REGULAR MEETING OF THE BOARD OF DIRECTORS

AGENDA

2:30 p.m. Tuesday, August 4, 2015

CALL TO ORDER/PLEDGE OF ALLEGIANCE/ROLL CALL

1. PUBLIC COMMENT
   Any person may address the Board on matters within its jurisdiction.

2. APPROVAL OF MINUTES
   A. July 7, 2015, and July 21, 2015, Board Meetings (Page 4)

3. DISCUSSION AND POSSIBLE ACTION ITEMS
   A. Consider Regional Recycled Water Ad Hoc Committee Appointment (Page 15)
   B. Consider Financial Support for the Santa Ana Watershed Project Authority Basin Management Task Force (Page 16)
   C. Consider Funding Agreement with San Bernardino County Flood Control District for Design and Construction of Recharge Facilities in Cactus Basins (Page 72)
   D. Consider City Creek Turnout and Water Treatment Plant 134 Hydroelectric Generation Procurements (Page 84)
   F. Consider Adoption of the CEQA Notices of Exemption for the Waterman Turnout Hydroelectric Generation Project (Page 91)
   G. Consider Scope Enhancement with NLineline Energy for the Waterman Turnout Hydroelectric Generation Project (Page 102)
   H. Consider Funding a Weather Station Maintenance Program (Page 110)
   I. Consider Adoption of Resolution No. 1035 Supporting the Nomination of Director Kathleen Tiegs as the Association of California Water Agencies President (Page 125)
4. **REPORTS (Discussion and Possible Action)**

A. General Manager’s Report  
B. Engineering Committee Meeting, July 22  
C. Baseline Feeder Committee Meeting, July 27 (Page 127)  
D. Board of Directors’ Workshop, July 30  
E. Basin Technical Advisory Committee, August 3  
F. SAWPA Commission Workshop, August 4  
G. Directors Activities  

5. **ANNOUNCEMENTS**

A. August 11, 2015 – Board of Directors Workshop, 3:00 p.m. at the District Office  
B. August 12, 2015 – Reservoir Committee, 3:00 p.m. at the District Office  
C. August 17, 2015 – Board of Directors’ Workshop, 3:00 p.m. at the District Office  
D. August 18, 2015 – SAWPA Commission Meeting, 9:30 a.m. at SAWPA  
E. August 18, 2015 – Board of Directors’ Meeting, 2:30 p.m. at the District Office  
F. August 24, 2015 – Baseline Feeder Committee Meeting, 3:00 p.m. at the District Office  
G. September 1, 2015 – SAWPA Committees, 9:30 a.m. at SAWPA  
H. September 1, 2015 – Board of Directors’ Meeting, 2:30 p.m. at the District Office  
I. September 7, 2015 – Basin Technical Advisory Committee, 1:30 p.m. at the District Office  
J. September 9, 2015 – Reservoir Committee Meeting, 3:00 p.m. at the District Office  
K. September 10, 2015 – Advisory Committee on Water Policy, 6:30 p.m. at the District Office  
L. September 15, 2015 – SAWPA Commission Meeting, 9:30 a.m. at SAWPA  
M. September 15, 2015 – Board of Directors’ Meeting, 2:30 p.m. at the District Office  
N. September 21, 2015 – Association of San Bernardino County Special Districts’ Association Dinner, 6:00 p.m.  
O. September 28, 2015 – Baseline Feeder Committee, 3:00 p.m. at the District Office  

6. **CLOSED SESSION**  
*The Board may convene/meet in closed session to discuss the following items.*  

A. Conference with Legal Counsel – Existing Litigation – Pursuant to Government Code Section 54956.9(a),(d)(1) – San Bernardino Valley Municipal Water District et al v. San Gabriel Valley Water Company et al – Case No. CIVDS1311085 (San Bernardino Superior Court

7. ADJOURNMENT

PLEASE NOTE:
Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection in the District’s office located at 380 E. Vanderbilt Way, San Bernardino, during normal business hours. Also, such documents are available on the District’s website at www.sbwmwd.com subject to staff’s ability to post the documents before the meeting. The District recognizes its obligation to provide equal access to those individuals with disabilities. Please contact Lillian Hernandez at (909) 387-9214 two working days prior to the meeting with any special requests for reasonable accommodation.
MINUTES
OF THE
REGULAR BOARD MEETING
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

July 7, 2015

Directors Present: Mark Bulot, Steve Copelan, Ed Killgore, Gil Navarro, and Susan Longville

Directors Absent: None

Staff Present: Douglas Headrick, Bob Tincher, Cindy Saks, Bruce Varner and Lillian Hernandez

Registered Guests:

Alan G. Dyer, West Valley Water District
Manny Aranda, San Bernardino Valley Water Conservation District
Charles Roberts, Highland Community News
Melody McDonald, San Bernardino Valley Water Conservation District
Jon Gaede, Assembly Member Brown’s Office
Benjamin G. Kelly, Western Heights Water Company

The regular meeting of the Board of Directors was called to order by President Bulot at 2:30 p.m. at the District office, 380 E. Vanderbilt Way, San Bernardino. A quorum was noted present.

Agenda Item 1. Public Comments.

President Bulot invited any members of the public to address the Board. Hearing none, the meeting proceeded with the published agenda items.

Agenda Item 2. Approval of Minutes of the June 16, 2015, Board Meeting.

Director Navarro moved to approve the minutes of the June 16, 2015, Board meeting. Director Copelan seconded. The motion was unanimously adopted.

Agenda Item 3. Discussion and Possible Action Items.
3 a) Consider Approval of Fiscal Year End June 30, 2016, General Fund Budget. Cindy Saks presented the proposed Fiscal Year 2015-2016 General Fund Budget for approval. On June 25th, the Board conducted a workshop where the draft budget was reviewed in detail. Added into the budget after the workshop was an additional $20,000 for upgrades to the water conservation garden at Cal State University San Bernardino. The General Fund Budget for Fiscal Year Ending June 30, 2016, includes total expenditures in the amount of $48,761,985 and revenues in the amount of $26,382,783. The difference of $22,379,202 will come from District reserves. In May 2015, the Board held a workshop and recommended a cost of living increase be established for all District employees. The budget has a 0.20 percent cost of living adjustment to staff salaries to be applied for each District employee. Staff recommended approval of the budget and the Salary Schedule with District positions.

   Director Copelan moved to approve the General Fund Budget for the Fiscal Year Ending June 30, 2016 which included total revenue in the amount of $26,382,783 and total expenditures in the amount of $48,761,985 and the District Salary Schedule effective July 1, 2015. Director Killgore seconded. The motion was unanimously adopted.

3 b) Consider Contract with G & G Environmental Compliance Inc. for Fiscal Year 2015-16 Brine Line Pretreatment Program Services. Bob Tincher stated that the Inland Empire Brine Line is a gravity pipeline that delivers non-reclaimable waste from the District's service area to a treatment plant that is owned by the Orange County Sanitation District (OCSD). Contracts for the Inland Empire Brine Line (IEBL) are separated into two categories, one for flow capacity and one for treatment and disposal capacity. SAWPA contracts with Orange County Sanitation District (OCSD) then in turn contracts with the member agencies. SBVMWD has taken responsibility for managing the brine line within its service area per Title 40, Code of Federal Regulations Part 403 and OCSD requirements since 2003. The District has three permits within its service area. Instead of hiring staff to oversee the day-to-day operations of these permits, the Board has contracted with G & G Environmental Compliance, Inc. which provides permitting, inspections, meetings, reporting, and enforcement. G & G Environmental Compliance, Inc. is uniquely qualified to perform the services based on their past history with the District, their intimate knowledge of the Pretreatment Program by OCSD and SAWPA. Staff recommended that the Board authorize staff to enter into a contract with G & G Environmental Compliance, Inc. for $26,154 to perform services for Fiscal Year 2015-2016.

   Director Navarro moved approval of the contract with G & G Environmental Compliance, Inc. for $26,154 for the Fiscal Year 2015-2016 Brine Line Pretreatment Program Services. Director Killgore seconded. The motion was unanimously adopted.

3 c) Consider United States Geological Survey Cooperative Investigations Program for Fiscal Year 2015-2016. Bob Tincher stated this item was discussed at a workshop on June 25th and the members present at the workshop requested that staff forward the item
to the full Board for consideration. This is an annual agreement with the United States Geological Survey (USGS). Staff requested that the Board approve the proposed USGS cooperative investigation program for federal fiscal year 2015-16. The District will pay $408,000 and the USGS will pay the remaining $110,100 for fiscal year 2015-16. Staff recommended approval and requested that the Board authorize the general manager to execute the funding agreement.

Director Longville moved approval of $518,100 for the USGS cooperative program for fiscal year 2015 and authorized the general manager to execute the USGS cooperative program agreement. Director Copelan seconded. The motion was unanimously adopted.

Agenda Item 4. Reports (Discussion and Possible Action).

4 a) General Manager's Report. Douglas Headrick announced that the Santa Ana Watershed Project Authority was successful in receiving $2 million of grant funding for a water-energy program. San Bernardino Valley Municipal Water District (SBVMWD) began their summer pumping schedule with two 9-hour shifts. They are delivering over 40 cubic feet per second (cfs) through the District's facilities currently. There will be a kick-off meeting on July 9th for the Regional Recycled Water Concept Study. Mr. Headrick stated that a Memorandum of Understanding is being developed in association with the study.

4 b) Baseline Feeder Committee, June 22, 2015. No oral report was given as a written report was included in the Board packet.

4 c) General Fund Budget Workshop, June 10, 2015. No oral report was given.

4 d) Upper Santa Ana Water Resources Association, June 26, 2015. Director Longville reported that she attended the meeting that was held at East Valley Water District along with Directors Navarro and Killgore. Douglas Headrick gave a presentation on the drought situation and water conservation. Daniel Cozad gave a presentation of legislative issues that were of interest to the participants.

4 e) SAWPA Commission Workshop, July 7, 2015. Director Killgore reported on the following SAWPA matters:

1) Adopted a resolution authorizing submission of a grant application to the Department of Water Resources (DWR) for the remaining Proposition 84 Integrated Regional Water Management Plan (IRWMP) funds allocated to the Santa Ana Region. Approved the recommendations of the One Water One Watershed (OWOW) Steering Committee regarding project selection and conditions. Grant funds were awarded to projects.

2) Authorized staff to enter into an agreement with the United States Fish and Wildlife Service (USFWS) to receive $37,000 in grant funds to help implement a Santa Ana Sucker habitat improvement project.
3) Approved grant implementation agreements between the Santa Ana Watershed Project Authority (SAWPA) and the five member agencies and Rancho California Water District for the implementation of the turf removal project element of the Proposition 84 2014 Drought Round 3 project.

Director Killgore stated that the salary and compensation study was delayed so there was no action taken on the item.

4f) Directors’ Activities. Director Killgore reported that he attended a meeting on July 6th at the Santa Ana Watershed Project Authority with the Orange County Sanitation District.

Director Navarro reported that he attended water conservation event at the University of Redlands, a Habitat for Humanity event, and a tour at West Valley Water District (WVWD). He requested authorization to attend the July 8th East Valley Water District Board meeting and the July 16th West Valley Water District Board meeting. He also requested retroactive authorization for meetings he attended on June 4th and 18th at West Valley Water District.

President Bulot reported that he was requested to attend a meeting on July 9th with the Mayor and City Manager of the City of Redlands regarding the Opal Avenue Detention Basin which the City would like to enhance to capture storm water so he requested authorization to attend the meeting. President Bulot also requested authorization to attend an event at the Babcock Laboratories on August 20th where there will be information presented on the storm water runoff rules.

Director Copelan reported that he attended the Yucaipa Valley Water District Board meeting on June 17th. He also attended a meeting on June 26th at the San Gorgonio Pass Water Agency regarding the state of water supply. The SGPWA has decided to go to a five member board since the passing of one of their directors.

Director Longville thanked the Board for authorizing the development of maps for the Tinman event that was held at California State University San Bernardino. Director Longville stated that there were 500 water conservation flyers put into the participants’ bags and she spoke to a group of students regarding water issues. She reported that she attended the City of San Bernardino Board of Water Commissioners meeting where there was discussion of turf removal. Director Longville spoke at an event that Henry Nickel had on July 5th and was requested to return on July 19th. She requested authorization to attend the July 19th Henry Nickel event and the July 8th East Valley Water District Board meeting. Director Longville requested that the Board consider adding on discretionary meeting per month for her participation in working with staff for disadvantaged communities and one discretionary meeting per month for her to work with staff in water use efficiency meetings. President Bulot stated “It kind of makes things a bit messy if we interject ourselves in staff workings”. Director Longville stated “Then I will withdraw the request”.

7/128
Director Navarro moved to approve of the requested meetings. Director Longville seconded. The motion was unanimously adopted.

**Agenda Item 5. Announcements.** None.

**Agenda Item 6. Closed Session.**

President Bulot adjourned the meeting to Closed Session at 3:04 p.m.

A. Conference with Legal Counsel – Existing Litigation - Pursuant to Government Code Section 54956.9(a),(d)(1) – San Bernardino Valley Municipal Water District et al v. San Gabriel Valley Water Company et al – Case No. CIVDS1311085 (San Bernardino Superior Court)


Pursuant to Government Code Section 54956.9 President Bulot returned the meeting to Open Session at 3:33 p.m. and reported that during Closed Session the Board took no reportable action.

There being no further business, President Bulot adjourned the meeting at 3:33 p.m.

<table>
<thead>
<tr>
<th>APPROVAL CERTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>I hereby certify to approval of the foregoing Minutes of San Bernardino Valley Municipal Water District.</td>
</tr>
<tr>
<td>Secretary</td>
</tr>
</tbody>
</table>

Respectfully submitted,

Lillian Hernandez
Board Secretary
MINUTES
OF
THE
REGULAR BOARD MEETING
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
July 21, 2015

Directors Present: Mark Bulot, Steve Copelan, Ed Killgore, Gil Navarro, and Susan Longville

Directors Absent: None

Staff Present: Douglas Headrick, Wen Huang, Brendan Brandt, and Lillian Hernandez

Registered Guests:

Alan G. Dyer, West Valley Water District
Greg Yanagihara, AECOM
Benjamin G. Kelly, Western Heights Water Company
Ron Coats, East Valley Water District
Charles Roberts, Highland Community News
Joseph W. Mays, Jr., Westside Action Group
Ratibu Jacocks, Westside Action Group
Melody McDonald, San Bernardino Valley Water Conservation District (arrived at 2:35 p.m.)

The regular meeting of the Board of Directors was called to order by President Bulot at 2:32 p.m. at the District office, 380 E. Vanderbilt Way, San Bernardino. A quorum was noted present.

Agenda Item 1. Public Comments.

President Bulot invited any members of the public to address the Board. Hearing none, the meeting proceeded with the published agenda items.

Agenda Item 2. Approval of Minutes of the July 7, 2015, Board Meeting. President Bulot stated that there had been a request to postpone approval of the minutes to the next regularly scheduled Board meeting. The Board agreed to move approval of the minutes to the August 4, 2015, Board of Directors’ meeting.
Agenda Item 3. Presentation

3 a) Change in Groundwater Storage for the Rialto-Colton, San Bernardino and Yucaipa Basins for 2014. Douglas Headrick gave a presentation on the change in groundwater storage for the Rialto-Colton, San Bernardino and Yucaipa Basins for 2014. Each year San Bernardino Valley Municipal Water District (SBVMWD) staff prepares a report on the storage in the groundwater basins. This year the Rialto-Colton and Yucaipa basins have been added to procedures staff has been using for the San Bernardino Basin Area (SBBA) for almost four decades. Since groundwater represents so much of the District’s water supply, it is something that is tracked very closely. The Basin Technical Advisory Committee (BTAC) has taken on some of this responsibility and they use the data in the change in storage report and other reports to provide what is called a threshold or maximum amount of recharge for the coming year. Mr. Headrick showed the sub-basins that make up the different groundwater storage models. The model that SBVMWD uses is a volumetric model. He explained how the calculation is made and it is kept track of over time and that is how the change in storage is calculated. In the past, the District has only focused on the SBBA which includes the Bunker Hill Basin. This year they added the Rialto-Colton and Yucaipa basins. The majority of its water supply comes from precipitation that ends up being produced through groundwater wells or surface diversions. Groundwater represents about 72 percent of average water supply for the Valley District service area. Five percent of water supply is recycled water primarily from the City of Redlands and Yucaipa Valley Water District’s (YVWD) plants and the remaining 23 percent, on average, comes from the State Water Project (SWP). He stated that the District begins the tracking of basin storage at 1934 which was arbitrarily set at a zero balance. 1934 being the first year there was enough data to calculate how much water was stored in the groundwater basin. Mr. Headrick showed the results of differing modeling techniques that show how much water is stored in the groundwater basin. He stated that in the past two years 130,000 to 150,000 acre-feet (af) of water has been used from the groundwater basin. Staff has predicted that for the 2015 year, the SBBA will decline approximately 134,500 af. The target operating storage range for the SBBA is 0 to 500,000 af on the change in storage graph. He stated that if the District would not have recharged or directly delivered SWP water beginning in 1970, instead of being at -640,000 in 2014-15, the SBBA would have been that low in 2002. State Water Project water is providing a huge benefit by keeping the basin in balance. There have been questions as to how much rain it would take to get back into the target operating range. He indicated that approximately 45 inches in addition to the average 16 inches would be needed to get into the middle of the target operating range.

He indicated that for the Rialto-Colton Basin there was not as much data so the calculation begins in 1976 when there was an upturn in storage, however, ever since 2000 there has been a downward trend. This basin is essentially unmanaged. The resources are not currently in place to be able to refill the basin. As the amount of water goes down producers need to produce less and less based on the 1961 Rialto Decree. When the Cactus Basin Recharge Project is completed and begins recharging imported water, this basin will recover.
He showed a slide of the Yucaipa basins. There is only data going back to 1994 for this basin. When SWP water began being delivered to the YVWD this basin recovered. It took less than 10 years to take the basin back to where it was in the early 1990's. There is approximately 200,000 af of dry storage in the Yucaipa area. Mr. Headrick stated that Bob Tincher and Dan Borell developed the presentation but were out of the office on official business and were not available to make the presentation.

**Agenda Item 4. Discussion and Possible Action Items.**

4 a) **Consider Adoption of Resolution No. 1034 Determining the Amount of Money Needed to Make Annual Payments for Indebtedness Approved by the Voters Prior to July 1, 1978, and/or for Which a Tax Levy is Required Under Article 1, Section 10 of the United States Constitution and Making a Tax Levy Therefor.** Douglas Headrick stated that annually the Board is required to set a property tax rate for its State Water Contract Debt Service Fund. On July 14th the Board held a workshop to discuss this item. Staff was directed to prepare a budget based on a property tax rate of $0.1625 per $100 of assessed value within the District's boundary. The tax rate will generate the $48 million needed to pay for State Water Project related expenses. Staff recommended approval of the tax rate, the budgets for the State Water Contract/Devil Canyon Castaic for fiscal year 2015-2016, and Resolution No. 1034.

Director Killgore moved to approve the tax rate, the budgets for the State Water Contract/Devil Canyon Castaic for fiscal year 2015-2016, and Resolution No. 1034. Director Copelan seconded. The motion was unanimously adopted by a roll-call vote.

**RESOLUTION NO. 1034**

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT DETERMINING THE AMOUNT OF MONEY NEEDED TO MAKE ANNUAL PAYMENTS FOR INDEBTEDNESS APPROVED BY THE VOTERS PRIOR TO JULY 1, 1978 AND/OR FOR WHICH A TAX LEVY IS REQUIRED UNDER ARTICLE 1, SECTION 10 OF THE UNITED STATES CONSTITUTION AND MAKING A TAX LEVY THEREFOR

(See Resolution Book)

**Agenda Item 5. Reports (Discussion and Possible Action).**

5 a) **Legislative Report.** Brendan Brandt gave a report on Assembly Bill 1, Senate Bill 88, Senate Bill 555, H.R. 2993, and H.R. 2898. He reported on two key water topics which included Lawrence Livermore National Laboratory assisting the State of California in designing a groundwater monitoring program for oil and gas well stimulation. He also reported that a Sacramento County Superior Court judge blocked enforcement of water
curtailment notices that were issued to four Central Valley irrigation districts by the State Water Resources Control Board, saying the notices violate due process.

5 b) Board of Directors' Workshop, July 13, 2015. No oral report was given as a written report was included in the Board packet.

5 c) Debt Service Fund Budget Workshop, July 14, 2015. No oral report was given.

5 d) Association of San Bernardino County Special Districts' Dinner, July 20, 2014. Director Copelan reported that The Phelan Pinon Hills Community Services District hosted the meeting at The Holiday Inn in Victorville. The speaker was Allison Mackenzie, the Chief Executive Officer of Babcock Laboratories. She spoke about laboratory monitoring and public health relating to water quality. Director Longville elaborated on the licensing of laboratories.

5 e) SAWPA Commission Workshop, July 21, 2015. Director Killgore reported on the following SAWPA matters:

1) Adopted Resolution No. 2015-07 authorizing staff to apply for a California River Parkways Grant and to enter into an agreement with the State to receive funding for a habitat improvement project to benefit the Santa Ana Sucker.

2) Received and filed a report on the Union Pacific Railroad Track Relocation and Protection of Inland Empire Brine Line (IEBL) Reach 4E.

3) Received and filed a status report on the IEBL Reach V - Phases 1 and 2.

4) Received and filed a summary of IEBL fiscal year 2015 activities and accomplishments and an update on the improved energy and water efficiency in the SAWPA headquarters building.

