PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • Telephone (661) 947-4111
Fax (661) 947-8604
www.palmdalewater.org

LAGERLOF, SENECAL, GOSNEY & KRUSE LLP
Attorneys

Board of Directors

ROBERT E. ALVARADO
Division 1

GORDON G. DEXTER
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN
Division 4

STEVE R. CORDOVA
Division 5

August 26, 2013

Agenda for a Meeting
of the Water Supply & Reliability Committee of the Palmdale Water District
Committee Members: Gordon Dexter-Chair, Gloria Dizmang
to be held at the District's office at 2029 East Avenue Q, Palmdale

Friday, August 30, 2013

10:00 a.m.

NOTE: To comply with the Americans with Disabilities Act, to participate in any Board meeting please contact Dawn Deans at 661-947-4111 x1003 at least 48 hours prior to a Board meeting to inform us of your needs and to determine if accommodation is feasible.

Agenda item materials, as well as materials related to agenda items submitted after distribution of the agenda packets, are available for public review at the District's office located at 2029 East Avenue Q, Palmdale. Please call Dawn Deans at 661-947-4111 x1003 for public review of materials.

PUBLIC COMMENT GUIDELINES: The prescribed time limit per speaker is three-minutes. Please refrain from public displays or outbursts such as unsolicited applause, comments, or cheering. Any disruptive activities that substantially interfere with the ability of the District to carry out its meeting will not be permitted and offenders will be requested to leave the meeting.

Each item on the agenda shall be deemed to include any appropriate motion, resolution, or ordinance to take action on any item.

1) Roll call.

2) Adoption of agenda.

3) Public comments.

4) Action Items: (The public shall have an opportunity to comment on any action item as each item is considered by the Committee prior to action being taken.)

4.1) Consideration and possible action on approval of minutes of meeting held July 19, 2013.

4.2) Consideration and possible action on the Littlerock Creek Groundwater Recharge and Recovery Project. (Water Resources Manager Pernula/Engineering Manager Knudson – Consultant Interviews: Kennedy Jenks Consultants, RMC Water and Environment, Black & Veatch, and GEI Consultants)

4.3) Presentation of monthly water demand and supply status. (Water & Energy Resources Manager Pernula)

4.4) Discussion of the District's water banking opportunities. (Chair Dexter)

4.5) Status on the operations of the State Water Project. (Water & Energy Resources Manager Pernula)

5) Project updates.

5.1) Palmdale Recycled Water Authority. (General Manager LaMoreaux)

5.2) Water purchase opportunities. (Water & Energy Resources Manager Pernula)

5.3) Littlerock Dam Sediment Removal Project. (Engineering Manager Knudson)

6) Information items.

7) Board members' requests for future agenda items.

8) Adjournment.

DENNIS D. LaMOREAUX,
General Manager

DDL/dd

AGENDA ITEM NO. 4.2

PALMDALE WATER DISTRICT

BOARD MEMORANDUM

DATE: August 23, 2013

TO: WATER SUPPLY AND RELIABILITY COMMITEE

FROM: Mr. Matthew R. Knudson, Engineering Manager
Mr. Jon M. Pernula, Water and Energy Resources Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: ***LITTLEROCK CREEK GROUNDWATER RECHARGE AND RECOVERY PROJECT (LCGRRP) – FEASIBILITY STUDY PROPOSALS***

The attached material is in preparation for the August 30, 2013 meeting of Water Supply and Reliability Committee.

The District recently distributed the attached Request for Proposals (RFP) to various engineering consulting firms to prepare a feasibility study for the proposed Littlerock Creek Groundwater Recharge and Recovery Project (LCGRRP). Attached is a copy of the RFP which explains the background, need, goals, and consultant selection process for the LCGRRP feasibility study. The scope of work outlined in the RFP included:

Task 1 - Project Administration
Task 2 - Update Water Demands and Water Supply Plans for the District and Other Stakeholders
Task 3 - Determine the Timing and Magnitude of Imported and Recycled Water for Recharge
Task 4 - Develop Preliminary LCGRRP Alternatives
Task 5 - Conduct Site Specific Investigations to Determine Environmental Issues and Constraints
Task 6 - Assess the Groundwater Response of Each Alternative
Task 7 - Refine LCGRRP Alternatives and Evaluate Feasibility
Task 8 - Prepare LCGRRP Report
Task 9 - Conduct Public Outreach

The District received a total of (6) proposal from the following engineering consulting firms and a copy of said proposals is attached:

- Black & Veatch Corporation
- Carollo Engineers
- GEI Consultants
- Kennedy/Jenks Consultants
- MWH
- RMC Water and Environment

Also attached is a summary of the (6) proposal the District received which highlights the project fee/costs, schedule, key staff, sub-consultants involvement, and optional tasks as submitted by the consultants. Staff has reviewed the (6) proposals and has recommended to interview and ask some follow-up questions to (4) of the firms. The interviews for the (4) firms is scheduled to take place at the August 30, 2013 Water Supply and reliability Committee meeting. The following is a list of the (4) firms we are scheduled to interview and the times they are scheduled for their interviews:

- Kennedy/Jenks Consultants – 10:00 am
- RMC Water and Environment – 10:45 am
- Black & Veatch – 11:30 am
- GEI Consultants – 12:15 pm

The District sent the attached letters to the (4) firms inviting them to the interview with the committee and staff. The letter also includes several follow-up questions the District has asked them to come prepared to discuss.

Please feel free to contact myself, Dennis LaMoreaux, or Jon Pernula if you should have any questions prior to the committee meeting.

Littlerock Creek Groundwater Recharge and Recovery Project (LCGRRP) - Feasibility Study
Summary of Proposals

Consultant	Total Fee	Schedule	Key Staff	Sub-Consultant	Sub-Consultant Scope	Sub-Consultant Fee	Optional Tasks
Black & Veatch	*$1,188,500*	*16 -Months*	*Steve Foellmi - PD* *Andrew Lazenby - PM* *Alan Rimer - Advisor* *James Strayer - QA/QC*	*Wildermuth*	*Hydrogeology*	*$388,720*	*InSAR - $102,200*
				Cardno ENTRIX	*Geophysics*	*$115,500*	*Website - $8,700*
				Geo Digital	*LiDAR*		*Stakeholder Interview - $20,700*
				Katz	*Public Relations*	*$58,200*	
				Neva Ridge	*InSAR*	*Optional*	
				ESA	*CEQA*	*$77,700*	
					Total Sub-Costs:	***$640,120***	
Carollo	*$899,536*	*22 - Months*	*Tom West - PIC* *David Rydman - PE* *Dennis Williams - Advisor* *Inge Wiersema - Advisor*	*Geoscience*	*Hydrogeology*	*$255,160*	*Monitoring Well Inst. - $242,252*
				Provost & Pritchard	*Advisor*	*$27,480*	*Local Scale Model - $39,382*
				ESA	*Environmental*	*$74,038*	
				Geophysics	*Geophysics*	*$150,000*	
					Total Sub-Costs:	***$506,678***	
GEI	*$1,427,846*	*20 - Months*	*Ron Schnabel - PM* *Marc Rozman - PIC*	*ESA*	*Environmental*	*$66,045*	
				Cardno ENTRIX	*Geophysics*	*$80,000*	
				eurofinsUS	*Water Quality*	*$27,500*	
					Total Sub-Costs:	***$173,545***	
Kennedy/Jenks	*$798,643*	*15 - Months*	*David Ferguson - PM* *Harold Glaser - PIC* *Lynn Takaichi - QA/QC*	*HELIX*	*Environmental*	*$48,150*	*InSAR - $36,885*
				Mark Thomas & Company	*LiDAR*	*$34,700*	*Water Infiltration Tests - $41,220*
				Christensen Associates, Inc.	*Flood Control & Road*	*$6,000*	*Geophysical - $22,745*
				Foxall	*InSAR*	*$15,000*	
				earthforensics, inc.	*Subsidence Modeling*	*$10,000*	
				MIG, Inc.	*Public Outreach*	*$32,900*	
				Weck / Lawrence	*Water Quality*	*$35,000*	
					Total Sub-Costs:	**$181,750**	
MWH	*$1,393,303*	*18 - Months*	*Victor Harris - PM* *Bill Swanson - Advisor* *Bill Leever - Advisor*	*Brown and Caldwell*	*Hydrogeology*	*$356,875*	*InSAR - $117,810*
				Provost & Pritchard	*Advisor*	*$127,765*	*Well Sampling - $31,065*
				Paleo	*Environmental Data*	*$5,750*	*Geophysics - $111,820*
				Aspen	*Environmental*	*$103,500*	*Field Surveys - $103,440*
				Fugro	*LiDAR*	*$34,500*	
					Total Sub-Costs:	*$628,390*	
RMC	*$1,328,511*	*18 - Months*	*Lyndel Melton - PM* *Brian Dietrick - DPM* *Dennis Williams - Advisor* *Tom Richardson - Advisor*	*Geoscience*	*Hydrogeology*	*$425,160*	*Monitoring Well Inst. - $217,490*
				Nellor Environmental	*Permitting*	*$20,900*	*Local Scale Model - $35,640*
				ESA	*Environmental*	*$66,045*	
				M. Cubed	*Economics*	*$30,000*	
					Total Sub-Costs:	***$542,105***	

MRK - 8/19/13

PALMDALE WATER DISTRICT

REQUEST FOR PROPOSALS (RFP)

for the preparation of

LITTLEROCK CREEK GROUNDWATER RECHARGE

AND RECOVERY PROJECT FEASIBILITY STUDY

Proposals Due: July 31, 2013; 5:00 PM

TABLE OF CONTENTS

I. Introduction

II. Project Description

III. Scope of Work

IV. Project Schedule

V. Submittal Requirements

VI. Selection Process

VII. Standard Professional Services Agreement

VIII. Special Conditions

IX. Questions

Attachment A: Proposal Figures
Attachment B: RFP Mailing List
Attachment C: Sample Professional Services Agreement

REQUEST FOR PROPOSALS (RFP)
for the preparation of
LITTLEROCK CREEK GROUNDWATER RECHARGE
AND RECOVERY PROJECT FEASIBILITY STUDY

I. Introduction

The Palmdale Water District (District) is seeking proposals from a qualified consultant team to prepare and consult on a Groundwater Recharge and Recovery Feasibility Study Project for the Littlerock Creek area.

The District's water system service area is located within the southern Antelope Valley approximately 60 miles north of downtown Los Angeles. The District currently provides potable water to a population of approximately 115,000 people and has approximately 27,600 service connections. The District owns and operates a 35-mgd conventional surface water treatment plant (WTP). The current surface water sources are the East Branch of the California Aqueduct as well as local water from Littlerock Reservoir. Currently both surface water sources supply water to Lake Palmdale which acts as a forebay to the existing WTP. The District also owns and operates 24 groundwater wells. The production ratio within the District is currently 60% surface water and 40% groundwater.

This RFP describes the Project, the required scope of services, the minimum information that must be included in the Proposal, and the selection process. Failure to submit the Proposal in accordance with the procedures outlined may be cause for disqualification.

Upon receiving this RFP, please acknowledge receipt by contacting Mr. Matthew Knudson via e-mail (mknudson@palmdalewater.org). Please provide the correct contact information for your firm/team to ensure prompt communication of addenda or notification of other changes. The District contact information is provided at the end of this RFP in Section IX: Questions.

