

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Ridgecrest City Hall 100 W California Ave., Ridgecrest, CA 93555 760-499-5000

BOARD OF DIRECTORS A G E N D A

Thursday, April 19, 2018

Open Session 10:00 a.m.

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, please contact Ricca Charlon at (760) 499-5002. Requests must be made as early as possible and at least one full business day before the start of the meeting. Documents and material relating to an open session agenda items that are provided to the IWVGA Board of Directors prior to a regular meeting will be available for public inspection and copying at Indian Wells Valley Water District, 500 Ridgecrest Blvd, Ridgecrest, CA 93555, or online at www.kerncounty.com/WaterResources.aspx

Statements from the Public

The public will be allowed to address the Board during Public Comments about subjects within the jurisdiction of the IWVGA Board and that are NOT on the agenda. No action may be taken on off-agenda items unless authorized by law. Questions posed to the Board may be answered after the meeting or at future meeting. Dialog or extended discussion between the public and the Board or staff will be limited in accordance with the Brown Act. The Public Comments portion of the meeting shall be limited to three (3) minutes per speaker. Each person is limited to one comment during Public Comments.

All remarks and questions should be addressed to the Board as a whole and not to any individual Board member or staff. There will be time after each action item on the agenda to receive comments from the public. Again each speaker will be limited to three (3) minutes. Speakers should be brief and limit their comments to the specific subject being discussed. Persons will be limited to one comment per person unless directed by the Chair.

1. CALL TO ORDER

- Pledge Of Allegiance

2. PUBLIC COMMENTS

This time is reserved for the public to address the Board about matters NOT on the agenda. No action will be taken on non-agenda items unless authorized by law. Comments are limited to three minutes per person.

3. CONSENT AGENDA

- a. Approve Minutes of Board Meeting March 15, 2018
- b. Approve Expenditures
 - i. Daily Independent \$76.44
 - ii. Stetson Engineering \$ 88,417.08 & \$76,971.03
 - iii. USGS \$22,301.48
- c. Financial Report
- d. TAC committee member approval

**IWVGA Board of Directors
Meeting of April 19, 2018**

4. WATER RESOURCES MANAGER REPORT

- a. REPORT/DISCUSSION on Plan of Action and Milestones (POAM)
- b. Report on Submittal of Proposition 1 Grant Application Status

5. DISCUSSION ON ISSUES AND OPTIONS FOR GROUNDWATER MANAGEMENT IN THE INDIAN WELLS VALLEY UNDER THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

6. REPORT FROM TECHNICAL ADVISORY COMMITTEE (TAC)

7. ACTION ITEMS FROM TAC MEETING OF APRIL 5, 2018

8. REPORT FROM POLICY ADVISORY COMMITTEE (PAC)

9. ACTION ITEMS FROM PAC SPECIAL MEETING OF MARCH 29, 2018

- a. Presentation And Approval Of Resolution On Communication and Engagement Plan

10. BOARD DISCUSSION FOR DIRECTION OF ACTION ITEMS TO TAC & PAC COMMITTEES (IF BOARD HAS ANY)

11. GENERAL MANAGER'S REPORT

12. CLOSING COMMENTS

This time is reserved for comments by Board members and/or staff and to identify matters for future Board business

13. DATE AND TIME OF NEXT MEETING – May 17, 2018; 10:00 a.m.

14. CLOSED SESSION

- a. CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION (Government Code Section 54956.9(d)(2)(e)(1)) Number of cases: One (1) Significant exposure to litigation in the opinion of the Board of Directors on the advice of legal counsel, based on: Facts and circumstances that might result in litigation against the IWVGA but which are not yet known to a potential plaintiff or plaintiffs, which facts and circumstances need not be disclosed.

15. ADJOURN

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

City of Ridgecrest, Kern County, Inyo County, San Bernardino County, Indian Wells Valley Water District

BOARD OF DIRECTORS

MINUTES

Thursday, March 15, 2018, 10:00 a.m.

IWVGA Members Present:

Commander Brian Longbottom, Dept. of the Navy	Mick Gleason, Kern County
Peter Brown, Indian Wells Valley Water District	Bob Harrington, Inyo County
Chairperson Peggy Breeden, City of Ridgecrest	Ron Strand, IWVGA General Manager
Stephen Johnson, IWVGA Water Resources Manager	Lauren Duffy, IWVGA Board Clerk
Steven O'Neill, IWVGA Legal Counsel (alternate)	Ryan Klausch, Bureau of Land Management

Attending via teleconference, Board Member Bob Page, San Bernardino County

1. CALL TO ORDER:

The meeting is called to order by Chairperson Breeden at 10:00 a.m.

The meeting is opened for public comment.

With no public comment made, Chairperson Breeden calls the meeting into Closed Session at 10:01 a.m.

2. CLOSED SESSION:

- a. CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION (Government Code Section 54956.9(d)(2)(e)(1)) Number of cases: One (1) Significant exposure to litigation in the opinion of the Board of Directors on the advice of legal counsel, based on: Facts and circumstances that might result in litigation against the IWVGA but which are not yet known to a potential plaintiff or plaintiffs, which facts and circumstances need not be disclosed.

3. OPEN SESSION – 11:00 a.m.

The meeting is recalled to Open Session at 11:07 a.m.

No action is taken that would require disclosure under the Brown Act.

4. PLEDGE OF ALLEGIANCE:

The Pledge of Allegiance is led by Phill Hall.

5. PUBLIC COMMENTS:

Don Decker comments that the quoted 2 million acre-feet of water in storage in this basin is incomplete. A lower value, 1.8 million acre-feet, was obtained in the Bureau of Reclamation Study in 1993, as a result of a better understanding of the areas of non-potable water:

http://iwvgroundwater.org/wp-content/uploads/2013/03/174_Bureau_of_Rec_IWV_vol_II_Dec_1993_Part21.pdf

Mike Neel suggests that the Board speak with Department of Water Resources (DWR) and discuss the possibility of a “Good Neighbor tax” to help those with wells that may become nonfunctional in this valley.

6. SPECIAL PRESENTATIONS: None.

7. CONSENT AGENDA:

- a. Approve Minutes of Board Meeting February 15, 2018.
- b. Approve Resolution 01-18 – Technical Advisory Committee Membership – Item deferred for discussion.
- c. Approve Expenditures in the amount of \$22,301.48.
- d. Financial Report – Item pulled, no report available.

Motion is made by Director Gleason and seconded by Director Brown to approve Minutes of Board Meeting February 15, 2018 and Expenditures in the amount of \$22,301.48. Motion carries by the following roll call vote:

Director Harrington: Aye
Director Gleason: Aye
Chairwoman Breeden: Aye
Vice-chair Brown: Aye
Director Page: Aye

The Board hears comments from Derek Hoffman and West Katzenstein regarding agenda item 7b.

Director Gleason comments that he received a call from an interested party who would like to become a member of the Technical Advisory Committee (TAC) to represent small agriculture.

Motion is made by Vice-chair Brown and seconded by Director Gleason to approve Resolution 01-18 – Technical Advisory Committee Membership with an edit to correct the spelling of Eddy Teasdale’s name. Motion carries by the following roll call vote:

Director Harrington: Aye
Director Gleason: Aye
Chairwoman Breeden: Aye
Vice-chair Brown: Aye
Director Page: Aye

Chairwoman Breeden announces that because Director Gleason must leave at noon, agenda item #10 will be addressed before agenda item #9.

8. WATER RESOURCES MANAGER REPORT:

Steve Johnson thanks Commander Longbottom for all of his help with the POAM.

Steve Johnson comments that there may be a need for Stetson Engineers and/or the IWVGA to work with the Navy to obtain upfront funding in order for Desert Resource Institute (DRI) to continue its work.

a. REPORT/DISCUSSION on Plan of Action and Milestones (POAM):

Jeff Helsley, Stetson Engineers, provides an update on the newest edition of the POAM.

DRI work is currently scheduled to begin April 1st. Work includes modification of the model to get the water levels recalibrated so that it will be ready for the baseline run.

b. Report on Submittal of Proposition 1 Grant Application Status:

Jeff Helsley reports that the preliminary recommendation, by Department of Water Resources (DWR), was that the IWVGA Grant application be fully funded. Mr. Helsley spoke with DWR with respect to the grant applications. DWR intends to have the final recommendations released by the end of March. After the final recommendations, the IWVGA will need to develop a contract with DWR, after which the final award is hoped to be executed within a month. If all goes well, the contract will be provided to the IWVGA at the May meeting for approval.

c. Groundwater Modeling Review:

Steve Johnson states that a coordination conference call was held with Stetson Engineers, the Brackish Water Group, and Ramboll, regarding the work being done on the model and Data Management System (DMS).

Director Gleason directs staff to develop a cost control model which the Board and public can use to monitor all expenses.

Commander Longbottom asks how the information from other groups are being tied into this organization's substructures, such as the TAC and PAC. The Commander reports that due to lack of man-power, the Navy has removed itself as a member of the Brackish Water Group and the Indian Wells Valley Cooperative Groundwater Management Group (IWVCGMG). The Navy is committed to the IWVGA and will continue to participate in the PAC and TAC.

TAC workshops are scheduled for June or July with DRI regarding the baseline models.

d. Data Management System:

Access for the DMS was made available to the Board Members, the General Manager, and legal counsel. Stetson Engineers will verify that all documents on the DMS are able to be viewed by the public and then release login information through the PAC and TAC.

Steve Johnson reports that input was requested from the TAC with respect to recycled water and alternative/imported water opportunities. Also, input on estimating pumping where there are no water meters in place and if well owners would voluntarily install a meter. Input was requested at least seven (7) days prior to the TAC meeting in order to provide responses at the meeting.

Motion is made by Director Gleason and seconded by Vice-chair Brown to receive and file report. Motion carries by the following roll call vote:

Director Harrington: Aye
Director Gleason: Aye
Chairwoman Breeden: Aye
Vice-chair Brown: Aye
Director Page: Aye

9. AD HOC BUDGET COMMITTEE REPORT ON FINDINGS REGARDING ESTABLISHING A STANDING FINANCE COMMITTEE: (agenda item #10 was addressed prior to this agenda item)

Vice-chair Brown reports that he and Director Page met with staff and discussed the importance of a standing Finance Committee. The initial intent of a committee was to address a possible gap in funding, which has since been mostly resolved with the grant funding and the advance from IWVWD. Vice-chair Brown asks the public to speak at the public workshop on the importance of developing a standing Finance Committee.

Director Page comments that until the IWVGA has a more complicated budget, he doesn't see the immediate need for a standing Finance Committee. However, reasons could arise at the workshop which could indicate a need for a more in-depth discussion.

The Board hears comments from Stan Rajtora, Mike Neel, Judie Decker, and Derek Hoffman.

Staff recommends that a standing Finance Committee not be established at this time

Motion is made by Director Harrington and seconded by Vice-chair Brown to receive and file report. Motion carries by the following roll call vote:

Director Harrington:	Aye
Director Gleason:	Absent
Chairwoman Breeden:	Aye
Vice-chair Brown:	Aye
Director Page:	Aye

10. GROUNDWATER PUMPING FEES TO FINANCE DEVELOPMENT AND ADOPTION OF A GROUNDWATER SUSTAINABILITY PLAN AND IWVGA ADMINISTRATIVE COSTS:

Jim Worth, IWVGA legal counsel and Indian Wells Valley Water District Attorney, provides a recommended process for imposing a groundwater fee in order to fund the Groundwater Sustainability Plan.

Staff recommends that the Board utilizes Water Code § 10730 as the authority to impose the groundwater pumping fee. The aforementioned Water Code was implemented as a part of Sustainable Groundwater Management Act (SGMA) and staff believes it provides the Board with adequate authority to impose groundwater pumping fees.

With respect to Water Code § 10730, all that is required prior to imposing a fee is the Board must hold a public meeting, which is noticed and published in the paper pursuant to Government Code § 6066. Additionally, any data which is provided to the Board to impose the fee must be made available to the public at least twenty (20) days prior to the public meeting.

Staff recommends that the Board hold a public workshop which would be held prior to the noticed public meeting. The one agenda item would be discussion of the imposition of fees. Staff also recommends that any member of the public wishing to provide comment, would fill out a comment card prior to the meeting. The comment card is only to identify who wishes to speak and also to give Chairwoman Breeden an idea of how many people wish to comment.

Reasonable time restraints would need to be placed dependent on the amount of public who wish to comment.

In order to make this workshop as productive as possible, staff recommends that the Board authorizes staff to make available to the public any data which the fee would be based upon, at least seven (7) days in advance of the workshop.

Staff recommends a possible date of the Board Workshop be April 5th from 6:00 p.m. – 8:00 p.m., the hours are at the discretion of the Board. Perhaps 5:00 p.m. if the Board believes the comments would take longer.

Mr. Worth reiterates that the Navy, de minimis users, and the Bureau of Land Management (BLM) would all be exempt from the initial fee, which covers the development of the GSP and any related administrative costs. Staff is working closely with Stetson Engineers to compile a list of impacted pumpers. Stetson Engineers believe they will have the list well in advance of an April 5th workshop, if that is the Board's desire.

Mr. Worth reviews the IWVGA Administrative Office Memorandum regarding Groundwater Pumping Fees to Finance Development and Adoption of a Groundwater Sustainability Plan and IWVGA Administrative costs (provided in the Board packet). Expenditures, Estimated Amounts, and total Gap Funding Required is noted on page four (4) of the memorandum. Water Code § 10730.6 authorizes the IWVGA to collect these fees and also provides the IWVGA certain remedies that can be pursued if there are any delinquent accounts.

Staff recommends the Board to authorize staff to continue working on the proposal and to schedule a Board Workshop for April 5th to replace the PAC meeting that evening. Also, to authorize staff to make available to the public any data which the Board is going to utilize in imposing the groundwater fee.

Public comments:

Stan Rajtora suggests that the Board explore other options before settling on a pumping fee.

Penelope LePome asks, assuming the Water District will be imposed a pumping fee, how will the Water District figure out how much to charge their customers. Director Brown answers that he is unsure what the IWVWD Board will decide to do and how to divide that cost. Nothing will be decided until the Water District's Rate Study is completed.

Derek Hoffman asks the Board to carefully consider the following concerns and requests:

- Establish a standing Finance Committee
- The workshop should not displace the scheduled April 5th PAC meeting.
- April 5th is too soon to hold a workshop on this issue.
- Primary issues with respect to the "public data" referenced in the memorandum.

Meadowbrook requests to be notified by mail of all meetings regarding new or increased fees.

Director Gleason believes the workshop should take place on April 5th, as well as include more meaningful participation from the TAC and PAC. He further recommends that the public participate via the comment card system and after the public comment portion is closed, comments would open up for only the PAC and TAC.

Motion is made by Director Gleason and seconded by Vice-chair Brown to schedule the workshop for April 5, 2018 and change the format to accommodate the TAC and PAC more, as well as distribute any necessary documentation seven (7) days in advance of the workshop to the public. Motion carries by the following roll call vote:

Director Harrington: Aye
Director Gleason: Aye
Chairwoman Breeden: Aye
Vice-chair Brown: Aye
Director Page: Aye

Chairwoman Breeden asks that a more defined detail of costs, with respect to the groundwater fees, be provided to the Board.

11. REPORT FROM TECHNICAL ADVISORY COMMITTEE (TAC):

Adam Bingham, TAC Chairperson, provides a report from the March 1, 2018, TAC meeting.

Motion is made by Director Harrington and seconded by Vice-chair Brown to receive and file report. Motion carries by the following roll call vote:

Director Harrington: Aye
Director Gleason: Absent
Chairwoman Breeden: Aye
Vice-chair Brown: Aye
Director Page: Aye

12. ACTION ITEMS FROM TAC MEETING OF FEBRUARY 1, 2018 – None.

13. REPORT FROM POLICY ADVISORY COMMITTEE (PAC):

Donna Thomas, PAC chairwoman, provides a report from the March 1, 2018, PAC meeting.

PAC Chairwoman Thomas asks the Board's permission to schedule a new date for a PAC meeting which is being displaced by the IWVGA Workshop. Chairwoman Breeden grants permission. New date of the PAC meeting is undecided at this time.

