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

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

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

BOARD OF DIRECTORS

SUPPLEMENTAL AGENDA

Thursday, May 17, 2018
Open Session 10:00 a.m.

Supplemental Agenda Related Writings/Documents Provided To A Majority Of The Indian Wells Valley Groundwater Authority After Distribution Of The May 17, 2018 Agenda Packet

7. *INTRODUCE ORDINANCE 02-18 ESTABLISHING THE RULES, REGULATIONS AND PROCEDURES FOR THE IMPOSITION AND COLLECTION OF GROUNDWATER EXTRACTION FEES*

8. *DISCUSSION AND APPROVAL OF IWVGA-DESERT RESEARCH INSTITUTE (DRI) MODELING SUPPORT AGREEMENT*

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ITEM 7

IWVGA ADMINISTRATIVE OFFICE

MEMORANDUM

TO: IWVGA Board Members **DATE: May 17, 2018**

FROM: Phillip Hall, IWVGA Staff

SUBJECT: Ordinance No 02-18 – Establishing the Rules, Regulations and Procedures For The Imposition and Collection of Groundwater Extractions Fees.

DISCUSSION

This Board has previously determined that it will fund the costs of a groundwater sustainability program, including, but not limited to, preparation, adoption, and amendment of a groundwater sustainability plan, and investigations, inspections, compliance assistance, enforcement, and program administration, including a prudent reserve through the imposition of a Groundwater Extraction Fee. The attached Ordinance is one component in implementing that program.

Because this action is an Ordinance, the Board will need to introduce this Ordinance at today's meeting and then revisit the Ordinance for final adoption at the next regular meeting of the Board in June. It is anticipated that the adoption of this Ordinance will coincide with the adoption of the Authority's Groundwater Extraction Fee Resolution.

RECOMMENDATION

Staff recommends that your Board:

1) Make a finding that the proposed Ordinance is exempt from further environmental review pursuant to California Environmental Quality Act Guidelines section 15273 and Public Resources Code section 21080(b)(8) because it is the establishment of operational rates and charges. Additionally, it has been determined that this action is exempt from further environmental review pursuant Guidelines section 15061(b)(3) because it can be seen with a certainty that this action will not have a significant effect on the environment. Moreover it has been determined that this action is exempt from further environmental review pursuant Guidelines section 15378(b)(5) because it involves administrative activities that will not result in direct or indirect physical changes in the environment.

2) Introduce the attached Ordinance by reading aloud its Title: Ordinance No 02-18– Establishing the Rules, Regulations and Procedures for the Imposition and Collection of Groundwater Extractions Fees.

BEFORE THE BOARD OF DIRECTORS OF THE INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

In the matter of: **Ordinance No. 02-18**

ESTABLISHING THE RULES, REGULATIONS AND PROCEDURES FOR THE IMPOSITION AND COLLECTION OF GROUNDWATER EXTRACTION FEES

I, _____, Clerk of the Board of Directors for the Indian Wells Valley Groundwater Authority, do certify that the following ordinance, on motion of Director _____, seconded by Director _____, was duly passed and adopted by the Board of Directors at an official meeting this ___ day of June, 2018, by the following vote:

AYES:

NOES:

ABSENT:

_____
Clerk of the Board of Directors
Indian Wells Valley Groundwater Authority

_____
Deputy Clerk

THE BOARD OF DIRECTORS OF INDIAN WELLS VALLEY GROUNDWATER AUTHORITY ORDAINS AS FOLLOWS:

Section 1. This Ordinance shall become effective 30 days from the date of adoption and the complete Ordinance shall be published in accordance with Californian Government Code section 25124.

Section 2. Definitions. As used in this Ordinance, the following terms shall have the meanings stated below:

2.1 "Authority" means the Indian Wells Valley Groundwater Authority.

2.2 "Basin" means the Indian Wells Valley Groundwater Basin which is designated as basin number 6-54 in Department of Water Resources' Bulletin No. 118.

2.3 "De Minimis Extractor" shall have the same meaning set forth in California Water Code section 10721(e).

2.4 "Groundwater Extraction Facility (Facilities)" means any device or method for the extraction of groundwater from the Basin.

2.5 "Groundwater Extraction Fee" means the fee set forth in the Authority's then applicable Groundwater Extraction Fee Resolution.

2.6 "Groundwater Extraction Fee Resolution" means the Authority's Resolutions and any amendments thereto, that refer to or set charges and conditions on the measurement of groundwater extractions in the Basin.

2.7 "Groundwater Extractors" means both the owner and the operator of a Groundwater Extraction Facility located within the Basin.

2.8 "Water Resources Manager" means the individual given said title and position with the Authority by the Board of Directors.

Section 3. Groundwater Extraction Fee. Effective August 1, 2018, and unless otherwise expressly prohibited by law, all groundwater extractions from, and within the Basin shall be subject to measurement and the Groundwater Extraction Fee set for in the then applicable Groundwater Extraction Fee Resolution.

Section 4. Groundwater Extraction Facility Registration. No later than July 23, 2018, all Groundwater Extraction Facilities within the boundaries of the Basin shall be registered with the Authority by the Groundwater Extractor. Groundwater Extraction Facilities are prohibited from extracting groundwater from the Basin if they are not registered by July 23, 2018 and said prohibition shall continue until the Facility is registered to the satisfaction of the Water Resources Manager.

Notwithstanding the foregoing, Groundwater Extraction Facilities that are used solely by a De Minimis Extractor have until October 1, 2018 to register with the Authority. If such a Groundwater Extraction Facility is not registered by October 1, 2018, the Facility shall be prohibited from extracting groundwater until it is registered to the satisfaction of the Water Resources Manager.

Groundwater Extraction Facilities constructed after July 23, 2018 must register and must receive registration approval from the Water Resources Manager prior to the extraction of any groundwater from the Basin.

The registration of a Groundwater Extraction Facility shall be made to the satisfaction of the Water Resources Manager and at a minimum the registration shall include the following information: 1) the name and contact address of the owner and, if different, the operator of the Groundwater Extraction Facility; 2) the location of the Groundwater Extraction Facility; 3) the name and address of the owner of

the land upon which the Groundwater Extraction Facility is located; 4) a description of the equipment associated with the Groundwater Extraction Facility; 5) a description of the method the owner and operator uses to measure groundwater extractions from the Groundwater Extraction Facility; 6) a statement describing whether the extracted groundwater is used for residential, commercial, industrial or agricultural purposes, or a combination thereof; and, 7) any other information that the Authority's General Manager deems to be prudent and necessary to achieve the legal purposes of the Authority.

The Water Resources Manager shall review all registrations and return, with corrective comment, any that do not meet the Water Resources Manager's approval. Approved registrations shall receive an approval notice from the Authority. A Groundwater Extraction Facility may not extract any groundwater from the Basin until it has received a registration approval notice.

Section 5. Groundwater Extraction Measuring and Reporting. Effective August 1, 2018, all groundwater extractions from, and within, the boundaries of the Basin shall be measured in a method approved by the Water Resources Manager and reported by the Groundwater Extractor to the Authority in accordance with the provisions of the then applicable Groundwater Extraction Fee Resolution.

Section 6. Violations. Anyone that violates any provision of this Ordinance, or the Groundwater Extraction Fee Resolution, shall be subject to possible civil penalties and civil action by the Authority. The Authority's civil penalties and civil action rights are an additional right to those rights which may otherwise be prescribed by Law.

Section 7. Delinquent Accounts. As prescribed by California Water Code section 10730.6, if the owner and/or operator of a Groundwater Extraction Facility knowingly fails to pay the Groundwater Extraction Fee within thirty (30) days of it becoming due, it is delinquent and the owner and operator shall be liable to the Authority for interest at a rate of one (1) percent per month on the delinquent amount of the Groundwater Extraction Fee and a ten (10) percent penalty on the delinquent amount.

As an additional remedy, the Authority may, after a public hearing, order an owner and/or operator to cease extraction of groundwater until all delinquent fees, interests and penalties are paid. In such an instance, the Authority shall give notice to the owner and/or operator by certified mail not less than 15 days in advance of the public hearing.

These above cited rights are additional rights to those rights which the Authority may otherwise be prescribed by law.

Section 8. Owner Responsibility. The owners of Groundwater Extraction Facilities are ultimately responsible for the payment of all Groundwater Extraction Fee charges, interest and penalties should an operator fail to abide by the provisions of this Ordinance and Authority's Groundwater Extraction Fee Resolution. Consequently, owners are charged with providing for the requirements of this Ordinance and the Groundwater Extraction Fee Resolution in any agreements entered into with well operators and water users.

Section 9. New Groundwater Extraction Facilities. Groundwater Extraction Facilities constructed after the effective date of this Ordinance shall comply with the requirements set forth in this Ordinance and the Groundwater Extraction Fee Resolution prior to the extraction of any groundwater from the Basin.

Section 10. Severability. Should any provision of this Ordinance, or its application, be determined by a court of competent jurisdiction to be unlawful, unenforceable or otherwise invalid, that determination shall have no effect on any other provision of this Ordinance and to that end, the provisions hereof are severable.

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IWVGA ADMINISTRATIVE OFFICE

MEMORANDUM

TO: IWVGA Board Members **DATE: May 17, 2018**

FROM: Phillip Hall, IWVGA Staff

SUBJECT: Resolution __-18 – Resolution Establishing Procedures for and Adopting a Groundwater Extraction Fee

DISCUSSION

Note – this Resolution is in draft format. The Board is not being asked to adopt this Resolution at this time. The Board is being provided this draft Resolutions to give it insight into the provisions that will be brought before your Board next month.

RECOMMENDATION

Take no action on this Resolution until the final version is brought before the Board at the June meeting.

BEFORE THE BOARD OF DIRECTORS
INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

In the matter of: **Resolution No. __-18**

RESOLUTION ESTABLISHING PROCEDURES FOR AND ADOPTING A GROUNDWATER EXTRACTION FEE

I, Lauren Duffy, Secretary of the Board of Directors for the Indian Wells Valley Groundwater Authority, do certify that the following resolution, on motion of Director _____, seconded by Director _____, was duly passed and adopted by the Board of Directors at an official meeting this 15th day of March, 2018, by the following vote:

AYES:

NOES:

ABSENT:

_____
Secretary of the Board of Directors
Indian Wells Valley Groundwater Authority

WHEREAS:

(a) The comprehensive groundwater legislation collectively enacted and referred to as the "Sustainable Groundwater Management Act" ("SGMA") initially became effective on January 1, 2015.

(b) The stated purpose of SGMA, as set forth in California Water Code section 10720.1, is to provide for the sustainable management of groundwater basins at a local level by providing local groundwater agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater.

(c) SGMA further provides for and anticipates that the local groundwater agencies and federal governmental entities overlying a basin will form Groundwater Sustainable Agencies ("GSAs") for the

purpose of achieving groundwater sustainability through the adoption and implementation of Groundwater Sustainability Plans ("GSPs") for the basin.

(d) The Indian Wells Valley Groundwater Authority ("Authority") was formed for the purpose of cooperatively carrying out the requirements of SGMA, including, but not limited to, the funding, development, adoption and implementation of a GSP that achieves groundwater sustainability in the Indian Wells Valley Groundwater Basin ("Basin"), which is designated as basin number 6-54 in Department of Water Resources' Bulletin No. 118.

(e) The Indian Wells Valley Groundwater Authority ("Authority") is the exclusive GSA for the Basin.

(f) Pursuant to California Water Code section 10730, the Authority is expressly authorized to fund the costs of a groundwater sustainability program, including, but not limited to, preparation, adoption, and amendment of a groundwater sustainability plan, and investigations, inspections, compliance assistance, enforcement, and program administration, including a prudent reserve through the imposition of a Groundwater Extraction Fee.

(g) The Authority has reviewed and considered the environmental impacts of this action and concluded that this action is exempt from further environmental review pursuant to California Environmental Quality Act Guidelines section 15273 and Public Resources Code section 21080(b)(8) because it is the establishment of operational rates and charges. Additionally, it has been determined that this action is exempt from further environmental review pursuant Guidelines section 15061(b)(3) because it can be seen with a certainty that this action will not have a significant effect on the environment.

THEREFORE IT IS RESOLVED by the Board of Directors of the Indian Wells Valley Groundwater Authority, as follows:

Section 1. This Board finds that the recited facts are true and that it has the jurisdiction to consider, approve, and adopt this Resolution.

Section 2. This Board finds that the this action is exempt from further environmental review pursuant to California Environmental Quality Act Guidelines section 15273 and Public Resources Code section 21080(b)(8) because it is the establishment of operational rates and charges and Guidelines section 15061(b)(3) because it can be seen with a certainty that this action will not have a significant effect on the environment.

Section 3. Definitions. As used in this Resolution, the following terms shall have the meanings stated below:

3.1 "Authority" means the Indian Wells Valley Groundwater Authority.

3.2 "Basin" means the Indian Wells Valley Groundwater Basin which is designated as basin number 6-54 in Department of Water Resources' Bulletin No. 118.

3.3 "De Minimis Extractor" shall have the same meaning set forth in California Water Code section 10721(e).

3.4 "Groundwater Extraction Facility (Facilities)" means any device or method used for the extraction of groundwater from the Basin.

3.5 "Groundwater Extraction Fee Resolution" means the Authority Resolutions and any amendments thereto, that refer to or sets conditions on the measurement of groundwater extractions in the Basin.

3.6 "Groundwater Extractors" means both the owner and the operator of a Groundwater Extraction Facility located within the Basin.

Section 4. Exemptions. As provided by law, and in particular California Water Code section 10730, federal entities are exempt from the provisions of this Resolution, as are De Minimis Extractors, unless, and only if, the particular provision expressly provides otherwise.

Section 5. Groundwater Extraction Fee. Effective August 1, 2018 and continuing for a period of 24 months, all groundwater extractions from the Basin shall be subject to an Extraction Fee of three dollars and fifty cents ($3.50) per tenth (.10) of an acre foot for all groundwater extracted from the Basin.

The Groundwater Extraction Fee shall be determined and paid on a monthly basis with water extraction measurements rounded down to the nearest tenth (.10) of an acre foot per month.

Section 6. Groundwater Extraction Facility Registration. No later than July 23, 2018, all Groundwater Extraction Facilities within the boundaries of the Basin shall be registered with the Authority by the Groundwater Extractor. Groundwater Extraction Facilities are prohibited from extracting groundwater from the Basin if they have not registered by July 23, 2018 and said prohibition shall continue until the facility is registered to the satisfaction of the Water Resources Manager.

Notwithstanding the foregoing, Groundwater Extraction Facilities that are used solely by a De Minimis Extractor have until October 1, 2018 to register with the Authority. If such a Groundwater Extraction Facility is not registered by October 1, 2018, the Facility shall be prohibited from extracting groundwater until it is registered to the satisfaction of the Water Resources Manager.

Groundwater Extraction Facilities constructed after July 23, 2018 must register and must receive registration approval from the Water Resources Manager prior to the extraction of any groundwater from the Basin.

The registration of a Groundwater Extraction Facility shall be made to the satisfaction of the Water Resources Manager and at a minimum the registration shall include the following information: 1) the name and contact address of the owner and if different the operator of the Groundwater Extraction Facility; 2) the location of the Groundwater Extraction Facility; 3) the name and address of the owner of the land upon which the Groundwater Extraction Facility is located; 4) a description of the equipment associated with the Groundwater Extraction Facility; 5) a description of the method the owner and operator uses to measure groundwater extractions from the Groundwater Extraction Facility; 6) a statement describing whether the extracted groundwater is used for residential, commercial, industrial or agricultural purposes, or a combination thereof; and, 7) any other information that the Authority's General Manager to be prudent

and necessary to achieve the legal purposes of the Authority.

The Water Resources Manager shall review all registrations and return, with corrective comment, any that do not meet the Water Resources Manager's approval. Approved registrations shall receive an approval notice from the Authority. A Groundwater Extraction Facility may not extract any groundwater from the Basin until it has received a registration approval notice.

Section 7. Groundwater Extraction Measuring Method. Effective August 1, 2018, all groundwater extractions from, and within, the boundaries of the Basin shall be measured in a method approved by the Authority's Water Resources Manager and reported to the Authority.

