as necessary to achieve consistency with any such certification conditions.

²⁷ 127 FERC ¶ 62,070 at P 70 (emphasis added).

(4) Article 201(a) is revised to read: “Reimbursing the United States for the cost of administering Part I of the Federal Power Act, the authorized installed capacity for that purpose is 88.65 MW.”

(5) The table in Article 401(a) is revised to read as follows.

Water Board condition	Forest Service condition	Plan name	Consulting entity	Due date
-	7	Hazardous Substance Plan	Forest Service, Water Board, US Fish and Wildlife Service (FWS), California Fish and Game	1 year from license issuance
-	13	Safety During Construction Plan	Forest Service	At least 60 days prior to ground-disturbing activity
-	14	Pesticide Use - Request for Approval	Forest Service	At least 60 days prior to pesticide use
-	15	Erosion Control Plan	Forest Service, Water Board, FWS, California Fish and Game	At least 60 days prior to ground-disturbing activity
-	25	Project-related Signs	Forest Service	At least 60 days prior to installation
-	27	Road Management Plan	Forest Service	1 year from license issuance
-	29	Recreation Management Sub-plans (Visitor Education and Information Plan and Shoreline Management Plan)	Forest Service	2 years from license issuance

-	29	Recreation Management Sub-plan (Traffic/Circulation/Parking Plan)	Forest Service	1 year from license issuance
2	34	Relief Reservoir drawdown curve and estimated Relief reach streamflow regime	Forest Service, Water Board, FWS, California Fish and Game	No later than 2 weeks from when approved by resource agencies
2	-	Plan for monitoring compliance with minimum flow between Relief dam and Kennedy Creek	Water Board, Forest Service, FWS, US Geological Service (USGS), and California Fish and Game	1 year from license issuance
4	34	Pinecrest Lake drawdown curve	Forest Service, Water Board, FWS, California Fish and Game, and Tuolumne Utilities District	No later than 2 weeks from when approved by resource agencies
4	-	Plan for monitoring compliance with minimum flow downstream of Strawberry dam	Water Board, Forest Service, FWS, USGS, and California Fish and Game	1 year from license issuance
8	-	Stanislaus power tunnel fish screen plans and drawings	Water Board, Forest Service, FWS, and California Fish and Game	December 31, 2010

8	39	Environmental monitoring plans ²⁸ and modifications to monitoring plans	Water Board, Forest Service, FWS, and California Fish and Game	6 months from license issuance for initial plans; as needed for modifications
11	-	Final plans for the construction of the Stanislaus power tunnel fish screen and removal of the Stanislaus Afterbay dam, including measures to protect water quality	Water Board, Forest Service, FWS, Bureau of Reclamation, and California Fish and Game	60 days prior to construction or dam removal
12	-	Stanislaus Afterbay sediment disposal approval		60 days before start of dam removal
13	-	Soil erosion plan to address construction of Stanislaus power tunnel fish screen and removal of Stanislaus Afterbay dam	Water Board, Forest Service, FWS, and California Fish and Game	December 31, 2010
15	35	Spill Management Plan	Water Board, Forest Service, FWS, and California Fish and Game	6 months from license issuance
18	-	Instream flow compliance locations	Water Board	6 months from license issuance

²⁸ These monitoring plans include: (1) Relief Reach Riparian and Vegetation Restoration and Streambank Stabilization; (2) Hardhead Monitoring in Camp Nine Reach and Sand Bar Dam Reach; (3) Trout Population Monitoring in Spring Gap Reach and Sand Bar Dam Reach; (4) Foothill Yellow-legged Frog Monitoring in Sand Bar Dam Reach and Camp Nine Reach; and (5) Mountain Yellow-legged Frog Monitoring in Relief Reach.

(6) The table in Article 401(c) is revised to read as follows.

Water Board condition	Forest Service condition	Modification
-	1	Project changes based on a recreation settlement agreement
-	29	Construction of possible additional day-use parking lots/areas
2	34	Instream flows in the Relief reach and Relief reservoir levels
4	34	Pinecrest Lake levels
16	-	Project changes that result from modifications of the conditions of the water quality certification to address coordination with operations of the Beardsley-Donnells Project as needed to protect water quality
27	-	Project changes that result from additions or modifications of the water quality certification as a result of violations of the conditions of the certification issued on September 15, 2008 and revised on June 16, 2009
28	-	Any changes to project operations
29	-	Project changes that result from modification or revocation of the water quality certification as a result of administrative or judicial review
30	-	Project changes that result from modification or revocation of the water quality certification as a result of monitoring that indicates that continued operation of the project would violate water quality objectives or impair the beneficial uses of the Middle or South Fork Stanislaus River
31	-	Project changes that result from additions or modifications of the water quality certification as a result of implementation of any new or revised water quality standards and implementation plans

32	-	Project changes that result from additions or modifications of the water quality certification as a result of coordination of this project with other water development projects, where coordination is reasonably necessary to achieve water quality standards or protect beneficial uses of water
33	-	Project changes that result from the addition to or modification of the water quality certification

(7) Article 407 is revised to state that the Programmatic Agreement is between the Commission and the California State Historic Preservation Officer, not the Washington State Historic Preservation Officer.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

APPENDIX ASTATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

In the Matter of Water Quality Certification for the

**PACIFIC GAS AND ELECTRIC COMPANY
SPRING GAP-STANISLAUS HYDROELECTRIC PROJECT****FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 2130**

SOURCES: Middle and South Forks of the Stanislaus River and Tributaries

COUNTY: Tuolumne

Introduction

Pacific Gas and Electric Company (PG&E or Licensee) applied to the Federal Energy Regulatory Commission (FERC) for a new license for the Spring Gap-Stanislaus Project (Project). The Project is located on the Middle and South Forks of the Stanislaus River in the Stanislaus National Forest near the town of Strawberry. The existing Spring Gap-Stanislaus Project is composed of four developments: Relief, Strawberry (Pinecrest Lake), Spring Gap, and Stanislaus as described in the Application for New License dated December 2002, that have a combined installed capacity of 87.9 megawatts. The Project includes the removal of the Stanislaus Afterbay Dam that poses a threat to the public.

Before FERC can issue a new license for the Project, PG&E must obtain water quality certification under section 401 of the Clean Water Act from the State Water Resources Control Board (State Water Board) (33 U.S.C. § 1341). The State Water Board must certify that the Project will comply with the applicable provisions of the Clean Water Act, including water quality standards set forth in the Water Quality Control Plan for the Sacramento and San Joaquin River Basin (Basin Plan). The Basin Plan designates the beneficial uses of waters to be protected along with the water quality objectives necessary to protect those uses that together are the water quality standards. The Basin Plan lists municipal and domestic supply, agricultural supply, hydropower generation, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, and wildlife habitat as beneficial uses for the Stanislaus River above New Melones Reservoir. The State Water Board analyzes the Project's overall effect on water quality and includes conditions in the certification, if necessary, to adequately protect the designated beneficial uses identified in the Basin Plan.

Stanislaus Planning Action Team

The Stanislaus Planning Action Team (SPLAT) was a collaborative group formed by PG&E and Tri-Dam Project to help interested parties develop recommended resource measures for the Spring Gap-Stanislaus, Beardsley/Donnells, Tulloch, and Donnells-Curtis Projects. In late 2003 and early 2004, the SPLAT participants reached consensus on recommended resource

measures for the Spring Gap-Stanislaus Project. The concurring SPLAT participants (which included the California Department of Fish and Game (CDFG), Central Sierra Environmental Resource Center, Stanislaus National Forest, Friends of the River, PG&E, Tuolumne Utilities District, Tri-Dam Project, Trout Unlimited, National Park Service, and American Whitewater) reached consensus on recommended resource measures that were filed by letter with FERC. In the letter, SPLAT requested that FERC consider the consensus recommended resource measures for the Spring Gap-Stanislaus Project in its Environmental Impact Statement (EIS). State Water Board staff provided input on Basin Plan water quality standards compliance to the SPLAT as it developed recommended resource measures, and assisted the SPLAT in crafting proposed measures with full consideration of the water quality standards. In general, the SPLAT recommended resource measures adequately protect designated beneficial uses and properly balance the needs of various flow-dependent resources. A more detailed rationale for each SPLAT measure is contained in the Recommended Resource Measures for the Spring Gap-Stanislaus Project dated March 1, 2004, and is incorporated into this certification by reference. Water quality certification conditions implement the substantive requirements of the flow-related Protection Mitigation and Enhancement (PM&E) measures in the SPLAT Agreement, with some language amendments designed to make the measures enforceable conditions.

Water Quality Impairments

Upon review of existing watershed data and studies conducted by PG&E for the relicensing of the project, the following impairments to the beneficial uses were identified and are addressed with the conditions in this water quality certification:

Ramping Rates

PG&E has the ability to alter stream flows at a time of year when unregulated stream flows would otherwise be stable. Ramping rates are needed during Licensee-controlled changes in regulated streamflow to avoid stranding or displacement of aquatic biota. This certification requires a ramping rate based on the stage-flow relationship of naturally occurring rates of stage change resulting from natural events, such as storms, and is consistent with such events. The measure refers to "regulated" streamflows to distinguish from "spill" flows over which the Licensee has little or no control. The six-inch per hour ramping rate refers to stage change as opposed to a change in flow rate because it is the rate of stage change in the stream channel that affects stranding and displacement. Facility modifications necessary to achieve the specified ramping rates may take a considerable amount of time to design, permit and construct, and shall occur no later than three years after license issuance. Licensee is required to make a good faith effort to provide the specified ramping rate until such facility modifications are completed.

Middle Fork Stanislaus River Water Temperature and Fish Habitat

Flows below the Sand Bar Diversion Dam during the warm summer months (July, August and September) are significantly less under the regulated hydrology compared to the unimpaired hydrology, which results in elevated water temperatures and reduced fish habitat. Current flow conditions in this reach are not adequate to protect cold freshwater habitat; however, the Middle Fork Stanislaus River (MFSR) is a transitional reach, which provides habitat for cold, eurythermal, and warm water species. The flow regime developed by the SPLAT, and required in this certification, balances the needs of cold and warm water aquatic species that use the Sand Bar Dam Reach during the entire year. The Minimum Supplemental Flows condition in

this certification is expected to protect the beneficial uses by more closely mimicking the shape of the natural hydrograph and providing seasonal cues for spawning. The annual variability of the timing and magnitude of the Minimum Supplemental Flows condition is anticipated to protect the beneficial uses by providing more natural annual variation in spring runoff.

Middle Fork Stanislaus River, Flow Fluctuations

Under certain conditions, the Sand Bar Project releases water in excess of the capacity of the Spring Gap-Stanislaus Project. If operation of the Stanislaus Powerhouse and the Sand Bar Project are not closely coordinated, flows from the Sand Bar Project can spill over the Sand Bar Diversion Dam, causing flow fluctuations in the MFSR to the detriment of macroinvertebrates, fish, and certain life stages of foothill yellow legged frog (FYLF). The condition in the certification specifically identifies the need for coordinated operation with regard to the Spring Gap-Stanislaus licensee providing specified minimum Daily, Supplemental, and Recreation Streamflow Event flows in the Sand Bar Dam Reach, because the Spring Gap-Stanislaus licensee cannot provide all of these flows without the cooperation of the Beardsley/Donnells licensee. A Coordinated Operations Agreement has been developed with the Oakdale and South San Joaquin Irrigation Districts, Tri-Dam Power Authority, and PG&E. The agreement will avoid release of flows in excess of the capacity of the Stanislaus Power Tunnel, and provide water necessary for minimum flows.

South Fork Stanislaus River/ Pinecrest Lake Recreation, Water Temperature and Trout Habitat

The flow condition in the certification for the South Fork Stanislaus River (SFSR) maintains lake levels at Pinecrest Lake for recreation, adequate and stable instream flows for fish and amphibians, Tuolumne Utilities District's (TUD's) consumptive water demands, and water for power generation through the Philadelphia Diversion. In general, consumptive water supply and ecological flows after the end of the spill period require water releases from Pinecrest Lake which are in direct conflict with the recreation objective of keeping the water surface elevation high between Memorial Day and Labor Day weekends. Additionally, the lack of flow conditions in the existing FERC license has resulted in periods of very low streamflow during the summer followed by periods of higher streamflow in the fall periods and lower flows in late fall and winter between Pinecrest Lake and Lyons Reservoir.

The SPLAT proposed developing a drawdown curve in consultation with PG&E, Forest Service, State Water Board, CDFG and TUD by April 15 of each year. State Water Board staff developed an alternative measure after PG&E conducted additional operations modeling that achieves the goals developed by the SPLAT of maintaining adequate streamflows, maintaining lake levels to support recreation, providing water for power generation, and meeting TUD consumptive demand, without yearly consultation.

Relief Reach Stanislaus River

Relief Reservoir is used to store water that is subsequently released into the Relief Reach to Tri-Dam's Donnells Reservoir, where it is stored and diverted for power generation at Donnells Powerhouse and other powerhouses downstream. There are no power generation facilities at Relief Reservoir or in the Relief Reach. Under the current FERC license, stored water is released from Relief Reservoir in the late summer or early fall. This flow regime was shown to have a negative impact on stream geomorphology, cottonwood recruitment, amphibians (including mountain yellow legged frogs), and trout. The condition in the certification for the

Reservoir Drawdown and Streamflows in the Relief Reach creates a regulated hydrograph with a shape that more closely resembles the shape of the unimpaired hydrograph, while avoiding increased spill at Donnell's Reservoir and the associated reduction in power generation. The measure achieves this with a combination of operational objectives, which are intended to guide the Licensee in developing an annual "best fit" drawdown curve for Relief Reservoir along with specified minimum and, in some cases, maximum streamflows, which are intended to assure that stream ecology needs are met.

The condition specifies minimum streamflows for all months and also specifies maximum streamflows for some months. The minimum streamflows are intended to meet ecological needs. The maximum streamflows in August and September protect cottonwood seedlings in the Kennedy Meadows area, and the maximum streamflows during the winter months assure a favorably shaped drawdown curve. The conditions substantially achieve desired conditions identified for water use and quality, including the protection of beneficial uses and watershed health.

White Water Boating

The MFSR and SFSR provided whitewater boating opportunities only during the spring high flow period. Based on whitewater boating study results, SPLAT determined that spill flows would provide adequate whitewater boating recreation opportunity on the Relief, Pinecrest, and Philadelphia reaches, particularly given the low demand and relatively high difficulty of runs on these reaches. However, project operations could result in multiple, consecutive non-spill years on the Sand Bar Dam Reach that would not provide adequate opportunity for boating on the Sand Bar and Mt. Knight runs.

To address this issue, the certification includes a condition that in the third of three consecutive years of no boating opportunity on the Sand Bar Dam Reach, the Licensee will make a good faith effort to provide a boating opportunity on two consecutive weekend days. The two-day concept will give boaters the opportunity to boat the Sand Bar run the first day, camp along the river, and then boat the Mt. Knight run the second day. The "good faith" provision and the multiple exceptions are intended to recognize that the Licensee has limited control on flows coming into Sand Bar Diversion Dam, that under certain circumstances the water may have far more value for electric generation than for recreation, and that the boating flows may potentially cause unanticipated resource damage. Further study is needed to clarify the minimum acceptable flow for whitewater boating in the Sand Bar and Mt. Knight Reaches.

Entrainment

Based on the design of the Stanislaus Power Tunnel, the high potential for entrainment, and lower trout populations below the diversion, studies were developed and conducted to quantify the level of entrainment. Based on this information, it was determined the level of entrainment was significant and that a fish screen was needed to protect fish populations. This certification requires PG&E to construct a fish screen at the entrance to the Stanislaus Power Tunnel that will prevent the entrainment of fish.

Spill Channels

The existing FERC license for the Spring Gap-Stanislaus Project does not include any specific limitations or operational guidelines to protect water quality during the operation of the Spring Gap Forebay spill channel or Stanislaus Forebay spill channel. Based on results of monitoring, short term spills will not result in significant impacts to aquatic resources; however, the use of

the spill channels needs to be minimized and monitored. This certification requires the Licensee to develop a plan to minimize the spill channel use (timing and duration), both from a water use standpoint and for protection of water quality and environmental resources.

Stanislaus Afterbay Dam

The Stanislaus Afterbay Dam is located on the MFSR just upstream of New Melones Dam and was constructed in 1961 to attenuate flow fluctuations from the Stanislaus Powerhouse. The dam impounds 31.6 acre-feet (af) of water and is timber-faced with steel buttresses supported on concrete slabs up to 30 feet wide. The maximum water surface of New Melones Reservoir inundates the afterbay dam, essentially rendering it obsolete and non-functional. FERC has requested that PG&E remove the dam because it is no longer functional, and has been essentially abandoned in place. The gates are no longer operational and the top three feet of timber planks have been removed from portions of the right side buttresses. Details of the removal are described in the Initial Study.

Findings

1. 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.”
2. 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 Resources Control Board (State Water Board) has delegated this function to the Executive Director by regulation. (Cal. Code Regs., tit. 23, § 3838, subd. (a).)
3. The California Regional Water Quality Control Boards have adopted, and the State Water Board has approved, 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. Section 303 of the Clean Water Act requires the states to develop and adopt water quality standards. (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 under section 303.
4. The Water Quality Control Plan for the Central Valley-Sacramento and San Joaquin River Basins (Basin Plan) identifies municipal and domestic supply, irrigation, stock watering, hydropower, warm and cold freshwater habitat, wildlife habitat, contact and non-contact recreation, canoeing, and rafting as beneficial uses of the Stanislaus River above New

Melones Reservoir. Protection of the instream beneficial uses identified in the Basin Plan requires maintenance of adequate instream flows as well as effluent limitations and other limitations on discharges of pollutants from point and nonpoint sources to the Middle Fork Stanislaus River and its tributaries.

