

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Ridgecrest City Hall 100 W California Ave., Ridgecrest, CA 93555 760-499-5002

BOARD OF DIRECTORS

A G E N D A

Thursday, September 19, 2019

Closed Session 10:00 a.m.

Open Session 11:00 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 Lauren Duffy at (760) 384-5502. 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 <https://iwvga.org/>.

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.

1. CALL TO ORDER

2. PUBLIC COMMENTS ON CLOSED SESSION

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. CLOSED SESSION

- CONFERENCE WITH LEGAL COUNSEL - POTENTIAL 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.
- CONFERENCE WITH LEGAL COUNSEL - REAL PROPERTY NEGOTIATIONS
(Government Code Section 54956.8) IWVGA Negotiator: Capitol Core Group
Negotiating with: Representatives of Antelope Valley-East Kern Water Agency, Mojave Water Agency, County of Plumas and Tulare Lake Basin Water Storage District. Real Property: Miscellaneous Imported Water Supplies

4. OPEN SESSION - 11:00 a.m.

- a. Report on Closed Session
- b. Pledge of Allegiance
- c. Roll Call

5. 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.

6. CONSENT AGENDA

- a. Approve Minutes of Board Meeting August 15, 2019
- b. Approve Expenditures
 - i. \$9,620.00 - RWG Law
 - ii. \$20,979.34- DRI
 - iii. \$92,087.22- Stetson Engineers
 - iv. \$1,162.00 – City of Ridgecrest (unbudgeted)
 - v. \$14,030.37 – Capitol Core Group
 - vi. \$676.00 – Daily Independent – Legal Notice of Ordinance No. 01-19 (unbudgeted)

7. BOARD DISCUSSION AND CONSIDERATION OF APPROVING LETTER OF SUPPORT FOR THE DEFENSE COMMUNITY INFRASTRUCTURE PROGRAM (DCIP)

Description: The DCIP offers a potential avenue to secure funding sources for necessary infrastructure to support the water development projects the Basin needs to support the base and community around it.

8. WATER RESOURCES MANAGER (WRM) REPORT

- a. Report on Proposition 1 Grant Status
- b. Severely Disadvantaged Communities (SDAC) Programs Update
- c. Groundwater Sustainability Plan (GSP) Update

9. UPDATE ON IWVGA FINANCES

10. UPDATE ON OUTREACH EFFORTS

- a. IWVGA Billboard

Description: Staff to update Board on billboard informing public of the required Well Registration and due date for registration since the passing of Ordinance No. 01-19: Mandatory Well Registration. Item is unbudgeted.

11. BOARD QUESTIONS REGARDING POLICY ADVISORY COMMITTEE (PAC) AND TECHNICAL ADVISORY COMMITTEE (TAC) REPORTS

12. GENERAL MANAGER’S REPORT

- a. Report on IWVGA’s Water Marketer (Capitol Core Group)
- b. Well Registration Update

13. CLOSING COMMENTS

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

14. DATE AND TIME OF NEXT MEETING – October 17, 2019; 10:00 a.m.

15. ADJOURN

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INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

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

BOARD OF DIRECTORS MEETING MINUTES Thursday, August 15, 2019; 10:00 a.m.

IWVGA Members Present:

Chairman Ron Kicinski, IWVWD	Don Zdeba, IWVGA General Manager
John Vallejo, Inyo County	James Worth, Legal Counsel
Mick Gleason, Kern County	Steve Johnson, Stetson Engineers
Scott Hayman, City of Ridgecrest	Commander Peter Benson, US Navy, DoD Liaison
Thomas Bickauskas, Bureau of Land Management	Lauren Duffy, Clerk of the Board
Bob Page, San Bernardino County	

Meeting recording and public comment letters submitted are made available at:
<https://iwvga.org/iwvga-meetings/>

1. CALL TO ORDER:

The meeting is called to order by Chairman Kicinski at 10:00 a.m.

2. PUBLIC COMMENTS ON CLOSED SESSION:

None.

With no public comments, Chairman Kicinski calls the meeting into Closed Session at 10:01 a.m.

3. CLOSED SESSION:

- CONFERENCE WITH LEGAL COUNSEL - POTENTIAL LITIGATION (Government Code Section 54956.9(d)(2)(e)(1)) Number of cases: Two (2) 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.

4. OPEN SESSION:

Meeting was reconvened into Open Session at 10:57 a.m.

a. Report on Closed Session:

Jim Worth reported that no action was taken which would require disclosure under the Brown Act.

b. The Pledge of Allegiance is led by Lyle Fisher.

c. Lauren Duffy calls the following roll call:

Director Vallejo	Present
Director Hayman	Present
Chairman Kicinski	Present
Director Page	Present
Vice Chair Gleason	Present

Don Zdeba announced that Lauren Duffy, IWVGA Clerk of the Board, has accepted a new position at the Indian Wells Valley Water District and her replacement, April Nordenstrom, is introduced. April will be shadowing Lauren the remainder of this year and take over as Clerk beginning in January 2020.

Chairman Kicinski requested the following agenda item changes: first, to switch items #7 and #8, second, that items #10C and #14B take place before Public Comments. Board has no objections.

5. PUBLIC COMMENTS - Item tabled and addressed after item #14b and 10c

The Board heard public comments from; Lorry Wagner, Chuck Griffin, Judie Decker, Josh Nugent, Renee Westa-Lusk, Don Decker, Camille Anderson, Sarah Zegers, Larry Mead, Earl Wilson, Elaine Mead, Doreen Baker, and Derek Hoffman

6. CONSENT AGENDA:

- a. Approve Minutes of Board Meeting July 18, 2019
- b. Approve Expenditures
 - i. \$2,839.00 – RWG LAW
 - ii. \$8,621.45 – DRI
 - iii. \$94,209.05 – Stetson Engineers
 - iv. \$830.00 – City of Ridgecrest (unbudgeted)
 - v. \$27,800.00 – Capitol Core Group

Motion made by Scott Hayman and seconded by Mick Gleason to approve Minutes of Board Meeting July 18, 2019, and the following expenditures in the amount of \$2,839.00 to RWG Law, \$8,621.45 to DRI, \$94,209.05 to Stetson Engineers, \$830.00 to City of Ridgecrest, \$27,800.00 to Capitol Core Group. Motion unanimously carries by the following vote: (Ayes: Gleason, Hayman, Kicinski, Page, Vallejo. Nays: None. Abstain: None.)

7. BOARD REVIEW AND APPROVE RESOLUTION NO. 06-19 TO ADOPT FINAL WELL REGISTRATION FORM FOR ALL WELL OWNERS: - Item tabled and addressed after item #8

Motion made by Mick Gleason and seconded by Scott Hayman to approve Resolution No. 06-19 to adopt the final Well Registration form contingent of the following edits; Below general information the date indicates October 1st, 2018 but should be October 1st, 2019. Under the de minimis user box, there will be an added disclaimer to “stop here if you are a de minimis user”.

The Board heard public comments from Don Decker, Derek Hoffman, Nick Panzer, Judie Decker, and Phill Hall.

Motion unanimously carried by the following roll call vote:

Director Vallejo	Aye
Director Hayman	Aye
Chairman Kicinski	Aye
Director Page	Aye
Vice Chair Gleason	Aye

8. SECOND READING AND ADOPTION, ORDINANCE 01-19, ESTABLISHING THE REGULATIONS AND PROCEDURES FOR THE REGISTRATION OF ALL OWNERS WITHIN THE INDIAN WELLS VALLEY GROUNDWATER BASIN:

Motion made by Mick Gleason and seconded by Scott Hayman to approve waiving the complete reading of the ordinance and to adopt off the title only. Motion unanimously carried by the following vote: (Ayes: Gleason, Hayman, Kicinski, Page, Vallejo. Nays: None. Abstain: None.)

Director Page asked Jim Worth to confirm that the IWVGA has the legal authority to require well owners to register.

The board heard public comments from Don Decker and Sarah Zegers.

Motion made by Bob Page and seconded by Mick Gleason to adopt Ordinance No. 01-19. Motion unanimously carries by the following roll call vote:

Director Vallejo	Aye
Director Hayman	Aye
Chairman Kicinski	Aye
Director Page	Aye
Vice Chair Gleason	Aye

9. DISCUSSION AND BOARD DIRECTION TO STAFF ON SEVERELY DISADVANTAGED COMMUNITIES (SDAC) PROGRAMS:

Jeff Helsley provided an update on the Water Audit, Leak Detection, and Repair Program and the Residential and Commercial Program for SDAC. The WaterWise Consulting Agreement term period will be amended to reflect an end date for 2020. It has also been suggested that there be a change of language regarding indemnification, in the California Rural Water Association Agreement (pending Jim Worth's review). Additionally, both consultants agreed to an added clause reflecting the approved 90-day period between invoice and payment. However, there will be a late fee added should payment surpass the allotted 90 days.

Motion made by Mick Gleason and seconded by Scott Hayman to proceed with both SDAC programs, contingent on proposed changes, and receiving an extension from the Department of Water Resources. Motions unanimously carry by the following vote: (Ayes: Gleason, Hayman, Kicinski, Page, Vallejo. Nays: None. Abstain: None.)

Chairman Kicinski questioned how the billing processes will be handled. He also expressed his concerns for the cash flow issue.

10. WATER REOURCES MANAGER REPORT:

a. Report on Proposition 1 Grant Status:

Steve Johnson stated the second invoice that was submitted to DWR is still processing. Invoice #3 is being put together for submission; which will cover April 2019 through June 2019.

b. Report on Model Run 6.1 and 6.2:

Jeff Helsley gave an in-depth report on both Model Run scenarios that have been prepared by Desert Research Institute (DRI). Presentations made available in the board packet and on the IWVGA website.

c. Report on August PAC Meetings: **Item moved up to agenda item #6 for discussion.**

Steve Johnson provided a report on the following items:

➤ Transparency/Constructive Input:

Mr. Johnson commented on accusations of there being a lack of transparency. He stated that documents/presentations, concerning studies that have been conducted to aid in the Groundwater Sustainability Plan efforts have all been run by the Technical Advisory Committee (TAC) and made available to the public. In addition, sections of the drafted GSP, and the outlined GSP, have also been made available to both the Policy and Technical Advisory Committees. Mr. Johnson clarifies the attorney meetings were meant to be confidential, but Jim Markman provided note summaries of each meeting to

the PAC. Mr. Johnson asks attendees to send any and all constructive input that will aid in sustainability efforts.

➤ Water Resources Manager follow-up:

Early concepts of the extended period of “ramp down” have been deemed unacceptable by the Board. The expected impacts are potentially significant and are not fully known or understood. A key issue going forward is how substantial of a loss in groundwater storage is considered “significant and unreasonable”. Mr. Johnson stated that over drafting the basin will be detrimental to this community. Imported water will be part of their plan to reach sustainability, but where the water will come from is still an uncertainty.

➤ Brief Background/Update:

Steve Johnson gave an update on both the Technical Advisory Committee (TAC) and PAC Meetings. TAC went reasonably smooth, but the PAC received several questions from the Water Resources Manager. A follow-up PAC meeting was scheduled for August 7, 2019, which resulted in high volumes of comments, but no recommendations were made to the Board.

Vice Chair Gleason commended Stetson’s commitment to transparency. He further comments on the costs to mitigate secondary impact and claims that any import from the south is not practical, but importing water is critical to the community.

Chairman Kicinski commented on the cost of imported water being too expensive for the consumer, given the size of our community.

Director Vallejo stated that Inyo County is against importing water through the Los Angeles Department of Water and Power (LADWP) and adds the Board needs to explore other funding options, potentially including Navy funding, to facilitate the construction of a pipeline to deliver water from Antelope Valley East Kern.

Director Hayman expressed concerns for the potential changes in the quality of water the lower we get into the basin.

Mr. Bickauskas advised the Board to explore different solutions for potential dust issues that could possibly impact the air quality.

Board heard public comments from Elaine Mead, Don Decker, Renee Westa-Lusk, Earl Wilson, and Derek Hoffman.

11. UPDATE ON IWVGA FINANCES:

Don Zdeba provided an update on the monthly IWVGA finances. Report made available on the IWVGA website. Mr. Zdeba commented that monthly extraction fees for July are still coming in and will be added to the monthly report.

12. UPDATE ON OUTREACH EFFORTS:

Chairman Kicinski commented that he attended the Rotary Club of China Lake, where he discussed groundwater issues, as well as cleared up any misconceptions.

Vice Chair Gleason stated he supports any and all outreach efforts that were discussed at the PAC. He further stated that communication is a two-way street and we are relying on the citizens to do their part.

13. BOARD QUESTIONS REGARDING POLICY ADVISORY COMMITTEE (PAC) AND TECHNICAL ADVISORY COMMITTEE (TAC) REPORTS:

David Janiec, PAC Chair, gave an update on both the August 1st and August 7th PAC meetings. The Special PAC meeting was scheduled to allow constituents time to have their questions and/or concerns heard by the Board, regarding the Model Run Scenarios. Mr. Janiec encouraged all the Board members to watch the video of the August 7th meeting.

14. GENERAL MANAGER'S REPORT:

a. Report on IWVGA's Water Marketer (Capitol Core Group)

Mr. Zdeba stated the WaterSmart Grant was submitted and acknowledged by the Bureau of Reclamation. Stetson, CCG, and Staff have decided to pursue a grant for the full amount of \$400,000. Furthermore, due to July 31st deadline to submit the grant application, the Technical Memorandum was not ready by July 31st. It has since been completed and will be given to the Board in Closed Session.

b. CCG Presentation on progress to-date: **Item moved up to agenda item #5 for discussion.**

Jeff Simonetti and Todd Tatum gave a presentation on Imported Water Supplies, which further explains the Water Resources Technical Memorandum and Funding Sources Report that have already been reviewed by the Board. Presentation made available in the Board Packet and on the IWVGA website.

Chairman Kicinski questioned the costs for the Antelope Valley East Kern Project and Operation Maintenance.

15. CLOSING COMMENTS:

Mr. Bickauskas suggested the Board research new technologies that could provide better statistics on groundwater levels.

Director Vallejo re-emphasized the concern of Inyo County and its communities regarding the IWVGA's pursuit of importing water from the Owens Valley and encouraged the IWVGA Board to continue to pursue import opportunities that do not rely on water from the Owens Valley.

Chairman Kicinski thanked everyone for their time and efforts.

16. DATE AND TIME OF NEXT MEETING – September 19, 2019; 10:00 a.m.

With no further Board or Public comments, Chairman Kicinski recessed the meeting at 2:49 p.m. for a short break.

The meeting was reconvened into Closed Session at 2:55 p.m.

17. CLOSED SESSION

- CONFERENCE WITH LEGAL COUNSEL - REAL PROPERTY NEGOTIATIONS
(Government Code Section 54956.8) IWVGA Negotiator: Capitol Core Group
Negotiating with: Representatives of Antelope Valley-East Kern Water Agency, Mojave Water Agency, County of Plumas and Tulare Lake Basin Water Storage District. Real Property: Miscellaneous Imported Water Supplies

The meeting was called back into Open Session at 3:36 p.m.

No action was taken which would require disclosure under the Brown Act.

18. ADJOURN:

Chairman Kicinski adjourned the meeting at 3:37 p.m.

Respectfully submitted,

April Nordenstrom

Executive Secretary
Indian Wells Valley Water District

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Invoice for Indian Wells Valley Water - Groundwater Sustainability

INVOICE TO

Indian Wells Valley Groundwater Authority
 c/o City of Ridgecrest - City Clerk
 100 W. California Ave
 Ridgecrest, CA 93555

INVOICE NUMBER: CI-06-2592 A / 14 ✓
 DATE: 08/28/19
 AMOUNT: \$20,979.34 ✓
 TERMS: Due Upon Receipt

Contract/Grant/Agreement/Purchase Order Indian Wells Valley Grndwater Authority ✓ Contract Dated 5/23/18	Period Billed	
	From 7/1/2019	To 7/31/2019
Title: Indian Wells Valley Groundwater Authority / Groundwater Sustainability Plan - Model Coordination		
P.I.: Chapman, Jenny		
DRI Acct: AWD-06-00000423 / GR07189 RC0068		TAX ID #: 886000024
Cost Elements/Services	Current	Cumulative

Indian Wells Valley - Groundwater Sustainability

Salaries	20,979.34	227,950.65
Travel	0.00	5,982.19
Operating	0.00	12.00
Totals	<u>20,979.34</u>	<u>233,944.84</u>

Total Amount Due This Invoice 20,979.34 ✓

Budget Amount	292,169.00
Invoiced to Date	<u>233,944.84</u>
Budget Balance	58,224.16

"I certify to the best of my ability that all expenditures reported are for appropriate purposes and in accordance with the provisions of the award documentation."

Sherril Schmidt _____ 08/28/19
 Sherril Schmidt, Sponsored Research Specialist Date
 (775) 673-7404

Make Check Payable To: **Board of Regents** Mail Check To: Desert Research Institute
 Financial Services Office
 2215 Raggio Parkway
 Reno, Nevada 89512-1095

* Please return Invoice Copy with Check *



Jul-19

IWV - Groundwater Sustainability

IWVGA - Dated 5/23/18

Awd-06-423 / GR07189

Position	Worker	Rate	Hours	Cost
Groundwater Modeler	Christopher Garner	117.92	36.095569	4,256.39
Groundwater Modeler-SME	Karl Pohlmann	230.78	45.074357	10,402.26
Hydrogeologist-SME	Jenny Chapman	258.45	2.367458	611.87
Hourly Data Analyst	Austin Chapman	29.46	5.482688	161.52
Groundwater Modeler	Susan Rybarski	83.16	0.000000	0.00
Geochemist	Ron Hershey	184.51	1.016059	187.47
Geomorphologist	Steve Bacon	132.82	40.354066	5,359.83
Total Salaries & Fringe				20,979.34

***On July 1st, professional employees received an increase for annual merit and cost of living adjustment*

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Invoice

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

Invoice Number: 2652-24
Invoice Date: 08/27/19

Project #: 2652 **Indian Wells Valley Groundwater Authority**

Professional Services through 7/31/2019

Water Resources Management

01 - POAM No. 134 Prep & Attend Board,PAC & TAC Mtgs/Consult w/ Authority & Co

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	34.00	\$230.00	\$7,820.00
Supervisor I	47.00	\$200.00	\$9,400.00
Associate I	34.75	\$115.00	\$3,996.25
Associate III	1.00	\$105.00	\$105.00
Senior Assistant	29.50	\$100.00	\$2,950.00
Assistant I	0.75	\$95.00	\$71.25
<i>Professional Services Subtotal:</i>			<u>\$24,342.50</u>
Reimbursables			<u>Charge</u>
Commercial Travel			\$81.84
Mileage			\$162.40
<i>Reimbursables Subtotal:</i>			<u>\$244.24</u>
			<u>\$24,586.74</u>

'OAM No. 134 Prep & Attend Board,PAC & TAC Mtgs/Consult w/ Authority & Com

02.01 - POAM No. 15,16 Prop 1 Grant Administration

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate I	6.50	\$115.00	\$747.50
<i>Professional Services Subtotal:</i>			<u>\$747.50</u>
<i>POAM No. 15,16 Prop 1 Grant Administration Subtotal:</i>			<u>\$747.50</u>

04.01 - POAM No. 54,55 Data Gaps

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	11.00	\$200.00	\$2,200.00
Assistant I	0.25	\$95.00	\$23.75
<i>Professional Services Subtotal:</i>			<u>\$2,223.75</u>
<i>POAM No. 54,55 Data Gaps Subtotal:</i>			<u>\$2,223.75</u>

04.02 - POAM No. 20 Data Management System

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate I	12.75	\$115.00	\$1,466.25
GIS Manager	14.50	\$115.00	\$1,667.50
Assistant I	80.00	\$95.00	\$7,600.00
GIS Specialist I	3.25	\$95.00	\$308.75
Administrative II	23.50	\$65.00	\$1,527.50
<i>Professional Services Subtotal:</i>			<u>\$12,570.00</u>
<i>POAM No. 20 Data Management System Subtotal:</i>			<u>\$12,570.00</u>



