

To David Janiec, PAC Chair
From Nick Panzer
Subject: Comments on DRAFT GSP Chapter 1
8 January 2019

General Comment:

Shouldn't the Introductory Chapter be the last Chapter written and reviewed? How can one meaningfully review a Plan Introduction without knowing what's in the Plan? That said:

1.1, Purpose of GSP, Page 1-1

Page 1-1 refers to *water rights* four times. If this means to telegraph a GA plan for a "proportional" versus a "community value-driven" approach to the allocation of pumping reductions, then this crucial distinction should be explained here so stakeholders can timely understand and proactively engage the all-important allocation problem. For example, while proportional reductions may more closely align with case law than community value-driven reductions, strict application of proportional reductions to our basin would likely produce a result that most citizens (think IWWWD customers) would consider unreasonable due to the fact that most citizens would be left with insufficient affordable water for their basic health and safety. This result would obtain because most of the District's water is used for health and safety; thus, an 80-90% proportional reduction of the District's water allocation would necessarily force an impractical, inequitable, and wealth-destroying population decline in order to cover the health and safety of those who remain.

1.2, Sustainability Goal, Page 1-2

I believe that the first paragraph should expand to include "mitigation of overdraft." See GSP Reg. 354.44.(b)(2). See next paragraph.

Regards the second paragraph on Page 1-2, I interpret "planning and implementation horizon" to be continuously fifty years forward starting with Joint Power Agreement adoption, not GSP adoption. See CA 10721(r). This distinction may be relevant to the prior paragraph concerning mitigation of overdraft.

1.3.1, Organization and Management Structure, Page 1-6

The penultimate line of the first complete paragraph on this page should read "policy and technical aspects,' not "political and technical aspects."

1.4, Notice and Communication, Page 1-10

Above all, each stakeholder wants to know his/her direct or indirect groundwater allocation and the approximate unit price for actual use, all in relation to current actual use and prices. Thus, Section 1.4 should expand to tell each reader how to use the GSP to estimate that impact upon himself/herself, whether at home or at work. This will help fulfill the C & E Plan promise that each stakeholder will have an opportunity to understand how pumping reductions will affect any specific stakeholder.

Paragraph 1.4 should also expand to direct the public to the place in the GSP where the public can ascertain how the GA has considered “state policy regarding the human right to water” as required under GSP Reg. 350.4(g). This is crucial given that affordable water for health and safety will require an extraordinarily high percentage of safe yield. See comment at **1.1** above.

This section 1.4 should further expand to explain how any person can be added to the “interested party” list under CA 10723.4 in order to receive notices and documents such as this DRAFT GSP Chapter 1. Moreover, this section should expand to specifically reference GSP Reg. 353.8, which reads in pertinent part:

“Any person may provide comments [to DWR] onelements of a proposed Plan under consideration by the [GSA]. Comments shall be submitted to [DWR] by written notice, with a duplicate copy of the comment provided to the [GSA].”

Appropriate mailing addresses for DWR and GSA should also be added here to facilitate public use of this Reg. 353.8.

Recommendations for and Benefits of Registration of Domestic Wells

by

Policy Advisory Committee

ad hoc Committee on Domestic Well Registration

2 January 2019

OBJECTIVES

The Policy Advisory Committee (PAC) of the IWW Groundwater Authority (GA) has asked an ad hoc committee consisting of James Mower (PAC representative for Business Interests), Joshua Nugent (PAC representative for Large Agriculture), C. Lyle Fisher (PAC representative for Domestic Well Owners) and West Katzenstein (PAC representative for Domestic Well Owners) to recommend methods for achieving de minimis well registration. This document has been prepared as a response to that request.

CALIFORNIA STATE LEGISLATIVE BACKGROUND

The State of California has declared the Indian Wells Valley (IWW) groundwater Basin to be in critical overdraft with a high priority designation. This is a result of the steadily declining Basin groundwater levels and groundwater quality over at least the last 50 years. The State through its Sustainable Groundwater Management Act (SGMA) has mandated that the IWW establish a Groundwater Authority to manage the groundwater in the Basin and achieve groundwater sustainability by 2040. The GA has been established and the required Groundwater Sustainability Plan (GSP) is under development. This plan is to be submitted to the State for approval by January 2020.

DOMESTIC WELL BACKGROUND

Domestic wells comprise a significant majority of the total number of IWW wells and are generally much shallower than the deeper higher-capacity wells used by the major pumpers, such as the IWW Water District, large scale agriculture, Searles Valley Minerals, and the US Navy. The Domestic Well Owners Association is aware of failures of domestic wells that have occurred due to the constant decline in groundwater levels or brackish water intrusion. **Accelerated failures of shallow wells would have a huge negative effect on the local economy, including but not limited to the value of real property, quality of life, economic growth, and the continued presence of the Navy.**

SGMA defines a category of 'de minimis' wells, domestic wells using less than 2 ac-ft/yr. These wells are to be considered differently than major pumping wells. SGMA clearly states that the de minimis pumpers shall not be required to install metering devices or to report water pumped (Water Code 10725.8e). It may be an advantage to individual well owners in some cases to install metering devices and report water pumped voluntarily; for example, to resolve questions on well production.

GROUNDWATER AUTHORITY RESPONSIBILITIES

An essential early responsibility of the GA is to reach out and contact all stakeholders, including the domestic well owners (Water Code 10723.2). It is critically important that the interests of the domestic well owners are fully represented in the IWW GSP. It is also essential that the domestic well owners comply with the management actions authorized by SGMA that appear in the IWW GSP.

The specific management actions in the GSP that will apply to domestic wells have not yet been developed by the GA. *These GA management actions must address the following questions: 1) What is the purpose and SGMA legal basis of the domestic well registration? 2) How would such registration be*

made? Through APN identification? 3) What information will be required from the de minimis well owner? 4) How does the domestic (mostly de minimis) well owner fit into the overall GSP? 5) What are the restrictions placed on the de minimis well owners? 6) What are the responsibilities of the de minimis well owners? These management actions may require domestic wells to be registered (Water Code 10725.6). Ultimately, appropriate fees may be assessed on these wells after the GSP has been approved by the State (Water Code 10730).

The GA must execute an effective and thorough well owner contact as a formal requirement of the GSA process. Otherwise, there is no basis for well registration.

POLICY ADVISORY COMMITTEE (PAC) RESPONSIBILITIES

The PAC has the responsibility to advise the GA on public outreach options. This has been completed in the ‘Communication and Engagement Plan’ developed by the PAC dated April 19, 2018. The PAC has neither the legal protections nor authority required to contact the stakeholders regarding well registration, voluntary or otherwise. The PAC also does not have the responsibility to define the requirements for domestic well registration or its details.

The following benefits for registering domestic wells are identified to the GA Board by the PAC ad hoc Committee on Domestic Well Registration.

1. Registration of all domestic wells ensures that each well owner becomes a formal part of the GSA. Note again, that de minimis wells are excluded by SGMA from metering and reporting of production.
2. Registration will ensure that proper ownership of wells is established.
3. Registration will provide data on individual wells needed by the GA to provide grants to well owners whose wells are damaged by continuing lowering of water levels. Note: The expected occurrence of well failures based on future pumping levels can be predicted using existing data and modeling capabilities.
4. Registration improves an overall understanding of basin well count and location. Kern County records are inadequate.
5. Registration potentially adds lithographic data, depth to water and water quality to the existing IWV aquifer data base.
6. Registration helps monitor shallow well impacts from declining water levels.

The PAC is willing to further advise the GA on domestic well registration.

GROUNDWATER AUTHORITY ACTION REQUIRED

It is essential that the GA immediately execute its responsibility to directly contact all stakeholders, including a request for de minimis well owner registration. This request must state the reasons for domestic well registration and its legal basis in SGMA and provide a de minimus well registration form. Note: It is not correct or useful to imply that the domestic well owners are remiss for not completing well registration. The GA at this point has neither clearly defined the registration process, nor formally asked the domestic well owners to register.

COMMENTS ON:
'GROUNDWATER SUSTAINABILITY PLAN SECTION 1 – INTRODUCTION CHAPTER
DRAFT
December 14, 2018'
By West Katzenstein
January 10, 2019

This document is a good first draft. Specific comments by section are provided below:

Section 1.1 Purpose of the Groundwater Sustainability Plan

The first three paragraphs of this section attempt to summarize the purpose of the GSP, as described in official SGMA documents. This summary is incomplete and repetitive, and may be essentially impossible to execute in several paragraphs. Each constituent group will carefully examine this section to determine if they are adequately represented. I recommend replacing the first three paragraphs with something like:

'The purpose of this Groundwater Sustainability Plan (GSP) is to manage the groundwater in the Indian Wells Valley Groundwater Basin (IWVGB) in accordance with the mandates and regulations that are instituted in the California Sustainable Groundwater Management Act (SGMA) legislation and the regulations and the water code modifications that derive from it. '

The protection of existing water rights is mentioned several times in the first three paragraphs. If any statement about water rights remains in the document, I recommend it be presented in a more balanced light, such as:

'The protection of water rights mandated by SGMA must be balanced against the requirement to manage the IWVGB sustainably, the need to supply water for the health and safety of all residents and businesses, and the human right to water. The investments of all users of water must be considered.'

I recommend that the fifth paragraph, last sentence should read:

'Disadvantaged Communities (DACs), Severely Disadvantaged Communities (SDACs), Economically Distressed Areas (EDAs), mutual / co-op wells, and domestic wells overlying the IWVGB are particularly susceptible to adverse effects resulting from the chronic lowering of groundwater levels because their wells are typically shallow, and furthermore, they often lack the resources to compensate for the continued overdraft.'

