2022 Indio Subbasin Alternative Plan Update

Public Workshop #4
SUMMARY

March 3, 2021 at 2:00 pm – 4:00 pm
Virtual Meeting

Members of the Public • Alan Pace, Petra Geosciences • Amy McNeill, Riverside County Flood Control and Water Conservation District • Amanda Monaco, Leadership Counsel for Justice & Accountability • Ben Olson, Olsen Engineering • Cathy Sanford, Regional Water Quality Control Board • Craig Kessler, Southern California Golf Association and CVWD Golf and Water Task Force • George Cappello, Grimway Farms • Johnathan Abadesco, High Desert Water District • Karina Jaquez • Kevin Fitzgerald, Southern California Golf Association • Kim Taylor, USGS • Kimberly Romich, California Department of Fish & Wildlife • Margaret Park, Agua Caliente Band of Cahuilla Indians • Mark Meeler, Myoma Dunes Mutual Water Company • Nina Waszak, Agua Caliente Band of Cahuilla Indians • Ron Buchwald, Valley Sanitary District • Sergio Sandoval • Steven Ledbetter, Mission Springs Water District • Tarren Torres, Egoscue Law Group representing Agua Caliente Band of Cahuilla Indians • Tom Calabrese, Envirologic Resources	**Groundwater Sustainability Agencies (GSAs)** • Castulo Estrada, CWA • Jamie Pricer, CVWD • Jesse Ruiz, CVWD • Jim Barrett, CVWD • Katie Evans, CVWD • Lauren Chase, CVWD • Mark Krause, DWA • Melanie Garcia, CVWD • Nancy Munoz, CVWD • Reymundo Trejo, IWA • Ryan Molhoek, DWA • Steve Bigley, CVWD • Trish Rhay, IWA • Zoe Rodriguez del Rey, CVWD **Consultant Team** • Iris Priestaf, Todd Groundwater • John Ayres, Woodard & Curran • Maureen Reilly, Todd Groundwater • Nicole Poletto, Woodard & Curran • Rosalyn Prickett, Woodard & Curran • Vanessa De Anda, Woodard & Curran

Welcome and Introductions

Ms. Rosalyn Prickett, Woodard & Curran, welcomed everyone to the meeting, and introductions were made as participants joined the call. Ms. Prickett briefed everyone on how to use the virtual GoToMeeting platform and notified attendees that the conference would be recorded. She then

presented the meeting objectives and agenda and reintroduced the project team working on the Indio Subbasin Alternative Plan Update, including the Indio Subbasin Groundwater Sustainability Agencies (GSAs) and Consultant team. Ms. Prickett reviewed the meeting objectives.

Alternative Plan Status

Ms. Iris Priestaf, Todd Groundwater, presented an overview of the Alternative Plan Update tasks. Outreach is a key task throughout the Alternative Plan Update process. There are 12 chapters in the Plan and Ms. Priestaf walked attendees through the outline of the document, beginning with the information included in the Plan Area chapter.

Groundwater Conditions

Groundwater Levels

Ms. Priestaf presented a map of the groundwater level contours in the Indio Subbasin (Subbasin). The Subbasin has a robust monitoring program that consists of 345 wells. Monitoring data from these wells was used to develop the groundwater level contour map. The groundwater levels range from 1,100 feet in the northeastern part of the Subbasin and decrease to 200 feet below mean sea level (msl) toward the Salton Sea. Groundwater flow is perpendicular to the contours, so groundwater flows from northwest to southeast in the Subbasin.

Ms. Priestaf presented a map showing the change in groundwater levels from 2009 through 2019. The map indicates that groundwater levels have primarily increased during the past decade, and the largest increases have occurred near the groundwater replenishment facilities (GRF). These increases in groundwater levels are the result of recharge in the GRFs, implementation of source substitution programs (e.g., recycled water to offset groundwater use), and conservation programs.