05 - POAM No. 126 Project Management Costs & Schedule

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	2.50	\$230.00	\$575.00
Supervisor I	2.50	\$200.00	\$500.00
Associate I	13.50	\$115.00	\$1,552.50
			<u>\$2,627.50</u>
<i>Professional Services Subtotal:</i>			<i>\$2,627.50</i>
<i>POAM No. 126 Project Management Costs & Schedule Subtotal:</i>			<i>\$2,627.50</i>

05A - POAM No. 125 POAM

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate I	1.50	\$115.00	\$172.50
			<u>\$172.50</u>
<i>Professional Services Subtotal:</i>			<i>\$172.50</i>
<i>POAM No. 125 POAM Subtotal:</i>			<i>\$172.50</i>

06 - POAM No. 36 IWVGW Basin 3rd Party Sustainability/Safe Yield Rev (GSP Compli:

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	7.50	\$200.00	\$1,500.00
Associate I	23.75	\$115.00	\$2,731.25
			<u>\$4,231.25</u>
<i>Professional Services Subtotal:</i>			<i>\$4,231.25</i>
<i>POAM No. 36 IWVGW Basin 3rd Party Sustainability/Safe Yield Rev (GSP Complia</i>			<i>\$4,231.25</i>

07 - POAM No. 82 IWVGW Basin Oppty's & Constraints for Alt Imported Water Suppli

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Senior Assistant	3.50	\$100.00	\$350.00
			<u>\$350.00</u>
<i>Professional Services Subtotal:</i>			<i>\$350.00</i>
<i>POAM No. 82 IWVGW Basin Oppty's & Constraints for Alt Imported Water Supplies</i>			<i>\$350.00</i>

07.01 - Imported Water RFP

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	10.50	\$230.00	\$2,415.00
Supervisor I	7.00	\$200.00	\$1,400.00
Associate I	0.50	\$115.00	\$57.50
GIS Manager	2.00	\$115.00	\$230.00
			<u>\$4,102.50</u>
<i>Professional Services Subtotal:</i>			<i>\$4,102.50</i>
<i>Imported Water RFP Subtotal:</i>			<i>\$4,102.50</i>

08.05.01 - Pumping Allocation

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	13.50	\$230.00	\$3,105.00
Supervisor I	21.50	\$200.00	\$4,300.00
Associate I	25.00	\$115.00	\$2,875.00
Associate III	2.00	\$105.00	\$210.00
Senior Assistant	12.00	\$100.00	\$1,200.00
			<u>\$11,690.00</u>
<i>Professional Services Subtotal:</i>			<i>\$11,690.00</i>
<i>Pumping Allocation Subtotal:</i>			<i>\$11,690.00</i>

08.08 - POAM No. 107 Develop Draft

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	1.00	\$230.00	\$230.00
Supervisor I	18.25	\$200.00	\$3,650.00
Associate I	12.00	\$115.00	\$1,380.00



08.08 - POAM No. 107 Develop Draft

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
GIS Manager	1.00	\$115.00	\$115.00
Associate III	4.25	\$105.00	\$446.25
Senior Assistant	27.50	\$100.00	\$2,750.00
Assistant I	5.75	\$95.00	\$546.25
			Professional Services Subtotal:
			\$9,117.50
			POAM No. 107 Develop Draft Subtotal:
			\$9,117.50

11.01 - POAM No. 56 Monitoring Wells - Planning

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	3.50	\$200.00	\$700.00
Associate I	2.00	\$115.00	\$230.00
			Professional Services Subtotal:
			\$930.00
			<u>Charge</u>
Car Rental			\$220.38
Equipment Purchase			\$614.96
Lodging			\$176.37
Maps			\$220.00
Meals			\$63.20
			Reimbursables Subtotal:
			\$1,294.91
			POAM No. 56 Monitoring Wells - Planning Subtotal:
			\$2,224.91

11.03 - POAM No. 64 Stream Gages - Planning

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Principal	2.00	\$230.00	\$460.00
Associate I	1.00	\$115.00	\$115.00
			Professional Services Subtotal:
			\$575.00
			POAM No. 64 Stream Gages - Planning Subtotal:
			\$575.00

11.05 - POAM No. 78 Aquifer Tests

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Assistant I	3.50	\$95.00	\$332.50
			Professional Services Subtotal:
			\$332.50
			POAM No. 78 Aquifer Tests Subtotal:
			\$332.50

11.06 - POAM No. 74 Water Quality & Stable Isotope Sampling

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
GIS Manager	1.00	\$115.00	\$115.00
Assistant I	23.75	\$95.00	\$2,256.25
			Professional Services Subtotal:
			\$2,371.25
			<u>Charge</u>
Board of Regents			\$1,471.82
			Sub-Contractors Subtotal:
			\$1,471.82
			POAM No. 74 Water Quality & Stable Isotope Sampling Subtotal:
			\$3,843.07

11.07 - POAM No. 69 Weather Stations - Planning

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate I	1.50	\$115.00	\$172.50
			Professional Services Subtotal:
			\$172.50
			POAM No. 69 Weather Stations - Planning Subtotal:
			\$172.50



12 - POAM No. 119 SDAC Projects; Water Conservation & Rebate Program

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	1.00	\$200.00	\$200.00
Associate I	2.50	\$115.00	\$287.50
Senior Assistant	20.00	\$100.00	\$2,000.00
<i>Professional Services Subtotal:</i>			<u>\$2,487.50</u>
<i>POAM No. 119 SDAC Projects; Water Conservation & Rebate Program Subtotal:</i>			<u>\$2,487.50</u>

13 - POAM No. 120 SDAC Projects: Water Audit, Leak Detection & Leak Rpr Program

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	7.50	\$200.00	\$1,500.00
Senior Assistant	18.50	\$100.00	\$1,850.00
<i>Professional Services Subtotal:</i>			<u>\$3,350.00</u>
<i>POAM No. 120 SDAC Projects: Water Audit, Leak Detection & Leak Rpr Program S</i>			<u>\$3,350.00</u>

14 - POAM No. 139 Pumping Assessment Support

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Associate I	15.50	\$115.00	\$1,782.50
<i>Professional Services Subtotal:</i>			<u>\$1,782.50</u>
<i>POAM No. 139 Pumping Assessment Support Subtotal:</i>			<u>\$1,782.50</u>

18 - Wellntel Coordination

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	8.00	\$200.00	\$1,600.00
Senior Assistant	2.50	\$100.00	\$250.00
<i>Professional Services Subtotal:</i>			<u>\$1,850.00</u>
<i>Wellntel Coordination Subtotal:</i>			<u>\$1,850.00</u>

19 - Water Smart Grant

Professional Services	<u>Bill Hours</u>	<u>Bill Rate</u>	<u>Charge</u>
Supervisor I	7.00	\$200.00	\$1,400.00
Senior Assistant	16.50	\$100.00	\$1,650.00
<i>Professional Services Subtotal:</i>			<u>\$3,050.00</u>
<i>Water Smart Grant Subtotal:</i>			<u>\$3,050.00</u>

Water Resources Management Subtotal: \$92,087.22

***** Invoice Total *****

\$92,087.22



REIMBURSABLE SUMMARY

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

Invoice Number: 2652-24
Invoice Date: 08/27/19

Project #: 2652 **Indian Wells Valley Groundwater Authority**
 Manager: Stephen Johnson
 Professional Services through 7/31/2019

Water Resources Management

01 - POAM No. 134 Prep & Attend Board,PAC & TAC Mtgs/Consult w/ Authority & Committees to Dev GSP

Reimbursables

Description	Date	Units	Unit Rate	Charge	Notes
Mileage	07/18/2019	280.00	\$0.58	\$162.40	
Commercial Travel	07/31/2019	1.00	\$19.21	\$19.21	
Commercial Travel	07/31/2019	1.00	\$43.42	\$43.42	
Commercial Travel	07/31/2019	1.00	\$19.21	\$19.21	

POAM No. 134 Prep & Attend Board,PAC & TAC Mtgs/Consult w/ Authority & Committees 244.24

11.01 - POAM No. 56 Monitoring Wells - Planning

Reimbursables

Description	Date	Units	Unit Rate	Charge	Notes
Maps	07/05/2019	1.00	\$220.00	\$220.00	
Meals	07/22/2019	1.00	\$17.80	\$17.80	
Meals	07/22/2019	1.00	\$5.29	\$5.29	
Meals	07/22/2019	1.00	\$3.95	\$3.95	
Car Rental	07/23/2019	1.00	\$43.20	\$43.20	
Car Rental	07/23/2019	1.00	\$28.72	\$28.72	
Lodging	07/23/2019	1.00	\$176.37	\$176.37	
Meals	07/23/2019	1.00	\$30.71	\$30.71	
Meals	07/23/2019	1.00	\$5.45	\$5.45	
Car Rental	07/24/2019	1.00	\$126.02	\$126.02	
Car Rental	07/24/2019	1.00	\$22.44	\$22.44	
Equipment Purchase	07/25/2019	1.00	\$614.96	\$614.96	

POAM No. 56 Monitoring Wells - Planning Sub-Total: \$1,294.91

11.06 - POAM No. 74 Water Quality & Stable Isotope Sampling

Sub-Contractors

Description	Date	Units	Unit Rate	Charge	Notes
Board of Regents	06/30/2019	1.00	\$1,471.82	\$1,471.82	

POAM No. 74 Water Quality & Stable Isotope Sampling Sub-Total: \$1,471.82

**KERN COUNTY
ASSESSOR**

07/05/2019 000001
#0537 8:45AM Andrea ****

	1 @ \$0.00	
5274 ASSESS INFO		\$0.00
	1 @ \$220.00	
5274 ASSESS INFO		\$220.00
CHK		\$220.00

FONDRIEST

ENVIRONMENTAL

Invoice

DATE	INVOICE #
7/25/2019	65659

BILL TO
Jean Moran 3020 Bridgeway Sausalito, CA 94965 US

SHIP TO
Stephan Bork 415 Sierra Grande St. Bishop, CA 93514 US

P.O. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.
Visa	Due on receipt	WO	7/25/2019	UPS 2nd Day	Origin

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
1	110149	USB optical reader	149.00	149.00T
1	112706	Slip fit direct read to optical adapter	65.00	65.00T
1	111348	Levelogger App Interface for real-time view and data upload	347.00	347.00T
1	Freight	Freight: UPS 2nd Day Air	53.96	53.96
		Out-of-state sale, exempt from sales tax	0.00%	0.00

PAID BY VISA	Total	\$614.96
--------------	--------------	----------

Remit to:
 Fondriest Environmental, Inc.
 2091 Exchange Court
 Fairborn, OH 45324
 phone 937 426 2151
 fax 937 426 1125
 Fed ID Number: 31-1669677

SALES RECEIPT

Purchased: 07/31/2019 8:51 PM PT
Thank you for your purchase.

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

AMTRAK
Merchant ID 00610
1 Massachusetts Ave NW
Washington, DC 20001
800-USA-RAIL
Amtrak.com

Reservation Number - DD3B6D
OCEANSIDE, CA - FULLERTON, CA (One-Way)
JULY 31, 2019

Billing Information

JEAN MORAN
3020 BRIDGEWAY
SAUSALITO, CA 94965

Visa ending in 4915 (Purchase) **Total \$19.21**
Authorization Code 005157

Purchase Summary - Ticket Number 2120610681326

Train 561: OCEANSIDE, CA - FULLERTON, CA
Depart 4:53 AM, Thursday, August 1, 2019

1 UNRESERVED COACH SEAT **\$19.21**

Ticket Terms & Conditions
NO TVL 30AUG19-02SEP19,26-28NOV19,30NOV19-2DEC19,23-24DEC19,26DEC19,31DEC19
SENIOR CITIZEN 65 YRS OR OLDER - ID REQUIRED

Subtotal \$19.21
Total Charged by Amtrak \$19.21

Passengers

Jean Moran

SALES RECEIPT

Purchased: 08/01/2019 8:05 PM PT
Thank you for your purchase.

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

AMTRAK
Merchant ID 00744
1 Massachusetts Ave NW
Washington, DC 20001
800-USA-RAIL
Amtrak.com

Reservation Number - DE7D24
FULLERTON, CA - OCEANSIDE, CA (One-Way)
AUGUST 1, 2019

Billing Information

JEAN MORAN
3020 BRIDGEWAY
SAUSALITO, CA 94965

Visa ending in 4915 (Purchase) **Total \$19.21**
Authorization Code 000506

Purchase Summary - Ticket Number 2130744656847

Train 792: FULLERTON, CA - OCEANSIDE, CA
Depart 8:46 PM, Thursday, August 1, 2019

1 UNRESERVED COACH SEAT **\$19.21**


Ticket Terms & Conditions
NO TVL 30AUG19-02SEP19,26-28NOV19,30NOV19-2DEC19,23-24DEC19,26DEC19,31DEC19
SENIOR CITIZEN 65 YRS OR OLDER - ID REQUIRED

Subtotal \$19.21
Total Charged by Amtrak \$19.21

Passengers


Jean Moran

< Aug 01, 2019, 7:26 PM



\$43.42

Thanks for riding with Jim



Your Trip

- 3765 Fruit St La Verne Pickup 7:26 PM
- 179 E Walnut Ave Fullerton Dropoff 7:54 PM



Nichole Weedman <nrweedman1992@gmail.com>

ENTERPRISE Rental Agreement 6HDTK4

1 message

DoNotReply@erac.com <DoNotReply@erac.com>
To: NRWEEDMAN1992@gmail.com

Wed, Jul 24, 2019 at 9:03 AM



RA #: 6HDTK4

Renter: WEEDMAN,NICHOLE

Dates & Times	Location
Pickup Jul 22, 2019 10:51 AM	875 S. COAST HIGHWAY OCEANSIDE, CA 92054-5321 7609669090
Return Jul 24, 2019 9:01 AM	875 S. COAST HIGHWAY OCEANSIDE, CA 92054-5321 7609669090

Vehicle

Make/Model: CHEV/CAMC

Color: RED BRIGHT

Mileage: 428

Fuel Out: Full

Fuel In: Full

License: GWNH92

Unit #: 7RG2K5

Vehicle #: K0122438

Charges	Price/Unit	Total
TIME & DISTANCE 07/22 - 07/24	2 @ \$43.26/DAY	\$86.52
MISCELLANEOUS REFUND	1 @ (\$7.10)/RENTAL	(\$7.10)
VEHICLE LICENSE RECOVERY FEE	2 @ \$2.74/DAY	\$5.48
SALES TAX	8.2500%	\$7.14

Optional Products And Protections Accepted

DAMAGE WAIVER	2 @ \$16.99/DAY	\$33.98
Total Charges:		\$126.02
Charge To:	DISCOVER xxxx2171	

2019-07-24 09:03:35



HAMPTON INN & SUITES - RIDGECREST
 104 EAST SYDNOR AVE.
 RIDGECREST, CA 93555
 United States of America
 TELEPHONE 760-446-1968 • FAX 760-446-1541
 Reservations
 www.hilton.com or 1 800 HILTONS

WEEDMAN, NICHOLE

 2319 PASEO DE LAURA
 APT 18
 OCEANSIDE CA 92056
 UNITED STATES OF AMERICA

Room No: 136/KXTD
 Arrival Date: 7/22/2019 3:39:00 PM
 Departure Date: 7/23/2019 6:54:00 AM
 Adult/Child: 1/0
 Cashier ID: DMR
 Room Rate: 155.82
 AL:
 HH # 648439392 BLUE
 VAT #
 Folio No/Che 178669 A

Confirmation Number: 91602878

HAMPTON INN & SUITES - RIDGECREST 7/23/2019 6:54:00 AM

DATE	REF NO	DESCRIPTION	CHARGES
7/22/2019	589779	GUEST ROOM	\$155.82
7/22/2019	589779	ROOM OCCUPANCY - TAX	\$15.58
7/22/2019	589779	RIDGECREST TOURISM IMPROVMENT	\$4.67
7/22/2019	589779	CA TOURISM ASSESSMENT	\$0.30
7/23/2019	589882	DS *2171	(\$176.37)
		REF=0000178669-00179762 CHIP	
		05	
		Application Label: Discover Credit	
		TC: 595320AAB3D9BB76	
		TVR: 0000008000	
BALANCE			\$0.00

Hilton HHonors(R) stays are posted within 72 hours of checkout. To check your earnings or book your next stay at more than 5,700 hotels and resorts in 113 countries and territories, please visit HHono

CREDIT CARD DETAIL

APPR CODE	02211R	MERCHANT ID	00106970999
CARD NUMBER	DS *2171	EXP DATE	09/21
TRANSACTION ID	589882	TRANS TYPE	Sale



780 N. China Lake Blvd.
Ridgecrest, CA 93555
760-384-4582

7/22/19 5:36 PM
Trans.: 7494 Store: 00261
Reg.: 002 Till: 002
Cashier: Emma Sales: Emma

Sale



00261002749420190722

Pacific Trail Performance Long S1 19.99 T
6411763

Original Price: 1 @ 19.99

Subtotal 19.99

Sales Tax 8.2500% 1.65

Total 21.64

Credit 21.64

Card: Discover

Account: 2171

Auth: 02272R (A)

Terminal ID: 8720522

Application Name: Discover

Verification: Signature

Card Entry Mode: Chip Read

Chip Indicator: CONTACT

Auth mode: ISSUER

ICC Details

Application ID: A0000001523010

Terminal Verification Result: 0000008000

Issuer Application Data: 010560800380000001E0

3000000000000000

Transaction Status Information: E800

Authorization Response Code: 00

Total Tender 21.64

Change Due 0.00

Number of Items Sold: 1

Customer Copy

841 N DOWNS
RIDGECREST CA 93555

SAGE MART
008534-434
841 N. DOWNS SUITE
RIDGECREST, CA
935557603757733
07/23/2019 183557093
08:03:09 AM

XXXXXXXXXXXX2171
Discover
INVOICE 320367015
AUTH 02371R

PUMP# 4
REGULAR 12.346G
PRICE/GAL \$3.499

FUEL TOTAL \$ 43.20

CREDIT \$ 43.20

Card Balance: \$-43.20

Card Data

COMPLETION ENTRY METHOD: S SEQ#6644

APPROVED

BATCH#20190723296

AUS Five-digit ZIP Code matches, address
does not

Return Code: Z

Retr Data: 000000000000

5 200000000 3

COME INSIDE TO SEE & FEEL THE BEER CAVE!
WE ALSO CASH CHECKS NOW!

1202 S Coast Hwy
Oceanside CA 92054

1400 N Norma Street
Ridgecrest Ca 93555

G & M OIL #39
L306236518001
1202 S COAST HWY
OCEANSIDE, CA
92064
07/24/2019 687635018
08:51:58 AM

XXXX XXXX XXXX 2171
Discover
INVOICE 084917
AUTH 02413R

*** REPRINT *** REPRINT *** REPRINT ***

PUMP# 4
REGULAR 6.488G
PRICE/GAL \$3.459

FUEL TOTAL \$ 22.44

*** REPRINT *** REPRINT *** REPRINT ***

CREDIT \$ 22.44

Customer-activated Purchase/Capture
Sequence Number 20303
Swiped
APPROVED 02413R

EDS MINI MART
L306479538001
1400 N NORMA ST
RIDGECREST , CA
93555
07/23/2019 845654159
05:00:42 PM

XXXX XXXX XXXX 2171
Discover
INVOICE 043068
AUTH 02329R

PUMP# 4
REGULAR CR 8.209G
PRICE/GAL \$3.499

FUEL TOTAL \$ 28.72

CREDIT \$ 28.72

Customer-activated Purchase/Capture
Sequence Number 44223
Swiped
APPROVED 02329R

Thank you for fueling @ Ed's Mini Mart!