5. The State Water Board has reviewed and considered the Stanislaus Planning Action Team recommended resource measures for the Spring Gap-Stanislaus Project; PG&E's final Federal Energy Regulatory Commission (FERC) License Application; comments on the final License Application by agencies and interested parties; the U.S. Forest Service Final 4(e) Conditions; and the FERC Final Environmental Impact Statement prepared pursuant to the National Environmental Policy Act for the Stanislaus River Projects. Further, the State Water Board has considered the basin plan, the existing water quality conditions, and project-related controllable factors.
6. The State Water Board is the lead agency under the California Environmental Quality Act (CEQA), in connection with the proceeding to issue water quality certifications for the Project. (Pub. Resources Code, §§ 21000-21177.) Under CEQA, a project may be analyzed for its incremental effects over existing baseline conditions. In an analysis of an already existing hydroelectric project, reauthorizing the project will not yield many environmental impacts because most of the impacts have already occurred and, when compared to the existing condition, do not register as significant. In contrast, water quality certification requires an analysis of a project's overall effect on water quality, including whether the designated beneficial uses identified in the Basin Plan are adequately protected. Water quality certification may also review a project's effects on public trust resources. The water quality certification analysis is based not only on proposed modifications to Project operations from the existing condition, but also on whether past, existing, or future operations impair or degrade water quality.
7. On August 1, 2007, the State Water Board provided an initial study and notice of intent to adopt a mitigated negative declaration (SCH # 2007082008) for the project. (Cal. Code Regs., tit. 14, § 15072.) The mitigated negative declaration and initial study reflects the State Water Board's independent judgment and analysis. After considering the documents and comments received during the public review process, the State Water Board hereby determines that the proposed project, with mitigation measures, will not have a significant effect on the environment. The mitigated negative declaration is hereby adopted. The documents or other material, which constitute the record, are located at the State Water Board, Division of Water Rights, 1001 I Street, Sacramento. The State Water Board will file a Notice of Determination within five days from the issuance of this order.
8. Public Resources Code section 21081.6(a) requires that if a public agency makes changes or alterations in a project to mitigate or avoid the significant adverse environmental effects of the project, it must adopt a monitoring or reporting program to ensure compliance with the changes or alterations. The mitigation and reporting plan is included as Attachment A to this certification.
9. On August 1, 2007, State Water Board staff issued a draft water quality certification for public review. On August 1, 2007, the State Water Board issued notice pursuant to section 3858 of the California Code of Regulations that it intended to issue water quality certification after a 21 day notice period.

ACCORDINGLY, BASED ON ITS INDEPENDENT REVIEW OF THE RECORD, THE STATE WATER BOARD CERTIFIES THAT THE OPERATION OF THE SPRING GAP-STANISLAUS PROJECT BY THE PACIFIC GAS AND ELECTRIC COMPANY UNDER A NEW LICENCE ISSUED BY FERC, AS DESCRIBED IN IT'S APPLICATION FOR NEW LICENSE DATED DECEMBER 2002, will comply with sections 301, 302, 303, 306 and 307 of the Clean Water Act, and with applicable provisions of state law, provided Pacific Gas and Electric Company complies with the following terms and conditions:

1. Each year from February through May, Licensee shall determine water-year type based on the California Department of Water Resource's (DWR) forecast for annual unimpaired inflow into New Melones Reservoir (as set forth in DWR's Bulletin 120 entitled *Water Conditions in California*). Licensee shall use this determination in implementing conditions of this certification that are dependent on water-year type. From February through April, the water-year type based on DWR's forecast for the month shall apply from the 10th day of the month through the 9th day of the next month. From May 10 through February 9 of the following calendar year, the water-year type shall be based on DWR's May 1 forecast. The Licensee shall maintain a five-year record of its water-year type determinations, and shall provide this record to the State Water Board Deputy Director for Water Rights (Deputy Director) annually.

Water-Year Types for the Spring Gap-Stanislaus Project

<u>Water-Year Type</u>	DWR Forecast Annual Unimpaired Inflow to New Melones Reservoir (acre-feet)
Critically Dry	Less than or equal to 350,000
Dry	Greater than 350,000 and less than or equal to 676,000
Normal	Greater than 676,000 and less than 1,585,000
Normal-Dry	Greater than 676,000 and less than 1,050,000
Normal-Wet	Greater than or equal to 1,050,000 and less than 1,585,000
Wet	Greater than or equal to 1,585,000

2. The Licensee shall annually, beginning the first full calendar year after license issuance, develop a "best fit" drawdown curve for Relief Reservoir based on that year's hydrological conditions. The drawdown curve shall be designed to meet the specified Relief Reach minimum and maximum streamflow requirements for the water-year type, and achieve the Operational Objectives specified below. Relief Reach is defined as the 15.8 mile-long reach of Summit Creek and the Middle Fork Stanislaus River from Relief Dam to Donnells Reservoir.

Operational Objectives

- Streamflow in the Relief Reach, as measured at Kennedy Meadows, mimics the shape of the unimpaired hydrograph, with peak flows in late spring, declining flows from the spring peak until October (except for increases due to natural events), and relatively uniform flows from November through March;
- The transition from spill flows to regulated flows is smooth, without significant decreases and increases in flows other than from natural events, achieving a rate of decline and a range of fluctuation that are within the natural range of variability of the unimpaired hydrograph;
- Streamflow fluctuation in response to natural events, such as storms and variation in rate of snowmelt, is allowed;

- The rate and magnitude of changes in regulated streamflows is gradual and within the natural range of variability of the unimpaired hydrograph for the time of year;
- Relief Reservoir is able to annually fill and be drawn down to minimum pool;
- The water stored in Relief Reservoir is adequate to meet the specified minimum streamflow requirements;
- Avoidable spill at Donnell's Reservoir is minimized; and
- Relief Reservoir operation is responsive to annual hydrological conditions.

The Licensee shall develop its proposed Relief Reservoir drawdown curve and estimated Relief Reach streamflow regime and provide it, along with the prior year's Kennedy Meadows flow gage daily data and Relief Reservoir water surface elevations, to the Deputy Director no later than April 15 of each year.

The Licensee shall operate Relief Reservoir in conformance with the minimum and maximum streamflow requirements shown in the table below, as may be modified by an approved alternate streamflow regime, and to achieve the specified Operational Objectives. Additionally, the Licensee shall maintain a year-round streamflow in Summit Creek between Relief Dam and Kennedy Creek of at least 5 cubic feet per second (cfs), and shall maintain a minimum pool in Relief Reservoir of at least 200 acre-feet. The Licensee shall, within one year of license issuance, develop and file with the Deputy Director, a plan for monitoring compliance with the 5 cfs requirement.

If the Licensee anticipates at any time that it cannot meet the minimum and/or maximum streamflow requirements it shall notify the Deputy Director, labeling the notification "Compliance Item, Immediate Attention Requested" and provide an alternate streamflow regime and drawdown curve for the year that meets the specified minimum and maximum streamflow requirements and achieves the specified Operational Objectives to the greatest extent feasible. The Deputy Director shall be provided 30 days to review, and if acceptable, approve the Licensee's alternate streamflow regime.

The specified minimum streamflows are the minimum mean flow over a continuous 24-hour period. Except as provided below for the months of November through March, instantaneous streamflow may, on an infrequent basis, deviate below the specified minimum streamflow up to 10 percent.

The specified maximum streamflows are the instantaneous maximums for the month. The Licensee shall make a good faith effort to maintain actual streamflows within the specified maximums. However, the Licensee is not required to adjust the Relief Reservoir outlet gate in response to short-term (not greater than approximately one week in length) natural events such as storms, variations in rate of snow melt, and accretion flows. In complying with the specified maximum streamflows, the Licensee shall attempt to under-run the maximum streamflows specified for August and September to the greatest extent feasible, consistent with actual hydrological conditions.

The specified minimum and maximum streamflows for November through March are target streamflows. By November of each year, the Licensee shall forecast the inflow to Relief Reservoir for the period December through March, and set the Relief Dam outlet gate at an opening to achieve the streamflow in the approved Relief Reservoir drawdown plan. The Licensee shall monitor Relief Reservoir water surface elevation with at least weekly readings for December through March to confirm that the outlet gate is at an appropriate setting to

achieve the target streamflow range. Upon a determination that the outlet gate setting needs adjustment to achieve the target streamflow range, the Licensee shall make a good faith effort to adjust the outlet gate, subject to personnel safety and access limitations.

Minimum and Maximum Streamflows for the Relief Reach (cfs) ^{1,2}

Month	Water-Year Type					
	Normal		Dry and Critically Dry		Wet	
	Min	Max	Min	Max	Min	Max
October 1-31	30	50	20	40	40	125
November 1-30	30	60	20	50	40	125
December 1-31	30	60	20	50	40	125
January 1–February 9	30	60	20	50	40	125
February 10-March 9	30	60	20	50	40	125
March 10-April 9	30	60	25	50	40	125
April 10-May 9	60	NA	45	NA	70	NA
May 10-May 31	100	NA	80	NA	150	NA
June 1-30	150	NA	100	NA	250	NA
July 1-31	90	NA	40	NA	200	NA
August 1-31	40	200	20	40	100	300
September 1-30	30	120	20	40	60	200

¹**The specified maximum and minimum streamflows are made up of flow releases from Relief Reservoir, unregulated accretion flows from Kennedy Creek and other sources, as measured at USGS gage 11292000 (PG&E gage S-52) in Kennedy Meadows.**

²**NA: Not Applicable**

- Beginning no more than six months after license issuance, Licensee shall maintain minimum streamflows made up of minimum Daily Flows and minimum Supplemental Flows in the Sand Bar Dam Reach in Normal, Dry, Critically Dry and Wet water-years as specified below. The Sand Bar Dam Reach is the 12.3 mile-long reach of the Middle Fork Stanislaus River extending from Sand Bar Diversion Dam to the confluence of the Middle Fork Stanislaus River with the North Fork Stanislaus River. Minimum Daily Flows and minimum Supplemental Flows may consist of any combination of spill, accretion and regulated flows.

Minimum Daily Flows

Licensee shall maintain the minimum Daily Flows in the following table in the Sand Bar Dam Reach. The specified minimum Daily Flow is the minimum mean flow over a continuous 24-hour period. Instantaneous flow may, on an infrequent basis, deviate below the specified minimum Daily Flow by up to 10 percent or 8 cfs, whichever is less.

Minimum Daily Flow schedule for the Sand Bar Dam Reach (cfs) ^{1,2,3}

Month	Water-Year Type		
	Normal	Dry and Critically Dry	Wet
October 1-31	80	50	80

November 1-30	70	50	70
December 1-31	70	50	70
January 1 - February 9	70	50	70
February 10 - March 9	70	50	70
March 10 - April 9	80	50	80
April 10 - May 9	80	50	80
May 10 – May 31	80	50	80
June 1 – 30	80	50	80
July 1- 31	80	60	100
August 1 – 31	80	60	100
September 1 – 30	80	50	100

¹**The compliance location for the minimum Daily Flows shall be USGS gage 11293200 (PG&E gage S-12).**

²**The minimum required Daily Flow is the amount indicated or, if the inflow to Sand Bar Diversion Dam is less than the amount indicated due to reasons outside the Licensee's control, the inflow to Sand Bar Diversion Dam.**

³Minimum Supplemental Flows that are additive to the specified minimum Daily Flows shall be provided during a continuous thirteen-week period (seven weeks in Critically Dry years) between March 1 and July 31.

Minimum Supplemental Flows

Licensee shall, in addition to the minimum Daily Flows specified above, maintain the minimum Supplemental Flows specified in the following table, provided such flows are available to the Licensee at Sand Bar Diversion Dam. The specified minimum Supplemental Flow for a week is the average flow for the week, with instantaneous flows at least equal to the specified minimum Supplemental Flow for the lower of the two adjoining weeks.

Minimum Supplemental Flow schedule for the Sand Bar Dam Reach (cfs) ^{1,2,3,4}

Week	Water-Year Type			
	Normal	Dry	Critically Dry	Wet
1	5	5	15	5
2	10	10	75	10
3	25	25	250	25
4	35	35	150	35
5	75	75	100	75
6	140	140	40	140
7	220	220	20	220
8	400	400	NA	400
9	180	180	NA	180
10	110	110	NA	110
11	65	65	NA	65
12	25	25	NA	25
13	10	10	NA	10

¹The compliance location for the minimum Supplemental Flows shall be USGS gage 11293200 (PG&E gage S-12) below Sand Bar Diversion Dam for the first 200 cfs. Flows in excess of 200 cfs shall be calculated by summing the flow contributions from Beardsley Afterbay Dam (gage S-89), Sand Bar Powerhouse and Spring-Gap Powerhouse and subtracting the flow diverted at Sand Bar Diversion Dam. If PG&E gage S-12 is upgraded to measure flows in excess of 200 cfs, it shall be used for flow measurement up to its upgraded rating.

²The minimum required Supplemental Flow is the amount indicated or, if the inflow to Sand Bar Diversion Dam is less than the amount indicated due to reasons outside the Licensee’s control, the inflow to Sand Bar Diversion Dam.

³The minimum Supplemental Flows are additive to the specified minimum Daily Flows.

⁴NA: Not Applicable

The Supplemental Flow period shall be 13 continuous weeks in length (seven weeks in Critically Dry water-years). For years in which Beardsley Reservoir is forecast to spill, the Licensee may initiate the Supplemental Flow period any time between March 1 and May 1 to best coincide with the period of spill (Date Trigger). For years in which Beardsley Reservoir is forecast not to spill, the Licensee shall initiate the Supplemental Flow period at a time between March 1 and May 1 so that the peak Supplemental Flow will occur approximately two weeks after the then-forecast peak inflow to Donnell’s Reservoir (Peak Flow Trigger).

The Licensee shall consult with the U.S Forest Service (USFS), Deputy Director, California

Department of Fish and Game (CDFG), Fish and Wildlife Service (FWS) and other interested parties to develop a recommendation for a Water Temperature Trigger to function in combination with the Date and Peak Flow Triggers described above for initiating Supplemental Flows in years that Beardsley Dam is forecast not to spill. The Water Temperature Trigger shall not apply for years in which Beardsley Reservoir is forecast to spill. The Water Temperature Trigger shall be developed based on available information. The Licensee shall, within one year of license issuance, file with the Federal Energy Regulatory Commission (FERC) a Water Temperature Trigger recommendation, including evidence of consultation, and shall implement the Water Temperature Trigger approved by the USFS, State Water Board, and FERC. Use of the Water Temperature Trigger shall be based on water temperatures measured using a continuous water temperature recorder installed and maintained by the Licensee at Sand Bar Diversion Dam.

The Licensee may meet the Supplemental Flow requirement with flow magnitudes in excess of those specified. However, the rate of decline in flow shall be no steeper than the specified decline for Supplemental Flows any time actual streamflow immediately below Sand Bar Diversion Dam is less than the peak magnitude specified for the Supplemental Flow. Exceptions to the decline rate are allowed when natural events, such as storms and variation in rate of snowmelt, cause short duration (not greater than approximately one week in length) flow fluctuations that exceed the flows specified for the declining limb of the Supplemental Flow. The Licensee shall make downward adjustments in Supplemental Flows in approximately equal steps to achieve a smooth decline.

4. The Licensee shall maintain the minimum streamflow schedule for the Pinecrest Reach between Strawberry Dam and the Philadelphia Diversion and in the Philadelphia Reach below the Philadelphia Diversion Dam in the SFSR, as specified in the following tables. In addition, the Licensee shall maintain a year-round minimum streamflow of 5 cfs in SFSR below Strawberry Dam. In years when Pinecrest Reservoir cannot be maintained above target elevation 5,610 feet, water releases during the period from the End of Spill through Labor Day shall only be made to meet the minimum streamflow schedule and Spring Gap Powerhouse Demand. Licensee shall draw down Pinecrest Reservoir to reach a target elevation of 5,615 feet as early as reasonably feasible each year after the End of Spill, provided that minimum streamflow schedule and Spring Gap Powerhouse Demand can be met, and Pinecrest Reservoir elevation can be maintained above a target elevation of 5,610 feet prior to and including Labor Day.

End of Spill is when the reservoir elevation falls below elevation 5,617 feet and the inflow to Pinecrest Lake decreases so that the diurnal fluctuation does not cause the water surface elevation to exceed elevation 5,617 feet and the outlet valve is used by Licensee to control water releases from Strawberry Dam.

Spring Gap Powerhouse Demand

During the period from the end of spill at Strawberry Dam until Labor Day, diversion of water to the Philadelphia Canal shall be a maximum flow of 5 cfs (the maximum flow is the mean flow over a continuous 24-hour period; the instantaneous streamflow may, on an infrequent basis, exceed the specified maximum flow by up to 1 cfs), except:

- a. During transmission line outages that require Spring Gap Powerhouse to govern local electric system load, or for Spring Gap Powerhouse maintenance, including start-up testing. Licensee shall use the minimum flow amount necessary to meet local load

- requirements or start-up testing procedures.
- b. When excess storage is available in Pinecrest Reservoir above that needed to meet the minimum stream flow schedule and maintain a reservoir elevation above target elevation 5,610 feet prior to and including Labor Day.
 - c. When flow is available from Herring Creek above that needed to meet the minimum streamflow schedule.

Minimum streamflow schedule for the Pinecrest Reach (cfs) ^{1, 2}

<i>Month</i>	<i>Water-Year Type</i>			
	<i>Dry</i>	<i>Normal-Dry</i>	<i>Normal-Wet</i>	<i>Wet</i>
October 1-31	10	10	15	15
November 1-30	10	10	15	15
December 1-31	10	10	10	15
January 1 – February 9	10	10	10	15
February 10 – March 9	10	10	10	15
March 10 - April 9	10	10	10	15
April 10 - May 9	10	10	15	15
May 10 – May 31	10	10	15	15
June 1 – 30	10	10	15	15
July 1- 31	10	10	15	15
August 1 – 31	10	10	15	15
September 1 – 30	10	10	15	15

¹ The compliance location for the minimum streamflows shall be USGS gage 11296500 (PG&E gage S-61) on the SFSR below Herring Creek.

² Once Pinecrest Lake has reached the specified minimum storage of 500 acre-feet, the minimum required streamflow is the amount indicated, or the inflow to Pinecrest Lake plus accretion flows from Herring Creek, whichever is less.

Minimum streamflow schedule for the Philadelphia Reach (cfs) ^{1,2}

Month	Water-Year Type			
	Dry	Normal-Dry	Normal-Wet	Wet
October 1-31	10	10	15	15
November 1-30	10	10	15	15
December 1-31	10	10	10	15
January 1 – February 9	10	10	10	15
February 10 – March 9	10	10	10	15
March 10 - April 9	10	10	10	15
April 10 - May 9	10	10	15	15
May 10 – May 31	10	10	15	15
June 1 – 30	10	10	15	15
July 1- 31	10	10	15	15
August 1 – 31	10	10	15	15
September 1 – 30	10	10	15	15

¹ *The compliance location for the minimum streamflows shall be USGS gage 11297200 (PG&E gage S-83) below Philadelphia Diversion.*

² *Once Pinecrest Lake has reached the specified minimum storage of 500 acre-feet, the minimum required streamflow is the amount indicated, or the inflow to Pinecrest Lake plus accretion flows between Strawberry Dam and Philadelphia Diversion, whichever is less.*

The Licensee shall, within one year of license issuance, develop and file a plan for monitoring compliance with the 5 cfs minimum streamflow requirement below Strawberry Dam for approval by the Deputy Director. The specified minimum streamflow schedule in this condition is the mean flow over a continuous 24-hour period. Instantaneous streamflow may, on an infrequent basis, deviate below the specified minimum streamflow by up to 10 percent. However, the Licensee shall make a good faith effort to meet the specified minimum streamflows at all times.