5 f) Operations Reports. No oral report was given as a written report was included in the Board packet.

5 g) Treasurer's Report. Director Navarro moved approval of the following expenses for the month of June 2015. The State Water Contract Fund $6,868,539.39, Devil Canyon/Castaic Fund $268,651.00, and General Fund $2,609,390.28. Director Copelan seconded. The motion was unanimously adopted.

5 h) Directors' Activities.

Director Longville requested approval to give a presentation at the July 21st Muscoy Community Meeting and to attend, on July 24th, the Southwest Megaregion Alliance which she has been a member of for several years.

Director Copelan requested authorization to attend the Association of California Water Agencies Joint Powers Insurance Authority and conference in December 2015. He also
requested authorization to attend a joint meeting of the San Gorgonio Pass Water Agency and the City of Banning on July 22nd and the Yucaipa Valley Water District meeting on July 29th.

President Bulot requested authorization and compensation to attend a meeting on July 28th with East Valley Water District's general manager and board president.

Director Navarro reported he attended a tour of the Southern California Sanitation Plant. He suggested that the District consider a tour of its facilities for Congressional and State legislators and involve the retail water agencies as well. He reported that West Valley Water District received a grant for turf removal. He requested compensation for and authorization to attend the July 22nd East Valley Water District and the August 6th West Valley Water District meetings.

Director Killgore announced that West Valley Water District Director Earl Tillman, Jr., is retiring. There will be a reception before their Board meeting on August 6th to honor Mr. Tillman for his 17 years of service. Director Killgore reported that he attended the second drought meeting with West Valley Water District on July 15th. Director Killgore requested approval to attend the California Special Districts Association conference on September 21-24, in Monterey, California.

Director Longville moved to approve all of the requested meetings in mass. Director Navarro seconded. The motion was unanimously adopted.

**Agenda Item 6. Announcements.** None.

**Agenda Item 7. Closed Session.**

President Bulot adjourned the meeting to Closed Session at 3:19 p.m.

A. Conference with Legal Counsel – Existing Litigation - Pursuant to Government Code Section 54956.9(a),(d)(1) – San Bernardino Valley Municipal Water District et al v. San Gabriel Valley Water Company et al – Case No. CIVDS1311085 (San Bernardino Superior Court)

B. Conference with Legal Counsel – Existing Litigation - Pursuant to Government Code Section 54956.9(d)(1) – Bear Valley Mutual Water Company et al v Jewell, et al (9th Cir. No. 12-57297)

C. Conference with Legal Counsel – Anticipated Litigation - Pursuant to Government Code Section 54956.9(d)(2) – 1 Potential Case

Pursuant to Government Code Section 54956.9 President Bulot returned the meeting to Open Session at 4:52 p.m. and reported that during Closed Session the Board took no reportable action.
There being no further business, President Bulot adjourned the meeting at 4:52 p.m.

Respectfully submitted,

Lillian Hernandez
Board Secretary
DATE: August 4, 2015
TO: Board of Directors
FROM: Douglas Headrick, General Manager
SUBJECT: Regional Recycled Water Ad-hoc Committee Appointment

Background
On June 16, 2015 the Valley District Board authorized the development of a regional recycled water concept study in cooperation with all the wastewater agencies in our service area. The collaborative group has already met twice and the work is on schedule. In light of the importance of local acceptance of the regional concepts being developed, Staff is recommending the appointment of an Ad-hoc Committee. This Committee would meet with similar Ad-hoc Committees of the cities and districts involved in the regional study to ensure there is agreement on the basic principles of the study. Staff has already reached out to several of the cooperating agencies and there is broad support for the proposed joint Ad-hoc Committee meetings.

Staff Recommendation
Appoint 2 Boardmembers to an Ad-hoc Committee on Regional Recycled Water.
DATE: August 4, 2015
TO: Board of Directors Workshop
FROM: Bob Tincher, Manager of Water Resources
SUBJECT: Consider Financial Support for the Santa Ana Watershed Project Authority Basin Management Task Force

At a Board workshop held February 4, 2015, those Board members in attendance supported Valley District’s participation in the Santa Ana Watershed Project Authority (SAWPA) Basin Management Task Force (Task Force) and asked staff to include a placeholder of $16,477 in the Valley District FY 15-16 budget.

To participate in the Task Force, it is requested that Valley District execute the attached Amendment No. 2 to Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed (Basin Monitoring Program) and pay $13,924, its portion of the Task Force budget for FY 15-16. Staff recommends participating in the Task Force. House Counsel has reviewed the attached agreement.

**Background**
In 1995, the Nitrogen and Total Dissolved Solids (N/TDS) Task Force was formed to conduct scientific investigations regarding the nitrogen and Total Dissolved Solids (TDS) water quality objectives of the 1995 Water Quality Control Plan for the Santa Ana River (SAR) Basin (Region 8). This Task Force was administered by the Santa Ana Watershed Project Authority (SAWPA) and was comprised of 22 water supply and wastewater agencies. The goal of the Task Force was to prepare a robust technical analysis of Nitrogen and TDS within the Santa Ana River Watershed that could be used by the Regional Water Quality Control Board (Regional Board) when considering any updates to the 1995 Basin Plan. As a result of this work, the Regional Board amended the Santa Ana Watershed Water Quality Control Plan in 2004 (2004 Basin Plan...
Amendment. The Amendment updated the groundwater basin boundaries within the Santa Ana River Watershed and updated the water quality objectives of total dissolved solids (TDS) and nitrogen (N). The updated Basin Plan also included revised nitrogen and TDS waste load allocations for discharges to the Santa Ana River and its tributaries, revised findings regarding assimilative capacity in ground water, and a plan for wastewater reclamation in the Region. To accommodate the reclamation projects in the Region, alternative water quality objectives, "Maximum Benefit" objectives were established in some groundwater basins. In return, agencies committed to manage salt and implement monitoring programs to ensure compliance. Pursuant to the 2004 Basin Plan Amendment, the following investigations are required:

1. Re-computation of the triennial Ambient Water Quality over a 20 year period; and
2. Preparation of an Annual Report of Santa Ana River Water Quality

In January 2004, the Basin Management Task Force (Task Force) was formed to monitor compliance with the Santa Ana Regional Water Quality Control Board 2004 Basin Plan Amendment. The Task Force is administered by SAWPA and meets on a regular basis. Each year, participating agencies develop a scope of work and a budget to accomplish the monitoring required under the 2004 Basin Plan Amendment. Costs are divided equitably amongst the agencies. If a particular task is not relevant to an agency, that agency does not fund that specific task.

Valley District's flow obligations under the Orange County Judgment are tied to the quality of the river. If total dissolved solids (TDS) in the river increases above 700 parts per million, Valley District's flow obligation increases. Although Valley District presently has an abundance of "credits" under this Judgment, it is in Valley District's interest to have a robust analysis of TDS along the river. As the regional water supply agency for the upper Santa Ana River Watershed, Valley District has an interest in groundwater quality. It is in the best interest of Valley District and its retail water agencies that any modeled projections of Nitrogen and TDS be as accurate as possible. For these reasons, Valley District may want to consider financial participation in this Task Force to have a "seat at the table".

The current participants in this Task Force are:

1. City of Beaumont
2. Chino Basin Watermaster
3. City of Corona
4. Eastern Municipal Water District  
5. Elsinore Valley Municipal Water District  
6. Inland Empire Utilities Agency  
7. Irvine Ranch Water District  
8. Jurupa Community Services District  
9. Lee Lake Water District  
10. Orange County Water District  
11. Rapid Infiltration and Extraction (RIX) Joint Powers Authority  
12. City of Redlands  
13. City of Rialto  
14. City of Riverside  
15. Western Riverside County Regional Wastewater Authority  
16. Yucaipa Valley Water District  

Amendment No. 2 to the original Task Force Agreement (attached) adds the following participants:  

17. City of Banning  
18. Beaumont Cherry Valley Water District  
19. San Gorgonio Pass Water Agency  
20. Valley District  

With the addition of the new participants, the budget for this year's program is, $13,924, which is lower than the cost of last year's program. This item was included in Valley District’s FY 15-16 budget.  

**Staff Recommendation**  
Authorize participation in the Santa Ana Watershed Project Authority Basin Management Task Force for an amount not to exceed $13,924 and execute Amendment No. 2 to Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed (Basin Monitoring Program).  

**Attachments**  
1. Santa Ana Watershed Project Authority Basin Management Task Force Budget for fiscal year 2015-16  
2. Amendment No. 2 to Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed (Basin Monitoring Program)  
3. Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed (Basin Monitoring Program)  
4. Amendment No. 1 to Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed (Basin Monitoring Program)
July 14, 2015

Robert Tincher  
San Bernardino Valley Municipal Water District  
380 East Vanderbilt Way  
San Bernardino, CA 92408  

Subject: Basin Monitoring Program Invoice 2015-16

Dear Mr. Tincher:

Attached is the invoice for the Basin Monitoring Program Task Force for expenses anticipated during FY 2015-16. These expenses reflect consultant and task force administration costs, preparation of the SAR Annual Water Quality Report, Basin Plan Amendment documentation support, and additional investigations supported by the Task Force, and continued annual funding for the Triennial Ambient Water Quality Report for Nitrogen and TDS.

Also attached is the Basin Monitoring Program Task Force agreement amendment which adds four new agencies to the task force resulting in reduced task force cost allocations for all agencies moving forward. Please sign the attached amendment and return to SAWPA’s contracts manager, Dawna Munson, dmunson@sawpa.org.

We appreciate your agency’s support of the work for FY 2015-16, payment of the attached invoice and execution of the attached agreement amendment so that work may proceed.

If you have any questions, feel free to contact me at (951) 354-4221.

Sincerely,

[Signature]

Mark R. Norton  
P.E., LEED AP, ENV SP  
Water Resources & Planning Manager

Enc: FY 2015-16 Invoice  
FY 2015-16 Task Force Budget  
Amendment No. 2 to Basin Monitoring Program Task Force Agreement
Santa Ana Watershed Project Authority

One Water One Watershed
AWRA INTEGRATED WATER RESOURCES MANAGEMENT AWARD
HARVARD KENNEDY SCHOOL'S TOP 25 INNOVATIONS IN AMERICAN GOVERNMENT

Thomas P. Evans
Commission
Chair

Celeste Cantú
General
Manager

Orange County
Water District

Invoice Date July 9, 2015
Invoice Number 9225

Mr. Bob Tincher
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408

FY 2015-16 Basin Monitoring Program Task Force Contributions

Total Allocation Amount $13,924.00

TOTAL DUE $13,924.00

Due Upon Receipt

11615 Sterling Avenue, Riverside, CA 92503 • 951.354.4220
www.sawpa.org • www.sawpa.org/OWOW
# Final FY 15-16 Basin Monitoring Program Task Force Budget

(Effective 4-14-15)

## Projected Expenses

<table>
<thead>
<tr>
<th>Category</th>
<th>FY 15-16 Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAWPA TF Admin &amp; Contract Adm</td>
<td>$50,000</td>
</tr>
<tr>
<td>SAR Annual Report</td>
<td>$30,000</td>
</tr>
<tr>
<td>Risk Sciences Regulatory &amp; Documentation Support</td>
<td>$74,000</td>
</tr>
<tr>
<td>Ambient Water Quality w/ Interpretive tools (FY 2016-2017)</td>
<td>$350,000</td>
</tr>
<tr>
<td>SAR Wasteload Allocation (FY 2016-2017)</td>
<td>$250,000</td>
</tr>
<tr>
<td>Special Studies</td>
<td>$25,000</td>
</tr>
<tr>
<td>Study - SAR salinity influences of POTWs</td>
<td>$431,067</td>
</tr>
<tr>
<td>TF Carryover funds</td>
<td>$270,557</td>
</tr>
</tbody>
</table>

## Projected Revenue

<table>
<thead>
<tr>
<th>Agency</th>
<th>SAWPA Admin</th>
<th>SAR Report</th>
<th>Risk Sciences Reg Support</th>
<th>Ambient Water Quality &amp; Tools</th>
<th>SAR Wasteload Allocation</th>
<th>Special Studies</th>
<th>Study - POTW TDS</th>
<th>Carryover Reserve</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEUA</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>EMWD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>DCWYD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>SBVMWD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>CORONA</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>EVAWYD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>REDLANDS</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>RIALTO</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>RIVERSIDE</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>RJX JPA</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>YYWD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>WRCRWV</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>JCSO</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>LELLE WVD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>BEAMONT</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>CBMM</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>BANNING</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>SGPWVA</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>BCWJO</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
<tr>
<td>IRWD</td>
<td>$2,631.58</td>
<td>$1,764.71</td>
<td>$3,700.00</td>
<td>$5,833.35</td>
<td>$6,250.00</td>
<td>$1,250.00</td>
<td>$520.00</td>
<td>$13,924</td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

1. Triennial Ambient Water Quality (AWQ) Update w/interpretive Tools (FY16-17) - funding collected annually over 3 years
2. SAR Wasteload Allocation (FY 16-17) - funding collected over 2 years
3. WE Inc. Study - SAR salinity influences of POTWs - to be conducted in FY 14-15 and funded using carryover reserves
4. Task Force Carryover Reserve resulting from reduced FY 2012-2014 admin costs than originally budgeted
5. SBVMWD, SGPWA, BCWJO and Banning are included as forthcoming new task force agencies and funding partners
6. A discount was provided for POTWs producing under 1 mgd of wastewater flow - No SAWPA Admin cost per TF direction
AMENDMENT NO. 2
TO
AGREEMENT TO FORM A TASK FORCE
TO CONDUCT A BASIN MONITORING PROGRAM FOR
NITROGEN AND TOTAL DISSOLVED SOLIDS
IN THE SANTA ANA RIVER WATERSHED
(BASIN MONITORING PROGRAM)

Pursuant to Covenants, Paragraph II.3b. of that certain AGREEMENT entitled, "Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed" (Basin Monitoring Program), dated August 10, 2004, the TASK FORCE AGENCIES hereby agree to make the following changes:

I. Add Additional Agencies to the Task Force as follows, subject to the financial contributions as defined in the Basin Monitoring Program Task Force Agreement:

1. City of Banning
2. Beaumont Cherry Valley Water District
3. San Bernardino Valley Municipal Water District
4. San Gorgonio Pass Water Agency

Except as otherwise expressly amended herein, all of the terms, conditions, and provisions of the Task Force Agreement and as amended under Amendment No. 1, shall continue in full force and effect, and the Additional Agencies agree to comply with and be bound thereto. Exhibit A – FY 2015-16 defines the initial contribution of the additional agencies.

This Amendment No. 2 may be executed in original counterparts, which together shall constitute a single agreement document.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to the Agreement to Form the Basin Monitoring Program Task Force, on the dates set forth below.

CITY OF BANNING

BY

Mayor

Date

BY

City Clerk

Date

BEAUMONT CHERRY VALLEY WATER DISTRICT

BY

President

Date

BY

Secretary-Treasurer

Date
IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to the Agreement to Form the Basin Monitoring Program Task Force, on the dates set forth below.

CITY OF BEAUMONT

BY: ___________________________ ___________________________
    Mayor                     Date

BY: ___________________________ ___________________________
    City Clerk                Date

CHINO BASIN WATERMASTER

BY: ___________________________ ___________________________
    President               Date

BY: ___________________________ ___________________________
    Secretary                Date

COLTON/SAN BERNARDINO REGIONAL TERTIARY TREATMENT AND WATER RECLAMATION AUTHORITY

BY: ___________________________ ___________________________
    President               Date

BY: ___________________________ ___________________________
    Secretary                Date

CITY OF CORONA

BY: ___________________________ ___________________________
    DWP General Manager       Date

BY: ___________________________ ___________________________
    City Clerk                Date
IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to the Agreement to Form the Basin Monitoring Program Task Force, on the dates set forth below.

EASTERN MUNICIPAL WATER DISTRICT

BY__________________________________________ Date

President

BY__________________________________________ Date

Secretary-Treasurer

ELSIMORE VALLEY MUNICIPAL WATER DISTRICT

BY__________________________________________ Date

President

BY__________________________________________ Date

Clerk of the Board

INLAND EMPIRE UTILITIES AGENCY

BY__________________________________________ Date

President

BY__________________________________________ Date

Secretary-Treasurer

IRVINE RANCH WATER DISTRICT

BY__________________________________________ Date

President

BY__________________________________________ Date

Secretary-Treasurer
IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to the Agreement to Form the Basin Monitoring Program Task Force, on the dates set forth below.

JURUPA COMMUNITY SERVICES DISTRICT

BY_________________________________________________________ Date

President, Board of Directors

LEE LAKE WATER DISTRICT

BY_________________________________________________________ Date

President

BY_________________________________________________________ Date

General Manager

ORANGE COUNTY WATER DISTRICT

BY_________________________________________________________ Date

President

BY_________________________________________________________ Date

General Manager

CITY OF REDLANDS

BY_________________________________________________________ Date

Mayor

By_________________________________________________________ Date

City Clerk
IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to the Agreement to Form the Basin Monitoring Program Task Force, on the dates set forth below.

CITY OF RIALTO

BY______________________________________ Date

Mayor

BY______________________________________ Date

City Clerk

CITY OF RIVERSIDE

BY______________________________________ Date

Mayor

BY______________________________________ Date

City Clerk

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

BY______________________________________ Date

President

BY______________________________________ Date

Secretary-Treasurer

SAN GORGONIO PASS WATER AGENCY

BY______________________________________ Date

Commission Chair

BY______________________________________ Date

Secretary-Treasurer
IN WITNESS WHEREOF, the parties hereto have executed this Amendment No. 2 to the Agreement to Form the Basin Monitoring Program Task Force, on the dates set forth below.

SANTA ANA WATERSHED PROJECT AUTHORITY
BY________________________________________________________ Date
Commission Chair

BY________________________________________________________ Date
Secretary-Treasurer

WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY
BY________________________________________________________ Date
Chair

BY________________________________________________________ Date
Secretary-Treasurer

YUCAIPA VALLEY WATER DISTRICT
BY________________________________________________________ Date
President, Board of Directors

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, SANTA ANA REGION
BY________________________________________________________ Date
Executive Officer
AGREEMENT TO FORM A TASK FORCE
TO CONDUCT A
BASIN MONITORING PROGRAM FOR
NITROGEN AND TOTAL DISSOLVED SOLIDS
IN THE SANTA ANA RIVER WATERSHED
(BASIN MONITORING PROGRAM)

THIS AGREEMENT is made and entered into this 10th day of August, 2004 by and among the following entities, which are hereinafter sometimes referred to collectively as "TASK FORCE AGENCIES" or individually as TASK FORCE AGENCY" ("AGREEMENT"). This AGREEMENT is also by and between the Santa Ana Watershed Project Authority ("SAWPA") and the TASK FORCE AGENCIES as to SAWPA's role as Task Force Administrator. The following public agencies are the "TASK FORCE AGENCIES":

Orange County Water District
Eastern Municipal Water District
City of Corona
City of Riverside
Yucaipa Valley Water District
Lee Lake Water District
Chino Basin Watermaster
City of Redlands
San Timoteo Watershed Management Authority
Inland Empire Utilities Agency
City of Rialto
Elsinore Valley Municipal Water District
Colton/San Bernardino Regional Tertiary Treatment and Wastewater Reclamation Authority
Jurupa Community Services District
City of Beaumont
Irvine Ranch Water District
Western Riverside County Regional Wastewater Authority

I. RECITALS

A. Background. In December 1995, the Nitrogen TDS Task Force, consisting of 22 water resource agencies in the Santa Ana Watershed, was formed to oversee a study to evaluate the impacts of Total Inorganic Nitrogen (TIN) and Total Dissolved Solids (TDS) on water resources in the Santa Ana River Watershed. The study was completed in mid-2003. On January 22, 2004, the Santa Ana Regional Water Quality Control Board ("RWQCB") incorporated the results of the Nitrogen TDS Task Force study into a Basin Plan Amendment for Nitrogen and TDS and adopted the Basin Plan Amendment. The TASK FORCE AGENCIES were named in that Basin Plan Amendment as responsible for conducting various monitoring programs and analyses to support the results defined in the Basin Plan Amendment. The monitoring programs and analyses are described as follows:

a. TDS/Nitrogen Monitoring Program for Santa Ana River Reaches 2, 4 and 5.
The implementation of a TDS/Nitrogen monitoring program for the Santa Ana River Reaches 2, 4 and 5 is necessary to assure compliance with both surface water objectives of the defined river reaches and groundwater objectives underlying the river reaches to protect downstream
Orange County groundwater. Compliance with the Reach 2 TDS objective can be determined by evaluation of data collected by the Santa Ana River Watermaster, Orange County Water District, the United States Geological Survey, and others.

b. Watershed-wide TDS/Nitrogen Groundwater Monitoring and Ambient Groundwater Quality Update Program. The implementation of a watershed-wide TDS/Nitrogen groundwater monitoring program is necessary to assess current water quality, to determine whether TDS and Nitrate-Nitrogen water quality objectives for management zones are being met or exceeded, and to update assimilative capacity findings. Groundwater monitoring is also needed to fill data gaps for those management zones with insufficient data to calculate TDS and Nitrate-Nitrogen historical quality and current quality. Groundwater monitoring is needed to assess the effects of publicly-owned treatment plants (“POTW”) discharges to surface waters on affected groundwater. The determination of current ambient groundwater quality throughout the watershed will be conducted and reported by July 1, 2005.

The RWQCB has indicated that the watershed-wide TDS/Nitrogen monitoring program should be conducted every three years to determine the current ambient groundwater quality in the watershed for TDS and Nitrogen. The SAR Reaches 2, 4 and 5 monitoring programs shall be conducted annually. The results of all monitoring programs defined in annual reports will be submitted to the RWQCB.