Groundwater Extractors shall seek the Water Resources Manager's method approval through the submission of an Authority approved form by no later than July 10, 2018. The Water Resources Manager shall review all method requests and return, with corrective comment, any that do not meet the Water Resources Manager's approval. Approved method requests shall receive an approval notice from the Water Resources Manager. A Groundwater Extraction Facility may not extract any groundwater from the Basin until it has received a method approval notice from the Water Resources Manager.

The preferred method for monitoring groundwater extractions shall be through a flow metering device approved by the Water Resources Manager. A secondary method shall be through use of electrical records and pump efficiency data. If the above options are not available the Groundwater Extractor must seek and receive approval from the Water Resources Manager of an alternative method prior to August 1, 2018.

Section 8. Groundwater Extraction Reporting and Fee Payment. On the first day of each month, Groundwater Extractors shall read and record the needed data for the measuring method used by the Groundwater Extraction Facility. By the 10th day of each calendar month, the Groundwater Extractor shall self-report the needed data from their Groundwater Extraction Facility on the self-reporting form provided by the Authority. Additionally, the Groundwater Extractor shall simultaneously pay the Groundwater Extraction Fee provided for on the Form.

If unusual circumstances exist, a Groundwater Extractor may request that their Groundwater Extraction Facility be placed on a modified reporting and billing schedule approved by both the Authority's General Manager and the Water Resources Manager.

Section 9. Delinquent Accounts. As prescribed by California Water Code section 10730.6, if a Groundwater Extractor knowingly fails to pay the Groundwater Extraction Fee for their Groundwater Extraction Facility within thirty (30) days of it becoming due, it is delinquent and the owner and operator shall be liable to the Authority for interest at a rate of one (1) percent per month on the delinquent amount of the Groundwater Extraction Fee and a ten (10) percent penalty on the delinquent amount of the Groundwater Extraction Fee.

As an additional remedy, the Authority may, after a public hearing, order an owner and/or operator to cease extraction of groundwater until all delinquent fees, interest and penalties are paid. In such an instance, the Authority shall give notice to the owner and/or operator by certified mail not less than 15 days in advance of the public hearing.

These above cited rights are additional rights to those rights which the Authority may otherwise be prescribed by Law.

Section 10. Owner Responsibility. The owners of Groundwater Extraction Facilities are ultimately responsible for the payment of all Groundwater Extraction Fee charges, interest and penalties should an operator fail to abide by the provisions of this Ordinance and Authority's Groundwater Extraction Fee Resolution. Consequently, owners are charged with providing for the requirements of this Ordinance and the Groundwater Extraction Fee Resolution in any agreements entered into with well operators and water users.

Section 11. New Groundwater Extraction Facilities. Groundwater Extraction Facilities constructed after the effective date of this Resolution shall meet the requirements set forth herein and receive Authority approval prior to the extraction of any groundwater from the Basin.

Section 12. Use of Extraction Revenues. Revenues collected through the imposition of the Groundwater Extraction Fee shall be used exclusively for the purposes authorized in California Water Code section 10730.

Section 13. Violations. Anyone that violates any provision of this Resolution shall be subject to possible civil penalties and civil action by the Authority. The Authority's civil penalties and civil action rights are an additional right to those rights which may otherwise be prescribed to the Authority by Law.

Section 14. Severability. Should any provision of this Resolution, or its application, be determined by a court of competent jurisdiction to be unlawful, unenforceable or otherwise invalid, that determination shall have no effect on any other provision of this Resolution to that end, the provisions hereof are severable.

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Groundwater Pumping Fee
Data Package

IWVGA Board Meeting

May 17, 2018

INDIAN WELLS VALLEY GROUNDWATER AUTHORITY

Groundwater Pumping Fee
Data Package

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Exhibit 2: Estimated Costs Required to be Funded by Groundwater Pumping Fee

Exhibit 3: Determination of Fee

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Exhibit 5: Methods to Quantify/Report Groundwater Production

Exhibit 6: Listing of IWV Wells and Water Systems

Exhibit 1: IWVGA Staff Report

IWVGA ADMINISTRATIVE OFFICE

Memorandum

TO: IWVGA Board Members **DATE: May 17, 2018**

FROM: James Worth, IWVGA Staff

SUBJECT: Groundwater Pumping Fees to Finance Development and Adoption of a Groundwater Sustainability Plan and IWVGA Administrative Costs

DISCUSSION

On January 18, 2018, the Indian Wells Valley Groundwater Authority ("IWVGA") Board of Directors ("Board") directed IWVGA staff to develop a fee proposal to finance the development and adoption of a Groundwater Sustainability Plan ("GSP"). The Board directed that the fee be based on volumetric usage of groundwater and be assessed on pumpers, with the exception of de minimis extractors.[1]

At the February and March IWVGA board meetings, staff presented updated concepts of the pump fee based on Board direction and public comment. Following the March board meeting, a board workshop was held on April 5, 2018 to provide the public with the opportunity to address the Board on the proposed fee. Following the Board workshop, staff continued to refine the pump fee proposal to address comments made at the workshop. The following is staff's recommendation on how to implement the fee.

The elements of the proposed groundwater pumping fee identified by staff are as follows:

Authority to Impose Fees:

Staff recommends the IWVGA Board adopt a fee pursuant to California Water Code Section 10730 ("Section 10730"), which was enacted through the California Sustainable Groundwater Management Act ("SGMA"). Section 10730 grants a Groundwater Sustainability Agency ("GSA") the authority to impose a groundwater pumping fee. Section 10730(a) states in part as follows:

> (a) A groundwater sustainability agency may impose fees, including, but not limited to, permit fees and fees on groundwater extraction or other regulated activity, to fund the costs of a groundwater sustainability program, including, but not limited to, preparation, adoption, and

1 "De minimis extractor' means a person who extracts, for domestic purposes, two acre-feet or less per year (California Water Code Section 10721(e)).

> amendment of a groundwater sustainability plan, and investigations, inspections, compliance assistance, enforcement, and program administration, including a prudent reserve.

Public Engagement:

Before imposing a fee, a GSA shall hold a public meeting, "at which oral or written presentations may be made" (Section 10730(b)). The GSA must provide notice prior to the meeting, pursuant to California Government Code Section 6066, including the time and place of the public meeting, "a general explanation of the matter to be discussed and a statement that the data required by this section is available." *Id*. At least 20 days prior to the meeting, the GSA "shall make available to the public data upon which the proposed fee is based. *Id*. After the public meeting, the fee shall be imposed or increased "only by ordinance or resolution."

Although Section 10730 only requires the IWVGA to hold a public meeting, a Board workshop was held on April 5, 2018. In addition, the draft Data Package upon which the proposed fee is based was made available to the public on March 29, 2018 and notice of the workshop was posted on the IWVGA website (iwvga.org) and published in the Daily Independent. Members of the Board, PAC, TAC and the public all provided comments on the proposed fee at the workshop.

Exempted Pumpers:

While the Board's approved motion to develop a fee proposal did not identify federal groundwater extractions, United States Navy ("Navy") and United States Department of Interior Bureau of Land Management ("BLM") pumping should be excluded. SGMA exempts federal agencies from the requirements of SGMA and prohibits the imposition of fees on de minimis extractors unless regulated pursuant to SGMA.[2]

Gap Funding Requirement:

As the pump fee proposal has been refined, budget items and amounts considered when calculating the needed gap funding have been adjusted and/or added. The following provides an overview of the items included in the budget and the rationale for adjusting the amounts after the Board workshop.

Expenditures: As the GSA for the Indian Wells Valley Basin, the IWVGA is required to adopt a GSP by no later than January 31, 2020. The IWVGA Water Resources Manager ("WRM") has estimated that the total cost of developing and adopting the GSP to be about $3.1 million. Additionally, as part of the Proposition 1 grant funding request, the WRM identified $646,000 in costs for initial projects benefitting Severely Disadvantaged Communities ("SDAC"). $87,600 has been added to account for the cost of the USGS Recharge Study. The

2 For purposes of this Proposal, any reference to groundwater pumpers excludes de minimis extractors, the Navy and BLM unless otherwise specified.

WRM has identified an additional $435,250 in estimated costs for the WRM's support of the IWVGA. IWVGA Administrative Costs of $161,500 are included to fund the hiring of a part-time General Manager for the GSA. The City of Ridgecrest has or expects to provide $210,466 in services and facilities which are referred to as Reimbursable Costs. Legal Costs which were estimated at $350,000 have been reduced to $200,000 to account for the fact that much of legal work will continue to be provided as in-kind services by General Members of the GSA. The remaining $200,000 is estimated legal costs to be incurred by IWVGA Special Counsel (James Markman) for work on GSP development and an expected validation action. Finally, the 20% reserve in the amount of $939,070 has been reduced to $227,268 which is 5% of the total GSP Development and SDAC Costs ($3,748,600), IWVGA Support Costs ($435,250), IWVGA Administrative Costs ($161,500) and Legal Costs ($200,000). Total Expenditures have been reduced from $5,844,886 to $5,070,684 resulting in $774,202 less estimated expenditures.

Revenue: On April 4, 2018, the California Department of Water Resources ("DWR") announced its final award for the Proposition 1 Grant funding, awarding the IWVGA the full Proposition 1 grant award of $2,146,000 -- $1.5 million for development of the GSP and $646,000 for SDAC projects. While the local match requirement for the SDAC projects grant award may be waived, the GSP development grant award requires a $1.5-million local match. It is estimated more than two-thirds ($1,157,300) of the local match requirement can be achieved with in-kind services and existing investments by parties in the Basin. Two budget items have been added under Revenue to reflect all monies received or expected to be received by the IWVGA to fund development of the GSA. The Initial General Member Agency Contribution of $75,000 reflects the $15,000 provided by each of the 5 General Members pursuant to the Joint Exercise of Powers Agreement creating the IWVGA (Section 9.02). The Proposition 1 Distressed Counties Grant has also been added. The Proposition 1 Distressed Counties Grant total is $250,000 which includes reimbursement for the USGS Recharge Study and other GSP support costs. For accounting purposes, the total Proposition 1 Distressed Counties Grant revenue has been reduced by $80,000 as some GSP support costs are already accounted for in the Proposition 1 Grant award. These additional Revenue items total $245,000 thereby increasing estimated Revenue from $3,303,300 to $3,548,300.

The following table summarizes all of these estimated financial impacts resulting in a total estimated gap funding requirement of $1,522,384 which the proposed pumping fee would address.

Budget Items	Estimated Costs
EXPENDITURES	
GSP Development and SDAC Costs (Prop 1)	**$3,748,600**
GSP Preparation	$3,102,600
Water Conservation and Rebate Program	$206,000
Water Audit, Leak Detection, & Leak Repair Program	$440,000
USGS Recharge Study	**$87,600**
IWVGA Support Costs	**$435,250**
IWVGA/TAC/PAC Coordination	$144,250
Prop 1 Application/Reporting	$103,000
Schedule/Budget Management	$52,000
Groundwater Pumping Assessment Support	$121,500
Database Management Coordination	$10,000
CASGEM Coordination	$4,500
IWVGA Administrative Costs	**$161,500**
GSA Board Meetings	$42,000
Consultant Management and GSP Development	$24,500
Financial Management	$8,500
Community Outreach	$21,000
Budget Development & Administration	$12,500
PAC/TAC Meetings	$19,000
Travel	$6,000
Insurance	$15,000
Conferences/Training	$3,000
Miscellaneous	$10,000
City of Ridgecrest Reimbursable Costs	**$210,466**
Legal Costs	**$200,000**
Reserve	**$227,268**
Total Expenditures	**$5,070,684**
REVENUE	
Proposition 1 Grant Award	**$2,146,000**
GSP Preparation	$1,500,000
Water Conservation and Rebate Program	$206,000
Water Audit, Leak Detection, & Leak Repair Program	$440,000
In-kind Services	**$1,157,300**
U.S. Navy/Federal Services	$1,097,300
IWVWD Services	$60,000
Initial General Member Agency Contribution	**$75,000**
Proposition 1 Distressed Counties Grant	**$170,000**
Total Revenue	**$3,548,300**
TOTAL GAP FUNDING REQUIRED	**$1,522,384**

Calculation of Fees:

As previously directed by the Board, the standard volumetric fee would be imposed on each impacted well owner pumping groundwater and would be based on the amount of groundwater pumped. Fees would be imposed based on the amount of groundwater pumped in relation to the funds required to develop and adopt the GSP and the additional IWVGA expenditures identified above. The initial calculation of a per acre-feet ("AF") fee would be based on existing estimates of the aggregate annual groundwater extractions by impacted pumpers.

For example, estimated pumping by impacted pumpers for 2016 is 21,600 AF, as reported to the Indian Wells Valley Cooperative Groundwater Management Group. A groundwater pumping fee of $35 per AF would generate $756,000 per year and the required Gap Funding of $1,522,384 would be met in approximately 24 months. See Exhibit 3 of the Data Package, Determination of Fee. A further noticed public meeting pursuant to Section 10730 would be required to increase the amount of the fee if the Gap Funding requirement increased.

Groundwater Pumping Measurement:

For those wells that have approved meters, groundwater pumping would be measured based on meter readings.[3] Although the IWVGA has the authority to impose groundwater extraction fees, it will not acquire the authority to require metering of groundwater wells until the GSP is adopted. In light of this, the IWVGA, through the WRM, has developed criteria and a procedure for measuring extractions by those non-metered wells. Exhibit 5 of the Data Package, Methods to Quantify/Report Groundwater Production, includes a memorandum on Methods to Quantify/Report Groundwater Production prepared by the WRM with assistance from the TAC. It is anticipated that effective August 1, 2018, all groundwater extractions from, and within, the boundaries of the Basin shall be measured in a method approved by the Water Resource Manager and reported by the Groundwater Extractor to the Authority.

Impacted Pumpers Identification:

Existing pumpers who would be assessed the proposed fee are being identified using county records and other available public documents. A list of the impacted pumpers subject to the proposed fee are included in Exhibit 6 of the Data Package, IWV Wells and Systems. Once the fee is adopted, the process for assessing new pumpers who start operations after the fee is implemented will be incorporated into the Ordinance adopting the fee. This process will include registration of wells subject to the approval of the Authority.

3 The Indian Wells Valley Water District and SVM have meters installed on their wells. It is not presently known how many of the other impacted pumpers have meters.

Fees Collection and Delinquent Account:

Water Code Section 10730.6 of SGMA authorizes the IWVGA to collect groundwater fees imposed pursuant to Section 10730 and provides multiple remedies that the IWVGA may pursue to collect delinquent accounts. It is recommended that all options available pursuant to Section 10730.6 be available to pursue delinquent accounts.

Fee Collection: On the first day of each month, Groundwater Extractors shall read and record the needed data for the measuring method used by the Groundwater Extraction Facility. By the 10th day of each subsequent calendar month, the Groundwater Extractor shall self-report the needed data from their Groundwater Extraction Facility for the previous month on the self-reporting form provided by the Authority. Additionally, the Groundwater Extractor shall simultaneously pay the Groundwater Extraction Fee provided for on the Form. Payments would be made to the IWVGA. Payments not made with thirty (30) days of becoming due would be considered delinquent.

Delinquent Accounts: Delinquent accounts shall be liable for interest at the rate of 1 percent per month on the delinquent amount of the groundwater fee and shall be liable for an additional 10-percent penalty on the delinquent amount of the groundwater fee. Additional remedies available to the IWVGA include, but are not limited to, (1) commence a lawsuit to collect delinquent fees, interest or penalties; (2) collect delinquent fees, interest and civil penalties under the laws applicable to the County of Kern; and (3) after a public hearing, order an impacted pumper to cease extraction of groundwater until all delinquent fees are paid. The remedies are cumulative and may be pursued alternatively or may be used consecutively.

Recommended Board Action:

Staff recommends that the Board:

1. Authorize staff to schedule the public meeting required by Section 10730(b) to consider and potentially act on imposing the fee. Staff is recommending June 21, 2018 for the date of the public meeting which is the next regularly scheduled Authority board meeting.
2. Authorize staff to make the data upon which the proposed fee is based available to the public no later than 20 days before the public meeting.
3. It is also noted that Item No. 8 on the agenda is related to the proposed pump fee and requests the Board to adopt a motion to waive reading of Ordinance No. 02-18 and direct staff to bring the Ordinance back for adoption at the next regular meeting of the Authority on June 21, 2018.