Pinecrest Reservoir shall not be drawn down below 500 acre-feet (af), except after approval of the Deputy Director. From Labor Day to December 31, regulated streamflows in the Philadelphia Reach shall not be greater than 60 cfs.

No later than April 15 of each year, the Licensee shall develop and submit a Pinecrest Lake drawdown curve to USFS, DFG and Tuolumne Utilities District, and others that request such information.

The target elevation of 5,610 feet at Labor Day may be modified and reduced to not lower than 5,608 feet if the Deputy Director determines that substantial evidence demonstrates that the recreational beneficial uses of the reservoir will be supported at the reduced elevation.

- In Critically Dry water-years, the Licensee may propose modifications to the flow requirements specified above. Licensee shall consult with the Deputy Director and provide justification for modifications to the flow requirements. The Licensee shall maintain the specified flows until modifications are approved by the Deputy Director.

6. The flow requirements specified above are subject to temporary modifications if required by equipment malfunction, agency requirements, emergency or law enforcement activity, or critical electrical system emergencies beyond the control of the Licensee. In the event of such temporary modifications, the Licensee shall promptly notify the Deputy Director labeling the notification "Compliance Item, Immediate Attention Requested". The flow requirements are also subject to modification, upon approval of the Deputy Director and FERC, based on the results of studies to improve streambank stability and restoration of riparian vegetation in the Relief Reach between Kennedy Meadows and Eureka Valley.
7. Where facility modification is required to implement the specified minimum streamflows, the Licensee shall complete such modifications as soon as reasonably practicable and no later than 3 years after license issuance. Prior to completion of such required facility modifications, the Licensee shall make a good faith effort to achieve the specified minimum streamflows within the capabilities of the existing facilities.
8. The Licensee shall, by the end of the first full calendar year after license issuance, prepare detailed plans for construction, operation, and testing to confirm compliance with the specified design criteria of a fish screen at the entrance to Stanislaus Power Tunnel. Upon completion, the Licensee shall submit the plans and drawings to the Deputy Director and provide 90 days for their review, comment and approval. The Licensee shall construct the fish screen approved by the Deputy Director within 4 years following approval of the plans and drawings.

The fish screen shall be designed using as guidelines the Environmental and Operational Objectives identified below:

Environmental Objectives

- Reduce entrainment of all life-stages of trout from Middle Fork Stanislaus River into Stanislaus Power Tunnel to less than significant levels, and
- Provide for all life-stages of trout in the Middle Fork Stanislaus River to pass downstream of Sand Bar Diversion Dam.

Operational Objectives

- No reduction in reliability, or hydraulic or electrical capacity of Stanislaus Powerhouse;
- Fish screen design is consistent with providing minimum Daily Flows and minimum Supplemental Flows in Sand Bar Dam Reach downstream of Sand Bar Diversion Dam;
- Provide for automated cleaning of the fish screen to avoid clogging;
- In the event the fish screen becomes clogged, provide for continued flow in Stanislaus Power Tunnel to maintain the operational reliability of Stanislaus Powerhouse and avoid large, rapid fluctuations in streamflows below Sand Bar Diversion Dam;
- Provide for sediment entering the fish screen structure to pass through downstream of Sand Bar Diversion Dam;
- Allow flexibility to determine fish screen maintenance and outage schedule after obtaining operating experience;
- Allow removal or opening of the fish screen during periods of high levels of potentially screen-clogging debris; and
- Provide for opening of the fish screen to assure continued flow in Stanislaus Power Tunnel in the event the fish screen becomes clogged with debris.

Design Criteria

- Flow capacity = 530 cfs;
- Approach velocity = 0.33 to 0.4 feet per second (fps) at fish screen;
- Sweeping velocity = 2 fps or greater at fish screen; and
- Fish screen openings = 1.75 mm for slot width or 3/32 inch for round opening.

The Licensee shall, within 6 months after license issuance, or as otherwise indicated, and in consultation with the USFS, Deputy Director, and CDFG, develop detailed monitoring plans consistent with the descriptions provided below. The Licensee shall provide the final detailed plans, along with all agency comments received and an explanation for any such comments not adopted, to the Deputy Director for final approval. It is anticipated that certain details of the Environmental Monitoring (e.g., specific years of sampling and/or specific study sites) may need modification during development of detailed study plans or during subsequent implementation of the Environmental Monitoring. All such modifications shall be developed in consultation with the USFS, Deputy Director, and CDFG, and approved by these agencies and provided to FERC before implementation.

Relief Reach Riparian Vegetation Restoration and Streambank Stabilization

- **Objective:** Evaluate the effectiveness of the specified streamflow regime on riparian vegetation restoration and streambank stabilization; evaluate existing streambank conditions; develop and implement vegetation restoration and streambank stabilization measures.
- Phase I: Evaluate existing information, develop recommendations for focused studies (within 12 months of license issuance), and re-evaluate cost of implementation and monitoring. Consult with the USFS, Deputy Director, and CDFG before Phase II is implemented.
- Phase II: Perform focused studies and develop recommended restoration (year 2). Consult with the USFS, Deputy Director, and CDFG before Phase III is implemented.
- Phase III: Implement monitoring and/or restoration (between year 3 and year 10 after license issuance per schedule developed in Phase II and subject to obtaining necessary approvals and permits).

Hardhead Monitoring in Camp Nine Reach and Sand Bar Dam Reach

- **Objective:** Determine if the specified streamflow regime affects hardhead habitat in the lower portions of the Sand Bar Dam Reach by evaluating hardhead distribution and abundance in the Camp Nine Reach (the 2.4 mile-long section of the Stanislaus River from the confluence of the Middle and North Forks of the Stanislaus River to Stanislaus Powerhouse) and the lower two miles of the Sand Bar Dam Reach.
- Conduct five years of snorkel surveys and/or electrofishing to determine abundance and distribution of hardhead in the Camp Nine Reach and the lower two miles of the Sand Bar Dam Reach, beginning within 12 months of license issuance.

- Radio tag 10-20 hardhead from the Camp Nine Reach in year 1 to determine if hardhead are using the lower Sand Bar Dam Reach or are only using the Camp Nine Reach and New Melones Reservoir. The Licensee shall consult with the USFS, Deputy Director, and CDFG within six months of license issuance to develop a detailed study plan for this task.
- Monitor algae abundance in Sand Bar Dam and Camp Nine reaches to determine relative food availability and evaluate if algae is limiting hardhead use of the lower Sand Bar Dam Reach. Conduct a general survey of algae abundance in the Sand Bar Dam and Camp Nine reaches within 12 months of license issuance and, if needed, collect additional quantitative algae abundance information within 24 months of license issuance.
- Monitor water temperature for up to five years to coincide with snorkel surveys and/or electrofishing (i.e., same years as for snorkel and/or electrofishing surveys) at the following four sites: (1) Middle Fork Stanislaus River above North Fork Stanislaus River, (2) Stanislaus River above Collierville Powerhouse, (3) Stanislaus River below Collierville Powerhouse, and (4) Stanislaus River below Stanislaus Powerhouse.
- Prepare and distribute to the USFS, Deputy Director, CDFG, and others upon request a final report after five years of study, including recommendations. Submit results of temperature monitoring and snorkel surveys to the USFS, Deputy Director, and CDFG within 6 months following completion of each year of monitoring.

Trout Population Monitoring in Spring Gap Reach and Sand Bar Dam Reach

- **Objective:** Monitor and evaluate effects of the specified streamflow regime on trout populations in the Sand Bar Dam Reach, using for comparison trout populations in the wild trout reference site established by CDFG upstream of the Spring Gap Reach (the 2.6 mile-long section of Middle Fork Stanislaus River from Spring Gap Powerhouse to Sand Bar Diversion Dam).
- **Spring Gap Reach:** Provide up to 50 percent of the labor or labor cost (in cooperation with CDFG and Forest Service) needed to electrofish one site (station 6, as identified in the License Application just upstream of Spring Gap Powerhouse) four times consistent with CDFG's three-year survey cycle at this site (expected in 2010, 2013, 2016, and 2019).
- **Sand Bar Dam Reach:** Perform electrofishing surveys at the lower-most historical site in the Sand Bar Dam Reach (station 4, as identified in the License Application) three times after license issuance to coincide with surveys at station 6 just upstream of the Spring Gap Powerhouse (expected in years 2010, 2013, and 2016).
- Prepare and distribute to the USFS, Deputy Director, CDFG, and others upon request a report within one year following each survey, including recommendations following completion of the study.

Foothill Yellow-Legged Frog (FYLF) Monitoring in Sand Bar Dam Reach and Camp Nine Reach

- Objective: Determine if the specified streamflow regime affects FYLF in the Camp Nine and Sand Bar Dam reaches and collect information to develop a Temperature Trigger for the minimum Supplemental Flows specified for the Sand Bar Dam Reach.
- Complete and distribute to the USFS, Deputy Director, CDFG, and others upon request within 12 months of license issuance, the Licensee's report on 2003 amphibian studies conducted in Relief Reach for Mountain Yellow-legged Frog (MYLF), Philadelphia Reach (Visual Encounter Surveys and flow study for FYLF), Spring Gap Reach (Visual Encounter Surveys for FYLF), and Sand Bar Dam Reach (Visual Encounter Surveys and flow study for FYLF).
- Conduct up to five years of additional Visual Encounter Surveys for FYLF at a total of three known sites with FYLF (based on 2000, 2001, 2003 study results) in the combined Sand Bar Dam Reach and the section of Camp Nine Reach above Collierville Powerhouse. Survey shall begin approximately 0.5 km below the known sites and end approximately 0.5 km above the known sites.
- Resurvey FYLF habitat at the three monumented stream cross sections that were established by the Licensee in 2003 in Sand Bar Dam Reach to enable monitoring of channel shape and substrate composition. The frequency of surveying cross sections shall be four times during the term of the license (anticipated to be years 5, 10, 15, and 25 after license issuance), and after any winter/spring flow event exceeding a 100-year recurrence interval.
- Conduct water temperature monitoring at three sites (Sand Bar Diversion Dam, mid-Sand Bar Dam Reach, and above the confluence of the Middle and North Forks of the Stanislaus River) to coincide with amphibian surveys. Identify a relationship between water temperatures at Sand Bar Diversion Dam and downstream amphibian breeding sites (including intermittent tributaries) so that implementation of the Temperature Trigger can be done by measuring water temperatures only at Sand Bar Diversion Dam.
- Compile existing relevant and reasonably available FYLF data from other hydroelectric projects in California licensed to Licensee to help develop the Temperature Trigger.
- Prepare and distribute to the USFS, Deputy Director, CDFG, and others upon request a final report, including recommendations, after completion of the study.

Mountain Yellow-Legged Frog (MYLF) Monitoring in Relief Reach

- Objective: Determine if the specified streamflow regime or the Licensee's land management practices have an affect on MYLF in the Relief Reach.
- Perform three years of additional Visual Encounter Surveys in the Kennedy Meadows area (ponds and river), anticipated to be by the end of first, second and third years after license issuance.
- Determine if MYLF habitat or known populations are affected by the specified streamflow regime or the Licensee's land management practices.
- Evaluate results and prepare and distribute to the USFS, Deputy Director, CDFG and

others upon request, a final report, including recommendations, after completion of study.

9. The Licensee shall, beginning as soon as reasonably feasible and no later than one year after license issuance, annually make recreation streamflow information available to the public as follows. Unless otherwise noted, the flow information shall be available to the public via toll-free phone and Internet, both of which may be accomplished through a third party. The flow information protocols may be modified upon mutual agreement of the Licensee and responsive stakeholders, and approval by the Commission:
 - a. From May 1 through October 31, the hourly average streamflow for the Middle Fork Stanislaus River at Kennedy Meadows (Dardanelles and Donnell's Runs), Middle Fork Stanislaus River immediately below Sand Bar Diversion Dam (Sand Bar and Mt. Knight Runs), mainstem Stanislaus River immediately below Stanislaus Powerhouse, South Fork Stanislaus River below Herring Creek (Strawberry Run), and South Fork Stanislaus River immediately below Philadelphia Diversion Dam (lower Strawberry Run). The flow information may be measured, calculated or a combination of the two. The flow information shall be posted at 9 AM, Noon and 4 PM daily for the current day and the past 7 days. Streamflows may be rounded up to the nearest 50 cfs, and all plots and tables showing this data shall be labeled: "These provisional data have not been reviewed or edited and may be subject to significant change."
 - b. By April 15, the proposed dates for any Recreation Streamflow Event (if applicable) planned to be provided by the Licensee. The information shall be shown in calendar format, shall specify the proposed flows in cfs, and shall be promptly updated if any changes occur.
 - c. By April 10, a preliminary forecast of the water-year type and the initiation date and duration of anticipated spill at Relief, Beardsley and Pinecrest Dams. The information shall be updated by May 10, and shall be updated weekly thereafter through the duration of the spill period.
 - d. The Licensee shall install and maintain one simple staff gage/depth indicator at each of the following locations: Middle Fork Stanislaus River at Kennedy Meadows (Dardanelles and Donnell's Runs), Middle Fork Stanislaus River at Sand Bar Diversion Dam (Sand Bar and Mt. Knight Runs), mainstem Stanislaus River at Stanislaus Powerhouse, South Fork Stanislaus River below Herring Creek (Strawberry Run), and South Fork Stanislaus River below Philadelphia Diversion Dam (lower Strawberry Run). The Licensee shall make a good faith attempt to locate the staff gages/depth indicators near whitewater boating put-in locations and, if possible, angling access points, so they are easily accessible for public reference. The Licensee shall provide a means at each staff gage/depth indicator to reasonably correlate staff gage/depth indicator readings to cfs.
10. After license issuance, the Licensee shall provide a Recreation Streamflow Event immediately below Sand Bar Diversion Dam (Sand Bar and Mt. Knight runs) on two consecutive weekend days in the third of three consecutive years in which a flow event has not otherwise occurred. A Recreation Streamflow Event is defined as at least two consecutive days from May 15 to the end of the Beardsley Dam spill period when flows immediately below Sand Bar Diversion Dam, as measured or calculated, are between 700 cfs and 2,000 cfs from 10 AM to 3 PM. The Recreation Streamflow Event, if provided by the Licensee, shall take place between May 15 and June 15, but no later than the date of

the peak Supplemental Flow. The Recreation Streamflow Event, if provided by the Licensee, shall occur simultaneously with any Supplemental Flow provided by the Licensee. The Licensee shall provide advance public notification of Recreation Streamflow Events provided by the Licensee, including the date and planned flow magnitude, beginning April 15 or as soon as reasonably feasible via the same toll-free phone and Internet system it uses to provide recreation streamflow information to the public. The Licensee's notification for a planned Recreation Streamflow Event shall be as accurate as reasonably feasible, recognizing that streamflows cannot be guaranteed and are subject to change.

All provisions for the Licensee to provide a Recreation Streamflow Event are subject to the safe operability of the Project facilities and equipment necessary to provide such streamflows. The Licensee is relieved from providing the Recreation Streamflow Event described above under the following circumstances: (1) if such events are causing significant ecological damage identified through scientific study, (2) water inflow at Sand Bar Diversion Dam is less than 600 cfs (100 cfs to keep Stanislaus Power Tunnel watered and 500 cfs absolute minimum boating flow), (3) equipment failure or conditions beyond the control of the Licensee from providing the Recreation Streamflow Event in the specified time period, (4) the California Department of Water Resources' May 1 forecast for total unimpaired inflow into New Melones Reservoir is less than 350,000 acre-feet, or (5) after consultation with, and upon the approval of the Deputy Director.

The Licensee shall: (1) provide the scheduled Recreation Streamflow Event on the dates it is scheduled to occur; (2) maintain the operability of Project facilities and equipment necessary to provide such event; (3) not schedule discretionary outages of such facilities and equipment in conflict with providing such event; and (4) co-ordinate with the Licensees of the upstream Beardsley/Donnells and Sand Bar Projects to have sufficient flow into Sand Bar Diversion Dam when the Spring Gap-Stanislaus Licensee has scheduled a Recreation Streamflow Event.

11. Prior to the beginning of construction of the Stanislaus Power Tunnel Fish Screen and the removal of the Stanislaus Afterbay Dam, Licensee shall obtain all necessary permits. Licensee shall submit final construction plans, including measures to protect water quality to the Deputy Director for review and approval prior to beginning work. The plans shall include a water quality monitoring program with monitoring locations upstream and downstream of the project site. The plans shall also include Best Management Practices, and measures that will be used to minimize water quality impacts during instream work.
12. Licensee shall collect sediment samples for selected trace metal analysis from sediment deposited upstream of Stanislaus Afterbay Dam to determine levels of selected metals to insure worker safety and to determine final disposition of the sediments. Sediment samples will be collected at three stations approximately two months prior to construction activities. The methodology and stations selected for sampling will be determined in the field based on access and stream and sediment characteristics. If site characteristics allow, a hand corer may be used to collect the samples. A composite of fine grained material at each station will be collected for analysis of selected trace metals. Sediment samples will be analyzed for mercury, methylmercury, arsenic, copper, nickel, lead, chromium, and silver. Sampling and analytical analysis will be performed in accordance with PG&E Environmental Sciences Quality Assurance Program Plan. Sediment sample analysis results and proposed method of sediment disposal will be submitted to the Deputy Director for review and approval prior to removing the sediments.

13. Licensee shall prepare plans to minimize soil erosion and loss of topsoil for the review and approval of the Deputy Director prior to beginning construction of the Stanislaus Power Tunnel Fish Screen or removal of the Stanislaus Afterbay Dam. The plan shall include the requirement to prepare a Storm Water Pollution Prevention Plan to address specific site mitigation measures to prevent erosion and protect water quality. The plan shall include Best Management Practices with temporary surface drainage ditches, water bars, and filter barriers along the access road to mitigate any potential erosion from rain during construction as needed.
14. Material such as fuel (gasoline/diesel), hydraulic oil, and motor oil, will be used during construction of the Stanislaus Power Tunnel Fish Screen and removal of the Stanislaus Afterbay Dam. Material Safety Data Sheets for all substances used on the job site must be on file at the job headquarters in Angels Camp and at the job site as required by the Hazard Communication Law, General Industry Safety Orders, Sec. 5194.