Bangkok House Restaurant

303 W Inyokern Rd July 22, 2019
RIDGECREST, CA 6:28 PM
93555-4711
(760) 446-0271

Receipt: nJGE
Ticket: Togo Nicole 2178535318
Authorization: 02244R

FOR HERE

Panang \$10.95
Chicken, Steamed Jasmin Rice, 3 -
Hot

Thai Iced Tea \$2.75

Subtotal \$13.70
Sales Tax \$1.13
Tip \$2.97

Total \$17.80
Discover 2171 (Swipe) \$17.80
Nichole Weedman

Lunch Buffet
M-F 11:00 AM - 02:00 PM

STARBUCKS Store #10429
14136 US Hwy 395
Adelanto, CA (760) 530-9252

CHK 710886
07/22/2019 01:50 PM
2744004 Drawer: 2 Reg: 1

Gr Vancrm Cold Brw 3.95
Sbux Card 3.95
XXXXXXXXXX0629

Subtotal \$3.95
Total \$3.95

Change Due \$0.00

----- Check Closed -----
07/22/2019 01:50 PM

SBUX Card x0629 New Balance: 1.98
Card is registered.

Ticket # 1148433 7/23/19 4:43 pm
Reg: 1 Store: 1000 Clerk: HNV

Beanster's Espresso
1601 Triangle Drive
Ridgecrest, CA 93555
760-446-2320

Quantity		Extended Price
1	Mocha Large	\$5.45
Taxable Total:		\$0.00
Non-Taxable Total:		\$5.45
Tax Amount:		\$0.00
Order Grand Total:		\$5.45
Credit Card Tendered:		\$5.45
Change Due:		\$0.00

MERCHANT ID: *****7751
CLERK ID: HNV

SALE

DISCOVER *****2171
ENTRY METHOD: CHIP
DATE: 07/23/2019 TIME: 16:43:17

INVOICE: 382411
REFERENCE: 0066
AUTH CODE: 02336R

AMOUNT	USD\$ 5.45
TOTAL	USD\$ 5.45

APPROVED - THANK YOU

I AGREE TO PAY THE ABOVE TOTAL AMOUNT
ACCORDING TO CARD ISSUER AGREEMENT
(MERCHANT AGREEMENT IF CREDIT VOUCHER)

Tip 15% 0.82 18% 0.98 20% 1.09

Tip _____
Total _____

X _____
Cardholder Signature

APPLICATION LABEL: Discover Credit
AID: A0000001523010
TVR: 0000008000
IAD: 01056080030000001E0300000000000000
TSI: E800
ARC: 00
CVM: SIGN

Subway#35846-0 Phone 760-384-4784
815 N china lake
Ridgecrest, Ca, 93555
Served by: 20 7/22/2019 5:52:45 pm
Term ID-Trans# 1/A-441252

908 NORMA ST
RIDGECREST CA 93555-3150
760-446-6960

Merchant ID: 650000086
Term ID: 9880

Sale

Qty	Size	Item	Price
1	6"	Turkey & Ham Sub	5.29
Sub Total			5.29
Total (Take Out)			5.29
Credit Card			5.29
Change			0.00

Call us with your Comments
Phone (760)7930386

Application Label: Discover
Discover Credit
DISCOVER
XXXXXXXXXXXX2171
AID: A0000001523010
Entry Method: Chip Read
Apprvd: Online Batch#: 00000
07/23/19 07:11:5

Inv#: 00000005 Appr Code: 02350

Amount: \$ 25.7:
Tip: \$ 5.00
Total: 30.71

Approval No: 02200R
Reference No: 920400691216
Card Issuer: Discover
Account No: *****2171
Acquired: Contact_EMV
Amount: \$5.29
Application: Discover Credit
AID: A0000001523010
TVR: 0000008000
TSI: E800
Date/Time: 7/22/2019 5:52:42 PM

Mode: Issuer
TVR: 0000008000
IAD: 01056080030000001E0300000000000000
TSI: E800
ARC: 00
I agree to pay above total amount
according to card issuer agreement
(Merchant agreement if credit voucher)

CUSTOMER COPY

Host Order ID: 747-197-3105946

X _____
HEEDMAN-NICHOLE
Customer Copy
THANK YOU

Thank You, Have an awesome day!!



Invoice for Stetson Engineers Inc. Isotopic Support

INVOICE TO

Stetson Engineers Inc
Attn: Accounts Payable
2171 East Francisco Blvd. Suite K
San Rafael, CA 94901

INVOICE NUMBER: CI-06-2479 / 01 ✓
 DATE: 07/30/19
 AMOUNT: \$1,471.82 ✓
 TERMS: Due Upon Receipt

Contract/Grant/Agreement/Purchase Order	Period Billed	
Stetson Engineers Inc. Contract # 2652 - 001 ✓	From	To
Contract Dated 5/24/19	5/17/2019	6/30/2019
Title: Stetson Engineers Inc, / Isotopic Support - Indian Wells Valley Groundwater Authority		
P.I.: Chapman, Jenny		
DRI Acct: AWD-06-00000523 / GR09067 RC0068 TAX ID #: 886000024		
Cost Elements/Services	Current	Cumulative

Stetson Engineers, Inc. - Isotopic Support - Indian Wells Valley Groundwater Authority ✓

Salaries	1,471.82	1,471.82
Travel	0.00	0.00
Operating	0.00	0.00
Totals	<u>1,471.82</u>	<u>1,471.82</u>

Total Amount Due This Invoice 1,471.82 ✓

Budget Amount 28,137.00
 Invoiced to Date 1,471.82
 Budget Balance **26,665.18**

"I certify to the best of my ability that all expenditures reported are for appropriate purposes and in accordance with the provisions of the award documentation."

Sherril Schmidt _____ 07/30/19
 Sherril Schmidt, Sponsored Research Specialist Date
 (775) 673-7404

Make Check Payable To: **Board of Regents** Mail Check To: Desert Research Institute
 Financial Services Office
 2215 Raggio Parkway
 Reno, Nevada 89512-1095

* Please return Invoice Copy with Check *



Jun-19

Stetson Engineers - Isotopic Support - IWVGA

Awd-06-523 / GR09067

Position	Worker	Rate	Hours	Cost
Groundwater Modeler-SME	Karl Pohlmann	219.41	0.000000	0.00
Hydrogeologist-SME	Jenny Chapman	245.89	4.655700	1,144.79
Geochemist	Ron Hershey	188.69	0.000000	0.00
GIS Professional	Cheryl Collins	93.33	3.504018	327.03

Total Salaries & Fringe

1,471.82

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City of Ridgecrest

100 West California Avenue
Ridgecrest, CA 93555
Phone (760) 499-5002 Fax (760) 499-1500
www.ridgecrest-ca.gov

TO: IWV Groundwater Authority
PO Box 1329
Ridgecrest, CA 93556-1329

Invoice Date: 9/10/2019

ATTN: Lauren Duffy, Secretary

Event: PAC / TAC Meetings - Sept. 5, 2019

Description	Account Distribution	Unit Price	Total Price
14 hours Total 8 hours booth setup and take down 4 hours pre meetings setup 2 hours post meeting		\$83.00	\$ 1,162.00
Total Amount Due			\$ 1,162.00

Please make payable to:

City of Ridgecrest

Credit Card Payments:

Please contact Ricca Charlon @ 760-499-5002

Mail to:

City of Ridgecrest
ATTN: Ricca Charlon
100 W. California Ave.
Ridgecrest, CA 93555

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CAPITOL
CORE
GROUP

Capitol Core Group, Inc.
205 Cartwheel Bend (Operations Dept.)
Austin, TX 78738 US
949.274.9605
operations@capitolcore.com
www.capitolcore.com

BILL TO

Indian Wells Valley Groundwater
Authority
500 West Ridgecrest Blvd.
Ridgecrest, California 93555
USA

INVOICE 2019-042

DATE 09/03/2019 **TERMS** Net 45

DUE DATE 10/18/2019

DATE	ACCOUNT SUMMARY	AMOUNT
08/02/2019	Balance Forward	\$27,800.00
	Payments and credits between 08/02/2019 and 09/03/2019	-27,800.00
	New charges (details below)	14,030.37
	Total Amount Due	\$14,030.37

ACTIVITY	HOURS	RATE	AMOUNT
Charges			
Task 1 -- Determination and Secure Sources of Imported Water Supplies			
Strategic Communications:Water Procurement Assistance Technical Memo: Week of August 1, 2019 {Partner Tatum}	0.50	250.00	125.00
Strategic Communications:Water Procurement Assistance Technical Memo: Week of August 12, 2019 {Partner Tatum}	0.50	250.00	125.00
Strategic Communications:Water Procurement Assistance Technical Memo: Presentation and Board Meeting {Partner Tatum}	4	250.00	1,000.00
Strategic Communications:Water Procurement Assistance Federal/State Implementation Meetings {SVP Simonetti}	3	225.00	675.00
Total Task 1 = \$1,925.00 (8 hours)			
Task 3 -- Identification and Secure Potential Funding Sources			
Government Relations:Federal Legislative Affairs Federal Direct Lobbying: Preparation and Meeting with Senator/Chairman Inhofe (R-OK) {Sr.Ad. Newman}	1.25	150.00	187.50
Government Relations:Federal Legislative Affairs Federal Direct Lobbying: Preparation and Meeting with Rep. Ken Calvert (R-CA)/Appropriations {Sr.Ad. Newman}	1.25	150.00	187.50
Government Relations:Federal Legislative Affairs Federal Direct Lobbying: Preparation, Meeting, and follow-up with Senator Feinstein (D-CA)/Rnk Member {Sr.Ad. Newman}	3.50	150.00	525.00
Government Relations:Federal Legislative Affairs Federal Direct Lobbying: Various -- meetings with DOD, Preparation and Report (AVEK) {Sr.Ad. Newman}	1.75	150.00	262.50

ACTIVITY	HOURS	RATE	AMOUNT
Government Relations:California Legislative Affairs State Direct Lobbying: Update White Paper and call for meetings with State Legislature {Partner McKinney}	2	250.00	500.00
Government Relations:California Legislative Affairs State Direct Lobbying: Background telephone calls and briefings with Legislative staff {Partner McKinney}	2	250.00	500.00
Government Relations:California Legislative Affairs State Direct Lobbying: Legislative and Agency Meetings (various -- See After Action Report for details) {Partner McKinney}	8	250.00	2,000.00
Government Relations:Public Policy Reporting: Review of Technical Memorandum {Partner McKinney}	2	250.00	500.00
Government Relations:California Legislative Affairs Reporting: After-Action Report {Partner McKinney}	4	250.00	1,000.00
Government Relations:Public Policy Strategic Plan: Development/Draft {Partner McKinney}	4	250.00	1,000.00
Government Relations:Public Affairs Reporting: Meeting with Stetson/IWVGA staff to discuss Strategic Plan development {Partner McKinney}	1.50	250.00	375.00
Government Relations:Public Policy Strategic Plan: Call with SGVMWD and monthly memorandum {SVP Simonetti}	1.50	225.00	337.50
Government Relations:Public Policy Strategic Plan: Call with NorCal water suppliers and monthly reporting {SVP Simonetti}	1.50	225.00	337.50
Government Relations:Public Policy Reporting: Tech Memo and monthly reporting {SVP Simonetti}	4	225.00	900.00
Government Relations:California Legislative Affairs State Direct Lobbying: Various Sacramento Meetings (see After-Action Report for details) {SVP Simonetti}	5.50	225.00	1,237.50
Government Relations:Federal Legislative Affairs Federal Direct Lobbying: Senator Feinstein (D-CA)/Rnk Member Appropriations {SVP Simonetti}	1.50	225.00	337.50
Government Relations:Federal Legislative Affairs Federal Direct Lobbying: Rep. Paul Cook (R-CA) {SVP Simonetti}	0.50	225.00	112.50
Total Task 3 = \$10,412.50 (48.25 hours)			
Task 4 -- Board/Staff Meetings			
Government Relations:Public Affairs Board/Staff Meeting: August Board Meeting {SVP Simonetti}	4.50	225.00	1,012.50
Total Task 4 = \$450.00 (2 hours)			
REIM -- Reimbursable Business Expenses			
Reimbursable Expense Item Travel: Flight LAX-SACTO (rt) August 20-23, 2019 {Partner McKinney}	1	200.00	200.00
Reimbursable Expense Item Travel: Hotel Embassy Suites SACTO August 20-23, 2019 {Partner McKinney}	2	135.00	270.00
Reimbursable Expense Item Travel: Flight ONT-SACTO (rt) August 13-14, 2019 {SVP Simonetti}	1	157.96	157.96

ACTIVITY	HOURS	RATE	AMOUNT
Reimbursable Expense Item	1	164.91	164.91
Travel: Hotel Hampton Inn & Suites August 13-14, 2019 {SVP Simonetti}			
Total REIM = \$792.87 (3 days travel; 2 personnel travelling)			
Thank you for your business. Please make checks payable to Capitol Core Group, Inc.	TOTAL OF NEW CHARGES		14,030.37
TOTAL DUE		\$14,030.37	

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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

IWV Ground Authority
 500 W Ridgecrest Blvd
 Ridgecrest, CA 93555

Invoice 8/28/2019
 Account # 102163

Date	Description	Lines	Amount
28-Aug-19	Display Legal IWVGA Ordinance	4*13	\$ 676.00
Total			\$676.00

Please Submit Payment to the above address. Should you have any billing questions, please contact:
 Advertising Department

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To: Don Zdeba, General Manager – IWVGA

From: Jeff Simonetti, Sr. Vice President

cc: Michael W. McKinney, Partner
Todd Tatum, Partner
IWVGA Water Manager and Board

Date: September 12, 2019

Subject: Consideration of Letter of Support for the Defense Community Infrastructure Program (DCIP)

Introduction

Capitol Core Group has been working at both the State and Federal levels of government to determine potential infrastructure funding sources for the necessary improvements to bring imported water supplies to the basin. While there are a few potential funding sources that may be available over the longer term, a local community infrastructure program called the Defense Community Infrastructure Program (DCIP) has a provision in the Senate version of the National Defense Authorization Act (NDAA) that is currently moving through the Senate Defense Appropriations Committee. This memo will outline what the program is, why we believe it is a potentially important funding source, and our request for your consideration of a letter of support (attached) for the DCIP.

The Defense Communities Infrastructure Program

Background

The Defense Community Infrastructure Program was originally passed within the Fiscal Year 2016 Defense Authorization Act. The program required the Secretary of Defense to coordinate with base command to determine off-site infrastructure requirements to maintain mission status at individual military installations. The program would provide critical funding for off-base community infrastructure projects that support mission readiness and resilience, including transportation, schools, hospitals, police, fire, emergency response, water, wastewater, telecommunications, electric, gas, or other utility infrastructure that is owned by a state or local government. Funds from this program could potentially be used to support infrastructure for the Basin's needs.

The program was originally established as a *pilot project* and authorized \$100M to be appropriated through the Defense Appropriations Act toward identified projects. DCIP sunsets in FY20, and current reauthorization language is included in the Senate Defense Authorization bill (S. 1790). That language is sponsored by the Senate Armed Services Committee Chairman James Inhofe (R-Oklahoma). The authorization makes minor adjustments to the original pilot program, allowing Congress to authorize specific projects for DCIP funding. Assistant Secretary of Defense for Sustainment Robert H. McMahan would have the ultimate approval authority of projects should monies be appropriated.

Despite support from the Senate Committee Chairman, the Appropriations Committee has never up until this point appropriated funds for the DCIP. Appropriations Committee staff has expressed concern in the past that the funds would solely be used for in-district projects that members support. However, a group of 100+ local

communities across the nation worked with the Association of Defense Communities (ADC) to support the Defense Community Infrastructure Program for Appropriation this year. Ridgecrest Mayor Peggy Breeden and 14 other mayors in California signed a letter of support through the ADC (please see attached letter). Capitol Core worked with our legislative contingent as well as Chairman Inhofe to support the DCIP appropriation. **On September 12th, the Senate Defense Appropriations Subcommittee allocated \$75 million in its version of the National Defense Authorization Act.**

Next Steps in Washington

There are a few next steps for the bill. The full Senate will have to vote on the bill. The House passed the NDAA on July 12th, but the bill will go back to a Conference Committee to settle differences between the House and Senate versions. It is during the Conference Committee that it will be crucial to ensure that this language remains in the final version of the bill.

Letter of Support

We are recommending that the Board approve the attached letter of support for the DCIP. We expect that this bill will go to Conference Committee at some point in early October, so we are bringing this letter request to you now. This program offers a potential avenue to secure funding sources for necessary infrastructure to support the water development projects that the Basin needs to support the base and the community around it. This letter will be useful to Capitol Core as we continue our efforts in Washington D.C. to support this measure and other pieces of legislation that we are tracking in September and early October prior to the vote.

September 12, 2019

The Honorable Richard Shelby
Chairman
Senate Committee on Appropriations
United States Senate

The Honorable Nita Lowey
Chairwoman
House Committee on Appropriations
United States House of Representatives

The Honorable Patrick Leahy
Ranking Member
Senate Committee on Appropriations
United States Senate

The Honorable Kay Granger
Ranking Member
House Committee on Appropriations
United States House of Representatives

RE: Fiscal Year 2020 Department of Defense Appropriations Act
Conference Committee

The Indian Wells Valley Groundwater Authority (IWVGA) supports provisions in the Senate version of the FY2020 Department of Defense Appropriations Act which appropriates \$75 million to the Defense Community Infrastructure Program (DCIP) and urges adoption by the Conference Committee into the final version of the bill.

The IWVGA governs the Indian Wells Basin which provides needed water supplies to the communities surrounding Naval Air Weapons Station China Lake. California's recent passage of the Sustainable Groundwater Management Act (SGMA) requires additional off-base infrastructure to provide an interconnection to imported water supplies and maintain the service levels at NAWSCL, the City of Ridgecrest and surrounding communities. In a recent letter to the IWVGA, base commanding officer Capt. P.M. Dale, USN stated, "*Commander Navy Region Southwest deems groundwater management the number one encroachment issue/concern which has the potential to impact missions enabled at Naval Air Weapons Station China Lake (NAWSCL). Water sustainability is critical to NAWSCL's mission accomplishment.*"

California's SGMA requires needed interconnection to transport outside water sources to sustain groundwater supplies in our basin. The DCIP may assist in these infrastructure costs. The IWVGA takes very seriously its mission to provide sustainable water supplies to support the communities around the NAWSCL. The base is a critical component to the national defense and a major economic engine to the region accounting for 86% of the local economy. NAWSCL, including its uniformed and civilian personnel as well as the businesses and homes that support the base, rely upon the groundwater provided within the Indian Wells Basin.

As such, the IWVGA respectfully requests the House recede and adopt the Senate's DCIP appropriation into the final version of the FY2020 Department of Defense Appropriations Act. Should you have any questions, please call Michael McKinney at 714-299-0053 or Jeff Simonetti at 909-568-5645.

Sincerely,

Ron Kicinski
Chairman of the Board
Indian Wells Valley Groundwater Authority



ASSOCIATION OF
**DEFENSE
COMMUNITIES**

**STRONG COMMUNITIES.
STRONG BASES.**

The Honorable Richard Shelby
Chairman
Defense Subcommittee
Senate Appropriations Committee
S-128 The Capitol
Washington, DC 20510

The Honorable Richard Durbin
Ranking Member
Defense Subcommittee
Senate Appropriations Committee
711 Hart Senate Building
Washington, DC 20510

Dear Chairman Shelby and Ranking Member Durbin,

On behalf of local governments across the nation, we urge you to provide funding for the Defense Community Infrastructure Pilot Program (Section 2391(d) of title 10, United States Code) in the FY 2020 Department of Defense appropriations bill. This program, which was authorized in Section 2861 of the National Defense Authorization Act for 2019, will provide critical funding for off-base but adjacent community infrastructure projects for transportation, schools, hospitals, police, fire, emergency response, water, wastewater, telecommunications, electric, gas, or other utility infrastructure that is owned by a state or local government.