II. Project Description

The District is located in the southern part of the Antelope Valley. Figure 1 shows the location of the Antelope Valley Groundwater Basin, the District, and State Water Project (SWP) facilities in the area. The District provides retail water service to parts of the City of Palmdale and unincorporated parts of Los Angeles County. The District is a SWP contractor with a Table "A" contract amount of 21,300 acre-ft/yr. The other SWP contractors in the Antelope Valley, the Antelope Valley East Kern Water Agency (AVEK), and the Littlerock Irrigation District (LCID) have endorsed this project, and will likely be partners in its implementation. As of 2010, the District provides groundwater from the Antelope Valley, treated SWP water, and Littlerock Creek water to its customers. The District customers include residential, commercial, and industrial water users. The historical and projected demands, expressed in acre-ft/yr, for the District are shown below.

Historical and Projected Water Demands (acre-ft/yr.)

Year	Demand
2005	23,600
2010	19,800
2015	35,000
2020	40,000
2025	45,000
2030	55,000
2035	60,000

The District completed a Strategic Water Resources Plan (SWRP) in 2010 and certified the Programmatic Environmental Impact Report (PEIR) for the SWRP in 2012. The water supply plan contained in the District's 2010 Urban Water Management Plan (UWMP) and the 2010 SWRP, expressed in acre-ft/yr for a single dry year, is summarized below.

Single Dry Year Supply and Demand Comparison

Supplies	2015	2020	2025	2030	2035
Current Water Supplies					
Groundwater[1]	12,000	12,000	12,000	12,000	12,000
SWP water	1,491	1,704	1,917	2,130	2,343
Littlerock Dam	4,000	4,000	4,000	4,000	4,000
Planned Water Supplies					
Recycled Water	1,000	3,000	6,000	9,000	12,000
Groundwater Banking	8,254	9,648	10,541	13,935	14,828
New Supplies[2]	8,255	9,648	10,542	13,935	14,829
Total Supply	35,000	40,000	45,000	55,000	60,000
Total Demand	35,000	40,000	45,000	55,000	60,000
Surplus/(Shortage)	0	0	0	0	0

Notes:
1. Some of this groundwater production will have to be replenished after the current adjudication process concludes.
2. Includes new recycled water sources and additional groundwater banking.

The Antelope Valley groundwater basin (the "Basin") has been in overdraft continuously since about 1930. In 1999, the pumpers in the Antelope Valley commenced legal action to adjudicate production rights in the groundwater basin. The adjudication reached a milestone in the spring of 2011 with the Court issuing a ruling that the safe yield is 110,000 acre-ft/yr. Groundwater production in the Basin currently exceeds the safe yield. The adjudication process continues on today with the goals to allocate the safe yield among the parties and to implement a physical solution that ensures sustainability.

At present, it is unclear what groundwater pumping rights in the Basin will be allocated to the District and to the other parties in the adjudication. However, it is likely the District will be required to replenish its groundwater production in excess of the groundwater production rights allocated to it. It is also likely the District and the adjudication parties will need to bank surplus amounts of imported water in years when it is available for production and use in years when the imported water is scarce.

To ensure sustainability, net[1] groundwater production in the Antelope Valley will need to be limited to the Basin's safe yield, and the location and magnitude of production will have to be modified to minimize subsidence and to ensure sustainable production. Recent groundwater simulation work conducted by the USGS[2] suggests that the combination of reducing groundwater production in certain areas where subsidence has occurred to levels that eliminate new subsidence and the relocation of production outside the subsidence area coupled with groundwater recharge projects, as described herein, are absolutely necessary to ensure sustainable production and to minimize subsidence. The parties involved in the ongoing adjudication are discussing a range of groundwater banking projects that involve the storage of imported water when surplus water is available for subsequent recovery and use when imported water is less available.

In the SWRP, the District proposes banking programs that include the development of new spreading grounds and recovery facilities that it will use to recharge imported water, local stormwater, and potentially recycled water:

- to replenish its overproduction pursuant to the future settlement or judicial decision in the ongoing adjudication,
- to store imported, local stormwater and recycled water in surplus years to meet future replenishment obligations when imported water is scarce, and
- to recover stored water during imported shortages.

The District has determined that it will ultimately require 105,000 acre-ft/yr of recharge capacity to meet its reliability goals and to meet new future demands.

The Littlerock Creek Groundwater Recharge and Recovery Project (LCGRRP) is the largest of four recharge projects included in the District's 2010 SWRP. The four projects and their anticipated capacity, expressed in acre-ft/yr, are listed below.

Planned Recharge Projects in the Palmdale Water District Strategic Water Resources Plan

Recharge Project	Projected Recharge Capacity
Upper Armargosa Creek	3,360
Lower Armargosa Creek	40,070
14E	18,480
Littlerock Creek	43,090
Total	105,000

The location of the LCGRRP is shown in Figure 2. Figure 2 also shows the District's service area and existing wells, Antelope Valley East Kern Water Agency's service area, Littlerock Creek Irrigation District's service area, and property owned by Los Angeles World Airports. The District will construct a well field adjacent to the recharge area to recover the water recharged in the project. The LCGRRP is proposed to be a run-of river recharge project, utilizing the existing active natural channel system and a series of shallow recharge basins in the adjacent floodplain, to recharge SWP water, stormwater, and recycled water. There are multiple ways to conduct the recharge of imported water in Littlerock Creek with the magnitude of desired recharge and the recharge capacity of the active stream channel dictating the scale of the project. In its simplest form, the proposed LCGRRP could consist of the following:

[1] Net groundwater production is defined herein as the production after replenishment for production in excess of safe yield.
[2] This work is currently being finalized and the final report is expected by the end of calendar 2013.

- SWP and other imported waters would be discharged from the East Branch of the SWP aqueduct where the aqueduct crosses Littlerock Creek. Imported water would be conveyed in the active channel of Littlerock Creek toward the project endpoint located about nine miles downstream of the aqueduct.
- Imported water recharge will occur when capacity exists in the East Branch of the aqueduct, primarily in the winter time over a period of 90 to 120 days.[3] Recharge could occur at other times of the year, provided that there is surplus SWP water available or when surplus capacity in the aqueduct is available to convey non-SWP water to the LCGRRP.

The project would be expanded as follows if the desired recharge cannot be accomplished in the active channel within the project area or if recycled water recharge is included in the recharge project:

- A diversion works would be constructed in the active channel just upstream of Palmdale Boulevard to split the remaining discharge in Littlerock Creek such that the imported water discharge remaining in Littlerock Creek can completely recharge in the active channel in the project area.
- The diverted imported water would be conveyed to shallow off-channel basins constructed adjacent to the active channel and within the floodplain. Imported water diverted into these basins would recharge completely within the project area.
- The off-channel basins would be constructed in a strip of land parallel to the active channel. A feeder channel would be constructed from the diversion works at Palmdale Boulevard and run along the west side of the off-channel basins. The feeder channel would convey imported water from the Littlerock Creek diversion to individual off-channel basins.
- The imported water discharge to Littlerock Creek would be modulated to ensure that all the imported water discharged to Littlerock Creek would be completely recharged in the active channel and off-channel basins in the project area.

Recycled water recharge would be accomplished by conveying recycled water to the off-channel basins in the project area. Dilution pursuant to the Department of Public Health Draft[4] CCR Title 22 regulations would be provided by imported water recharge in the same facilities and groundwater underflow.

The recharge and recovery capacities of the project are projected to be about 43,000 acre-ft/yr and 14,000 acre-ft/yr, respectively. Preliminary groundwater modeling studies[5] have demonstrated that the LCGRRP will substantially reduce drawdown in the District's service area and areas surrounding the project. The recharge project will increase piezometric levels in the southern part of the subsidence area and provide regional benefits, including the reduction of subsidence in the central part of the Antelope Valley. For these reasons, the other SWP contractors in the Antelope Valley, the Antelope Valley East Kern Water Agency (AVEK), and the Littlerock Irrigation District (LCID) have endorsed this project, and will likely be partners in its implementation.

The feasibility study proposed herein, as more fully described in the Scope of Work, below, will develop facility and operating plans for recharge facilities in and adjacent to the active Littlerock Creek channel, determine the recharge capacity of the Littlerock Creek recharge project, determine the fate of the

---

[3] The design duration of recharge will be developed in the proposed feasibility investigation. The duration of recharge will depend on the availability of surplus unused capacity in the East Branch of the SWP that can be used by the District, Antelope Valley East Kern Water Agency, and Littlerock Creek Irrigation District to convey SWP water and non-SWP water to the LCGRRP.

[4] The Department of Public Health has expressed that it will soon be finalizing these regulations. The recycled water recharge component in the LCGRRP would be designed consistent with the final regulations.

[5] Modeling studies were done to evaluate banking programs in the SWRP.

recharge water under different recovery schemes, prepare cost opinions, complete an initial environmental study, and assess the overall feasibility of the LCGRRP.

III. Scope of Work

The scope of work described below has been designed to be executed in a logical, transparent, and process-driven manner; and to produce a robust feasibility assessment. This is a complicated project and will require coordination with many agencies and non-governmental organizations. Therefore, the scope includes tasks to disseminate information relatively continuously as the project unfolds, review and coordination among stakeholders, and formal public outreach opportunities. The scope of work consists of nine major tasks, which include:

- Task 1 Project Administration
- Task 2 Update Water Demands and Water Supply Plans for the District and Other Stakeholders
- Task 3 Determine the Timing and Magnitude of Imported and Recycled Water for Recharge
- Task 4 Develop Preliminary LCGRRP Alternatives
- Task 5 Conduct Site Specific Investigations to Determine Environmental Issues and Constraints
- Task 6 Assess the Groundwater Response of Each Alternative
- Task 7 Refine LCGRRP Alternatives and Evaluate Feasibility
- Task 8 Prepare LCGRRP Report
- Task 9 Conduct Public Outreach

Task 1 Project Administration

This task includes project management (progress and financial management, administration of subconsultant contracts, preparation of monthly progress reports, and invoicing) and meetings. There will be monthly telephonic meetings following invoicing to discuss progress and work to be done in the next billing period. Stakeholder meetings will occur approximately every two months to discuss the technical work in process, evaluate progress and performance, and to receive stakeholder feedback.

Task 2 Update Water Demands and Water Supply Plans for the District and Other Stakeholders

The objective of this task is to update the water demand and supply plans for all of the major water supply entities that have demands on the East Branch of the SWP, recycled water, and groundwater. This is being done to take an Antelope Valley-wide view of the water demand and supply plans and to determine how groundwater banking in general, and in the LCGRRP area specifically, can be integrated into the valley-wide water supply plan.

The deliverables for this task include a task report, documenting the work in this task, presentations to the stakeholders within this task effort, and subsequent workshops. This deliverable will be used in Task 4 to develop LCGRRP alternatives.

Task 3 Determine the Timing and Magnitude of Imported, Local Surface, and Recycled Water for Recharge

The objectives of this task are to determine the capacity within the East Branch of the SWP to deliver SWP and non-SWP waters to the LCGRRP, to identify the types of non-SWP water that can be conveyed and recharged, and the amount and timing of recycled water that could be recharged at the LCGRRP. This work will identify the range and types of water that can be recharged, the timing of deliveries, and the probable costs of these water sources. Finally, the agreements and processes required to obtain and convey these waters to the LCGRRP will be described.