Hazardous waste products such as grease cartridges and oil absorbents will be placed in proper containers and transported from the job site to an authorized Hazardous Waste Collection Site.

Trucks and equipment will be refueled as required from 110-gallon capacity diesel tanks carried in the back of pickup trucks. No fuel storage tanks will be placed on the site.

Equipment hydraulic oil will be changed out to biodegradable oil for the equipment operating within the stream channel. Oil collection booms will be strategically placed in the Stanislaus River to provide additional protection in the event of an equipment fluid release.

To reduce potentially hazardous conditions and minimize the impacts from the handling of potentially hazardous materials, PG&E will include the following in its construction contract documents:

- a) The contractor(s) shall enforce strict on-site handling rules to keep construction and maintenance materials out of receiving waters and storm drains. In addition, the contractor(s) shall store all reserve fuel supplies only within the confines of a designated construction staging area, refuel equipment only within the designated construction staging area, and regularly inspect all construction equipment for leaks.
 - b) The contractor(s) shall prepare a *Health and Safety Plan*. The plan shall include measures to be taken in the event of an accidental spill.
 - c) The construction staging area shall be designed to contain contaminants such as oil, grease, and fuel products so that they do not drain towards receiving waters or storm drain inlets.
15. Within 6 months of license issuance the Licensee shall submit a spill channel management plan for the review and approval of the Deputy Director. The plan shall include measures to minimize the use of the spill channels, reduce the magnitude and duration of spills, monitor channel stability, and monitoring and reporting of water quality impacts during spill events.
 16. The Licensee shall coordinate Project operations with operations of the Beardsley/Donnells Hydroelectric Project (Project No. 2005) consistent with the Coordinated Operations

Agreement among the Oakdale and South San Joaquin Irrigation Districts, Tri-Dam Power Authority, and Pacific Gas and Electric Company. Any revisions or amendments to the Coordinated Operations Agreement shall be filed with the Deputy Director. The State Water Board may modify terms and conditions in this certification, after notice and opportunity for hearing, to address project coordination reasonably necessary to achieve water quality standards and beneficial uses of water.

17. Nothing in this certification shall be construed as State Water Board approval of the validity of any consumptive water rights, including pre-1914 claims, referenced in the Coordinated Operations Agreement or elsewhere. The State Water Board has separate authority under the Water Code to investigate and take enforcement action if necessary to prevent any unauthorized or threatened unauthorized diversions of water.
18. Beginning as soon as reasonably feasible and no later than 6 months after license issuance, Licensee shall limit increase or decrease of regulated minimum streamflows and Daily Flows to result in a stage change of six inches or less per hour. The point of compliance shall be at the following flow measurement gages; USGS gage 11293200 (PG&E gage S-12 below Sand Bar Diversion Dam), USGS gage 11292000 (PG&E gage S-52 at Kennedy Meadows), USGS gage 11296500 (PG&E gage S-61 below Herring Creek), and USGS gage 11297200 (PG&E gage S-83 below Philadelphia Diversion Dam) or at a different location after approval of the Deputy Director. The ramping rate may be temporarily modified if required by equipment malfunction, agency requirements, emergency or law enforcement activity, or electric system emergencies beyond the control of the Licensee. Where facility modification is required for the Licensee to provide the specified ramping rate, the Licensee shall complete such modifications as soon as reasonably practicable and no later than three years after license issuance. Prior to such required facility modifications, the Licensee shall make a good faith effort to provide the specified ramping rate within the capabilities of the existing facilities. The Licensee shall notify the Deputy Director if it is unable to meet the ramping rate prior to facility modification.
19. The Licensee shall continue to maintain and operate the Philadelphia Diversion fish screen in accordance with the functional design filed with FERC on May 3, 1993 and approved by FERC on July 30, 1993, including transporting stream sediment through the structure and the option of removing the upper screen panels in the winter from December 1 through March 15 when ice and snow conditions may exist.
20. The Licensee shall continue to maintain and operate the fish ladder located at Philadelphia Diversion Dam. The Licensee shall annually, after the peak spring flow period, inspect the fish ladder and the downstream access pool and maintain their functionality.
21. The Licensee shall pay the cost, up to a maximum of \$20,000 per year (2002 cost basis), for fish stocking in Pinecrest Lake and potentially Pinecrest Reach by California Department of Fish and Game, provided such stocking is performed.
22. This certification is contingent on compliance with all applicable requirements of the Water Quality Control Plan for the Sacramento and San Joaquin River Basins, except as may be modified by the specific conditions of the certification.
23. 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 Licensee shall take all reasonable measures to protect the beneficial uses of water of the Middle and South Forks Stanislaus River.

24. The authorization to operate the Project pursuant to this certification is conditioned upon payment of all applicable fees for review and processing of the application for water quality certification and administering the State's water quality certification program, including but not limited to: timely payment of any annual fees or similar charges that may be imposed by future statutes or regulations for the State's reasonable costs of a program to monitor and oversee compliance with conditions of water quality certification.
25. This certification is not intended and shall not be construed to apply to issuance of any FERC license or FERC license amendment other than the FERC license specifically identified in Licensee's application for certification described above.
26. This certification does not authorize any act which results in the taking of a threatened or endangered species or any act, which is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish & G. Code §§ 2050 - 2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531 - 1544). If a "take" will result from any act authorized under this certification or water rights held by the Licensee, the Licensee shall obtain authorization for the take prior to any construction or operation of the Project. The Licensee shall be responsible for meeting all requirements of the applicable Endangered Species Act for the Project authorized under this certification.
27. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be 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 certification. In response to a suspected violation of any condition of this certification, the State Water Board may require the holder of any federal permit or license subject to this 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. In response to any violation of the conditions of this certification, the State Water Board may add to or modify the conditions of this certification as appropriate to ensure compliance.
28. Licensee must submit any change to the Spring Gap-Stanislaus Hydroelectric Project, including project operation that would have a significant or material effect on the findings, conclusions, or conditions of this certification, to the Deputy Director for prior review and written approval.
29. This certification is subject to modification upon administrative or judicial review, including review and amendment pursuant to Water Code section 13330 and California Code of Regulations, title 23, division 3, chapter 28, article 6 (commencing with § 3867).
30. The State Water Board reserves authority to modify this certification if monitoring results indicate that continued operation of the project would violate water quality objectives or impair the beneficial uses of the Middle or South Forks Stanislaus River.

31. The State Water Board may add to or modify the conditions of this 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.

32. The State Water Board may add to or modify the conditions of this 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.

33. The State Water Board shall provide notice and an opportunity for hearing in exercising its authority to add or modify any of the conditions of this certification.

ORIGINAL SIGNED BY

Dorothy Rice
Executive Director

Date: September 15, 2008
as modified by the June 16, 2009 Order No. WR 2009-0039

APPENDIX B**Filed November 30, 2005****Modified August 29, 2007; November 30, 2006; April 10, 2007; and October 3, 2007****PACIFIC SOUTHWEST REGION****USDA FOREST SERVICE****FINAL 4(e) TERMS AND CONDITIONS AND 10(a) Recommendations****Spring Gap-Stanislaus Hydroelectric Project****FERC Project No. 2130**

The Forest Service hereby submits its Final 4(e) Terms and Conditions (Conditions) and Section 10(a) recommendations, as applicable, for the Spring Gap-Stanislaus Hydroelectric Project (FERC Project No. 2130), in accordance with 18 CFR 4.34(b)(1)(i). Wording in [brackets] in these conditions indicates that the Forest Service determined that this portion of the condition was not within its jurisdiction; however the Forest Service recommends it be included in the license under Section 10(a) of the Federal Power Act.

Section 4(e) of the Federal Power Act states the Commission may issue a license for a project within a reservation only if it finds that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired. This is an independent threshold determination made by FERC, with the purpose of the reservation defined by the authorizing legislation or proclamation (see *Rainsong v. FERC*, 106 F.3d 269 (9th Cir. 1977)). The Forest Service, for its protection and utilization determination under Section 4(e) of the FPA may rely on broader purposes than those contained in the original authorizing statutes and proclamations in prescribing conditions (see *Southern California Edison v. FERC*, 116F.3d 507 (D.C. Cir. 1997)). These terms and conditions are based on those resource and management requirements enumerated in the Organic Administration Act of 1897 (30 Stat. 11), the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215), the National Forest Management Act of 1976 (90 Stat. 2949), and any other law specifically establishing a unit of the National Forest System or prescribing the management thereof (such as the Wilderness Act or the Wild and Scenic Rivers Act), as such laws may be amended from time to time, and as implemented by regulations and approved Land and Resource Management Plans prepared in accordance with the National Forest Management Act. Specifically, the 4(e) conditions are based on the Land and Resource Management Plans (as amended) for the Stanislaus National Forest, as approved by the Regional Forester of the Pacific Southwest Region.

Pursuant to Section 4(e) of the Federal Power Act, the Secretary of Agriculture, acting by and through the Forest Service, considers the following conditions necessary for the adequate protection and utilization of the land and resources of the Stanislaus National Forest. License articles contained in the Federal Energy Regulatory

Commission's (hereinafter referred to as the Commission) Standard Form L-1 (revised October 1975) issued by Order No. 540, and dated October 31, 1975, cover general requirements. Section II of this document includes standard conditions deemed necessary for the administration of National Forest System lands. Section III covers specific requirements for protection and utilization of National Forest System lands and shall also be included in any license issued.

Standard Forest Service Conditions

Condition No. 1—Settlement Agreement

The Forest Service reserves the authority to add to, delete from, or modify the Final terms and conditions contained herein in the event that the Licensee, the Forest Service and/or other federal and state agencies enter into a settlement agreement resolving some or all of the issues raised in this ongoing license proceeding in order to provide Final terms and conditions that are consistent with the terms of any such settlement.

Forest Service and Licensee have been negotiating a draft Recreation Settlement Agreement (DRSA) relating to Forest Service facilities that are currently outside the Project boundary. The DRSA essentially contemplates rehabilitating and rebuilding certain Forest Service facilities on a cost sharing basis between Forest Service and Licensee pursuant to an implementation plan. The DRSA has been substantially negotiated, but not yet finalized by the parties. As a result, if the DRSA is not executed by the time the new FERC license is issued, then the relevant, material and agreed upon portions of the last version of the DRSA, including the scope of work, party responsibilities for performance of work, cost responsibilities and implementation schedules, will be deemed incorporated into these Final conditions so that those agreed upon portions of the DRSA remain the same and become part of the new FERC license for the Project. The incorporated DRSA portions will be of no further force or effect if the DRSA is fully executed by the Forest Service and the Licensee and filed with the Commission. Any disagreements between Forest Service and Licensee regarding the provisions of the DRSA that may be incorporated into the new FERC license under this Section 4(e) condition will be resolved pursuant to the alternative dispute resolution procedures available through FERC.

Condition No. 2—Modification of 4(e) Conditions After Biological Opinion or Water Quality Certification

The Forest Service reserves the right to modify these conditions, if necessary, to respond to any Final Biological Opinion issued for this Project by the United States Fish and Wildlife Service; or any Certification issued for this Project by the State Water Resources Control Board.

Condition No. 3—Forest Service Approval of Final Design

Before any new construction of the Project occurs on National Forest System lands, the Licensee shall obtain prior written approval of the Forest Service for all final design plans for Project components, which the Forest Service deems as affecting or potentially affecting National Forest System resources. The Licensee shall follow the schedules and procedures for design review and approval specified in the conditions herein. As part of such written approval, the Forest Service may require adjustments to the final plans and facility locations to preclude or mitigate impacts and to insure that the Project is compatible with on-the-ground conditions. Should such necessary adjustments be deemed by the Forest Service, the Commission, or the Licensee to be a substantial change, the Licensee shall follow the procedures of Article 2 of the license. Any changes to the license made for any reason pursuant to Article 2 or Article 3 shall be made subject to any new terms and conditions of the Secretary of Agriculture made pursuant to Section 4(e) of the Federal Power Act.

Condition No. 4 – Approval of Changes

Notwithstanding any Commission approval or license provisions to make changes to the Project, when such changes directly affect National Forest System lands, the Licensee shall get written approval from the Forest Service prior to making any changes in the location of any constructed Project features or facilities, or in the uses of Project lands and waters, or any departure from the requirements of any approved exhibits filed with the Commission. Following receipt of such approval from the Forest Service, and at least 60 days prior to initiating any such changes or departure, the Licensee shall file a report with the Commission describing the changes, the reasons for the changes, and showing the approval of the Forest Service for such changes. The Licensee shall file an exact copy of this report with the Forest Service at the same time it is filed with the Commission. This article does not relieve the Licensee from the amendment or other requirements of Article 2 or Article 3 of this license.

Condition No. 5—Consultation

Each year in between March 15 and April 15, the Licensee shall consult with the Forest Service with regard to measures needed to ensure protection and utilization of the National Forest resources affected by the Project. Within 60 days following such consultation, the Licensee shall file with the Commission evidence of the consultation with any recommendations made by the Forest Service. The Forest Service reserves the right, after notice and opportunity for comment, to require changes in the Project and its operation through revision of the 4(e) conditions that require measures necessary to accomplish protection and utilization of National Forest resources.

When Forest Service section 4(e) conditions require the Licensee to file a plan with the Commission that is approved by the Forest Service, the Licensee shall provide the Forest

Service a minimum of 60 days to review and approve the plan before filing with the Commission. Upon Commission approval, the Licensee shall implement Forest Service required and approved plans.

Condition No. 6—Surrender of License or Transfer of Ownership

Prior to any surrender of this license, the Licensee shall provide assurance acceptable to the Forest Service that Licensee shall restore National Forest System resources to a condition satisfactory to the Forest Service upon or after surrender of the license, as appropriate. The restoration plan shall identify the measures to be taken to restore such National Forest System resources and shall include adequate financial assurances such as a bond or letter of credit, to ensure performance of the restoration measures.

In the event of any transfer of the license or sale of the Project, the Licensee shall guarantee or assure that, in a manner satisfactory to the Forest Service, the Licensee or transferee will provide for the costs of surrender and restoration. If deemed necessary by the Forest Service to assist it in evaluating the Licensee's proposal, the Licensee shall conduct an analysis, using experts approved by the Forest Service, to estimate the potential costs associated with surrender and restoration of any project area directly affecting National Forest System lands to Forest Service specifications. In addition, the Forest Service may require the Licensee to pay for an independent audit of the transferee to assist the Forest Service in determining whether the transferee has the financial ability to fund the surrender and restoration work specified in the analysis.

Condition No. 7—Hazardous Substances Plan

Within one year of license issuance, the Licensee shall file with the Commission a plan approved by the Forest Service for hazardous substances storage and spill prevention and cleanup for Project facilities on or affecting National Forest System Lands. In addition, during planning and prior to any new construction or maintenance not addressed in an existing plan, the Licensee shall notify the Forest Service, and the Forest Service shall make a determination whether a plan approved by the Forest Service for oil and hazardous substances storage and spill prevention and cleanup is needed.

At a minimum, the plan must require the Licensee to (1) maintain in the Project area, a cache of spill cleanup equipment suitable to contain any spill from the Project; (2) to periodically inform the Forest Service of the location of the spill cleanup equipment on National Forest System lands and of the location, type, and quantity of oil and hazardous substances stored in the Project area; (3) to inform the Forest Service immediately of the nature, time, date, location, and action taken for any spill affecting National Forest System lands and Licensee adjoining property, and (4) provide annually to the Forest Service a list of Licensee project contacts.

Condition No. 8—Use of Explosives

Use of explosives shall be consistent with state and local requirements.

The Licensee shall use only electronic detonators for blasting on National Forest System lands and Licensee adjoining property, except near high-voltage powerlines. The Forest Service may allow specific exceptions when in the public interest.

In the use of explosives, the Licensee shall exercise the utmost care not to endanger life or property and shall comply with the requirements of the Forest Service. The Licensee shall contact the Forest Service prior to blasting to obtain the requirements from the Forest Service. The Licensee shall be responsible for any and all damages resulting from the use of explosives and shall adopt precautions to prevent damage to surrounding objects. The Licensee shall furnish and erect special signs to warn the public of the Licensee's blasting operations. The Licensee shall place and maintain such signs so they are clearly evident to the public during all critical periods of the blasting operations, and shall ensure that they include a warning statement to have radio transmitters turned off.

The Licensee shall store all explosives on National Forest System lands in a secure manner, in compliance with State and local laws and ordinances, and shall mark all such storage places "DANGEROUS—EXPLOSIVES." Where no local laws or ordinances apply, the Licensee shall provide storage that is satisfactory to the Forest Service and in general not closer than 1,000 feet from the road or from any building or camping area.

When using explosives on National Forest System lands, the Licensee shall adopt precautions to prevent damage to landscape features and other surrounding objects. When directed by the Forest Service, the Licensee shall leave trees within an area designated to be cleared as a protective screen for surrounding vegetation during blasting operations. The Licensee shall remove and dispose of trees so left when blasting is complete. When necessary, and at any point of special danger, the Licensee shall use suitable mats or some other approved method to smother blasts.

Condition No. 9—Fire Prevention, Response, and Investigation

Within one year of license issuance the Licensee shall file with the Commission a Fire Management and Response Plan that is approved by the Forest Service, and developed in consultation with appropriate State and local fire agencies. The plan shall set forth in detail the Licensee's responsibility for the prevention (excluding vegetation treatment as described in Condition No. 42), reporting control, and extinguishing of fires in the vicinity of the Project.

At a minimum the plan shall address the following categories:

Fuels Treatment/Vegetation Management: Identification of fire hazard reduction measures to prevent the escape of project-induced fires.

Prevention: Availability of fire access roads, community road escape routes, helispots to allow aerial firefighting assistance in the steep canyon, water drafting sites and other fire suppression strategies.

Address fire danger and public safety associated with project-induced recreation, including fire danger associated with dispersed camping, existing and proposed developed recreation sites, trails, and vehicle access.

Emergency response preparedness: Analyze fire prevention needs including equipment and personnel availability.

Reporting: Licensee shall report any project related fires to the Forest Service within 24 hours.

Fire control/extinguishing: Provide the Forest Service a list of the location of available fire suppression equipment and the location and availability of fire suppression personnel.

Include appropriate measures from Condition 41 and assure fire prevention measures will conform to water quality protection practices as enumerated in USDA, Forest Service, Pacific Southwest Region, Water Quality Management for National Forest System Lands in California-Best Management Practices.