Quality of life for military families is a priority for the state and local communities that enjoy the privilege of hosting military installations and should also be a priority for the federal government. It is well documented that roads and other vulnerable infrastructure necessary to support military bases continues to deteriorate and many local governments face significant issues with flooding. We believe community infrastructure deficiencies directly impacts military readiness and federal funding to address these deficiencies will enhance military value, resilience, and military quality of life at our nation's military installations.

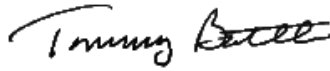
Accordingly, we urge you to provide funding for the Defense Community Infrastructure Pilot Program, as state and local governments across the country battle the impacts of decaying infrastructure.

Sincerely,

Joe Driskill
President, Association of Defense Communities

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

ALABAMA



Tommy Battle
Mayor, Huntsville

ALASKA



Bryce Ward
Mayor, Fairbanks
North Star Borough

ARIZONA



Kenneth Weise
Mayor, Avondale



Alexis Hermsillo
Mayor, El Mirage



Jerry Weiers
Mayor, Glendale



Georgia Lord
Mayor, Goodyear



Thomas Schoaf
Mayor, Litchfield Park



Clint Hickman
Supervisor,
Maricopa County

ARKANSAS

Ricky Hill*
State Senator, District 32

Jane English*
State Senator, District 34



Henry Reed
Mayor, Lonoke



Barry Hyde
County Judge/Chief Executive Officer,
Pulaski County



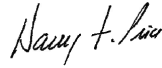
Noel Foster
Mayor, White Hall

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

CALIFORNIA



Drew Boyles
Mayor, El Segundo



Harry Price
Mayor, Fairfield



Alex Vargas
Mayor, Hawthorne



Eric Garcetti
Mayor, Los Angeles



Clyde Roberson
Mayor, Monterey



Steven Hofbauer
Mayor, Palmdale



Will Berg
Mayor, Port Hueneme



Peggy Breeden
Mayor, Ridgecrest

Ronald Knott*
Mayor, Rio Vista



Kevin Faulconer
Mayor, San Diego



Chris Cate
Councilmember, San Diego

Lori Wilson*
Mayor, Suisun City



Steve Bilderain
Mayor, Twentynine Palms



Ron Rowlett
Mayor, Vacaville

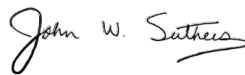


Shon Harris
Mayor, Yuba City

COLORADO



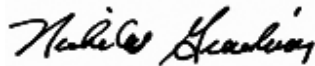
Bob LeGare
Mayor, Aurora



John Suthers
Mayor, Colorado Springs




Gabriel Ortega
Mayor, Fountain



Nicholas Gradisar
Mayor, Pueblo

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

CONNECTICUT



Patrice Granatosky
Mayor, Groton

FLORIDA



J.B. Whitten
Mayor, Crestview



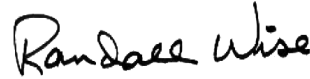
Gary Jarvis
Mayor, Destin



Richard Rynearson
Mayor, Fort Walton Beach



Margaret McLemore
Mayor, Mary Esther



Randall Wise
Mayor, Niceville

GEORGIA



John Harley
Mayor, Centerville



B. H. "Skip" Henderson III
Mayor, Columbus



Randy Toms
Mayor, Warner Robins

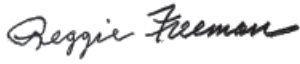
IDAHO



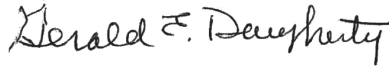
Rich Sykes
Mayor, Mountain Home

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

ILLINOIS



Reggie Freeman
Mayor, East Moline



Gerald Daugherty
Mayor, Mascoutah



Stephanie Acri
Mayor, Moline



Herb Roach
Mayor, O'Fallon



Mark Kern
County Board Chairman,
St. Clair

KANSAS



Pat Landes
Mayor, Junction City



Mike Dodson
Mayor, Manhattan



Brad Roether
Mayor, Milford

KENTUCKY



Jeffrey Gregory
Mayor, Elizabethtown



Carter Hendricks
Mayor, Hopkinsville

Theresa Jarvis*
Mayor, Oak Grove



JJ Duval
Mayor, Radcliff



Pam Ogden
Mayor, Vine Grove

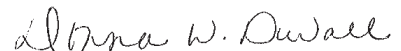
LOUISIANA



Misty Clanton
Mayor, DeRidder



Clarence Beebe
Mayor, Hornbeck



Donna DuVall
Mayor, Rosepine

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

MARYLAND



Michael O'Connor
Mayor, Frederick



William Martin
Mayor, Havre de Grace



Brandon Paulin
Mayor, Indian Head



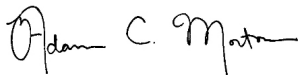
Pamela Beidle
State Senator,
Legislative District 32

MICHIGAN



Mark Behnke
Mayor, Battle Creek

MISSOURI



Adam Morton
Mayor, Knob Noster



Bill McMurray
Mayor, St. Joseph



Luge Hardman
Mayor, Waynesville



Dr. George Lauritson
Mayor, Saint Robert



Casey Lund
Mayor, Warrensburg

MONTANA



Bob Kelly
Mayor, Great Falls



John Engen
Mayor, Missoula

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

NEW JERSEY



Ronald DeBaecke
Mayor, North Hanover Township

NEW MEXICO



David Lansford
Mayor, Clovis

NORTH CAROLINA



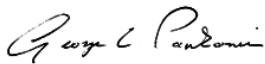
Chuck Allen
Mayor, Goldsboro

NORTH DAKOTA



Michael Brown
Mayor, Grand Forks

OKLAHOMA



George Pankonin
Mayor, Enid



John Browne
Mayor, McAlester



Matthew Dukes III
Mayor, Midwest City

OREGON



Carol Westfall
Mayor, Klamath Falls

LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE

PENNSYLVANIA



John Blake
State Senator, District 22

SOUTH CAROLINA



Greg Habib
Mayor, Goose Creek



Sam Murray
Mayor, Port Royal

TEXAS



Anthony Williams
Mayor, Abilene



Marion Grayson
Mayor, Belton



Jerry Dittrich
Mayor, Benbrook



Stosh Boyle
Mayor, Cibolo



Joe McComb
Mayor, Corpus Christi



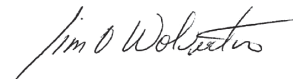
Bruno Lozano
Mayor, Del Rio



Dee Margo
Mayor, El Paso



Greg Seidenberger
Commissioner Pct. 1,
Guadalupe County, Seguin



Jim Wolverton
Commissioner Pct. 3,
Guadalupe County, Seguin



Drew Engelke
Commissioner Pct. 2,
Guadalupe County, Seguin



Judy Cope
Commissioner Pct. 4,
Guadalupe County, Seguin



Klye Kutscher
County Judge,
Guadalupe County, Seguin

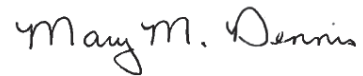
LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE



Spencer Smith
Mayor, Harker Heights



Jose Segarra
Mayor, Killeen



Mary Dennis
Mayor, Live Oak



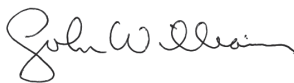
Walter Williams
Mayor, New Berlin



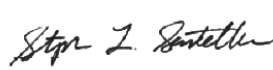
Brenda Gunter
Mayor, San Angelo



Timothy Davis
Mayor, Temple



John Williams
Mayor, Universal City



Stephen Santellana
Mayor, Wichita Falls



Clayton Perry
Councilmember,
San Antonio

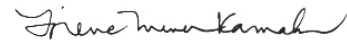
UTAH



Mike Gailey
Mayor, Syracuse



Jo Sjoblom
Mayor, South Weber



Lorene Kamalu
Davis County Commission



Mark Shepherd
Mayor, Clearfield County

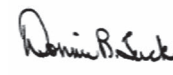
VIRGINIA



Rick West
Mayor, Chesapeake



Frank Rabil
Mayor, Franklin



Donnie Tuck
Mayor, Hampton



William McCarty, Sr.
Board of Supervisors,
Isle of Wight County



Michael Hipple
Board of Supervisors,
James City County

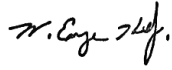


McKinley Price, DDS
Mayor, Newport News

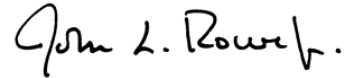
LOCAL ELECTED OFFICIALS IN SUPPORT OF AMERICA'S DEFENSE INFRASTRUCTURE



Kenneth Alexander
Mayor, Norfolk



W. Eugene Hunt
Mayor, Poquoson



John Rowe, Jr.
Mayor, Portsmouth



Linda Johnson
Mayor, Suffolk



Robert Dyer
Mayor, Virginia Beach

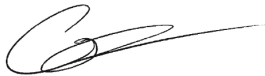


Paul Freiling
Mayor, Williamsburg

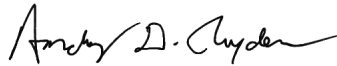


Jeffrey Wassmer
Board of Supervisors,
York County

WASHINGTON



Cassie Franklin
Mayor, Everett



Andy Ryder
Mayor, Lacey



Don Anderson
Mayor, Lakewood



Ron Lucas
Mayor, Steilacoom



Victoria R. Woodards
Mayor, Tacoma



JW Foster
Mayor, Yelm

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IWVGA Board Meeting September 19, 2019

▶ Prop 1 Status/Schedule

▶ Invoice #2:

- ▶ Covers October 2018 through March 2019
- ▶ Approved for Payment
- ▶ Total Payment to be Received: \$352,087.42 expected late September/Early October

▶ Invoice #3:

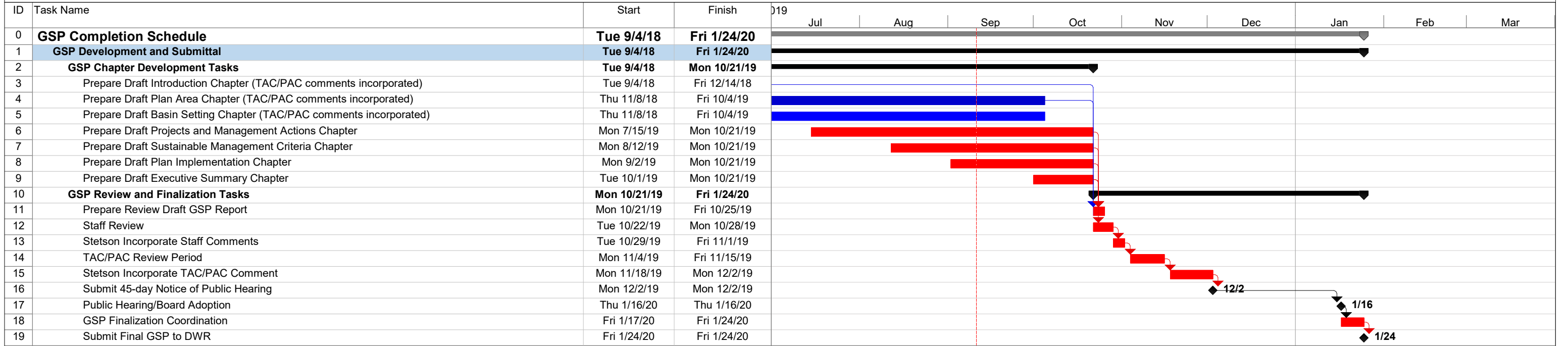
- ▶ Covers April 2019 through June 2019
- ▶ Anticipate draft submitted in September
- ▶ Total Payment Approximately \$160,000

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INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Draft GSP Schedule

September 11, 2019



Condensed GSP Schedule Date: Wed 9/11/19	Task		Rolled Up Milestone		Inactive Milestone		Start-only		Baseline	
	Critical Task		Rolled Up Progress		Inactive Summary		Finish-only		Baseline Milestone	
	Milestone		Split		Manual Task		External Tasks		Baseline Summary	
	Summary		External Tasks		Duration-only		External Milestone		Progress	
	Rolled Up Task		Project Summary		Manual Summary Rollup		Critical		Deadline	
Rolled Up Critical Task		Group By Summary		Manual Summary		Critical Split				

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**Indian Wells Valley Groundwater Authority
August 2019 Financial Report**

	Project Budget/ POAM	Pre-FY 2018	FY 2018	2019 Budget	FYTD through August	
Beginning Balance				231,368	476,713	* Includes Sweep Account of \$121,728.11
County of Kern Advance	500,000	-	254,655	245,345	-	* Loan - Shouldn't be considered as revenue
IWVWD Advance	500,000	-	500,000	-	-	* To be credited against future Pumping Fees - Shouldn't be considered as revenue
Navy in-Kind	1,097,300	-	620,600	476,700	-	* Tasks being performed by the Navy as in-kind services
IWVWD In-kind	80,000	-	80,000	-	-	* Tasks being performed by the IWVWD as in-kind services
Initial Member Contribution	75,000	75,000	-	-	-	
Beginning Balance	1,252,300	75,000	1,455,255	953,413	476,713	
Revenues						
DWR	249,950	-	225,501	24,449	-	
Prop 1 Grant	2,146,000	-	-	931,325	335,567	
-GSP Preparation @ \$1,500,000						
-SDAC @ \$646,000						
Assessment Pumping Fee	1,522,384	-	121,788	762,973	360,754	* Anticipat need to update for June
Total Revenue	3,918,334	-	347,288	1,718,747	696,320	
Expenses						need to update for June
Task 1- Initial GSP Support Studies	167,600	19,341	188,065	(39,805)	31,762	* Includes \$80,000 IWVWD/City In-Kind Contribution to Salt/Nutrient Plan
Task 2- Proposition 1 SGMA GSP Development Grant	102,880	27,280	50,481	25,119	23,789	
Task 3- Data Management System	371,105	3,686	75,143	292,276	34,997	
Task 4- GSP Development and Submittal	2,505,700	12,136	860,130	1,633,434	463,326	* FY 2018 Includes \$620,600 Navy In-Kind Contribution to Model Development
Task 5- SDAC Projects	646,000	1,969	45,073	598,959	5,600	
Task 6- IWVGA Project Management and Administrative Tasks	206,300	8,953	124,441	72,906	101,358	
- City of Ridgecrest Reimbursement	210,466	-	-	-	-	* To Be Paid in Out Years
Task 7- Legal Services	200,000	-	12,878	187,123	75,517	
Task 8- Stakeholder/Authority Coordination	289,250	-	29,424	259,826	66,589	
- Additional PAC/TAC/Board Meeting Support	100,000	-	-	100,000	-	* To Cover Expenses above POAM Budget
- Additional Pump Fee Support	36,000	-	-	36,000	-	* To Cover Expenses above POAM Budget
Task 9- Groundwater Pumping Fee Support	121,500	-	98,032	23,468	91,580	
Stetson- TSS Support	17,464	-	-	14,700	4,883	* Additional Tasks Outside of POAM
Stetson- Brackish Water Support	47,088	-	-	30,000	3,775	* Additional Tasks Outside of POAM
Stetson- Imported Water Coordination	48,710	-	-	45,000	13,170	* Additional Tasks Outside of POAM
Stetson- Allocation Process Support	104,015	-	-	50,000	34,967	* Additional Tasks Outside of POAM
Stetson- Navy-Coso Funding Support	13,382	-	-	10,000	3,989	* Additional Tasks Outside of POAM
Auditing Services & IWVWD Reimbursement for Website fees					6,276	-Unbudgeted
Banking Fees	60	-	60	-	-	* Deposit Forms
Addtl Insurance Cost	2,000	-	-	2,000	9,967	* To Cover Expenditures over POAM Budget
PAC & TAC Meeting Costs	7,470	-	-	7,470	4,109	* 2.5 hours for PAC + 3.5 hours for TAC each month x 83/hour plus 25%
Water Marketing	230,000	-	-	230,000	77,600	
Well Monitoring					12,587	
Undocumented Expenditures (pre-FY2018)	-	635	-	-	-	* \$93.95 for Horizon California Publication; \$541.25 for Springhill Suites
Total Expenses	5,426,990	74,000	1,483,725	3,578,475	1,065,841	
Reserve Requirements				227,268		
Ending Balance	(256,356)			(1,133,583)	107,192	
Unpaid Invoices						
Capitol Core Group INV# 2019-042, 09/03/19					14030.37	
City of Ridgecrest, 09/05/19 PAC/TAC Meetings, 09/10/19					1162.00	
Daily Independent INV# 8282019, 08/28/19					676.00	
DRI INV# CI-06-2592 A/14, 08/28/19					20979.34	
RWG Law INV# 223180, 08/23/19					9620.00	
Stetson INV# 2652-21, 05/23/19 (approved, deferred)					104714.33	
Stetson INV# 2652-22, 07/09/19 (approved, deferred)					99947.96	
Stetson INV# 2652-23, 08/06/19 (approved, deferred)					94209.05	
Stetson INV# 2652-24, 08/27/19					92087.22	
					437,426.27	

**Indian Wells Valley Groundwater Authority
Pro-Forma**

	Project Budget/ POAM	2019 Budget	FYTD through July	August	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	Total	
Beginning Balance	1,252,300	953,413	476,713	87,243	(327,167)	(467,213)	(315,254)	(524,495)	(513,090)	(721,636)	(855,291)	(747,650)	(811,168)	(653,287)	(677,806)	(471,874)	(502,393)	(532,912)	(446,580)	(496,099)	476,713	
Revenues																						
DWR	249,950	24,449				24,449															24,449	
Prop 1 Grant	2,146,000	2,146,000																				
-GSP Preparation @ \$1,500,000 + SDAC @ \$646,000			335,567			352,055		225,000			203,400		203,400		216,450			131,850			1,667,722	
Brackish Group Reimbursement							14,355														14,355	
Assessment Pumping Fee	1,522,384	762,973	300,715	60,039	60,000	45,000	41,000	26,000	20,000	20,000	16,000	27,000	45,000	66,000	80,000	60,000	60,000	45,000	41,000	26,000	1,038,754	
Total Revenue	3,918,334	2,933,422	636,282	60,039	60,000	421,504	55,355	251,000	20,000	20,000	219,400	27,000	248,400	66,000	296,450	60,000	60,000	176,850	41,000	26,000	2,745,280	
Expenses																						
- City of Ridgecrest Reimbursement	210,466	210,466																				
- County of Kern Repayment	500,000	500,000																				
Task 7- Legal Services	200,000	187,123	72,678	2,839	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	5,686	166,488
Stetson	4,776,994	3,151,883	841,811	186,296	150,000	225,000	225,000	200,000	200,000	60,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	2,438,107
DRI			29,354	8,621	20,000	16,000	11,050	11,050	-	-	-	-	-	-	-	-	-	-	-	-	-	96,076
SDAC									-	48,833	48,833	48,833	48,833	48,833	48,833	48,833	48,833	48,833	48,833	48,833	48,833	537,163
Auditing Services & IWVWD Reimbursement for Website fees			6,276							6,276												12,552
Banking Fees	60																					
Addtl Insurance Cost	2,000	2,000	9,967							10,000												19,967
PAC & TAC Meeting Costs	7,470	7,470	3,279	830	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	20,109
Water Marketing	230,000	230,000	49,800	27,800	21,860	21,860	21,860	21,860	21,860	21,860	21,240											230,000
Other (Mailer, etc.)				3,309	1,500																	4,809
Well Monitoring			12,587																			12,587
Outstanding Invoices				244,753																		
Total Expenses	5,926,990	4,288,941	1,025,752	474,448	200,046	269,546	264,596	239,596	228,546	153,655	111,759	90,519	90,519	90,519	90,519	90,519	90,519	90,519	90,519	90,519	3,782,611	
Reserve Requirements		227,268																				
Ending Balance	(756,356)	(629,374)	87,243	(327,167)	(467,213)	(315,254)	(524,495)	(513,090)	(721,636)	(855,291)	(747,650)	(811,168)	(653,287)	(677,806)	(471,874)	(502,393)	(532,912)	(446,580)	(496,099)	(560,618)	(560,618)	