B. The Purpose of the Task Force Agreement. The purpose of this Task Force Agreement is to form a task force to oversee and conduct the necessary studies for the Basin Monitoring Program as defined in the RWQCB’s Basin Plan Amendment. The Task Force is proposed to consist of the TASK FORCE AGENCIES to direct the study and fund it on an equitable basis to be determined by the Task Force.

C. Memorandum of Agreement on Nitrogen Loss Monitoring Program. Some of the TASK FORCE AGENCIES have entered into a separate agreement to conduct a one year Nitrogen Loss Monitoring Program in the Santa Ana River Watershed which, while related to the work in this AGREEMENT, is to be funded separately by those TASK FORCE AGENCIES who are parties to that Agreement, and shall be governed separately by the parties to that Agreement.

II. COVENANTS

NOW, THEREFORE; in consideration of the foregoing recitals and mutual covenants contained herein, the TASK FORCE AGENCIES agree as follows:

1. Creation of a Task Force. There is hereby created a "Task Force to conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed" initially consisting of the TASK FORCE AGENCIES and other entities as more specifically provided for in paragraph 3 below.
2. **Purpose of the Task Force.**
   The purpose of the Task Force is to provide oversight and supervision of the work that is described herein.

3. **Membership and Organization.**
   a. **Regular Members.** Concurrently with the execution of this AGREEMENT, each of the TASK FORCE AGENCIES shall appoint one regular representative to the Task Force and one alternate representative to act in the absence of the regular representative. The representatives must be vested with the authority to act on behalf of the appointing TASK FORCE AGENCY, but only as provided for in this AGREEMENT. No actions by the TASK FORCE AGENCIES shall bind the TASK FORCE AGENCIES, except as explicitly provided for in this AGREEMENT. The identity of the appointed representatives shall be promptly communicated in writing to SAWPA. The representatives shall serve at the pleasure of the appointing TASK FORCE AGENCY and may be removed at any time, with or without cause; provided, however, that the TASK FORCE AGENCIES acknowledge and agree the continuity of representation on the Task Force is important to the overall effectiveness of the Task Force, and the TASK FORCE AGENCIES further agree to ensure such continuity whenever possible.

   b. **Additional Agencies.** The TASK FORCE AGENCIES acknowledge and agree that the effectiveness of the Task Force may be improved by the inclusion of other public agencies as additional TASK FORCE AGENCIES to the Task Force. Such public agencies may join the Task Force on such written terms and conditions as are acceptable to all TASK FORCE AGENCIES of the Task Force, including, but not limited to, agreed-upon cash contributions for past, present, and/or future work, of the Task Force. The inclusion of such public agencies as additional TASK FORCE AGENCIES to the Task Force shall be effected by a written amendment to this AGREEMENT signed by all TASK FORCE AGENCIES. Such additional TASK FORCE AGENCIES shall appoint their Task Force representatives and alternates as provided in Section 3.a. above or in said written amendment.

   c. **Advisory Members.** The Task Force may, from time to time, seek the advice and counsel of regulatory or special interest agencies, which agencies may serve as Advisory Members to the Task Force. Such Advisory Members shall have no obligation to provide funding and no voting privileges. The California Regional Water Quality Control Board, Santa Ana Region, is hereby appointed as an Advisory Member of the Task Force. Additional Advisory Members may be appointed by a majority vote of the Task Force representatives.

   d. **Committees.** The Task Force may establish committees, consisting of members who shall be selected by, and serve at the pleasure of the Task Force.

   e. **Task Force Administrator.** SAWPA, acting through its Planning Department staff, is hereby appointed as the Task Force Administrator for purposes of this Task Force Agreement. SAWPA shall have the following administrative responsibilities and shall be reimbursed for time expended on behalf of the Task Force at SAWPA's rate for salary, overhead, burden (as shown in Exhibit "A"), and cost of materials, and including costs for:
1. Organizing and facilitating Task Force meetings;
2. Secretarial, clerical, and administrative services;
3. Management of Task Force funds and provide annual reports of Task Force assets and expenditures;
5. Hire SAWPA-approved consultant to provide technical review of Watershed-wide TDS/nitrogen groundwater monitoring program.

SAWPA, as the Task Force Administrator, will act as the contracting party for the benefit of Task Force, for contracts with all Task Force consultants or contractors. SAWPA will not contract, direct, instruct, or guide such consultants or contractors on behalf of the Task Force or use funds provided by the Task Force without approval of, or guidance from, the Task Force representatives in accordance with Sections 3.f(2), 5 and 6 of this AGREEMENT. SAWPA will provide project management for work performed by such consultants or contractors.

f. Meetings of the Task Force.

1. Frequency and Location. The first Task Force meeting shall be held at the office of SAWPA, at which time the Task Force shall agree upon the time and place of holding its regular meetings. Special meetings may be called at the request of the Task Force Administrator or by a majority of the Task Force representatives. All meetings of the Task Force or its Committees shall be noticed and conducted in compliance with California’s Open Meeting Laws.

2. Quorum. A majority of the representatives of the Task Force shall constitute a quorum. Actions of the Task Force shall be passed and adopted upon the affirmative vote of a majority of the Task Force. Each TASK FORCE AGENCY shall have one vote. The Task Force may adopt such additional rules and regulations as may be required for the conduct of its affairs so long as such rules and regulations do not conflict with this AGREEMENT and applicable law.

3. Meeting Minutes. SAWPA shall keep, or cause to be kept, minutes of the Task Force meetings including any handout materials used. Copies of the meetings and handouts will be delivered to the Task Force representatives, each TASK FORCE AGENCY, and the Advisory Members.

4. Task Force Chair. At the first official meeting of the Task Force following execution of this AGREEMENT by all TASK FORCE AGENCIES a chair shall be selected by the Task Force representatives. The term of the chair shall be one year and shall be rotated among the Task Force representatives.
4. **Duties of the Task Force.**
   
a. **Conduct Watershed-wide TDS/Nitrogen Groundwater Monitoring and Ambient Groundwater Quality Update Program.** Hire consultant to perform, authorize, direct, and supervise the "project scope of work". The first component of the scope of work is described in that certain report entitled, "RWQCB Basin Plan Amendment Required Monitoring and Analyses, Recomputation of Ambient Water Quality for the Period 1984 to 2003, Final Work Plan" dated February 2004 (hereafter "Study"), which is incorporated herein by this reference. The determination of current ambient groundwater quality throughout the watershed will be conducted and reported by July 1, 2005. An update and recomputation of the ambient water quality will be conducted every three years thereafter by the Task Force.

b. **Conduct TDS/Nitrogen Monitoring Program for Santa Ana River, Reaches 2, 4, and 5.** Hire consultant to implement a monitoring program and prepare annual reports that will provide an evaluation of compliance with the TDS and Nitrogen objectives for Reaches 2, 4 and 5 of the Santa Ana River. The reports will be provided to the RWQCB by April 15th of each year.

c. **Termination of Projects or Studies.** The TASK FORCE AGENCIES hereby agree that the Task Force shall have the discretion to terminate its projects or studies in the event a consensus of the TASK FORCE AGENCIES cannot be maintained during the course of the Task Force projects or studies.

5. **Budgets.**

On or before January 1st of each year, SAWPA shall prepare and submit a Task Force budget for the next fiscal year to the Task Force and TASK FORCE AGENCIES. The proposed budget shall include all anticipated costs and fees for the scope(s) of work developed by the Task Force for the next fiscal year. Costs shall include costs and fees for any consultants or contractors to be hired by SAWPA to complete the anticipated scopes of work, any equipment or materials to be purchased, and any other direct costs. SAWPA shall include as a separate item in such proposed budgets costs of SAWPA administrative services. The proposed budget shall include a detailed description of all work to be accomplished with the budget. The budgets shall also set forth the funds to be deposited with SAWPA consistent with the budgeted costs and fees for that fiscal year. Each TASK FORCE AGENCY shall approve and pay, in advance on or before January 1st of each year, its pro-rata share of the Task Force proposed budget for the next fiscal year. The pro-rata share of such costs and fees for each TASK FORCE AGENCY will be as described in EXHIBIT "B", attached hereto and made a part of this AGREEMENT. Said EXHIBIT "B" shall be renewed each fiscal year to reflect the final budget and the participating TASK FORCE AGENCIES of that fiscal year, and any other factor that may affect the pro-rata share of such costs and fees for each TASK FORCE AGENCY for that fiscal year. EXHIBIT "A" includes by its attachment the funding sources for Fiscal Year (July 1st to June 30th) 2004-2005, and a budget for that fiscal year shall be adopted by the Task Force and TASK FORCE AGENCIES after this AGREEMENT has been fully executed. In the event that any TASK FORCE AGENCY withdraws from the Task Force, the budget then in effect shall be adjusted in order to provide for any funding shortfall caused by such withdrawal.
6. **Contracting.**
Upon Task Force approval, SAWPA shall hire consultants and contractors, as necessary, to complete the scope of work that has been funded by TASK FORCE AGENCIES each fiscal year. SAWPA shall not obligate funds that have not been delivered to SAWPA by the TASK FORCE AGENCIES.

7. **Duration of Agreement.**
This AGREEMENT shall not terminate unless by mutual agreement of the TASK FORCE AGENCIES provided that all debts and liabilities of the Task Force are satisfied. Notwithstanding the foregoing, each TASK FORCE AGENCY reserves the right to terminate at anytime, upon sixty (60) days’ written notice to the Task Force. Task Force projects and studies already undertaken on behalf of TASK FORCE AGENCIES at the time of withdrawal by a TASK FORCE AGENCY shall be fully funded by the TASK FORCE AGENCIES, including the withdrawing TASK FORCE AGENCY, at the time projects or studies are approved by the Task Force for implementation. A withdrawing TASK FORCE AGENCY shall not be entitled to any refund for programs or studies already underway. Any refund of surplus funds due to the withdrawing TASK FORCE AGENCY shall be paid sixty (60) days after completion of tasks, projects and studies undertaken or in progress.

8. **Ownership of Documents.**
All work or deliverables produced, including originals prepared by anyone in connection with, or pertaining to, the work of the Task Force, shall become the property in whole and in part of TASK FORCE AGENCIES, individually and collectively. Provided, however, that any withdrawn TASK FORCE AGENCY shall only be entitled to such work or deliverables if the withdrawn TASK FORCE AGENCY has fully contributed funds for such work or deliverables.

9. **Assignment.**
No right, duty or obligation of whatever kind or nature created herein shall be assigned without the prior written consent of all TASK FORCE AGENCIES.

10. **Effective Date.**
This Task Force Agreement shall become effective when it has been executed by a majority of the TASK FORCE AGENCIES pursuant to authorization by each TASK FORCE AGENCY’s Board of Directors.

11. **Counterparts.**
This AGREEMENT may be executed in original counterparts, which together shall constitute a single agreement.

12. **Independent Contractor Status.**
This AGREEMENT is not intended and shall not be construed so as to create the relationship of agent, servant, employee, partnership, joint venture or association, as between the TASK FORCE AGENCIES.
13. **Waiver Of Rights.**  
The failure by the TASK FORCE AGENCIES or SAWPA to insist upon strict performance of any of the terms, covenants or conditions of this AGREEMENT shall not be deemed a waiver of any right or remedy that TASK FORCE AGENCIES and SAWPA may have, and shall not be deemed a waiver of the right to require strict performance of all the terms, covenants and conditions of this AGREEMENT thereafter, nor a waiver of any remedy for the subsequent breach or default of any term, covenant or condition of this AGREEMENT.

14. **Severability.**  
If any part of this AGREEMENT is held, determined or adjudicated to be illegal, void or unenforceable by a court of competent jurisdiction, the remainder of this AGREEMENT shall be given effect to the fullest extent reasonably possible.

15. **Amendment.**  
It is mutually understood and agreed that no addition to, alteration of, or variation of the terms of this AGREEMENT, nor any oral understanding or agreement not incorporated herein, shall be valid unless made in writing and signed and approved by all TASK FORCE AGENCIES and SAWPA.

16. **Entire Agreement.**  
This document sets forth the entire Agreement between and among the TASK FORCE AGENCIES and SAWPA.

17. **Availability Of Funds.**  
The obligation of each TASK FORCE AGENCY is subject to the availability of funds appropriated by each TASK FORCE AGENCY for the purposes herein. Any obligation for the future payment of money beyond the current fiscal year is conditioned on the governing body of each TASK FORCE AGENCY providing adequate appropriations in the adopted budgets for those subsequent fiscal years. This condition applies to but is not limited to the obligations of the TASK FORCE AGENCIES under section 3.e (Task Force Administrator), and section 5 (Budgets) of this AGREEMENT. Based on the financial constraints imposed by this Section 17, the TASK FORCE AGENCIES understand that SAWPA is under no duty to perform any services under this AGREEMENT until and unless the each TASK FORCE AGENCY has approved the fiscal year budget under Section 5, and has appropriated and deposited with SAWPA, the necessary monies to fund the approved budget. Any failure by one or more of the TASK FORCE AGENCIES to appropriate and deposit monies with SAWPA to fund the budget will necessarily delay the performance of the services by SAWPA contemplated by this AGREEMENT, and SAWPA shall not be held responsible or liable for any such delay or costs incurred from such a delay.

18. **Indemnity and Insurance.**  
a. SAWPA shall require all consultants or contractors performing work or services for the Task Force to indemnify and hold harmless SAWPA and the TASK FORCE AGENCIES from any and all claims, damages, lawsuits, fines, penalties, including attorneys’ fees and costs, arising from or related to the works or services provided by such consultants.
or contractors. Such contractors or consultants shall also maintain the following insurances and keep certificates of such insurances on file with SAWPA, on behalf of the Task Force:

(1) Workers Compensation Insurance. A program of Workers Compensation insurance or a state approved self-insurance program shall be in an amount and form to meet all applicable requirements of the Labor Code of California, covering all persons and entities providing services on behalf of the consultant or contractor and all risks of such persons or entities under this AGREEMENT.

(2) Comprehensive General and Automobile Liability Insurance. Comprehensive personal injury and property damage liability coverage shall include contractual coverage and automobile liability, if applicable, and including coverage for owned, hired and non-owned vehicles. The policy shall have a combined single limit for bodily injury and property damage of at least $1,000,000.00. SAWPA and the TASK FORCE AGENCIES shall be named as additional insureds on the policy providing such coverage, and any right of subrogation shall be waived.

(3) Professional Liability Insurance. Professional liability insurance shall include limits of at least $1,000,000.00 per claim or occurrence, unless such coverage is waived by the Task Force representatives.

b. Nothing in this AGREEMENT is intended to create, nor shall anything herein be construed as creating, any rights in, benefits for or obligations to, any person or entity other than SAWPA and the TASK FORCE AGENCIES.

SAWPA shall ensure that during the term of this AGREEMENT it and any consultant retained by it shall not discriminate on the grounds of race, religion, creed, color, national origin, ancestry, age, physical disability, mental disability, medical condition, including the medical condition of Acquired Immune Deficiency Syndrome (AIDS) or any other condition related thereto, marital status, sex, or sexual orientation, in the selection and retention of employees and subcontractors and the procurement of materials and equipment, except as provided in Section 12940 of the California Government Code, in the performance of this AGREEMENT and shall also comply with the applicable provisions of the Americans with Disabilities Act.

20. Warranty of Authority.
Each of the individuals executing this AGREEMENT represent and warrant that she or he has the legal power, right and actual authority to bind their respective TASK FORCE AGENCIES to the terms and conditions of this AGREEMENT. Each individual executing this AGREEMENT further represents and warrants that the AGREEMENT has been approved by his or her respective TASK FORCE AGENCIES’ governing board.

21. Dispute Resolution.
Any dispute which may arise by and between the parties to this AGREEMENT shall first be submitted to non-binding mediation, conducted by a neutral, impartial mediation
service that the parties mutually agree upon in writing. Any dispute not resolved by such mediation shall be submitted to binding arbitration conducted by a neutral, impartial arbitration service that the parties mutually agree upon in writing. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California, and all other applicable laws. Upon a showing of good cause, the arbitrator may permit limited discovery in the arbitration proceeding. If any party commences legal action or arbitration arising out of or in connection with this Project Agreement, the prevailing party shall be entitled to recover reasonable attorney’s fees and litigation expenses from the losing party.

IN WITNESS WHEREOF, SAWPA and the TASK FORCE AGENCIES have executed this AGREEMENT on the date set forth below.

ORANGE COUNTY WATER DISTRICT

DATE 9-1-04

BY

President

DATE 9-1-04

BY

General Manager

INLAND EMPIRE UTILITIES AGENCY

DATE__________

BY

President

DATE__________

BY

Secretary

EASTERN MUNICIPAL WATER DISTRICT

DATE__________

BY

President

DATE__________

BY

Secretary
service that the parties mutually agree upon in writing. Any dispute not resolved by such mediation shall be submitted to binding arbitration conducted by a neutral, impartial arbitration service that the parties mutually agree upon in writing. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California, and all other applicable laws. Upon a showing of good cause, the arbitrator may permit limited discovery in the arbitration proceeding. If any party commences legal action or arbitration arising out of or in connection with this Project Agreement, the prevailing party shall be entitled to recover reasonable attorney’s fees and litigation expenses from the losing party.

IN WITNESS WHEREOF, SAWPA and the TASK FORCE AGENCIES have executed this AGREEMENT on the date set forth below.

ORANGE COUNTY WATER DISTRICT

DATE____________  BY____________

President

DATE____________  BY____________

Secretary

INLAND EMPIRE UTILITIES AGENCY

DATE 9/8/04  BY

President

DATE____________  BY____________

Secretary

EASTERN MUNICIPAL WATER DISTRICT

DATE____________  BY____________

President

DATE____________  BY____________

Secretary
service that the parties mutually agree upon in writing. Any dispute not resolved by such mediation shall be submitted to binding arbitration conducted by a neutral, impartial arbitration service that the parties mutually agree upon in writing. The arbitrator shall decide each and every dispute in accordance with the laws of the State of California, and all other applicable laws. Upon a showing of good cause, the arbitrator may permit limited discovery in the arbitration proceeding. If any party commences legal action or arbitration arising out of or in connection with this Project Agreement, the prevailing party shall be entitled to recover reasonable attorney's fees and litigation expenses from the losing party.

IN WITNESS WHEREOF, SAWPA and the TASK FORCE AGENCIES have executed this AGREEMENT on the date set forth below.