Exhibit 2: Estimated Costs Required to be Funded by Groundwater Pumping Fee

Supporting Attachments

- Prop 1 Application Budget Tables
- IWVGA Support Costs
- City of Ridgecrest Reimbursable Costs Budget Breakdown
- Final Prop 1 Funding Recommendations

Indian Wells Valley Groundwater Authority

Estimated Costs Required to be Funded by Groundwater Pumping Fee

Budget Items	Estimated Costs
Expenditures	
GSP Development and SDAC Costs (Prop 1)	**$3,748,600**
GSP Preparation [1]	*$3,102,600*
Water Conservation and Rebate Program [1] [2]	*$206,000*
Water Audit, Leak Detection, and Leak Repair Program [1] [2]	*$440,000*
USGS Recharge Study	**$87,600**
IWVGA Support Costs [3]	**$435,250**
IWVGA/TAC/PAC Coordination	*$144,250*
Prop 1 Application/Reporting	*$103,000*
Schedule/Budget Management	*$52,000*
Groundwater Pumping Fee Support	*$121,500*
Database Management Coordination	*$10,000*
CASGEM Coordination	*$4,500*
IWVGA Administrative Costs	**$161,500**
GSA Board Meetings	*$42,000*
Consultant Management and GSP Development	*$24,500*
Financial Management	*$8,500*
Community Outreach	*$21,000*
Budget Development & Admin	*$12,500*
PAC/TAC Meetings	*$19,000*
Travel	*$6,000*
Insurance	*$15,000*
Conferences/Training	*$3,000*
Miscellaneous	*$10,000*
City of Ridgecrest Reimbursable Costs [4]	**$210,466**
Legal Costs [5]	**$200,000**
Reserve [6]	**$227,268**
Total Expenditures	**$5,070,684**
Revenue	
Proposition 1 GSP Grant Award [1] [7]	**$2,146,000**
GSP Preparation	*$1,500,000*
Water Conservation and Rebate Program	*$206,000*
Water Audit, Leak Detection, and Leak Repair Program	*$440,000*
In-kind Services	**$1,157,300**
U.S Navy/Federal Services [1] [8]	*$1,097,300*
IWVWD/City of Ridgecrest Services [1] [9]	*$60,000*
Member Agency Contributions	**$75,000**
Proposition 1 Distressed Counties Grant [10]	**$170,000**
Total Revenue	**$3,548,300**
TOTAL GAP FUNDING REQUIRED	**$1,522,384**

Indian Wells Valley Groundwater Authority

Notes

1] From Prop 1 Grant Application. See Exhibit 2 supporting attachments for budget tables from Prop 1 Grant Application.

2] The Water Conservation and Rebate Program ($206,000) and Water Audit, Leak Detection, and Leak Repair Program ($440,000) together are collectively referred to as the SDAC Groundwater Conservation Pilot Project for a total of $646,000.

3] Additional IWVGA support costs not eligible for Prop 1 Grant. See Exhibit 2 supporting attachments for description of costs.

4] Reimbursable costs include legal, IT support, and building usage costs. See Exhibit 2 supporting attachments for description of costs.

5] Legal costs anticipated to be incurred by IWVGA Special Counsel for work on GSP development and an anticipated validation action.

6] Reserve is 5% of the total of GSP Development and SDAC Costs ($3,748,600), IWVGA Support Costs ($435,250), IWVGA Administrative Costs ($161,500), and Legal Costs ($200,000).

7] Grant award amounts are consistent with DWR's Prop 1 Final Funding Recommendations. See Exhibit 2 supporting attachments.

8] Federal services include numerical modeling and monitoring well installation.

9] IWVWD/Ridgecrest services include development of the Salt and Nutrient Management Plan.

10] The Prop 1 Distressed Counties Grant total is $250,000 which includes reimbursement for the USGS Recharge Study and other GSP support costs. For accounting purposes, the total Prop 1 Distressed Counties Grant revenue has been reduced by $80,000 because some GSP support costs are already accounted for in the Proposition 1 GSP grant award revenue.

Table 5 - Proposal Budget

Proposal Title: Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development and SDAC Groundwater Conservation Pilot Project

	Individual Project Title	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund	(c) Other Cost Share	(d) Total Cost	(e) % Cost Share
1	Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development[1]	**$1,500,000**	**$1,602,600**	**$0**	**$3,102,600**	**52%**
	Proposal Total	**$1,500,000**	**$1,602,600**	**$0**	**$3,102,600**	**52%**

1. Sources of funding from the IWVGA (including Kern County, Inyo County, San Bernardino County, Indian Wells Valley Water District, and City of Ridgecrest), Searles Valley Minerals, and from the U.S. Navy. A breakdown of funding sources is provided in Table 4.

Table 4 - Project Budget

Proposal Title: Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development and SDAC Groundwater Conservation Pilot Project

Project Title: Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development

Project serves a need of a DAC?: ☑ Yes ☐ No

Cost Share Waiver Request?: ☑ Yes ☐ No

	Tasks	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source	(c) Other Cost Share	(d) Total Cost
	Objective 1				
1	**Task 1 -** Model Development	**$235,072**	**$691,328**	**$0**	**$926,400**
	Task 1a - Hydrogeologic Conceptual Model	$24,137.54	$7,262 [1]	$0	$31,400
	Task 1b - Numerical Groundwater Model (Review Existing Model, Create Sustainable Basin Model Updates and Scenarios, Trasport Modeling to Evaluate Groundwater Quality, Evaluate Potential Land Subsidence)	$210,934.40	$63,466 [1]	$0	$274,400
	Previous and Ongoing Model Development In-Kind Services	$0	$620,600 [2]	$0	$620,600
2	**Task 2 -** Salt and Nutrient Management Plan Development	**$20,000**	**$60,000** [3]	**$0**	**$80,000**
	Task 2a - Loading Analysis (Existing)	$0	$30,000	$0	$30,000
	Task 2b - Mixing Model Development (Existing)	$0	$30,000	$0	$30,000
	Task 2c - Reporting and Coordination	$20,000	$0	$0	$20,000

	Tasks	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source	(c) Other Cost Share	(d) Total Cost
	Objective 2				
3	**Task 3 -** Data Management System	**$274,737**	**$82,663** [1]	**$0**	**$357,400**
	Task 3a - Develop a Web-Based GeoDatabase (DMS)	$37,436.24	$11,264	$0	$48,700
	Task 3b - Establish Monitoring Protocols and Reporting Standards	$23,753.18	$7,147	$0	$30,900
	Task 3c - Populate Database with Historical Data	$41,664.16	$12,536	$0	$54,200
	Task 3d - Install Transducers and Telemetry Equipment	$138,137.43	$41,563	$0	$179,700
	Task 3e - Integrate GSP Goals and Objectives - Adaptive Management	$33,746.43	$10,154	$0	$43,900
4	**Task 4 -** Identify and Evaluate Hydrogeologic Data Gaps	**$51,273**	**$15,427** [1]	**$0**	**$66,700**
	Task 4a - Review Existing Model and Monitoring Network	$32,593.36	$9,807	$0	$42,400
	Task 4b - Identification and Prioritization of Data Gaps	$18,679.69	$5,620	$0	$24,300
5	**Task 5 -** Monitoring Wells	**$108,619**	**$509,381**	**$0**	**$618,000**
	Task 5a - Design and Location Siting	$11,453.80	$3,446 [1]	$0	$14,900
	Task 5b - Work Plan and Well Construction	$0	$476,700 [4]	$0	$476,700
		$53,886.67	$16,213 [1]	$0	$70,100
	Task 5c - Collection of Monitoring Well Data	$43,278.45	$13,022 [1]	$0	$56,300

	Tasks	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source	(c) Other Cost Share	(d) Total Cost
6	**Task 6 -** Stream Gages	**$114,154**	**$34,346** [1]	**$0**	**$148,500**
	Task 6a - Hydrologic Analysis	$16,373.55	$4,926	$0	$21,300
	Task 6b - Design and Location Siting	$31,978.39	$9,622	$0	$41,600
	Task 6c - Equipment Purchase, Installation, and Testing	$65,801.69	$19,798	$0	$85,600
7	**Task 7 -** Weather Stations	**$64,725**	**$19,475** [1]	**$0**	**$84,200**
	Task 7a - Design and Location Siting	$17,603.49	$5,297	$0	$22,900
	Task 7b - Equipment Purchase	$27,750.48	$8,350	$0	$36,100
	Task 7c - Installation and Testing	$19,371.53	$5,828	$0	$25,200
8	**Task 8 -** Water Quality and Stable Isotope Sampling and Analysis	**$83,559**	**$25,141** [1]	**$0**	**$108,700**
	Task 8a - Surface and Groundwater Sampling	$62,649.98	$18,850	$0	$81,500
	Task 8b - Perform Geochemical Reaction and Transport Analysis	$20,908.95	$6,291	$0	$27,200
9	**Task 9 -** Aquifer Tests	**$132,449**	**$39,851** [1]	**$0**	**$172,300**
	Task 9a - Prepare Aquifer Test Work Plan	$27,750.48	$8,350	$0	$36,100
	Task 9b - Perform Aquifer Testing	$104,698.49	$31,502	$0	$136,200

	Tasks	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source	(c) Other Cost Share	(d) Total Cost
	Objective 3				
10	**Task 10 -** Imported Water Study	**$134,524**	**$40,476** [1]	**$0**	**$175,000**
	Task 10a - Evaluate Potential Imported Water Sources	$57,653.35	$17,347	$0	$75,000
	Task 10b - Evaluate Water Banking Alternatives and Extraction Schedule	$19,217.78	$5,782	$0	$25,000
	Task 10c - Evaluate Infrastructure Requirements	$19,217.78	$5,782	$0	$25,000
	Task 10d - Prepare Technical Memorandum	$38,435.57	$11,564	$0	$50,000
11	**Task 11 -** Recycled Water Study	**$46,891**	**$14,109** [1]	**$0**	**$61,000**
	Task 11a - Existing Supply and Demand Analysis	$5,073.50	$1,527	$0	$6,600
	Task 11b - Identify Existing Recycled Water Infrastructure and Users	$4,612.27	$1,388	$0	$6,000
	Task 11c - Review Regulatory and Institutional Requirements	$2,613.62	$786	$0	$3,400
	Task 11d - Identify and Evaluate Potential Recycled Water Users	$15,374.23	$4,626	$0	$20,000
	Task 11e - Prepare Technical Memorandum	$19,217.78	$5,782	$0	$25,000

	Tasks	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source	(c) Other Cost Share	(d) Total Cost
	Objective 4				
12	**Task 12 -** GSP Development and Compilation	**$233,996**	**$70,404** [1]	**$0**	**$304,400**
	Task 12a - Prepare Executive Summary Chapter	$691.84	$208	$0	$900
	Task 12b - Prepare Introduction Chapter	$922.45	$278	$0	$1,200
	Task 12c -Prepare Plan Area and Basin Setting Chapter	$12,453.12	$3,747	$0	$16,200
	Task 12d - Prepare Sustainable Management Criteria Chapter	$23,061.34	$6,939	$0	$30,000
	Task 12e - Prepare Projects and Management Actions to Achieve Sustainability Goal Chapter	$38,435.57	$11,564	$0	$50,000
	Task 12f - Prepare Plan Implementation Chapter	$26,904.90	$8,095	$0	$35,000
	Task 12g- Prepare References and Technical Studies Chapter	$1,537.42	$463	$0	$2,000
	Task 12h - Develop Draft and Final GSP	$24,060.67	$7,239	$0	$31,300
	Task 12i - Project Management	$57,499.61	$17,300	$0	$74,800
	Task 12j - Stakeholder/DWR Coordination	$48,428.82	$14,571	$0	$63,000
	Grand Total (Tasks 1-12)	**$1,500,000**	**$1,602,600**	**$0**	**$3,102,600**

Notes

1. Funding Source: IWVGA
2. Funding Source: Navy
3. Funding Source: City of Ridgecrest and IWVWD
4. Funding Source: Navy, Searles Valley Minerals, and Kern County

Table 5 - Proposal Budget

Proposal Title: Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development and SDAC Groundwater Conservation Pilot Project

	Individual Project Title	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund	(c) Other Cost Share	(d) Total Cost	(e) % Cost Share
1	Indian Wells Valley Groundwater Basin - SDAC Groundwater Conservation Pilot Project	$646,000	$0	$0	$646,000	0%
	Proposal Total	$646,000	$0	$0	$646,000	0%

Table 4 - Project Budget

Proposal Title: Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development and SDAC Groundwater Conservation Pilot Project
Project Title: Indian Wells Valley Groundwater Basin - SDAC Groundwater Conservation Pilot Project
Project serves a need of a DAC?: ☑ Yes ☐ No
Cost Share Waiver Request?: ☑ Yes ☐ No

	Tasks	(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source	(c) Other Cost Share	(d) Total Cost
1	**Task 1 - SDAC Water Conservation and Rebate Program**	**$206,000**	**$0**	**$0**	**$206,000**
	Task 1a - Administration and Project Management	$22,000	$0	$0	$22,000
	Task 1b - Marketing	$15,000	$0	$0	$15,000
	Task 1c - Rebate Tracking and Reporting	$16,000	$0	$0	$16,000
	Task 1d - Rebate Processing	$113,000	$0	$0	$113,000
	Task 1e - Monitoring Plan	$24,000	$0	$0	$24,000
	Task 1f - Billing and Reporting	$16,000	$0	$0	$16,000
2	**Task 2 - SDAC Water Audit, Leak Detection, and Leak Repair Program**	**$440,000**	**$0**	**$0**	**$440,000**
	Task 2a - Administration and Project Management	$30,000	$0	$0	$30,000
	Task 2b - Phase 1 : Water Audit	$10,000	$0	$0	$10,000
	Task 2c - Phase 2: Leak Detection and Repair Program	$384,000	$0	$0	$384,000
	Task 2d - Billing and Reporting	$16,000	$0	$0	$16,000
	Grand Total (Tasks 1-2)	**$646,000**	**$0**	**$0**	**$646,000**

IWVGA Support Costs

Expenditure	Description	Total Costs (Aug 2017 - Jan 2020)
IWVGA/TAC/PAC Coordination	Additional Costs for coordination with the IWVGA, TAC, and PAC not included directly associated with the Prop 1 Grant costs (meeting preparation, coordination calls, meetings, etc.)	$144,250
Prop 1 Application / Reporting [1]	Costs to Prepare the Prop 1 Grant Application, Coordination with DWR, and Prop 1 Grant Administration (invoice processing, reporting, etc.)	$103,000
Schedule/Budget Management	Additional Project Management costs to develop and maintain a Microsoft Project schedule with budget tracking following the Navy's Plan of Action and Milestone (POAM) format .	$52,000
Groundwater Pumping Fee Support [2]	Assist IWVGA with preparing monthly assessments including estimating pumping from non-metered wells.	$121,500
Database Management Coordination	Coordination with Ramboll and IWVGA regarding database management development.	$10,000
CASGEM Coordination	Coordination with DWR, Kern County Water Agency, and IWVGA to transfer CASGEM responsibilities to IWVGA.	$4,500
TOTAL		**$435,250**

[1] Assumes Prop 1 Admin Support begins June 2018.
[2] Assumes Groundwater Pumping Fees administered for 24 months.