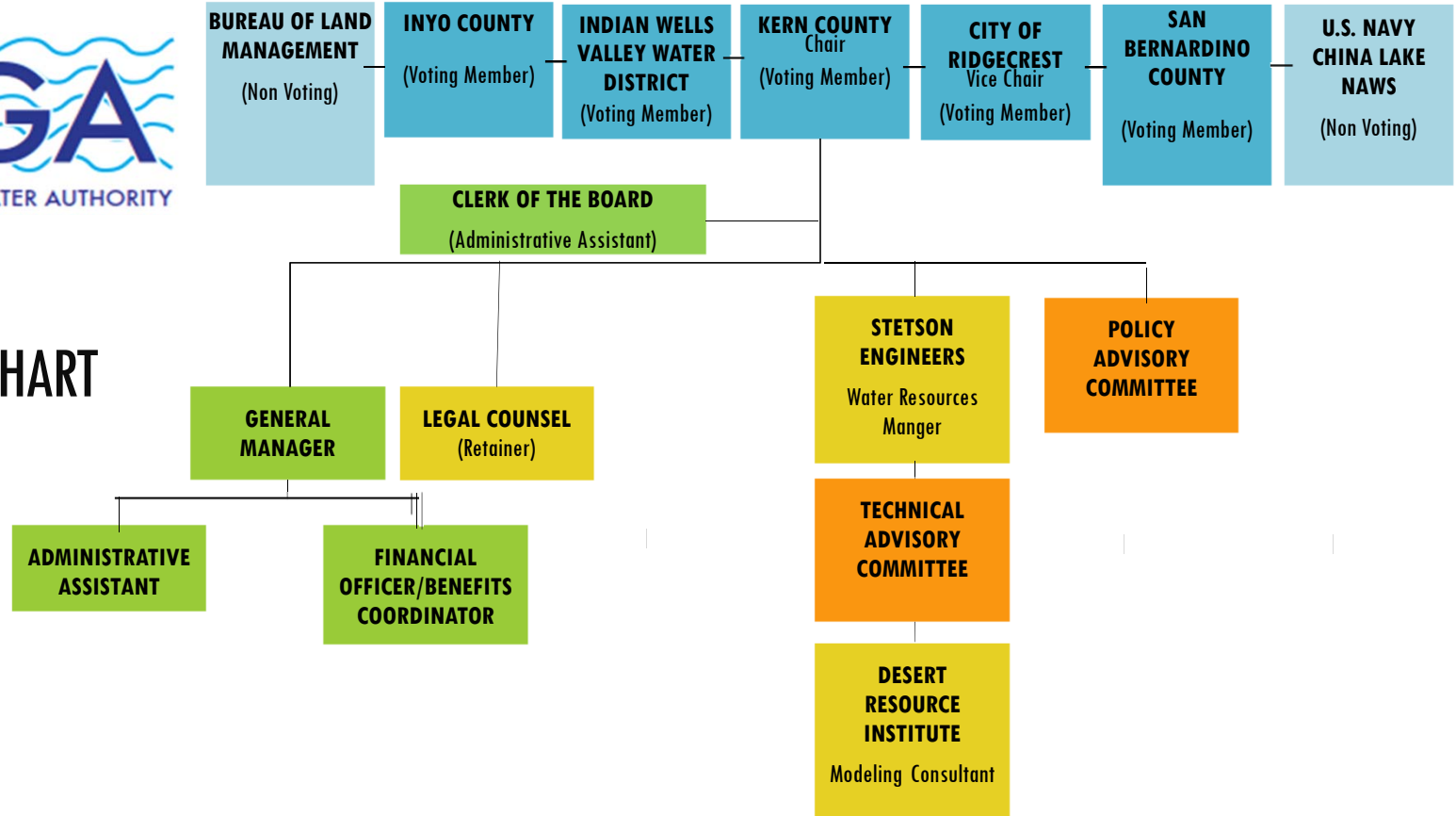
* \$500,000 credit due to the Indian Wells Valley Water District upon implementation of an administrative fee.



August 2019

ORGANIZATIONAL CHART

ADMINISTRATIVE SUPPORT



■ Board
 ■ Staff
 ■ Standing Committees
 ■ Consultants

DRAFT

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY 2020 Proposed Administration Budget

EXPENSES

- 1 . Salaries, Benefits & Employee Development
 - a. Salaries
 - b. Overtime
 - c. Benefits
 - d. PERS ER Contributions
 - e. Temporary Labor
 - f. Training/Conferences
- 2 . Meetings and Travel
- 3 . Insurance
- 4 . Office Supplies, Services, Rent and O&M
 - a. Office Supplies
 - b. Printing and Reproduction
 - c. Postage
 - d. Telephone/Cell Phone
 - e. Stationary/Computer Supplies
 - f. Computer Maintenance/Software/Licenses
 - g. Office Equipment/Maintenance
 - h. Miscellaneous Supplies
- 5 . Vehicle Expenses
 - a. Vehicle Maintenance
 - b. Fuel
 - c. DMV Fees
- 6 . Audit
- 7 . Public Education/**Outreach**
- 8 . Legal Services
 - a. Implementation of GSP
 - b. Special Counsel/Water Rights/Litigation
- 9 . Meetings and Preparation (GA Staff)
- 10 . Engineering
 - a. Prop 1 Grant
 - i. Administration
 1. Coordination with DWR
 2. Invoices
 3. Progress Reports
 4. Final Reports
 - ii. Project Implementation (SDAC Pilot Projects)
 - b. GSP Work
 - i. TSS Coordination
 - ii. Coordination with DWR on GSP Review
 - iii. Annual Report

- iv. Well Registration
 - v. Reporting Production
 - 1. Verification of Production/Reporting
 - vi. Production Assessments
 - vii. Data collection/monitoring
 - 1. Water Levels
 - 2. Water Quality
 - 3. Stream Gage
 - 4. Weather Station
 - viii. Database Management
 - ix. Additional Aquifer Performance Testing (Potential)
 - x. Additional Stream Gaging Station Installation (Potential)
 - xi. Additional Weather Station Installation (Potential)
 - xii. Rules and Regulations/GSP Pumping Restrictions
 - xiii. Meter Test Program
 - c. Meetings and Preparation (Engineering Support)
 - d. Annual Budget
- 11 . Contingency

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Did you know?

**AS OF OCTOBER 1, 2019,
ALL WELLS MUST BE REGISTERED**

WWW.IWVGA.ORG

(760) 384-5502



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Item 1. Call to Order

All members were present with the exception of voting member Ed Imsand (attending by phone and ineligible to vote), and non-voting member Lorelei Oviatt.

Item 2. Open Public Comment (Not Related to Other Agenda Items) - None Received.**Item 3. Review and Approve Minutes for June, July and August Meetings**

The minutes for the PAC meetings on June 6, June 27 (re-scheduled July meeting), August 1 and August 7 (Special Meeting) were approved with minor amendments.

Item 4. Draft GSP Update and Section Review**a. GSP Schedule Update**

The Chair outlined the GSP schedule update provided by the WRM to the TAC earlier. Section 2 was released earlier this week for review and individual member comment by September 17. The WRM and Stetson team provided presentations to the TAC earlier on Sustainable Management Criteria and Projects and Management Actions. Those presentations were discussed below and were provided for review and individual member comment by September 13. Both are supporting GSP sections in draft. The WRM intends to have the complete Draft GSP to GA staff by the end of October, then to both the PAC and TAC for review prior to submission to the GA Board. The WRM stated that they remain committed to meet the January 31, 2020 deadline required by SGMA.

- Member comment included concern regarding the opportunity for a second review of the sections, after the first round of comments were incorporated.

b. Sustainable Management Criteria

i. Shallow Well Impacts – Scenario 6.2 – The Chair summarized the updated Shallow Well Impact study incorporating the results for Scenario 6.2.

Member comment included:

- Concern with the “piecemeal” submission of data and difficulty in keeping the context of the complete picture. Concern was also expressed with lack of precision and accuracy of details in the data. This presentation had conflicting information with the information provided at the last GA meeting. These data are being used to provide recommendations for potential decisions and actions that have major impact on the citizens in the basin, and the data need to be as correct and complete as possible.
- Concern regarding the statement: “highest beneficial uses of groundwater “. Who decides which users have the highest beneficial use? The Navy, City, and County should not be considered “domestic”.
- The difference between scenario 6.1 and 6.2 included an additional imported water amount nearly 150% of total AG pool, but did not impact the shallow well impact numbers. More work and consideration for other variables and supplemental water opportunities (such as brackish) should be considered. More data is also needed on the relative impact of the multiple variables changed in scenario 6 including: a. lower overall pumping, b. injection of additional pumping near Inyokern, and c. moving some of the pumping from dense pumping areas to lower pumping areas.
- The DRI transport model due to be completed next week will provide critical data on water quality impacts that also must factor into the analyses, not just water levels.

- If 1% growth is considered for the municipal users, it should also be applied for other public domestic users such as mutuals, cooperatives, and Inyokern CSD. Any growth also needs to be considered in competition for the limited resource and the impact to those users already here.
- Policy issues here include what new or growth “users” might bring to the basin, as well as the economic and overall quality of life impact related to use of each acre foot of water in the basin.
- The water district provides municipal water to many businesses; why should ag be treated differently?

Public Comment Included:

- The non-domestic group represents tens, if not hundreds of millions of dollars of business value and investment in the basin. The proposed severe impact of providing only a temporary allocation to that group seems to be based on protecting 20-30 shallow wells. Alternative approaches need to be considered that are more considerate of all the users in the basin.
 - Member comment noted we should be considering how efficient our use of water is with respect to infrastructure and livelihoods supported. Infrastructure and livelihoods lost in the domestic group for the amount of water allocated to the non-domestic group would far outweigh the numbers above.
- Concern about the piecemeal release of data and the overall philosophy and the assumptions that are going into this process.

ii. Sustainable Management Criteria Presentation – The Chair summarized the presentation given by

Stetson to the TAC. Individual member comments are to be provided to the Chair by September 13.

Member comment included:

- Reiterated the need to be complete, accurate, and concise, such as not using the term “etc.” when listing impacts.
- Minimum thresholds must include groundwater quality as declining water levels have already resulted in lower quality in some areas in the basin. In some cases, if you decline to the minimum, you may not be able to recover quality at all. Groundwater quality must be part of the management plan.
- These minimum and objective thresholds are based on model scenario 6. If another scenario is eventually selected, would they all have to be re-calculated? Should historical data be more properly used to set the minimums?
- The GSP should include mitigation plan for both water level and quality issues.

Public Comment included:

- Some individuals on the TAC believe that the minimum thresholds should be set by the historical data rather than the model. The model can be used for future prediction.
- Encourage shallow well owners who have declining water levels or quality to attend the GA and committee meetings and help assess the impacts and plan for mitigation or remediation.

c. Projects and Management Actions – The Chair summarized the presentation given by

Stetson at the TAC. Individual member comments are to be provided to the chair by September 13.

Member comment included:

- While imported water delivery option 2 from AVEC is far more expensive, the GA would “own” the delivery infrastructure and not be dependent on any future negotiations with LADWP.
- The IWV Water District cost per AF varies each year, but has been as high as \$305/AF. Imported water costs may be 10 times higher on average when compared to IWVWD.

- Water costs appear to be based primarily on long term water purchase contracts that would likely have varying delivery quantity depending on water supply conditions each year. Capitol Core has researched both long-term contract opportunities and annual “spot” market sources.

Public Comment included:

- Questions arose regarding the amount of water available for recycled water. The state revolving fund can provide loans for recycled water at 1%. The 2% minimum assumption in the presentation is for non-recycled water. Recycled water loan cost beyond secondary treatment should be calculated at 1%.
- We should discuss where the money is coming from to pay for these options.
- Concern regarding the city use of recycled water for alfalfa production and costs associated with it.
- Under scenario 6, the major “non-domestic” users would be eliminated and the imported water costs would be borne entirely by the remaining “domestic” group users.
- How was the determination of the requirement for 5000AF/Yr imported water required? Were costs of comparative options considered and evaluated?

d. Draft GSP Section 2 Release for Comment

The Chair noted that Individual member comments are due to the Chair by 17 September for forwarding to the WRM. Member comments indicated the section seemed well done upon first review, but individual comments will be provided. No public comments were made.

Item 5. Imported Water Update

Nothing new to report.

ITEM 6. Future Agenda Items (September PAC)

- Draft GSP Update and Review
 - Sustainable Management Criteria Review
 - Projects and Management Actions Review
- Management Scenario Progress and Policy Issues
- Imported Water Status Update

Item 7. Future PAC meeting dates

Regular meetings: October 3, November 7, and December 5.

Item 8. Member Comment

- Ed Imsand stated that he remains optimistic that a solution can be reached that involves all stakeholders. He expressed concern that the process seems to be driven by some individuals with an agenda that makes the situation look more dramatically bad than it really is. As examples, he mentioned not using the USGS recharge numbers, and questioned the validity of the shallow well impact study. The water quality on North Brown road has remained steady for the last 20 years.
- Judie Decker emphasized the importance of not having actions in the plan that could not be realistically enforced, such as limiting non-deminimus users to less than 2AF/Yr. Pat Quist agreed.
- Pat Quist also noted that as a small farmer, she still contributes to the community as do all other small businesses, but is apparently not considered equal to all the other non-agriculture businesses in the basin. Certain entities in the basin seem to be villainized. We need to get past this.
- Renee Westa-Lusk emphasized the need to get on with getting the GSP completed.

- Nick Panzer expressed his support for the document posted today by member West Katzenstein proposing a uses-based allocation plan for the basin. He cited the DWR document on Water Budget Best Practices and beneficial use prioritization for water budgeting.
- West Katzenstein noted that he had taken the WRM offer to consider any alternative allocation plan and he submitted the plan early today that defines and prioritizes reasonable uses for water in our basin. It is based on the number of livelihoods each AF of water in the basin protects, and the amount of infrastructure each AF protects. The plan is available on the IWVGA website.
- Lyle Fisher commented that he did not expect strong response to the mandatory well registration.
- David Janiec thanked Stetson for their efforts, and thanked members for their respectful and collaborative efforts on this difficult and contentious task.

Item 7. Meeting Adjourned. Submitted by: David Janiec, IWVGA PAC Chair, 12 September 2019

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INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Ridgecrest City Hall, 100 W. California Ave, Ridgecrest, CA 93555

TECHNICAL ADVISORY COMMITTEE REPORT

September 19th, 2019 Report

- Item 1: Call to Order of the September 5, 2019 meeting.
 - Present: Adam Bingham (Chairman), Don Decker, Don Quist, Earl Wilson, Mallory Boyd, Wade Major and Eddy Teasdale.
 - Absent: Stephan Bork, Michelle Anderson and Tim Parker
 - No Rand Community Water District Representative.

- Item 2: Public Comments: Questions regarding the El Paso sub-basin regarding wells and locations for aquifer testing were asked. Stetson responded that plans for aquifer testing in the basin and coordination for TSS services in the El Paso sub-basin are in progress. A TAC member explained the El Paso sub-basin is hydrogeologically separated from the rest of the main basin.

- Item 3: WRM Discussion of GSP
 - 3a: Data Gaps and Isotope Reports
 - Nicole Weedman gave the presentation on water quality and stable isotope analysis under the Prop 1 Funding. This report indicated plans, timing, locations and goals for analysis and use within the GSP. Sampling at CASGEM and domestic wells is scheduled for September and October. Agricultural group representatives will ask well owners if samples may be taken from available wells at this time.
 - 3b: Sustainable Management Criteria
 - Steve Johnson discussed GSP development and current progress. Allocation, importation and necessary compliance needs were discussed. Since the basin is currently, and has been, in overdraft, there are undesirable impacts that are occurring now and there is no surplus water available; however, undesirable results are defined specifically in SGMA and some additional loss of storage and impacts will occur before acquiring additional water supplies and getting into SGMA compliance.
 - Heather Steele presented both the Shallow Well Impact summary which included a brief summary of Model Scenario 6.2. TAC members commented that the two pool groups names of “Domestic” and “Non-Domestic” are confusing because certain groups will not experience ramp-downs. TAC members requested that a detailed listing and/or paper on Model Run 6.2 be developed. Members of the public commented on the well registration form and asked it be simplified.
 - Heather Steele presented Sustainable Management Criteria. The proposed approach for setting criteria for chronic lowering of ground water levels and loss of storage is based on Model run 6.2 results along with historical measured data. The approaches for interconnected surface water and water quality are under development. The TAC discussed using the model for setting criteria compared to using measured data and the need for operational flexibility between the minimum thresholds and the measurable objectives. It was recommended the historical water levels in Navy wells be analyzed to consider Groundwater Dependent Ecosystems. TAC members were

IWVGA TAC COMMITTEE

Meeting Report – September 19, 2019

- encouraged to provide comments on the sustainable management criteria approach to Stetson.
- 3c: Projects and Management Actions
 - Heather Steele presented the project and management actions to be included in the GSP: imported water, recycled water, pumping restrictions, conservation, brackish water project. There was TAC discussion on dust control and the need for mitigation. Members of the public recommended specific areas in Ridgecrest be converted to using recycled water and recommended some additional historical conservation measures be discussed.
- 3d: GSP Report Update:
 - Documentation on Land Subsidence, Model Documentation, and Draft Section 2 was distributed to the TAC for review.
 - Transport modeling/TDS data documentation will be coming within the next couple of weeks.
 - Draft Sections will be distributed for review as they are ready.
- Item 4: Future Agenda Items
 - No changes at this time but they may occur as needed for GSP requirements and the upcoming GA Board requests. TAC members are encouraged to send Stetson thoughts and input recommendations for GSP requirements and Agenda needs.
- Item 5: Future TAC Meeting Dates
 - Current future meetings scheduled for October 3rd, November 7th and December 5th.
- Item 6: Final WRM & TAC Announcements and Comments
 - WRM: No comments.
 - TAC Members:
 - Mallory Boyd: Commented about the well registration form and indicated that some people don't know the definition of a well extraction facility.
 - Eddy Teasdale: Requested more narrative for modeling scenarios to better understand hydrographs.
 - Adam Bingham: Reported on members not present.
 - Don Decker: Appreciated Stetson's efforts. Encouraged a more simplified well registration form.
 - Don Quist: No comments.
 - Earl Wilson: No comments.
 - Wade Major: No comments.
- Item 7: Meeting adjourned around 4:00 pm

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Comments and suggestions concerning Stetson Engineers draft GSP documents provided to the GA TAC August 12, 2019. These documents include 1) “Estimated Shallow Well Impact Analysis of GA Model Runs 3, 4, 5, 6.1 and 6.2” and 2) IWV GSP draft Appendix “Total Dissolved Solids Database”

prepared by Don Decker, member of the TAC representing IWV Domestic Well Owners, August 18, 2019

1) Estimated Shallow Well Impact Analysis of GA Model Runs 3, 4, 5, 6.1 and 6.2.

a) This impact analysis follows previous Stetson Engineers (SE) work already reported for model runs 3, 4, and 5. All of these analyses are based on an approach suggested by this author in a Report to SE dated 11/2/2018. The total number of shallow domestic wells in the IWV Basin is estimated from existing inventories including the Kern County Well permit database. Since the earlier impact analysis runs, additional domestic shallow wells have been added to the original well inventory from data provided from Eastern Kern County Resource Conservation District files. The SE report estimates that there are 872 shallow wells in the IWV Basin. This is consistent with estimates of the number of rural parcels and rural annual domestic water production given by Todd Engineers in their January 2014 Report prepared for Kern County.

b) The new shallow well impact analyses for runs 6.1 and 6.2 are the primary interest here. The available Kern County Water Agency 5 year water level change data (2010 to 2015) was a key input as in the earlier impact analyses. The previous shallow well impact analysis results for model runs 3, 4 and 5 was included in the present discussion so that convenient comparison could be made with these earlier results.

c) This author’s report dated 8/5/2019 provides comments on pumping scenarios 6.1 and 6.2. These scenarios are based largely on scenario 4 which has been judged by some to be closest to providing an acceptable scenario on which the GSP could be based. However, as this author has commented, none of the scenarios to date including 6.1 and 6.2 are based on proper (explicit) recognition of the water rights of many of the major pumpers. What is missing at a minimum, is an outline of the GSP features that these pumping scenarios would be functioning under. Specific water buyouts and at least an estimated budget breakdown would go a long way towards reducing the extreme concerns that these scenarios raise for many pumpers.

d) However, this TAC member report is addressing shallow well impacts resulting from these scenarios-not the scenarios themselves. As expected, scenarios 6.1 and 6.2 have estimated cumulative impacts that are very similar to scenario 4 except for the out-years 2040 and 2070. For those future years, the cumulative impact rate is small and similar to scenario 5, the “abrupt halt of pumping”. Of course, from the domestic well community viewpoint, this low rate of predicted impact for 6.1 and 6.2 is a very welcome change from the ongoing costly repair years.

e) Although the apparent future differences in groundwater levels Basin wide is slight between scenarios 6.1 and 6.2, the 2500 ac-ft/yr of additional recharge water assumed in 6.1 cannot be simply ignored as unimportant. As can be easily seen from the colored maps that summarize groundwater level changes for each of the scenarios, the very large area of the NE remains in a declining water level condition in all scenarios out to 2070. If the flow model were to be carried further into the future the effect of the “extra” recharge water in 6.1 would be apparent. It is important to carry these models further into the future.

