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Minutes - DRAFT

To: NCPA Commission

From: Cary A. Padgett, Assistant Secretary to the Commission

Subject: June 28, 2018, NCPA Commission Meeting

1. *Call Meeting to Order and Introductions*

Chair Bob Lingl called the meeting to order at 9:11 am at Alameda Municipal Power, 2000 Grand Street, Alameda, California. A quorum was present. Introductions were made. Those in attendance are shown on the attached attendance list.

2. *Approve Minutes of the May 24, 2018, Regular Commission Meeting*

Motion: A motion was made by Roger Frith and seconded by Madeline Deaton to approve the Minutes of the May 24, 2018, Regular Commission Meeting. The motion carried unanimously on a voice vote of those members present.

PUBLIC FORUM

Chair Lingl asked if any members of the public were present who would like to address the Commission on the agenda items. James Pope addressed the Commission and presented a retirement gift to NCPA's Assistant General Manager Dave Dockham who retires at the end of the month.

REPORTS AND COMMITTEE UPDATES

3. *General Manager's Business Progress Report and Update*

General Manager Randy Howard reported:

- Provided an overview of the activities and meetings that took place at APPA's Annual Conference in New Orleans.
- Hometown Connections, Inc. (HCI) Update: All contracts have been signed and filed on HCI (NCPA is one of five owners in the corporation.) Provided the Commission HCI's marketing brochure. NCPA's Administrative Services department is working on travel and other procedures for HCI. Members will be able to view HCI services on NCPA Connect under Support Services.
- Gave an update on NCPA's Support and Shared Services Agreements and provided a copy of the monthly status report.

- Held meetings with non NCPA project participants, i.e., Modesto Irrigation District, Turlock Irrigation District and Merced Irrigation District.
- Staffing Update: Announced Tony Zimmer as the new Assistant General Manager for Power Management replacing Dave Dockham who retires at the end of this month. Maury Kruth, Consultant on Western Issues, retired earlier this month was replaced by Regina Rieger who will begin in early August.
- Gave a brief update on legislative activities and issues.

4. *Executive Committee*

Committee Chair Bob Lingl reported that the Committee met once since the last Commission meeting. The Committee heard reports from the General Manager and General Counsel and met in closed session to discuss four closed session items. No reportable action was taken on the closed session items.

5. *Facilities Committee*

Assistant General Manager Dave Dockham reported the Committee met once since the last Commission meeting. The Committee met and discussed items 14-17 on today's Agenda. The Committee recommended Commission approval of all items.

6. *Finance Committee*

Committee Chair David Hagele reported the Committee did not meet since the last Commission meeting. The next regular meeting will be held on August 14 at NCPA's Roseville office.

7. *Legal Committee*

General Counsel Jane Luckhardt reported that the Committee did not meet since the last Commission meeting.

8. *Legislative & Regulatory Affairs Committee*

Committee Chair Teresa O'Neill reported the Committee did not meet since the last Commission meeting. Chair O'Neill gave an update on the activities that took place at the American Public Power Association's Annual Conference in New Orleans last week. Santa Clara Council Member Pat Kolstad, City of Lompoc staff Tikan Singh, and NCPA's Assistant General Manager of Legislative Regulatory Affairs Jane Cirrincione all received awards from APPA. NCPA's State Legislative Staff Tour is scheduled for July 23-25, and plan to visit the City of Lodi, the Lodi Energy Center and NCPA's Hydroelectric facility. NCPA's Annual Conference is scheduled for September 25-28 at the Hyatt Regency Monterey. Online registration is now available at www.ncpa.com. The next Committee meeting will be held on August 22 at NCPA's Roseville office.

9. *Members' Announcements & Meeting Reporting*

Madeline Deaton, **Alameda**, read the story for this month's 50th Anniversary commemorative pin that was provided to the Commission. This month's pin highlighted the NCPA Geothermal facility.

Nico Procos, **Alameda**, introduced Alameda's interns that were in attendance at the meeting and thanked everyone for coming to Alameda.

Dean Batchelor, **Palo Alto**, announced that Ed Shikada accepted the position of Palo Alto City Manager and will begin in that role on January 1, 2019.

CONSENT CALENDAR

Prior to the roll call vote to approve the Consent Calendar, the Commissioners were polled to determine if any member wished to pull an item or abstain from one or more items on the Consent Calendar. No items were pulled for Discussion/Action.

Motion: A motion was made by Teresa O'Neill and seconded by Mark Chandler to approve the Consent Calendar consisting of Items 10, 11, 12, 13, 14, 15, 16, and 17. The motion carried by a majority of those members present on a roll call vote with the abstentions noted below for each item.

San Francisco BART, Gridley, Redding, Plumas-Sierra, and Truckee Donner were absent.

10. ***NCPA's Financials for the Months Ended May 31, 2018*** – approval by all members.

11. ***Treasurer's Report for the Months Ended May 31, 2018*** – accept by all members.

12. ***Sale or Disposal of Surplus Property*** – note and file report by all members for the disposal of approximately 601 pounds of electronic waste.

Fiscal Impact: This report has no direct fiscal impact to the Agency.

13. ***Fiscal Year 2022 Western O&M Funding Commitment and Contribution Report*** – note and file report by Assignment Members, as directed pursuant to Commission Resolution 15-49, confirming receipt of Revision 22 to Exhibit C of the Western O&M Funding Agreement.

Fiscal Impact: This report has no direct fiscal impact to the Agency.

Shasta Lake abstained.

14. ***Resolution 18-43, Approval of Performance Mechanical, Inc. – Five Year Multi-Task General Services Agreement for general T&M maintenance services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members*** – adopt resolution by all members authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Performance Mechanical, Inc. for general T&M maintenance services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$2,000,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

Fiscal Impact: Upon execution, the total cost of the agreement is not to exceed \$2,000,000.00 over five years, to be used out of NCPA approved budgets as services are rendered. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

Port of Oakland abstained.

15. ***Resolution 18-44, Approval American Crane Rental, Inc. – Five Year Multi-Task General Services Agreement for crane services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members*** – adopt resolution by all members authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with American Crane Rental, Inc. for crane services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$500,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

Fiscal Impact: Upon execution, the total cost of the agreement is not to exceed \$500,000.00 to be used out of the NCPA approved budget. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

Port of Oakland abstained.

16. **Resolution 18-45, Approval of OST Trucks & Cranes, Inc. – Five Year Multi-Task General Services Agreement for trucking and crane services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members** – adopt resolution by all members authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with OST Trucks and Cranes, Inc. for trucking and crane services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$500,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members. **Fiscal Impact:** Upon execution, the total cost of the agreement is not to exceed \$500,000.00 to be used out of the NCPA approved budget. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures. *Port of Oakland abstained.*
17. **Resolution 18-47, Approval of Baker-Tilly Virchow Krause, LLP MTPSA – recommend approval of the two year MTPSA for an amount not to exceed \$500,000 for audit services for FY18 and FY19 for use by NCPA, Members, and SCPPA** – adopt resolution by all members authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Baker Tilly Virchow Krause, LLP (Baker Tilly) for annual audit services, which shall not exceed \$500,000 over two years for use by NCPA, its Members, Southern California Public Power Authority (SCPPA), or by SCPPA Members. At the Agency’s option, the term of the Agreement may be extended for two additional three-year terms, which options may be exercised by the Agency by providing written notice to the Consultant no less than four (4) months in advance of expiration of the agreement. **Fiscal Impact:** The total two-year cost of this agreement is \$500,000. The audit fee for fiscal years 2018 and 2019 are \$70,000 and \$72,100, respectively. The proposed agreement contains a contingency of \$357,900 for additional services such as the biennial Commercial Compliance Audit, OMB A- 133 audit for Federal Grants received in excess of \$750,000, other miscellaneous services as needed, and for utilization by NCPA Members, SCPPA, and/or SCPPA Members. Upon extension of the agreement for the two subsequent three-year period, the audit fees would be subject to annual escalation based on the consumer Price Index for All Urban Consumers, U.S. City Average, with a cap of 5%. This agreement was included in the current fiscal year budget, and funds are available in General Allocations-Related to Programs portion of the Annual Budget and Ten-Year Forecast. Such General Costs are proportionally allocated to all programs (equalized for debt service, property taxes, and other costs that would otherwise unfairly skew the results of the allocation). *Port of Oakland abstained.*

CLOSED SESSION

Non-essential Members and NCPA staff left the meeting for closed session items 18 and 19 discussion.

18. **Conference with Legal Counsel** – Existing litigation pursuant to Government Code Section 54956.9(d)(1): Name of case: Northern California Power Agency, City of Redding, City of Roseville, and City of Santa Clara v. the United States, Court of Federal Claims No. 14-817C.
19. **Conference with Legal Counsel** – Anticipated Litigation pursuant to California Government Code Section 54956.9(d)(2): one case

RECONVENED TO OPEN SESSION

All meeting attendees rejoined the meeting.

REPORT FROM CLOSED SESSION

Closed Session Disclosure: General Counsel Jane Luckhardt stated no reportable action was taken on closed session items 18 and 19.

DISCUSSION/ACTION ITEMS

20. **Resolution 18-48, Approval of Delegate Authority to the General Manager to enter into agreements and issue purchase orders necessary for turbine maintenance of Alameda CT Unit 1; Applicable to the following projects: NCPA CT1 Facility** – adopt resolution by all members authorizing the General Manager to enter into agreements and issue purchase orders necessary to restore Alameda CT Unit 1 to service, for a total cost not to exceed \$2,000,000, and to increase the CT1 FY19 budget.

Fiscal Impact: In 2015, major service of the unit at that time cost approximately \$900,000. It did not require the unit to be shipped offsite and needed very few new parts. While early in the procurement process, staff is estimating that this service will cost approximately \$2,000,000. Staff will be working with insurance to determine if this incident is a valid property damage claim. If so, financial liability may be limited to the insurance deductible of \$500,000. The funds for this service have not been budgeted and an augmentation will be required to perform the work.

Assistant General Manager Ken Speer gave a presentation explaining the turbine maintenance needed at the Alameda Combustion Turbine Unit 1. Due to the timing of necessary maintenance at the facility, this item was not vetted through the NCPA Facilities Committee prior to seeking Commission approval. Staff will discuss with the Committee at its next regular scheduled meeting.

Motion: A motion was made Teresa O'Neill and seconded by Mel Grandi to adopt resolution delegating authority to the General Manager to enter into agreements and issue purchase orders necessary for turbine maintenance of Alameda CT Unit 1; Applicable to the following projects: NCPA CT1 Facility. The motion carried by a majority on a roll call vote of those members present.

*San Francisco BART, Gridley, Plumas-Sierra, Redding, and Truckee Donner were absent.
Port of Oakland and Shasta Lake abstained.*

21. **Resolution 18-42, Approval of Resolution Commending David Dockham** – adopt resolution by all members commending David Dockham.

Chair Lingl read the resolution expressing appreciation for David Dockham's dedication to NCPA.

22. **Resolution 18-46, Approval of Resolution Commending Madeline Deaton** – adopt resolution by all members commending Madeline Deaton.

Chair Lingl read the resolution expressing appreciation for Madeline Deaton's dedication to NCPA.

Motion: A motion was made by Mark Chandler and seconded by Basil Wong to adopt resolution 18-46, Commending Madeline Deaton, and to adopt resolution 18-42, Commending David Dockham. The motion carried by a majority on a roll call vote of those members present.

NEW BUSINESS

No new business was discussed.

ADJOURNMENT

The June 28, 2018, Commission meeting was adjourned at 10:31 am.

Respectfully submitted,

CARY A. PADGETT
Assistant Secretary to the Commission

Attachments

**Northern California Power Agency
Commission Meeting of June 28, 2018
COMMISSIONER
Attendance List**

NCPA Commissioners are requested to sign, but signature by members of the public is voluntary.

MEMBER	NAME
ALAMEDA	Madelene C. Norton
BIGGS	Sam I. Buel
GRIDLEY	
HEALDSBURG	Ad
LODI	Mark Chandler
LOMPOC	Bbl. J
PALO ALTO	Dean Batchelder
PORT OF OAKLAND	Basil Wong
PLUMAS-SIERRA REC	
REDDING	
ROSEVILLE	Mum/B
SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT (BART)	
SANTA CLARA	Teresa O'Neill
SHASTA LAKE	Samuel J. Davis
TRUCKEE DONNER	
UKIAH	Mel J. Grandi

NCPA Commissioners, Alternates & Staff are requested to sign, but signature by members of the public is voluntary.

[illegible]

CONSENT CALENDAR

All items on the Consent Calendar are considered routine and will be approved without discussion by a single-roll call vote. Any Commissioner or member of the public may remove any item from the Consent Calendar. If an item is removed, it will be discussed separately following approval of the remainder of the Consent Calendar.

Prior to the roll call vote to approve the Consent Calendar, the Commissioners will be polled to determine if any Member wishes to abstain from one or more items on the Consent Calendar.

CONSENT CALENDAR ROLL-CALL APPROVAL

Commission Meeting Date: **June 28, 2018**

Consent Items Listed on the Agenda: # 10 to # 17

Consent Items Removed from the Agenda and Approved Separately:

6

ROLL-CALL VOTE BY MEMBERS: SVP / LODI

Member	Item Numbers Abstained	Vote	Absent
Alameda		X	
BART			X
Biggs		X	
Gridley			X
Healdsburg		X	
Lodi		X	
Lompoc		X	
Palo Alto		X	
Port of Oakland	<u>14-17</u>	X	
Redding			X
Roseville		X	
Santa Clara		X	
Shasta Lake	<u>13</u>	X	
Truckee Donner			X
Ukiah		X	
Plumas-Sierra			X

ATTEST:


Cary A. Padgett
Assistant Secretary to the Commission



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Commission Staff Report

AGENDA ITEM NO.: 5

Date: July 26, 2018
To: NCPA Commission
Subject: July 5, 2018 Facilities Committee Meeting Minutes

The attached Draft Minutes are being provided for information and to augment the oral Committee report.



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Minutes

Date: July 11, 2018
To: NCPA Facilities Committee
From: Carrie Pollo
Subject: July 5, 2018 Facilities Committee Meeting Minutes

1. **Call meeting to order & Roll Call** - The meeting was called to order by Committee Chair Mike Brozo at 9:02 am. A sign-in sheet was passed around. Attending via teleconference and/or on-line presentation were Alan Hanger and Debbie Whiteman (Alameda), Mark Sorensen (Biggs), Paul Eckert (Gridley), Tikan Singh (Lompoc), Shiva Swaminathan (Palo Alto), and Steve Hance and Peter Virasak (Santa Clara). Those attending in person are listed on the attached Attendee Sign-in Sheet. Committee Representatives from BART, Healdsburg, TID, and Ukiah were absent. A quorum of the Committee was established.

PUBLIC FORUM

No public comment.

2. **Approve minutes from the June 6, 2018 Facilities Committee meeting.** A motion was made by Steve Hance and seconded by William Forsythe recommending approval of the June 6, 2018 Facilities Committee meeting minutes. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.
3. **All Generation Services Facilities, Members, SPCPA – Dynamic Ratings, Inc. MTPSA –** Staff provided background information and was seeking a recommendation for Commission approval of a Multi-Task Professional Services Agreement with Dynamic Ratings, Inc. for instrument and predictive maintenance services and purchase of related equipment, with a not to exceed amount of \$500,000, for use at all facilities owned and/or operated by NCPA, its Members, SPCPA, and SPCPA Members. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review. Dynamic Ratings Inc. was the best bidder with the newest tools including transformer tools.

Motion: A motion was made by Jiayo Chiang and seconded by Mike Brozo recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Dynamic Ratings, Inc., for instrument and predictive maintenance services, with any non-substantial changes recommended and approved by the

NCPA General Counsel, which shall not exceed \$500,000 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

4. **All Generation Services Facilities, Members, SCPPA – Eaton Corporation MTGSA – Staff** was seeking a recommendation for Commission approval of a Multi-Task General Services Agreement with Eaton Corporation for electrical services, with a not to exceed amount of \$500,000, for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review. The current agreement is expired.

Motion: A motion was made by William Forsythe and seconded by Jiayo Chiang recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Eaton Corporation for electrical services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$500,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

5. **All Generation Services Facilities, Members, SCPPA – Industrial Air Flow Dynamics MTGSA – Staff** was seeking a recommendation for Commission approval of a Multi-Task General Services Agreement with Industrial Air Flow Dynamics for expansion joints, penetration seals, and HRSG related maintenance services, with a not to exceed amount of \$4,000,000, for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review. This type of work is very expensive.

Motion: A motion was made by William Forsythe and seconded by Mike Brozo recommending Commission approval of the authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Industrial Air Flow Dynamics, Inc. for expansion joints, penetration seals and HRSG related maintenance services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$4,000,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

6. **All Generation Services Facilities, Members, SCPPA - Tetra Engineering Group, Inc. MTPSA – Staff** was seeking a recommendation for Commission approval of a Multi-Task Professional Services Agreement with Tetra Engineering Group, Inc. for inspections related to HRSG, power piping, steam plant assessments, and engineering consulting services, with a not to exceed amount of \$1,000,000, for use at all facilities owned and/or operated by NCPA, its Members, SCPPA, and SCPPA Members. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review. The current agreement is expiring soon.

Motion: A motion was made by Jiayo Chiang and seconded by William Forsythe recommending Commission approval of the authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Tetra Engineering Group, Inc. for inspections related to HRSG, power piping, steam plant assessments, root cause failures and consulting engineering, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,000,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

- 7. NCPA Combustion Turbine 1 Facilities – Bay Cities Pyrotecator, Inc. Public Works Agreement** – Staff was seeking a recommendation for Commission approval of a Public Works Agreement with Bay Cities Pyrotecator, Inc. for the CT1 fire system upgrade project, with a not to exceed amount of \$328,684.47, for use at NCPA's Combustion Turbine 1 facilities. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets through the maintenance reserve funds. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by William Forsythe and seconded by Jiayo recommending Commission approval authorizing the General Manager or his designee to enter into a Public Works Agreement with Bay Cities Pyrotecator, Inc. for CT1 facilities fire system upgrade services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$328,684.47, for use at NCPA CT1 Lodi and CT1 Alameda facilities. A vote was taken by roll call: YES = Alameda, Biggs, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

- 8. NCPA Combustion Turbine 1 Facilities – Alameda Unit 1 Maintenance and Budget Augmentation** – Staff reviewed the results of a borescope report, including photos and leading theories, as well as next steps for repairs related to the recent trip and subsequent damage to NCPA's Alameda Unit 1.

On June 19, 2018 Units 1 and 2 were called in the real time market for operation during the morning. Both units ran with no trouble and were cycled off. Unit 1 was the first unit to come back on for day ahead market runs. It did not reach full output, only making 21 MW (vs24) and prior to tripping, dropped to 18 MW. There were no alarms. The unit then tripped, also causing Unit 2 to trip. Prior to this, the unit was disassembled in 2015 for a major inspection with refurbishing, upgrades, and replacement of equipment blades. The unit was also disassembled this year for Flex Seal, with no compressor damage found.

The borescope summary includes oil on plenum floor of the inlet. Three stage 0 stator vanes liberated at the root, with major impact damage throughout the compressor. Debris in fuel nozzles, with combustion caps, and crossfire tube cooling holes in the combustion chamber. The turbine has material loss from one stage 1 nozzle, material loss from one stage 1 bucket and impact marks throughout.

Motion: A motion was made by Steve Hance and seconded by Alan Hanger recommending Commission approval authorizing the General Manager to enter into agreements and issue purchase orders necessary to restore Alameda CT Unit 1 to service, for a total cost not to exceed \$2,000,000, and to increase the CT1 FY19 budget. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

- 9. NCPA Geothermal Facility – Northwest Paving, Inc. Public Works** – Staff provided background information and was seeking a recommendation for Commission approval of a Public Works Agreement with Northwest Paving, Inc. with a not to exceed amount of \$332,000, for road repairs at NCPA's geothermal facility. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. This is budgeted in the 2018 encumbered funds. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by Jiayo Chiang and seconded by Mike Brozo recommending Commission approval authorizing the General Manager to enter into a Public Works Agreement with Northwest Paving, Inc. for a not to exceed amount of \$301,327 with any non-substantial changes recommended and approved by the NCPA General Counsel. Staff further recommends that an additional \$30,673 (approximately 10% of contractor's bid) be authorized for possible contingencies, so that the total project cost is not to exceed \$332,000. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Plumas-Sierra, Roseville, and Santa Clara. ABSTAIN = Palo Alto. The motion passed.

- 10. All Generation Services Facilities - Pengo Wireline of California, Inc. MTPSA** – Staff provided background information and was seeking a recommendation for Commission approval of a Multi-Task Professional Services Agreement with Pengo Wireline of California, Inc., for downhole wirelines services on wells, with a not to exceed amount of \$750,000, for use at all NCPA Generation Services Facilities. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft agreement were available for review.

Motion: A motion was made by William Forsythe and seconded by Mike Brozo recommending Commission approval authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Pengo Wireline of California Inc., for the deployment of downhole wireline services on wells, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$750,000 over five years, for use at all NCPA Generation Services Plant Locations. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Plumas-Sierra, Roseville, and Santa Clara. ABSTAIN = Palo Alto. The motion passed.

- 11. NCPA Hydroelectric Facility – Weather Modification Program** – Staff presented background information and was seeking a recommendation that the Commission adopt an addendum to the previously approved CEQA Initial Study and Negative Declaration, and authorize the General Manager to enter into one or more contracts and to issue purchase orders for a total not-to-exceed amount of \$1,800,000 over five years for the Stanislaus Weather Modification Program. All purchase orders will be charged against approved annual Hydroelectric operating budgets. A draft Commission Staff Report and the draft addendum to the agreement were available for review.

Motion: A motion was made by Jiayo Chiang and seconded by Mike Brozo recommending Commission approval of the addendum to the CEQA Initial Study/Negative Declaration authorizing the General Manager or his designee to enter into one or more contracts as approved by the NCPA General Counsel and to issue purchase orders for a total not-to-exceed amount of \$1,800,000 over five (5) years for the Stanislaus Weather Modification Program. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

- 12. NCPA Hydroelectric Facility – Western Area Power Administration Support Agreement Extension** - Staff is seeking a recommendation for Commission approval of an extension to the Support Agreement between NCPA and Western Area Power Administration for maintenance services, for use at NCPA Hydro facility. All purchase orders issued pursuant to the agreement will be charged against approved Annual Operating Budgets. A draft Commission Staff Report and the draft addendum to the agreement were available for review.

Motion: A motion was made by William Forsythe and seconded by Alan Hanger recommending Commission approval authorizing the General Manager or his designee to extend an existing Contract for Maintenance Services with Western Area Power Administration (WAPA) for transmission line, transformer and substation service maintenance, as approved by the NCPA General Counsel, which shall not exceed \$1,000,000 over five years for use at all facilities owned and/or operated by NCPA. A vote was taken by roll call: YES = Alameda, Biggs, Gridley, Lodi, Lompoc, Palo Alto, Plumas-Sierra, Roseville, and Santa Clara. The motion passed.

- 13. NCPA Generation Services Plant Updates – Information Only** – NCPA Plant Staff will provide the Committee with an informational update on current plant activities and conditions.

Staff provided the facility outage schedule for 2019. Hydro will have a major outage with the stator rewind for Unit 1 scheduled from August 31 through December 8. RA balance will be updated and distributed next week, with capacity balance and CAISO requirements based on last year's estimate. Staff has asked that members check their schedules and get back to NCPA with any questions or issues regarding the outages that are proposed.

Geo staff updated the Committee with various activities going on at the sites. Current generation is 2MW higher than originally forecasted. The cooling tower deck is receiving an overlay to preserve the wood, while P-Site wells are undergoing wireline work due to damage. Several O&M supervising positions have been filled, plus there are additional postings for operations positions due to retirements.

14. Planning and Operations Update –

- CCA Services Update – East Bay Community Energy has been operating since June 1. NCPA is working on procurement with them. Things have been going smoothly with Pioneer Community Energy. Both organizations are now focused on longer term procurement. San Jose Clean Energy will begin operating on September 1. They are actively working with the CAISO to complete their registration process.
- PG&E has developed a new procedure regarding fire safety which would include load dropping in the event of a fire emergency. Certain members have been contacted by PG&E regarding this new procedure. NCPA will contact PG&E to setup a meeting to learn more about the program. NCPA will also do some initial research per review of any CPUC documentation regarding the new program. Plumas-Sierra has offered to help with the research efforts.
- Order 890 Complaint – NCPA is working to develop a new transmission planning procedure that may be presented to PG&E for consideration. FERC held a technical conference in May due to the filed complaint. In response to the technical conference, NCPA, TANC and the CPUC filed coordinated comments further supporting development of an open and transparent PG&E transmission planning process. NCPA will report back at the next Facilities Committee meeting, and may file a motion for expedited treatment of the complaint at FERC, if resolution is not reached soon.
- NCPA failed to meet certain spinning reserve instructions for Collierville on May 11. There is an ongoing investigation regarding the validity of the CAISO instructions. NCPA is looking

into the ADS software as well. NCPA will retest the unit for spinning reserves within the next six months.

15. Schedule next meeting date – The next regular Facilities Committee meeting is scheduled for August 1, 2018.

ADJOURNMENT

The meeting was adjourned at 11:10 am by the Committee Chair.

**Northern California Power Agency
July 5, 2018 Facilities Committee Meeting
Attendance List**

NCPA Facilities Committee Members, Alternates & Staff are requested to sign, but signature by members of the public is voluntary.

[illegible]

**Northern California Power Agency
July 5, 2018 Facilities Committee Meeting
Attendance List**

NCPA Facilities Committee Members are requested to sign, but signature by members of the public is voluntary.

MEMBER	NAME
ALAMEDA	
BART	
BIGGS	
GRIDLEY	
HEALDSBURG	
LODI	Jiayo Chang
LOMPOC	
PALO ALTO	
PLUMAS-SIERRA REC	Michael Brog
PORT OF OAKLAND	
ROSEVILLE	Willie
SANTA CLARA	
TID	
UKIAH	



Commission Staff Report

July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: June 2018 Financial Report (Unaudited)

AGENDA CATEGORY: Consent

FROM:	Sondra Ainsworth <i>[Signature]</i>	METHOD OF SELECTION:
	Treasurer-Controller	N/A
Division:	Administrative Services	
Department:	Accounting & Finance	

IMPACTED MEMBERS:

All Members <input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input type="checkbox"/>	City of Lompoc <input type="checkbox"/>	City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input type="checkbox"/>
City of Biggs <input type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input type="checkbox"/>	City of Roseville <input type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input type="checkbox"/>	City of Santa Clara <input type="checkbox"/>	Other <input type="checkbox"/>

If other, please specify

RECOMMENDATION:

Approval by all members

NOTICE:

The disbursements of the Northern California Power Agency for the month reported herein, will be approved at the July 26, 2018 meeting of the NCPA Commission. The following page is a summary of those disbursements.

Prior to the Chairman's call to order, the Assistant Secretary to the Commission will, upon request, make available for review the detailed listing of those disbursements.

The report of budget vs. actual costs and the unaudited June 2018 financial reports are also included.

FISCAL IMPACT:

This report has no direct budget impact to the Agency.

ENVIRONMENTAL ANALYSIS:

The financial report would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary.

Respectfully submitted,

A handwritten signature in cursive script that reads "Ken Spier for Randy Howard". The signature is written in dark ink and is positioned above the printed name of Randy S. Howard.

RANDY S. HOWARD
General Manager

Attachments: (1)

**NORTHERN CALIFORNIA POWER AGENCY
and ASSOCIATED POWER CORPORATIONS**

**Schedule of Disbursements
(Unaudited)**

For the Month of June 2018

Operations:

Geothermal	\$ 1,049,459
Hydroelectric	2,590,960
CT#1 Combustion Turbines	91,087
CT#2 STIG	539,141
Lodi Energy Center	2,845,506
NCPA Operating	<u>29,469,110</u>
Total	<u><u>\$ 36,585,263</u></u>

NORTHERN CALIFORNIA POWER AGENCY
REPORT OF BUDGET VS. ACTUAL COST
FOR THE PERIOD ENDED JUNE 30, 2018

PERCENT OF
YEAR ELAPSED
100%

	This Month	Actual Year To-Date	FY 2018 Budget	% Used	
<u>GENERATION RESOURCES</u>					
NCPA Plants					
Hydroelectric					
Other Plant Cost	\$ 1,920,787	\$ 18,759,308	\$ 15,603,994	120%	(a)
Debt Service (Net)	1,716,438	36,786,409	38,258,150	96%	
Annual Budget Cost	3,637,225	55,545,717	53,862,144	103%	
Geothermal					
Other Plant Cost	2,756,234	25,156,707	27,184,263	93%	
Debt Service (Net)	411,312	4,935,743	4,935,743	100%	
Annual Budget Cost	3,167,546	30,092,450	32,120,006	94%	
Combustion Turbine No. 1					
	977,520	5,093,780	3,198,552	159%	(b)
Combustion Turbine No. 2 (Stig)					
Fuel and Pipeline Transport Charges	74,734	1,083,240	834,641	130%	(c)
Other Plant Cost	295,555	2,319,926	2,095,083	111%	(c)
Debt Service (Net)	474,410	5,692,922	5,692,922	100%	
Annual Budget Cost	844,699	9,096,088	8,622,646	105%	
Lodi Energy Center					
Fuel	152,442	26,982,484	14,877,170	181%	(d)
Other Plant Cost	2,834,758	24,424,848	19,794,554	123%	(d)
Debt Service (Net)	2,201,387	26,198,433	26,416,640	99%	
Annual Budget Cost	5,188,587	77,605,765	61,088,364	127%	
Member Resources - Energy	5,836,046	55,301,268	53,389,034	104%	(e)
Member Resources - Natural Gas	272,520	3,452,141	3,457,156	100%	
Western Resources	2,875,510	25,319,237	30,119,880	84%	
Market Power Purchases	1,976,679	36,441,392	19,318,025	189%	(f)
Load Aggregation Costs - CAISO	19,192,413	208,915,131	233,822,294	89%	
Net GHG Obligations	-	1,394,460	445,917	313%	(g)
	43,968,745	508,257,429	499,444,018	102%	
<u>TRANSMISSION</u>					
Independent System Operator					
Grid Management Charge	627,266	4,008,954	2,466,609	163%	(h)
Wheeling Access Charge	9,515,494	103,800,034	96,760,295	107%	(i)
Ancillary Services	796,623	4,580,672	2,639,380	174%	(j)
Other Charges	279,281	16,384,205	1,058,438	1548%	(k)
	11,218,664	128,773,865	102,924,722	125%	
<u>MANAGEMENT SERVICES</u>					
Legislative & Regulatory					
Legislative Representation	215,883	1,731,338	1,976,008	88%	
Regulatory Representation	97,355	713,742	837,639	85%	
Western Representation	76,617	555,350	829,636	67%	
Member Services	47,810	384,786	436,078	88%	
Judicial Action	200,498	827,006	625,000	132%	(l)

**NORTHERN CALIFORNIA POWER AGENCY
REPORT OF BUDGET VS. ACTUAL COST
FOR THE PERIOD ENDED JUNE 30, 2018**

PERCENT OF YEAR ELAPSED
100%

	This Month	Actual Year To-Date	FY 2018 Budget	% Used	
Power Management					
System Control & Load Dispatch	731,130	5,680,715	5,864,452	97%	
Forecasting, Planning, Prescheduling & Trading	305,697	2,445,295	2,647,017	92%	
Industry Restructuring & Regulatory Affairs	39,107	308,794	424,174	73%	
Contract Admin, Interconnection Svcs & External Affairs	113,216	868,859	1,151,828	75%	
Green Power Project	320	2,375	17,746	13%	
Gas Purchase Program	8,508	63,884	88,131	72%	
Market Purchase Project	12,370	94,707	130,141	73%	
Energy Risk Management	10,590	175,991	206,836	85%	
Settlements	79,102	584,080	774,377	75%	
Integrated Systems Support	94,254	170,257	318,562	53%	
Participant Pass Through Costs	66,202	1,219,585	1,525,907	80%	
Support Services	112,387	484,589	-	N/A	
	2,211,046	16,311,353	17,853,532	91%	
TOTAL ANNUAL BUDGET COST	57,398,455	653,342,647	620,222,272	105%	
LESS: THIRD PARTY REVENUE					
Plant ISO Energy Sales	5,175,008	105,380,988	70,367,243	150%	(m)
Load Aggregation Energy Sales	18,909,803	119,642,635	151,018,772	79%	
Ancillary Services Sales	456,283	5,898,251	2,731,442	216%	(n)
Western Resource Energy Sales	2,501,751	23,434,056	18,026,100	130%	(o)
Other ISO Revenue	1,651,944	18,455,464	-	N/A	
Transmission Sales	9,198	110,376	110,376	100%	
Western Credits, Interest and Other Income	1,997,651	14,751,139	15,712,788	94%	
	30,701,638	287,672,909	257,966,721	112%	
NET ANNUAL BUDGET COST TO PARTICIPANTS	\$ 26,696,817	\$ 365,669,738	\$ 362,255,551	101%	

- (a) Increase in costs due to unbudgeted outside services related to the dredging of the Beaver Creek reservoir. It is anticipated that costs will be offset by insurance and FEMA proceeds.
- (b) Increase in costs due to greater than projected MWhs of generation. CT1 is at 1,001% of budgeted MWhs at 6/30/18. Fuel costs, CA ISO charges, and other variable costs have all increased as a result of increased generation.
- (c) Increase in costs due to greater than projected MWhs of generation. CT2 is at 745% of budgeted MWhs at 6/30/18. Fuel costs and CA ISO charges have increased as a result of increased generation.
- (d) Increase in costs due to greater than projected MWhs of generation. LEC is at 285% of budgeted MWhs at 6/30/18. Fuel costs and CA ISO charges have increased as a result of increased generation.
- (e) Increase in costs over budget due to unbudgeted costs for Pioneer Community Energy.
- (f) Increase due to unbudgeted market purchases and NCPA contracts. Unbudgeted contracts include Gridley PV, Bart PV, as well as deals made after the FY18 budget including certain Powerex, Shell, and EDF deals.
- (g) Purchases made several months in advance. Increase primarily due to greater than anticipated GHG allowances purchased at auction for the City of Lodi.
- (h) Increase due to greater than projected MWhs of generation. See notes (b), (c), and (d).
- (i) Increase due to overestimated load served at high voltage point and overestimated member generation resulting in additional wheeling charges.
- (j) Increase due to greater than projected MWhs of generation. See notes (b), (c), and (d) and corresponding increase in ancillary services sales.
- (k) The large budget to actual variance is caused by unbudgeted CAISO costs including imbalance costs, neutrality allocations, congestion offsets, and other cost allocations. These costs are not budgeted due to their unpredictable nature.
- (l) Variance due to unbudgeted legal costs.
- (m) Variance due to higher than anticipated ISO energy sales for the Lodi Energy Center (LEC), CT1, CT2, and Hydro.
- (n) Increase due to greater than projected MWhs of generation. See notes (b), (c), (d), and (i) and corresponding increase in ancillary services costs.
- (o) Variance due primarily to \$1.45 million in unbudgeted displacement revenue.

COMBINED STATEMENTS OF NET POSITION

NORTHERN CALIFORNIA POWER AGENCY AND ASSOCIATED POWER CORPORATIONS

UNAUDITED

	June 30,	
	2018	2017
	(in thousands)	
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	\$ 18,404	\$ 45,779
Investments	57,721	24,825
Accounts receivable		
Participants	41	997
Other	1,200	5,650
Interest receivable	307	171
Inventory and supplies	9,746	9,746
Prepaid expenses	1,570	1,285
TOTAL CURRENT ASSETS	88,989	88,453
RESTRICTED ASSETS		
Cash and cash equivalents	63,879	80,265
Investments	157,983	141,042
Interest receivable	613	476
TOTAL RESTRICTED ASSETS	222,475	221,783
ELECTRIC PLANT		
Electric plant in service	1,504,546	1,501,733
Less: accumulated depreciation	(973,465)	(942,713)
	531,081	559,020
Construction work-in-progress	260	821
TOTAL ELECTRIC PLANT	531,341	559,841
OTHER ASSETS		
Regulatory assets	229,014	236,245
Unused vendor credits	-	24
Preliminary survey and investigation costs	12	-
Investment in associated companies	265	-
TOTAL ASSETS	1,072,096	1,106,346
DEFERRED OUTFLOWS OF RESOURCES		
Excess cost on refunding of debt	41,876	48,106
Pension deferrals	13,506	13,506
TOTAL DEFERRED OUTFLOWS OF RESOURCES	55,382	61,612
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$ 1,127,478	\$ 1,167,958

COMBINED STATEMENTS OF NET POSITION

NORTHERN CALIFORNIA POWER AGENCY AND ASSOCIATED POWER CORPORATIONS

UNAUDITED

	June 30,	
	2018	2017
	(in thousands)	
LIABILITIES		
CURRENT LIABILITIES		
Accounts payable and accrued expenses	\$ 18,792	\$ 30,456
Member advances	1,068	993
Operating reserves	21,168	20,024
Current portion of long-term debt	42,335	39,495
Accrued interest payable	8,638	10,582
TOTAL CURRENT LIABILITIES	92,001	101,550
NON-CURRENT LIABILITIES		
Net pension liability	64,589	64,589
Operating reserves and other deposits	145,740	138,665
Interest rate swap liability	13,819	15,173
Long-term debt, net	694,860	737,022
TOTAL NON-CURRENT LIABILITIES	919,008	955,449
TOTAL LIABILITIES	1,011,009	1,056,999
DEFERRED INFLOWS OF RESOURCES		
Regulatory credits	71,163	72,439
Pension deferrals	4,460	4,460
TOTAL DEFERRED INFLOWS OF RESOURCES	75,623	76,899
NET POSITION		
Net investment in capital assets	(62,013)	(62,191)
Restricted	54,397	58,269
Unrestricted	48,462	37,982
TOTAL NET POSITION	40,846	34,060
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	\$ 1,127,478	\$ 1,167,958

**COMBINED STATEMENTS OF REVENUES, EXPENSES
AND CHANGES IN NET POSITION**

**NORTHERN CALIFORNIA POWER AGENCY
AND ASSOCIATED POWER CORPORATIONS**

UNAUDITED

	Twelve Months Ended June 30,	
	2018	2017
	(in thousands)	
OPERATING REVENUES		
Participants	\$ 380,759	\$ 334,913
Other Third-Party	178,963	131,825
TOTAL OPERATING REVENUES	559,722	466,738
OPERATING EXPENSES		
Purchased power	224,625	192,806
Operations	73,718	52,558
Transmission	135,289	103,544
Depreciation	30,913	30,749
Maintenance	21,054	16,970
Administrative and general	23,371	21,680
TOTAL OPERATING EXPENSES	508,970	418,307
NET OPERATING REVENUES	50,752	48,431
NON OPERATING (EXPENSES) REVENUES		
Interest expense	(37,701)	(34,550)
Interest income	4,768	60
Other	7,881	12,929
TOTAL NON OPERATING EXPENSES	(25,052)	(21,561)
FUTURE RECOVERABLE AMOUNTS	(7,231)	(13,274)
REFUNDS TO PARTICIPANTS	(11,683)	(7,499)
INCREASE (DECREASE) IN NET POSITION	6,786	6,097
NET POSITION, Beginning of year	34,060	27,963
NET POSITION, Period ended	\$ 40,846	\$ 34,060

OTHER FINANCIAL INFORMATION

COMBINING STATEMENT OF NET POSITION

NORTHERN CALIFORNIA POWER AGENCY
AND ASSOCIATED POWER CORPORATIONS

(000's omitted)

June 30, 2018

	GENERATING & TRANSMISSION RESOURCES										
	Geothermal	Hydroelectric	Multiple Capital Facilities	CT No. One	Lodi Energy Center	Transmission No. One	Purchased Power & Transmission	Associated Member Services	Other Agency	Combined	
ASSETS											
CURRENT ASSETS											
Cash and cash equivalents	\$ 1	\$ -	\$ 1	\$ 1	\$ 73	\$ -	\$ -	\$ 71	\$ 18,257	\$ 18,404	
Investments	-	-	-	-	-	-	-	-	57,721	57,721	
Accounts receivable	-	-	-	-	-	-	-	-	41	41	
Participants	-	-	-	-	-	-	-	-	1,200	1,200	
Other	-	-	-	-	-	-	-	-	220	220	
Interest receivable	-	-	-	-	-	-	-	-	-	-	
Inventory and supplies	4,509	1,079	642	1,405	2,111	-	-	29	-	-	
Prepaid expenses	290	351	26	38	286	-	-	-	550	1,570	
Due from Agency and other programs*	16,505	10,851	2,231	(1,171)	8,642	-	17,228	14,960	(69,246)	-	
TOTAL CURRENT ASSETS	21,305	12,282	2,900	273	11,112	-	18,045	15,060	8,012	88,989	
RESTRICTED ASSETS											
Cash and cash equivalents	8,499	28,014	927	-	3,658	-	7,738	-	15,043	63,879	
Investments	20,970	33,410	5,041	-	21,994	-	19,578	-	56,990	157,983	
Interest receivable	88	183	16	-	79	-	-	-	247	613	
TOTAL RESTRICTED ASSETS	29,557	61,607	5,984	-	25,731	-	27,316	-	72,280	222,475	
ELECTRIC PLANT											
Electric plant in service	570,187	394,820	64,844	36,517	423,805	7,736	-	739	5,898	1,504,546	
Less: accumulated depreciation	(535,654)	(262,226)	(48,363)	(34,478)	(81,554)	(7,736)	-	(397)	(3,057)	(973,465)	
	34,533	132,594	16,481	2,039	342,251	-	-	342	2,841	531,081	
Construction work-in-progress	-	-	-	-	182	-	-	-	78	260	
TOTAL ELECTRIC PLANT	34,533	132,594	16,481	2,039	342,433	-	-	342	2,919	531,341	
OTHER ASSETS											
Regulatory assets	173	138,065	10,608	-	23,789	-	-	-	56,379	229,014	
Preliminary survey and investigation costs	-	-	-	-	-	-	-	12	-	12	
Investment in associated companies	-	-	-	-	-	-	-	-	265	265	
TOTAL ASSETS	85,568	344,548	35,973	2,312	403,065	-	45,361	15,414	139,855	1,072,096	
DEFERRED OUTFLOWS OF RESOURCES											
Excess cost on refunding of debt	1,585	37,268	893	-	2,130	-	-	-	-	41,876	
Pension deferrals	-	-	-	-	-	-	-	-	13,506	13,506	
TOTAL DEFERRED OUTFLOWS OF RESOURCES	1,585	37,268	893	-	2,130	-	-	-	13,506	55,382	
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$ 87,153	\$ 381,816	\$ 36,866	\$ 2,312	\$ 405,195	\$ -	\$ 45,361	\$ 15,414	\$ 153,361	\$ 1,127,478	

* Eliminated in Combination

OTHER FINANCIAL INFORMATION

COMBINING STATEMENT OF NET POSITION

NORTHERN CALIFORNIA POWER AGENCY AND ASSOCIATED POWER CORPORATIONS (000's omitted)

June 30, 2018

	GENERATING & TRANSMISSION RESOURCES										Other Agency	Combined
	Geothermal	Hydroelectric	Multiple Capital Facilities	CT No. One	Lodi Energy Center	Transmission	Purchased Power & Transmission	Associated Member Services				
LIABILITIES												
CURRENT LIABILITIES												
Accounts payable and accrued expenses	\$ 134	\$ 724	\$ 3	\$ 14	\$ 944	\$ -	\$ 8,335	\$ -	\$ 8,638	\$ 18,792		
Member advances	791	-	-	-	-	-	-	277	-	1,068		
Operating reserves	6,213	250	513	702	13,490	-	-	-	-	21,168		
Current portion of long-term debt	4,250	22,610	3,995	-	11,480	-	-	-	-	42,335		
Accrued interest payable	347	6,364	710	-	1,217	-	-	-	-	8,638		
TOTAL CURRENT LIABILITIES	11,735	29,948	5,221	716	27,131	-	8,335	277	8,638	92,001		
NON-CURRENT LIABILITIES												
Net pension liability	-	-	-	-	-	-	-	-	-	64,589		
Operating reserves and other deposits	19,666	16,737	-	-	1,716	-	27,403	7,937	72,281	145,740		
Interest rate swap liability	-	13,819	-	-	-	-	-	-	-	13,819		
Long-term debt, net	24,520	308,919	30,228	-	331,193	-	-	-	-	694,860		
TOTAL NON-CURRENT LIABILITIES	44,186	339,475	30,228	-	332,909	-	27,403	7,937	136,870	919,008		
TOTAL LIABILITIES	55,921	369,423	35,449	716	360,040	-	35,738	8,214	145,508	1,011,009		
DEFERRED INFLOWS OF RESOURCES												
Regulatory credits	19,124	4,213	941	2,204	40,953	-	-	278	3,450	71,163		
Pension deferrals	-	-	-	-	-	-	-	-	4,460	-		
TOTAL DEFERRED INFLOWS OF RESOURCES	19,124	4,213	941	2,204	40,953	-	-	278	7,910	75,623		
NET POSITION												
Net investment in capital assets	(5,915)	(36,920)	(7,137)	-	(12,877)	-	-	-	836	(62,013)		
Restricted	8,655	34,410	5,275	-	13,357	-	-	(7,300)	-	54,397		
Unrestricted	9,368	10,690	2,338	(608)	3,722	-	9,623	14,222	(893)	48,462		
TOTAL NET POSITION	12,108	8,180	476	(608)	4,202	-	9,623	6,922	(57)	40,846		
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	\$ 87,153	\$ 381,816	\$ 36,866	\$ 2,312	\$ 405,195	\$ -	\$ 45,361	\$ 15,414	\$ 153,361	\$ 1,127,478		

OTHER FINANCIAL INFORMATION

COMBINING STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

NORTHERN CALIFORNIA POWER AGENCY
AND ASSOCIATED POWER CORPORATIONS
(000's omitted)

For the Eleven Months Ended June 30, 2018

	GENERATING & TRANSMISSION RESOURCES										Other Agency	Combined
	Geothermal	Hydroelectric	Multiple Capital Facilities	CT No. One	Lodi Energy Center	Transmission	Purchased Power & Transmission	Associated Member Services				
OPERATING REVENUES												
Participants	\$ 4,173	\$ 18,907	\$ 6,453	\$ 1,556	\$ 26,510	\$ -	\$ 303,116	\$ 19,333	\$ 711	\$ 380,759		
Other Third-Party	28,224	28,445	1,193	2,523	51,455	-	64,476	2,647	-	178,963		
TOTAL OPERATING REVENUES	32,397	47,352	7,646	4,079	77,965	-	367,592	21,980	711	559,722		
OPERATING EXPENSES												
Purchased power	400	2,841	364	392	4,789	-	215,839	-	-	224,625		
Operations	15,507	3,964	1,760	1,851	37,390	-	3,452	9,794	-	73,718		
Transmission	302	(32)	(20)	(9)	812	-	134,231	5	-	135,289		
Depreciation	3,897	9,663	2,206	184	14,612	-	-	39	312	30,913		
Maintenance	5,309	7,834	653	1,933	5,212	-	-	113	-	21,054		
Administrative and general	4,788	4,899	705	760	4,480	-	-	7,310	429	23,371		
Intercompany (sales) purchases, net*	(622)	252	60	104	275	-	-	(69)	-	-		
TOTAL OPERATING EXPENSES	29,581	29,421	5,728	5,215	67,570	-	353,522	17,192	741	508,970		
NET OPERATING REVENUES	2,816	17,931	1,918	(1,136)	10,395	-	14,070	4,788	(30)	50,752		
NON OPERATING (EXPENSES) REVENUES												
Interest expense	(946)	(18,874)	(2,696)	-	(15,185)	-	-	-	-	(37,701)		
Interest income	698	776	32	-	689	-	650	43	1,880	4,768		
Other	20	3,564	1,471	-	2,440	-	-	44	342	7,881		
TOTAL NON OPERATING (EXPENSES) REVENUES	(228)	(14,534)	(1,193)	-	(12,056)	-	650	87	2,222	(25,052)		
FUTURE RECOVERABLE AMOUNTS												
REFUNDS TO PARTICIPANTS	(560)	(7,944)	(863)	-	2,136	249	-	-	(249)	(7,231)		
INCREASE (DECREASE) IN NET POSITION	(2,993)	(1,070)	(151)	428	(2,481)	-	(1,329)	(2,445)	(1,642)	(11,683)		
NET POSITION, Beginning of year	(965)	(5,617)	(289)	(708)	(2,006)	249	13,391	2,430	301	6,786		
NET POSITION, Period ended	13,073	13,797	765	100	6,208	(249)	(3,768)	4,492	(358)	34,060		
	\$ 12,108	\$ 8,180	\$ 476	\$ (608)	\$ 4,202	\$ -	\$ 9,623	\$ 6,922	\$ (57)	\$ 40,846		

* Eliminated in Combination

NORTHERN CALIFORNIA POWER AGENCY & ASSOCIATED POWER CORPORATIONS
AGED ACCOUNTS RECEIVABLE
June 30, 2018

<u>Status</u>	<u>Participant / Customer</u>	<u>Description</u>	<u>Amount</u>
CURRENT			\$ 1,241,013
PAST DUE:			
1 - 30			
31 - 60			
61 - 90			
91 - 120			
Over 120 Days			
PARTICIPANT and OTHER RECEIVABLES (net)			<u>\$ 1,241,013</u>

NOTE: All amounts invoiced or credited to members and others are project/program specific.
NCPA does not apply any credits issued to outstanding invoices unless directed.

**NORTHERN CALIFORNIA POWER AGENCY
and ASSOCIATED POWER CORPORATIONS**

**Schedule of Disbursements
(Unaudited)**

For the Month of June 2018

Operations:

Geothermal	\$	1,049,459
Hydroelectric		2,590,960
CT#1 Combustion Turbines		91,087
CT#2 STIG		539,141
Lodi Energy Center		2,845,506
NCPA Operating		29,469,110
Total	\$	36,585,263



Commission Staff Report

July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Treasurer's Report for Month Ended June 30, 2018

AGENDA CATEGORY: Consent

FROM:	Sondra Ainsworth <i>[Signature]</i>	METHOD OF SELECTION:
	Treasurer-Controller	N/A
Division:	Administrative Services	
Department:	Accounting & Finance	

IMPACTED MEMBERS:

All Members	<input checked="" type="checkbox"/>	City of Lodi	<input type="checkbox"/>	City of Shasta Lake	<input type="checkbox"/>
Alameda Municipal Power	<input type="checkbox"/>	City of Lompoc	<input type="checkbox"/>	City of Ukiah	<input type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	City of Palo Alto	<input type="checkbox"/>	Plumas-Sierra REC	<input type="checkbox"/>
City of Biggs	<input type="checkbox"/>	City of Redding	<input type="checkbox"/>	Port of Oakland	<input type="checkbox"/>
City of Gridley	<input type="checkbox"/>	City of Roseville	<input type="checkbox"/>	Truckee Donner PUD	<input type="checkbox"/>
City of Healdsburg	<input type="checkbox"/>	City of Santa Clara	<input type="checkbox"/>	Other	<input type="checkbox"/>

If other, please specify

RECOMMENDATION:

Approval by all members.

BACKGROUND:

In compliance with Agency policy and State of California Government Code Sections 53601 and 53646(b), the following monthly report is submitted for your information and acceptance.

Cash - At month end cash totaled \$30,115,530 of which approximately \$102,239 was applicable to Special and Reserve Fund Deposits, \$25,612,607 to Debt Service and \$4,400,684 to Operations and other.

The cash balance held at U.S. Bank includes outstanding checks that have not yet cleared. This cash balance is invested nightly in a fully collateralized (U.S. Government Securities) repurchase agreement.

Investments - The carrying value of NCPA's investment portfolio totaled \$267,867,002 at month end. The current market value of the portfolio totaled \$264,302,937.

The overall portfolio had a combined weighted average interest rate of 1.691% with a bond equivalent yield (yield to maturity) of 1.715%. Investments with a maturity greater than one year totaled \$150,251,000. June maturities totaled \$70 million and monthly receipts totaled \$35 million. During the month \$26 million was invested.

Funds not required to meet annual cash flow are reinvested and separately reported as they occur.

Interest Rates - During the month, rates on 90 day T-Bills increased 1 basis point (from 1.92% to 1.93%) and rates on one year T-Bills increased 2 basis points (from 2.31% to 2.33%).

To the best of my knowledge and belief, all securities held by NCPA as of June 30, 2018 are in compliance with the Agency's investment policy. There are adequate cash flow and investment maturities to meet next month's cash requirements.

FISCAL IMPACT:

This report has no direct budget impact to the Agency.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

Respectfully submitted,


RANDY S. HOWARD
General Manager

Attachment

SR: 174:18

NORTHERN CALIFORNIA POWER AGENCY

TREASURER'S REPORT

JUNE 30, 2018

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DETAIL REPORT OF INVESTMENTS	APPENDIX

**Northern California Power Agency
Treasurer's Report
Cash & Investment Balance
June 30, 2018**

	CASH	INVESTMENTS	TOTAL	PERCENT
NCPA FUNDS				
Operating	\$ 1,986,234	\$ 100,075,872	\$ 102,062,106	34.25%
Special Deposits	\$ 1,416,156	\$ -	\$ 1,416,156	0.48%
Construction	\$ 998,294	\$ 3,985,546	\$ 4,983,840	1.67%
Debt Service	\$ 25,612,607	\$ 12,843,996	\$ 38,456,603	12.90%
Special & Reserve	\$ 102,239	\$ 150,961,588	\$ 151,063,827	50.70%
	<u>\$ 30,115,530</u>	<u>\$ 267,867,002</u>	<u>\$ 297,982,532</u>	<u>100.00%</u>

Portfolio Investments at Market Value

\$ 264,302,937

NOTE A -Investment amounts shown at book carrying value.

**Northern California Power Agency
Treasurer's Report
Cash Activity Summary
June 30, 2018**

	RECEIPTS			EXPENDITURES			CASH INCREASE / (DECREASE)
	OPS/CONSTR	INTEREST (NOTE B)	INVESTMENTS (NOTE A)	OPS/CONSTR	INVESTMENTS (NOTE B)	INTER-COMPANY/ FUND TRANSFERS	
NCPA FUNDS							
Operating	\$ 32,959,602	\$ 37,502	\$ 19,438,255	\$ (19,363,102)	\$ (20,175,677)	\$ (12,721,645)	\$ 174,935
Special Deposits	1,729,876	9	-	(11,941,676)	-	10,215,901	4,110
Construction	-	-	985,000	-	-	-	985,000
Debt Service	-	2,540	41,306,197	(21,330,661)	-	5,266,233	25,244,309
Special & Reserve	-	273,162	8,724,510	-	(6,237,182)	(2,760,489)	1
	<u>\$ 34,689,478</u>	<u>\$ 313,213</u>	<u>\$ 70,453,962</u>	<u>\$ (52,635,439)</u>	<u>\$ (26,412,859)</u>	<u>\$ -</u>	<u>\$ 26,408,355</u>

NOTE A -Investment amounts shown at book carrying value.

NOTE B -Net of accrued interest purchased on investments.

**Northern California Power Agency
Treasurer's Report
Investment Activity Summary
June 30, 2018**

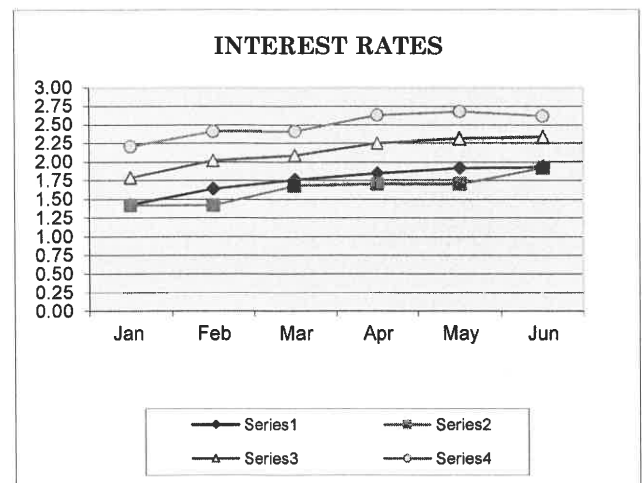
	PURCHASED	SOLD OR MATURED	(NON-CASH) DISC/(PREM) AMORT	(NON-CASH) GAIN/(LOSS) ON SALE	INVESTMENTS TRANSFERS	INCREASE / (DECREASE)
NCPA FUNDS						
Operating	\$ 20,175,677	\$ (19,438,255)	\$ 9,021	\$ (167,756)	\$ -	\$ 578,687
Special Deposits	-	-	-	-	-	-
Construction	-	(985,000)	(198)	-	-	(985,198)
Debt Service	-	(41,306,197)	41,740	-	-	(41,264,457)
Special & Reserve	6,237,182	(8,724,510)	(7,183)	(40,000)	-	(2,534,511)
	<u>\$ 26,412,859</u>	<u>\$ (70,453,962)</u>	<u>\$ 43,380</u>	<u>\$ (207,756)</u>	<u>\$ -</u>	<u>\$ (44,205,479)</u>
 Less Non- Cash Activity						
Disc/(Prem) Amortization & Gain/(Loss) on Sale						<u>164,376</u>
Net Change in Investment --Before Non-Cash Activity						<u>\$ (44,041,103)</u>

NOTE A -Investment amounts shown at book carrying value.

**Northern California Power Agency
Interest Rate/Yield Analysis
June 30, 2018**

	WEIGHTED AVERAGE INTEREST RATE	BOND EQUIVALENT YIELD
OVERALL COMBINED	1.691%	1.715%
OPERATING FUNDS:	1.692%	1.722%
PROJECTS:		
Geothermal	1.835%	1.961%
Capital Facilities	1.887%	1.903%
Hydroelectric	1.642%	1.658%
Lodi Energy Center	1.860%	1.449%

KEY INTEREST RATES		
	CURRENT	PRIOR YEAR
Fed Fds (Overnight)	1.92%	1.16%
T-Bills (90da.)	1.93%	1.02%
Agency Disc (90da.)	1.90%	1.01%
T-Bills (1yr.)	2.33%	1.22%
Agency Disc (1yr.)	2.30%	1.18%
T-Notes (3yr.)	2.62%	1.52%



**Northern California Power Agency
Total Portfolio
Investment Maturities Analysis
June 30, 2018**

Type	0-7 Days	8-90 Days	91-180 Days	181-270 Days	271-365 Days	1-5 Years	6-10 Years	Total	Percent
US Government Agencies	\$ 6,891	\$ 7,481	\$18,808	\$ 5,370	\$ 9,437	\$ 116,895	\$ -	\$ 164,882	61.04%
Corporate Bonds (MTN)	-	-	-	-	-	33,210	-	33,210	12.30%
US Bank Trust Money Market	2,135	-	-	-	-	-	-	2,135	0.79%
Commercial Paper	21,200	-	-	-	-	-	-	21,200	7.85%
Investment Trusts (LAIF)	43,077	-	-	-	-	-	-	43,077	15.95%
U.S.Treasury Market Acct. *	3,989	-	-	-	-	-	-	3,989	1.48%
U.S.Treasury Bill/Note	-	1,118	78	119	137	146	-	1,598	0.59%
Certificates of Deposit	10	-	-	-	-	-	-	10	0.00%
Total Dollars	\$ 77,301	\$8,599	\$18,886	\$5,489	\$9,574	\$150,251	\$0	\$ 270,100	100.00%
Total Percents	28.62%	3.18%	6.99%	2.03%	3.54%	55.63%	0.00%	100.00%	

Investments are shown at Face Value, in thousands.

* The cash balance held at US Bank includes outstanding checks that have not yet cleared. This cash balance is invested nightly in a fully collateralized (U.S. Government Securities) repurchase agreement. Cash held by Union Bank of California is invested nightly in fully collateralized U.S. Treasury Securities.