Section 1.2 Sustainability Goal

I recommend modifying the first paragraph to be more succinct and to the point. It might read: 'As defined in California Water Code 10721, the 'sustainability goal' is to operate the basin within its sustainable yield (balanced pumping and recharge). The sustainability goal is a quantitative measure; it is a statement of a GSP's objectives and desired conditions and how the basin will eliminate undesired results as defined in SGMA. This goal must be expressed as a quantitative measure of groundwater levels, groundwater quality, and minimum thresholds in groundwater parameters that cannot be

breached, in order to preclude undesirable results. (These terms are defined and described in detail in Section 4).'

Section 1.3 Agency Information

I recommend modifying the second paragraph fourth sentence to read: 'The Indian Wells Valley Water District serves potable water to the city of Ridgecrest and a small area outside of the city of Ridgecrest's jurisdiction. A small number of deep wells service the agriculture in the IWVGB. The vast majority (97%) of wells are shallow and service the rural inhabitants.'

1.4 Notice and Communication

Note that the GSP Annotated Outline provided by DWR shows the 'Notice and Communication' section to be elsewhere in the GSA and to also address 'uses and users'. I recognize that the bulk of this section may be a better match for chapter 1, however the 'uses and users' must be addressed in some appropriate section of the GSP.

I recommend the third sentence of the first paragraph to read: 'The C&E Plan provides specific guidance on public outreach to the GSA on how to alert each stakeholder and agency in the IWVGB to the magnitude of the groundwater overdraft problem, how overdraft will affect stakeholders, and the process for participation in developing a GSP to solve the overdraft problem.'

INDIAN WELLS VALLEY GROUNDWATER BASIN

GROUNDWATER SUSTAINABILITY PLAN

SECTION 1 – INTRODUCTION CHAPTER

DRAFT

December 14, 2018

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SECTION 1: INTRODUCTION

1.1 PURPOSE OF THE GROUNDWATER SUSTAINABILITY PLAN

The stated purpose of the Sustainable Groundwater Management Act (SGMA), as set forth in the California Water Code Section 10720.1, is to provide for the sustainable management of groundwater basins; enhance local management of groundwater consistent with the protected rights to use or to store groundwater; establish minimum standards for groundwater management; provide local groundwater management agencies with the legal authority along with the technical and financial assistance necessary to sustainably manage groundwater; to avoid or to minimize subsidence problems; improve the collection of data and the understanding of groundwater; increase groundwater storage and recharge; manage groundwater basins through the actions of local governmental agencies to the greatest extent possible without state intervention; and, where seemingly irreconcilable conflicts exist, provide for the most efficient and cost-effective allocation procedures that ensure water rights and due process.

It is the intent of SGMA to preserve the security of water rights in the state to the greatest extent possible, consistent with the sustainable management of groundwater. Additionally, SGMA establishes minimum standards for sustainable groundwater management along with providing local groundwater management agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater.

The local management of groundwater is one of the essential tenets of SGMA, rather than having a one-size-fits-all set of regulations and laws. It is the philosophy of SGMA that, to the greatest extent feasible, groundwater basins are best managed by local agencies, with minimal state intervention only to ensure that the local agencies are managing the groundwater in a sustainable manner. The culmination of the SGMA effort provides for a more efficient and cost-effective groundwater management process that protects water rights, ensures due process, prevents unnecessary delays, and furthers the objectives of the intent of the legislature to sustainably use California's water resources.

The Indian Wells Valley Groundwater Basin (IWVGB) resources are currently not sustainably managed. Noticeable overdraft conditions have existed since the 1960s as a result of groundwater pumping exceeding the natural basin yield. The results of overdraft have manifested themselves through various undesirable results, primarily the chronic lowering of groundwater levels and the reduction of groundwater in storage throughout the IWVGB.

Historically, water producers in the basin have been able to mine the basin to meet water demands; however, this practice is resulting in the lowering of groundwater levels and a reduction of storage. If left unmanaged, such practice will seriously impact groundwater producers' abilities to supply quality reliable potable water at a reasonable price. Disadvantaged Communities (DACs), Severely Disadvantaged Communities (SDACs), and Economically Distressed Areas (EDAs) overlying the IWVGB are particularly susceptible to adverse effects resulting from the chronic lowering of groundwater levels because their wells are typically shallow, and furthermore, they lack the resources to compensate for the continued overdraft.

In compliance with SGMA, this Groundwater Sustainability Plan (GSP) discusses basin management strategies that will culminate in the absence of undesirable and unsustainable groundwater conditions in the IWVGB. The GSP recommends these management strategies and provides measurable sustainability objectives and milestones that intend to achieve basin sustainability while considering the unique geologic and hydrogeologic conditions of the IWVGB. The recommendations of this GSP will provide for long-term sustainable groundwater management in the IWVGB within 20 years of GSP implementation.

1.2 SUSTAINABILITY GOAL

As defined in California Water Code Section 10721, the term "sustainability goal" refers to the existence and the implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing the implementation of the measures targeted to ensure the applicable basin is operated within its sustainable yield (balanced levels of pumping and recharge). The sustainability goal is not a quantitative measure; it is a statement of a GSP's objectives and desired conditions, how the basin will reach the desired conditions, and why the measures recommended in a GSP will lead to success in achieving these objectives and desired conditions. The sustainability goal is in part defined by the locally-defined minimum thresholds and undesirable results. (These terms are defined and described in detail in Section 4).

In general, the IWVGA sustainability goal is to manage the IWVGB within its sustainable yield such that undesirable results do not occur over the planning and implementation horizon (50 years after GSP adoption). The detailed sustainability goal, including a description of the development of the goal and an explanation of how the goal is intended to be achieved, is provided in Section 4.

1.3 AGENCY INFORMATION

In its 2016 Bulletin 118 interim update, the California Department of Water Resources (DWR) identified the IWVGB as a critically overdrafted basin of medium priority. As such, in compliance with SGMA, the associated groundwater sustainability agency (GSA) must submit a GSP by January 31, 2020 to enhance the local and sustainable management of groundwater resources. The Indian Wells Valley Groundwater Authority (IWVGA) Board of Directors adopted Resolution No. 02-16 on December 8, 2016, to elect for the IWVGA to become the exclusive GSA for the entirety of the IWVGB.

The IWVGB underlies portions of the counties of Kern, Inyo, and San Bernardino and is unique in that it is isolated from the populated areas of these three counties. The majority of the valley's area is set in northeastern Kern County with smaller portions located in northwestern San Bernardino County and southern Inyo County. The city of Ridgecrest is located in the extreme northeastern portion of Kern County and within the east-central portion of the valley. The Indian Wells Valley Water District serves potable water to the city of Ridgecrest and a large area outside of the city of Ridgecrest's jurisdiction.

The land overlying the northeastern IWVGB is home to the China Lake Naval Air Weapons Station, a weapons testing center operated by the United States Navy. In addition, a significant amount of land overlying the southwestern IWVGB is largely undeveloped and managed by the United States Bureau of Land Management (BLM). For such reasons, these two federal agencies serve a role in the development efforts of the GSP.

The five aforementioned agencies (Kern County, Inyo County, San Bernardino County, the city of Ridgecrest, and the Indian Wells Valley Water District) entered into a joint exercise of powers agreement to form the IWVGA. The agreement is attached to this GSP as Appendix _____. These five agencies serve as General Members on the IWVGA Board of Directors, which governs the IWVGA as a whole. Due to their federal status, the Navy and BLM serve as Associate Members (non-voting) on the IWVGA Board of Directors.

1.3.1 Organization and Management Structure of the IWVGA¹

Indian Wells Valley Groundwater Authority

100 W. California Avenue, Ridgecrest, CA 93556

Main Contact:

Donald Zdeba

don.zdeba@iwwvd.com

(760) 384-5555

Alternate Contact:

Lauren Duffy—Clerk of the Board of Directors of the IWVGA

lduffy@iwwvd.com

(760) 384-5511

The Indian Wells Valley Groundwater Authority Board of Directors (General Members)

Chairman Ron Kicinski— Indian Wells Valley Water District

Vice-chairman Mick Gleason—Kern County

Director Scott Hayman—City of Ridgecrest

Director Matt Kingsley—Inyo County

Director Luther Snoke—San Bernardino County

The Indian Wells Valley Groundwater Authority: Associate Members

Commander Peter Benson—United States Navy (Non-voting)

Ryan Klausch—United States Bureau of Land Management (Non-voting)

Staff

¹ The IWVGA has a unique rotating management structure. Names and contacts are current and valid as of January 1, 2019.

Donald Zdeba—Acting General Manager

Steve Johnson—Water Resources Manager²

James Worth—Board Counsel

Ricca Charlon—City of Ridgecrest

Lauren Duffy—Clerk of the Board of Directors

The IWVGA is governed and administered by the aforementioned Board of Directors (Board). Approval of any Board action requires the affirmative vote of a majority of the Board, which is composed of one voting seat per Board member. In addition, the Board members representing the County of Kern, the city of Ridgecrest, and the Indian Wells Valley Water District are considered principal voters. That is, no Board action may be approved by the Board unless it receives the affirmative vote from no less than two (2) of the Board members representing the County of Kern, the city of Ridgecrest, and/or the Indian Wells Valley Water District. The United States Navy and the Bureau of Land Management hold two Associate Member positions that have a representative non-voting seat on the Board. Although they do not have the power to vote on any Board action or proposal, the Associate Members' position entitles them to full participation in Board meetings and discussions.

The Board consists of a Chairperson and Vice-Chairperson that preside at all Board meetings and exercise and perform other powers and duties as may be assigned by the Board. The Chairperson and Vice-Chairperson hold office for a term of one year commencing on January 1st of each and every calendar year. The positions of Chairperson and Vice-Chairperson rotate annually between the Board members representing the County of Kern, the city of Ridgecrest, and the Indian Wells Valley Water District. For example, in calendar year 2017, the Board member representing the County of Kern held the position of Chairperson, followed in order by the Board member representing the city of Ridgecrest and then the member representing the Indian Wells Valley Water District. The Board member representing the city of Ridgecrest held the position of Vice-Chairperson in 2017, followed in order by the Board members representing the Indian Wells Valley Water District and then the member representing the County of Kern.