City of Ridgecrest Reimbursable Costs - Budget Breakdown

Attorney Fees	2016	2017	2018	2019
Jan.		$ 8,842.50	$ 6,500.00	$ 4,000.00
Feb		$ 4,860.00	$ 6,500.00	$ 4,000.00
Mar		$ 7,321.49	$ 6,500.00	$ 4,000.00
April		$ 5,767.50	$ 6,500.00	$ 4,000.00
May		$ 2,097.30	$ 6,500.00	$ 4,000.00
June		$ 630.00	$ 6,500.00	$ 4,000.00
July		$ 5,308.00	$ 6,500.00	$ 4,000.00
August	$ 2,587.50	$ 2,304.49	$ 6,500.00	$ 4,000.00
Sept.	$ 2,452.50	$ 2,551.87	$ 6,500.00	$ 4,000.00
Oct.	$ 2,385.00	$ 3,217.50	$ 6,500.00	$ 4,000.00
Nov.	$ 8,857.78	$ 3,037.50	$ 6,500.00	$ 4,000.00
Dec.	$ 4,977.50	$ 2,677.50	$ 6,500.00	$ 4,000.00
	$ 21,260.28	$ 48,615.65	$ 78,000.00	$ 48,000.00
Total Attorney Costs		**$ 195,875.93**		

Chamber hours	2016	2017	2018	2019
Jan.		4	3	**3**
Feb		3.5	3	3
Mar		3	3	3
April		3	3	3
May		3	3	3
June		7	3	3
July		2.5	3	3
August	2	2	3	3
Sept.	3.5	3	3	3
Oct.	2	2.5	3	3
Nov.	2.5	4	3	3
Dec.	2.5	2	3	3
	12.5	39.5	36	36
Total Chamber hours	124			
X $40/hour	$ 40.00			
Total Chamber costs	**$ 4,960.00**			

IT Support	2016	2017	2018	2019
Jan.		$ 270.00	$ 250.00	$ 250.00
Feb		$ 240.00	$ 250.00	$ 250.00
Mar		$ 210.00	$ 250.00	$ 250.00
April		$ 210.00	$ 250.00	$ 250.00
May		$ 210.00	$ 250.00	$ 250.00
June		$ 450.00	$ 250.00	$ 250.00
July		$ 180.00	$ 250.00	$ 250.00
August	$ 150.00	$ 150.00	$ 250.00	$ 250.00
Sept.	$ 240.00	$ 210.00	$ 250.00	$ 250.00
Oct.	$ 150.00	$ 180.00	$ 250.00	$ 250.00
Nov.	$ 180.00	$ 270.00	$ 250.00	$ 250.00
Dec.	$ 180.00	$ 150.00	$ 250.00	$ 250.00
	$ 900.00	$ 2,730.00	$ 3,000.00	$ 3,000.00

Council Chamber IT services include:
Audio monitoring and leveling
Broadcasting to OTA Channel 41 and Mediacom Channel 6
Broadcasting to City webpage
Assistance with PowerPoint presentations
Digital copy of event/meeting within 2 business days

Total IT Support $ 9,630.00

Total Attorney Costs	**$ 195,875.93**
Total Chambers use costs	**$ 4,960.00**
Total IT Support	**$ 9,630.00**
2016-2019 Cost to be reimbursed	**$ 210,465.93**

Final Awards

2017 Groundwater Sustainability Plans and Projects Solicitation

April 2018

Note	Cat 1 Map ID	Grantee	Project Title	Category 1 Grant Award[A]	Category 2 Grant Award	Total Grant Award
		Arroyo Santa Rosa Basin Groundwater Sustainability Agency	Arroyo Santa Rosa Basin Groundwater Sustainability Plan	$ -	$ 177,081	$ 177,081
B	20	Asian Business Institute Resource Center	Southeast Asian Groundwater and Sustainability Advocacy and Outreach Program	$ 400,000	$ -	$ 400,000
		Atascadero Mutual Water Co.	2017 Atascadero Basin Sustainable Groundwater Proposal	$ -	$ 809,250	$ 809,250
		Bear Valley Basin Groundwater Sustainability Agency	Bear Valley Basin Groundwater Sustainability Plan	$ -	$ 177,000	$ 177,000
		Bedford-Coldwater Sub-basin Groundwater Sustainability Agency	Bedford-Coldwater Sub-basin Groundwater Sustainability Plan Proposal	$ -	$ 1,000,000	$ 1,000,000
	18	Big Bear Lake Department of Water and Power	Basin Resiliency Sawmill Well Pumping Plant Project	$ 782,298	$ -	$ 782,298
	9	Biola Community Services District	Biola Groundwater Recharge Project	$ 705,000	$ -	$ 705,000
		Butte County Department of Water and Resource Conservation	Groundwater Sustainability Plan Development for the Vina, East Butte, West Butte and Wyandotte Creek Subbasins	$ -	$ 1,498,800	$ 1,498,800
		Castaic Lake Water Agency	Santa Clarita Valley Groundwater Sustainability Agency 2017 Sustainable Groundwater Planning Grant Program Category 2 Proposal	$ -	$ 416,106	$ 416,106
		City of Brentwood	Tracy Subbasin Groundwater Sustainability Plan Development Prop 1 Proposal	$ -	$ 1,000,000	$ 1,000,000
		City of Corona	Sustainable Groundwater Planning Grant For the City of Corona Temescal Subbasin	$ -	$ 732,338	$ 732,338
		City of Modesto	Sustainable Groundwater Planning Grant for the Modesto Groundwater Subbasin	$ -	$ 1,000,000	$ 1,000,000
C		City of Paso Robles	Paso Robles Basin Groundwater Sustainability Plan Development	$ -	$ 1,500,000	$ 1,500,000
		City of Redding	EAGSA Enterprise and Anderson Subbasin Groundwater Sustainability Plan	$ -	$ 983,230	$ 983,230
		City of San Diego - Public Utilities Department	Groundwater Sustainability Plan for the San Pasqual Valley Groundwater Basin	$ -	$ 989,550	$ 989,550
		Colusa Groundwater Authority	Colusa Subbasin Groundwater Sustainability Plan Development	$ -	$ 1,000,000	$ 1,000,000
	10	Community Water Center	Facilitate Participation of Severely Disadvantaged Community Stakeholders In The Tulare Lake Basin And Develop A Drinking Water Vulnerability Tool	$ 614,353	$ -	$ 614,353
		County of Glenn	Groundwater Sustainability Plan Development in the Corning Subbasin		$ 999,980	$ 999,980
C	6	County of San Diego	San Diego County GSP Development	$ 1,000,000	$ 2,000,000	$ 3,000,000
		County of San Luis Obispo	2017 County of San Luis Obispo Sustainable Groundwater Proposal	$ -	$ 1,397,125	$ 1,397,125
C	3	Cuyama Basin Groundwater Sustainability Agency	Cuyama Basin Groundwater Sustainability	$ 648,124	$ 1,500,000	$ 2,148,124
		Del Norte County	Smith River Plain Groundwater Basin GSP	$ -	$ 250,000	$ 250,000
		East Bay Municipal Utility District	East Bay Plain Subbasin Groundwater Sustainability Plan Development	$ -	$ 1,000,000	$ 1,000,000
C		Eastern San Joaquin Groundwater Authority	Eastern San Joaquin Subbasin Groundwater Sustainability Plan Grant	$ -	$ 1,500,000	$ 1,500,000
		Elsinore Valley Municipal Water District	Elsinore Valley Groundwater Sustainability Agency Groundwater Sustainability Planning Grant Proposal	$ -	$ 1,000,000	$ 1,000,000
		Fillmore Piru GSA	Fillmore and Piru Basins Groundwater Sustainability Plans	$ -	$ 1,500,000	$ 1,500,000
	7	Freshwater Trust	Engaging Severely Disadvantaged Communities in the Development of the Solano Subbasin Groundwater Sustainability Plan	$ 490,000	$ -	$ 490,000
C	13	Indian Wells Valley Groundwater Authority	Indian Wells Valley Groundwater Basin - Groundwater Sustainability Plan Development and SDAC Groundwater Conservation Pilot Project	$ 646,000	$ 1,500,000	$ 2,146,000
		Inyo-Water Department, County of	Groundwater Sustainability Planning for the Owens Valley Groundwater Basin	$ -	$ 713,155	$ 713,155
C		Kern River Groundwater Sustainability Agency	Kern County Subbasin Groundwater Sustainability Plan Support - 2017 Grant Application		$ 1,500,000	$ 1,500,000
		Lassen County	Big Valley Groundwater Sustainability Plan	$ -	$ 999,185	$ 999,185
	14	Leadership Counsel for Justice and Accountability	Partnering for Equitable Groundwater	$ 758,000	$ -	$ 758,000
	15	Linda County Water District	Linda County Water District-Well 17 Project Funding Application Groundwater Sustainability Planning Grant Program Proposal	$ 999,500	$ -	$ 999,500
		Los Angeles County Waterworks District No. 37, Acton	Fringe Area Antelope Valley Groundwater Sustainability Plan	$ -	$ 300,000	$ 300,000
C		Lower Tule River Irrigation District Groundwater Sustainable Agency	Lower Tule River Irrigation District GSA, SGWP Planning Grant	$ -	$ 1,500,000	$ 1,500,000
C	16	Madera County Water and Natural Resources	Groundwater Monitoring Well Installation and GSP Development For The Chowchilla Subbasin	$ 1,000,000	$ 1,500,000	$ 2,500,000
C	11	Madera County Water and Natural Resources	Groundwater Monitoring Well Installation and GSP Development for the Madera Subbasin	$ 1,000,000	$ 1,500,000	$ 2,500,000
		Marina Coast Water District	Monterey Subbasin Groundwater Sustainability Plan Development	$ -	$ 1,000,000	$ 1,000,000
		Mendocino County Water Agency	Phase 2 of the Ukiah Valley Basin Groundwater Sustainability Plan Development	$ -	$ 764,255	$ 764,255
C	1	Merced Irrigation District	2017 Merced Groundwater Subbasin Sustainability	$ 901,261	$ 1,500,000	$ 2,401,261
C		Mid-Kaweah Groundwater Sustainability Agency	Kaweah Sub-Basin Groundwater Sustainability Plans Development	$ -	$ 1,500,000	$ 1,500,000
C		Mid-Kings River Groundwater Sustainability Agency	Tulare Lake Subbasin GSP Development and SGMA Compliance Project	$ -	$ 1,500,000	$ 1,500,000
		Mound Basin Groundwater Sustainability Agency	Mound Basin GSA and GSP	$ -	$ 758,100	$ 758,100
	2	North Cal-Neva Resource Conservation and Development Council, Inc.	Big Valley GSP Monitoring and Data Development	$ 782,344	$ -	$ 782,344
C		North Fork Kings Groundwater Sustainability Agency	Kings Basin Groundwater Sustainability Plans	$ -	$ 1,500,000	$ 1,500,000
		Padre Dam Municipal Water District	San Diego River Valley Groundwater Sustainability Plan (GSP) Development Proposal	$ -	$ 600,000	$ 600,000
C,D		Pajaro Valley Water Management Agency	Pajaro Valley Groundwater Sustainability Plan	$ -	$ 1,500,000	$ 1,500,000
		Petaluma Valley GSA	Petaluma Valley Groundwater Sustainability Plan	$ -	$ 1,000,000	$ 1,000,000
D		Sacramento Central Groundwater Authority	Development of the South American Subbasin Groundwater Sustainability Plan (Bulletin 118 Subbasin NO. 5-21.65)	$ -	$ 970,693	$ 970,693
		Sacramento Groundwater Authority	North American Subbasin Groundwater Sustainability Plan Development	$ -	$ 994,276	$ 994,276
C		Salinas Valley Basin Ground Water Sustainability Agency	Salinas Valley Basin Groundwater Sustainability Plan	$ -	$ 1,500,000	$ 1,500,000
		San Antonio Basin Groundwater Sustainability Agency	San Antonio Basin Groundwater Sustainability Plan	$ -	$ 300,000	$ 300,000
		San Benito County Water District	Sustainable Groundwater Planning Grant for GSP Preparation: Bolsa, Hollister, and San Juan Bautista Groundwater Subbasins	$ -	$ 830,336	$ 830,336
		San Bernardino Valley Municipal Water District	Yucaipa Groundwater Sustainability Plan	$ -	$ 815,100	$ 815,100
	4	San Gorgonio Pass Water Agency	2017 Sustainable Groundwater Planning Grant for the San Gorgonio Pass Subbasin	$ 1,000,000	$ 1,000,000	$ 2,000,000
C		Santa Cruz Mid-County Groundwater Agency	Santa Cruz Mid-County Groundwater Sustainability Plan Development	$ -	$ 1,500,000	$ 1,500,000
		Santa Margarita Groundwater Agency	Santa Margarita Groundwater Sustainability Plan Development	$ -	$ 1,000,000	$ 1,000,000
		Santa Rosa Plain GSA	Santa Rosa Plain Groundwater Sustainability Plan	$ -	$ 1,000,000	$ 1,000,000
		Santa Ynez River Water Conservation District	Santa Ynez River Valley Basin GSP Planning and Preparation	$ -	$ 1,000,000	$ 1,000,000
	8	Self-Help Enterprises	Self-Help Enterprises - SDACs Project	$ 1,000,000	$ -	$ 1,000,000
	19	Shasta Valley Resource Conservation District	Groundwater Monitoring Implementation Program for the Shasta Valley GSA	$ 976,884	$ -	$ 976,884
		Siskiyou County Flood Control and Water Conservation District	Development	$ -	$ 1,367,000	$ 1,367,000
		Solano Subbasin Groundwater Sustainability Agency	Solano Subbasin Groundwater Sustainability Plan Development	$ -	$ 1,000,000	$ 1,000,000
		Sonoma Valley GSA	Sonoma Valley Groundwater Sustainability Plan	$ -	$ 1,000,000	$ 1,000,000
		Southeast Sacramento County Agricultural Water Authority	Establishing a Groundwater Sustainability Plan and Governance Structure for the Cosumnes Groundwater Sub Basin	$ -	$ 1,000,000	$ 1,000,000
D		Sutter County Development Services	Sutter Subbasin Groundwater Sustainability Plan Development	$ -	$ 956,814	$ 956,814
		Tehama County Flood Control & Water Conservation District	Tehama County Groundwater Sustainability Plan Development Grant Application	$ -	$ 1,498,960	$ 1,498,960
	12	The Nature Conservancy	Demonstrating Multi-Benefit On-Farm Managed Aquifer Recharge in the Central Valley	$ 300,000	$ -	$ 300,000
		Tulelake Irrigation District	Protecting Our Groundwater Resource: Securing a Sustainable Future for the Tule Lake Subbasin	$ -	$ 721,120	$ 721,120
		Upper Ventura River Groundwater Agency	Upper Ventura River Basin GSA and GSP	$ -	$ 630,061	$ 630,061
		Walnut Valley Water District	Spadra Groundwater Basin Groundwater Sustainability Plan Development	$ -	$ 338,500	$ 338,500
C	17	West Stanislaus ID	2017 Sustainable Groundwater Planning Grant for the Delta-Mendota Subbasin	$ 1,178,500	$ 1,500,000	$ 2,678,500
		West Turlock Subbasin GSA	Sustainable Groundwater Planning Grant for the Turlock Groundwater Subbasin	$ -	$ 1,000,000	$ 1,000,000
		Western Municipal Water District	Riverside-Arlington Subbasin Groundwater Sustainability Plan	$ -	$ 130,000	$ 130,000
C	5	Westlands Water District	Groundwater Monitoring Well Installation Project and Groundwater Sustainability Plan Development for the Westside Subbasin	$ 1,000,000	$ 1,500,000	$ 2,500,000
		White Wolf Groundwater Sustainability Agency	White Wolf Subbasin Groundwater Sustainability Plan Development	$ -	$ 557,998	$ 557,998
		Yolo County Flood Control and water Conservation District	Yolo Subbasin - GSP Planning and Preparation	$ -	$ 1,000,000	$ 1,000,000
		Yuba County Water Agency	Groundwater Sustainability Plans for the North Yuba Subbasin and South Yuba Subbasin	$ -	$ 893,948	$ 893,948
				$ 16,182,264	**$ 69,569,961**	**$ 85,752,225**

A All Category 1 Projects: Grantee shall obtain written (i.e., letter) approval of proposed scope of work from GSA, of respective basin/GSP where project is located in, prior to execution of Grant Agreement.

B Recommended funding less than requested due to recalculation of Direct Project Administration (DPA) Costs.

C Critically Over-Draft Basin included in application

D Applicant submitted an Alternative Plan to DWR for review.

Exhibit 3: Determination of Fee

Supporting Attachments

- IWVGA Groundwater Production Rates – 1975 through Present

Determination of the Groundwater Pumping Fee Rate

Gap Funding Required [1]	Fee Period (Months)	Annual Pumping (AFY)	Monthly Pumping (AF) [2]	Fee Rate ($/AF) [3]
$1,522,384	24	21,600	1,800	$35

AFY = acre-feet per year

AF = acre-feet

[1] See Exhibit 2 for determination of Gap Funding Required.