Motion is made by Director Harrington and seconded by Vice-chair Brown to receive and file report. Motion carries by the following roll call vote:

Director Harrington: Aye
Director Gleason: Absent
Chairwoman Breeden: Aye
Vice-chair Brown: Aye
Director Page: Aye

14. ACTION ITEMS FROM PAC MEETING OF MARCH 1, 2018 - None.

15. BOARD DISCUSSION FOR DIRECTION OF ACTION ITEMS TO TAC & PAC COMMITTEES (IF BOARD HAS ANY): None.

16. GENERAL MANAGER'S REPORT:

Ron Strand has nothing to report.

17. CLOSING COMMENTS:

Director Harrington states that Supervisor Matt Kingsley regrets not being able to attend this meeting.

18. DATE AND TIME OF NEXT MEETING:

The next IWVGA Regular Board Meeting will be held on April 19, 2018, beginning with Closed Session at 10:00 a.m.

19. ADJOURN:

With no further business to come before the Board, the meeting is adjourned at 1:35 p.m.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Lauren Duffy', is written over the printed name.

Lauren Duffy
Clerk of the Board of Directors
Indian Wells Valley Groundwater Authority

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The Daily Independent
P.O. Box 7
Ridgecrest, CA 93556

Office Hours: Mon - Fri.
8:30 am - 2.30 pm
Phone Number: 760-375-4481
Fax Number: 760-375-4880

City of Ridgcrest

100 W California Ave

Ridgecrest, CA

93555

Invoice 4/3/2018
Account 103108

[illegible]

SUPERIOR COURT OF THE STATE OF CALIFORNIA
FOR THE COUNTY OF KERN

Notice of Workshop
City of R/C

Case Number _____

DECLARATION
OF PUBLICATION
(2015.5 C.C.P.)

State of California, County of Kern, ss:

Declarant says:

That at all times, herein mentioned declarant is and was a citizen of the United States, over the age of twenty-one years, and not a party to nor interested in the within matter; that declarant is the principal clerk of the printer and the publisher of THE DAILY INDEPENDENT, a newspaper of general circulation printed and published daily in the City of Ridgecrest, Indian Wells Judicial District, County of Kern, State of California, which newspaper has been adjudged a newspaper of general circulation by the said Superior Court by order made and renewed July 8, 1952, in Civil Proceeding No. 58584 of said Court: that the instrument of which the annexed in a printed copy has been published in each regular and like issue of said newspaper (and not any supplement thereof) on the following dates, to-wit:

3/24/18

I declare under penalty of perjury that the foregoing is true and correct.

EXECUTED ON March 24, 2018, at
Ridgecrest California

Declarant Tiera Amad

NOTICE IS
HEREBY GIVEN
THAT A SPECIAL
WORKSHOP WILL
BE HELD BEFORE
THE INDIAN
WELLS VALLEY
GROUNDWATER
AUTHORITY
BOARD OF DIRECT-
ORS, POLICY AD-
VISORY

COMMITTEE, AND
TECHNICAL ADVI-
SORY COMMITTEE
IN THE RIDGE-
CREST CITY HALL,
100 W. CALIFOR-
NIA AVENUE,
RIDGECREST,
CALIFORNIA ON
THURSDAY, APRIL
5, 2018, AT 5:00
P.M. OR AS SOON

THEREAFTER AS
THE MATTERS
MAY BE HEARD.

UNDER CONSID-
ERATION WILL BE a
special workshop to
receive comments
related to the Indian
Wells Valley Ground-
water Authority's
("IWVGA") fee pro-

posal to finance the
development and
adoption of a
Groundwater Sus-
tainability Plan
("GSP") and IWVGA
Administrative Costs.
Under the Sustain-
able Groundwater
Management Act
("SGMA"), IWVGA
may impose fees, in-
cluding, but not lim-
ited to, permit fees
and fees on ground-
water extraction or
other regulated activ-
ity, to fund the costs
of a groundwater
sustainability pro-
gram, including, but
not limited to, prepa-
ration, adoption, and
amendment of a

groundwater sustain-
ability plan, and in-
vestigations,
inspections, compli-
ance assistance, en-
forcement, and
program administra-
tion. (Water Code §
10730(a).) Draft
"public data" upon
which the proposed
fee is based will be

made available to
the public seven (7)
days prior to the
workshop, through
the IWVGA website
at: <https://iwvga.org/>,
to allow the public
the opportunity to re-
view and comment
on the draft "public
data" at the work-
shop. (Water Code §

10730(b)(3).) All in-
terested persons are
invited to attend the
above described
public workshop and
present testimony.

(03/24/2018)



Invoice

County of Kern
County Administrative Office
1115 Truxtun Ave., 5th Floor
Bakersfield CA 93301
ATTN.: Mr. Alan Christensen

Invoice Number: 2652-06

Invoice Date: 3/9/2018

Project #: 2652

Indian Wells Valley Groundwater Authority

Professional Services through 1/31/2018

Water Resources Management

01 - Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	29.00	\$230.00	\$6,670.00
Supervisor I	5.50	\$200.00	\$1,100.00
Senior I	0.50	\$160.00	\$80.00
Associate I	15.00	\$115.00	\$1,725.00
Associate III	3.50	\$105.00	\$367.50
<i>Professional Services Subtotal:</i>			<u>\$9,942.50</u>

Reimbursables	<u>Charge</u>
Reproduction (Color)	\$6.23
Mileage	\$152.60
Reproduction	\$33.00
<i>Reimbursables Subtotal:</i>	<u>\$191.83</u>

Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev \$10,134.33

03 - Review of Basin GW Model - GSP Compliance/Prep HCM

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	6.00	\$230.00	\$1,380.00
Supervisor I	1.00	\$200.00	\$200.00
Supervisor II	48.00	\$185.00	\$8,880.00
Associate I	13.25	\$115.00	\$1,523.75
Associate III	5.50	\$105.00	\$577.50
<i>Professional Services Subtotal:</i>			<u>\$12,561.25</u>

Reimbursables	Charge
Reproduction (Color)	\$27.59
Commercial Travel	\$55.43
Lodging	\$93.50
Mileage	\$123.72
Reproduction	\$3.90
Reimbursables Subtotal:	<u>\$304.14</u>

Review of Basin GW Model - GSP Compliance/Prep HCM Subtotal: \$12,865.39

04.02 - Data Management System

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	22.50	\$230.00	\$5,175.00
Supervisor I	0.50	\$200.00	\$100.00
Associate I	8.75	\$115.00	\$1,006.25

**04.02 - Data Management System****Professional Services**

	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate III	1.00	\$105.00	\$105.00
Aide II	14.25	\$60.00	\$855.00
<i>Professional Services Subtotal:</i>			<u>\$7,241.25</u>

Reimbursables

			<u>Charge</u>
Mileage			\$89.38
<i>Reimbursables Subtotal:</i>			<u>\$89.38</u>

Data Management System Subtotal: \$7,330.63

04.03 - Ramboll/GeoGIS**Professional Services**

	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	19.75	\$230.00	\$4,542.50
Supervisor I	1.00	\$200.00	\$200.00
Supervisor II	1.00	\$185.00	\$185.00
Associate I	31.00	\$115.00	\$3,565.00
Technical Illustrator	15.50	\$85.00	\$1,317.50

Professional Services Subtotal: \$9,810.00

Ramboll/GeoGIS Subtotal: \$9,810.00

04A - CASGEM**Professional Services**

	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Senior II	7.00	\$145.00	\$1,015.00

Professional Services Subtotal: \$1,015.00

CASGEM Subtotal: \$1,015.00

05 - Project Management Costs & Schedule**Professional Services**

	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	3.00	\$230.00	\$690.00
Supervisor I	9.00	\$200.00	\$1,800.00
Senior II	8.25	\$145.00	\$1,196.25
Associate I	13.25	\$115.00	\$1,523.75
Associate III	3.25	\$105.00	\$341.25
Assistant II	19.50	\$90.00	\$1,755.00

Professional Services Subtotal: \$7,306.25

Reimbursables

			<u>Charge</u>
Reproduction (Color)			\$64.08
Reproduction			\$3.90

Reimbursables Subtotal: \$67.98

Project Management Costs & Schedule Subtotal: \$7,374.23

05A - POAM**Professional Services**

	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Senior II	21.00	\$145.00	\$3,045.00
Associate I	20.50	\$115.00	\$2,357.50
Administrative II	13.00	\$65.00	\$845.00

Professional Services Subtotal: \$6,247.50

POAM Subtotal: \$6,247.50

07 - IWVGW Basin Opptys & Constraints for Alt Imported Water Supplies**Professional Services**

	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
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**07 - IWVGW Basin Opptys & Constraints for Alt Imported Water Supplies**

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	31.50	\$200.00	\$6,300.00
Senior II	23.50	\$145.00	\$3,407.50
Associate I	76.50	\$115.00	\$8,797.50
Associate III	0.50	\$105.00	\$52.50
<i>Professional Services Subtotal:</i>			<u>\$18,557.50</u>
<i>IWVGW Basin Opptys & Constraints for Alt Imported Water Supplies Subtotal:</i>			<u>\$18,557.50</u>

09 - Other Ongoing Studies/Review (Brackish Water, USGS Recharge, Subsidence, Geop

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	10.50	\$200.00	\$2,100.00
Senior II	0.50	\$145.00	\$72.50
Associate I	6.50	\$115.00	\$747.50
Assistant II	35.00	\$90.00	\$3,150.00
<i>Professional Services Subtotal:</i>			<u>\$6,070.00</u>
<i>Other Ongoing Studies/Review (Brackish Water, USGS Recharge, Subsidence, Geop</i>			<u>\$6,070.00</u>

10 - Stakeholder/SWR Coordination for GSP

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	5.00	\$230.00	\$1,150.00
Supervisor I	5.50	\$200.00	\$1,100.00
Associate I	5.00	\$115.00	\$575.00
<i>Professional Services Subtotal:</i>			<u>\$2,825.00</u>
<i>Stakeholder/SWR Coordination for GSP Subtotal:</i>			<u>\$2,825.00</u>

12 - SDAC Projects; Water Conservation & Rebate Program

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	4.50	\$200.00	\$900.00
Senior II	14.50	\$145.00	\$2,102.50
<i>Professional Services Subtotal:</i>			<u>\$3,002.50</u>
<i>SDAC Projects; Water Conservation & Rebate Program Subtotal:</i>			<u>\$3,002.50</u>

13 - SDAC Projects: Water Audit, Leak Detection & Leak Rpr Program

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	6.50	\$200.00	\$1,300.00
Senior II	13.00	\$145.00	\$1,885.00
<i>Professional Services Subtotal:</i>			<u>\$3,185.00</u>
<i>SDAC Projects: Water Audit, Leak Detection & Leak Rpr Program Subtotal:</i>			<u>\$3,185.00</u>
<i>Water Resources Management Subtotal:</i>			<u>\$88,417.08</u>

***** Invoice Total *******\$88,417.08**



2171 E. Francisco Blvd., Suite K • San Rafael, California 94901
Phone: (415) 457-0701 • FAX: (415) 457-1638 • Website: www.stetsonengineers.com
Northern California • Southern California • Arizona • Colorado • Oregon

REIMBURSABLE SUMMARY

County of Kern
County Administrative Office
1115 Truxtun Ave., 5th Floor
Bakersfield CA 93301
ATTN.: Mr. Alan Christensen

Invoice Number: 2652-06

Invoice Date: 3/9/2018

Project #: 2652

Indian Wells Valley Groundwater Authority

Professional Services through 1/31/2018

Water Resources Management

01 - Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev GSP

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Reproduction	12/31/2017	216.00	\$0.15	\$32.40	
Mileage	01/18/2018	280.00	\$0.55	\$152.60	
Reproduction	01/30/2018	4.00	\$0.15	\$0.60	
Reproduction (Color)	01/30/2018	7.00	\$0.89	\$6.23	
Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority &				\$191.83	

03 - Review of Basin GW Model - GSP Compliance/Prep HCM

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Mileage	01/04/2018	227.00	\$0.55	\$123.72	
Commercial Travel	01/15/2018	1.00	\$26.00	\$26.00	
Commercial Travel	01/31/2018	1.00	\$29.43	\$29.43	
Lodging	01/31/2018	1.00	\$93.50	\$93.50	
Reproduction	01/31/2018	26.00	\$0.15	\$3.90	
Reproduction (Color)	01/31/2018	31.00	\$0.89	\$27.59	
Review of Basin GW Model - GSP Compliance/Prep HCM Sub-Total:				\$304.14	

04.02 - Data Management System

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Mileage	01/15/2018	164.00	\$0.55	\$89.38	
Data Management System Sub-Total:				\$89.38	

05 - Project Management Costs & Schedule

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Reproduction	12/31/2017	26.00	\$0.15	\$3.90	
Reproduction (Color)	12/31/2017	72.00	\$0.89	\$64.08	
Project Management Costs & Schedule Sub-Total:				\$67.98	

Jean Moran

From: etickets@amtrak.com
Sent: Monday, January 15, 2018 4:50 AM
To: Jean Moran
Subject: Amtrak: eTicket and Receipt for Your 01/15/2018 Trip - JEAN MORAN
Attachments: Moran Jean 201801150750150644.pdf

SALES RECEIPT



Purchased: 01/15/2018 4:50 AM PTThank you for your purchase.

1. Retain this receipt for your records.
2. Print the attached eTicket and carry during your trip.

Merchant ID 006491 Massachusetts Ave NWWashington, DC 20001800-USA-RAILAmtrak.com

Reservation Number - B247FF OLD TOWN SN DIE,
CA - SANTA ANA, CA (One-Way) JANUARY 15, 2018
Billing Information

JEAN M MORAN3020 BRIDGEWAYSALITO, CA 94965

Visa ending in 4915 (Purchase)Authorization Code 045014

Total \$26

Purchase Summary - Ticket Number 0150649502906

Train 565: SAN DIEGO (OLD TOWN), CA - SANTA ANA, CA Depart 7:04 AM,
Monday, January 15, 2018
1 UNRESERVED COACH SEAT

\$26.00

Ticket Terms & ConditionsNO TRVL 22-26NOV17, 22-26DEC17, 29DEC17-1JAN18, 30MAR-1APR18, 25MAY-28MAY1NO TRVL 31AUG-03SEP18

Subtotal

\$26.00

Total Charged by Amtrak

\$26.00



59

02-01-18

Jeanmarie Moran
3020 Bridgeway 405
Sausalito CA 94965
United States

Folio No. :
A/R Number :
Group Code :
Company :
Membership No. : **PC 907983640**
Invoice No. :

Room No. : **415**
Arrival : **01-31-18**
Departure : **02-01-18**
Conf. No. : **69128046**
Rate Code : **IDAAA**
Page No. : **1 of 1**

Date	Description	Charges	Credits
01-31-18	*Accommodation	85.00	
01-31-18	Occupancy Tax	8.50	
01-31-18	Visa		93.50
Thank you for staying with us! Qualifying points for this stay will automatically be credited to your account. Please tell us about your stay by writing a review here - www.ihg.com/reviews . We look forward to welcoming you back soon.		Total	93.50
		Balance	0.00

Guest Signature: _____

I have received the goods and / or services in the amount shown hereon. I agree that my liability for this bill is not waived and agree to be held personally liable in the event that the indicated person, company, or associate fails to pay for any part or the full amount of these charges. If a credit card charge, I further agree to perform the obligations set forth in the cardholder's agreement with the issuer.

Holiday Inn West Covina
3223 East Garvey Avenue North
West Covina, CA 91791
Telephone: (626) 966-8311 Fax: (626) 339-2850

Verizon

3:51 PM

100%

Jan 31, 2018 - 6:43 PM

Pickup

6:43 PM

E Rental Car Rd, Ontario

Dropoff

7:08 PM

3261 E Garvey Ave N, West Covina

Since you updated your stop or destination, your fare reflects actual time and distance

Learn more

Base fare	\$0.00
24m 17s	\$3.64
19.14mi	\$19.33
Service fee	\$2.80
ONT Airport - Airport Fee	\$3.00
Total	\$28.77

** ICR RECEIPT **

7-ELEVEN

1089 CARLSBAD VILLAGE

CARLSBAD CA 920081804

7607290616

STORE#: 39310

THANKS FOR SHOPPING

7-ELEVEN

D# 8 RUL

4.493 GAL @ 3.419 /GAL

CREDIT PREPAY

15.36

15.36

SUBTOTAL

TOTAL DUE

VISA

MORAN/JEAN M

ACCT#: *****4915

APPROVAL#: 013327

APPROVAL TIME: 113327

ENTRY:

STORE # 39310

TERM#: 00073931001

REF#: 92000 98 002 7

15.36

15.36

15.36

AUTH CODE: 0

HOW DID WE DO? GO TO WWW.TELL7ELEVEN.COM

AND GET A FREE BIG BULP NEXT PURCHASE!