The joint exercise of power agreement that formed the IWVGA also constructed the By-Laws under which the IWVGA operates. Under section 8.05 of the agreement, the Board adopted the By-Laws which govern

² Per IWVGA Agreement No. 02-17, the Water Resources Manager was appointed on August 17, 2017, to prepare, develop, and implement the GSP for the IWVGB.

the conduct of meetings and the day-to-day operations of the IWVGA. On March 17, 2017, the By-Laws became effective under IWVGA Resolution No. 03-17. **The By-Laws are attached to this GSP as Appendix _____.**

All IWVGA Board meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The IWVGA Board meetings are held on the third (3rd) Thursday of each month at Ridgecrest City Chambers, located at 100 West California Avenue, Ridgecrest, CA.

Under Article 3.8 of the IWVGA By-Laws, the IWVGA sought to hire a Water Resources Manager (WRM) with sufficient technical background, expertise, and experience to prepare and implement a GSP for the IWVGB. On August 17, 2017, the IWVGA entered into Agreement No. 02-17 to retain Steve Johnson as the WRM responsible for preparing and implementing this GSP. The WRM regularly reports to and coordinates with the IWVGA in relation to GSP preparation and collaborates with the IWVGA's standing committees in relation to the political and technical aspects of the IWVGB. In addition, the WRM presents all technical information and reports to the IWVGA.

1.3.2 Legal Authority

On September 16, 2014, Governor Jerry Brown signed into law a three-bill package (AB 1739—Dickinson, SB 1168—Pavley, and SB 1349—Pavley) that became collectively known as SGMA. Each of the three aforementioned bills amended various aspects of the California Water Code (namely Title 23, Division 6, Part 2.74, commencing at Section 10720) to allow for the management of groundwater through a locally-formed GSA. The general powers and authorities of GSAs are listed in Chapter 5 (California Water Code Sections 10725 and 10726) of SGMA.

To clarify and unify many of the concepts in the three-bill package, AB 617 was introduced by Assembly Member Henry T. Perea (D-Fresno) and was signed into law on October 9, 2015. AB 617 amended Sections 10540, 10721, 10727.4, 10727.8, and 10733.4 of the California Water Code and also added Sections 10726.5 and 10732.2 to the California Water Code. Specifically, AB 617 grants additional legal authority to GSAs such that a GSA may enter into agreements with private parties that assist in or facilitate the implementation of GSPs; impose the requirements of its GSP on other state agencies; oversee the incorporation of its GSP's requirements into a regional water management plan, etc.

AB 617 and SGMA are attached to this GSP as Appendix _____.

The IWVGA has the legal authority to manage local groundwater through SGMA. It should be noted that **the IWVGA is the sole GSA for the IWVGB.**

In general, the legal authority and powers of the IWVGA are published in Article 4 of the joint exercise of power agreement that formed the IWVGA. These powers include (but are not limited to) the following:

- To collect and monitor all data related and beneficial to the development, adoption, and implementation of the GSP
- To levy assessments, charges, and fees as provided in SGMA
- To regulate and monitor groundwater extractions as permitted by SGMA
- To establish and administer various programs for the benefit of the basin such as water banking, water recycling, recapture/purification efforts, etc.
- To apply for and accept grants, contributions, donations, and loans under any federal, state, or local programs for assistance in developing or implementing any of its projects or programs in connection with the GSP
- To acquire by negotiation or condemnation, lease, purchase, construct, hold, manage, maintain, operate, and dispose of any buildings, property, water rights, works, or improvements within and without the respective boundaries of the General Members necessary to accomplish the purposes of the IWVGA
- To cooperate, act in conjunction, and contract with the United States, the State of California or any agency thereof, counties, municipalities, public and private corporations of any kind, and/or individuals for the purposes necessary or convenient for the full exercise of the Authority's powers

1.3.2.1 Policy Advisory Committee (PAC)

Article 5.1 of the IWVGA By-laws provides that the Board may establish standing committees for the purpose of making recommendations to the Board on the various activities of the IWVGA. The Board established an eleven person, voting-member policy advisory committee (PAC) to advise the Board on all policy-related matters of the Board and to develop non-binding proposals on policy matters pertaining to the GSP. The PAC is comprised of the following voting members:

- 2 representatives from Large Agriculture—Joshua Nugent and Edward Imsand
- 1 representative of Small Agriculture—Patricia Quist

- 2 representatives from Business Interests—David Janiec and James Mower
- 2 representatives from Domestic Well Owners—West Katzenstein and Lyle Fisher
- 2 representatives from residential customers of a public water agency supplier—Nick Panzer and Renee Westa-lusk
- 1 representative from the Eastern Kern County Resource Conservation District—Judie Decker
- 1 representative from Wholesaler and Industrial User—Rajanikant Jonnalagadda

The IWVGA By-Laws require that at least one of the appointed voting PAC members shall also represent Disadvantaged Communities (DACs). On July 20, 2017, the Board approved Resolution No. 08-17 to add Tim Carroll of the Inyokern Community Services District as a DAC-representative voting member to the PAC. The PAC also includes Associate Members that represent the Navy (John Kersey), the Indian Wells Valley Water District (Don Zdeba), the Kern County Planning and Natural Resources Department (Lorelai Oviatt), and the U.S. Bureau of Land Management (Ryan Klausch). These Associate Members provide needed expertise to help the PAC understand the policies of their respective jurisdictions.

As required by California Water Code Section 10723.2, the IWVGA must consider the interest of all beneficial uses and users within the Basin. To assist the Authority in meeting this objective, the PAC's objectives are to (1) provide all water users in the Basin with a meaningful voice and representation on policy matters of the Board associated with SGMA; (2) work collaboratively for the benefit of the IWVGB as a whole; (3) provide input and recommendations to the Board, in collaboration with the Water Resources Manager, and other committees of the Board, in support of actions that facilitate bringing the IWVGB into compliance with SGMA; and (4) work in good faith to achieve consensus and make unified recommendations to develop a GSP and for management actions to achieve groundwater sustainability in accordance with the requirements of SGMA.

All PAC meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The By-Laws of the IWVGA provide that the Board shall set regular meeting dates for the PAC by resolution. The PAC meetings are held on the first (1st) Thursday of each month at the office of the Indian Wells Valley Water District, located at 500 West Ridgecrest Boulevard, Ridgecrest, CA.

1.3.2.2 Technical Advisory Committee (TAC)

The Board also established a Technical Advisory Committee (TAC) for the express purpose of giving interested parties a reasonable opportunity to review and conduct a thorough evaluation of each technical element of the GSP prior to its finalization by the WRM. As stated in Article 5.12 of the IWVGA By-Laws, TAC members must have a formal education and experience in a groundwater-related field while also maintaining an understanding of the technical aspects of the IWVGB or similar basins in California. The TAC is comprised of individuals representing PAC members, PAC membership categories, and the general interests of landowners and water users in the IWVGB. Each member of the PAC may nominate one member of the TAC for review and possible approval by the Board. To ensure proper stakeholder representation, the Board may also appoint TAC members that are not affiliated with any PAC members.

As of January 1, 2019, the TAC consists of the following water use representatives:

- Large Agriculture—Eddy Teasedale
- Large Agriculture—Wade Major
- Business Interests—Scott O’Neil
- Residential Customers of a Public Water Agency—Stayed³
- Domestic Well Owners—Don Decker
- Eastern Kern County Resource Conservation District—Earl Wilson
- Wholesale and Industrial User—Adam Bingham
- Indian Wells Valley Water District—Tim Parker
- Department of the Navy—Stephan Bork (ex-officio/staff member)
- Kern County Water Agency—Michelle Anderson (ex-officio/staff member)

All TAC meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The TAC meetings are held on the first (1st) Thursday of each month at the office of the Indian Wells Valley Water District, located at 500 West Ridgecrest Boulevard, Ridgecrest, CA. The WRM sets the agenda of each TAC meeting so that each technical element of the GSP is presented to the TAC, in draft, to afford the TAC a reasonable opportunity to review and conduct a thorough evaluation of each element.

³ Position formerly held by Michael Powell.

1.3.2.3 Interested Agencies and Roles

During the formation of the IWVGA, a comprehensive listing of interested parties (including name, email, and phone number) was developed. The listing includes local community residents (including Disadvantaged Communities, Severely Disadvantaged Communities, and Economically Distressed Areas), businesses, large and small-scale agriculture, academic institutions, relevant state and local agencies, federal agencies, non-profit organizations, and community organizations. This listing of over 150 stakeholders includes representatives from all types of water users within the IWVGB and was used during the 17-month long GSA formation process for notification of public meetings, notifications, and updates related to discussions on the SGMA. *The listing is attached to this GSP as Appendix ____.*

1.3.3 Estimated Implementation and Costs

This section will include an estimate of the cost of implementing the GSP and a general description of how the IWVGA plans to fund those costs, to be determined based on annual reporting requirements, planned projects, and planned fees and assessments.