Sierra front recharge flow will only be apparent Basin wide in a longer time period. Although the dust issues connected with this drying out may be addressed in a separate project, groundwater will likely play a major role in its solution just as at Owens Lake. As alarming as this observation is, it cannot be ignored without serious future consequence. Even today, strong winds from the west or north pick up a characteristic very white dust from the greater playa. This is a phenomenon of recent years.

2) IWV GSP draft Appendix “Total Dissolved Solids Database”

a) This draft Appendix is nicely written and complete for the purpose. The water quality database is clearly just as important as the water level database as an underpinning of the GSP. We are all aware of the deteriorating water quality issues in some locations in the IWV Basin. The GSP will of necessity have a substantial section on water quality and sustainability. The Appendix database under discussion will be an essential reference.

Extensive water quality studies have been done on groundwater in the IWV basin going back to Charles Lee’s time. For any database to be useful, the data itself must be high quality. SE has clearly spent a very substantial effort in carefully examining the existing data sources including methods and consistency across the many reports involved. Accompanying this examination are notes to sort the data into cross checked and verified confidence levels. As noted in the SE appendix introduction, this is not a static database and the accompanying notes make it possible to easily identify data components for further future examination. This careful effort will undoubtedly pay dividends now and into the future.

b) The multitude of wells from which the documented water samples were taken are nicely distributed across the Basin with only a few weak areas. The most serious omission is the area west of Inyokern- extending both north and south of Hwy 178. Another apparent omission is the relatively weak data set of water quality from the watershed springs. However, the spring flows are small except for a few examples in wet years and most do not contribute significantly to the present day recharge. The relatively weak water level and quality data representation in the El Paso sub basin should not be a problem for now. If a groundwater recharge project were to be developed there in the future, additional water level and quality data would undoubtedly be brought forth.

Comments and recommendations concerning the September 5'th, 2019 TAC agenda item 3.b.ii, Sustainable Management Criteria and 3.c., Projects and Management Actions

Prepared by Don Decker, TAC member representing the IWV domestic well owners, September 7, 2019

A. For clarity this report will follow the Stetson Engineers presentations slide by slide where possible. Notes comments and suggestions intended to be explanatory are presented in italics.

B. Agenda item 3.b.ii, Sustainable Management Criteria

Slide 5: 1) I suggest changing wording of the second sub bullet to read: “Costs to mitigate secondary impacts related to loss of storage or loss of water quality”. **These impacts would be a consequence of wells going dry or the need to treat well water or relocate wells due to water quality issues.** *Note: some well owners are already treating water as a result of water quality issues. Well relocation in many, even most cases, will be difficult and certainly very costly.* 2) Clarification of the 3'rd sub/sub bullet. *DRI examined the predicted precipitation quantities for several published IPCC climate models and documented conflicting results; ie, some models predicted decreases and some predicted increases in precipitation in the future with the assumed driver of CO2 increase. This is the reason DRI did not incorporate any precipitation change in model simulations into the future other than annual fluctuations similar to those that have been observed in the past record. This clarification needs to be incorporated into the GSP text itself.* 3) A 6'th sub bullet needs to be added after “Impacts to Groundwater Dependent Ecosystems (GDE)”, add - **“Impacts from increased dust production in the greater vicinity of the playa”**. *This issue is actually ongoing and the dust produced is easily observable from space. There is the potential for a very serious problem as the groundwater levels near the playa continue to decline. This dust issue is directly connected to the GDE issues and will be a major Navy range concern.*

Slide 6: 1) Word usage in 2'nd sub/sub bullet needs to be changed. “Amount” needs to be replaced by “Number”- same suggestion lower down –**Number of shallow wells predicted to go dry.** 2) “Potential impacts: shallow wells need to be deepened or replaced or the owner would need to be connected to an alternate water system- a co-op or mutual system” *Note: It is often suggested that such a connection is a potential solution to shallow well failure. However, many co-op and mutual systems are in themselves already stressed to the point that further connections are not possible. It is more likely that mutual systems themselves will need to be “rescued”. This condition will become very obvious when a sustainability assessment for all Basin wells is completed.*

Slide 7: 1) The suggestion in the 2'nd sub bullet is too simplistic. *As this author has repeatedly pointed out, connecting a well failed because of poor water quality to a nearby healthier well is problematic from the start. It is very likely that all nearby wells are similarly affected. In any case, there is no legal route to force a private well owner to accommodate a neighbor in distress. Running new lines to reach a major water system will be very expensive and is the primary reason that the small shallow wells were drilled and equipped in the first place. For these shallow wells the aquifer itself is the distribution system. This is why the maintenance of healthy shallow wells Basin wide is so important. Assuming that the failed well is also not having water level issues, the likely recovery route is going to be local water treatment.* 2) 2'nd sub bullet under “Land Subsidence”, “water levels reach clay layers” is far too simplistic to be of any use. *What clay layers? The Basin lithographic structure is largely complex inter-bedded clay and coarser materials at nearly all locations. The only “clay layer” that is widespread and continuous is the very thick organic clay*

section underlying much of north Brown Rd. Evidence of subsidence in this area is present today. Early day subsidence at the Bowman Ranch (present Walmart location) may well have been caused by dewatering of lacustrine clays underlying the property. **Far more detailed evaluation of prominent clay sections will be required if any useful predictive capability is even possible. The only criteria to establish when “undesireable subsidence results occur” is to track the absolute elevations of a suitable set of bench marks which have been established for the purpose. All major civilian and Navy facilities should be so equipped.** INSAR can provide convenient areal mapping of elevation changes but calibration of these measurements depends on the bench marks themselves. It is obvious that some substantial elevation changes in this Basin have a tectonic origin. Regardless of the origin, the monitoring of elevation changes depends on the same measurements. 3). “Depletion of interconnected surface water” It can be easily discovered that in the early 1900’s flowing surface water was present nearly year round on the Valley floor in the major washes. These flowing streams provided a water supply to meet the requirements for many successful homestead applications. These washes are virtually dry now except for an occasional peak storm surge. Some present day Valley citizens have charged that this is this an example of the ability of the dry soils from the declining water levels to absorb the otherwise flowing surface water. Of course, the real origin of these dry washes is the substantially lower precipitation today.

Slide 8: A simple way to execute a Thiessen polygon approach is to use topographic sections (nominally 1 mi² or subsections (rectangular polygons). The advantage of this recommendation is that the polygons are already identified and located.

Slide 9: This is a repeat of an earlier comment- the 2’nd sub bullet under “Land subsidence method of measurement”: the line should read “direct elevation measurement”. **There is no realistic possibility that groundwater levels can be used as a proxy.**

Slide 10: The entry under land subsidence historical should read “yes”. *In the GSP this author recommends a short paragraph be written to describe the Bowman Ranch and N Brown Rd subsidence areas that are clearly evident today. These subsidence features serve to illustrate the possibility of future groundwater pumping subsidence. This phenomenon is not an abstract concept in this Basin at all.*

Slide 11: This slide is a compact and useful summary of the SGMA required management criteria. **However, this author has repeatedly criticized the use of flow model derived minimum threshold values. A much more accurate and defensible criteria can be obtained by linear extrapolation of existing (average) water level measurements for a fixed period of time which will be determined by the assumptions of the continued pumping in the pumping scenario selected for the GSP. This author also seriously criticized the use of groundwater levels as a proxy for subsidence. See slide 7 2) above.**

Slide 12: *This set of key monitoring wells includes virtually all of the thoroughly characterized wells in the Basin. However, the Navy subarea is not properly monitored. Especially important is the area in the greater vicinity of the China Lake play sink. The Navy can help to identify useful monitoring wells in this area.*

Slide 14: This slide illustrates a reasonable and practical combination of a minimum threshold (mt) and a measureable objective (mo). The difference in these values as illustrated is about 9 ft. **We all realize that SGMA does not require Basin water level repair. From that standpoint why is the mo set higher than the 2019 measured level? As a domestic well owner representative, I approve of such a setting as doing so**

provides a benefit to the shallow wells of the basin. However, it is likely more defensible to set the mo at the 2019 measured level. Actually setting the mo to the 2014 would be more defensible. This plot is a perfect example of proper functioning of the flow model in defining a mt. However, as pointed out earlier in slide 11 comments, a simpler and likely more accurate and consistent way to set the mt is to extrapolate the measured levels out to a time defined by the pumping scenario assumptions.

Slide 15: *This is an example where the flow model is not representing the current observed water levels in this well. The model slope is however, representative of water level declines over earlier years. This author could agree that some judgment will have to be employed for wells that do have unexpected level variations. The disadvantage of such an approach of course is the mo and mt are not entirely defensible.*

Slide 16: Another example of water levels and the flow model in good agreement. Either the model or a linear extrapolation would yield similar mt values.

Slide 17: This slide is apparently incomplete and not properly labeled.

Slide 19: Another example like slide 16.

Slides 21 and 22: Both of these slides illustrate a mo which has been set much too low for whatever reason. Setting the mo to the 2019 level would be appropriate as suggested earlier.

Slides 23 and 24: The model is not properly representing the observed water levels in BoR 5 and 6. The mo is not being calculated properly for BoR 5. Setting the mo to the 2019 level would be acceptable here also. The model behavior for BoR 6 suggests a systematic error.

Slide 25: **The flow model slope is accurately representing the present behavior of BoR 10. The out year predicted behavior is strange. The calculation of both the mo and mt are both clearly unreasonable. The 2019 measured level mt approach and the linear extrapolation to a proper future time would result in an acceptable mt.**

Slide 27: Measured water levels and model results for Sandquist Spa are in good agreement. Calculated mo is not correct. Again using the measured water level for 2019 would provide a reasonable mo.

Slide 29: The measured water levels and model results not in good agreement for BoR 1. 2019 measured water level would provide a reasonable mo.

Slide 30: BoR 2 is not in the El Paso Basin. It is actually within the disturbed zone of the El Paso fault itself. Study the water level elevations of this well compared to BoR 1 and any well in the SW (BoR 3). Again 2019 water level would provide a reasonable mo value.

Slide 31: The cumulative loss of storage plotted for the years 2020 to 2070 is presumably correct although it seems too small and does not have a break at the end of the continued pumping era. Since no details of the calculations for the mo and mt are given no comments on that aspect are possible.

C. Projects and management actions

Slides 2 and 3: Tentative placement of a brackish water project in the GSP is appropriate given the very large uncertainties of this effort. **It is unlikely that a real and useful project can emerge from this effort.**

The present location for a brackish water project is far from ideal from a brackish water supply standpoint and from the consequences on nearby potable water project pumping impacts.

Slide 4: Slide is a summary of GSP requirements and is complete

Slide 5: Complete as described. *There is another possible pipeline option involving DWP infrastructure and AVEK water. It has been observed that the second DWP aqueduct has been empty throughout many of the previous dry years. With a suitable incentive, DWP might be willing to lease a section of the second line starting at a point north of Cal City through which AVEK water could be transported to this Valley. The major modifications to the DWP pipeline would involve two full cross section isolation valves, a pump facility at Cal City and a turnout valve near Cal City and another probably in Indian Wells Canyon. The additional pipeline required from the AVEK line in Cal City to the aqueduct and from the aqueduct down into the IWV would be a small fraction of the length required for the full distance otherwise. This project has some important possible additions and many additional potential advantages not apparent. This project has clear issues but is perhaps no more daunting than some of the problem areas for the projects listed in this slide (Nickels water from the Kern R).*

Slide 9: *This writer has pointed out many times another approach to conserving water presently going to the Tui chub pond. It could be relatively simple and low cost to construct a large in ground concrete tank that would be maintained as chub habitat. This tank would have virtually no water lost to seepage and the water lost to evaporation from the new “pond” would be a tiny fraction of the water lost now. The project just described might be a suitable SeaBee undertaking.*

Slide 10: *Proposed purple line routes look useful and feasible except for the relatively long run to the west for injection recharge. Why not recharge the now largely depleted Ridgecrest well field which is more or less centered on the present day IWVWD headquarters and yard? The old well field also includes the area surrounding the City Hall complex. The reduction in pipeline length would be significant and the recharge would be in an area that could presumably readily accept the water. Research into removal of drugs and other complex organics from potential recharge water is ongoing.*

Slide 12: *This writer assumes that these costs for projects 1 and 2 are for tertiary treatment only. If so the costs seem high driven largely by the capital costs.*

Slide 14: *There appears to be contradictory information between the statements on this slide that pumping restrictions will be implemented after verifying current pumping compared to earlier slides that stated that pumping allocations would be based on planted areas in the 2010- 2014 time span. If ultimately the large farm interests are going to be denied future water allocations it would seem that accurate recognition of the actual water use during the 2010-2014 time period would be most appropriate. Even by 2014 a large fraction of the orchard farms had immature trees or in some cases no trees planted at all.*

Slide 15: *This slide provides a compact summary of past and some future water conservation efforts in the IWV. However many citizens are very upset over the very poor example being set by the City itself. Huge grass areas that have no real purpose, poor water practices that result in over sprinkling onto sidewalks, gutters and streets, watering at all times of the day and night including high wind days, fountains running even on the windiest days and no response at all to criticism from the public. Having a seat on the GA Board is not an excuse to ignore the water conservation that is underway for the citizenry. There needs to be a*

bulleted item on this slide that specifically describes the conservation measures the City intends to accomplish.

Slide 16: *The list of “potential opportunities for additional conservation” is not a list of opportunities but rather regulatory demands. It may well come to such a state but before this Basin gets to that point this writer will offer another scenario of a significantly reduced population from folks who are not somehow tied here to work or family- simply leaving. Actually, with the earthquakes it is already underway and even accelerated.*

As to projects like replacing evaporative coolers with conventional AC, in a low humidity environment like we have here, an AC unit is not the water conservation device that is claimed. To provide a reasonable and healthful living environment, the AC air must be humidified and exchanged at a substantial rate. Such water use is substantial. As to farming operations employing drip irrigation where possible, drip has been in use in orchards and row crops for decades everywhere. Just offering suggestions like this or the evaporative cooler conversion to AC without a better understanding of all aspects of the problem is not useful.

Indian Wells Valley GSP Appendix Land Subsidence Conditions

Comments from Earl Wilson IWV- TAC Member

I. Subsidence Environment Aquifer materials and conditions in IWV (Pg-1, Bullet-2)

The lacustrine hydrogeologic unit (i.e., fine-grained sediment) includes relatively thick deposits of silt and silty clay of Pleistocene age that have low permeability. The lacustrine unit is underlain by alluvium and is interbedded with deeper alluvium in the central portion of the basin. The extent of the clayey lacustrine unit coincides with the depocenter of China Lake basin and past highstand water levels of **Pleistocene China-Searles Lake** (Fig. 2).

Comment: Highstand water levels is not correct. China Lake was only a point of deposition along the flow path of water from far north of China Lake and flowing through Salt Wells to Searles Lake and finally terminating in Lake Manley in Death Valley. Searles and Salt Wells are not a part of the IWV Basin, Fig. 2 does not show either of the other basins And it should not.

II. Historical Observations of Subsidence

Level-line surveys showing tectonic ground deformation (Pg-2)

In some seismically active areas, ground deformation is commonly associated with discrete movements on faults during coseismic slip (i.e., slip during earthquake) or interseismic creep (i.e., slip during no earthquakes). The area of IWV that the LLFZ and APFZ cross is actively deforming based on historical surface rupturing events, as well as from land-based geodetic data from repeat, high-resolution level-line surveys of the 6.55-km (4.07-mi) long Supersonic Naval Ordnance Research Track (SNORT) alignment within Naval Air Weapons Station China Lake (NAWSCL) (Zellmer and Roquemore, 1997) (Fig. 5). The style and magnitude of historical surface deformation of the SNORT alignment reflects complex fault geometry between the LLFZ and ALFZ, and **an underlying shallow (~3-km deep) magma body.**

Comment: Not sure about using the word magma. Is it viscous or just “hot rock”. At ~3 km it sounds like we could have an eruption soon and not have to worry about a GSP at all.

The elevation differences between the surveys were computed as relative elevation changes along the track, and **assume** that the absolute elevation of the initial survey base station at the south end of **SNORT (monument SF-0) has not changed.**

Comment: Some confusion here between (F0 and SF-0)
(pg-5)

Evaluation of SNORT survey data for the period 1986–2000 was performed in this study to extend the period of record by 14 years. High-resolution, differential global positioning system (GPS) data acquired in 4 October – 6 November, 2000 by NAWSCL was compared with SNORT survey data collected in 1986 using the same methods of Zellmer and Roquemore (1997). In order to resolve the data to be fixed to the **SNORT base station (F0) an offset of +33.7 mm was applied.** This offset and perhaps other offsets previously used by Zellmer and Roquemore (1997) could be a signal of land subsidence associated groundwater-related compaction of aquifer materials or errors between individual survey methods that included ground-based geodetic techniques and more recently GPS.

Comment: I assume that SF-0 is a new reference point for SNORT. Were either F0 or SF-0 checked with distant USGS benchmarks.

Spatiotemporal correspondence between simulated groundwater-level and InSAR land-surface changes.

An evaluation of groundwater drawdown and InSAR datasets was performed in this study to characterize potential spatiotemporal correspondence between groundwater level and land surface changes across the IWV groundwater basin. Simulation of drawdown from the IWV groundwater model (McGraw et al., 2016; Garner et al., 2017) were compared to InSAR datasets (Katzenstein, 2015) for the periods 1992–2000 and 2005–2010. The evaluation also included the location of faults used in the groundwater model and the extent of the clay-rich lacustrine/playa unit, **along with the location of wells with greater than 900 acf of production during each period (Figs. 10 and 11).** Collectively, all the data were used to examine potential explanations for non-tectonic subsidence in IWV.

Comment: See Comment on Figure 12 (Below)

Subsidence modeling with MODFLOW (Pg-8&9)

Furthermore, during this initial stage of the development of the IWV groundwater model, faults were not included in the model. The newer version of the IWV groundwater model (Garner et al., 2017) now includes faults, which may produce different results if subsidence modeling was to be performed again.

Comment: Shows fault with the model used, Should ALSO be included as future work after GSP is adopted.