The deliverables for this task include a task report, documenting the work in this task, and presentations to the stakeholders within this task effort and subsequent workshops. This deliverable will be used in Task 4 to develop LCGRRP alternatives.

Task 4 Develop Preliminary LCGRRP Alternatives

The objective of this task is to develop up to ten preliminary LCGRRP alternatives and to describe them in sufficient detail so that they can be evaluated for performance, environmental challenges, and cost. Basic data will be compiled to ensure that the recharge and recovery elements of the LCGRRP will work and that facility and operating plans can be developed in sufficient detail for evaluations in subsequent tasks. To this end, the following subtasks will be performed:

- Review basic hydrogeologic information, such as borehole logs, geophysical investigations, groundwater level, etc. (this will be completed before Task 4 begins).
- Conduct geophysical investigations to determine the presence of vertical and horizontal barriers (see Task 5 for a description of environmental compliance and permits).
- Conduct a ground surface deformation investigation using InSAR technology[6] to determine how the ground surface responds to recharge and where the recharged water goes.
- Conduct a topographic survey using LiDAR[7] technology.
- Collect existing and planned potable and non-potable water infrastructure information from the District and other potential project participants.
- Collect existing and planned flood control and road infrastructure information for the project area.

This information will be compiled into a GIS database and used as a basis to develop alternative facility and operating plans.

Up to ten preliminary facility and operating plans (alternatives) will be developed along the lines discussed earlier in the project description. These alternatives, their preliminary cost, and proposed feasibility evaluation criteria will be presented to the stakeholders at a regularly scheduled coordination meeting. These preliminary alternatives will be revised by incorporating the comments and suggestions of the stakeholders.

The deliverables for this task include a task report documenting the work in this task, presentations to the stakeholders within this task effort, coordination meetings, and subsequent workshops.

Task 5 Conduct Site Specific Investigations to Determine Environmental Issues and Constraints

The objectives of this task are to identify potential impacts of the LCGRRP alternatives on the hydrological, biological, cultural, and mineral resources; the potential for exacerbating flooding, geological, and seismic hazards; and, impacts on groundwater levels, water quality, and subsidence. As to the latter, most of this information was collected during the prior phases of the Antelope Valley adjudication process, is readily available, and only needs to be brought current to 2012. The SWRP

---

[6] Synthetic Aperture Radar Interferometry (InSAR) measures deformation in the earth's surface over time and can be used to observe the recharge mound beneath the earth's surface and the areas impacted by recharge. In the LCGRRP application, InSAR will be used to determine the slight rise in the Earth's surface following recharge that occurred during the 1998 and 2005 floods on Littlerock Creek and determine where the recharged water went. These observations are important in the identification of recharge areas and horizontal flow barriers.

[7] Light Detection and Ranging (LiDAR) is an optical remote sensing technology that can measure the distance to, or other properties of a target, by illuminating the target with light, often using pulses from a laser. LiDAR would be used herein to develop precise topographic maps for laying out facilities plans.

Programmatic Environmental Impact Report (PEIR) contains recommended mitigation measures to evaluate the impacts on these resources when the LCGRRP moves towards implementation. The scope contained herein implements these mitigation measures. This task also includes a thorough evaluation of the groundwater level, water quality, and subsidence conditions in the project area, and area that could be impacted by the LCGRRP. After compiling and analyzing existing groundwater level and groundwater quality data, a determination will be made about whether these data are sufficient to define ambient groundwater conditions to the extent required to evaluate impacts from project alternatives. This proposal assumes that up to ten existing wells may be sampled as part of this project. A sampling and analysis plan (SAP), including a quality assurance project plan (QAPP), and a health and safety plan (HSP) will be developed. Groundwater elevations will be measured using standard protocols specified in the SAP. Groundwater samples will be collected from these wells and submitted to an Environmental Laboratory Accreditation Program (ELAP)-certified laboratory for Title 22 analyses. All groundwater elevation and groundwater quality data will be quality control-checked and uploaded into the project database.

The project will include fieldwork on previously undisturbed areas. We anticipate the need for permits from the Los Angeles World Airports and potentially agreements with some private landowners to enter their properties to conduct biologic resource surveys, cultural resource surveys, and geologic and geophysical surveys. The geophysical surveys will require the temporary placements of equipment on the ground and the application of electrical forces at the ground surface. The biological resources, cultural resources, and geological resources surveys will be completed prior to the geophysical surveys. These surveys will be used to comply with the California Environmental Quality Act (CEQA) for both the geophysical survey and subsequent CEQA review of the LCGRRP.

CEQA documentation will be completed on the LCGRRP alternatives identified in the feasibility investigation in conjunction with eventual project design.

The deliverables for this task include two task reports documenting the work in this task, presentations to the stakeholders within this task effort, coordination meetings, and subsequent workshops. These deliverables will be used in Tasks 6 and 7 to evaluate the groundwater response and revise the LCGRRP alternatives as necessary to be implementable.

Task 6 Assess the Groundwater Response of Each Alternative

The objectives of this task are to evaluate: the hydrogeologic feasibility of the LCGRRP; evaluate the groundwater level, water quality, and subsidence impacts of the preliminary LCGRRP alternatives; and, suggest refinements to the preliminary LCGRRP alternatives that improve project performance and minimize impacts to the groundwater resource. The scope includes the update of the 2012 USGS groundwater flow and subsidence model of the Antelope Valley,[8] the development of a companion solute transport model[9] to assess the fate and transport of the water quality constituents of interest, and the application of these models to evaluate the groundwater level, water quality, and subsidence responses for the no-LCGRRP (baseline) alternative and the LCGRRP alternatives developed in Task 4. The groundwater modeling results of the LCGRRP alternatives will be compared to the baseline alternative to estimate the LCGRRP impacts to the groundwater system. The scope includes a feedback

[8] The USGS is in the process of preparing a final report to document their latest investigation of groundwater level and subsidence conditions in the Antelope Valley and the evaluation of planning alternatives. Their final report should be available before the end of calendar 2013. There are other versions of this model that may be more appropriate and the District will secure these versions for the Consultant.

[9] A solute transport model, such as the MT3D or its functional equivalent, would be used to assess the fate and transport of water quality constituents of interest.

loop to suggest modifications to some of the alternatives to minimize impacts or to improve the LCGRRP alternative performance.

The deliverables for this task include a task report documenting the work in this task, presentations to the stakeholders within this task effort, coordination meetings, and subsequent workshops. This deliverable will be used in Task 7 to refine the LCGRRP alternatives and to evaluate feasibility.

Task 7 Refine the LCGRRP Alternatives and Evaluate Feasibility

The objective of this task is to take the results of Tasks 5 and 6, to update (finalize) the preliminary LCGRRP alternatives, update their cost opinions, and assess their feasibility. An implementation plan will be developed for the feasible LCGRRP alternatives.

The deliverables for this task will include a task report documenting the work in this task, presentations to the stakeholders within this task effort, coordination meetings, and a public workshop.

Task 8 Prepare the LCGRRP Report

The objective of this task is to prepare a completion report for the entire feasibility investigation. This process includes the preparation and submittal of a draft report, preparation of comments and suggestions by the stakeholders, preparation and submittal of responses to comments and suggestions, and preparation of the final draft of the completion report.

The deliverables for this task include the draft report, formal responses to comments and suggestions, and the final report.

Task 9 Conduct Public Outreach

The objective of this task is to disseminate information related to the LCGRRP feasibility investigation to all groundwater users, project stakeholders, and the general public, and to provide a forum to publicly and transparently provide input to the LCGRRP proponents. The following public outreach efforts will be made:

- Five public workshops will be conducted to review the preliminary LCGRRP alternatives (Tasks 2, 3 and 4), the alternative performance and impact analysis (Tasks 5 and 6), and to review the final LCGRRP alternatives and feasibility (Task 7).
- The results of this feasibility investigation will be disseminated to be included in the Antelope Valley Integrated Regional Water Management Plan (IRWMP) process.

The deliverables for this task include five public workshops.

IV. Project Schedule

The following dates reflect the anticipated schedule for soliciting proposals, selecting the Consultant, and awarding the contract for the work requested in this RFP:

- Solicit Proposals 6/27/13
- Proposals Due 7/31/13 at 5:00 PM
- Review Proposals / Interviews 8/1/13 – 8/20/13
- Award Contract 8/28/13

The District reserves the right to conduct interviews with the Consultants to help with the selection process.

V. Submittal Requirements

- **Basic Qualifications:** Provide basic data relative to firm's size, history, personnel, special expertise and general credits. Individual resumes, awards, associations, etc., may be included.
- **Specific Qualifications:** List the team expected to accomplish this work. Describe who will perform the various tasks, the amount of their involvement and responsibilities, and give their qualifications. Provide a list of at least (5) projects, with brief descriptions, which show ability to complete projects of this scope.
- **Approach to Project:** Include a statement of your approach to this specific project, including project understanding and scope of work.
- **Past Performance:** Submit reference letters from prior clients or client representatives. Letters from projects listed in "Specific Qualifications" are preferable.
- **Project Fee and Schedule:** Submit a project fee in a not-to-exceed amount as well as a project schedule. Include a cost breakdown with an allocation of hours for the specified tasks.

To assist evaluation, it is desirable to format the proposal similar to the heading listed above. The proposal should be clear and to the point. ***Submit 10 copies*** of the proposal.

VI. Selection Process

The following areas of evaluation will be used:

AREA OF EVALUATION	TOTAL AVAILABLE POINTS
Experience and qualifications of personnel with water resource planning.	35
Consultant's approach and compliance with proposal requirements.	25
Consultant's past record of performance on similar projects, efforts related to project management, cost control, work quality, and schedule conformance.	15
Consultant's depth of staff resources available for insuring project tasks are completed on time.	15
Other	10
Total =	100

The District reserves the right to reject any or all proposals, and to waive any informality or minor irregularity in any proposal.

VII. Standard Professional Services Agreement

The Consultant selected for the Project shall be expected to execute the Districts' Standard Professional Services Agreement (included as Attachment C). The selected Consultant shall execute the final agreement within five working days from the Notice of Award.

VIII. Special Conditions

- **District's Contractual Rights:** The District reserves the right to cancel, in part or entirely, the Request for Proposals, including but not limited to, selection schedule, submittal date, and submitting requirements.
- **Disclaimer of Right of Contract:** This RFP does not commit the District to award a contract or to defray any costs incurred in the preparation of the Proposal pursuant to this RFP.
- **Costs for Developing Proposal:** Costs for developing proposals are the responsibility of the proposing firms. The District shall not be responsible for any costs associated with the development of proposals.