Investigation of Project Related Fires

The Licensee agrees to fully cooperate with the Forest Service on all fire investigations. The Licensee shall produce upon request all material and witnesses not subject to the attorney-client or attorney work product privileges, over which the Licensee has control, related to the fire and its investigation including:

All investigation reports

All witness statements

All photographs

All drawings

All analysis of cause and origin

All other, similar materials and documents regardless of how collected or maintained

The Licensee shall preserve all physical evidence, and give custody to the Forest Service of all physical evidence requested. The Forest Service shall provide the Licensee with reasonable access to the physical evidence and documents the Licensee requires in order to defend any and all claims, which may arise from a fire resulting from project operations, to the extent such access is not precluded by ongoing criminal or civil litigation.

Condition No. 10—Access By The United States

The United States shall have unrestricted use of any road over which the Licensee has control within the project area for all purposes deemed necessary and desirable in connection with the protection, administration, management, and utilization of Federal lands or resources. When needed for the protection, administration, and management of Federal lands or resources the United States shall have the right to extend rights and privileges for use of the right-of-way and road thereon to States and local subdivisions thereof, as well as to other users. The United States shall control such use so as not to unreasonably interfere with the safety or security uses, or cause the Licensee to bear a share of costs disproportionate to the Licensee's use in comparison to the use of the road by others.

Condition No. 11—Road Use

The Licensee shall confine all vehicles being used for project purposes, including but not limited to administrative and transportation vehicles and construction and inspection equipment, to roads or specifically designed access routes, as identified in the Road Management Plan (refer to Condition No. 27). The Forest Service reserves the right to close any and all such routes where damages is occurring to the soil or vegetation, or, if requested by Licensee, to require reconstruction/construction by the Licensee to the extent needed to accommodate the Licensee's use. The Forest Service agrees to provide notice to the Licensee and the Commission prior to road closures, except in an emergency, in which case notice will be provided as soon as practicable.

Condition No. 12—Maintenance of Improvements

The Licensee shall maintain all its improvements and premises on National Forest System lands to standards of repair, orderliness, neatness, sanitation, and safety acceptable to the Forest Service. The Licensee shall comply with all applicable Federal, State, and local laws, regulations, including but not limited to, the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., the Resources Conservation and Recovery Act, 42 U.S.C. 6901 et seq., the Comprehensive Environmental Response, Control, and Liability Act, 42 U.S.C. 9601 et seq., and other relevant environmental laws, as well as public health and safety laws and other laws relating to the siting, construction, operation, maintenance of any facility, improvement, or equipment.

Condition No. 13—Safety during Project Construction

Sixty days prior to ground-disturbing activity related to new Project construction on or affecting National Forest System Lands, the Licensee shall file a Safety During Construction Plan with the Commission that is approved by the Forest Service that identifies potential hazard areas and measures necessary to protect public safety.

Areas to consider include construction activities near public roads, trails and recreation area and facilities.

The Licensee shall perform daily (or on a schedule otherwise agreed to by the Forest Service in writing) inspections of Licensee's construction operations on National Forest System lands and Licensee adjoining fee title property while construction is in progress. The Licensee shall document these inspections (informal writing sufficient) and shall deliver such documentation to the Forest Service on a schedule agreed to by the Forest Service. The inspections must specifically include fire plan compliance, public safety, and environmental protection. The Licensee shall act immediately to correct any items found to need correction.

Condition No. 14—Pesticide Use Restrictions

Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, fish, insects, and rodents on National Forest System lands without the prior written approval of the Forest Service. The Licensee shall submit a request for approval of planned uses of pesticides. The request must cover annual planned use and be updated as required by the Forest Service. The Licensee shall provide information essential for review in the form specified. Exceptions to this schedule may be allowed only when unexpected outbreaks of pests require control measures that were not anticipated at the time the request was submitted. In such an instance, an emergency request and approval may be made.

The Licensee shall use on National Forest System lands only those materials registered by the U. S. Environmental Protection Agency for the specific purpose planned. The Licensee must strictly follow label instructions in the preparation and application of pesticides and disposal of excess materials and containers.

Condition No. 15—Erosion Control Plan

During planning and before any new construction or non-routine maintenance projects with the potential for causing erosion and/or stream sedimentation on or affecting National Forest System Lands (including but not limited to the planned recreation-related construction), the Licensee shall file with the Commission an Erosion Control Measures Plan that is approved by the Forest Service. The Plan shall include measures to control erosion, stream sedimentation, dust, and soil mass movement. The plan shall be based on actual-site geological, soil, and groundwater conditions and shall include:

A description of the actual site conditions;

Detailed descriptions, design drawings, and specific topographic locations of all control measures;

Measures to divert runoff away from disturbed land surfaces;

Measures to collect and filter runoff over disturbed land surfaces, including sediment ponds at the diversion and powerhouse sites;

Revegetating disturbed areas in accordance with current direction on use of native plants and locality of plant and seed sources;

Measures to dissipate energy and prevent erosion; and,

A monitoring and maintenance schedule.

Condition No. 16—Valid Claims and Existing Rights

This license is subject to all valid rights and claims of third parties. The United States is not liable to the Licensee for the exercise of any such right or claim.

Condition No. 17—Compliance with Regulations

The Licensee shall comply with the regulations of the Department of Agriculture for activities on National Forest System lands, and all applicable Federal, State, county, and municipal laws, ordinances, or regulations in regards to the area or operations on or directly affecting National Forest System lands, to the extent those laws, ordinances or regulations are not preempted by federal law.

Condition No. 18—Protection of United States Property

The Licensee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with the license.

Condition No. 19—Indemnification²⁹

The Licensee shall indemnify, defend, and hold the United States harmless for:

- any violations incurred under any laws and regulations applicable to, or
- judgments, claims, penalties, fees, or demands assessed against the United States caused by, or
- costs, damages, and expenses incurred by the United States caused by, or
- the releases or threatened release of any solid waste, hazardous substances, pollutant, contaminant, or oil in any form in the environment related to the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license.

The Licensee's indemnification of the United States shall include any loss by personal injury, loss of life or damage to property caused by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Indemnification shall include, but is not limited to, the value of resources damaged or destroyed; the costs of restoration, cleanup, or other mitigation; fire suppression or other types of abatement costs; third party claims and judgments; and all administrative, interest, and other legal costs. Upon surrender, transfer, or termination of the license, the Licensee's obligation to indemnify and hold harmless the United States shall survive for all valid claims for actions that occurred prior to such surrender, transfer or termination.

Condition No. 20—Surveys, Land Corners

The Licensee shall avoid disturbance to all public land survey monuments, private property corners, and forest boundary markers. In the event that any such land markers or monuments on National Forest System lands are destroyed by an act or omission of the Licensee, in connection with the use and/or occupancy authorized by this license, depending on the type of monument destroyed, the Licensee shall reestablish or reference same in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States,"

²⁹ Condition No. 19 is revised in accord with a November 30, 2006 letter from the Forest Service to the Commission.

(2) the specifications of the County Surveyor, or (3) the specifications of the Forest Service. Further, the Licensee shall ensure that any such official survey records affected are amended as provided by law.

Condition No. 21—Damage to Land, Property, and Interests of the United States³⁰

The Licensee has an affirmative duty to protect the land, property, and interests of the United States from damage arising from the Licensee's construction, maintenance, or operation of the project works or the works appurtenant or accessory thereto under the license. The Licensee's liability for fire and other damages to National Forest System lands shall be determined in accordance with the Federal Power Act and standard Form L-1 Articles 22 and 24.

Condition No. 22— Risks and Hazards on National Forest System Lands

As part of the occupancy and use of the project area, the Licensee has a continuing responsibility to reasonably identify and report all known or observed hazardous conditions on or directly affecting National Forest System lands within the project boundary that would affect the improvements, resources, or pose a risk of injury to individuals. Licensee will abate those conditions, except those caused by third parties or not related to the occupancy and use authorized by the License. Any non-emergency actions to abate such hazards on National Forest System lands shall be performed after consultation with the Forest Service. In emergency situations, the Licensee shall notify the Forest Service of its actions as soon as possible, but not more than 48 hours, after such actions have been taken. Whether or not the Forest Service is notified or provides consultation; the Licensee shall remain solely responsible for all abatement measures performed. Other hazards should be reported to the appropriate agency as soon as possible.

Condition No. 23—Crossings

The Licensee shall maintain existing crossings as required by the Forest Service for all Forest Service roads and trails that intersect the right-of-way occupied by linear Project facilities (powerline, penstock, ditch, and pipeline).

Condition No. 24—Access

The Forest Service reserves the right to use or permit others to use any part of the

³⁰ Condition No. 21 is revised in accord with a November 30, 2006 letter from the Forest Service to the Commission.

licensed area on National Forest System lands for any purpose, provided such use does not interfere with the rights and privileges authorized by this license or the Federal Power Act.

Condition No. 25—Signs

The Licensee shall consult with the Forest Service prior to erecting signs related to safety issues on National Forest System lands covered by the license. Prior to the Licensee erecting any other signs or advertising devices on National Forest System lands covered by the license, the Licensee must obtain the approval of the Forest Service as to location, design, size, color, and message. The Licensee shall be responsible for maintaining all Licensee-erected signs to neat and presentable standards.

Project Specific Forest Service Conditions

Condition No. 26—Fuel Treatment Plan

Within one year of license issuance the Licensee shall file with the Commission a plan approved by the Forest Service for fuel treatment on or affecting National Forest System lands. The purpose of the plan shall be to reduce the potential for wildfires originating at Project facilities. At a minimum, the Fuel Treatment Plan shall:

Analyze fuel loading on Stanislaus National Forest lands that extend from the edge of each Project facility area (excluding the area around reservoir shorelines) for a distance of 300 feet in the upslope direction to determine the condition of the existing fuels.

Identify for each such area approved fuel treatment methods to mitigate identified hazard fuels. Such treatment methods shall be limited to thinning of small trees, removing excess brush, and reducing fuel load and continuity of surface and ladder fuels.

Include a map and schedule of treatments proposed by the Licensee.

Identify treatments with specifications for each.

Maintain fuel profiles within the project area commensurate with Standards and Guidelines set forth in the Stanislaus Forest Land and Resource Management Plan, as amended (USDA 1991, 2004).

Be responsible for the initial treatment (or the cost of mutually agreeable Forest Service treatment).

Be responsible for maintaining the treatment areas by repeat treatments once every eight years.

Condition No. 27—Road Management Plan

Within one year of license issuance the Licensee shall file with the Commission a plan approved by the Forest Service for management of all Forest Service and unclassified roads required by the Licensee to access the Project area. The Project Road Management Plan shall include:

Identification of all Forest Service roads and unclassified roads on National Forest System lands needed for Project access, including road numbers.

A map of all Forest Service roads and unclassified roads on National Forest System land used for Project access, including digital spatial data accurate to within 40 feet, identifying each road by Forest Service road number.

A description of each Forest Service road segment and unclassified roads on National Forest System land needed for Project access including:

- 1) Termini
- 2) Length
- 3) Purpose and use
- 4) Party responsible for maintenance
- 5) Level of maintenance
- 6) Structures accessed
- 7) Location and status of gates and barricades, if any
- 8) Ownership of road segment and underlying property
- 9) Instrument of authorization for road use
- 10) Assessment of road condition

Provisions for the Licensee to consult with the Forest Service in advance of performing any road construction, realignment, or closure involving Forest Service roads or lands.

The Licensee shall cooperate with Forest Service on the preparation of a condition survey and a proposed maintenance plan subject to Forest Service approval annually; beginning the first full-year after the Road Management Plan has been approved.

The Licensee shall obtain appropriate authorization (e.g. special use permit, road use permit, or maintenance agreement) in accordance with the Road Management Plan for all Project access roads that are under Forest Service jurisdiction outside the Project Boundary, including unclassified roads and Forest Service System roads needed for Project access. The term of the authorization shall be the same as the term of the license. The Licensee shall enter into the appropriate authorization mechanism with the Forest Service that will supersede the 1968 Special Use Permit. The Road Management Plan shall identify the Licensee's responsibility for road maintenance and repair costs commensurate with the Licensee's use and Project-induced use. The Road Management Plan shall specify road maintenance and management standards that provide for traffic safety; minimize erosion and damage to natural resources and

that are acceptable to the Forest Service.

Licensee shall be responsible for any new construction, realignment, closure, or other road management actions proposed by Licensee in the future, subject to Forest Service standards in effect at the time, including related studies, analyses or reviews required by Forest Service.

Snow removal on Road 4N01 and other Project roads shall be performed so as to minimize erosion during runoff periods. The Licensee shall be responsible for maintenance and replacement of aggregate that is damaged or lost due to snow plowing on the aggregate surfaced portion of Road 4N01 and other roads from which snow is plowed. The Licensee shall be responsible for a share of the cost of needed maintenance and repairs of Road 4N01 commensurate with the Licensee's use and Project induced use.

Condition No. 28—Rights-of-Way

Within six months of license issuance, the Licensee shall initiate the process to provide an easement to the Forest Service across Licensee-owned property at (1) Kennedy Meadows for public use of the Huckleberry Trail and access into the Emigrant Wilderness, and (2) Spring Gap for public use of the fishing access trail and Spring Gap foot-bridge. The Licensee shall issue an easement within two years of license issuance subject to all necessary regulatory approvals.

Condition No. 29—Recreation Facilities and Administration

Within one year of license issuance, the Licensee shall file with the Commission a Recreation Implementation Plan approved by the Forest Service. The Recreation Implementation Plan shall include detailed descriptions of the work as described below to the conceptual plan level, implementation schedules (including public notification strategy), and detailed steps for planning, design, and construction for the rehabilitation and construction work. Additionally, the Recreation Implementation Plan shall provide a mechanism for the Licensee and the Forest Service to meet periodically over the term of the license to review/modify the implementation schedule of these measures. Once approved by the Forest Service, the Licensee shall file the final Recreation Implementation Plan, including evidence of consultation, with the Commission and shall implement those measures approved by the Commission.

Definitions

The following definitions apply to this Condition.

Planning and Design:

Design Narrative: Describes the management objectives, design criteria, and constraints associated with the development. It should include: (a) management

objectives; (b) design criteria, including criteria on type and color of materials and accessibility; (c) existing physical conditions; (d) any rehabilitation and new construction; (e) anticipated management problems that design may minimize; (f) site capacity, durability, and protection; (g) user safety; and (h) interpretive services.

Concept Plan: A preliminary graphic illustration of proposed facilities and utilities in relationship to existing site features, facilities, and utilities. It communicates proposed development ideas or alternatives. A blow-up of a typical area or camping unit, which indicates placement and orientation of facilities, may be included to clarify the concept. Aerial photography or topographic maps may be used.

NEPA Compliance: Conduct appropriate environmental analysis. After an environmental analysis or environmental impact statement is conducted on the concept plan and an alternative selected, the concept plan becomes the basis of the master development plan.

Site Development Plan: A comprehensive graphic illustration of the facilities and utilities (both existing and proposed) to be built or modified as approved by the NEPA decision. The development plan is based on an accurate survey, usually drawn to a scale ranging from 1" = 20' to 1" = 100', with appropriate contour information, and may also include descriptions or lists of features.

The plan must be approved before construction proposals are prepared. The plan must be consistent with the concept plan approved by the NEPA decision or revised through the NEPA process.

Construction Plans: Professionally prepared engineering, architectural, or landscape architectural plans and specifications for buildings, utilities, roads, grading, plantings, and related improvements. After review, construction plans must be approved by the appropriate line officer after review.

Maintenance

Maintenance includes keeping fixed assets in an acceptable condition, including preventive maintenance, repairs, replacement of parts and structural components. Maintenance includes work needed to meet laws, regulations, codes, and other legal direction (such as compliance with ADA) as long as the original intent or purpose of the fixed asset is not changed. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than those originally intended. Specific maintenance definitions include:

Operational Maintenance: Maintenance or reconditioning that neither materially adds to the value of the property nor appreciably prolongs its life. The work serves only to keep the facility in an ordinary, efficient operation condition. From an accounting or tax perspective, it is work that may be expensed. Examples include interior painting, repair of broken windows, light bulb replacement, cleaning, unplugging drains, preventive maintenance, greasing, servicing, inspecting, oiling adjusting, and

tightening, aligning, sweeping, and general snow removal.

Heavy Maintenance: Maintenance or reconditioning that arrests deterioration and appreciably prolongs the life of the property. From an accounting standpoint, the expenditures may be capitalized. Examples include installing a new roof, new floor, or new siding, replacing electrical wiring or heating systems, repairing or replacing pipes, pumps and motors, repairing or maintaining government property threatened or damaged by heavy snow or ice, repairing or maintaining the paths, lands, walks, or walls adjacent to other government-owned structures, and performing exterior painting or refinishing.

Reconditioning: Restoring a facility to its original condition or to meet current national standards, such as the ADA, accessibility guidelines or Uniform Building Code. Reconditioning does not include construction of new facilities (i.e. a capital improvement).

Capital Improvement

The construction, installation, or assembly of a new fixed asset, or the significant alteration, expansion, or extension of an existing fixed asset to accommodate a change of purpose.

Rehabilitate and Improve Pinecrest Day Use Facilities

The scope of work consists of rehabilitation and improvement of the existing Pinecrest Day Use Area (Items 1-4), the Pinecrest National Recreation Trail (Item 5), a new East Shore Day Use Area (Item 6) and completion of improvements for the Amphitheater (Item 7). These facilities (Items 1-7) shall be incorporated into the FERC Project boundary when the new license is issued. Any additional Day Use Parking Lots/areas (Item 8) agreed to by Licensee and Forest Service as a result of the Traffic/Circulation/Parking Plan shall be incorporated into the FERC Project boundary, if necessary, after rehabilitation work or new improvement to such day use parking areas has been completed. Licensee shall submit to FERC for approval, with documentation of Forest Service's approval, an exhibit drawing within one year of completing work for Item 8 to incorporate these facilities into FERC Project Boundary.

Boat Ramp

Resurface (asphalt concrete) the roadway from the top of the existing boat launch (where it connects with the access road) to the turnaround located at the head of the launch ramp. Rehabilitate the existing ramp. Remove courtesy dock and replace with ADA compliant courtesy dock. Install directional signs, barriers and an entry/boating restriction sign. Install one wildlife resistant trash and recycle bin with pad and replace one water spigot. Upgrade fish cleaning station to meet ADA standards. Remove the existing restroom and changing room and install one new eight-unit unisex flush restroom with two outdoor unheated showerheads. Replace water and

sewer lines within the boat ramp area.