T#01 0P TRN2082701 02/02/2018 11:35 am



Invoice

County of Kern
County Administrative Office
1115 Truxtun Ave., 5th Floor
Bakersfield CA 93301
ATTN.: Mr. Alan Christensen

Invoice Number: 2652-07

Invoice Date: 4/4/2018

Project #: 2652

Indian Wells Valley Groundwater Authority

Professional Services through 2/28/2018

Water Resources Management

01 - Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	25.50	\$230.00	\$5,865.00
Supervisor I	16.50	\$200.00	\$3,300.00
Associate I	20.25	\$115.00	\$2,328.75
Associate III	0.75	\$105.00	\$78.75
<i>Professional Services Subtotal:</i>			<u>\$11,572.50</u>

Reimbursables	<u>Charge</u>
Mileage	\$305.20
<i>Reimbursables Subtotal:</i>	<u>\$305.20</u>

Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev \$11,877.70

02 - Preparation of Prop 1 Application Grant Funding/DWR Coordn/Auth Financial Pla

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	5.00	\$230.00	\$1,150.00
Senior II	0.50	\$145.00	\$72.50
<i>Professional Services Subtotal:</i>			<u>\$1,222.50</u>

Preparation of Prop 1 Application Grant Funding/DWR Coordn/Auth Financial Pla \$1,222.50

04.02 - Data Management System

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	36.50	\$230.00	\$8,395.00
Associate I	47.75	\$115.00	\$5,491.25
Associate III	3.25	\$105.00	\$341.25
Aide II	22.75	\$60.00	\$1,365.00
<i>Professional Services Subtotal:</i>			<u>\$15,592.50</u>

Reimbursables	<u>Charge</u>
Car Rental	\$150.47
<i>Reimbursables Subtotal:</i>	<u>\$150.47</u>

Data Management System Subtotal: \$15,742.97

04.03 - Ramboll/GeoGIS

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate I	1.50	\$115.00	\$172.50
<i>Professional Services Subtotal:</i>			<u>\$172.50</u>

Ramboll/GeoGIS Subtotal: \$172.50

05 - Project Management Costs & Schedule

**05 - Project Management Costs & Schedule**

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	5.00	\$200.00	\$1,000.00
Associate I	15.00	\$115.00	\$1,725.00
Assistant II	10.00	\$90.00	\$900.00
<i>Professional Services Subtotal:</i>			<u>\$3,625.00</u>
<i>Project Management Costs & Schedule Subtotal:</i>			<u>\$3,625.00</u>

05A - POAM

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Senior II	1.00	\$145.00	\$145.00
Associate I	32.75	\$115.00	\$3,766.25
Administrative II	17.25	\$65.00	\$1,121.25
<i>Professional Services Subtotal:</i>			<u>\$5,032.50</u>
<i>POAM Subtotal:</i>			<u>\$5,032.50</u>

06 - IWVGW Basin 3rd Party Sustainability/Safe Yield Rev (GSP Compliance)/Numeric:

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	5.00	\$230.00	\$1,150.00
Supervisor II	46.50	\$185.00	\$8,602.50
<i>Professional Services Subtotal:</i>			<u>\$9,752.50</u>
Reimbursables			<u>Charge</u>
Car Rental			\$15.36
<i>Reimbursables Subtotal:</i>			<u>\$15.36</u>
<i>IWVGW Basin 3rd Party Sustainability/Safe Yield Rev (GSP Compliance)/Numerica</i>			<u>\$9,767.86</u>

07 - IWVGW Basin Opptys & Constraints for Alt Imported Water Supplies

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	3.00	\$230.00	\$690.00
Supervisor I	21.50	\$200.00	\$4,300.00
Associate I	54.50	\$115.00	\$6,267.50
GIS Manager	2.00	\$115.00	\$230.00
GIS Specialist I	15.00	\$95.00	\$1,425.00
Assistant II	11.50	\$90.00	\$1,035.00
<i>Professional Services Subtotal:</i>			<u>\$13,947.50</u>
<i>IWVGW Basin Opptys & Constraints for Alt Imported Water Supplies Subtotal:</i>			<u>\$13,947.50</u>

09 - Other Ongoing Studies/Review (Brackish Water, USGS Recharge, Subsidence, Geop

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	3.00	\$230.00	\$690.00
Supervisor I	3.50	\$200.00	\$700.00
Assistant II	39.25	\$90.00	\$3,532.50
<i>Professional Services Subtotal:</i>			<u>\$4,922.50</u>
<i>Other Ongoing Studies/Review (Brackish Water, USGS Recharge, Subsidence, Geop</i>			<u>\$4,922.50</u>

10 - Stakeholder/SWR Coordination for GSP

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	3.00	\$230.00	\$690.00
<i>Professional Services Subtotal:</i>			<u>\$690.00</u>
<i>Stakeholder/SWR Coordination for GSP Subtotal:</i>			<u>\$690.00</u>

**12 - SDAC Projects; Water Conservation & Rebate Program**

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Senior II	33.50	\$145.00	\$4,857.50
<i>Professional Services Subtotal:</i>			<u>\$4,857.50</u>
<i>SDAC Projects; Water Conservation & Rebate Program Subtotal:</i>			<u>\$4,857.50</u>

13 - SDAC Projects: Water Audit, Leak Detection & Leak Rpr Program

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Senior II	11.50	\$145.00	\$1,667.50
<i>Professional Services Subtotal:</i>			<u>\$1,667.50</u>
<i>SDAC Projects: Water Audit, Leak Detection & Leak Rpr Program Subtotal:</i>			<u>\$1,667.50</u>

14 - Pumping Assessment Support

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	11.00	\$230.00	\$2,530.00
Associate I	7.50	\$115.00	\$862.50
Associate III	0.50	\$105.00	\$52.50
<i>Professional Services Subtotal:</i>			<u>\$3,445.00</u>
<i>Pumping Assessment Support Subtotal:</i>			<u>\$3,445.00</u>
<i>Water Resources Management Subtotal:</i>			<u>\$76,971.03</u>

***** Invoice Total ***** **\$76,971.03**



2171 E. Francisco Blvd., Suite K • San Rafael, California 94901
Phone: (415) 457-0701 • FAX: (415) 457-1638 • Website: www.stetsonengineers.com
Northern California • Southern California • Arizona • Colorado • Oregon

REIMBURSABLE SUMMARY

County of Kern
County Administrative Office
1115 Truxtun Ave., 5th Floor
Bakersfield CA 93301
ATTN.: Mr. Alan Christensen

Invoice Number: 2652-07

Invoice Date: 4/04/2018

Project #: 2652

Indian Wells Valley Groundwater Authority

Professional Services through 2/28/2018

Water Resources Management

01 - Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev GSP

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Mileage	02/01/2018	280.00	\$0.545	\$152.60	
Mileage	02/15/2018	280.00	\$0.545	\$152.60	
Prep & Attend Board, PAC & TAC Mtgs/Consult w/ Authority &				<u>\$305.20</u>	

04.02 - Data Management System

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Car Rental	02/01/2018	1.00	\$114.22	\$114.22	
Car Rental	02/01/2018	1.00	\$36.25	\$36.25	
Data Management System Sub-Total:				<u>\$150.47</u>	

06 - IWVGW Basin 3rd Party Sustainability/Safe Yield Rev (GSP Compliance)/Numerical GW Model

Reimbursables

<u>Description</u>	<u>Date</u>	<u>Units</u>	<u>Unit Rate</u>	<u>Charge</u>	<u>Notes</u>
Car Rental	02/02/2018	1.00	\$15.36	\$15.36	
IWVGW Basin 3rd Party Sustainability/Safe Yield Rev (GSP)				<u>\$15.36</u>	

ENTERPRISE RENT-A-CAR COMPANY OF LOS ANGELES, 1060 AUTO CENTER CT STE
M, CARLSBAD, CA 920084321 (760) 931-1111

RENTAL AGREEMENT REF#
236417 18JZJZ

RENTER
REICH, STEPHEN

DATE & TIME OUT
01/31/2018 05:04 PM

DATE & TIME IN
02/02/2018 11:56 AM

BILLING CYCLE
24-HOUR

CAR CLASS CHARGED
FCAH

VEH #1 2017 FORD FUSH EAR4

VIN# 3FA6P0LUXHR316205

LIC# JJF5308

MILES DRIVEN 522

CAR CLASS: FCAH

SUMMARY OF CHARGES

Charge Description	Date	Quantity	Per	Rate	Total
TIME & DISTANCE	01/31 - 02/02	2	DAY	\$31.47	\$62.94
DW	01/31 - 02/02	2	DAY	\$16.99	\$33.98
PAI/PEC	01/31 - 02/02	2	DAY	\$5.13	\$10.26
REFUELING CHARGE	01/31 - 02/02				\$0.00
Subtotal:					\$107.18
Taxes & Surcharges					
SALES TAX	01/31 - 02/02			7.75%	\$4.88
VEHICLE LICENSE RECOVERY FEE	01/31 - 02/02	2	DAY	\$1.08	\$2.16
Total Charges:					\$114.22

Total Estimated Amount Due **\$114.22**

PAYMENT INFORMATION

AMOUNT PAID **TYPE**
\$114.22 Visa

CREDIT CARD NUMBER
xxxxxxxxxxx5178 PENDING

La Verne Car Wash
Visit Our Website
www.lavernecarwash.com

LA VERNE CAR WASH
EC06131306001
914 W FOOTHILL BLVD
LA VERNE , CA
91750
02/01/2018 666411016
07:02:25 PM

XXXXXXXXXXXX5178
Visa
INVOICE 036130
AUTH 079040

PUMP# 12
Regular 10.728G
PRICE/GAL \$3.379

FUEL TOTAL \$ 36.25

CREDIT \$ 36.25

=====

Customer-act. vated Purchase/Capture
Site #: 000000009759788
Shift Number 1
Sequence Number 21171
Swiped
APPROVED 079040

=====

Thank You
Please Come Again

** ICR RECEIPT **

7-ELEVEN
1089 CARLSBAD VILLAGE
CARLSBAD CA 920081804

7607290616

STORE#: 39310
THANKS FOR SHOPPING
7-ELEVEN

D# 8 RUL
4.493 GAL @ 3.419 /GAL
CREDIT PREPAY

15.36

15.36

15.36

15.36

15.36

SUBTOTAL
TOTAL DUE

VISA

MORAN/JEAN M

ACCT#: *****4915

APPROVAL#: 013327

APPROVAL TIME: 113327

ENTRY:

STORE # 39310

TERM#: 00073931001

REF# : 92000 98 002 7

AUTH CODE: 0

HOW DID WE DO? GO TO WWW.TELL7ELEVEN.COM
AND GET A FREE BIG BULB NEXT PURCHASE!
T#01 0P TRN2082701 02/02/2018 11:35 am

DI-1040

UNITED STATES DEPARTMENT OF THE INTERIOR
DOWN PAYMENT (BILL) REQUEST

Page:1

Make Remittance Payable To: U.S. Geological Survey
Billing Contact: Victoria Wu Phone: (916) 278-3034Bill #: 90615836
Customer: 6000005786
Date: 03/08/2018
Due Date: 06/06/2018Remit Payment To: United States Geological Survey
P.O. Box 71362
Philadelphia, PA 19176-1362Payer: KERN COUNTY
Alan Christensen
1115 TRUXTUN AVENUE, 5TH FLOOR
BAKERSFIELD CA 93301Additional forms of payment may be accepted. Please
email GS-A-HQ_RMS@USGS.GOV or call
703-648-7683 for additional information.To pay through Pay.gov go to <https://www.pay.gov>.Checks must be made payable to
U.S. Geological Survey. Please detach the top portion
or include bill number on all remittances.

Amount of Payment: \$ _____

Date	Description	Qty	Unit Price		Amount
			Cost	Per	
03/08/2018	Final quarterly billing for the Indian Wells Valley Recharge study, per a Joint Funding Agreement between Kern County & the U.S. Geological Survey. Quarterly billing covers: 1/1/18 through 2/28/18 17WSCA60005786	1	22,301.48	1	22,301.48

Amount Due this Bill: 22,301.48

Accounting Classification:

Sales Order: 65613
Sales Office: GWZG
Customer: 6000005786
Accounting #: 10889970

TIN: *****0925

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ITEM 3C**Indian Wells Valley Groundwater Authority JPA Fund****Fund No. 42927****FY 2017-18**

Beginning Balance \$ 74,364.80

PENDING SENT TO DWR**Current \$ 47,436.41**

Date	Category	Description	Amount	Balance
9/14/2017	Expense	USGS Recharge Study - 3/01/17 - 6/30/17	\$ 10,335.00	\$ 64,029.80
10/23/2017	Expense	Stetson Engineers - 8/01/17 - 8/31/17	\$ 20,530.56	\$ 43,499.24
12/5/2017	Expense	Stetson Engineers - 9/01/17 - 9/30/17	\$ 42,499.24	\$ 1,000.00
1/17/2018	Deposit	IWVWD Advance	\$ 100,000.00	\$ 101,000.00
		Remaining Balance - Stetson Engineers		
1/22/2018	Expense	9/01/17 - 9/30/17	\$ 15,577.75	\$ 85,422.25
1/31/2018	Expense	USGA Recharge Study - 7/101/17 - 9/30/17	\$ 32,662.04	\$ 52,760.21
2/13/2018	Deposit	IWVWD Advance	\$ 48,239.79	\$ 101,000.00
2/14/2018	Expense	Stetson Engineers - 10/01/17 - 10/31/17	\$ 66,241.27	\$ 34,758.73
3/15/2018	Deposit	DWR Reimbursement	\$ 9,818.25	\$ 44,576.98
3/23/2018	Deposit	IWVWD Advance	\$ 66,241.27	\$ 110,818.25
4/11/2018	Expense	Stetson Engineers - 11/01/17 - 11/30/17	\$ 41,080.36	\$ 69,737.89
4/11/2018	Expense	USGS Recharge Study - 10/01/17 - 12/31/17	\$ 22,301.48	\$ 47,436.41

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INDIAN WELLS VALLEY GROUNDWATER AUTHORITY
GROUNDWATER SUSTAINABILITY PLAN (GSP) DEVELOPMENT
POAM SCHEDULE - DRAFT (April 10, 2018)