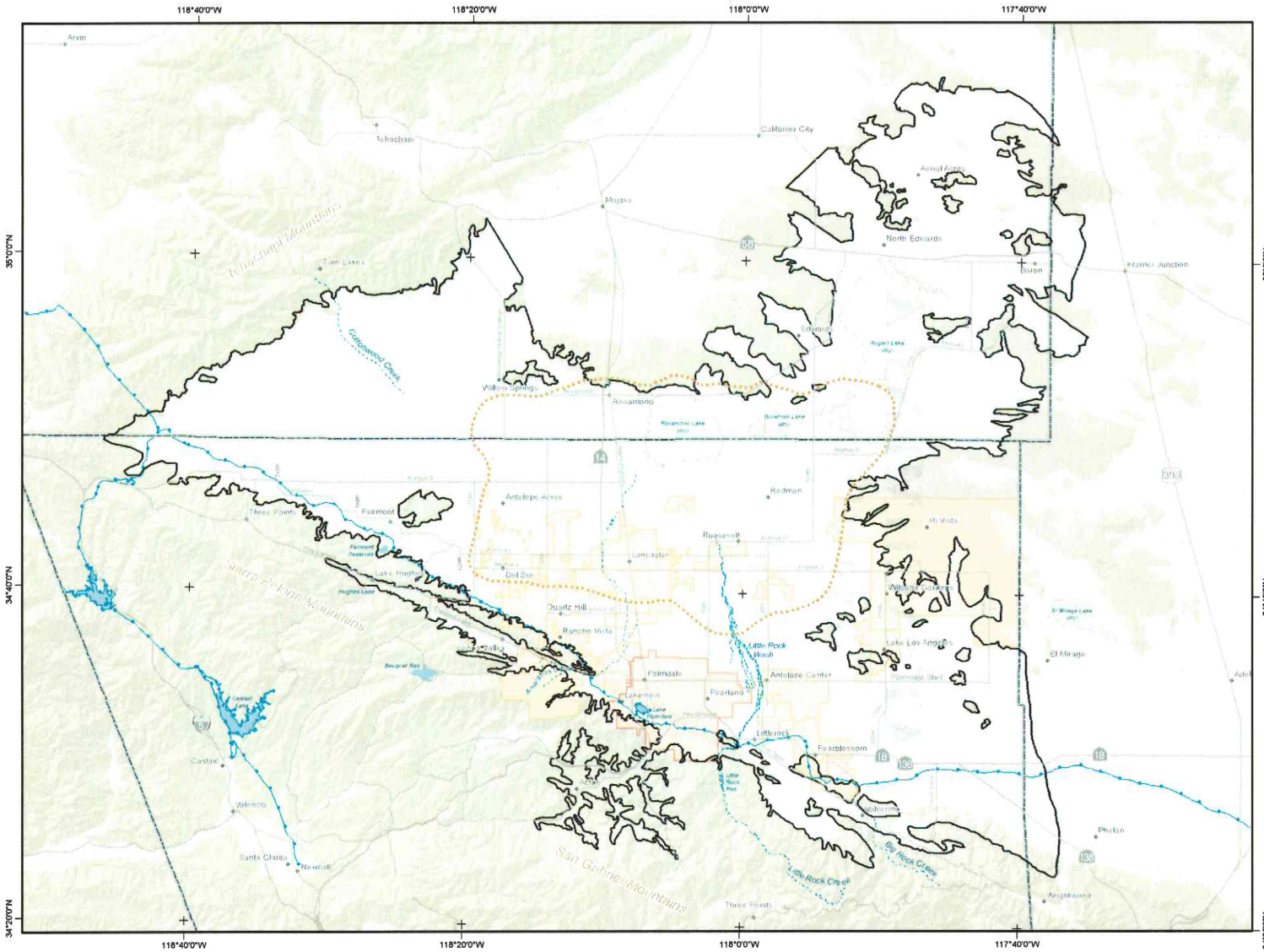
IX. Questions

Questions regarding this RFP shall be sent to Mr. Matthew Knudson, Engineering Manager via e-mail at mknudson@palmdalewater.org. Questions concerning this RFP and project will only be answered in writing; questions requiring clarifications or additional information will be addressed in an addendum to this RFP.

Mr. Matthew Knudson
Engineering Manager
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550
p. (661) 456-1018
f. (661) 947-8604
mknudson@palmdalewater.org

ATTACHMENT A

Proposal Figures



Antelope Valley Groundwater Basin

Palmdale Water District

Los Angeles County Waterworks District 40

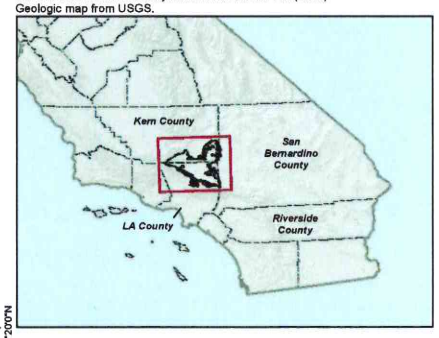
SWP California Aqueduct

Area of Subsidence

Quaternary Alluvium

Piocene and Older Consolidated Rock

Notes:
Groundwater basin boundary from DWR Bulletin 118 (2003)
Geologic map from USGS.



Produced by:
WILDERMUTH ENVIRONMENTAL INC
23692 Birtcher Drive
Lake Forest, CA 92630
949.420.3030
www.wildermuthenvironmental.com

Author: WEL
Date: 20130513
File: Figure1.mxd

0 7 14 Miles
0 10 20 Kilometers

Antelope Valley Groundwater Basin

LCGRRP Feasibility Study

Figure 1

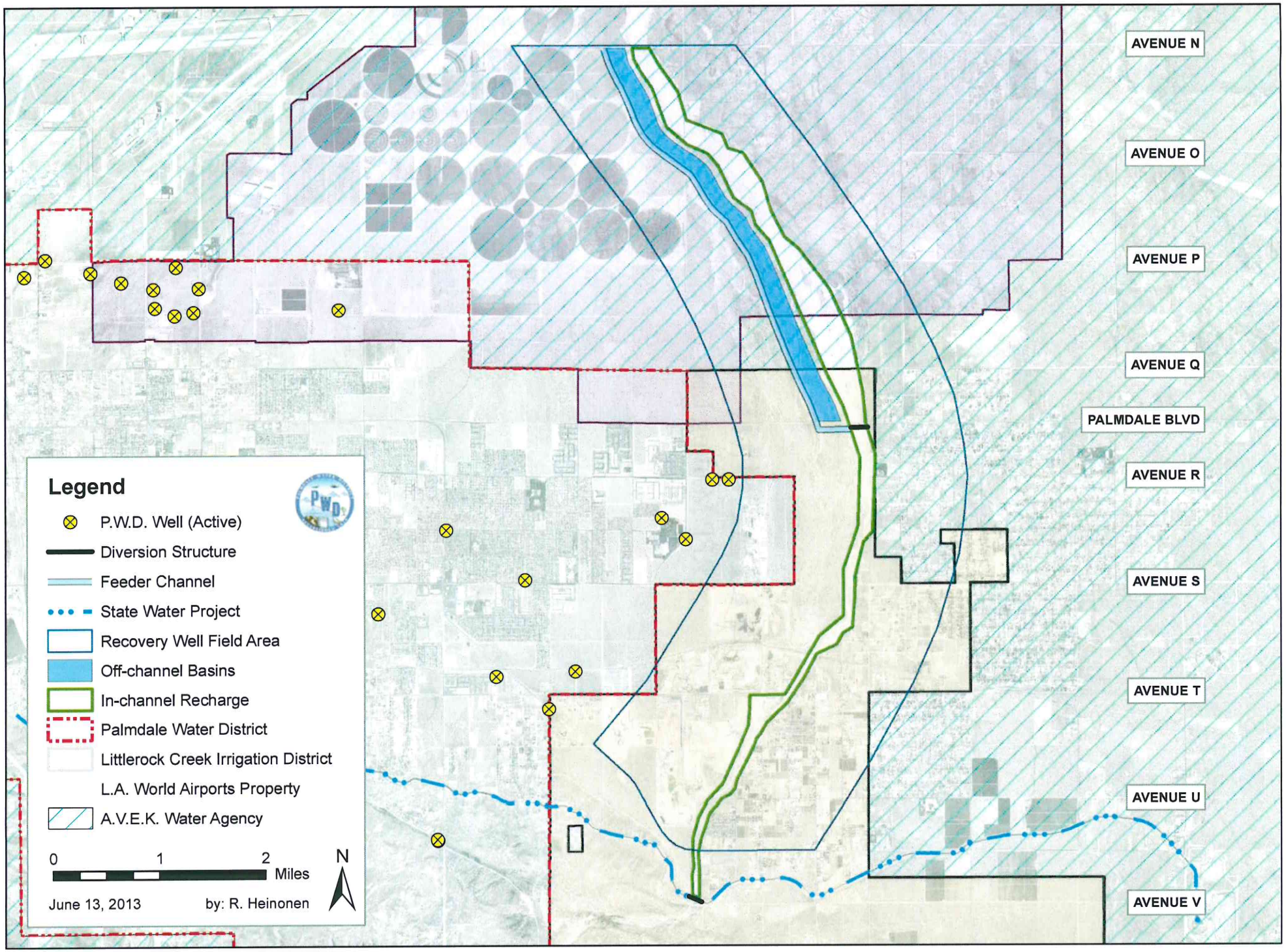


FIGURE 2 - PROPOSED LITTLEROCK CREEK RECHARGE AREA

ATTACHMENT B

RFP Mailing List

Mailing List

1. Black & Veatch
   ATTN: Andrew Lazenby
   15615 Alton Parkway, Suite 300
   Irvine, CA 92618
   P 949-788-4218
   lazenbyag@bv.com

2. Carollo Engineers
   ATTN: Tom West
   11620 Wilshire Blvd., 9th Floor
   Los Angeles, CA 90025
   P 213-500-9911
   twest@carollo.com

3. CDM Smith
   ATTN: David Ebersold
   523 West Sixth Street, Suite 400
   Los Angeles, CA 90014
   P 213-457-2139
   ebersolddb@cdmsmith.com

4. GEI Consultants, Inc.
   ATTN: Lorena S. Ospina
   101 North Brand Blvd., Suite 1780
   Glendale, CA 91203
   P 818-552-6400
   lospina@geiconsultants.com

5. Intera Geosciences & Engineering
   ATTN: Thomas Love
   201 Monte Vista Lane
   Sierra Madre, CA 91024
   P 626-825-3678
   tlove@intera.com

6. MWH
   ATTN: Victor Harris
   618 Michillinda Ave., Suite 200
   Arcadia, CA
   P 626-568-6024
   victor.e.harris@us.mwhglobal.com

7. Provost & Pritchard
   ATTN: Sheila Gonzales
   130 North Garden Street
   Visalia, CA 93291
   P 661-616-5900
   sgonzales@ppeng.com

8. RMC Water and Environment
   ATTN: Brian Dietrick
   2400 Broadway Ave., Suite 300
   Santa Monica, CA 90404
   P 310-566-6479
   bdietrick@rmcwater.com

9. Wildermuth Environmental
   ATTN: Mark Wildermuth
   23692 Birtcher Drive
   Lake Forest, CA 92630
   P 949-420-3030
   mwildermiuth@wildermuthenvironmental.com

ATTACHMENT C

Sample Agreement

PROFESSIONAL SERVICES AGREEMENT

between

PALMDALE WATER DISTRICT

and

_____

for the

_____

_____

1. IDENTIFICATION

This PROFESSIONAL SERVICES AGREEMENT, hereinafter referred to as "Agreement," is made and entered into this _____ day of _____, _____, by and between Palmdale Water District, a public corporation organized and existing under the provisions of the California Water Code, hereinafter referred to as "District," and _____, a _____ _____, hereinafter referred to as "Consultant."