Beaches and Picnic Area

Install visitor information kiosks and bulletin/information boards. Remove existing buildings (toilet facilities), barriers and day use site components. Install new picnic tables (including accessible and group style) with group-size cooking grills and single-size cooking grills. Install remaining benches along paths (to ADA standards). Remove one existing restroom at Beach 2 and 3 and install one new six-unit unisex flush restroom with 2 outdoor unheated showerheads. Replace water spigots. Install new six-unit unisex flush restroom (new construction) with two outdoor unheated showerheads at Beach 1. Replace water and sewer lines within the Beach 1, 2 and 3 areas. Establish and maintain a beach sand cushion above high-water level (5617.5) on the three beaches. Remove rocks (size and location to be determined in Recreation Implementation Plan) below the high-water line. Remove the trees separating the three beach areas below high water line. Grade and re-contour the tree removal areas for public safety, including stump removal (remove old existing stumps). Should negative environmental or operational impacts be determined, the Licensee shall consult with Forest Service and submit to the Commission for approval any modifications or changes.

Day Use/Boat Trailer Parking

Grade and pave (asphalt concrete) a new boat trailer parking area (the specific location shall be determined in the Traffic/Circulation/Parking Plan as described in Sub-Plan 2, below). Grade and pave (asphalt concrete) the existing marina parking area (also used for day use parking) near Beach 1. Install new concrete paths that meet ADA standards. Resurface (asphalt concrete) the existing parking area across Pinecrest Road from Beach 1. Expand this paved parking area to include the current native surfaced area used for boat trailer parking. Expand the intersection of Rustic Avenue at Pinecrest Road for an RV turnaround and drop-off location. Resurface (asphalt concrete) the parking spaces adjacent to Pinecrest Road. Install entry and directional signs and barriers to manage parking and traffic. The Traffic/Circulation/Parking Plan shall determine the final design. The Licensee may in consultation with the Forest Service, at Licensee's option, collect day use parking fees to help defray Licensee's operations, maintenance and capital costs.

Fishing Pier Area (south end of the day use area)

Remove existing building, barriers and day use site components. Install information/bulletin board. Install picnic tables (including accessible ones and group use), and cooking grills. Install new paths that meet ADA standards with seating. Rehabilitate the fishing pier and landscape the small-unpaved area in the middle of the pier. Resurface (asphalt concrete) the fishing pier parking spaces adjacent to Pinecrest Road. Install walkway fences to manage foot traffic. Install a fish cleaning station. Replace water spigots. Install trash and recycle bins with pads. Remove one

restroom and install one new six-unit unisex flush restroom with two unheated outdoor showerheads. Replace water and sewer lines within the Fishing Pier area.

Pinecrest National Recreation Trail

Rehabilitate the 4-mile loop foot-trail around Pinecrest Lake. Install waterbars, repair tread, clear vegetation for the trail way, and install directional signs. Close and restore user-created trails. Install bulletin/information signs at each end of the trail (near the marina and the fishing pier).

East Shore Day Use Area

Construct two to three picnic sites, a new two-unit vault toilet and a small courtesy dock. This facility shall be located near the trailhead to Cleo's Bath at the east shore of Lake Pinecrest.

Amphitheater

Complete additional improvements not currently funded by the existing Forest Service Capital Improvement Project to complete ADA and rehabilitation upgrades at the Amphitheater facility. Install entry, directional and informational signs. Install walkway fences to manage foot traffic. Remove one restroom and install one new six-unit unisex flush restroom with two outdoor unheated showerheads. Replace water spigots. Install wildlife-resistant trash and recycle bins with pads. Replace water and sewer lines within the amphitheater area.

Construction of Possible Additional Day Use Parking Lots/Areas

Construction of possible Additional Day Use Parking Lots/areas as a result of the Traffic/Circulation/Parking Plan agreed to by Licensee and Forest Service.

Design and Construction of Pinecrest Day Use Facilities

The Licensee shall be responsible for performing design and construction of the rehabilitation and improvements unless the Licensee and Forest Service agree otherwise. The Licensee shall not be liable for a failure to perform or for delay in performance due to any cause reasonably beyond its control. This may include, but is not limited to, natural events, labor or civil disruption, or breakdown or failure of Project works. The Licensee shall notify the Forest Service within 21 days after becoming aware of any event that so affects performance. The Licensee shall make all reasonable efforts to promptly resume performance.

Annual Maintenance and Operation of Pinecrest Day Use Facilities

The Licensee shall not be responsible for the performance of annual maintenance and operation of the Pinecrest Day Use area.

Replacement of Pinecrest Day Use Facilities

The Licensee shall be responsible for replacement of recreation facilities due to Acts

of God and End of Service Life.

Ownership of Pinecrest Day Use Facilities

The Forest Service shall own the facilities and improvements.

Funding of Pinecrest Day Use Facilities

The Licensee shall be responsible for funding the planning and design, capital improvements, reconditioning, and year-round operation and maintenance (including both operational and heavy maintenance) of these facilities by the Forest Service. Any new fee collections or contributions received by the Forest Service that contribute to operation and maintenance of facilities in the Day Use Area will be credited to the Licensees annual O&M contribution. Collections from permitted activities within the Project Boundary that are invested into heavy maintenance will be credited against the Licensees responsibility to perform that work.

Schedule for Rehabilitation and Improvement of Pinecrest Day Use Facilities

Rehabilitation and improvement of the Pinecrest Day Use Facilities shall be completed in accordance with the following schedule. The year completed is the number of years after the license issuance date. The construction schedule shall be detailed in the Recreation Implementation Plan. The construction schedule for specific sites shall be determined by the Licensee considering methods to reduce impacts to the public's use of the facilities, construction sequence, efficiencies and necessity for closure of individual sites.

Facility	Year Completed
Amphitheater	5 ¹
Beach Sand/tree removal	2
East shore picnic/restroom	3
Boat Ramp including parking	5
Pinecrest Day Use Area: parking, beaches, fish pier areas	5
Pinecrest National Recreation Trail	5

¹Revised by the Forest Service via letter to the Commission dated April 9, 2007.

Prepare and Implement Recreation Sub-Plans

In addition to the overall Recreation Implementation Plan, the Licensee shall prepare each of the following sub-plans in support of the Recreation Implementation Plan.

Visitor Education and Information Plan

The Licensee shall develop and implement a visitor education and information plan. Elements of the plan include: a) developing and printing information for dissemination at points of visitor contact, b) funding for printed materials, c) schedule for updating information, and d) funding contribution to Forest Service interpretive programs, and participation and implementation of portions of the plan.

Traffic/Circulation/Parking Plan

The Licensee shall develop a Traffic/Circulation/Parking Plan for pedestrian and vehicular movement and parking for the public recreation areas of Pinecrest meeting mutual agreement to Forest Service and Licensee. The plan shall include: a) modifications to the paths of travel that would reduce congestion at Pinecrest Recreation Area, improve visitor safety and minimize resource damage, b) improvements and/or additional parking facilities or operational procedures for day use access, c) implementation responsibilities and an implementation schedule.

Shoreline Management Plan

The Shoreline Management Plan shall include the management of the reservoir shoreline. This plan will address the privately owned boat docks and mooring balls, and include zoning of certain sections of the shoreline for swimming, fishing and shoreline boat access.

Schedule for Development of Sub-Plans

Once approved by the Forest Service, the Licensee shall file these plans by the date listed below.

Plan	Completion Date
Information/Education Plan	2
Traffic/Circulation/Parking Plan	1
Shoreline Management Plan	2

Relief Reservoir

The Licensee will be responsible for funding campsite and trail rehabilitation; and annual campsite and trail maintenance within the Project Boundary at Relief Reservoir.

Funding Contribution for Operations, Operational Maintenance, Visitor Contact and Patrols

Beginning the calendar year of licensee issuance, the Licensee shall contribute up to \$206,257 (2005 dollar cost basis; costs to be annually escalated based on the U.S. Gross Domestic Product—Implicit Price Deflator) funding annually for operations and operational maintenance, visitor information/interpretive services and patrol for the facilities described in this condition, including Level 4 Law Enforcement Level 2 Law Enforcement Officer to conduct boat patrols on Pinecrest Reservoir activities related to the Project. *The first year contribution will be pro-rated based on operations and maintenance work remaining in the calendar year.* Licensee shall enter into a collection agreement with the Forest Service to provide up to this level of funding. The Licensee shall enter into a collection agreement with Forest Service to provide 50% funding for the purchase of a boat for reservoir patrol use up to a one-time cost of \$6,000 to be provided within one year of license issuance.³¹

Spring Gap Foot-Bridge

The Licensee shall be responsible for maintenance of the Spring Gap Foot-Bridge to allow fishing access to the Middle Fork Stanislaus River. The Licensee shall grant an easement for public access through PG&E lands. (See Condition No. 28)

Condition No. 30—Recreation Streamflow Information

The Licensee shall, beginning as soon as reasonably feasible and no later than one year after license issuance, annually make recreation streamflow information available to the public as follows. Unless otherwise noted, the flow information shall be available to the public via toll-free phone and Internet, both of which may be accomplished through a third party. The flow information protocols may be modified upon mutual agreement of the Licensee, responsive stakeholders and approval by the Commission.

1. From May 1 through October 31, provide the hourly average streamflow for the

³¹ Portions in *bold italics* were revised in accord with a September 27, 2007 letter from the Forest Service to the Commission.

Middle Fork Stanislaus River at Kennedy Meadows (Dardanelles and Donnells Runs), Middle Fork Stanislaus River immediately below Sand Bar Diversion Dam (Sand Bar and Mt. Knight Runs), main stem Stanislaus River immediately below Stanislaus Powerhouse, South Fork Stanislaus River below Herring Creek (Strawberry Run), and South Fork Stanislaus River immediately below Philadelphia Diversion Dam (lower Strawberry Run). The flow information may be measured, calculated or a combination of the two. The flow information shall be posted at 9 AM, Noon and 4 PM daily for the current day and the past 7 days. Streamflows may be rounded up to the nearest 50 cfs, and all plots and tables showing this data shall be labeled “These provisional data have not been reviewed or edited and may be subject to significant change”.

2. By April 10, a preliminary forecast of the water year type and the initiation date and duration of anticipated spill at Relief, Beardsley and Pinecrest Dams. The information shall be updated by May 10, and shall be updated weekly thereafter through the duration of the spill period.
3. The Licensee shall install and maintain one simple staff gage/depth indicator at each of the following locations: Middle Fork Stanislaus River at Kennedy Meadows (Dardanelles and Donnells Runs), Middle Fork Stanislaus River at Sand Bar Diversion Dam (Sand Bar and Mt. Knight Runs), main stem Stanislaus River at Stanislaus Powerhouse, South Fork Stanislaus River below Herring Creek (Strawberry Run), and South Fork Stanislaus River below Philadelphia Diversion Dam (lower Strawberry Run). The Licensee shall make a good faith attempt to locate the staff gages/depth indicators near whitewater boating put-in locations, and, if possible, angling access points, so they are easily accessible for public reference. The Licensee shall provide a means at each staff gage/depth indicator to reasonably correlate staff gage/depth indicator readings to cfs.

Condition No. 31—Heritage Resources

Within one year of license issuance, the Licensee shall complete a Heritage Resources Management Plan (HRMP) that is approved by the Forest Service and file the HRMP with the Commission. The HRMP will be incorporated into the Programmatic Agreement by reference. The HRMP, as appropriate, shall accurately define the area of potential effects, including effects of implementing Section 4(e) conditions, and take into account project effects on National Register properties, Native American traditional cultural values, and Project impacts to archaeological properties on National Forest System lands. The HRMP shall also provide measures to mitigate the identified impacts, a monitoring program, and management protocols for the ongoing protection of archaeological properties.

If, prior to or during ground-disturbing activities or as a result of project operations, items of potential cultural, historical, archeological, or paleontological value are reported or discovered, or a known deposit of such items is disturbed on National

Forest System lands and Licensee adjoining fee title property, the Licensee shall immediately cease work in the area so affected. The Licensee shall then notify the Forest Service and shall not resume work on ground-disturbing activity until it receives written approval from the Forest Service.

If it deems it necessary, the Forest Service may require the Licensee to perform recovery, excavation, and preservation of the site and its artifacts at the Licensee's expense through provisions of an Archaeological Resources Protection Act permit issued by the Forest Service.

Condition No. 32—Ramping Rate

The Licensee shall, beginning as soon as reasonably feasible and no later than six (6) months after license issuance, increase or decrease regulated minimum streamflows and Daily Flows at a stream stage change rate of six inches or less per hour in the affected stream reach, measured at the compliance point specified for minimum streamflows and Daily Flows [USGS gage 11293200 (PG&E gage S-12 below Sand Bar Diversion Dam), USGS gage 11292000 (PG&E gage S-52 at Kennedy Meadows), USGS gage 11296500 (PG&E gage S-61 below Herring Creek), and USGS gage 11297200 (PG&E gage S-83 below Philadelphia Diversion Dam)] or at a different location if more representative of the stream channel configuration. The ramping rate may be temporarily modified if required by equipment malfunction, agency requirements, emergency or law enforcement activity, or electric system emergencies beyond the control of the Licensee. Where facility modification is required for the Licensee to provide the specified ramping rate, the Licensee shall complete such modifications as soon as reasonably practicable and no later than three (3) years after license issuance. Prior to such required facility modifications, the Licensee shall make a good faith effort to provide the specified ramping rate within the capabilities of the existing facilities.

Condition No. 33—Water Year Types

The Licensee shall, each year in each of the months of February through May, determine water-year type based on the California Department of Water Resource's (DWR) forecast for annual unimpaired inflow into New Melones Reservoir (as set forth in DWR's Bulletin 120 entitled Water Conditions in California). The Licensee shall use this determination in implementing articles and conditions of the license that are dependent on water-year type. In each of February, March and April, the water-year type shall be based on DWR's forecast for the month and shall apply from the 10th day of the month through the 9th day of the next month. From May 10 through February 9 of the following calendar year, the water-year type shall be based on DWR's May 1 forecast. The Licensee shall maintain a five-year record of its water-year type determinations, and shall provide this record to the Commission annually.

A Normal water year is defined as one in which DWR's forecast is for more than the 25th percent exceedence value but less than the 75th percent exceedence value of

DWR's historic May 1 forecasts of runoff into Melones Reservoir for each water year from 1946 through 2002. The values for each water year type are in the table below.

Water Year Type	DWR Forecast Annual Unimpaired Inflow to New Melones Reservoir (acre-feet)
Critically Dry	Less than or equal to 350,000
Dry	Greater than 350,000 and less than or equal to 676,000
Normal	Greater than 676,000 and less than 1,585,000
Normal-Dry	Greater than 676,000 and less than 1,050,000
Normal-Wet	Greater than or equal to 1,050,000 and less than 1,585,000
Wet	Greater than or equal to 1,585,000

Condition No. 34—Stream Flow and Reservoir Drawdown

Middle Fork Stanislaus River

Drawdown of Relief Reservoir and Streamflows in Relief Reach

The Licensee shall each year, beginning the first full calendar year after license issuance, annually develop a “best fit” drawdown curve for Relief Reservoir based on that year's hydrological conditions. The drawdown curve shall be designed to meet the specified Relief Reach minimum and maximum streamflow requirements for the water year type, and achieve the Operational Objectives specified below. Relief Reach is defined as the 15.8 mile-long reach of Summit Creek and the Middle Fork Stanislaus River from Relief Dam to Donnell's Reservoir.

Operational Objectives for Relief Reservoir and Streamflows in Relief Reach:

Streamflow in the Relief Reach, as measured at Kennedy Meadows, mimics the shape of the unimpaired hydrograph, with peak flows in late spring, declining flows from the spring peak until October (except for increases due to natural events), and relatively uniform flows from November through March;

The transition from spill flows to regulated flows is smooth, without significant decreases and increases in flows other than from natural events, achieving a rate of decline and a range of fluctuation that are within the natural range of variability of the unimpaired hydrograph;

Streamflow fluctuation in response to natural events, such as storms and variation in rate of snowmelt, is allowed;

The rate and magnitude of changes in regulated streamflows is gradual and within the natural range of variability of the unimpaired hydrograph for the time of year;

Relief Reservoir is able to annually fill and be drawn down to minimum pool;

The water stored in Relief Reservoir is adequate to meet the specified minimum streamflow requirements;

Avoidable spill at Donnell's Reservoir is minimized; and

Relief Reservoir operation is responsive to annual hydrological conditions. The Licensee shall develop its proposed Relief Reservoir drawdown curve and estimated Relief Reach streamflow regime and provide it, along with the prior year's Kennedy Meadows flow gage daily data and Relief Reservoir water surface elevations to the Forest Service, SWRCB, CDFG and others who request such information no later than April 15 of each year.

The Licensee shall operate Relief Reservoir in conformance with the minimum and maximum streamflow requirements shown in the table below, as may be modified by an approved alternate streamflow regime, and to achieve the specified Operational Objectives. Additionally, the Licensee shall maintain a year-round streamflow in Summit Creek between Relief Dam and Kennedy Creek of at least 5 cfs, and shall maintain a minimum pool in Relief Reservoir of at least 200 acre-feet. The Licensee shall, within one year of license issuance, develop and file with the Commission for approval, a plan for monitoring compliance with the 5 cfs requirement.

If the Licensee anticipates at any time that it cannot meet the minimum and/or maximum streamflow requirements (such as due to hydrological conditions or need to conduct studies) it shall notify the Forest Service, SWRCB, CDFG and others who request such notification, labeling the notification "Compliance Item, Immediate Attention Requested" and provide an alternative streamflow regime and drawdown curve for the year that meets the specified minimum and maximum streamflow requirements and achieves the specified Operational Objectives to the greatest extent feasible. The notified parties shall be provided 30 days to review and respond to the Licensee's alternate streamflow regime. If the notified agencies approve the alternate streamflow regime proposed by the Licensee, the Licensee shall implement the alternate streamflow regime. If the notified agencies do not approve the alternate streamflow regime proposed by the Licensee, but propose an alternate streamflow regime that meets the specified minimum and maximum streamflow requirements and achieves the specified Operational Objectives to the greatest extent feasible, the Licensee shall implement the alternate streamflow regime proposed by the responsive agencies, provided the agencies' alternative is consistent with actual physical conditions (such as equipment capability and hydrological conditions). If the notified agencies within 30 days of notification do not respond, do not propose an alternate streamflow regime, or the alternate

streamflow regime proposed by the agencies cannot be implemented due to actual physical conditions, or the Licensee receives conflicting alternate proposals from the responsive agencies that the Licensee cannot resolve through a good faith effort, the Licensee shall operate according to its proposed alternate streamflow regime, upon approval of the Commission.