Task Name	Task Responsibility	Predecessors	Budget	Actual Cost	Remaining Cost	Start	Finish	% Work Complete	2017				2018				2019						
									Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1		
0	POAM billing data through 02/28/18																						
1	Water Resources Manager Starts Work - August 2017	-		\$0.00	\$0.00	Thu 8/17/17	Thu 8/17/17	0%			8/17												
2	Task 1.0 Initial GSP Support Studies	-		\$0.00	\$0.00	Mon 5/1/17	Thu 6/21/18	0%															
3	USGS Recharge Study- Grant Funded	USGS / Kern County		\$0.00	\$0.00	Mon 5/1/17	Thu 5/17/18	85%															
4	Brackish Groundwater Resources FS- Brackish Groundwater Study Group Funded	IWVWD / Others		\$0.00	\$0.00	Mon 5/1/17	Thu 6/21/18	75%															
5	Aerial Electro-Magnetic Geophysics Survey- Government and Local Funding	IWVWD / Others		\$0.00	\$0.00	Fri 9/1/17	Thu 5/17/18	75%															
6	Well Database Groundwater Truthing Study	IWVWD / Others		\$0.00	\$0.00	Wed 8/23/17	Wed 12/20/17	100%															
7	Salt and Nutrient Management Plan	IWVWD / Others		\$0.00	\$0.00	Fri 1/1/16	Fri 12/29/17	0%															
8	Loading Analysis (Existing)	IWVWD / Ridgecrest		\$0.00	\$0.00	Fri 1/1/16	Fri 12/29/17	0%															
9	Mixing Model Development (Existing)	IWVWD / Ridgecrest	8SS	\$0.00	\$0.00	Fri 1/1/16	Fri 12/29/17	0%															
10	Reporting and Coordination	IWVWD / Ridgecrest	8SS,9SS	\$0.00	\$0.00	Fri 1/1/16	Fri 12/29/17	0%															
11	Task 2.0 Proposition 1 SGMA GSP Development Grant Application	-		\$62,880	\$56,590.69	\$6,289.36	Fri 9/8/17	Wed 11/15/17	90%														
12	Release final PSP	DWR		\$0.00	\$0.00	Fri 9/8/17	Fri 9/8/17	0%															
13	Prepare Project Application	Stetson	1	\$62,880	\$56,590.69	\$6,289.36	Mon 9/11/17	Tue 11/14/17	90%														
14	Submit Project Application	Stetson	13		\$0.00	\$0.00	Wed 11/15/17	Wed 11/15/17	0%														
15	Task 3.0 Data Management System	-		\$357,400	\$77,534.17	\$279,774.92	Thu 8/3/17	Mon 12/2/19	22%														
16	Task 3.1 Data Management System Development	-		\$48,595.57	\$10.42	Wed 8/23/17	Wed 1/31/18	99%															
17	Develop a Web-Based GeoDatabase (DMS)	Stetson	1	\$48,605	\$48,595.57	\$10.42	Wed 8/23/17	Wed 1/31/18	99%														
18	Task 3.2 Data Compilation and Analysis	-		\$28,938.60	\$279,764.50	Thu 8/3/17	Mon 12/2/19	9%															
19	Develop Monitoring Protocols for the GSP	Stetson		\$30,900	\$0.00	\$30,900.36	Thu 3/1/18	Tue 7/31/18	0%														
20	Populate Data with Historical Data	Stetson		\$54,200	\$28,938.60	\$25,261.54	Fri 12/15/17	Wed 8/15/18	53%														
21	Install Transducers and Telemetry Equipment	Stetson	49	\$179,700	\$0.00	\$179,702.30	Fri 3/30/18	Mon 4/29/19	0%														
22	Integrate GSP Goals and Objectives – Adaptive Management	Stetson		\$43,900	\$0.00	\$43,900.30	Mon 4/1/19	Thu 6/27/19	0%														
23	Monitoring Program - Kern County Water Agency and Navy Funded	KCWA / Navy			\$0.00	\$0.00	Thu 8/3/17	Mon 12/2/19	0%														
24	Task 4.0 GSP Development and Submittal	-		\$1,430,100	\$121,547.49	\$1,308,675.60	Thu 8/17/17	Mon 12/30/19	10%														
25	Task 4.1 Prepare/Submit Notification of GSP Preparation to DWR and Local Agencies and Post on Website	-	1		\$0.00	\$0.00	Tue 10/17/17	Tue 10/17/17	100%			10/17											
26	Task 4.2 Conceptual and Numerical Basin Modeling	-		\$305,800	\$52,507.57	\$253,322.60	Thu 8/17/17	Fri 6/28/19	21%														
27	Hydrogeologic Conceptual Model			\$31,400	\$12,865.39	\$18,534.61	Mon 1/1/18	Fri 6/29/18	38%														
28	Prepare/Review Hydrogeologic Conceptual Model	Stetson	25		\$12,865.39	\$0.00	Mon 1/1/18	Thu 5/3/18	40%														
29	Revise Hydrogeologic Conceptual Model	Stetson	28		\$0.00	\$0.00	Fri 5/4/18	Thu 5/31/18	0%														
30	Discussion and Determination of Conceptual Model and Water Budget	TAC	29FF+20 days		\$0.00	\$0.00	Thu 2/1/18	Fri 6/29/18	0%														
31	Numerical Groundwater Model	-		\$274,400	\$39,642.18	\$234,787.99	Thu 8/17/17	Fri 6/28/19	14%														
32	Review and Evaluation of Existing Groundwater Model	Stetson		\$31,400	\$29,874.32	\$1,554.17	Thu 8/17/17	Fri 12/29/17	95%														
33	Model: Historical Model Calibration	Navy / DRI / Stetson	32	\$58,000	\$9,767.86	\$48,232.10	Mon 4/2/18	Fri 9/28/18	17%														
34	Discussion and Recommendation of Recharge, Pumping, Baseline	TAC			\$0.00	\$0.00	Thu 6/7/18	Thu 7/5/18	0%														
35	Calibration Workshop	TAC			\$0.00	\$0.00	Thu 8/2/18	Thu 8/2/18	0%														
36	Complete Basin Model Calibration	Stetson	33,35		\$0.00	\$0.00	Mon 10/1/18	Mon 10/1/18	0%														
37	Discussion and Recommendation of Model Calibration	TAC	35		\$0.00	\$0.00	Fri 8/3/18	Thu 10/4/18	0%														

Project: POAM billing data through 02/28/18
Date: Tue 4/10/18

Task
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Rolled Up Critical Task
 Rolled Up Milestone
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 External Tasks

Project Summary
 Group By Summary
 Inactive Milestone
 Inactive Summary
 Manual Task

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External Tasks
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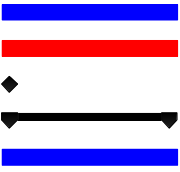
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INDIAN WELLS VALLEY GROUNDWATER AUTHORITY
GROUNDWATER SUSTAINABILITY PLAN (GSP) DEVELOPMENT
POAM SCHEDULE - DRAFT (April 10, 2018)

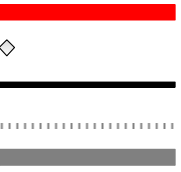
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										Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
38	Model: Baseline	Navy / DRI / Stetson	32,36FS-42 c		\$0.00	\$0.00	Fri 8/3/18	Fri 11/2/18	0%													
39	Discussion and Recommendation of Modeling Scenarios	TAC	80FS-21 days,88FS-21		\$0.00	\$0.00	Fri 6/1/18	Fri 11/2/18	0%													
40	Discussion of Initial Sustainable Management Criteria	TAC	39SS		\$0.00	\$0.00	Fri 6/1/18	Fri 6/1/18	0%													
41	Model: Management Actions	Navy / DRI / Stetson	40,39,38	\$78,000	\$0.00	\$78,001.15	Mon 11/5/18	Fri 3/1/19	0%													
42	Discussion of Baseline and Management Action Results	TAC	41SS+23 days		\$0.00	\$0.00	Thu 12/6/18	Fri 3/29/19	0%													
43	Complete Modeling of Management Actions	Stetson	41		\$0.00	\$0.00	Mon 3/4/19	Mon 3/4/19	0%													
44	Recommendation of Management Actions	TAC	42		\$0.00	\$0.00	Mon 4/1/19	Mon 4/1/19	0%													
45	Discussion and Recommendation of Sustainable Management Criteria	TAC			\$0.00	\$0.00	Thu 12/6/18	Fri 3/29/19	0%													
46	Model: Transport Modeling and Alternative Effects of Land Subsidence	Navy / DRI / Stetson	71	\$107,000	\$0.00	\$107,000.57	Fri 2/1/19	Fri 5/31/19	0%													
47	Discussion and Recommendation of Transport Modeling and Land Subsidence	Navy / DRI / Stetson	46SS+23 days		\$0.00	\$0.00	Wed 3/6/19	Fri 6/28/19	0%													
48	Task 4.3 Data Gap Evaluation	-		\$721,700	\$7,430.00	\$714,282.00	Fri 12/15/17	Tue 12/3/19	1%													
49	Review Existing Model and Monitoring Network	Stetson		\$42,400	\$0.00	\$42,399.79	Fri 12/15/17	Thu 3/29/18	0%													
50	Identification of Data Gaps	Stetson	49,36FF	\$24,300	\$7,430.00	\$16,870.29	Mon 4/2/18	Mon 10/1/18	31%													
51	Monitoring Wells	-			\$0.00	\$141,302.01	Thu 4/5/18	Tue 12/3/19	0%													
52	Design and Location Siting	Stetson		\$14,900	\$0.00	\$14,900.00	Thu 4/5/18	Thu 5/3/18	0%													
53	Discussion of Location Siting	TAC			\$0.00	\$0.00	Thu 4/5/18	Thu 5/3/18	0%													
54	Work Plan and Well Construction	-		\$70,100	\$0.00	\$70,101.67	Thu 4/5/18	Tue 12/3/19	0%													
55	Prepare Work Plan for Monitoring Wells	Stetson	52FF+25 days		\$0.00	\$0.00	Thu 4/5/18	Thu 6/7/18	0%													
56	Installation of 2 Monitoring Wells 2018	Navy/Stetson	55		\$0.00	\$0.00	Fri 6/8/18	Mon 12/31/18	0%													
57	Installation of 2 Monitoring Wells 2019	Navy/Stetson	56		\$0.00	\$0.00	Tue 1/1/19	Tue 12/3/19	0%													
58	Collection of Monitoring Well Data	-		\$56,300	\$0.00	\$56,300.34	Thu 12/20/18	Mon 12/2/19	0%													
59	Stream Gages	-			\$0.00	\$148,501.25	Mon 4/2/18	Mon 10/29/18	0%													
60	Hydrologic Analysis	Stetson		\$21,300	\$0.00	\$21,300.38	Mon 4/2/18	Fri 6/1/18	0%													
61	Discussion of Location Siting	TAC	60		\$0.00	\$0.00	Mon 6/4/18	Mon 7/30/18	0%													
62	Design and Location Siting	Stetson	60	\$41,600	\$0.00	\$41,600.42	Mon 6/4/18	Mon 7/30/18	0%													
63	Equipment Purchase, Installation, and Testing	Stetson	62	\$85,600	\$0.00	\$85,600.45	Fri 8/3/18	Mon 10/29/18	0%													
64	Weather Stations	-			\$0.00	\$84,201.17	Fri 5/18/18	Fri 11/16/18	0%													
65	Discussion of Location Siting	TAC	49,3		\$0.00	\$0.00	Fri 5/18/18	Fri 8/17/18	0%													
66	Design and Location Siting	Stetson	65SS	\$22,900	\$0.00	\$22,900.62	Fri 5/18/18	Fri 8/17/18	0%													
67	Equipment Purchase	Stetson	66	\$36,100	\$0.00	\$36,100.04	Mon 8/20/18	Wed 10/17/18	0%													
68	Installation and Testing	Stetson	67	\$25,200	\$0.00	\$25,200.51	Thu 10/18/18	Fri 11/16/18	0%													
69	Water Quality and Stable Isotope Sampling and Analysis	-			\$0.00	\$108,700.55	Fri 6/1/18	Fri 3/29/19	0%													
70	Discussion of Sampling	TAC			\$0.00	\$0.00	Fri 6/1/18	Tue 7/31/18	0%													
71	Surface and Groundwater Sampling	Stetson	70SS+21 day	\$81,500	\$0.00	\$81,500.85	Mon 7/2/18	Mon 12/31/18	0%													
72	Geochemical Reaction and Transport Analysis	DRI		\$27,200	\$0.00	\$27,199.70	Thu 11/1/18	Fri 3/29/19	0%													
73	Aquifer Tests	-			\$0.00	\$172,306.94	Thu 4/5/18	Thu 12/6/18	0%													
74	Discussion of Work Plan	TAC			\$0.00	\$0.00	Thu 4/5/18	Thu 5/3/18	0%													
75	Prepare Aquifer Test Work Plan	Stetson	74	\$36,100	\$0.00	\$36,100.04	Fri 5/4/18	Thu 6/28/18	0%													
76	Perform Aquifer Testing	Stetson	75	\$136,200	\$0.00	\$136,206.90	Fri 6/29/18	Thu 12/6/18	0%													
77	Task 4.4 Imported Water Study	-		\$175,000	\$45,382.50	\$129,625.81	Fri 12/15/17	Wed 10/31/18	26%													

Project: POAM billing data through 02/28/18
Date: Tue 4/10/18

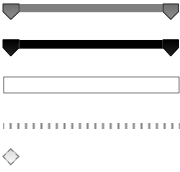
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Rolled Up Critical Task
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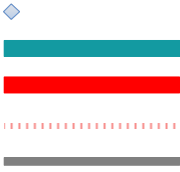
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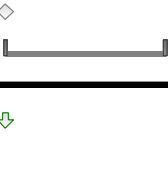
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External Tasks
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Baseline Milestone
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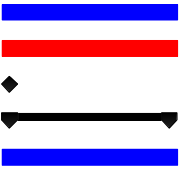


INDIAN WELLS VALLEY GROUNDWATER AUTHORITY
GROUNDWATER SUSTAINABILITY PLAN (GSP) DEVELOPMENT
POAM SCHEDULE - DRAFT (April 10, 2018)

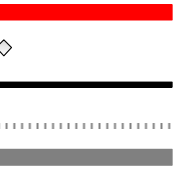
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										Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
78	Evaluate Potential Imported Water Supply Sources	Stetson		\$75,000	\$45,382.50	\$29,617.19	Fri 12/15/17	Thu 5/31/18	61%													
79	Evaluate Water Banking Alternatives and Extraction Schedule	Stetson	78FF	\$25,000	\$0.00	\$25,008.48	Mon 1/1/18	Thu 5/31/18	0%													
80	Discussion and Recommendation of Imported Water Feasibility	TAC	81FF		\$0.00	\$0.00	Thu 3/1/18	Fri 6/29/18	0%													
81	Evaluate Infrastructure Requirements	Stetson		\$25,000	\$0.00	\$24,999.55	Tue 5/1/18	Fri 6/29/18	0%													
82	Prepare Technical Memorandum	Stetson	80,78,79	\$50,000	\$0.00	\$50,000.59	Mon 7/2/18	Wed 10/31/18	0%													
83	Task 4.5 Recycled Water Study	-		\$61,000	\$16,227.42	\$44,842.57	Fri 12/15/17	Fri 6/29/18	27%													
84	Existing Supply and Demand Analysis	Stetson		\$6,600	\$5,234.92	\$1,365.06	Fri 12/15/17	Tue 1/30/18	79%													
85	Identify Existing Recycled Water Infrastructure and Users	Stetson	84	\$6,000	\$6,070.00	\$0.00	Wed 1/31/18	Wed 2/28/18	100%													
86	Review Regulatory and Institutional Requirements	Stetson	84	\$3,400	\$0.00	\$3,399.96	Wed 1/31/18	Wed 2/28/18	0%													
87	Identify and Evaluate Potential Recycled Water Users	Stetson / IWVGA	85,86	\$20,000	\$4,922.50	\$15,077.99	Thu 3/1/18	Tue 5/1/18	25%													
88	Discussion and Recommendation of Recycled Water Feasibility	TAC	84,85,87FF		\$0.00	\$0.00	Thu 3/1/18	Fri 6/29/18	0%													
89	Prepare Technical Memorandum	Stetson	87	\$25,000	\$0.00	\$24,999.55	Wed 5/2/18	Fri 6/29/18	0%													
90	Task 4.6 Prepare Draft GSP Chapters	-		\$135,300	\$0.00	\$135,301.83	Fri 6/1/18	Fri 6/28/19	0%													
91	GSP Report Preparation: Prepare Introduction Chapter	Stetson		\$1,200	\$0.00	\$1,199.81	Fri 6/1/18	Tue 7/31/18	0%													
92	Prepare Plan Area and Basin Setting Chapter	Stetson	4,10,30	\$16,200	\$0.00	\$16,200.43	Mon 7/2/18	Fri 11/2/18	0%													
93	Prepare Projects and Management Actions to Achieve Sustainability Goal Chapter	Stetson	44,47FF,80,8	\$50,000	\$0.00	\$50,000.59	Tue 4/2/19	Fri 6/28/19	0%													
94	Prepare Sustainable Management Criteria Chapter	Stetson	45FF	\$30,000	\$0.00	\$29,999.76	Tue 1/1/19	Fri 5/31/19	0%													
95	Plan Implementation				\$0.00	\$34,999.96	Fri 2/1/19	Fri 6/28/19	0%													
96	Discussion and Recommendation of Plan Implementation	TAC	44FS-42 days		\$0.00	\$0.00	Fri 2/1/19	Thu 6/6/19	0%													
97	GSP Report Preparation: Prepare Plan Implementation Chapter	Stetson	96FS-23 days	\$35,000	\$0.00	\$34,999.96	Tue 5/7/19	Fri 6/28/19	0%													
98	GSP Report Preparation: Prepare References and Technical Studies Chapter	Stetson		\$2,000	\$0.00	\$2,000.68	Mon 6/3/19	Fri 6/28/19	0%													
99	GSP Report Preparation: Prepare Executive Summary Chapter	Stetson		\$900	\$0.00	\$900.60	Mon 6/3/19	Fri 6/28/19	0%													
100	Task 4.7 GSP Report Preparation: Develop Draft and Final GSP	-		\$31,300	\$0.00	\$31,300.79	Mon 7/1/19	Mon 8/26/19	0%													
101	Prepare Review Draft GSP Report	Stetson	91,92,93,94,9		\$0.00	\$0.00	Mon 7/1/19	Wed 7/31/19	0%													
102	Submit Review Draft GSP Report to IWVGA Board, TAC, and PAC	Stetson	101		\$0.00	\$0.00	Thu 8/1/19	Thu 8/1/19	0%													
103	Review Draft Comment Period	IWVGA/TAC/PAC	102		\$0.00	\$0.00	Fri 8/2/19	Thu 8/15/19	0%													
104	Prepare Final Draft GSP Report	Stetson	103		\$0.00	\$0.00	Fri 8/16/19	Mon 8/26/19	0%													
105	Task 4.8 Public Hearing and Adoption of Plan	-			\$0.00	\$0.00	Mon 8/26/19	Mon 12/30/19	0%													
106	Submit 90-Day Notice of Public Hearing	IWVGA	104		\$0.00	\$0.00	Mon 8/26/19	Mon 8/26/19	0%													
107	Public Hearing	IWVGA	106FS+65 da		\$0.00	\$0.00	Mon 11/25/19	Mon 11/25/19	0%													
108	Prepare Final GSP Report (Incorporate Public Input)	Stetson	107		\$0.00	\$0.00	Tue 11/26/19	Wed 12/18/19	0%													
109	IWVGA Approval	IWVGA	108		\$0.00	\$0.00	Thu 12/19/19	Fri 12/27/19	0%													
110	Submit Final GSP to DWR		109		\$0.00	\$0.00	Mon 12/30/19	Mon 12/30/19	0%													