ORANGE COUNTY WATER DISTRICT

DATE __ Date__

BY ____________________________
President

DATE __ Date__

BY ____________________________
Secretary

INLAND EMPIRE UTILITIES AGENCY

DATE __ Date__

BY ____________________________
President

DATE __ Date__

BY ____________________________
Secretary

EASTERN MUNICIPAL WATER DISTRICT

DATE 8/3/04

BY ____________________________
President

DATE 8/23/04

BY ____________________________
Secretary
CITY OF RIALTO

DATE________
BY ______________
Mayor

DATE________
BY ______________
City Clerk

CITY OF CORONA

DATE________
BY ______________
Mayor

DATE________
BY ______________
City Clerk

ELSONE VALLEY MUNICIPAL WATER DISTRICT

DATE________
BY ______________
President

DATE________
BY ______________
Secretary

CITY OF RIVERSIDE

DATE________
BY ______________
Mayor

DATE________
BY ______________
City Clerk
CITY OF RIALTO

DATE_______
BY________________________
Mayor

DATE_______
BY________________________
City Clerk

CITY OF CORONA

DATE 8/4/04
BY________________________
Mayor

DATE 8/4/04
BY________________________
City Clerk

ELSINORE VALLEY MUNICIPAL WATER DISTRICT

DATE_______
BY________________________
President

DATE_______
BY________________________
Secretary

CITY OF RIVERSIDE

DATE_______
BY________________________
Mayor

DATE_______
BY________________________
City Clerk
CITY OF RIALTO

DATE__________ BY______________________________

Mayor

DATE__________ BY______________________________

City Clerk

CITY OF CORONA

DATE__________ BY______________________________

Mayor

DATE__________ BY______________________________

City Clerk

ELSI NORE VALLEY MUNICIPAL WATER DISTRICT

DATE 9-13-04 BY W. Ben Wicks

President

DATE 9/14/04 BY Piero Santamaria

Secretary

CITY OF RIVERSIDE

DATE__________ BY______________________________

Mayor

DATE__________ BY______________________________

City Clerk
CITY OF RIALTO

DATE_______ BY________________________
                     Mayor

DATE_______ BY________________________
                     City Clerk

CITY OF CORONA

DATE_______ BY________________________
                     Mayor

DATE_______ BY________________________
                     City Clerk

ELSVINORE VALLEY MUNICIPAL WATER DISTRICT

DATE_______ BY________________________
                     President

DATE_______ BY________________________
                     Secretary

CITY OF RIVERSIDE

DATE 09-02-2004 BY________________________
                     Mayor City Manager

DATE 09-02-2004 BY________________________
                     City Clerk

APPROVED AS TO FORM
CITY ATTORNEY’S OFFICE
BY________________________
                     Deputy City Attorney
COLTON/SAN BERNARDINO REGIONAL
TERTIARY TREATMENT AND WASTEWATER
RECLAMATION AUTHORITY

DATE 9/13/04
BY [Signature]
President

DATE 9/14/04
BY [Signature]
Secretary

YUCAIPA VALLEY WATER DISTRICT

DATE ______
BY [Signature]
President, Board of Directors

JURUPA COMMUNITY SERVICES DISTRICT

DATE ______
BY [Signature]
President, Board of Directors

LEE LAKE WATER DISTRICT

DATE ______
BY [Signature]
President

DATE ______
BY [Signature]
Secretary
COLTON/SAN BERNARDINO REGIONAL TERTIARY TREATMENT AND WASTEWATER RECLAMATION AUTHORITY

DATE: ______  
BY: _____________________________
President

DATE: ______  
BY: _____________________________
Secretary

YUCAIPA VALLEY WATER DISTRICT

DATE: ______  
BY: _____________________________
President, Board of Directors

JURUPA COMMUNITY SERVICES DISTRICT

DATE: ______  
BY: _____________________________
President, Board of Directors

LEE LAKE WATER DISTRICT

DATE: ______  
BY: _____________________________
President

DATE: ______  
BY: _____________________________
Secretary

11
JURUPA COMMUNITY SERVICES DISTRICT

DATE ______  
BY__________________________  
President, Board of Directors

LEE LAKE WATER DISTRICT

DATE 7/20/04  
BY__________________________  
President

DATE 7/20/04  
BY__________________________  
Secretary

CITY OF BEAUMONT

DATE ______  
BY__________________________  
Mayor

DATE ______  
BY__________________________  
City Clerk

CHINO BASIN WATERMASTER

DATE ______  
BY__________________________  
President

DATE ______  
BY__________________________  
Secretary
CITY OF BEAUMONT

DATE 9/21/04

BY

DATE 9/21/04

BY

CITY OF REDLANDS

DATE

BY

Mayor

DATE

BY

City Clerk

CHINO BASIN WATERMASTER

DATE

BY

President

DATE

BY

Secretary

IRVINE RANCH WATER DISTRICT

DATE

BY

President

DATE

BY

Secretary

46/128
CITY OF BEAUMONT

DATE ______  
BY ____________________________
Mayor

DATE ______  
BY ____________________________
City Clerk

CHINO BASIN WATERMASTER

DATE ______  
BY ____________________________
President

DATE ______  
BY ____________________________
Secretary

IRVINE RANCH WATER DISTRICT

DATE ______  
BY ____________________________
President

DATE ______  
BY ____________________________
Secretary

CITY OF REDLANDS

DATE ______  
BY ____________________________
Mayor

DATE ______  
BY ____________________________
City Clerk
CITY OF BEAUMONT

DATE __________  BY ____________________

Mayor

DATE __________  BY ____________________

City Clerk

CHINO BASIN WATERMASTER

DATE __________  BY ____________________

President

DATE __________  BY ____________________

Secretary

IRVINE RANCH WATER DISTRICT

DATE 03/11/10  BY ____________________

President

DATE 04/13/10  BY ____________________

Secretary

CITY OF REDLANDS

DATE __________  BY ____________________

Mayor

DATE __________  BY ____________________

City Clerk

A-12

48/128
CITY OF BEAUMONT

DATE ______
BY _____________________________
Mayor

DATE ______
BY _____________________________
City Clerk

CHINO BASIN WATERMASTER

DATE ______
BY _____________________________
President

DATE ______
BY _____________________________
Secretary

IRVINE RANCH WATER DISTRICT

DATE ______
BY _____________________________
President

DATE ______
BY _____________________________
Secretary

CITY OF REDLANDS

DATE 11/2/04
BY Susan Pepller Mayor

DATE 11/2/04
BY Lorrie Poyzer City Clerk
WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY

DATE __________

BY ____________________________
Chair

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

DATE __________

BY ____________________________
President

DATE __________

BY ____________________________
Secretary

SANTA ANA WATERSHED PROJECT AUTHORITY

DATE __________

BY ____________________________
Chair

DATE __________

BY ____________________________
Secretary-Treasurer
WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY

DATE ______  BY __________________________

Chair

DATE ______  BY __________________________

Secretary-Treasurer

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

DATE 9/28/04  BY __________________________

President

DATE 9/28/04  BY __________________________

Secretary

SANTA ANA WATERSHED PROJECT AUTHORITY

DATE ______  BY __________________________

Chair

DATE ______  BY __________________________

Secretary-Treasurer
WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY

DATE _______  
BY ____________________________  
Chair

DATE _______  
BY ____________________________  
Secretary-Treasurer

SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

DATE _______  
BY ____________________________  
President

DATE _______  
BY ____________________________  
Secretary

SANTA ANA WATERSHED PROJECT AUTHORITY

DATE 8-10-04  
BY ____________________________  
Chair

DATE 8-10-04  
BY ____________________________  
Secretary-Treasurer
EXHIBIT A

Overhead and burden are included in all rates. Labor for SAWPA staff shall be billed at the rates in Table 1 below for FY 04-05. Rates will be adjusted annually based on SAWPA annual budget. Materials purchased to provide administrative services that are not shown in Table 1 below shall be billed at direct cost with no additional fees or mark-ups.

<table>
<thead>
<tr>
<th>Item</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning Manager</td>
<td>$117.09/hour</td>
</tr>
<tr>
<td>Watershed Planner</td>
<td>$75.60/hour</td>
</tr>
<tr>
<td>Sr. Administrative Assistant</td>
<td>$55.65/hour</td>
</tr>
<tr>
<td>Administrative Assistant II</td>
<td>$43.11/hour</td>
</tr>
<tr>
<td>Administrative Assistant I</td>
<td>$44.34/hour</td>
</tr>
<tr>
<td>Controller</td>
<td>$88.65/hour</td>
</tr>
<tr>
<td>Senior Accounting Technician</td>
<td>$50.89/hour</td>
</tr>
<tr>
<td>Automobile Travel</td>
<td>Federal mileage rate for automobile travel to meeting locations.</td>
</tr>
<tr>
<td>Out of Town travel (when air travel or overnight stay is required)</td>
<td>Direct cost of air travel plus direct cost of lodging and meals.</td>
</tr>
</tbody>
</table>
EXHIBIT B
TASK FORCE BUDGET

A. CONTRIBUTIONS

1. Study Contributions. In order to participate in the activities of the Task Force, each TASK FORCE AGENCY shall appropriate and deliver to SAWPA its agreed upon share of the funding. Based on study obligations assigned by the RWQCB in the Basin Plan Amendment for TIN and TDS, some portions of the overall study will be paid for by a subset of the TASK FORCE AGENCY as provided in a separate memorandum of agreement. The TASK FORCE AGENCIES specifically recognize that each TASK FORCE AGENCY's agreed-upon share is determined by that TASK FORCE AGENCY's Board of Directors, who are the signatories to this AGREEMENT. Funding shall be provided by the TASK FORCE AGENCIES in accordance with the attachment to this Exhibit.

2. Funds appropriated by each TASK FORCE AGENCY to the activities of the Task Force shall be expended only for the purposes expressed in this AGREEMENT. Funds shall be deposited in a restricted, interest-bearing account for the benefit of the Task Force, administered by SAWPA. Funds shall be strictly accounted to each TASK FORCE AGENCY. Upon termination of the Agreement and the activities of the Task Force, any funds not used shall be returned to the TASK FORCE AGENCIES in proportion to their contribution as provided in the Agreement.

3. The compensation to be paid to consultant hired by Task Force is subject to SAWPA's receipt of funds from the TASK FORCE AGENCIES. The consultant will be directed to limit its activities to ensure that the Consultant does not expend funds or provide services for which SAWPA has not yet collected funds from the TASK FORCE AGENCIES. SAWPA will endeavor to obtain the funds needed to fully fund the scope of work.
## Basin Monitoring and Update Program Funding (FY 04-05)

**CONSULTANTS**

WE Inc. - Ambient Groundwater Update
WE Inc. - SAR Reaches 2, 4, 5 Annual Report

<table>
<thead>
<tr>
<th>Consultant Cost</th>
<th>SAWPA ADM</th>
<th>Contingency</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$248,194</td>
<td>$45,000</td>
<td>$21,306</td>
<td>$314,500</td>
</tr>
<tr>
<td>$30,000</td>
<td>$9,800</td>
<td>$5,000</td>
<td>$44,800</td>
</tr>
<tr>
<td>$278,194</td>
<td>$54,800</td>
<td>$26,306</td>
<td>$359,300</td>
</tr>
</tbody>
</table>

### Distribution of Costs Among Responsible Agencies

<table>
<thead>
<tr>
<th>Agency</th>
<th>SAR Report</th>
<th>Current Ambient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEUA</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>EMWD</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>OCWD</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>CORONA</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>EVMWD</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>REDLANDS</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>RIALTO</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>RIVERSIDE</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>RIX JPA</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>YYWD</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>WRCRWA</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>JCSD</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>LEE LAKE WD</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>San Timoteo WMA</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>BEAUMONT</td>
<td>$3,200</td>
<td>$18,500</td>
<td>$21,700</td>
</tr>
<tr>
<td>CBWM</td>
<td>$18,500</td>
<td>$18,500</td>
<td>$37,000</td>
</tr>
<tr>
<td>IRWD</td>
<td>$18,500</td>
<td>$18,500</td>
<td>$37,000</td>
</tr>
<tr>
<td></td>
<td>$44,800</td>
<td>$314,500</td>
<td>$359,300</td>
</tr>
</tbody>
</table>

**SAWPA ADM Contingency**

<table>
<thead>
<tr>
<th>Agency</th>
<th>SAR Report</th>
<th>Current Ambient</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$45,000</td>
<td>$21,306</td>
<td>$66,306</td>
</tr>
<tr>
<td></td>
<td>$9,800</td>
<td>$5,000</td>
<td>$14,800</td>
</tr>
<tr>
<td></td>
<td>$54,800</td>
<td>$26,306</td>
<td>$81,106</td>
</tr>
</tbody>
</table>

**Totals**

|                       | $314,500   | $44,800         | $359,300 |

**Total**

|                       | $359,300   |                 |         |
AMENDMENT NO. 1
TO
AGREEMENT TO FORM A TASK FORCE
TO CONDUCT A
BASIN MONITORING PROGRAM FOR
NITROGEN AND TOTAL DISSOLVED SOLIDS
IN THE SANTA ANA RIVER WATERSHED
(BASIN MONITORING PROGRAM)

Pursuant to Paragraph II.15 of that certain AGREEMENT entitled, “Agreement to Form a Task Force to Conduct a Basin Monitoring Program for Nitrogen and Total Dissolved Solids in the Santa Ana River Watershed”, dated August 10, 2004, the TASK FORCE AGENCIES hereby agree to make the following changes:

1. Under I. Recitals B. The Purpose of the Task Force Agreement shall be revised to read as follows:

The purpose of this AGREEMENT is to form a task force to oversee and conduct the studies for the Basin Monitoring Program as described in the RWQCB’s Basin Plan Amendment and perform other related cooperative studies as agreed to by the TASK FORCE AGENCIES. The Task Force is proposed to consist of the TASK FORCE AGENCIES to direct the study and fund it on an equitable basis to be determined by the TASK FORCE AGENCIES.

2. The TASK FORCE AGENCIES hereby amend Paragraph II.4 (Duties of the Task Force) of the Task Force Agreement to include the following tasks to be funded by the TASK FORCE AGENCIES and authorize the Task Force Administrator to conduct such tasks.

   d. Conduct Santa Ana River (SAR) Wasteload Allocations and other related studies

Hire a consultant to perform updates to the SAR Wasteload Allocation Report, work with the RWQCB staff and TASK FORCE AGENCIES on appropriate model runs to be used for new RWQCB Basin Plan Amendments for the SAR Wasteload Allocation and provide appropriate input for new Basin Plan Amendment language as needed. Additional studies may also be conducted to support the purposes of the TASK FORCE AGENCIES as directed by a consensus of the TASK FORCE AGENCIES.

Except as otherwise expressly amended herein, all of the terms, conditions, and provisions of the AGREEMENT shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment on the dates set forth below (Agencies Listed on the following Four Signature Pages):
CITY OF BEAUMONT

DATE 3.16.10
BY ____________________________
Mayor

DATE 3.16.10
BY ____________________________
City Clerk

CHINO BASIN WATERMASTER

DATE__________
BY ____________________________
President

DATE__________
BY ____________________________
Secretary

COLTON/SAN BERNARDINO REGIONAL
TERTIARY TREATMENT AND WASTEWATER
RECLAMATION AUTHORITY

DATE__________
BY ____________________________
President

DATE__________
BY ____________________________
Secretary
CITY OF BEAUMONT

DATE _______  BY ____________________________

Mayor

DATE _______  BY ____________________________

City Clerk

CHINO BASIN WATERMASTER

DATE 5/2/10  BY ____________________________

President

DATE 5/7/10  BY ____________________________

Secretary

COLTON/SAN BERNARDINO REGIONAL TERTIARY TREATMENT AND WASTEWATER RECLAMATION AUTHORITY

DATE _______  BY ____________________________

President

DATE _______  BY ____________________________

Secretary
CITY OF CORONA

DATE ____________ BY ____________________________
DWP General Manager

DATE ____________ BY ____________________________
City Clerk

EASTERN MUNICIPAL WATER DISTRICT

DATE 4/12/10 BY ____________________________
President

DATE 04/12/10 BY ____________________________
Secretary

ELSIONORE VALLEY MUNICIPAL WATER DISTRICT

DATE ____________ BY ____________________________
President

DATE ____________ BY ____________________________
Secretary

C:\projects/PA206BasinPlanTF/AMENDMENTNO1 3
INLAND EMPIRE UTILITIES AGENCY

DATE
BY
President

DATE
BY
Secretary

IRVINE RANCH WATER DISTRICT

DATE
BY
President

DATE
BY
Secretary

JURUPA COMMUNITY SERVICES DISTRICT

DATE
BY
President, Board of Directors

ORANGE COUNTY WATER DISTRICT

DATE 2/17/10
BY
President

DATE 2/17/10
BY
General Manager

c:\projects/PA20BasinPlanTF/AMENDMENTNO1

4

APPROVED AS TO FORM
By: General Counsel for Orange County Water District
CITY OF RIALTO

DATE __________
BY ____________________________
Mayor

DATE __________
BY ____________________________
City Clerk

CITY OF RIVERSIDE

DATE __________
BY ____________________________
Mayor

DATE __________
BY ____________________________
City Clerk

CITY OF REDLANDS

DATE 6/15/2010
BY ____________________________
Mayor

DATE 6/15/2010
BY ____________________________
City Clerk
SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

DATE______

BY__________________________
President

DATE______

BY__________________________
Secretary

SANTA ANA WATERSHED PROJECT AUTHORITY

DATE______

BY__________________________
Chair

DATE______

BY__________________________
Secretary-Treasurer

WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY

DATE______

BY__________________________
Chair

DATE______

BY__________________________
Secretary-Treasurer

YUCAIPA VALLEY WATER DISTRICT

DATE______

BY__________________________
President, Board of Directors
SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

DATE_______ BY________________________________________

President

DATE_______ BY________________________________________

Secretary

SANTA ANA WATERSHED PROJECT AUTHORITY

DATE_______ BY________________________________________

Chair

DATE_______ BY________________________________________

Secretary-Treasurer

WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY

DATE 7/12/10 BY ________________________________

Chair

DATE 7/22/10 BY ________________________________

Secretary-Treasurer

YUCAIPA VALLEY WATER DISTRICT

DATE_______ BY________________________________________

President, Board of Directors
SAN TIMOTEO WATERSHED MANAGEMENT AUTHORITY

DATE ___________ BY ___________________________

President

DATE ___________ BY ___________________________

Secretary

SANTA ANA WATERSHED PROJECT AUTHORITY

DATE ___________ BY ___________________________

Chair

DATE ___________________________

Secretary-Treasurer

WESTERN RIVERSIDE COUNTY REGIONAL WASTEWATER AUTHORITY

DATE ___________ BY ___________________________

Chair

DATE ___________ BY ___________________________

Secretary-Treasurer

YUCAIPA VALLEY WATER DISTRICT

DATE ___________ BY ___________________________

President, Board of Directors
DATE: August 4, 2015
TO: Board of Directors
FROM: Wen Huang, Manager of Engineering
SUBJECT: Consider Funding Agreement with San Bernardino County Flood Control District for Design and Construction of Recharge Facilities in Cactus Basins

This memorandum provides background information regarding the construction of the Cactus Basins, facilities required for recharge in the Basins, and a financial arrangement with the San Bernardino County Flood Control District for design and construction of the recharge facilities. This item was discussed at the July 30 Board of Directors' Workshop and is being forwarded to the Board of Directors for consideration.

Background:
The Cactus Basins, located south of Interstate 210 and north of Etiwanda Avenue, between Ayala Drive and Cactus Avenue, are owned by the San Bernardino County Flood Control District (SBCFCD). The partially developed flood control basins appear to be the most feasible location to provide large scale recharge for the Rialto – Colton Basin. Staff has been working with SBCFCD to incorporate recharge components into the current and future flood control improvements at the Cactus Basins. As a cooperative effort with Valley District, SBCFCD was able to secure one million dollars for construction of the Cactus Basins No. 3 and 3A from Round 1 of the Proposition 84 Grant. Construction is scheduled to begin in fall 2015.

The primary purpose of the Cactus Basins is for flood protection. In order to facilitate recharge, Valley District Staff has been working cooperatively with SBCFCD to incorporate certain recharge appurtenances, including bypass pipelines, control gates, and low-flow diversion structures, into the design of the basins. These recharge facilities are being designed by SBCFCD with significant
input from Valley District and will be constructed at the same time with the basins to minimize costs.

It is currently proposed that the recharge facilities will be constructed in two phases, one with the construction of Cactus Basins Nos. 3 and 3A, which is scheduled to begin in fall 2015, and the second phase with Cactus Basin No. 4, which is currently planned for late 2016. It is anticipated that the recharge facilities will be fully functional by the end of 2017. Operation of the recharge facilities is pending completion of environmental documentation for evaluation of recharge effects by Valley District.

The attached funding agreement is to formalize the proposed financial arrangement that Valley District agrees to cover 100 percent of the costs of the recharge facilities, which are presently estimated to be $2,020,000, including 10% of the estimated construction cost for design and engineering, 15% for administration and surveying, and a 20% construction contingency. Valley District will be invoiced on a monthly basis for costs incurred on the project. This funding agreement has been reviewed by District's Special Counsel, David Aladjem, and found it to be satisfactory.

Recommendation:
Staff recommends the Board of Directors approve this funding agreement and authorize the Board President to execute the agreement. The total estimated cost of design and construction for the recharge facilities is approximately $2.02 million.

Attachments:
1. Conceptual Dual-Purpose Facilities in Cactus Basins
2. Funding Agreement
THIS CONTRACT is entered into in the State of California by and between the SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT, hereinafter called the FCD, and

Name
San Bernardino Valley Municipal Water District
Address
380 East Vanderbilt Way
San Bernardino, CA 92408
Telephone (909) 387-9200

hereinafter called VALLEY DISTRICT
Federal ID No. or Social Security No.
95-6005196

IT IS HEREBY AGREED AS FOLLOWS:
(Use space below and additional bond sheets. Set forth service to be rendered, amount to be paid, manner of payment, time for performance or completion, determination of satisfactory performance and cause for termination, other terms and conditions, and attach plans, specifications, and addenda, if any.)

WITNESSETH

WHEREAS, the San Bernardino County Flood Control District (hereafter referred to as FCD) and the San Bernardino VALLEY DISTRICT Municipal Water FCD (hereafter referred to as VALLEY DISTRICT) are signatories to this AGREEMENT and shall be collectively referred to as "the PARTIES"; and

WHEREAS, the FCD is currently engaged in developing and constructing the Cactus Basin improvement project (hereafter referred to as PROJECT), located within the incorporated area of the City of Rialto, consisting of constructing Cactus Basins 3, 3a, and 4 (to be constructed in 2 phases) including earthen dams, basin grading,
excavation, inlet/outlet structures, spillways, access roads, an interior berm, and miscellaneous flood control-related appurtenances within property currently owned by FCD; and

WHEREAS, the PROJECT has been recognized as a Regional Flood Protection Facility for which funding was recommended as a part of the FCD's Zone 2 Priority Project List and Ten Year Construction Funding Program, with additional funding being provided through a Proposition 84 Integrated Regional Water Management Program ("IRWMP") Implementation Grant awarded by Santa Ana Watershed Project Authority ("SAWPA"); and

WHEREAS, VALLEY DISTRICT proposes to have constructed certain recharge-related appurtenances for the purpose of conveying California State Water Project or recycled water through the Cactus Basins, consisting of a distribution pipeline, diversion structures, an inlet and outlet structures into Basins 3, 4 and the existing outlet culvert for Basin 3A (hereafter referred to as APPURTENANCES) constructed with the FCD'S PROJECT for potential future use; and

WHEREAS, water spreading activities within the Cactus Basins themselves will be subject to future agreements between the FCD and VALLEY DISTRICT and is not a part of this AGREEMENT; and

WHEREAS, the proposed APPURTENANCES will be constructed in two (2) phases, one with the FCD'S Cactus Basin No. 3, 3A PROJECT and the second phase with the FCD'S Cactus Basin No. 4 PROJECT. Budget and remaining funds will be reviewed and the AGREEMENT may be revised based upon anticipated costs to complete the APPURTENANCES; and

WHEREAS, VALLEY DISTRICT agrees to bear 100 percent of the costs of the APPURTENANCES, which are presently estimated to be $2,020,000.00 (Two Million Twenty Thousand Dollars); including ten percent (10%) of the estimated construction cost for design engineering, an additional fifteen percent (15%) of the estimated constructional cost for administration and surveying and a twenty percent (20%) construction contingency, as depicted on Exhibit "A"-Cost Estimate attached hereto; and

WHEREAS, the FCD will act as the Lead Agency, as stipulated under SECTION I (1.1) below on the PROJECT; and

WHEREAS, the PARTIES desire to set the forth responsibilities and obligations of each as they pertain to the PROJECT.