1.4 NOTICE AND COMMUNICATION

As stated in California Water Code Sections 10723.2 and 10728, a groundwater sustainability agency shall not only consider the interests of all beneficial uses and users of groundwater but also make available to the public and DWR a written statement describing the manner in which interested parties may participate in the development and implementation of the GSP. The IWVGA subsequently adopted Resolution No. 02-18 on April 19, 2018, to adopt a Communication and Engagement Plan (C&E Plan) intended to encourage public and agency participation in GSP development and implementation. The C&E Plan allows each stakeholder and agency in the IWVGB to understand the magnitude of the groundwater overdraft problem, how overdraft will affect stakeholders, and the process for participation in developing a GSP to solve the overdraft problem. *The C&E Plan is attached to this GSP as Appendix ____.*

1.4.1 PAC Stakeholder/**Public Outreach**

The regular meetings of the Board, PAC, and TAC are open to members of the public, including representatives of all types of water users. At each meeting, members of the public are allowed time to address the respective committee regarding topics listed and not listed on the meeting agenda. All IWVGA documents (such as meeting agendas, minutes, resolutions, ordinances, presentations, packages, etc.) are available to the public at the following IWVGA website:

<https://iwvga.org/>

In addition, as part of the Department of Water Resources' requirements for SGMA and the GSP, a publicly-accessible database has been developed to store and present specific supporting elements of the GSP, including monitoring, reporting, management criteria, a water budget, hydrogeologic conceptual model, and other supporting documentation. The database additionally allows the public to review data and other reports related to IWVGB water resources. The database may be reached at the following link:

<https://www.iwvgsp.com>

1.5 GSP ORGANIZATION

This GSP is organized into the following sections, which generally follow DWR's GSP guidelines and suggested elements as applicable to the IWVGA and IWVGB:

- Section 1 – Introduction Chapter
 - Provides information on the purpose of the GSP along with regulatory and agency background
- Section 2 – Plan Area
 - Presents background information on the IWVGB area with respect to overlying water management agencies, land use, basin beneficial uses, water quality objectives, production wells, and other planning efforts undertaken in the IWVGB
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 - Presents a summary description of basin geology, hydrogeology, groundwater conditions, groundwater quality, groundwater-dependent ecosystems, water budget, and management areas

- Section 4 – Sustainable Management Criteria
 - Summarizes the basin’s existing undesirable results due to overdraft and the basin management objectives, milestones, and monitoring network that will track the overall progress toward basin-wide sustainability
- Section 5 – Projects and Management Actions
 - Describes the potential projects and water management strategies intended to achieve the goals and objectives of the GSP
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 - Discusses the work plan, schedule, and costs for implementation of the GSP as well as the requirements for annual reporting to DWR
- Section 7 – References and Technical Studies
 - Lists all of the technical reports, studies, and other documents used in the preparation of the GSP

1.5.1 Checklist for GSP Submittal

DWR has prepared a number of guidance documents for the sustainable management of groundwater, including a *Preparation Checklist for GSP Submittal* dated December 2016. The Preparation Checklist suggests general GSP content requirements for the purpose of verifying that a GSP is complete and ready for submission to DWR. In particular, the Preparation Checklist serves as a guide so that the reader of this GSP may find the relevant sections and page numbers that discuss specific groundwater management topics. **The Preparation Checklist is attached to this GSP as Appendix ____.**

INDIAN WELLS VALLEY GROUNDWATER BASIN

GROUNDWATER SUSTAINABILITY PLAN

SECTION 1 – INTRODUCTION CHAPTER

DRAFT

December 14, 2018

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SECTION 1: INTRODUCTION

1.1 PURPOSE OF THE GROUNDWATER SUSTAINABILITY PLAN

The stated purpose of the Sustainable Groundwater Management Act (SGMA), as set forth in the California Water Code Section 10720.1, is to provide for the sustainable management of groundwater basins; enhance local management of groundwater consistent with the protected rights to use or to store groundwater; establish minimum standards for groundwater management; provide local groundwater management agencies with the legal authority along with the technical and financial assistance necessary to sustainably manage groundwater; to avoid or to minimize subsidence problems; improve the collection of data and the understanding of groundwater; increase groundwater storage and recharge; manage groundwater basins through the actions of local governmental agencies to the greatest extent possible without state intervention; and, where seemingly irreconcilable conflicts exist, provide for the most efficient and cost-effective allocation procedures that ensure water rights and due process.

It is the intent of SGMA to preserve the security of water rights in the state to the greatest extent possible, consistent with the sustainable management of groundwater. Additionally, SGMA establishes minimum standards for sustainable groundwater management along with providing local groundwater management agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater.

The local management of groundwater is one of the essential tenets of SGMA, rather than having a one-size-fits-all set of regulations and laws. It is the philosophy of SGMA that, to the greatest extent feasible, groundwater basins are best managed by local agencies, with minimal state intervention only to ensure that the local agencies are managing the groundwater in a sustainable manner. The culmination of the SGMA effort provides for a more efficient and cost-effective groundwater management process that protects water rights, ensures due process, prevents unnecessary delays, and furthers the objectives of the intent of the legislature to sustainably use California's water resources.

The Indian Wells Valley Groundwater Basin (IWVGB) resources are currently not sustainably managed. Noticeable overdraft conditions have existed since the 1960s as a result of groundwater pumping exceeding the natural basin yield. The results of overdraft have manifested themselves through various undesirable results, primarily the chronic lowering of groundwater levels and the reduction of groundwater in storage throughout the IWVGB.

Historically, water producers in the basin have been able to mine the basin to meet water demands; however, this practice is resulting in the lowering of groundwater levels and a reduction of storage. If left unmanaged, such practice will seriously impact groundwater producers' abilities to supply **quality reliable** potable water at a reasonable price. Disadvantaged Communities (DACs), Severely Disadvantaged Communities (SDACs), and Economically Distressed Areas (EDAs) overlying the IWVGB are particularly susceptible to adverse effects resulting from the chronic lowering of groundwater levels because their wells are typically shallow, and furthermore, they lack the resources to compensate for the continued overdraft.

In compliance with SGMA, this Groundwater Sustainability Plan (GSP) discusses basin management strategies that will culminate in the absence of undesirable and unsustainable groundwater conditions in the IWVGB. The GSP recommends these management strategies and provides measurable sustainability objectives and milestones that intend to achieve basin sustainability while considering the unique geologic and hydrogeologic conditions of the IWVGB. The recommendations of this GSP will provide for long-term sustainable groundwater management in the IWVGB ~~within 20 years of GSP implementation.~~

1.2 SUSTAINABILITY GOAL

As defined in California Water Code Section 10721, the term "sustainability goal" refers to the existence and the implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing the implementation of the measures targeted to ensure the applicable basin is operated within its sustainable yield (balanced levels of pumping and recharge). The sustainability goal is not a quantitative measure; it is a statement of a GSP's objectives and desired conditions, how the basin will reach the desired conditions, and why the measures recommended in a GSP will lead to success in achieving these objectives and desired conditions. The sustainability goal is in part defined by the locally-defined minimum thresholds and undesirable results. (These terms are defined and described in detail in Section 4).

In general, the IWVGA sustainability goal is to manage the IWVGB within its sustainable yield such that undesirable results do not occur over the planning and implementation horizon (50 years after GSP adoption). The detailed sustainability goal, including a description of the development of the goal and an explanation of how the goal is intended to be achieved, is provided in Section 4.

1.3 AGENCY INFORMATION

In its 2016 Bulletin 118 interim update, the California Department of Water Resources (DWR) identified the IWWGB as a critically overdrafted basin of medium priority. As such, in compliance with SGMA, the associated groundwater sustainability agency (GSA) must submit a GSP by January 31, 2020 to enhance the local and sustainable management of groundwater resources. The Indian Wells Valley Groundwater Authority (IWWGA) Board of Directors adopted Resolution No. 02-16 on December 8, 2016, to elect for the IWWGA to become the exclusive GSA for the entirety of the IWWGB.

The IWWGB underlies portions of the counties of Kern, Inyo, and San Bernardino and is unique in that it is isolated from the populated areas of these three counties. The majority of the valley's area is set in northeastern Kern County with smaller portions located in northwestern San Bernardino County and southern Inyo County. The city of Ridgecrest is located in the extreme northeastern portion of Kern County and within the east-central portion of the valley. The Indian Wells Valley Water District serves potable water to the city of Ridgecrest and a large area outside of the city of Ridgecrest's jurisdiction.

The land overlying the northeastern IWWGB is home to the China Lake Naval Air Weapons Station, a weapons testing center operated by the United States Navy. In addition, a significant amount of land overlying the southwestern IWWGB is largely undeveloped and managed by the United States Bureau of Land Management (BLM). For such reasons, these two federal agencies serve a role in the development efforts of the GSP.

The five aforementioned agencies (Kern County, Inyo County, San Bernardino County, the city of Ridgecrest, and the Indian Wells Valley Water District) entered into a joint exercise of powers agreement to form the IWWGA. **The agreement is attached to this GSP as Appendix _____.** These five agencies serve as General Members on the IWWGA Board of Directors, which governs the IWWGA as a whole. Due to their federal status, the Navy and BLM serve as Associate Members (non-voting) on the IWWGA Board of Directors.

1.3.1 Organization and Management Structure of the IWVGA¹

Indian Wells Valley Groundwater Authority

100 W. California Avenue, Ridgecrest, CA 93556

Main Contact:

Donald Zdeba

don.zdeba@iwwvd.com

(760) 384-5555

Alternate Contact:

Lauren Duffy—Clerk of the Board of Directors of the IWVGA

lduffy@iwwvd.com

(760) 384-5511

The Indian Wells Valley Groundwater Authority Board of Directors (General Members)

Chairman Ron Kicinski— Indian Wells Valley Water District

Vice-chairman Mick Gleason—Kern County

Director Scott Hayman—City of Ridgecrest

Director Matt Kingsley—Inyo County

Director Luther Snoke—San Bernardino County

The Indian Wells Valley Groundwater Authority: Associate Members

Commander Peter Benson—United States Navy (Non-voting)

Ryan Klausch—United States Bureau of Land Management (Non-voting)

Staff

¹ The IWVGA has a unique rotating management structure. Names and contacts are current and valid as of January 1, 2019.