Project: POAM billing data through 02/28/18
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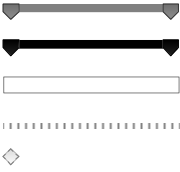
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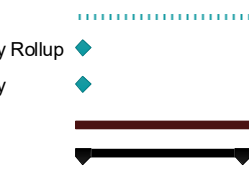
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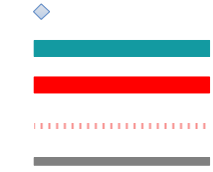
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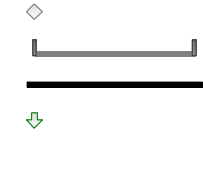
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External Tasks
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Baseline Milestone
Baseline Summary
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Deadline



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ITEM 5

DISCUSSION ON ISSUES AND OPTIONS FOR GROUNDWATER MANAGEMENT IN THE INDIAN WELLS VALLEY UNDER THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

Anthony Brown, of Aquilogic, will present a Discussion Paper outlining concepts for achieving sustainability in the Indian Wells Valley to comply with the Sustainable Groundwater Management Act. The Discussion Paper has received technical review by Coso Geothermal Company, Mojave Pistachio, Meadowbrook Dairy, Searles Valley Minerals, and Indian Wells Valley Water District.

The Discussion Paper is being presented for discussion purposes only. No action on the part of the Board is required.

A Discussion Paper: Issues and Options for Groundwater Management in the Indian Wells Valley under the Sustainable Groundwater Management Act

Introduction

The Indian Wells Valley (I WV) faces water resources challenges which have been growing for over 50 years. However, with the implementation of the 2014 Sustainable Groundwater Management Act (SGMA) a plan to address these challenges must now be completed in the next two years. This discussion paper presents an approach to address the challenges in a way that provides for the following in IWV:

- Sustainable groundwater management and compliance with SGMA
- Long-term water security
- A means to fund the needed water projects
- Long-term viability of the Naval Air Weapons Station (NAWS), with respect to water
- Economic stability and continued growth

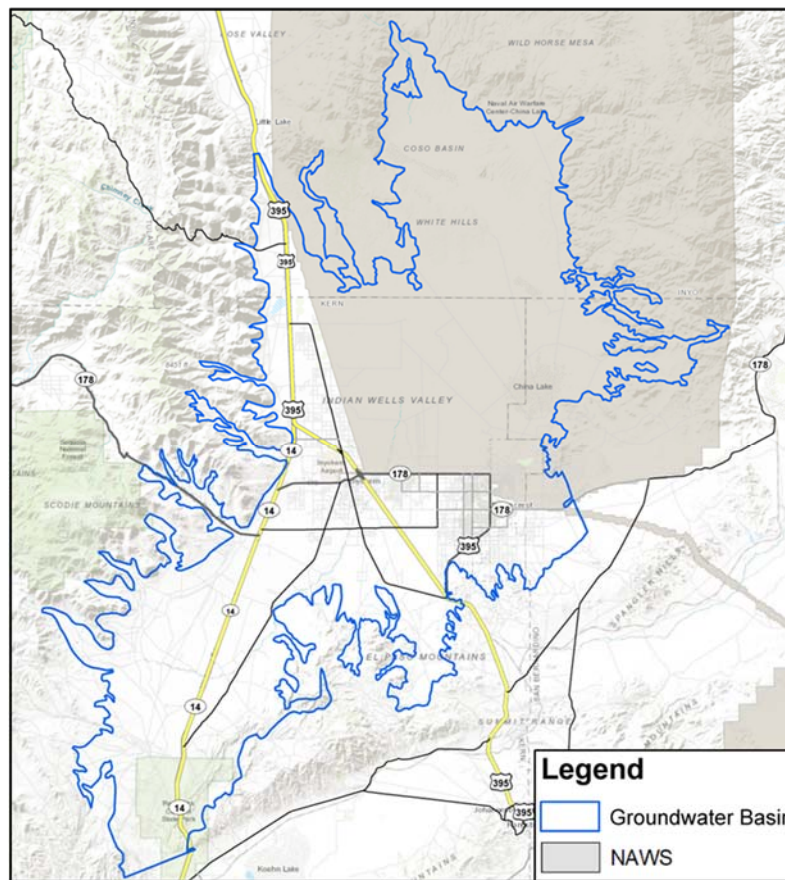


Figure 1: Indian Wells Valley Groundwater Basin

The proposed strategy consists of the following five key elements:

1. Given the volume of groundwater in storage in the IWV Groundwater Basin (the Basin) (see **Figure 1**), allowing current pumping to continue for a period of time while alternate water supplies are developed
2. Charging a pumping assessment (in three forms of groundwater extraction fees) to pay for groundwater management, studies, and engineering design/permitting for alternate water supplies
3. Developing alternate water supplies (e.g. brackish water, imported water) to offset future pumping reductions
4. Implementing a market-driven groundwater pumping reduction program, with the ability to trade pumping allocations
5. Developing a contingency plan for shallower domestic wells that face water supply problems prior to the Basin reaching sustainability
6. Develop water conservation plans that incentivize all water users in IWV to use less water

Groundwater Sustainability

The IWV Basin (Basin ID 6-54) has been listed by the California Department of Water Resources (DWR) as a medium priority basin subject to critical overdraft. This requires that a Groundwater Sustainability Plan (GSP) be developed by the Indian Wells Valley Groundwater Authority (IWVGA), which is the Groundwater Sustainability Agency (GSA) for the Basin, by January 2020. Under SGMA, the Basin must be managed consistent with the Basin's "sustainable yield" by 2040; however, DWR may grant a ten year extension from 2040 to 2050. SGMA defines sustainable yield as *"the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result."* The following are the potential undesirable results, as defined by SGMA:

1. chronic lowering of groundwater levels
2. significant and unreasonable reduction of groundwater storage
3. significant and unreasonable seawater intrusion
4. significant and unreasonable degraded water quality
5. significant and unreasonable land subsidence
6. depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water

The GSA, in this case, the IWVGA member agencies with input from the water resources manager (WRM), the advisory committees and the community, defines the basin sustainability criteria and associated undesirable results.

Sustainable yield is NOT safe yield. Safe yield is a technical and legal term that defines the amount of water that can be withdrawn from the Basin without resulting in long-term loss of groundwater in storage. Thus, over a period of years, safe yield must equal the amount of water entering the Basin (i.e. recharge) minus basin outflows. Under SGMA, sustainable yield could be higher than safe yield, if a small annual loss of groundwater in storage is not considered significant and unreasonable by the GSA or by DWR.

To manage the Basin consistent with the sustainable yield, while still meeting current water demands, Basin water users must:

1. reduce the volume of native groundwater pumping
2. develop new sources of water to offset pumping reductions and meet water demands

With respect to the former, reductions in groundwater pumping in the Basin should be addressed in a manner that follows the SGMA mandate for the IWVGA to “*consider the interests of all beneficial uses and users of groundwater.*” This means setting up a pumping reduction plan that is fair and equitable, takes economic and social factors into account, and does so to achieve SGMA mandates in a reasonable time period, while minimizing the risk of litigation and additional costs for the community to bear. With respect to the latter, development of new sources of water will require funding through the collection of fees. The IWVGA should develop a water pricing and funding mechanism through the public process of the GSP preparation where all water users in the Basin pay an equitable price for their water.

Pumping in IWV

According to records maintained by the IWVWD, between 1975 and 2015 an estimated 1,057,000 AF of groundwater has been removed from the Basin (IWVWD, 2017). These pumping volumes are based on information provided to the IWV Cooperative Groundwater Management Group (CGMG) or estimated by IWVWD, in the absence of such information. The estimated total volume pumped equates to an average annual pumping volume of approximately 25,800 AFY over this period (see **Figure 2**). With the maturing of pistachio orchards in the IWV over time and termination of state-mandated conservation measures, it is estimated that pumping will reach 28,600 AFY by 2020 (based on pre-drought urban water use, and acreage of pistachio trees in IWV and average annual demand for mature trees).

Overdraft

Overdraft occurs when the amount of pumping over an extended time period exceeds the amount of recharge to the basin over that same time period, and groundwater is removed from storage; that is, pumping exceeds the safe yield. Groundwater in storage can be viewed as our “water savings account”; whereas, recharge is our income and discharge (pumping) is our expenses. As in life, we may need to dip into our savings when times are tough (e.g. drought), and restore our savings when times are good (e.g. wet years). In addition, we may need to withdraw from savings to invest in something with good long-

term returns (e.g. an alternate water supply). In many groundwater basins in California, overdraft has been productively managed to generate economic growth and invest in long-term water solutions (e.g. Orange County Water District [OCWD]). Thus, overdraft may be acceptable to the extent that it results in economic growth that can be used to pay for long-term water solutions that eventually allow the groundwater basin to achieve sustainability.

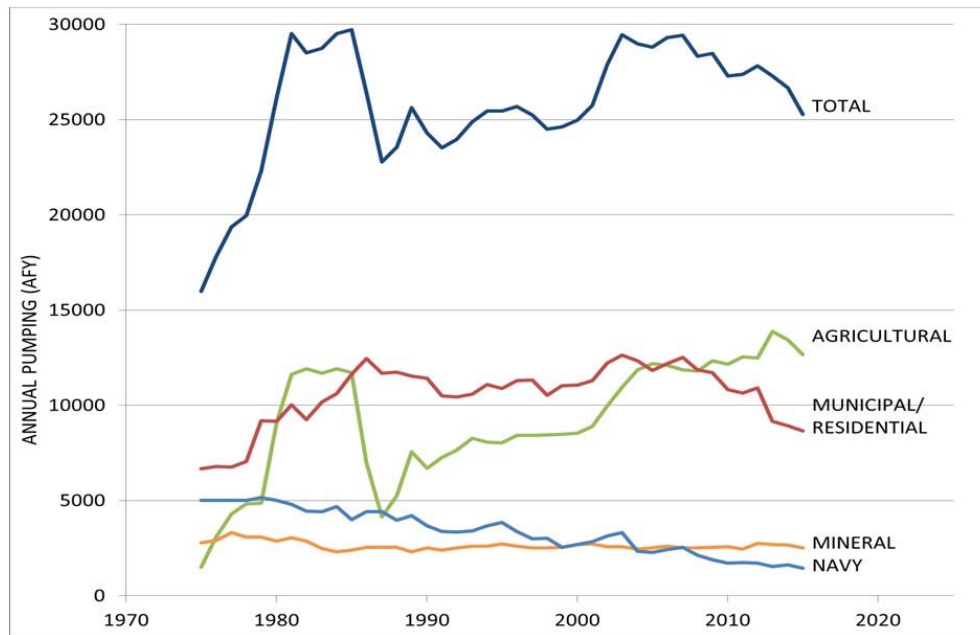


Figure 2: Historical Pumping (AFY) for Various Uses in IWV (1975-2015), IWVWD (2017)

Groundwater Levels

According to data collected and maintained by the Kern County Water Agency (KCWA) (KCWA, 2016), between approximately 1960 and 2015, groundwater levels in IWV have declined up to 45 feet (0.7 feet/year) in some areas with heavy pumping. In other parts of the Basin, where there has been little or no groundwater pumping, groundwater level declines appear to have been far less. For example, at the US Bureau of Reclamation (USBR) well #1 (T27S/R38E-23F) in the southwest area of the Basin, groundwater levels showed no decline between 1994 and 2013 (KCWA, 2016). With continued pumping at a rate of 28,600 AFY (the estimated pumping for 2020), groundwater levels would continue to decline at 1.2 ft/year on average in areas with significant pumping (see **Figure 3**), and water levels would be approximately 40 feet lower by 2050, based on that rate of decline.

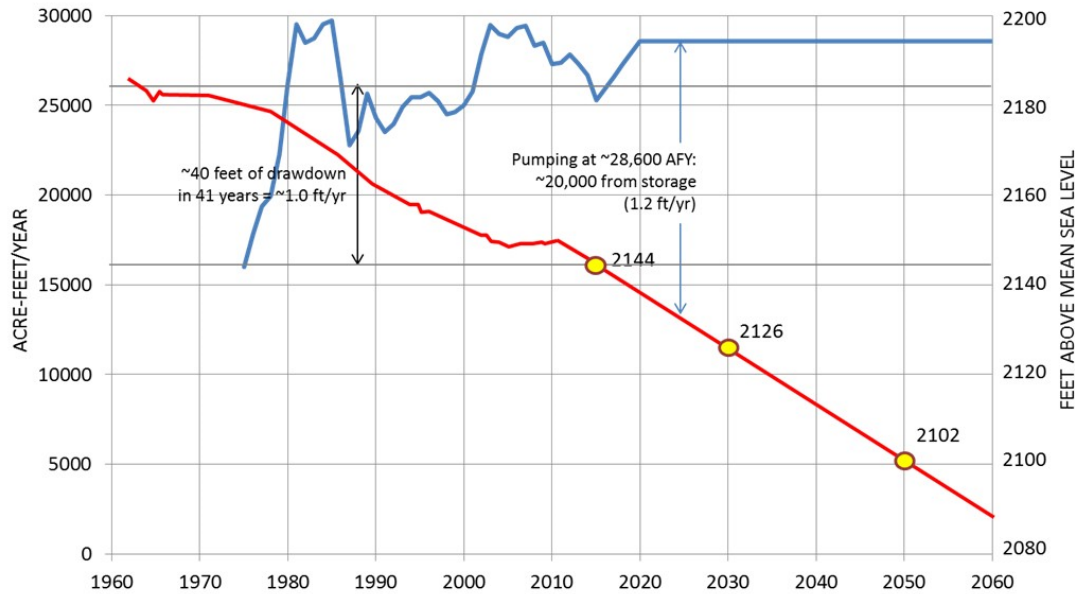


Figure 3: Projected Groundwater Levels (to 2060) in Pumping Areas in IWW with Estimated 2020 Pumping Rates Maintained (1975-2015 data for the Bucket Well – T27S/R40E, Sect. 15, Well D01 [KCWA, 2016]). The Bucket Well is considered representative of groundwater levels in areas with significant pumping.

The Big Questions

Given the proposed strategy, the following questions must be addressed for the Basin:

1. Can the estimated 2020 rate of pumping in the Basin be maintained for a modest period without causing long-term, “significant and unreasonable undesirable results”, as defined in SGMA?
2. How should future pumping reductions be implemented over several decades, as allowed under SGMA, in a fair and equitable manner that best fosters cooperation rather than conflict?
3. What alternate sources of water supply can be developed and how much will they offset pumping reductions?
4. How should future groundwater management, studies, and new water projects be funded?
5. What happens if shallow domestic wells start to run dry?

Much additional study and data is needed to definitively answer these questions, and the WRM, TAC, and groundwater pumpers in the IWW are already developing plans for such studies. However, this paper presents a preliminary conceptual approach to answer these questions and outlines a set of governing principles for managing groundwater in the Basin.