NOW, THEREFORE, IT IS MUTUALLY AGREED AS FOLLOWS:

SECTION I

1.0 FCD AGREES TO:

1.1 Act as the Lead Agency to prepare all construction plans, specifications, engineer's estimates, and accomplish construction administration, including advertisements for bids, bid reviews, contract awards, construction, and all other needed inspections of the PROJECT.

1.2 Submit to the VALLEY DISTRICT contract plans, specifications, engineer's cost estimates, invoices, and progress reports to enable Valley District to be able to reasonably assess progress of the PROJECT and to enable VALLEY DISTRICT to review and approve each phase of the PROJECT and the APPURTENANCES.

1.3 Advertise, award, and administer construction of the PROJECT and APPURTENANCES and in accordance with the provisions of the California Public Contract Code applicable to counties and all other applicable state laws.

1.4 Ensure PROJECT is constructed in accordance with the plans and specifications approved by the VALLEY DISTRICT.
1.5 Enter into construction contract(s) with contractor(s) for the PROJECT.

1.6 Perform inspections of all items of work performed under the construction contract(s) with the contractors or subcontractors for the PROJECT and maintain adequate records of inspection and materials testing made available for review to VALLEY DISTRICT. The FCD shall provide copies of all records of inspection including inspection notes and materials testing to the VALLEY DISTRICT.

1.7 Provide VALLEY DISTRICT the opportunity to inspect the project during all phases of construction.

1.8 Provide the VALLEY DISTRICT invoices on a monthly basis for costs incurred on the PROJECT that are reimbursable under the agreement and shall include at minimum the following information:
   a. Cost incurred for work performed in implementing the project during the period identified in the particular invoice.
   b. Cost incurred for any interest in real property (land or easement) that have been necessarily acquired for the project during the period identified in the particular invoice for the implementation of the project.
   c. Cost for design and engineering to be invoiced upon completion of the PROJECT
   d. Invoices submitted shall meet the following format requirements:
      1. Invoice must contain date of invoice, time period covered by the invoice, and the total amount due.
      2. Invoices must be itemized
      3. Provide sufficient backup documentation (e.g. receipts, copies of checks, time sheets) as determined by VALLEY DISTRICT.

1.9 Require all contractors and vendors working on the PROJECT to have appropriate and adequate insurance coverage for the mutual protection and benefit of the PARTIES. VALLEY DISTRICT shall be added as an additional insured by endorsement on all contracts let by the FCD.

1.10 Provide status reports regarding the PROJECT to VALLEY DISTRICT upon request.

1.11 Provide to VALLEY DISTRICT, upon completion of PROJECT, one (1) set of "Record Drawings" Mylar drawings and one (1) electronic set of the PROJECT.

1.12 Retain or cause to be retained for audit by the FCD or other government auditors for a period of three (3) years from the date of the final payment, all records and accounts relating to the PROJECT.

1.13 Upon completion of the PROJECT in full compliance with the terms of this agreement, the FCD shall own, operate and maintain the regional mainline drainage improvements for the PROJECT.

1.14 Require its contractor to maintain a labor and materials bond and a faithful performance bond, each in a penal sum equal to one hundred percent of the contract price for the PROJECT (including the APPURTENANCES). All bonds required for the PROJECT (including the APPURTENANCES) shall include both VALLEY DISTRICT and the FCD as dual obligees for their respective contributions to the PROJECT and the APPURTENANCES. Such bond shall be delivered to VALLEY DISTRICT prior to the commencement of any work on the Project.

SECTION II

2.0 VALLEY DISTRICT AGREES TO:

2.1 Pay the cost for the design, construction, survey and contract administration of the APPURTENANCES work to the FCD within 60 days of invoicing.
2.2 Promptly review and comment on contract plans, specifications and engineer's estimates and respond to construction related questions submitted by the FCD to VALLEY DISTRICT.

2.3 Enter in a separate agreement and/or obtain an encroachment permit for the use of the APPURTENANCES.

SECTION III

3.0 IT IS MUTUALLY AGREED:

3.1 All changes to the approved plans and specifications will be approved by PARTIES prior to construction, as follows: Any changes to the approved plans and specifications for the facilities being paid for, in whole or in part, by Valley District may only be made if Valley District has approved those changes in writing, provided that in the case of an emergency, the FCD must in good faith seek the approval of Valley District for any changes and must provide Valley District with after-the-fact notification of the change not more than 48 hours after any such change. Incidental changes to facilities being paid for by the FCD may be implemented without consulting and the change is not a change in the design.

SECTION III

4.0 IT IS FURTHER UNDERSTOOD AND AGREED:

4.1 The Effective Date of Acceptance of the AGREEMENT shall be the first date upon which all of the following has occurred: (1) the VALLEY DISTRICT and FCD Boards have approved the AGREEMENT; and (2) the authorized representative of each has signed the AGREEMENT; and (3) a fully executed copy of the AGREEMENT has been submitted to all PARTIES.

4.2 All of the FCD’s revenues as defined below, have been pledged to secure the payment of the principal and interest on certain bonds and refunding bonds ("Bonds") issued by the FCD in May 2007. The pledge constitutes a first lien on the revenues for the payment of the Bonds. Any payments under this AGREEMENT are subject to the prior pledge of revenues described above. FCD payments pursuant to this AGREEMENT will be made to the extent there are sufficient funds available after payment of the Bonds. For purposes of this paragraph, “revenues” shall mean all income and revenue received by the FCD from the operation or ownership of the flood and storm water control and conservation facilities ("Flood Control System") of the FCD (including but not limited to, all real and personal property, or any interest therein, and all additions, improvements, betterments and extensions thereto), determined in accordance with Generally Accepted Accounting Principles, including all ad valorem property taxes received by the FCD pursuant to Article XIII A of the Constitution of the State of California and Section 95 et seq. of the California Revenue and Taxation Code, all rents, royalties and license and permit fees and charges received by the FCD, investment income and all other money howsoever derived by the FCD from the operation or ownership of the Flood Control System or arising from the Flood Control System, but excluding (a) ad valorem property taxes levied to pay any voter approved general obligation indebtedness of the FCD, (b) assessments levied pursuant to Section 43-7 or Section 43-26.9 of the San Bernardino County Flood Control Act (Cal. Water Code App. Sect. 43-1 et seq.), and (c) grants, advances or contributions in aid of construction, except to the extent such grants are unrestricted and available for any expenditure of the FCD.

4.3 All payments shall be made via electronic funds transfer (EFT) directly deposited into the PARTIES' designated checking or other bank account. PARTIES shall promptly comply with directions and accurately complete forms provided to process EFT payments.

4.4 American Recovery and Reinvestment Act Funding (ARRA).
This AGREEMENT may be funded in whole or in part with funds provided by the American Recovery and Reinvestment Act of 2009 ("ARRA"), signed into law on February 17, 2009. Section 1605 of ARRA prohibits the use of recovery funds for a project for the construction, alternation, maintenance or repair of a public building or public work (both as defined in 2 CFR 176.140) unless all of the iron, steel and manufactured goods (as defined in 2 CFR 176.140) used in the project are produced in the United States. A waiver is available under three circumstances: (i) Iron, steel or relevant manufactured goods are not produced in the United States in sufficient and reasonable quantities and of a satisfactory quality; (ii) Inclusion of iron, steel or manufactured goods produced in the United States will increase the cost of the overall project by more than 25 percent; or (iii) Applying the domestic preference would be inconsistent with the public interest. This is referred to as the "Buy American" requirement. Request for waiver must be made to the FCD for an appropriate determination.

Section 1606 of ARRA requires that laborers and mechanics employed by contractors and subcontractors on PROJECT funded directly by or assisted in whole or in part by and through the Federal Government pursuant to ARRA shall be paid wages at rates not less than those prevailing on PROJECT of a character similar in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act (40 U.S.C. 31). This is referred to as the "wage rate" requirement.

The above described provisions constitute notice under ARRA of the Buy American and wage requirements. The VALLEY DISTRICT must contact the FCD contact if they have any questions regarding the applicability or implementation of the ARRA Buy American and wage rate requirements. The VALLEY DISTRICT will also be required to provide detailed information regarding compliance with the Buy American requirements they have under ARRA. The information may be required as frequently as monthly or quarterly. The VALLEY DISTRICT agrees to fully cooperate in providing information or documents as requested by the FCD pursuant to this provision. Failure to do so will be deemed a default and may result in the withholding of payments and termination of this AGREEMENT.

Schedule of Expenditure of Federal Awards. In addition to the requirements described in "Use of ARRA Funds and Requirements," proper accounting and reporting of ARRA expenditures in single audits is required. FCD agrees to separately identify the expenditures for each grant award funded under ARRA on the Schedule of Expenditures of Federal Awards (SEFA) and the Data Collection Form (SF-SAC) required by the Office of Management and Budget Circular A-133, "Audits of States, Local Governments, and Nonprofit Organizations." This identification on the SEFA and SF-SAC shall include the Federal award number, the Catalog of Federal Domestic Assistance (CFDA) number, and amount such that separate accountability and disclosure is provided for ARRA funds by Federal award number consistent with the recipient reports required by ARRA Section 1512 (c).

In addition, FCD agrees to separately identify to each subcontract and document at the time of subcontract and at the time of disbursement of funds, the Federal award number, any special CFDA number assigned for ARRA purposes, and amount of ARRA funds.

FCD may be required to provide detailed information regarding expenditures so that the VALLEY DISTRICT may fulfill any reporting requirements under ARRA described in this section. The information may be required as frequently as monthly or quarterly. FCD agrees to fully cooperate in providing information or documents as requested by the VALLEY DISTRICT pursuant to this provision. Failure to do so will be deemed a default and may result in the withholding of payments and termination of this AGREEMENT.

4.5 Indemnification and Insurance.

i) FCD agrees to indemnify and hold harmless the VALLEY DISTRICT its officers, employees, agents, consultants, volunteers from any and all claims, actions or losses, damages, and/or liability resulting from the FCD'S negligent acts or omissions which arise from the FCD'S
performance of its obligations under this agreement. **FCD** shall require its contractor(s) and subcontractor(s) to indemnify and hold the **VALLEY DISTRICT** harmless from any work related to the **PROJECT** and to name the **VALLEY DISTRICT** as an additional insured by endorsement on all insurance documents provided pursuant to any and all of the construction contracts entered into by the **FCD** for the **PROJECT**.

ii) **VALLEY DISTRICT** agrees to indemnify, defend and hold harmless the **FCD** and its officers, employees, agents and volunteers from any and all claims, actions, losses, damages and/or liability resulting from Valley District's negligent acts or omissions which arise from Valley District’s performance of its obligations under this agreement.

iii) In the event, the **FCD** and/or the **VALLEY DISTRICT** is found to be comparatively at fault for any claim action, loss or damage which results from their respective obligations under the agreement, the **FCD** and/or **VALLEY DISTRICT** shall indemnify the other to the extent of its comparative fault.

iv) Waiver of Subrogation Rights – The **FCD** shall require the carriers of required coverage to waive all rights of subrogation against the **VALLEY DISTRICT**, its officers, employees, agents, volunteers, contractors and subcontractors. All general or auto liability insurance coverage provided shall not prohibit the **FCD** and **FCD**’s employees or agents from waiving the right of subrogation prior to a loss or claim. The **FCD** hereby waives all rights of subrogation against the **VALLEY DISTRICT**.

v) Self-Insurance - **FCD** and **VALLEY DISTRICT** are authorized self-insured public entities for purposes of Professional Liability, General Liability, Automobile Liability and Workers' Compensation and warrant that through their respective programs of self-insurance, they have adequate coverage or resources to protect against liabilities arising out of the performance of the terms, conditions or obligations of this agreement.

4.6 Since the **PARTIES** or their agents have participated fully in the preparation of this **AGREEMENT**, the language of this **AGREEMENT** shall be construed simply, according to its fair meaning, and not strictly for any or against any party. Any term referencing time, days or period for performance shall be deemed work days. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this **AGREEMENT**.

4.7 No supplement, modification, or amendment of this **AGREEMENT** shall be binding unless executed in writing and signed by all **PARTIES**.

4.8 All notices, approvals, consents or other documents required or permitted under this **AGREEMENT** shall be in writing and, except as otherwise provided herein, shall be effective upon personal delivery or three days after deposit in the United States mail, certified, with first class postage fully prepaid, addressed as follows:

San Bernardino Valley Municipal Water District 380 East Vanderbilt Way San Bernardino, CA 92408

San Bernardino County Flood Control District 825 East Third Street San Bernardino, CA 92415-0835

4.9 No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a **PARTY** shall give the other **PARTY** any contractual rights by custom, estoppel, or otherwise.

4.10 This **AGREEMENT** shall be governed by the laws of the State of California. If a court of competent jurisdiction declares any portion of this **AGREEMENT** invalid, illegal, or otherwise unenforceable, the remaining provisions shall continue in full force and effect, unless the purpose of this
AGREEMENT is frustrated. Any dispute or action to enforce any obligation under this AGREEMENT shall be filed and resolved in the appropriate Superior Court in the County of San Bernardino, California. In the event of litigation arising from this AGREEMENT, each PARTY to the AGREEMENT shall bear its own costs, including attorney’s fees. This provision concerning costs shall not apply to costs or attorney’s fees relative to section 3.5 of this agreement.

4.11 Except with respect to the PARTIES’ operation, maintenance and indemnification obligations contained herein, this AGREEMENT shall terminate upon the completion of the PROJECT and final payment by the FCD to VALLEY DISTRICT.

4.12 This AGREEMENT contains the entire AGREEMENT of the PARTIES with respect to subject matter hereof, and supersedes all other prior negotiations, understandings or contracts. This AGREEMENT may only be modified in writing, signed by all PARTIES.

4.13 The Recitals preceding the terms of this AGREEMENT are incorporated into the terms hereof by this reference and constitute constructive terms of this AGREEMENT.

4.14 This AGREEMENT may be signed in counterparts, each of which shall constitute an original.

IN WITNESS WHEREOF, this AGREEMENT has been fully executed on behalf of the FCD and the VALLEY DISTRICT by their duly authorized officers, effective as of the date hereunder written.

This AGREEMENT shall inure to the benefit of and to be binding upon the successors and assigns both PARTIES.

SAN BERNARDINO COUNTY
FLOOD CONTROL DISTRICT

James Ramos, Chair, Board of Supervisors
Dated: ______________________

SIGNED AND CERTIFIED THAT A COPY OF THIS DOCUMENT HAS BEEN DELIVERED TO THE CHAIRMAN OF THE BOARD
Laura H. Welch, Clerk

By ______________________
Deputy

Approved as to Legal Form
Counsel
Date

Reviewed by Contract Compliance
Date

Presented to Board for Signature
Date
IN WITNESS WHEREOF, this AGREEMENT has been fully executed on behalf of the FCD and the VALLEY DISTRICT by their duly authorized officers, effective as of the date hereunder written.

This AGREEMENT shall inure to the benefit of and to be binding upon the successors and assigns both PARTIES.

VALLEY DISTRICT
(Print or type name of corporation, company, contractor, etc.)

Authorized signature - sign in blue ink)

Name __________________________
(Print or type name of person signing contract)

Title __________________________
(Print or Type)

Dated: __________________________

Address __________________________

Approved as to Legal Form __________________________

Attested by VALLEY DISTRICT Clerk __________________________

VALLEY DISTRICT Attorney __________________________

Date __________________________

VALLEY DISTRICT Clerk __________________________

Date __________________________
### Phase 1 - Cactus Basin No. 3, 3A Imported Water Recharge Related Appurtenances

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Description</th>
<th>Unit Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>L.S.</td>
<td>Trench Excavation Safety / Shoring</td>
<td>$10,000.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>L.S.</td>
<td>Locate and Protect Existing Utilities</td>
<td>$2,700.00</td>
<td>$2,700.00</td>
</tr>
<tr>
<td>3</td>
<td>32</td>
<td>C.Y.</td>
<td>Class 1 Concrete-Gated Pipe Junction structure</td>
<td>$1,200.00</td>
<td>$38,400.00</td>
</tr>
<tr>
<td>4</td>
<td>420</td>
<td>L.F.</td>
<td>48-inch Diameter Smooth Wall HDPE DR-21 Pipe- Outside Dam Embankment Zone</td>
<td>$200.00</td>
<td>$84,000.00</td>
</tr>
<tr>
<td>5</td>
<td>340</td>
<td>L.F.</td>
<td>48-inch Diameter Smooth Wall HDPE DR-21 Pipe-Within Dam Embankment Zone</td>
<td>$300.00</td>
<td>$102,000.00</td>
</tr>
<tr>
<td>6</td>
<td>1,980</td>
<td>L.F.</td>
<td>36-inch Diameter Smooth Wall HDPE DR-21 Pipe</td>
<td>$180.00</td>
<td>$356,400.00</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>EA.</td>
<td>36” HDPE Side Drain Connection to Existing RCB Wingwall</td>
<td>$3,500.00</td>
<td>$3,500.00</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>EA.</td>
<td>48-inch Diameter Slide Gate, Adjustable Stem Guide, and Enclosed Gear Pedestal Lift</td>
<td>$10,000.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>L.S.</td>
<td>DSOD Review Fees (Approx. 0.5% of Total)</td>
<td>$3,000.00</td>
<td>$3,000.00</td>
</tr>
</tbody>
</table>

Estimated Construction Total: $610,000.00
10% (+/-) Design Engineering: $61,000.00
15% (+/-) Construction Administration & Survey: $91,000.00
20% (+/-) Construction Contingencies: $122,000.00

PHASE 1 TOTAL: $884,000.00

### Phase 2 - Cactus Basin No. 4 Imported Water Recharge Related Appurtenances

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Unit</th>
<th>Description</th>
<th>Unit Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>L.S.</td>
<td>Trench Excavation Safety / Shoring</td>
<td>$10,000.00</td>
<td>$10,000.00</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>L.S.</td>
<td>Locate and Protect Existing Utilities</td>
<td>$2,000.00</td>
<td>$2,000.00</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>C.Y.</td>
<td>Class 1 Concrete-Gated Pipe Junction structure</td>
<td>$1,200.00</td>
<td>$120,000.00</td>
</tr>
<tr>
<td>4</td>
<td>3,000</td>
<td>L.F.</td>
<td>36-inch Diameter Smooth Wall HDPE DR-21 Pipe-Outside Dam Embankment Zone</td>
<td>$180.00</td>
<td>$540,000.00</td>
</tr>
<tr>
<td>5</td>
<td>300</td>
<td>L.F.</td>
<td>36-inch Diameter Smooth Wall HDPE DR-21 Pipe-Within Dam Embankment Zone</td>
<td>$290.00</td>
<td>$87,000.00</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>EA.</td>
<td>36-inch Diameter Slide Gate, Adjustable Stem Guide, and Enclosed Gear Pedestal Lift</td>
<td>$10,000.00</td>
<td>$20,000.00</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>L.S.</td>
<td>DSOD Review Fees (Approx. 0.5% of Total)</td>
<td>$4,000.00</td>
<td>$4,000.00</td>
</tr>
</tbody>
</table>

Estimated Construction Total: $783,000.00
10% (+/-) Design Engineering: $78,500.00
15% (+/-) Construction Administration & Survey: $117,500.00
20% (+/-) Construction Contingencies: $156,300.00

PHASE 2 TOTAL: $1,136,000.00

GRAND TOTAL PHASE 1 & 2: $2,020,000.00
DATE:    August 4, 2015

TO:    Board of Directors

FROM:    Wen Huang, Manager of Engineering
           Mike Esquer, Project Manager

SUBJECT:    Consider City Creek Turnout and WTP 134 Hydroelectric Generation
            Procurements

The purpose of this memorandum is to discuss procurement of specific equipment for the City
Creek Turnout and East Valley Water District (EVWD) Water Treatment Plant 134 Hydroelectric
Generation Project (Project). Costs for the equipment will be financed by Valley District and
EVWD will repay these costs with interest over 10 years. The procurement of these items was
discussed with EVWD and they requested that Valley District bring the procurement package to
the Board of Directors for consideration. The equipment procurements were presented and
discussed at the Board of Directors' Engineering Workshop on July 22, 2015 and is being
forwarded to the full board for consideration.

Discussion:
The Board of Directors approved a design and engineering service contract with NLine Energy at
its meeting on May 6th, 2014. The approved budget for the design of the Project is $728,563.33.
The estimated construction cost of the Project is $3.97M. The intent of the Project is to design
and construct a 242 kW electric generation facility at EVWD WTP 134 site and new flow control
facilities at the City Creek Turnout (CCTO). Valley District will provide State Water Project (SWP)
water to WTP 134 from the refurbished and upgraded flow control facilities at the CCTO. NLine
Energy has since prepared plans and specifications and received cost proposals for the following
specific equipment:
   1. Pump-as-Turbine (PaT) and electric generator unit; and
   2. Flow control ball valves
Procurement of long lead components in advance allows for a shortened construction schedule and faster completion of the project. Further, advanced procurement of equipment saves money because the construction contracts allow for up to a 15% markup on equipment procured by the contractor. The advanced procurement of equipment also allows the District ultimate control over the type and quality of components being purchased.