Donald Zdeba—Acting General Manager

Steve Johnson—Water Resources Manager²

James Worth—Board Counsel

~~Ricca Charlon—City of Ridgecrest~~

Lauren Duffy—Clerk of the Board of Directors

The IWVGA is governed and administered by the aforementioned Board of Directors (Board). Approval of any Board action requires the affirmative vote of a majority of the Board, which is composed of one voting seat per Board member. In addition, the Board members representing the County of Kern, the city of Ridgecrest, and the Indian Wells Valley Water District are considered principal voters. That is, no Board action may be approved by the Board unless it receives the affirmative vote from no less than two (2) of the Board members representing the County of Kern, the city of Ridgecrest, and/or the Indian Wells Valley Water District. The United States Navy and the Bureau of Land Management hold two Associate Member positions that have a representative non-voting seat on the Board. Although they do not have the power to vote on any Board action or proposal, the Associate Members' position entitles them to full participation in Board meetings and discussions.

The Board consists of a Chairperson and Vice-Chairperson that preside at all Board meetings and exercise and perform other powers and duties as may be assigned by the Board. The Chairperson and Vice-Chairperson hold office for a term of one year commencing on January 1st of each and every calendar year. The positions of Chairperson and Vice-Chairperson rotate annually between the Board members representing the County of Kern, the city of Ridgecrest, and the Indian Wells Valley Water District. For example, in calendar year 2017, the Board member representing the County of Kern held the position of Chairperson, followed in order by the Board member representing the city of Ridgecrest and then the member representing the Indian Wells Valley Water District. The Board member representing the city of Ridgecrest held the position of Vice-Chairperson in 2017, followed in order by the Board members representing the Indian Wells Valley Water District and then the member representing the County of Kern.

The joint exercise of power agreement that formed the IWVGA also constructed the By-Laws under which the IWVGA operates. Under section 8.05 of the agreement, the Board adopted the By-Laws which govern

² Per IWVGA Agreement No. 02-17, the Water Resources Manager was appointed on August 17, 2017, to prepare, develop, and implement the GSP for the IWVGB.

the conduct of meetings and the day-to-day operations of the IWVGA. On March 17, 2017, the By-Laws became effective under IWVGA Resolution No. 03-17. The By-Laws are attached to this GSP as Appendix _____.

All IWVGA Board meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The IWVGA Board meetings are held on the third (3rd) Thursday of each month at Ridgecrest City Chambers, located at 100 West California Avenue, Ridgecrest, CA.

Under Article 3.8 of the IWVGA By-Laws, the IWVGA sought to hire a Water Resources Manager (WRM) with sufficient technical background, expertise, and experience to prepare and implement a GSP for the IWVGB. On August 17, 2017, the IWVGA entered into Agreement No. 02-17 to retain Steve Johnson as the WRM responsible for preparing and implementing this GSP. The WRM regularly reports to and coordinates with the IWVGA in relation to GSP preparation and collaborates with the IWVGA's standing committees in relation to the political and technical aspects of the IWVGB. In addition, the WRM presents all technical information and reports to the IWVGA.

1.3.2 Legal Authority

On September 16, 2014, Governor Jerry Brown signed into law a three-bill package (AB 1739—Dickinson, SB 1168—Pavley, and SB 1349—Pavley) that became collectively known as SGMA. Each of the three aforementioned bills amended various aspects of the California Water Code (namely Title 23, Division 6, Part 2.74, commencing at Section 10720) to allow for the management of groundwater through a locally-formed GSA. The general powers and authorities of GSAs are listed in Chapter 5 (California Water Code Sections 10725 and 10726) of SGMA.

To clarify and unify many of the concepts in the three-bill package, AB 617 was introduced by Assembly Member Henry T. Perea (D-Fresno) and was signed into law on October 9, 2015. AB 617 amended Sections 10540, 10721, 10727.4, 10727.8, and 10733.4 of the California Water Code and also added Sections 10726.5 and 10732.2 to the California Water Code. Specifically, AB 617 grants additional legal authority to GSAs such that a GSA may enter into agreements with private parties that assist in or facilitate the implementation of GSPs; impose the requirements of its GSP on other state agencies; oversee the incorporation of its GSP's requirements into a regional water management plan, etc.

AB 617 and SGMA are attached to this GSP as Appendix _____.

The IWVGA has the legal authority to manage local groundwater through SGMA. It should be noted that **the IWVGA is the sole GSA for the IWVGB.**

In general, the legal authority and powers of the IWVGA are published in Article 4 of the joint exercise of power agreement that formed the IWVGA. These powers include (but are not limited to) the following:

- To collect and monitor all data related and beneficial to the development, adoption, and implementation of the GSP
- To levy assessments, charges, and fees as provided in SGMA
- To regulate and monitor groundwater extractions as permitted by SGMA
- To establish and administer various programs for the benefit of the basin such as water banking, water recycling, recapture/purification efforts, etc.
- To apply for and accept grants, contributions, donations, and loans under any federal, state, or local programs for assistance in developing or implementing any of its projects or programs in connection with the GSP
- To acquire by negotiation or condemnation, lease, purchase, construct, hold, manage, maintain, operate, and dispose of any buildings, property, water rights, works, or improvements within and without the respective boundaries of the General Members necessary to accomplish the purposes of the IWVGA
- To cooperate, act in conjunction, and contract with the United States, the State of California or any agency thereof, counties, municipalities, public and private corporations of any kind, and/or individuals for the purposes necessary or convenient for the full exercise of the Authority's powers

1.3.2.1 Policy Advisory Committee (PAC)

Article 5.1 of the IWVGA By-laws provides that the Board may establish standing committees for the purpose of making recommendations to the Board on the various activities of the IWVGA. The Board established an eleven person, voting-member policy advisory committee (PAC) to advise the Board on all policy-related matters of the Board and to develop non-binding proposals on policy matters pertaining to the GSP. **The PAC is comprised of the following voting members:**

- 2 representatives from Large Agriculture—Joshua Nugent and Edward Imsand
- 1 representative of Small Agriculture—Patricia Quist

- 2 representatives from Business Interests—David Janiec and James Mower
- 2 representatives from Domestic Well Owners—West Katzenstein and Lyle Fisher
- 2 representatives from residential customers of a public water agency supplier—Nick Panzer and Renee Westa-lusk
- 1 representative from the Eastern Kern County Resource Conservation District—Judie Decker
- 1 representative from Wholesaler and Industrial User—Rajanikant Jonnalagadda

The IWVGA By-Laws require that at least one of the appointed voting PAC members shall also represent Disadvantaged Communities (DACs). On July 20, 2017, the Board approved Resolution No. 08-17 to add Tim Carroll of the Inyokern Community Services District as a DAC-representative voting member to the PAC. The PAC also includes Associate Members that represent the Navy (John Kersey), the Indian Wells Valley Water District (Don Zdeba), the Kern County Planning and Natural Resources Department (Lorelai Oviatt), and the U.S. Bureau of Land Management (Ryan Klausch). These Associate Members provide needed expertise to help the PAC understand the policies of their respective jurisdictions.

As required by California Water Code Section 10723.2, the IWVGA must consider the interest of all beneficial uses and users within the Basin. To assist the Authority in meeting this objective, the PAC's objectives are to (1) provide all water users in the Basin with a meaningful voice and representation on policy matters of the Board associated with SGMA; (2) work collaboratively for the benefit of the IWVGB as a whole; (3) provide input and recommendations to the Board, in collaboration with the Water Resources Manager, and other committees of the Board, in support of actions that facilitate bringing the IWVGB into compliance with SGMA; and (4) work in good faith to achieve consensus and make unified recommendations to develop a GSP and for management actions to achieve groundwater sustainability in accordance with the requirements of SGMA.

All PAC meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The By-Laws of the IWVGA provide that the Board shall set regular meeting dates for the PAC by resolution. The PAC meetings are held on the first (1st) Thursday of each month at the office of the Indian Wells Valley Water District, located at 500 West Ridgecrest Boulevard, Ridgecrest, CA.

1.3.2.2 Technical Advisory Committee (TAC)

The Board also established a Technical Advisory Committee (TAC) for the express purpose of giving interested parties a reasonable opportunity to review and conduct a thorough evaluation of each technical element of the GSP prior to its finalization by the WRM. As stated in Article 5.12 of the IWVGA By-Laws, TAC members must have a formal education and experience in a groundwater-related field while also maintaining an understanding of the technical aspects of the IWVGB or similar basins in California. The TAC is comprised of individuals representing PAC members, PAC membership categories, and the general interests of landowners and water users in the IWVGB. Each member of the PAC may nominate one member of the TAC for review and possible approval by the Board. To ensure proper stakeholder representation, the Board may also appoint TAC members that are not affiliated with any PAC members.

As of January 1, 2019, the TAC consists of the following water use representatives:

- Large Agriculture—Eddy Teasedale
- Large Agriculture—Wade Major
- Business Interests—Scott O’Neil
- Residential Customers of a Public Water Agency—Stayed³
- Domestic Well Owners—Don Decker
- Eastern Kern County Resource Conservation District—Earl Wilson
- Wholesale and Industrial User—Adam Bingham
- Indian Wells Valley Water District—Tim Parker
- Department of the Navy—Stephan Bork (ex-officio/staff member)
- Kern County Water Agency—Michelle Anderson (ex-officio/staff member)

All TAC meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The TAC meetings are held on the first (1st) Thursday of each month at the office of the Indian Wells Valley Water District, located at 500 West Ridgecrest Boulevard, Ridgecrest, CA. The WRM sets the agenda of each TAC meeting so that each technical element of the GSP is presented to the TAC, in draft, to afford the TAC a reasonable opportunity to review and conduct a thorough evaluation of each element.

³ Position formerly held by Michael Powell.