[2] Monthly pumping is annual pumping (21,600 AFY) divided by twelve months.

[3] Fee Rate is the Gap Funding required ($1,522,384) divided by Fee Period (24 months) divided by Monthly Pumping (1,800 AF).

IWV Ground Water Production Estimates 1975 - Present

Year	Meadow-brook Farms (e)	Simmons Ranch (f)	China Lake Acres	City of R/C	SVM	IWVWD	Inyokern CSD	NAWS (c)	Neal Ranch	Private Wells	Quist Farms	Orchards (d)	R/C Heights	S. Leroy (a/b)	Annual Totals
1975	1516		400		2781	2983	300	5000	2000				1000		15980
1976	1494		400		2911	3099	300	5000	2000				1000	1600	17804
1977	2702		400		3315	3063	300	5000	2000				1000	1600	19380
1978	3216		400		3081	3357	300	5000	2000				1000	1600	19954
1979	3257		400		3081	3402	300	5154	2000	2100			1000	1600	22294
1980	7515		400		2887	3319	300	4995	2041	2100			1000	1600	26157
1981	10036		400		3065	4223	300	4804	2002	2100			1000	1600	29530
1982	10324		400		2887	3963	300	4450	1478	2100			1000	1600	28502
1983	10087		400		2476	4316	300	4402	1752	2400			1000	1600	28733
1984	10312		400		2307	4940	300	4694	1568	2400			1000	1600	29521
1985	10100		400		2397	4981	300	4002	2450	2500			1000	1600	29730
1986	5389		400		2557	5901	300	4430	2353	2500			1000	1600	26430
1987	4141		**Purchased**		2560	7426	300	4422	1447	2500			**Purchased**	**Ranch**	22796
1988	5255		**by**		2560	7889	173	3980	1195	2500			**by**	**Closed**	23552
1989	7064		**IWVWD**		2320	8725	175	4205	**Purchased**	2650		500	**IWVWD**		25639
1990	6187				2505	8600	170	3667	**by**	2650		525			24304
1991	6737				2406	7700	150	3364	**IWVWD**	2650		525			23532
1992	7104				2528	7650	141	3351		2650		550			23974
1993	7701				2607	7800	150	3411		2650		575			24894
1994	7504				2607	8300	146	3684		2650		575			25466
1995	7427				2710	8100	125	3848		2650		595			25455
1996	7807				2620	8504	134	3367		2650		600			25682
1997	7800				2522	8534	139	2983		2650		625			25253
1998	7800				2527	7719	102	3018		2700		640			24506
1999	7800				2537	8242	104	2541		2700		690			24614
2000	7800				2701	8148	111	2690		2800		725			24975
2001	8150				2732	8392	97	2840		2800		750			25761
2002	8460			445	2564	8865	115.6	3138		2800	750	750			27887.6
2003	9420			616	2561	9098	126	3325		2800	750	775			29471
2004	9370			413	2470	8992	118.4	2331		2800	750	800		950	28994.4
2005	9580			366	2504	8545	135	2288		2800	750	825		1025	28818
2006	9460			385	2591.2	8864.4	135	2440		2800	750	840		1050	29315.6
2007	9270			420	2530.4	9198.5	90.7	2533		2800	750	840		1000	29432.6
2008	8957			392	2520.7	8564.8	118	2119		2800	750	900		1200	28321.5
2009	9536			400	2534.5	8398.2	118	1883		2800	750	925		1125	28469.7
2010	9437			339	2586.6	7570	118	1710		2800	750	925		1050	27285.6
2011	9827			370	2457.5	7364.25	118	1734		2800	750	925		1050	27395.75
2012	9876			348	2743	7633.45	117.927	1710		2800	750	1062		800	27840.377
2013	9354	918		423	2706	7531.69	117.68	1538		1100	750	2846			27284.37
2014	7524	1,087		392	2679	7318.7	108	1618		1100	750	4087			26663.7
2015	6517	1,003		427	2518	7050	90.532	1442		1100	750	4387			25284.532
2016	6387	918		373	2377	6411.8	102.335	1595		1100	750	4300			24314.135
Total	315200	3926	4800	6109	110530	290681.79	7546.174	139706	26286	93250	11250	33062	12000	26850	1081196.9
Avg.	7532	1003	400	410	2638	6933	182	3369	1878	2491	750	1065	1000	1343	25778

(a) Spike Leroy ranch started back up in 2004 with approx. 150 acres of alfalfa x 7

(b) 2012 number is an estimate/converted to pistachio 2013

(c) Navy began aggressive water conservation program in 2007

(d) 2013 number based on March 4, 2014 letter to BOS.
2014/2015/2016 data includes 3,700 and 4,000 AF from Mojave Pistacio "based off the UC Davis Pistachio Cost Study plus dust mitigation."

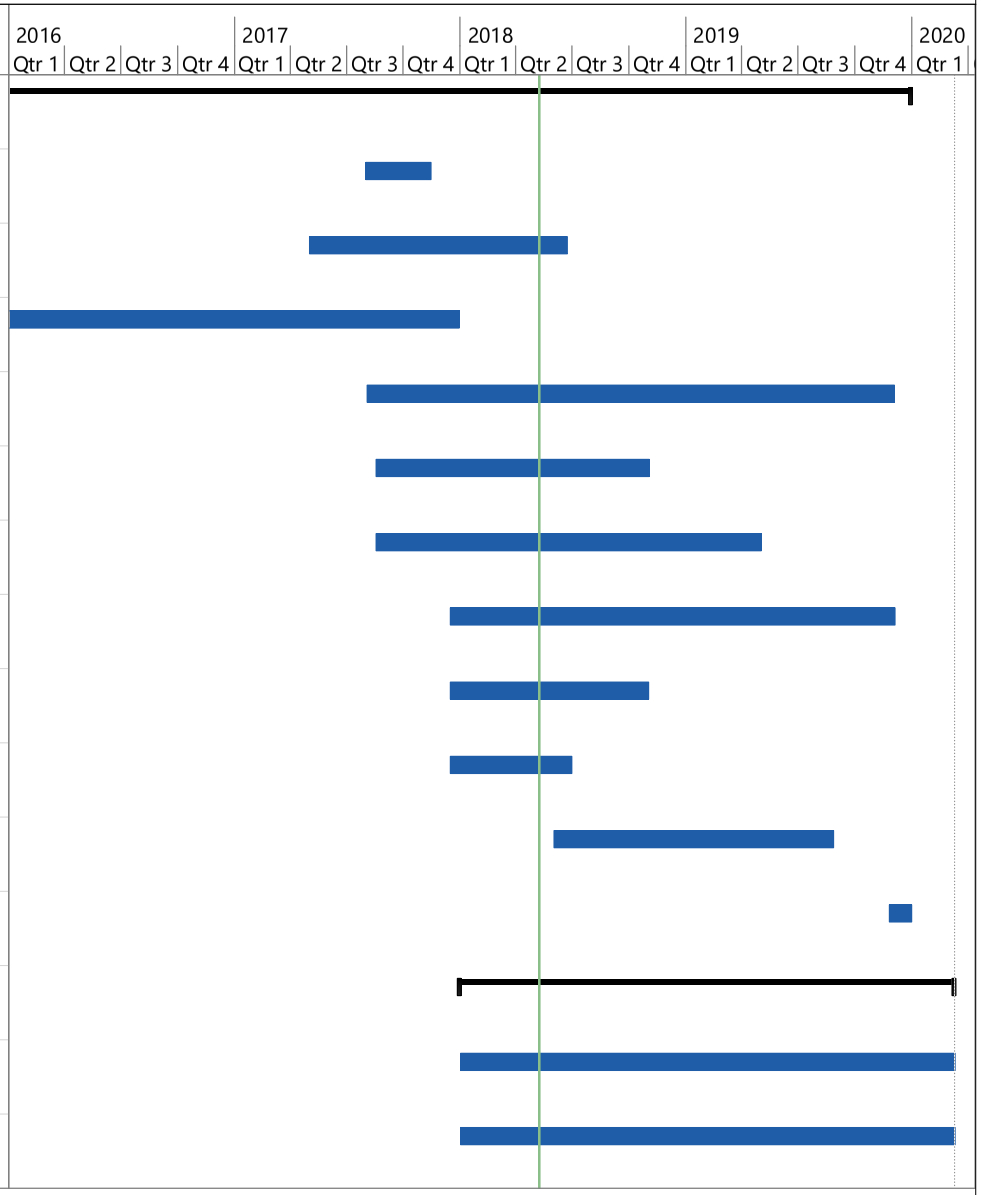
(e) 2005 Brown Road Farming changed to Meadowbrook Farms

(f) Simmons Alfalfa Ranch added March 2014

Exhibit 4: Groundwater Sustainability Plan Schedule

Indian Wells Valley Groundwater Authority
GSP Development and SDAC Programs: Schedule Summary 05.09.18

ID	Task Name
1	**GSP Development**
2	Prop 1 Grant Application
3	GSP Support Studies (Recharge Study, Brackish Water Study)
4	Salt and Nutrient Management Plan Development
5	Data Management System
6	Hydrogeologic Conceptual Model
7	Numerical Groundwater Model
8	Hydrogeologic Data Gap Evaluation and Analysis
9	Imported Water /Alternative Sources Evaluation
10	Recycled Water Evaluation
11	GSP Report Preparation: Develop Initial Draft and Final GSP
12	Public Hearing and Adoption of Plan
13	**SDAC Programs**
14	SDAC Water Conservation and Rebate Program
15	SDAC Water Audit, Leak Detection, and Leak Repair Program



Project: IWVGA Project Schedule Summary

Task

Summary

Exhibit 5: Methods to Quantify/Report Groundwater Production

Indian Wells Valley Groundwater Authority

Methods to Quantify/Report Groundwater Production

The Indian Wells Valley Groundwater Authority (GA) is considering the adoption of a "groundwater pumping fee", under the Sustainable Groundwater Management Act (SGMA), and California Water Code Division 6 Part 2.74 Chapter 8 Section 10730. The GA Board has set a GA Board meeting and public workshop to publicly discuss the planned groundwater pumping fee.

In order to levy this fee, the GA must collect information on active wells within the Indian Wells Valley groundwater basin and collect information on the quantity of water pumped from each relevant well. SGMA provides that wells pumping two (2) acre-feet per year of water or less are considered "de minimis" pumping and will not be subject to this fee (one acre-foot per year is approximately equivalent to 900 gallons per day). In addition, since SGMA is a state-mandated regulation, it is not enforceable upon federal agencies. Accordingly, any pumping by the United States Navy and the U.S. Department of Interior Bureau of Land Management (BLM) is excluded from this fee.

Quantify/Reporting Groundwater Pumping

The accuracy and completeness of groundwater pumping information within the Indian Wells Valley groundwater basin is extremely important to the GA's mandate to manage groundwater supplies. The GA strongly recommends that all wells owners within the basin install and maintain accurate water meters on the discharge of all wells.
When the GA adopts a DWR-approved Groundwater Sustainability Plan (GSP) for the basin, the GA will be in a position to require accurate water meters be installed and maintained on all wells. This requirement is expected to be established during 2020.

It is anticipated the Board will consider adopting this fee at its June 2018 Board meeting. If adopted at the June 2018 Board meeting, the first month of groundwater pumping subject to the groundwater pumping fee would be August 2018.

The GA staff is collecting information on all wells within the basin and associated groundwater pumping. The most current list of wells and water systems potentially subject to the groundwater pumping fee is provided in Exhibit 6. The GA staff will continue to update the well and water system listing to make it complete and accurate.

For basin wells with meters, well owners would submit production data to the GA. For basin wells subject to fees without accurate water meters, the monthly groundwater production must be determined using "alternative methods for reporting groundwater pumping". For wells without accurate water meters, the following alternative methods may be employed by the GA staff to determine monthly groundwater pumping for GA fee pumpers:

1. Electric Power Use. The well, or wells, must have dedicated electric power meters for the well, or wells (no other power use associated with electric meters). The well owner will provide monthly electric power use for each and a wells served by the electric meter. The GA staff will convert electronic power use to acre-feet of water pumped for GA fee purposes. (Similar procedure for wells powered by other sources.)
2. Agricultural Use Estimates. For agricultural-use estimates, the well owner must identify all wells used for agricultural irrigation. The well owner must provide accurate agricultural acreage and type of agriculture. The GA staff will use this agricultural information to estimate annual and monthly groundwater pumping. The methods and references used by the GA staff will be provided to the well owner.
3. Comparable Use to Metered Well(s). The GA staff will consider using groundwater pumping information from "metered" wells, for "comparable" uses from "non-measured" wells, based upon the GA staff's determination of comparability.

Well owners with “non-metered” wells are reminded that if there is dispute with GA staff regarding water use estimates using “alternative methods”, the well owner can elect to install an accurate water meter on their well. The GA will provide assistance to the extent it is capable.

Exhibit 6: Listing of IWV Wells and Water Systems

(As of May 15, 2018. Listing updated periodically as needed.)

INDIAN WELLS VALLEY GROUNDWATER BASIN WELL/SYSTEM LISTING

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
WELLS IN SAN BERNARDINO COUNTY						
Dale Robinson			Individual\ Domestic			
John Lamb			Individual\ Domestic			
Jorge M. Gonzalez			Individual\ Domestic			
WELLS IN INYO COUNTY						
Pearsonville Water System[8/]	CA1400043		Commercial	100	20	
			Commercial			
			Commercial			
			Commercial			
			Commercial			
			Commercial			
		Well 1N	Commercial /			
		Well 2S	Restaurant			
Permitted Water System			Resdential			
			Resdential			
			Resdential			
			Resdential			
			Vacant			
			Commercial			
			Commercial			
			Resdential			
			Resdential			
			Institutional			
			Resdential			
			Resdential			
			Industrial			
Structure Present -- Well Status Unknown			Resdential			
			Vacant			
			Resdential			
			Resdential			
WELLS IN KERN COUNTY						
KNOWN LARGE PURVEYORS						
INDIAN WELLS VALLEY WATER DISTRICT[1/3/8/9/]	CA1510017	WP0007175	Public	29,791	11,771	6,412[4/]
		WP0009366	Public			
		WP0013790	Agricultural			
		9a				
		10				
		11				
		13				
		17				
		18				
		30				
		31				
		33				
		34				
		35 (planned operation in 2019)				

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
City of Ridgecrest[2/]		26S40E29R				373[4/]
		26S40E34F				
		26S40E34N01				
		27S40E04A01				
		27S40E05H				
Inyokern CSD[2/8/9/]	CA1510036	Well 1 (inactive)	Residential	984	265	102[4/]
		Well 2 (standby)				
		Well 3				
MAX HOVATEN [3/]		WP0012086	Agricultural			480[5/]
		WP0014919	Private			
		WP0006416	Private			
		WP0014918				
MEADOWBROOK DAIRY [3/]		WP0010853	Agricultural			6,387[4/]
		WP0009179	Agricultural			
		WP0013993	Private			
MOJAVE PISTACHIO / RTS AGRI BUSINESS [3/]		WP0013816	Agricultural			325[5/]
		WP0014367	Agricultural			
		WP0013180	Agricultural			
		WP0014430	Agricultural			
		WP0013792	Agricultural			
Searles Valley[1/3/]		IWV Well #2				2,377[4/]
		IWV Well #4				
		IWV Well #30				
		IWV Well #35				
		IWV Well #36				
Quist Farms/Don Quist [3/]		WP0002793	Private			750[4/]
		WP0014955	Agricultural			
Simmons Ranch / Jack Simmons [3/]		WP0013257	Agricultural			918[4/]
Sierra Shadows Ranch / John Thomas Conaway [3/]		WP0014708	Agricultural			373[5/]
[3/]		WP0014649	Agricultural			
Amber Glow Ranch / Patricia Davis [3/]		WP0014940	Agricultural			48[5/]
Art Hickle (Hickle Family Trust) [3/]		WP0013463	Agricultural			85[5/]
Lists of Mutuals/State Small Systems						
Brady's Café and Mini Mart[9/]				50	3	
Buttermilk Acres[8/9/]	CA1502695	Well 1	Residential	60	2	
Caspar Water System[7/9/11/]		WA0001115		8		
China Lake Acres Mutual Water Company [2/8/9/]	CA1500563	WELL 1	Residential	60	60	
		WELL 2	Residential	60	60	
Crestview Water System[7/9/]		WA0000473		12	6	
Del Sol Water Co-Op[9/10/]						
Desert Sands Mutual Water Co-Op / Randal Smith[7/9/] [3/]		WP0016863 / WA0000439		15	5	
			Private			
Dixie Water Company[9/10/]						
Domestic Water System[9/10/]						
DONNA SUE WATER CO-OP[3/7/9/]		WP0001344 / WA0001403	Non-Public	24	14	