Ms. Priestaf presented four hydrographs showing groundwater levels from 2009 through 2020, though she noted that numerous hydrographs in the Subbasin are available. The hydrographs show a consistent pattern of overall groundwater level increases from 2009. The hydrographs also show large increases near recharge at the GRFs and smaller increases at locations distant from the GRFs. Overall, the hydrographs show recovery from overdraft since 2009.

Change in Groundwater Storage

Ms. Priestaf presented a graph showing the cumulative change in storage from 1970 through 2019. The hydrograph starts a "running total" of groundwater storage in 1970 as this was right before the Whitewater River GRF began operation in 1973. The hydrograph starts with a net change in storage of 0 acre-feet (AF) in 1970 and shows a significant decline in groundwater storage happening in the mid-1980s through 2009. The year 2009 marked a historical low for groundwater storage, and overdraft has started to reverse since then with a net storage increase of 840,000 AF. Increased groundwater storage is important as it can be used during a water shortage such as drought.

Land Subsidence

Ms. Priestaf presented land subsidence, or the sinking of the ground surface, in the Subbasin. In this case, land subsidence is not caused by tectonics and action in the San Andreas fault, but rather as a result of the compaction of sediments that occur with groundwater level declines. Clay layers in the Subbasin float in groundwater, so if groundwater levels decline, the clay layers settle and compact, causing the ground surface to also decline. The Subbasin is susceptible to land subsidence which may disrupt conveyance facilities and facilities on the ground surface. Land subsidence in the Subbasin has been studied since 1995 by the United States Geological Survey (USGS) and CVWD. USGS research shows a correlation between land subsidence and groundwater declines, reaching up to 2 feet of subsidence in parts of the Subbasin between 1995 and 2010. USGS has documented stabilization of

land surface and even uplift in some areas of the Subbasin since 2010 as a result of increasing groundwater levels. For comparison, land subsidence in the Central Valley is as much as 30 feet and is still ongoing.

Sustainable Management Criteria

Mr. John Ayres, Woodard & Curran, presented the Sustainable Management Criteria (SMC) for the Alternative Plan Update. To define the SMC, DWR recommends setting thresholds for groundwater levels and using these thresholds as a proxy for the storage and subsidence indicators. The GSAs have an overarching objective to avoid undesirable results of a significant and unreasonable loss of yield from existing production wells. SGMA does not define "significant" and "unreasonable" as these are determined at the local level. Representative monitoring will occur throughout the Subbasin, but not every well will be monitored. Subbasin management will only include management activities that the GSAs can influence.

Sustainability Management Criteria

Mr. Ayres explained that SMCs can be qualitative. For the Subbasin, the *Sustainability Goals* are defined as the conditions in the absence of undesirable results within the next 20 years. *Undesirable Results* are qualitative and descriptive; these are conditions that should be avoided in the Subbasin. In comparison, *Measurable Objectives* (MO) are specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions to achieve the sustainability goal. *Minimum Thresholds* (MT) are numeric values for each sustainability indicator used to define undesirable results. *Interim Milestones* (IM) are quantitative target values representing measurable groundwater conditions in increments of five years; these will be updated during every Plan update. A graphic illustrating the quantitative criteria was presented to the group.

The Alternative Plan goal is "to reliably meet current and future water demands cost-effectively and sustainably." The draft SGMA Sustainability Goal is to "maintain a locally managed, economically viable, sustainable groundwater resource for existing and future beneficial use in the Indio Subbasin by managing groundwater to avoid undesirable results." The SGMA Sustainability Goal only focuses on groundwater and is nested within the Alternative Plan goal, which is broader and encompasses all water supplies.

This meeting focuses on three of the six SMC, which include: 1) chronic lowering of groundwater levels, 2) reduction of groundwater storage, and 3) land subsidence. The draft undesirable result statements were phrased broadly for these three SMC to give the GSAs local control over what is significant and unreasonable, as well as drive the monitoring networks and thresholds.

Groundwater Levels

Mr. Ayres explained that the undesirable results for the chronic lowering of groundwater levels indicator include impacts to shallow wells, and maintenance of municipal and industrial water supply.