1.3.2.3 Interested Agencies and Roles

During the formation of the IWVGA, a comprehensive listing of interested parties (including name, email, and phone number) was developed. The listing includes local community residents (including Disadvantaged Communities, Severely Disadvantaged Communities, and Economically Distressed Areas), businesses, large and small-scale agriculture, academic institutions, relevant state and local agencies, federal agencies, non-profit organizations, and community organizations. This listing of over 150 stakeholders includes representatives from all types of water users within the IWVGB and was used during the 17-month long GSA formation process for notification of public meetings, notifications, and updates related to discussions on the SGMA. *The listing is attached to this GSP as Appendix ____.*

1.3.3 Estimated Implementation and Costs

This section will include an estimate of the cost of implementing the GSP and a general description of how the IWVGA plans to fund those costs, to be determined based on annual reporting requirements, planned projects, and planned fees and assessments.

1.4 NOTICE AND COMMUNICATION

As stated in California Water Code Sections 10723.2 and 10728, a groundwater sustainability agency shall not only consider the interests of all beneficial uses and users of groundwater but also make available to the public and DWR a written statement describing the manner in which interested parties may participate in the development and implementation of the GSP. The IWVGA subsequently adopted Resolution No. 02-18 on April 19, 2018, to adopt a Communication and Engagement Plan (C&E Plan) intended to encourage public and agency participation in GSP development and implementation. The C&E Plan allows each stakeholder and agency in the IWVGB to understand the magnitude of the groundwater overdraft problem, how overdraft will affect stakeholders, and the process for participation in developing a GSP to solve the overdraft problem. *The C&E Plan is attached to this GSP as Appendix ____.*

1.4.1 PAC Stakeholder/**Public Outreach**

The regular meetings of the Board, PAC, and TAC are open to members of the public, including representatives of all types of water users. At each meeting, members of the public are allowed time to address the respective committee regarding topics listed and not listed on the meeting agenda. All IWVGA documents (such as meeting agendas, minutes, resolutions, ordinances, presentations, packages, etc.) are available to the public at the following IWVGA website:

<https://iwvga.org/>

In addition, as part of the Department of Water Resources' requirements for SGMA and the GSP, a publicly-accessible database has been developed to store and present specific supporting elements of the GSP, including monitoring, reporting, management criteria, a water budget, hydrogeologic conceptual model, and other supporting documentation. The database additionally allows the public to review data and other reports related to IWVGB water resources. The database may be reached at the following link:

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Lorelei H. Oviatt, AICP, Director
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**PLANNING AND NATURAL
RESOURCES DEPARTMENT**

Planning
Community Development
Administrative Operations

January 10, 2019

Indian Wells Valley Groundwater Authority
Policy Advisory Committee (PAC)
Attn: Donald Zdeba
100 W. California Avenue
Ridgecrest, CA 93556

File: IWVG PAC

RE: PAC Member

Comments on Groundwater Sustainability Plan - Draft Section 1 – Introduction Chapter
Dated – December 14, 2018

Dear Mr. Zdeba,

Thank you for the opportunity to provide comments on the Draft Groundwater Sustainability Plan (GSP) Section 1 - Introduction Chapter (December 14, 2018). The purpose of this Chapter is to provide the reader, which includes the Department of Water Resources located in Sacramento, a picture of the basin land use and water regulators, structure of the Groundwater Authority and purpose of the plan.

The following are suggested edits to the language that will ensure that a full and complete description is provided for local jurisdictional authorities and stakeholders. It also highlights a correction that needs to be made.

SUGGESTED EDITS

1.1 PURPOSE OF THE GROUNDWATER SUSTAINABILITY PLAN

Third Paragraph,

The local management of groundwater is one of the essential tenets of SGMA, rather than having a one-size-fits-all set of regulations and laws. It is the philosophy of SGMA that, to the greatest extent feasible, groundwater basins are best managed by local agencies, with minimal state intervention only to ensure that the local agencies are managing the groundwater in a sustainable manner. The culmination of the SGMA effort provides for a more efficient and cost-effective groundwater management process that protects water rights, ensures due process, prevents unnecessary delays, and furthers the objectives of the intent of the legislature to sustainably use California's water resources while providing for the stability of the local economy.

1.3 AGENCY INFORMATION

Second Paragraph,

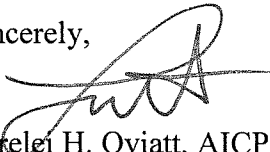
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If you have any questions regarding these comments please don't hesitate to contact me at Lorelei@kerncounty.com. Thank you.

Sincerely,



Lorelei H. Oviatt, AICP, Director
Kern County Planning and Natural Resources Department

cc: Supervisor Gleason

INDIAN WELLS VALLEY GROUNDWATER BASIN

GROUNDWATER SUSTAINABILITY PLAN

SECTION 1 – INTRODUCTION CHAPTER

DRAFT

December 14, 2018

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It is the intent of SGMA to preserve the security of water rights in the state to the greatest extent possible, consistent with the sustainable management of groundwater. Additionally, SGMA establishes minimum standards for sustainable groundwater management along with providing local groundwater management agencies with the authority and technical and financial assistance necessary to sustainably manage groundwater.

The local management of groundwater is one of the essential tenets of SGMA, rather than having a one-size-fits-all set of regulations and laws. It is the philosophy of SGMA that, to the greatest extent feasible, groundwater basins are best managed by local agencies, with minimal state intervention only to ensure that the local agencies are managing the groundwater in a sustainable manner. The culmination of the SGMA effort provides for a more efficient and cost-effective groundwater management process that protects water rights, ensures due process, prevents unnecessary delays, and furthers the objectives of the intent of the legislature to sustainably use California's water resources.

The Indian Wells Valley Groundwater Basin (IWVGB) resources are currently not sustainably managed. Noticeable overdraft conditions have existed since the 1960s as a result of groundwater pumping exceeding the natural basin yield. The results of overdraft have manifested themselves through various undesirable results, primarily the chronic lowering of groundwater levels and the reduction of groundwater in storage throughout the IWVGB.

Historically, water producers in the basin have been able to mine the basin to meet water demands; however, this practice is resulting in the lowering of groundwater levels and a reduction of storage. If left unmanaged, such practice will seriously impact groundwater producers' abilities to supply quality reliable potable water at a reasonable price. Disadvantaged Communities (DACs), Severely Disadvantaged Communities (SDACs), and Economically Distressed Areas (EDAs) overlying the IWVGB are particularly susceptible to adverse effects resulting from the chronic lowering of groundwater levels because their wells are typically shallow, and furthermore, they lack the resources to compensate for the continued overdraft.

In compliance with SGMA, this Groundwater Sustainability Plan (GSP) discusses basin management strategies that will culminate in the absence of undesirable and unsustainable groundwater conditions in the IWVGB. The GSP recommends these management strategies and provides measurable sustainability objectives and milestones that intend to achieve basin sustainability while considering the unique geologic and hydrogeologic conditions of the IWVGB. The recommendations of this GSP will provide for long-term sustainable groundwater management in the IWVGB within 20 years of GSP implementation.

1.2 SUSTAINABILITY GOAL

As defined in California Water Code Section 10721, the term "sustainability goal" refers to the existence and the implementation of one or more groundwater sustainability plans that achieve sustainable groundwater management by identifying and causing the implementation of the measures targeted to ensure the applicable basin is operated within its sustainable yield (balanced levels of pumping and recharge). The sustainability goal is not a quantitative measure; it is a statement of a GSP's objectives and desired conditions, how the basin will reach the desired conditions, and why the measures recommended in a GSP will lead to success in achieving these objectives and desired conditions. The sustainability goal is in part defined by the locally-defined minimum thresholds and undesirable results. (These terms are defined and described in detail in Section 4).

In general, the IWVGA sustainability goal is to manage the IWVGB within its sustainable yield such that undesirable results do not occur over the planning and implementation horizon (50 years after GSP adoption). The detailed sustainability goal, including a description of the development of the goal and an explanation of how the goal is intended to be achieved, is provided in Section 4.

1.3 AGENCY INFORMATION

In its 2016 Bulletin 118 interim update, the California Department of Water Resources (DWR) identified the IWWGB as a critically overdrafted basin of medium priority. As such, in compliance with SGMA, the associated groundwater sustainability agency (GSA) must submit a GSP by January 31, 2020 to enhance the local and sustainable management of groundwater resources. The Indian Wells Valley Groundwater Authority (IWWGA) Board of Directors adopted Resolution No. 02-16 on December 8, 2016, to elect for the IWWGA to become the exclusive GSA for the entirety of the IWWGB.

The IWWGB underlies portions of the counties of Kern, Inyo, and San Bernardino and is unique in that it is isolated from the populated areas of these three counties. The majority of the valley's area is set in northeastern Kern County with smaller portions located in northwestern San Bernardino County and southern Inyo County. The city of Ridgecrest is located in the extreme northeastern portion of Kern County and within the east-central portion of the valley. The Indian Wells Valley Water District serves potable water to the city of Ridgecrest and a large area outside of the city of Ridgecrest's jurisdiction.

The land overlying the northeastern IWWGB is home to the China Lake Naval Air Weapons Station, a weapons testing center operated by the United States Navy. In addition, a significant amount of land overlying the southwestern IWWGB is largely undeveloped and managed by the United States Bureau of Land Management (BLM). For such reasons, these two federal agencies serve a role in the development efforts of the GSP.

The five aforementioned agencies (Kern County, Inyo County, San Bernardino County, the city of Ridgecrest, and the Indian Wells Valley Water District) entered into a joint exercise of powers agreement to form the IWWGA. The agreement is attached to this GSP as Appendix _____. These five agencies serve as General Members on the IWWGA Board of Directors, which governs the IWWGA as a whole. Due to their federal status, the Navy and BLM serve as Associate Members (non-voting) on the IWWGA Board of Directors.