2. RECITALS

2.1 District requires professional _____ and _____ services in conjunction with _____.

2.2 Consultant has demonstrated expertise in various aspects of _____ and _____ and is qualified to provide the professional services required by District.

2.3 District and Consultant desire to enter into a contract for the provision of professional services for the _____ as delineated in the Scope of Work attached hereto as Exhibit A, subject to the terms and conditions of this Agreement.

3. AGREEMENT

NOW THEREFORE, in consideration of the promises and covenants hereinafter contained, it is mutually agreed as follows:

3.1 District hereby retains Consultant to perform the professional services described in Exhibit A. Consultant agrees to perform such services in a timely and professional manner and with due diligence.

3.2 The Project Manager for Consultant shall be _____, who shall manage and direct the technical effort of Consultant and be the Consultant's liaison with the District.

3.3 Consultant, at its sole cost, shall procure and maintain at all times during this Agreement: (a) statutory Workers' Compensation Insurance coverage together with employer's liability coverage of $1 Million, (b) General Liability Insurance (insuring against bodily injury and property damage) with a minimum coverage of $1 Million for each occurrence

and a $2 Million aggregate, and naming the District as an additional insured, (c) Automobile Liability Insurance with a minimum coverage of $1 Million per accident for bodily injury and property damage, and (d) Professional Liability Insurance with a minimum coverage of $1 Million per claim and annual aggregate.

The policy or policies of insurance so provided shall contain a contractual liability endorsement covering the liability assumed by the Consultant by the terms of this Agreement. The above-referenced insurance policy (or policies) shall be furnished at the Consultant's expense, in a form and with insurance companies authorized to do business and have an agent for service of process in California and have an "A-" policyholder's rating and a financial rating of at least Class VII in accordance with the most recent Best's Insurance Guide, or as otherwise approved by the District. If Best's is no longer published, comparable ratings must be provided from a service acceptable to District. Such insurance policies shall have provisions providing that insurance furnished thereunder shall be considered primary as to Consultant's services with respect to any policies of insurance maintained by District. Said policy(ies) shall also contain provisions requiring that the coverage cannot be reduced or canceled without giving District thirty (30) days prior written notice.

Before performing any work, Consultant shall furnish certificates of insurance evidencing the foregoing insurance coverage.

3.4 Consultant shall indemnify and hold harmless the District, its elected Board, appointed officers, agents, and employees from and against any and all claims, demands, costs, expenses, losses, or liabilities in law or in equity, including, but not limited to injury to or death of any person, and damages to or destruction of property of any person, arising out of:

a. The wrongful misconduct or negligent acts, errors or omissions of Consultant, so long as such claims, demands, costs, expenses, losses or liabilities do not result from the sole negligence or willful misconduct of District or any of its directors, officers, employees, agents, or volunteers, provided that if such claims, demands, costs, expenses, losses or liabilities arise from the negligence of the District or any of its directors, officers, employees, agents or volunteers (other than its or their sole negligence), then Consultant's obligation hereunder shall be allocated in accordance with comparative negligence principles under California law;

b. The violation of governmental laws or regulations, compliance with which is the responsibility of the Consultant.

Consultant shall pay and satisfy any judgment, award, or decree that may be rendered against District or any of its directors, officers, employees, agents, or volunteers in any such suit, action, or other legal proceeding.

Consultant shall reimburse District or any of its directors, officers, employees, agents, or volunteers for any and all legal expenses and costs incurred by each of them in connection therewith.

Consultant's obligation to indemnify shall not be limited to insurance proceeds, if any, received by District or any of its directors, officers, employees, agents, or volunteers.

3.5 District shall have the right to terminate this Agreement at any time upon five (5) days written notice to Consultant. In the event of such termination, District shall compensate Consultant through the notice date for services actually performed hereunder in accordance with the rates set forth in Exhibit B, but in no event shall District be obligated to pay more than the maximum compensation set forth in Exhibit B.

3.6 District shall pay Consultant the compensation in the amount, time, and manner set forth on the attached Exhibit B.

3.7 This Agreement shall not be assigned by Consultant without the written consent of District.

3.8 Consultant shall procure, at its expense, all permits required by governmental authorities and shall comply with all applicable local, state and federal regulations and statutes including Cal-OSHA requirements.

3.9 Consultant shall comply with Labor Code Section 1775. In accordance with said Section 1775, the Consultant shall forfeit as a penalty to the District, a penalty in such amount as the Labor Commissioner shall determine for each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed for any work done under this Agreement by them or by any sub-consultant under them in violation of the provisions of the Labor Code and, in particular, Labor Code Sections 1770 to 1780, inclusive. In addition to said penalty and pursuant to said Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Consultant.

3.10 Consultant shall not discriminate against any employee or applicant for employment because of race, sex (including pregnancy, childbirth or related medical condition), creed, national origin, color, disability as defined by law, disabled veteran status, Vietnam veteran status, religion, age, medical condition, marital status, ancestry, or sexual orientation.

3.11 District will make available to Consultant such materials from its files as may be required by Consultant to perform these services. Such materials shall remain the property of the District while in Consultant's possession. Upon termination of the Agreement or completion of work under the Agreement, Consultant shall turn over to the District any District property or materials in its possession and any calculations, notes, reports, electronic files or other materials prepared by Consultant in the performance of these services.

District may utilize any material prepared or work performed by Consultant in any manner, which District deems proper without additional compensation to Consultant. Consultant shall have no responsibility or liability for any revisions, changes or corrections made by District or any use or reuse pursuant to this paragraph unless Consultant accepts such responsibility in writing.

3.12 Consultant shall not make public information releases or otherwise publish any information obtained or produced by it as a result of, or in connection with, the

performance of services under the Agreement without prior written consent of the District.

3.13 Consultant shall not publish or use any advertising, sales promotion or publicity in matters relating to services, equipment, products, reports, and material furnished by Consultant in which District's name is used or its identity is implied without prior written approval by the District.

3.14 In the event any action or proceeding is brought by either party to enforce any term or provision of this Agreement, the prevailing party shall recover its reasonable attorneys' fees and costs.

3.15 Written notices shall be deemed to have been given when mailed by the United States mail, postage prepaid, addressed to the parties to this Agreement.

3.16 At all times during the term of this Agreement, Consultant shall be deemed to be an independent contractor and not an employee of District.

3.17 This Agreement contains the entire agreement between the parties hereto and supersedes any prior or concurrent written or oral agreement between said parties concerning the subject matter contained herein.

3.18 The validity, interpretation, and performance of this Agreement shall be controlled by and construed under the laws of the State of California. The parties hereto do hereby consent to the jurisdiction of the California courts in the event any dispute arises in conjunction herewith.

3.19 If any provision of this Agreement, or the application thereof under certain circumstances, is held invalid, the remainder of this Agreement, or the application of such provision under other circumstances, shall not be affected thereby and shall remain valid and enforceable.

3.20 The signatories to this Agreement represent that they have the authority to execute this Agreement.

3.21 This Agreement has been prepared jointly by the parties. Any uncertainty or ambiguity shall not be construed for or against any party based on attribution of drafting to any party.

The parties hereto have caused this Agreement to be duly executed by its authorized officers.

PALMDALE WATER DISTRICT

By:_____
Its:_____

Date:_____

_____

By:_____
Its:_____

Date:_____

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • **Telephone (661) 947-4111**
Fax (661) 947-8604
www.palmdalewater.org

LAGERLOF, SENECAL, GOSNEY & KRUSE LLP
Attorneys

Board of Directors

ROBERT E. ALVARADO
Division 1

GORDON G. DEXTER
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN
Division 4

STEVE R. CORDOVA
Division 5

August 21, 2013

Kennedy/Jenks Consultants
Attn: Harold Glaser
707 Wilshire Blvd., Suite 4700
Los Angeles, CA 90017

RE: LITTLEROCK CREEK GROUNDWATER RECHARGE AND RECOVERY PROJECT (LCGRRP) FEASIBILITY STUDY – INTERVIEW

Dear Mr. Glaser:

On behalf of the Palmdale Water District, I would like to invite you and your team to an interview with the Water Supply and Reliability Committee and District staff to discuss your proposal. Your team is scheduled for Friday, August 30, 2013 at 10:00 am. The interview will take place in the District's Board room located at 2029 East Avenue Q, Palmdale, CA 93550. The District will have a projector and laptop available for your use if you choose to have a presentation. The District has allocated 45-minutes total for each of the consultants we are interviewing.

The District would like you to come prepared to discuss and respond to the following questions:

1. What is your recommendation and opinion on the need and benefit of preparing a joint CEQA/NEPA document as part of this project?

2. Is it important for the model to match the numbers determined through the adjudication process?

3. What factors control the boundary of the proposed modeling?

4. What are the limits of stormwater recharge as part of this project and how does your proposal address this?

5. Explain your approach related to the outreach to various landowners along the Littlerock Creek.

6. Highlight the "optional tasks" that were included in your proposal and the added benefit in completing said optional tasks.

7. If given the option, what scope would you recommend be added to this phase of the project and what part of the scope included in the Request for Proposals would you eliminate in order to obtain the same results.

8. What is the added value and ability to develop a valley-wide groundwater banking plan when the physical solution associated with the adjudication process has not been finalized?

Additional questions may be asked during the interview process. If you should have any questions, please feel free to contact me at (661) 456-1018. We look forward to meeting with you to discuss this exciting project.

Very truly yours,

MATTHEW KNUDSON,
Engineering Manager

MK/dd

cc: Water Supply and Reliability Committee Members
Dennis LaMoreaux, General Manager
Jon Pernula, Water & Energy Resources Manager

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • **Telephone (661) 947-4111**
Fax (661) 947-8604
www.palmdalewater.org

LAGERLOF, SENECAL, GOSNEY & KRUSE LLP
Attorneys

Board of Directors

ROBERT E. ALVARADO
Division 1

GORDON G. DEXTER
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN
Division 4

STEVE R. CORDOVA
Division 5

August 21, 2013

RMC Water and Environment
Attn: Lyndel Melton
2400 Broadway, Suite 300
Santa Monica, CA 90404

RE: LITTLEROCK CREEK GROUNDWATER RECHARGE AND RECOVERY PROJECT (LCGRRP) FEASIBILITY STUDY – INTERVIEW

Dear Mr. Melton:

On behalf of the Palmdale Water District, I would like to invite you and your team to an interview with the Water Supply and Reliability Committee and District staff to discuss your proposal. Your team is scheduled for Friday, August 30, 2013 at 10:45am. The interview will take place in the District's Board room located at 2029 East Avenue Q, Palmdale, CA 93550. The District will have a projector and laptop available for your use if you choose to have a presentation. The District has allocated 45-minutes total for each of the consultants we are interviewing.

The District would like you to come prepared to discuss and respond to the following questions:

1. What is your recommendation and opinion on the need and benefit of preparing a joint CEQA/NEPA document as part of this project?

2. Is it important for the model to match the numbers determined through the adjudication process?

3. What factors control the boundary of the proposed modeling?

4. What are the limits of stormwater recharge as part of this project and how does your proposal address this?

5. Explain your approach related to the outreach to various landowners along the Littlerock Creek.

6. Highlight the "optional tasks" that were included in your proposal and the added benefit in completing said optional tasks.