Public comments and questions included the following:

- Drinking water is the primary beneficial use of water in California, but the Sustainability Goal references only the economic use of water. Ms. Amanda Monaco, a representative from Leadership Counsel who works with several vulnerable communities in the Subbasin, requested that a reference to protecting drinking water also be included.
    - This comment was noted and will be addressed.

- Regarding land subsidence, reviewing impacts to only water infrastructure may ignore impacts to other development like roads. Ms. Amanda Monaco suggested that language for land subsidence be less restrictive to only water conveyance infrastructure.
    - This comment was noted and will be addressed

Ms. Priestaf provided the consultant team's recommendations on setting MTs for groundwater levels, storage, and subsidence. SGMA defines a groundwater level MT as a groundwater elevation measured at a representative monitoring site. There will not be MTs or monitoring conducted for every single pumping well in the Subbasin, just for the representative sites. There are two options for setting groundwater elevation MTs, as described below:

1. Use historical low groundwater levels. The groundwater levels reached a historical low in 2009. The historical low occurred recently without any reported significant problems that impacted the beneficial uses of water wells. In comparison, historical groundwater level lows in the Central Valley led to community water systems and wells drying up. This option is recommended because the historical low groundwater levels are conservative and protective of the Subbasin based on the best available information.
2. Document construction of all production wells, select criteria per diverse well characteristics, relate private wells to representative "Key Wells." This option would protect production wells; however, it requires documentation of the construction of all production wells (including but not limited to the well location, bottom depth of the well, etc.). To implement this option, extensive data collection and decision-making would be required to define the selection criteria. It is recommended that the Subbasin develops a well inventory in the future as a way to refine the MTs.

Ms. Priestaf presented hydrographs showing the suggested MTs corresponding with the lowest groundwater elevations measured at Key Wells. These MTs will guide management in the Subbasin. Ms. Priestaf stated that there are 757 wells in the Subbasin. Of these wells, 57 wells were selected as representative wells in the Key Well network because they have well construction data, are easily accessible (though this may change in the future if they are abandoned or replaced), have an extensive monitoring record and current data, are distributed throughout the Subbasin near other production wells and small water systems that are vulnerable to groundwater level declines, and are representative of all GSAs.

Public comments and questions included the following:

- What is a production well, and does it include private wells?
    - It is a pumping well for beneficial use (e.g., industrial, drinking water, municipal, agricultural)

Ms. Priestaf stated that the SMC will assume that undesirable results will occur if groundwater levels remain consistently below the MTs. It is recommended that an undesirable result be defined when the MT is crossed in five low season monitoring events (i.e., October) in 25% of the monitoring wells across the subbasin. Annual reporting will include MT hydrographs to identify potential problems, analyze what will happen as groundwater management actions change in that area, and determine if the Subbasin will recover.

Public comments and questions included the following:

- What is an example of five consecutive low-season monitoring events?
    - These are five consecutive years, likely in October; not consecutive monitoring events, which might be quarterly.

Groundwater Storage

Ms. Priestaf explained that using levels as a proxy for groundwater storage is recommended for the Subbasin as groundwater level monitoring generally matches the long-term change in storage. Based on previous monitoring, it is expected that the groundwater level MTs are protective of groundwater storage and will not lead to significant and unreasonable conditions in storage.

Land Subsidence

Ms. Priestaf explained that using levels as a proxy for subsidence is also recommended for the Subbasin. Based on previous monitoring, it is expected that the groundwater level MTs are protective of land subsidence and will not lead to significant and unreasonable conditions. Undesirable results may include disruption of surface drainage, water supply conveyance and flood control facilities, damage to other critical infrastructure, and earth fissures.

Groundwater Model Status

Ms. Priestaf presented the groundwater model status. The model provides a numerical simulation of the Subbasin. The model was updated with recent inflow and outflow data and coordinated with models for adjacent basins for consistency. The model is in the process of final calibration, and a chapter for the model is underway. The model will continue to provide a reliable tool to simulate future conditions and scenarios.