III. Assessment of Subsidence in Indian Wells Valley

Summary of rate, extent, and likely cause of historically observed subsidence

Land subsidence monitoring in Indian Wells Valley (Pg-11)

Comment: I concur with the recommendations for future work. Esp. since the recent earthquakes. SNORT would be my first choice for a permanent real time GPS location at F0 w/1 hr. data records. Also to run the Gardner etal model with the faults included even though there may be some changes from the recent quakes.

Figure 12. (pg-25)

Map showing 18 years of surface change within the Indian Wells Valley (IWV) groundwater model domain from Interferometric Synthetic Aperture Radar (InSAR) data between 1992 and 2010 (Katzenstein, 2015). The location of modeled faults, simulated drawdown from the IWV groundwater model, and the extent of a clay-rich hydrogeologic unit are shown. The distribution of wells with **greater than 900**, 10,000, and 20,000 acf of groundwater extraction during the period are also shown. The location of wells (8, 18, and 26) referred to in text are shown.

Comment: Does not match the legend!! Although it is correct since it is greater than 900 acf by a factor of > 4.

END OF COMMENTS

Earl Wilson

Indian Wells Valley GSP Appendix Total Dissolved Solids (TDS) Database

Comments from Earl Wilson IWV- TAC Member

Comment: You have a database with a goodly amount of data to process. I note that there are a lot of wells shallower than the screened intervals. Hint: F must be = to or > than G, unless the measurement includes the distance above ground surface. I did a QA/validation on it and provide the following areas of possible errors.

Page 5-1 there are 2-items 26s40e05po01 “Snip” almost cut it off.

26S39E36B	35.63386	-117.73144				982	362-962		
26S40E01A01	35.71042	-117.61376	444481.173	3952004.534	15				
26S40E01A02	35.70933	-117.61693	444193.669	3951885.434	198				
26S40E01J01	35.70558	-117.61690	444193.652	3951469.365	18				
26S40E01Q01	35.69742	-117.62818	443168.142	3950570.355	22	80-100	110-130	170-190	
26S40E01Q02	35.69843	-117.62015	443894.999	3950677.979	22				
26S40E04Q01	35.69739	-117.67526	438908.664	3950595.981	290				
26S40E05F01	35.70440	-117.70007			25				
26S40E05P01	35.69566	-117.69591	437038.807	3950416.395	89	40-98			

Page 5-2

26S40E06E01	35.70301	-117.72257							
26S40E07E01	35.68822	-117.71507	435298.747	3949603.885	86	120-200			
26S40E07N01	35.68107	-117.68840							
26S40E08N01	35.68162	-117.68618							
26S40E08Q01	35.68134	-117.69145							
26S40E09A01	35.69470	-117.67190	439206.252	3950297.550	100				
26S40E10E01	35.68857	-117.66923							
26S40E10F01	35.69100	-117.66097	440196.513	3949877.499	39	37-43.3			
26S40E10N01	35.68363	-117.66551	439780.363	3949063.707	134				
26S40E11A01	35.69229	-117.63241	442781.052	3950004.525	5	20-40	60-80		
26S40E11J01	35.68755	-117.63476	442565.650	3949479.784	18				
26S40E11J03	35.68579	-117.63645			8				

Page 6-1 Caution on the base: SeaBees may do grab samples and backfill the borehole.

26S40E26B01	35.64912	-117.64173			50				
26S40E26F01	35.64746	-117.64506	441603.958	3945038.872	77	20-40	60-80		
26S40E26N02	35.63857	-117.65046	441109.072	3944057.105	74	72-77			
26S40E27D01	35.65051	-117.66729	439594.451	3945391.174	160	75-77			

Page 7-1

26S40E33P04	35.61078	-117.65643	440547.952	3940978.398	304	169-182	198-216	233-252	256-272	275-290
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Comment: Not sure about this one. You cannot seal off 3 & 4 ft. sections of screen or formations effectively. Either drillers log error or a very large diameter well or the driller included the collars as blind. Other option is the driller had a bunch of cutoffs laying around and sold them to the customer !!

Page 7-2 two items

26S40E36K01	35.62800	-117.62240							
26S41E06P01	35.70181	-117.60719	445069.626	3951045.080	30	18-28			
26S41E07D01	35.69829	-117.61117			21	360-500			
26S41E07E01	35.69549	-117.61283	444555.418	3950347.873	32				
26S41E07G01	35.69559	-117.60008			31	30-36			

JMM12-MW08			437105.321	3945617.392	152	138-153
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SOME TYPOS – may be more - just the ones I spotted

Page 1 of 3

- Data from references RMC and Layne were removed because they were unable to be cross-checked
- 1 entry from Layne (2009) was based on DRAFT IWVWD figure with 18 TDS values
 - no report was available to effectively QA/QC data - moved to the 'Suspect TDS Data' tab
- 102 entries from RMC (2018) by BWG were moved to the 'Suspect TDS Data' tab - report did not source TDS data, therefore Stetson was unable to effectively QA/**AC** data

Page 2 of 3

- Requested GIS provide centroid location (x,y of the coordinates of the center of the section) where lat/long not available These are noted as "**PLScntr**" in the "**loc_source**" Column of the Well Information Tab

Comment: In this document it is: “Loc: center PLS” in the “Notes” Column.

June 2019 Database Update

- 1 • Addition of 3 TDS values from GAMA 6/21/2019 data download
 - Searles Valley Minerals Op Well 02 (27S40E04B3) 12/11/**2019** & 3/5/2019 TDS Samples
 - West Valley Mutual Well 01 (26S39E07M1) 11/19/**2019** TDS Sample

Comment: Did you mean 2018 ? Future shock ?

END OF COMMENTS

Earl Wilson

Adam / Heather

A few thoughts.

Inputs for shallow well impact results

The color scheme selected to highlight the model results is confusing, and misleading. Some charts are worse than others. For example, the chart entitled "production well location map" shows the entire basin as 'green' and then colors the various wells as a function of their type. The green sends the wrong message.

Recommend making it neutral, grey or some shade of beige - like the desert. Subsequent charts, have similar problems. The use of blue and green for a valley in severe over-draft is a mistake. Perhaps the shades of brown/ yellow / orange / red be better choices. In addition overlaying on the background colors highlighting the sections of across the map are locations of wells which also colored - the legend explaining the well colors is not included on these charts (other than on the production well location chart). Indeed, since these charts are more focused on water table information, only the approximate well locations are needed and colors could be eliminated. Recommend that the well locations be indicated with empty circles over laying on the colored background indicating the water conditions of the underlying groundwater. Again, I would recommend a different color scheme for the scenario charts.

Another general comment regarding color, less is better.

Doing GA meeting this week, or perhaps the last PAC gathering, the number of impacted wells used on our analysis to date was questioned. The official answer was, quite frankly, lousy and woefully inadequate. we need to include in this section where the number (91) came from, and if an estimate what assumptions were used in its' derivation. There was a lot of grumbling in the audience when the answer given lacked any details.

While I agree that imported water is an important element of the IWV's future, we have not identified much less secured a water source, Until we do, one of our future states needs to include what that means, because that just might be our future, as bleak as it might be.

respectfully submitted

r. mallory boyd

September 12, 2019
File No. 18-1-021

Sent via e-mail: SteveJ@stetsonengineers.com

Mr. Steve Johnson, P.E.
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Indian Wells Valley Groundwater Authority Technical Advisory Committee Members
c/o Water Resources Manager

**SUBJECT: INDIAN WELLS VALLEY GROUNDWATER AUTHORITY TECHNICAL ADVISORY COMMITTEE
MEMBER COMMENTS ON SEPTEMBER 5, 2019 TAC ITEMS**

Dear Mr. Johnson:

This letter is being written on behalf of our client, Meadowbrook Dairy (“Meadowbrook”). This letter is submitted in response to the Indian Wells Valley Groundwater Authority (GA) Water Resources Manager’s (WRM) September 5, 2019 request for input from Technical Advisory Committee (TAC) members on the following items:

1. Draft Model Documentation Appendix (DRI, August 2019)
2. Shallow Well Impact Results & Sustainable Management Criteria (WRM Presentation, September 5, 2019)

With respect to each of these discussion items, we reserve the opportunity to provide further comments as more detailed information is provided by the WRM, including for example, further comments on draft GSP materials and chapters, and in response to comments offered by other TAC members. Please distribute this letter to the TAC members prior to the October TAC meeting.

We appreciate the opportunity to provide preliminary comments on these items that lay the groundwork for the forthcoming Groundwater Sustainability Plan (GSP), and we look forward to developing a process to reach technical consensus as we move forward through the GSP process.

DISCUSSION TOPIC NUMBER 1 – DRAFT MODEL DOCUMENTATION APPENDIX

General Comments:

- Final model documentation should include a detailed table of contents and adhere to requirements of the GSP Regulations and DWR Modeling Best Management Practices.
- Model documentation should include at a minimum the following details presented in an organized report format. An example format has been provided below:
 - Executive Summary
 - Introduction
 - Background
 - Objectives and Approach
 - Report Organization
 - Model Code Section
 - Model Development Section
 - Spatial Discretization and Model Layering
 - Temporal Discretization
 - Climate
 - Groundwater Pumping
 - Off-Season Irrigation
 - Land Use
 - Crop Coefficients
 - Soil Type
 - Boundary Conditions
 - Aquifer Properties
 - Geological Framework
 - Simulation
 - Upscaling Hydraulic Parameters
 - Hydraulic Conductivity
 - Storage
 - Initial Conditions
 - Calibration
 - Groundwater Flow Model Results Section
 - Aquifer Parameters (Hydraulic Conductivity, Storage Coefficients)
 - Model Calibration
 - Statistical Measures of Model Fit
 - Hydraulic Head (Groundwater levels)
 - Model Water Budget
 - Land Surface System
 - Groundwater System
 - Estimate of Sustainable Yield

- Model Sensitivity
- Predictive Model Development Section
 - Baseline Model
 - Model Period and Hydrology
 - Model Geometry (Stress-Periods)
 - Climate
 - Groundwater Pumping
 - Boundary Conditions
 - Initialization
 - Climate Change
 - Model uncertainty due to climate change should be evaluated in accordance with Section 354.18(c)(3) of the GSP regulations and the DWR “Guidance for Climate Change Data Use During Groundwater Sustainability Plan Development” document (DWR, 2018).
- Projects and Management Actions Section
 - Utilize model to evaluate Projects and Management Actions considered by IWVGA as part of GSP preparation described in Project and Management Actions Section of GSP.
- Solute Transport Model Development Section
 - Porosity
 - Dispersion and Diffusion
 - Temporal Discretization
 - Initial Conditions
- Solute Transport Model Results Section
 - Calibration Results
 - Solute Budget
 - Residual Error Descriptive Statistics
- Conclusions & Recommendations Section
- Model Uncertainty and Limitations Section
- References Section

DISCUSSION TOPIC NUMBER 2 – SUSTAINABLE MANAGEMENT CRITERIA

General Comments on Shallow Well Impact Summary Slides (Agenda Item 3bi)

Given very limited site-specific (i.e. field verified, well construction information (age/depth/quality) and groundwater usage) domestic well information has been utilized in the current Shallow Well Impact Analysis, a much more reliable data is necessary in order to consider and evaluate any management action that would be implemented to address shallow well impacts. Current efforts to require registration of domestic wells is underway; however, based on the lack of current responses on the domestic well survey, domestic site-specific well information will not be available until after 2020 at the earliest (assuming

individual well owners respond). Implementation of the management actions built into Model Scenario 6 would jeopardize tens if not hundreds of millions of dollars of business investments and business value of the named “Non-Domestic Group” by, for example, forcing those producers including Meadowbrook to entirely cease pumping. It is unfathomable that the GSP would implement such harsh management actions in order to try to preserve a couple of dozen domestic wells utilizing the current Shallow Well Impact method that does not utilize quantifiable data such as the geographic location of the well, depth to water in the well, the age of the well, water quality from the well and historic usage.

Recommend that an official Economic Analysis and Framework for Potential Domestic Well Mitigation Program be developed and incorporated as an Appendix to the GSP. That Appendix should include an overview of the proposed program, discuss the benefits and costs of faster implementation of demand management. The mitigation program should discuss, for example:

1. Well mitigation program/purpose statement – Define the mission of the program, for example the program is to address any unreasonable adverse effects of groundwater pumping on domestic wells.
2. Definition of unreasonable adverse effects – Program should clearly define the types of impacts to domestic wells that will and will not be eligible for mitigation.
3. Register domestic wells – Develop a registration system. The current outreach methodology utilized has not resulted in much of a response.
4. Mitigation measures – Define mitigation measures. Other well mitigation programs suggest the following examples:
 - a. Domestic wells where municipal water service is not expected to exist in the near future (deepen or replace)
 - b. Domestic wells near existing municipal services (connect to municipal service)
 - c. Domestic wells impacted within a small geographic area (develop mutual/municipal to serve the impacted areas)
5. Define mitigation costs – Define how mitigation fund will pay for each type of impacted domestic well. Other well programs suggest:
 - a. Establish payment of \$XX/ft to deepen wells. If well cannot be deepened, establish standard cost to replace well \$XX/well
 - b. Decide how to compensate well owners that can connect to municipal systems
 - c. Establish “rapid response” approach for situations when wells go dry.
6. Establish review process – Develop a board to review and approve well mitigation claims consistent with the guidelines established. Establish process for expedient review.
7. Financing – Identify program financing sources, with priority toward external support including grants and low interest loans.

The program would be expected to be further developed during the first five years of GSP implementation. There are several well mitigation programs already in the state and they should be reviewed and considered for implementation in this basin.

General Comments on current Baseline Scenario:

The “current” baseline model developed for the initial modeling scenarios, should not be considered a baseline scenario for modeling comparisons. The “current” baseline model was initiated by a request from the WRM to selected producers to estimate future pumping over a 50-year period (factoring in growth). Those estimates were compiled and utilized in the current groundwater flow model, and subsequent model scenarios (only two of which, Model Scenarios 1 and 2, were vetted by the TAC prior to running) have been compared to this “current” baseline model run. Recommend that a “revised” baseline model scenario be developed in accordance with the GSP Regulations. (Please reference, for example, GSP Regulations Section 354.18 for more details).

Sustainable Management Criteria (SMC) including measurable objectives and minimum thresholds would be developed according to the “revised” baseline model scenario and in accordance with GSP Regulations and DWR’s SMC Best Management Practices. All Projects and Management Actions and model scenarios to evaluate Projects and Management Actions would be compared to the “revised” baseline in developing Sustainable Management Criteria.

General Comments on Sustainable Management Criteria Slides (Agenda 3bii Slides):

1. Following presentation of a specific topic (i.e. Sustainable Management Criteria), additional written documentation should also be provided to allow the reviewer to provide meaningful comments. The documentation could be in the form of a Technical Memorandum, and the contents could efficiently be incorporated into applicable sections of the GSP. Providing detailed comments only on summary PowerPoint presentation slide materials, where often the assumptions are not included, can be difficult, as is the case with the September 5 TAC meeting materials on SMCs.
2. For comparison purposes, include hydrographs for “revised baseline” results.
3. A description of the proposed minimum thresholds and measurable objectives and how they were established for the PowerPoint materials, and for all further SMC-related materials prepared by the WRM, should be provided. The assumptions should include recognition of the anticipated fluctuations in basin conditions around the established measurable objectives. In addition, please describe how each of the Projects and Management Actions and how the GSP will meet each measurable objective, how each measurable objective is intended to achieve the sustainability goal for the Plan area for the long-term beneficial uses, and how the interim milestones are intended to reflect the anticipated progress toward the measurable objectives during the 2020 to 2040 implementation period.
4. The GSP regulations define undesirable results as occurring when significant and unreasonable effects are caused by groundwater conditions occurring throughout the Plan area for a given sustainability indicator. Significant and unreasonable effects occur when minimum thresholds (MTs) are exceeded for one or more sustainability indicators. Information should be provided to the TAC and to the public to describe the following for each sustainability indicator relevant to

Plan area: the methodology used to set the minimum threshold and how selected MTs avoid causing undesirable results, relationships to other sustainability indicators, impact on adjacent subbasins, impacts on beneficial use/users, comparison to relevant federal, state, local standards, the measurement method.

5. To improve upon the technical understanding in the North Brown Road area, suggest adding additional domestic and existing agricultural wells to the current monitoring network.
6. Given the known uncertainties of the current groundwater model, recommend utilizing historical groundwater elevation and water quality measurements to define measurable objectives. Under SGMA, undesirable conditions prior to 2015 do not have to be addressed. As an example, the measurable objective for the groundwater levels at each monitoring site could be determined by taking the average groundwater elevation over the current monitoring period. Looking at groundwater levels in more recent years allows a more realistic, attainable goal to be set.

General Comments on Model Scenario 6.2

1. Scenario 6.2 includes many built-in assumptions, including for example, imposition of groundwater pumping allocations that require Meadowbrook and other large producers to cease production over a given time period, relocating the IWV Water District's pumping locations, and importing water, all of which are more accurately described as Projects and Management Actions, and many of which are objectionable, not fully vetted and not agreed upon. Scenario 6.2 is, in other words, more accurately described as a Project and Management Action model scenario, and not a valid framework for a GSP. At a minimum, individual PMA's should instead be specifically identified, detailed in their assumptions, vetted for feasibility and consensus, and then compared to a revised baseline scenario, before being considered for inclusion or implementation in a GSP
2. As described under the GSP regulations, PMA's should be developed to address sustainability goals, measurable objectives, and undesirable results identified in the Subbasin. The PMAs developed for the GSP should consider reducing the potential socioeconomic impacts associated with actions required to sustainably manage groundwater in the Subbasin.

For your reference, GSP Regulation §354.44 requires the following:

- a. Each Plan shall include a description of the projects and management actions the GSA has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.
- b. Each Plan shall include a description of the projects and management actions that include the following:
 1. A list of projects and management actions proposed in the Plan with a description of the measurable objective that is expected to benefit from the project or management action. The list shall include projects and management actions that may be utilized to meet interim milestones, the exceedance of minimum thresholds, or where undesirable results have occurred or are imminent. The Plan shall include the following:
 - A. A description of the circumstances under which projects or management actions shall be implemented, the criteria that would trigger implementation and termination of

projects or management actions, and the process by which the Agency shall determine that conditions requiring the implementation of particular projects or management actions have occurred.

- B. The process by which the Agency shall provide notice to the public and other agencies that the implementation of projects or management actions is being considered or has been implemented, including a description of the actions to be taken.
2. If overdraft conditions are identified through the analysis required by California Code of Regulations (CCR) Section 354.18 [Water Budget], the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.
 3. A summary of the permitting and regulatory process required for each project and management action.
 4. The status of each project and management action, including a timetable for expected initiation and completion, and the accrual of expected benefits.
 5. An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated.
 6. An explanation of how the project or management action will be accomplished. If the projects or management actions rely on water from outside the jurisdiction of the Agency, an explanation of the source and reliability of that water shall be included.
 7. A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.
 8. A description of the estimated cost for each project and management action and a description of how the Agency plans to meet those costs.
 9. A description of the management of groundwater extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.
- c. Projects and management actions shall be supported by best available information and best available science.
 - d. An Agency shall consider the level of uncertainty associated with the basin setting when developing projects or management actions.

MR. STEVE JOHNSON, P.E.
SEPTEMBER 12, 2019
PAGE 8

Thank you for considering our initial comments and recommendations. We look forward to working with you to further define, develop and produce the Groundwater Sustainability Plan in Indian Wells Valley.

Sincerely,

LUHDORFF & SCALMANINI
CONSULTING ENGINEERS

A handwritten signature in blue ink, appearing to read 'Eddy Teasdale', with a long horizontal stroke extending to the right.