The specified minimum streamflows are the minimum mean flow over a continuous 24-hour period. Except as provided below for the months of November through March, instantaneous streamflow may, on an infrequent basis, deviate below the specified minimum streamflow up to 10 percent. However, the Licensee shall make a good faith effort to meet the specified minimum streamflows at all times.

The specified maximum streamflows are the instantaneous maximums for the month. The Licensee shall make a good faith effort to maintain actual streamflows within the specified maximums. However, the Licensee is not required to adjust the Relief Reservoir outlet gate in response to short-term (not greater than approximately one week in length) natural events such as storms, variations in rate of snow melt and accretion flows. In complying with the specified maximum streamflows, the Licensee shall attempt to under-run the maximum streamflows specified for August and September to the greatest extent feasible, consistent with actual hydrological conditions.

The specified minimum and maximum streamflows for November through March are target streamflows. By November of each year, the Licensee shall forecast inflow to Relief Reservoir for the period December through March, and set the Relief Dam outlet gate at an opening to achieve the streamflow in the approved Relief Reservoir drawdown plan. The Licensee shall monitor Relief Reservoir water surface elevation with at least weekly readings December through March to confirm that the outlet gate is at an appropriate setting to achieve the target streamflow range. Upon a determination that the outlet gate setting needs adjustment to achieve the target streamflow range, the Licensee shall make a good faith effort to adjust the outlet flow gate subject to personnel safety and access limitations.

The requirements of this measure are subject to temporary modifications if required by equipment malfunction, agency requirements, emergency or law enforcement activity, or critical electrical system emergencies beyond the control of the Licensee. In the event of such temporary modifications, the Licensee shall promptly notify the Forest Service, the Commission, SWRCB, CDFG and others requesting such notification, labeling the notification "Compliance Item, Immediate Attention Required". The streamflow requirements are also subject to modification, upon approval by the Forest Service, [SWRCB] and the Commission based on the results of studies to improve streambank stability and rejuvenation of riparian vegetation in the Relief Reach between Kennedy Meadows and Eureka

Valley.

In Critically Dry water years, the Licensee may propose modifications to the specified minimum or maximum streamflows. If such modifications are proposed, the Licensee shall consult with the Forest Service SWRCB, CDFG, and others who request consultation as to the justification for such modifications. This consultation shall be combined with Critically Dry water year consultation for other Project-affected reaches, if applicable. The Licensee shall maintain the specified minimum and maximum streamflows until any such modifications are approved by the responsive agencies and the Commission.

Where facility modification is required to implement the Relief Reservoir drawdown curve, the Licensee shall complete such modifications as soon as reasonably practicable and no later than three years after license issuance. Prior to completion of such required facility modifications, the Licensee shall make a good faith effort to comply with this article within the capabilities of the existing facilities.

Minimum and Maximum Streamflows for the Relief Reach (cfs)^{1,2}

Month	Water Year Type					
	Normal		Dry and Critically Dry		Wet	
	Min	Max	Min	Max	Min	Max
October 1-31	30	50	20	40	40	125
November 1-30	30	60	20	50	40	125
December 1-31	30	60	20	50	40	125
January 1-February 9	30	60	20	50	40	125
February 10-March 9	30	60	20	50	40	125
March 10-April 9	30	60	25	50	40	125
April 10-May 9	60	NA	45	NA	70	NA
May 10-May 31	100	NA	80	NA	150	NA
June 1-30	150	NA	100	NA	250	NA
July 1-31	90	NA	40	NA	200	NA
August 1-31	40	200	20	40	100	300
September 1-30	30	120	20	40	60	200

1 The specified maximum and minimum streamflows are made up of flow releases from Relief Reservoir, unregulated accretion flows from Kennedy Creek and other sources, as measured at USGS gage 11292000 (PG&E gage S-52) in Kennedy Meadows.

2 NA: Not Applicable

Minimum Streamflows in Sand Bar Dam Reach

The Licensee shall, beginning no more than six months after license issuance, maintain minimum streamflows made up of minimum Daily Flows and minimum

Supplemental Flows in the Sand Bar Dam Reach in Normal, Dry, Critically Dry and Wet water years as specified below. The Sand Bar Dam Reach is the 12.3 mile-long reach of the Middle Fork Stanislaus River extending from Sand Bar Diversion Dam to the confluence of the Middle Fork Stanislaus River with the North Fork Stanislaus River. Minimum Daily Flows and minimum Supplemental Flows may consist of any combination of spill, accretion and regulated flows.

Minimum Daily Flows

In order to assure an adequate year-round biological baseline, the Licensee shall maintain in the Sand Bar Dam Reach the minimum Daily Flows specified in the following table. The specified minimum Daily Flows is the minimum mean flow over a continuous 24-hour period. Instantaneous flow may, on an infrequent basis, deviate below the specified minimum Daily Flow by up to 10 percent or 8 cfs, whichever is less. However, the Licensee shall make a good faith effort to meet the specified minimum Daily Flows at all times.

Minimum Daily Flow schedule for the Sand Bar Dam Reach (cfs) ^{1, 2, 3}

Month	Water Year Type		
	Normal	Dry and Critically Dry	Wet
October 1-31	80	50	80
November 1-30	70	50	70
December 1-31	70	50	70
January 1 - February 9	70	50	70
February 10 - March 9	70	50	70
March 10 - April 9	80	50	80
April 10 - May 9	80	50	80
May 10 – May 31	80	50	80
June 1 – 30	80	50	80
July 1- 31	80	60	100
August 1 – 31	80	60	100
September 1 – 30	80	50	100

¹ The compliance location for the minimum Daily Flows shall be USGS gage 11293200 (PG&E gage S-12).

² The minimum required Daily Flow is the amount indicated or, if the inflow to Sand Bar Diversion Dam is less than the amount indicated due to reasons outside the Licensee's control, the inflow to Sand Bar Diversion Dam.

³ Minimum Supplemental Flows that are additive to the specified minimum Daily Flows shall be provided during a continuous thirteen-week period (seven weeks in Critically Dry years) between March 1 and July 31.

Minimum Supplemental Flows

In order to assure an adequate spring peak flow event occurs each year, the Licensee shall, in addition to the minimum Daily Flows specified above, maintain the minimum Supplemental Flows specified in the following table, provided such flows are available to the Licensee at Sand Bar Diversion Dam. The specified minimum Supplemental Flow for a week is the average flow for the week, with instantaneous flows at least equal to the specified minimum Supplemental Flow for the lower of the two adjoining weeks.

Minimum Supplemental Flow schedule for the Sand Bar Dam Reach (cfs)^{1,2,3,4}

Week	Water Year Type			
	Normal	Dry	Critically Dry	Wet
1	5	5	15	5
2	10	10	75	10
3	25	25	250	25
4	35	35	150	35
5	75	75	100	75
6	140	140	40	140
7	220	220	20	220
8	400	400	N/A	400
9	180	180	N/A	180
10	110	110	N/A	110
11	65	65	N/A	65
12	25	25	N/A	25
13	10	10	N/A	10

¹ The compliance location for the minimum Supplemental Flows shall be USGS gage 11293200 (PG&E gage S-12) below Sand Bar Diversion Dam for the first 200 cfs. Flows in excess of 200 cfs shall be calculated by summing the flow contributions from Beardsley Afterbay Dam (gage S-89), Sand Bar Powerhouse and Spring-Gap Powerhouse and subtracting the flow diverted at Sand Bar Diversion Dam. If PG&E gage S-12 is upgraded to measure flows in excess of 200 cfs, it shall be used for flow measurement up to its upgraded rating.

² The minimum required Supplemental Flow is the amount indicated or, if the inflow to Sand Bar Diversion Dam is less than the amount indicated due to reasons outside the Licensee's control, the inflow to Sand Bar Diversion Dam.

³ The minimum Supplemental Flows are additive to the specified minimum Daily Flows.

⁴ NA: Not Applicable

The Supplemental Flow period shall be 13 continuous weeks in length (seven weeks in Critically Dry water years). For years in which Beardsley Reservoir is forecast to spill, the Licensee may initiate the Supplemental Flow period any time between March 1 and May 1 to best coincide with the period of spill (Date Trigger). For years in which Beardsley Reservoir is forecast not to spill, the

Licensee shall initiate the Supplemental Flow period at a time between March 1 and May 1 so that the peak Supplemental Flow will occur approximately two weeks after the then forecast peak inflow to Donnell's Reservoir (Peak Flow Trigger).

The Licensee shall consult with the Forest Service, SWRCB, CDFG, FWS and other interested parties, to develop a recommendation for a Water Temperature Trigger to function in combination with the Date and Peak Flow Triggers described above for initiating Supplemental Flows in years that Beardsley Dam is forecast not to spill. The Water Temperature Trigger shall not apply for years in which Beardsley Reservoir is forecast to spill. The Water Temperature Trigger shall be developed based on available information. The Licensee shall, within one year of license issuance, file with the Commission a Water Temperature Trigger recommendation, including evidence of consultation, and shall implement the Water Temperature Trigger approved by the Forest Service, [SWRCB,] and the Commission. Use of the Water Temperature Trigger shall be based on water temperatures measured using a continuous water temperature recorder installed and maintained by the Licensee at Sand Bar Diversion Dam.

The Licensee may meet the Supplemental Flow requirement with flow magnitudes in excess of those specified; however, the rate of decline in flow shall be no steeper than the specified decline for Supplemental Flows any time actual streamflow immediately below Sand Bar Diversion Dam is less than the peak magnitude specified for the Supplemental Flow. Exceptions to the decline rate are allowed when natural events, such as storms and variation in rate of snowmelt cause short duration (not greater than approximately one week in length) flow fluctuations that exceed the flows specified for the declining limb of the Supplemental Flow. The Licensee shall make downward adjustments in Supplemental Flows in approximately equal steps to achieve a smooth decline.

The requirements of this measure may be temporarily modified if required by equipment malfunction, emergency, agency requirements, or law enforcement activity, or electric system emergencies beyond the control of the Licensee. In the event of such temporary modifications, the Licensee shall promptly notify the Forest Service, the Commission, SWRCB, CDFG, FWS and others that request such notification, labeling the notification "Compliance Item, Immediate Attention Required".

In Critically Dry water years, the Licensee may propose modifications to the specified minimum Supplemental Flows down, or up to a maximum of the Dry water year Supplemental Flows. If such modifications are proposed, the Licensee shall consult with the Forest Service, SWRCB, CDFG, and others who request consultation as to the justification for such modifications. This consultation shall be combined with Critically Dry water year consultation for other Project-affected reaches, if applicable. The Licensee shall maintain Supplemental Flows until any

such modifications are approved by the responsive agencies and the Commission. In addition, after consultation and approval by Forest Service [and SWRCB], the Licensee may reduce or eliminate Supplemental Flows in Critical Dry water years in response to compelling socio-economic considerations.

Additionally, in Critically Dry water years, the Licensee may propose modifications to the specified minimum Daily Flows. If such modifications are proposed, the Licensee shall consult with Forest Service, SWRCB, CDFG and others who request consultation as to the justification for such modifications. This consultation shall be combined with Critically Dry water year consultation for other Project-affected reaches, if applicable. The Licensee shall maintain the specified minimum Daily Flows until any such modifications are approved by the responsive agencies and the Commission.

Where facility modification is required to implement the specified minimum Daily Flows or Supplemental Flows, the Licensee shall complete such modifications as soon as reasonably practicable and no later than three years after license issuance. Prior to completion of such required facility modifications, the Licensee shall make a good faith effort to provide the specified minimum Daily Flows and Supplemental Flows within the capabilities of the existing facilities.

South Fork Stanislaus River

Drawdown of Pinecrest Lake and Streamflows in Pinecrest and Philadelphia Reaches

The Licensee shall each year, beginning the first full calendar year after license issuance, annually develop a “best fit” drawdown curve for Pinecrest Lake based on that year’s forecast hydrological conditions. The drawdown curve shall be designed to meet the specified Pinecrest Reach and Philadelphia Reach minimum streamflow requirements for the water year type, and achieve the Consumptive Water Supply, Ecological, Recreational and Power Generation Operational Objectives specified below. The Pinecrest Reach is the 3.9 mile-long section of South Fork Stanislaus River (SFSR) from Strawberry Dam to Philadelphia Diversion. The Philadelphia Reach is the 8.5 mile-long section of SFSR from Philadelphia Diversion to Lyons Reservoir.

Consumptive Water Supply Operational Objectives:

- Consumptive Water supply deliveries are managed consistent with the specified Ecological and Recreation Operational Objectives to the greatest extent feasible; and
- Avoidable spill at Lyons Reservoir is minimized.

Ecological Operational Objectives (in order of priority):

- Streamflows in the Philadelphia Reach from the annual snowmelt spill period at Strawberry Dam through August are steady, with only gradual increases and decreases in flows (target maximum change of approximately 10 cfs per week);
- Streamflows in the Philadelphia Reach from September 1 to the beginning of the annual snowmelt spill period at Strawberry Dam are steady to the extent feasible and still meet downstream consumptive water supply demands, with only gradual increases and decreases in streamflows (target maximum change of approximately 10 cfs per week);
- Streamflows in the Philadelphia Reach for the period from Labor Day to December 31 are not greater than 60 cfs and under-run 60 cfs when reasonably feasible;
- Streamflows in the 0.6-mile section of South Fork Stanislaus River between Strawberry Dam and Herring Creek are at least 5 cfs, year-round;
- Streamflow fluctuation in response to short duration natural events, such as storms and variation in rate of snowmelt, is allowed; and
- Sufficient minimum pool is maintained in Pinecrest Lake for ecological and fishery resources.

Recreation Operational Objectives:

- In all water year types, once spill at Strawberry Dam stops, the water surface of Pinecrest Lake is maintained as high as feasible, consistent with achieving the specified Ecological and Consumptive Water Supply Operational Objectives, and above elevation 5,610 feet (PG&E Datum) for as many days as feasible beginning Memorial Day weekend and extending through Labor Day weekend; and
- If spill stops earlier than July 1, drawdown of Pinecrest Lake is targeted to reach Elevation 5,615 (PG&E Datum) as close as reasonably feasible to July 4 to enhance beach usability. If spill stops later than July 1, drawdown of Pinecrest Lake is accelerated to reach Elevation 5,615 as early as reasonably feasible.

Power Generation Operational Objectives:

- Pinecrest Lake is able to annually fill and be drawn down to a minimum

pool;

- Flows in excess of that needed to meet the Ecological, Consumptive Water Supply and Recreation Operational Objectives are diverted at Philadelphia Diversion for power generation at Spring Gap and Stanislaus powerhouses;
- Flows in Philadelphia Ditch are maintained at sufficient levels during non-winter months to keep the canal clean of debris and ready for emergency operation, and during the winter months to prevent icing; and
- Pinecrest Lake operation is responsive to annual hydrological conditions.

The Licensee shall develop its proposed Pinecrest Lake drawdown curve in consultation with the Forest Service, SWRCB, CDFG and TUD; to the extent these agencies request such consultation. The Licensee shall provide its proposed Pinecrest Lake drawdown curve to the Forest Service [and SWRCB] for approval and to CDFG, TUD and others who request such information, no later than April 15 of each year. The Licensee shall operate Pinecrest Lake in conformance with the drawdown curve as approved by the Forest Service [and SWRCB,] the minimum streamflow requirements specified below and to achieve the specified Operational Objectives.

If the Forest Service [and/or SWRCB] does not approve the Licensee's proposed drawdown curve, or if the Licensee anticipates at any time that it cannot operate consistent with the approved drawdown curve or cannot meet the minimum streamflow requirements (such as due to hydrological conditions or need to conduct studies) it shall notify the Forest Service, SWRCB, CDFG, TUD and others who request such notification, Labeling the notification "Compliance Item, Immediate Attention Requested", and provide an alternate drawdown curve for the year that meets the specified minimum streamflow requirements and achieves the specified Operational Objectives to the greatest extent feasible. The Forest Service and notified parties shall be provided 30 days to review and respond to the Licensee's alternate drawdown curve. If the Forest Service, notified parties and TUD approve the alternate drawdown curve proposed by the Licensee, the Licensee shall implement the alternate drawdown curve. If the Forest Service, notified agencies and TUD do not approve the alternate drawdown curve proposed by the Licensee, but proposes an alternate drawdown curve that meets the specified minimum streamflow requirements and achieves the specified Operational Objectives to the greatest extent feasible, the Licensee shall implement the alternate drawdown curve proposed by the Forest Service, agencies and TUD, provided the Forest Service, agency and TUD alternative is consistent with actual physical conditions (such as equipment capability and hydrological

conditions). If the Forest Service, notified agencies and TUD, within 30 days of notification do not respond, does not propose an alternate drawdown curve, or the alternate drawdown curve proposed by the Forest Service, agencies and TUD, cannot be implemented due to actual physical conditions, or the Licensee receives conflicting alternate proposals from the agencies and TUD that the Licensee cannot resolve through a good faith effort, the Licensee shall operate according to its proposed alternate drawdown curve, upon approval of the Commission.

In developing its proposed drawdown curve for Pinecrest Lake, the Licensee shall target storage in Pinecrest Lake of not less than 3,500 acre-feet on December 31 and, after consultation with TUD, shall, to the extent feasible, target storage in Pinecrest Lake of not less than 1,000 acre-feet from January 1 through the start of spill at Strawberry Dam. The absolute minimum storage in Pinecrest Lake shall not be less than 500 acre-feet.

Operation of Pinecrest Lake according to the minimum streamflow specified below and to achieve the specified Operational Objectives is subject to temporary modification if required by equipment malfunction, agency requirements, emergency or law enforcement activity, or critical electric or water delivery system emergencies beyond the control of the Licensee. In the event of such temporary modifications, the Licensee shall promptly notify the Commission, Forest Service, SWRCB, CDFG, TUD, and others that request such notification labeling the notification "Compliance Item, Immediate Attention Requested".

In Critically Dry water years, the Licensee may propose modifications to the specified minimum streamflows and Operational Objectives. If such modifications are proposed the Licensee shall consult with the Forest Service, SWRCB, CDFG, TUD and others who request such consultation as to the justification for the proposed modifications. This consultation shall be combined with Critically Dry year consultation for other project-affected reaches, if applicable. The Licensee shall maintain the minimum streamflow specified for Dry water year conditions until such modifications are approved by the responsive agencies and the Commission.

Where facility modification is required to implement the specified minimum streamflows and the specified Operational Objectives, the Licensee shall complete such modifications as soon as reasonably practicable and no later than three years after license issuance. Prior to completion of such required facility modifications, the Licensee shall make a good faith effort to achieve the specified minimum streamflows within the capabilities of the existing facilities.