7. If given the option, what scope would you recommend be added to this phase of the project and what part of the scope included in the Request for Proposals would you eliminate in order to obtain the same results.

Additional questions may be asked during the interview process. If you should have any questions, please feel free to contact me at (661) 456-1018. We look forward to meeting with you to discuss this exciting project.

Very truly yours,

MATTHEW KNUDSON,
Engineering Manager

MK/dd

cc: Water Supply and Reliability Committee Members
Dennis LaMoreaux, General Manager
Jon Pernula, Water & Energy Resources Manager

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • **Telephone (661) 947-4111**
Fax (661) 947-8604
www.palmdalewater.org

LAGERLOF, SENECAL, GOSNEY & KRUSE LLP
Attorneys

Board of Directors

ROBERT E. ALVARADO
Division 1

GORDON G. DEXTER
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN
Division 4

STEVE R. CORDOVA
Division 5

August 21, 2013

Black & Veatch Corporation
Attn: Steven Foellmi
15615 Alton Parkway, Suite 300
Irvine, CA 92618

RE: LITTLEROCK CREEK GROUNDWATER RECHARGE AND RECOVERY PROJECT (LCGRRP) FEASIBILITY STUDY – INTERVIEW

Dear Mr. Foellmi:

On behalf of the Palmdale Water District, I would like to invite you and your team to an interview with the Water Supply and Reliability Committee and District staff to discuss your proposal. Your team is scheduled for Friday, August 30, 2013 at 11:30 am. The interview will take place in the District's Board room located at 2029 East Avenue Q, Palmdale, CA 93550. The District will have a projector and laptop available for your use if you choose to have a presentation. The District has allocated 45-minutes total for each of the consultants we are interviewing.

The District would like you to come prepared to discuss and respond to the following questions:

1. What is your recommendation and opinion on the need and benefit of preparing a joint CEQA/NEPA document as part of this project?

2. Is it important for the model to match the numbers determined through the adjudication process?

3. What factors control the boundary of the proposed modeling?

4. What are the limits of stormwater recharge as part of this project and how does your proposal address this?

5. Explain your approach related to the outreach to various landowners along the Littlerock Creek.

6. Highlight the "optional tasks" that were included in your proposal and the added benefit in completing said optional tasks.

7. If given the option, what scope would you recommend be added to this phase of the project and what part of the scope included in the Request for Proposals would you eliminate in order to obtain the same results.

8. Explain the benefit of bypassing InSAR with this phase of the project.

Additional questions may be asked during the interview process. If you should have any questions, please feel free to contact me at (661) 456-1018. We look forward to meeting with you to discuss this exciting project.

Very truly yours,

MATTHEW KNUDSON,
Engineering Manager

MK/dd

cc: Water Supply and Reliability Committee Members
Dennis LaMoreaux, General Manager
Jon Pernula, Water & Energy Resources Manager

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • **Telephone (661) 947-4111**
Fax (661) 947-8604
www.palmdalewater.org

LAGERLOF, SENECAL, GOSNEY & KRUSE LLP
Attorneys

Board of Directors

ROBERT E. ALVARADO
Division 1

GORDON G. DEXTER
Division 2

GLORIA DIZMANG
Division 3

KATHY MAC LAREN
Division 4

STEVE R. CORDOVA
Division 5

August 21, 2013

GEI Consultants, Inc.
Attn: Marc Rozman
101 North Brand Blvd., Suite 1780
Glendale, CA 91203

RE: LITTLEROCK CREEK GROUNDWATER RECHARGE AND RECOVERY PROJECT (LCGRRP) FEASIBILITY STUDY – INTERVIEW

Dear Mr. Rozman:

On behalf of the Palmdale Water District, I would like to invite you and your team to an interview with the Water Supply and Reliability Committee and District staff to discuss your proposal. Your team is scheduled for Friday, August 30, 2013 at 12:15 pm. The interview will take place in the District's Board room located at 2029 East Avenue Q, Palmdale, CA 93550. The District will have a projector and laptop available for your use if you choose to have a presentation. The District has allocated 45-minutes total for each of the consultants we are interviewing.

The District would like you to come prepared to discuss and respond to the following questions:

1. What is your recommendation and opinion on the need and benefit of preparing a joint CEQA/NEPA document as part of this project?

2. Is it important for the model to match the numbers determined through the adjudication process?

3. What factors control the boundary of the proposed modeling?

4. What are the limits of stormwater recharge as part of this project and how does your proposal address this?

5. Explain your approach related to the outreach to various landowners along the Littlerock Creek.

6. Highlight the "optional tasks" that were included in your proposal and the added benefit in completing said optional tasks.

7. If given the option, what scope would you recommend be added to this phase of the project and what part of the scope included in the Request for Proposals would you eliminate in order to obtain the same results.

Additional questions may be asked during the interview process. If you should have any questions, please feel free to contact me at (661) 456-1018. We look forward to meeting with you to discuss this exciting project.

Very truly yours,

MATTHEW KNUDSON,
Engineering Manager

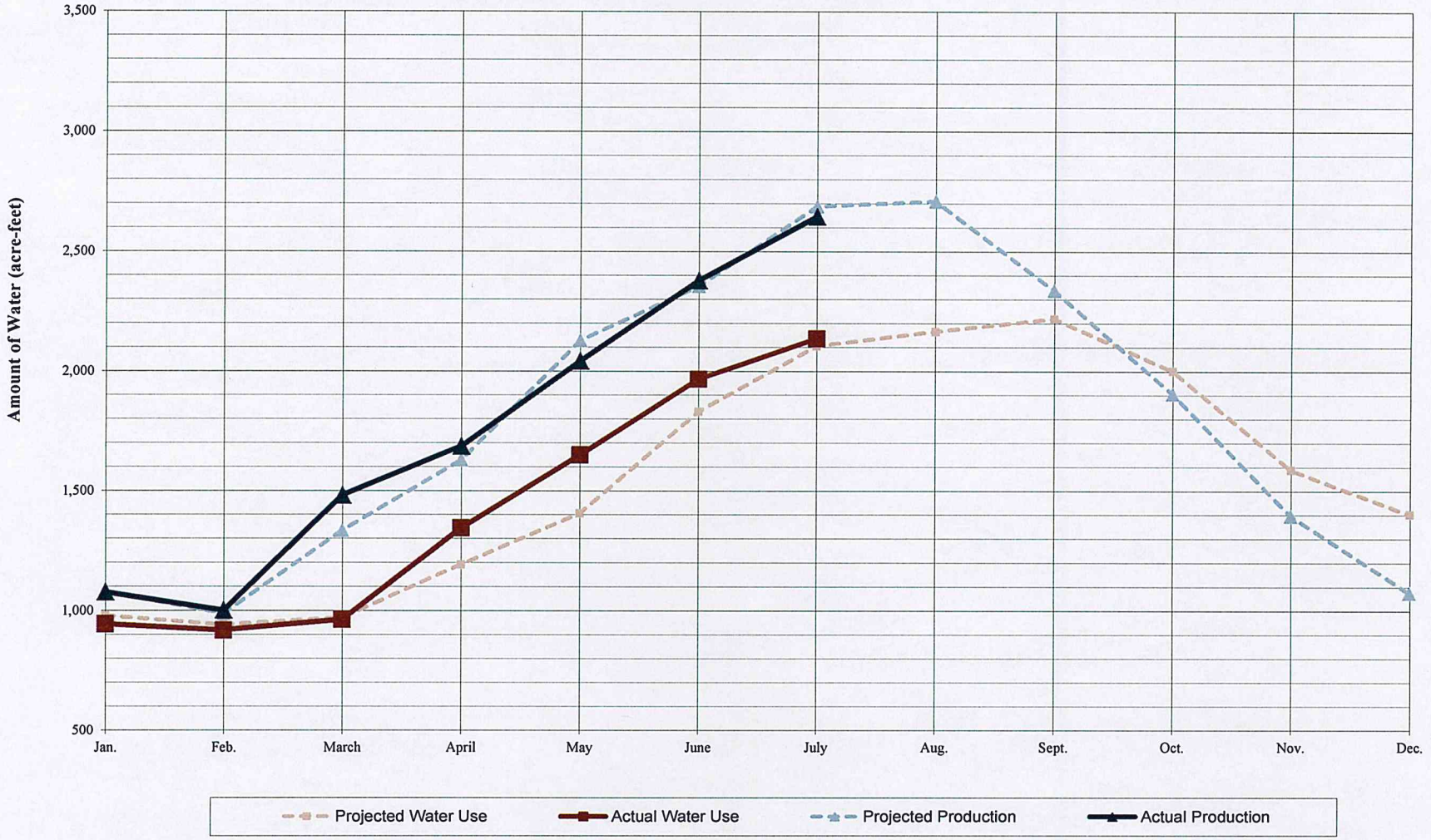
MK/dd

cc: Water Supply and Reliability Committee Members
Dennis LaMoreaux, General Manager
Jon Pernula, Water & Energy Resources Manager