Eddy Teasdale, P.G., C.HG
Senior Hydrogeologist

CC: Adam Bingham (Chair Technical Advisory Committee)

Technical Memorandum

August 30, 2019

To: Steve Johnson, Stetson Engineers - Water Resources Manager, Indian Wells Valley Groundwater Authority

From: Timothy K. Parker, PG, CEG, CHG, Parker Groundwater - Consulting Hydrogeologist to Indian Wells Valley Water District

Subject: Technical Review of Shallow Well Impact Analysis PowerPoint Slides

The following should be clarified in the slides:

Slide 1

- Should define "Shallow Well" with an appropriate metric
- Source of information for well counts for Private, Coop, Mutual wells, and residences should be provided
- Using the term "Production" twice may be confusing to the layperson - suggest using the term "Water Wells" as referenced in the state well standards

Slide 2

- Is the "CSD" the Inyokern Community Services District? The ICSD wells should not be considered "Coop wells", as a CSD is a California Special District, a form of local government created by a local community to meet a specific need or needs.
- It would be useful to provide a table of water wells including the larger production wells with certain characteristics such as owner of larger production wells, depth date installed, etc.
- Wells going dry reaches back to 1980 but the analysis only uses water level contour maps going back to 2010? How does extrapolating back the DDMN from 2010 to 1980 compare with pumping rate averages between 2010 and 1980, available from IWV Coop records?

Slide 3 & 4

- These slides describe the process and many assumptions that goes into this assessment
- There is no comment on the potential uncertainty associated with the results and SGMA specifically mentions uncertainty with analysis - a slide should be added that provides commentary on the potential uncertainty associated with the approach and results
- Cumulative number seems high - for example, the assessment based on many assumptions and unquantified uncertainty, suggests 8 wells went dry in 2013, and 91 wells between 1980 and 2018.
- The challenge with this assessment is that many people will believe this is the actual well count, not just an approximation based on a large number of conservative assumptions

- There should be some effort directed toward validation to the extent possible. The potential financial consequences to the GA to remediate impact on wells may be very significant.
- Suggest confirmation checks with the following additional sources of data:
 - o Request Kern County provide tabulation of all well replacements, deepening, and destructions based on cross referencing with parcel number in well permit database
 - o Brackish Group GeoGIS database contains all well completion from DWR database through 2018 - this database could also be queried for well replacements, deepening, and destructions based on cross referencing with parcel number

Slides 5-15

- Considering how this assessment is being used in the GSP development process and planning, it is essential that a slide be added to provide information on the uncertainty with the approach and results

Cc: Adam Bingham, Searles Valley Minerals, IWVGA TAC Chair
Don Zdeba, IWVWD General Manager, IWVGA GM

Technical Memorandum

September 3, 2019

To: Steve Johnson, Stetson Engineers - IWVGA Water Resources Manager
Adam Bingham, Searles Valley Minerals - IWVGA TAC Chairman

From: Timothy K. Parker, PG, CEG, CHG, Parker Groundwater - IWWVD TAC Member

Subject: Technical Review of Indian Wells Valley Groundwater Authority Draft Documents:

- Item 3a Prop 1 Water Quality Sampling Status
- Item 3bi Shallow Well Impacts
- DRAFT Appendix - GSP Model Documentation Figures 20190828

These comments are presented as the professional opinion of Tim Parker, Parker Groundwater, Consulting Hydrogeologist to the IWWVD, based on groundwater experience working in California, drafting GSPs with other co-authors in three other basins, and as a former DWR staff member. These comments are in no way meant to be criticism, but are submitted to be constructive and assist in the preparation of a DWR-compliant GSP on behalf of the IWVGA.

General Comment on PowerPoint Presentations

The PowerPoint presentations need to be written into narrative form into GSP sections including any supporting tables and figures for TAC review. With the time remaining for finishing the GSP in order to have adequate time for meaningful review by TAC and PAC and the public, future products provided to the TAC, PAC and public are recommended to be GSP sections from here on in - not PowerPoint presentations.

Item 3a Prop 1 Water Quality Sampling Status - 9/5/2019 IWV TAC: Water Quality Sampling

Appreciate that baseline is good consideration.

However, what is missing and what makes this PowerPoint document difficult to conduct a comprehensive review is that there has been a significant amount of water level and water quality sampling evaluations and results reported in the IWV and a narrative section with figures and tables need to be provided first with a detailed summary of what we know and don't know from previous water quality sampling and analysis as a foundation and rationale for additional sampling.

That said - The water quality sampling rationale should include a selection of well locations spatially in a way that allows evaluation of flowpaths from the Sierra Nevada drainages that recharge the basin to the west and northwest to the east and southeast - Flowpath analysis will be essential in order to understand the patterns of recharge and discharge in the basin over time.

Item 3bi Shallow Well Impacts - September 5, 2019**Cumulative Loss of Groundwater Storage**

Cumulative loss in groundwater storage should be tied to a minimum threshold value caused by a significant and unreasonable undesirable result with a rationale as foundation, including the use of the shallow well impacts analysis and groundwater flow model. This has not been written into narrative form - the current perception appears to be that the loss of groundwater storage as a driver was a result of private Board discussions and not technical or with the input of the TAC. Under the GSP regulations, the rationale for the groundwater storage loss set for curtailing pumping should be written into a narrative subsection with figures and tables as part of the sustainable management criteria section of the GSP. The WRM and TAC members should reference the SGMA Minimum Thresholds section included at this end of these comments.

Cumulative Well Impact

The cumulative well impact analysis relies on a number of fairly conservative assumptions which produce a relatively high number of wells going dry, which on the surface seems higher than reality. Since the shallow wells impact analysis is being used as an “undesirable result” under SGMA, there should be included a narrative section on the rationale, assumptions and uncertainties with the approach and results to make this work scientifically credible - otherwise the work is not defensible. Additionally, there are two sources of data and information that need to be used to cross-check the results as second and third lines of scientific evidence of the cumulative well impacts analysis. This is particularly critical since these results are driving the allowable storage loss and driving significant pumping ramp downs that will have economic and political impacts, and likely result in litigation. The two sources of data and information that without question need to be cross checked against the cumulative well impacts analysis are:

- 1) The Kern County Health Department well permitting information and database for new, modified and well destruction permits on a parcel-by-parcel basis.
- 2) The GeoGIS database which includes all the well construction data through 2018

Using lack of time and/or resources as a reason for not including a review of readily available hard data may lead to scientific challenges of the work and is not recommended - there are been several years to get to where we are in the process.

Groundwater Model Documentation

I have not reviewed the model documentation for compliance with DWR requirements (GSP Emergency Regulations and Best Management Practices for Sustainable Management of Groundwater - Models) - it is the responsibility of the Water Resources Manager to ensure that the GSP including model documentation is in compliance and passes the scrutiny of Department of Water Resources and State Water Resources Control Board reviews. Please see section on groundwater models from SGMA and refer to the DWR Models BMP for further information.

General Comments:

The model does not cover the entire SGMA basin, and there is not discussion describing why, or rationale for the geographic coverage of the model compared to the legally defined groundwater basins and hydrologic watershed - recommend a narrative discussion and rationale be included.

The model contains a sensitivity analysis section but lacks an assessment of uncertainty - recommend including an assessment of the uncertainty of the modeling results.

1. Introduction

Model utilization should include reference to assessing sustainability indicators since it is being used to set acceptable storage depletion.

The model documentation indicates that DRI developed a new MODFLOW model - our previous understanding was that the model was initiated based on the 2009 Brow & Caldwell model developed with funding by the IWV cooperative Groundwater Management Group - please clarify if DRI started from scratch to develop the model or if they started with the Brown & Caldwell model -

2.3 Configuration

The documentation indicates that the only flux simulated on the perimeter boundary is mountain front recharge, however, 2,400 AF/yr is from Rose Valley, which is not within the IWV basin - recommend that this be further explained.

SGMA Statute

§ 352.4. Data and Reporting Standards

(f) Groundwater and surface water models used for a Plan shall meet the following standards:

(1) The model shall include publicly available supporting documentation.

(2) The model shall be based on field or laboratory measurements, or equivalent methods that justify the selected values, and calibrated against site-specific field data.

(3) Groundwater and surface water models developed in support of a Plan after the effective date of these regulations shall consist of public domain open-source software.

(g) The Department may request data input and output files used by the Agency, as necessary. The Department may independently evaluate the appropriateness of model results relied upon by the Agency, and use that evaluation in the Department's assessment of the Plan.

§ 354.28. Minimum Thresholds

(a) Each Agency in its Plan shall establish minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value

used to define minimum thresholds shall represent a point in the basin that, if exceeded,

may cause undesirable results as described in Section 354.26.

(b) The description of minimum thresholds shall include the following:

(1) The information and criteria relied upon to establish and justify the minimum thresholds for each sustainability indicator. The justification for the minimum threshold shall be supported by information provided in the basin setting, and other data or models as appropriate, and qualified by uncertainty in the understanding of the

basin setting.

(2) The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability

indicators.

(3) How minimum thresholds have been selected to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.

(4) How minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.

(5) How state, federal, or local standards relate to the relevant sustainability indicator.

If the minimum threshold differs from other regulatory standards, the Agency shall explain the nature of and basis for the difference.

(6) How each minimum threshold will be quantitatively measured, consistent with the monitoring network requirements described in Subarticle 4.

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(c) Minimum thresholds for each sustainability indicator shall be defined as follows:

(1) Chronic Lowering of Groundwater Levels. The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results.

Minimum

thresholds for chronic lowering of groundwater levels shall be supported by the following:

(A) The rate of groundwater elevation decline based on historical trends, water year type, and projected water use in the basin.

(B) Potential effects on other sustainability indicators.

(2) Reduction of Groundwater Storage. The minimum threshold for reduction of groundwater storage shall be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results.

Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.



Searles Valley Minerals Comments on PAC/TAC items 3bii and 3c

Agenda Item 3bii: Sustainable Management Criteria

Overall, the main thing missing from this section is any discussion of economic trade-offs, except for potential encroachment on the NAWS mission. Re-drilling 99 wells is still cheaper than imported water from AVEK or LADWP. In addition, the use of scenario 6 modeling for both minimum thresholds and measurable objectives does not give independent measurable metrics. Too much reliance on modeling can compound errors.

Approach for Setting Criteria

Model 6 scenario is used for setting many of the minimum thresholds and some of the measurable objectives required for Sustainable Management Criteria. This scenario relies upon imported water to be available in 2035. Will the thresholds/objectives change if imported water is not available? This scenario relies upon moving some higher volume wells from areas of high density pumping to areas of lower density. Is this reflected in a management action? How does this action change the thresholds/objectives? Does moving any pumping to the area south of the El Paso fault change the thresholds/objectives of the groundwater storage or groundwater level criteria?

Minimum Thresholds

Minimum thresholds in the reduction of groundwater storage seem to be based on modeling and shallow well impacts. The Thiessen polygon modeling method on slide 8 does not state the number or location of monitoring wells that will be used. The 12 wells mentioned in the monitoring well network (slide 12) do not seem to be adequate to determine the groundwater levels for the entire basin 9/12/2019. The areal extent and number of wells should be greater.

In addition, since multiple criteria are using groundwater levels to define minimum thresholds, a minimum number of wells located throughout the basin should be determined. How was the number of 12 wells decided to be the appropriate amount? “Key wells” should represent distinct areas of the basin to get a true account of basin water levels throughout our boundary area and not be clustered. Wells that may not show a drastic decrease in level should not be omitted from the data set. If they are omitted, the model is biased towards more drastic decline across the basin than is actually present.

Agenda Item 3c: Project and Management Actions

The project and management actions section of the GSP needs more information. It is unclear what governing body or group will be accountable for making the final decisions on whether to pursue any or all of the projects. It is unclear what the timetable is for making these decisions and where the funding will come from. We would like to see cost benefit analyses for these projects and prioritization based on effectiveness and “more bang for the buck”. A discussion on permitting and CEQA issues for the projects seems to be missing. More consideration needs to be given to conservation as a management action.

Imported Water

Assuming that imported water is legally, technologically and economically feasible, a decision on whether the imported water from AVEK or LADWP will be injected into the IWVGB or piped directly to the IWVWD or some other entity should be made. This might have an impact on the type of infrastructure needed and therefore the cost. A detailed cost analysis would be helpful.

In addition, there should be some discussion on the amount of water to import. Costs are for 5000 AFY. Maybe the amount should be higher knowing that the full amount is rarely available. Maybe it should be lower. At what point does building the infrastructure make sense on a per acre-ft basis? The timing of these projects is important. Large multi-jurisdictional projects take a lot of time and money to complete. Is the 2035 deadline achievable?

Recycled Water

Use of recycled water for recharge or other uses makes sense from a conservation viewpoint. The costs, however, seem high. Are they mainly due to extra piping or extra treatment? A detailed cost analysis would be helpful. The priority of the different projects involving recycled water would also be helpful with a detailed explanation of why certain projects receive higher priority. Conservation effects on the 1476 AFY available to meet demand should also be considered. Is there a plan to hook up people on septic to sewer to mitigate this effect?

Has the proposed site for recycled water injection been evaluated? What criteria were used to choose this site? What makes this site better than other sites?

Pumping Restrictions

Searles Valley Minerals does not agree with basing any pumping restrictions on the current version of Scenario 6.2. That said, any acceptable GSP will include decreases of potable water pumping and usage by all users including those categorized as domestic, non-domestic, agricultural, industrial, municipal, etc. Any acceptable GSP that hopes to gain broad community support will need to provide enough time for pumpers to change how they use water and develop other processes, if necessary. Lastly, any acceptable GSP will include a minimum amount of pumping credited to every pumper that recognizes their extant water rights. Whether those residual rights are transferred, bought out or used can be left to the individual pumpers.

There is no discussion in this section about moving some high volume pumpers from areas of high pumping density to different areas of lower pumping. This is a topic that needs to be included as a management action. Specifically, moving some pumping to areas south of the El Paso fault zone should be explored. Cost calculations should also be included for this management action/project.

Dust Control

Potential dust control problems due to groundwater level changes might be considered an additional undesirable effect. At this point, however, it is a hypothetical concern and has not been shown to be a major issue from a data standpoint. Anecdotal evidence does not prove an issue exists. In addition, areas of dust on the NAWS base from the playas should be treated differently than possible dust from fallowed fields. This is an issue that would benefit from a data gap analysis and could be revisited during the 5-year update if there is a real issue.

Storm Water:

There appears to be no substantive discussion on the capture of storm water. During wet years, a sizeable amount of water gathers in various storm channels and on Mirror Lake. It is intermittent and does not occur every year, but currently storm water sits on the surface of the desert and evaporates. Do we know how much water this is? We would like to see discussion on using this water either as recycled water or maybe filtered and injected into the water table as recharge. There are funds available under the Proposition 1 Storm Water Grant Program. A notice came out August 22 stating "Nearly \$100 million in Proposition 1 funds remain available for multi-benefit storm water projects. In anticipation of the second solicitation for implementation projects (Round 2), which is planned to open later this year." It seems like an idea worth pursuing.

Conservation

We live in an arid, desert environment. If we assume the conditions and parameters as stated in the various models, specifically recharge numbers and basin capacity, as well as recent pumping data, everyone in the basin will have to drastically reduce their usage. Drastic conservation may result in life style changes. This is unavoidable given the magnitude of change that the state of California mandates with SGMA.

Other countries facing severe drought and sharing some facets of our arid environment have been able to decrease their water consumption drastically. Public outreach for conservation efforts as well as rebates for installing conservation friendly equipment like low flow toilets, faucets, leak detection, switching from swamp coolers, etc. is the key to conserving. In addition, higher costs of potable water, including fees, drive conservation. Grants for conservation appear to be available and should be considered and aggressively pursued. Individual household gray water usage and storm water capture should be encouraged. All of these techniques will be needed, but economic costs and rebates should be considered before requiring implementation of higher cost changes.

There should be discussion of expanding the municipal water districts to include de minimis users in those areas of relatively high population density and/or shallow well failures. Grants might be available to offset the costs of this. Moving some de minimis users to the water districts could mitigate shallow well failures.

Searles Valley Minerals recycles a considerable amount of water and also uses brackish water in its processes. The company continues to explore potential opportunities for additional conservation.

Respectfully submitted by Mallory Boyd

Comments regarding Sustainable management criteria summary submitted
9/05/19 in support of discussions – Agenda item 3bii, IWVGA TAC meeting 9/05/19

As I mentioned during the subject TAC meeting, the specific sustainability criteria specified in SGMA lacks consideration for dust resulting (in-directly) from dropping water table levels, this is a particular concern in a basin in severe over-draft like the Indian Wells Valley (IWV). The playa in the China Lake region overlays the regions' shallowest depth to water table. This shallow depth exposes the IWV's water table to the atmosphere, resulting in relatively high levels of Evapo-transpiration, estimated (and supported with scientific instrumentation measurements) to be 2500 AC-FT/year. As the water table declines across the valley, the eventual effect in the playa area is a drying of surface minerals concentrated over countless years, as a direct result of lowering ground water. These now dry(er) minerals, mostly held in place while moist, become less secure and prone to become airborne when winds sufficiently powerful blow through the valley. While this problem is still somewhat in its' infancy (in the IWV), an example of a playa allowed to dry through excessive water diversions and the resultant dust issues lays just north in the Owens Valley. The problem is real, the consequences high – and can be predicted with reasonable accuracy. We must connect the most relevant sustainability criteria with this ancillary effect early in the development of the ground water plan, and take steps to isolate it from other dust producing events (like following agriculture lands) as the mitigation steps are likely to be more protracted, if not more complicated – and if not acted upon early, more costly.

Playa dust contains myriad components, many environmentally threatening, and present substantive health challenges to not just IWV residents but to neighboring communities.

I have other concerns, but most have been touched upon by Mr Parker and Dr Decker in their written submissions.

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TO: Don Zdeba, General Manager IWVGA

FROM: Jeff Simonetti, Sr. Vice President

CC: Michael W. McKinney – Capitol Core
Todd Tatum – Capitol Core

DATE: September 9, 2019

SUBJECT: Project Update Memorandum – August 2019

The following will serve as a project update to Capitol Core Group activities for the month of August 2019. The overlapping legislative recesses and completion of Technical Memorandum in July reduced workload, as expected, during the month. Even with this reduction, some key elements were accomplished and are reported herein.

TASK 1 – DETERMINATION AND SECURE SOURCES OF IMPORTED WATER SUPPLIES

As stated above the Technical Memorandum has been provided to the Board for consideration. During August, Capitol Core answered questions concerning the data provided and met with Northern California suppliers on potential imported water supplies. Follow-up on potential water supplies will continue in September.

TASK 3 – IDENTIFICATION AND SECURE POTENTIAL FUNDING SOURCES

With Congress in recess for the majority of August, Capitol Core focused on specific meetings with Members and Congressional staff concerning the Authorization and Appropriations bill processes. Specifically, we held meetings with Senator Inhofe (R-OK) who chairs the Senate Armed Services Committee and with Senator Feinstein (D-CA) who is the ranking member of the Senate Energy & Water Development Subcommittee for the Appropriations Committee. Our meetings were primarily targeted on potential Senate actions on Authorization/Appropriation bills expected in mid-September related to either water or defense bills that Capitol Core is tracking.

By contrast, the California Legislature returned to finalize the first year of the 2019-2020 Session (recess is expected on September 13, 2019). During this period Capitol Core met with the Governor's Office, the Governors' Military Council, State Water Resources Control Board, and various members of the California Legislature to discuss an *order-of-magnitude* funding request. We have received direction from the State Legislature and are currently finalizing our State After-Action Report for submittal.

Capitol Core continues finalization of the Funding Source Strategic Plan which will be submitted to the Board in early October. We are completing specific meetings with the U.S. Department of Agriculture, the U.S. Army Corps of Engineers, and the California Department of Natural Resources in order to provide a complete array of funding sources and finalize our recommendations. We also met with members of the Governor's Military Council and members of the California Senate to begin assessing the potential for funding assistance for communities that support military installations in California that also need to address SMGA compliance. Michael McKinney will be attending the October Board Meeting to present findings and seek final direction to request funding sources.

Should you have any questions, please give me a call.

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