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
Dune III Mutual Water Company[8/9]	CA1502690	Well 1	Residential	119	36	
		Well 2				
Dune I Water[7/]		WA0000544		15	9	
Dune V Water[7/]		WA0000552		24	8	
East Inyokern Mutual Water[8/9/]	CA1500554	Well 1 (Nadine West)	Residential	87	28	
		Well 2 (Nadine East)	Residential	87	28	
El Solana Trailer Park[9/10/]				85		
Ferran Water System[7/9/]		WA0000527		21	10	
Gateway Market Water System[8/9/]	CA1502673	Well 1	Recreation/ CM	104	2	
Gilbert Mutual Water Company[7/9/]		WA0000541		31	7	
Hammar Water Co-Op[7/]		WA0001267		17	9	
Hometown Water Association[8/9/]	CA1500564	Well 1 (Main)	Residential	25	12	
IAC Water Company[7/9/10/]		WA0006627		60	8	
Indian Wells Lodge[8/9/]	CA1502418	Spring 1	Commercial	47	4	
Jumper St Water Co-op[3/7/9/]		WP0000513 / WA0000543	Public	12	7	
LIFE WATER CO-OP[3/8/9/]	CA1500579	WP0011908	Public	27	18	
		Well 1 (standby)				
		Well 2				
LELITER CO-OP WATER SYSTEM[3/7/11/]		WP0000764 / WA0001478	Private		8	
Mirage St Water Co-Op[7/]		WA0000553		13	5	
Owens Peak South[8/9/]	CA1502659	Well 1		40	17	
Owens Peak West[8/9/]	CA1502608	Well 1 - West		60	24	
Pinon Water System[3/7/]		WP0000050 / WA0000540	Public	7	7	
Pluto West Water Co[3/7/9/10/]		WP0000043 / WA0000536	Private	16	8	
		WP0008060 / WA0000536	Private			
Ridgecrest Christian Fellowship[9/10/]				100	3	
Sandy's Oasis Mobile Home Park[9/10/]				102		
SIERRA BREEZE MUTUAL WATER CO[3/8/9/]	CA1500447	WP0011177	Public	150	60	
		Well 2	Residential			
		Well 3				
South Desert Mutual Water Company[8/9/]	CA1502619	Well 1	Residential	26	13	
Sweet Water Co-Op[8/9/]	CA1500591	Well 1	Residential	47	15	
Warren Water System[7/]		WA0000567			5	
WEST VALLEY MUTUAL WATER CO[3/8/9/]	CA1500550	WP0011598	Public	70	41	
		Well 1	Residential			
		Well 2				
Yellow Bird Water Co-Op[7/9/]		WA0000537		20	8	
Lists of Non-Public Systems						
1112 WELL SHARING AGREEMENT[7/]		WA0001541			2	
412 NORTH JACKS RANCH WELL[3/7/]		WP0001327 / WA0001257	Non-Public		4	
		WP0001332 / WA0001257	Non-Public			
415 N Primavera Well[7/]		WA0001082			4	
750 N Primavera Well[7/]		WA0001214			2	
A-1 WATER COMPANY[3/7/]		WP0002145 / WA0001468	Non-Public		4	
B & B Water System[7/]		WA0000100			3	
Barel Cactus Water System[7/]		WA0000625			2	

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
Bass Water System[7/]		WA0000089			3	
Bergman Water Company[3/7/]		WP0008156 / WA0000626	Private/Agriculture			
BILL CORLEY [3/]		WP0009682	Non-Public			
Blub Water Co-op[3/7/]		WP0004222 / WA0001125	Non-Public		4	
Bonnie Bar Water System[3/7/]		WP0004353 / WA0001048	Private		2	
		WP0003223 / WA0001048	Private		3	
Brown Coyote Water System[3/7/]		WP0000055 / WA0000622	Private		4	
Cactus Canyon View Water Coop		WA0000628			4	
Church-Primavera Water System[3/7/]		WP0000113 / WA0000974	Private		2	
COLE FAMILY WELL[7/]		WA0001260			2	
Conrad Water System[7/]		WA0000591			3	
Cordova Acres Water System[7/]		WA0000771			3	
GAYLE SWINGROVER / Crystal Clear Co-op System [7/] [3/]		WP0012002 / WA0000694	Private		2	
Dune II[7/]		WA0000592			4	
Dune VI[3/7/]		WP0001324 / WA0000935	Non-Public		4	
Dune VII[7/]		WA0001107			4	
Fairchild #5[7/]		WA0000681			4	
Fairchild #6[7/]		WA0001087			4	
Felspar Water Company[7/]		WA0000682			3	
Fiddaments Fourty[7/]		WA0000610			4	
Galaxy Water Company[7/]		WA0000942				
Grand View Water System[3/7/]		WP0000512 / WA0000631	Private		2	
Greenmun Water System[3/7/]		WP0000437 / WA0000812	Private		2	
Guamward Water Co[7/]		WA0001139				
Haas Water System[3/7/]		WP0000078 / WA0000813	Non-Public		4	
KEN WILSON / Hawk Solo Water System[7/] [3/]		WP0015736 / WA0000571	Private		4	
J One Water Well[3/7/]		WP0008455 / WA0001253	Private		4	
MIKE WEST / J.E. West Water Co-op [7/] [3/]		WP0010652/WA0001017	Private			
Jiggy's Water System[7/]		WA0000088			4	
JOHN BARNES [3/]		WP0014057	Non-Public			
JRRLF WATER CO[7/]		WA0001502			4	
KARIN JAIN [3/]		WP0009832	Non-Public			
Kern Buckel Water System[3/7/]		WP0000173 / WA0000804	Private		4	
LC Water System[3/7/]		WP0007148 / WA0001135	Private			
Little Dipper Water System[3/7/]		WP0001834 / WA0000668	Non-Public		4	
Lone Star Water Company[3/7/]		WP0000072 / WA0001016	Private		4	
		WP0006605 / WA0001016	Private			
LOSCAR WELL WORKS[7/]		WA0001413			4	
Mahan & Reeves Water System[7/]		WA0000717			2	
Martin & Kelch Water Co[3/7/]		WP0008428 / WA0000689	Private		2	
		WP0000047 / WA0000689	Private			
		WP0003708 / WA0000689	Public			
MERTZ CONSTRUCTION WATER SYSTEM[7/]		WA0001495			2	
Monache Water Cooperative[7/]		WA0001038			4	
Norcrest Water Company[7/]		WA0000639			4	
Oasis Water System[3/7/]		WP0000101 / WA0000612	Private		4	
Pappe Water System[7/]		WA0000608			4	
PARCEL MAP 5105 MUTUAL WATER COMPANY[7/]		WA0001528			4	