How Long Can Estimated 2020 Pumping Be Maintained?

This question will be more definitively addressed through future proposed field investigations, notably borehole and aerial geophysical mapping and monitoring well installation, ongoing groundwater modeling,

and the US Geological Survey (USGS) study to estimate natural recharge to the basin. While the exact volume of groundwater in storage is not currently known, studies by the USGS and Bureau of Land Management (BLM) have identified fresh groundwater in borings to depths >1,400 feet [BLM, 1993]. Recent geophysical studies by Stanford University have identified a transition to deeper, connate brackish water at depths between approximately 850 and >1600 feet (Stanford, 2016). Therefore, even with groundwater levels in areas of pumping currently at 400 feet bgs, these figures suggest that at least 1,000 feet of fresh groundwater exists within the Basin.

SGMA, together with concerns about undesirable results associated with long-term declining groundwater levels (e.g., subsidence, upwelling of deeper, connate brackish waters, and higher pump lifts), compels a management plan that results in groundwater levels that stabilize within a reasonable timeframe. However, because the Basin has significant fresh groundwater in storage, the Basin can likely afford continued pumping for a modest period without causing long-term, significant and unreasonable undesirable results. This will allow pumpers time to adjust their operations to the future pumping reductions, allow for the development of alternate water supplies for the IWV, and minimize socio-economic impacts.

Proposed Pumping Strategy

Given the above analysis and modeled drawdown, continued pumping at estimated 2020 rates in areas where most of the current pumping occurs (e.g. Ridgecrest and the Brown Road agricultural area), and with corresponding estimated rates of groundwater level decline, could be sustained for many decades if not centuries. However, this would not be acceptable under SGMA, as the groundwater level declines would be chronic and DWR would view a long-term loss of storage as significant and unreasonable. Therefore, it is proposed that pumping in these areas at estimated 2020 rates be maintained through 2030 (see **Figure 4**). Between 2030 and 2040 (possibly extended to 2050), groundwater pumping in these areas would be reduced to reach the native safe yield (assumed herein to be between 7,700 [DRI, 2016] and 11,000 AFY [ECORP, 2012]; however, further study is required to confirm the native safe yield for the Basin).

This proposed “soft landing” strategy presents the following advantages:

- It meets the demand for water in the Basin through 2030 from local groundwater resources
- It allows alternate water supply projects (e.g. brackish water) to be developed and brought on-line by 2030
- It allows for the imposition of a pumping assessment on a sustained pumping volume (i.e. 28,600 AFY) to fund ongoing groundwater management in the Basin, groundwater studies, and capital projects (e.g. brackish water development)
- It would reduce the risk of possible conflict over near-term reductions and allocations and potential resulting litigation by lessening the economic impact on pumpers that have made significant investments in the basin

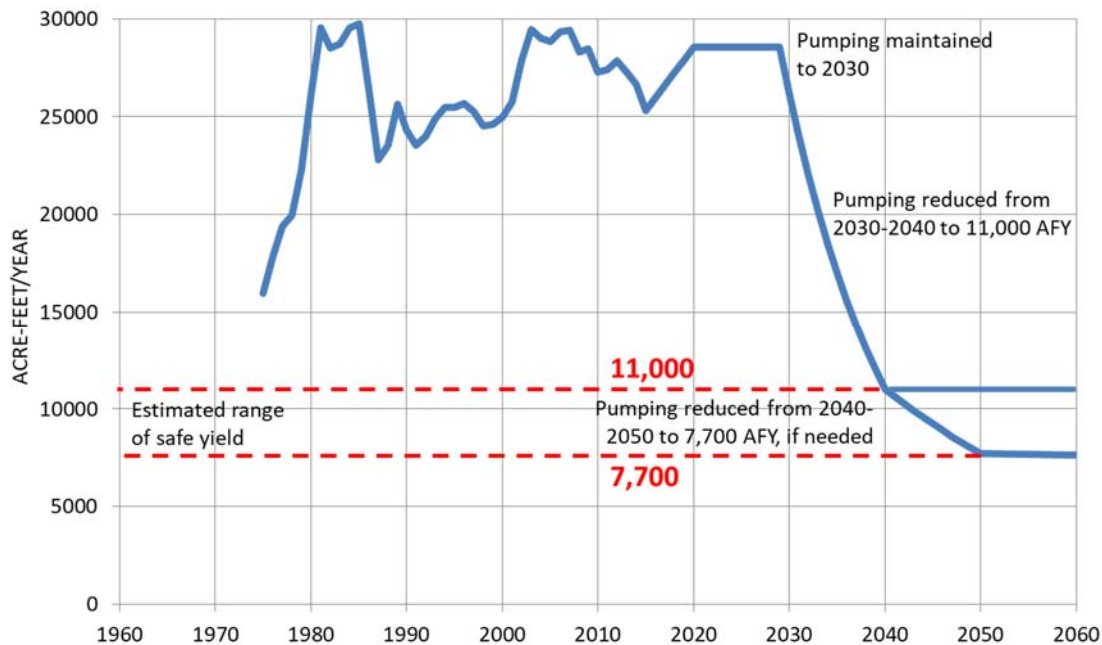


Figure 4: Historical (1975-2016) and Proposed (2017-2060) Groundwater Pumping in the Basin

The proposed pumping strategy would result in an estimated additional 18 feet (1.2 ft/year over 13 years) of groundwater level decline by 2030 in areas of pumping (**Figure 5**) and an additional 10 feet of groundwater level declines between 2030 and 2050. However, after 2050, groundwater levels would stabilize with pumping at the safe yield.

As noted above, the proposed pumping strategy would result in an estimated additional 28-foot decline in groundwater levels in the vicinity of the Bucket Well (see **Figure 5**). However, declines may be slightly higher in some areas, and considerably less in many areas. Therefore, to ensure that significantly higher declines do not occur in some areas, it is proposed that a threshold groundwater elevation be set at 40 feet below 2015 levels (the last year for which we have groundwater level data across the Basin). That is, groundwater levels at key monitoring wells located throughout the IWV Basin cannot decline more than 40 feet below 2015 levels. Even prior to the proposed pumping reduction schedule between 2030 and 2040 (possibly extended to 2050), immediate reductions would be implemented based greater than anticipated groundwater level declines. For example:

- If groundwater levels decline to 25 feet below 2015 levels in a monitoring well, then pumping rates would be reduced to achieve 67% of 2015 levels in the vicinity of that monitoring well
- If groundwater levels decline to 35 feet below 2015 levels), then pumping would be reduced to rates that achieve 33% of 2015 levels
- If groundwater levels continue to decline to 40 feet below 2015 levels, then pumping would be reduced to the assigned “free pumping allocations” (see later discussion)

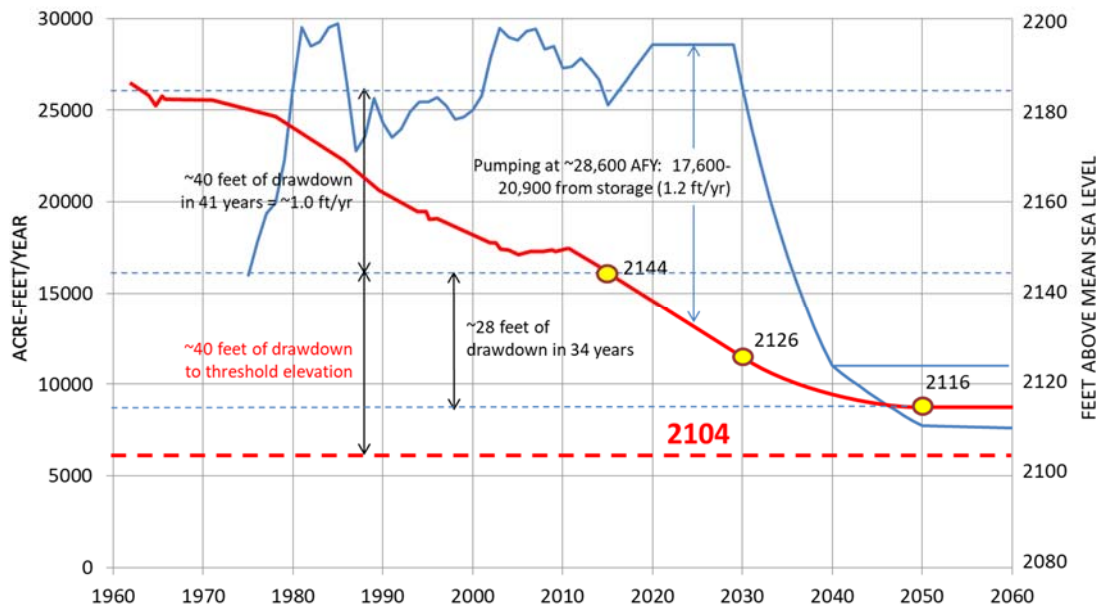


Figure 5: Historical (1960-2016) and Future (2017-2060) Groundwater Levels with the Proposed Pumping Strategy (1975-2015 data for the Bucket Well – T27S/R40E, Sect. 15, Well D01)

How Should Pumping Reductions Be Implemented?

As noted in the above proposed pumping strategy, between 2030 and 2040 (possibly extended to 2050), total native fresh groundwater pumping would be reduced from projected 2020 demands of 28,600 AFY to the native safe yield, which for purposes of this discussion paper is estimated to be between 7,700 and 11,000 AFY.

To develop a better estimate of pumping volumes, the exact number of *de minimis* pumpers in IWV (defined in SGMA as using 2 AFY or less for domestic purposes), the condition of their wells, and their water use must be established. However, the metering of all *de minimis* pumpers may not be practical or necessary to achieve groundwater sustainability in the Basin. In addition, most private well owners do not have access to alternate supplies. Therefore, it has been conservatively assumed that the total volume of groundwater pumped by *de minimis* pumpers, estimated at 1,100 AFY (IWWVD, 2017), would not change. *De minimis* pumpers would be required to adopt water conservation measures, and would be encouraged to connect to local public or domestic mutual water companies to the extent feasible (see later discussion). In addition to the *de minimis* pumpers, it has been assumed that pumping at NAWS would be sustained at current levels (i.e. 1,500 AFY), given the need to maintain operations at NAWS, their Federal water rights, and past conservation measures undertaken at NAWS.

With the conservative assumption that volumes extracted by *de minimis* pumpers and NAWS may not change, reductions would be borne by all non-*de minimis* pumpers: IWWVD, Mojave, Meadowbrook, SVM, Simmonds Ranch, Quist Farms, the community of Inyokern, other smaller farmers, and the City of

Ridgecrest. Without potential reductions by *de minimis* pumpers and NAWS (e.g. from conservation measures), these non-*de minimus* pumpers would need to reduce their combined pumping of native fresh groundwater supplies from about 26,000 AFY to between 5,100 and 8,400 AFY (between 68 and 80% or 5.5 to 7.8% per year from 2030 to 2040 or possibly 2050). The loss of pumping would be offset by the development of alternate water supplies made available to these pumpers (see later discussion).

To achieve the necessary reduction in native groundwater pumping, each of the non-*de minimis* pumpers would be assigned two forms of allocations, which would be keyed to three different extraction fees discussed further below. Each pumper would obtain an annual “baseline pumping allocation” which, cumulatively, together with the domestic well users, would total the 2020-2030 baseline of 28,600 AFY - referred to herein as the “operating yield”. The baseline pumping allocations would be ramped down proportionally from 2030 to 2050 until the operating yield equaled the native safe yield (estimated for purposes of this discussion paper to be between 7,700 and 11,000 AFY).¹

Each pumper would also be assigned a share of the basin’s native safe yield as a sub-set of their baseline allocation - referred to herein as a “free pumping allocation”. At any time after 2020, a pumper may pump up to their free pumping allocation and only pay a small, per AF, basin management fee and no capital projects fee (sometimes referred to as a replenishment fee) or overdraft fee (see later discussion). The pumping allocation assigned to each pumper would only include native groundwater supplies and would not include any water they receive from alternate sources, such as treated brackish water.

Any party with a demand that exceeds its free pumping allocation would have the option of paying the capital projects fee or purchasing/leasing free pumping allocation from another pumper with surplus (see later discussion). Of course, in lieu of paying the capital projects fee or acquiring additional free pumping allocation, a pumper could also substitute the to-be-developed alternative supplies to avoid pumping of native groundwater in excess of their free pumping allocation.

As discussed later, commencing in 2030, as the operating yield is gradually reduced annually, a pumper pumping in excess of its annual baseline allocation (its share of the operating yield) would also pay an “overdraft fee,” which would be added to the funds obtained from the capital projects fee to fund projects to develop alternative water supplies.

¹ This is similar to the approach and terminology used in the judgment entered in the Seaside Basin Adjudication, which defines an “operating safe yield” and individual shares thereof as well as a considerably lower “native safe yield” with individual shares thereof. The shares of the operating yield are reduced triennially by 10% until the operating yield is equivalent to the native safe yield. Pumping in excess of the native safe yield share incurs a replenishment assessment and pumping in excess of the shares of the operating safe yield incurs an additional and higher per AF replenishment assessment (or overdraft fee).

What Alternate Sources Can Be Developed?

To meet the future water demands within IWW, given the proposed reduction in native fresh groundwater pumping, alternate water supplies will need to be developed. The following alternate water supplies have been identified as having some potential to meet water demands within IWW:

1. The development of brackish groundwater within the Basin, and construction of pipelines to supply non-*de minimus* groundwater pumpers
2. The relocation of some pumping to the far southwest of the Basin (i.e. El Paso area), and construction of a pipeline to the central area of the Basin
3. The development of supplies in areas adjacent to the Basin with surplus water, and construction of a pipeline to the central area of the Basin
4. The development of a groundwater banking program with the Los Angeles Department of Water and Power (DWP), where a portion of the banked water is retained to supplement natural recharge to the basin
5. The development of water supplies far from the Basin, and exchange of that water with DWP either directly or indirectly, and the equivalent off-take of water from the Los Angeles Aqueduct (i.e. a water swap)
6. Reuse and/or recycling of waste water from IWW users (estimated at 2,000 AFY)

It should be noted that pumping brackish groundwater (option 1) and fresh groundwater in the far southwest (option 2) would still be removing groundwater from storage and result in groundwater level declines in these pumping areas. For these reasons, these strategies should only be viewed as interim projects (i.e. 20-50 years), and not permanent, long-term strategies. Brackish groundwater beneath the north and east areas of the Basin would likely have no reasonable beneficial use and, to the extent that is true, it could be managed differently under SGMA from areas underlain by fresh groundwater. This would allow pumping of brackish groundwater so long as there were no significant and unreasonable undesirable results in areas of fresh groundwater. In addition, the migration of poorer quality, brackish groundwater would lead to water quality degradation in areas of the Basin with fresh groundwater. The pumping of brackish groundwater would control this migration and mitigate this undesirable result. Pumping in the far southwest area of the Basin, south of the IWW Fault Zone), would still be removing fresh groundwater (with beneficial uses) from storage. However, by moving pumping away from the central area with chronic groundwater level declines (~1 ft/year) it would serve as an interim measure to reduce the rate of decline. A separate management area would potentially need to be established for the southwest area to allow short-term pumping within the sustainable yield of this defined area.

Depending on the Basin's native safe yield and the amount of pumping, alternative supplies will need to offset between 17,600 AFY (28,600 minus 11,000 AFY) and 20,900 (28,600 minus 7,700 AFY) of reductions. It is not likely that one alternate supply can deliver that much water to the IWW. Therefore, two or more (and perhaps all) of the above alternate supplies will likely be needed. Brackish groundwater (alternative #1) likely represents a significant potential interim source of alternate water in

the near term, has a high likelihood of success, can deliver water before 2030, and is local. A brackish groundwater feasibility study is already underway. In addition, grant funding from DWR is available for additional brackish water studies and a treatment demonstration plant. Feasibility evaluations for other alternate supplies (#2 through #6) will need to be developed in the coming months and years.

How to Fund Ongoing Groundwater Management And New Water Projects?