NORTHERN CALIFORNIA POWER AGENCY

Detail Report Of Investments

APPENDIX

Note: **This appendix has been prepared to comply with
Government Code section 53646.**

**Northern California Power Agency
Treasurer's Report
06/30/2018**

Operating

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
US Bank, N.A.	USB	20,156,900	1.250	11/26/2014	20,156,900		1	1.250	20,156,900	SYS70101	70101	20,156,900
Local Agency Investm	LAIF	15,197,299	1.509	07/01/2013	15,197,299		1	1.509	15,197,299	SYS70000	70000	15,197,299
Union Bank of Califo	UBOC	11	0.002	07/01/2013	11		1	0.002	11	SYS70014	70014	11
US Bank	USB	1,986,232	0.001	06/30/2013	1,986,232		1	0.001	1,986,232	SYS70050	70050	1,986,232
US Bank	USB	1,042,697	0.850	08/24/2017	1,042,697		1	0.850	1,042,697	SYS70056	70056	1,042,697
US Bank	USB	10,000	0.050	04/07/2018	10,000	07/07/2018	6	0.050	10,000	SYS30307	30307	10,000
Federal Farm Credit	UBOC	3,626,000	1.290	12/21/2015	3,624,948	11/19/2018	141	1.300	3,615,448	3133EFPJ0	26280	3,625,862
Federal Home Loan Mt	UBOC	7,370,000	1.750	06/09/2015	7,455,050	05/30/2019	333	1.450	7,328,949	3137EADG1	26231	7,389,554
Federal Home Loan Ba	UBOC	4,975,000	1.600	08/28/2017	4,990,373	07/17/2020	747	1.490	4,874,953	3130ABTW6	26466	4,985,890
Federal Home Loan Ba	UBOC	2,785,000	1.400	07/19/2016	2,783,608	01/19/2021	933	1.411	2,684,879	3130A8P80	26355	2,784,211
Federal Home Loan Mt	UBOC	3,000,000	2.530	03/29/2018	3,000,000	03/29/2021	1,002	2.530	2,986,170	3134GSGT6	26564	3,000,000
Home Depot Inc.	UBOC	500,000	2.000	03/21/2018	487,800	04/01/2021	1,005	2.846	487,900	437076BL5	26558	488,919
Pfizer Inc	UBOC	500,000	1.950	06/12/2018	487,130	06/03/2021	1,068	2.858	486,525	717081DX8	26617	487,358
Federal Home Loan Mt	UBOC	1,000,000	2.500	06/28/2018	1,000,000	06/28/2021	1,093	2.990	1,000,030	3134GSQA6	26628	1,000,000
Federal Farm Credit	UBOC	2,602,000	1.720	08/28/2017	2,611,784	07/26/2021	1,121	1.620	2,525,241	3133EHSR5	26465	2,609,678
Federal Home Loan Mt	UBOC	3,500,000	1.500	11/23/2016	3,500,000	08/23/2021	1,149	1.500	3,355,310	3134GAVH4	26385	3,500,000
Federal Home Loan Mt	UBOC	202,000	2.200	01/30/2017	202,000	01/26/2022	1,305	2.200	196,382	3134GAV92	26403	202,000
TD Ameritrade	UBOC	500,000	2.950	05/15/2018	493,385	04/01/2022	1,370	3.315	491,260	87236YAE8	26601	493,603
PepsiCo Inc.	UBOC	500,000	2.250	03/21/2018	487,005	05/02/2022	1,401	2.924	483,965	713448DT2	26557	487,882
Apple Inc.	UBOC	1,123,337	2.300	02/01/2018	1,121,966	05/11/2022	1,410	2.329	1,090,783	037833CQ1	26525	1,122,099
NStar Electric Co.	UBOC	500,000	2.375	06/12/2018	484,480	10/15/2022	1,567	3.144	480,200	67021CAG2	26616	484,669
Boeing Co.	UBOC	500,000	2.200	06/12/2018	482,180	10/30/2022	1,582	3.074	480,925	097023BN4	26612	482,395
American Honda Finan	UBOC	500,000	2.600	06/12/2018	488,550	11/16/2022	1,599	3.157	486,720	02665WCA7	26614	488,686
Chevron Corp.	UBOC	500,000	2.355	03/21/2018	485,760	12/05/2022	1,618	3.008	478,015	166764AB6	26555	486,601
Simon Property Group	UBOC	500,000	2.750	05/15/2018	484,585	02/01/2023	1,676	3.464	483,285	829807CN5	26603	485,003
Oracle Corp.	UBOC	500,000	2.625	03/21/2018	488,010	02/15/2023	1,990	3.154	484,275	68389XBR5	26556	488,690
John Deere Capital C	UBOC	500,000	2.800	06/12/2018	489,875	03/06/2023	1,709	3.264	487,875	24422ETG4	26613	489,988
Berkshire Hathaway I	UBOC	500,000	2.750	03/21/2018	492,280	03/15/2023	1,718	3.086	489,305	084670BR8	26554	492,710
United Parcel Servic	UBOC	500,000	2.500	05/15/2018	483,225	04/01/2023	1,735	3.248	483,055	911312BK1	26600	483,664
Bank of NY Mellon Co	UBOC	500,000	3.500	05/15/2018	501,265	04/28/2023	1,762	3.443	500,220	06406RAG2	26602	501,232
Hershey Company	UBOC	500,000	3.375	06/12/2018	503,125	05/15/2023	1,779	3.236	501,810	427866AZ1	26615	503,092
Fund Total and Average		\$ 76,076,476	1.586		\$ 76,021,523		443	1.607	\$ 75,356,619			\$ 75,956,925

MPP GHG Auction Acct

Local Agency Investm		70,811	1.509	07/01/2013	70,811		1	1.509	70,811	SYS70045	70045	70,811
Fund Total and Average		\$ 70,811	1.510		\$ 70,811		1	1.510	\$ 70,811			\$ 70,811

Northern California Power Agency
Treasurer's Report
06/30/2018



SCPA Balancing Account

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
SCPA Balancing Account												
Local Agency Investm	LAIF	1,762,651	1.509	07/01/2013	1,762,651		1	1.509	1,762,651	SYS70022	70022	1,762,651
Union Bank of Calif	UBOC	0	0.002	07/01/2013	0		1	0.002	0	SYS70023	70023	0
Federal Home Loan Ba	UBOC	4,625,000	1.780	04/30/2018	4,607,392	07/16/2018	15	1.811	4,621,624	313385ZK5A	26595	4,621,570
Federal National Mtg	UBOC	1,462,000	1.625	12/18/2014	1,476,255	11/27/2018	149	1.369	1,459,120	3135G0YT4	26187	1,463,467
Federal National Mtg	UBOC	5,098,000	1.350	04/28/2016	5,098,000	10/28/2019	484	1.350	5,013,475	3135G0J95	26330	5,098,000
Federal National Mtg	UBOC	3,097,000	1.350	07/28/2016	3,097,000	07/28/2020	758	1.350	3,009,541	3136G3T39	26357	3,097,000
Bank of NY Mellon Co	UBOC	500,000	2.050	04/03/2018	486,105	05/03/2021	1,037	3.000	484,405	06406FAB9	26570	487,207
Microsoft Corp.	UBOC	500,000	2.375	04/04/2018	492,295	02/12/2022	1,322	2.798	488,885	594918BA1	26574	492,778
TD Ameritrade	UBOC	500,000	2.950	04/03/2018	497,200	04/01/2022	1,370	3.100	491,260	87236YAE8	26571	497,371
Home Depot Inc.	UBOC	500,000	2.625	04/04/2018	494,290	06/01/2022	1,431	2.918	490,395	437076BG6	26572	494,622
Public Storage	UBOC	500,000	2.370	04/04/2018	483,705	09/15/2022	1,537	3.161	480,160	74460DAB5	26573	484,590
Intel Corp	UBOC	500,000	2.700	06/22/2018	492,300	12/15/2022	1,628	3.070	489,660	458140AM2	26625	492,343
Toyota Motor Credit	UBOC	550,000	2.625	05/09/2018	536,294	01/10/2023	1,654	3.203	532,884	88233PF77	26598	536,718
Cisco Systems Inc.	UBOC	500,000	2.600	06/22/2018	487,655	02/28/2023	1,703	3.170	486,340	17275RBE1	26624	487,721
Exxon Mobil Corporat	UBOC	500,000	2.726	05/09/2018	490,280	03/01/2023	1,704	3.055	480,715	30231GAR3	26599	492,890
Berkshire Hathaway I	UBOC	500,000	2.750	05/09/2018	484,780	03/15/2023	1,718	3.185	489,305	084670BR8	26596	490,569
United Parcel Servic	UBOC	500,000	2.500	06/22/2018	480,350	04/01/2023	1,735	3.191	483,055	911312BK1	26527	484,860
Nike Inc	UBOC	500,000	2.250	05/09/2018	480,350	05/01/2023	1,765	3.108	478,340	654108AC7	26597	480,920
Federal Home Loan Mt	UBOC	2,500,000	2.750	05/24/2018	2,500,000	05/24/2023	1,788	3.326	2,496,900	3134GSLU7	26604	2,500,000
Federal Home Loan Mt	UBOC	1,000,000	2.700	06/14/2018	1,000,000	06/14/2023	1,809	3.316	998,990	3134GSNE1	26622	1,000,000
Pfizer Inc	UBOC	500,000	3.000	06/22/2018	496,550	06/15/2023	1,810	3.150	494,105	717081DH3	26626	496,567
Fund Total and Average		\$ 26,094,651	1.944		\$ 25,955,772		827	2.140	\$ 25,741,810			\$ 25,961,844

General Operating Reserve

Local Agency Investm	LAIF	15,041,950	1.509	07/01/2013	15,041,950		1	1.509	15,041,950	SYS70000	70002	15,041,950
Union Bank of Calif	UBOC	0	0.002	07/01/2013	0		1	0.002	0	SYS70019	70019	0
US Bank	USB	0	0.000	07/01/2013	0		1	0.000	0	SYS70051	70051	0
Federal National Mtg	UBOC	5,970,000	1.625	12/23/2014	6,009,701	11/27/2018	149	1.450	5,958,239	3135G0YT4	26188	5,974,099
Federal National Mtg	UBOC	4,982,000	1.750	08/28/2015	5,047,364	11/26/2019	513	1.430	4,932,877	3135G0ZY2	26246	5,003,603
Federal Farm Credit	UBOC	4,285,000	1.440	07/20/2016	4,280,715	01/19/2021	933	1.463	4,152,893	3133EGMP7	26356	4,282,570
Federal Home Loan Ba	UBOC	11,720,000	1.400	07/19/2016	11,714,140	01/19/2021	933	1.411	11,298,666	3130A9P80	26354	11,716,679
Federal National Mtg	UBOC	5,162,000	1.625	05/25/2016	5,162,000	05/25/2021	1,059	1.625	4,992,015	3136G3NL5	26332	5,162,000
Federal National Mtg	UBOC	1,300,000	1.500	08/30/2016	1,300,000	05/28/2021	1,062	1.500	1,255,930	3136G33W3	26368	1,300,000
Federal Farm Credit	UBOC	10,629,000	1.690	06/02/2016	10,629,000	06/02/2021	1,067	1.690	10,271,122	3133EGDH5	26335	10,629,000
Federal Home Loan Mt	UBOC	467,000	2.200	01/30/2017	467,000	01/26/2022	1,305	2.200	454,013	3134GAV92	26402	467,000
Microsoft Corp.	UBOC	400,000	2.375	04/26/2018	391,480	02/12/2022	1,322	2.972	391,108	594918BA1	26578	391,885
TD Ameritrade	UBOC	500,000	2.950	04/26/2018	492,950	04/01/2022	1,370	3.335	491,260	87236YAE8	26582	493,274
Apple Inc.	UBOC	4,025,452	2.300	02/01/2018	4,020,538	05/11/2022	1,410	2.329	3,908,794	037833CQ1	26524	4,021,016



Northern California Power Agency
Treasurer's Report

06/30/2018

General Operating Reserve

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Federal Home Loan Ba	UBOC	3,575,000	2.125	08/28/2017	3,634,560	08/10/2022	1,440	1.760	3,483,909	313379Q69	26467	3,624,080
PepsiCo Inc.	UBOC	500,000	3.100	04/26/2018	500,310	07/17/2022	1,477	3.083	499,020	713448CX4	26580	500,297
Visa Inc.	UBOC	500,000	2.800	04/26/2018	492,600	12/14/2022	1,627	3.145	490,810	92826CAC6	26584	492,888
General Electric Co.	UBOC	500,000	3.100	04/26/2018	490,415	01/09/2023	1,653	3.545	488,815	36962G6S8	26577	490,783
Bank of NY Mellon Co	UBOC	500,000	2.950	04/26/2018	491,790	01/29/2023	1,673	3.325	488,675	06406RAE7	26575	492,102
Oracle Corp.	UBOC	500,000	2.625	04/26/2018	487,350	02/15/2023	1,690	3.195	484,275	68389XBR5	26579	487,826
Praxair Inc	UBOC	500,000	2.700	04/26/2018	488,350	02/21/2023	1,696	3.225	487,380	74005PBF0	26581	488,786
Berkshire Hathaway I	UBOC	500,000	2.750	04/26/2018	488,920	03/15/2023	1,718	3.243	489,305	084670BR8	26576	489,329
United Parcel Serv	UBOC	500,000	2.500	04/26/2018	483,135	04/01/2023	1,735	3.245	483,055	911312BK1	26583	483,753
Fund Total and Average		\$ 72,057,402	1.714		\$ 72,114,268		774	1.693	\$ 70,544,111			\$ 72,032,920
GRAND TOTALS:		\$ 174,299,340	1.692		\$ 174,162,374		637	1.722	\$ 171,713,351.			\$ 174,022,500

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Investment #26330	FNMA	Callable quarterly
Investment #26332	FNMA	Callable quarterly
Investment #26335	FFCB	Callable anytime
Investment #26354	FHLB	Callable anytime
Investment #26355	FHLB	Callable anytime
Investment #26356	FFCB	Callable anytime
Investment #26357	FNMA	Callable quarterly
Investment #26368	FNMA	Callable quarterly
Investment #26385	FHLMC	Callable quarterly
Investment #26403	FHLMC	Callable quarterly
Investment #26564	FHLMC	Callable until 3/29/2019
Investment #26604	FHLMC	Callable quarterly
Investment #26622	FHLMC	Callable quarterly beginning 12/14/2018
Investment #26628	FHLMC	Callable quarterly beginning 9/28/2018



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Geothermal Debt Service

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Federal Home Loan Ba	USBT	235,000	1.420	12/28/2017	233,276	07/02/2018	1	1.450	234,622	313385YV2	26509	234,991
Federal Home Loan Ba	USBT	235,000	1.679	02/27/2018	233,629	07/02/2018	1	1.713	234,622	313385YV2	26533	234,989
Federal Home Loan Ba	USBT	235,000	1.710	03/28/2018	233,928	07/02/2018	1	1.741	234,622	313385YV2	26560	234,989
Fund Total and Average		\$ 705,000	1.603		\$ 700,833		1	1.635	\$ 703,866			\$ 704,969

Geo 2012A Debt Service

Federal Home Loan Ba	USBT	124,000	1.679	02/27/2018	123,277	07/02/2018	1	1.713	123,800	313385YV2	26532	123,994
Federal Home Loan Ba	USBT	124,000	1.710	03/28/2018	123,435	07/02/2018	1	1.741	123,800	313385YV2	26561	123,994
Fund Total and Average		\$ 248,000	1.695		\$ 246,712		1	1.728	\$ 247,600			\$ 247,988

Geothermal Special Reserve

Union Bank of Calif	UBOC	0	0.002	07/01/2013	0		1	0.002	0	SYS70015	70015	0
Federal Home Loan Mt	UBOC	1,500,000	1.150	02/26/2016	1,500,000	11/26/2018	148	1.150	1,494,840	3134G8KVO	26302	1,500,000
Fund Total and Average		\$ 1,500,000	1.150		\$ 1,500,000		148	1.150	\$ 1,494,840			\$ 1,500,000

Geo Decommissioning Reserve

Local Agency Investm	LAIF	4,604,527	1.509	07/01/2013	4,604,527		1	1.509	4,604,527	SYS70027	70027	4,604,527
Union Bank of Calif	UBOC	0	0.002	07/01/2013	0		1	0.002	0	SYS70034	70034	0
Federal National Mtg	UBOC	5,500,000	1.500	08/30/2016	5,500,000	05/28/2021	1,062	1.500	5,313,550	3136G33W3	26369	5,500,000
PNC Bank NA	UBOC	750,000	2.550	03/15/2018	735,450	12/09/2021	1,257	3.103	731,378	66353REY0	26553	736,598
Federal Home Loan Mt	UBOC	941,000	2.200	01/30/2017	941,000	01/26/2022	1,305	2.200	914,831	3134GA92	26404	941,000
Apple Inc.	UBOC	861,211	2.300	11/29/2017	860,117	05/11/2022	1,410	2.329	836,253	037833CQ1	26499	860,262
Walt Disney Company/	UBOC	750,000	2.350	03/15/2018	728,580	12/01/2022	1,614	3.004	719,903	25468PCW4	26551	729,919
General Electric Co.	UBOC	750,000	3.100	03/15/2018	740,385	01/09/2023	1,653	3.390	733,223	36962G6S8	26552	740,973
John Deere Capital C	UBOC	750,000	2.800	03/15/2018	739,748	01/27/2023	1,671	3.104	733,238	24422ERT8	26550	740,368
Bank of NY Mellon Co	UBOC	750,000	2.950	03/15/2018	740,610	01/29/2023	1,673	3.229	733,013	06406RAE7	26549	741,177
IBM Credit LLC	UBOC	500,000	3.000	03/15/2018	496,820	02/06/2023	1,681	3.140	488,945	44932HAH6	26548	497,011
Federal Home Loan Mt	UBOC	2,000,000	2.700	06/14/2018	2,000,000	06/14/2023	1,809	3.316	1,997,980	3134GSNE1	26623	2,000,000
Fund Total and Average		\$ 18,166,738	2.006		\$ 18,087,237		1025	2.164	\$ 17,806,841			\$ 18,091,835

GEO Debt Service Reserve Acct

U.S. Treasury	USB	56,000	1.823	02/27/2018	55,041	01/31/2019	214	1.872	55,319	912796PP8	26536	55,393
Federal Home Loan Mt	USBT	907,000	1.750	06/02/2015	920,886	05/30/2019	333	1.354	901,948	3137EADG1	26228	910,177
Federal Home Loan Mt	USBT	2,515,000	1.250	02/27/2015	2,483,839	10/02/2019	458	1.530	2,476,797	3137EADM8	26197	2,506,508



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GEO Debt Service Reserve Acct

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Fund Total and Average		\$ 3,478,000	1.390		\$ 3,459,766		421	1.490	\$ 3,434,064			\$ 3,472,078
Geo 2012A DSR Account												
U.S. Treasury	USB	41,000	1.555	01/03/2018	40,403	12/06/2018	158	1.594	40,637	912798PE3	26511	40,720
Federal National Mtg	USBT	1,517,000	1.625	05/25/2016	1,517,000	05/25/2021	1,059	1.625	1,467,045	3136GG3NL5	26333	1,517,000
Fund Total and Average		\$ 1,558,000	1.623		\$ 1,557,403		1035	1.624	\$ 1,507,682			\$ 1,557,720
GRAND TOTALS:		\$ 25,646,738	1.835		\$ 25,551,951		854	1.961	\$ 25,194,893.			\$ 25,574,690

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Investment #26302 FHLMC Callable quarterly
Investment #26333 FNMA Callable quarterly
Investment #26369 FNMA Callable quarterly
Investment #26404 FHLMC Callable quarterly



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Cap Facilities Debt Service

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
U.S. Treasury	USBT	1,085,000	1.559	01/31/2018	1,076,725	07/26/2018	25	1.593	1,083,752	912796PR4	26521	1,083,825
Federal Home Loan Ba	USBT	464,000	1.865	05/31/2018	462,534	07/31/2018	30	1.896	463,299	313385A22A	26611	463,279
Federal Home Loan Ba	USBT	1,462,000	1.740	02/27/2018	1,451,047	08/01/2018	31	1.777	1,459,661	313385A30A	26542	1,459,809
Federal Home Loan Ba	USBT	466,000	1.770	03/27/2018	463,090	08/01/2018	31	1.805	465,254	313385A30A	26559	465,290
Federal Home Loan Ba	USBT	464,000	1.820	04/30/2018	461,818	08/01/2018	31	1.853	463,258	313385A30A	26585	463,273
Fund Total and Average		\$ 3,941,000	1.718		\$ 3,915,214		29	1.753	\$ 3,935,224			\$ 3,935,476

Cap. Fac. Debt Svc Reserve

U.S. Treasury	USB	17,000	1.680	02/27/2018	16,880	08/23/2018	53	1.717	16,955	912796PV5	26541	16,958
U.S. Treasury	USB	37,000	1.554	01/03/2018	36,461	12/06/2018	158	1.594	36,673	912796PE3	26514	36,747
Federal National Mtg	USB	71,000	1.530	07/28/2016	71,000	07/28/2021	1,123	1.530	67,956	3136G3S97	26358	71,000
Federal Home Loan Mt	USB	1,443,000	2.375	02/13/2012	1,447,430	01/13/2022	1,292	2.340	1,424,053	3137EADB2	25845	1,444,578
Fund Total and Average		\$ 1,568,000	2.310		\$ 1,571,751		1244	2.279	\$ 1,545,637			\$ 1,569,283
GRAND TOTALS:		\$ 5,509,000	1.887		\$ 5,486,965		376	1.903	\$ 5,480,861.			\$ 5,504,759

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Investment #26358 FNMA Callable quarterly



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Capital Dev. Reserve Hydro

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Local Agency Investm	LAIF	4,620,538	1.509	07/01/2013	4,620,538		1	1.509	4,620,538	SYS70028	70028	4,620,538
Union Bank of Calif	UBOC	2,002,467	0.002	07/01/2013	2,002,467		1	0.002	2,002,467	SYS70031	70031	2,002,467
Federal Home Loan Mt	UBOC	3,221,000	1.150	02/29/2016	3,221,000	11/26/2018	148	1.150	3,209,920	3134G8KVO	26304	3,221,000
Federal National Mtg	UBOC	3,320,000	1.350	06/30/2016	3,320,000	12/30/2019	547	1.350	3,255,692	3136G3VH6	26340	3,320,000
Branch Banking & Tru	UBOC	500,000	2.625	06/13/2018	488,420	01/15/2022	1,294	3.314	487,485	07330NAQ8	26618	488,581
Exxon Mobil Corporat	UBOC	500,000	2.397	06/13/2018	490,350	03/06/2022	1,344	2.946	488,900	30231GAJ1	26621	490,479
Public Storage	UBOC	500,000	2.370	03/14/2018	485,770	09/15/2022	1,537	3.051	480,160	74460DAB5	26546	486,709
Visa Inc.	UBOC	500,000	2.800	03/14/2018	494,470	12/14/2022	1,627	3.051	490,810	92826CAC6	26547	494,816
Toyota Motor Credit	UBOC	500,000	2.700	06/13/2018	489,100	01/11/2023	1,655	3.215	486,800	89236TEL5	26619	489,219
Oracle Corp.	UBOC	500,000	2.625	03/14/2018	488,715	02/15/2023	1,690	3.121	484,275	68389XBR5	26545	489,397
Boeing Co.	UBOC	500,000	2.800	03/14/2018	496,070	03/01/2023	1,704	2.971	489,295	097023BW4	26544	496,305
United Parcel Serv	UBOC	500,000	2.500	06/13/2018	484,900	04/01/2023	1,735	3.182	483,055	911312BK1	26620	485,057
Fund Total and Average		\$ 17,164,005	1.485		\$ 17,081,800		496	1.500	\$ 16,979,397			\$ 17,084,568

Hydro Initial Facilities

U.S. Treasury	USB	16,000	1.680	02/27/2018	15,868	08/23/2018	53	1.717	15,958	912798PV5	26540	15,960
Federal National Mtg	USB	1,529,000	1.625	12/12/2014	1,539,244	11/27/2018	149	1.450	1,525,988	3135G0YT4	26189	1,530,050
Federal Farm Credit	USB	2,437,000	1.250	02/02/2016	2,450,501	01/22/2019	205	1.060	2,424,181	3133EFVQ7	26300	2,439,536
Fund Total and Average		\$ 3,982,000	1.396		\$ 4,005,613		183	1.212	\$ 3,965,127			\$ 3,985,546

Hydro Debt Service

Federal Home Loan Ba	USBT	2,971,000	1.680	02/27/2018	2,953,669	07/02/2018	1	1.713	2,966,217	313385YV2	26531	2,970,861
Federal Home Loan Ba	USBT	2,967,000	1.710	03/28/2018	2,953,470	07/02/2018	1	1.741	2,962,223	313385YV2	26563	2,966,859
Fund Total and Average		\$ 5,938,000	1.695		\$ 5,907,139		1	1.728	\$ 5,928,440			\$ 5,937,720

Hydro Debt Service Resrv 2010A

U.S. Treasury	USB	52,000	1.625	02/27/2018	51,780	06/30/2019	364	1.945	51,620	912828WS5	26537	51,836
Federal Home Loan Ba	USB	135,000	4.375	07/28/2017	142,601	07/01/2019	365	1.400	137,572	3133XU3G6	26451	138,948
Federal Farm Credit	USB	5,528,000	1.750	08/28/2015	5,546,187	08/04/2020	765	1.680	5,431,371	3133EE5Z9	26243	5,535,711
Fund Total and Average		\$ 5,715,000	1.813		\$ 5,740,568		752	1.676	\$ 5,620,563			\$ 5,726,495

Hydro 2012A Rebate Account

Federal Home Loan Mt	USB	689,000	1.875	04/28/2017	691,391	08/09/2021	1,135	1.790	672,657	3134G93A3	26432	690,735
Fund Total and Average		\$ 689,000	1.875		\$ 691,391		1135	1.790	\$ 672,657			\$ 690,735



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Hydro Special Reserve

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Hydro Special Reserve												
Local Agency Investm	LAIF	0	0.377	07/01/2013	0		1	0.377	0	SYS70000	70003	0
Union Bank of Califo	UBOC	0	0.002	07/01/2013	0		1	0.002	0	SYS70016	70016	0
Federal Home Loan Mt	UBOC	1,500,000	1.150	02/26/2016	1,500,000	11/26/2018	148	1.150	1,494,840	3134G8KVO	26303	1,500,000
Fund Total and Average		\$ 1,500,000	1.150		\$ 1,500,000		148	1.150	\$ 1,494,840			\$ 1,500,000

Hydro 2012 Cost of Issuance

US Bank	USB	0	0.040	07/01/2013	0		1	0.040	0	SYS79061	79061	0
Fund Total and Average		\$ 0	*** **		\$ 0		***	*** **	\$ 0			\$ 0

Hydro 2012 DSRA

Federal Farm Credit	USB	100,000	1.750	08/28/2015	100,329	08/04/2020	765	1.680	98,252	3133EE5Z9	26244	100,139
U.S. Treasury	USB	146,000	2.250	02/27/2018	145,992	02/15/2021	960	2.251	144,711	9128283X6	26539	145,993
Federal National Mitg	USB	94,000	1.530	07/28/2016	94,000	07/28/2021	1,123	1.530	89,969	3136G3S97	26359	94,000
Federal Home Loan Mt	USB	3,928,000	2.375	02/09/2012	3,926,232	01/13/2022	1,292	2.380	3,876,425	3137EADB2	25852	3,927,371
Fund Total and Average		\$ 4,268,000	2.337		\$ 4,266,553		1265	2.340	\$ 4,209,357			\$ 4,267,503
GRAND TOTALS:		\$ 39,256,005	1.642		\$ 39,193,064		508	1.658	\$ 38,871,381.			\$ 39,192,567

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Investment #26303 FHLMC Callable quarterly
Investment #26340 FNMA Callable quarterly
Investment #26359 FNMA Callable quarterly



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LEC GHG Auction Acct

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Local Agency Investm		72,525	1.509	07/01/2013	72,525		1	1.509	72,525	SYS70046	70046	72,525
Fund Total and Average		\$ 72,525	1.509		\$ 72,525		1	1.509	\$ 72,525			\$ 72,525

LEC Issue#1 2010A DS Fund

US Bank Trust	USB	544,059	0.600	07/01/2013	544,059		1	0.600	544,059	SYS79003	79003	544,059
Fund Total and Average		\$ 544,059	0.600		\$ 544,059		1	0.600	\$ 544,059			\$ 544,059

LEC Issue #1 2010B DS Fund

US Bank Trust	USB	726,392	0.600	07/01/2013	726,392		1	0.600	726,392	SYS79004	79004	726,392
Fund Total and Average		\$ 726,392	0.600		\$ 726,392		1	0.600	\$ 726,392			\$ 726,392

LEC Issue #2 2010A DS Fund

US Bank Trust	USB	398,345	0.600	07/01/2013	398,345		1	0.600	398,345	SYS79011	79011	398,345
Fund Total and Average		\$ 398,345	0.600		\$ 398,345		1	0.600	\$ 398,345			\$ 398,345

LEC Issue #2 2010B DS Fund

US Bank Trust	USB	349,048	0.600	07/01/2013	349,048		1	0.600	349,048	SYS79012	79012	349,048
Fund Total and Average		\$ 349,048	0.600		\$ 349,048		1	0.600	\$ 349,048			\$ 349,048

LEC Issue #1 2010 DSR Fund

US Bank Trust	USB	79,946	0.600	07/01/2013	79,946		1	0.600	79,946	SYS79005	79005	79,946
U.S. Treasury	USB	85,000	1.625	02/27/2018	84,641	06/30/2019	364	1.945	84,380	912828WS5	26538	84,732
Federal Farm Credit	USB	4,360,000	1.660	06/08/2016	4,360,000	05/25/2021	1,059	1.659	4,213,809	3133EGBZ7	26337	4,360,000
Federal Home Loan Mt	USB	150,000	1.125	07/28/2017	146,648	08/12/2021	1,138	1.699	143,147	3137EAE9	26454	147,415
Federal Home Loan Ba	USB	4,100,000	2.125	08/28/2017	4,168,306	06/10/2022	1,440	1.780	3,995,532	313379Q69	26463	4,156,287
Fund Total and Average		\$ 8,774,946	1.860		\$ 8,839,541		1223	1.701	\$ 8,516,814			\$ 8,828,380

LEC Iss#1 2010B BABS Subs Resv

US Bank Trust	USB	36,594	0.600	07/01/2013	36,594		1	0.600	36,594	SYS79006	79006	36,594
U.S. Treasury	USB	38,000	1.823	02/27/2018	37,349	01/31/2019	214	1.872	37,538	912796PP8	26534	37,588
Federal Home Loan Ba	USB	2,145,000	3.375	07/28/2017	2,255,146	06/12/2020	712	1.540	2,174,773	313370E38	26455	2,219,673



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LEC Iss#1 2010B BABS Subs Resv

Issuer	Trustee / Custodian	Stated Value	Interest Rate	Purchase Date	Purchased Price	Maturity Date	Days to Maturity	Bond* Equiv Yield	Market Value	CUSIP	Investment #	Carrying Value
Fund Total and Average												
		\$ 2,219,594	3.305		\$ 2,329,089		692	1.530	\$ 2,248,905			\$ 2,293,855
LEC Issue #2 2010B DSR BABS												
US Bank Trust	USB	624	0.600	07/01/2013	624		1	0.600	624	SYS79013	79013	624
U.S. Treasury	USB	25,000	1.823	02/27/2018	24,572	01/31/2019	214	1.872	24,696	912798PP8	26535	24,729
Federal Home Loan Ba	USB	1,025,000	4.375	07/28/2017	1,082,708	07/01/2019	365	1.400	1,044,526	3133XU3G6	26456	1,054,978
Fund Total and Average												
		\$ 1,050,624	4.314		\$ 1,107,904		361	1.410	\$ 1,069,846			\$ 1,080,331

LEC O & M Reserve

Local Agency Investm												
Union Bank of Califo	UBOC	1,706,698	1.509	07/01/2013	1,706,698		1	1.509	1,706,698	SYS70047	70047	1,706,698
Federal National Mtg	UBOC	0	0.002	07/18/2013	0		1	0.002	0	SYS70041	70041	0
Federal Home Loan Ba	USB	2,933,000	1.875	08/28/2015	2,998,142	02/19/2019	233	1.220	2,926,459	3135G0ZA4	26248	2,944,872
Federal National Mtg	UBOC	3,615,000	1.540	06/30/2017	3,613,952	06/05/2020	705	1.550	3,543,278	3130ABJQ0	26440	3,614,310
Fund Total and Average												
		\$ 11,254,698	1.559		\$ 11,318,792		482	1.391	\$ 11,102,755			\$ 11,265,880
GRAND TOTALS:												
		\$ 25,390,231	1.860		\$ 25,685,695		712	1.449	\$ 25,028,689			\$ 25,558,815

*Bond Equivalent Yield to Maturity is shown based on a 365 day year to provide a basis for comparison between all types.

Investments with less than 6 months to maturity use an approximate method, all others use an exact method.

Current Market Value is based on prices from Trustee/ Custodian Statements or bid prices from the Wall Street Journal as of 06/30/2018

Investment #26337 FFCB Callable anytime



Commission Staff Report

July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Sale or Disposal of Surplus Property

AGENDA CATEGORY: Consent

FROM:	Sondra Ainsworth 	METHOD OF SELECTION:
	Treasurer-Controller	N/A
Division:	Administrative Services	
Department:	Accounting & Finance	

IMPACTED MEMBERS:

All Members <input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input type="checkbox"/>	City of Lompoc <input type="checkbox"/>	City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input type="checkbox"/>
City of Biggs <input type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input type="checkbox"/>	City of Roseville <input type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input type="checkbox"/>	City of Santa Clara <input type="checkbox"/>	Other <input type="checkbox"/>

If other, please specify

RECOMMENDATION:

Note and file report by all members for the disposal of 2 Rochester Instrument System (RIS) temperature monitors.

BACKGROUND:

The NCPA Policy for the Disposal or Destruction of Surplus Supplies, Materials, or Equipment requires that such disposal or destruction be reported to the NCPA Commission within 60 days of such action.

In accordance with that policy, the following disposal or destruction is hereby reported:

<u>Property Description</u>	<u>Quantity</u>	<u>*Method of Disposal</u>	<u>Net Cost From Disposal</u>	
RIS temperature monitors	2	PS	\$	(100.00)
			\$	
			\$	
			\$	
			\$	
		Total	\$	(100.00)

* Note: Public Sale (PS); Private Sale (P), Disposal – Net Scrap Value (S)

FISCAL IMPACT:

This report has no direct fiscal impact to the Agency.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

Respectfully submitted,

A handwritten signature in cursive script that reads "Sen Spem for Randy Howard".

RANDY S. HOWARD
General Manager

Attachments:

- Declarations of Surplus



477 Bret Harte Drive
Murphys, CA 95247

phone (209) 728-1387
fax (209) 728-1391
web www.ncpa.com

Receipt Acknowledgment Sale of Surplus Property

May 30, 2018

Tri-Dam Power Authority
P.O. Box 1158
Pinecrest, CA 95364-0158

NCPA is selling two (2) Rochester Instrument System (RIS) temperature monitors for one hundred dollars (\$100) for use on the Tri-Dam Project as spares.

Delivery Acknowledgment:

Delivered By: (NCPA) Jerry Santoro

Received By: (Tri-Dam) Troy Hammerbeck

Date: 5-31-18



Date: 12/18/2017

DECLARATION OF SURPLUS SUPPLIES, MATERIALS & EQUIPMENT

			DESCRIPTION (Including All Applicable Model #'s, LCNs & VINs)	COND**	ESTIMATED VALUE <small>Per Unit and Per Project are subject to approval by the project manager and subject to the 10% bid discount per the terms</small>		NCPA Property or Project #	SITE LOCATION
	QTY	U/M*			UNIT	TOTAL		
1.	2	U	RIS Temperature Monitors	A	1	\$ 100	2409	Murphys
2.								
3.								
4.								
5.								
6.								
7.								
8.								

JUSTIFICATION FOR SURPLUS/DISPOSAL:

Upgraded equipment at NSM Powerhouse. Specialized equipment not suitable for common use, recommend private sale to other hydroelectric project if possible.

PREPARED BY: Amber Summerett 12/18/17 AS Amber

APPROVED BY: [Signature] ORG. CODE: 650

AUTHORIZATION TO PROCEED: [Signature] ASST. GEN. MANAGER DATE: 12/21/17

(GENERAL MANAGER)

RECOMMENDED DISPOSITION:
 PUBLIC SALE: XX SEALED BIDS XX AUCTION
 DISPOSAL: XX SCRAP/RECYCLE VALUE XX NO VALUE - TRASH/JUNK
 DISPOSITION JUSTIFICATION:
 Recommend sale to Tri-Dams for use on their project.

** CONDITION: EXCELLENT (E), GOOD (G), AVERAGE (A), POOR (P), SCRAP (S)

ORIGINAL TO TREASURER-CONTROLLER

ATTACHMENT 1



ROCHESTER
INSTRUMENT
SYSTEMS

PIS

GENERATOR

UNIT NO. 1
WINDING TEMP./210C-81
W2120

TRIP
SET ALARM
CH

PIS

GENERATOR

UNIT NO. 1
WINDING TEMP./210C-85
W2122

TRIP
SET ALARM
CH

PIS

GENERATOR

UNIT NO. 1
BEARING TEMP./210C-89
W2126

TRIP
SET ALARM
CH

PIS

GENERATOR

UNIT NO. 1
BEARING TEMP./210C-910
W2127

TRIP
SET ALARM
CH

PIS

MD-2480



TEMP. / PROCESS MONITOR

SPAN] RTD
ZERO] TC
RESET
F.S.D.
TRIP
ALARM
ZERO

TEMPERATURE

TEMPERATURE

TEMPERATURE

TEMPERATURE

Fris

255 North Union Street, Rochester, NY 14605
Maxim Road, Crayford, Darford, Kent DA1 4BG U.K.
915 Kipling Avenue, Toronto M8Z 5H4 Canada

MODEL

TM-2482

VOLTS

125VDC

SERIAL

22703-5A

WATTS

32

Temperature Monitor

TM-2482-P12-000-P6-RE-HW

Component ID #TM-2482-1

ELIN PROJECT

A-1002-778



Commission Staff Report

Date: July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Industrial Air Flow Dynamics, Inc. – Five Year Multi-Task General Services Agreement for expansion joints, penetration seals and HRSG related maintenance services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members

AGENDA CATEGORY: Consent

FROM:	Ken Speer <i>K/S</i>	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Combustion Turbines	

IMPACTED MEMBERS:		
All Members <input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input type="checkbox"/>	City of Lompoc <input type="checkbox"/>	City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input type="checkbox"/>
City of Biggs <input type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input type="checkbox"/>	City of Roseville <input type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input type="checkbox"/>	City of Santa Clara <input type="checkbox"/>	Other <input type="checkbox"/>
<i>If other, please specify</i>		

RECOMMENDATION:

Approval of Resolution 18-49 authorizing the General Manager or his designee to enter into a Multi-Task General Services Agreement with Industrial Air Flow Dynamics, Inc. for expansion joints, penetration seals and HRSG related maintenance services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$4,000,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

BACKGROUND:

Expansion joints, penetration seals and HRSG related maintenance services are required from time to time related to project support at facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$4,000,000.00 over five years, to be used out of NCPA approved budgets as services are rendered. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA currently has similar agreements in place with HRST, Inc. and Dekomte (pending) and seeks bids from multiple qualified providers whenever services are needed. Bids are awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval on Consent Calendar.

The recommendation above was reviewed by the Lodi Energy Center Project Participant Committee on July 9, 2018, and was approved.

Respectfully submitted,

A handwritten signature in cursive script that reads "Randy S. Howard". The signature is written in dark ink and is positioned above the printed name and title.

RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Multi-Task General Services Agreement with Industrial Air Flow Dynamics, Inc.

RESOLUTION 18-49

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING A MULTI-TASK GENERAL SERVICES AGREEMENT WITH INDUSTRIAL AIR FLOW DYNAMICS, INC.

(reference Staff Report #165:18)

WHEREAS, expansion joints, penetration seals and HRSG related maintenance services are periodically required at the facilities owned and/or operated by Northern California Power Agency (NCPA), its Members, the Southern California Public Power Authority (SCPPA), and SCPPA Members; and

WHEREAS, Industrial Air Flow Dynamics, Inc. is a provider of these services; and

WHEREAS, NCPA seeks to enter into a Multi-Task General Services Agreement with Industrial Air Flow Dynamics, Inc. to provide such services as needed at all NCPA Generation facility locations, Member, SCPPA, and SCPPA Member facilities in an amount not to exceed \$4,000,000 over five years; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Multi-Task General Services Agreement with Industrial Air Flow Dynamics, Inc. with any non-substantial changes as approved by the NCPA General Counsel, which shall not exceed \$4,000,000 over five years for expansion joints, penetration seals and HRSG related maintenance services for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (SCPPA), or by SCPPA Members.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY



**MULTI-TASK
GENERAL SERVICES AGREEMENT BETWEEN
THE NORTHERN CALIFORNIA POWER AGENCY AND
INDUSTRIAL AIR FLOW DYNAMICS, INC.**

This Multi-Task General Services Agreement ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and Industrial Air Flow Dynamics, Inc., a corporation with its office located at 734 Hebron Avenue, Glastonbury, CT 06033 ("Contractor") (together sometimes referred to as the "Parties") as of _____, 2018 ("Effective Date") in Roseville, California.

Section 1. SCOPE OF WORK. Subject to the terms and conditions set forth in this Agreement, Contractor is willing to provide to Agency the range of services and/or goods described in the Scope of Work attached hereto as Exhibit A and incorporated herein ("Work").

- 1.1 Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Contractor completes the Work, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is shorter.
- 1.2 Standard of Performance.** Contractor shall perform the Work in the manner and according to the standards observed by a competent practitioner of the profession in which Contractor is engaged and for which Contractor is providing the Work. Contractor represents that it is licensed, qualified and experienced to provide the Work set forth herein.
- 1.3 Assignment of Personnel.** Contractor shall assign only competent personnel to perform the Work. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Contractor shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 Work Provided.** Work provided under this Agreement by Contractor may include Work directly to the Agency or, as requested by the Agency and consistent with the terms of this Agreement, to Agency members, Southern California Public Power Authority ("SCPPA") or SCPPA members.
- 1.5 Request for Work to be Performed.** At such time that Agency determines to have Contractor perform Work under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific Work to be performed ("Requested Work"), may include a not-to-exceed cap on monetary cap on Requested Work and all related expenditures authorized by that Purchase Order, and shall include a time by which the Requested Work shall be completed. Contractor shall have seven calendar days from the date of the Agency's issuance of the Purchase Order in which to respond in writing that Contractor chooses not to perform the Requested Work. If Contractor agrees to perform the Requested Work, begins to perform the Requested Work, or does not respond within the seven day period specified, then Contractor will have

agreed to perform the Requested Work on the terms set forth in the Purchase Order, this Agreement and its Exhibits.

Section 2. COMPENSATION. Agency hereby agrees to pay Contractor an amount **NOT TO EXCEED** FOUR MILLION dollars (\$4,000,000.00) for the Work, which shall include all fees, costs, expenses and other reimbursables, as set forth in Contractor's fee schedule, attached hereto and incorporated herein as Exhibit B. Alternatively, prior to authorizing Contractor to perform any portion of the Work or incur costs hereunder, the Agency and Contractor can agree to fixed compensation for such portion of the Work without regard or reference to Contractor's fee schedule attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Contractor, but is merely a limit of potential Agency expenditures under this Agreement.

2.1 Invoices. Contractor shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Work performed;
- The Purchase Order number authorizing the Requested Work;
- At Agency's option, for each work item in each task, a copy of the applicable time entries or time sheets shall be submitted showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation, to Agency's reasonable satisfaction;
- At Agency's option, the total number of hours of work performed under the Agreement by Contractor and each employee, agent, and subcontractor of Contractor performing work hereunder.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable
AcctsPayable@ncpa.com

2.2 Monthly Payment. Agency shall make monthly payments, based on invoices received, for Work satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Contractor.

2.3 Payment of Taxes. Contractor is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

2.4 Authorization to Perform Work. The Contractor is not authorized to perform any Work or incur any costs whatsoever under the terms of this Agreement until receipt of a Purchase Order from the Contract Administrator.

2.5 Timing for Submittal of Final Invoice. Contractor shall have ninety (90) days after completion of the Requested Work to submit its final invoice for the Requested Work. In the event Contractor fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Contractor is deemed to have waived its right to collect its final payment for the Requested Work from Agency.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Contractor shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Work.

Section 4. INSURANCE REQUIREMENTS. Before beginning any Work under this Agreement, Contractor, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

4.1 Workers' Compensation. If Contractor employs any person, Contractor shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Contractor with limits of not less than one million dollars (\$1,000,000.00) per accident.

4.2 Commercial General and Automobile Liability Insurance.

4.2.1 Commercial General Insurance. Contractor shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Contractor. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.

4.2.2 Automobile Liability. Contractor shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Contractor, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident, with a self-insured retention or deductible of no more than \$100,000. This insurance shall provide contractual liability covering all motor vehicles and mobile equipment to the extent coverage may be excluded from general liability insurance.

4.2.3 General Liability/Umbrella Insurance. The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.

4.3 Professional Liability Insurance. Not Applicable.

4.4 Pollution Insurance. Not Applicable.

4.5 All Policies Requirements.

4.5.1 Verification of coverage. Prior to beginning any work under this Agreement, Contractor shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2 and in Section 4.4, if applicable, adding the Agency as an additional insured and declaring such insurance primary in regard to work performed pursuant to this Agreement.

4.5.2 Notice of Reduction in or Cancellation of Coverage. Contractor shall provide at least thirty (30) days prior written notice to Agency of any reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.

4.5.3 Higher Limits. If Contractor maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Contractor.

4.5.4 Additional Certificates and Endorsements. If Contractor performs Work for Agency members, SCPPA and/or SCPPA members pursuant to this Agreement, Agency shall have the right to require Contractor to provide the certificates of insurance and/or policy endorsements, as referenced in Section 4.5.1, naming the specific Agency member, SCPPA and/or SCPPA member for which the Work is to be performed.

4.6 Waiver of Subrogation. Contractor agrees to waive subrogation which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Contractor, its employees, agents and subcontractors.

4.7 Contractor's Obligation. Contractor shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Work are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Contractor shall also ensure that all workers involved in the

provision of Work are properly classified as employees, agents or independent contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONTRACTOR'S RESPONSIBILITIES.

- 5.1 Effect of Insurance.** Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Contractor acknowledges and agrees to the provisions of this section and that it is a material element of consideration.
- 5.2 Scope.** Contractor shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency, and its officials, commissioners, officers, employees, agents and volunteers from and against all losses, liabilities, claims, demands, suits, actions, damages, expenses, penalties, fines, costs (including without limitation costs and fees of litigation), judgments and causes of action of every nature arising out of or in connection with any acts or omissions by Contractor, its officers, officials, agents, and employees, except as caused by the sole or gross negligence of Agency. Notwithstanding, should this Agreement be construed as a construction agreement under Civil Code section 2783, then the exception referenced above shall also be for the active negligence of Agency.
- 5.3 Transfer of Title.** Not Applicable.

Section 6. STATUS OF CONTRACTOR.

- 6.1 Independent Contractor.** Contractor is an independent contractor and not an employee of Agency. Agency shall have the right to control Contractor only insofar as the results of Contractor's Work and assignment of personnel pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Contractor accomplishes Work rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Contractor shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Contractor or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would

otherwise be the responsibility of Agency. Contractor and Agency acknowledge and agree that compensation paid by Agency to Contractor under this Agreement is based upon Contractor's estimated costs of providing the Work, including salaries and benefits of employees, agents and subcontractors of Contractor.

Contractor shall indemnify, defend, and hold harmless Agency from any lawsuit, administrative action, or other claim for penalties, losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly, due to Contractor's failure to secure workers' compensation insurance for its employees, agents, or subcontractors.

Contractor agrees that it is responsible for the provision of group healthcare benefits to its fulltime employees under 26 U.S.C. § 4980H of the Affordable Care Act. To the extent permitted by law, Contractor shall indemnify, defend and hold harmless Agency from any penalty issued to Agency under the Affordable Care Act resulting from the performance of the Services by any employee, agent, or subcontractor of Contractor.

- 6.2 Contractor Not Agent.** Except as Agency may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 Assignment and Subcontracting.** This Agreement contemplates personal performance by Contractor and is based upon a determination of Contractor's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Contractor. Contractor may not assign this Agreement or any interest therein without the prior written approval of the Agency. Contractor shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where written approval is granted by the Agency, Contractor shall supervise all work subcontracted by Contractor in performing the Work and shall be responsible for all work performed by a subcontractor as if Contractor itself had performed such work. The subcontracting of any work to subcontractors shall not relieve Contractor from any of its obligations under this Agreement with respect to the Work and Contractor is obligated to ensure that any and all subcontractors performing any Work shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.
- 6.4 Certification as to California Energy Commission.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit C.

- 6.5 **Certification as to California Energy Commission Regarding Hazardous Materials Transport Vendors.** If requested by the Agency, Contractor shall, at the same time it executes this Agreement, execute Exhibit D.
- 6.6 **Maintenance Labor Agreement.** If the Work is subject to the terms of one or more Maintenance Labor Agreements, which are applicable only to certain types of construction, repair and/or maintenance projects, then Contractor shall execute Exhibit E and/or similar documentation as to compliance.

Section 7. LEGAL REQUIREMENTS.

- 7.1 **Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 **Compliance with Applicable Laws.** Contractor and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3 **Licenses and Permits.** Contractor represents and warrants to Agency that Contractor and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.
- 7.4 **Monitoring by DIR.** The Work is subject to compliance monitoring and enforcement by the Department of Industrial Relations.
- 7.5 **Registration with DIR.** During the term of this Agreement, Contractor warrants that it is registered with the Department of Industrial Relations and qualified to perform Work consistent with Labor Code section 1725.5.
- 7.6 **Prevailing Wage Rates.** In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work as provided in the California Labor Code must be paid to all workers engaged in performing the Work. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for the locality in which the Work is to be performed; the Agency has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the project; and copies of the prevailing rate of per diem wages are on file at the Agency and will be made available on request. Throughout the performance of the Work, Contractor must comply with all applicable laws and regulations that apply to wages earned in performance of the Work. Contractor assumes all responsibility for such payments and shall defend, indemnify and hold the Agency harmless from any and all claims made by the

State of California, the Department of Industrial Relations, any subcontractor, any worker or any other third party with regard thereto.

Additionally, in accordance with the California Administrative Code, Title 8, Group 3, Article 2, Section 16000, Publication of Prevailing Wage Rates by Awarding Bodies, copies of the applicable determination of the Director can be found on the web at: <http://www.dir.ca.gov/DLSR/PWD/> and may be reviewed at any time.

Contractor shall be required to submit to the Agency during the contract period, copies of Public Works payroll reporting information per California Department of Industrial Relations, Form A- 1-131 (New 2-80) concerning work performed under this Agreement.

Contractor shall comply with applicable law, including Labor Code Sections 1774 and 1775. In accordance with Section 1775, Contractor shall forfeit as a penalty to Agency \$50.00 for each calendar day or portion thereof, for each worker paid less than the prevailing rates as determined by the Director of Industrial Relations for such work or craft in which such worker is employed for any Work done under the Agreement by Contractor or by any subcontractor under Contractor in violation of the provisions of the Labor Code and in particular, Labor Code Sections 1770 *et seq.* In addition to the penalty and pursuant to Section 1775, the difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate shall be paid to each worker by the Contractor.

Section 8. TERMINATION AND MODIFICATION.

- 8.1 Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Contractor.

In the event of termination, Contractor shall be entitled to compensation for Work satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Contractor delivering to Agency any or all records or documents (as referenced in Section 9.1 hereof).

- 8.2 Amendments.** The Parties may amend this Agreement only by a writing signed by both of the Parties.

- 8.3 Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Contractor shall survive the termination of this Agreement.

- 8.4 Options upon Breach by Contractor.** If Contractor materially breaches any of the terms of this Agreement, including but not limited to those set forth in Section 4, Agency's remedies shall include, but not be limited to, the following:

- 8.4.1** Immediately terminate the Agreement;

- 8.4.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Contractor pursuant to this Agreement;
- 8.4.3 Retain a different Contractor to complete the Work not finished by Contractor; and/or
- 8.4.4 Charge Contractor the difference between the costs to complete the Work that is unfinished at the time of breach and the amount that Agency would have paid Contractor pursuant hereto if Contractor had completed the Work.

Section 9. KEEPING AND STATUS OF RECORDS.

- 9.1 **Records Created as Part of Contractor's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Contractor prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the Agency. Contractor hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Contractor agree that, unless approved by Agency in writing, Contractor shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.
- 9.2 **Contractor's Books and Records.** Contractor shall maintain any and all records or other documents evidencing or relating to charges for Work or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Contractor under this Agreement.
- 9.3 **Inspection and Audit of Records.** Any records or documents that this Agreement requires Contractor to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under this Agreement.
- 9.4 **Confidential Information and Disclosure.**
 - 9.4.1 **Confidential Information.** The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible

medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as Confidential Information in accordance with this section.

9.4.2 Non-Disclosure of Confidential Information. During the term of this Agreement, either party may disclose (the "Disclosing Party") Confidential Information to the other party (the "Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confidence; and (b) shall take all reasonable steps to prevent any unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

9.4.4 Handling of Confidential Information. Upon conclusion or termination of the Agreement, Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof), if requested by Disclosing Party in writing. Notwithstanding the foregoing, the Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, consultants, contractors and

subcontractors who have a need to know in connection with this Agreement.

Section 10. PROJECT SITE.

- 10.1 Operations at the Project Site.** Each Project site may include the power plant areas, all buildings, offices, and other locations where Work is to be performed, including any access roads. Contractor shall perform the Work in such a manner as to cause a minimum of interference with the operations of the Agency; if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4; and other contractors at the Project site and to protect all persons and property thereon from damage or injury. Upon completion of the Work at a Project site, Contractor shall leave such Project site clean and free of all tools, equipment, waste materials and rubbish, stemming from or relating to Contractor's Work.
- 10.2 Contractor's Equipment, Tools, Supplies and Materials.** Contractor shall be solely responsible for the transportation, loading and unloading, and storage of any equipment, tools, supplies or materials required for performing the Work, whether owned, leased or rented. Neither Agency nor, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, will be responsible for any such equipment, supplies or materials which may be lost, stolen or damaged or for any additional rental charges for such. Equipment, tools, supplies and materials left or stored at a Project site, with or without permission, is at Contractor's sole risk. Anything left on the Project site an unreasonable length of time after the Work is completed shall be presumed to have been abandoned by the Contractor. Any transportation furnished by Agency or, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, shall be solely as an accommodation and neither Agency nor, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, shall have liability therefor. Contractor shall assume the risk and is solely responsible for its owned, non-owned and hired automobiles, trucks or other motorized vehicles as well as any equipment, tools, supplies, materials or other property which is utilized by Contractor on the Project site. All materials and supplies used by Contractor in the Work shall be new and in good condition.
- 10.3 Use of Agency Equipment.** Contractor shall assume the risk and is solely responsible for its use of any equipment owned and property provided by Agency and, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4, for the performance of Work.

Section 11. WARRANTY.

- 11.1 Nature of Work.** In addition to any and all warranties provided or implied by law or public policy, Contractor warrants that all Work shall be free from defects in design and workmanship, and that Contractor shall perform all Work in accordance with applicable federal, state, and local laws, rules and regulations

including engineering, construction and other codes and standards and prudent electrical utility standards, and in accordance with the terms of this Agreement.

- 11.2 Deficiencies in Work.** In addition to all other rights and remedies which Agency may have, Agency shall have the right to require, and Contractor shall be obligated at its own expense to perform, all further Work which may be required to correct any deficiencies which result from Contractor's failure to perform any Work in accordance with the standards required by this Agreement. If during the term of this Agreement or the one (1) year period following completion of the Work, any equipment, supplies or other materials or Work used or provided by Contractor under this Agreement fails due to defects in material and/or workmanship or other breach of this Agreement, Contractor shall, upon any reasonable written notice from Agency, replace or repair the same to Agency's satisfaction.
- 11.3 Assignment of Warranties.** Contractor hereby assigns to Agency all additional warranties, extended warranties, or benefits like warranties, such as insurance, provided by or reasonably obtainable from suppliers of equipment and material used in the Work.

Section 12. HEALTH AND SAFETY PROGRAMS. The Contractor shall establish, maintain, and enforce safe work practices, and implement an accident/incident prevention program intended to ensure safe and healthful operations under their direction. The program shall include all requisite components of such a program under Federal, State and local regulations and shall comply with all site programs established by Agency and, if applicable, the entity for which Contractor is performing the Work, as referenced in Section 1.4.

- 12.1** Contractor is responsible for acquiring job hazard assessments as necessary to safely perform the Work and provide a copy to Agency upon request.
- 12.2** Contractor is responsible for providing all employee health and safety training and personal protective equipment in accordance with potential hazards that may be encountered in performance of the Work and provide copies of the certified training records upon request by Agency. Contractor shall be responsible for proper maintenance and/or disposal of their personal protective equipment and material handling equipment.
- 12.3** Contractor is responsible for ensuring that its lower-tier subcontractors are aware of and will comply with the requirements set forth herein.
- 12.4** Agency, or its representatives, may periodically monitor the safety performance of the Contractor performing the Work. Contractors and its subcontractors shall be required to comply with the safety and health obligations as established in the Agreement. Non-compliance with safety, health, or fire requirements may result in cessation of work activities, until items in non-compliance are corrected. It is also expressly acknowledged, understood and agreed that no payment shall be due from Agency to Contractor under this Agreement at any time when, or for

any Work performed when, Contractor is not in full compliance with this Section 12.

- 12.5** Contractor shall immediately report any injuries to the Agency site safety representative. Additionally, the Contractor shall investigate and submit to the Agency site safety representative copies of all written accident reports, and coordinate with Agency if further investigation is requested.
- 12.6** Contractor shall take all reasonable steps and precautions to protect the health of its employees and other site personnel with regard to the Work. Contractor shall conduct occupational health monitoring and/or sampling to determine levels of exposure of its employees to hazardous or toxic substances or environmental conditions. Copies of any sampling results will be forwarded to the Agency site safety representative upon request.
- 12.7** Contractor shall develop a plan to properly handle and dispose of any hazardous wastes, if any, Contractor generates in performing the Work.
- 12.8** Contractor shall advise its employees and subcontractors that any employee who jeopardizes his/her safety and health, or the safety and health of others, may be subject to actions including removal from Work.
- 12.9** Contractor shall, at the sole option of the Agency, develop and provide to the Agency a Hazardous Material Spill Response Plan that includes provisions for spill containment and clean-up, emergency contact information including regulatory agencies and spill sampling and analysis procedures. Hazardous Materials shall include diesel fuel used for trucks owned or leased by the Contractor.
- 12.10** If Contractor is providing Work to an Agency Member, SCPPA or SCPPA member (collectively "Member" solely for the purpose of this section) pursuant to Section 1.4 hereof, then that Member shall have the same rights as the Agency under Sections 12.1, 12.2, 12.4, 12.5, and 12.6 hereof.

Section 13. MISCELLANEOUS PROVISIONS.

- 13.1** **Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.
- 13.2** **Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.