1.3.1 Organization and Management Structure of the IWVGA¹

Indian Wells Valley Groundwater Authority

100 W. California Avenue, Ridgecrest, CA 93556

Main Contact:

Donald Zdeba

don.zdeba@iwwvd.com

(760) 384-5555

Alternate Contact:

Lauren Duffy—Clerk of the Board of Directors of the IWVGA

lduffy@iwwvd.com

(760) 384-5511

The Indian Wells Valley Groundwater Authority Board of Directors (General Members)

Chairman Ron Kicinski— Indian Wells Valley Water District

Vice-chairman Mick Gleason—Kern County

Director Scott Hayman—City of Ridgecrest

Director Matt Kingsley—Inyo County

Director Luther Snoke—San Bernardino County

The Indian Wells Valley Groundwater Authority: Associate Members

Commander Peter Benson—United States Navy (Non-voting)

Ryan Klausch—United States Bureau of Land Management (Non-voting)

Staff

¹ The IWVGA has a unique rotating management structure. Names and contacts are current and valid as of January 1, 2019.

Donald Zdeba—Acting General Manager

Steve Johnson—Water Resources Manager²

James Worth—Board Counsel

Ricca Charlon—City of Ridgecrest

Lauren Duffy—Clerk of the Board of Directors

The IWVGA is governed and administered by the aforementioned Board of Directors (Board). Approval of any Board action requires the affirmative vote of a majority of the Board, which is composed of one voting seat per Board member. In addition, the Board members representing the County of Kern, the city of Ridgecrest, and the Indian Wells Valley Water District are considered principal voters. That is, no Board action may be approved by the Board unless it receives the affirmative vote from no less than two (2) of the Board members representing the County of Kern, the city of Ridgecrest, and/or the Indian Wells Valley Water District. The United States Navy and the Bureau of Land Management hold two Associate Member positions that have a representative non-voting seat on the Board. Although they do not have the power to vote on any Board action or proposal, the Associate Members' position entitles them to full participation in Board meetings and discussions.

The Board consists of a Chairperson and Vice-Chairperson that preside at all Board meetings and exercise and perform other powers and duties as may be assigned by the Board. The Chairperson and Vice-Chairperson hold office for a term of one year commencing on January 1st of each and every calendar year. The positions of Chairperson and Vice-Chairperson rotate annually between the Board members representing the County of Kern, the city of Ridgecrest, and the Indian Wells Valley Water District. For example, in calendar year 2017, the Board member representing the County of Kern held the position of Chairperson, followed in order by the Board member representing the city of Ridgecrest and then the member representing the Indian Wells Valley Water District. The Board member representing the city of Ridgecrest held the position of Vice-Chairperson in 2017, followed in order by the Board members representing the Indian Wells Valley Water District and then the member representing the County of Kern.

The joint exercise of power agreement that formed the IWVGA also constructed the By-Laws under which the IWVGA operates. Under section 8.05 of the agreement, the Board adopted the By-Laws which govern

² Per IWVGA Agreement No. 02-17, the Water Resources Manager was appointed on August 17, 2017, to prepare, develop, and implement the GSP for the IWVGB.

the conduct of meetings and the day-to-day operations of the IWWGA. On March 17, 2017, the By-Laws became effective under IWWGA Resolution No. 03-17. The By-Laws are attached to this GSP as Appendix _____.

All IWWGA Board meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The IWWGA Board meetings are held on the third (3rd) Thursday of each month at Ridgecrest City Chambers, located at 100 West California Avenue, Ridgecrest, CA.

Under Article 3.8 of the IWWGA By-Laws, the IWWGA sought to hire a Water Resources Manager (WRM) with sufficient technical background, expertise, and experience to prepare and implement a GSP for the IWWGB. On August 17, 2017, the IWWGA entered into Agreement No. 02-17 to retain Steve Johnson as the WRM responsible for preparing and implementing this GSP. The WRM regularly reports to and coordinates with the IWWGA in relation to GSP preparation and collaborates with the IWWGA's standing committees in relation to the political and technical aspects of the IWWGB. In addition, the WRM presents all technical information and reports to the IWWGA.

1.3.2 Legal Authority

On September 16, 2014, Governor Jerry Brown signed into law a three-bill package (AB 1739—Dickinson, SB 1168—Pavley, and SB 1349—Pavley) that became collectively known as SGMA. Each of the three aforementioned bills amended various aspects of the California Water Code (namely Title 23, Division 6, Part 2.74, commencing at Section 10720) to allow for the management of groundwater through a locally-formed GSA. The general powers and authorities of GSAs are listed in Chapter 5 (California Water Code Sections 10725 and 10726) of SGMA.

To clarify and unify many of the concepts in the three-bill package, AB 617 was introduced by Assembly Member Henry T. Perea (D-Fresno) and was signed into law on October 9, 2015. AB 617 amended Sections 10540, 10721, 10727.4, 10727.8, and 10733.4 of the California Water Code and also added Sections 10726.5 and 10732.2 to the California Water Code. Specifically, AB 617 grants additional legal authority to GSAs such that a GSA may enter into agreements with private parties that assist in or facilitate the implementation of GSPs; impose the requirements of its GSP on other state agencies; oversee the incorporation of its GSP's requirements into a regional water management plan, etc.

AB 617 and SGMA are attached to this GSP as Appendix _____.

The IWVGA has the legal authority to manage local groundwater through SGMA. It should be noted that **the IWVGA is the sole GSA for the IWVGB.**

In general, the legal authority and powers of the IWVGA are published in Article 4 of the joint exercise of power agreement that formed the IWVGA. These powers include (but are not limited to) the following:

- To collect and monitor all data related and beneficial to the development, adoption, and implementation of the GSP
- To levy assessments, charges, and fees as provided in SGMA
- To regulate and monitor groundwater extractions as permitted by SGMA
- To establish and administer various programs for the benefit of the basin such as water banking, water recycling, recapture/purification efforts, etc.
- To apply for and accept grants, contributions, donations, and loans under any federal, state, or local programs for assistance in developing or implementing any of its projects or programs in connection with the GSP
- To acquire by negotiation or condemnation, lease, purchase, construct, hold, manage, maintain, operate, and dispose of any buildings, property, water rights, works, or improvements within and without the respective boundaries of the General Members necessary to accomplish the purposes of the IWVGA
- To cooperate, act in conjunction, and contract with the United States, the State of California or any agency thereof, counties, municipalities, public and private corporations of any kind, and/or individuals for the purposes necessary or convenient for the full exercise of the Authority's powers

1.3.2.1 Policy Advisory Committee (PAC)

Article 5.1 of the IWVGA By-laws provides that the Board may establish standing committees for the purpose of making recommendations to the Board on the various activities of the IWVGA. The Board established an eleven person, voting-member policy advisory committee (PAC) to advise the Board on all policy-related matters of the Board and to develop non-binding proposals on policy matters pertaining to the GSP. The PAC is comprised of the following voting members:

- 2 representatives from Large Agriculture—Joshua Nugent and Edward Imsand
- 1 representative of Small Agriculture—Patricia Quist

- 2 representatives from Business Interests—David Janiec and James Mower
- 2 representatives from Domestic Well Owners—West Katzenstein and Lyle Fisher
- 2 representatives from residential customers of a public water agency supplier—Nick Panzer and Renee Westa-lusk
- 1 representative from the Eastern Kern County Resource Conservation District—Judie Decker
- 1 representative from Wholesaler and Industrial User—Rajanikant Jonnalagadda

The IWVGA By-Laws require that at least one of the appointed voting PAC members shall also represent Disadvantaged Communities (DACs). On July 20, 2017, the Board approved Resolution No. 08-17 to add Tim Carroll of the Inyokern Community Services District as a DAC-representative voting member to the PAC. The PAC also includes Associate Members that represent the Navy (John Kersey), the Indian Wells Valley Water District (Don Zdeba), the Kern County Planning and Natural Resources Department (Lorelai Oviatt), and the U.S. Bureau of Land Management (Ryan Klausch). These Associate Members provide needed expertise to help the PAC understand the policies of their respective jurisdictions.

As required by California Water Code Section 10723.2, the IWVGA must consider the interest of all beneficial uses and users within the Basin. To assist the Authority in meeting this objective, the PAC's objectives are to (1) provide all water users in the Basin with a meaningful voice and representation on policy matters of the Board associated with SGMA; (2) work collaboratively for the benefit of the IWVGB as a whole; (3) provide input and recommendations to the Board, in collaboration with the Water Resources Manager, and other committees of the Board, in support of actions that facilitate bringing the IWVGB into compliance with SGMA; and (4) work in good faith to achieve consensus and make unified recommendations to develop a GSP and for management actions to achieve groundwater sustainability in accordance with the requirements of SGMA.

All PAC meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The By-Laws of the IWVGA provide that the Board shall set regular meeting dates for the PAC by resolution. The PAC meetings are held on the first (1st) Thursday of each month at the office of the Indian Wells Valley Water District, located at 500 West Ridgecrest Boulevard, Ridgecrest, CA.

1.3.2.2 Technical Advisory Committee (TAC)

The Board also established a Technical Advisory Committee (TAC) for the express purpose of giving interested parties a reasonable opportunity to review and conduct a thorough evaluation of each technical element of the GSP prior to its finalization by the WRM. As stated in Article 5.12 of the IWVGA By-Laws, TAC members must have a formal education and experience in a groundwater-related field while also maintaining an understanding of the technical aspects of the IWVGB or similar basins in California. The TAC is comprised of individuals representing PAC members, PAC membership categories, and the general interests of landowners and water users in the IWVGB. Each member of the PAC may nominate one member of the TAC for review and possible approval by the Board. To ensure proper stakeholder representation, the Board may also appoint TAC members that are not affiliated with any PAC members.