In general, groundwater management activities fall into the following three categories:

- Ongoing management activities (e.g. data collection, collation and analysis – monitoring groundwater pumping rates, groundwater levels, water quality, etc.)
- Groundwater studies (e.g. southwest area pumping feasibility analysis)
- Capital projects (e.g. new water supply wells, water treatment facilities, transmission pipelines)

Funding for these activities can come from one or more of the following sources:

1. Grant funds available from the State and Federal government
2. Low-interest government loans (e.g. State Revolving Loan [SRF] funds)
3. Voluntary contributions from pumpers
4. Taxes (e.g. property taxes, sales taxes, special taxes)
5. Groundwater extraction fees
6. Private investment, either as a privately owned project or public-private partnership

Wherever grant funds are available, the IWVGA or a group of pumpers should pursue these aggressively (e.g. Proposition 1 GSP development grants, brackish water grants, geophysics grants, water treatment grants). In addition, low-interest government loans should be secured for major capital projects. Where a study or capital project provides a benefit to a select group of pumpers, then those parties should be encouraged to voluntarily fund a portion of such studies or projects (e.g. the current brackish water study).

There are many groundwater basins in California that are actively managed by a special district (e.g. OCWD) and many basins where a Watermaster has been appointed after an adjudication proceeding. In nearly all of these basins, a groundwater extraction fee or replenishment assessment is imposed on the pumpers to pay for ongoing basin management activities, fund studies, and provide complete or partial funding for capital projects.

A conceptual groundwater extraction fee structure for the IWV could include three types of fees: (1) a basin management fee, (2) a capital projects fee, and (3) an overdraft fee. The fees would be levied on every pumper in the basin on an annual per AF basis with the exception that *de-minimis* users would be just charged a flat annual fee. The actual amount of each type of pumping fee would be set each year based on the projected budget for groundwater management activities and planned studies in the

coming fiscal year and the five-year basin plan that includes planned capital projects. Thus, depending upon the budgets and plans, in some years the capital projects fee may be higher than the basin management fee, and visa-versa.

For all pumpers (except *de-minimis* users), the small “basin management fee” would be assessed on every AF pumped to pay for general management activities (e.g., administrative costs, monitoring, basin research).

The “capital projects fee” would be assessed only on pumping that exceeds a pumper’s assigned free pumping allocation to pay for feasibility studies, engineering design and permitting (i.e., the soft construction costs) of capital facilities to develop alternative water supplies for the IWV. The hard construction costs for capital facilities, along with ongoing operation and maintenance (O&M) costs and periodic replacement costs, would be built into the per AF delivered cost of the alternate water supplies. That is, alternate supplies would mostly be funded by the ultimate users of that water. It is anticipated that the capital projects fee would decline between 2030 and 2050, as most of the alternate water supply projects would be constructed between 2030 and 2050.

An “overdraft fee” would also be assessed for any pumping in excess of the baseline allocation. The overdraft fee would be designed (priced) to: (1) discourage individual pumping above the increasingly reduced baseline allocations (and cumulative pumping above the overall operating yield); (2) incentivize a market for exchange of allocations; and (3) fund the purchase of alternate water by the basin manager to be used to recharge the basin and offset the overdraft pumping. To achieve these goals, the overdraft fee would be set at a value slightly higher than the cost of alternate supplies. This would encourage the development and use of these alternate supplies, and create a common pricing for water throughout the Basin, whether it is local native groundwater or alternate supplies.

Figure 6 illustrates when the various pumping fees might be assessed against an individual pumper between 2020 and 2050 and beyond.

As noted, the imposition of fees can also provide a market for the transfer of pumping allocations. For example, a pumper may lease or permanently sell its free pumping allocation to another pumper or lease any part or all of their baseline allocation to another pumper that needs additional water supplies that year. This transaction is between two independent pumpers, but subject to approval by the basin manager. In practice, the value of this transferred water is capped by the overdraft fee. That is, if it is cheaper to pay the overdraft fee, then why purchase another party’s pumping allocation? Clearly, a series of rules and procedures would need to be developed to establish and manage such a water-trading market.

One important takeaway is that allowing more pumping generates more fees, and while allowing current pumping to continue removes more groundwater from storage it also generates even more fees. By imposing a capital projects fee on pumping in excess of the free pumping allocation and an

additional overdraft fee on pumping in excess of the baseline allocation, it allows the pumping that created the problem to pay for the solution.

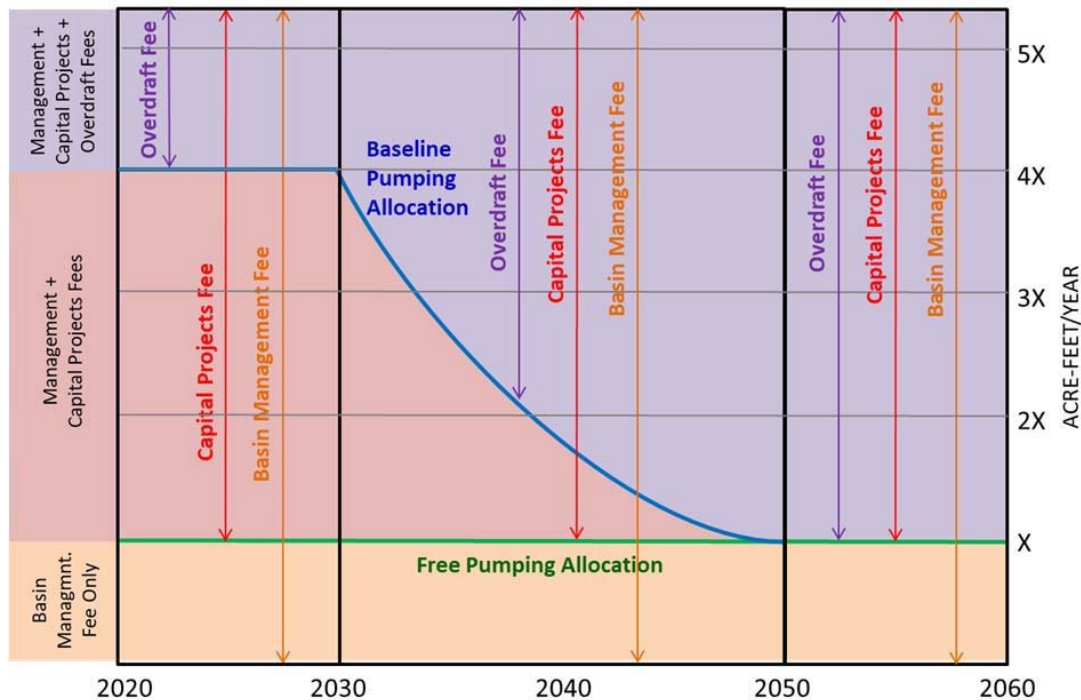


Figure 6: Assessment of Fees Relative to Free Pumping Allocation and Baseline Pumping Allocation

This gradual “soft-landing” approach, coupled with a fee structure for pumping in excess of the native safe yield and allowance of pumper-to-pumper exchanges of allocation, has been implemented in several prior groundwater management/ overdraft curtailment programs. Examples include the Mojave Basin and Seaside Basin. The approach affords the following advantages:

- It allows time for pumpers to adjust to the necessary ramp-downs in their baseline allocation of the operating yield to the native safe yield, helping minimize economic impacts on pumpers and reducing the risk of potential costly litigation
- It builds capital to fund the initial development of alternative supplies and affords time to bring the new projects online without water supply disruption
- It fosters a market for exchanges of allocations among pumpers, which in turn, incentivizes conservation and reallocation of groundwater supplies from lower- to higher-valued uses

What Happens If Domestic Wells Start To Dry-up?

As noted in the pumping strategy section, it is proposed that current pumping levels be maintained through 2030. Pumping would then be reduced to the sustainable yield between 2030 and 2040 (and possibly extended to 2050). However, as noted, this pumping will result in continued declines in

groundwater levels through at least 2040. An additional groundwater level decline threshold would be set at 40 feet beyond 2015 levels (see prior discussion). The larger groundwater pumping wells operated by IWWVD, SVM, and larger agricultural interests are deep enough to accommodate an additional 40-feet of groundwater level decline without any serious adverse consequences for the well. However, with this additional drawdown, there is a possibility that shallower, domestic wells could face problems; in fact, some wells may become inoperable. A contingency plan is needed to address these situations.

The following are potential solutions to these problems:

1. For isolated properties, subsidize the drilling of a new, deeper domestic well for the impacted party
2. Connect the party to the municipal supply (i.e. IWWVD), if they are proximate to the municipal distribution network
3. Connect the party to an alternate supply (e.g. treated brackish water), if they are close to the treated water delivery pipeline
4. Connect the impacted party to a neighbor's well, if that well has not been impacted and the neighbor is willing to allow such a connection
5. Establish a domestic mutual water company in an impacted area, drill a new, deeper well to service this area, and connect the impacted parties to the mutual water company distribution system

Where a party is located far from the IWWVD distribution network, but in an area with many domestic well owners, option 5 will likely be preferable.

Conclusion

IWV can continue to pump fresh groundwater at rates in the near term in excess of native safe yield, so long as such pumping does not cause significant and unreasonable undesirable results, as defined in SGMA and established by the IWVGA. However, this pumping will eventually have to be reduced to meet sustainability goals for the Basin. It is proposed that fresh groundwater pumping continue at current rates through 2030, and then be reduced to the sustainable yield between 2030 and 2040 (possibly extending to 2050).

A contingency plan should be developed to ensure that *de minimis* domestic well owners have access to a water supply in the event their wells run dry. This plan could include the creation of domestic mutual water companies.

A pumping fee assessment comprising a basin management fee on every AF of groundwater extracted and a capital projects fee on every AF above an assigned "free pumping allocation" should be imposed. In addition, an overdraft assessment should be charged for any pumping above a party's "annual baseline allocation" of the operating yield. These assessments should be used to pay for ongoing basin management, groundwater studies, and a portion of capital projects. Imposing these assessments also creates a market for the transfer of pumping allocations between parties.

In summary, IWV can dip into their groundwater savings to yield long-term economic growth and invest in projects with a long-term return of water. This strategy lets the pumping that created the overdraft problem pay for the long-term solution.

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INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Kern McGee Community Center, 100 W. California Ave, Ridgecrest, CA 93555

TECHNICAL ADVISORY COMMITTEE REPORT

Thursday, April 19th, 2018, Time 10:00 a.m.

- WRM/TAC Discussion
 - Stetson presented the Priority Projects and Tasks
 - a- Prop 1 grant funding update was provided. Final Grant awards were announced on April 4, 2018. IWVGA received full funding for both Category 1 and 2 projects. Draft Template contract is currently in legal review. Administrative grant requirements in review with Kern County.
 - b- Modeling schedule update was provided. Update on coordination with Navy/DRI contract was provided. Tim Parker asked how Brackish Water Study will be integrated into the model. In response, the integration is dependent on project schedule and timing. Navy must approve structural changes to the DRI model. Responses to TAC comments regarding the Basin Model review and the Initial Water Budget Presentation were provided.
 - c- Recycled water opportunities update. Update provided on current sources of wastewater and recycled water. Discussion on regulatory constraints and opportunities including non-potable reuse including septic tank flow, indirect potable reuse, and direct potable reuse. Committee provided comments on narrowing down list of high priority projects and need to document all potential projects for potential future funding opportunities. Stetson recycled water opportunities outline #2 was presented.
 - d- Alternative/Imported water opportunities update. Discussion on water transfer regulations; potential imported water sources from Owens Valley, Cadiz Water Project, and Fremont Valley Recovery Project; demand management measures; and AVEK opportunities and current agreements with MWD. Committee provided comments on narrowing down list of high priority projects and need to document all potential projects for potential future funding opportunities.
 - e- Discussion on reporting of pumping without meters. Committee members received data package for Special Workshop on the Pumping Assessment. WRM received comments prior to TAC meeting.
 - f- Discussion on identification of potential wells/owners subject to Pumping Assessment. Committee members received data package for Special Workshop on the Pumping Assessment. Input provided to WRM on sources to identify wells and well owners. Committee emphasized need for complete well inventory.
 - g- Discussion on Prop 1 Grant – Category 1 (SDAC) Project. Draft RFP was presented. WRM indicated decision should be made regarding who should be the

IWVGA TAC COMMITTEE

Meeting of April 19, 2018

contracting entity. Committee indicated conservation work should be coordinated with the Indian Wells Valley Water District

- h- Comments since the last TAC committee meeting previously received by the WRM from individual TAC members regarding priority projects and tasks were provided. No additional discussion.
- Regarding Future Agenda meetings, the June and July dates are being reviewed and may be changed in order to meet quorum requirements due to holidays and other state related groundwater meetings that TAC members may be attending out of town. TAC and Stetson will inform the GA of any changes.
- For TAC member comments, Tim Parker informed the TAC about the upcoming Groundwater Resources Association GSA Workshop in the first week of June.
- **The TAC meeting was finished and adjourned at 4:15pm in preparation of the upcoming Workshop meeting.**

PAC Report for IWVGA Board of Directors Meeting – April 19, 2018

The following actions and discussions took place at the March 29, 2018 PAC meeting. This meeting was approved as an alternate meeting for the April 5, 2018 PAC meeting.

Agenda item #1 – Roll call established that 8 voting PAC members were present.

Agenda item #2 – Review of those submitting Form 700. Only 2 PAC members need to submit their Form 700s .

Agenda item #3 – No public comment.

Agenda item #4 – Approval of March 1, 2018 minutes pending until May 3, 2018 meeting.

Agenda item #5 – Review of PAC Action Schedule. The discussion of the updated form was rolled into the discussion for Agenda item #7.

Agenda item #6 Potential Actions to complete Outreach Strategy (C&E Plan)

Regarding C&E items #1.a. and 1.a.i., (background items relating to the background for GSA and GSP), Steve Johnson sent to the PAC some information from the Proposition 1 Funding application used for the C&E Plan outline.

PAC members completed a final review of the C&E Plan document.

PAC has submitted the C&E Plan for presentation, and potential approval by Resolution at the IWVGA meeting on April 19, 2018.

Agenda item #7 Discussion and Responses to Questions From Water Resources Manager

These questions were placed on the March 29, 2018 agenda for additional discussion. #1 on the e-mail: C&E Plan is a written document. Other written documents that PAC will provide are written reviews/recommendations on each topic on the PAC /PAS schedule, also on Draft of each GSP element or GSP Chapter, and review and comment on Draft Final of GSP before IWVGA Board approval and submission to DWR.

PAC members recommend that on the POAM and the PAC/PAS schedules, the Description column should state for each topic or GSP Element “Discussion of Outreach Plan and Policy options.”

We ask that the Water Resources Manager meet directly with PAC members at one of our meetings to discuss policy alternatives and policy directions. Together we need to establish the best answer for policy decisions, because we seem to be getting conflicting directions regarding how PAC should proceed. We look forward to seeing topics or GSP elements forwarded to us from the WRM and the TAC for PAC review and development of policy alternatives and recommendations.

Agenda item #8 Discussion and Decision Regarding Allocation of Comment Times for 30 Minute Time Frame Designated for PAC at April 5, 2018 Public Workshop.

After discussion by PAC members, they decided to set up 5 constituent categories for a comment period of 6 minutes each. Categories are: 1) Ag representatives (2 large and 1 small – Stiefvater,

Imsand and Quist); 2) Business interests (Janiec, Wilson); 3) Domestic Well Owners (Fisher, Katzenstein); 4) Industrial business and Wholesaler (Godard); 5) Residential/ratepayers, rural unincorporated areas, including DACs, private property owners (Panzer, Westa-Lusk, Carroll, Thomas)

Public comments regarding the Workshop were received, but not discussed, because the April 5, 2018 Public Workshop and Assessment package for groundwater extraction fees were not on the agenda.

Agenda items # 9 Future Agenda Items, and #10 Committee Member Announcements or Comments – no input from PAC members.

Agenda item #11 Adjournment. Meeting adjourned at 9:06 P.M. to the April 5, 2018 Public Workshop.

Submitted by

A handwritten signature in cursive script that reads "Donna Thomas".