- 13.3 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 13.4 No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.
- 13.5 Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.
- 13.6 Conflict of Interest.** Contractor may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Contractor in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Contractor shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

- 13.7 Contract Administrator.** This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.
- 13.8 Notices.** Any written notice to Contractor shall be sent to:

Industrial Air Flow Dynamics, Inc.
Attention: Jason Talbot, CFO
734 Hebron Avenue
Glastonbury, CT 06033

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

General Counsel
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

- 13.9 Professional Seal.** Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.
- 13.10 Integration; Incorporation.** This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Contractor and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.
- 13.11 Alternative Dispute Resolution.** If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Contractor agree to resolve the dispute in accordance with the following:
- 13.11.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
 - 13.11.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
 - 13.11.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
 - 13.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
 - 13.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
 - 13.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative remedy prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*

13.12 Controlling Provisions. In the case of any conflict between the terms of this Agreement and the Exhibits hereto, a Purchase Order, or Contractor's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and a Purchase Order or the Contractor's Proposal, the Exhibits shall control. In the case of any conflict between the terms of a Purchase Order and the Contractor's Proposal, the Purchase Order shall control.

13.13 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

13.14 Construction of Agreement. Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.

13.15 No Third Party Beneficiaries. This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties. However, should Contractor provide Work to an Agency member, SCPPA or SCPPA member (collectively for the purpose of this section only "Member") pursuant to Section 1.4, the parties recognize that such Member may be a third party beneficiary solely as to the Purchase Order and Requested Work relating to such Member.

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

INDUSTRIAL AIR FLOW DYNAMICS, INC.

Date_____

Date_____

RANDY S. HOWARD,
General Manager

JASON TALBOT,
Chief Financial Officer

Attest:

Assistant Secretary of the Commission

Approved as to Form:

General Counsel

EXHIBIT A
SCOPE OF WORK

Industrial Air Flow Dynamics, Inc. ("Contractor") shall provide penetration seals, expansion joints and HRSG related maintenance as requested by the Northern California Power Agency ("Agency") at any facilities owned or operated by Agency, its Members, Southern California Public Power Authority (SCPPA) or SCPPA Members.

Services to include, but not be limited to the following:

- Penetration Seals
- Expansion Joints
- General HRSG Maintenance
- Turnkey Services
- On-Site Training
- Free Consultation

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all work, including hourly fees and expenses, shall not exceed the amount set forth in Section 2 hereof. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

FIELD SERVICE LABOR RATES	
	(Per Man)
Straight Time - (First 8 Hours)	\$140.00 hour
Overtime - (over 8 Hours)	\$165.00 hour
Weekends (Saturday & Sundays All Hours)	\$200.00 hour
Holidays (All Hours)	\$200.00 hour
Engineering/Project Site Engineering Hours	\$200.00 hour
Hourly travel rates (drive time to and from site)	\$50.00 hour
Flight / Hotel / Travel Expenses (tolls, fuel, etc.)	Invoiced at cost + 20%
Materials	Invoiced at cost + 25%
Consumables	Per list cost
Per Diem (per man)	\$70.00 day
IAFD Equipment Usage	\$50.00 Shift Hour
Rental Equipment (generator, lighting, etc.)	Invoiced at cost + 20%
IAFD Tool Truck Travel to Site	\$40.00 hour

IAFD Inc. Field Service Billing Explanations:

- Straight Time and Overtime is determined by the day of week regardless of project start day. Per each IAFD employee Mon-Fri the first 8 hours will be billed as straight time and any additional hours will be billed at Overtime rate. Weekends are billed at Weekend rates. See illustrative project example below which reflects a 7 day and 75-hour job:

Day of Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Straight Time	8 hours	8 hours	8 hours	8 hours	8 hours		
Overtime	4 hours	4 hours	2 hours	4 hours	1 hours		
Weekends						12 Hours	8 Hours
Total Job Hours	12 hours	12 Hours	10 Hours	12 Hours	9 Hours	12 Hours	8 Hours

- Holiday rates apply on any designated holiday regardless of start day or time worked
- Travel Rates are billed for drive time to and from site per employee on an hourly basis

- Flight/Hotel/Travel Expenses are billed at total cost (including taxes) per employee with 20% overhead Markup
- Materials are billed at total cost (Including taxes) with 25% overhead markup
- Per Diem is billed on a per employee and per day basis. For example, billing for a project with 5 employees who have all worked for any amount of time in those 7 days will be \$2,450 (5 employees * 7 Days * \$70 Per Diem Rate)
- On-Site IAFD Equipment usage is billed per job on a shift hour basis. For example, a 75-hour job is billed \$3,750 (75 shift hours * \$50 equip usage Rate)
- Rental Equipment is billed at total cost (including taxes) with 20% overhead markup
- Tool Truck travel is billed per truck on an hourly basis for truck travel to job site

Pricing for services to be performed at NCPA Member or SCPPA locations will be quoted at the time services are requested.

NOTE: As a public agency, NCPA shall not reimburse Contractor for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C
CERTIFICATION

Affidavit of Compliance for Contractors

I,

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity
and employment history of all employees of
Industrial Air Flow Dynamics, Inc.

(Company name)

for contract work at:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the
above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 _____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY
PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY
THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

NOT APPLICABLE

EXHIBIT D

CERTIFICATION

Affidavit of Compliance for Hazardous Materials Transport Vendors

I, _____,

(Name of person signing affidavit)(Title)

do hereby certify that the below-named company has prepared and implemented security plans in conformity with 49 CFR 172, subpart I and has conducted employee background investigations in conformity with 49 CFR 172.802(a), as the same may be amended from time to time,

(Company name)

for hazardous materials delivery to:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 ____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.

NOT APPLICABLE

EXHIBIT E

**ATTACHMENT A [from MLA]
AGREEMENT TO BE BOUND**

**MAINTENANCE LABOR AGREEMENT ATTACHMENT
LODI ENERGY CENTER PROJECT**

The undersigned hereby certifies and agrees that:

- 1) It is an Employer as that term is defined in Section 1.4 of the Lodi Energy Center Project Maintenance Labor Agreement ("Agreement" solely for the purposes of this Exhibit E) because it has been, or will be, awarded a contract or subcontract to assign, award or subcontract Covered Work on the Project (as defined in Section 1.2 and 2.1 of the Agreement), or to authorize another party to assign, award or subcontract Covered Work, or to perform Covered Work.
- 2) In consideration of the award of such contract or subcontract, and in further consideration of the promises made in the Agreement and all attachments thereto (a copy of which was received and is hereby acknowledged), it accepts and agrees to be bound by the terms and condition of the Agreement, together with any and all amendments and supplements now existing or which are later made thereto.
- 3) If it performs Covered Work, it will be bound by the legally established trust agreements designated in local master collective bargaining agreements, and hereby authorizes the parties to such local trust agreements to appoint trustees and successor trustee to administer the trust funds, and hereby ratifies and accepts the trustees so appointed as if made by the undersigned.
- 4) It has no commitments or agreements that would preclude its full and complete compliance with the terms and conditions of the Agreement.
- 5) It will secure a duly executed Agreement to be Bound, in form identical to this documents, from any Employer(s) at any tier or tiers with which it contracts to assign, award, or subcontract Covered Work, or to authorize another party to assign, award or subcontract Covered Work, or to perform Covered Work.

DATED: _____ Name of Employer _____

(Authorized Officer & Title)

(Address)



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Commission Staff Report

Date July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Dynamic Ratings, Inc. – Five Year Multi-Task Professional Services Agreement for instrument and predictive maintenance services; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members.

AGENDA CATEGORY: Consent

FROM:	Ken Speer <i>KS</i>	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Generation Services	

IMPACTED MEMBERS:		
All Members <input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input type="checkbox"/>	City of Lompoc <input type="checkbox"/>	City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input type="checkbox"/>
City of Biggs <input type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input type="checkbox"/>	City of Roseville <input type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input type="checkbox"/>	City of Santa Clara <input type="checkbox"/>	Other <input type="checkbox"/>
<i>If other, please specify</i>		
<hr/>		
<hr/>		

RECOMMENDATION:

Approval of Resolution 18-50 authorization the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Dynamic Ratings, Inc., for instrument and predictive maintenance services, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$500,000 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

BACKGROUND:

Instrument and predictive maintenance services are required from time to time related to project support at facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$500,000 over five years, to be used out of NCPA approved budgets as services are rendered. Purchase orders referencing the terms and conditions of this Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA currently has in place other enabling agreements for similar services with Reliability Optimization, Inc. and Eaton Corporation (pending), and seeks bids from as many qualified providers as possible. Bids are awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval on Consent Calendar.

The recommendation above was reviewed by the Lodi Energy Center Project Participant Committee on July 9, 2018, and was approved.

Respectfully submitted,


RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Multi-Task Professional Services Agreement with Dynamic Ratings, Inc.

RESOLUTION 18-50

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING A MULTI-TASK PROFESSIONAL SERVICES AGREEMENT WITH DYNAMIC RATINGS, INC.

(reference Staff Report #166:18)

WHEREAS, instrument and predictive maintenance services are periodically required at the facilities owned and/or operated by Northern California Power Agency (NCPA), its Members, the Southern California Public Power Authority ("SCPPA"), and SCPPA Members; and

WHEREAS, Dynamic Ratings, Inc. is a provider of these services; and

WHEREAS, NCPA seeks to enter into a Multi-Task Professional Services Agreement with Dynamic Ratings, Inc. to provide such services as needed at all NCPA Generation facility locations, Member, SCPPA, and SCPPA Member facilities in an amount not to exceed \$500,000 over five years; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Dynamic Ratings, Inc. with any non-substantial changes as approved by the NCPA General Counsel, which shall not exceed \$500,000 over five years for instrument and predictive maintenance services, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority ("SCPPA"), or by SCPPA Members.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY



MULTI-TASK PROFESSIONAL SERVICES AGREEMENT BETWEEN THE NORTHERN CALIFORNIA POWER AGENCY AND DYNAMIC RATINGS, INC.

This Professional Services Agreement ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and Dynamic Ratings, Inc., a corporation with its office located at N56 W24879 N. Corporate Circle, Sussex, WI 53089 ("Consultant") (together sometimes referred to as the "Parties") as of _____, 20__ ("Effective Date") in Roseville, California.

Section 1. SERVICES. Subject to the terms and conditions set forth in this Agreement, Consultant shall provide to Agency the services described in the Scope of Services attached hereto as Exhibit A and incorporated herein ("Services"), at the time and place and in the manner specified therein.

- 1.1 Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Consultant completes the Services, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is shorter.
- 1.2 Standard of Performance.** Consultant shall perform the Services in the manner and according to the standards observed by a competent practitioner of the profession in which Consultant is engaged and for which Consultant is providing the Services. Consultant represents that it is licensed, qualified and experienced to provide the Services set forth herein.
- 1.3 Assignment of Personnel.** Consultant shall assign only competent personnel to perform the Services. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Consultant shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 Services Provided.** Services provided under this Agreement by Consultant may include Services directly to the Agency or, as requested by the Agency and consistent with the terms of this Agreement, to Agency members, Southern California Public Power Authority ("SCPPA") or SCPPA members.
- 1.5 Request for Services.** At such time that Agency determines to use Consultant's Services under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific services to be performed ("Requested Services"), may include a not-to-exceed monetary cap on Requested Services and expenditures authorized by that Purchase Order, and a time by which the Requested Services shall be completed. Consultant shall have seven calendar days from the date of the Agency's issuance of the Purchase Order in which to respond in writing that Consultant chooses not to perform the Requested Services. If Consultant agrees to perform the Requested Services, begins to perform the Requested Services or does not respond within the seven day period

specified, then Consultant will have agreed to perform the Requested Services on the terms set forth in the Purchase Order, this Agreement and its Exhibits.

Section 2.

COMPENSATION. Agency hereby agrees to pay Consultant an amount **NOT TO EXCEED FIVE HUNDRED THOUSAND** dollars (\$500,000) for the Services, which shall include all fees, costs, expenses and other reimbursables, as set forth in Consultant's fee schedule, attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Consultant, but is merely a limit of potential Agency expenditures under this Agreement.

2.1 Invoices. Consultant shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Services performed;
- The Purchase Order number authorizing the Services;
- At Agency's option, the total number of hours of work performed under the Agreement by Consultant and each employee, agent, and subcontractor of Consultant performing services hereunder; and
- At Agency's option, when the Consultant's Scope of Work identifies tasks, for each work item in each task, a copy of the applicable time entries showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation, to Agency's reasonable satisfaction.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable
AcctsPayable@ncpa.com

2.2 Monthly Payment. Agency shall make monthly payments, based on invoices received, for services satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Consultant.

2.3 Payment of Taxes. Consultant is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

- 2.4 Authorization to Perform Services.** The Consultant is not authorized to perform any Services or incur any costs whatsoever under the terms of this Agreement until receipt of written authorization from the Contract Administrator.
- 2.5 Timing for Submittal of Final Invoice.** Consultant shall have ninety (90) days after completion of its Services to submit its final invoice. In the event Consultant fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Consultant is deemed to have waived its right to collect its final payment from Agency.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Consultant shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Services.

Section 4. INSURANCE REQUIREMENTS. Before beginning any work under this Agreement, Consultant, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

- 4.1 Workers' Compensation.** If Consultant employs any person, Consultant shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Consultant with limits of not less than one million dollars (\$1,000,000.00) per accident.
- 4.2 Commercial General and Automobile Liability Insurance.**
- 4.2.1 Commercial General Insurance.** Consultant shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Consultant. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.
- 4.2.2 Automobile Liability.** Consultant shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Consultant, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident, with a self-insured retention or deductible of no more than \$100,000. This insurance shall provide contractual liability covering all motor vehicles and

mobile equipment to the extent coverage may be excluded from general liability insurance.

4.2.3 General Liability/Umbrella Insurance. The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.

4.3 Professional Liability Insurance. Consultant shall maintain professional liability insurance appropriate to Consultant's profession performing work in connection with this Agreement in an amount not less than one million dollars (\$1,000,000.00) and two million dollars (\$2,000,000) aggregate covering the Consultant's errors and omissions. Any deductible or self-insured retention shall not exceed two hundred fifty thousand dollars (\$250,000) per claim. Such insurance shall be on a "claims-made" basis, subject to the following conditions: (1) the retroactive date of the policy shall be on or before the Effective Date of this Agreement; (2) the policy shall be maintained for at least five (5) years after completion of the Services and, if requested by Agency, evidence of coverage shall be provided during this period; and (3) if, within five (5) years of completion of the Services, coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the Effective Date of this Agreement, Consultant shall purchase "extended reporting" coverage for a minimum of five (5) years after completion of the Services and, if requested by Agency, provide evidence of coverage during this period.

4.4 All Policies Requirements.

4.4.1 Verification of coverage. Prior to beginning any work under this Agreement, Consultant shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2, adding the Agency as an additional insured and declaring such insurance primary in regard to work performed pursuant to this Agreement.

4.4.2 Notice of Reduction in or Cancellation of Coverage. Consultant shall provide at least thirty (30) days prior written notice to Agency of any reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.

4.4.3 Higher Limits. If Consultant maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Consultant.

4.4.4 Additional Certificates and Endorsements. If Consultant provides services to Agency members, SCPPA and/or SCPPA members, Consultant shall provide certificates of insurance and policy endorsements, as referenced in Section 4.4.1, naming the specific

Agency member, SCPPA or Agency member for which the Services are to be performed.

4.4.5 Waiver of Subrogation. Consultant agrees to waive subrogation which any insurer of Consultant may acquire from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. In addition, the Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Consultant, its employees, agents and subcontractors.

4.6 Consultant's Obligation. Consultant shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Services are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Consultant shall also ensure that all workers involved in the provision of Services are properly classified as employees, agents or independent contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONSULTANT'S RESPONSIBILITIES.

5.1 Effect of Insurance. Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Consultant acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.

5.2 Scope. Consultant shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency and its officials, commissioners, officers, employees, and volunteers from and against any and all claims that arise out of, pertain to or relate to the negligence, recklessness or willful misconduct of the Consultant in its performance of Services under this Agreement. Consultant shall bear all losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly ("Liabilities"). Such obligations to defend, hold harmless and indemnify the Agency shall not apply to the extent that such Liabilities are caused by the sole negligence, active negligence, or willful misconduct of the Agency.

Section 6. STATUS OF CONSULTANT.

6.1 Independent Contractor. Consultant is an independent contractor and not an employee of Agency. Agency shall have the right to control Consultant only insofar as the results of Consultant's Services and assignment of personnel

pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Consultant accomplishes Services rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Consultant shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of Agency. Consultant and Agency acknowledge and agree that compensation paid by Agency to Consultant under this Agreement is based upon Consultant's estimated costs of providing the Services, including salaries and benefits of employees, agents and subcontractors of Consultant.

Consultant shall indemnify, defend, and hold harmless Agency from any lawsuit, administrative action, or other claim for penalties, losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly, due to Consultant's failure to secure workers' compensation insurance for its employees, agents, or subcontractors.

Consultant agrees that it is responsible for the provision of group healthcare benefits to its fulltime employees under 26 U.S.C. § 4980H of the Affordable Care Act. To the extent permitted by law, Consultant shall indemnify, defend and hold harmless Agency from any penalty issued to Agency under the Affordable Care Act resulting from the performance of the Services by any employee, agent, or subcontractor of Consultant.

- 6.2 Consultant Not Agent.** Except as Agency may specify in writing, Consultant shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Consultant shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 Assignment and Subcontracting.** This Agreement contemplates personal performance by Consultant and is based upon a determination of Consultant's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Consultant. Consultant may not assign this Agreement or any interest therein without the prior written approval of the Agency. Consultant shall not subcontract any portion of the

performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where written approval is granted by the Agency, Consultant shall supervise all work subcontracted by Consultant in performing the services and shall be responsible for all work performed by a subcontractor as if Consultant itself had performed such work. The subcontracting of any work to subcontractors shall not relieve Consultant from any of its obligations under this Agreement with respect to the services and Consultant is obligated to ensure that any and all subcontractors performing any services shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.

- 6.4 Certification as to California Energy Commission.** If requested by the Agency, Consultant shall, at the same time it executes this Agreement, execute Exhibit C.

Section 7. LEGAL REQUIREMENTS.

- 7.1 Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 Compliance with Applicable Laws.** Consultant and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3 Licenses and Permits.** Consultant represents and warrants to Agency that Consultant and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.

Section 8. TERMINATION AND MODIFICATION.

- 8.1 Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Consultant.

In the event of termination, Consultant shall be entitled to compensation for Services satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Consultant delivering to Agency any or all records or documents, as referenced in Section 9.1 hereof.

- 8.2 Amendments.** The Parties may amend this Agreement only by a writing signed by all the Parties.
- 8.3 Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Consultant shall survive the termination of this Agreement.

8.4 **Options upon Breach by Consultant.** If Consultant materially breaches any of the terms of this Agreement, including but not limited to those set forth in Section 4, Agency's remedies shall include, but not be limited to, the following:

8.4.1 Immediately terminate the Agreement;

8.4.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Consultant pursuant to this Agreement;

8.4.3 Retain a different consultant to complete the Services not finished by Consultant; and/or

8.4.4 Charge Consultant the difference between the costs to complete the Services that are unfinished at the time of breach and the amount that Agency would have paid Consultant pursuant hereto if Consultant had completed the Services.

Section 9. KEEPING AND STATUS OF RECORDS.

9.1 **Records Created as Part of Consultant's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Consultant prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the Agency. Consultant hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Consultant agree that, unless approved by Agency in writing, Consultant shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.

9.2 **Consultant's Books and Records.** Consultant shall maintain any and all records or other documents evidencing or relating to charges for Services or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement.

9.3 **Inspection and Audit of Records.** Any records or documents that this Agreement requires Consultant to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under the Agreement.

9.4 Confidential Information and Disclosure.

9.4.1 Confidential Information. The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as confidential Information in accordance with this section.

9.4.2 Non-Disclosure of Confidential Information. During the term of this Agreement, either party may disclose ("The Disclosing Party") confidential Information to the other party ("the Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confident; and (b) shall take all reasonable steps to prevent any unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, consultants, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

9.4.4 Handling of Confidential Information. Upon conclusion or termination of the Agreement, Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof), if requested by Disclosing Party in writing. Notwithstanding the foregoing, the

Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, consultants, contractors and subcontractors who have a need to know in connection with this Agreement.

Section 10. MISCELLANEOUS PROVISIONS.

- 10.1 Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.
- 10.2 Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.
- 10.3 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 10.4 No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.
- 10.5 Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.
- 10.6 Conflict of Interest.** Consultant may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Consultant in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Consultant shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

10.7 Contract Administrator. This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.

10.8 Notices. Any written notice to Consultant shall be sent to:

Dynamic Ratings, Inc.
N.56 W24879 N. Corporate Circle
Sussex, WI 53089

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

Jane E. Luckhardt
General Counsel
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

10.9 Professional Seal. Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.

10.10 Integration; Incorporation. This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.

10.11 Alternative Dispute Resolution. If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Consultant agree to resolve the dispute in accordance with the following:

10.11.1 Each party shall designate a senior management or executive level representative to negotiate any dispute;

10.11.2 The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.

- 10.11.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
- 10.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
- 10.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
- 10.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*
- 10.12 Controlling Provisions.** In the case of any conflict between the terms of this Agreement and the Exhibits hereto, a Purchase Order, or Consultant's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and a Purchase Order or the Consultant's Proposal, the Exhibits shall control. In the case of any conflict between the terms of a Purchase Order and the Consultant's Proposal, the Purchase Order shall control.
- 10.13 Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.
- 10.14 Construction of Agreement.** Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.
- 10.15 No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties. However, should Consultant provide services to an Agency member, SCPPA or SCPPA member (collectively for the purpose of this Section only "Member") pursuant to Section 1.4, the parties recognize that such Member may be a third party beneficiary solely as to the Purchase Order and Requested Services relating to such Member.

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

DYNAMIC RATINGS, INC.

Date_____

Date_____

RANDY HOWARD, General Manager

TONY PINK, General Manager/VP

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Jane E. Luckhardt, General Counsel

EXHIBIT A

SCOPE OF SERVICES

Dynamics Ratings, Inc. ("Contractor") shall provide instrument and predictive maintenance services as requested by the Northern California Power Agency ("Agency") at any facilities owned and/or operated by Agency, its Members, Southern California Public Power Authority ("SCPPA"), or SCPPA Members.

Services to include, but not be limited to, the following:

- Monitor Configuration standardization and confirmation of proper installation
 - On-site service by Dynamic Ratings (DR) to confirm integrity of operation and configurations
 - If issues discovered that cannot be remedied on the day of monitor configuration; this work will have to be rescheduled for another specific trip in the future
 - Participation by local NCPA Engineers and support personnel during the Monitor Configuration visit is encouraged by DR
 - Updates to monitors as DR develops the bushing and Partial Discharge module firmware through lessons learned and customer feedback while in operation (customer performing update themselves)"
- Support of Partial Discharge (PD) Analysis in ongoing operations
 - Quick review of data with summary report when an alarm has triggered - review of PD levels in Athena
 - Per single event for a specific Generator
- Detailed Annual or as requested;
 - review of PD data from the DR Athena file
 - Including Comprehensive report for a specific generator
- Periodic Support of Bushing Analysis in ongoing operations
 - Review of data when an alarm has triggered; by reviewing bushing data in Athena
- Detailed Bushing Analysis to include PD data from Athena file
 - Including Comprehensive report for a specific bushing/transformer
- Monitoring of new setup installations
 - Supervised Installation of RMM-H or -T
 - Commissioning of RMM-H
 - Commissioning of RMM-T
 - Supervised Installation of DTM
 - Commissioning of DTM
- Other services as may be requested

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all tasks, including hourly fees and expenses, shall not exceed \$500,000 subject to Section 2 of the Agreement. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

- DR Engineering Rate: \$200/ hour
- DR Field Service rate, including travel: \$1,500/day

Pricing for services to be performed at NCPA Member or SCPPA locations will be quoted at the time services are requested.

NOTE: As a public agency, NCPA shall not reimburse Consultant for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C
CERTIFICATION

Affidavit of Compliance for Contractors

I, _____

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of

(Company name)

for contract work at:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 ____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.



Commission Staff Report

Date: July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Western Area Power Administration (WAPA) – Extension of existing contract for maintenance services for an additional five years; Applicable to the following projects: All NCPA Facility Locations.

AGENDA CATEGORY: Consent

FROM:	Ken Speer <i>KS</i>	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Hydroelectric	

IMPACTED MEMBERS:		
All Members <input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input type="checkbox"/>	City of Lompoc <input type="checkbox"/>	City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input type="checkbox"/>
City of Biggs <input type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input type="checkbox"/>	City of Roseville <input type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input type="checkbox"/>	City of Santa Clara <input type="checkbox"/>	Other <input type="checkbox"/>
<i>If other, please specify</i>		

RECOMMENDATION:

Approval of Resolution 18-51 authorizing the General Manager or his designee to extend an existing Contract for Maintenance Services with Western Area Power Administration (WAPA) for transmission line, transformer and substation service maintenance, as approved by the NCPA General Counsel, which shall not exceed \$1,000,000 over five years for use at all facilities owned and/or operated by NCPA.

BACKGROUND:

Western Area Power Administration is a federal agency that operates and maintains transmission lines for the Central Valley Project and Bureau of Reclamation. WAPA provides linemen, substation maintenance and emergency services for public power agencies on an as-needed basis to shorten or avoid maintenance related outages. NCPA seeks to continue a maintenance contract to maintain transmission lines, substations and transformers, as required, through the use of WAPA's maintenance services.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$1,000,000 over five years to be used out of NCPA approved budgets as services are rendered. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will request services for a specific scope of work. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval on Consent Calendar.

The recommendation above was reviewed by the Lodi Energy Center Project Participant Committee on July 9, 2018, and was approved.

Respectfully submitted,

A handwritten signature in cursive script that reads "Ken Speer for Randy Howard". The signature is written in dark ink and is positioned above the printed name of Randy S. Howard.

RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Amendment 1 to the Contract for Maintenance Services between the Northern California Power Agency and the United States Department of Energy Western Area Power Administration

RESOLUTION 18-51

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY TO EXTEND EXISTING MAINTENANCE SERVICE AGREEMENT WITH WESTERN AREA POWER ADMINISTRATION (WAPA) FOR AN ADDITIONAL FIVE YEARS

(reference Staff Report #167:18)

WHEREAS, Northern California Power Agency (NCPA) has an obligation to maintain transmission lines, transformers and substation circuit breakers on behalf of its members; and

WHEREAS, the expertise for this type of maintenance and emergency repair services is not regularly required and is therefore not staffed in-house; and

WHEREAS, Western Area Power Administration (WAPA) provides specialty, as-needed maintenance and emergency repair services on transmission lines, transformers and substation circuit breakers; and

WHEREAS, NCPA already has an existing agreement with WAPA who supports public power agencies for this purpose; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Contract for Maintenance Services with Western Area Power Administration (WAPA), as approved by NCPA General Counsel, which shall not exceed \$1,000,000 over five years for transmission line, transformer and substation circuit breaker maintenance for use at all facilities owned and/or operated by NCPA.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY

UNITED STATES
DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
SIERRA NEVADA REGION

AMENDMENT 1
(Term Extension)

CONTRACT FOR
MAINTENANCE SERVICES

WITH

THE NORTHERN CALIFORNIA POWER AGENCY

UNITED STATES
DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
SIERRA NEVADA REGION

AMENDMENT 1
(Term Extension)

CONTRACT FOR
MAINTENANCE SERVICES

WITH

THE NORTHERN CALIFORNIA POWER AGENCY

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UNITED STATES
DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
SIERRA NEVADA REGION

AMENDMENT 1
(Term Extension)

CONTRACT FOR
MAINTENANCE SERVICES

WITH

THE NORTHERN CALIFORNIA POWER AGENCY

1. PREAMBLE:

This Amendment 1 (Amendment) to Contract 13-SNR-01735 (Contract) is made this _____ day of _____, 2018, between the UNITED STATES OF AMERICA, DEPARTMENT OF ENERGY, WESTERN AREA POWER ADMINISTRATION (WAPA) and the NORTHERN CALIFORNIA POWER AGENCY (NCPA), also hereinafter referred to individually as Party and together as Parties, pursuant to the same authorities as the Contract.

2. EXPLANATORY RECITALS:

2.1 The Parties entered into the Contract on September 30, 2013, and it became effective on January 15, 2014. Under the Contract, WAPA provides maintenance services for NCPA's electrical facilities on an as-need basis, at the request of NCPA.

2.2 The original termination date of the Contract is September 30, 2018. NCPA has requested an extension of the term of the Contract.

///

2.3 WAPA is willing to extend the Contract term through September 30, 2023.

3. AGREEMENT:

The Parties agree to the terms and conditions set forth herein.

4. TERM OF AMENDMENT:

This Amendment shall become effective upon execution and shall remain in effect concurrently with the Contract.

5. MODIFICATION OF SECTION 4 (TERM OF CONTRACT) OF THE CONTRACT:

Section 4 of the Contract is hereby deleted and the following substituted therefor:

“4. This Contract shall become effective on January 15, 2014, and shall remain in effect through September 30, 2023; provided, that either Party may terminate this Contract by giving the other Party sixty (60) days’ advance written notice; provided further, that any obligations incurred hereunder shall remain in effect until satisfied.”

6. CONTRACT TO REMAIN IN EFFECT:

Except as expressly modified by this Amendment, the Contract shall remain in full force and effect, and this Amendment shall be subject to all provisions of the Contract, except as herein amended.

7. AUTHORITY TO EXECUTE:

Each individual signing this Amendment certifies that the Party represented has duly authorized such individual to execute this Amendment that binds and obligates the Party.

///

1 **IN WITNESS WHEREOF**, the Parties have caused this Amendment to be
2 executed the day and year first above written.

3
4 WESTERN AREA POWER ADMINISTRATION

5 By: _____
6 Kevin Howard
7 Title: _____
8 Acting Senior Vice President and
9 Sierra Nevada Region Regional Manager
10 Address: _____
11 114 Parkshore Drive
12 Folsom, California 95630

13 NORTHERN CALIFORNIA POWER AGENCY

14 (Attest)

15 By: _____
16 Name: _____
17 Randy S. Howard
18 Title: _____
19 General Manager
20 Address: _____
21 651 Commerce Drive
22 Roseville, CA 95678-6420

23 By: _____
24 Title: _____

25 Approved as to form:

26 By: _____
27 Jane Luckhardt, General
28 Counsel

EXHIBIT A
(Specific Maintenance Activities)

1. This Exhibit A, Revision 8, to be effective under and as a part of Contract 13-SNR-01735 (Contract), shall become effective upon execution of this Exhibit A; Provided, That this Exhibit A, Revision 8, shall not terminate Exhibit A, Revision 4, Exhibit A, Revision 5, Exhibit A, Revision 6, and Exhibit A, Revision 7; and Exhibit A, Revision 4, Exhibit A, Revision 5, Exhibit A, Revision 6, Exhibit A, Revision 7 and this Exhibit A, Revision 8 shall all remain in effect until such time as the work under each respective exhibit is completed and Western has terminated such exhibit, or termination of the Contract.

2. Under Section 6 of the Contract, NCPA has requested and Western has agreed to perform the following training. The details of the training are as follows:

2.1 Description of Training:

2.1.1 Basic Grounding and Employee Safety for Substation and Generation Facilities training class by Western employee Gary Zevenbergen P.E. This observation and training by Gary Zevenbergen will include the following:

2.1.1.1 Observation of 230kv tower #115 insulator and vibration damper replacement work by Western Line Department and supported by NCPA crews on August 17, 2015.

2.1.1.2 Basic Grounding and Employee Safety for Substations and Generation Facilities classroom training on August 18, 2015 at NCPA's LEC facility.

2.1.1.3 Observation and review of NCPA electrical job planning, Lock Out/Tag Out (LOTOT) and hands-on Protective Grounding procedure review and training on NCPA generating plant equipment August 19, 2015.

2.1.2 Start Date: August 17, 2015 at 0800 hours

2.1.3 Completion Date: August 19, 2015 at 1600 hours

2.1.4 Estimated Cost: \$4,700.00

///

///

///

WESTERN AREA POWER ADMINISTRATION

By: _____
Name: _____ Subhash Paluru
Title: _____ Senior Vice President and
_____ Sierra Nevada Regional Manager
Address: _____ 114 Parkshore Drive
_____ Folsom, CA 95630
Date: _____

NORTHERN CALIFORNIA POWER AGENCY

Attest:

By: _____
Title: _____

By: _____
Name: _____ Ken Speer
Title: _____ Assistant General Manager
Address: _____ 651 Commerce Drive
_____ Roseville, CA 95678
Date: _____



16

Commission Staff Report

Date: July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Stanislaus Weather Modification Program - Addendum to the CEQA Initial Study and Negative Declaration (IS/ND) and Proposal for Extension of Program. Applicable to NCPA Hydroelectric Facility.

AGENDA CATEGORY: Consent

FROM:	Ken Speer <i>KS</i>	METHOD OF SELECTION:
	Assistant General Manager	<i>Competitive Pricing Process</i>
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Hydroelectric	

IMPACTED MEMBERS:		
All Members	<input type="checkbox"/>	City of Lodi <input checked="" type="checkbox"/>
Alameda Municipal Power	<input checked="" type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	City of Ukiah <input checked="" type="checkbox"/>
City of Biggs	<input type="checkbox"/>	City of Lompoc <input checked="" type="checkbox"/>
City of Gridley	<input type="checkbox"/>	City of Palo Alto <input checked="" type="checkbox"/>
City of Healdsburg	<input checked="" type="checkbox"/>	City of Redding <input type="checkbox"/>
		City of Roseville <input checked="" type="checkbox"/>
		City of Santa Clara <input checked="" type="checkbox"/>
		Plumas-Sierra REC <input checked="" type="checkbox"/>
		Port of Oakland <input type="checkbox"/>
		Truckee Donner PUD <input type="checkbox"/>
		Other <input type="checkbox"/>
<i>If other, please specify</i>		
<hr/>		
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RECOMMENDATION:

Staff recommends that the Commission adopt the Addendum to the CEQA Initial Study and Negative Declaration (IS/ND) and approve Resolution 18-52 which authorizes the General Manager or his designee to enter into one or more contracts as approved by the NCPA General Counsel, and to issue purchase orders, for a total not-to-exceed amount of \$1,800,000 over five (5) years for the Stanislaus Weather Modification Program.

BACKGROUND:

The Agency proposes to continue its aerial weather modification program that was initiated in the winter of 2006 in the North Fork Stanislaus River watershed above the New Spicer Meadow Reservoir. The program consists of aerial cloud seeding to augment winter snowfall in the higher elevations of the watershed. The goal is to enhance water supply and hydroelectric power production especially during the spring and summer runoff periods.

FISCAL IMPACT:

Total cost of the program for a five (5)-year period is not-to-exceed \$1,800,000. Based on unit / quantity assumptions provided to contractors, the price proposal recommended for acceptance is for (\$274,793) for the winter period beginning November 1, 2018 through April 30, 2019. Additional costs could be incurred if services are requested for an additional month (through May 2019), or if actual costs (airplane flight time and consumables) are more than anticipated. The proposal also includes options for NCPA to receive services (if requested), for the next four (4) subsequent winters, at an estimated base cost per year as follows:

	Base Cost
Winter 2019-2020	\$291,637
Winter 2020-2021	\$301,399
Winter 2021-2022	\$311,979
Winter 2022-2023	\$322,956

Annual costs could be greater (up to \$1,800,000 over five years) if NCPA extends the duration or increases the intensity of the cloud seeding effort. \$270,000 was included in the fiscal year 2018-19 Hydro budget for cloud seeding, with an additional \$50,000 allocated for the water-for-power program. Purchase orders associated with agreements executed for this program will utilize approved Hydroelectric budget funds.

Scientific experts in the field of weather modification estimate the snow pack can be increased from two to more than ten percent by a well-managed weather modification program. An increase of 2% would result in approximately ten thousand (10,000) MWh per year for the NCPA Hydroelectric Project during an average snow pack year. The value of an additional 10,000 MWh's for 2019 is on the order of \$375,000 (assuming a weighted price of \$37.50 / MWh). Cost allocation will be based on project participation percentages.

SELECTION PROCESS:

A formal Request for Proposal was released on June 18, 2018 and sent to the three (3) vendors that are known to provide cloud seeding services in California. Three (3) responses were received. In accordance with NCPA's procurement policies and procedures, these responses will be evaluated and a vendor will be selected based on qualifications of the bidder's proposed

Project Team, recent and relevant cloud seeding experience, proposed project approach, compliance with CEQA, willingness to sign NCPA's General Services Agreement, and corresponding fees.

ENVIRONMENTAL ANALYSIS:

Environmental impact considerations were previously analyzed by and are covered by an Initial Study and Negative Declaration ("IS/ND") adopted by the Commission on January 12, 2006. In anticipation of extending the project by an additional five (5) years, NCPA prepared an Addendum to the IS/ND. The Addendum shows that the continuation of the project will not result in any new or previously unidentified significant impacts and that the continuation of the project will not result in any of the impacts identified in the IS/ND rising to a level of significance.

Staff recommends that the Commission adopt the negative declaration prior to acting on the proposal.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval on Consent Calendar.

Respectfully submitted,


RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- CEQA Addendum

RESOLUTION 18-52

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY ADOPTING AN ADDENDUM TO THE PREVIOUSLY APPROVED INITIAL STUDY AND NEGATIVE DECLARATION AND AUTHORIZING THE GENERAL MANAGER TO ENTER INTO CONTRACTS AND TO ISSUE PURCHASE ORDERS FOR AN AMOUNT NOT TO EXCEED \$1,800,000 OVER A FIVE (5) YEAR PERIOD TO PERFORM THE STANISLAUS WEATHER MODIFICATION PROGRAM

(reference Staff Report #168:18)

WHEREAS, the Northern California Power Agency (NCPA) operates and maintains Hydroelectric Facilities on behalf of its project owners; and

WHEREAS, NCPA previously considered and adopted Resolution No. 09-87 adopting an initial study and negative declaration ("IS/ND") for the Stanislaus Weather Modification Program ("Project"); and

WHEREAS, NCPA now proposes to extend the Project for an additional five (5)-year period; and

WHEREAS, in accordance with the California Environmental Quality Act ("CEQA") NCPA has prepared an Addendum to the previously approved IS/ND; and

WHEREAS, the Addendum shows that the continuation of the Project will not result in any new or previously unidentified significant impacts to the environment; and

WHEREAS, NCPA has solicited bids to carry out the Project over a five (5)-year period; and

WHEREAS, the proposed weather modification program has been included in the NCPA FY 2018/2019 Budget; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency:

1. Adopts the Addendum to the IS/ND; and
2. Authorizes the General Manager or his designee to enter into one or more contracts as approved by NCPA General Counsel and to issue purchase orders for a total not-to-exceed amount of \$1,800,000 over five (5) years for the Stanislaus Weather Modification Program.

PASSED, ADOPTED and APPROVED this ____ day of _____ 2018, by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____

Truckee Donner
Ukiah
Plumas-Sierra

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY

2018 Addendum to the Initial Study and Negative Declaration for the Stanislaus Weather Modification Program

Introduction

In November 2005, the Northern California Power Agency (“NCPA”) prepared an initial study and a negative declaration (“IS/ND”) under the California Environmental Quality Act (“CEQA”) for the Stanislaus Weather Modification Program (“Project”) and in January 2006 NCPA adopted the IS/ND (attached hereto as Exhibit 1) and approved the Project. Project operations commenced with some weather modification work done during the later half of the 2006/2007 rainy season. In November 2007, NCPA approved a two-year contract for further weather modification operations during the 2007/2008 and 2008/2009 rainy seasons. In November of 2009, NCPA approved a three-year contract to extend weather modifications operations for the 2009/2010, 2010/2011, and 2011/2012 rainy seasons. In August of 2012 NCPA approved a 3-year contract to extend weather modification operations for the 2012/2013, 2013/2014, 2014/2015 rainy seasons. And in July 2015 NCPA approved a 3-year contract to extend weather modification operations for the 2015 / 2016, 2016 / 2017/ 2017/2018 rainy seasons

Now, NCPA is proposing to approve an up-to 5-year contract to extend weather modification operations through the 2022/2023 rainy seasons.

Applicability and Use of an Addendum

Under CEQA, lead agencies must conduct an evaluation of proposed changes to a project in order to determine whether further environmental analysis is required. (CEQA, § 21166; CEQA Guidelines, § 15162.) Once an EIR or negative declaration has been completed for a project, a lead agency may not require preparation of a subsequent environmental review unless the conditions set forth in CEQA section 21166 and CEQA Guidelines section 15162 are satisfied.

Pursuant to CEQA section 21166, when a previous environmental review for a project has been prepared and approved, no subsequent or supplemental environmental review shall be required unless:

- (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report.
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.

(c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

CEQA Guidelines section 15162 further clarifies that:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

(c) Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

If none of the conditions set forth in CEQA Guidelines section 15162(b) allowing a lead agency to prepare a subsequent negative declaration are met, CEQA Guidelines section 15164 authorizes the lead agency to prepare an addendum to the previously approved negative declaration. In relevant part, CEQA Guidelines section 15164 states:

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

It would appear that no further CEQA review is required since the Project approved a program of weather modification and the new, five-year contract proposal only seeks to continue the existing Project. However, in an abundance of caution, NCPA has chosen to examine the potential changes in the environmental impacts of the Project due to the extension of the duration of the Project, and any changes in environmental impacts due to changed conditions or the availability of new information have been evaluated and measured against the standards set forth above to determine if an addendum is appropriate. Based on the evidence before NCPA, including all evidence in NCPA's files, the IS/ND attached hereto, and all other evidence presented to NCPA, the modified Project does not trigger any of the circumstances that would require preparation of a subsequent EIR or negative declaration under Public Resources Code section 21166 or CEQA Guidelines section 15162, as further set forth in this Addendum.

Description of the Proposed Project

With the exception of the extension of the duration of the Project, the description of the Project remains the same as that described in Chapter 2 of the attached IS/ND. In short, the Project proposes to continue the program of cloud seeding through the use of silver iodide, distributed by aircraft. The intent of the Project is to increase precipitation and the snowpack in the watershed of the North Fork Stanislaus River and Highland Creek

upstream of Lake Alpine, Utica and Union Reservoirs, and Spicer Meadow Reservoir and generally above the 6,600-foot contour. The increased precipitation will lead to increased runoff which, in turn, will provide more water to power NCPA's North Fork Stanislaus Hydroelectric facilities. The proposed modifications to the Project will allow NCPA to continue the Project for the 2018/2019, 2019/2020, 2020/2021, 2021/2022, and 2022/2023 rainy seasons.

Environmental Impacts Associated with the Modified Project

Changed Conditions

Because the elements of the Project will remain the same as the Project previously examined in the attached IS/ND, with the exception of the duration of the project, all direct Project impacts would remain the same as those identified in attached IS/ND in the absence of any changed conditions in the environment.

NCPA has no evidence that the environment in the Project location has changed in a way that would result in previously unexamined environmental impacts from the Project or an increase in the severity of any of the previously examined environmental impacts.

New Information

NCPA has no evidence of any new information that was not available at the time of the previous IS/ND that would show that the Project may have new or previously unexamined significant impacts on the environment, with one potential exception. At the time of the previous IS/ND, it was not the practice in California to examine the potential climate change impacts of a project and, thus, no climate change analysis was performed in the previous IS/ND. Today, through legislative action such as AB 32 and SB 97, it has become clear that some analysis of potential climate change impacts is required. An analysis of this potential impact was included in the 2015 Addendum to the IS/ND, attached hereto. The analysis concluded that the Project will have a **beneficial impact** on climate change.

Cumulative Impacts

Though, as noted above, the modification to the Project will not change any of the direct impacts of the Project, the continued duration of the Project has the potential to increase the cumulative impacts of the Project as the duration of the Project is extended.

Potential Cumulative Impact No. 1. Operational activities could continue to emit criteria pollutants into the atmosphere.

As is described in the IS/ND, the small, fixed-wing aircraft utilized in the Project would generate small amounts of criteria pollutants. However, the increased duration of the

exhaust emissions from a small fixed-wing aircraft making 40 - 60 flights per year would not cumulatively impact the air quality in the vicinity of the project.

Potential Cumulative Impact No. 2. Cloud seeding could affect large-scale or long term meteorology.

As identified in the IS/ND, the Project would not affect large-scale nor long-term weather patterns. The increased duration of this project would not change this finding.

Potential Cumulative Impact No. 3. The continued use of silver iodide as a cloud seeding nucleating agent could cause chronic toxic impacts to terrestrial and aquatic organisms.

As identified in the IS/ND, existing ionic silver concentrations are one to two orders of magnitude below the threshold of significance. Moreover, as also noted in the IS/ND, it is difficult for ionic silver to accumulate in the environment at toxic levels due to its insolubility in water, its tendency to be strongly absorbed by organic colloids in the soil and in aquatic vegetation, and the dilution of ionic silver through the movement of water throughout the water shed. Thus, the continuation of cloud seeding operations using silver iodide is not expected to reach cumulative threshold levels of significance now or anytime in the near future.

Potential Cumulative Impact No. 4. The accumulation of silver iodide or other silver complexes could alter the rate soil microorganisms decompose organic matter, thereby altering the processes by which nutrients are cycled through the forest ecosystems.

As identified in the IS/ND, even though microorganisms in the soil are more sensitive to silver and silver compounds than plants or animals, direct toxicity of silver iodide to soil microorganisms at environmentally-relevant concentrations is difficult to demonstrate. Moreover, due to the extremely low levels of silver iodide used in cloud seeding operations, it would be difficult to even detect levels of silver iodide in the soil from weather modification. The increased duration of cloud seeding operations is not expected to change these findings.

Potential Cumulative Impact No. 5. The continuation of the Project could cumulatively increase ionic silver in drinking water.

As identified in the IS/ND, and above, silver iodide is insoluble in water and, thus, is not expected to form ionic silver when introduced to the water shed. Moreover, ionic silver as a strong tendency to bind to soil and aquatic vegetation, and thus is not expected to reach threshold concentrations in water. The increased duration of cloud seeding operations is not expected to change these findings.

Conclusions

The continuation of the Project would not result in any new or substantially more significant impacts than those examined in the IS/ND and prior Addendums. Moreover there is no new information and there are no changed conditions that would result in any new or substantially more significant impacts than those examined in the IS/ND and prior Addendums.

**Initial Study
and
Negative Declaration**

**Stanislaus Weather Modification Program
State Clearinghouse No. 2001032036**

Prepared for:

**Northern California Power Agency
180 Kirby Way
Roseville, California 95678**

Prepared by:

**K.S. Dunbar & Associates, Inc.
Environmental Engineering
3035 Calle Frontera
San Clemente, California 92673-3012
(949) 366- 2089
(949) 366- 5315 fax
ksdpe@cox.net**

November 2005



Preface

This Initial Study addresses the potential impacts associated with implementation of the Northern California Power Agency's (NCPA) proposed Stanislaus Weather Modification Program.

During July 2001, NCPA issued an Initial Study for its then proposed Stanislaus Weather Modification Program (State Clearinghouse No. 2001032036). At that time, the preferred alternative was to utilize ground-based generators to disperse the silver iodide into the atmosphere. Due to the time required for land acquisition and environmental permits, NCPA decided to utilize aerial application of the silver iodide by the use of a small fixed-winged aircraft. That project is described in the following Initial Study.

It has been determined that the proposed operating procedures and suspension criteria described in Appendix A would not have any significant impacts on the environment. The suspension criteria provide guidelines for curtailment of cloud seeding operations under specified conditions, including excess reservoir storage, total snowfall status, potential flood situations and severe weather threats. Project operations and suspension criteria would mitigate all potential adverse impacts associated with the Stanislaus Weather Modification Program to less than significant levels.

It should also be pointed out that only extremely low concentrations of silver iodide would be dispensed by the aircraft under specific weather conditions during cloud seeding operations. However, relatively low levels of silver could result in long-term or chronic toxicity to certain life stages of more sensitive aquatic organisms. Therefore, a conservative threshold level of no effect of 0.4 µg/l was established for this Initial Study. The Desert Research Institute has measured silver levels in water samples from Lower Blue Lake and Salt Springs Reservoir for the Pacific Gas and Electric Company (PG&E) as part of the Mokelumne Weather Modification Program. Monitoring results of water samples received in June 1995 reported silver levels of 0.0074 µg/l in Lower Blue Lake and 0.0063 µg/l in Salt Springs Reservoir. These reported results are two orders of magnitude lower than the established threshold level at which there would be no significant effects. Due to the fact that cloud seeding has occurred in the Mokelumne watershed for over 50 years, it is highly unlikely that cloud seeding operations in the North Fork Stanislaus River watershed would result in any appreciable increase in the accumulation of silver to levels approaching the conservative threshold level of 0.4 µg/l.

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Chapter 1 Introduction

Overview and Purpose

The Northern California Power Agency (NCPA) anticipates implementing the Stanislaus Weather Modification Program. The weather modification program (cloud seeding) would augment winter snowfall in the higher elevations of the North Fork Stanislaus River watershed upstream of Spicer Meadow Reservoir (Figure 1-1).

The proposed action, which is the subject of this Initial Study, includes the operation of fixed-winged aircraft (e.g., Cessna 304A) to seed the clouds during storm events. The proposed action would not increase storm frequency; however, it would enhance precipitation (snowfall) from naturally occurring storms. The amount of precipitation added by cloud seeding is difficult to determine because of the natural variability of precipitation and the difficulty of obtaining representative measurements. However, it is anticipated that the program would enhance runoff approximately 7.5 percent.

The target area, which is the area in which increased precipitation (snowfall) is desired, is the 74 square mile watershed above Spicer Meadow Reservoir, Utica and Union Reservoirs, and Lake Alpine. Most of the watershed is above the 6,600 foot elevation contour. The operational season, when cloud seeding would occur, would be from November 1 through May 31.

Need for Project

Increased runoff in the target area (i.e., watershed above Spicer Meadow Reservoir, Utica and Union Reservoirs and Lake Alpine) would pass through the North Fork Stanislaus Hydroelectric Development Project's [Federal Energy Regulatory Commission (FERC) Project No. 2409] power plants at Spicer Meadow and Collierville. The combined generation capacity of these two power plants is 258 megawatts. This increased runoff would also pass through downstream power plants at New Melones and Lake Tulloch.

Additional beneficiaries of the Stanislaus Weather Modification Program would be the users of streams, lakes and reservoirs within the target area for recreational purposes such as boating and fishing. Within the targeted watershed, augmented snowfall and subsequent runoff may also benefit forest growth and resistance to drought-related stress (*Parsons Engineering Science, Inc., October 1995*).

Environmental Compliance

The Stanislaus Weather Modification Program is subject to the requirements of the California Environmental Quality Act (CEQA). Therefore, the following Initial Study has been prepared in accordance with CEQA and the State CEQA Guidelines.

Designation of Lead Agency

Section 15051(a) of the State CEQA Guidelines states:

If the project will be carried out by a public agency, that agency shall be the Lead Agency even if the project would be located within the jurisdiction of another public agency.

Therefore, NCPA is the designated Lead Agency for CEQA purposes.

Purposes of an Initial Study

The purposes of an Initial Study, as outlined in §15063(c) of the CEQA Guidelines, are:

- 1) *Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration;*
- 2) *Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration;*
- 3) *Assist the preparation of an EIR, if one is required, by:*
 - a) *Focusing the EIR on the effects determined to be significant,*
 - b) *Identifying the effects determined not to be significant,*
 - c) *Explaining the reasons for determining that potentially significant effects would not be significant, and*
 - d) *Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.*
- 4) *Facilitate environmental assessment early in the design of a project;*
- 5) *Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment;*
- 6) *Eliminate unnecessary EIR's; and*
- 7) *Determine whether a previously prepared EIR could be used with the project.*

Contents of an Initial Study

The contents of an Initial Study are defined in §15063(d) of the CEQA Guidelines as follows:

- 1) *A description of the project including the location of the project;*
- 2) *An identification of the environmental setting;*
- 3) *An identification of environmental effects by use of a checklist, matrix, or other method, provided that entries on a checklist or other form are briefly explained to indicate that there is some evidence to support the entries. The brief explanation may be either through a narrative or a reference to another information source such as an attached map, photographs, or an earlier EIR or negative declaration. A reference to another document should include, where appropriate, a citation to the page or pages where the information is found;*
- 4) *A discussion of ways to mitigate the significant effects identified, if any;*
- 5) *An examination of whether the project would be consistent with existing zoning, plans, and other applicable land use controls;*
- 6) *The name of the person or persons who prepared or participated in the Initial Study.*

Intended Use of the Initial Study

The Initial Study will be presented to the Northern California Power Agency's Commission for its use in implementing the California Environmental Quality Act (CEQA). The basic purposes of CEQA as outlined in §15002(a) of the CEQA Guidelines are to:

- 1) *Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.*
- 2) *Identify the ways that environmental damage can be avoided or significantly reduced.*
- 3) *Prevent significant avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.*
- 4) *Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.*

As pointed out above, one purpose of an Initial Study is:

Provide the Lead Agency with information to use as the basis for deciding whether to prepare an Environmental Impact Report (EIR) or Negative Declaration.

Lead Agency Decision Making Process

The Lead Agency (i.e., Northern California Power Agency) would base its decision on the project on the findings contained within this Initial Study plus the professional knowledge and judgment of its staff and consultants. During the review process, mitigation measures contained in this document should be evaluated with respect to their effectiveness in reducing impacts to a level of insignificance. Public input, including responsible and trustee agencies, should also be requested and evaluated during the review process.

The approval process for the proposed project will begin with Northern California Power Agency's Commission making a decision to prepare a Negative Declaration or an Environmental Impact Report for the project. Should the Agency decide to prepare a Negative Declaration, based on this Initial Study, it would also determine whether or not it would approve of the project in accordance with §15074 of the CEQA Guidelines. Should the Agency decide to prepare an Environmental Impact Report for the project, it would also have to make findings in accordance with §15091 of the CEQA Guidelines and to certify the Final Environmental Impact Report in accordance with §15090 of the CEQA Guidelines.

Approvals for which this Initial Study will be Used

No other public agency has jurisdiction over this project. However, the California Department of Water Resources must be notified that a cloud seeding program is going to be carried out.

Chapter 2 Project Description

Introduction

During 1982, the Calaveras County Water District (CCWD) received a FERC License for its North Fork Stanislaus River Hydroelectric Development Project (FERC Project No. 2409). Subsequently, under the terms of a power purchase contract, NCPA constructed the project and began commercial operation in January 1990. The North Fork Project includes a large storage Reservoir (Spicer Meadow Reservoir), three diversion dams (North Fork, Beaver Creek and McKays Point), three tunnels and two power plants with a combined generation capacity of about 258 megawatts (MW).

Spicer Meadow Reservoir, located on Highland Creek, has a total storage capacity of 189,000 acre-feet. The North Fork Diversion Dam and Tunnel also diverts water previously stored in Lake Alpine and Utica and Union Reservoirs into Spicer Meadow Reservoir. These combined watersheds cover approximately 74 square miles with elevations ranging from 6,600 feet to 9,700 feet and produce an average annual runoff of 160,200 acre-feet. Approximately 90 percent of the precipitation in this watershed falls during California's wet season, October through May, and mostly accumulates as snow during the November through April period.

In order to augment winter snowfall in the watershed above Spicer Meadow Reservoir, NCPA anticipates the implementation of a weather modification program which is also known as a cloud seeding program. The operational season would be from November 1 through May 31. The weather modification program would not increase storm frequency but would enhance precipitation from naturally occurring storms. The amount of precipitation added by cloud seeding is difficult to determine because of the natural variability of precipitation and the difficulty of obtaining representative measurements.

Based on other weather modification programs in the area, the proposed Stanislaus Weather Modification Program would attempt to increase snowpack from 6 to 10 percent. In terms of the resultant annual average runoff, the expected benefit from this program would likely be an approximate 7.5 percent increase (*PG&E, June 3, 1996*). Cloud seeding typically results in an increase in precipitation (snow fall) from more moderate storms. Sublimation of the snowpack, soil adsorption of snow melt and subsequent evapotranspiration and groundwater recharge are factors that contribute to the lower increases in runoff directly attributable to cloud seeding. These factors exhibit considerable variation between different storm events and seasons (*Parsons Engineering Science, Inc., October 1995*).

For purposes of this report, a 15 percent maximum increase in snowpack and a 10 percent maximum increase in runoff is assumed in order to examine the environmental impacts of the proposed program in a conservative manner.

History of Weather Modification Programs

For the past 60 years, technologies to influence weather have been used in attempts to alleviate droughts or the effects of hazardous storms. Today, operational weather-modification programs exist in more than 24 countries, and in 2001 at least 66 efforts to alter the weather were conducted in 10 states across the United States (*The National Academies, 10/29/05*).

As stated in Parsons Engineering Science, Inc's October 1995 Environmental Assessment, weather modification programs (cloud seeding) were first initiated in California during the 1947/48

water year. There have been operational programs conducted in California each year since that date.

Modern cloud seeding efforts for the purpose of increasing rain and snow over numerous areas in California began with a few landmark programs in the late 1940's and early 1950's. Some of these early projects that are still active, along with the initial year of operation, are listed below:

- The California Electric Power Company (now Southern California Edison Company) program over the Bishop Creek watershed of the eastern Sierra (1948).
- The Southern California Edison Company program over the Upper San Joaquin River Basin (1950).
- The Pacific Gas and Electric Company program over the Lake Almanor Watershed (1953).
- The Kings River Conservation District program over the Kings River Watershed above Pine Flat Dam (1954).

The purpose of these programs is to enhance precipitation for water supplies and/or hydroelectric power. Over the past 50+ year period, a broad range of statistical analyses and physical studies have been used to evaluate many of these programs. Based on various evaluations, program sponsors have concluded that these operations have produced 5 to 10 percent increases in average annual streamflow runoff and up to 15 percent increases in coastal mountains (*Parsons Engineering Science, Inc., October 1995*).

At the present time, there are 15 operational cloud-seeding programs active in California. The northernmost program is the Lake Almanor Program, conducted by PG&E over a portion of the Feather River drainage basin. The most southerly program in California is the Santa Barbara Project sponsored by the County of Santa Barbara. A map showing the locations of these 15 cloud-seeding programs being conducted in California is presented on Figure 2-1. A list of these projects and their sponsors is also included in Table 2-1.



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Figure 2-1
 Cloud Seeding Programs in California

Initial Study
 Stanislaus Weather Modification Program
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**Table 2-1
Cloud-Seeding Programs in California**

Program Designation	Sponsor
1. Lake Almanor	Pacific Gas and Electric Company
2. Tahoe-Truckee	State of Nevada
3. American River	Sacramento Municipal Utility District
4. Carson/Walker Rivers	State of Nevada
5. Mokelumne River	Pacific Gas and Electric Company
6. Calaveras River	Stockton East Water District
7. Tuolumne River	Turlock and Modesto Irrigation Districts
8. San Joaquin River	Southern California Edison Company
9. Eastern Sierra	Los Angeles Department of Water and Power
10. Kings River	Kings River Conservation District
11. Kaweah River	Kaweah Delta Water Conservation District
12. Kern River	North Kern Water Storage District
13. Santa Clara County	Santa Clara Water Agency
14. Monterey County	Monterey County Water Resources Agency
15. Santa Barbara	Santa Barbara County

The location of these projects is shown on Figure 2-1.

Source: Parsons Engineering Science, Inc., October 1995.

Cloud-Seeding Programs in Project Area

Other cloud-seeding programs in the vicinity of the Stanislaus Weather Modification Program include the Mokelumne River program sponsored by the Pacific Gas and Electric Company (PG&E), Carson/Walker Rivers program sponsored by the State of Nevada, the American River program sponsored by the Sacramento Municipal Utility District (SMUD), and the Calaveras River program sponsored by the Stockton East Water District (SEWD) (Figure 2-1). The Mokelumne River program, immediately adjacent to the proposed program, provides an augmented water supply for PG&E's Salt Springs Reservoir. Water from the Carson/Walker Rivers program serves primarily agricultural interests and some recreational interests in the State of Nevada and eastern California. The purpose of the SMUD program is snowfall augmentation for hydroelectric projects. The general target area of the SMUD program includes the Crystal Basin (Loon Lake and Union Valley). The Calaveras River program, located to the west of the proposed program, operated by SEWD, provides rainfall augmentation by aerial cloud seeding to serve the New Hogan Reservoir watershed for agricultural interests (66 percent) and urban interests (34 percent).