**Item #1 - Pump as Turbine (PaT) Procurement:**
NLine Energy evaluated options for PaT in the range of flow and head pressures required for the WTP 134 and initially identified three manufacturers that may be considered for the Project, Andritz (Austria), KSB (Germany) and Cornell (USA). Through its evaluation, NLine Energy concluded that Andritz does not supply a PaT model that supports the head pressure ranges needed for this project, KSB PaT units only support the range of flow or the head pressure class but not both, and only Cornell produces units that meet all requirements for the Project. In addition, Cornell is the only manufacturer of PaT based in the US and is certified as “Manufactured in the USA”. The authorized dealer of Cornell PaT products for the Western US is Canyon-Hydro, a division of Canyon Industries, Incorporated. Canyon-Hydro provided a proposal for two Cornell PaT units and the associated induction motor generators at a proposed cost of $164,684 and an estimated manufacturing time of 20-24 weeks (5-6 months). It is estimated that from time of order to delivery it will be approximately 26-30 weeks (6.5 to 7.5 months). Attached is the Canyon-Hydro proposal for the Cornell PaT and induction motor generators.

**Item #2 - Flow Control Ball Valves Procurement:**
Valley District staff evaluated several types of flow control valves for controlling flow delivery of SWP water to WTP 134. Valve types evaluated are the sleeve Valve (Mono-jet type), full port ball valve and globe style valve. The valve that best fits the range of flow with a minimum loss of head pressure required for throttling service is the Henry Pratt rubber seated bi-directional ball valve. The system hydraulics and surge protection used for design is based on the 8-inch full port ball valve. NLine Energy sent specifications for two 8-inch ball valves manufactured by Henry Pratt to the following distributors and received the following responses: Valve and Gate Group (VAG) for $48,000, CSAMSCO did not submit a quote, and Southwest Valve and Equipment for $35,523. The lowest responsive bidder’s proposal received for the valves is $35,523 from Southwest Valve and Equipment. It is estimated that the time required to manufacture the valves is 20-24 weeks (5 to 6 months) and from time of order to delivery will be 24-28 weeks (6 to 7
months). Attached in this memorandum is the proposal for 8-inch ball valves received from Southwest Valve and Equipment.

**Recommendations:**
Staff recommends that the Board of Directors approve the procurement of the Pump as Turbine and Generator components for the estimated cost of $164,684 from Canyon Hydro, a division of Canyon Industries, Incorporated, and Henry Pratt 8-inch Ball Valves for the estimated cost of $35,523 from Southwest Valve and Equipment.
Dear Mr. Powell,

Thank you for contacting us to update our quotation for the energy recovery hydroelectric project you are working on for EVWD Plant 134. As always, we appreciate the opportunity to work with you to offer the best possible hydroelectric equipment package for this site and application. This quotation is refined to offer appropriately sized US Motors induction generators. Each generator will be equipped with: winding thermostats, mechanical vibration switch, space heaters and auxiliary connection box. If desired, additional protection devices are available.

Based on your correspondence we are offering an equipment package utilizing two pump turbine units. Please find the equipment package descriptions and quoted pricing below.

**Unit 1**

Based on a Cornell 6TR3 pump turbine to pass 7.7 cfs at 366 feet net head with expected system production of 175 kW using the equipment package described below.

- (1) Cornell model 6TR3, DI/SS fitted, mechanical seal, horizontal direct drive configuration
- (1) US Motors, 186 kW, 1800 rpm, 480 VAC, 60 Hz, 3 ph, induction generator
- (1) 12" 250 psi turbine inlet valve with hydraulic actuator
- (1) Custom flanged inlet cone reducer, epoxy coated with pressure gauge
- (1) Custom flanged outlet cone increaser, epoxy coated with pressure gauge
- (1) Custom 120 VAC hydraulic power unit to support inlet valve actuation
- (1) Custom structural steel turbine/generator mounting frame with adjustable mounting positions
- (1) Direct drive coupling set with flexible coupling element, hubs, bushings and steel drive guard
- (1) Speed sensor bracket and toothed wheel (sensor by others)

Quoted system price, as described............................................................................. $77,765.00

**Unit 2**

Based on a Cornell 4TR4 pump turbine to pass 3.1 cfs at 247 feet net head with expected system production of 45 kW using the equipment package described below.

- (1) Cornell model 4TR4, DI/SS fitted, mechanical seal, horizontal direct drive configuration
- (1) US Motors, 55.9 kW, 1800 rpm, 480 VAC, 60 Hz, 3 ph, induction generator
- (1) 8" 250 psi turbine inlet valve with hydraulic actuator
- (1) Custom flanged inlet cone reducer, epoxy coated with pressure gauge
- (1) Custom flanged outlet cone increaser, epoxy coated with pressure gauge
(1) Custom 120 VAC hydraulic power unit to support inlet valve actuation
(1) Custom structural steel turbine/generator mounting frame
(1) Direct drive coupling set with flexible coupling element, hubs, bushings and steel drive guard
(1) Speed sensor bracket and toothed wheel (sensor by others)

Quoted system price, as described.................................................................$61,920.00

The equipment package offered will be custom designed to meet the particular requirements of the EVWD Plant 134 site. Should project requirements change or additional requirements be identified we will be pleased to refine our quotation.

<table>
<thead>
<tr>
<th>Normal Terms</th>
<th>15% to begin final design</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30% to begin manufacture following final design approval</td>
</tr>
<tr>
<td></td>
<td>25% mid-project</td>
</tr>
<tr>
<td></td>
<td>20% on notice of readiness to ship</td>
</tr>
<tr>
<td></td>
<td>10% on successful startup or 120 days from notice of readiness, whichever is first</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Normal Delivery</th>
<th>20-24 weeks from design approval and receipt of payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delivery FOB</td>
<td>Deming, WA (crated for shipment)</td>
</tr>
<tr>
<td>Valid For</td>
<td>60 days</td>
</tr>
</tbody>
</table>

We offer startup, commissioning and training services for $14,000.00 to include: 3 days on site, 1 day travel, lodging, rental car, travel and meals.

We offer a single day visit for installation supervision at $6,000 to include: 1 day on site, travel and misc. expenses.

We offer a two day visit for installation supervision at $9,000 to include: 2 days on site, travel and misc. expenses.

Freight arrangement and shipment to the site is offered at $2,000 total.

We thank you for the opportunity to work with NLine Energy again and we greatly appreciate your continued interest in working with Canyon Hydro.

Sincerely,

Eric Melander
To: All Bidding Contractors

Date: 07/15/2015

Proposal Number: 48MEC150131

FP No: 150131

Engineer: DOMENICHELLI & ASSOCIATES

Project: City Creek Turnout and Pipeline Project

Location: City Creek, CA

We are pleased to propose the following:

<table>
<thead>
<tr>
<th>Item</th>
<th>Qty</th>
<th>Description</th>
<th>Unit Price</th>
<th>Extended</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>8&quot; Flanged 250# Rated, ANSI B16, Class 125 Drill, Rubber Seated Ball Valve, Double Seated, DI Body, DI Ends, Modulating Electric Motor Actuator, Paint: 16 mils NSF Epoxy Interior/Exterior.</td>
<td>16,307.00</td>
<td>32,614.00</td>
</tr>
</tbody>
</table>

The lump sum price for the above listed items is: $32,614.00

Start-up assistance: Not included in above lump sum price.

NOTES:

Lead Time - ARO Approved Submittals
24 Weeks
Lead times are subject to change based on stock levels at time of release.

Quote does not include TAX. TAX TBD by others.

Quote is freight collect. Estimated freight cost to Southern California is $150.

Quote is per provided email description only. This quotation is subject to change once a complete specification is received and evaluated.

"This quotation reflects our policy of sourcing raw materials in the most cost effective manner. Any requirement for specific U.S content shall require a revised quotation".

Pratt is quoting Standard Terms and Conditions. A copy can be found at Henrypratt.com and will be provided via request.

Standard Submittals and O & M Manuals shall be furnished upon request ( PO or LOI ). Standard Valve Tags will be provided. Additional or special tagging to be furnished by others.

Tee wrenches, floor boxes and covers, MJ accessories kits, Flanged end accessories kits, extension stems, extension stem kits, wall support brackets, and all other appurtenances to be provided by others.

Commercial Terms:

FOB Point : Factory, Aurora, IL
Freight Terms : Freight Collect
Payment Terms : Net 30 Days
Price Validity : 30 Days
Packaging : Standard Packaging.

CONDITIONS OF SALE

1. Prices are firm and proposal is valid providing:
A. A purchase order is received within 30 days of bid opening date. If this quotation is not accepted within 30 days after bid date, The Henry Pratt Company reserves the right to re-quote the project if necessary, and price escalation may become required.

B. Approved drawings, if required, are returned within thirty (30) days of submittal date with full release to manufacture.

C. Quoted lead times are estimates only. Actual delivery dates will be provided after receipt of a signed approved submittal package. Pratt reserves the right to adjust quoted lead times based upon shop load/manufacturing times at the time of notice to proceed with fabrication.

D. 100% Net 30 day terms are extended to customers who have submitted a completed credit application packet and have been approved by our credit department. Payment must be made in advance of credit release/shipment for all other accounts. No retainage is authorized.

PRICES MAY BE SUBJECT TO RENEGOTIATION IF THE ABOVE CONDITIONS ARE NOT MET.

2. Quoted prices exclude:
   A. All taxes.
   B. Flange nuts, bolts, gaskets, anchor, mounting bolts, Victaulic couplings, mechanical joint, accessories, spool pieces, thimbles or non-standard Tags.
   C. Extension stems, soil pipe, valve boxes, covers, or "tee" wrenches.
   D. Installation and start-up service, on-site training, classroom instruction.
   E. Spare parts.
   F. Interconnecting piping or wiring.
   G. Non standard submittal or record drawings, data, manuals, and information, as determined by the Henry Pratt Company.
   H. Format and availability of O&M data for outsourced manufactured products, will be as provided to the Henry Pratt Co.
   I. Hydraulic oil for cylinder operators and/or accumulator systems.

3. The quoted list of materials included herein represents our interpretation of Plans and Specifications and is not guaranteed to be complete or correct. All equipment quoted herein meets AWWA as applicable.

4. Attached Terms and Conditions of Sale apply to this quotation. The basic warranty is in paragraph 7.

5. "This quotation reflects our policy of sourcing raw materials in the most cost effective manner. Any requirement for specific U.S content shall require a revised quotation".

If you have any questions regarding this proposal, please contact our local sales representative:

Ryan McGovern  
(714) 832-1090
@southwestvalve.com
Southwest Valve & Equipment  
14081 Yorba Street
Suite 111
Tustin, CA 92780
USA
FAX: (714) 832-1091
www.southwestvalve.com

Sincerely,  
Michael Cosentino  
Application Engineer  
mcosentino@henrypratt.com

cc: Joe Banghart, District Manager  
cc: Melinda Kroning, Sales Manager - Treatment Plants
DATE: August 4, 2015
TO: Board of Directors
FROM: Wen Huang, Manager of Engineering
      Mike Esquer, Project Manager
SUBJECT: Adoption of the CEQA Notices of Exemption for the Waterman Turnout Hydroelectric Generation Project.

The purpose of this memorandum is to present to the Board of Directors the required California Environmental Quality Act (CEQA) documentation for the Waterman Turnout Hydroelectric Generation Project.

Discussion:
The Board of Directors approved the design and engineering contract for the Projects at its meeting on May 6th, 2014. A status update of the Project and a Notice of Exemption were presented and discussed at the Board of Directors' Engineering Workshop on July 22, 2015.

The Waterman Turnout Hydroelectric Generation Project consists of a hydroelectric turbine-generator that produces power as water flows from the Foothill Pipeline into the Waterman Basins for the purpose of groundwater recharge. Hydropower projects provide long-term benefits to ratepayers and the overall environment through the exchange of carbon based power with green (renewable) power that results in reduced greenhouse gases. EN2 prepared a Notice of Exemption (NOE) that determined the project has a Class 28 Categorical Exemption per CEQA Guidelines Section 15328. As a small hydroelectric project at an existing facility, the project fits within CEQA Categorical Exemption Class 28 (authority cited PRC Sec. 21083). The proposed hydropower project will generate less than 5 megawatts of power, and is located within an area of previously disturbed ground. There will be no disruption or change in the flow of any stream, and the project will not adversely affect sensitive natural or cultural resources.
Findings:

- Find that San Bernardino Valley Municipal Water District is the Lead agency for the purposes of the California Environmental Quality Act.

- Find that the Board has reviewed staff’s report, the Notice of Exemption and the other materials in the record.

- Find that there is no substantial evidence in light of the entire record before the District that the Project will result in any potentially significant impacts.

- Find that the Notice of Exemption is accurate, has been completed in compliance with CEQA, and represents the Board’s independent judgment and analysis.

Recommendations:
Staff recommends that the Board of Directors adopt the findings and Notice of Exemption for the Waterman Turnout Hydroelectric Generation Project and direct staff to file a Notice of Exemption within 5 days with the County Clerk of San Bernardino County.

Attachment:
CEQA Notice of Exemption for the Waterman Turnout Hydroelectric Generation Project.
Notice of Exemption

To: Office of Planning and Research
   P.O. Box 3044, Room 113
   Sacramento, CA 95812-3044

From: (Public Agency): SBVMWDA

County Clerk
County of: San Bernardino
   222 W. Hospitality Lane
   San Bernardino CA 92415-0022

Project Title: Waterman Turnout Small Hydroelectric Project

Project Applicant: San Bernardino Valley Municipal Water District (SBVMWD)

Project Location - Specific:
At the existing Waterman turnout located east of 4899 North Waterman Ave, San Bernardino, CA 92404

Project Location - City: San Bernardino
Project Location - County: San Bernardino

Description of Nature, Purpose and Beneficiaries of Project:
A small hydroelectric turbine-generator would be installed in order to produce power as water flows through the water system. Hydropower projects provide long-term benefits to ratepayers and the overall environment through the exchange of brown with green (renewable) power that results in reduced greenhouse gases.

Name of Public Agency Approving Project: San Bernardino Valley Municipal Water District
Name of Person or Agency Carrying Out Project: San Bernardino Valley Municipal Water District

Exempt Status: (check one): □ Ministerial (Sec. 21080(b)(1); 15268);
□ Declared Emergency (Sec. 21080(b)(3); 15269(a));
□ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
□ Categorical Exemption. State type and section number: Class 28, CEQA Guidelines Sec.15328
□ Statutory Exemptions. State code number: _______________

Reasons why project is exempt:
As a small hydroelectric project at an existing facility, the project fits within CEQA Categorical Exemption Class 28 (authority cited: PRC Sec. 21083). The proposed hydro power project will generate less than 5 megawatts of power, and is located within an area of previously disturbed ground. There will be no disruption or change in the flow of any stream, and the project will not adversely affect sensitive natural or cultural resources.

Lead Agency Contact Person: Mike Esquer, Project Manager
Area Code/Telephone/Extension: 909.387.9200

If filed by applicant:
1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project?, □ Yes □ No

Signature: ___________________________ Date: ______________ Title: ___________________________

□ Signed by Lead Agency □ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: ___________________________

Revised 2011
GENERAL INFORMATION

Name of Project: Waterman Turnout Small Hydroelectric Project
Name of Worksheet Preparer: EN2 Resources, Inc.

Project Description: The San Bernardino Valley Municipal Water District (SBVMWD) proposes to construct and operate a small hydroelectric system within the area of existing infrastructure at the existing Waterman turnout located east of 4899 North Waterman Ave, San Bernardino, CA 92404. The property is located in the northwestern portion of APN No. 015435108 and owned by SBVMWD (San Bernardino County, 2014).

The turbine-generator recommended for the powerhouse has a capacity of 900 kW and would use a 12 kV step-up electrical transformer to connect with an existing power line. The new powerhouse would be about 30 feet by 41 feet in size (1,230 square feet), and consist of a concrete tilt-up style building, or a concrete masonry block building, with removable roof panels for access to the equipment by mobile crane. The interior walls of the building will be approximately 17 feet in height and would cover the new hydroelectric turbine-generator and electrical equipment. There will be no changes to permitted water diversions or deliveries as a result of the proposed Project.

The proposed small hydroelectric station would be installed within the fenced area of the existing water turnout station, would be operated in parallel with the existing pressure reducing valve, and would generate power as water flows through the turnout.

The Project qualifies for a Categorical Exemption (CE) under Section 15328 of the California Code of Regulations, Class 28, Small Hydroelectric Projects at Existing Facilities. As a 900 kW hydroelectric project at an existing facility, the Project qualifies as a CE because the proposed hydro power Project will generate less than 5 megawatts of power, and is located within an area of previously disturbed ground. There will be no disruption or change in the flow of any stream, and the Project will not adversely affect sensitive natural or cultural resources.

EXCEPTIONS FOR CEQA CATEGORICAL EXEMPTIONS
A. Location in an area of Critical Concern: For Categorical Exemption Classes 3, 4, 5, 6, and 11). Not applicable to this Project.
**ATTACHMENT 1**

*Preliminary Review Worksheet – Categorical Exemption*  
For the San Bernardino Valley Municipal Water District  
Waterman Turnout Small Hydroelectric Project

**B. Significant Effect Due to Unusual Circumstances (For All Categorical Exemptions):** Evaluate the following elements to determine if there are any unusual circumstances that could result in a significant effect. For any “Yes” answers, discuss the possibility of significant environmental impacts resulting from the unusual circumstance. Consider all facilities; conveyance lines; storage, points of diversion; staging areas; and affected service area as applicable. Use attachments if necessary.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☒</td>
<td>In or adjacent to an area of undisturbed, unique, or high-quality habitat</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>On or adjacent to wildlife migration routes</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>In an area of unique recreational facilities or resources</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>On or adjacent to a unique stream or water body</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves removal of healthy, mature, scenic trees</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves grading in a waterway or wetland</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves a substantial alteration of ground contours</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves new or increased use of a critically depleted groundwater basin or groundwater basin subject to salinity intrusion</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>In an area with important mineral resources</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves production of significant amounts of solid wastes or litter</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves substantial new or increased emission of dust, ash, smoke, fumes, odors, or other pollutants</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves substantial change in noise or vibration levels in vicinity (beyond the property line)</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>In an area of sensitive noise receptors</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>On slopes of 10 percent or more or on highly erodible soil</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>In an officially mapped area of severe geologic hazard</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves new or increased use or disposal of hazardous materials, flammables, or explosives</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves substantial change in demand for municipal services</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves traffic impacts in an area with traffic problems</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves substantial increase in fuel consumption (electricity, oil, natural gas, etc.)</td>
</tr>
<tr>
<td>☐</td>
<td>☒</td>
<td>Involves significant growth inducement</td>
</tr>
</tbody>
</table>

**Discussion:** The proposed hydroelectric Project would be located within the bounds of SBVMWD's Waterman Turnout facility area that has been heavily disturbed due to construction and operation of the Foothill Water Transmission Line, the Waterman Turnout and associated site levees, water distribution infrastructure and access roads. Operation of the Project would not require a change in the current permitted allocations or beneficial uses of water. The Project would not substantially affect any of the elements (1-20) described above, however discussion of several topics is provided below.
The Project site, located within the limits of the City of San Bernardino, has a public/quasi-public zoning of PFC = Flood Control CCS-3=Central City South-3, with a Specific Plan District overlay of Foothill Fire Zone/Hillside Overlays (City of San Bernardino 2014). The existing and proposed SBVMWD facilities and operations are allowed under this zoning.

There is negligible native habitat within the Project area of disturbance. The entire property has previously undergone extensive trenching and grading, graveling of unpaved areas, construction, and regular weed abatement. The proposed hydroelectric unit would include a concrete tailrace using a configuration that connects with the existing concrete outfall for the turnout station. The new concrete tailrace would not impact, but would be located adjacent to, a nearby drainage. The design and construction of the tailrace would avoid disturbance of the drainage. The small hydro station tailrace would discharge into the top of the existing turnout station concrete outfall structure. A new permanent gate and ramp would improve access to the existing road, and a temporary staging area would be located outside of and adjacent to the fence, however within previously disturbed areas.

The Project design and construction specifications will require that the construction contractor avoid ground disturbance activities, material placement, equipment operations and other activity that could cause erosion or siltation into the adjacent drainage. This will require that all ground disturbing activities occur within the existing fenced area of the turnout station, avoid impacts to the outfall channel, and avoid the need for possible permits.

1. Biological database searches of the California Natural Diversity Database (CNDDB 2014) and the California Department of Fish and Wildlife Spotted Owl Database (CDFW 2014) show sensitive species occurring within five miles of the Project site. Most of these occurrences are in higher elevation areas toward Lake Arrowhead. Six plants and three wildlife sensitive species have been previously identified within one mile of the Project site, and only one of the plants and no animals have been sighted within the past ten years. The plant, *Brodiaea filifolia*, occurs in vernal pool and grassland habitat. The project site does not contain suitable vernal pool or grassland habitat, and all occurrences of this plant are in the mountains north of the Project site.

A site inspection was conducted by EN2 Resources Senior Biologist Kris Kiehne on June 12, 2014, and a rare plant survey was conducted by Kris Kiehne and Biologist Jeremy Waites on May 13, 2015. No sensitive biological resources were identified or are expected to occur in the Project area. The 2015 rare plant survey was conducted to verify that no special status plants occur in or near the project site or the staging areas. Although no sensitive wildlife are anticipated, standard construction management practices, such as covering of trenches each evening, have been incorporated into the Project specifications.
2. Given the previous level of disturbance of the site, it is not considered suitable habitat for sensitive species but there is the potential that birds protected under the Migratory Bird Treaty Act may nest in Project area vegetation during the bird nesting season (generally February 1 to September 15). The limited Project site vegetation will be removed between September 15 and February 1 (outside of the nesting season) to ensure that nesting birds would not be affected by the proposed construction. Alternatively, if construction activities are planned to occur before September 15, a preconstruction nest survey of the Project site and surrounding area would be conducted. If active nests are found within ¼ mile of proposed construction activity, the construction area and/or schedule will be modified to avoid impacts.