Donna Thomas, IWVGA PAC Chair April 9, 2018

RESOLUTION NO. _____

**A RESOLUTION OF THE
INDIAN WELLS VALLEY GROUNDWATER AUTHORITY
ADOPTING A COMMUNICATION AND ENGAGEMENT PLAN**

BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE INDIAN WELLS VALLEY GROUNDWATER AUTHORITY as follows:

WHEREAS, The Indian Wells Valley Groundwater Authority (IWVGA) was formed through a Joint Exercise of Powers Agreement for the purpose of forming a Groundwater Sustainability Agency (GSA) to manage the Indian Wells Valley groundwater basin and to implement Sustainable Groundwater Management Act (SGMA) requirements, including the development of a Groundwater Sustainability Plan (GSP); and,

WHEREAS, Pursuant to the SGMA, prior to initiating the development of a GSP, IWVGA shall make available a written statement describing the manner in which interested parties may participate in the development and implementation of the GSP (Water Code § 10727.8(a)); and,

WHEREAS, the IWVGA Board has created a Policy Advisory Committee (PAC) which provides representation to all types of water users in the Indian Wells Valley groundwater basin on policy matters of the Board associated with SGMA (including the GSP); and,

WHEREAS, Pursuant to Water Code sections 10727.8(a), 10723.2, and Cal. Code Regs. § 354.10(a), the IWVGA PAC has prepared a Communication and Engagement Plan to encourage public and agency participation in GSP development and implementation.

NOW, THEREFORE, BE IT RESOLVED by the Board of the Indian Wells Valley Groundwater Authority that the Communication and Engagement Plan is hereby adopted.

PASSED, APPROVED, AND ADOPTED, by the Indian Wells Valley Groundwater Authority this _____ day of _____, 2018.

SIGNED:

President of the Board of Directors

ATTEST:

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Communication and Engagement Plan

Indian Wells Valley Groundwater Authority

Policy Advisory Committee

April 19, 2018

POLICY ADVISORY COMMITTEE:

Chairperson - Donna Thomas, Eastern Kern County Resource CD

Secretary - Renee West-Lusk, Residential Customers of Public Water Agency

Rodney Stiefvater, Large Agriculture

Edward Imsand, Large Agriculture

Patricia Quist, Small Agriculture

David Janiec, Business Interests

Carol Wilson, Business Interests

Nick Panzer, Residential Customers of Public Water Agency

West Katzenstein, Domestic Well Owner

Lyle Fisher, Domestic Well Owner

Steve Godard, Wholesaler Industrial User

Tim Carroll, Inyokern Community Services District

NON VOTING MEMBERS:

Don Zdeba, Indian Wells Valley Water District

Ryan Klausch, Bureau of Land Management

John Kersey, Department of the Navy

Lorelei Oviatt, Kern County Planning and Natural Resources

Indian Wells Valley Groundwater Authority Policy Advisory Committee COMMUNICATION AND ENGAGEMENT PLAN

EXECUTIVE SUMMARY

This document outlines a COMMUNICATION and ENGAGEMENT PLAN to encourage public and agency participation in Groundwater Sustainability Plan development and implementation.

COMMUNICATION

Each stakeholder and agency must have an opportunity to understand the magnitude of the groundwater overdraft problem and how that problem could affect the stakeholders.

ENGAGEMENT

Each stakeholder and agency must have an opportunity to understand the process for participation in developing a plan to solve the overdraft problem.

Authority: Water Code Secs 10727.8 (a) and 10723.2 and Reg. Sec. 354.10(a)

INTRODUCTION

The Indian Wells Valley Groundwater basin is located east of the southern Sierra Nevada Range in southern California with an area of approximately 382,000 acres underlying portions of Inyo, Kern, and San Bernardino Counties. The Indian Wells Valley Groundwater basin is identified by the Department of Water Resources (DWR) as Basin 6-54 in Bulletin No. 118. The Indian Wells Valley groundwater basin is classified as a "medium priority" basin pursuant to the California Statewide Groundwater Elevation Monitoring (CASGEM) program and the Sustainable Groundwater Management Act (SGMA). The Indian Wells Valley groundwater basin is also classified as a "critically overdrafted" basin in Bulletin No. 118 interim update (2016), prepared by the DWR. As required by SGMA, all Bulletin No. 118 basins designated as "high" or "medium priority" and "critically overdrafted" shall be managed under a groundwater sustainability plan (GSP) by January 31, 2020, including the Indian Wells Valley groundwater basin.

GROUNDWATER SUSTAINABILITY AGENCY FORMATION AND PROJECT PROPONENTS

In July 2016, the Indian Wells Valley Groundwater Authority (IWVGA) was formed through a Joint Exercise of Powers Agreement for the purpose of forming a Groundwater Sustainability Agency (GSA) to manage the Indian Wells Valley groundwater basin and to implement SGMA requirements, including the development of a Groundwater Sustainability Agency (GSP). The IWVGA consists of the following voting member agencies:

1. City of Ridgecrest (a public agency)
2. Indian Wells Valley Water District (a California Special District)
3. County of Kern (a public agency)
4. County of Inyo (a public agency)
5. County of San Bernardino (a public agency)

along with the United States Department of the Interior Bureau of Land Management and the United States Navy, Naval Air Weapons Station China Lake as non-voting associate members.

The IWVGA conducts regular Board meetings (on a monthly basis) to support the development of the GSP for the Indian Wells Valley groundwater basin to present information concerning the GSP, and to receive input from the public attending the meetings. The IWVGA has specific authorities with additional and full powers granted by SGMA upon approval of the GSP by the State of California. The IWVGA has created a Technical Advisory Committee (TAC) which meets on a monthly basis and will assist in the development of the GSP. In addition, the IWVGA Board has created a Policy Advisory Committee (PAC) which meets on a monthly basis and provides representation to all types of water users in the Indian Wells Valley groundwater basin on policy matters of the Board associated with SGMA (including the GSP). Through these committees and other means the public will be engaged to provide input to the GSP. Throughout the development of the GSP, the IWVGA Board will receive input from the TAC, PAC, and the public, including input regarding the key Work Plan tasks which are identified and presented in the sections below.

According to Article 5.7 of the "Bylaws of the Indian Wells Valley Groundwater Authority" (Bylaws), dated May 18, 2017, the voting members of the PAC include water users from the following:

- 2 representatives from Large Agriculture
- 1 representative from Small Agriculture
- 2 representatives from Business Interests
- 2 representatives from Domestic Well Owners
- 2 representatives from residential customers of a public agency water supplier
- 1 representative from Eastern Kern County Resource Conservation District
- 1 representative from Wholesaler and Industrial User
- At least 1 representative from Disadvantaged Communities

One representative each from the Indian Wells Valley Water District, the United States Department of the Interior, Bureau of Land Management – Ridgecrest Field Office , and the United States Navy, Naval Air Weapons Station China Lake and Director of Kern County Planning and Natural Resources Department are also included as non-voting PAC members.

According to Article 5.12 of the Bylaws, the TAC shall be comprised of individuals representing PAC members, PAC membership categories, and the interests of basin landowners and water users. PAC members may nominate a TAC member for their respective membership category.

During the formation of the IWVGA, a comprehensive listing of interested parties (including name, email, and phone number) was developed. The listing includes local community residents (including Disadvantaged Communities, Severely Disadvantaged Communities, and Economically Distressed Areas), businesses, large and small-scale agriculture, domestic well owners, academic institutions, relevant state and local agencies, federal agencies, non-profit organizations, and community organizations. This listing of over 150 stakeholders includes representatives from all types of water users within the Indian Wells Valley groundwater basin and was used during the 17-month long GSA formation process for notification of public meetings, notifications, and updates related to discussions on the SGMA. This stakeholders listing will continue to be updated and used during the development of the GSP.

PURPOSE AND ORGANIZATION

The Indian Wells Valley groundwater basin resources are currently not sustainably managed. Overdraft conditions have existed since the 1960s as a result of groundwater pumping exceeding the sustainable yield. Disadvantaged Communities (DACs), Severely Disadvantaged Communities (SDACs), ~~and~~ Economically Distressed Areas (EDAs) and the large number of shallow domestic water wells overlying the Indian Wells Valley groundwater basin are particularly susceptible to adverse effects resulting from chronic lowering of groundwater levels-accordingly, mitigating the chronic lowering of groundwater levels through implementing the GSP is an urgent requirement. As a result of these conditions, and with the purpose of complying with SGMA regulations and DWR standards and guidance, the purpose of the Indian Wells Valley groundwater basin GSP Work Plan was established:

Purpose: Develop a Sustainable Groundwater Management Act (SMGA) compliant Groundwater Sustainability Plan (GSP) that provides sustainable management strategies that culminate in the absence of undesirable and unsustainable groundwater conditions within 20 years in order to provide long-term sustainable groundwater management that provides a viable future for the basin.

GOALS AND DESIRED OUTCOMES

- Desired outcomes include, making use of local knowledge, creating improved outcomes, building trust, reducing conflict, increasing credibility, building partnerships, promoting stakeholder buy-in and broader public awareness, understanding, knowledge, and support for all voices and perspectives.
- Public participation is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process.

- Public participation includes the promise that the public's contribution will influence the decision.
- Public participation promotes sustainable decisions by recognizing and communicating the needs and interests of all.
- Public participation provides all with the information they need to participate in a meaningful way.
- Public participation communicates to all how their input affected the decision.
- Plan for economic development and growth while protecting private property rights, water rights and health and safety.

COMMUNICATION OBJECTIVES

- The guiding principles of the Communication and Engagement plan are:
 - Commitment to open communication,
 - Inclusivity, and respect for all views
 - Assurances of two-way communication
 - Being clear about the process and the details of the problem.
 - Individualizing contact to provide communication with every resident, landowner and business owner to the extent possible and the creation of meaningful opportunities for feedback.
- Enhance understanding and inform the public about water, ~~and~~ groundwater resources, uses and water balance in the Indian Wells Valley and the purpose and need for the GSP.
- Engage a diverse group of interested parties and stakeholders and promote informed community feedback throughout the GSP preparation and implementation process.
- Engage entities and groups that may be instrumental in supporting, influencing and implementing a potential broad array of options and solutions developed under the plan that may contribute together to the goal of reaching groundwater sustainability in the IWV Basin.
- Coordinate communication and involvement between the GSA (Board, Advisory Committees and staff) and other local agencies (including other GSAs) elected and appointed officials and the general public.
- Utilize the Policy Advisory Committee to facilitate a comprehensive public engagement process.
- Employ a variety of outreach methods that make public participation easy and accessible. Hold meetings at times and locations that encourage broad participation.
- Respond to public concerns and provide accurate and up-to-date information.
- Manage the community engagement program in a manner that provides a maximum value to the public and an efficient use of GSA and local agency resources.
- Giving stakeholders an opportunity to understand
 - The quantitative details of the imbalance between current groundwater recharge and groundwater uses (that imbalance being the GSA's overriding challenge)

- The specific manner in which they may help develop a plan to create balance
- Clear explanations of how the plan could affect all uses and users of groundwater in the basin.

PRESENTATION AND COMMUNICATION CONCERNS AND CHALLENGES

- A. Use of unfamiliar technical language and terminology
- B. Lack of attendance
- C. Access for non-English language users, hearing impaired and ADA compliance
- D. Lack of access to internet and reference materials
- E. Engaging people with privacy concerns
- F. Non- interest in the subject and apathy
- G. Absentee and out of basin landowners
- H. Temporary employees in the basin who own homes
- I. Emphasizing the seriousness of the basin condition without being alarmist

OUTREACH METHODS AND NOTIFICATION

The following is guidance for the GSA staff and consultants to design the outreach plan based on the work plan milestones.

The following are methods that should be used beyond legal notifications:

- Individual mailings and newsletters
- Website updates and potential use of social media
- Public notices and display advertisements in newspapers
- Focused workshops
- Speaker Bureau for any organizations requesting presentation. The * indicates those organizations recommended for proactive contact. The bureau should include appointed people by the Board to accept and generate speaker engagement requests and have focused messages and the ability to answer questions.
- Evening GSA Board meetings to discuss milestone recommendations or any tax or regulations
- Hard copy materials along with CD should be placed in County libraries

Guidelines for Workshops:

- Provide a meeting venue large enough to accommodate expected attendance
- Night meetings preferred but focused workshop with a specific organization should be at the time preferred by the organization.
- Anticipate any request for translation and utilize headphone translation equipment if possible.
- Make materials available on the website either in advance or after the workshop.

- Make a clear explanation in any notice to the nature of workshop
(Informational only or possible decision made based on public comments).

Notification List (contact names and phone numbers provided under separate cover)

Any mailing of information should include all organizations and contacts on this list. Any persons or organizations that wish to be added to the list should be directed to contact the JPA staff and they should be added to the list for the next notification mailing. Once established people and organizations should not be dropped from the list unless the mailing is returned as undeliverable or they specifically ask to be removed. The * indicates these organizations recommended for proactive contact.

Service Organizations

American Legion*
BPO Elks Lodge*
Desert Area Resources and Training (DART)
Exchange Club*
Fleet & Family Support Center
Friends of the Fair, Inc.
Fraternal Order - Eagles*
Historical Society/Upper Mojave Desert*
IWV Optimist Club*
Kiwanis International*
Knights of Columbus*
Lions Club*
Masonic Lodge
Oasis Garden Club of IWV*
Rotary Club of China Lake*
Salvation Army
United Way of IWV
VFW*
Women's Center – High Desert, Inc.

Business and Advocacy Groups

Agricultural Property Owners Association – IWV
American Pistachio Growers
China Lake Alliance
China Lake Museum Foundation
California Rural Water Association (CRWA)
Democratic Club of IWV*
Domestic Wells Owners Association – IWV
Greater Antelope Valley Economic Alliance – GAVEA
Indian Wells Valley Economic Development Corporation
Inyokern Airport District
Inyokern Chamber of Commerce*

Kern County Farm Bureau
Kern Economic Development Corporation
Maturango Museum
NARFE (National Active and Retired Federal Employees Association*)
Ridgecrest Area Convention and Visitors Bureau (RACVB)
RC Republican Women, Federated*
Ridgecrest Area Association of Realtors*
Ridgecrest Chamber of Commerce*
Ridgecrest Regional Hospital
Ridgecrest United
Searles Valley Minerals
Trona Chamber of Commerce*

Schools and Religious Organizations

Adventist Christian School
Balas Montessori School
Calvary Christian School
Cerro Coso Community College
Heritage Montessori School
Immanuel Christian School
Liberty Christian School
Mountain View Christian Academy
Pilgrim Christian
Ridgecrest Charter School
Saint Ann School
Sierra Sands Unified School District
Sierra View Christian School
Soli Deo Gloria Christian Academy
The Bridge Learning Center

Tribal Representation

Cherokee Community of Central CA
Kern Valley Indian Council
Kitanemuk & Yowlumne Tejon Indians
Monache Intertribal Association
Nuui Cunni Cultural Center, Kern River Paiute Council
Tejon Indian Tribe
Timbisha Shoshone Tribal Council
Tubatulabals of Kern County

Utilities

Los Angeles Department of Water and Power
Pacific Gas and Electric
Southern California Edison
Southern California Gas

Local Government

City of Ridgecrest City Council
City of Ridgecrest City Manager
City of Ridgecrest City Attorney
City of Ridgecrest Planning
City of Ridgecrest Public Works
Fremont Valley Integrated Regional Water Management Program
Indian Wells Valley Water District
Inyokern Community Services District
Inyo County Board of Supervisors
Inyo County CAO
Inyo County Counsel
Inyo County Planning Department
Inyo County Water Department
Inyo Mono Integrated Regional Water Management Program
Kern County Board of Supervisors
Kern County CAO
Kern County Counsel
Kern County Planning and Natural Resources Department
Kern County Public Health
Kern County Water Agency
San Bernardino Board of Supervisors
San Bernardino CAO
San Bernardino County Counsel
San Bernardino County Land Use Services Department
San Bernardino County Public Health
Searles Domestic Water Company

State Government

California Department of Food and Agriculture
California Department of Water Resources
California Department of Conservation
Eastern Kern County Resource Conservation District

Ridgecrest

16th State Senate District (Jean Fuller)
34th State Assembly District (Vince Fong)

Trona (San Bernardino County)

16th State Senate District (Jean Fuller)
33rd State Assembly District (Jay Olbermolte)

Corner where Kern, San Bernardino and Inyo County meet

8th State Senate District (Tom Berryhill)
16th State Senate District (Jean Fuller)
26th State Assembly District (Devon Mathis)

CA Military Caucus
Governor's Office
Business & Econ Dev
Governor's Military Council
Office of Planning and Research

Federal Government

Ridgecrest
23rd Congressional District (Kevin McCarthy)

Trona (San Bernardino County)
8th Congressional District (Paul Cook)

Corner where Kern, San Bernardino and Inyo County meet
8th US Congressional District (Paul Cook)

Senator Kamala Harris

Bureau of Land Management – Ridgecrest Field Office
Department of Navy-Naval Air Weapons Station China Lake
USDA Natural Resources Conservation Service
USDA Farm Service Agency

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