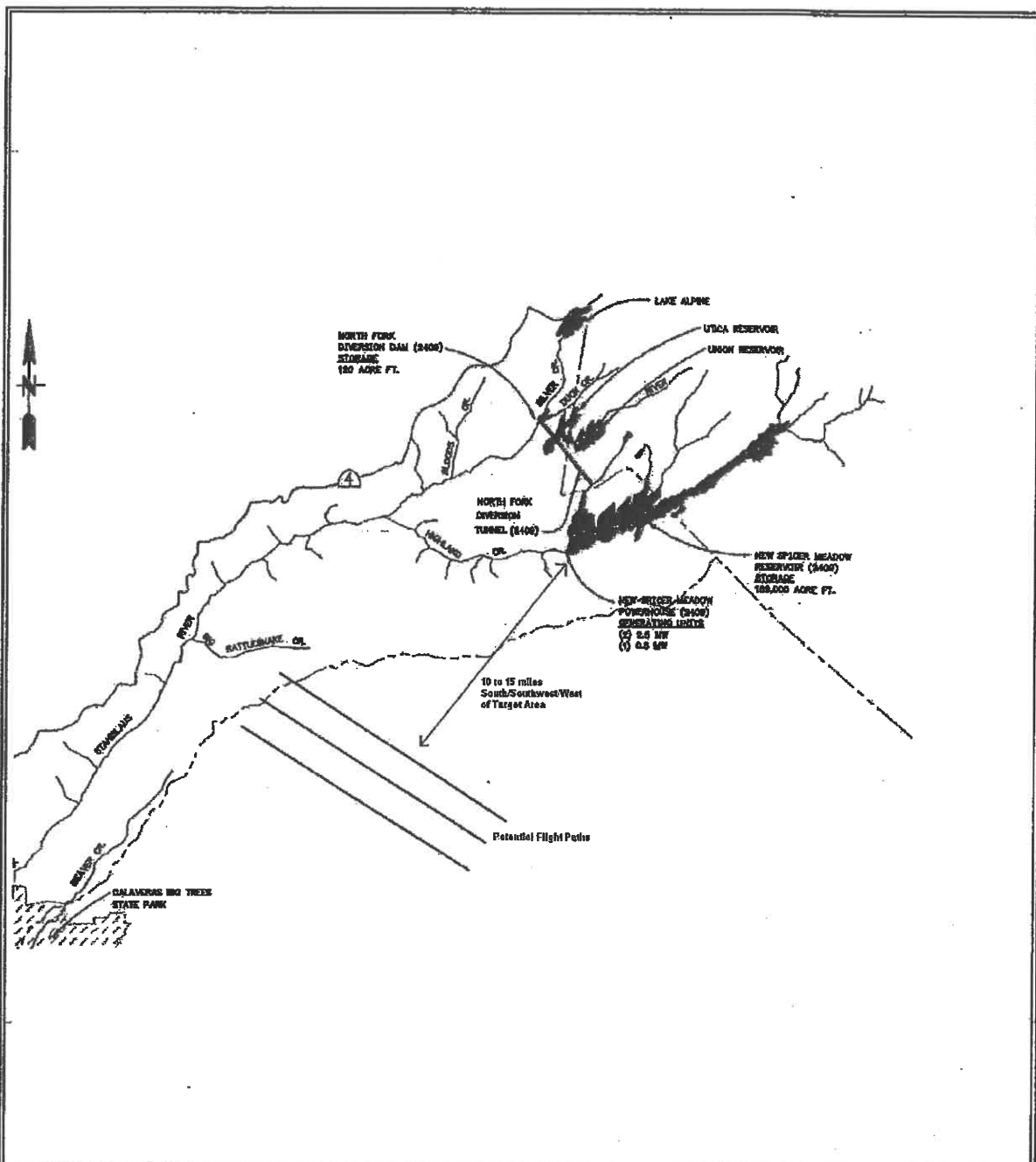
Project Location

The project location includes the target area for snowpack enhancement as well as the area where aerial seeding will be performed. The target area for increased snowpack enhancement is the watershed of the North Fork Stanislaus River and Highland Creek upstream of Lake Alpine, Utica and Union Reservoirs, and Spicer Meadow Reservoir and generally above the 6,600-foot contour (Figure 2-2). The target area includes approximately 74 square miles in Alpine and Tuolumne Counties. The nearest community to the target area is Bear Valley with a population of about 133 persons (*U.S. Census, 2000*).

Project Objectives

Based on a previous study for the Stanislaus Weather Modification Program (PG&E, 1996), the program is designed to meet the following objectives:

- Augment winter snow accumulations in the watersheds above Spicer Meadow Reservoir, Utica and Union Reservoirs, and Lake Alpine.



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Figure 2-2

Potential Flight Paths

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 Stanislaus Weather Modification Program
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- Augment runoff into Spicer Meadow Reservoir.
- Achieve a net benefit to NCPA based on increased power production.

Proposed Project

Introduction

At a recent meeting at the California Energy Commission Building in Sacramento, discussions by the Weather Modification Association (WMA) included discussions regarding the improved results of aerial seeding versus ground-based seeding programs in the southern Sierra Nevada Range. NCPA participated in these discussions and with the cooperation of WMA members, aerial seeding is proposed as the method to augment the snowpack accumulation in the NCPA target watershed.

Silver iodide aerosol has long been recognized as a material which can cause ice nucleation (the creation of new ice crystals) when it is dispersed into clouds containing supercooled liquid water droplets at temperatures below -5°C . Clouds containing supercooled water droplets occur frequently over the Sierra Nevada mountains during winter storms, as the associated storm winds lift moist air up the mountain slopes. These clouds are referred to as orographic clouds. The supercooled water droplets are most numerous in the lower portions of the cloud systems, especially where moisture supply and air lifting is causing rapid condensation. Natural ice nuclei, for example, dust particles, can be locally deficient in number to act upon the number of supercooled water droplets in the area where rapid condensation is occurring. Thus, introduction of silver iodide particles to these lower portions of the cloud system offers additional sites for new ice crystals to be initiated.

Ice nucleation by silver iodide type aerosols occurs by a variety of mechanisms (e.g., contact, condensation, freezing or deposition). It has been shown that the effectiveness of these processes vary with cloud temperature, supercooled liquid water content, supersaturation, ice nucleus aerosol chemistry and particle size distribution and time frames available for growth of new ice crystals. Once silver iodide initiates the growth of a new ice crystal, its growth can proceed without limiting the growth of naturally occurring ice crystals provided supersaturations over ice are maintained by the presence of sufficient supercooled liquid water and vapor. Given adequate time, water droplet, and vapor supplies in the seeded cloud, all ice particles can continue to grow to sizes which ultimately fall to the ground. By seeding cloud systems when favorable conditions exist, more water can be precipitated, within a given time frame, than would have occurred naturally. This is the static cold cloud seeding hypothesis which forms the basis for conducting snow augmentation programs.

Cloud Seeding in the Sierra Nevada

In wintertime cloud seeding programs, the primary goal is to achieve active ice nuclei concentrations of 10-100 per liter within the specific cloud volume over the target where supercooled liquid water is present in concentrations of $0.05\text{-}0.5\text{ gm/m}^3$. In the Sierra Nevada, this is particularly important in the lower altitude regions below 10,000 feet where the temperature is frequently in the range of -3 to -10°C . Studies in the Sierra have shown supercooled liquid water conditions frequently exist and suggest that icing occurs approximately 400 to 500 hours per year at temperatures in this range and with mountain top wind directions of 180 to 220 degrees true. The important parameters which determine the seeding material release rate are the area coverage and depth of cloud above the -5°C isotherm and the horizontal wind velocity fields.

The number of ice nuclei flares required to achieve effective treatment of the cloud volume over the target is dependent upon both the intensity and duration of a particular storm as well as any other seeding activities that may be occurring in the immediate vicinity such as ground seeders by nearby programs. The aerial seeding location upwind of the target watershed along a path perpendicular to the wind direction, at distances related to the storm wind velocities and ice crystal growth times. The flare activation also needs to consider the ice nucleation activity spectrum of the seeding materials used and the rate these ingredients become active. These variables are dependent upon cloud temperature, liquid water content, and seeding ingredients in the flares. Maximum effectiveness of a project will come from seeding every storm provided certain public safety criteria are fulfilled, supercooled liquid water is present and windflow parameters are neither too high nor low to achieve sufficiently low concentrations of ice crystals or high growth times.

Stanislaus Weather Modification Program

The Stanislaus Weather Modification Program will be conducted by a private entity (e.g., Atmospheric, Inc.) under contract to the Northern California Power Agency. Under the terms of the contract, the contractor shall furnish and have available for use during the operational period the following equipment and personnel:

- The services of a competent staff on a 24-hour per day, 7-day per week basis, to furnish full meteorological data.
- All weather data will be available at the location of the Contractor's head office in Fresno and will be used to coordinate various phases of the field program. These data will be passed by FXA and Internet to the radar field headquarters on a daily basis whenever the station is active.
- A 5 cm weather radar system will be permanently based at the Modesto Airport that will act as the field operational headquarters for the program. It shall be located so as to "see" the full target area and have a maximum range of not less than 450 km.
- A cloud seeding aircraft will be permanently based at the Modesto Airport. This aircraft will be equipped for all-weather flying. It will be further equipped with facilities for dispensing silver iodide freezing nuclei, carbon dioxide, and other such nuclei as may be appropriate for use in cloud seeding activities throughout the target area. The Contractor's aircraft and equipment thereon will be certified by the Federal Aviation Administration (FAA) and all pilots operating aircraft for or on behalf of the Contractor shall be duly licensed by the FAA.
- The following core staff at the head office in Fresno who will be available on a full-time basis for all required activities associated with the Stanislaus Weather Modification Program:
 - One radar meteorologist/forecaster.
 - One instrument rated cloud seeding pilot.

These persons will be located on a full-time basis 24-hours per day, 7-days per week, near enough to the airport and radar field headquarters so they would require less than 30 minutes travel time from their living quarters to the radar and project aircraft for all project activities.

- The Contractor will launch seeding flights only when the radar system indicates that seedability is either "excellent" or "good" as specified under the following criteria:

- **Excellent:** Cloud depths are greater than at least 10,000 feet from base to tops. Very few natural ice crystals are noted between -5°C and -12°C. Aircraft icing is persistent and, on some occasions, may require a lower altitude "melt-off".
- **Good:** Cloud depths are near 10,000 feet thick from base to tops. Supercooled liquid water produces modest icing on the aircraft. The natural SLW ice crystal ratios are reasonably high in temperatures warmer than -12°C.
- The Contractor will comply with the suspension program outlined in Appendix A of this Initial Study. The Contractor will be maintain, and be responsible for, specific suspension criteria designed to avoid contributing to, or appearing to contribute to, hazardous situations from naturally occurring weather related phenomena. These items relevant to the program include total snow and rainfall status, potential flood situations, avalanche hazards, severe weather threats, and other special circumstances such as search and rescue missions within the target area.

The aircraft, a Cessna 340A, would hold 32 burn-in-place flares, 150 grams each. Each flare burns for about 4 minutes. A flare would burn continuously while in icing conditions (supercooled liquid water). If perfect seeding conditions were encountered during the entire flight, 4,800 grams of silver iodide complex nuclei would be released in approximately 2 to 2 ½ hours of seeding time. It is important to point out that not all storms have liquid water continuously, so it is anticipated that the average flight would release 12 to 15 flares.

Based on a study of seeding tracks for the target area, the Contractor anticipates that tracks upwind to the northwest and southwest would be the best. These would range from about 8 miles upwind to a maximum of about 25 miles out in the southwest depending on the wind speeds and altitude. Seeding altitudes on these tracks would run at 13,000 feet on the northwest tracks and from 9,000 to 11,000 feet on the southwest tracks.

Water-Yield Potential

Individual seeding plumes were estimated to have approximate widths ranging from 1.5 to 3.0 kilometers (km) as they cross the target area. For purposes of this report, an estimate of 2.25 km (\approx 1.4 miles) is used. Typical cross-watershed transport of seeding plumes ranges in distances of 10 to 20 km. For purposes of this report, an estimate of 16 km (\approx 10 miles) is used. Therefore, a seeding plume would cover approximately

$$1.4 \text{ mi} \times 10 \text{ mi} \times 640 \text{ acres/mi}^2 = 8,960 \text{ acres as it traverses the target area}$$

Cloud seeding studies have shown that cloud seeding can augment precipitation rates by 0.1 to 1.0 mm/hr in Sierra Nevada orographic clouds (PG&E, June 3, 1996). For purposes of this report, an estimate of 0.015 in/hr is used. Based on this estimate, the water yield of a cloud seeding plume crossing the target area would be

$$8,960 \text{ acres} \times 0.015 \text{ in/hr} \times 1 \text{ ft/12 in} = 11.2 \text{ acre-feet/hour/plume}$$

There have been about 44 seedable events (adjusted for cancelled operations) of 11 hours each during past winter seasons in the Mokelumne Program. This number is lower than full potential that could apply to NCPA's watershed because the Mokelumne seeding was suspended before season end due to adequate snowpack an average of four out of ten years. A conservative estimate of the number of seeding hours per season over the target area would be

$$44 \text{ events} \times 11 \text{ hours/event}$$

Therefore, the seasonal yield of a cloud seeding plume traveling over the target area would be

$$11.2 \text{ acre-feet/hr} \times 484 \text{ hours} = 5,420 \text{ acre-feet}$$

The objective would be to position as many seeding plumes over the watershed during prime seedable weather conditions as possible. However, this objective would have to be tempered (limited) by not over-seeding the same cloud volume with too many seeding plumes concurrently (this could reduce the water yield).

It is estimated that two to four plumes enhancing snowfall over the target area during seedable weather conditions would occur. For purposes of this report, an estimate of 2.5 plumes as a long-term average number of plumes effectively targeting the target area during any given seeding operation is used. Based on the 2.5 plume estimate, the seasonal precipitation enhancement is estimated at

$$2.5 \text{ plumes} \times 5,420 \text{ acre-feet/plume} = 13,550 \text{ acre-feet}$$

This represents about an 8.5 increase in potential annual runoff from the Spicer Meadow Reservoir watershed.

Net Benefit Analysis

Benefit

Based on the assumption that after evaporative losses (deduction of 1 percent), the NCPA cloud seeding program would produce a 7.5 percent increase, the increased runoff would equal

$$160,200 \text{ acre-feet} \times 0.075 = 12,015 \text{ acre-feet}$$

If this runoff were utilized by NCPA's hydroelectric facilities, which have a power factor of 2.05 megawatt hours per acre-foot, and based on the assumption that the value of the energy equals 50 mills per kilowatt hour, the benefit of the added hydroelectric power would be:

$$12,015 \text{ ac-ft/yr} \times 2,050 \text{ kwhr/ac-ft} \times \$0.075/\text{kwhr} = \$1,847,000 \text{ per year.}$$

Project Cost

The costs of the proposed Stanislaus Weather Modification Program are as shown in Table 2-2.

**Table 2-2
Estimated Costs of Stanislaus Weather Modification Program**

Item	Estimated Cost
Startup	\$80,000
Recurring	
Annual contract costs	\$170,000
Administrative	\$25,000
Total First Year Costs	\$275,000

Estimate of Five-Year Net Benefit

An estimate of the five-year net benefit of the Stanislaus Weather Modification Program is provided in Table 2-3.

**Table 2-3
Estimate of Five-Year Net Benefit
Stanislaus Weather Modification Program**

Item	Amount
5-year gross benefit = 5 x \$1,847,000	\$9,235,000
5-year costs= \$275,000 + 4(\$195,000)	\$1,055,000
Minimum 5-year net benefit to NCPA	\$8,180,000

Based on the estimates shown in Tables 2-2 and 2-3, the benefit/cost ratio after the initial startup cost would be

$$\$1,847,000 \div \$195,000 = 9.5:1.0$$

It should be pointed out that the above benefits are based on an assumed value of energy of 75 mills per kilowatt-hour. Other values of energy would change these estimates.

Chapter 3 Environmental Setting

Introduction

The social, economic and environmental setting of the project area is important for the decision-maker and the public. The environmental setting is the starting point from which forecasts of the environmental impacts of the proposed action must be made. Therefore, the following section contains a detailed description of the environmental setting in the area of the proposed Stanislaus Weather Modification Program.

Aesthetics

The Carson-Iceberg Wilderness is a rugged landscape of great scenic beauty dominated by volcanic ridges and peaks. Prominent in the southwestern portion are the Dardanelles. There are many streams flowing through deep granitic canyons but few lakes. Elevations range from about 5,000 feet near Donnell's Reservoir to 11,462 feet at Sonora Peak. From some vantage points, one can view vast desert to the east and dense conifer forest to the west.

Agricultural Resources

The project area includes timberlands in Alpine, Calaveras and Tuolumne Counties. There are no prime farmlands or unique farmlands of statewide importance in the project area.

Air Quality

Meteorology and Topography

Meteorological and topographical conditions play an important role in a project of this nature because they can determine the success of the seeding activities and determine how well seeding agents and air pollutants generated by the project will be dispersed. Specific meteorological conditions trigger when to initiate seeding. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of the air pollutants.

Topography

This area is characterized by complex terrain consisting of mountain peaks, valleys, and several lakes. Elevations range from 6,600 feet near Spicer Meadow Reservoir to over 9,700 feet on the adjoining peaks. Forced lifting of air as it passes over hills or mountains can produce orographic clouds which are sometimes seeded. The varying terrain can also cause an area to be subject to a combination of climatic factors which result in a low potential for accumulation of pollutants near water and a slightly higher potential in sheltered valleys. The low accumulation potential near water is caused by atmospheric turbulence created by the temperature differential between land and water surfaces.

Temperature

The target area experiences several different temperature regimes. Higher elevations have colder temperatures than surrounding valleys. Temperatures near lakes are moderated due to

differential heating between land and water surfaces. This results in colder temperatures in the summer and warmer temperatures in the winter compared to areas away from water.

There are no National Oceanic and Atmospheric Administration (NOAA) sponsored temperature monitoring stations in the project area. However, there are two representative stations close by (Salt Springs and Twin Lakes). Salt Springs is located immediately west of the target area at an elevation of approximately 4,000 feet. Temperatures typically range from 30° F to 60° F in the winter and 60° F to 90° F in the summer. The other station (Twin Lakes) is located northeast of the target area at an elevation of approximately 8,000 feet. Temperatures at this station vary between 10° F and 40° F in the winter and 40° F to 70° F in the summer (NOAA, 1982).

Inversions

A temperature inversion, which may be described as a layer, or layers, of warm air above a cooler layer of air, acts as a nearly impenetrable lid to the vertical mixing of the atmosphere, thus inhibiting dilution of near-surface air pollutant emissions. The height above the surface through which vertical mixing occurs is called the mixing height. The stabilities associated with inversions can lead to orographic cloud growth at the level of the inversion. The strongest inversions and resulting lowest mixing heights occur primarily during the morning hours. Summer inversions usually are caused by the compressional warming of air as it sinks toward the earth's surface under the influence of the Pacific High. When local or seasonal cooling of the earth's surface occurs, as it does most frequently during the fall and winter, ground-based (radiative) inversions form. Both types of inversions can occur, however, at any time during the year.

Determination of actual mixing heights in the target area is difficult due to the lack of monitoring data and varying terrain. Holzworth (1972) created mixing height contours based on available data, so that existing heights could be estimated in areas without data. These contours show that the annual average morning mixing height is 450 meters and the annual average afternoon mixing height is about 2,000 meters. Typically, mixing heights are lower in the morning during the summer months compared to winter months. The opposite is true during the afternoon.

Temperature inversions would rarely occur during the periods when NCPA would perform cloud seeding operations. These periods would typically be windy, cloudy, precipitating storm periods and atmospheric mixing in these conditions/periods is not conducive to inversions or air pollutant accumulation.

Precipitation

The summer climate of California is dominated by a semi-permanent, high pressure region centered over the eastern Pacific Ocean termed the "Pacific High". The Pacific High generally remains fixed offshore from May through September. Because of this persistent high-pressure cell, the jet stream is directed away from California; therefore, storm systems rarely affect the area during the summer.

In winter, the Pacific High weakens and shifts southward and storms become more frequent in California. Precipitation data from the two monitoring stations near the target area (Salt Springs and Twin Lakes) show that the precipitation primarily occurs between October and May. Much of the precipitation during this time frame falls as snow. Very little precipitation is observed during the balance of the year, usually less than one inch per month. The annual average precipitation (rainfall plus snowfall converted to equivalent inches of water) for the area is usually between 40 and 60 inches (NOAA, 1982).

Wind

Wind flows are important because they determine what direction a storm system will move and how air pollutants will be dispersed. Air pollutant can accumulate in sheltered valleys when light winds combine with reversals of wind direction between daytime up-valley and nighttime down-valley air flow, or when calm winds persist for extended periods.

Examination of the terrain in the target area, as well as general wind flow patterns, indicated that the wind is generally from the southwest quadrant in the valleys and the southern quadrant at mountain peaks. Valley areas may experience a nighttime reversal of air flow. The diurnal pattern in one of calmer conditions (4 to 9 knots) prevailing during the night and the strongest winds (9 to 16 knots) occurring during the afternoon (*Parsons Engineering Science, Inc., October 1995*).

PG&E has two wind monitoring stations in the greater project area. One station, Mt. Reba, is indicative of mountain conditions. The other station, Salt Springs, represent conditions that would occur in a valley. Data monitored on Mt. Reba indicate that winds are predominantly from the south. The average wind speed is approximately 10 knots. Winds for the most part are between 5 and 15 knots. Data from Salt Springs show that the predominant direction is from the southwest. A nighttime reversal does appear, indicated by the predominant nighttime wind direction being from the north (*Parsons Engineering Science, Inc., October 1995*).

Air Pollutants

The Stanislaus Weather Modification Program lies within the Mountain Counties Air Basin and the Great Basin Valley Air Basin. Tuolumne County lies within the Mountain Counties Air Basin and Alpine County lies within the Great Basin Valley Air Basin.

Pollutants regulated by the State and federal Clean Air Acts fall under three categories:

- ❖ criteria air pollutants
- ❖ toxic air contaminants, and
- ❖ global warming and ozone depleting gases.

Pollutants in each of these categories are monitored and regulated differently. Criteria air pollutants are measured by sampling concentrations in the air, toxic air contaminants are measured at the source and in the general atmosphere, and global warming and ozone-depleting gases are not monitored but are subject to federal and regional policies that call for their reduction and eventual phaseout. (*SCAQMD, 1999*)

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. Those standards have been set at levels to protect the human health with an adequate margin of safety.

The following paragraphs describe the source and health effects of the criteria pollutants. In addition, Table 3-1 lists the primary emission sources of the criteria pollutants and some of the harmful effects of the pollutants.

Table 3-1
Primary Sources and Effects of Criteria Pollutants

Pollutant	Source	Primary Health Effects
Lead (Pb)	Contaminated soil	Impairment of blood function and nerve conduction. Behavioral and hearing problems in children
Sulfur Dioxide (SO ₂)	Combustion of sulfur-containing fossil fuels. Smelting of sulfur-bearing metal ores. Industrial processes.	Plant injury. Reduced visibility. Deterioration of metals, textiles, leather, finishes, coatings, etc. Irritation of eyes. Reduced lung function. Aggravation of respiratory diseases (asthma, emphysema).
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust. Natural events, such as decomposition of organic matter.	Plant injury. Reduced visibility. Deterioration of metals, textiles, leather, finishes, coatings, etc. Irritation of eyes. Reduced lung function. Aggravation of respiratory diseases (asthma, emphysema).
Nitrogen Dioxide (NO ₂)	Motor vehicle exhaust. High temperature stationary combustion. Atmospheric reactions.	Reduced plant growth. Reduced visibility. Aggravation of respiratory illness. Formation of acid rain.
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	Plant leaf injury. Irritation of eyes. Aggravation of respiratory and cardiovascular diseases. Impairment of cardiopulmonary function.
Fine Particulate Matter (PM ₁₀)	Secondary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions.	Soiling. Reduced visibility. Aggravation of the effects of gaseous pollutants. Increased cough and chest discomfort. Reduced lung function. Aggravation of respiratory and cardio-respiratory diseases.

Source: SCAQMD, 1999

Lead

Lead (Pb) in the atmosphere occurs as particulate matter. The combustion of leaded gasoline was the primary source of lead emissions. Other sources of lead include the manufacturing of batteries, paint, ink, ceramics, and ammunition and secondary lead smelters. With the phase-out of leaded gasoline, secondary lead smelters and battery recycling and manufacturing facilities are becoming lead emission sources of greater concern.

Prolonged exposure to lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance (including IQ performance, psychomotor performance and reaction time) and growth. Lead is classified as a probable human carcinogen with an EPA weight-of-evidence classification of B2.

Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless gas with a pungent, irritating odor. Sulfur dioxide is created by the combustion of sulfur containing fuels. This substance is known to oxidize to sulfur trioxide, which combines with moisture in the atmosphere to form a sulfuric acid mist. Sulfur dioxide damages and irritates lung tissue and accelerates corrosion of materials.

Carbon Monoxide

The automobile and other types of motor vehicles are the primary source of carbon monoxide (CO). This gas is colorless and odorless which adds to its danger. In high concentrations, carbon monoxide can cause physiological and pathological changes, and ultimately death, by incapacitating the red blood cells and interfering with their ability to carry oxygen to body tissues.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a by-product of fuel combustion. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but nitric oxide reacts quickly to form nitrogen dioxide, creating the mixture of nitric oxide and nitrogen dioxide commonly called NO_x. Nitrogen dioxide acts as an acute irritant and, in equal concentrations, is more injurious than nitric oxide. At atmospheric concentrations, however, nitrogen dioxide is only potentially irritating. There is some indication of a relationship between nitrogen dioxide and chronic pulmonary fibrosis. Some increase in bronchitis in children (two to three years old) has been observed at concentrations below 0.3 ppm. Nitrogen dioxide absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. Nitrogen dioxide also contributes to the formation of suspended particulate matter.

Ozone

Ozone (O₃) is one of a number of substances called photochemical oxidants that are formed when reactive organic compounds and nitrogen oxides, both byproducts of the internal combustion engine, react in the presence of ultraviolet sunlight. Ozone may pose its worst health threat to those who already suffer from respiratory diseases. However, ozone also hurts healthy people. In the past, those effects were thought to be limited to more difficult breathing during work and exercise. However, research has shown that children residing in areas of high ozone concentrations experience a loss in lung function.

Fine Particulate Matter (PM₁₀)

Fine particulate matter (PM₁₀) consists of extremely small suspended particles or droplets 10 microns or smaller in diameter that can lodge in the lungs contributing to respiratory problems. PM₁₀ arises from such sources as road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. It is also formed in the atmosphere from nitrogen dioxide and sulfur dioxide reactions with ammonia. PM₁₀ scatters light and significantly reduces visibility.

Fine particulates pose a serious health hazard, alone or in combination with other pollutants. More than half of the smallest particles inhaled will be deposited in the lungs and can cause permanent lung damage. Fine particulates can also have a damaging effect on health by interfering with the body's mechanism for clearing the respiratory tract or by acting as a carrier of an absorbed toxic substance.

Ambient Air Quality Standards

The current ambient air quality standards are provided in Table 3-2.

**Table 3-2
National and California Ambient Air Quality Standards**

Air Pollutant	National Standards	California Standards
Lead (Pb)	1.5 µg/m ³ (calendar quarter)	1.5 µg/m ³ (30-day average)
Sulfur Dioxide (SO ₂)	0.14 ppm (24-hour)	0.25 ppm (1-hour) 0.04 ppm (24-hour)
Carbon Monoxide (CO)	9.0 ppm (8-hour) 35 ppm (1-hour)	9.0 ppm (8-hour) 20 ppm (1-hour)
Nitrogen Dioxide (NO ₂)	0.053 ppm (annual arithmetic mean)	0.25 ppm (1-hour)
Ozone (O ₃)	0.12 ppm (1-hour)	0.09 ppm (1-hour) 0.070 ppm (8-hour) ¹
Fine Particulate Matter (PM ₁₀)	150 µg/l (24-hour) 50 µg/l (annual arithmetic mean)	50 µg/l (24-hour) 12 µg/l (annual arithmetic mean)
Sulfate (SO ₄)	None	25 µg/l (24-hour)
Visual Range	None	10 miles (8-hour) w/humidity <70 percent
Sulfates	25 µg/l (24-hour)	None
Hydrogen Sulfide	0.03 µg/l (1-hour)	None
Vinyl Chloride	0.01 ppm (24-hour)	None

¹ This concentration was approved by the Air Resources Board on April 28, 2005 and is expected to become effective in early 2006.

Source: California Air Resources Board (5/06/05); www.arb.ca.gov (8/11/05)

Ambient Air Quality Data

The California Air Resources Board provides ambient air quality data for most air basins in the State. A summary of the data available for the greater project area is provided in Tables 3-3 and 3-4.

**Table 3-3
Ozone Trends Summary**

Year	Days > Standard			1-hr Observations		8-hr Averages		EPDC	Year Coverage
	1-hr		8-hr.	Maximum	3-yr 4 th High	Maximum	3-yr Ave 4 th High		
	State	National	National						
Truckee--Fire Station									
2004	0	0	0	0.086	0.082			0.083	73
2003	0	0	0	0.068	0.087			0.088	22
2002	0	0	0	0.085	0.084	0.071		0.085	81
2001	0	0	0	0.091	0.087	0.077		0.085	99
2000	0	0	0	0.081	0.077	0.068		0.077	75
1999	0	0	0	0.079	0.077			0.080	78
1998	0	0	0	0.077	0.080	0.066		0.084	84
1997	0	0	0	0.080	0.081	0.075		0.087	94
1996	0	0	0	0.093	0.081	0.068		0.084	90
1995	0	0	0	0.087	0.080			0.081	73
Mammoth Lakes--Gateway HC									
2004									
2003									
2002	0	0	0	0.071	0.097			0.105	11
2001	4	0	2	0.100	0.097			0.104	61
2000									
1999									
1998	0	0	0	0.079	0.090			0.095	24
1997	0	0	0	0.092	0.091			0.096	63
1996	0	0	1	0.090	0.100	0.090	0.079	0.099	82
1995	2	0	2	0.110	0.100	0.101	0.079	0.097	88

Notes: All concentrations expressed in parts per million.

The Expected Peak Day Concentration (EPDC) is calculated based on data for 3 successive years, listed by the last year of the 3 year period. EPDC represents the ozone concentration expected to occur once per year.

Blanks mean that there was insufficient data available to determine the value.

Source: ARB, 2005 (www.arb.ca.gov, 10-29-05)

Table 3-4
PM₁₀ Trends Summary

Year	Est. Days > Std.		Annual Averages		3-yr Average		High 24-hr Average	EPDC	Year Coverage
	National	State	National	State	National	State	National		
Truckee Fire Station									
2004									
2003									
2002									
2001									
2000							50.0		12
1999							44.0		36
1998							71.0		48
1997							136.0		91
1996							49.0		33
1995									
Mammoth Lakes Gateway HIC									
2004	0.0	10.5	24.1	19.6		20	86.0		88
2003							74.0		54
2002							129.0		40
2001							134.0		80
2000							70.0		38
1999									
1998							106.0		48
1997	0.0	36.4	26.5	26.4		26	112.0		97
1996							74.0		77
1995	0.0	37.0	26.0	26.0	30	34	122.0		97

Notes: All concentrations expressed in micrograms per cubic meter.
The Expected Peak Day Concentration (EPDC) is calculated based on data for 3 successive years, listed by the last year of the 3 year period. EPDC represents the ozone concentration expected to occur once per year.
Blanks mean that was insufficient data available to determine value.

Source: ARB, 2005 (www.arb.ca.gov, 10/29/05)

The California Air Resources Board and the U.S. Environmental Protection Agency have made the designations shown in Table 3-5 for the target area.

Table 3-5
State and National Air Quality Designations for Target Area

Pollutant	Alpine County		Tuolumne County	
	EPA	ARB	EPA	ARB
Ozone-1hr.	Unclassified	Unclassified	Unclassified	Non-attainment
Ozone-8hr.	Unclassified		Non-attainment	
PM ₁₀	Unclassified/attainment	Non-attainment	Unclassified/attainment	Non-attainment
PM _{2.5}		Unclassified		Unclassified
Carbon Monoxide	Unclassified/attainment	Unclassified	Unclassified/attainment	Attainment
Nitrogen Dioxide	Unclassified/attainment	Attainment	Unclassified/attainment	Attainment
Sulfur Dioxide	Unclassified	Attainment	Unclassified	Attainment
Sulfates		Attainment		Attainment
Lead		Attainment		Attainment
Hydrogen Sulfide		Unclassified		Unclassified
Visibility Reducing Particles		Unclassified		Unclassified

Source: ARB, 2005 (www.arb.ca.gov, 10/29/05)

Biological Resources

Terrestrial Habitats

The target area ranges from approximately 6,000 to over 9,000 feet above mean sea level (MSL). Consequently, it contains a diverse assemblage of vegetation communities which support a wide variety of wildlife habitats. Wildlife habitat usage and classification is primarily based on vegetation and can be further subdivided on several stages and canopy density.

Two major vegetation zones occur in the target area: upper montane and subalpine. Within these two major zones, further subdivisions of plant communities which overlap include: white fir, red fir, lodgepole pine, subalpine conifer, ponderosa pine, montane chaparral, montane meadow and montane riparian.

Upper Montane Vegetation Zone

This zone occurs from 6,000 to 8,000 feet above MSL (1,830 to 2,440 meters) and includes three somewhat overlapping plant communities: Jeffrey pine (*Pinus jeffreyi*), red fir (*Abies magnifica*), and lodgepole pine (*Pinus contorta*) forests. Jeffrey pine forests have a somewhat open overstory and commonly have an extensive mosaic of shrubby and herbaceous understory plants similar to ponderosa pine forests. Common plants in the understory include manzanita, ceonothus species and mountain misery. Red fir forests occur as a closed canopy and for a virtual monoculture largely devoid of herbaceous or shrubby understory.

Lodgepole pine forests generally occur within or at higher elevations than red fir forests. However, they also occur at lower elevations in the transition zone between red and white fir forests, particularly on disturbed sites. Lodgepole pine forests commonly succeed herbaceous communities in montane meadows as the meadows fill in with sediment and dry out. At higher elevations, mature lodgepole pine stands are generally open with little or sparse understory and little accumulation of forest floor litter. In transitional and disturbed areas, they are characterized by a dense thicket of smaller trees.

Subalpine Vegetation Zone

The subalpine vegetation zone occurs from 8,000 to 10,000 feet above MSL (2,440 to 3,050 meters) and is composed of three characteristic species: western white pine (*Pinus monticola*), mountain hemlock (*Tsuga mertensiana*) and juniper (*Juniperus occidentalis*). Other species such as red fir, lodgepole pine, and whitebark pine (*Pinus albicaulis*), which tends to be the dominant woody species at tree line, are also present in this zone. Shrubby vegetation and litter accumulation is sparse at these elevations. Few herbaceous plants are present except for flowering annuals and lupines (*Lupinus* sp.) which occur in occasional small meadows.

Montane Riparian and Meadow Vegetation

Within each of the above zones, intermittent creeks, streams, lakes and ponds support or are bordered by riparian vegetation more adapted to mesic conditions. Riparian habitat is recognized as one of the most important components for wildlife with the forest. Riparian refers to the transition between aquatic and terrestrial ecosystems that supports distinctive vegetation requiring free or unbound water (not attached to soil particles).

All perennial streams, most intermittent streams and most lakes and reservoirs support some type of riparian vegetation. Along perennial streams the dominant overstory vegetation is comprised of sycamore (*Plantanus racemosa*), dogwood (*Cornus* sp.), big leaf maple (*Acer macrophyllum*) at lower elevations, and alder (*Alnus* sp.) and aspen (*Populus tremuloides*) at

higher elevations. Thickets of willows and openings of grasses, sedges and rushes comprise the understory vegetation along perennial streams in both vegetative zones. Intermittent streams and high altitude lakes support primarily herbaceous species with occasional clumps of woody species, such as willow or aspen. A few of the high altitude lakes have shallow shorelines which support marsh vegetation providing good cover for shorebirds and waterfowl which are occasional visitors.

Meadows are open grassy areas which occur within both vegetation zones. However, most meadows are at elevations ranging between 7,500 and 9,000 feet and are associated with the lodgepole pine or red fir forests. Meadows are created and maintained by several factors: topography, drainage, seasonally wet soils, fire and land use. Should environmental conditions become drier, brush and trees, particularly lodgepole pine, would invade and succeed the herbaceous wet meadow vegetation. This limited habitat type provides important foraging habitat for numerous waterfowl and wildlife species and is usually bordered by dense willow thickets or forests which provide nesting and cover habitat. This edge effect supports higher wildlife diversity.

Common Terrestrial Wildlife

In general, there are fewer resident wildlife species at high elevations in the upper montane and subalpine vegetation zones, and many of these residents [e.g., yellow-bellied marmot (*Marmota flaviventris*), belding ground squirrel (*Spennophilus beldingi*), alpine chipmunk (*Tamias alpinus*), and pika (*Ochotona princeps*)] either hibernate or become inactive during the winter. The winter is less severe at lower elevations. Consequently, lower elevations of the upper montane zone contain more resident species and support more winter migrant species. Common resident species which are active throughout the winter include western gray squirrel (*Sciurus griseus*), northern flying squirrel (*Glaucmys sabrinus*), porcupine (*Erethizon dorsatum*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Felis rufus*) and trowbridge shrew (*Sorex trowbridgii*). Golden mantled ground squirrel (*Spennophilus lateralis*), chipmunk (*Tamias* sp.), black bear (*Ursus americanus*), raccoon (*Procyon lotor*) and badger (*Taxidea laxus*) are all common species which are inactive during the winter.

Montane riparian and meadow vegetation provides the most important habitat for wildlife. A wide assortment of wildlife utilizes these habitats including birds, mammals, insects, reptiles and amphibians (aquatic and semi-aquatic species discussed below under aquatic resources). The majority of riparian-associated species are birds with 77 species above 6,000 feet. Most birds migrate south or move downslope for the winter. During winter most birds that reside in the Sierra Nevada live below 5,000 feet. Those that remain include Clarks nuthatches (*Sitta canadensis*), golden-crowned kinglets (*Regulus satrapa*), rosy finches (*Leucosticte arcota*) and several species of woodpeckers (*Picoides* sp.).

Upper montane meadows are a summer concentration area for deer and provide important foraging habitat. Winter range for mule deer is generally outside the target area below 4,500 feet. California and Columbian black-tailed deer, two subspecies of mule deer, inhabit the forest and are considered important big game species. Black bears are also commonly found in these areas. Rodents and songbirds also utilize meadow habitat. Many of the rare plants located on the forest are found in these meadows or on their dry margins (special-status species are discussed below). Higher altitude forest clearings and interfaces with meadows provide habitat for blue grouse (*Dendragapus obscurus*), mountain quail (*Oreortyx pictus*), gray fox, pine marten (*Martes Americana*), yellow-bellied marmot, pacific fisher (*Martes pennanti pacifica*), mountain beaver (*Aplodonilia rufa*) and the rare wolverine (*Gulo gulo*).

Aquatic Resources

The target watershed includes the following aquatic resources: Highland Creek and the North Fork Stanislaus River, reservoirs and alpine lakes and streams and the aquatic and semi-aquatic organisms supported by the waterways.

A wide variety of aquatic organisms are present in the streams, lakes and reservoirs within the target area watershed. Periphyton, phytoplankton and zooplankton inhabit the lakes while aquatic insects and the early life stages of several terrestrial insects are found in both lakes and stream habitats. These include mayflies, stoneflies, caddisflies, midges, dragonflies, damselflies, water striders, and beetles. Benthic organisms include bacteria, protozoa, nematodes, worms and insect larvae. Attached plants and benthic organisms (bottom-dwelling animals) regulate or modify most chemical, physical, geological and biological processes within the aquatic environment, referred to as the benthic effect.

The target watershed is located in the rainbow trout zone, the highest elevation zone of these aquatic life zones classified in this region. The dominant species is rainbow trout (*Oncorhynchus mykiss*). Other common non-game species include speckled dace (*Rhinichthys osculus*) and riffle sculpin (*Cottus gulosus*). Other aquatic or semi-aquatic animals include mountain yellow-legged frog (*Rana muscosa*), Sierra mountain beaver (*Aplodontia rufa californica*), river otter (*Lutra Canadensis*) and other frogs, toads and garter snakes.

The North Fork Stanislaus River and Highland Creek contain mostly rainbow trout, some brown trout (*Salmo trutta*) and an occasional eastern brook trout (*Salvelinus fontinalis*).

Most of the reservoirs in the target area were constructed by placing impoundments at the outlets of natural basins. The major reservoirs include Spicer Meadow Reservoir, Lake Alpine, and Utica and Union Reservoirs. These reservoirs normally freeze during the winter. They are stocked with rainbow, brown and eastern brook trout to supplement naturally-sustaining rainbow and brown trout populations.

The small alpine lakes within the target area were formed by glaciation and are generally oligotrophic (low in nutrients and biological productivity). These lakes and highland streams generally support a low biomass of aquatic organisms due to the short growing season and limited nutrient base. Fish were naturally absent from most of these high elevation habitats prior to introduction because barriers prevented colonization or habitat was not suitable for maintaining fish populations. Rainbow and eastern brook trout are planted in many of these lakes and streams yearly. Due to their shallow depth, these lakes and streams often freeze or are covered with snowpack for long duration. Fish populations are not naturally self sustaining in these lakes and streams because dissolved oxygen concentrations are depleted over the winter below levels required for survival by higher levels of aquatic life.

Special-Status Species

Special-status species are those organisms that are listed or proposed as threatened or endangered under the Federal or State Endangered Species Acts. Special-status species also include organisms determined by the California Department of Fish and Game (DFG) or other conservation groups, such as the Native Plant Society, to be rare or have a limited distribution. Two federally-listed endangered animal species, bald eagle and peregrine falcon, permanently or seasonally reside in the target watershed.

Mountain yellow-legged frogs are a California Species of Concern and Federal Candidate Species for listing which occur in riparian habitats typically above 6,000 feet in the target watershed. They prefer streams with riffle pool regimes, good cover and cobble or rocky

substrates. In addition to these types of special-status species, six animal and eleven plant species have been designated as "sensitive" by the US Forest Service (USFS) Pacific Southwest Region. These sensitive species are either rare or limited in their range and require special management to prevent their Federal or State listing as threatened or endangered. The special-status and sensitive animal and plant species potentially present in the target watershed are listed in tables in Appendix B.

In general, the DFG and US Fish and Wildlife Service (USFWS) are responsible for the protection of threatened and endangered organisms at the species and subspecies level, while the USFS manages forest and other types of habitat at the community and ecosystem level. The USFS protects threatened and endangered species through designation of "sensitive species" and identification of "critical habitats" that are essential elements for the survival of sensitive species and the overall health and diversity of the forest. Management policies for the protection of critical habitats are specified in the Land Area Resource Management Plan. In addition, habitats that are representative of the general forest environment and characteristic species, referred to as Management Indicator Species (MIS), are selected to monitor the health of the forest environment (see Appendix B). The MIS's for each representative habitat are inventoried; management objectives and measures are identified; and if necessary, management measures are implemented. The MIS's are monitored to evaluate habitat conditions and the effectiveness of management measures.

Cultural Resources

The principal peoples dominating the greater target area prior to the Spanish and American historical eras (1806-1848 and post 1848) were the Miwok and Washoe Indians. The Miwok Indians were distributed from the Central Valley to the mountains and the Washoe Indians used the higher elevations from their population centers east of the Sierra. Both the Miwok and Washoe were hunters, but their primary staple food was acorn meal which they ground in mortars or milling holes, often formed in bedrock outcrops. These mortar holes are a common feature of archeological sites found throughout the area, but a bedrock mortar site does not necessarily indicate a permanent settlement, because groups would make special journeys in the fall to gather and grind acorns. Other cultural characteristics included burial of the dead, sometimes in caves, creation of rock art, construction of rock shelters, construction of dance houses, quarrying of chert, chalcedony, etc., and working it into tools and weapons; and in general, settlement in one spot from generation to generation, leading to the accumulation of extensive debris middens.

Geology and Soils

Geology

The target area is underlain by four major rock types. Granitics form the most abundant rock type followed by metamorphosed sedimentary rocks, volcanic rocks and glacial deposits. The western edge of the target area is underlain by metamorphosed rocks of the Calaveras formation, one of the oldest geologic formations in the region. The crest of the Sierra Nevada, with elevations exceeding 10,000 feet (Disaster Peak, 10,047 feet), is made up of granitic rocks which were intruded into much older metamorphosed rocks. Volcanics that were extruded through fractures in the granitic rocks form volcanic caps on the granitics. Sedimentary deposits left by glacial activity which took place between 500,000 and 11,000 years ago are the most recent geologic deposits. (*Parsons Engineering Science, Inc., October 1995*).

At elevations of 6,000 feet and above, the North Fork Stanislaus River watershed is composed primarily of glaciated Mesozoic granitic rocks capped by areas of Pliocene and some Miocene volcanic formations. Much of this higher elevation geology is characterized by exfoliated granitic

domes with little or no soil development. These areas generally support scattered clumps of trees but are largely absent of herbaceous vegetation except that which occurs in dispersed meadows and small strips along the shorelines of small alpine lakes. These high alpine lakes and meadows were formed by recent glacial activity. Glacial scouring and plucking formed small depressions that impound water form many of the alpine lakes. Glacial till deposited as moraines and alluvium deposited by glacial outwash provided natural impoundments, moisture, and fine textured soils that has lead to the formation of high alpine meadows. (*Parsons Engineering Science, Inc., October 1995*).

At lower elevations, below 6,000 feet, the target watershed consists of steeply-sloped and deeply incised stream-cut canyons. The Highland Creek and North Fork Stanislaus River Canyons cut down through as much as 4,000 feet of granitics (granodiorite). At these elevations, some alluvial deposits are present within and immediately along the North Fork Stanislaus River and other smaller streams, but the amount is limited due to the steep gradient. Colluvium has been deposited at the bottom of the stream-cut canyons from mass wasting of the surrounding steep canyon slopes.

A variety of geologic-related hazards are present within the project target area. These potential hazards include seismic activity, volcanism and mass movements. Generally, the probability of occurrence of a major catastrophic event, such as an earthquake or volcanic eruption is extremely low. The risk from such an event is correspondingly low but still exists. Greater risks are presented by rockfalls and landslides which is varying degrees or severity are a frequent occurrence in the target area.

Potential volcanic hazards within the target area are minimal. No volcanic activity has occurred in this part of the Sierra Nevada in over 2 million years. The closest volcanically active region is the Mono Basin—Long Valley, located 55 miles to the southeast. The most recent volcanic eruption in the Mono Basin-Long Valley is thought to have occurred some 250 to 450 years ago, and recent increases in earthquake activity since 1978 indicate no near-surface movements of magma. (*Parsons Engineering Science, Inc., October 1995*).

Earthquakes are often felt in this portion of the Sierra Nevada but the epicenters are usually quite distance. Existing traces of seismic activity are numerous but no evidence of excessive activities within the last two million years. Due to this long period of quiescence, these fault traces are thought to be inactive, and therefore, the risk of resource damage from seismic damage within this portion of the Sierra Nevada is considered to be low. Actual damage from earthquakes has been extremely minor, and limited to liquefaction of local soil deposits, snow avalanches and reactivation of dormant sites. (*Parsons Engineering Science, Inc., October 1995*).

The primary factors which control the occurrence of mass movements are slope steepness and water saturation. Other factors include vegetative cover, individual storm intensity and soil characteristics such as texture, depth and permeability. Mass movements can be large-scale events in which large amounts of earth material move downslope quickly. However, most often they are small events because the Central Sierra Nevada geology is very stable and only very localized areas are subject to mass movements. Generally, geologic deposits of weathered materials or soils consist of shallow, well drained, coarse-textured granitics.

Geologic resources in the target area include minerals, unique geologic formations and groundwater. A variety of common minerals are present in the target area, but currently little potential exists for economically-feasible extraction of leasable minerals within the target watershed. Known mineral commodities within the target watershed include gold, silver, lead, tungsten and uranium. Special note should be made that silver is a somewhat commonly-occurring mineral throughout the target watershed. (*Parsons Engineering Science, Inc., October 1995*).

In addition to geologic mineral resources that have potential commercial value, unique geologic formations that have significant recreational and scenic value also occur in the greater project area. These unique geologic features include Bull Run, Windeler Cave, Columns of the Giants and Niagara Creek Falls.

Soils

Soil types largely determine the types and amounts of vegetation that will grow in a given area. Soils in the target watershed are varied and complex. Soil characteristics differ greatly because soil formation is controlled by a variety of factors including climate, topography, vegetation and time. Soils are characterized by parent materials, depth, texture, color, organic content, pH and other factors. At elevations ranging from 3,500 to 6,500 feet, soils and productivity on the south-facing slopes are quite variable depending on slope gradient and parent material. However, soils at these elevations are generally deep, medium to coarse textured, and no-stony with very high timber productivity. In areas above 6,500 feet, large expanses of bared glaciated rock occur and soils are mostly coarse-textured and shallow. A few areas above 10,000 feet, which are outside the target watershed, have perennial snow.

Control of soil erosion is a key management concern for maintaining health and productivity of forest resources. Raindrop impact and surface runoff are the major processes by which soil and debris are dislodged and carried downslope, thereby creating soil erosion. Soil particulates are dislodged by the impact of raindrops and are carried overland via sheet flow dislodging more soil particles as they go. Raindrop impact is essential to the erosion processes because it initiates the movement of soil particles. Eventually the sheet flow collects into channels and forms rills or gullies. The water and suspended particles are deposited at a low energy location elsewhere in the watershed or discharged into existing stream channels.

If discharged to a stream or other waterbody, the eroded soil particles become suspended in the bed load and increase streambank scour and erosion. Streambank erosion is largely a function of stream flow velocities and bed load. Overland, rill, gully and streambank erosion all contribute to increases in turbidity and downstream sedimentation and can adversely affect downstream aquatic habitat quality.

The highest erosion hazard occurs in the 3,500 to 5,000-foot elevation zone where soils are deep and fine textured and management activities, such as timber harvesting and road building which disrupt the soil, occur. Coarse-textured granitic soils found at higher elevations, although thin, are not a high erosion hazard. Montane meadows with unconsolidated alluvial soils and fine textured glacial deposits are subject to high rates of erosion. (*Parsons Engineering Science, Inc., October 1995*).

Soil Quantity Standards and Long-Term Soil Productivity Guidelines have been developed and are specified by the Stanislaus National Forest in its Land and Resource Management Plan. Soil Quantity Standards apply to areas where management prescriptions are applied, such as forest range production areas and managed chaparral lands. These standards provide threshold values beyond which further alteration of soil properties would significantly change or impair the productive capacity of the soil. Significant change in the productivity of the land is indicated by changes in soil properties that are expected to result in a 15 percent or more reduction in productive capacity over the planning horizon. Changes in the quantity and quality of soil cover, soil porosity and organic matter have been linked to changes in long-term soil productivity potential. These soil properties can be measured in the field. (*Parsons Engineering Science, Inc., October 1995*).

Hazards and Hazardous Materials

Other than the geologic hazards identified above, there are no known hazards in the target area. In addition, there are no known hazards associated with the Stanislaus Weather Modification Program. However, chemicals such as silver iodide would be used in the cloud seeding program.

Hydrology and Water Quality

Surface Water

The two major streams to be affected by the Stanislaus Weather Modification Program would be Highland Creek and the North Fork Stanislaus River.

Highland Creek originates at Highland Lakes near the crest of the Sierra Nevada and flows in a southwesterly direction to its confluence with the North Fork Stanislaus River at Sand Flat. Historical stream flows on Highland Creek below Spicer Meadow Reservoir (drainage area 45.4 square miles) for the period of 1953 through 1986 (prior to operation of the existing reservoir) averaged 129 cfs (~93,400 acre-feet per year).

The North Fork Stanislaus River also originates near the crest of the Sierra Nevada at Mosquito Lake and flows in a southwesterly direction to its confluence with the Middle Fork Stanislaus River just upstream of New Melones Reservoir. Historical stream flows on the North Fork Stanislaus River below Silver Creek (drainage area 27.8 square miles) for the period 1953 through 1986 (prior to the operation of the North Fork Diversion Dam) averaged 84 cfs (~60,600 acre-feet per year).

Historical stream flows on the North Fork Stanislaus River further downstream at McKays Point Diversion Dam site (drainage area of 163 square miles) have varied from a low of 94,110 acre-feet annually (~130 cfs) to a high of 554,160 acre-feet annually (~765 cfs). The annual average runoff at this point is approximately 300,000 acre-feet (~410 cfs). Flows on the North Fork Stanislaus River are highly dependent upon operation of hydroelectric facilities by the Northern California Power Agency [North Fork Stanislaus Hydroelectric Development Project (FERC Project No. 2409) and the Upper Utica Project (FERC Project No. 11563)].

The North Fork Project includes Spicer Meadow Dam, Reservoir and Powerplant on Highland Creek; North Fork Diversion Dam and Reservoir on the North Fork Stanislaus River; North Fork Diversion Tunnel which conveys water from the North Fork Stanislaus River to Spicer Meadow Reservoir; McKays Point Diversion Dam and Reservoir on the North Fork Stanislaus River; Beaver Creek Diversion Dam and Reservoir on Beaver Creek; Beaver Creek Tunnel which conveys water from Beaver Creek to the McKays Point Reservoir; Collierville Tunnel which conveys water from McKays Point Diversion Dam to the Collierville Powerplant and the Utica Power Authority's Utica Hydroelectric Project (FERC Project No. 2019); and the Collierville Powerplant on the Stanislaus River at the upper end of New Melones Reservoir.

The Upper Utica Project includes Lake Alpine on Silver Creek and Union and Utica Reservoirs on the North Fork Stanislaus River.

As stated in the California Regional Water Quality Control Board, Central Valley Region's *Water Quality Control Plan, San Joaquin River Basin (Basin 5C)*, beneficial uses of waters upstream of New Melones Reservoir include:

MUN	Municipal and domestic supply
AGR	Irrigation and stock watering
POW	Power generation

REC1	Water-contact recreation including canoeing and rafting
REC2	Non-contact recreation
WARM	Warm freshwater habitat
COLD	Cold freshwater habitat
WILD	Wildlife habitat

Water quality samples collected during studies of Lake Alpine and Utica and Union Reservoirs by NCPA indicated that the North Fork Stanislaus River's source waters are of excellent mineral quality and well within all applicable State and federal standards. Biological, physical and chemical data from these three reservoirs (including dissolved oxygen, nutrients, chlorophyll-a, and fecal coliform) indicated that the reservoirs are oligotrophic (nutrient poor) and contain negligible levels of parameters that may degrade water quality.

Water quality information reported by the Pacific Gas and Electric Company (PG&E) also characterizes surface water within the North Fork Stanislaus River system as excellent in mineral quality, reflecting the high quality source water which is predominantly runoff from snowmelt. Water within the study area was reported to contain low concentrations of inorganic and dissolved solids. Water quality was determined to meet with all beneficial uses including domestic and municipal supply as well as power production, agriculture, recreation, aquatic habitat and wildlife uses. Temperature and dissolved oxygen concentrations were reported to be seasonal. The parameters were inversely proportional with dissolved oxygen decreasing as temperature increased during the summer months. Dissolved oxygen concentrations were reported to be at or near saturation during most of the year. Temperatures were reported to range between freezing in the winter months to 20°C during the summer months. (PG&E, 1991).

Groundwater

Available groundwater in the target watershed is present in three types of aquifers: lava cap on massive granitic basement rock; glacial till on granitic basement rock; and fractures in granitic and metamorphic bedrock. (Parsons Engineering Science, Inc., October 1995).

Groundwater utilization in the greater project area is low in terms of developed diversion facilities, but high in terms of instream uses and other uses when the groundwater emerges as surface flow. No commercial groundwater extraction occurs in the greater project area (i.e., Stanislaus National Forest) and developed uses are limited. The most apparent, and arguably the most important, use of groundwater generated on the forest is off-forest, sustained surface flows in streams and rivers. Groundwater provides or augments surface flows which support aquatic and riparian habitat and provide recreational opportunities. At locations where groundwater emerges or saturates soils, it supports spring, seep and meadow habitat.

Approximately 40 domestic water wells are located on the entire Stanislaus National Forest which contains the primary groundwater aquifers that could be directly affected by the cloud seeding activities. These wells provide water for USFS recreation and administration sites and a few local residences. Much of the groundwater on the forest emerges downgradient as surface flow in streams or rivers. (Parsons Engineering Science, Inc., October 1995).

Land Use and Planning

Existing Land Use

The Spicer Meadow Reservoir watershed is within the Stanislaus National Forest which is managed by the USFS. These lands are managed for multiple uses such as recreation, mining, timber production, scenic values, wildlife habitat and grazing.

A significant portion of the Spicer Meadow Reservoir watershed is within the Carson-Iceberg Wilderness. The Carson-Iceberg Wilderness was created by the Wilderness Act of 1964. According to the Wilderness Act, wilderness areas are:

Where earth and its community of life remains untrammelled, where man himself is a visitor who does not remain.

Wilderness is closed to all mechanized use and has no new developments or improvements other than trails. Livestock grazing and mining, where they occurred prior to Wilderness designation, are permitted uses.

Reservoirs and large bodies of water within the target area include Spicer Meadow Reservoir, Alpine Lake, Utica and Union Reservoirs, and Highland Lakes. Additional smaller lakes (e.g., Duck Lake, Bull Run Lake, Rock Lake and Elephant Rock Lake) are scattered throughout the target area. Spicer Meadow Reservoir is operated by NCPA for hydroelectric power generation and downstream water supplies. NCPA also operates Lake Alpine and Utica and Union Reservoirs for downstream hydroelectric power generation and water supplies. Recreational facilities provided at Spicer Meadow Reservoir and Lake Alpine include individual and group campgrounds, picnic tables, and boat launching facilities. Additional, more primitive facilities are at Utica and Union Reservoirs.

Highland Creek and the North Fork Stanislaus River are the main waterways within the target area. Neither of these waterways are designated as a Wild and Scenic River under the Wild and Scenic Rivers Act.

While the majority of the target area is within the Carson-Iceberg Wilderness Area, a few scattered residences (primitive summer cabins and cattle camps) are also located within the target area in Alpine County. A summer resort is also located at Lake Alpine. The closest community to the target area is Bear Valley which has a year-round population of about 133 persons. However, this and other communities just outside the target area can experience wide fluctuations in population due to recreational activities such as skiing in winter months and camping in summer months.

During the winter months, skiing is available at Mt. Reba and Cottage Springs. Access to both ski resorts is via Highway 4, the Ebbetts Pass Highway.

Access to the Lake Alpine Resort and summer cabins is dependent upon snow conditions in the early spring months. If snowfall is heavy, access may be restricted until late in the season. This same access condition may occur for tourists and residents wanting to access the eastern portion of Alpine County from Highway 4. Highway 4 is closed just east of the turnoff to Mt. Reba during the winter months and opened by Caltrans when the roads are clear of snow.

Relevant Plans and Policies

A Land and Resources Management Plan has been developed for the Stanislaus National Forest by the USFS. This plan provides direction for managing the national forest lands for a 10 to 15 year period. All permits, contracts and other instruments for use and occupancy of National Forest lands must be in conformance with this plan.