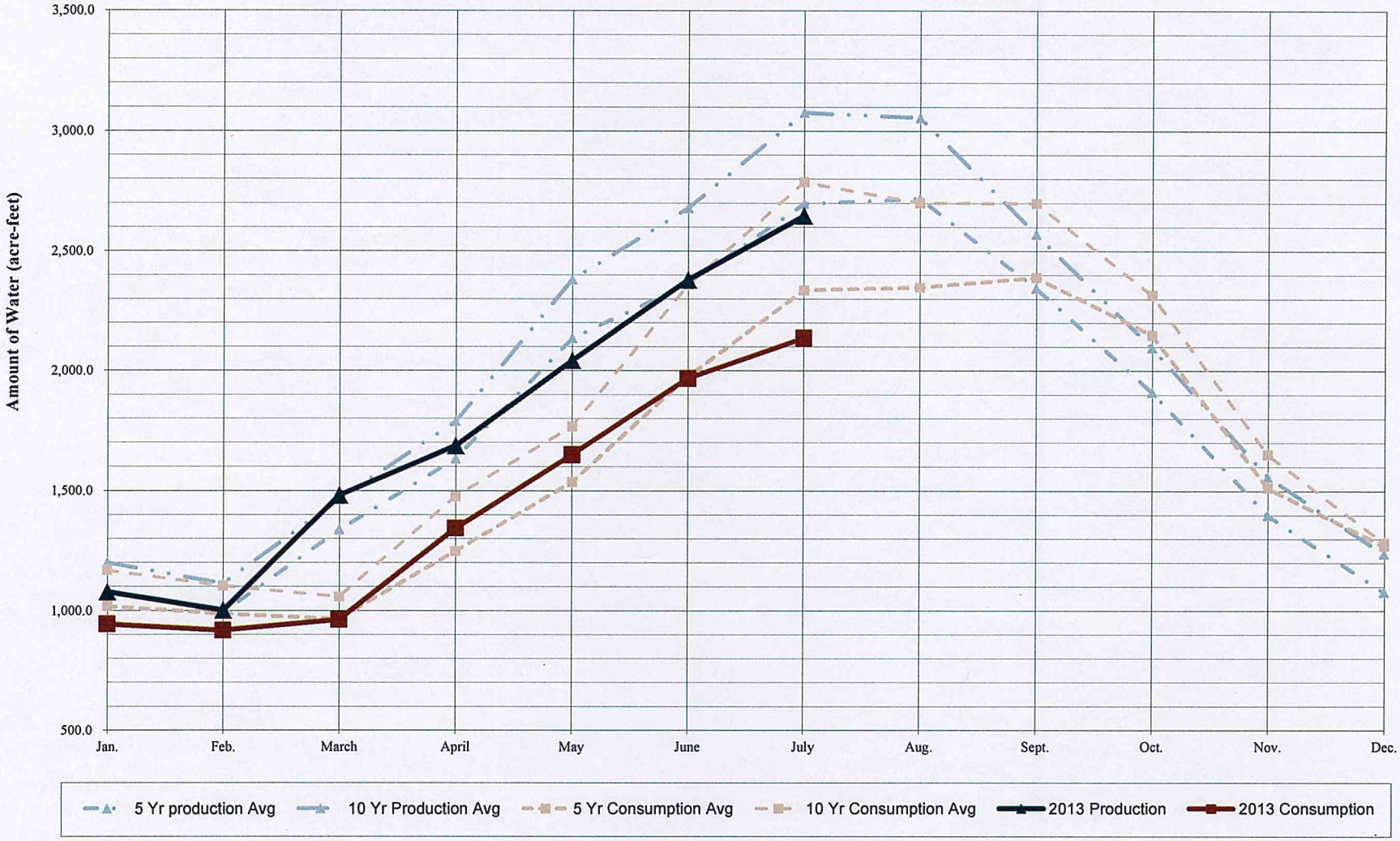
Month	Five-Year Aver. Consumption (ac.-ft.)	Budgeted 2013 Consumption (ac.-ft.)	Actual 2013 Consumption (ac.-ft.)	Difference (Act. - Pred.) (ac.-ft.)	
Jan.	1018.1	979	**944.3**	**-34.8**	
Feb.	987.5	941	**918.3**	**-22.4**	
March	966.0	970	**960.7**	**-9.8**	
April	1248.3	1,191.5	**1,344.2**	**152.7**	
May	1535.9	1,405.0	**1,649.6**	**244.6**	
June	1974.0	1,830.7	**1,966.9**	**136.2**	
July	2335.5	2,104.6	**2,135.7**	**31.1**	
Aug.	2347.3	2,165.7	0.0	0.0	
Sept.	2389.4	2,219.2	0.0	0.0	
Oct.	2149.1	2,002.1	0.0	0.0	
Nov.	1513.5	1,588.3	0.0	0.0	
Dec.	1272.0	1,402.5	0.0	0.0	
	19,736.6	9,422.2	**9,919.7**	**497.5**	**5.0%**
	2008 thru 2012	20,000.0			

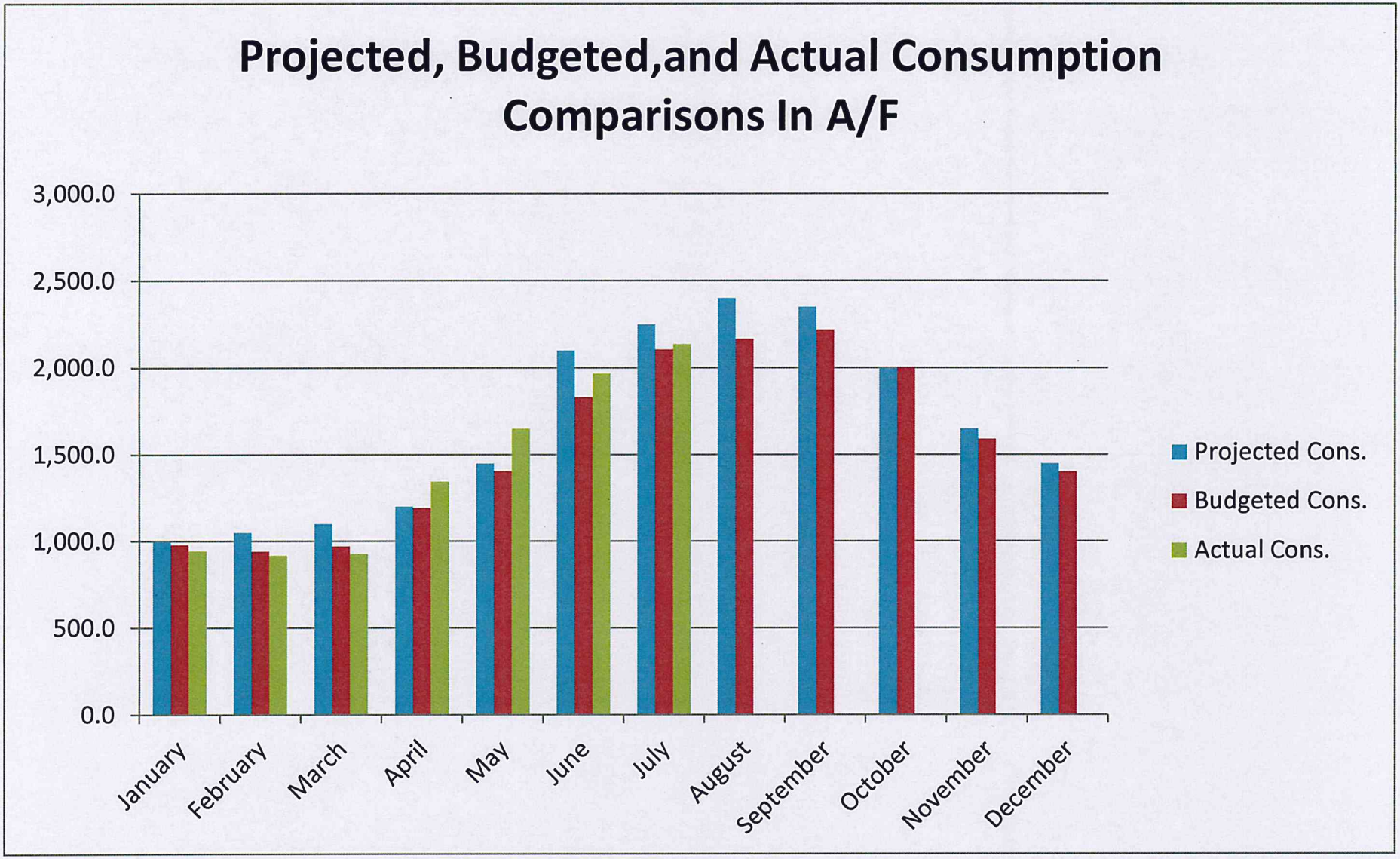
Month	Five-Year Aver. Production (ac.-ft.)	Projected 2013 Production (ac.-ft.)	Actual 2013 Production (ac.-ft.)	Difference (Act. - Pred.) (ac.-ft.)	
Jan.	1082.4	1,217.8	**1,076.7**	**-141.2**	
Feb.	990.3	1,036.3	**1,001.2**	**-35.1**	
March	1336.7	1,164.9	**1,481.1**	**316.2**	
April	1633.2	1,646.4	**1,686.0**	**39.6**	
May	2134.5	2,207.1	**2,042.1**	**-165.0**	
June	2362.4	2,434.8	**2,378.8**	**-56.0**	
July	2696.4	2,736.8	**2,645.7**	**-91.1**	
Aug.	2717.7	2,763.3	**0.0**	**0.0**	
Sept.	2344.3	2,512.8	**0.0**	**0.0**	
Oct.	1910.8	2,241.9	**0.0**	**0.0**	
Nov.	1399.4	1,652.2	**0.0**	**0.0**	
Dec.	1078.2	1,385.6	**0.0**	**0.0**	
	21,686.3	12,444.2	**12,311.6**	**-132.6**	**-1.1%**
		23,000.0			
	2008 thru 2012				

2013
PWD PRODUCTION & CUSTOMER WATER USE - Actual vs. Budgeted



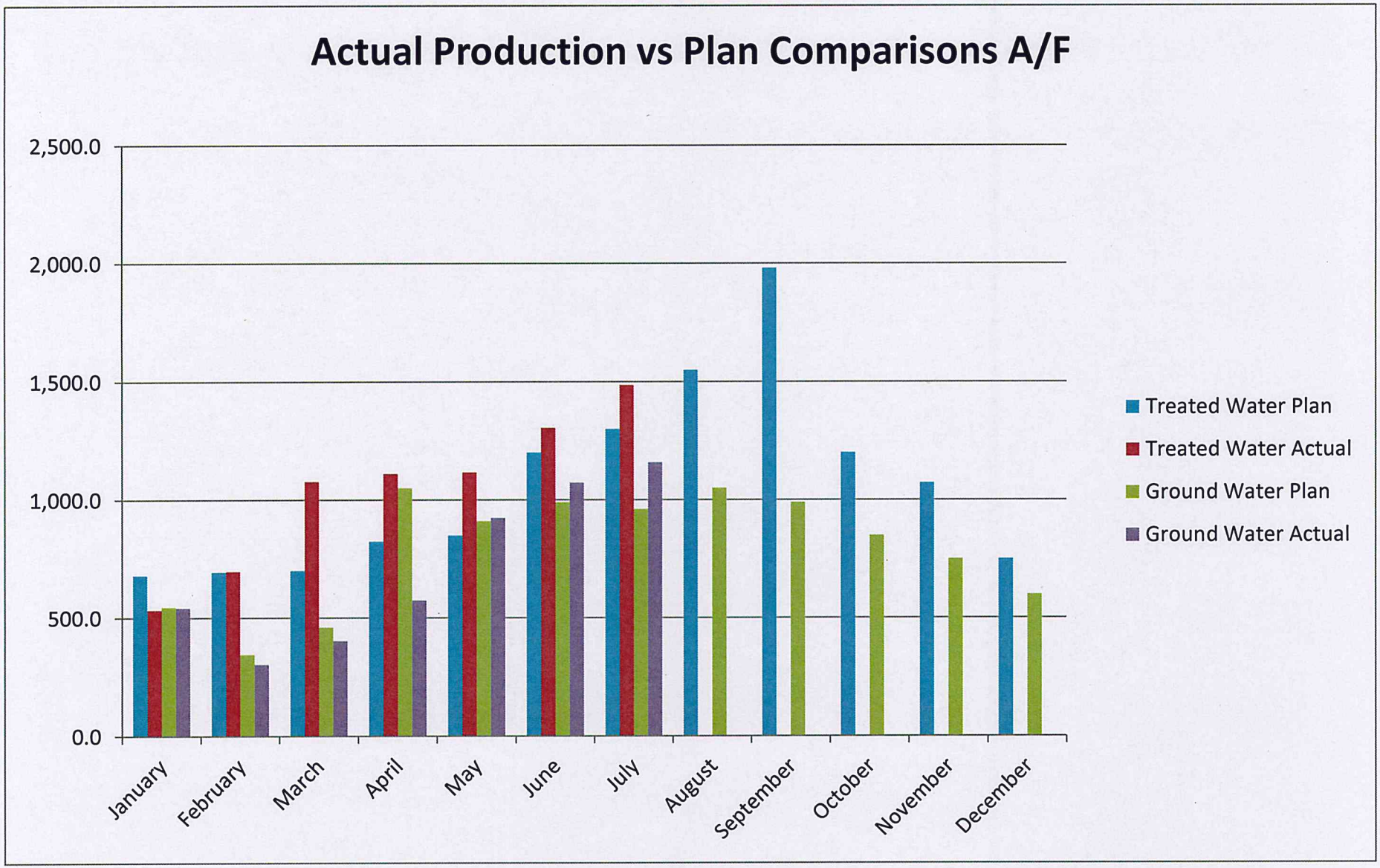
2013
PWD PRODUCTION & CUSTOMER WATER USE - Actual vs. 5 and 10 Year Averages




Projected, Budgeted,and Actual Consumption Comparisons In A/F
3,000.0
2,500.0
2,000.0
1,500.0
1,000.0
500.0
0.0
January
February
March
April
May
June
July
August
September
October
November
December
Projected Cons.
Budgeted Cons.
Actual Cons.