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
Parcel Map 6775[7/]		WA0000693			4	
JAMES LLOYD / Parcel Map 8609 [7/] [3/]		WP0000176 / WA0000822	Non-Public		4	
		WP0013181	Private			
Petty Water System[7/]		WA0000598			2	
RED ROSE WATER SUPPLY[7/]		WA0001427			2	
Renfroe Water System[7/]		WA0000621			2	
RICHARD MOE[3/7/]		WP0008728 / WA0001197	Non-Public	10	4	
SILENT HILLS WATER CO[3/7/]		WP0000123 / WA0000730	Private		3	
Skogs Water System[3/7/]		WP0000456 / WA0000829	Non-Public		4	
SMITH WATER SYSTEM[3/7/]		WP0008435 / WA0001296	Private		4	
Sol-Wind Water Company+A638[7/]		WA0000650			3	
CALVIN FALLGATTER / STARGAZER RANCH SYSTEM #1 [7/] [3/]		WP0009200/WA0001217	Private		4	
Thor Water System[7/]		WA0000603			2	
Tumbleweed Water Company[3/7/]		WP0001670 / WA0000837	Private		4	
WALTER SIEBERT [3/]		WP0010414	Non-Public			
Warkentin Water System[3/7/]		WP0001445 / WA0000619	Non-Public			
Warren WATER SYSTEM 2[3/7/]		WP0009192 / WA0001338	Private		4	
W/R Water Company[3/7/]		WP0000081 / WA0000655	Private		4	
Well Association #277[7/]		WA0001067			4	
Wildflower Water Company[7/]		WA0000867			4	
WILLIAM GREEDY [3/]		WP0010415	Non-Public			
OTHER WELLS [6/]						
A R SANDY POULIN [3/]		WP0008740	Private			
ALFRED CRAVER [3/]		WP0009996	Private			
ANTHONY BARNHARDT [3/]		WP0010046	Private			
ARLO MUELLER [3/]		WP0009683	Private			
BRADLEY BROWN [3/]		WP0012075	Private			
BRANSON JOHN AND MELANIE [3/]		WP0007274	Private			
BREEDLOVE KEVIN [3/]		WP0007775	Private			
BYRON SELF [3/]		WP0010060	Private			
CAREY CURT AND PEGGY [3/]		WP0009312	Private			
CHESTER CORNELIUS [3/]		WP0009527	Private			
CHRISTINE KLEIN [3/]		WP0013512	Private			
CHRISTOPHER M WINFIELD [3/]		WP0008153	Private			
CHUCK PATTERSON [3/]		WP0009287	Private			
CIRCLE M FARMING [3/]		WP0013182	Agricultural			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
CORDELL CONSTRUCTION [3/]		WP0013307	Private			
		WP0013351	Private			
DANIEL JIMENEZ [3/]		WP0010105	Private			
DANIEL NELSON [3/]		WP0008500	Private			
DAVID PEARSON [3/]		WP0010743	Private			
DESERT MEMORIAL PARK [3/]		WP0016032	Irrigation			
DIXIE STARR [3/]		WP0009860	Private			
DONALD L DECKER [3/]		WP0011136	Private			
ED WINCHESTER [3/]		WP0011008	Private			
EDITH J HRESCHAK [3/]		WP0010217	Private			
EDWARD STULER [3/]		WP0010857	Private			
ERNEST BELL [3/]		WP0011509	Agricultural			
FRANK SENTELL [3/]		WP0009577	Private			
GARY HERTEG [3/]		WP0008575	Private			
GEORGE BERTRAND [3/]		WP0012480	Private			
GEORGE MARTIN [3/]		WP0008437	Private			
GEORGE TURNER [3/]		WP0012567	Private			
HARLAN KOOIMA [3/]		WP0012105	Private			
HARRY MERTZ [3/]		WP0009575	Private			
HARRY MERTZ [3/]		WP0009576	Private			
JACQUELINE WARREN [3/]		WP0011479	Private			
JAMES MURRAY [3/]		WP0009823	Private			
JAMES WILLIAMS [3/]		WP0012409	Private			
JASON STULER [3/]		WP0010281	Private			
JASON ZEHENDENER [3/]		WP0010651	Private			
JEFF NICHOLS [3/]		WP0008833	Private			
JILL PARKS [3/]		WP0012518	Private			
JOHN CARR [3/]		WP0011178	Private			
JOHN GRAY [3/]		WP0012488	Private			
JOHNNY KEEL [3/]		WP0010766	Private			
JOSE MONTOYA [3/]		WP0009750	Private			
JOSEPH DAUPLAISE [3/]		WP0010291	Private			
JOSEPH WALLACK [3/]		WP0010704	Private			
KARL OLMSTEAD [3/]		WP0010646	Private			
KINGE OKAUCHI [3/]		WP0012494	Private			
KIRSCHENMANS DRILLING [3/]		WP0010249	Private			
LARRY MEAD [3/]		WP0009245	Private			
LARRY WAGNER [3/]		WP0011011	Private			
MARGARET PORTER [3/]		WP0010927	Private			
MICHAEL MCGEE BUSINESS TRUST [3/]		WP0015442	Agricultural			
MICHAEL MORRIS [3/]		WP0007741	Private			
MICHAEL ROBERTSON [3/]		WP0010877	Private			
MICHELE JUSTUS [3/]		WP0011148	Private			
MICHELLE RICTER [3/]		WP0007892	Agricultural			
NANCI ATCHLEY [3/]		WP0012526	Deepen			
NTSP LLC [3/]		WP0014684	Agricultural			
OTTO BLOWERS [3/]		WP0012448	Private			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
PAT MOORE WATER CO [3/]		WP0008182	Private			
PATRICIA MCGUIRE [3/]		WP0009222	Private			
PATRICK BLUBAUGH [3/]		WP0014943	Agricultural			
		WP0010858	Private			
PAUL DECKER [3/]		WP0014116	Private			
PG&E CHRIS EDERER [3/]		WP0017300	Cathodic Protection			
PRICILLA WAGNER [3/]		WP0009607	Private			
RENDY JOE SISK [3/]		WP0000397	Private			
RICHARD WOODALL [3/]		WP0011342	Private			
ROBERT CANNING [3/]		WP0015443	Private			
ROBERT DICKSON [3/]		WP0009574	Private			
ROBERT REDDITT [3/]		WP0010795	Private			
ROBERT ROONEY [3/]		WP0009548	Private			
ROBERT SNYDER [3/]		WP0009822	Private			
ROBIN TORGERSON [3/]		WP0009963	Private			
RODNEY SNODGRASS [3/]		WP0013643	Private			
RON SCHILLER [3/]		WP0009142	Private			
RONALD PAGE [3/]		WP0000431	Private			
ROXIE KLETT [3/]		WP0010132	Private			
RUTH AMSTER [3/]		WP0012911	Private			
SCOTT JOHNSTONE [3/]		WP0010210	Private			
SCOTT POCKRANDT [3/]		WP0012474	Private			
SHELBY KING [3/]		WP0009278	Private			
STEPHEN AMBROSIUS [3/]		WP0009525	Private			
SYBIL TURNER [3/]		WP0010028	Public			
TERRY CAFFEE [3/]		WP0009379	Private			
THOMAS HULL [3/]		WP0015374	Private			
THOMAS MCCOY [3/]		WP0011664	Private			
TIMOTHY CROSBY [3/]		WP0009135	Private			
TODD A EVANS [3/]		WP0013594	Private			
TODD MCKINNEY [3/]		WP0007811	Private			
TOM MARCUS [3/]		WP0012024	Private			
TONY MEGLA [3/]		WP0002595	Private			
VIRGINIA MARTIN [3/]		WP0006344	Private			
WALTER BURFEINDT [3/]		WP0009281	Private			
WARREN HAGEMAN [3/]		WP0013459	Private			
WEST EPIC [3/]		WP0009765	Private			
no well owner provided [3/]		WP0007177	Agricultural			
no well owner provided [3/]		WP0008259	Agricultural			
no well owner provided [3/]		WP0008224	Agricultural			
no well owner provided [3/]		WP0009074	Agricultural			
no well owner provided [3/]		WP0000319	Agricultural			
no well owner provided [3/]		WP0008830	Cathodic Protection			
no well owner provided [3/]		WP0006300	Cathodic Protection			
no well owner provided [3/]		WP0006669	Cathodic Protection			
no well owner provided [3/]		WP0001422	Deepen			
no well owner provided [3/]		WP0001423	Deepen			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0001832	Industrial			
no well owner provided [3/]		WP0001639	Industrial			
no well owner provided [3/]		WP0003820	Non-Public			
no well owner provided [3/]		WP0000866	Non-Public			
no well owner provided [3/]		WP0003304	Non-Public			
no well owner provided [3/]		WP0003207	Non-Public			
no well owner provided [3/]		WP0001476	Non-Public			
no well owner provided [3/]		WP0001827	Non-Public			
no well owner provided [3/]		WP0000733	Non-Public			
no well owner provided [3/]		WP0001643	Non-Public			
no well owner provided [3/]		WP0001305	Non-Public			
no well owner provided [3/]		WP0001264	Non-Public			
no well owner provided [3/]		WP0004151	Non-Public			
no well owner provided [3/]		WP0003961	Non-Public			
no well owner provided [3/]		WP0003962	Non-Public			
no well owner provided [3/]		WP0001148	Non-Public			
no well owner provided [3/]		WP0001396	Non-Public			
no well owner provided [3/]		WP0001003	Non-Public			
no well owner provided [3/]		WP0000181	Non-Public			
no well owner provided [3/]		WP0000461	Non-Public			
no well owner provided [3/]		WP0003424	Non-Public			
no well owner provided [3/]		WP0003425	Non-Public			
no well owner provided [3/]		WP0001686	Non-Public			
no well owner provided [3/]		WP0000917	Non-Public			
no well owner provided [3/]		WP0001231	Non-Public			
no well owner provided [3/]		WP0002511	Non-Public			
no well owner provided [3/]		WP0003217	Non-Public			
no well owner provided [3/]		WP0001790	Non-Public			
no well owner provided [3/]		WP0000924	Non-Public			
no well owner provided [3/]		WP0000702	Non-Public			
no well owner provided [3/]		WP0000433	Non-Public			
no well owner provided [3/]		WP0000097	Non-Public			
no well owner provided [3/]		WP0001408	Non-Public			
no well owner provided [3/]		WP0000506	Non-Public			
no well owner provided [3/]		WP0001455	Non-Public			
no well owner provided [3/]		WP0003464	Non-Public			
no well owner provided [3/]		WP0001126	Non-Public			
no well owner provided [3/]		WP0001769	Private			
no well owner provided [3/]		WP0002535	Private			
no well owner provided [3/]		WP0002650	Private			
no well owner provided [3/]		WP0002932	Private			
no well owner provided [3/]		WP0008889	Private			
no well owner provided [3/]		WP0008227	Private			
no well owner provided [3/]		WP0008950	Private			
no well owner provided [3/]		WP0003667	Private			
no well owner provided [3/]		WP0002675	Private			
no well owner provided [3/]		WP0008163	Private			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0002983	Private			
no well owner provided [3/]		WP0006110	Private			
no well owner provided [3/]		WP0000525	Private			
no well owner provided [3/]		WP0000076	Private			
no well owner provided [3/]		WP0000637	Private			
no well owner provided [3/]		WP0005339	Private			
no well owner provided [3/]		WP0000068	Private			
no well owner provided [3/]		WP0004168	Private			
no well owner provided [3/]		WP0003031	Private			
no well owner provided [3/]		WP0004496	Private			
no well owner provided [3/]		WP0004985	Private			
no well owner provided [3/]		WP0000085	Private			
no well owner provided [3/]		WP0000555	Private			
no well owner provided [3/]		WP0004946	Private			
no well owner provided [3/]		WP0004947	Private			
no well owner provided [3/]		WP0001517	Private			
no well owner provided [3/]		WP0007294	Private			
no well owner provided [3/]		WP0005570	Private			
no well owner provided [3/]		WP0005571	Private			
no well owner provided [3/]		WP0000500	Private			
no well owner provided [3/]		WP0000090	Private			
no well owner provided [3/]		WP0000082	Private			
no well owner provided [3/]		WP0005356	Private			
no well owner provided [3/]		WP0008600	Private			
no well owner provided [3/]		WP0007572	Private			
no well owner provided [3/]		WP0000067	Private			
no well owner provided [3/]		WP0000483	Private			
no well owner provided [3/]		WP0000060	Private			
no well owner provided [3/]		WP0005787	Private			
no well owner provided [3/]		WP0005832	Private			
no well owner provided [3/]		WP0005884	Private			
no well owner provided [3/]		WP0004871	Private			
no well owner provided [3/]		WP0007729	Private			
no well owner provided [3/]		WP0001162	Private			
no well owner provided [3/]		WP0004610	Private			
no well owner provided [3/]		WP0005613	Private			
no well owner provided [3/]		WP0005614	Private			
no well owner provided [3/]		WP0000019	Private			
no well owner provided [3/]		WP0000654	Private			
no well owner provided [3/]		WP0003479	Private			
no well owner provided [3/]		WP0005387	Private			
no well owner provided [3/]		WP0000833	Private			
no well owner provided [3/]		WP0002792	Private			
no well owner provided [3/]		WP0001791	Private			
no well owner provided [3/]		WP0003815	Private			
no well owner provided [3/]		WP0000544	Private			
no well owner provided [3/]		WP0000503	Private			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0003851	Private			
no well owner provided [3/]		WP0001842	Private			
no well owner provided [3/]		WP0001843	Private			
no well owner provided [3/]		WP0001917	Private			
no well owner provided [3/]		WP0006352	Private			
no well owner provided [3/]		WP0000585	Private			
no well owner provided [3/]		WP0001973	Private			
no well owner provided [3/]		WP0004182	Private			
no well owner provided [3/]		WP0002036	Private			
no well owner provided [3/]		WP0000172	Private			
no well owner provided [3/]		WP0000502	Private			
no well owner provided [3/]		WP0004183	Private			
no well owner provided [3/]		WP0004431	Private			
no well owner provided [3/]		WP0004432	Private			
no well owner provided [3/]		WP0004235	Private			
no well owner provided [3/]		WP0001191	Private			
no well owner provided [3/]		WP0001343	Private			
no well owner provided [3/]		WP0006926	Private			
no well owner provided [3/]		WP0000989	Private			
no well owner provided [3/]		WP0004583	Private			
no well owner provided [3/]		WP0006836	Private			
no well owner provided [3/]		WP0001345	Private			
no well owner provided [3/]		WP0001081	Private			
no well owner provided [3/]		WP0000507	Private			
no well owner provided [3/]		WP0002337	Private			
no well owner provided [3/]		WP0008291	Private			
no well owner provided [3/]		WP0000115	Private			
no well owner provided [3/]		WP0008868	Private			
no well owner provided [3/]		WP0001268	Private			
no well owner provided [3/]		WP0000922	Private			
no well owner provided [3/]		WP0005588	Private			
no well owner provided [3/]		WP0008852	Private			
no well owner provided [3/]		WP0004159	Private			
no well owner provided [3/]		WP0004160	Private			
no well owner provided [3/]		WP0004577	Private			
no well owner provided [3/]		WP0004578	Private			
no well owner provided [3/]		WP0000083	Private			
no well owner provided [3/]		WP0005267	Private			
no well owner provided [3/]		WP0003409	Private			
no well owner provided [3/]		WP0008519	Private			
no well owner provided [3/]		WP0000092	Private			
no well owner provided [3/]		WP0003484	Private			
no well owner provided [3/]		WP0003186	Private			
no well owner provided [3/]		WP0003274	Private			
no well owner provided [3/]		WP0003639	Private			
no well owner provided [3/]		WP0003640	Private			
no well owner provided [3/]		WP0000457	Private			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0000255	Private			
no well owner provided [3/]		WP0009150	Private			
no well owner provided [3/]		WP0004646	Private			
no well owner provided [3/]		WP0004877	Private			
no well owner provided [3/]		WP0004884	Private			
no well owner provided [3/]		WP0004499	Private			
no well owner provided [3/]		WP0000442	Private			
no well owner provided [3/]		WP0005386	Private			
no well owner provided [3/]		WP0003050	Private			
no well owner provided [3/]		WP0005896	Private			
no well owner provided [3/]		WP0001310	Private			
no well owner provided [3/]		WP0001150	Private			
no well owner provided [3/]		WP0007151	Private			
no well owner provided [3/]		WP0000687	Private			
no well owner provided [3/]		WP0000086	Private			
no well owner provided [3/]		WP0005302	Private			
no well owner provided [3/]		WP0005303	Private			
no well owner provided [3/]		WP0005296	Private			
no well owner provided [3/]		WP0005297	Private			
no well owner provided [3/]		WP0005298	Private			
no well owner provided [3/]		WP0004769	Private			
no well owner provided [3/]		WP0003845	Private			
no well owner provided [3/]		WP0000988	Private			
no well owner provided [3/]		WP0000522	Private			
no well owner provided [3/]		WP0000435	Private			
no well owner provided [3/]		WP0004715	Private			
no well owner provided [3/]		WP0006351	Private			
no well owner provided [3/]		WP0004162	Private			
no well owner provided [3/]		WP0001810	Private			
no well owner provided [3/]		WP0002534	Private			
no well owner provided [3/]		WP0006921	Private			
no well owner provided [3/]		WP0001471	Private			
no well owner provided [3/]		WP0000780	Private			
no well owner provided [3/]		WP0003927	Private			
no well owner provided [3/]		WP0000035	Private			
no well owner provided [3/]		WP0006818	Private			
no well owner provided [3/]		WP0008820	Private			
no well owner provided [3/]		WP0008144	Private			
no well owner provided [3/]		WP0001846	Private			
no well owner provided [3/]		WP0000132	Private			
no well owner provided [3/]		WP0006090	Private			
no well owner provided [3/]		WP0001630	Private			
no well owner provided [3/]		WP0004257	Private			
no well owner provided [3/]		WP0004743	Private			
no well owner provided [3/]		WP0008710	Private			
no well owner provided [3/]		WP0001600	Private			
no well owner provided [3/]		WP0001601	Private			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0008678	Private			
no well owner provided [3/]		WP0007668	Private			
no well owner provided [3/]		WP0008962	Private			
no well owner provided [3/]		WP0003023	Private			
no well owner provided [3/]		WP0002213	Private			
no well owner provided [3/]		WP0006877	Private			
no well owner provided [3/]		WP0004147	Private			
no well owner provided [3/]		WP0004161	Private			
no well owner provided [3/]		WP0000335	Private			
no well owner provided [3/]		WP0004506	Private			
no well owner provided [3/]		WP0008052	Private			
no well owner provided [3/]		WP0000071	Private			
no well owner provided [3/]		WP0002933	Private			
no well owner provided [3/]		WP0005599	Private			
no well owner provided [3/]		WP0005600	Private			
no well owner provided [3/]		WP0000532	Private			
no well owner provided [3/]		WP0000063	Private			
no well owner provided [3/]		WP0000648	Private			
no well owner provided [3/]		WP0000793	Private			
no well owner provided [3/]		WP0004545	Private			
no well owner provided [3/]		WP0003924	Private			
no well owner provided [3/]		WP0003816	Private			
no well owner provided [3/]		WP0004187	Private			
no well owner provided [3/]		WP0004761	Private			
no well owner provided [3/]		WP0004084	Private			
no well owner provided [3/]		WP0000017	Private			
no well owner provided [3/]		WP0000138	Private			
no well owner provided [3/]		WP0000074	Private			
no well owner provided [3/]		WP0004622	Private			
no well owner provided [3/]		WP0004294	Private			
no well owner provided [3/]		WP0008805	Private			
no well owner provided [3/]		WP0004858	Private			
no well owner provided [3/]		WP0004859	Private			
no well owner provided [3/]		WP0001002	Private			
no well owner provided [3/]		WP0004018	Private			
no well owner provided [3/]		WP0004019	Private			
no well owner provided [3/]		WP0000488	Private			
no well owner provided [3/]		WP0000075	Private			
no well owner provided [3/]		WP0009065	Private			
no well owner provided [3/]		WP0002667	Private			
no well owner provided [3/]		WP0005677	Private			
no well owner provided [3/]		WP0005678	Private			
no well owner provided [3/]		WP0000036	Private			
no well owner provided [3/]		WP0000895	Private			
no well owner provided [3/]		WP0001559	Private			
no well owner provided [3/]		WP0004085	Private			
no well owner provided [3/]		WP0008444	Private			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0000073	Private			
no well owner provided [3/]		WP0007912	Private			
no well owner provided [3/]		WP0007583	Private			
no well owner provided [3/]		WP0000692	Private			
no well owner provided [3/]		WP0000065	Private			
no well owner provided [3/]		WP0008194	Private			
no well owner provided [3/]		WP0000792	Private			
no well owner provided [3/]		WP0004407	Private			
no well owner provided [3/]		WP0006572	Private			
no well owner provided [3/]		WP0004083	Private			
no well owner provided [3/]		WP0003682	Private			
no well owner provided [3/]		WP0009211	Private			
no well owner provided [3/]		WP0005196	Private			
no well owner provided [3/]		WP0001771	Private			
no well owner provided [3/]		WP0001265	Private			
no well owner provided [3/]		WP0000581	Private			
no well owner provided [3/]		WP0003067	Private			
no well owner provided [3/]		WP0001370	Private			
no well owner provided [3/]		WP0003392	Private			
no well owner provided [3/]		WP0006539	Private			
no well owner provided [3/]		WP0000749	Private			
no well owner provided [3/]		WP0001854	Private			
no well owner provided [3/]		WP0000045	Private			
no well owner provided [3/]		WP0000536	Private			
no well owner provided [3/]		WP0006567	Private			
no well owner provided [3/]		WP0001881	Private			
no well owner provided [3/]		WP0004900	Private			
no well owner provided [3/]		WP0008636	Private			
no well owner provided [3/]		WP0001851	Public			
no well owner provided [3/]		WP0000434	Public			
no well owner provided [3/]		WP0008225	Public			
no well owner provided [3/]		WP0001113	Public			
no well owner provided [3/]		WP0000439	Public			
no well owner provided [3/]		WP0000980	Public			
no well owner provided [3/]		WP0001607	Public			
no well owner provided [3/]		WP0000033	Public			
no well owner provided [3/]		WP0000175	Public			
no well owner provided [3/]		WP0005924	Public			
no well owner provided [3/]		WP0005925	Public			
no well owner provided [3/]		WP0000925	Public			
no well owner provided [3/]		WP0000588	Public			
no well owner provided [3/]		WP0001446	Public			
no well owner provided [3/]		WP0000527	Public			
no well owner provided [3/]		WP0002336	Public			
no well owner provided [3/]		WP0001021	Public			
no well owner provided [3/]		WP0003237	Public			
no well owner provided [3/]		WP0001935	Public			

WELL OWNER/WATER SYSTEM	DDW WATER SYSTEM NUMBER	WELL NAME/ PERMIT NUMBER	INTENDED USE / TYPE	POPULATION SERVED	NO. OF CONNECTIONS	PRODUCTION
no well owner provided [3/]		WP0001172	Public			
no well owner provided [3/]		WP0001755	Public			
no well owner provided [3/]		WP0002116	Public			
no well owner provided [3/]		WP0004704	Public			
no well owner provided [3/]		WP0002160	Public			
no well owner provided [3/]		WP0000105	Public			
no well owner provided [3/]		WP0001669	Public			
no well owner provided [3/]		WP0003236	Public			
no well owner provided [3/]		WP0000674	Public			
no well owner provided [3/]		WP0000448	Public			
no well owner provided [3/]		WP0000059	Public			
no well owner provided [3/]		WP0005454	Public			
no well owner provided [3/]		WP0002894	Public			
no well owner provided [3/]		WP0000256	Public			
no well owner provided [3/]		WP0001798	Public			
no well owner provided [3/]		WP0000950	Public			
no well owner provided [3/]		WP0000110	Public			
no well owner provided [3/]		WP0001922	Public			
no well owner provided [3/]		WP0000161	Public			
no well owner provided [3/]		WP0000724	Public			
no well owner provided [3/]		WP0000477	Public			
no well owner provided [3/]		WP0001201	Public			
no well owner provided [3/]		WP0001947	Public			
no well owner provided [3/]		WP0001888	Public			
no well owner provided [3/]		WP0001149	Public			
no well owner provided [3/]		WP0002031	Public			
no well owner provided [3/]		WP0001173	Public			
no well owner provided [3/]		WP0000494	Public			
no well owner provided [3/]		WP0000436	Public			
no well owner provided [3/]		WP0001948	Public			
no well owner provided [3/]		WP0001591	Public			
no well owner provided [3/]		WP0002581	Public			

Notes

1/ Wells provided by water purveyor.

2/ Wells provided in DRI Report.

3/ Wells provided in Kern County Environmental Health Database. (Provided in March 2018 and revised per IWVGA Staff/TAC/PAC as directed.)

4/ Production data from Cooperative Group IWV Ground Water Production Estimates 1975-Present. Calendar Year 2016 Data.

5/ Production from IWV Farmers Group Letter to Kern County dated March 4, 2014. 2013 Data.