Although the Land and Resources Management Plan does not specifically include policies with respect to cloud seeding operations, a number of policies could be indirectly related. These include policies relating to management of wilderness, protection of water quality, and protection of basic resources.

General Plan and Zoning Designations

The majority of the target area is within Alpine County. The General Plan designations for this area are Open Space or Wilderness and the corresponding zoning designations are Agriculture and Wilderness.

The remainder of the target area is within Tuolumne County where the General Plan designation is Timberland and the corresponding zoning designation is Unclassified.

Mineral Resources

There are no known mineral deposits in the target area.

Noise

Objectionable sound levels constitute noise. Sound is a function of three factors: sound power, sound pressure, and sound frequency. A source's power creates pressure waves which become audible.

The human ear hears a wide range of frequencies, roughly 20 to 16,000 cycles per second, emphasizing certain sounds depending upon the frequency range. A-scale decibels are the unit of measurement of sound pressure levels in the frequency range most sensitive to the human ear. Therefore, noise is usually measured in decibels on the A-scale, expressed as d(B)A. Table 3-6 lists common noise sources and their corresponding sound levels.

**Table 3-6
Typical Sources of Community Noise**

Source	Sound Level- dB(A)
Leaves rustling	10-15
Quiet residential street	40-52
150 to 200 feet from dense traffic	55-70
Edge of highway with dense traffic	70-85
Noisy street	84-94
Jet plane at 1,000 feet	100-105
50-hp siren at 100 feet	130-135

The target area is a forested area. Although no noise studies have been completed in the target area, it is anticipated that the noise levels would range from 20 to 40 d(B)A.

Population and Housing

There are no communities that would be directly affected by implementation of the Stanislaus Weather Modification Program. However, there are a few scattered residences (primarily summer cabins and cattle camps) with the target area in Alpine County. A summer resort is also located at Lake Alpine. The closest community to the target area is Bear Valley which has a year-round population of about 133 persons.

Public Services

Fire protection services within the target area are provided by the Stanislaus National Forest. Law enforcement with the target area is provided by the Alpine and Tuolumne County Sheriff's Departments as well as the Stanislaus National Forest and the California Highway Patrol.

Recreation

The target area provides many recreational opportunities including skiing, camping, picnicking, boating, fishing, hunting, hiking, etc. There are developed facilities at Lake Alpine and Spicer Meadow Reservoir and more primitive facilities at Utica and Union Reservoirs.

Transportation/Traffic

The only major road within or near the target area is Highway 4. During winter months, Highway 4 is closed from just east of the turnoff to the Mt. Reba Ski Area across Ebbetts Pass to Markleeville. This highway is reopened when weather conditions permit. As the majority of the target area is within the Carson-Iceberg Wilderness, few paved or dirt roads providing local access occur in the target area.

Roadways within the target area are maintained by the California Department of Transportation (Caltrans), the USFS, Alpine and Tuolumne Counties and private landowners. While the main highway within and near the target area is maintained by Caltrans, counties are responsible for the costs of clearing roads to certain recreational areas such as Bear Valley.

Non-vehicular transportation occurs with the target area via an extensive trail network throughout the Stanislaus National Forest. No railroads or airports are located within the target area.

Utilities and Service Systems

Because the majority of the target area is within the Carson-Iceberg Wilderness, there are few utilities and service systems providers. Bear Valley and the Lake Alpine resort are served electricity by PG&E and telephone by SBC.

Impacts

There is no prime farmland, unique farmland or farmland of statewide importance within the target area. Therefore, it is concluded that the project would have no significant effects on agricultural resources.

Mitigation Measures

No significant impacts have been identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant adverse agricultural resources impacts associated with the Stanislaus Weather Modification Program.

Air Quality

Significance Criteria

The State CEQA Guidelines indicate that a project would have a significant effect on air quality if it would violate any air quality standard, contribute to an existing or projected air quality violation or expose sensitive receptors to substantial air pollutant concentrations. Impacts to meteorology would be considered significant if could seeding activities were to affect large-scale atmospheric forces and/or cause or contribute to extreme meteorological conditions which could lead to flooding, avalanches, and/or other precipitation-related hazards in the target area or in other downwind areas.

Impacts

Potential Impact No. 1, Operational activities could emit criteria pollutants into the atmosphere.

The small fixed-wing aircraft utilized in the cloud seeding operation would generate small amounts of criteria pollutants. Exhaust emissions from a small fixed-wing aircraft are not considered significant and would not cause any ambient air quality violations.

Potential Impact No. 2, Inhalation of silver and iodide compounds could cause human health effects.

Thresholds for silver and iodide compounds have been set by the ACGIH and are considered to be the acceptable levels for occupational safety. The acceptable level for silver has been established at $10\mu\text{g}/\text{m}^3$ over an 8-hour period. The acceptable level for iodine is $1,000\mu\text{g}/\text{m}^3$ for a 15-minute period. Similar cloud seeding activities have resulted in silver iodide concentrations in the seeded atmosphere in the range of 10^{-5} to $10^{-8}\mu\text{g}/\text{m}^3$. (*Parsons Engineering Science, October 1995*). Assuming a $10^{-5}\mu\text{g}/\text{m}^3$ worst-case concentration, the concentration of both silver and iodide would be well below the ACGIH standards. On the basis of the above information, it is concluded that inhalation of silver and iodide compounds would not cause significant health effects.

Potential Impact No. 3, The Stanislaus Weather Modification Program could increase precipitation within the target area.

The goal of the program is to increase precipitation and runoff in the Lake Alpine, Utica, Union, and Spicer Meadow Reservoirs watershed, so any increases in precipitation due to cloud seeding would be considered beneficial by the project sponsor. Implementation of the proposed program is expected to increase snowpack by 6 to 10 percent. For the purpose of this analysis, a 15 percent increase in snowpack is assumed in order to examine impacts in a conservative manner. Changes in precipitation would not be homogeneous within the target area due to the variability of meteorological and topographical conditions and the physics of cloud seeding effects. Each cloud seeding event success is dependent upon several physical variables, such as temperature, wind speed and direction, nature of the storm system, and cloud composition.

The overall increase in precipitation would depend on the number of types of storms seeded. Cloud seeding has been performed in the project vicinity for over 40 years. It has been concluded that cloud seeding has led to modest increases in the past and that future increases would be on the same level.

The project area may also be affected by other cloud seeding activities being performed in nearby areas. The cumulative effects of nearby cloud seeding programs as well as this proposed program are difficult to quantify because of the numerous variables affecting total precipitation. Conversely, the possibility of overseeding a particular cloud may occur, resulting in a decrease in precipitation.

Specific meteorological criteria for suspending seeding activities have been included in the program design. These criteria ensure that the possibility of the seeding activities contributing to unusually high precipitation events or to a decrease in the amount of precipitation from the passing storm is small.

Potential Impact No. 4, The Stanislaus Weather Modification Program could affect other meteorological conditions within the target area.

For the most part, cloud seeding would not affect meteorological conditions other than precipitation. Seeding may slightly increase cloud growth and therefore may increase humidity and decrease temperature. These changes would be temporary, localized and considered to be less than significant.

Potential Impact No. 5, The Stanislaus Weather Modification Program could cause changes in precipitation downwind of the target area.

Many studies have been done to examine the effects of cloud seeding on downwind areas (*Parsons Engineering Science, Inc., October 1995*). It is widely believed that only a small percentage of cloud moisture falls out in the form of precipitation, leaving more than enough moisture for downwind areas. It has also been concluded that under certain circumstances cloud seeding may actually decrease precipitation downwind.

If a cloud becomes overseeded, ice crystals tend to evaporate rather than grow. Below a critical temperature, the natural occurrence of ice particles may already be greater than that required for the most effective release of precipitation. In this case, artificial seeding may actually decrease precipitation downwind of the target area.

However, the majority of the research concludes that in most cases precipitation is actually released slightly downwind due to seeding activities. The timing factor for precipitation production is the amount of available ice nuclei. The artificial ice nuclei induced into a cloud sometimes remain active downwind, but in a lower concentration from when they were first induced, which

could improve the rate of precipitation. However, this increase would be smaller than the increases expected within the target area.

Cloud seeding programs have been known to increase rainfall amounts downwind at distances up to 200 miles (*Parsons Engineering Science, Inc., October 1995*). Based on this information, it is expected that this cloud seeding program could affect portions of Alpine and Tuolumne Counties as well as some areas in the State of Nevada. All these locations are downwind from the target area. However, any increases or decreases caused by the project's cloud seeding activities are not expected to be significant.

It is anticipated that any increases in precipitation (most likely small) caused by cloud seeding would be beneficial to ski resorts, such as Bear Valley, at the south edge of the target area. It should be noted that cloud seeding has been conducted in the project vicinity for over 40 years and the communities or ski resorts downwind of the Mokelumne program have not experienced significant impacts directly linked to cloud seeding events. Any possible adverse impacts downwind would be reduced or avoided by using the suspension criteria included as part of the project.

Potential Impact No. 6, Cloud seeding could affect large-scale or long-term meteorology.

Cloud seeding activities are performed to enhance the number of ice nuclei and consequently the amount of precipitation created by a particular storm system. Storm systems have a relative short lifetime. Cloud seeding that has occurred in the areas in the past has been in the frequency of approximately 40 to 60 times per year.

The impacts to temperature and amounts of moisture resulting from this weather modification program would not affect large-scale nor long-term weather patterns because this project's effects only occur during short and infrequent storm periods and occur over a relatively small area in the lower atmosphere. The long-term and large-scale weather patterns in the project region are mostly influenced by the Pacific Ocean and upper atmospheric conditions such as the jet stream, which is not expected to be affected by this project.

Mitigation Measures

There were no air quality impacts identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant adverse air quality impacts associated with the Stanislaus Weather Modification Program.

Biological Resources

Significance Criteria

Biological impacts would be considered significant if the proposed project could directly or indirectly cause a substantial measurable change in species composition, abundance or normal variability, or ecological function within aquatic or terrestrial habitats. Substantial alteration of "critical habitats" as defined by the Stanislaus National Forest Land and Resource Management Plan, are critical elements of wildlife and fish habitat and diversity within the general forest environment and include mountain meadows, riparian zones, late several stage forests, snags and logs, and lakes and streams.

variation to which aquatic life is adapted. Continued cloud seeding would not be expected to cause a measurable change in the composition of aquatic communities because of the minor amount of snowpack augmentation.

Potential Impact No. 12, The continued use of silver iodide as a cloud seeding nucleating agent could cause chronic toxic impacts to terrestrial and aquatic organisms.

Particulate raindrop nuclei consisting of approximately equal parts of silver and iodide will eventually enter into the soil, streams and reservoirs in the target watershed. The effects of iodine on the biological community are considered minimal. Iodine is a naturally occurring element required by many organisms for survival. It has been estimated that a person would have to consume 130 gallons of precipitation from a storm seeded with silver iodide (AgI), at one time, in order to consume the amount of iodine equal to that consumed with a meal of eggs flavored with iodized salt (*Cooper and Jolly, 1969 in Parsons Engineering Science, Inc., October 1995*).

Ionic or free silver (Ag^+) is one of the more toxic of the heavy metals to lower plants and animals, but is only moderate toxic to higher organisms. There is little danger to humans, other mammals or birds from free silver in cloud seeding operations because of the extremely low concentrations used. The silver iodide concentrations in precipitation resulting from cloud seeding typically range from 10 to 100 parts per trillion (ppt) (0.01 to 0.10 $\mu\text{g/l}$) which is comparable to the silver concentration in seawater and far below the US Public Health Service standard for drinking water of 0.05 ppm (50 $\mu\text{g/l}$). No effect on plant growth has been observed with free silver concentrations up to 10,000 ppm. Due to the extremely low concentrations of free silver that would result from cloud seeding and its low solubility, effects on terrestrial organisms are expected to be slight and immeasurable. (*Parsons Engineering Science, Inc., October 1995*).

The toxic effects of free silver ions are more pronounced in aquatic organisms. Silver in the form of Ag^+ is toxic to fish and anaerobic organisms. Laboratory experiments have shown silver toxicity in aquatic insects and rainbow trout eggs at concentrations in the parts per billion range (*Klein 1978 in Parsons Engineering Science, Inc., October 1995*).

The instantaneous maximum criterion of 2.3 micrograms of silver per liter ($\mu\text{g/l}$, equivalent to parts per billion) is the aquatic toxicity criterion adopted by the State Water Resources Control Board in the Inland Waters Plan. Nearly all of the LC_{50} (lethal concentration at which 50 percent of the test population dies) concentrations in the EPA AQUatic toxicity information Retrieval (AQUIRE) database (1992 and 1994 update) are greater than this criterion. The SWRCB criterion is therefore reasonable.

Reported LC_{50} values for adult rainbow trout, fathead minnow and frog typically range from 4 to 30 $\mu\text{g/l}$ and up to 280 $\mu\text{g/l}$. However, smaller aquatic organisms are generally more sensitive to toxic heavy metals such as silver. LC_{50} and EC_{50} figures for the water flea (*Daphnia magna*) vary from 0.39 $\mu\text{g/l}$ to 55.0 $\mu\text{g/l}$ with 17 of 42 reported tests (40 percent) falling below the 2.3 $\mu\text{g/l}$ criterion. The single reported LC_{50} figure for the mayfly (*Ephemmerella grandis*) is <1 $\mu\text{g/l}$. (*Parsons Engineering Science, Inc., October 1995*).

Davies and Goetti also reported the results of studies of fish populations in Buckeye Lake, which occupies a watershed which has been cloud seeded for ten years. Mean concentrations of silver in lake water ranged from 0.27 to 0.61 $\mu\text{g/l}$ and varied seasonally with sediment deposition, resuspension, and plant growth conditions. Silver was found to constitute no ecological threat at these levels in the Buckeye Lake watershed. Health tissue analyzed for silver content indicated a minor amount of silver was concentrated in the bones and liver with decreased concentration found with increasing age (i.e., no evidence of bioaccumulation). No toxic effect of silver to trout or any of the other components of this aquatic system were demonstrated.

Although silver iodide can show a toxic effect on rainbow trout under specific laboratory conditions, Davis and Goetti concluded that its use as a cloud seeding agent does not pose a threat to the aquatic environment. Considering the insolubility of silver iodide and its strong absorption by colloids found in aquatic vegetation and sediments, it would be nearly impossible for silver to dissociate sufficiently or rapidly enough to achieve toxic levels of free silver in aquatic environments as a result of weather modification.

Silver iodide solubility in water is 1.5×10^{-10} M (about 1 $\mu\text{g Ag/l}$) at 25°C. Because of this extreme insolubility, silver iodide ionizes only very slightly. The ionic or free form of silver is strongly adsorbed by organic colloids found in aquatic vegetation and sediments. Silver iodide concentrations in cloud seeding precipitation typically range from 10 to 100 ppt (0.1 to 1.0 $\mu\text{g/l}$) or considerably less than the solubility constant of silver iodide. Free silver in melting snowpack would tend to bond to soil particles or be released into streams and further diluted by runoff. The free silver concentrations found in streams, lakes and reservoirs in the Sierra Nevada as a result of cloud seeding operations are typically well below the toxicity levels reported in the AQUIRE database for nearly all aquatic organisms and below the long-term toxicity no-effect concentrations reported for rainbow trout (*Parsons Engineering Science, Inc., October 1995*). Therefore, toxic effects of cloud seeding to aquatic organisms are highly unlikely to be significant.

The Desert Research Institute has monitored free silver concentrations in snowpack in the central Sierra including the Mokelumne watershed. Background levels of silver in unseeded snow are typically on the order of 1 to 2 parts per trillion. Where cloud seeding has taken place, individual snow samples (i.e., discrete bands) within a core may have on the order of 20 to 40 parts per trillion of silver and rare peak hits of 100 to 200 parts per trillion. Typically no more than 20 percent of the snowpack is above background levels and 95 percent of the silver concentrations measured in snowpack by the Desert Research Institute have been less than 0.005 $\mu\text{g/l}$. Therefore, the average silver concentration of the snowpack is in the 1 to 6 parts per million range (*Stone 1995 in Parsons Engineering Science, Inc., October 1995*). Therefore, cloud seeded snowpack has a silver concentration only slightly higher than natural background levels.

Any minor concentrations of silver in individual snow layers would be diluted in snowmelt runoff and streams. Alpine meadows would also tend to strip heavy metals, including silver, through adsorption by organic colloids found in aquatic vegetation and soils.

Studies by the Desert Research Institute found naturally-occurring silver levels in eastern Sierra streams of 4 to 6 ppm. Natural sources of silver in rock were by far the largest source of free silver in these streams. It was unable to detect higher levels of silver in streams fed by cloud-seeded snowmelt runoff than these background levels. These levels are two orders of magnitude lower than the no-effect concentrations of silver iodide in long-term toxicity tests reported by Davies and Goetti.

Because free silver concentrates in sediments and detritus and is toxic to anaerobic bacteria and other microorganisms, the potential to alter nutrient cycling in the aquatic community exists. Some uncertainties exist about how silver iodide and other ionized silver complexes react with and accumulate in sediments and benthic invertebrates in alpine streams, rivers and lakes. Some research has indicated that photodecomposition of silver iodide under anaerobic conditions can release ionic silver from bottom sediments. Accordingly, the presence or absence of free oxygen has been demonstrated to influence the toxicity of free silver to microorganisms (*Klein 1978 in Parsons Engineering Science, Inc., October 1995*). However, current and future concentrations of silver would not be expected to accumulate at levels toxic to living organisms because of the minute concentrations involved in cloud seeding operations, extreme insolubility of silver iodide, and the high adsorption of ionic silver by colloidal sediments and vegetation.

Given the reported laboratory long-term no-effect toxicity concentration between 0.18 and 0.40 $\mu\text{g Ag/l}$ for green rainbow trout eggs, the most conservative toxic concentration reported for *Daphnia*

of 0.39 µg/l. and the study results that Buckeye Lake water in a natural ecosystem reported no effect at ranges of 0.27 to 0.61 µg/l, a threshold concentration of 0.4 µg/l of ionic silver was recommended for the Mokelumne Weather Modification Program. Laboratory tests are typically conservative and do not reflect buffering and species adaptation to background levels of heavy metals in a natural aquatic system (*Parsons Engineering Science, Inc., October 1995*).

The actual amount of AgI released to the atmosphere in cloud seeding operations is very small. Given the stability of silver compounds, extreme solubility of silver iodide in water and absorption of ionic silver by colloids found in sediments and aquatic vegetation, silver concentrations at the target reservoirs resulting from cloud seeding operations are anticipated to be on the order of 0.004 to 0.008 µg/l (within normal background levels). Therefore, silver levels approaching 0.4 µg/l are not anticipated, nor are deleterious effects to aquatic life.

Ionic silver concentrations were measured by the Desert Research Institute for PG&E in the water columns and sediments at two waterbodies within the Mokelumne watershed after its 1994-95 cloud seeding season. Salt Springs Reservoir and Lower Blue Lake were selected because the Salt Springs Reservoir is the receiving waterbody and Lower Blue Lake is located in the upper elevations (above 8,000 feet) of the target watershed where the most cloud seeding occurs. Both lakes also support rainbow trout. Monitoring results reported silver levels in the water samples of 0.0067 µg/l in Lower Blue Lake and 0.0063 µg/l in Salt Springs Reservoir (*Parsons Engineering Science, Inc., October 1995*). These reported results are two orders of magnitude lower than the established threshold level at which no measurable chronic toxic effect would be anticipated.

Sediment samples from Lower Blue Lake and Salt Springs Reservoir had measurable but variable silver content. Sediment samples average 0.036 mg Ag/kg from Lower Blue Lake and 0.107 mg Ag/kg from Salt Springs Reservoir. However, not detectable free silver could be measured from lake sediment samples undergoing leach extraction, indicating the silver detected in sediment samples is highly insoluble and not entering the lake or downstream surface waters.

Therefore, operations of the Stanislaus Weather Modification Program should not result in any significant chronic effect on aquatic organisms.

Potential Impact No. 13, Prolonged snowpack duration and accumulation of silver iodide or other silver complexes could alter the rate soil microorganisms decompose organic matter, thereby altering the processes by which nutrients are cycled through the forest ecosystem.

The rate at which microbial processes decompose matter and release nutrients for plant growth is highly dependent on temperature and moisture. The prolonged snowpack could reduce soil temperatures and decrease the rate of decomposition early in the season. However, small increases in moisture late in the season would offset the early season reduction (*Berg and Smith 1980 in Parsons Engineering Science, Inc., October 1995*).

Some concern has been expressed because silver concentrates in surface soil zones where soil microbial activity and nutrient cycling essential for plant growth occurs. When silver is deposited in soils by precipitation or snowmelt, it is retained in surface soil layers. Silver tends to concentrate in surface zones through biotic and abiotic processes at levels which exceed background concentrations. Silver binds to clay particles due to its similar ionic radius to potassium and sodium (*Klein 1978 in Parsons Engineering Science, Inc., October 1995*). It strongly absorbs to humic (organic) colloids and is not readily released back into solution. Because silver quickly binds to soil particles and organic colloids, its bioavailability is low.

Generally microorganisms are considered to be more sensitive to the presence of silver than higher plant and animal organisms. The antimicrobial effect of silver has been widely used in medicine and sanitation; however, direct toxicity of silver iodide to soil microorganisms at

environmentally-relevant concentrations is difficult to demonstrate. Predictable low levels of silver ion (Ag^+) can be released from silver iodide from the ionization process and can have chronic (long-term) toxic effects within its solubility constant as discussed previously. Silver iodide from seeding operations may produce antimicrobial effects, but they are not observed consistently and these effects occur only at concentrations which far exceed levels expected to accumulate in natural environments due to cloud seeding (Klein 1978 in Parsons Engineering Science, Inc., October 1995).

Studies suggest that it would be very difficult to establish toxicity levels or even to detect toxicity for silver iodide from weather modification. Available information on the effects of silver iodide on soils and aquatic microbiological populations indicates that it will be difficult to detect effects under field conditions. Generally, microbial decomposition processes can be observed (Klein 1978 in Parsons Engineering Science, Inc., October 1995). Because of the very low concentrations of silver iodide in cloud seeding precipitation and the stability of silver compounds, free silver would not be expected to accumulate in the environment and soils at levels detrimental to soil microorganisms. Therefore, impacts to soil microorganisms and nutrient cycling would be less than significant.

Potential Impact No. 14, Cloud seeding activities could adversely affect special-status species.

The use of silver iodide as a nucleating agent has the slight potential to result in accumulation of silver iodide at levels toxic to special-status species. As previously discussed, the cloud seeding program would not significantly affect any organisms, their habitat or distribution. Free silver (Ag^+) is no more toxic to these species of concern than to common plant and wildlife species. Reduced special-status species populations are typically the result of habitat loss or other direct disturbance. Cloud seeding has occurred in the adjacent watershed for over 40 years with no evidence that it has contributed to the loss of special-status species populations.

Silver iodide and free silver are generally more toxic to aquatic and semi-aquatic organisms (whether common or special-status). Mountain yellow-legged frog is one special-status species that could be potentially affected by cloud seeding. It is a State of California species of concern and is found in or near rocky perennial streams at high elevations, usually above 6,000 feet. Its distribution is limited due to fish predation.

Acute toxic levels of silver to similar frog species (same genus) are in the range of 4 to 30 and up to 200 $\mu\text{g/l}$ (EPA 1992, 1994 in Parsons Engineering Science, Inc., October 1995). This is well above the threshold criteria for silver or the solubility of silver compounds in water. Concentrations of Ag^+ in streams in cloud seeded areas are typically two orders of magnitude lower than this concentration.

Special-status plant species are typically limited by specific habitat requirements and not sensitivity to toxic metals. Therefore, special-status plant populations would not be adversely affected by accumulation of silver in soils.

Mitigation Measures

There were no significant impacts to biological resources; therefore, mitigation is not required.

Level of Significance After Mitigation

There would be no significant impacts to biological resources associated with the Stanislaus Weather Modification Program.

Cultural Resources

Significance Criteria

The State CEQA Guidelines state that public agencies should seek to avoid damaging effects on archeological and paleontological resources whenever possible. If avoidance is not feasible, the Guidelines state that the importance of the site should be evaluated using the criteria contained in the Guidelines.

Impacts

A long-term weather modification program could potentially affect archeological and historic sites if runoff associated with increased snowpack increased erosional processes, which could uncover and affect objects. However, the relatively limited increase in runoff associated with the project (projected to be a maximum of 10 percent above normal runoff) would occur over a longer duration but not result in accelerated rates of erosion. Therefore, no significant impacts to cultural resources are expected. The identified suspension criteria (discussed in Chapter 2 of this Initial Study) state that cloud seeding would not occur when abnormal runoff conditions exist or are forecast. This criterion would be adequate to mitigate any potential impacts to cultural resources.

Mitigation Measures

There were no significant impacts to cultural resources identified; therefore, mitigation is not required.

Level of Significance After Mitigation

There would be no significant cultural resources impacts associated with the Stanislaus Weather Modification Program.

Geology and Soils

Significance Criteria

Impacts of the cloud seeding program would be considered significant if the following would result: 1) substantial or marked increases in the potential for geologic hazards such as rockfalls or landslides which threaten public safety; 2) substantial alteration of the physical environment including visible disturbances to unique geologic features and decreases in the value or extractability of mineral resources; and 3) soil loss and decreased productivity that exceeds the criteria established in the Stanislaus National Forest's guidelines "Soil Quality Standards and Long-Term Soil Productivity" contained in its Land and Resource Management Plan.

Impacts

Potential Impact No. 15, Slight increases in the total soil moisture and period of saturation could increase the potential for mass movements, rockfalls or landslides.

Increased precipitation due to the cloud seeding program could incrementally add to the total soil moisture content and period of saturation, thereby reducing slope stability and weakening geologic structure. The increased period of saturation could also prolong the period of increased risk from mass movements. This condition could result in a slight increase in occurrence of

rockfalls and landslides. Increased soil moisture as a result of this program could exacerbate the liquefaction of soils during seismic events and intensify landsliding.

Minor increases in frequency and severity of mass movements would occur in areas already prone to this activity. The increase in these events would be expected to be small because of the minor increases in precipitation attributable to the cloud seeding program, relatively stable geology in the Sierra Nevada, and implementation of suspension criteria which curtails cloud seeding activities when large storm events are expected or seasonal snowpack exceeds 125 percent of normal for a given date. Resource damage from landslides has been insignificant (Parsons Engineering Science, Inc., October 1995).

Cloud seeding activities have occurred in the project vicinity over the past 40 years without identifiable significant increases in rockfalls or landslides. No discernable increase in the actual risk to forest users from geologic hazards would be expected. Consequently, small increases in the occurrence of mass movements would be considered less than significant.

Potential Impact No. 16, Minor increases in the amount of precipitation and runoff could result in a slight increase in the rate of weathering of geologic formations.

Slight increases in the rate of weathering can be expected to result from increased amounts of precipitation. The increased rate of weathering would be imperceptible, and most likely, immeasurable. This increase in the rate of weathering would not preclude development or diminish the value of mineral resources. It would not result in drastically accelerated weathering of unique geological formations. Because increases in the amount of weathering would be imperceptible and most likely immeasurable, impacts would be considered less than significant.

Potential Impact No. 17, Small increases in erosion due to an increase in snowpack and runoff could result in accelerated loss and decreased productivity of forest soils.

An assumed 10 percent increase in the total amount of runoff would be expected to result in small increases in the amount of erosion. The actual increase in runoff would most likely be about 7.5 percent. Cloud seeding activities would increase the duration of the snowpack, snowmelt and runoff but would not appreciably increase the rate of runoff. The snowmelt and runoff rates are primarily controlled by atmospheric temperature and are largely independent of the amount of the snowpack. Increases in the rate of runoff increase overland rill and gully erosion and are related to stream velocities, the primary factor controlling streambank erosion.

The rate of overland erosion is largely dependent on detachment of soil particles from the soil mass and is closely related to rainfall intensity. An increase in the snowpack should have little impact on the rate of sheet or rill erosion, because the presence of the snowpack would preclude raindrop impact on the soil surface. Snow falling on bare ground or rain falling on snowpack should have little impact on the erosion processes.

Only in the transient snow zone would small changes in snowpack depth potentially affect the rate of erosion processes. In these areas, if weather modification resulted in a thin snow cover on the ground that would otherwise be bare, snowmelt during rainfall would lead to greater runoff than would have occurred naturally. Warm winter storms that cause rainfall on snowpack could result in rapid snow melts, high rates of runoff and peak flows. Conversely, the shallow snow cover made possible by weather modification could protect soil from rain drop impact and minimize surface erosion.

An increase in the snowpack should not have any substantial impact on the rate of streambank erosion because warm winter storm events that could cause rainfall on snow resulting in high runoff rates and peak flows would not be seeded. Suspension criteria requirements specify curtailment of seeding events with the potential to induce rainfall on existing snowpack. The

period of runoff and total amount of overland and streambank erosion would be slightly increased, but impacts would not be expected to measurably degrade soil productivity and are considered less than significant.

Mitigation Measures

There were no geology and soils impacts identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be significant geology and soils impacts associated with the Stanislaus Weather Modification Program.

Hazards and Hazardous Materials

Significance Criteria

According to the State CEQA Guidelines, a project would have a significant effect on the environment if it would involve: 1) a risk of accidental explosion or release of hazardous substances; 2) possible interference with an emergency response plan; 3) creation of any health hazard or potential health hazard; 4) exposure of people to existing sources of potential health hazards; or 5) increased fire hazard in areas with flammable brush, grass or trees.

Impacts

The Stanislaus Weather Modification Program would not involve any of the incidents cited above. Therefore, there would be no significant impacts regarding hazards or hazardous materials associated with the project.

Mitigation Measures

There were no hazards or hazardous materials impacts identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be significant hazards or hazardous materials impacts associated with the Stanislaus Weather Modification Program.

Hydrology and Water Quality

Significance Criteria

Significance criteria as applied to impacts described in the following section are as follows: 1) potential for the project to expose people or property to a significant increase in flood risk or avalanches; 2) potential for the project to substantially degrade water quality; 3) potential for the project to contaminate a public water supply; and 4) reduced amount or diminished quality or water in groundwater aquifers.

Impacts

Potential Impact No. 18, Increase runoff from the project could increase flood risks.

For this analysis, the amount of increase in runoff due to cloud seeding activities has been conservatively estimated to be 10 percent. The actual increase in runoff is expected to be closer to 7.5 percent. A 10 percent increase in runoff would not be expected to be significant based on studies in adjacent watersheds where cloud seeding programs have been ongoing since 1953. However, storm events could cause flooding even without the increases in precipitation attributed to cloud seeding.

Strict adherence to suspension criteria and operation procedures would reduce the increased flood level risk due to cloud seeding to an insignificant level. Cloud seeding would be suspended when flood warnings were issued due to severe weather threats or when continued rainfall results in runoff in excess of reservoir storage capacity. Coordination between weather modification forecasters, District supervisors, and the weather modification program manager would be effective in determining storm seedability to minimize flood risk. This project is not expected to significantly increase runoff or flood risk. The project is not expected to alter runoff to exceed current reservoir flood storage capacity. Therefore, this potential impact is not considered significant.

Potential Impact No. 19, Increased snowpack potentially resulting from the project could induce elevated peak storm/runoff events.

Runoff in the Sierra Nevada is controlled by the temperature regime. The rate of meltwater production (runoff) in years of average snowpack is essentially independent of the amount of snow on the ground. A review of historical records indicates that snowpack contributions to extremes of streamflow are minimal. Recent studies suggest that extending the period of snowmelt (due to increased snowpack) does not cause a shift of the entire snowmelt runoff peak, but extends the duration of meltwater production. Therefore, increased snowpack is not expected to result in observable increase in peaks of major snowmelt runoff events (*Parsons Engineering Science, Inc., October 1995*).

Floods resulting from winter rains are of moderate concern in the project drainage basin. Kattelmann, while conducting research in the American River Basin, found that warm winter storms that cause rain-on-snow events are responsible for the highest peak flows and occasional mass movements. It was also found that rain-on-snow event magnitude is unaffected by changes in snowpack depth (*Parsons Engineering Science, Inc., October 1995*).

Snowpack augmentation due to project-related weather modification may be beneficial by providing more storage (a "sponge" effect) for rainfall and by potentially reducing massive flood releases from naturally occurring rain-on-snow events. In this respect, additional snowpack may have a slight moderating influence on streamflow and, therefore, flood potential delaying rain runoff. Rain-on-snow research conducted by Kattelmann suggests that snow delays rainstorm runoff anywhere from a few to 12 hours. However, if weather modification resulted in a thin snow cover on ground that would have otherwise been bare, especially in the transitory zone below 6,000 feet, snowmelt during rainfall would lead to greater runoff than would have occurred naturally. The incremental increase in instantaneous runoff resulting from cloud seeding under these conditions would be slight. A runoff hazard could exist under the combination of record snowpack water content accumulation and a major rain-on-snow event that included a substantial melt-off of the snowpack above 6,000 feet. Following the operating procedures outlined in the proposed suspension criteria, it is improbable that cloud seeding would add materially to the

snowpack contributing to runoff in these rare events. (*Parsons Engineering Science, Inc., October 1995*).

The suspension criteria that have been developed for operation of the weather modification program would halt cloud seeding activities when it was evident that a rain-on-snow event would occur. Even then, the effect of such an event would be sustained by high flow, not an increased peak. The potential sustained high flows are not likely to exceed the capacity of the existing storage/flood control system. Therefore, this impact is not considered to be significant.

Potential Impact No. 20, Weather modification could potentially increase the risk of avalanches.

To the extent that this program increases the amount and duration of snowfall during major winter storms, it could increase the frequency of avalanches. However, this tendency is less than proportional to the estimated increase in snowfall. In research studies directed at identifying avalanche-triggering effects, the effects of relatively small incremental increases in snowfall have been marked by more pronounced influences of wind, temperature, rate of snowfall, and stability of the snowpack (*USBR 1977 in Parsons Engineering Science, Inc., October 1995*). Adherence to the project suspension criteria would avoid contributing to hazardous situations such as avalanches. Therefore, this potential impact is considered less than significant.

Potential Impact No. 21, The weather modification program could extend delayed snowmelt.

Wind activity and topography prevent snow from falling evenly over an area. Delayed snowmelt would occur primarily in protected areas and locations that accumulate a disproportionately large quantity of snow. Increased time for snowpack melt out would vary according to the duration of augmentation, effect of rain or increased snow on the snowpack, and many other factors, such as temperature regime and amount of cloudiness and sunshine (*USFS 1990 in Parsons Engineering Science, Inc., October 1995*).

Based on previous US Bureau of Reclamation (USBR) studies, incremental increases in Sierra Nevada snowpacks resulting from an increase of up to 8 percent in snowfall did not create lingering snowpacks of significance to the physical and human environment. It is estimated that the delay in snowmelt would extend a few days. Snowpack modeling studies sponsored by the USBR in the Sierra Nevada and Colorado Rocky Mountains and studies sponsored by the Utah Division of Water Resources in the Uinta Mountains (*USBR 1990 in Parsons Engineering Science, Inc., October 1995*) indicate that a very small percentage (1-3 percent) of their total target study area would tend to have a delayed snow-free period beyond 3 days. As the effect described above would not be expected to exceed existing reservoir storage capacities within and downstream of the target area, this potential impact is not considered to be significant.

Potential Impact No. 22, The project could result in increased soluble salts, turbidity, and suspended sediments in surface waters.

The conservatively estimated 10 percent increase in runoff would, relative to ambient levels, cause an increase in the amount of soluble mineral salts leached from bedrock and soil. However, the increased amount of runoff would also dilute the existing water soluble salt levels to less than or equal to that which would exist without cloud seeding.

The increase in suspended sediments and turbidity would be related to increased flows. Although the potential increase in flow levels would be small, a slight increase in suspended sediments may also slightly increase nutrients which bond to sediments, such as phosphorous. As previously discussed, increases in soil erosion and resultant sedimentation due to cloud seeding would not be significant.

Suspension criteria would curtail cloud seeding activities during storm events with a potential for flooding, or when the existing storage and transfer facilities are near or at capacity. During periods of heavy runoff, detention time in reservoirs and flood control facilities would allow for settling out of suspended sediments which would decrease turbidity and reduce siltation downstream. During the 50-year period that cloud seeding has occurred on the North Fork Mokelumne River watershed, all of the water quality objectives of the Basin Plan have been met and the USFS reports excellent year-round surface water quality. Based on these studies, cloud seeding operations would not significantly degrade surface water quality.

Potential Impact No. 23, The project could increase the silver (Ag^+) in drinking water.

Free silver in its positive ionic state (Ag^+) from cloud seeding activities would eventually enter streams, reservoirs, and other surface waters in the target area. However, silver salts are extremely insoluble and silver iodide is the least soluble of these salts. The solubility constant of silver iodide is 1.5×10^{-10} M at 25°C (gram molecular weight per liter), corrected to zero ionic strength, which is equivalent to about $1\text{ }\mu\text{g/l}$, and drops to 1.7×10^{-17} M ($0.45\text{ }\mu\text{g Ag}^+/\text{l}$) at 15°C . Therefore, very little silver iodide is ionized to the Ag^+ form which is toxic. Soluble Ag^+ is strongly absorbed in the first few centimeters of soil by colloids and organic material and in aquatic sediment and vegetation.

The US Public Health Standard for silver in drinking water is 0.05 ppm. The amount of silver in seeded storms has typically ranged from 0.0001 to 0.0003 ppm (0.1 to $0.3\text{ }\mu\text{g/l}$), which is far below the drinking water standard. No significant impact to drinking water quality is expected to result from cloud seeding due to the extremely small concentrations of silver involved and its extremely low solubility. Therefore, impacts to drinking water due to elevated Ag^+ concentrations would not be significant. Silver iodide would not be present in water at concentrations that would pose any risk to back country patrol personnel, backpackers or other recreation visitors who use water for drinking or cooking.

Potential Impact No. 24, Increased amounts of precipitation could result in small increases in the amount of groundwater recharge.

Cloud seeding activities would be expected to increase the recharge rates of groundwater aquifers. The increase in the groundwater recharge rate is closely related to the increase in precipitation, conservatively assumed to be 15 percent, and runoff, 10 percent. This increased recharge would be considered a beneficial impact because it would enhance the available groundwater supply and provide additional water downgradient for instream or other uses.

To test impacts on groundwater from weather modification, snowmelt was artificially extended 11 days at the Central Sierra Snow Laboratory, near Soda Springs (*Parsons Engineering Science, Inc., October 1995*). The additional snowmelt caused a localized rise in groundwater that expanded laterally and downslope in time. The groundwater "mound" dissipated within two weeks, but higher soil moisture levels persisted for several weeks after the extended period of snowmelt. Similar or typically smaller localized groundwater and soil moisture effects are expected to result from the Stanislaus Weather Modification Program.

Mitigation Measures

There were no significant impacts to hydrology and water quality identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant hydrology and water quality impacts associated with the Stanislaus Weather Modification Program.

Land Use and Planning

Significance Criteria

The State CEQA Guidelines define a significant effect on the environment as a substantial adverse change in the physical conditions that exist in the area affected by the proposed project. According to the State CEQA Guidelines, significant land use or planning impacts would occur if a proposed project would result in the loss of important open space or other resource lands; give rise to substantial land use conflicts; disrupt or divide the physical arrangement of an established community; or conflict with recreational, educational, religious or scientific uses of the area.

Impacts

Potential Impact No. 25, Indirect land use conflicts could occur from the project by introducing snow loads during winter months and limiting access for tourists, residents, and recreationists. Limitations on access could have associated economic impacts to businesses primarily within Alpine County.

The proposed project is estimated to increase snowpack by a maximum of 15 percent above normal conditions. Thus, in a storm event producing up to 2 feet (24 inches) of snowfall, the proposed project could contribute up to 3.6 additional inches of snowpack for a total of 27.6 inches. Increased snowpack could result in access limitations at the higher elevations. Avalanche hazards are addressed in more detail in a previous section entitled "Hydrology and Water Quality".

The length of time during which snow covers the ground is dependent on many factors such as amount of snowpack accumulation, elevation, and temperature. The incremental length of time that snowpack from cloud seeding would remain on the ground would be measured in terms of a few days rather than weeks (*Kings River Conservation District 1978 and Department of Water Resources 1990 in Parsons Engineering Science, Inc., October 1995*). The amount of increased snow due to the project is not expected to be significant in terms of limiting access to residents, recreationists and tourists. Associated economic impacts, such as limitations on tourism in the eastern portion of Alpine County, would also not be significant. Cloud seeding operations have occurred in the adjacent watershed for the past 50 years without noticeable effect on access relative to natural variability in snowpack.

Potential Impact No. 26, The project could conflict with policies of the Forest Plan for the Stanislaus National Forest, as well as policies related to the management of Wilderness Areas as specified in the Forest Plan and the 1964 Wilderness Act.

Relevant policies are summarized in Table 4-1. As shown in Table 4-1, the only potential conflict may occur in relation to the management of Wilderness Areas. One interpretation of the Wilderness Act could be that increasing precipitation (snowpack) by mechanized cloud seeding operations does not maintain the "natural" state of the wilderness. A new cloud seeding operation, using motorized aircraft flying over may be considered in conflict with Wilderness Act policies. However, it is not anticipated that the small fixed-wing aircraft utilized in cloud seeding activities would intrude into the Wilderness Area. Therefore, it is not believed that program operation would be considered inconsistent with Wilderness Act policy.

Table 4-1
Relevant Policies Related to Cloud Seeding Operations
Stanislaus Weather Modification Program

Relevant Document	Policy	Relationship of Project to Policy
Stanislaus National Forest Land and Resource Management Plan (pp. IV-3 through IV-8 and p. IV-97)	B-1 Manage the forest in an economically efficient and cost-effective manner while responding to economic and local needs of the public and local communities.	Potential impacts to the tourism industry and local economics due to increased snowpack are addressed under Potential Impact No. ____.
	C-1 Maintain air quality that complies with all applicable regulations. Carry out forest management activities in a manner consistent and compatible with the attainment of State and federal air quality objectives.	See section of Air Quality.
	C-2 Inventory, evaluate, enhance and manage cultural resources to prevent loss or damage to cultural values, to integrate significant resources into multiple use management, to gain scientific knowledge and management data about them, and to interpret for public benefit and appreciation.	Cultural resources would not be directly affected by the cloud seeding operation. However, indirectly, increased runoff due to the project could increase erosion and impact cultural resources along waterways within and downstream of the target area. The rate of erosion will not increase, therefore, cultural resources would not be significantly affected.
	C-6 Provide habitat for viable populations of all native and desired non-native wildlife, fish and plants. Maintain and improve habitat for threatened and endangered species to see that they do not become federally listed as threatened or endangered.	See section on Biological Resources.
	C-7 Encourage mineral exploration and development in compliance with applicable laws, regulations and orders. In areas identified as susceptible to slope instability, analyze risks of management activities so as to avoid initiation of acceleration of slope movement and protect human safety and Forest resources. Prevent degradation of groundwater quality and develop groundwater sources to meet domestic, livestock and wildlife needs.	See sections of Geology and Soils and Hydrology and Water Quality.
	C-11 Manage riparian areas to protect or improve riparian area-dependent resources while allowing for management of other compatible uses.	See section on Biological Resources.
	C-18 Maintain or improve water quality and watershed condition to meet applicable State and federal requirements. Realize feasible increases in the quantity of water yield and delays in the timing of runoff by including water yield modification as an objective in the design and manipulation of commercial and non-commercial vegetation.	See section of Hydrology and Water Quality.
	C-20 Manage wilderness to preserve its character and values and to	See discussion of project's relationship to the 1964 Wilderness

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Relevant Document	Policy	Relationship of Project to Policy
	allow recreational, scenic, scientific, educational, conservation and historic uses consistent with these objectives.	Act at the end of this table.
Stanislaus National Forest Land and Resource Management Plan (p. IV-97, Management Practices and General Direction)	Wilderness Management: Manage to preserve unique wilderness characteristic. Implement Limits of Acceptance Change (LAC). Wilderness management will be consistent with adjoining National Park Wilderness management and will limit use as necessary. Allow commercial uses by permit only after evaluation shows that such use will not compromise wilderness resources and character.	Cloud seeding would be considered a commercial use and would be subject to receiving a permit from the USFS. Potential impacts to wilderness resources are discussed throughout Chapter 4 of this Initial Study as well as at the end of this table.
Wilderness Act of 1964 (P.L. 88-577, 78 Stat. 890, as amended; 16 USC 1131 (note), 1131-1136; Section 4 (Limitation of Use and Activities)	(Note: While no specific language of the Wilderness Act addresses weather modification activities, that text which indirectly addresses such an activity is noted below.)	Cloud seeding would be considered a commercial use and would be subject to receiving a permit from the USFS. Potential impacts to wilderness resources are discussed throughout Chapter 4 of this Initial Study as well as at the end of this table.
	(b) Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character. Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historic use.	
	(c) Except as specifically provided in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of person within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.	
	(d) The following special provisions are hereby made . . .	
	(4) Within wilderness areas in the National Forests designated by this Act, (1) the President may, within a specific area and in accordance with such regulations as he may deem desirable, authorize prospecting for water resources, the establishment of reservoirs, water-conservation works, power projects, transmission lines,	

Relevant Document	Policy	Relationship of Project to Policy
	and other facilities needed in the public interest, including the road construction and maintenance essential to the development and use thereof, upon his determination that such use or uses in the specific area will better serve the interests of the United States and the people thereof than will its denial, and (2) the grazing of livestock, where established prior to the effective date of this Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary to the Secretary of Agriculture.	

Potential Impact No. 27, Growth inducement could occur if the project created an increased water supply to support new development. Such growth inducement would occur outside of the project area in areas served by water districts/agencies reliant upon water from the North Fork Stanislaus River.

Increased precipitation caused by the cloud seeding operation would supply reservoirs used by the Calaveras County Water District and the Utica Power Authority as a source of drinking water for residents downstream of the target area. However, growth inducement is not expected as a result of the project because those dependent upon the North Fork Stanislaus River for drinking water already have an adequate supply, including the appropriate water rights.

While lack of available water can be a constraint to new development (just as a surplus of water could be considered an "incentive" for development), other controls exist that determine the location and rate of development. Local land use plans (e.g., General Plans) and zoning regulations are the primary mechanisms for managing the location and rate of growth.

Potential Impact No. 28, Increased snowpack could be beneficial to both winter and summer recreational opportunities.

Increased snowpack and runoff could be beneficial to both winter and summer recreational opportunities within, near to, or downstream of the target area. If the effects of cloud seeding extend to Mt. Reba, for instance, the increased snowpack would benefit the use of this facility. Increased runoff would also improve summer recreational opportunities such as fishing and boating downstream of the target area.

Mitigation Measures

There were no significant impacts to land use or planning identified; therefore, mitigation is not required.

Level of Significance After Mitigation

There would be no significant land use or planning impacts associated with the Stanislaus Weather Modification Program.

Mineral Resources

Significance Criteria

According to the State CEQA Guidelines, a project would have a significant effect on the environment if it encourages activities which would result in the use of large amounts of mineral resources or uses mineral resources in a wasteful manner.

Impacts

Implementation of the Stanislaus Weather Modification Program would not consume large amounts of mineral resources nor use mineral resources in a wasteful manner. Therefore, there should be no potential for significant adverse effects on mineral resources.

Mitigation Measures

There were no significant impacts to mineral resources identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant impacts to mineral resources associated with the Stanislaus Weather Modification Program.

Noise

Significance Criteria

According to the State CEQA Guidelines, a project would have a significant effect on the environment if it would increase substantially the ambient noise levels for adjoining areas. Noise affects all types of land uses and activities, although some are more sensitive to high noise levels than others. Land uses identified as noise sensitive include residences of all types, hospitals, rest homes, convalescent hospitals, places of worship and schools.

Impacts

The only noise associated with the project would be that from the small fixed-wing aircraft utilized to seed the clouds. This would not be an uncommon event in the project area. Therefore, this potential impact would be considered less than significant.

Mitigation Measures

There were no significant noise impacts identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant noise impacts associated with the Stanislaus Weather Modification Program.

Population and Housing

Significance Criteria

According to the State CEQA Guidelines, significant population and housing impacts would occur if a proposed project would cumulatively exceed official regional or local population projections, induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure) or displace existing housing, especially affordable housing.

Impacts

The Stanislaus Weather Modification Program would not cumulatively exceed official regional or local population projections, induce substantial growth in an area either directly or indirectly nor displace existing housing. Therefore, it is concluded that the project would not have a significant effect on population or housing.

Mitigation Measures

There were no significant impacts to population and housing identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant impacts to population and housing associated with the Stanislaus Weather Modification Program.

Public Services

Significance Criteria

According to the State CEQA Guidelines with respect to public services, a project would have a significant impact on the environment if it would cause the capacity of public safety and protection systems to be overloaded (thus either requiring additional services or causing the quality of services to suffer) as explained below. The State CEQA Guidelines also suggest that a significant impact would be indicated by the likelihood of a project interfering with an emergency response plan or an emergency evacuation plan.

For the purposes of this analysis, the proposed project would create a significant impact on public services if it would: 1) delay response times by emergency personnel, 2) require a substantial modification to existing facilities or services that would have an impact on sensitive resources or land uses or 3) create an inherently hazardous situation that could not be mitigated.

Impacts

Implementation of the Stanislaus Weather Modification Program would not delay response times by emergency personnel, require modification to existing public service facilities, or create an inherently hazardous situation. The project would not create any additional demand for public services such as fire, police or schools. It is therefore concluded that there would be no significant impacts on public services associated with the Stanislaus Weather Modification Program.

Mitigation Measures

There were no significant impacts to public services identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant impacts to public services associated with the Stanislaus Weather Modification Program.

Recreation

Significance Criteria

The State CEQA Guidelines define a significant effect on the environment as a substantial adverse change in the physical conditions that exist in the area affected by the proposed project. According to the State CEQA Guidelines, significant recreational impacts would occur if a project would result in the loss of important open space or other resource lands designed for recreational uses and/or conflict with established recreational, educational, religious or scientific uses of the area.

Impacts

Implementation of the Stanislaus Weather Modification Program would not result in a significant loss of open space or other resource lands presently used for recreational uses and/or conflict with established recreational, educational, religious or scientific uses of the area. Therefore, it is concluded that there would be no significant recreational impacts associated with the Stanislaus Weather Modification Program.

Mitigation Measures

There were no significant impacts to recreation identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant impacts to recreation associated with the Stanislaus Weather Modification Program.

Transportation/Traffic

Significance Criteria

According to the State CEQA Guidelines, a project would have a significant effect on the environment if it causes an increase in traffic which is substantial in relation to the existing traffic land and capacity of the street system.

Impacts

Potential Impact No. 28, Cloud seeding could impact traffic.

Increased snowfall associated with the Stanislaus Weather Modification Program is not expected to have significant impacts on traffic using roadways within the target area due to the small

increase in snowfall and the fact that the suspension criteria would limit cloud seeding during severe storm conditions or when snowpack exceeds 125 percent of normal to date. A study was undertaken by Caltrans of potential impacts of weather modification and increased snowpack (up to 15 percent in normal and below normal years). This study concluded that road closures are more frequently caused by blowing or drifting snow or icing conditions rather than the amount of snowfall (*Turlock Irrigation District 1990 in Parsons Engineering Science, Inc., October 1995*). The proposed weather modification program would not affect the frequency, temperature, or timing of natural storms. Hourly snow removal costs would not be increased significantly by increased storm intensity.

Some traffic delays and traffic accidents on Highway 4 due to snow augmentation could possibly occur if cloud seeding resulted in effects outside the target area. The only portion of a State highway that passes through the target area is a small portion of Highway 4 that is closed during winter months. The identified suspension criteria would limit cloud seeding during severe storms or high snowpack years and would prevent significant impacts related to either travel delays or accidents.

Vehicular and non-vehicular access could be limited in the early spring months due to increased snowpack from cloud seeding. The number of days delay due to increased snowpack is not expected to be significant due to the identified suspension criteria and the relatively low increase in snowfall estimated from the project. The incremental increase in the length of time that snowpack would remain on the ground due to cloud seeding would be measured in terms of a few days rather than weeks (*Kings River Conservation District 1975, Department of Water Resources 1990 in Parsons Engineering Science, Inc., October 1995*). No cloud seeding would occur after May 31 each year or after precipitation accumulation exceeds 125 percent of normal to date (as measured by snow water content in monthly snow surveys conducted February through April). Thus, if snow surveys at the end of April show that precipitation accumulation exceeds 125 percent of normal to date, no additional seeding would occur in May. Access for hikers and residents during summer months would not be impacted.

Mitigation Measures

There were no significant impacts to transportation/traffic identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant impacts to transportation/traffic associated with the Stanislaus Weather Modification Program.

Utilities and Service Systems

Significance Criteria

According to the State CEQA Guidelines with respect to utilities and service systems, a project would have a significant impact on the environment if it would cause the capacity of utilities or service systems to be overloaded thus either requiring additional facilities or causing the quality of services to suffer.

Impacts

Implementation of the Stanislaus Weather Modification Program would not utilize significant amounts of utilities or service systems. Therefore, it is concluded that the Stanislaus Weather Modification Program would not affect utilities or service systems.

Mitigation Measures

There were no significant impacts to utilities and service systems identified; therefore, no mitigation is required.

Level of Significance After Mitigation

There would be no significant impacts to utilities and service systems associated with the Stanislaus Weather Modification Program.

Chapter 5 Alternatives to the Proposed Action

Introduction

This section of the Initial Study briefly addresses two alternatives to the proposed action as well as two alternatives that were considered but rejected. The ability of the alternatives to meet project objectives and their associated environmental impacts are addressed below.

No Project Alternative

The "No Project" alternative assumes that no cloud seeding operations would take place in the Lake Alpine, Utica and Union Reservoirs and Spicer Meadow Reservoir watersheds. This alternative would not meet any of the objectives established for the project. None of the potential impacts associated with the proposed project would occur under this alternative.

Cloud Seeding with Ground-Based Generators Utilizing Silver Iodide

A well designed program would include the number and placement of seeding generators so that operations could be conducted reliably and the seeding caused precipitation occurs over the desired area, the target area watershed. PG&E's proprietary targeting model was used to develop these estimates. A benefit/cost analysis of seeding plume coverage and resulting water yield over the target area indicated that four new seeding generators would be desirable for the NCPA target area.

A cloud seeding program developed for NCPA would include placement of new seeding generators in four areas upwind of the Spicer Meadow Reservoir watershed, NCPA's target area (NTA). These four sites include Cabbage Patch, Strawberry Peak, Twin Peak, and Spicer Meadow Reservoir. These sites would provide adequate travel distance and time for ground-based seeding plumes to enhance precipitation over the NTA. An alternative program also considered would place ground seeding generators in the general vicinity of Big Prather Meadow, Spring Gap, Sardine Meadow and Spicer Meadow Reservoir. The ultimate site selection would depend on site availability, land costs, local setting, site access, and other environmental factors which make one site superior to another.

Although this alternative would meet all of the project objectives it was rejected due to the time to acquire the necessary land acquisitions and local permits.

Ground-Based Seeding Utilizing Propane

Pressurized propane (or nitrogen) released from a jet/nozzle (achieving release temperatures near -6°C) theoretically could act as a cloud seeding agent in some topographical-target area settings. The technology was tried in a recent program sponsored by the California Department of Water Resources on the Middle Fork of the Feather River. Because it is not a technology widely used in the industry nor has it been proven to be effective, seeding with an agency such as propane was not further considered.

Vegetation Management

Vegetation management technology aims at reducing water consumption by replacing existing vegetation with "less quality" types of vegetation. It can also involve methods of reducing evapotranspiration loss of natural precipitation, thus augmenting runoff and percolation transport. Changing vegetation types in the target watershed would not be considered environmentally or ecologically sound. The high Sierra ecosystem has naturally adapted to the climate and soil types and could be adversely upset by an attempt to change it toward more of a grassland or tundra (no trees).

One method of reducing evapotranspiration losses involves strip cutting of forest in swaths about 50 feet in width. Snowfall accumulates more heavily in these swaths resulting in longer periods of snow melt for percolation and surface runoff in concentrated zones during the spring. Water previously consumed by the cleared trees is then available for transport processes. This practice would not be suited to the target area which ranges in elevation from 6,000 to 9,500 feet above sea level. There are many steep slopes and the forest stands above 7,000 feet are somewhat limited, generally characterized as scattered groves among granite and decomposing granite outcroppings. Soils are generally shallow. Strip cutting this limited forest would lead to higher erosion potential and subsequent adverse effects to the watershed and river system. Thus, vegetation management technology was rejected as an alternative to the existing cloud seeding program. Strip cutting is also prohibited within wilderness areas.

Chapter 6 Persons and Organizations Consulted

On November 21, 2005, Northern California Power Agency's environmental consultant, K.S. Dunbar & Associates, Inc., Environmental Engineering, mailed copies of the Notice of Intent to Adopt a Negative Declaration and Initial Study to those on the following list.

Federal Agencies

Magalie Roman Salas, Secretary
Federal Energy Regulatory Commission
810 1st Street N.E., Room 1068
Washington, D.C. 20426

Takeshi Yamoshita, Regional Manager
Federal Energy Regulatory Commission
901 Market Street, Suite 350
San Francisco, California 94103

Dave Campodonico, Special Projects Liaison
Stanislaus National Forest
USDA – Forest Service
19777 Greenley Road
Sonora, California 95370

Patti Clarey
Calaveras Ranger District
Stanislaus National Forest
USDA – Forest Service
Post Office Box 500
Hathaway Pines, California 95233

Division of Ecological Services
U. S. Fish and Wildlife Service
2800 Cottage Way
Sacramento, California 95825

Keith Davis
Bureau of Reclamation
U. S. Department of the Interior
6850 Stud Horse Flat Road
Sonora, California 95370

Kathy Norton
U. S. Army Engineer District – Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

State Agencies

Terry Roberts
State Clearinghouse Director
Governor's Office of Planning and Research
Post Office Box 3044
Sacramento, California 95812-3044

Tom Pinkos, Executive Officer
California Regional Water Quality Control Board,
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670-6114

Stafford Lehr, Fishery Biologist
Region 2
California Department of Fish and Game
1701 Nimbus Avenue, Suite A
Rancho Cordova, California 95670

Bill Loudermilk, Regional Manager
Region 4
California Department of Fish and Game
1234 E. Shaw Avenue
Fresno, California 93710

Nadell Gayou
California Department of Water Resources
Post Office Box 942836
Sacramento, California 94236-0001

Larry B. Ford
Division of Safety of Dams
California Department of Water Resources
Post Office Box 942836
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Hans Kreutzberg
Office of Historic Preservation
California Department of Parks and Recreation
Post Office Box 942896
Sacramento, California 94296-0001

Debbie Pilas-Treadway
Associate Government Program Analyst
Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

Local Agencies

Leonard Tumbeaugh
Alpine County Planning Department
55 Diamond Valley Road
Markleeville, California 96120

Mark DeMaio, County Engineer
Alpine County Department of Public Works
55 Diamond Valley Road
Markleeville, California 96120

Robert Sellman, Interim Planning Director
Calaveras County Planning Department
891 Mountain Ranch Road
San Andreas, California 95249

Bob Houghton, Department Head
Calaveras County Department of Public Works
891 Mountain Ranch Road
San Andreas, California 95249

Beverly Shane, Director
Tuolumne County Planning Department
2 South Green Street
Sonora, California 95370

Peter Rei, Director
Tuolumne County Department of Public Works
2 South Green Street
Sonora, California 95370

Interested Entities

Reba Fuller, Spokesperson
Central Sierra Me-Wuk Cultural and
Historic Preservation Commission
Post Office Box 699
Tuolumne, California 95379

John Buckley
Central Sierra Environmental Resource Center
Post Office Box 396
Twain Harte, California 95383

Chapter 7 Report Authors/Contributors

Report Authors

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Report Contributors

Northern California Power Agency

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U.S. Geological Survey, Menlo Park, California

Appendix A
Suspension Criteria

Northern California Power Agency's Suspension Criteria Stanislaus Weather Modification Program¹

Introduction

As in any well designed and responsibly-conducted weather modification program, the NCPA Program design includes basic guidelines for temporary suspension or curtailment of cloud seeding operations under certain conditions. These project safeguards are designed to avoid runoff or reservoir storage beyond manageable limits and to avoid contributing to, or appearing to contribute to, hazardous situations, such as increased flooding, erosion and sedimentation or avalanches, resulting from naturally occurring weather-related phenomena. The parameters used to determine if suspension of cloud seeding operations is appropriate are:

- Excess reservoir storage.
- Total snowfall status.
- Potential flood situations, including rain-on-snow events or avalanches.
- Severe weather threats.
- Temperature, wind speed and cloud altitude.
- Other special circumstances (e.g., search and rescue operations or emergency situations).