Minimum Streamflows

In order to assure ecological needs are met, the Licensee shall maintain the minimum streamflows specified in the following tables. In addition, the Licensee

shall maintain a year-round minimum streamflow of 5 cfs in SFSR between Strawberry Dam and Herring Creek. The Licensee shall, within one year of license issuance, develop and file with the Commission for approval, a plan for monitoring compliance with the 5 cfs requirement. The specified minimum streamflows are the minimum mean flow over a continuous 24-hour period. Instantaneous streamflow may, on an infrequent basis, deviate below the specified minimum streamflow by up to 10 percent. However, the Licensee shall make a good faith effort to meet the specified minimum streamflows at all times.

Minimum streamflow schedule for the Pinecrest Reach (cfs)^{1,2}

Month	Water Year Type			
	Dry	Normal-Dry	Normal-Wet	Wet
October 1-31	10	10	15	15
November 1-30	10	10	15	15
December 1-31	10	10	10	15
January 1 - February 9	10	10	10	15
February 10 - March 9	10	10	10	15
March 10 - April 9	10	10	10	15
April 10 - May 9	10	10	15	15
May 10 – May 31	10	10	15	15
June 1 – 30	10	10	15	15
July 1- 31	10	10	15	15
August 1 – 31	10	10	15	15
September 1 – 30	10	10	15	15

¹ The compliance location for the minimum streamflows shall be USGS gage 11296500 (PG&E gage S-61) on the SFSR below Herring Creek.

² Once Pinecrest Lake has reached the specified minimum storage of 500 acre-feet, the minimum required streamflows is the amount indicated, or the inflow to Pinecrest Lake plus accretion flows from Herring Creek, whichever is less.

Minimum streamflow schedule for the Philadelphia Reach (cfs)^{1,2}

Month	Water Year Type			
	Dry	Normal-Dry	Normal-Wet	Wet
October 1-31	10	10	15	15
November 1-30	10	10	15	15
December 1-31	10	10	10	15
January 1 - February 9	10	10	10	15
February 10 - March 9	10	10	10	15
March 10 - April 9	10	10	10	15
April 10 - May 9	10	10	15	15

May 10 – May 31	10	10	15	15
June 1 – 30	10	10	15	15
July 1- 31	10	10	15	15
August 1 – 31	10	10	15	15
September 1 – 30	10	10	15	15

¹ The compliance location for the minimum streamflows shall be USGS gage 11297200 (PG&E gage S-83) below Philadelphia Diversion.

² Once Pinecrest Lake has reached the specified minimum storage of 500 acre-feet, the minimum required streamflow is the amount indicated, or the inflow to Pinecrest Lake plus accretion flows between Strawberry Dam and Philadelphia Diversion, whichever is less.

Condition No. 35—Spill Channel Management

Within one year of license issuance, the Licensee shall file with the Commission a Spill Channel Management Plan that is approved by the Forest Service for the Spring Gap spill channel (adjacent to the Spring Gap penstock) and the Stanislaus Forebay spill channel (at the outlet of the Stanislaus tunnel near the Stanislaus Forebay).

The objective of the Spill Channel Management Plan shall be to minimize environmental impacts to National Forest lands over which spills occur. The Licensee shall endeavor to minimize flows into the spill channels during normal Project operation and, to the extent reasonably possible, during unusual or emergency situations.

The Plan shall first evaluate the magnitude of problems associated with spill channel water and sediment discharge to determine a reasonable course of mitigation and monitoring to meet Plan objectives. The plan would define methods to evaluate the nature of water and sediment discharges from the spill channels and, based on the results of the evaluation, identify reasonable measures to minimize erosion and protect the waters of the MFSR, as appropriate.

Condition No. 36—Annual Employee Awareness Training

The Licensee shall, beginning the first full calendar year after license issuance, provide annual employee awareness training in coordination with the Forest Service. The goal of the training shall be to familiarize the Licensee maintenance and operations staff with local resource issues, special status species, noxious weeds, procedures for reporting to the Forest Service, and Forest Service orders that pertain to the Stanislaus National Forest lands in the vicinity of the Project. Information on special status species and noxious weeds and their locations in the Project area shall be provided to field personnel.

Condition No. 37—Special Status Species

The Licensee shall, beginning the first full calendar year after license issuance, in consultation with the Forest Service, annually review the current list of special status

plant and wildlife species (species that are Federal Endangered or Threatened, Forest Service Sensitive, Stanislaus National Forest Watch Lists) that might occur on National Forest System lands in the project area directly affected by project operations. When a species is added to one or more of the lists, the Forest Service in consultation with the Licensee shall determine if the species or un-surveyed suitable habitat for the species is likely to occur on such National Forest System lands. For such newly added species, if the Forest Service determines that the species is likely to occur on such National Forest System lands, the Licensee shall develop and implement a study plan in consultation with the Forest Service to reasonably assess the effects of the project on the species. The Licensee shall prepare a report on the study including objectives, methods, results, recommended resource measures where appropriate, and a schedule of implementation, and shall provide a draft of the final report to the Forest Service for review and approval. The Licensee shall file the report, including evidence of consultation, with the Commission and shall implement those resource management measures required by the Commission.

Condition No. 38—Ground Disturbing Activities

If the Licensee proposes ground disturbing, project related activities on National Forest System lands that were not specifically addressed in the Commission's National Environmental Policy Act (NEPA) processes, the Licensee, in consultation with the Forest Service, shall determine the scope of work, and the potential Project-related effects and whether additional information is required to proceed with the planned ground disturbing activity. Upon Forest Service's request, the Licensee shall enter into an agreement with the Forest Service under which the Licensee shall fund a reasonable portion of Forest Service's staff time and expenses for staff activities related to the proposed activities.

Condition No. 39—Environmental Monitoring

The Licensee shall, within six months after license issuance, or as otherwise indicated, and in consultation with the Forest Service, State Water Resources Control Board (SWRCB) and California Department of Fish and Game (CDFG), develop detailed monitoring plans consistent with the descriptions provided below. The Licensee shall provide the final detailed plans, along with all agency comments received and an explanation for any such comments not adopted, to the Commission for final approval. The Licensee shall perform the Environmental Monitoring as approved by the Commission. It is anticipated that certain details of the environmental monitoring (e.g., specific years of sampling and/or specific study sites) may need modification during development of detailed study plans or during subsequent implementation of the environmental monitoring. All such modifications shall be developed in consultation with the Forest Service, SWRCB, and CDFG, and approved by these agencies and provided to the Commission before implementation. Where

years are specified, year one is the first full calendar year after issuance of the new license.

Relief Reach Riparian Vegetation Restoration and Streambank Stabilization

Objective: Evaluate the effectiveness of the specified streamflow regime on riparian vegetation restoration and streambank stabilization; evaluate existing streambank conditions; develop and implement vegetation restoration and streambank stabilization measures.

Cost: Not to exceed \$200,000, 2004 cost basis, over a period of 10 years.

Phase I: Evaluate existing information, develop recommendations for focused studies (year 1), and re-evaluate cost of implementation and monitoring. Consult with Forest Service, SWRCB, and CDFG before Phase II is implemented. The cost of this phase is estimated to be \$25,000.

Phase II: Perform focused studies and develop recommended restoration (year 2). Consult with Forest Service, SWRCB, and CDFG before Phase III is implemented. The cost of this phase is estimated at \$25,000 to \$50,000.

Phase III: Implement monitoring and/or restoration (year 3 and year 10 per schedule developed in Phase II and subject to obtaining necessary approvals and permits). The estimated amount remaining for this phase is \$125,000 to \$150,000.

Hardhead Monitoring in Camp Nine Reach and Sand Bar Dam Reach

Objective: Determine if the specified streamflow regime affects hardhead habitat in the lower portions of the Sand Bar Dam Reach by evaluating hardhead distribution and abundance in the Camp Nine Reach (the 2.4 mile-long section of the Stanislaus River from the confluence of the Middle and North Forks of the Stanislaus River to the Stanislaus powerhouse) and the lower two miles of the Sand Bar Dam Reach.

Cost: Consistent with specified scope.

Conduct five years of snorkel surveys and/or electrofishing to determine abundance and distribution of hardhead in the Camp Nine Reach and the lower two miles of the Sand Bar Dam Reach, beginning in year 1.

Radio tag 10-20 hardhead from the Camp Nine Reach in year 1 to determine if hardhead are utilizing the lower Sand Bar Dam Reach or are only utilizing the Camp Nine Reach and New Melones Reservoir. The Licensee shall consult with the Forest Service in early year 1 to develop a detailed study plan for this task.

Monitor algae abundance in Sand Bar Dam and Camp Nine reaches to determine relative food availability and evaluate if algae is limiting hardhead use in the lower Sand Bar Dam Reach. Conduct a general survey of algae abundance in the Sand Bar Dam and Camp Nine reaches in year 1 and, if needed, collect additional quantitative algae abundance information in year 2.

Monitor water temperature for up to five years to coincide with snorkel surveys and/or electrofishing (i.e., same years as for snorkel and/or electrofishing surveys) at the following four sites: (1) Middle Fork Stanislaus River above North Fork Stanislaus River, (2) Stanislaus River above Collierville PH, (3) Stanislaus River below Collierville Powerhouse, and (4) Stanislaus River below Stanislaus Powerhouse).

Prepare and distribute to the Forest Service, SWRCB, CDFG, and others upon request a final report after five years of study, including recommendations. Submit results of temperature monitoring and snorkel surveys to the Forest Service within six months following completion of each year of monitoring.

Trout Population Monitoring in Spring Gap Reach and Sand Bar Dam Reach

Objective: Monitor and evaluate effects of the specified streamflow regime on trout populations in the Sand Bar Dam Reach, using for comparison trout populations in the wild trout reference site established by CDFG upstream of the Spring Gap Reach (the 2.6 mile-long section of Middle Fork Stanislaus River from Spring Gap powerhouse to Sand Bar Diversion Dam).

Cost: Consistent with specified scope.

Spring Gap Reach: Provide up to 50% of the labor or labor costs (in cooperation with CDFG and Forest Service) needed to electrofish one site (station 6, as identified in the License Application just upstream of Spring Gap Powerhouse) four times consistent with CDFG's three-year survey cycle at this site (expected in 2004, 2007, 2010, 2013).

Sand Bar Dam Reach: Perform electrofishing surveys at the lower-most historical site in the Sand Bar Dam Reach (station 4, as identified in the License Application) three times after license issuance to coincide with surveys at station 6 just upstream of the Spring Gap Powerhouse (expected in years 2007, 2010, and 2013).

Provide and distribute to the Forest Service, SWRCB, CDFG and other upon request, a report within one year following each survey, including recommendations following completion of the study.

Foothill Yellow Legged Frog (FYLF) Monitoring in Sand Bar Reach and Camp Nine Reach

Objective: Determine if the specified streamflow regime affects FYLF in the Camp Nine and Sand Bar Dam reaches and collect information to develop a Temperature Trigger for the minimum Supplemental Flows specified for the Sand Bar Dam Reach. The information will be used to establish a relationship between water temperature and breeding so Supplemental Flows are timed prior to temperatures at which breeding is initiated.

Cost: Consistent with specified scope.

Complete and distribute to the Forest Service, SWRCB, CDFG and others upon request, by year 1, the Licensee's report on 2003 amphibian studies conducted in Relief Reach for mountain yellow-legged frog (MYLF), Philadelphia Reach (Visual Encounter Surveys and flow study for FYLF), Spring Gap Reach (Visual Encounter Surveys for FYLF), and Sand Bar Dam Reach (Visual Encounter Surveys and flow study for FYLF).

Conduct up to five years of additional Visual Encounter Surveys for FYLF at a total of three known sites with FYLF (based on 2000, 2001, 2003 study results) in the combined Sand Bar Dam Reach and the section of Camp Nine Reach above Collierville Powerhouse. Surveys shall begin approximately 0.5 km below a known site and end approximately 0.5 km above the known sites.

Resurvey FYLF habitat at the three monumented stream cross sections that were established by the Licensee in 2003 in Sand Bar Dam Reach to enable monitoring of channel shape and substrate composition. The frequency of surveying cross sections shall be four times during the term of the license (anticipated to be years 5, 10, 15, and 25), and after any winter/spring flow event exceeding a 100-year recurrence interval.

Conduct water temperature monitoring at three sites (Sand Bar Diversion Dam, mid-Sand Bar Dam Reach, and above the confluence of the South and North forks of the Stanislaus River) to coincide with amphibian surveys. Identify a relationship between water temperatures at Sand Bar Diversion Dam and downstream amphibian breeding sites (including intermittent tributaries) so that implementation of the Temperature Trigger can be done by measuring water temperatures only at Sand Bar Diversion Dam.

Compile existing, relevant and reasonably available FYLF data from other hydroelectric projects in California licensed to Licensee to help develop the Temperature Trigger.

Prepare and distribute to the Forest Service, SWRCB, CDFG and others upon request a final report, including recommendations, after completion of the study.

Mountain Yellow Legged Frog Study

Objective: Determine if the specified streamflow regime or the Licensee's land management practices have an affect on MYLF in the Relief Reach.

Cost: Consistent with specified scope.

Perform three years of additional Visual Encounter Surveys in the Kennedy Meadows area (ponds and river). Anticipated to be years 1, 2, and 3 after license issuance.

Determine if MYLF habitat or known populations are affected by the specified stream flow regime or the Licensee's land management practices.

Evaluate results and prepare and distribute to the Forest Service, SWRCB, CDFG and other upon request a final report, including recommendations, after completion of the study.

Condition No. 40—Maintain and Operate Philadelphia Diversion Fish Screen and Ladder

The Licensee shall continue to maintain and operate the Philadelphia Diversion fish screen in accordance with the functional design filed with the Commission on May 3, 1993 and approved by the Commission on July 30, 1993, including transporting stream sediment through the structure and the option of removing the upper screen panels in the winter from December 1 through March 15 when ice and snow conditions may exist.

The Licensee shall continue to maintain and operate the Fish Ladder located at Philadelphia Diversion Dam. The Licensee shall annually, after the peak spring flow period, inspect the fish ladder and the downstream access pool and take timely actions to maintain their functionality.

Condition No. 41—Invasive Weed Management Plan

Within two years of license issuance, the Licensee shall file with the Commission an Invasive Weed Management Plan developed in consultation with the Forest Service, the appropriate County Agricultural Commissioner and California Department of Food and Agriculture. Invasive weeds will be those weeds defined in the California Food and Agriculture code, and other species identified by the Forest Service. The plan will address both aquatic and terrestrial Invasive weeds within the project boundary and adjacent to project features directly affecting National Forest System lands including, roads, and distribution and transmission lines.

The Invasive Weed Plan will include and address the following elements:

- Inventory and mapping of new populations of Invasive weeds using a Forest Service compatible database and GIS software. The Invasive weed GIS data layer will be updated periodically and shared with resource agencies.
- Action and/or strategies to prevent and control spread of known populations or introductions of new populations, such as vehicle/equipment wash stations. Noxious weeds presently identified include populations of tree of Heaven, cheat grass, Italian thistle, yellow star thistle, Himalayan blackberry, scotch broom, wild fennel, velvet grass, Klamathweed, bouncing bet, woolly mullein, and bull thistle. Where these populations are: 1) contiguous and extend outside the Project boundary or 2) downstream of populations inside the project boundary and have a reasonable nexus to the project, the Licensee shall make reasonable efforts to control the entire population unit.
- Development of a schedule for control of all known A, B, Q and selected other rated invasive weed species, designated by resource agencies.
- On-going annual monitoring of known populations of Invasive weeds for the life of the license in locations tied to project actions or effects, such as road maintenance, at project facilities, O&M activities, , new construction sites, etc. to evaluate the effectiveness of re-vegetation and Invasive weed control measures.
- The plan will include an adaptive management element to implement methods for prevention of aquatic Invasive weeds, as necessary. These actions may include, but may not be limited to: 1) public education and signing of public boat access, 2) preparation of an Aquatic Plant Management Plan approved by the Forest Service, and in consultation with other agencies, and 3) boat cleaning stations at boat ramps for the removal of aquatic Invasive weeds.

New infestations of A& B rated weeds shall be controlled within 12 months of detection or as soon as is practical and feasible (A, B, C, & Q ratings refer to the California Department of Food & Agriculture Action Oriented Pest Rating System). At specific sites where other objectives need to be met all classes of Invasive weeds may be required to be treated.

Monitoring will be done in conjunction with other project maintenance and resource surveys, so as not to require separate travel and personnel. Monitoring information, in database and GIS formats, will be provided to the Forest Service as part of the annual consultation on affected National Forest resources (Condition No. 5). To assist with this monitoring requirement, training in invasive plant identification will

be provided to project employees and contractors by the Forest Service.

Licensee shall restore/revegetate areas where treatment has eliminated Invasive weeds in an effort to eliminate the reintroduction of Invasive weed species. Project-induced ground disturbing activities shall be monitored annually for the first 3 years after disturbance to detect and map new populations of Invasive weeds.

Condition No. 42—Vegetation Management

Within two years after license issuance, the Licensee shall file with the Commission a plan approved by the Forest Service for vegetation management on or affecting National Forest System lands. The plan shall include:

1. An implementation schedule for the Licensee to protect and enhance vegetation in the Pinecrest Day Use Area, consistent with the Forest Service's anticipated Recreation Implementation Plan; and
2. Protection measures, such as placement of large rocks, for potential Project-affected populations of Sierra bolandra near Relief Reservoir and cut-leaved monkey flower near Pinecrest Reservoir.

Condition No. 43—Wildlife Management

The Licensee shall, within one year after license issuance, implement the following measures to maintain and enhance existing native wildlife species potentially affected by the Project:

1. For bats within the Project Boundary: (a) install up to three bat houses in the Project area; and (b) provide employee awareness training so that operation staff can perform Project maintenance with minimal disturbance to bats that use Project facilities.
2. In consultation with the Forest Service and CDFG, site, install and maintain two osprey nest platforms at Pinecrest Lake.
3. After consultation with the Forest Service and CDFG, conduct one season of surveys for western pond turtle at each of the Sand Bar Diversion Dam impoundment and the Stanislaus Forebay. If western pond turtles are found at either site, in consultation with the Forest Service and CDFG, develop a mitigation plan for that site. The plan shall include the results of the surveys, recommended mitigation measures (such as installing basking logs), and an implementation schedule. File the plan, including evidence of consultation, with the Commission within six months of completing the survey, and implement the final plan within one year after its approval by the Commission.