2013 BILLED CONSUMPTION

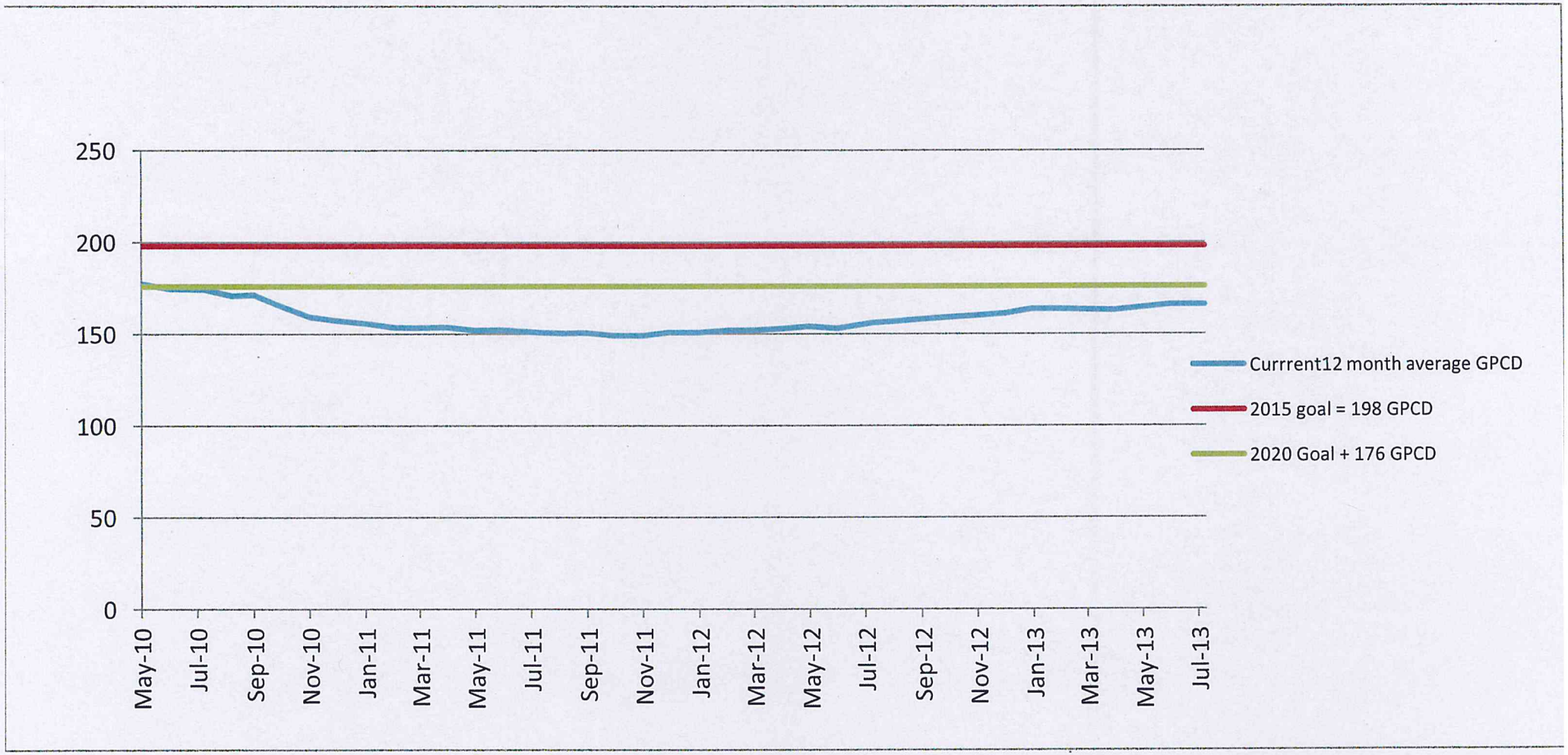
	PROJECTED	BUDGETED	ACTUAL
January	**1,000.0**	**979.1**	**944**
February	**1,050.0**	**940.7**	**918**
March	**1,100.0**	**970.5**	**927**
April	**1,200.0**	**1,191.5**	**1,344**
May	**1,450.0**	**1,405.0**	**1,650**
June	**2,100.0**	**1,830.7**	**1,967**
July	**2,250.0**	**2,104.6**	**2,136**
August	2,400.0	2,165.7	0
September	2,350.0	2,219.2	0
October	2,000.0	2,002.1	0
November	1,650.0	1,588.3	0
December	1,450.0	1,402.5	0
Totals	10,150.0	9422.2	9,886
	20,000.0	18,800	
Running total	**10,150.0**	**9,422.2**	**9,886**


Actual Production vs Plan Comparisons A/F
2,500.0
2,000.0
1,500.0
1,000.0
500.0
0.0
January
February
March
April
May
June
July
August
September
October
November
December
Treated Water Plan
Treated Water Actual
Ground Water Plan
Ground Water Actual

2013

MONTHLY TOTALS					
MONTH	TOTAL af	SW af	GW af	SW %	GW%
January	1,076.7	534.50	542.2	49.64%	50.36%
February	1,001.3	697.60	303.7	69.67%	30.33%
March	1,481.0	1077.9	403.1	72.78%	27.22%
April	1,686.0	1111.8	574.2	65.94%	34.06%
May	2,042.1	1118.1	924.0	54.75%	45.25%
June	2,378.8	1305.5	1073.3	54.88%	45.12%
July	2,646.20	1486.90	1159.30	56.19%	43.81%
August	0.00	0.00	0.00		
September	0.00	0.00	0.00		
October	0.00	0.00	0.00		
November	0.00	0.00	0.00		
December	0.00	0.00	0.00		

Running Averages	SW	GW
January	49.64%	50.36%
Jan. thru February	59.66%	40.34%
Jan. thru March	64.03%	35.97%
Jan. thru April	64.51%	35.49%
Jan. thru May	62.56%	37.44%
Jan. thru June	61.28%	38.72%
Jan. thru July	60.55%	39.45%
Jan. thru August	0.00%	0.00%
Jan. thru September	0.00%	0.00%
Jan. thru October	0.00%	0.00%
Jan. thru November	0.00%	0.00%
Jan. thru December	0.00%	0.00%


250
200
150
100
50
0
May-10
Jul-10
Sep-10
Nov-10
Jan-11
Mar-11
May-11
Jul-11
Sep-11
Nov-11
Jan-12
Mar-12
May-12
Jul-12
Sep-12
Nov-12
Jan-13
Mar-13
May-13
Jul-13
Currrent12 month average GPCD
2015 goal = 198 GPCD
2020 Goal + 176 GPCD

2013 Water Production Plan @ 35% Allocation

Month	Raw Surface Water Sources							Water Production						Metered Water	
	Surface Water					Evaporation	Total	WTP		Groundwater		Total			
	Carry Over (ac-ft) *	DWR reported (ac-ft) from source	Butte (ac-ft)	PWD/SWP (ac-ft)	LrD (ac-ft)	Plan (ac-ft)	Plan (ac-ft)	Plan (ac-ft)	Actual (ac-ft)	Plan (ac-ft)	Actual (ac-ft)	Plan (ac-ft)	Actual (ac-ft)	Plan (ac-ft)	Actual (ac-ft)
January	544.0	*544.0*	0.0	0.0	0.0	-9.50	534.50	680.0	534.5	545.0	542.2	1,225.0	1,076.7	1,000.0	944
February	0.0	680.0	0.0	680.0	0.0	0.00	680.00	694.0	697.6	345.0	303.7	1,039.0	1,001.3	1,050.0	918
March	0.0	1100.0	1100.0	0.0	0.0	-22.10	1077.90	700.0	1077.9	460.0	403.1	1,160.0	1,481.0	1,100.0	961
April	1297.0	1297.0	0	0.0	0.0	-170.00	1127.00	824.0	1111.8	1,050.0	574.2	1,874.0	1,686.0	1,200.0	1,344
May	1273.0	1273.0	0	0.0	39.5	-146.00	1166.50	850.0	1118.1	910.0	924.0	1,760.0	2,042.1	1,450.0	1,650
June	0.0	749.0	0	749.0	963.9	-445.00	1267.90	1,200.0	1305.5	990.0	1073.3	2,190.0	2,378.8	2,100.0	1,967
July	0.0	0.0	1209.3	0.0	322.9	-145.00	1387.20	1,300.0	1486.4	960.0	1159.3	2,260.0	2,645.7	2,250.0	2,136
August	0.0	0.0	1135	0.0	0.0	-270.00	865.00	1,550.0	0.0	1,050.0	0.0	2,600.0	0.0	2,400.0	0
September	0.0	0.0	0.0	1894.0	600.0	-335.00	2159.00	1,980.0	0.0	990.0	0.0	2,970.0	0.0	2,350.0	0
October	0.0	0.0	0.0	1100.0	0.0	-136.00	964.00	1,200.0	0.0	850.0	0.0	2,050.0	0.0	2,000.0	0
November	0.0	0.0	0.0	1100.0	0.0	-50.00	1050.00	1,072.0	0.0	750.0	0.0	1,822.0	0.0	1,650.0	0
December	0.0	0.0	0.0	900.0	0.0	-39.00	861.00	750.0	0.0	600.0	0.0	1,350.0	0.0	1,450.0	0
CURRENT USE	3,114.00	5,643.0	2309.3	1,429.0	1,326.3	(937.60)	7,241.00	6,248.0	7,331.7	5,260.0	4,979.80	11,508.0	12,311.5	10,150.0	9,920
Allocated Total Use:	3,896.0	2,000.0	3,500.0	7,455.0	3,500.0	1,250.0	13,600.0	13,000.0	11,000.0	9,500.0	9,000.00	23,000.0	21,500.00	20,000.0	19,999.0
Actual planned use*	3,114.0		3,444.3	7,323.0			13,140.0								
Remaining Allotment:	782.0	-3,643.0	55.7	132.0	2,173.7	312.4	6,359.0	6,752.00	-3,668.3	4,240.0	-4,020.20	11,492.0	9,188.46	9,850.0	10,078.9
CCWA return		325.0						13,916.0		7,542.0		22,500.0	21,459.0	17,800.0	19,258
Total:	3,896.0	0.0	3,500.0	7,455.0	3,000.0	-1,250.0									
AVAILABLE FOR CARRYOVER	782.0	0.0	1,190.7	6,026.0	1,673.7		7,998.7					3,424.0			
PLANNED AVAILABLE FOR CO							1,733.00								