Reservoir storage is a NCPA technical consideration related to management of runoff from precipitation. Total snowfall status is usually estimated using data generated by PG&E, the Department of Water Resources, the US Bureau of Reclamation, public utilities and other sources in monthly snow surveys. The cloud seeding program will be temporarily suspended when precipitation accumulation exceeds 125 percent of normal to date as measured by snow water content in the monthly snow surveys conducted in February through April. Once suspended, this program may resume operational seeding if subsequent snow surveys indicated the accumulation has fallen below the 125 percent level in the North Fork Stanislaus watershed. Any discussion of temporary project suspension or termination based on these first two parameters, reservoir storage and snowfall status, is initiated by NCPA personnel.

Consideration of the other four parameters is a routine facet of ongoing forecasting and operational activities considered as part of cloud seeding operations. The decision-making time frame within these parameters is far shorter than commonly used in periodic snowfall assessments. These factors are monitored on a storm-by-storm basis and even on a sub-hourly basis during rapidly changing weather conditions. National Weather Service Flash Flood or Severe Weather Warnings pertinent to the target area or to adjacent watersheds will trigger temporary curtailment of cloud seeding efforts. While curtailment related to severe weather threat is typically infrequent and short-lived, suspension during potential flood situations might span several days. Special circumstances such as search and rescue missions or other emergency situations within the target area may result in temporary curtailment of seeding operations as deemed prudent.

¹ Adapted from PG&E's Suspension Criteria for its Mokelumne Weather Modification Program.

Analysis of Effectiveness

NCPA will use a randomization method in selecting storm periods for cloud seeding treatment. The intent of the randomization procedure is to produce a control (non-seeded period) precipitation data set for comparison with precipitation data measured during seeded periods. The randomization procedure is balanced against the need to produce precipitation in the North Fork Stanislaus watershed for hydroelectric generation. Therefore, randomization procedures may be suspended (i.e., all opportunities are seeded) at the discretion of NCPA's management.

The current design of NCPA's Stanislaus Weather Modification Program includes randomization of seeding treatments. Once a seedable opportunity prevails over the Stanislaus target area, a randomized decision to commence weather modification is made. The "seed" or "no-seed" designation is based on a set of individual orders prepared and sealed in envelopes before the beginning of the season. The program is designed for a "seed" or "no-seed" ratio of 1:1. The forecaster achieves a randomized decision to seed or not to seed by opening one of these envelopes when the seedable opportunity is perceived, if the cloud seeding order sheet indicates "seed", the duty forecaster issues an order to activate the cloud seeding operations. If the cloud seeding order sheet indicates "no-seed", the duty forecaster notifies all concerned personnel that a "no-seed" condition prevails and the cloud seeding operations are not activated.

Each "seed" or "no-seed" event is 12 hours in length. A new "seed" or "no-seed" event cannot be initiated until the previous event has completed its assigned time interval. At the discretion of the duty weather forecaster, an event can be terminated early if seeding during is less than seven hours. This option is exercised when forecasted weather conditions do not materialize.

Personnel

NCPA personnel at the Murphys Hydroelectric Operations and the Roseville Dispatch Center will be responsible for the Stanislaus Weather Modification Program. However, NCPA will contract the cloud seeding operations to a private entity (e.g., Atmospherics, Incorporated) that will be responsible for the day-to-day operations of the program.

Appendix B
Environmental Checklist

CHAPTER 4 ENVIRONMENTAL CHECKLIST AND ANALYSIS

Introduction

- | | |
|--|---|
| 1. Project Title: | Stanislaus Weather Modification Program |
| 2. Lead Agency Name and Address: | Northern California Power Agency
180 Cirby Way
Roseville, California 95678 |
| 3. Contact Person and Phone Number: | Norm Worthington
(916) 786-0124 |
| 4. Project Location: | Stanislaus National Forest in Alpine and
Tuolumne Counties |
| 5. Project Sponsor's Name and Address: | Northern California Power Agency
180 Cirby Way
Roseville, California 95678 |
| 6. General Plan Designation: | Open Space, Timberlands, Wilderness |
| 7. Zoning: | Agricultural, Wilderness |
| 8. Description of Project: | Weather modification program to augment
winter snowfall in the higher elevations of the
Spicer Meadow Reservoir watershed. Aerial
cloud seeding would take place during the
November 1 through May 31 period. |
| 9. Surrounding Land Uses and Setting: | Stanislaus National Forest and Carson-Iceberg
Wilderness. |
| 10. Other Public Agencies whose
Approval is Required: | None |

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

Aesthetics	Agricultural Resources	Air Quality
Biological Resources	Cultural Resources	Geology/Soils
Hazards & Hazardous Materials	Hydrology/Water Quality	Land Use/Planning
Mineral Resources	Noise	Population Housing
Public Services	Recreation	Transportation/Traffic
Utilities/Service Systems	Mandatory Findings of Significance	

Determination (To be completed by the Lead Agency):

On the basis of this initial evaluation:

X	I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION will be prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures in the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable legal standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____

Date _____

Printed Name _____

Northern California Power Agency
For

Evaluation of Environmental Impacts:

Introduction

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant" to a "Less Than Significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses" may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analyses Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analyses.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

*Environmental Checklist
Stanislaus Weather Modification Program
Northern California Power Agency*

- 8) This is only a suggested form, and lead agencies are free to use different formats, however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

Aesthetics:

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Have a substantial adverse effect on a scenic vista?					X
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?					X
c. Substantially degrade the existing visual character or quality of the site and its surroundings?					X
d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?					X

Discussion: See Chapter 4 in Initial Study.

Agricultural Resources

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. <i>Would the Project:</i>					
a. Convert Prime Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?					X
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?					X
c. Involve other changes in the existing environment that, due to					X

their location or nature, could result in conversion of Farmland, to non-agricultural use?					
--	--	--	--	--	--

Discussion: See Chapter 4 in Initial Study.

Air Quality

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. <i>Would the Project:</i>					
a. Conflict with or obstruct implementation of the applicable air quality plan?					X
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?					X
c. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?					X
d. Expose sensitive receptors to substantial pollutant concentrations?					X
e. Create objectionable odors affecting a substantial number of people?					X

Discussion: See Chapter 4 in Initial Study.

Biological Resources

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife					X

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	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Service?					
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?					X
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?					X
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites					X
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?					X
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?					X

Discussion: See Chapter 4 in Initial Study.

Cultural Resources

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?					X
b. Cause a substantial adverse change in the significance of a archeological resource as defined in § 15064.5?					X
c. Directly or indirectly destroy a					X

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unique paleontological resource or site or unique geological feature?					
d. Disturb any human remains, including those interred outside of formal cemeteries?					X

Discussion: See Chapter 4 in Initial Study.

Geology and Soils

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.					X
2. Strong seismic ground shaking?					X
3. Seismic-related ground failure, including liquefaction?					X
4. Landslides?					X
b. Result in substantial soil erosion or the loss of topsoil?					X
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?					X
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?					X
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?					X

Discussion: See Chapter 4 in Initial Study.

Hazards and Hazardous Materials

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?					X
b. Create a significant hazard to the public or the environment through reasonably upset accident conditions involving the release of hazardous materials into the environment?					X
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?					X
d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65963.5 and, as a result, would it create a significant hazard to the public or the environment?					X
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?					X
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?					X
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?					X
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?					X

Discussion: See Chapter 4 in Initial Study.

Hydrology and Water Quality

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Violate any water quality standards or waste discharge requirements?					X
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?					X
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site?					X
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?					X
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?					X
f. Otherwise substantially degrade water quality?					X
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					X
h. Place within a 100-year flood hazard area structures that would					X

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	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
impede or redirect flood flows?					
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?					X
j. Inundation by seiche, tsunami, or mudflow?					X

Discussion: See Chapter 4 in Initial Study.

Land Use and Planning

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Physically divide an established community?					X
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?					X
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?					X

Discussion: See Chapter 4 in Initial Study.

Mineral Resources

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Result in the loss of availability of a known resource that would be of value to the region and the residents of the state?					X
b. Result in the loss of availability of a locally-important mineral					X

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	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
resource recovery site delineated on a local general plan, specific plan or other land use plan?					

Discussion: See Chapter 4 in Initial Study.

Noise

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?					X
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?					X
c. A substantial permanent increase in ambient noise levels above levels existing without the project?					X
d. A substantial temporary or periodic increase in noise levels in the project vicinity above levels existing without the project?					X
e. For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?					X
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?					X

Discussion: See Chapter 4 in Initial Study.

Population and Housing

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure?)					X
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?					X
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?					X

Discussion: See Chapter 4 in Initial Study.

Public Services

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
1. Fire Protection?					X
2. Police Protection?					X
3. Schools?					X
4. Parks?					X
5. Other Public Facilities?					X

Discussion: See Chapter 4 in Initial Study.

Recreation

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?					X
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?					X

Discussion: See Chapter 4 in Initial Study.

Transportation/Traffic

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections?)					X
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?					X
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?					X
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous					X

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	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
intersections) or incompatible uses (e.g., farm equipment)?					
e. Result in inadequate emergency access?					X
f. Result in inadequate parking capacity?					X
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?					X

Discussion: See Chapter 4 in Initial Study.

Utilities and Service Systems

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?					X
b. Require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?					X
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?					X
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?					X
e. Result in a determination by the wastewater treatment provider that serves or may serve the project's projected demand in addition to the provider's existing communities?					X
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?					X

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	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g. Comply with federal, state, and local statutes and regulations related to solid waste?					X

Discussion: See Chapter 4 in Initial Study.

Mandatory Findings of Significance

	Sources	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<i>Would the project:</i>					
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?					X
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)					X
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?					X

Discussion: See Chapter 4 in Initial Study.

Appendix C
Negative Declaration

Negative Declaration

Project Name:

Stanislaus Weather Modification Program

Project Description:

The Northern California Power Agency anticipates implementing the Stanislaus Weather Modification Program. The weather modification program (cloud seeding) would augment winter snowfall in the higher elevations of the North Fork Stanislaus River and Highland Creek watersheds upstream of Lake Alpine, Utica and Union Reservoirs, and Spicer Meadow Reservoir.

The proposed action includes the release of silver iodide from a small fixed-wing aircraft depending on weather conditions during the November 1 through May 31 period.

The proposed program would not increase storm frequency; however, it would enhance precipitation (snowfall) from naturally occurring storms. The amount of precipitation added by cloud seeding is difficult to determine because of the natural variability of precipitation and the difficulty of obtaining representative measurements. However, it is anticipated that the program would enhance runoff approximately 7.5 percent over normal.

Project Location:

The target area, which is that area in which increased precipitation (snowfall) is desired, is the 74 square mile watershed above Spicer Meadow Reservoir, Utica and Union Reservoirs, and Lake Alpine. Most of the watershed is above the 6,600-foot contour within the Stanislaus National Forest and the Carson-Iceberg Wilderness Area.

Project Sponsor:

Northern California Power Agency
180 Cirby Way
Roseville, California 95678

Findings:

On the basis of the attached Initial Study:

X	I find that the proposed project COULD NOT have a significant effect on the environment and a NEGATIVE DECLARATION has been prepared.
	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION has been prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT has been prepared.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures in the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT has been prepared, but analyzed only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable legal standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

*Negative Declaration
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Northern California Power Agency*

Signature

Date

Printed Name

Northern California Power Agency
For

Mitigation Measures

No significant impacts were identified; therefore, no mitigation measures are required.

2015 Addendum to the Initial Study and Negative Declaration for the Stanislaus Weather Modification Program

Introduction

In November 2005, the Northern California Power Agency (“NCPA”) prepared an initial study and a negative declaration (“IS/ND”) under the California Environmental Quality Act (“CEQA”) for the Stanislaus Weather Modification Program (“Project”) and in January 2006 NCPA adopted the IS/ND (attached hereto as Exhibit 1) and approved the Project. Project operations commenced with some weather modification work done during the later half of the 2006/2007 rainy season. In November 2007, NCPA approved a two-year contract for further weather modification operations during the 2007/2008 and 2008/2009 rainy seasons. In November of 2009, NCPA approved a three-year contract to extend weather modifications operations for the 2009/2010, 2010/2011, and 2011/2012 rainy seasons. In August of 2012 NCPA approved a 3-year contract to extend weather modification operations for the 2012/2013, 2013/2014, 2014/2015 rainy seasons.

Now, NCPA is proposing to approve a 3-year contract to extend weather modification operations for the 2015 / 2016, 2016 / 2017/ 2017/2018 rainy seasons.

Applicability and Use of an Addendum

Under CEQA, lead agencies must conduct an evaluation of proposed changes to a project in order to determine whether further environmental analysis is required. (CEQA, § 21166; CEQA Guidelines, § 15162.) Once an EIR or negative declaration has been completed for a project, a lead agency may not require preparation of a subsequent environmental review unless the conditions set forth in CEQA section 21166 and CEQA Guidelines section 15162 are satisfied.

Pursuant to CEQA section 21166, when a previous environmental review for a project has been prepared and approved, no subsequent or supplemental environmental review shall be required unless:

- (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report.
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.

(c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

CEQA Guidelines section 15162 further clarifies that:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(b) If changes to a project or its circumstances occur or new information becomes available after adoption of a negative declaration, the lead agency shall prepare a subsequent EIR if required under subdivision (a). Otherwise the lead agency shall determine whether to prepare a subsequent negative declaration, an addendum, or no further documentation.

(c) Once a project has been approved, the lead agency's role in project approval is completed, unless further discretionary approval on that project is required. Information appearing after an approval does not require reopening of that approval. If after the project is approved, any of the conditions described in subdivision (a) occurs, a subsequent EIR or negative declaration shall only be prepared by the public agency which grants the next discretionary approval for the project, if any. In this situation no other responsible agency shall grant an approval for the project until the subsequent EIR has been certified or subsequent negative declaration adopted.

If none of the conditions set forth in CEQA Guidelines section 15162(b) allowing a lead agency to prepare a subsequent negative declaration are met, CEQA Guidelines section 15164 authorizes the lead agency to prepare an addendum to the previously approved negative declaration. In relevant part, CEQA Guidelines section 15164 states:

(b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

It would appear that no further CEQA review is required since the Project approved a program of weather modification and the new, three-year contract proposal only seeks to continue the existing Project. However, in an abundance of caution, NCPA has chosen to examine the potential changes in the environmental impacts of the Project due to the extension of the duration of the Project, and any changes in environmental impacts due to changed conditions or the availability of new information have been evaluated and measured against the standards set forth above to determine if an addendum is appropriate. Based on the evidence before NCPA, including all evidence in NCPA's files, the IS/ND attached hereto, and all other evidence presented to NCPA, the modified Project does not trigger any of the circumstances that would require preparation of a subsequent EIR or negative declaration under Public Resources Code section 21166 or CEQA Guidelines section 15162, as further set forth in this Addendum.

Description of the Proposed Project

With the exception of the extension of the duration of the Project, the description of the Project remains the same as that described in Chapter 2 of the attached IS/ND. In short, the Project proposes to continue the program of cloud seeding through the use of silver iodide, distributed by aircraft. The intent of the Project is to increase precipitation and the snowpack in the watershed of the North Fork Stanislaus River and Highland Creek

upstream of Lake Alpine, Utica and Union Reservoirs, and Spicer Meadow Reservoir and generally above the 6,600-foot contour. The increased precipitation will lead to increased runoff which, in turn, will provide more water to power NCPA's North Fork Stanislaus Hydroelectric facilities. The proposed modifications to the Project will allow NCPA to continue the Project for the 2015/2016, 2016/2017, and 2017/2018 rainy seasons.

Environmental Impacts Associated with the Modified Project

Changed Conditions

Because the elements of the Project will remain the same as the Project previously examined in the attached IS/ND, with the exception of the duration of the project, all direct Project impacts would remain the same as those identified in attached IS/ND in the absence of any changed conditions in the environment.

NCPA has no evidence that the environment in the Project location has changed in a way that would result in previously unexamined environmental impacts from the Project or an increase in the severity of any of the previously examined environmental impacts.

New Information

NCPA has no evidence of any new information that was not available at the time of the previous IS/ND that would show that the Project may have new or previously unexamined significant impacts on the environment, with one potential exception. At the time of the previous IS/ND, it was not the practice in California to examine the potential climate change impacts of a project and, thus, no climate change analysis was performed in the previous IS/ND. Today, through legislative action such as AB 32 and SB 97, it has become clear that some analysis of potential climate change impacts is required. An analysis of this potential impact follows.

Climate Change Impacts

Background

Various gases in the Earth's atmosphere, classified as atmospheric greenhouse gases (GHGs), play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), nitrous

oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and, to a certain extent, water vapor.¹

The effects of increasing global temperature are far reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs is anticipated to result in rising sea levels which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. According to a California Energy Commission report², the snowpack portion of the supply could potentially decline by 20 to 40 percent by the end of the 21st century (CEC 2009). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system. Sea level has risen approximately seven inches during the last century and, according to the CEC report, it is predicted to rise as much as an additional 35 inches by 2100, depending on the future GHG emissions levels (CEC 2009). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands (CEC 2009). As the existing climate throughout California changes over time, mass migration of species, or worse, failure of species to migrate in time to adapt to the perturbations in climate, could also result.

Project Impacts

It is generally accepted that, due to the complexity and global nature of GHG emissions and the climate change phenomenon, it is likely impossible for an individual project to have a direct impact on climate change. Nevertheless, CEQA also requires that lead agencies examine the potential cumulative impacts of a project in conjunction with past, present, and reasonably foreseeable cumulative projects.

The Project here would have a **beneficial impact** on climate change, and may have an ameliorative effect on the impacts of climate change. First, the Project is specifically designed to remove an atmospheric GHG, water vapor, from the atmosphere. Second, the water vapor that the Project does remove from the atmosphere will contribute to snow

¹ See <http://lwf.ncdc.noaa.gov/oa/climate/gases.html>.

² Moser, Susie, Guido Franco, Sarah Pittiglio, Wendy Chou, Dan Cayan. 2009. *The Future Is Now: An Update on Climate Change Science Impacts and Response Options for California*. California Energy Commission, PIER Energy-Related Environmental Research Program. CEC-500-2008-071. ("CEC 2009")

pack and will be stored in existing reservoirs, thereby potentially aiding in California's need to obtain and store water. Finally, the water that the Project obtains will be used to generate electricity in NCPA's hydroelectric facilities. To the extent that this electricity replaces electricity generated from sources that release GHG into the atmosphere, the Project will help to reduce total GHG emissions.

For all of these reasons, NCPA finds that the Project will have a **beneficial impact** on climate change.

Cumulative Impacts

Though, as noted above, the modification to the Project will not change any of the direct impacts of the Project, the continued duration of the Project has the potential to increase the cumulative impacts of the Project as the duration of the Project is extended.

Potential Cumulative Impact No. 1. Operational activities could continue to emit criteria pollutants into the atmosphere.

As is described in the IS/ND, the small, fixed-wing aircraft utilized in the Project would generate small amounts of criteria pollutants. However, the increased duration of the exhaust emissions from a small fixed-wing aircraft making 40 - 60 flights per year would not cumulatively impact the air quality in the vicinity of the project.

Potential Cumulative Impact No. 2. Cloud seeding could affect large-scale or long term meteorology.

As identified in the IS/ND, the Project would not affect large-scale nor long-term weather patterns. The increased duration of this project would not change this finding.

Potential Cumulative Impact No. 3. The continued use of silver iodide as a cloud seeding nucleating agent could cause chronic toxic impacts to terrestrial and aquatic organisms.

As identified in the IS/ND, existing ionic silver concentrations are one to two orders of magnitude below the threshold of significance. Moreover, as also noted in the IS/ND, it is difficult for ionic silver to accumulate in the environment at toxic levels due to its insolubility in water, its tendency to be strongly absorbed by organic colloids in the soil and in aquatic vegetation, and the dilution of ionic silver through the movement of water throughout the water shed. Thus, the continuation of cloud seeding operations using silver iodide is not expected to reach cumulative threshold levels of significance now or anytime in the near future.

Potential Cumulative Impact No. 4. The accumulation of silver iodide or other silver complexes could alter the rate soil microorganisms decompose organic matter, thereby altering the processes by which nutrients are cycled through the forest ecosystems.

As identified in the IS/ND, even though microorganisms in the soil are more sensitive to silver and silver compounds than plants or animals, direct toxicity of silver iodide to soil microorganisms at environmentally-relevant concentrations is difficult to demonstrate. Moreover, due to the extremely low levels of silver iodide used in cloud seeding operations, it would be difficult to even detect levels of silver iodide in the soil from weather modification. The increased duration of cloud seeding operations is not expected to change these findings.

Potential Cumulative Impact No. 5. The continuation of the Project could cumulatively increase ionic silver in drinking water.

As identified in the IS/ND, and above, silver iodide is insoluble in water and, thus, is not expected to form ionic silver when introduced to the water shed. Moreover, ionic silver as a strong tendency to bind to soil and aquatic vegetation, and thus is not expected to reach threshold concentrations in water. The increased duration of cloud seeding operations is not expected to change these findings.

Conclusions

The continuation of the Project would not result in any new or substantially more significant impacts than those examined in the IS/ND. Moreover there is no new information and there are no changed conditions that would result in any new or substantially more significant impacts than those examined in the IS/ND.



Commission Staff Report

Date: July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Tetra Engineerg Group, Inc. – Five Year Multi-Task Professional Services Agreement for inspections related to HRS, power piping, steam plant assessments, root cause failures and consulting engineering; Applicable to the following projects: All NCPA Facility Locations, Members, SCPPA, and SCPPA Members

AGENDA CATEGORY: Consent

FROM:	Ken Speer KS	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Combustion Turbines	

IMPACTED MEMBERS:		
All Members	<input checked="" type="checkbox"/>	
Alameda Municipal Power	<input type="checkbox"/>	
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	
City of Biggs	<input type="checkbox"/>	
City of Gridley	<input type="checkbox"/>	
City of Healdsburg	<input type="checkbox"/>	
City of Lodi	<input type="checkbox"/>	
City of Lompoc	<input type="checkbox"/>	
City of Palo Alto	<input type="checkbox"/>	
City of Redding	<input type="checkbox"/>	
City of Roseville	<input type="checkbox"/>	
City of Santa Clara	<input type="checkbox"/>	
City of Shasta Lake	<input type="checkbox"/>	
City of Ukiah	<input type="checkbox"/>	
Plumas-Sierra REC	<input type="checkbox"/>	
Port of Oakland	<input type="checkbox"/>	
Truckee Donner PUD	<input type="checkbox"/>	
Other	<input type="checkbox"/>	
<i>If other, please specify</i>		
<hr/>		
<hr/>		

RECOMMENDATION:

Approval of Resolution 18-55 authorizing the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Tetra Engineering Group, Inc. for inspections related to HRSG, power piping, steam plant assessments, root cause failures and consulting engineering, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$1,000,000.00 over five years, for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members.

BACKGROUND:

Inspections related to HRSG, power piping, steam plant assessments, root cause failures and consulting engineering services are required from time to time related to project support at facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (“SCPPA”), or by SCPPA Members.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$1,000,000.00 over five years, to be used out of NCPA approved budgets as services are rendered. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA currently has similar agreements in place with HRST, Inc. and Industrial Air Flow Dynamics, Inc. (pending) and seeks bids from multiple qualified providers whenever services are needed. Bids are awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a “project” for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval on Consent Calendar.

Respectfully submitted,


RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Multi-Task Professional Services Agreement with Tetra Engineering Group, Inc.

RESOLUTION 18-55

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING A MULTI-TASK PROFESSIONAL SERVICES AGREEMENT WITH TETRA ENGINEERING GROUP, INC.

(reference Staff Report #171:18)

WHEREAS, inspections related to HRSG, power piping, steam plant assessments, root cause failures and consulting engineering services are periodically required at the facilities owned and/or operated by Northern California Power Agency (NCPA), its Members, the Southern California Public Power Authority (SCPPA), and SCPPA Members; and

WHEREAS, Tetra Engineering Group, Inc. is a provider of these services; and

WHEREAS, NCPA seeks to enter into a Multi-Task Professional Services Agreement with Tetra Engineering Group, Inc. to provide such services as needed at all NCPA Generation facility locations, Member, SCPPA, and SCPPA Member facilities in an amount not to exceed \$1,000,000 over five years; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Tetra Engineering Group, Inc. with any non-substantial changes as approved by the NCPA General Counsel, which shall not exceed \$1,000,000 over five years for inspections related to HRSG, power piping, steam plant assessments, root cause failures and consulting engineering services for use at all facilities owned and/or operated by NCPA, its Members, by the Southern California Public Power Authority (SCPPA), or by SCPPA Members.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY



MULTI-TASK PROFESSIONAL SERVICES AGREEMENT BETWEEN THE NORTHERN CALIFORNIA POWER AGENCY AND TETRA ENGINEERING GROUP, INC.

This Professional Services Agreement ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and Tetra Engineering Group, Inc., a Connecticut corporation with its office located at 110 Hopmeadow Street, Suite 800, Weatogue, CT 06089 ("Consultant") (together sometimes referred to as the "Parties") as of _____, 182018 ("Effective Date") in Roseville, California.

Section 1. SERVICES. Subject to the terms and conditions set forth in this Agreement, Consultant shall provide to Agency the services described in the Scope of Services attached hereto as Exhibit A and incorporated herein ("Services"), at the time and place and in the manner specified therein.

- 1.1 Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Consultant completes the Services, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is shorter.
- 1.2 Standard of Performance.** Consultant shall perform the Services in the manner and according to the standards observed by a competent practitioner of the profession in which Consultant is engaged and for which Consultant is providing the Services. Consultant represents that it is licensed, qualified and experienced to provide the Services set forth herein.
- 1.3 Assignment of Personnel.** Consultant shall assign only competent personnel to perform the Services. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Consultant shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 Services Provided.** Services provided under this Agreement by Consultant may include Services directly to the Agency or, as requested by the Agency and consistent with the terms of this Agreement, to Agency members, Southern California Public Power Authority ("SCPPA") or SCPPA members.
- 1.5 Request for Services.** At such time that Agency determines to use Consultant's Services under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific services to be performed ("Requested Services"), may include a not-to-exceed monetary cap on Requested Services and expenditures authorized by that Purchase Order, and a time by which the Requested Services shall be completed. Consultant shall have seven calendar days from the date of the Agency's issuance of the Purchase Order in which to respond in writing that Consultant chooses not to perform the Requested Services. If Consultant agrees to perform the Requested Services, begins to perform the Requested Services or does not respond within the seven day period

specified, then Consultant will have agreed to perform the Requested Services on the terms set forth in the Purchase Order, this Agreement and its Exhibits.

Section 2. **COMPENSATION.** Agency hereby agrees to pay Consultant an amount **NOT TO EXCEED ONE MILLION** dollars (\$1,000,000.00) for the Services, which shall include all fees, costs, expenses and other reimbursables, as set forth in Consultant's fee schedule, attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Consultant, but is merely a limit of potential Agency expenditures under this Agreement.

2.1 **Invoices.** Consultant shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Services performed;
- The Purchase Order number authorizing the Services;
- At Agency's option, the total number of hours of work performed under the Agreement by Consultant and each employee, agent, and subcontractor of Consultant performing services hereunder; and
- At Agency's option, when the Consultant's Scope of Work identifies tasks, for each work item in each task, a copy of the applicable time entries showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation, to Agency's reasonable satisfaction.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable
AcctsPayable@ncpa.com

2.2 **Monthly Payment.** Agency shall make monthly payments, based on invoices received, for services satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Consultant.

2.3 **Payment of Taxes.** Consultant is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

- 2.4 Authorization to Perform Services.** The Consultant is not authorized to perform any Services or incur any costs whatsoever under the terms of this Agreement until receipt of written authorization from the Contract Administrator.
- 2.5 Timing for Submittal of Final Invoice.** Consultant shall have ninety (90) days after completion of its Services to submit its final invoice. In the event Consultant fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Consultant is deemed to have waived its right to collect its final payment from Agency.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Consultant shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Services.

Section 4. INSURANCE REQUIREMENTS. Before beginning any work under this Agreement, Consultant, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

- 4.1 Workers' Compensation.** If Consultant employs any person, Consultant shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Consultant with limits of not less than one million dollars (\$1,000,000.00) per accident.
- 4.2 Commercial General and Automobile Liability Insurance.**
- 4.2.1 Commercial General Insurance.** Consultant shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Consultant. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.
- 4.2.2 Automobile Liability.** Consultant shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Consultant, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident, with a self-insured retention or deductible of no more than \$100,000. This insurance shall provide contractual liability covering all motor vehicles and

mobile equipment to the extent coverage may be excluded from general liability insurance.

4.2.3 General Liability/Umbrella Insurance. The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.

4.3 Professional Liability Insurance. Consultant shall maintain professional liability insurance appropriate to Consultant's profession performing work in connection with this Agreement in an amount not less than one million dollars (\$1,000,000.00) and two million dollars (\$2,000,000) aggregate covering the Consultant's errors and omissions. Any deductible or self-insured retention shall not exceed two hundred fifty thousand dollars (\$250,000) per claim. Such insurance shall be on a "claims-made" basis, subject to the following conditions: (1) the retroactive date of the policy shall be on or before the Effective Date of this Agreement; (2) the policy shall be maintained for at least five (5) years after completion of the Services and, if requested by Agency, evidence of coverage shall be provided during this period; and (3) if, within five (5) years of completion of the Services, coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a retroactive date prior to the Effective Date of this Agreement, Consultant shall purchase "extended reporting" coverage for a minimum of five (5) years after completion of the Services and, if requested by Agency, provide evidence of coverage during this period.

4.4 All Policies Requirements.

4.4.1 Verification of coverage. Prior to beginning any work under this Agreement, Consultant shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2, adding the Agency as an additional insured and declaring such insurance primary in regard to work performed pursuant to this Agreement.

4.4.2 Notice of Reduction in or Cancellation of Coverage. Consultant shall provide at least thirty (30) days prior written notice to Agency of any reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.

4.4.3 Higher Limits. If Consultant maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Consultant.

4.4.4 Additional Certificates and Endorsements. If Consultant provides services to Agency members, SCPPA and/or SCPPA members, Consultant shall provide certificates of insurance and policy endorsements, as referenced in Section 4.4.1, naming the specific

Agency member, SCPPA or Agency member for which the Services are to be performed.

4.5.5 Waiver of Subrogation. Consultant agrees to waive subrogation which any insurer of Consultant may acquire from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. In addition, the Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Consultant, its employees, agents and subcontractors.

4.6 Consultant's Obligation. Consultant shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Services are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Consultant shall also ensure that all workers involved in the provision of Services are properly classified as employees, agents or independent contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONSULTANT'S RESPONSIBILITIES.

5.1 Effect of Insurance. Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Consultant acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.

5.2 Scope. Consultant shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency and its officials, commissioners, officers, employees, and volunteers from and against any and all claims that arise out of, pertain to or relate to the negligence, recklessness or willful misconduct of the Consultant in its performance of Services under this Agreement. Consultant shall bear all losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly ("Liabilities"). Such obligations to defend, hold harmless and indemnify the Agency shall not apply to the extent that such Liabilities are caused by the sole negligence, active negligence, or willful misconduct of the Agency.

Section 6. STATUS OF CONSULTANT.

6.1 Independent Contractor. Consultant is an independent contractor and not an employee of Agency. Agency shall have the right to control Consultant only

insofar as the results of Consultant's Services and assignment of personnel pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Consultant accomplishes Services rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Consultant shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of Agency. Consultant and Agency acknowledge and agree that compensation paid by Agency to Consultant under this Agreement is based upon Consultant's estimated costs of providing the Services, including salaries and benefits of employees, agents and subcontractors of Consultant.

Consultant shall indemnify, defend, and hold harmless Agency from any lawsuit, administrative action, or other claim for penalties, losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly, due to Consultant's failure to secure workers' compensation insurance for its employees, agents, or subcontractors.

Consultant agrees that it is responsible for the provision of group healthcare benefits to its fulltime employees under 26 U.S.C. § 4980H of the Affordable Care Act. To the extent permitted by law, Consultant shall indemnify, defend and hold harmless Agency from any penalty issued to Agency under the Affordable Care Act resulting from the performance of the Services by any employee, agent, or subcontractor of Consultant.

- 6.2 Consultant Not Agent.** Except as Agency may specify in writing, Consultant shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Consultant shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 Assignment and Subcontracting.** This Agreement contemplates personal performance by Consultant and is based upon a determination of Consultant's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Consultant. Consultant

may not assign this Agreement or any interest therein without the prior written approval of the Agency. Consultant shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where written approval is granted by the Agency, Consultant shall supervise all work subcontracted by Consultant in performing the services and shall be responsible for all work performed by a subcontractor as if Consultant itself had performed such work. The subcontracting of any work to subcontractors shall not relieve Consultant from any of its obligations under this Agreement with respect to the services and Consultant is obligated to ensure that any and all subcontractors performing any services shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.

- 6.4** **Certification as to California Energy Commission.** If requested by the Agency, Consultant shall, at the same time it executes this Agreement, execute Exhibit C.

Section 7. LEGAL REQUIREMENTS.

- 7.1** **Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2** **Compliance with Applicable Laws.** Consultant and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3** **Licenses and Permits.** Consultant represents and warrants to Agency that Consultant and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.

Section 8. TERMINATION AND MODIFICATION.

- 8.1** **Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Consultant.

In the event of termination, Consultant shall be entitled to compensation for Services satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Consultant delivering to Agency any or all records or documents, as referenced in Section 9.1 hereof.

- 8.2** **Amendments.** The Parties may amend this Agreement only by a writing signed by all the Parties.

8.3 Survival. All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Consultant shall survive the termination of this Agreement.

8.4 Options upon Breach by Consultant. If Consultant materially breaches any of the terms of this Agreement, including but not limited to those set forth in Section 4, Agency's remedies shall include, but not be limited to, the following:

8.4.1 Immediately terminate the Agreement;

8.4.2 Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Consultant pursuant to this Agreement;

8.4.3 Retain a different consultant to complete the Services not finished by Consultant; and/or

8.4.4 Charge Consultant the difference between the costs to complete the Services that are unfinished at the time of breach and the amount that Agency would have paid Consultant pursuant hereto if Consultant had completed the Services.

Section 9. KEEPING AND STATUS OF RECORDS.

9.1 Records Created as Part of Consultant's Performance. All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Consultant prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the Agency. Consultant hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Consultant agree that, unless approved by Agency in writing, Consultant shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.

9.2 Consultant's Books and Records. Consultant shall maintain any and all records or other documents evidencing or relating to charges for Services or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement.

9.3 Inspection and Audit of Records. Any records or documents that this Agreement requires Consultant to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement

exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under the Agreement.

9.4 Confidential Information and Disclosure.

9.4.1 Confidential Information. The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as confidential Information in accordance with this section.

9.4.2 Non-Disclosure of Confidential Information. During the term of this Agreement, either party may disclose ("The Disclosing Party") confidential Information to the other party ("the Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confident; and (b) shall take all reasonable steps to prevent any unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, consultants, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

9.4.4 Handling of Confidential Information. Upon conclusion or termination of the Agreement, Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof), if requested by Disclosing Party in writing. Notwithstanding the foregoing, the Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, consultants, contractors and subcontractors who have a need to know in connection with this Agreement.

Section 10. MISCELLANEOUS PROVISIONS.

- 10.1 Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.
- 10.2 Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.
- 10.3 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 10.4 No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.
- 10.5 Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.
- 10.6 Conflict of Interest.** Consultant may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Consultant in a "conflict of interest," as that term is defined

in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Consultant shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

10.7 Contract Administrator. This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.

10.8 Notices. Any written notice to Consultant shall be sent to:

Tetra Engineering Group, Inc.
Attention: Frank J. Berte, President
P.O. Box 55
Weatogue, CT 06089

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

Jane E. Luckhardt
General Counsel
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

10.9 Professional Seal. Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.

10.10 Integration; Incorporation. This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.

10.11 Alternative Dispute Resolution. If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Consultant agree to resolve the dispute in accordance with the following:

- 10.11.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
- 10.11.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
- 10.11.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
- 10.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
- 10.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
- 10.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*

10.12 Controlling Provisions. In the case of any conflict between the terms of this Agreement and the Exhibits hereto, a Purchase Order, or Consultant's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and a Purchase Order or the Consultant's Proposal, the Exhibits shall control. In the case of any conflict between the terms of a Purchase Order and the Consultant's Proposal, the Purchase Order shall control.

10.13 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

10.14 Construction of Agreement. Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.

10.15 No Third Party Beneficiaries. This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties. However, should Consultant provide services to an Agency member, SCPPA or SCPPA member (collectively for the purpose of this Section only "Member") pursuant to Section 1.4, the parties recognize that such Member may be a third party beneficiary solely as to the Purchase Order and Requested Services relating to such Member.

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

TETRA ENGINEERING GROUP, INC.

Date _____

Date _____

RANDY S. HOWARD,
General Manager

PETER S. JACKSON,
Corporate Secretary

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Jane E. Luckhardt, General Counsel

EXHIBIT A

SCOPE OF SERVICES

Tetra Engineering Group, Inc. ("Consultant") shall provide inspection services as requested by the Northern California Power Agency ("Agency") at Facilities owned or operated by NCPA, its Members, Southern California Public Power Authority (SCPPA) and SCPA Members.

Services to include, but not be limited to, the following:

- Heat Recovery Steam Generator Warranty Inspections
- Heat Recovery Steam Generator Consulting Engineering
- Power Piping Inspections
- Power Piping Design Engineering
- Steam Plant Condition Assessments and Fitness-for-Service Evaluations
- Root Cause Failure Assessments

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all work, including hourly fees and expenses, shall not exceed the amount set forth in Section 2 hereof. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

Labor Category	Rate (USD/hr)
Senior Project Manager	\$275
Assistant Project Manager	\$250
Senior Consulting Engineer	\$225
Consulting Engineer	\$175
Senior Engineer	\$150
Engineer II	\$125
Senior Technical Support	\$125
Technical Support	\$95

Pricing for services to be performed at NCPA Member or SCPA locations will be quoted at the time services are requested.

NOTE: As a public agency, NCPA shall not reimburse Consultant for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C

CERTIFICATION

Affidavit of Compliance for Contractors

I, _____

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of

(Company name)

for contract work at:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 ____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.



Commission Staff Report

Date July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Pengo Wireline of California, Inc. – Five Year Multi-Task Professional Services Agreement; Applicable to the following projects: All NCPA facilities.

AGENDA CATEGORY: Consent

FROM:	Ken Speer <i>KS</i>	METHOD OF SELECTION:
	Assistant General Manager	N/A
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Geothermal	

IMPACTED MEMBERS:		
All Members <input checked="" type="checkbox"/>	City of Lodi <input type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input type="checkbox"/>	City of Lompoc <input type="checkbox"/>	City of Ukiah <input type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input type="checkbox"/>
City of Biggs <input type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input type="checkbox"/>	City of Roseville <input type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input type="checkbox"/>	City of Santa Clara <input type="checkbox"/>	Other <input type="checkbox"/>
<i>If other, please specify</i>		
<hr/>		
<hr/>		

RECOMMENDATION:

Approve Resolution 18-56 authorizing the General Manger or his designee to enter into a Multi-Task Professional Services Agreement with Pengo Wireline of California Inc., for the deployment of downhole wireline services on wells, with any non-substantial changes recommended and approved by the NCPA General Counsel, which shall not exceed \$750,000 over five years, for use at all NCPA facilities.

BACKGROUND:

Pengo Wireline of California, Inc. provides deployment of downhole wireline ‘hoisting’ services which allow completion of casing calipers, BLM mandated pressure temperature surveys, high temperature camera runs, gauge ring runs, and several other services that are vital to continuing operations at NCPA facilities.

FISCAL IMPACT:

Upon execution, the total cost of the agreement is not to exceed \$750,000 to be used out of the NPCA approved budget. Purchase orders referencing the terms and conditions of the Agreement will be issued following NCPA procurement policies and procedures.

SELECTION PROCESS:

This enabling agreement does not commit NCPA to any expenditure of funds. At the time services are required, NCPA will bid the specific scope of work consistent with NCPA procurement policies and procedures. NCPA currently has in place other enabling agreements with Cogco, Inc., Expro Americas, and Gregg Linville Consulting, LLC for similar services and seeks bids from as many qualified providers as possible. Bids are awarded to the lowest cost provider. NCPA will issue purchase orders based on cost and availability of the services needed at the time the service is required.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a “project” for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval on Consent Calendar.

Respectfully submitted,

A handwritten signature in cursive script that reads "for Spec for Randy Howard". The signature is written in dark ink and is positioned above the printed name and title.

RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Multi-Task Professional Services Agreement with Pengo Wireline of California, Inc.

RESOLUTION 18-56

**RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY
APPROVING A MULTI-TASK PROFESSIONAL SERVICES AGREEMENT WITH PENGOWIRELINE OF CALIFORNIA, INC.**

(reference Staff Report #172:18)

WHEREAS, deployment of downhole wireline services on wells are periodically required at NCPA facilities; and

WHEREAS, Pengo Wireline of California, Inc. is a provider of these services; and

WHEREAS, NCPA seeks to enter into a Multi-Task Professional Services Agreement with Pengo Wireline of California, Inc. to provide such services as needed for use at all NCPA facilities, in an amount not to exceed \$750,000 over five years; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Multi-Task Professional Services Agreement with Pengo Wireline of California, Inc. with any non-substantial changes as approved by the NCPA General Counsel, which shall not exceed \$750,000 for the deployment of downhole wireline services for use at all NCPA facilities.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY



MULTI-TASK PROFESSIONAL SERVICES AGREEMENT BETWEEN THE NORTHERN CALIFORNIA POWER AGENCY AND PENGOWIRELINE OF CALIFORNIA, INC.

This Professional Services Agreement ("Agreement") is made by and between the Northern California Power Agency, a joint powers agency with its main office located at 651 Commerce Drive, Roseville, CA 95678-6420 ("Agency") and Pengowireline of California, Inc., a corporation with its office located at 3529 Standard Street, Bakersfield, CA 93308 ("Consultant") (together sometimes referred to as the "Parties") as of _____, 2018 ("Effective Date") in Roseville, California.

Section 1. SERVICES. Subject to the terms and conditions set forth in this Agreement, Consultant shall provide to Agency the services described in the Scope of Services attached hereto as Exhibit A and incorporated herein ("Services"), at the time and place and in the manner specified therein.

- 1.1 Term of Agreement.** The term of this Agreement shall begin on the Effective Date and shall end when Consultant completes the Services, or no later than five (5) years from the date this Agreement was signed by Agency, whichever is shorter.
- 1.2 Standard of Performance.** Consultant shall perform the Services in the manner and according to the standards observed by a competent practitioner of the profession in which Consultant is engaged and for which Consultant is providing the Services. Consultant represents that it is licensed, qualified and experienced to provide the Services set forth herein.
- 1.3 Assignment of Personnel.** Consultant shall assign only competent personnel to perform the Services. In the event that Agency, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Consultant shall, immediately upon receiving written notice from Agency of such request, reassign such personnel.
- 1.4 Services Provided.** Services provided under this Agreement by Consultant may include Services directly to the Agency or, as requested by the Agency and consistent with the terms of this Agreement, to Agency members, Southern California Public Power Authority ("SCPPA") or SCPPA members.
- 1.5 Request for Services.** At such time that Agency determines to use Consultant's Services under this Agreement, Agency shall issue a Purchase Order. The Purchase Order shall identify the specific services to be performed ("Requested Services"), may include a not-to-exceed monetary cap on Requested Services and expenditures authorized by that Purchase Order, and a time by which the Requested Services shall be completed. Consultant shall have seven calendar days from the date of the Agency's issuance of the Purchase Order in which to respond in writing that Consultant chooses not to perform the Requested Services. If Consultant agrees to perform the Requested Services, begins to perform the Requested Services or does not respond within the seven day period

specified, then Consultant will have agreed to perform the Requested Services on the terms set forth in the Purchase Order, this Agreement and its Exhibits.

Section 2. **COMPENSATION.** Agency hereby agrees to pay Consultant an amount **NOT TO EXCEED SEVEN HUNDRED FIFTY THOUSAND** dollars (\$750,000) for the Services, which shall include all fees, costs, expenses and other reimbursables, as set forth in Consultant's fee schedule, attached hereto and incorporated herein as Exhibit B. This dollar amount is not a guarantee that Agency will pay that full amount to the Consultant, but is merely a limit of potential Agency expenditures under this Agreement.

2.1 **Invoices.** Consultant shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. Invoices shall contain the following information:

- The beginning and ending dates of the billing period;
- Services performed;
- The Purchase Order number authorizing the Services;
- At Agency's option, the total number of hours of work performed under the Agreement by Consultant and each employee, agent, and subcontractor of Consultant performing services hereunder; and
- At Agency's option, when the Consultant's Scope of Work identifies tasks, for each work item in each task, a copy of the applicable time entries showing the name of the person doing the work, the hours spent by each person, a brief description of the work, and each reimbursable expense, with supporting documentation, to Agency's reasonable satisfaction.

Invoices shall be sent to:

Northern California Power Agency
651 Commerce Drive
Roseville, California 95678
Attn: Accounts Payable
AcctsPayable@ncpa.com

2.2 **Monthly Payment.** Agency shall make monthly payments, based on invoices received, for services satisfactorily performed, and for authorized reimbursable costs incurred. Agency shall have thirty (30) days from the receipt of an invoice that complies with all of the requirements above to pay Consultant.

2.3 **Payment of Taxes.** Consultant is solely responsible for the payment of all federal, state and local taxes, including employment taxes, incurred under this Agreement.

- 2.4 Authorization to Perform Services.** The Consultant is not authorized to perform any Services or incur any costs whatsoever under the terms of this Agreement until receipt of written authorization from the Contract Administrator.
- 2.5 Timing for Submittal of Final Invoice.** Consultant shall have ninety (90) days after completion of its Services to submit its final invoice. In the event Consultant fails to submit an invoice to Agency for any amounts due within the ninety (90) day period, Consultant is deemed to have waived its right to collect its final payment from Agency.

Section 3. FACILITIES AND EQUIPMENT. Except as set forth herein, Consultant shall, at its sole cost and expense, provide all facilities and equipment that may be necessary to perform the Services.

Section 4. INSURANCE REQUIREMENTS. Before beginning any work under this Agreement, Consultant, at its own cost and expense, shall procure the types and amounts of insurance listed below and shall maintain the types and amounts of insurance listed below for the period covered by this Agreement.

- 4.1 Workers' Compensation.** If Consultant employs any person, Consultant shall maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Consultant with limits of not less than one million dollars (\$1,000,000.00) per accident.

4.2 Commercial General and Automobile Liability Insurance.

- 4.2.1 Commercial General Insurance.** Consultant shall maintain commercial general liability insurance for the term of this Agreement, including products liability, covering any loss or liability, including the cost of defense of any action, for bodily injury, death, personal injury and broad form property damage which may arise out of the operations of Consultant. The policy shall provide a minimum limit of \$1,000,000 per occurrence/\$2,000,000 aggregate. Commercial general coverage shall be at least as broad as ISO Commercial General Liability form CG 0001 (current edition) on "an occurrence" basis covering comprehensive General Liability, with a self-insured retention or deductible of no more than \$100,000. No endorsement shall be attached limiting the coverage.
- 4.2.2 Automobile Liability.** Consultant shall maintain automobile liability insurance form CA 0001 (current edition) for the term of this Agreement covering any loss or liability, including the cost of defense of any action, arising from the operation, maintenance or use of any vehicle (symbol 1), whether or not owned by the Consultant, on or off Agency premises. The policy shall provide a minimum limit of \$1,000,000 per each accident, with a self-insured retention or deductible of no more than \$100,000. This insurance shall provide contractual liability covering all motor vehicles and

mobile equipment to the extent coverage may be excluded from general liability insurance.

4.2.3 General Liability/Umbrella Insurance. The coverage amounts set forth above may be met by a combination of underlying and umbrella policies as long as in combination the limits equal or exceed those stated.

4.3 Professional Liability Insurance. Not Applicable

4.4 All Policies Requirements.

4.4.1 Verification of coverage. Prior to beginning any work under this Agreement, Consultant shall provide Agency with (1) a Certificate of Insurance that demonstrates compliance with all applicable insurance provisions contained herein and (2) policy endorsements to the policies referenced in Section 4.2, adding the Agency as an additional insured and declaring such insurance primary in regard to work performed pursuant to this Agreement.

4.4.2 Notice of Reduction in or Cancellation of Coverage. Consultant shall provide at least thirty (30) days prior written notice to Agency of any reduction in scope or amount, cancellation, or modification adverse to Agency of the policies referenced in Section 4.

4.4.3 Higher Limits. If Consultant maintains higher limits than the minimums specified herein, the Agency shall be entitled to coverage for the higher limits maintained by the Consultant.

4.4.4 Additional Certificates and Endorsements. If Consultant provides services to Agency members, SCPPA and/or SCPPA members, Consultant shall provide certificates of insurance and policy endorsements, as referenced in Section 4.4.1, naming the specific Agency member, SCPPA or Agency member for which the Services are to be performed.

4.5 Waiver of Subrogation. Consultant agrees to waive subrogation which any insurer of Consultant may acquire from Consultant by virtue of the payment of any loss. Consultant agrees to obtain any endorsement that may be necessary to effect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Agency for all work performed by Consultant, its employees, agents and subcontractors.

4.6 Consultant's Obligation. Consultant shall be solely responsible for ensuring that all equipment, vehicles and other items utilized in the performance of Services are operated, provided or otherwise utilized in a manner that ensures they are and remain covered by the policies referenced in Section 4 during this Agreement. Consultant shall also ensure that all workers involved in the

provision of Services are properly classified as employees, agents or independent contractors and are and remain covered by any and all workers' compensation insurance required by applicable law during this Agreement.

Section 5. INDEMNIFICATION AND CONSULTANT'S RESPONSIBILITIES.

- 5.1 Effect of Insurance.** Agency's acceptance of insurance certificates and endorsements required under this Agreement does not relieve Consultant from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply to any damages or claims for damages whether or not such insurance policies shall have been determined to apply. By execution of this Agreement, Consultant acknowledges and agrees to the provisions of this Section and that it is a material element of consideration.
- 5.2 Scope.** Consultant shall indemnify, defend with counsel reasonably acceptable to the Agency, and hold harmless the Agency and its officials, commissioners, officers, employees, and volunteers from and against any and all claims that arise out of, pertain to or relate to the negligence, recklessness or willful misconduct of the Consultant in its performance of Services under this Agreement. Consultant shall bear all losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly ("Liabilities"). Such obligations to defend, hold harmless and indemnify the Agency shall not apply to the extent that such Liabilities are caused by the sole negligence, active negligence, or willful misconduct of the Agency.

Section 6. STATUS OF CONSULTANT.

- 6.1 Independent Contractor.** Consultant is an independent contractor and not an employee of Agency. Agency shall have the right to control Consultant only insofar as the results of Consultant's Services and assignment of personnel pursuant to Section 1; otherwise, Agency shall not have the right to control the means by which Consultant accomplishes Services rendered pursuant to this Agreement. Notwithstanding any other Agency, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Consultant and any of its employees, agents, and subcontractors providing services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by Agency, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of Agency and entitlement to any contribution to be paid by Agency for employer contributions and/or employee contributions for PERS benefits.

Consultant shall indemnify, defend, and hold harmless Agency for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would

otherwise be the responsibility of Agency. Consultant and Agency acknowledge and agree that compensation paid by Agency to Consultant under this Agreement is based upon Consultant's estimated costs of providing the Services, including salaries and benefits of employees, agents and subcontractors of Consultant.

Consultant shall indemnify, defend, and hold harmless Agency from any lawsuit, administrative action, or other claim for penalties, losses, costs, damages, expense and liability of every kind, nature and description that arise out of, pertain to, or relate to such claims, whether directly or indirectly, due to Consultant's failure to secure workers' compensation insurance for its employees, agents, or subcontractors.

Consultant agrees that it is responsible for the provision of group healthcare benefits to its fulltime employees under 26 U.S.C. § 4980H of the Affordable Care Act. To the extent permitted by law, Consultant shall indemnify, defend and hold harmless Agency from any penalty issued to Agency under the Affordable Care Act resulting from the performance of the Services by any employee, agent, or subcontractor of Consultant.

- 6.2 Consultant Not Agent.** Except as Agency may specify in writing, Consultant shall have no authority, express or implied, to act on behalf of Agency in any capacity whatsoever as an agent. Consultant shall have no authority, express or implied, pursuant to this Agreement to bind Agency to any obligation whatsoever.
- 6.3 Assignment and Subcontracting.** This Agreement contemplates personal performance by Consultant and is based upon a determination of Consultant's unique professional competence, experience, and specialized professional knowledge. A substantial inducement to Agency for entering into this Agreement was and is the personal reputation and competence of Consultant. Consultant may not assign this Agreement or any interest therein without the prior written approval of the Agency. Consultant shall not subcontract any portion of the performance contemplated and provided for herein, other than to the subcontractors identified in Exhibit A, without prior written approval of the Agency. Where written approval is granted by the Agency, Consultant shall supervise all work subcontracted by Consultant in performing the services and shall be responsible for all work performed by a subcontractor as if Consultant itself had performed such work. The subcontracting of any work to subcontractors shall not relieve Consultant from any of its obligations under this Agreement with respect to the services and Consultant is obligated to ensure that any and all subcontractors performing any services shall be fully insured in all respects and to the same extent as set forth under Section 4, to Agency's satisfaction.
- 6.4 Certification as to California Energy Commission.** If requested by the Agency, Consultant shall, at the same time it executes this Agreement, execute Exhibit C.

Section 7. LEGAL REQUIREMENTS.

- 7.1 Governing Law.** The laws of the State of California shall govern this Agreement.
- 7.2 Compliance with Applicable Laws.** Consultant and its subcontractors and agents, if any, shall comply with all laws applicable to the performance of the work hereunder.
- 7.3 Licenses and Permits.** Consultant represents and warrants to Agency that Consultant and its employees, agents, and subcontractors (if any) have and will maintain at their sole expense during the term of this Agreement all licenses, permits, qualifications, and approvals of whatever nature that are legally required to practice their respective professions.

Section 8. TERMINATION AND MODIFICATION.

- 8.1 Termination.** Agency may cancel this Agreement at any time and without cause upon ten (10) days prior written notice to Consultant.

In the event of termination, Consultant shall be entitled to compensation for Services satisfactorily completed as of the effective date of termination; Agency, however, may condition payment of such compensation upon Consultant delivering to Agency any or all records or documents, as referenced in Section 9.1 hereof.

- 8.2 Amendments.** The Parties may amend this Agreement only by a writing signed by all the Parties.
- 8.3 Survival.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating liability between Agency and Consultant shall survive the termination of this Agreement.
- 8.4 Options upon Breach by Consultant.** If Consultant materially breaches any of the terms of this Agreement, including but not limited to those set forth in Section 4, Agency's remedies shall include, but not be limited to, the following:
- 8.4.1** Immediately terminate the Agreement;
 - 8.4.2** Retain the plans, specifications, drawings, reports, design documents, and any other work product prepared by Consultant pursuant to this Agreement; and/or
 - 8.4.3** Retain a different consultant to complete the Services not finished by Consultant;

Section 9. KEEPING AND STATUS OF RECORDS.

- 9.1 Records Created as Part of Consultant's Performance.** All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, plans, studies, specifications, records, files, or any other documents or materials, in electronic or any other form, that Consultant prepares or obtains pursuant to this Agreement and that relate to the matters covered hereunder shall be the property of the Agency. Consultant hereby agrees to deliver those documents to the Agency upon termination of the Agreement. Agency and Consultant agree that, unless approved by Agency in writing, Consultant shall not release to any non-parties to this Agreement any data, plans, specifications, reports and other documents.
- 9.2 Consultant's Books and Records.** Consultant shall maintain any and all records or other documents evidencing or relating to charges for Services or expenditures and disbursements charged to the Agency under this Agreement for a minimum of three (3) years, or for any longer period required by law, from the date of final payment to the Consultant to this Agreement.
- 9.3 Inspection and Audit of Records.** Any records or documents that this Agreement requires Consultant to maintain shall be made available for inspection, audit, and/or copying at any time during regular business hours, upon oral or written request of the Agency. Under California Government Code Section 8546.7, if the amount of public funds expended under this Agreement exceeds ten thousand dollars (\$10,000.00), the Agreement shall be subject to the examination and audit of the State Auditor, at the request of Agency or as part of any audit of the Agency, for a period of three (3) years after final payment under the Agreement.
- 9.4 Confidential Information and Disclosure.**
- 9.4.1 Confidential Information.** The term "Confidential Information", as used herein, shall mean any and all confidential, proprietary, or trade secret information, whether written, recorded, electronic, oral or otherwise, where the Confidential Information is made available in a tangible medium of expression and marked in a prominent location as confidential, proprietary and/or trade secret information. Confidential Information shall not include information that: (a) was already known to the Receiving Party or is otherwise a matter of public knowledge, (b) was disclosed to Receiving Party by a third party without violating any confidentiality agreement, (c) was independently developed by Receiving Party without reverse engineering, as evidenced by written records thereof, or (d) was not marked as confidential Information in accordance with this section.
- 9.4.2 Non-Disclosure of Confidential Information.** During the term of this Agreement, either party may disclose ("The Disclosing Party") confidential Information to the other party ("the Receiving Party"). The Receiving Party: (a) shall hold the Disclosing Party's Confidential Information in confident; and (b) shall take all reasonable steps to prevent any

unauthorized possession, use, copying, transfer or disclosure of such Confidential Information.

9.4.3 Permitted Disclosure. Notwithstanding the foregoing, the following disclosures of Confidential Information are allowed. Receiving Party shall endeavor to provide prior written notice to Disclosing Party of any permitted disclosure made pursuant to Section 9.4.3.2 or 9.4.3.3. Disclosing Party may seek a protective order, including without limitation, a temporary restraining order to prevent or contest such permitted disclosure; provided, however, that Disclosing Party shall seek such remedies at its sole expense. Neither party shall have any liability for such permitted disclosures:

9.4.3.1 Disclosure to employees, agents, consultants, contractors, subcontractors or other representatives of Receiving Party that have a need to know in connection with this Agreement.

9.4.3.2 Disclosure in response to a valid order of a court, government or regulatory agency or as may otherwise be required by law; and

9.4.3.3 Disclosure by Agency in response to a request pursuant to the California Public Records Act.

9.4.4 Handling of Confidential Information. Upon conclusion or termination of the Agreement, Receiving Party shall return to Disclosing Party or destroy Confidential Information (including all copies thereof), if requested by Disclosing Party in writing. Notwithstanding the foregoing, the Receiving Party may retain copies of such Confidential Information, subject to the confidentiality provisions of this Agreement: (a) for archival purposes in its computer system; (b) in its legal department files; and (c) in files of Receiving Party's representatives where such copies are necessary to comply with applicable law. Party shall not disclose the Disclosing Party's Information to any person other than those of the Receiving Party's employees, agents, consultants, contractors and subcontractors who have a need to know in connection with this Agreement.

