

INDIAN WELLS VALLEY GROUNDWATER BASIN

GROUNDWATER SUSTAINABILITY PLAN

SECTION 1 – INTRODUCTION CHAPTER

DRAFT

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Comment [ET1]:

Include: list of abbreviations and acronyms, list of tables, list of figures and applicable appendices to the Table of Contents

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; and to 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.~~

SGMA defines sustainable groundwater management as “management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.” (Water Code Section 10721, subdivision (v). The planning and implementation period is a 50-year time period over which a groundwater sustainability agency determines that plans and measure will be implemented in a basin to ensure that the basin is operated within its sustainable yield. (Water Code Section 10721, subdivision (r).) Undesirable results which must be avoided, are any of the following effects caused by groundwater conditions occurring throughout the basin:

- Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon.
- Significant and unreasonable reduction of groundwater storage.
- Significant and unreasonable seawater intrusion.
- Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.
- Significant and unreasonable land subsidence that substantially interferes with surface land uses.
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

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. SGMA recognizes that neither the GSA nor this GSP determines or may alter water rights. ~~Additionally,~~ SGMA establishes minimum standards for sustainable groundwater management along with providing local groundwater management

Comment [DH2]: This is not set forth in Water Code Section 10720.1, as the introductory clause states.

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 ~~o~~verdraft conditions have existed ~~for decades 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~~ utilize basin resources 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 IWWGB are particularly susceptible to adverse effects resulting from the chronic lowering of groundwater levels because their wells are typically shallow, and ~~furthermore, because~~ they generally 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 results and unsustainable groundwater conditions in the IWWGB. The GSP recommends these management strategies and provides measurable ~~sustainability~~ objectives and interim milestones ~~that intend~~ designed to achieve basin sustainability while considering the unique geologic and hydrogeologic conditions of the IWWGB. The recommendations of this GSP will provide for long-term sustainable groundwater management in the IWWGB within 20 to 30 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 IWWGA sustainability goal is to manage the IWWGB 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.

Comment [DH3]: Note that this is not the definition of sustainable yield under SGMA. See the definition quoted above. The core element in the definition of sustainable yield is the avoidance of undesirable results, each of which is further specifically defined to include "significant" and "unreasonable" components. Avoiding undesirable results will be a function of the Projects and Management Actions brought online through the plan. To say that the sustainable yield means "balanced levels of pumping and recharge" would suggest that the GSA is simply reducing pumping to average recharge figure, which is not the objective of SGMA nor should it be the objective of the GSA.

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.

Comment [ET4]: Insert subbasin information (DWR Subbasin 6-054)

Comment [ET5]: Reference and Insert Figure 1-1.

Comment [ET6]: Provide details on size of the basin, who are the main pumpers what percentage of the basin's groundwater is used by Navy, City, Ag, etc.

1.3.1 Organization and Management Structure of the IWVGA¹

Contact information for the GA Board members is provided below:

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.

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 transfers](#), 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~~Teasdale
- 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.

Comment [DH7]: This section should add a detailed summary of the current \$30 per acre foot Water Code 10730 fee. Cite the ordinance, process, etc.

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 XX.