6. Project construction would occur in an area that is set back from the existing turnout station discharge outfall (water release) area. Water quality will be protected through use of construction plans and specifications that incorporate standard construction best management practices to ensure full separation of open water from Project construction activities.

15. The Project is located within the boundaries of the San Bernardino North Quadrangle Special Studies Zone, an area near the San Andreas Fault line with mapped geologic hazards. However, the Project would not impact this natural feature, nor expose new residents that could be harmed by seismic activity (DOC 2014).

C. Cumulative Impacts for All Categorical Exemptions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

1. ☒ ☒ Does the project contribute to cumulative impacts associated with successive projects of the same type at and around the project site? If yes, discuss the significance of the impacts.
ATTACHMENT 1
Preliminary Review Worksheet – Categorical Exemption
For the San Bernardino Valley Municipal Water District
Waterman Turnout Small Hydroelectric Project

Discussion: There are two additional small hydroelectric projects that are tentatively planned by water agencies at the following sites:
- Plant 134 is approximately 8 miles southeast of the Waterman site at the East Valley Water District’s Water Treatment Plant 134 in Highland, CA.
- Roemer site is approximately 10 miles southwest of the Waterman site at the West Valley Water District’s Oliver P. Roemer Water Filtration Facility in Rialto, CA.
Given that: 1) all of the hydropower projects would be located on water district properties that are already heavily disturbed; 2) construction would not commence simultaneously; 3) the construction and operations of these hydroelectric projects would have negligible or less than significant impacts; and 4) hydroelectric projects provide long-term benefits to the overall environment through the exchange of brown with green (renewable) power resulting in a reduction in greenhouse gas emissions, the combined projects would not result in cumulatively significant impacts.

D. Scenic Highways (For All Categorical Exemptions): Would the project result in damage to any of the following scenic resources within view of a highway officially designated as a state scenic highway (excluding improvements required as mitigation by an adopted Negative Declaration or certified EIR)?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>
| 1. Trees
| 2. Historic buildings
| 3. Rock outcroppings
| 4. Other similar resources

Discussion: The Project area is not within view of a state designated scenic highway (Caltrans 2014).

E. Hazardous Waste Sites (For All Categorical Exemptions)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is the project located on a site that is included on any list compiled pursuant to Section 65962.5 of the Government Code?</td>
<td></td>
</tr>
</tbody>
</table>

Discussion: The Project site is not on or near any property listed on the Hazardous Waste and Substances Site List (Cortese List) developed per the requirements of Government Code Section 65962.5 (DTSC 2014).

F. Historical Resources (For All Categorical Exemptions)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is there a potential for the project to cause a substantial adverse change in the significance of a historical resource?</td>
<td></td>
</tr>
</tbody>
</table>

San Bernardino Valley Municipal Water District
Waterman Turnout Small Hydroelectric Project

5 May 26, 2015
EN2 Resources, Inc.
ATTACHMENT 1
Preliminary Review Worksheet – Categorical Exemption
For the San Bernardino Valley Municipal Water District
Waterman Turnout Small Hydroelectric Project

Discussion: A historical records search was conducted for the Project site by the Archaeological Information Center located at the San Bernardino County Museum in Redlands, CA on June 25, 2014. Review of previous historical resources investigations determined that the Project area was previously surveyed with negative results and that no further archaeological work is recommended (AIC-SBC, 2014).

SOURCES REVIEWED IN PREPARING THE CATEGORICAL EXEMPTION


California Public Resources Code, Sections 21083 and 21084. Website: http://www.leginfo.ca.gov/index.html


ATTACHMENT 1
Preliminary Review Worksheet – Categorical Exemption
For the San Bernardino Valley Municipal Water District
Waterman Turnout Small Hydroelectric Project


DATE: August 4, 2015
TO: Board of Directors' Engineering Workshop
FROM: Wen Huang, Manager of Engineering
       Mike Esquer, Project Manager
SUBJECT: Consider Scope Enhancement with NLine Energy for the Waterman Turnout Hydroelectric Generation Project

The purpose of this memorandum is to discuss enhancements in the scope of work and associated fees with NLine Energy for the Waterman Turnout Hydroelectric Generation Project (Project). This item was presented and discussed at the Board of Directors' Engineering Workshop on July 22, 2015 and is being forwarded to the full board for consideration.

Discussion:
The Board of Directors approved a design and engineering services contract with NLine Energy at the Board of Directors' meeting on May 6, 2014. The approved budget for design of the Project is $807,073. The intent of the Project is to design and construct an 865 kW electric generation facility at Valley District's existing Waterman turnout in the San Bernardino County Flood Control District's Waterman recharge basins. At the time of preparing its scope of work, NLine Energy assumed that the existing turnout facilities were operable.

During the design process of the Project, it was discovered that the Howell-Bunger Sleeve (HBS) valve does not function properly and extensive corrosion was found on the existing flow meter. The corrosion has damaged the throat of the meter and may result in comprised flow data.

During inspection of the valve, Staff also found cracks in the body and corrosion on internal portions of the valve and the motor operator utilizing a Direct Current (DC) power source. Staff discussed concerns of the existing HBS valve with the manufacturer and concluded the following:
1. The valve is 43 years old and advancements in valve design have fixed the excessive vibration that may have caused cracking on the valve body.

2. There is over 500 feet of head at this turnout. Research conducted on the HBS valves since 1972 have concluded that the upper limit for the head should be limited to 500 feet. The manufacturer recommends a different valve, which will operate properly in conditions that exceed 500 feet of head. This valve is necessary to serve as a bypass for safe operation of the hydroelectric generation unit.

Staff found corrosion in the flow meter element that has caused leaks in the body of the flow tube during the February outage inspections. The leaks occur in the throat of the meter. Repair of these leaks may increase the turbulence in the critical section of the meter and may result in compromised flow readings. The meter is 43 years old and is recommended for replacement.

The guard valve uses an outdated DC power system. The DC electrical system provided a more robust electrical power source than what could be provided by the local electrical power provider in 1972 when the facility was constructed. The power grid in this area has been improved over the past 40 years in order to serve the growing community and is more reliable now than the DC system.

The Waterman Turnout experienced two break-ins in 2014 that resulted in the loss of 90% of the wiring in Line Valve #1 meter and guard valve vaults. In addition to the theft of the copper wiring, many of the mechanical processes were damaged or destroyed. This has left the line valve vaults inoperable. The proposed scope enhancement will include replacing the DC motor actuators with newer AC motor actuators, and designing new lighting, venting and electrical systems. The existing differential pressure transducers will also be evaluated for replacement. Upon replacement, it would accommodate flow measurements in the Foothill Pipeline.

The evaluation of the security system for the Waterman turnout is in the current NLine Energy scope of work and recommendations will be made for the District to enhance security features for the new facilities.

Staff believes it is prudent to repair and upgrade the existing turnout facilities to accommodate future recharge and to provide the necessary flow bypass required for safe operation of the hydroelectric generation unit.
At Staff's request, NLine Energy provided a scope of work to address Valley District's concerns and meet the objectives for the Project. It is estimated that the additional scope of work will cost $80,070. Staff believes that this cost estimate is reasonable for the amount of work involved and the cost of construction for these changes. With this scope enhancement, the NLine Energy's contract amount would increase from $807,073 to $887,143.33. This is a 9.9% increase to the design contract.

**Recommendation:**
Staff requests that the Board authorize the General Manager to execute the scope enhancement agreement with NLine Energy for a not to exceed amount of $80,070 for the Waterman Turnout Hydroelectric Generation Project.

**Attachment:**
1. NLine Proposal for the scope enhancement.
San Bernardino Valley Municipal Water District
Waterman Turnout Hydroelectric Project
Amendment 2, June 24, 2015

San Bernardino Valley Municipal Water District requested that NLine Energy provide a proposal and fee schedule for additional engineering services required in the vicinity of work being performed under contract for the Waterman Turnout Hydroelectric Project. The additionally required scope at the Foothill pipeline facilities; Line Valve #1 and Meter Vaults are included in Task 11. Additional scope at the Waterman Turnout is included in Task 12.

Scope of Services
Task 11 – Engineering Services Line Valve #1 and Meter Vaults

Existing facilities and condition description provided by SBVMWD

- **Line Valve #1 Vault:** Vault includes a 48” Pratt Ball Valve, DC Motor Operator, 10” Globe Valve and miscellaneous pressure gages and transducers. Vault also includes lights and electrical exhaust fans. To power the 48” ball valve actuator, AC electrical current is converted to DC power through a rectifier. Existing system is no longer functioning. Vandals heavily damaged the rectifier during the theft of copper and electrical components. Many of the light fixtures and all of the Rosemount pressure transducers were stolen. Most of the copper wiring was removed by vandals and the portions left behind are damaged. Some of the electrical conduits are damaged or removed and taken. The intent of this scope of work is to provide a functioning line valve that is connected to the proposed Waterman Turnout Hydroelectric Station (WTHS) PLC.

- **Meter Vault:** Meter vault houses a 78-inch primary flow tube (Venturi) that utilizes differential pressure to measure the flow for the range of 30cfs to 295cfs. The differential pressure transducers, lights and ventilation have been stolen or irreparably damaged. The intent of this scope of work is to provide a functioning meter.

Scope of services
The repair work at Line Valve #1 and Meter Vaults consists of civil and electrical engineering design, preparing plans for the repair of the existing system. Design will include review and incorporation of existing District As-Built drawings. The scope of work includes the following items.

11.1. **Scope of Work at Line Valve#1 Vault:**
11.1.1. Size new AC motor actuator for existing 48” Pratt Ball Valve.
11.1.2. Design and specify new lighting and ventilation for vault.
11.1.3. Design and specify new pressure transducers (upstream and downstream of valve).
11.1.4. Specify removal of all remaining existing electrical equipment and conduits in valve vault.
11.1.5. Design and specify new AC electrical service for vault. This service shall be combined with the new WTHS.
11.1.6. Incorporate new line valve controls into the new WTHS PLC.
11.1.7. Design and specify intrusion alarms on access hatches.

11.2. **Scope of Work at Meter Vault:**
11.2.1. Design and specify new differential pressure transducers for the existing 48-inch primary flow tube element.
11.2.2. Design and specify new lighting and ventilation for the meter vault.
Attachment A

11.2.3. Specify removal of all existing electrical equipment and conduits remaining in the meter vault.
11.2.4. Design and specify new AC electrical service for vault. This service shall be combined with the new WTHS.
11.2.5. Incorporate metering data into the new WTHS PLC.
11.2.6. Design and specify intrusion alarms on access hatches.

Task 12 – Engineering Services Existing Waterman Turnout

Existing facilities and condition description provided by SBVMWD
The Waterman turnout includes a guard valve vault, above grade building and meter/flow control valve vault. The guard valve is a 24” Pratt Ball Valve with a DC motor actuator, the flow element is a 30-inch Venturi flow tube with differential pressure transducers, and the flow control valve is a 20-inch Howell Bunger Sleeve Valve with DC Motor Actuator. The above ground building houses the AC panel, PLC and AC to DC rectifier. The flow meter element is damaged and should be replaced. The Howell Bunger sleeve valve is damaged and the manufacturer believes is not the correct valve for the hydraulic grade at this location. The District prefers that the valve DC motor actuators are updated to AC motor actuators. The turnout controls shall be incorporated into the new WTHS PLC panel. The intent of this scope of work is to provide a functioning Waterman Turnout and metering that is connected to the proposed Waterman Turnout Hydroelectric Station (WTHS) PLC.

Scope of services
The scope of work consists of civil and electrical engineering design, preparation of plans for the repair of the existing system, moving the electrical controls to the Waterman turnout hydroelectric station (WTHS), and replacement of the damaged Howell Bunger valve with an appropriate valve. Design will include review and incorporation of existing District As-Built drawings. The scope of work includes the following items.

12.1. Guard Valve Vault:
12.1.1. Design and specify new AC motor operator for 24-inch Pratt Ball Valve.
12.1.2. Design and specify new remote IO or connect turnout flow control elements directly into new WTHS PLC.
12.1.3. Design and specify intrusion alarms on all vault doors and hatches.
12.1.4. Evaluate the existing lighting and vault ventilation.
12.1.5. Design and specify upgrades for lighting, ventilation and electrical equipment to bring to current safety codes.

12.2. Meter and Flow Control Valve Vaults:
12.2.1. Design and specify new 30-inch magnetic flow meter.
12.2.2. Design and specify new flow meter vault to house new flow meter.
12.2.3. Evaluate both the 14-inch Hartman Mono-Jet Sleeve Valve and the 20-inch Rodney Hunt RICO Plunger Valve for use as the flow control discharge valve.
12.2.4. Design and specify new flow control valve and motor actuator in the existing meter vault location.
12.2.5. Design and specify modifications to existing turnout piping to accommodate new flow control elements.
12.2.6. Design and specify intrusion alarms on all vault doors and hatches.
12.2.7. Evaluate the existing lighting and vault ventilation.
Attachment A

12.2.8. Design and specify upgrades for lighting, ventilation and electrical equipment to bring to current safety codes.

Deliverables
Deliverables for Task 11 and Task 12 will include civil and electrical design drawings including details, sections, elevation views and other necessary engineering layout designs, PLC control logic, technical specifications and equipment documentation. These deliverables will be incorporated into the final plans, specifications, and contract documents of the Waterman Hydroelectric project.

Cost
The proposal costs for Task 11 and Task 12 are shown in the table below.

<table>
<thead>
<tr>
<th>SBVMWD Waterman Hydroelectric Project: Amendment 2 Cost Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
</tr>
<tr>
<td>Task 11</td>
</tr>
<tr>
<td>Task 12</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Waterman proposal for additional services cost detail.

June 24, 2015

<table>
<thead>
<tr>
<th></th>
<th>Task 11 Line Valve #1 and Meter Vaults</th>
<th>Task 12 Turnout</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>NLine Energy</td>
<td>$5,000</td>
<td>$10,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>Domenichelli &amp; Associates</td>
<td>$8,040</td>
<td>$18,430</td>
<td>$26,470</td>
</tr>
<tr>
<td>EETS</td>
<td>$12,300</td>
<td>$26,300</td>
<td>$38,600</td>
</tr>
<tr>
<td></td>
<td>$25,340</td>
<td>$54,730</td>
<td>$80,070</td>
</tr>
</tbody>
</table>
DATE: August 4, 2015

TO: Board of Directors

FROM: Heather Dyer, Water Resources Project Manager

SUBJECT: Consider Funding a Weather Station Maintenance Program

This memorandum provides background information on the Weather-Based Irrigation Controller (WBIC) Program and the need for a Weather Station Maintenance Program to ensure accurate weather data is transmitted to the irrigation controllers installed through the WBIC program. This item was discussed at the July 30, 2015, Board of Directors’ workshop and is being forwarded to the Board of Directors for consideration.

Background
In 2008, Valley District, in partnership with the City of San Bernardino, began a Weather-Based Irrigation Controller pilot program that is available to large water users. Although the water savings from the City of San Bernardino were mixed (due mainly to existing deficient irrigation systems), since that time, water conservation successes have occurred. In fact, one Homeowner’s Association reported a savings of almost 30% by implementing these controllers. To date, over 200 smart controllers at 89 sites have been installed throughout the region. Valley District funds 50% of the program costs to be completed with a local partner (City, water agency, Homeowner’s Association, School District, etc.). To date, we have spent over $225,000 on the weather-based irrigation controller program. In the last few months four new partners have initiated the process to participate in the program.

The water-saving success of the smart controllers depends largely upon receiving accurate weather data from the weather stations installed by the program. Six Campbell Scientific ET 107 weather stations were installed between 2008 and 2014 in support of the WBIC installations throughout the District’s service area. The weather stations are in the following locations:

- Loma Linda Station: Ohio Street and Redlands Blvd., Loma Linda
- Highland Station: 5th Street and Central Ave, Highland
- Waterman Station: Waterman and Marshall, San Bernardino
- West Valley Station: Riverside Ave./Knollwood, Rialto
- Yucaipa Station: Bryant and Oak Glen Rd
The ET 107 weather stations measure air temperature, solar radiation, relative humidity, rainfall, wind speed, and wind direction. The stations are based around a programmable data logger that records sensor measurements and transmits data to a central server. Regular inspection, maintenance and calibration is required in order for the equipment to remain in good operating condition and essential to obtain accurate data. Complex maintenance activities such as sensor calibration, sensor performance testing, and sensor component replacement requires a skilled technician to perform these activities so that reliable data is continually provided from each station.

The original contract did not address long term maintenance of the weather stations. Some stations may require equipment replacement in order to record the most accurate data and all the stations should be calibrated twice a year. Additionally, we would like to make the data available to partners and/or the public in a user friendly, web-based format. In order to accomplish this, a new method of data transmission from the station to a software program is recommended.

Staff released a Request for Proposals for qualified firms with expertise in evaluation, routine maintenance, and calibration of Campbell Scientific ET 107 Evapotranspiration Monitoring stations for a period of one (1) and two (2) years. The scope of work generally includes evaluation of the current conditional of equipment, recommendations for improvements necessary to increase accuracy of the data collected, and development of a routine maintenance schedule. Three firms submitted proposals and were interviewed.

The selected firm, Western Weather Group, Inc. has over 25 years in the weather industry and is the authorized representative for Campbell Scientific equipment in California. Western Weather Group has maintained the Irvine Ranch Water District weather station for 18 years and was recently contracted to maintain East Valley Water District’s newly installed weather station.

Western Weather Group recommended initially replacing several pieces of equipment and then performing semi-annual calibration as recommended by Campbell Scientific. The estimate for initial replacement parts is approximately $7,658.12. Western Weather also proposed setting up a webpage to graphically display the weather data. They will collect, process, and review the data on a daily basis for quality control and then store the data in a weather database and display the data on a web page that can be accessed by the public.

The year-one cost for this maintenance program would be approximately $19,168.12 which includes:

- Initial assessment of the weather stations
- Replacement of equipment (estimated $7,658.12)
- Development of the web page
- Daily data collection, processing, and quality control review by qualified meteorologists
- Monthly monitoring of the data to ensure equipment is functioning correctly
- Semi-annual calibration of equipment

The year-two cost would be $5,725.00 which includes daily review and processing of the data, maintenance of the web page, repair of sensors as needed, and semi-annual calibration.

**Recommendation**
Staff recommends the Board of Directors authorize the General Manager to enter into a contract with Western Weather Group for a two-year weather station maintenance program at an estimated cost of $24,893.12.

**Attachment**
Western Weather Group Proposal
Response to Request for Proposal
For
Campbell Scientific ET107 Weather Station Maintenance
For the
Weather Based Irrigation Control Program

Presented to: Heather Dyer, Water Resources Project Manager
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408

Presented by: Don Schukraft, Certified Consulting Meteorologist
Western Weather Group, Inc.
568 Manzanita Ave., Suite 2
Chico, CA 95926

June 10, 2015
Proposal valid through August 12, 2015
I. INTRODUCTION

Western Weather Group (WWG) is a team of meteorologists, physical scientists, and an environmental resource engineer and support staff that provide weather information services to businesses impacted by the weather. Several of the team members have worked together for over 25 years in the weather industry. The two primary services provided by Western Weather Group are custom weather forecasting and industrial grade meteorological monitoring systems. Western Weather Group is the authorized sales representative in California for Campbell Scientific, Inc. Campbell Scientific is the manufacturer of the ET107 weather station. The team at Western Weather Group has been working with the Campbell Scientific products since the 1980's.

NOTE: This proposal is for semi-annual calibrations of the six ET107 weather stations listed in the Request for Proposal. This proposal does not include monthly or three month intervals of simple routine maintenance. It has been our experience that semi-annual maintenance is sufficient to maintain a weather station. Simple routine maintenance can be performed by persons on site when and if needed.

II. EXPERIENCE AND QUALIFICATIONS

Western Weather Group's core business is industrial grade meteorological and hydrological monitoring systems. All monitoring systems are built around a Campbell Scientific datalogger. The team has installed over 500 Campbell Scientific weather stations over the years. Western Weather Group provides system design, sales, installation, on-site calibration and maintenance and data collection, processing and distribution of Campbell Scientific weather stations as part of their normal course of business.

The Irvine Ranch Water District (IRWD) was one of the first water districts in California to institute ET0 data into their billing system. In the spring of 1997, Team members at WWG installed three Campbell Scientific weather stations for IRWD to assist them in accomplishing this new billing method. These weather stations are still in operation today. Western Weather Group has provided the semi-annual calibrations of the IRWD since their installation (18 years ago).

WWG routinely provides weather station calibrations for companies like Chevron, Shell Oil, Phillips 66, City of San Jose, City of San Mateo and many others. In southern California our clients include San Gabriel Valley MVCD, IRWD, Southern California Gas Company and San Diego Gas & Electric who have 173 Campbell Scientific weather stations from WWG.
III. CAMPBELL SCIENTIFIC WEATHER STATIONS AND ET 107 MAINTENANCE

The Campbell Scientific ET107 weather station is built around a CR1000 programmable datalogger. The ET107 weather station is designed for commercial agriculture and irrigation scheduling and requires a minimum amount of maintenance. Semi-annual field calibrations are sufficient to maintain the stations in good operating condition.

A. Routine Maintenance

Routine maintenance such as checking the rain gauge for debris, cleaning the pyranometer and solar panel and overall keeping the weather station and its overall environment clean can best be performed in an economical way by local personnel who work near the station and can spend a few minutes each month on the simple routine maintenance. It is recommended that a person or persons with the Water District be trained by Western Weather Group to perform the simple maintenance and be familiar with the weather station to perform simple repairs as directed by Western Weather Group via phone and email correspondence if and when necessary.