Section 10. MISCELLANEOUS PROVISIONS.

10.1 Attorneys' Fees. If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

10.2 Venue. In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested

exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.

- 10.3 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 10.4 No Implied Waiver of Breach.** The waiver of any breach of a specific provision of this Agreement does not constitute a waiver of any other breach of that term or any other term of this Agreement.
- 10.5 Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and shall apply to and bind the successors and assigns of the Parties.
- 10.6 Conflict of Interest.** Consultant may serve other clients, but none whose activities within the corporate limits of Agency or whose business, regardless of location, would place Consultant in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Section 81000 *et seq.*

Consultant shall not employ any Agency official in the work performed pursuant to this Agreement. No officer or employee of Agency shall have any financial interest in this Agreement that would violate California Government Code Sections 1090 *et seq.*

- 10.7 Contract Administrator.** This Agreement shall be administered by Ken Speer, Assistant General Manager, or his/her designee, who shall act as the Agency's representative. All correspondence shall be directed to or through the representative.
- 10.8 Notices.** Any written notice to Consultant shall be sent to:

David E. Warren
Pengo Wireline of California, Inc.
3529 Standard Street
Bakersfield, CA 93308

Any written notice to Agency shall be sent to:

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

With a copy to:

Jane E. Luckhardt
General Counsel
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95678

- 10.9 Professional Seal.** Where applicable in the determination of the Agency, the first page of a technical report, first page of design specifications, and each page of construction drawings shall be stamped/sealed and signed by the licensed professional responsible for the report/design preparation.
- 10.10 Integration; Incorporation.** This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.
- 10.11 Alternative Dispute Resolution.** If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Consultant agree to resolve the dispute in accordance with the following:
- 10.11.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
 - 10.11.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
 - 10.11.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
 - 10.11.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
 - 10.11.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
 - 10.11.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative prior to either Party initiating legal action. This alternative dispute

resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*

- 10.12 Controlling Provisions.** In the case of any conflict between the terms of this Agreement and the Exhibits hereto, a Purchase Order, or Consultant's Proposal (if any), the Agreement shall control. In the case of any conflict between the Exhibits hereto and a Purchase Order or the Consultant's Proposal, the Exhibits shall control. In the case of any conflict between the terms of a Purchase Order and the Consultant's Proposal, the Purchase Order shall control.
- 10.13 Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.
- 10.14 Construction of Agreement.** Each party hereto has had an equivalent opportunity to participate in the drafting of the Agreement and/or to consult with legal counsel. Therefore, the usual construction of an agreement against the drafting party shall not apply hereto.
- 10.15 No Third Party Beneficiaries.** This Agreement is made solely for the benefit of the parties hereto, with no intent to benefit any non-signator third parties. However, should Consultant provide services to an Agency member, SCPPA or SCPPA member (collectively for the purpose of this Section only "Member") pursuant to Section 1.4, the parties recognize that such Member may be a third party beneficiary solely as to the Purchase Order and Requested Services relating to such Member.

SIGNATURES ON FOLLOWING PAGE

The Parties have executed this Agreement as of the date signed by the Agency.

NORTHERN CALIFORNIA POWER AGENCY

PENGO WIRELINE OF CALIFORNIA, INC.

Date_____

Date_____

RANDY S. HOWARD, General Manager

DAVID E. WARREN, General Manager

Attest:

Assistant Secretary of the Commission

Approved as to Form:

Jane E. Luckhardt, General Counsel

EXHIBIT A

SCOPE OF SERVICES

Pengo Wireline of California, Inc. ("Contractor") shall provide labor and equipment as requested by the Northern California Power Agency ("Agency") at any facilities owned and/or operated by the Agency, for the deployment of downhole wireline services on wells, including, but not limited to:

- Pressure, temperature, and spinner surveys;
- Casing caliper surveys;
- Downhole video services; and
- Miscellaneous wireline work in support of drilling operations.

EXHIBIT B

COMPENSATION SCHEDULE AND HOURLY FEES

Compensation for all tasks, including hourly fees and expenses, shall not exceed the amount set forth in Section 2 of the Agreement. The hourly rates and or compensation break down and an estimated amount of expenses is as follows:

DAILY SERVICE COST ESTIMATE: (charges also apply to stand-by days)	\$ / UNIT
Daily Operation Charge – hoist service including pressure control packoff and 1 run	\$4,500.00
Additional runs per day after initial run	\$ 400.00
Daily travel cost per vehicle (2 vehicles used per day)	\$ 500.00
Mileage Charge per mile per vehicle (2 vehicles x 700 miles round trip)	\$ 2.25
Per hour charge after 12 hours	\$ 150.00
Daily Service Charge	\$1,000.00
Well Pressure Control device Charge – after initial run	\$ 330.00
Pressure / Temp Survey High Temp Operation Charge – Minimum \$600.00	\$ 0.30
Pressure / Temp Survey High Temp Depth Charge – Minimum \$800.00	\$ 0.44
Gamma Ray / Neutron Operating Charge – Minimum \$540.00	\$ 0.30
Gamma Ray / Neutron Depth Charge – Minimum \$600.00	\$ 0.32

For services not specified here, compensation shall be as mutually agreed in writing by Contractor and NCPA.

Pricing for services to be performed at NCPA Member or SCPPA locations will be quoted at the time services are requested – Not Applicable

NOTE: As a public agency, NCPA shall not reimburse Consultant for travel, food and related costs in excess of those permitted by the Internal Revenue Service.

EXHIBIT C

CERTIFICATION

Affidavit of Compliance for Contractors

I, _____

(Name of person signing affidavit)(Title)

do hereby certify that background investigations to ascertain the accuracy of the identity and employment history of all employees of

(Company name)

for contract work at:

LODI ENERGY CENTER, 12745 N. THORNTON ROAD, LODI, CA 95242

(Project name and location)

have been conducted as required by the California Energy Commission Decision for the above-named project.

(Signature of officer or agent)

Dated this _____ day of _____, 20 ____.

THIS AFFIDAVIT OF COMPLIANCE SHALL BE APPENDED TO THE PROJECT SECURITY PLAN AND SHALL BE RETAINED AT ALL TIMES AT THE PROJECT SITE FOR REVIEW BY THE CALIFORNIA ENERGY COMMISSION COMPLIANCE PROJECT MANAGER.



Commission Staff Report

July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Approve Authorization for the General Manager to enter into a Funding Agreement with the California Municipal Utilities Association and the Southern California Public Power Authority for a total not-to-exceed amount of \$827,600, of which NCPA's total not-to-exceed share is \$213,309 for the development of a demand side management cost-effectiveness tool and reporting platform.

AGENDA CATEGORY: Consent

FROM:	Jane Cirrincione	METHOD OF SELECTION:
	Assistant General Manager	<i>Competitive Pricing Process</i>
Division:	Legislative & Regulatory Affairs	<i>If other, please describe: See Selection Process.</i>
Department:	Legislative & Regulatory	

IMPACTED MEMBERS:

All Members	<input type="checkbox"/>	City of Lodi	<input checked="" type="checkbox"/>	City of Shasta Lake	<input checked="" type="checkbox"/>
Alameda Municipal Power	<input checked="" type="checkbox"/>	City of Lompoc	<input checked="" type="checkbox"/>	City of Ukiah	<input checked="" type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	City of Palo Alto	<input checked="" type="checkbox"/>	Plumas-Sierra REC	<input checked="" type="checkbox"/>
City of Biggs	<input checked="" type="checkbox"/>	City of Redding	<input checked="" type="checkbox"/>	Port of Oakland	<input checked="" type="checkbox"/>
City of Gridley	<input checked="" type="checkbox"/>	City of Roseville	<input checked="" type="checkbox"/>	Truckee Donner PUD	<input checked="" type="checkbox"/>
City of Healdsburg	<input checked="" type="checkbox"/>	City of Santa Clara	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>

If other, please specify

RECOMMENDATION:

Approve Authorization for the General Manager to enter into a Funding Agreement with CMUA and SCPA, for a total not-to-exceed amount of \$827,600, of which NCPA's total not-to-exceed share is \$213,309, for the development of a demand side management cost-effectiveness tool and reporting platform.

BACKGROUND:

Currently, all publicly-owned utilities (POUs), including 15 NCPA Members (with the exception of BART), use an Excel-based spreadsheet tool to report annual energy efficiency (EE) program results to the California Energy Commission (CEC). This EE spreadsheet tool was initially developed in 2006 by Energy and Environmental Economics (E3), and has been regularly updated since. However, with the passage of Senate Bill 350 (2015), POUs are required to provide additional data, and in different formats, than what the E3 tool can provide. Furthermore, the E3 tool does not currently support POU reporting of EE programs to the U.S. Energy Information Agency (EIA). In summary, POU EE reporting and analysis needs exceed the capabilities of the E3 Tool.

In April, NCPA worked with the Southern California Public Power Authority (SCPPA) and the California Municipal Utilities Association (CMUA) to issue a Request for Proposal for the development of a new cost-effectiveness tool and reporting platform to replace the current E3 tool. Following technical workshop interviews with the two vendor finalists, Energy Platforms, LLC was unanimously selected to develop the cost-effectiveness tool and reporting platform.

Consistent with similar joint POU projects in the past, the RFP identified CMUA as the lead agency that would enter into a consulting services agreement with the selected vendor—Energy Platforms, LLC—on behalf of all POUs, including NCPA Members (see attached). To facilitate CMUA execution of the agreement with Energy Platforms, LLC, NCPA and SCPPA are to sign the proposed funding agreement to govern how CMUA will be reimbursed for our respective members' share of the project costs.

The proposed cost-effectiveness tool (CET) and reporting platform (RP) will replace the current E3 tool, but with a more intuitive user-interface. The CET will be web-based, which eliminates confusion about which version of the tool to use, and simplifies the process for submitting data to NCPA for compilation into the annual EE report. The CET includes default settings to provide a simple process for utilities to enter program data, as well as the ability for utilities to set utility-specific inputs, such as avoided costs. The RP is a second web-based application that will summarize utility program data into common reporting formats used by the CEC and EIA. Utilities will also be able to run custom analyses of their data, over multiple years, through the RP.

The E3 tool has outlived its practical usefulness. Through the NCPA Demand Management Working Group (and the Public Benefits Working Group before that), NCPA Member staff have expressed a need for an improved tool to ease the burden of annual EE reporting; some NCPA Members also seek a more powerful tool to support higher-level analyses of their programs. By working with SCPPA and CMUA, NCPA can deliver that tool at a fraction of a cost—NCPA Members' share of the CET and RP is roughly a quarter of what it would have cost NCPA to develop its own tool. Also, collaborating with CMUA and SCPPA on a shared tool mitigates potential political risk and criticism from policymakers that POUs are not using a consistent tool.

FISCAL IMPACT:

Total cost of the project is not to exceed \$827,600 over the five-year term of the agreement; NCPA's share of the project is not to exceed \$213,309 over the five-year term of the agreement. For the first-year development of the project, NCPA's share of the costs is not to exceed \$131,862. This project was included in the current fiscal year budget as a Member Services Project under participant pass through (Energy Efficiency Reporting Tool). Cost allocation per participating utility is based 50 percent on equal shares, and 50 percent on a utility's proportion of all POU retail sales in 2016. Cost allocation amongst NCPA, SCPPA, and CMUA is based on the cumulative total of each organization's member utilities participating in the project.

SELECTION PROCESS:

Energy Platforms, LLC was selected as a result of a competitive solicitation issued jointly with CMUA and SCPPA, and in accordance with NCPA's procurement policies and procedures. The Request for Proposal was released on April 11, 2018, which was publicly posted and also sent directly to seven potential vendors. Four responses were received from and evaluated based on: (1) quality and completeness of proposal, (2) knowledge, experience, and skills of respondent, (3) experience of staff to be assigned to the project, (4) competitive rates, (5) respondent's ability to perform the work within the time specified and demonstrated strong project management, and (6) customer references. The responses were evaluated by a review team. Two vendors were selected to interview based on the evaluation score of their responses. Energy Platforms, LLC was selected because it provided the best-fit solution at the lowest evaluated costs.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation was reviewed and discussed by the NCPA Demand Management Working Group at its June 21, 2018 meeting, and was recommended for Commission approval.

Respectfully submitted,

A handwritten signature in cursive script that reads "Sen Speer for Randy Howard".

RANDY S. HOWARD
General Manager

Attachments:

- Resolution 18-57
- Draft Funding Agreement with CMUA and SCPPA
- Executed Consulting Services Agreement between CMUA and Energy Platforms, LLC

FISCAL IMPACT:

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Respectfully submitted,

RANDY S. HOWARD
General Manager

Attachments:

- Resolution 18-57
- Draft Funding Agreement with CMUA and SCPA
- Executed Consulting Services Agreement between CMUA and Energy Platforms, LLC

SR: 176:18

RESOLUTION 18-57

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING FUNDING AGREEMENT WITH THE CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION AND SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

(Reference Staff Report #176:18)

WHEREAS, the Northern California Power Agency (NCPA) has previously collaborated with the California Municipal Utilities Association (CMUA) and the Southern California Public Power Authority (SCPPA), on the development of an Excel-based energy efficiency cost-effectiveness tool and reporting platform; and

WHEREAS, mandatory reporting requirements on utility energy efficiency programs have increased pursuant to Senate Bill 350 (de Leon, 2015) and now exceed the functional capabilities of an Excel-based spreadsheet tool; and

WHEREAS, the development of a new cost-effectiveness tool and reporting platform is included in NCPA's current fiscal year budget as a Member Services Project under participant pass through (Energy Efficiency Reporting Tool); and

WHEREAS, NCPA, CMUA, and SCPPA jointly released a competitive solicitation (Request for Proposal) for the selection of a consultant to develop a web-based application to replace the current Excel-based cost-effectiveness tool and reporting platform; and

WHEREAS, NCPA, CMUA, and SCPPA selected Energy Platforms, LLC through a competitive solicitation to develop the web-based cost-effectiveness tool and reporting platform; and

WHEREAS, CMUA has executed a consulting services agreement with Energy Platforms, LLC to develop a web-based cost-effectiveness tool and reporting platform for use by the electric utility members of CMUA, NCPA, and SCPPA, for an amount not-to-exceed \$827,600 over the five-year term of the agreement; and

WHEREAS, the NCPA Demand Management Working Group considered the proposed funding agreement during its June 21, 2018 meeting; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to enter into a Funding Agreement with the California Municipal Utilities Association and Southern California Public Power Authority, for which NCPA's share of the costs shall not exceed \$213,309 over five years, for the development and maintenance of a demand side management cost-effectiveness tool and reporting platform.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
COMMISSION VICE CHAIR

ATTEST: _____
CARY A. PADGETT
ASSISTANT SECRETARY

FUNDING AGREEMENT FOR ENERGY EFFICIENCY SERVICES

This agreement ("Agreement") is dated as of _____, 2018 ("Effective Date"), by and among the California Municipal Utilities Association ("CMUA"), a California non-profit corporation, the Northern California Power Agency ("NCPA"), a joint powers agency, and the Southern California Public Power Authority ("SCPPA"), a joint powers agency. CMUA, NCPA, and SCPPA are also referred to individually as a "Party" and jointly as "the Parties."

WITNESSETH:

WHEREAS, each of the Parties is a membership organization consisting of publicly owned utilities, many of which operate an electric utility; and

WHEREAS, certain of the member utilities of the Parties ("Participants") are engaged in the planning, development, and administration of energy efficiency incentive programs for their respective retail electric customers; and

WHEREAS, the Participants have a need for professional and technical services to develop (1) an energy efficiency cost-effectiveness tool ("CET") and (2) an energy efficiency reporting platform ("RP") to improve Participants' tracking and evaluation of program performance and to support Participants' compliance with mandatory state and federal reporting requirements; and

WHEREAS, the Parties desire to jointly retain Energy Platforms, LLC ("Consultant") to develop the CET and RP that can be utilized by the Participants, and to share the costs of developing the CET and RP; and

WHEREAS, the Consultant is qualified and capable of providing consulting services for developing the CET and RP, and the Consultant is willing to provide such services at a price **NOT TO EXCEED eight-hundred twenty-seven thousand six hundred dollars (\$827,600)**, including all costs; and

WHEREAS, CMUA is willing to retain Consultant to provide the services, with the costs of such services to be shared by each of the Parties as specified in this Agreement so that the CET and RP will be available for use by each of the Parties and their respective Participants.

NOW, THEREFORE the Parties agree as follows:

Section 1. RETAINER OF CONSULTANT. CMUA agrees to enter into a consultant services agreement (the "CSA") with Consultant, in an amount **not to exceed eight-hundred twenty-seven thousand six hundred dollars (\$827,600)**. Pursuant to the CSA, Consultant will develop and deliver the CET and RP to CMUA as more fully described in the CSA. Upon delivery of the CET and RP to CMUA, CMUA shall promptly provide access to SCPPA and NCPA for use by their respective Participants.

- 1.1 **Term of Agreement.** The term of this agreement shall begin on the Effective Date and shall end when the CSA with the Consultant ends, or no later than five (5) years from the Effective Date, whichever is shorter.
- 1.2 **Cost Allocation.** Pursuant to Section 3, Parties are responsible for a share of the cost of services provided under the CSA as follows:
- a. CMUA shall be responsible **30.748%** total cost of services provided under the CSA, and total payments not exceed **two-hundred fifty-four thousand four hundred sixty-seven dollars (\$254,467)**.
 - b. NCPA shall be responsible **25.774%** total cost of services provided under the CSA, and total payments not exceed **two-hundred thirteen thousand three hundred nine dollars (\$213,309)**.
 - c. SCPPA shall be responsible **43.478%** total cost of services provided under the CSA, and total payments not exceed **three-hundred fifty-nine thousand eight hundred twenty-four dollars (\$359,824)**.
- 1.3 **Administration of CSA.** CMUA shall be responsible for the administration of the CSA.

Section 2. AUTHORIZED REPRESENTATIVES. Any notices to the Parties, and all invoices and payments shall be sent to the following Authorized Representatives of the Parties:

Barry Moline
Executive Director
California Municipal Utilities Association
915 L Street, Suite 1460
Sacramento, CA 95814

Randy S. Howard
General Manager
Northern California Power Agency
651 Commerce Drive
Roseville, CA 95568

Mike Webster
Executive Director
Southern California Public Power Authority
1160 Nicole Court
Glendora, CA 91740

Any Party may modify the name of its Authorized Representative or its address by sending written notice to the other Parties.

Section 3. PAYMENT. The Parties agree that costs of services provided under the CSA

shall be shared by the Parties on a 50% equal share, 50% proportional share of total energy consumption basis:

Org	Entity	2016 Sales (GWh)	2016 Sales (%)	Sales (\$)	Equal Share (\$)	Not To Exceed (\$)	Cost Share (%)
CMUA	Sacramento	10,421.1	17.16%	\$ 71,011	\$ 10,610	\$ 81,622	9.86%
CMUA	Modesto	2,503.1	4.12%	\$ 17,057	\$ 10,610	\$ 27,667	3.34%
CMUA	Turlock	2,000.3	3.29%	\$ 13,630	\$ 10,610	\$ 24,241	2.93%
CMUA	San Francisco	970.9	1.60%	\$ 6,616	\$ 10,610	\$ 17,226	2.08%
CMUA	Merced	476.9	0.79%	\$ 3,250	\$ 10,610	\$ 13,860	1.67%
CMUA	Moreno Valley	192.6	0.32%	\$ 1,313	\$ 10,610	\$ 11,923	1.44%
CMUA	Lassen	130.6	0.22%	\$ 890	\$ 10,610	\$ 11,500	1.39%
CMUA	Trinity	108.7	0.18%	\$ 741	\$ 10,610	\$ 11,351	1.37%
CMUA	Victorville	89.0	0.15%	\$ 607	\$ 10,610	\$ 11,217	1.36%
CMUA	Corona	78.6	0.13%	\$ 536	\$ 10,610	\$ 11,146	1.35%
CMUA	Rancho Cucamonga	73.0	0.12%	\$ 497	\$ 10,610	\$ 11,108	1.34%
CMUA	Needles	35.9	0.06%	\$ 244	\$ 10,610	\$ 10,855	1.31%
CMUA	Pittsburg	20.9	0.03%	\$ 142	\$ 10,610	\$ 10,752	1.30%
NCPA	Santa Clara	3,425.8	5.64%	\$ 23,344	\$ 10,610	\$ 33,954	4.10%
NCPA	Roseville	1,179.0	1.94%	\$ 8,034	\$ 10,610	\$ 18,644	2.25%
NCPA	Palo Alto	914.7	1.51%	\$ 6,233	\$ 10,610	\$ 16,844	2.04%
NCPA	Redding	742.9	1.22%	\$ 5,062	\$ 10,610	\$ 15,672	1.89%
NCPA	Lodi	426.2	0.70%	\$ 2,904	\$ 10,610	\$ 13,515	1.63%
NCPA	Alameda	341.8	0.56%	\$ 2,329	\$ 10,610	\$ 12,940	1.56%
NCPA	Shasta Lake	195.6	0.32%	\$ 1,333	\$ 10,610	\$ 11,943	1.44%
NCPA	Truckee Donner	151.5	0.25%	\$ 1,033	\$ 10,610	\$ 11,643	1.41%
NCPA	Plumas-Sierra	144.5	0.24%	\$ 985	\$ 10,610	\$ 11,595	1.40%
NCPA	Lompoc	131.5	0.22%	\$ 896	\$ 10,610	\$ 11,506	1.39%
NCPA	Ukiah	106.7	0.18%	\$ 727	\$ 10,610	\$ 11,338	1.37%
NCPA	Healdsburg	75.3	0.12%	\$ 513	\$ 10,610	\$ 11,123	1.34%
NCPA	Port of Oakland	61.3	0.10%	\$ 418	\$ 10,610	\$ 11,028	1.33%
NCPA	Gridley	34.2	0.06%	\$ 233	\$ 10,610	\$ 10,843	1.31%
NCPA	Biggs	16.2	0.03%	\$ 111	\$ 10,610	\$ 10,721	1.30%
SCPPA	Los Angeles	22,666.3	37.33%	\$ 154,452	\$ 10,610	\$ 165,062	19.94%
SCPPA	Imperial	3,385.5	5.58%	\$ 23,070	\$ 10,610	\$ 33,680	4.07%
SCPPA	Anaheim	2,356.3	3.88%	\$ 16,056	\$ 10,610	\$ 26,666	3.22%
SCPPA	Riverside	2,182.8	3.59%	\$ 14,874	\$ 10,610	\$ 25,484	3.08%
SCPPA	Vernon	1,109.0	1.83%	\$ 7,557	\$ 10,610	\$ 18,167	2.20%
SCPPA	Burbank	1,095.9	1.80%	\$ 7,468	\$ 10,610	\$ 18,078	2.18%
SCPPA	Pasadena	1,070.9	1.76%	\$ 7,298	\$ 10,610	\$ 17,908	2.16%
SCPPA	Glendale	1,065.5	1.75%	\$ 7,261	\$ 10,610	\$ 17,871	2.16%
SCPPA	Colton	352.9	0.58%	\$ 2,405	\$ 10,610	\$ 13,015	1.57%
SCPPA	Azusa	253.7	0.42%	\$ 1,729	\$ 10,610	\$ 12,339	1.49%
SCPPA	Banning	138.4	0.23%	\$ 943	\$ 10,610	\$ 11,553	1.40%

3.1 Invoices. Upon receipt of any invoice from the Consultant, CMUA shall forward a copy

of the invoice to NCPA and SCPA who shall, within thirty (30) days of receipt, pay their share of the invoice or otherwise make restitution of their respective share of the invoice to CMUA. CMUA as counterparty to the CSA with the Consultant will be responsible for payment to the Consultant. Notwithstanding the foregoing, payments by NCPA and SCPA are subject to the limitations established in Subsection 1.2.

- 3.2 Recovery of Costs from Participants.** Each Party shall be responsible for the recovery of any costs for which it is responsible under this Agreement from those Participants who are members of that Party.
- 3.3 Non-Responsibility for Costs Incurred by Other Parties.** The obligations incurred by the Parties under this Agreement are severable, and not joint. No Party shall be responsible for the costs incurred under the CSA for services to Participants who are not identified in this Section 3 as the responsibility of that Party.

Section 4. MISCELLANEOUS PROVISIONS.

- 4.1 Governing Law.** The laws of the State of California shall govern this Agreement.
- 4.2 Attorneys' Fees.** If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.
- 4.3 Venue.** In the event that either party brings any action against the other under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.
- 4.4 Severability.** If a court of competent jurisdiction finds or rules that any provision of this Agreement is invalid, void, or unenforceable, the provisions of this Agreement not so adjudged shall remain in full force and effect. The invalidity in whole or in part of any provision of this Agreement shall not void or affect the validity of any other provision of this Agreement.
- 4.5 Successor and Assigns.** This Agreement is binding upon and shall inure to the benefit of the Parties and their respective successors and assigns. No Party may assign its rights or obligations hereunder without the prior written consent of the other Parties.
- 4.6 Integration; Incorporation.** This Agreement, including all the exhibits attached hereto, represents the entire and integrated agreement between Agency and Consultant and supersedes all prior negotiations, representations, or agreements, either written or oral. All exhibits attached hereto are incorporated by reference herein.

- 4.7 Alternative Dispute Resolution.** The Parties shall attempt to resolve disputes arising under this Agreement in a fair and reasonable manner by discussions among their respective Authorized Representatives. If any dispute arises between the Parties that cannot be settled after engaging in good faith negotiations, Agency and Consultant agree to resolve the dispute in accordance with the following:
- 4.7.1** Each party shall designate a senior management or executive level representative to negotiate any dispute;
- 4.7.2** The representatives shall attempt, through good faith negotiations, to resolve the dispute by any means within their authority.
- 4.7.3** If the issue remains unresolved after fifteen (15) days of good faith negotiations, the Parties shall attempt to resolve the disagreement by negotiation between legal counsel. If the above process fails, the Parties shall resolve any remaining disputes through mediation to expedite the resolution of the dispute.
- 4.7.4** The mediation process shall provide for the selection within fifteen (15) days by both Parties of a disinterested third person as mediator, shall be commenced within thirty (30) days and shall be concluded within fifteen (15) days from the commencement of the mediation.
- 4.7.5** The Parties shall equally bear the costs of any third party in any alternative dispute resolution process.
- 4.7.6** The alternative dispute resolution process is a material condition to this Agreement and must be exhausted as an administrative prior to either Party initiating legal action. This alternative dispute resolution process is not intended to nor shall be construed to change the time periods for filing a claim or action specified by Government Code §§ 900 *et seq.*
- 4.8 Counterparts.** This Agreement may be executed in counterparts, each of which shall be deemed an original.
- 4.9 No Third Party Beneficiaries.** There are no third party beneficiaries to this Agreement. Without limiting the generality of the foregoing, the Participants are not third party beneficiaries.

IN WITNESS WHEREOF, each signatory hereto represents that he or she has been properly authorized to execute and deliver this Agreement on behalf of the Party for which he or she signs.

California Municipal Utilities Association

BARRY MOLINE
Executive Director

Northern California Power Agency

RANDY S. HOWARD
General Manager

Approved as to form:

General Counsel

Southern California Public Power Authority

MICHAEL WEBSTER
Executive Director

Approved as to form:

General Counsel

CONSULTING SERVICES AGREEMENT
BETWEEN
California Municipal Utilities Association
AND
Energy Platforms, LLC

This CONSULTING SERVICES AGREEMENT ("Agreement") is dated as of June 25, 2018, by and between Energy Platforms, LLC ("Consultant"), a Minnesota limited liability company, located at 8170 Old Carriage Ct. N., Suite 200, Shakopee, MN 55379, and California Municipal Utilities Association ("CMUA"), a Non-Profit Association created pursuant to the laws of the State of California, located at 915 L Street, Suite 1460, Sacramento, California 95814. CMUA and Consultant are also referred to individually as ("Party") and together as ("Parties").

WHEREAS, certain CMUA member utilities, Northern California Power Agency ("NCPA") and Southern California Public Power Authority ("SCPPA") (NCPA and SCPPA are hereinafter individually referred to singularly as a "Participant" and jointly as "Participants"), each of whom is a California joint powers agency composed of public agencies operating a municipally owned electric utility, are involved in the planning, development, and administration of energy efficiency programs for their respective electric utility members; and

WHEREAS, the member electric utilities of the Participants are required by Section 9505 of the Public Utilities Code to annually report to the California Energy Commission ("CEC") on their investments in energy efficiency and demand reduction programs, including: program expenditures; the cost-effectiveness of each program, as well as energy savings and demand reduction results; and

WHEREAS, the Participants have a need for professional and technical services for updating and developing an energy efficiency database tool to calculate the cost-effectiveness of energy efficiency and demand reduction measures and programs, and to summarize and report program expenditures, energy savings, and demand reductions in order to report this information to the CEC and other regulatory agencies; and

WHEREAS, Consultant was deemed qualified and capable of providing these services based upon their response to a comprehensive, competitive Request for Proposals (RFP) solicitation process by CMUA;

NOW, THEREFORE, in consideration of the promises herein and for other good and valuable consideration, the Parties agree as follows:

1. **Services to be Provided:** CMUA engages the Consultant to prepare and deliver the Energy Efficiency Cost-Effectiveness Test and Reporting Platform as described in the Scope of Work, presented as Exhibit A. Consultant will perform the services at the direction of and on behalf of CMUA and Participants.

2. **Independent Contractor:** Consultant is an independent contractor and is not an employee of CMUA or the Participants. Consultant shall not be entitled to any benefits or rights, including, but not limited to, sick leave, vacation leave, holiday pay, worker's compensation or other insurance benefits. Consultant shall furnish the services in its own manner and method except as required by this Agreement. Consultant shall have no authority, express or implied, to act on behalf of or bind CMUA or the Participants in any capacity whatsoever as agents or otherwise.
3. **Standard of Care:** The Consultant will perform services under this Agreement with the degree of skill and diligence normally practiced in the same industry by consultants performing the same or similar services. Consultant shall assign only competent personnel to perform the Services. In the event that CMUA, in its sole discretion, at any time during the term of this Agreement, requests the reassignment of any such personnel, Consultant shall, promptly upon receiving written notice from CMUA of such request, reassign such personnel. Consultant shall comply with all Federal, State, County, City and other governing laws, rules and regulations as applicable to the performance of services under this Agreement. Consultant is not required to perform the services during fixed hourly or daily times, nor at CMUA or Participant premises unless as provided in the Scope of Work attached hereto as Exhibit A. Consultant's time spent at CMUA, a Participant site or the sites of the Participants' members, or project location premises shall be subject to normal business hours and security requirements as may be reasonably imposed by CMUA or a Participant and communicated in writing to Consultant.
4. **Changes/Amendments:** This Agreement may not be changed except by written amendment signed by both Parties. Services not expressly set forth in this Agreement are excluded. If Consultant determines that changes should be made to the Services, the Consultant will notify CMUA of such proposed changes in writing, including the effects on the schedule, level of effort and payment for such changes. Thereafter, Consultant and CMUA shall agree in writing on which changes, if any, shall be included in an amendment to the Services and both Parties shall sign the amendment. If Consultant is delayed in performing the services by any act of war, force majeure or other unforeseen and immitigable circumstance beyond its control, then Consultant shall not be considered to be in default of the performance of its obligations under this Agreement while such circumstance is in effect, provided that Consultant shall provide notice to CMUA of the existence of such event or circumstance within 3 days of its occurrence.
5. **Payment:**
 - (a) Consultant shall submit invoices, not more often than once a month during the term of this Agreement, based on the cost for services performed and reimbursable costs incurred prior to the invoice date. CMUA agrees to pay Consultant for services described in the Proposal. Each invoice shall state the basis for the amount invoiced, including services completed, units of time and costs, and any work performed. Subject to the amount withheld pursuant to Section 5(b), CMUA shall pay properly invoiced amounts not more than thirty (30) days after delivery of an invoice. The total cost for services under this Agreement shall not exceed Eight Hundred Twenty-Seven Thousand, Six Hundred dollars (\$827,600.00), including all costs and reimbursable expenses, as defined within Exhibit "B".

(b) CMUA shall withhold 10 percent of the total amount associated with time and materials in each monthly invoice from the amount paid to Consultant pursuant to Section 5(a) and Section 3 of Exhibit C. Invoiced amounts associated with reimbursable expenses for travel and invoiced amounts for annual hosting of the Energy Efficiency Cost-Effectiveness Test and Reporting Platform shall not be subject to this 10 percent withholding. Upon a determination, not to be unreasonably withheld or delayed, by CMUA that Consultant has delivered a sufficiently functional and complete Energy Efficiency Cost-Effectiveness Test and Reporting Platform consistent with the description in the Scope of Work, included in Exhibit A, CMUA shall provide notice of such determination to Consultant consistent with Section 15 and shall cease withholding amounts pursuant to this Section 9(b) from future invoices. CMUA shall pay the accumulated total of the 10 percent withheld from each monthly invoice within thirty (30) days after providing such notice. No interest shall accrue on the accumulated 10 percent withheld from each monthly invoice.

6. **Taxes:** Any and all taxes imposed on Consultant's income shall be paid by Consultant. Consultant specifically agrees that Consultant is not an employee or agent of CMUA.
7. **Indemnity:** Consultant undertakes and agrees to defend, indemnify and hold harmless CMUA and Participants, and their respective member agencies, as well as their respective officers, agents, representatives, employees, assigns and successors in interest from and against any and all third-party suits and causes of action, claims, charges, damages, demands, judgments, civil fines and penalties, or losses of any kind or nature whatsoever for death, bodily injury or personal injury to any person, including Consultant's employees and agents, or damage or destruction to any property of either Party hereto, or third person in any manner directly arising by reason of negligent acts, errors, omissions or willful misconduct incident to the performance of this Agreement on the part of the Consultant, or the Consultant's officers, agents, employees, or subcontractors of any tier, except for the sole negligence or willful misconduct of CMUA or Participants or any of their respective board members, officers, agents, representatives or employees.
8. **Limitation of Liability:** To the extent permitted by law, and except as provided in Section 9 of this Agreement the total liability of the Consultant to CMUA for any claims arising out of this Agreement, whether caused by negligence, errors, omissions, strict liability, breach of contract or contribution, or indemnity claims based on third party claims, shall be limited to direct damages and not exceed one hundred and fifty thousand dollars (\$150,000), provided however this limitation shall not apply in the event of gross negligence, willful misconduct, bad faith of the Consultant, or where occurrence is covered by insurance as provided in Section 9 below in which case the applicable limit pursuant to the insurance policy specified in Section 9 shall apply. In no event will Consultant or CMUA be liable for any indirect, consequential, punitive or special damages arising out of or related to this Agreement or the Services performed hereunder, whether in contract, tort (including negligence), strict liability or otherwise, even if such Party has been advised of the possibility of such loss or damage.
9. **Insurance:** Consultant shall, at its own cost and expense, maintain during the entire term of this Agreement, the following insurance coverage with the limits indicated:

Coverage	Limits
General Liability	\$2 million per occurrence \$4 million general aggregate
Errors & Omissions	\$2 million per claim \$2 million policy aggregate
Workers' Compensation	Limits Statutory for State of Minnesota at \$500,000

10. **Term and Termination:** The term of this Agreement shall be for five (5) years from the date hereof, unless sooner terminated in accordance with this section, at which time, it shall either terminate or be extended for one (1) additional term of five (5) years subject, again, to earlier termination in accordance with this section. CMUA's determination to grant such an extension for an additional five (5) year term shall be at the sole discretion of the CMUA Executive Director and shall be carried forth through mutual execution, between CMUA and the Consultant of such an agreement. Notwithstanding anything to the contrary contained herein, either Party may terminate this Agreement, with or without cause, upon thirty (30) days' written notice to the other Party. CMUA shall pay Consultant for all services rendered up to the date of termination plus reasonable expenses for winding down the services, so long as the final amount does not exceed the total cost provided in Section 5. Any payment, indemnity, and work product rights or obligations pursuant to Sections 5, 7, and 11, respectively, shall survive the termination of this Agreement.
11. **Use and Ownership of Work Products:** As used in this Agreement, the term "Work Product" means any and all materials fixed in a tangible medium of expression, including software code, written procedures, written documents, abstracts and summaries thereof, or any portions or components of the foregoing created, written, developed, conceived, perfected or designed in connections with the Services provided under this Agreement. All Work Product may be used by CMUA, the Participants, and their respective members solely pursuant to the license granted in that certain ESP® Service Agreement dated on or about the date hereof, by and between CMUA, as Customer, and Consultant (the "Service Agreement") and attached hereto as Exhibit C. The Work Product will be deemed part of ESP for purposes of the Service Agreement.
12. **Information Provided by Others:** CMUA and/or Participants shall provide to the Consultant in a timely manner any information indicated is needed to perform the services hereunder. Consultant may rely on the accuracy of information provided by CMUA and its representatives.
13. **Confidential Information:** With respect to any information supplied in connection with this Agreement, Confidential Information shall be any and all: (1) customer data provided by CMUA or any Participant to Consultant or any of Consultant's subcontractors; and (2) Customer Responses collected by Consultant or any of Consultant's subcontractors from customers of any member of CMUA or Participants; and (3) any information provided to one Party from another that is labeled and/or marked confidential. The recipient agrees to protect the Confidential Information in a reasonable and appropriate manner, and to use and reproduce the Confidential Information only as necessary to realize the benefits of or perform its obligations under this Agreement and for no other purpose.

Notwithstanding the foregoing, Confidential Information does not include information which (i) at the time of disclosure is within the public domain through no breach of this Agreement by either Party; (ii) has been known or independently developed by and is currently in the possession of recipient prior to disclosure or receipt thereof; (iii) was or is acquired by recipient from a third party (other than a member of CMUA or a member of a Participant contacted by Consultant in the course of performance of this Agreement) or (v) disclosed pursuant to a legal requirement or order. The recipient may disclose the Confidential Information on a need-to-know basis to its contractors, agents and affiliates who agree to confidentiality and non-use terms that are substantially similar to these terms. The parties acknowledge and agree that any proprietary software provided by Consultant in connection with this Agreement shall be considered the Confidential Information of Consultant.

In the case of a *bona fide* request received by CMUA or a Participant under the California Public Records Act (“CPRA,”) Cal. Gov't Code § 6250 et seq.) from a third party for access to Consultant's Confidential Information subject to this Agreement, CMUA shall promptly notify Consultant of such request and shall follow Consultant's reasonable instructions in responding thereto subject to the understanding that CMUA cannot delegate the responsibilities imposed on it by the CPRA to Consultant. In the event access to such Confidential Information is denied and the third party requesting the same initiates litigation to compel access under the CPRA, CMUA shall promptly advise Consultant of such litigation, and CMUA shall have no other duty or obligation to Consultant under this Agreement with respect to the denial of access to such Confidential Information or to oppose or defend any such litigation. Consultant, at its own cost and expense, shall indemnify, defend and hold CMUA free and harmless from such litigation or any claim, suit, cost, expense, judgment or order related thereto or otherwise arising from the denial of access to Consultant's Confidential Information to said third party.

Confidential Information must be kept in a secure location. Confidential Information received from customers of a member of CMUA or customers of a member of a Participant will only be provided by Consultant to CMUA and its designated representatives, and to no other party. Consultant shall, when directed by CMUA, create aggregated data derived from Confidential Information in such a way such that individual customer responses or data cannot be determined. Consultant will retain the Confidential Information only so long as it is necessary to perform Consultant's tasks under the Agreement, and after such time, the Confidential Information will be returned to CMUA (or at CMUA's written option, destroyed), and Consultant will retain no copies of the Confidential Information.

Consultant shall be responsible to ensure that any subcontractors used to provide Services that have access to Confidential Information or who will collect Customer Responses comply with the provisions of this Section 12.

14. **Dispute Resolution:** Consultant and CMUA shall attempt to resolve conflicts or disputes under this Agreement in a fair and reasonable manner and agree that if resolution cannot be made to attempt to mediate the conflict by a professional mediator. Absent mediated resolution, the Parties agree to submit any dispute to binding arbitration under the rules governing commercial arbitration as promulgated by the American Arbitration Association. Any arbitration shall be subject to the Federal Arbitration Act, and the locale of the arbitration shall be Northern California.

15. **Representatives:**

Each Parties representative for administration of this Agreement, such as notices, requests, demands

and other communications hereunder shall be deemed given only if in writing signed by an authorized representative of the sender and delivered by first class mail, postage prepaid; by electronic mail or facsimile, with a hard copy mailed first class, postage prepaid; or when sent by a courier or service guaranteeing overnight delivery to the receiving party, addressed as follows:

To CMUA:

Barry Moline
Executive Director
915 L Street, Suite 1460
Sacramento, CA 95814
916.326.5800 FAX: 916.326.5810
bmoline@cmua.org

To Consultant:

Leo Steidel
CEO
8170 Old Carriage Court North, Suite 200
Shakopee, MN 55379
651.341.5932
lsteidel@energyplatforms.com

All questions pertaining to this Agreement shall be referred to the above-named person(s), or to the representative's designee.

Except as otherwise provided herein, the representatives set forth herein shall have authority to give all notices required herein.

Either party may change its address for the purposes of this Agreement by giving written notice of such change to the other party in the manner provided in this Section.

Notice shall be deemed effective: 1) immediately, upon personal delivery; 2) two calendar days after transmission by electronic mail or facsimile; five calendar days after deposit in first class mail, if mailed within the United States; and ten calendar days after deposit in the mail, if mailed from outside the United States.

16. Miscellaneous:

(a) This Agreement is binding upon and will inure to the benefit of the Parties and their respective successors and assigns. Neither Party may assign its rights or obligations hereunder without the prior written consent of the other Party; provided, however, that either Party may assign this Agreement to a successor of the Party's entire business relating to this Agreement.

(b) If any provision of this Agreement is invalid or unenforceable, the remainder of this Agreement shall continue in full force and effect and the provision declared invalid or unenforceable shall continue in full force and shall continue as to other circumstances in accordance with, the laws of the State of California.

(c) This Agreement is entered into in Sacramento County in the State of California and shall be governed by, and construed in accordance with, the laws of the State of California.

(d) Each of SCPA and NCPA shall be deemed to be third party beneficiaries of this Agreement. There are no other third-party beneficiaries.

(e) This Agreement, including Exhibits A through C, inclusive, constitutes the entire understanding and agreement of the Parties relating to the Services, and supersedes all prior or contemporaneous agreements and understandings, whether written or oral; provided, however, the Service Agreement shall govern all matters specified therein, and in the event of a direct conflict

between the terms of the this Agreement and the Service Agreement, the language in the Service Agreement will control but only to the extent of the direct conflict.

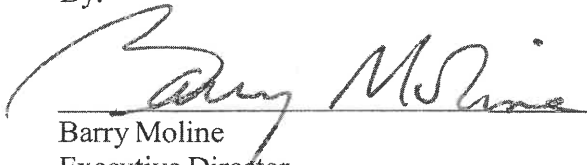
[SIGNATURE PAGE TO FOLLOW]

17. **Signature Clause:**

IN WITNESS WHEREOF, each signatory hereto represents that he or she has been properly authorized to execute and deliver this Agreement on behalf of the Party for which he or she signs.

California Municipal Utilities Association

By:

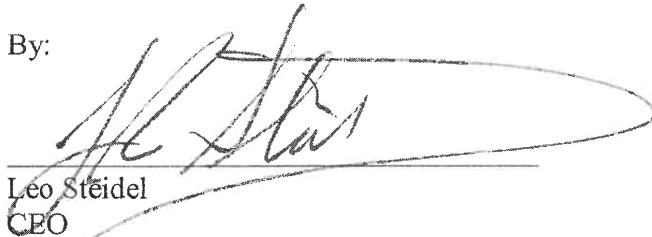
A handwritten signature in dark ink, appearing to read "Barry Moline", is written over a horizontal line.

Barry Moline
Executive Director
CMUA

915 L Street, Suite 1460
Sacramento, CA 95814
916.326.5800 FAX: 916.326.5810

Energy Platforms, LLC

By:

A handwritten signature in dark ink, appearing to read "Leo Steidel", is written over a horizontal line.

Leo Steidel
CEO

Energy Platforms LLC
8170 Old Carriage Court N., Suite 200
Shakopee, MN 55379
Phone: 866.204.5171
Cell: 612.382.5547

EXHIBIT A

SCOPE OF SERVICES

Statement of Work

Energy Platforms will create a cloud-based Cost Effectiveness Tool (CET) and Reporting Tool (RT) for the Requesters.

The new tools will, in general, provide all of the functionality in the Requester's current Reporting Tool Spreadsheet. The scope of the spreadsheet is a single portfolio/year; the new tools will provide the following additional capabilities:

- a. The ability to store all reference libraries and portfolios for all utilities in a single, cloud-based database.
- b. The ability to upload, edit, and manage Avoided Costs, Load Shapes, and Greenhouse Gas emissions libraries and calculations in hourly data ("8760" format), at the individual utility or reference library levels.
- c. The ability to manage reference libraries of measures, avoided costs, load shapes, and greenhouse gas emissions year over year and across multiple utilities.
- d. Reference libraries may be used by utilities, or utilities may upload/edit their own library elements.
- e. The ability to produce cost effectiveness results using 8760 hourly data rather than the "6 bin" approach used in the current spreadsheet.
- f. The RT will generate an accumulated year/year savings presentation.
- g. The CET will also provide the functionality to manage and maintain different scenarios and/or portfolios for utility evaluation and planning purposes

The draft Technical Specification to achieve these outcomes is presented below.

Draft Functional CET and RT Technical Specification:

1) Historical Data

- a. Maintain historical database of Excel spreadsheet Inputs and Outputs from the 3 most-recent reports provided to the CEC in each of March 2016, 2017 and 2018 for fiscal years 2015, 2016, and 2017, respectively.

2) Energy Efficiency Measure Database:

- a. Initially includes preloaded measure savings from CMUA technical reference manual
- b. Ability for utilities to input custom measures.
- c. Ability to share custom measures with group if desired.
- d. Future functionality to incorporate other data sources (e.g. CalTF eTRM) via API.
- e. Ability to handle different measure vintages (e.g. CMUA TRM 2016 vs 2017)
- f. Preloaded variables in a measure should include but are not limited to the following:
 - i. Unique Measure ID
 - ii. Measure Name
 - iii. Climate Zone
 - iv. Customer Type
 - v. Building Type
 - vi. Measure Type

- vii. Load Shape
- viii. Source of Savings (DEER, CMUA TRM 2016, etc.)
- ix. Measure units (e.g. Tons, unit, bulb, fixture, home, etc.)
- x. Measure Cost
- xi. Incremental Cost
- xii. 1st Baseline Electric Energy Savings, kWh
- xiii. 2nd baseline Electric Energy Savings, kWh
- xiv. 1st Baseline Natural Gas Energy Savings, Therm
- xv. 2nd baseline Natural Gas Energy Savings, Therm
- xvi. 1st Baseline Electric Demand Savings, kW
- xvii. 2nd baseline Electric Demand Savings, kW
- xviii. 1st Baseline Cost
- xix. 2nd baseline Cost
- xx. 1st baseline measure life (RUL)
- xxi. Measure Useful Life (EUL)
- g. Ability to add new fields in the future.
- h. Ability to easily select measures for portfolio and use selected measures for cost effectiveness analysis.

3) Avoided Cost Library and database

- a. The platform will maintain one or more hourly avoided cost databases, with 8,760-hour definition, as the “default” avoided costs for use in the CET, as defined by CMUA, NCPA, and SCPPA.
- b. The platform will allow for all users to input and use alternative avoided cost curves for their respective analyses

4) Greenhouse Gas Emissions Library and database

- a. The platform will maintain one or more hourly GHG emissions databases, with 8,760-hour definition, as the “default” GHG emissions curve for use in the CET, as defined by CMUA, NCPA, and SCPPA.
- b. The platform will allow for all users to input and use alternative GHG curves for their respective analyses

5) Load Shapes Library and database

- a. The platform will maintain hourly load shapes databases for all efficiency measures, with 8,760-hour definition, as the “default” load shapes for use in the CET, as defined by CMUA, NCPA, and SCPPA.
- b. The platform will allow for all users to input and use load shapes for their respective analyses

6) Cost Effectiveness Tool

- a. Data Input
 - i. Measure Flat File Upload (preprocessing done outside of CE tool)
 - 1. Ability to upload a flat file that defines all aspects of portfolio
 - a. Measure data
 - b. Program data
 - c. Admin costs

- d. Load shape ID (reference to load shapes, avoided cost, avoided GHG emissions)
 - 2. Ability to make changes to uploaded data inside of the cost effectiveness tool (don't want to have to go back and upload a new file)
 - 3. hourly (8760) inputs
 - a. Load Shape per vintage
 - i. Per CZ (see above)
 - ii. Per Vintage (see above)
 - iii. Custom per utility (see above)
 - b. Avoided cost per vintage (see above)
 - c. Avoided GHG emissions per vintage (see above)
- ii. Measure Input via User Interface
 - 1. Measure Input and editing
 - a. CE Tool should interface directly with database (or they are one in the same)
 - b. Ability to make changes inside of the CE tool - don't want to have to switch back and forth between tools.
 - c. Group discussed a "wizard" for entering and selecting measures.
 - 2. Cost Input and editing
 - a. Ability to enter cost categories by program and have the costs automatically spread to the measures.
 - i. Admin
 - ii. EM&V
 - iii. Marketing
 - iv. General overhead
 - b. Ability to turn auto cost allocation on or off by program
 - 3. Identify which programs should and should not be included in overall cost effectiveness rollup.
- b. Analysis
 - i. In addition to what the current E3 calculator already does, the tool should calculate the following
 - 1. Perform hourly analysis
 - 2. Track cumulative savings going back to 2015
 - 3. Account for measure degradation customized at the measure level.
- c. Output
 - i. Generate reports closely matching current E3 summary report and E3 results.
 - ii. Generate reports at the measure level (cost-effectiveness, contribution to savings/GHG/Demand Reduction...)
 - iii. Generate 8760 load profiles
 - 1. Overall EE portfolio kWh savings by hour
 - 2. Overall EE portfolio GHG savings by hours

Schedule

Phase 1

This project has an aggressive schedule. The goal of Phase 1 is to get the CET application up and running on line by October 15, 2018, in time for utilities to report annual data. At the end of Phase 1, functionality will be sufficient to create a reporting portfolio and run cost benefit analysis.

After EP has completed scope and design EP will run 2-week agile development sprints until project completion.

EP will hold a status meeting with CMUA at the end of every sprint and demonstrate any visible progress.

EP may post interim versions of the application for CMUA review more frequently if appropriate.

7/10/18 – CET Scope Complete

- EP will have completed discovery and scope, visited Requesters and select utilities.

7/20/18 – CET Design Complete

- UI Storyboards, Class Diagram, Database Schema Documentation complete

8/17/18 – CET Early Alpha Version Posted Live for Requester/Select Utility Use

- Portfolio Summary, Program, and Measure Library basically operational with mock data

9/21/18 – CET Pre-QA Version Posted Live for Requester/Select Utility Use

- Application functional, pre-quality assurance testing (some bugs will exist).

10/15/18 – CET Application Live and Ready for User Onboarding

- Application tested and production-ready

10/26/18 – CET Training Complete, Users Onboard

- Training webinars complete, account invitations sent, users onboard

Phase 2

The goals of Phase 2 are to continue CET improvement and have RT in production in time for CMUA to report results to CEC on March 15, 2019.

12/3/18 – RT Alpha Posted

- This release will have basic functionality with some features in process.

1/28/18 – RT Pre-QA Posted

- This will be a code-complete version of the Reporting Tool

2/18/18 – RT Production-Ready

- Requesters will be onboard and have full reporting functionality

Phase 2 Options (not included in schedule or budget)

- Paper Template Reporting – automated publication of the CEC report from a Word template.
- Ad Hoc Reporting – the ability for users to define their own custom “dashboard” with queries, charts, and graphs.

Notes:

1. This budget/schedule does not include the additional Phase 2 Options. These can be added later if desired.
2. The Oct 15, 2018 version of CET will include basic functionality. EP will be updating and adding features to CET after Oct 15, including integration with RT.
3. CET will be fully-functional by no later than January 15, 2019 and the RT will be production-ready February 18, 2018.

EXHIBIT B

Compensation & Reimbursement

Energy Platforms will invoice CMUA monthly for time and material expenses incurred. Payment terms are net 30 days.

The following table shows the estimated monthly invoices. Actual invoices will depend on expended effort.

	Time & Materials	Travel	Annual Hosting
Jun	\$ 28,000		
Jul	\$ 50,000	\$ 12,000	
Aug	\$ 60,000		
Sep	\$ 60,000		
Oct	\$ 30,000		\$ 70,000
Nov	\$ 50,000		
Dec	\$ 15,000		
Jan	\$ 20,000		
Feb	\$ 22,600		
Sub-Total	\$ 335,600	\$ 12,000	\$ 70,000
Added Alternatives			
Automated Reporting	\$ 45,000		
Ad-hoc User-Reporting	\$ 40,000		\$ 9,000
Sub-Total	\$ 85,000	\$ -	\$ 9,000
Total	\$ 420,600	\$ 12,000	\$ 79,000

Based on these data, the associated Not to Exceed amounts for each of the years of the Agreement are presented below for reference. These amounts do not include any potential platform enhancements that may be requested and directed by CMUA in the future. Any such enhancements and related modifications to the not-to-exceed amounts will be made as one or more amendments to the Agreement.

YEAR	AMOUNT
2018-19	\$ 511,600
2019-20	\$ 79,000
2020-21	\$ 79,000
2021-22	\$ 79,000
2022-23	\$ 79,000
5-yr Total	\$ 827,600

EXHIBIT C

ESP® Service Agreement

This Service Agreement (this “**Agreement**”), dated as of _____, 2018, is by and between Energy Platforms, LLC, a Minnesota limited liability company (the “**Company**”), and California Municipal Utilities Association (“**CMUA**”), a Non-Profit Association created pursuant to the laws of the State of California (“**Customer**”).

The Company and Customer agree as follows:

1. Definitions. For the purposes of this Agreement, the following capitalized terms will have the meanings given to them below.

(a) “**Access Credentials**” means any user name, identification number, password, license or security key, security token, PIN or other security code, method, technology or device used, alone or in combination, to verify an individual’s identity and authorization to access and use ESP.

(b) “**Company Indemnatee**” has the meaning given to such term in Section 8.

(c) “**Company Materials**” means ESP, Documentation and Company Systems and any and all other information, data, documents, materials, works and other content, devices, methods, processes, hardware, software and other technologies and inventions, including any deliverables, technical or functional descriptions, requirements, plans or reports, that are provided or used by Company or any subcontractor in connection with ESP or otherwise comprise or relate to ESP or Company Systems. For the avoidance of doubt, Company Materials include any information, data or other content derived from Provider’s monitoring of Customer’s access to or use of ESP, but do not include Customer Data.

(d) “**Company Permissions**” has the meaning given to such term in Section 7(d).

(e) “**Company Personnel**” means all individuals involved in the performance of services for Customer as employees, agents, or independent contractors of Company or any subcontractor or Company.

(f) “**Company Systems**” means the information technology infrastructure used by or on behalf of Company in providing ESP to Customer, including all computers, software, hardware, databases, electronic systems (including database management systems) and networks, whether operated directly by Company or through the use of third-party services.

(g) “**Connectivity Downtime**” means the total accumulated minutes that deployed Internet-facing services for ESP have no external connectivity during a five-minute period as measured and aggregated in five-minute intervals. Connectivity downtime does not include any loss of external connectivity caused in whole or in part by any event that is not a Service Failure.

(h) “**Customer Data**” will mean data entered into or uploaded to ESP by a User and data derived by a User using ESP.

(i) “**Customer Systems**” has the meaning given to such term in Section 7(e)

(j) **“Documentation”** means any manuals, instructions or other documents or materials that the Company provides or makes available to Customer in any form or medium and which describe the functionality, components, features or requirements of ESP or Company Materials, including any aspect of the installation, configuration, integration, operation, use, support or maintenance thereof.

(k) **“ESP”** will mean the Web-based software service stated on the Purchase Agreement at the level subscribed to by Customer, as such software service may be revised and updated by Company from time to time.

(l) **“Fees”** will mean the amounts due from Customer to Company as specified on the Purchase Agreement.

(m) **“Force Majeure Event”** has the meaning given to such term in Section 10(a).

(n) **“Harmful Code”** means any software, hardware or other technology, device or means, including any virus, worm, malware or other malicious computer code, the purpose or effect of which is to (i) permit unauthorized access to, or to destroy, disrupt, disable, distort, or otherwise harm or impede in any manner any (A) computer, software, firmware, hardware, system or network or (B) any application or function of any of the foregoing or the security, integrity, confidentiality or use of any data Processed thereby, or (ii) prevent Customer or any User from accessing or using ESP or Company Systems as intended by this Agreement.

(o) **“Intellectual Property”** will mean all rights, title and interest in and to all (a) patents, utility models, patent applications, and continuing (continuation, divisional, or continuation-in-part) applications, re-issues, extensions, renewals, and re-examinations thereof and patents issued thereon; (b) registered and unregistered trademarks, service marks, trade names, domain names, and all of the associated goodwill; (c) registered and unregistered copyrights and all other literary rights; (d) trade secrets, know how, concepts, ideas, processes, methods, designs, discoveries, inventions, and improvements, whether patentable or unpatentable; (e) all other intellectual and proprietary rights now or hereafter existing throughout the universe; (f) applications for and registrations, renewals, and extensions of, any of the foregoing; and (g) exclusive and non-exclusive license rights to any of the foregoing.

(p) **“Maximum Connectivity Minutes”** means the total minutes in any calendar month.

(q) **“Monthly Connectivity Uptime”** means the product resulting from multiplying 100 by the quotient of (y) Maximum Connectivity Minutes less Connectivity Downtime divided by (z) the Maximum Connectivity Minutes.

(r) **“Notice”** has the meaning given to such term in Section 10(c).

(s) **“Permitted Use”** means the Permitted Use stated in the Purchase Agreement, or if no Permitted Use is stated in the Purchase Agreement, any use of ESP by a User for the benefit of Customer solely in or for Customer's business operations.

(t) **“Person”** means an individual, corporation, partnership, joint venture, limited liability entity, governmental authority, unincorporated organization, trust association, or other entity.

(u) **“Process”** means to take any action or perform any operation or set of operations that ESP is capable of taking or performing on any data, information or other content. Processed and Processing shall have their correlative meanings.

(v) **“Prohibited Data”** has the meaning given to such term in Section 7(f).

(w) **“Purchase Agreement”** will mean the ESP Purchase Agreement signed by Customer and Company.

(x) **“Service Failure”** means an event during which ESP operating in a production environment is unexpectedly unavailable to the Customer or its Users through the Internet due to an error or fault of the Company and such event is reported by Customer to Company as required in Section 6(b). A “Service Failure” does not include any of the following:

(i) an interruption in the availability of ESP caused in whole or in part by factors beyond the Company’s reasonable control, such as acts of God, acts of any government, war or other hostility, civil disorder, the elements, fire, explosion, power failure, equipment failure, industrial or labor dispute, inability to obtain necessary supplies, and the like;

(ii) an interruption in the availability of ESP caused in whole or in part by actions or inactions of the Customer or its Users or other representatives or anyone gaining access to ESP using the Customer’s Access Credentials;

(iii) an interruption in the availability of ESP caused in whole or in part by factors software or hardware owned, licensed or used by Customer (other than ESP);

(iv) an interruption in the availability of a beta version of ESP;

(v) an interruption in the availability of ESP during any trial period or other period of time during which the Customer is not paying Fees for the use of ESP; or

(vi) an interruption in the availability of ESP during any period of time in which the Company announced in writing that ESP may be unavailable to the Customer or its Users.

(y) **“Term”** will have the meaning given to it in Section 4 of this Agreement.