As of January 1, 2019, the TAC consists of the following water use representatives:

- Large Agriculture—Eddy Teasedale
- Large Agriculture—Wade Major
- Business Interests—Scott O’Neil
- Residential Customers of a Public Water Agency—Stayed³
- Domestic Well Owners—Don Decker
- Eastern Kern County Resource Conservation District—Earl Wilson
- Wholesale and Industrial User—Adam Bingham
- Indian Wells Valley Water District—Tim Parker
- Department of the Navy—Stephan Bork (ex-officio/staff member)
- Kern County Water Agency—Michelle Anderson (ex-officio/staff member)

All TAC meetings are held in accordance with the Ralph M. Brown Act, set forth in the California Government Code sections 54950, et seq. The TAC meetings are held on the first (1st) Thursday of each month at the office of the Indian Wells Valley Water District, located at 500 West Ridgecrest Boulevard, Ridgecrest, CA. The WRM sets the agenda of each TAC meeting so that each technical element of the GSP is presented to the TAC, in draft, to afford the TAC a reasonable opportunity to review and conduct a thorough evaluation of each element.

³ Position formerly held by Michael Powell.

1.3.2.3 Interested Agencies and Roles

During the formation of the IWVGA, a comprehensive listing of interested parties (including name, email, and phone number) was developed. The listing includes local community residents (including Disadvantaged Communities, Severely Disadvantaged Communities, and Economically Distressed Areas), businesses, large and small-scale agriculture, academic institutions, relevant state and local agencies, federal agencies, non-profit organizations, and community organizations. This listing of over 150 stakeholders includes representatives from all types of water users within the IWVGB and was used during the 17-month long GSA formation process for notification of public meetings, notifications, and updates related to discussions on the SGMA. The listing is attached to this GSP as Appendix _____.

1.3.3 Estimated Implementation and Costs

This section will include an estimate of the cost of implementing the GSP and a general description of how the IWVGA plans to fund those costs, to be determined based on annual reporting requirements, planned projects, and planned fees and assessments.

1.4 NOTICE AND COMMUNICATION

As stated in California Water Code Sections 10723.2 and 10728, a groundwater sustainability agency shall not only consider the interests of all beneficial uses and users of groundwater but also make available to the public and DWR a written statement describing the manner in which interested parties may participate in the development and implementation of the GSP. The IWVGA subsequently adopted Resolution No. 02-18 on April 19, 2018, to adopt a Communication and Engagement Plan (C&E Plan) intended to encourage public and agency participation in GSP development and implementation. The C&E Plan allows each stakeholder and agency in the IWVGB to understand the magnitude of the groundwater overdraft problem, how overdraft will affect stakeholders, and the process for participation in developing a GSP to solve the overdraft problem. The C&E Plan is attached to this GSP as Appendix _____.

1.4.1 PAC Stakeholder/Public Outreach

The regular meetings of the Board, PAC, and TAC are open to members of the public, including representatives of all types of water users. At each meeting, members of the public are allowed time to address the respective committee regarding topics listed and not listed on the meeting agenda. All IWVGA documents (such as meeting agendas, minutes, resolutions, ordinances, presentations, packages, etc.) are available to the public at the following IWVGA website:

<https://iwvga.org/>

In addition, as part of the Department of Water Resources' requirements for SGMA and the GSP, a publicly-accessible database has been developed to store and present specific supporting elements of the GSP, including monitoring, reporting, management criteria, a water budget, hydrogeologic conceptual model, and other supporting documentation. The database additionally allows the public to review data and other reports related to IWVGB water resources. The database may be reached at the following link:

<https://www.iwvgsp.com>

1.5 GSP ORGANIZATION

This GSP is organized into the following sections, which generally follow DWR's GSP guidelines and suggested elements as applicable to the IWVGA and IWVGB:

- Section 1 – Introduction Chapter
 - Provides information on the purpose of the GSP along with regulatory and agency background
- Section 2 – Plan Area
 - Presents background information on the IWVGB area with respect to overlying water management agencies, land use, basin beneficial uses, water quality objectives, production wells, and other planning efforts undertaken in the IWVGB
- Section 3 – Basin Setting
 - Presents a summary description of basin geology, hydrogeology, groundwater conditions, groundwater quality, groundwater-dependent ecosystems, water budget, and management areas

- Section 4 – Sustainable Management Criteria
 - Summarizes the basin’s existing undesirable results due to overdraft and the basin management objectives, milestones, and monitoring network that will track the overall progress toward basin-wide sustainability
- Section 5 – Projects and Management Actions
 - Describes the potential projects and water management strategies intended to achieve the goals and objectives of the GSP
- Section 6 – Plan Implementation
 - Discusses the work plan, schedule, and costs for implementation of the GSP as well as the requirements for annual reporting to DWR
- Section 7 – References and Technical Studies
 - Lists all of the technical reports, studies, and other documents used in the preparation of the GSP

1.5.1 Checklist for GSP Submittal

DWR has prepared a number of guidance documents for the sustainable management of groundwater, including a *Preparation Checklist for GSP Submittal* dated December 2016. The Preparation Checklist suggests general GSP content requirements for the purpose of verifying that a GSP is complete and ready for submission to DWR. In particular, the Preparation Checklist serves as a guide so that the reader of this GSP may find the relevant sections and page numbers that discuss specific groundwater management topics. The Preparation Checklist is attached to this GSP as Appendix _____.

From Nick Panzer to Jim Markman via Dave Janiec, PAC Chair (1/15/19)

Question: Does this thumbnail sketch reasonably interpret and apply the law to IWV facts?

Article X, Section 2 of the California Constitution is the Cardinal Rule of California water law. It declares that all water rights and all water uses must be reasonable, and that unreasonable uses must be prevented. By making these reasonableness principles “**self-executing**,” the Constitution enshrines them as both a **policy mandate** and a **limitation on water rights**. Moreover, the California Supreme Court, in *Joslin v. Marin Water Agency*, holds that no one has a protectable interest in the unreasonable use of water. Hence, the deprivation of such is not a compensable taking or damaging. (See 2015, *The Reasonable Use Doctrine in California Water Law and Policy*, Chapter 4, Brian E. Gray. Mr. Gray is a Senior Fellow at the Public Policy Institute of California’s Water Policy Center and a Professor Emeritus at the University of California’s Hastings College of the Law in San Francisco.)

Section 10720.1.(b) of California’s Sustainable Groundwater Management Act (SGMA) specifically means to comply with California’s reasonableness principle as summarized above.

Reasonable use embraces at least four interrelated concepts (see Gray above).

Utilitarian: The law seeks to encourage relatively efficient, economical, and socially beneficial uses of water. Public water agencies such as Indian Wells Valley Water District, Inyokern Community Services District, and Searles Domestic Water Company, are **utilitarian** by design. We typically referred to such entities as “public **utilities**” for that reason. These entities are publically regulated to ensure that they **efficiently** and **economically** fulfill their primary mission, namely, public health and safety (HS hereafter). In this context, health and safety includes consumption, cooking cooling, sanitation, fire suppression, line flush, and line leakage.

After HS, the next most utilitarian use of water is the Navy Mission. IWV is ideally and uniquely suited to the Navy’s high tech/national defense mission due to the size and utility of its test ranges. Thus, the Navy Mission is far more efficient, economical, and socially beneficial in relation to all uses of water except for HS. That is why China Lake has survived several national military base closures and consolidations, known as Base Realignment and Closure (or BRAC).

Any allocation of water rights that risks public agency access to sufficient water for HS or the Navy mission is **unreasonable**? Two uses of water in the IWV basin fall within this unreasonable category as spelled out next.

Situational: Safe yield is about 7,600 afy. Pumping use in afy looks about like this:

Navy (this could change significantly in time of war)	2,000
HS at home and work for <i>current</i> population of 35,000	4,100
Irrigation at home, work, farm, and municipal	27,900
Searles Valley Minerals industrial process	<u>2,000</u>
	<u>36,000</u>

While all of these uses of water are beneficial, only the first two are **reasonable** in light of safe yield because a) their **utilitarian** value far exceeds that of the latter two uses, and b) they require a full allocation of safe yield to maintain population and still allow a cushion for population growth, Navy demand uncertainty, and climate uncertainty. Our **situation** is such that **irrigation** of any kind (home, business, and farm) and industrial process use of any kind is **unreasonable** in light of the basin's limited safe yield.

Dynamic: What is reasonable/unreasonable changes over time as the economy, technology, demographics, hydrologic conditions, environment, and societal needs evolve. As the scope of the Navy mission evolved and grew beginning in the 1940s, the population grew along with and in support of it. The dynamic of high-tech Navy growth and supporting population growth inverted societal needs over time, rendering other uses of water such as irrigation and industrial process **unreasonable** due to scarce safe yield.

Fragile: What originally may have been a reasonable use of water can become an unreasonable use of water as population grows, and new demands for water arise. Such is the case in IWV. Searles Valley Minerals water imports from IWV beginning in the 1920s were no doubt reasonable, same for small agricultural irrigation beginning about the same time. However, once the base and supporting population growth took off in the 1940s, chronic overdraft followed by the early 1950s. Industrial process use of water and irrigation use of water thus changed from being reasonable to **unreasonable** as China Lake and its supporting population became the most utilitarian use of water in the IWV.

SUMMARY AND CONCLUSION

Indian Wells Valley Groundwater Basin (IWVGB) must reduce pumping by 80% to comply with SGMA. The allocation of that reduction should turn on judicial principles espoused under the state constitution's "reasonableness" principle. Applying that principle to the IWVGB finds that essentially all groundwater uses other than HS and Navy Mission are unreasonable within the meaning of the California Constitution, and should be prevented without compensation.