B. Semi-Annual Calibrations

Semi-annual calibrations will be performed on the weather stations by a qualified technician from Western Weather Group. A written report will follow each calibration. Since the weather stations may have not been calibrated or serviced for some time, it is recommended that an initial inspection and calibration of each weather station be performed at the very beginning of the maintenance program to set a base line for the weather station’s condition. After the initial inspection and calibration the semi-annual calibrations will be performed every six months.

During a field calibration, each sensor is tested against a calibrated transfer standard or a known performance standard. The Western Weather Group calibration equipment undergoes periodic calibrations per the manufacturer’s recommendations to ensure accurate readings. The test results and any additional notes are recorded for inclusion in the final calibration report.

Appendix A is an example of a proposed maintenance log that will describe the equipment at the station and show each maintenance visit and what was performed.

See Appendix B for an example of a calibration report.

The repair of the wind sensors in the field is not recommended. It is recommended that three new wind sensors be purchased. These will be installed at three selected stations. The wind sensors from these stations will then be removed and factory repaired and calibrated. The three factory repaired sensors will then be installed at the opposite three stations the following six months and their wind sensors will be factory repaired and calibrated. Under this process, the wind sensors at each station will be rotated every 12 months.
C. Viewing Data for Quality Control
It is recommended that Western Weather Group set-up a web page so the San Bernardino Valley Municipal Water District and other water districts have direct access to the data. WWG will collect and process the data on a daily basis and store the data in an online weather database accessible on the web page. Users will be able to view the weather data in tabular and graphical reports and download data from any of the stations to their local PC. An example of the weather web page can be seen by viewing the East Valley Water District (Highland, CA) weather web page at http://www.westernwx.com/evwd/.

The best quality control of the data is reviewing the data on a daily basis. The web page provides this ability. Western Weather Group will utilize the web page to routinely view the data by staff meteorologists for accuracy. If a problem is noticed, action will be initiated. The web page also allows others to access and use the information matters.

A web app will also be established for local users of the data. Following are two examples of web apps showing a network of weather stations in Sonoma County.

http://www.westernwx.com/mobile/?group=msonoma
http://www.westernwx.com/map/?g=sonoma_county

IV. REPLACEMENT PARTS

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Part Description</th>
<th>Unit Cost</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>034B-ET</td>
<td>ET107 wind speed and wind direction sensor</td>
<td>$770.00</td>
<td>3</td>
<td>$2,310.00</td>
</tr>
<tr>
<td>CS305-ETM</td>
<td>ET107 solar radiation sensor</td>
<td>$315.00</td>
<td>3</td>
<td>$945.00</td>
</tr>
<tr>
<td>HMP60-ETR</td>
<td>ET107 air temperature and relative humidity sensor</td>
<td>$375.00</td>
<td>3</td>
<td>$1,125.00</td>
</tr>
<tr>
<td>TES25-ET</td>
<td>ET107 tipping bucket rain gauge</td>
<td>$385.00</td>
<td>2</td>
<td>$770.00</td>
</tr>
<tr>
<td>9598</td>
<td>Replacement RH Chip for HMP60 temp/RH sensor</td>
<td>$128.00</td>
<td>3</td>
<td>$384.00</td>
</tr>
<tr>
<td>13764</td>
<td>Replacement Reed Switch</td>
<td>$35.00</td>
<td>3</td>
<td>$105.00</td>
</tr>
<tr>
<td>13765</td>
<td>Replacement Wind Vane Tall</td>
<td>$90.00</td>
<td>3</td>
<td>$270.00</td>
</tr>
<tr>
<td>15954</td>
<td>Replacement potentiometer with Mounting Assembly for 034B</td>
<td>$250.00</td>
<td>3</td>
<td>$750.00</td>
</tr>
<tr>
<td>3648</td>
<td>Replacement Bearing</td>
<td>$25.00</td>
<td>12</td>
<td>$300.00</td>
</tr>
</tbody>
</table>

*Parts will be purchased as needed. Additional parts not listed above may be required and will be charged on an as needed bases.

Subtotal $6,959.00  
Sales Tax $574.12  
Shipping $125.00  
TOTAL $7,658.12
# V. Fee and Project Schedule

## Project Outline and Costs

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>One time set-up fee for Web Page: Web Page includes the data collection, processing and distribution along with Web Apps to display the data in tabular and graphical formats on any web enabled device</td>
</tr>
<tr>
<td>2</td>
<td>Weather Web Page Service Fee (Monthly)</td>
</tr>
<tr>
<td>3</td>
<td>Purchase replacement parts*</td>
</tr>
<tr>
<td>4</td>
<td>Initial Semi-annual calibration: Meet with staff personnel who are involved with project and weather stations, review web page and how to use the online weather database, train local Water District staff personnel on simple maintenance and train on them on how to make simple repairs and diagnosis problems, initial evaluation of each station, check and calibrate sensors and make repairs or replace parts as necessary, determine additional inventory parts required</td>
</tr>
<tr>
<td>5</td>
<td>Western Weather Group will Monitor data through web page and notify Water District staff of any adjustments or changes that may be required (Monthly)</td>
</tr>
<tr>
<td>6</td>
<td>Repair of sensors at Western Weather Group office</td>
</tr>
<tr>
<td>7</td>
<td>Semi-annual calibration to take place six months from initial calibration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
<th>Hourly Rate</th>
<th>Travel Costs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.50</td>
<td>$110.00</td>
<td>$0.00</td>
<td>$935.00</td>
</tr>
<tr>
<td>2</td>
<td>12.00</td>
<td>$85.00</td>
<td>$0.00</td>
<td>$1,020.00</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>$7,658.12</td>
</tr>
<tr>
<td>4</td>
<td>28.00</td>
<td>$110.00</td>
<td>$1,770.00</td>
<td>$4,850.00</td>
</tr>
<tr>
<td>5</td>
<td>12.00</td>
<td>$65.00</td>
<td>$0.00</td>
<td>$780.00</td>
</tr>
<tr>
<td>6</td>
<td>5.00</td>
<td>$110.00</td>
<td>$0.00</td>
<td>$550.00</td>
</tr>
<tr>
<td>7</td>
<td>20.00</td>
<td>$110.00</td>
<td>$1,175.00</td>
<td>$3,375.00</td>
</tr>
</tbody>
</table>

**Total for Services for first 12 months** 19,168.12

**NOTE:** Monthly and three monthly simple maintenance not included in this proposal.
## Appendix A

### STATION EQUIPMENT AND MAINTENANCE LOG - EXAMPLE

**Station Name:**

**Station Location:**

**Installation Date:**

**Maintenance Frequency:**

<table>
<thead>
<tr>
<th>Parts List</th>
<th>Model Number</th>
<th>Manufacturer</th>
<th>Date Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Datalogger</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage Regulator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Supply Charging Source</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature/RH Sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wind Sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar Radiation Sensor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rain Gauge</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maintenance Date</th>
<th>Work Performed</th>
<th>Technician</th>
<th>Notes</th>
<th>Further Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maintenance Date</th>
<th>Work Performed</th>
<th>Technician</th>
<th>Notes</th>
<th>Further Action Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**APPENDIX B**

**WESTERN WEATHER GROUP**

**Automated Meteorological Monitoring Station Calibration-Maintenance Worksheet**

**Company:** Irvine Ranch Water District  
**Station:** Central (CNN)  
**Date:** 10/28/2014  
**Time:** 1:45pm  
**Weather:** Sunny  
**Performed By:** Walsh

---

### Sensor Performance vs Western Weather Calibrated Reference

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Model</th>
<th>Test</th>
<th>To pass</th>
<th>Test After Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Station Value</td>
<td>Reference Value</td>
<td>Diff</td>
</tr>
<tr>
<td>Temperature (°F)</td>
<td>HMP45C</td>
<td>80.0</td>
<td>80.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Relative Humidity (%)</td>
<td>HMP45C</td>
<td>40.8</td>
<td>43.8</td>
<td>-3.0</td>
</tr>
<tr>
<td>Dew Point Temp (°F)</td>
<td>HMP45C</td>
<td>54.1</td>
<td>56.0</td>
<td>-1.9</td>
</tr>
<tr>
<td>Solar Radiation (W/m²)</td>
<td>LI200X</td>
<td>610</td>
<td>616</td>
<td>-1.0%</td>
</tr>
<tr>
<td>(serial # 73780)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rain Gauge (Inches)</td>
<td>TES25-WS</td>
<td>0.51</td>
<td>0.50</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

---

### Wind Speed & Direction Sensors

<table>
<thead>
<tr>
<th>Sensor</th>
<th>4 Point Test</th>
<th>Bearings</th>
<th>Orientation (No true north)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction</td>
<td>Wind Sentry</td>
<td>1, 89, 179, 269</td>
<td>Good</td>
</tr>
<tr>
<td>Speed</td>
<td>Wind Sentry</td>
<td></td>
<td>20°W of true N, corrected</td>
</tr>
</tbody>
</table>

---

### Battery Check

<table>
<thead>
<tr>
<th>Battery Check</th>
<th>Volts</th>
<th>Datalogger Status</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charging</td>
<td>13.0</td>
<td>OS 25</td>
<td>Grounding: Good</td>
</tr>
<tr>
<td>Load/No charge</td>
<td>12.3</td>
<td>Watchdog Ers 0</td>
<td>Comm.: Good</td>
</tr>
<tr>
<td>Low 12V / 5V Errors</td>
<td>0</td>
<td>Program Ers 0</td>
<td>Desiccant: Good</td>
</tr>
<tr>
<td>Int. Battery (CR800) Volts</td>
<td>3.50</td>
<td>Clock Check Good</td>
<td>Lat./Lon: 33° 40'07.7&quot;N / 117° 44'19.0&quot;W (new site)</td>
</tr>
</tbody>
</table>

---

**Customer Notes:**

The station was moved over the summer approximately 1/2 mile to the southeast. The orientation of the wind direction sensor was off ~20 degrees west of true north (i.e. if the wind was blowing from due north the station was reading 20 degrees or NNE). The orientation was corrected to true north +/- 2 degrees. Otherwise, all of the sensors passed their respective calibration tests. Made a very slight calibration adjustment to solar pyranometer to improve solar radiation accuracy.

---

**Parts Required:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Recommend</th>
<th>Installed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Internal Notes:**

---

119/128
Appendix C

Western Weather Group Personnel (who will work on project)

<table>
<thead>
<tr>
<th>EMPLOYEE</th>
<th>EXPERIENCE (yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don Schukraft, CEO, Certified Consulting Meteorologist</td>
<td>30</td>
</tr>
<tr>
<td>Marc Walsh, Physical Scientist</td>
<td>26</td>
</tr>
<tr>
<td>Dennis Lundy, Physical Scientist</td>
<td>35</td>
</tr>
</tbody>
</table>

REFERENCES

Brian D’Agostino, Meteorologist, San Diego Gas & Electric
619-725-5195
bdagostino@semprautilities.com

Steve Vanderburg, Meteorologist, San Diego Gas & Electric
619-681-4690
svanderburg@semprautilities.com

Tom McCarthy, California Horse Racing Board
Santa Anita, Los Alamitos, Del Mar Race Tracks
916-257-9615
timccarthy@chrb.ca.gov

Christine Pio, Buyer, Irvine Ranch Water District
949-453-5713
pio@irwd.com

Kenn Fujioka, San Gabriel Valley MVCD
626-814-9466
kfujioka@sgvmosquito.org
DONALD F. SCHUKRAFT, CCM
558 Manzanita Ave., Suite 2 • Chico, CA 95926 • Office 530-342-1700 • don@westernwx.com

PROFESSIONAL EXPERIENCE

Western Weather Group, Inc. August 2005 to Present
- Owner and CEO of Western Weather Group, Inc.
- Provide sales, business development and marketing support for company
- Develop budgets and oversee operations of company

Weathernews Americas Inc. – San Francisco, California 1975 to 2005
Regional Director, Agricultural Services January 2002 to 2005
- Manage 200+ accounts providing meteorological information services
- Create and communicate a vision for the future of the business to management
- Develop internal business practices to track and manage projects
- Seek new products and services to achieve growth within company's expertise
- Prepare technical proposals and reports for current and potential customers
- Responsible for sales cycle; initial contact, design, sale, project management, customer support and preparing invoices for accounting
- Report results of activities to management team
- Expertise in meteorological monitoring systems and data communications
- Twenty years experience in agricultural meteorology
- Sold and served as Project Manager for large meteorological networks in Hawaii, Colombia, Chile, Mexico, Brazil and the continental United States
- Initiated and closed sale to Northrop Grumman and acted as Project Manager for a network of twenty meteorological stations for the U. S. Navy

General Manager, Weathernews, Chico, CA May 1985 to December 2001
- Directed the development of action plans and budgets that drove and supported all business functions within the office
- Reviewed and monitored organizational development and oversaw employee evaluations, salaries and hiring of new employees
- Directed marketing, advertising and sales efforts
- Prepared sales activity plans, met with prospective customers, prepared sales quotations, and followed sales cycle through from initial contact to invoicing
- Managed supervisors in weather forecasting and instrumentation divisions
- Initiated new product development and managed software development processes
- Demonstrated the value of software development in the growth of the business
- Prepared annual budgets and sales projections for management
- Designed project tracking system and quote generation system
- Created a positive work environment for all employees resulting in high employee morale and job satisfaction
- Monitored monthly financial statements and sales goals
Manager – Post Voyage Analysis Department May 1975 to April 1985
  • Manager of Post Voyage Analysis Department for Oceanroutes (now Weathernews Americas)
  • Managed from 5 to 15 meteorologists supporting the ship weather routing business within Oceanroutes
  • Served as expert witness in meteorology for Oceanroutes providing expert testimony in District Courts in the United States and Canada, Maritime Arbitrations, and U. S. Coast Guard hearings

EDUCATION AND CERTIFICATION

BS Meteorology – San Jose State University - 1975

American Meteorological Society - Certified Consulting Meteorologist No. 345, July 1983
Resume
Dennis Lundy
Western Weather Group, Inc.
568 Manzanita Ave., Suite 2, Chico, CA 95973 (530) 342-1700
dennis@westernwx.com

Education
M.S. Physical Science, California State University, Chico, December 1985.
B.A. Environmental Science (special major), California State University, Chico, May 1979
A.A. Geology, Shasta Community College, Redding, CA, June 1976

Experience
Western Weather Group, Chico, California. Responsible for all aspects of automated weather
monitoring and environmental monitoring equipment, which includes purchase recommendations,
programming, installation and maintenance. Data gathering, processing and report writing for
contracts and client sponsored research. September, 2005 to the present.

Department of Physical Science, Butte-Glenn Community College District, Oroville, California.
Associate faculty member, instructor for Introduction to Weather. September, 2003 to 2011.

Weathernews Americas, Inc., Chico, California. Responsible for all aspects of automated weather
monitoring and environmental monitoring equipment, which includes purchase recommendations,
programming, installation and maintenance. Data gathering, processing and report writing for

Department of Geosciences, California State University, Chico. Lecture and laboratory instructor
for Weather and for Introduction to Practical Meteorology. Laboratory instructor for General
Geology, Environmental Science, Concepts in Physical Science and Fundamental Relationships

University Research Foundation, California State University, Chico. For the California State Air
Resources Board. Project manager of the Pilot Balloon Observation Program in Chico. Oversee
all aspects of this project, which includes budget, purchasing supplies, hiring and training of
personnel and data preparation for the Air Resources Board. September 1 to January 1, 1982 to

University Research Foundation, California State University, Chico. For the Pacific Gas and
Electric Company. Launch and collect data from rawinsonde weather balloons for an
Marc M. Walsh  
Weather Forecasting & Instrumentation

EDUCATION

B.S., Physical Science, Minor in Chemistry, Chico State University, June 1989
A.A., Physical Science, Butte College, June 1982

EXPERIENCE

Western Weather Group, Inc.
September 2005 to Present
Responsibilities include weather forecasting for a variety of customers in agriculture and industry. Responsibilities also include technical support and data management of environmental monitoring systems, specializing in meteorological monitoring stations. These responsibilities include system integration, installation, maintenance, audits, calibrations and customer support.

Weathernews Americas Inc.
1989 to August 2005
Employed by Weathernews Americas Inc. or related company

1998 to 2005 – Operations Supervisor
Responsibilities include supervision of weather forecasting and instrumentation staff of up to five meteorologists and physical scientists - In addition to: scheduling of forecast shifts and instrumentation installations/maintenance/audits and calibrations; customer service relating to forecasting as well as instrumentation software and hardware; proprietary software setup, installation, testing, and trouble-shooting; Instrumentation system design, configuration, testing, and trouble-shooting; database operations; quality control; office computer networking, and climatology studies.

1991 to 1998 – Weather Forecaster & Instrumentation Specialist
Responsibilities included weather forecasting and instrumentation maintenance; customer service; proprietary software setup, installation, testing, and trouble-shooting and computer support.

1989 to 1991 – Weather Graphics Specialist
Responsibilities included the production of daily weather maps for T.V. Graphics clients.

1986 to 1989 – Various jobs while finishing college
Worked full-time while taking 12-13 units a semester finishing up bachelors degree. Jobs included: Cable TV technician for Viacom in Paradise & Oroville, Assistant Golf Pro at Table Mountain Golf Course in Oroville, Drug Delivery Person at Lee Pharmacy in Chico, and Sign Painter.

1983 to 1986 – U.S. Army
Honorably served at Fort Hood, Texas and in Bremerhaven, West Germany as a Tactical Satellite Microwave Systems Operator. Received the Army Commendation Medal upon completion of service.
DATE: August 4, 2015

TO: Board of Directors Workshop

FROM: Douglas Headrick, General Manager

SUBJECT: Consider Adoption of Resolution No. 1035 Supporting the Nomination of Director Kathleen Tiegs as the Association of California Water Agencies President

Background

In July 2015, staff received correspondence from the Cucamonga Valley Water District requesting the District consider adopting a resolution endorsing Kathleen Tiegs' nomination for the Association of California Water Agencies (ACWA) President. Ms. Tiegs has been the ACWA Vice-President for the past two years. Cucamonga Valley Water District requested that the resolution be returned to them by August 14, 2015, so they can include it in the submittal packet to ACWA.

Director Copelan requested that the item be placed on the agenda for the full Board to consider the matter so staff prepared Resolution No. 1035 for the Board's consideration.

Attachments:
1. Resolution No. 1035
RESOLUTION NO. 1035

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT SUPPORTING THE NOMINATION OF DIRECTOR KATHLEEN TIEGS AS THE ASSOCIATION OF CALIFORNIA WATER AGENCIES PRESIDENT

WHEREAS, the San Bernardino Valley Municipal Water District Board of Directors are active participants in the Association of California Water Agencies (ACWA), and

WHEREAS, Director Kathleen Tiegs has expressed her interest in serving as the ACWA President for the 2015-2016 term, and

WHEREAS, Director Kathleen Tiegs has served in a variety of leadership positions in ACWA, including Vice-President of the Board, the Local Government Committee, the Groundwater Committee, Vice-Chair of the Federal Affairs Committee, Region 9 Board of Directors, and as a member of ACWA/JPIA Executive Committee, and

WHEREAS, Director Kathleen Tiegs is committed to advancing ACWA’s Policy Principles and finding common ties between members to develop a long-term strategy that provides a sustainable water future for all members and their constituents.

NOW, THEREFORE, BE IT RESOLVED, that the San Bernardino Valley Municipal Water District Board of Directors:

1. Does hereby place its full and unreserved support of the nomination of Director Kathleen Tiegs as President of the Association of California Water Agencies for the 2015-2016 term.

ADOPTED at a regular meeting of the San Bernardino Valley Municipal Water District Board of Directors held on August 4, 2015.

San Bernardino Valley Municipal Water District

By: ____________________________
    Mark Bulot
    President

ATTEST:

______________________________
Gil Navarro
Secretary
DATE: August 4, 2015
TO: Board of Directors
FROM: Wen Huang, Manager of Engineering

The Baseline Feeder Committee met at 3:00 pm on Monday, July 27, 2015 in the conference room at the offices of the San Bernardino Valley Municipal Water District. Director Navarro chaired the meeting. Director Copelan participated in the meeting. Peter Fox, Stephanee Stafford, and Ed Arandia of the City of Rialto and Don Hough of Riverside Highland Water Company (RHWC) also participated in the discussion.

The meeting agenda contained the following item for presentation and discussion:

2.A. **Update on Operations of the New Baseline Feeder System:**

Staff reported that the Baseline Feeder System has been running as designed. As of June 30, WVWD received 2,161 acre-feet (AF) and the City of Rialto received 1,229 AF, for a total of 3,390 AF, from the System for 2015. Overall, the year-to-date delivery tracks very well with the delivery goal of 3,525 AF at this time of the year. It was also reported that the City of Rialto staff requested supplemental water from the Encanto Booster to discontinue starting on July 1.

In addition, staff provided a status update of the reinstallation of a 24-inch Cla-Val at WVWD’s 3A-1 connection to the Baseline Feeder System. The total cost for equipment rehabilitation and installation is approximately $40,000. The proposed work would minimize the need that WVWD has to maintain a certain water level in its reservoir before the City of Rialto is able to receive its deliveries either from the New Baseline Feeder System, its own wells, or the Encanto System, especially during the Time-of-Use (TOU) schedule in summer. As of July 14, the contractor has completed installation of the 24-inch Cla-Val and the vault extension sections. WVWD staff will be working on
the pilot system installation and then schedule Cla-Val technicians for startup testing and adjustments before placing the system in operation. It is anticipated that the work will be completed in August 2015.

**Staff Recommendation:** Receive and file.