(z) **“Territory”** means the geographical area stated on the Purchase Agreement.

(aa) **“Third Party Materials”** means materials and information, in any form or medium, including any software, documents, data, content, specifications, products, equipment or components of or relating to ESP that are not proprietary to Company.

(bb) **“Users”** will mean an employee of Customer who accesses or otherwise uses ESP on behalf of Customer through this Agreement and pursuant to the End User License Agreement then applicable to an individual’s use of, and access to, ESP.

2. ESP Service.

(a) Subject to and conditioned on Customer’s and its User’s compliance with the terms and conditions of this Agreement, the Company shall use commercially reasonable efforts to provide to Customer and its Users ESP in accordance with the terms and conditions hereof, including to host, manage, operate, and maintain ESP for remote electronic access and use by Customer and its Users.

(b) Subject to and conditioned on Customer’s payment of the Fees and compliance and performance in accordance with all other terms and conditions of this Agreement, Company hereby

authorizes Customer to access and use, solely in the Territory specified on the Purchase Agreement, and during the Term, ESP and such Company Materials as Company may supply or make available to Customer solely for the Permitted Use by and through Users in accordance with the conditions and limitations set forth in this Agreement and Company's End User License Agreement. This authorization is non-exclusive and non-transferable.

(c) Customer may, through its Customer account settings accessible on ESP, grant access to ESP up to the maximum number of Users specified on the Purchase Agreement.

(d) Nothing in this Agreement grants any right, title or interest in or to (including any license under) any Intellectual Property rights in or relating to, ESP, Company Materials or Third Party Materials, whether expressly, by implication, estoppel or otherwise. All right, title and interest in and to ESP, the Company Materials and the Third Party Materials are and will remain with Company and the respective rights holders in the Third Party Materials.

(e) Customer shall not, and shall not permit any other Person to, access or use ESP or Company Materials except as expressly permitted by this Agreement and, in the case of Third Party Materials, the applicable third-party license agreement. For purposes of clarity and without limiting the generality of the foregoing, Customer shall not, except as this Agreement expressly permits:

(i) copy, modify or create derivative works or improvements of ESP or Company Materials;

(ii) rent, lease, lend, sell, sublicense, assign, distribute, publish, transfer or otherwise make available ESP or Company Materials to any Person, including on or in connection with the internet or any time-sharing, service bureau, software as a service, cloud or other technology or service;

(iii) reverse engineer, disassemble, decompile, decode, adapt or otherwise attempt to derive or gain access to the source code of ESP or Company Materials, in whole or in part;

(iv) bypass or breach any security device or protection used by ESP or Company Materials or access or use ESP or Company Materials other than by a User through the use of his or her own then valid Access Credentials;

(v) input, upload, transmit or otherwise provide to or through ESP or Company Systems, any information or materials that are unlawful or injurious, or contain, transmit or activate any Harmful Code;

(vi) damage, destroy, disrupt, disable, impair, interfere with or otherwise impede or harm in any manner ESP, Company Systems, or Company's provision of services to any third party, in whole or in part;

(vii) remove, delete, alter or obscure any trademarks, warranties or disclaimers, or any copyright, trademark, patent or other Intellectual Property or proprietary rights notices from ESP or Company Materials, including any copy thereof;

(viii) access or use ESP or Company Materials in any manner or for any purpose that infringes, misappropriates or otherwise violates any Intellectual Property right or other right of any third party or that violates any applicable Law; or

(ix) otherwise access or use ESP or Company Materials beyond the scope of the authorization granted under Section 2(b).

(f) Users will be required to accept an End User License Agreement consistent with this Agreement prior to accessing or using ESP. A User's violation of the End User License Agreement, including any community behavior guidelines, constitutes a material breach of this Agreement.

3. Fees and Payment.

(a) Other than the amount withheld pursuant to Section 9(b) of the Payment Agreement, Customer shall pay the Fees in immediately available United States Dollars as and when indicated on the Purchase Agreement. All Fees are nonrefundable and fully earned when paid.

(b) If Customer fails to make any payment when due then, in addition to all other remedies that may be available:

(i) Company may charge interest on the past due amount at the rate of 1.5% per month calculated daily and compounded monthly or, if lower, the highest rate permitted under applicable law;

(ii) Customer shall reimburse Company for all costs incurred by Company in collecting any late payments or interest, including attorneys' fees, court costs and collection agency fees; and

(iii) if such failure continues for five days following written Notice thereof, Company may suspend Company's and Users' access to ESP until all past due amounts and interest thereon have been paid, without incurring any obligation or liability to Customer or any other Person by reason of such suspension.

(c) Other than the amount withheld pursuant to Section 9(b) of the Payment Agreement, Customer shall pay when due any fees, taxes, or other assessments, including any interest or penalty thereon, levied on Company or Customer as a result of this Agreement or Customer's use of ESP, excluding taxes measured by the net income of the Company.

(d) All amounts payable to Company under this Agreement shall be paid by Customer to Company in full without any setoff, recoupment, counterclaim, deduction, debit or withholding for any reason other than Service Credits issued pursuant to Section 6(a) and the amount withheld pursuant to Section 9(b) of the Payment Agreement.

4. Term and Termination.

(a) The term of this Agreement will begin on the date on which the Customer accepts this Agreement and will continue thereafter until the date stated on the Purchase Agreement (the "**Term**").

(b) The Company may terminate this Agreement prior to the expiration of the Term by providing the Customer with Notice of termination on or after the occurrence of any of the following events: (i) one or more breaches of this Agreement by Customer; (ii) violation by Customer of a law related to this Agreement or to ESP; (iii) filing by Customer of a voluntary petition in bankruptcy, or the filing of an involuntary petition in bankruptcy against Customer; (iv) insolvency of Customer, the making of an assignment for the benefit of creditors by Customer, the appointment of a receiver, conservator, or trustee to operate Customer's business, or the liquidation by Customer of all or

substantially all of its business assets; (v) repeated violations or a material violation of any End User License Agreement by any User that Customer does not take reasonable steps to cure and prevent future violations by any such User. If the Company seeks to terminate this Agreement for Customer's failure to timely pay Fees, Company shall provide Customer with a 30-day period to cure such delinquency prior to terminating this Agreement. In all other instances, the termination of this Agreement will be effective upon Customer's receipt (or constructive receipt) of Notice of termination. The Company may, at its option, suspend Customer's and/or Users' access to ESP during its investigation of any breach of this Agreement. Upon the termination or expiration of this Agreement, Customer's and its Users' ability to use and access ESP and any Customer Data will terminate.

(c) Within 30 days of the expiration of this Agreement, the Company shall at Customer's request, and only if Customer is current with all Fees and had not otherwise defaulted under this Agreement during the Term, transfer to Customer all Customer Data stored on ESP. The Customer Data shall be transferred in an industry standard format determined by ESP in its sole discretion, and Customer shall be responsible for any conversion required to make the Customer Data usable outside of ESP. ESP does not replace the need for Customer to maintain regular data backups or redundant data archives. COMPANY HAS NO OBLIGATION OR LIABILITY FOR ANY LOSS, ALTERATION, DESTRUCTION, DAMAGE, CORRUPTION OR RECOVERY OF CUSTOMER DATA.

(d) If Company has permanently terminated its provision of ESP to customers, including the Customer, or ceased to provide ESP to Customer for a period of 30 or more consecutive days during the Term, except as permitted by this Agreement or by reason of a Force Majeure Event, Company shall grant Customer a perpetual, nonexclusive, non-transferable, non-sublicensable right and license throughout the Territory to possess, control, and use ESP, including the ESP source code, solely for the Permitted Use; provided the grant of the license shall be conditioned upon Customer paying Company an additional license Fee for one-year of use of ESP (as specified in the Purchase Agreement) and reimbursing Company for its reasonable costs incurred in preparing and delivering the source code pursuant to the license.

5. Warranties, Disclaimers, and Limitations of Liability.

(a) Customer represents, warrants, and covenants to the Company that it is the sole and exclusive owner of the Customer Data and it has the right to grant the Company Permissions.

(b) The Company and Customer each represent and warrant to the other that neither the execution nor delivery of this Agreement, nor performance of its obligations hereunder, will conflict with, or result in a breach of or default under, any law, contract, or instrument to which it is a party or by which it is bound.

(c) THE COMPANY PROVIDES ESP AND ANY OUTPUT GENERATED BY ESP ON AN AS-IS BASIS, WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF TITLE PERFORMANCE, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY, OMISSIONS, COMPLETENESS, CURRENTNESS OR DELAYS.

IN NO EVENT SHALL COMPANY OR ITS AFFILIATES BE LIABLE TO CUSTOMER FOR ANY CLAIM(S) RELATING IN ANY WAY TO (i) ANY LOST PROFITS OR OTHER CONSEQUENTIAL, EXEMPLARY, INCIDENTAL, INDIRECT OR SPECIAL DAMAGES RELATING IN WHOLE OR IN PART TO CUSTOMER'S RIGHTS UNDER THIS AGREEMENT OR USE OF, OR INABILITY TO USE, ESP, EVEN IF COMPANY, AND/OR

ITS AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; OR (ii) THE PROCURING, COMPILING, INTERPRETING, EDITING, WRITING, REPORTING, OR DELIVERING OF DATA BY ESP OR OUTPUT GENERATED BY ESP.

COMPANY MAKES NO WARRANTY THAT ACCESS TO ESP OR ANY OUTPUT GENERATED BY ESP WILL BE UNINTERRUPTED, SECURE, COMPLETE, OR ERROR FREE, NOR DOES COMPANY MAKE ANY WARRANTY AS TO THE LIFE OF ANY URL OR THIRD PARTY WEB SERVICE.

CUSTOMER ACKNOWLEDGES THAT THE USE OF ESP ENTAILS THE LIKELIHOOD OF SOME HUMAN AND MACHINE ERRORS, DELAYS, INTERRUPTIONS AND LOSSES, INCLUDING THE INADVERTENT LOSS OF DATA (INCLUDING CUSTOMER DATA) OR DAMAGE TO MEDIA OR CUSTOMER'S HARDWARE, AND COMPANY SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES RELATED TO SUCH OCCURRENCES.

(d) The Company shall have no liability for any of the following (a) Customer's access to or use of ESP or Company Materials in combination with any hardware, system, software, network or other materials or service not provided or authorized in writing by Company; (b) modification of ESP or Company Materials other than: (i) work done by or on behalf of Company; or (ii) with Company's written approval in accordance with Company's written specifications; and (c) failure to timely implement any modifications, upgrades, replacements or enhancements made available to Customer by or on behalf of Company.

6. ESP Availability; Service Credits.

(a) If the Customer experiences a Service Failure and Customer is not then in default of this Agreement, the Customer may apply for a credit against future Fees (a "**Service Credit**").

(b) For Customer's claim for a Service Credit to be considered by Company, Customer must notify ESP of the potential Service Failure within 5 days of such event and must file a written claim with the Company using the form provided by Company prior to the end of the calendar month immediately following the month in which the potential Service Failure occurred. The Company will review the Customer's written claim submission, and using such information, will in good faith determine whether the Customer is owed a Service Credit due to the alleged Service Failure. The Company's determination is final and not subject to appeal or negotiation. The Service Credit will have no cash value and may only be used as a discount against future Fees incurred by Customer. The Customer may make only one claim for a Service Credit per calendar month. The Service Credit is the Customer's sole and exclusive remedy for any Service Failure.

(c) If the Customer experiences a Service Failure and complies with the requirements of this Agreement, the Company will issue the Customer a Service Credit in an amount calculated as follows:

(i) If the Monthly Connectivity Uptime (as defined below) is 99.00 to 99.95%, the Customer will receive a Service Credit equal to 5% of the Customer's Fees for the month in which the Service Failure occurred.

(ii) If the Monthly Connectivity Uptime is less than 99.00%, the Customer will receive a Service Credit equal to 7% of the Customer's Fees for the month in which the Service Failure occurred.

(iii) If one of the following Service Failures listed in Table 1 below occurs and is reported by Customer, the Company shall use commercially reasonable efforts to respond as indicated

in Table 2, and provided all conditions regarding Service Credits have been satisfied by Customer, issue Customer a Service Credit as stated on Table 2.

Table 1	
Defect Priority	Service Failure
Critical Priority	A problem that renders ESP unavailable to all or a substantial number of users (i.e. ESP is generally unavailable).
High Priority	A problem that has or will render ESP inoperable or unusable for a substantial number of users through incorrect calculations or disabled access to key functionality and where there is no acceptable workaround.
Medium or Low Priority	A problem with ESP that impacts a non-essential function while leaving the essential functions of ESP intact and operable or any other problem deemed by the Customer to fall into this category.

Table 2					
Priority Level	Response Time	Investigate, diagnose, continue to work Production Systems	Minimum Frequency of status updates	Resolution Time	Service Credits
Critical Priority	Acknowledge by a personal phone call within 60 minutes of receiving an alert or request (during business hours). M-F, 8 am - 8 pm CT	24 x 7 x 365	Every 4 hours or mutually agreed interval	8 hours from receipt of alert or request. Root cause report will be provided by Company.	5% of the Fees for the month in which the initial failure begins, discounted from next invoice.
High Priority	Acknowledge within 2 hours of receiving alert or request (during business hours). M-F, 8 am - 8 pm CT	M-F, 8am – 8pm (CT)	Daily	3 business days from receipt of alert or request. Root cause report will be provided by Company on request.	3% of the Fees for the month in which the initial failure begins, discounted from next invoice.

Table 2					
Priority Level	Response Time	Investigate, diagnose, continue to work Production Systems	Minimum Frequency of status updates	Resolution Time	Service Credits
Medium or Low Priority	Acknowledge within 4 hours of receiving alert or request (during business hours). M-F, 8 am - 8 pm CT	M-F, 8am – 8 pm (CT)	Daily	10 business days from receipt of alert or request. Unless otherwise agreed by the parties	2% of the Fees for the month in which the initial failure begins, discounted from next invoice.

7. Ownership of Data; Customer Control of Data.

(a) Company has and will retain sole control over the operation, provision, maintenance and management of ESP and Company Materials, including the: (i) Company Systems; (ii) location(s) where any of the services hereunder are performed; (iii) selection, deployment, modification and replacement of ESP; and (iv) performance of maintenance, upgrades, corrections and repairs to ESP.

(b) Customer has and will retain sole control over the operation, maintenance and management of, and all access to and use of, the Customer Systems, and sole responsibility for all access to and use of ESP and Company Materials by any Person by or through the Customer Systems or any other means controlled by Customer or any User, including any: (i) information, instructions or materials provided by any of them to ESP or Company; (ii) results obtained from any use of ESP or Company Materials; and (iii) conclusions, decisions or actions based on such use.

(c) As between Customer and Company, Customer is and will remain the sole and exclusive owner of all right, title and interest in and to all Customer Data, including all Intellectual Property rights relating thereto, subject to the rights and permissions granted in Section 7(d).

(d) Customer hereby irrevocably grants all such rights and permissions in or relating to Customer Data: (i) to Company, its subcontractors, and the Company Personnel as are necessary or useful to provide ESP and perform the services hereunder; and (ii) to Company as are necessary or useful to enforce this Agreement and exercise its rights and perform its duties hereunder (the “**Company Permissions**”). Notwithstanding anything to the contrary in the Company Permissions, Company shall use commercially reasonable efforts to use and display the Customer Data only as permitted by the Company Permissions and the settings selected by Customer and its Users in ESP.

(e) Customer has and will retain sole responsibility for: (i) all Customer Data, including its content and use; (ii) all information, instructions and materials provided by or on behalf of Customer or any User in connection with ESP; (iii) Customer’s information technology infrastructure, including computers, software, databases, electronic systems (including database management systems) and networks, whether operated directly by Customer or through the use of third-party services (“**Customer**

Systems”); (iv) the security and use of Customer’s and its Users’ Access Credentials; and (v) all access to and use of ESP and Company Materials directly or indirectly by or through the Customer Systems or its or its Users’ Access Credentials, with or without Customer’s knowledge or consent, including all results obtained from, and all conclusions, decisions and actions based on, such access or use.

(f) Customer acknowledges ESP is not designed with security and access management for Processing the following categories of information: (i) personal information; (ii) data that is classified and or used on the U.S. Munitions list, including software and technical data; (iii) articles, services and related technical data designated as defense articles or defense services; and (iv) ITAR (International Traffic in Arms Regulations) related data, (each of the foregoing, “**Prohibited Data**”). Customer shall not, and shall not permit any User or other Person to, provide any Prohibited Data to, or Process any Prohibited Data through, ESP, the Company Systems or any Company Personnel. Customer is solely responsible for reviewing all Customer Data and shall ensure that no Customer Data constitutes or contains any Prohibited Data.

8. Indemnification.

(a) Customer shall indemnify, defend, and hold harmless, with counsel reasonably acceptable to Company, the Company and its affiliates, and each of its and their respective officers, directors, employees, agents, successors and assigns (each, a “**Company Indemnitee**”) from and against any and all losses, damages, liabilities, deficiencies, claims, actions, judgments, settlements, interest, awards, penalties, fines, costs or expenses of whatever kind, including reasonable attorneys’ fees and the costs of enforcing any right to indemnification hereunder and the cost of pursuing any insurance provider (collectively, “**Losses**”) incurred by a Company Indemnitee caused by or related to any of the following: Customer’s or User’s use or misuse of ESP; Customer’s or User’s design or use of applications for ESP; Customer Data; Customer’s or User’s use of output generated by or through ESP; allegations of facts that, if true, would constitute Customer’s breach of this Agreement; or negligence or more culpable act or omission by Customer, any User, or any third party on behalf of Customer or User, in connection with this Agreement.

(b) Company shall indemnify, defend and hold harmless Customer from and against any and all third party Losses incurred by Customer caused by or arising out of Customer's use of ESP (excluding Customer Data and Third Party Materials) in compliance with this Agreement infringes a U.S. Intellectual Property right. The foregoing obligation does not apply to any Losses arising out of or relating to any: (i) access to or use of ESP or Company Materials in combination with any hardware, system, software, network or other materials or service not provided or authorized in writing by Company; (ii) modification of ESP or Company Materials other than: (A) by or on behalf of Company; or (B) with Company’s prior written approval in accordance with Company’s written specifications; (iii) failure to timely implement any modifications, upgrades, replacements or enhancements made available to Customer by or on behalf of Company; or (iv) act, omission or other matter described in Section 8(a), whether or not the same results in any action against or Losses by any Company Indemnitee.

9. Limitations on Liability.

(a) IN NO EVENT WILL COMPANY OR ANY OF ITS LICENSORS, SERVICE PROVIDERS OR SUPPLIERS BE LIABLE UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ITS SUBJECT MATTER UNDER ANY LEGAL OR EQUITABLE THEORY, INCLUDING BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY AND OTHERWISE, FOR ANY: (i) LOSS OF PRODUCTION, USE, BUSINESS, REVENUE OR PROFIT OR DIMINUTION IN VALUE; (ii) IMPAIRMENT, INABILITY TO USE

OR LOSS, INTERRUPTION OR DELAY OF ACCESS TO ESP, OTHER THAN FOR THE ISSUANCE OF ANY APPLICABLE SERVICE CREDITS PURSUANT TO SECTION 6(a), (iii) LOSS, DAMAGE, CORRUPTION OR RECOVERY OF DATA, OR BREACH OF DATA OR SYSTEM SECURITY, OR (iv) CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL, ENHANCED OR PUNITIVE DAMAGES, REGARDLESS OF WHETHER SUCH PERSONS WERE ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES OR SUCH LOSSES OR DAMAGES WERE OTHERWISE FORESEEABLE, AND NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE.

(b) IN NO EVENT WILL THE COLLECTIVE AGGREGATE LIABILITY OF COMPANY AND ITS LICENSORS, SERVICE PROVIDERS AND SUPPLIERS UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ITS SUBJECT MATTER, UNDER ANY LEGAL OR EQUITABLE THEORY, INCLUDING BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY AND OTHERWISE, EXCEED THE FEES RECEIVED BY COMPANY UNDER THIS AGREEMENT DURING THE 12-MONTH PERIOD IMMEDIATELY PRECEDING EVENT GIVING RISE TO LIABILITY. THE FOREGOING LIMITATION APPLIES NOTWITHSTANDING THE FAILURE OF ANY AGREED OR OTHER REMEDY OF ITS ESSENTIAL PURPOSE.

10. General Provisions.

(a) In no event will Company be liable or responsible to Customer, or be deemed to have defaulted under or breached this Agreement, for any failure or delay in fulfilling or performing any term of this Agreement, when and to the extent such failure or delay is caused by any circumstances beyond Company's reasonable control (a "**Force Majeure Event**"), including acts of God, flood, fire, earthquake or explosion, war, terrorism, invasion, riot or other civil unrest, embargoes or blockades in effect on or after the date of this Agreement, national or regional emergency, strikes, labor stoppages or slowdowns or other industrial disturbances, passage of Law or any action taken by a governmental or public authority, including imposing an embargo, export or import restriction, quota or other restriction or prohibition or any complete or partial government shutdown, or national or regional shortage of adequate power or telecommunications or transportation. In the event of any failure or delay caused by a Force Majeure Event, Company shall give Notice to Customer stating the period of time the occurrence is expected to continue and use commercially reasonable efforts to end the failure or delay and minimize the effects of such Force Majeure Event.

(b) The parties are independent contractors, and neither shall at any time be considered, or represent itself to be, an agent, employee, associate, or joint venture party of the other. Neither party shall have the authority nor hold itself out as able to bind the other party to any contract or commitment.

(c) Each notice, request or demand, or other communication or document to be given or made under this Agreement will be given in writing, and sent by prepaid U.S. mail, delivered by personal service or delivered by a recognized overnight delivery service, addressed as follows (a "**Notice**"):

If to the Company: 8170 Old Carriage Court N.
Suite 200
Shakopee, MN 55379
ATTN: CEO

If to the Customer: 915 L Street
Suite 1460

Sacramento, CA 95814
ATTN: Executive Director

or to such other address as a party will have specified to the other in writing. All Notices or other communications by letter or personal delivery will be deemed to be duly given or made when delivered.

The Company may provide the Customer with a Notice by e-mail by sending the Notice to the address stated on the Purchase Agreement. If the Company provides the Customer with a Notice by email, the Notice shall be deemed received on the day such Notice is sent by Company and shall have the same force and effect as if sent by courier, overnight delivery, or the United States Postal Service.

The Customer is responsible for updating its Notice addresses on file with the Company.

(d) Neither party to this Agreement may assign or otherwise transfer any of its rights or obligations under this Agreement without the prior written consent of the other party, except that the Company may assign any or all of its rights hereunder to another Person that assumes all of Company's obligations under this Agreement.

(e) This Agreement shall be binding upon and inure to the benefit of the successors, permitted assigns and any other permitted transferees of the parties hereto.

(f) Neither this Agreement nor any of its provisions may be waived, amended or otherwise modified, except by a written instrument signed by both parties and then only to the extent expressly provided therein.

(g) The headings used in this Agreement are inserted for convenience only and shall not affect the meaning or interpretation of this Agreement.

(h) Each party and its legal counsel have reviewed this Agreement. Any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in interpreting this Agreement.

(i) This Agreement may be executed in any number of counterparts by physical, digital, or electronic signature or assent, and delivered electronically or through a facsimile machine or as a .pdf attached to email, and each counterpart so executed and delivered shall be deemed an original, all of which together shall constitute one instrument.

(j) This Agreement shall be interpreted and governed by the laws of the State of Minnesota, USA, not including its conflict of laws principles. Company's use of ESP may also be subject to other local, state, national, or international laws.

(k) The parties agree that the state and federal courts sitting in Hennepin County, Minnesota, USA will have exclusive jurisdiction over any claim arising out of this Agreement and each party consents to the exclusive jurisdiction of such courts.

(l) In the event that any provisions of this Agreement, or any portions thereof, are held to be unenforceable or invalid by any court of competent jurisdiction, the validity and enforceability of the remaining provisions or portions of this Agreement shall not be affected thereby.

(m) This Agreement is solely for the benefit of the parties hereto and no Person other than a party to this Agreement may rely upon or enforce any provisions of this Agreement; provided, however, each Company Indemnitee is a third party beneficiary of this Agreement entitled to enforce Section 8(a).

(n) This Agreement, including the Purchase Agreement and any other guidelines, agreements or materials referenced herein, constitutes the entire understanding and agreement of the parties relating to the subject matter hereof, and supersedes all prior or contemporaneous agreements and understandings, whether written or oral. In the event of a direct conflict between the terms of the Purchase Agreement and this Agreement, the language in the Purchase Agreement will control but only to the extent of the direct conflict. However, the Customer acknowledges and agrees that the End User License Agreement, as the same may be amended by Company from time to time, entered into separately between each User and the Company shall govern each User's use of ESP.

(o) ESP is owned and developed by the Company, and as a result, as between the Company and the Customer, the Company shall make all decisions regarding the functionality and features of ESP. Any and all title, ownership rights, and Intellectual Property rights concerning any ideas, concepts, suggestions, materials and the like that the Customer provides to Company regarding ESP shall become the exclusive property of Company, and Company may use such information for its business purposes in its sole discretion without any payment, accounting, remuneration, or attribution to the Customer.

(p) The individual signing this Agreement on behalf of the Customer is an authorized officer or agent of the Customer with sufficient capacity and authority to execute and deliver this Agreement.

The parties are signing this Agreement as of the date first above written.

Company:

ENERGY PLATFORMS, LLC,
a Minnesota limited liability company

By: _____

Name: Leo Steidel

Its: CEO

Customer:

California Municipal Utilities Association
a Non-Profit Association created pursuant to the laws of the State of California

By: _____

Name: Barry Moline

Its: Executive Director

ESP® Purchase Agreement

Customer Name: California Municipal Utilities Association

Customer Contact: Barry Moline

Address: 915 L Street, Suite 1460, Sacramento, CA 95814

Phone: 916.326.5800

Email: bmoline@cmua.org

Services, Territory, Term & Fees

Services: ESPPortfolios™

Territory: California Publicly Owned Utilities

Term: 5 Years

Start Date: October 1st, 2018

Fees: \$79,000USD per year

Energy Platforms LLC

Contact: Leo Steidel

Cell: 612.382.5547

Email: lsteidel@energyplatforms.com




Commission Staff Report

Date: July 18, 2018

COMMISSION MEETING DATE: July 26, 2018

SUBJECT: Public Works Contract with Northwest Paving, Inc. for 2018 NCPA Geothermal Facility Road Repairs; Applicable to the following project: NCPA Geothermal Facilities

AGENDA CATEGORY: Discussion/Action

FROM:	Ken Speer 	METHOD OF SELECTION:
	Assistant General Manager	<i>Public Works Bid</i>
Division:	Generation Services	<i>If other, please describe:</i>
Department:	Geothermal	

IMPACTED MEMBERS:		
All Members <input type="checkbox"/>	City of Lodi <input checked="" type="checkbox"/>	City of Shasta Lake <input type="checkbox"/>
Alameda Municipal Power <input checked="" type="checkbox"/>	City of Lompoc <input checked="" type="checkbox"/>	City of Ukiah <input checked="" type="checkbox"/>
San Francisco Bay Area Rapid Transit <input type="checkbox"/>	City of Palo Alto <input type="checkbox"/>	Plumas-Sierra REC <input checked="" type="checkbox"/>
City of Biggs <input checked="" type="checkbox"/>	City of Redding <input type="checkbox"/>	Port of Oakland <input type="checkbox"/>
City of Gridley <input checked="" type="checkbox"/>	City of Roseville <input checked="" type="checkbox"/>	Truckee Donner PUD <input type="checkbox"/>
City of Healdsburg <input checked="" type="checkbox"/>	City of Santa Clara <input checked="" type="checkbox"/>	Other <input checked="" type="checkbox"/>
<i>If other, please specify</i>		Turlock

RECOMMENDATION:

Approve Resolution 18-53, authorizing the General Manager to enter into a Public Works Agreement with Northwest Paving, Inc. for road repairs at the NCPA Geothermal Facility, with any non-substantial changes recommended and approved by the NCPA General Counsel, and to delegate the General Manager authority to issue purchase orders and change orders for a not-to-exceed amount of \$332,000.

BACKGROUND:

Road repair and maintenance services are periodically required to maintain the roads at NCPA's Geothermal Facility. Currently, the main road to NCPA's Geothermal Facility needs to be repaired and resurfaced, and the center lines and fogs lines need to be restriped. In addition, the entrance to Plant #1 needs to be widened to allow safer access for large trucks.

FISCAL IMPACT:

The cost for the project is \$301,327, as specified in the contractor's bid. Contingency funds of \$30,673 (approximately 10% of the contractor's bid amount) are further requested to cover possible changes orders, for a total not to exceed amount of \$332,000. This project was included in the FY19 budget. Cost allocation will be based on project participation percentages. Purchase orders referencing the terms and conditions of the agreement will be issued consistent with NCPA procurement policies and procedures.

The cost to repair the main road to NCPA's main gate will be shared between NCPA and Calpine via a standing Operational Agreement. This agreement states that NCPA is responsible for 60% of road maintenance costs on this specific stretch of road, while Calpine is responsible for the other 40%. The estimated cost for repairs to the main road is \$248,277. Calpine will reimburse NCPA for a total of \$99,310.80, or 40% of these costs. NCPA will pay the remaining 60%, or \$148,966.20, plus an additional \$53,050 for widening the entrance to Plant #1.

SELECTION PROCESS:

This project was competitively bid in compliance with the CA Public Works Contracting procedures. A formal Request for Proposal (RFP) for this public works project was issued on May 7, 2018. Bids were due on June 13, 2018. Two contractors submitted bids for the project; Epidendio Construction submitted the highest responsive bid for \$452,863, and Northwest Paving submitted the lowest responsive bid for \$301,327. Staff recommends that Northwest Paving be awarded the contract based on the best value to NCPA.

ENVIRONMENTAL ANALYSIS:

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

COMMITTEE REVIEW:

The recommendation above was reviewed by the Facilities Committee on July 5, 2018, and was recommended for Commission approval as a Discussion/Action Item.

Respectfully submitted,

A handwritten signature in cursive script that reads "Ken Speer for Randy Howard". The signature is written in dark ink and is positioned above the printed name of Randy S. Howard.

RANDY S. HOWARD
General Manager

Attachments (2):

- Resolution
- Northwest Paving, Inc. Public Works Agreement

RESOLUTION 18-53

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY APPROVING THE PUBLIC WORKS CONTRACT FOR 2018 NCPA ROAD REPAIRS WITH NORTHWEST PAVING, INC.

(reference Staff Report #169:18)

WHEREAS, the Northern California Power Agency (NCPA) operates and maintains on behalf of the project owners a Geothermal Facility near Middletown, California, consisting of two power plants with containment areas and 80 steam production and injection wells; and

WHEREAS, inspections have demonstrated a need for repairs to the main road to NCPA's Geothermal Facility; and

WHEREAS, Northwest Paving, Inc. was the low responsive bidder to the Request for Proposal for the public works for NCPA Geothermal Facility Road Repairs (GEO348) with a bid of \$301,327; and

WHEREAS, an additional \$30,673, or approximately 10% of the bid amount, is requested to cover possible change orders and contingencies, for a total project cost of \$332,000; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager to enter into the Public Works Contract for 2018 NCPA Road Repairs with Northwest Paving, Inc. with a not to exceed amount of \$332,000, which includes the bid amount of \$301,327 and \$30,673 in contingency funds, with any non-substantial changes recommended and approved by the NCPA General Counsel.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2018 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY

AGREEMENT

This contract ("Contract" or "Agreement") is entered into this _____ day of _____, 20__, by and between the Northern California Power Agency, a joint powers public agency organized and existing under the laws of the State of California (hereinafter referred to as "NCPA") and Northwest Paving, Inc., a **California Corporation** with offices located at 8115 Secluded Valley Drive, Redding, CA 96001, (hereinafter referred to as "Contractor"), collectively referred to as the "Parties"),

WHEREAS, NCPA intends to have constructed the **2018 Road Repairs** ("Project") located at **NCPA's Facilities near Middletown, CA** (hereinafter referred to as the "Project"), and the work required by this Contract is an integral part of this Project, and

WHEREAS, on _____, at its regularly scheduled meeting, the NCPA Commission has approved and authorized this Project by Resolution No. _____ (if estimated at over \$250,000); and

WHEREAS, both Parties have a desire to perform the work described herein;

NOW THEREFORE, IT IS AGREED THAT:

SECTION 1. SCOPE OF WORK

Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, materials, transportation and utility services and incidentals necessary to fully perform and complete, in a good workmanlike manner, free from any and all liens and claims from mechanics, material suppliers, subcontractors, artisans, machinists, teamsters, freight carriers, and laborers, and in strict accordance with the Contract Documents (as defined below), including without limitation the drawings and technical specifications and plans included therein, the Work of:

**Northern California Power Agency
Project Description: 2018 Road Repairs
NCPA Bid No.: GEO348**

It is understood and agreed that such tools, equipment, apparatus, facilities, labor, materials, transportation and utility services and incidentals shall be furnished, and the Work performed and completed, in accordance with the Contract Documents and subject to the approval of NCPA and NCPA's duly authorized representatives.

SECTION 2. TIME OF COMPLETION; LIQUIDATED DAMAGES

Contractor hereby agrees to commence the Work within 10 calendar days from the date of NCPA's "Notice to Proceed," and to diligently prosecute the same to completion within sixty (60) consecutive calendar days commencing after the date of NCPA's Notice to Proceed. Contractor shall complete the work no later than October 31, 2018, except as adjusted by any subsequent change order. Time is of the essence in this Agreement.

This Contract is being awarded in reliance upon the completion date set forth in the Contract Documents and the dates established by schedules set forth and released by NCPA. NCPA will hold the Contractor responsible and accountable for all damages suffered by NCPA as a consequence of the Contractor's failure to meet the schedule dates, or to complete the work at the time specified, except for such excusable delays as listed in the Contract Documents.

NCPA – GEO348
Northwest Paving, Inc. Public Works Agreement
1/23/17

It is agreed by the parties to this Agreement that in the case in which portion of the work called for under Contract Documents are not completed within the times specified, damages will be sustained by NCPA, and it is and will be impractical and extremely difficult to ascertain the actual damages which NCPA will sustain in the event of and by reason of such delay. It is therefore agreed that the Contractor shall pay to NCPA the sums stipulated for delays in finishing the work beyond the times of completion specified; and the Contractor agrees to pay these liquidated damages, and further agrees that NCPA may deduct the amount thereof from any moneys due or that may become due the Contractor under the Contract Documents. If such moneys are insufficient, the Contractor or its surety or sureties shall pay to NCPA any deficiency within thirty (30) days of invoice submittal by NCPA.

Liquidated damages in the amount of **\$1,000 per day** for each day of delay shall be imposed on Contractor.

SECTION 3. CONTRACT PRICE

NCPA will pay Contractor in current funds as full consideration for the full and complete performance of this Agreement the sum of:

THREE HUNDRED AND ONE THOUSAND THREE HUNDRED TWENTY-SEVEN dollars (\$301,327.00), being Contractor's bid amount, subject to subsequent contract change order(s), for furnishing all materials and for doing all the Work contemplated under this Agreement; for all loss or damages arising out of the nature of the Work, or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the Work, until the Work is accepted by the NCPA; for all expenses incurred by or in consequences of the suspension or discontinuance of the Work; and for well and faithfully completing the Work, the whole thereof, in the manner and in accordance with the Contract Documents therefore and the requirements of NCPA under them.

SECTION 4. BONDS

Prior to execution of this Agreement, Contractor shall obtain a one hundred percent (100%) Performance Bond, a one hundred percent (100%) Payment (Labor and Materials) Bond, and a ten percent (10%) Maintenance Bond each in the form included in the Contract Documents.

SECTION 5. INSURANCE

Before beginning any work under this Contract, Contractor, at its own cost and expense, shall procure the types and amounts of insurance listed below against claims that may arise from or in connection with the performance of the work hereunder by Contractor and its agents, representatives, employees, and subcontractors. Contractor shall maintain the insurance policies required by this section throughout the term of this Contract. The cost of such insurance shall be included in the Contractor's price. Contractor shall not allow any subcontractor to commence work on any subcontract until Contractor has obtained all insurance required herein for the subcontractor(s) and provided evidence thereof to NCPA. Verification of the Contractor's required insurance shall be submitted and made part of this Contract prior to execution. The existence of insurance shall not relieve or decrease the liability of Contractor under the Contract Documents.

5.1. Workers' Compensation. Contractor shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Contractor. The Statutory Workers' Compensation Insurance and Employer's Liability Insurance shall be provided with limits of not less than One Million Dollars (\$1,000,000.00) per accident. In the alternative, Contractor may rely on a self-insurance program to meet those requirements, but only if the program of self-insurance complies fully with the provisions of the California Labor Code. Determination of whether a self-insurance program meets the standards of the Labor Code shall be solely in the discretion of NCPA. The insurer, if insurance is provided, or the Contractor, if a program of self-insurance is provided, shall waive all rights of subrogation against NCPA and its officers, officials, employees, and volunteers for loss arising from work performed under this Contract.

5.2. Commercial General Insurance.

5.2.1. General requirements. Contractor, at its own cost and expense, shall maintain commercial general liability insurance for the term of this Contract in an amount not less than one million dollars (\$1,000,000) and two million dollars (\$2,000,000.00), per occurrence, combined single limit coverage for risks associated with the work contemplated by this Contract. If a Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Contract or the general aggregate limit shall be at least twice the required occurrence limit. Such coverage shall include but shall not be limited to, protection against claims arising from bodily injury, personal injury, including death resulting therefrom, completed operations and products liability; broad form property damage liability; coverage for the XCU hazards of explosion, collapse, and underground, and contractual liability as to the obligations assumed by the Contractor under the Contract Documents.

5.2.2. Minimum scope of coverage. Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (current edition) covering comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability. No endorsement shall be attached limiting the coverage.

5.3 Automobile Liability Insurance.

5.3.1. General requirements. Contractor, at its own cost and expense, shall maintain automobile liability insurance for the term of this Contract in an amount not less than one million dollars (\$1,000,000) and two million dollars (\$2,000,000.00), per occurrence, combined single limit coverage for risks associated with the work contemplated by this Contract. If an Automobile Liability form or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Contract or the general aggregate limit shall be at least twice the required occurrence limit.

5.3.2. Minimum scope of coverage. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001 (current edition) symbol 1. No endorsement shall be attached limiting the coverage.

5.4 All Policies Requirements.

- 5.4.1. Acceptability of Insurers.** All insurance required by this section is to be placed with insurers with a Best's rating of no less than A:VII.
- 5.4.2. Verification of Coverage.** Prior to beginning any work under this Contract, Contractor shall furnish NCPA with endorsements (as to insurance referenced in Sections 5.2, 5.3 and 5.5) and certificates, with complete certified copies of all policies (if requested by NCPA), evidencing to NCPA's reasonable satisfaction, compliance with Section 5 herein. All endorsements shall show the signature of a person authorized by that insurer to bind coverage on its behalf.
- 5.4.3. Notice of Reduction in or Cancellation of Coverage.** Contractor shall provide at least thirty (30) days prior written notice of any material changes to the insurance specified herein, including suspension, cancellation, termination, limitation, reduction in scope or amount. NCPA's receipt of such notice shall not constitute NCPA's acceptance of such material change.
- 5.4.4. Additional Insured; Primary Insurance.** An endorsement at least as broad as Insurance Services Office form number CG 20 10 (current edition) shall be attached to policies referenced in Sections 5.2, 5.3 and 5.5, stating that NCPA and its officers, employees, agents, and volunteers shall be covered as additional insureds with respect to such policies. The coverage shall contain no special limitations on the scope of protection afforded to NCPA or its officers, employees, agents, or volunteers.
- Each endorsement shall state that coverage is primary insurance with respect to NCPA and its officers, officials, employees, agents and volunteers, and that no insurance or self-insurance maintained by NCPA shall be called upon to contribute to a loss under the coverage.
- 5.4.5. Deductibles and Self-Insured Retentions.** Contractor shall disclose to and obtain the written approval of NCPA for the self-insured retentions and deductibles before beginning any of the services or work called for by any term of this Contract.
- During the period covered by this Contract, only upon the prior express written authorization of NCPA, Contractor may increase such deductibles or self-insured retentions with respect to NCPA, its officers, employees, agents, and volunteers. NCPA may condition approval of an increase in deductible or self-insured retention levels with a requirement that Contractor procure a bond, guaranteeing payment of losses and related investigations, claim administration, and defense expenses that is satisfactory in all respects to each of them.
- 5.4.6. Subcontractors.** Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and certified endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.
- 5.4.7. Variation.** NCPA may approve a variation in writing in the foregoing insurance requirements, upon a determination that the coverage, scope, limits, and forms of such insurance are either not commercially available, or that NCPA's interests are otherwise fully protected.

5.4.8 Reporting. The endorsements shall also specify that any failure or delay to comply with reporting or other provisions of the policies shall not affect coverage provided to NCPA, its officers, officials, employees, agents or volunteers.

5.4.9 Occurrence-basis for Coverage. The endorsements shall also specify that coverage is on an occurrence or an accident basis, and not on a claims-made basis.

5.5 Builder's Risk. Contractor shall obtain and maintain at its own expense a builder's risk and fire insurance policy, special form including extended coverage and vandalism, and malicious mischief endorsements. The policy shall name NCPA and the Contractor as insureds. This insurance shall be in the amount of 100% of the Contract Price, and may be increased at NCPA's request to reflect change orders. In the event of partial or total destruction by fire of any or all of the Work at any time prior to completion and NCPA's acceptance of the Work, the Contractor shall promptly reconstruct all Work so destroyed or injured at the Contractor's sole cost and expense and at no cost to NCPA.

5.6 Remedies. In addition to any other remedies NCPA may have if Contractor fails to provide or maintain any insurance policies or policy endorsements to the extent and within the time herein required, NCPA may, at its sole option exercise any of the following remedies, which are alternatives to other remedies NCPA may have and are not the exclusive remedy for Contractor's breach:

- Obtain such insurance and deduct and retain the amount of the premiums for such insurance from any sums due under the Contract;
- Order Contractor to stop work under this Contract or withhold any payment that becomes due to Contractor hereunder, or both stop work and withhold any payment, until Contractor demonstrates compliance with the requirements hereof; and/or
- Terminate this Contract.

SECTION 6. INDEPENDENT CONTRACTOR

6.1. Independent Contractor. At all times during the term of this Contract, Contractor shall be an independent contractor and shall not be an employee of NCPA. NCPA shall not have the right to control the means by which Contractor accomplishes services rendered pursuant to this Contract. Notwithstanding any other NCPA, state, or federal policy, rule, regulation, law, or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing services under this Contract shall not qualify for or become entitled to, and hereby agree to waive any and all claims to, any compensation, benefit, or any incident of employment by NCPA, including but not limited to eligibility to enroll in the California Public Employees Retirement System (PERS) as an employee of NCPA and entitlement to any contribution to be paid by NCPA for employer contributions and/or employee contributions for PERS benefits.

6.2. Contractor Not Agent. Except as NCPA may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of NCPA in any capacity whatsoever as an agent. Contractor shall have no authority, express or implied, pursuant to this Contract to bind NCPA to any obligation whatsoever.

SECTION 7. REGISTRATION

During the term of this Agreement, Contractor warrants that it is currently registered with the Department of Industrial Relations and qualified to perform public work consistent with Labor Code section 1725.5. Contractor further warrants that any subcontractors, who are subject to Public Contract Code section 4104, are registered and qualified to perform public work consistent with Labor Code section 1725.5

SECTION 8. LAW, VENUE, AND CONFLICTS OF INTEREST

8.1. This Agreement has been executed and delivered in the State of California, and the validity, enforceability and interpretation of any of the provisions of the Contract Documents, including this Agreement, shall be determined and governed by the laws of the State of California, without regard to the choice of law doctrine.

8.2. The duties and obligations of the parties created hereunder are performable in Placer County and in that County where the NCPA Project is located. Either Placer County or the County where the Project Facility is located shall be the venue for any action or proceeding that may be brought or arise out of, in connection with or by reason of this Agreement.

8.3. Contractor may serve other clients, but none whose activities within the corporate limits of NCPA or whose business, regardless of location, would place Contractor in a "conflict of interest," as that term is defined in the Political Reform Act, codified at California Government Code Sections 81000 *et seq.*

8.4. Contractor shall not employ any NCPA official in the work performed pursuant to this Contract. No officer or employee of NCPA shall have any financial interest in this Contract that would violate Government Code Sections 1090 *et seq.*

8.5. Contractor hereby warrants that it is not now, nor has it been in the previous twelve (12) months, an employee, agent, appointee, or official of NCPA. If Contractor was an employee, agent, appointee, or official of NCPA in the previous twelve months, Contractor warrants that it did not participate in any manner in the forming of this Contract. Contractor understands that, if this Contract is made in violation of Government Code Sections 1090 *et seq.*, the entire Contract is void and Contractor will not be entitled to any compensation for services performed pursuant to this Contract, including reimbursement of expenses, and Contractor will be required to reimburse NCPA for any sums paid to the Contractor. Contractor understands that, in addition to the foregoing, it may be subject to criminal prosecution for a violation of Government Code Section 1090 and, if applicable, will be disqualified from holding public office in the State of California.

SECTION 9. CHANGE ORDERS

It is agreed that the Project Manager is the sole person authorized to execute change orders necessary to the prosecution of the Work, unless NCPA otherwise notifies Contractor in writing.

SECTION 10. EXTRA WORK

Contractor hereby agrees that it will not proceed with any extra work unless it has been authorized in writing to do so by the Project Manager prior to the commencement of such extra work.

SECTION 11 PROGRESS PAYMENTS

11.01 The Contractor shall submit to NCPA's designated representative at least 10 days before the first and/or third Monday of the month, for NCPA's approval, a request for payment. Each progress payment to the Contractor by NCPA shall be in payment for only that work performed

by the Contractor during the period immediately preceding the Contractor's current request for payment.

11.02 If requested by NCPA, the Contractor shall submit time sheets to NCPA daily for approval and signature. The daily time sheets shall clearly delineate the number of worker-hours and equipment hours worked in each given area of work. If NCPA makes this request, then only those time sheets signed by NCPA will be honored for payment.

11.03 Each request for payment submitted by the Contractor shall include backup documentation in support of all quantities and costs for which payment is requested, including but not limited to all material invoices, subcontractor/vendor statements of quantities and/or services provided, equipment rental invoices and signed daily time sheets.

11.04 Work performed at the request of NCPA, which is outside the scope of work and unit prices as defined in these Contract Documents, shall be itemized separately, with back-up documentation attached, and the total cost figures for the work shall be entered on the billing form under "Other Work". Work itemization with back-up shall be submitted with the Contractor's request for payment.

11.05 Subject to Section 12 of the General Conditions, after approval by NCPA, progress payments will be made to the Contractor in the amount of ninety five percent (95%) of the approved billing. Progress payments will be made within 30 days after NCPA receives the Contractor's Request for Payment. NCPA's Progress Payment shall not constitute approval or acceptance of the Work performed.

SECTION 12. FINAL PAYMENT

12.01 Final payment will not be made to the Contractor until it has furnished evidence satisfactory to NCPA, of the Contractor's payment or provision for payment of all bills for material, labor, services, etc., incurred in connection with the performance of the Work; and at NCPA's option the written consent of the Contractor's surety to release final payment.

12.02 Final payment will further be contingent on approval of, and acknowledgment by, NCPA that the Contractor has completed all tasks and complied with all conditions of the Contract Documents. Upon approval by NCPA, the final payment will be made to the Contractor. NCPA may withhold from final payment, to the extent allowed by applicable law, amounts which in NCPA's opinion are determined to be reasonable and necessary to provide security against any losses, damages, expense, and liability covered by the Indemnification provision in the Contract Documents, and claims filed or reasonable evidence indicating probable filing of claims, damages to NCPA or third parties, liquidated damages, or other lawful bases for withholding final payment.

12.03 Final payment by NCPA, and acceptance of it by the Contractor, shall not constitute a waiver by NCPA, to any rights with respect to the Contractor's continuing obligations under the Contract Documents.

SECTION 13. DISPUTES

13.1. All questions of fact, and any and all disputes with references thereto, arising out of the performance of this Contract, or changes therein, or extra work in connection therewith, shall be submitted in writing to NCPA. NCPA will then make the final decision, which when made in writing shall be final and conclusive on the parties hereto.

13.2. Prior to initiating litigation in a court of competent jurisdiction, both Contractor and NCPA shall undergo alternative dispute procedures as outlined in Public Contract Code Sections 20104

et seq. The parties also expressly agree that the Alternative Dispute Resolution procedures outlined in Public Contract Code Sections 20104 *et seq.* shall apply to all claims, including those that exceed \$375,000, and that such procedures are incorporated as though fully set forth in this Contract.

13.3 Notwithstanding Sections 13.1 and 13.2, procedures for the Contractor to make claims for: (1) an extension of time, including relief from damages or penalties for delay; (2) payment by NCPA of money or damages arising from work done by, or on behalf of, the Contractor, where the underlying contract does not expressly provide for payment or payment to which the Contractor is not otherwise entitled, or (3) the payment of an amount disputed by NCPA are set forth in Section 10.03 of the General Conditions.

SECTION 14. PREVAILING WAGES

In accordance with California Labor Code Section 1771, not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is to be performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work fixed as provided in the California Labor Code must be paid to all workers engaged in performing the Work. In accordance with California Labor Code Section 1770 and following, the Director of Industrial Relations has determined the general prevailing wage per diem rates for the locality in which the Work is to be performed. In accordance with California Labor Code Section 1773, NCPA has obtained the general prevailing rate of per diem wages and the general rate for holiday and overtime work in the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the project. In accordance with California Labor Code Section 1773.2, copies of the prevailing rate of per diem wages are on file at the Agency and will be made available on request. Throughout the performance of the Work the Contractor must comply with all provisions of the Contract Documents and all applicable laws and regulations that apply to wages earned in performance of the Work. Contractor assumes all responsibility for such payments and shall defend, indemnify and hold NCPA harmless from any and all claims made by the State of California, the Department of Industrial Relations, any subcontractor, any worker or any other third party with regard thereto.

SECTION 15. GUARANTEE OF WORK

Contractor hereby agrees that it will post a Maintenance Bond in the form included in the Contract Documents after final inspection by NCPA and completion of required corrections and/or repairs. Such Maintenance Bond shall guarantee Contractor's work for the period of one year after the date of recording of NCPA's Notice of Completion of the Work.

SECTION 16. RELEASE

Upon payment of undisputed amounts under this Agreement and if requested by NCPA, Contractor shall execute a Release in the form provided by NCPA. Such Release shall not apply to disputed contract claims in amounts specifically excluded by Contractor from the operation of the Release.

SECTION 17. BINDING AGREEMENT; ASSIGNMENT

Contractor, by execution of this Agreement, acknowledges that Contractor has read this Agreement and the other Contract Documents, understands them, and agrees to be bound by their terms and conditions. The Contract Documents shall inure to the benefit of and shall be binding upon the Contractor and NCPA and their respective successors and permitted assigns.

The Contractor shall not assign or transfer by operation of law or otherwise any or all of its rights, burdens, duties or obligations without the prior written consent of all sureties on all bonds required by this agreement, including but not limited to the Payment (Labor and Materials) Bond, and NCPA.

NCPA – GEO348
Northwest Paving, Inc. Public Works Agreement
1/23/17

SECTION 18. CONTRACT DOCUMENTS

The full, complete and exclusive contract between the parties hereto shall consist of the following identified documents (the "**Contract Documents**"): (1) The "**Bid Documents**," consisting of the Notice Inviting Bids, Instructions to Bidders, Bidder's Check List, Bid Form, Bid Bond, Designation of Subcontractors, Non-Collusion Declaration, Agreement, Workers' Compensation Insurance Certification, Performance Bond, Payment (Labor and Materials) Bond, Maintenance Bond, Escrow Agreement for Security Deposits in Lieu of Retention, General Conditions, Supplementary Conditions, and Technical Specifications and Plans, if any Addenda, and (2) any Change Orders, Field Orders, or NCPA's directives issued pursuant to and in accordance with this Agreement.

SECTION 19. INDEMNIFICATION AND ATTORNEY'S FEES

Contractor shall at its own cost, defend, hold harmless, and indemnify NCPA, its governing board, officials, commission members, officers, directors, employees, agents, and successors in interest ("Indemnitees") from and against any and all liability, damages, losses, claims, demands, actions, costs including attorney's fees and expenses ("Liabilities"), on account of injury to or death of persons or damage to any property (including property of NCPA) or delay or damage to another contractor resulting from or arising out of or in any way connected with the performance by the Contractor of this Agreement, and Contractor will reimburse Indemnitees for all Liabilities incurred by Indemnitees in consequence of any claims, demands, and causes of action which may be brought against Indemnitees arising out of the performance by the Contractor of this Agreement. However, notwithstanding, nothing in this section or the Contract Documents generally shall be construed to require the Contractor to indemnify the Indemnitees for their sole negligence, willful misconduct, or for defects in design furnished by Indemnitees. This section and the Contract Documents shall be construed consistent with Civil Code section 2782 so as to provide the maximum indemnification permitted by applicable law to Indemnitees.

This indemnification shall be in addition to any other indemnification provisions contained in the Contract Documents.

SECTION 20. NO IMPLIED WAIVER OF BREACH

The waiver of any breach of a specific provision of this Contract does not constitute a waiver of any other breach of that term or any other term of this Contract.

SECTION 21. SUCCESSORS AND ASSIGNS

The provisions of this Contract shall inure to the benefit of and shall apply to and bind the successors and assigns of the parties.

SECTION 22. USE OF RECYCLED PRODUCTS

Contractor shall endeavor to prepare and submit all reports, written studies and other printed material on recycled paper to the extent it is available at equal or less cost than virgin paper.

SECTION 23. NONDISCRIMINATION AND EQUAL OPPORTUNITY

Contractor shall not discriminate, on the basis of a person's race, religion, color, national origin, age, physical or mental handicap or disability, medical condition, marital status, sex, or sexual orientation, against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by Contractor under this Contract. Contractor shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any

services that are the subject of this Contract, including but not limited to the satisfaction of any positive obligations required of Contractor thereby.

Contractor shall include the immediately foregoing paragraph, verbatim, of this Subsection in any subcontract approved by the Contract Administrator or this Contract.

Contractor shall indemnify, defend, and hold harmless NCPA with respect to any alleged violation of this Section.

SECTION 24. ENTIRE AGREEMENT

The Contract Documents constitute the entire Agreement between the parties, and supersede any prior agreement between the parties, oral or written, including NCPA's award of the contract to Contractor, unless such agreement is expressly incorporated herein. NCPA makes no representations or warranties, express or implied, not specified in the Contract Documents.

SECTION 25. EXECUTION OF OTHER DOCUMENTS

The parties to this Agreement shall cooperate fully in the execution of any and all other documents and in the completion of any additional actions that may be necessary or appropriate to give full force and effect to the terms and intent of the Contract Documents.

SECTION 26. EXECUTION IN COUNTERPARTS

This Agreement may be executed in counterparts such that the signatures may appear on separate signature pages. A copy, or an original, with all signatures appended together, shall be deemed a fully executed Agreement.

SECTION 27. SEVERABILITY

If any provision of the Contract Documents shall be held invalid or unenforceable by a court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof.

SECTION 28. AMENDMENTS

The terms of the Contract Documents shall not be waived, altered, modified, supplemented or amended in any manner whatsoever except by written agreement signed by the parties.

SECTION 29. WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual or member of the firm, to an officer or director of the corporation, or to a manager of the LLC for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party who gives the notice.

Any written notice to Contractor shall be sent to:

Northwest Paving, Inc.
8115 Secluded Valley Drive
Redding, CA 96001

Any written notice to NCPA shall be sent to:

Northern California Power Agency
Attn: Project Manager
Ed Voge, Reservoir Engineer
P.O. Box 663
12000 Socrates Mine Road
Middletown, CA. 95461and

Northern California Power Agency
Attn: Randy Howard, General Manager
651 Commerce Drive
Roseville, CA 95678

With a copy to:
Jane Luckhardt
General Counsel
651 Commerce Drive
Roseville, CA 95678

SECTION 29. TERMINATION OF AGREEMENT

NCPA may terminate the Agreement as provided in the Contract Documents. The Contractor shall receive payment for all work performed to the date of termination in accordance with the provisions of the Contract Document.

SECTION 30. MONITORING BY DEPARTMENT OF INDUSTRIAL RELATIONS

This Project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

IN WITNESS WHEREOF, the Northern California Power Agency has authorized the execution of this Agreement by its General Manager has caused this Agreement to be duly executed.

NORTHERN CALIFORNIA POWER AGENCY

ATTEST

By _____
RANDY S. HOWARD, General Manager

By _____
Assistant Secretary of the Commission

Date: _____

APPROVED AS TO FORM

By _____
JANE LUCKHARDT
NCPA General Counsel

NCPA – GEO348
Northwest Paving, Inc. Public Works Agreement
1/23/17

CONTRACTOR:

(Name - Type or Print)

By _____
Signature (if a partnership, all partners must sign)

Official Title

Business Address

License No./Classification/Expiration Date

CORPORATE CERTIFICATE

I, _____, hereby certify that I am the Secretary of the Corporation named as Contractor in the foregoing Agreement; that _____ who signed the Agreement on behalf of the Contractor, was then _____ of such Corporation; that the Agreement was duly signed for and in behalf of such Corporation by authority of its governing body and is within the scope of its corporate powers.

(Corporate Seal)

(Secretary)

RESOLUTION 18-58

**RESOLUTION OF THE COMMISSION OF THE
NORTHERN CALIFORNIA POWER AGENCY**

COMMENDING

STEPHEN "STEVE" HOLLABAUGH

WHEREAS, Stephen "Steve" Hollabaugh diligently served on the Commission as an Alternate Commissioner representing Truckee Donner Public Utility District for 16 years; and

WHEREAS, During Steve's tenure, Truckee Donner Public Utility District has been well recognized for its outstanding reliability, despite its location in the path of many severe Sierra snow storms each year. Under Steve's leadership, Truckee Donner has received Platinum Level recognition in the American Public Power Association's Reliable Public Power Provider Program that honors operational excellence among the nation's public power utilities; and

WHEREAS, Steve has very successfully led the clean energy transition of Truckee Donner's portfolio from 92% coal in 2008 to 61% renewable by 2016, making his Public Utility District among the greenest utilities in the nation; and

WHEREAS, Steve has extensive knowledge of electricity industry policy issues and has been a very strategic, tireless, well respected, and highly effective advocate for public power systems and their consumers; and

WHEREAS, Steve has been a tremendous supporter of joint action throughout his career and has worked very effectively among colleagues with diverse needs and interests to ensure that the whole is stronger than its parts; and

WHEREAS, Steve's karaoke skills performing AC/DC's TNT with Bob Marshall singing backup have impressed and entertained NCPA meeting attendees for many years; and

WHEREAS, Steve is known for his honesty and his straightforward communication resulting in additional editing of many sets of meeting minutes to remove expletives from his formal remarks; and

WHEREAS, Steve will be dearly missed by members of the public power community and state and federal policymakers; and

WHEREAS, Steve leaves a tremendous and lasting mark on the electricity industry truly a legacy of proactive engagement and outstanding results for the consumers he served; and

NOW, THEREFORE BE IT RESOLVED by the Commission of the Northern California Power Agency, that this Agency, its members, and its employees are truly grateful for all Steve has done to support public power and the purpose of this Agency throughout his career, and sincerely congratulate him on the occasion of his retirement from the Truckee Donner Public Utility District.

PASSED AND ADOPTED BY ACCLAMATION on this _____ of _____ 2018.

ROGER FRITH
VICE CHAIR

ATTEST:

CARY A. PADGETT
ASSISTANT SECRETARY





ITEM NO, 22

No supporting documents for Agenda Item #22
are included in the packet.

See Commission Agenda for complete details.