6/ Unidentified wells could be part of other systems (i.e. mutuals, non-public, or small).

7/ Data from Kern County. (Provided in March 2018 and revised per IWVGA Staff/TAC/PAC as directed.)

8/ Data from State Water Board Safe Drinking Water Information System (SDWIS) database. (Accessed April and May 2018.)

9/ Info from Donna Thomas's list of Mutuals/Small Water Systems.

10/ Info from small business website. (Accessed April and May 2018.)

11/ Data from Kern County indicates non-public system; however, listed as mutual/state small systems because more than 4 connections.

**AGREEMENT BETWEEN the INDIAN WELLS VALLEY GROUNDWATER AUTHORITY
and the BOARD OF REGENTS of the NEVADA SYSTEM OF HIGHER EDUCATION on
behalf of the DESERT RESEARCH INSTITUTE**

As of _____, 2018, Indian Wells Valley Groundwater Authority (hereinafter "SPONSOR"), and the Board of Regents of the Nevada System of Higher Education on behalf of the Desert Research Institute, (hereinafter "DRI") agree as follows:

1. Purpose

(a) DRI has the knowledge and expertise in the groundwater model for Indian Wells Valley to assist SPONSOR in using this groundwater model to support SPONSOR's work on its State-required Groundwater Sustainability Plan (GSP);

(b) DRI is willing and able to make facilities and qualified personnel available to conduct the desired research and/or perform the desired services;

2. Term and Responsibilities

(a) Pursuant to this Agreement, DRI, for a period from June 1, 2018 to June 30, 2020, shall perform the duties/tasks in accordance with the DRI Scope of Work and Budget, a copy of which is attached hereto as "Exhibit A" and by reference made part of this Agreement. Either party may terminate this Agreement on thirty (30) days written notice.

3. Consideration

(a) This Agreement is to be considered a cost reimbursement agreement for a total estimated cost of two hundred thirty nine thousand nine hundred thirty four dollars ($239,934). Costs are to be established as outlined in the DRI cost proposal, attached hereto as "Exhibit A."

(b) If the scope of work described under this Agreement expands, SPONSOR shall initiate an amendment to include added scope and funding that is mutually agreed upon by DRI and SPONSOR. All work will be authorized on a Task and associated Budget basis.

(c) DRI agrees to use reasonable efforts to perform its research obligations and all other obligations described under this Agreement within the total estimated cost.

(d) SPONSOR shall not be obligated to reimburse DRI in excess of the above-listed Agreement price, unless and until SPONSOR has notified DRI, in writing, that such Agreement price has been increased, and an amendment to the Agreement providing for such an increase is entered into.

(e) DRI shall invoice SPONSOR on a monthly basis in the format contained in the DRI Cost Proposal. Payment is to be made by SPONSOR to DRI no later than sixty (60) days after receipt of the invoice.

4. Ownership of Property

(a) If equipment not already owned by DRI shall be required for the research

conducted under this Agreement, such additional equipment, with the approval of the SPONSOR, shall be built or purchased by DRI and the cost thereof shall be reimbursed by SPONSOR under this Agreement. DRI shall retain title to all property purchased under this Agreement.

(b) DRI shall utilize a groundwater model that was developed for the United States Navy. DRI has received authorization from the Navy to utilize the groundwater model for this Agreement with SPONSOR.

5. Patents

DRI shall own all right, title, and interest in and to any patent, trade secret, or other proprietary rights that develop out of or as a result of the research called for under this Agreement. DRI agrees to grant SPONSOR a perpetual, non-exclusive, royalty-free license to use throughout the world any such patent, trade secret, and/or proprietary rights.

6. Independent Contractor

DRI is acting as an independent contractor, and not an employee of SPONSOR.

7. Insurance

DRI is self-insured in accordance with the limitations of NRS 41.0305 to NRS 41.039. DRI shall maintain self insurance with limits of liability as set forth in NRS 41.0305 to 41.039, and Workers Compensation coverage as required by Nevada State Law, during the term of this Agreement.

8. Project Monitorship

The project described under this Agreement will be monitored by Indian Wells Valley Water Resources Manager (IWV-WRM), project manager.

9. Publications

The major purpose of the work performed by DRI is to obtain information that may be made available to the public and industry through publications, conferences, or other means of public disclosure. DRI shall give SPONSOR thirty (30) days to review and comment on any proposed announcement or publication of work developed pursuant to this Agreement, and DRI shall consider SPONSOR's comments prior to public release. DRI shall recognize the support of SPONSOR and give credit in the text and/or on the title pages of any such announcement or publication of work.

10. Governing Law

This Agreement shall be interpreted and construed under, and the rights of the parties will be governed by, the laws of the State of Nevada.

11. Reports and Deliverables

Final results shall be provided by the end of the project.

12. Subcontracts

DRI shall not subcontract or assign responsibility for performance of any portion of this Agreement without the prior written consent of SPONSOR. Except as otherwise specifically approved by SPONSOR, DRI shall include appropriate provisions of this Agreement in subcontracts so rights conferred to SPONSOR by this Agreement shall not be affected or diminished by subcontract. There shall be no contractual relationship intended, implied, or created between DRI and any subcontractor with respect to services under this Agreement.

13. Integration

This Agreement represents the entire understanding of SPONSOR and DRI as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This Agreement may not be modified or altered except in writing, signed by both parties.

14. Miscellaneous

(a) Neither party hereto shall assign, sublet, or transfer interests hereunder without first obtaining written consent from the other party.

(b) The waiver by either party of any breach of this Agreement shall not bar the other party from enforcing any subsequent breach thereof.

(c) Notices shall be deemed received when deposited in the U.S. Mail with postage prepaid and registered or certified addressed as follows unless advising in writing to the contrary:

Indian Wells Valley Groundwater Authority
[ADDRESS]

The Board of Regents of the Nevada System of Higher Education on Behalf of the Desert Research Institute
[ADDRESS]

_____

IN WITNESS WHEREOF, the parties hereby have caused this Agreement to be executed the date first above written.

Indian Wells Valley Groundwater Authority

By:_____

Title:_____

Address:_____

Date:_____

THE BOARD OF REGENTS OF THE NEVADA SYSTEM OF HIGHER EDUCATION
onbehalf of the DESERT RESEARCH INSTITUTE

By:_____

Title: Director of Sponsored Projects and Compliance

Address: 2215 Raggio Parkway, Reno, NV 89512-1095

Date:_____

Exhibit A

Indian Wells Valley Groundwater Authority

DRI Proposal for Full Support of GSP Development

April 27, 2018

Task 1 - Sustainable Management Alternatives through 2070

The calibrated groundwater model will be setup to simulate up to four (4) sustainable management alternative simulations through 2070. The sustainable management alternatives will be provided by the Technical Advisory Committee (TAC). Results will be presented as maps of drawdown in Indian Wells Valley, hydrographs at specific locations, and annual water budget tables for the basin and each management area including pumping by water use. The management area extents would be provided by the TAC and/or the Water Resource Manager (WRM) and would probably include 3 to 5 zones.

The personnel cost for this task is $24,570.

Task 2 - Transport (Salinity) and Land Subsidence

A predictive simulation for TDS transport and land subsidence will be developed for the preferred sustainable management alternative. The transport model will be based on the published transport model but implemented on the updated model platform including additional salinity data if readily available. A revised conceptual model of land subsidence will be developed and integrated into the subsidence model framework. The transport and subsidence simulations will extend through 2070 and results will be presented as maps of TDS concentrations, concentrations through time at selected locations, and annual mass balance tables by management area for the preferred alternative.

The personnel cost for this task is $36,498.

Task 3a – Attendance and Participation at TAC Meetings

DRI will attend and participate in eight (8) TAC meetings. Beyond general attendance and participation and discussions, DRI will present model calibration results, including baseline model assumptions, seasonally varying and constant boundary conditions, water budgets, and results of the steady-state, transient historical, and four (4) sustainable management alternatives, and TDS transport results.

Travel cost for this task is $9,154 and personnel cost is $47,343. Total cost for this task is $56,497.

Task 3b – Attendance and Participation at TAC Workshop

Jenny Chapman and Greg Pohll will prepare for and lead two (2) 4-hour workshops for an ad hoc (3 member) committee from the TAC. DRI will collaborate with the WRM and the Navy for additional content. DRI will provide detailed information regarding model calibration results (steady-state and transient), model assumptions, seasonally varying recharge and pumping, and other boundary conditions, and water budgets. In addition, DRI will provide summary slides to the ad hoc committee and the full TAC following each workshop.

Travel cost for this task is $4,409 and personnel cost is $25,104. Total cost for this task is $29,513.

Task 4 – Coordination with the Water Resource Manager

This task will include ongoing coordination with the WRM. WRM support would include discussions, providing input, developing data tables, GIS locations and maps, etc. Other items that will be coordinated include a review of existing (and brackish water study) hydrogeologic conceptual models, development of sustainable water balance, development of monitoring plan, identification of data gaps, development of sustainable management criteria, providing tables and descriptions for GSP model section documentation, discussions regarding climate change, land use, potential recharge areas, and other management alternatives. DRI will also collaborate with the WRM to provide response to modeling comments from TAC, GSA Board, California Department of Water Resources (DWR), and the general public.

This task does not include travel and personnel cost is $37,572.

Task 5 – Model Documentation

DRI will prepare a report that describes updates of the groundwater model since the last report. Updates will include changes made to the model since the last published report. Changes will include model re-calibration results, alterations to seasonally varying and constant boundary conditions, water budgets, and results of the steady-state, transient historical, and four (4) sustainable management alternatives, and TDS transport results. This report is not intended to replace the first edition of the modeling report as it will focus on model updates.

Personnel cost for this task is $55,284.

Total Project Cost

The total project cost is $239,934.

DRI Cost Proposal

IWV Basin Model Coordination - FULL PROPOSAL

1 June 2018 through 30 June 2020

					Model Sustainable Management Alternatives 2070		Model Transport and Land Subsidence		TAC Meetings		TAC Workshops		Coordination/Discussions with WRM		Model Documentation	
	Individual / Units	Rate,$/hr	Hrs	Cost	Task 1		Task 2		Task 3a		Task 3b		Task 4		Task 5	
SALARIES & WAGES					Hrs	Cost, $	Hrs	Cost, $	Hrs	Cost, $	Hrs.	Cost, $	Hrs	Cost, $	Hrs	Cost, $
Professional																
S020 Environmental Scientist	C. Garner	106.70	480	51,217	100	10,670	166	17,713	24	2,561	24	2,561	0	0	166	17,713
Subject Matter Expert	J. Chapman	237.98	296	70,443	0	0	40	9,519	48	11,423	48	11,423	80	19,039	80	19,039
Subject Matter Expert	G. Pohll	231.66	452	104,710	60	13,900	40	9,266	144	33,359	48	11,120	80	18,533	80	18,533
SUBTOTAL PERSONNEL			1,228	226,371	160	24,570	246	36,498	216	47,343	120	25,104	160	37,572	326	55,284
TRAVEL																
Ridgecrest, CA - Meetings or Field Work																
China Lake - DRI Vehicle						0		0		4,178		1,921	0	0	0	0
Lodging						0		0		2,640		1,320	0	0	0	0
Meals/Incidental expenses						0		0		2,336		1,168	0	0	0	0
SUBTOTAL TRAVEL						0		0		9,154		4,409		0		0
TOTAL COSTS				239,934		24,570		36,498		56,497		29,513		37,572		55,284

All costs are fully burdened in accordance with DRI's standard business practice.

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Indian Wells Valley Groundwater Authority

DRI Proposal for Prop 1 Funded Support of GSP Development

April 27, 2018

Task 1 - Sustainable Management Alternatives through 2070

The calibrated groundwater model will be setup to simulate up to four (4) sustainable management alternative simulations through 2070. The sustainable management alternatives will be provided by the Technical Advisory Committee (TAC). Results will be presented as maps of drawdown in Indian Wells Valley, hydrographs at specific locations, and annual water budget tables for the basin and each management area including pumping by water use. The management area extents would be provided by the TAC and/or the Water Resource Manager (WRM) and would probably include 3 to 5 zones.

The personnel cost for this task is $24,570.

Task 2 - Transport (Salinity) Model Scenario

A predictive simulation for TDS transport will be developed for the preferred sustainable management alternative. The transport model will be based on the published transport model but implemented on the updated model platform including additional salinity data if readily available. The transport and subsidence simulations will extend through 2070 and results will be presented as maps of TDS concentrations, concentrations through time at selected locations, and annual mass balance tables by management area for the preferred alternative.

The personnel cost for this task is $23,514.

Task 3a – Attendance and Participation at TAC Meetings

DRI (generally Greg Pohll) will attend and participate in six (6) TAC meetings. Beyond general attendance and participation and discussions, DRI will present model calibration results, including baseline model assumptions, seasonally varying and constant boundary conditions, water budgets, and results of the steady-state, transient historical, and four (4) sustainable management alternatives, and TDS transport results.

Travel cost for this task is $7,118 and personnel cost is $35,920. Total cost for this task is $43,038.

Task 3b – Attendance and Participation at TAC Workshop

Jenny Chapman and Greg Pohll will prepare for and lead a 4-hour workshop for an ad hoc (3 member) committee from the TAC. DRI will collaborate with the Water Resource Manager (WRM) and the Navy for additional content. DRI will provide detailed information regarding model calibration results (steady-state and transient), model assumptions, seasonally varying recharge and pumping, and other boundary conditions, and water budgets. In addition, DRI will provide summary slides to the ad hoc committee and the full TAC following the workshop.

Travel cost for this task is $2,204 and personnel cost is $12,552. Total cost for this task is $14,756.

Task 4 – Coordination with the Water Resource Manager

This task will include ongoing coordination with the WRM. WRM support would include discussions, providing input, developing data tables, GIS locations and maps, etc. Other items will be coordinated within the limits of the budget. DRI will also collaborate with the WRM to provide response to modeling comments from TAC, GSA Board, California Department of Water Resources (DWR), and the general public.

This task does not include travel and personnel cost is $15,641.

Task 5 – Model Documentation

DRI will prepare a report that describes updates of the groundwater model since the last report. Updates will include changes made to the model since the last published report. Changes will include model re-calibration results, alterations to seasonally varying and constant boundary conditions, water budgets, and results of the steady-state, transient historical, and four (4) sustainable management alternatives, and TDS transport results. This report is not intended to replace the first edition of the modeling report as it will focus on model updates.

Personnel cost for this task is $55,284.

Total Project Cost

The total project cost is $176,804.

DRI Cost Proposal

IWV Basin Model Coordination - Prop 1

1 June 2018 through 30 June 2020

					Model Sustainable Management Alternatives 2070		Transport Model Scenario		TAC Meetings		TAC Workshops		Coordination/Discussions with WRM		Model Documentation	
	Individual / Units	Rate,$/hr	Hrs	Cost	Task 1		Task 2		Task 3a		Task 3b		Task 4		Task 5	
SALARIES & WAGES					Hrs	Cost, $	Hrs	Cost, $	Hrs	Cost, $	Hrs.	Cost, $	Hrs	Cost, $	Hrs	Cost, $
Professional																
S020 Environmental Scientist	C. Garner	106.70	382	40,760	100	10,670	80	8,536	24	2,561	12	1,280	0	0	166	17,713
Subject Matter Expert	J. Chapman	237.98	147	34,984	0	0	24	5,712	0	0	24	5,712	19	4,522	80	19,039
Subject Matter Expert	G. Pohll	231.66	396	91,737	60	13,900	40	9,266	144	33,359	24	5,560	48	11,120	80	18,533
SUBTOTAL SALARY AND WAGES			925	167,481	160	24,570	144	23,514	168	35,920	60	12,552	67	15,641	326	55,284
TRAVEL																
Ridgecrest, CA - Meetings or Field Work																
China Lake - DRI Vehicle						0		0		3,386		960		0	0	0
Lodging						0		0		1,980		660		0	0	0
Meals/Incidental expenses						0		0		1,752		584		0	0	0
SUBTOTAL TRAVEL						0		0		7,118		2,204		0		0
TOTAL COSTS				176,804		24,570		23,514		43,038		14,756		15,641		55,284

All costs are fully burdened in accordance with DRI's standard business practice.

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