Projects and Management Actions

Ms. Prickett presented the projects and management actions (PMAs) which are required under SGMA to achieve sustainability. The project team previously presented the water supply portfolio, which will be packaged into different scenarios and modeled when the model calibration is finalized. The PMAs have been grouped into two major categories: 1) SGMA implementation to comply with the SGMA requirements, and 2) PMAs.

1. SGMA implementation activities to support SGMA compliance.
2. The PMAs are actions that support sustainable water management. These PMAs are different from, but support, the water supplies that were discussed in the last workshop. Many PMAs help to convey, deliver, and recharge regional supplies. PMAs[1] that will be included in the Alternative Plan Update are grouped into the following five categories:
    - Water Conservation
    - Water Supply Development
    - Source Substitution and Replenishment
    - Water Quality Improvements
    - Other Studies and Programs

Ms. Prickett presented the objectives of scenario modeling. Scenario modeling will consider how uncertainties may affect the ability to sustainability manage water resources, as well as help the Subbasin meet SGMA regulations for balancing the water budget and avoiding groundwater overdraft.

Ms. Prickett explained there are several uncertainties for the water demand projections. Land use agencies may experience development at rates greater than anticipated, resulting in higher water demands than projected. There may also be increased agricultural water demands resulting from an

[1] Please refer to the meeting presentation for a list of PMAs considered for the Subbasin.

influx of new farmers from neighboring subbasins that have experienced significant decreases in pumping due to SGMA. To account for these uncertainties, there was a 10% buffer added to the total municipal demand (i.e., 110% of total municipal demand), and the potential new acreage for agriculture was doubled (i.e., 1,000 acres of *new* agriculture).

Ms. Prickett explained there are also many uncertainties for the supply projections. Climate change may change the local hydrology, which would reduce watershed runoff, as well as lead to additional reductions in water supplies from the Colorado River and State Water Project (SWP). SWP supplies may also decline if the Delta Conveyance project is delayed or not constructed. Other sources of uncertainty include imported water disruptions as a result of natural disasters or regulatory constraints, groundwater changes in storage and outflows, and recycled water constraints from evolving regulations and project delays. The Sites Reservoir and Lake Perris Seepage projects may also not be constructed or delayed.

Ms. Prickett presented five scenarios that are underway. These include:

1) No Project – assumes growth but no additional water supplies,
2) Baseline – assumes supplies and facilities in the Capital Improvement Program,
3) Future Projects – assumes all planned supplies and facilities including new SWP supplies, the buildout of nonpotable system, and source substitutions,
4) Future Projects with Climate Change – assumes planned supplies & facilities, limited by climate change, and
5) Future Projects with Drought – assumed planned supplies and facilities limited by reoccurring drought.

Public comments and questions included the following:

- These 5 scenarios are logical since they factor in climate change. It is encouraging that Indio is already working on drinking water and consolation projects, which gives GSAs the ability to collaborate.
- There is a need for enhanced land use planning that is coordinated with water planning. There are a lot of uncertainties with land use, so coordination will be vital.
    - The consultant team coordinated with land use planning agencies during development of the demand forecast. The consultant team used the SCAG 2020 forecast as the basis and then asked the city and county municipalities for confirmation that their planned future developments and General Plan developments were correctly included in that forecast.
- There needs to be coordination with local permitting agencies on future agricultural lands and their wells.

Next Steps

Ms. Prickett presented the next steps for February through April 2021. The consultant team will develop scenarios and determine how they will be input into the groundwater model. Results will be presented at the next meeting, which will be held on May 19 from 2 to 4 pm. The consultant team will also complete fieldwork and surveys for Groundwater Dependent Ecosystems (GDEs), finalize proposed PMAs and sustainability criteria based on input from Tribal and public workshops, and quantify Indio Subbasin water budget. Finally, the consultant team will finalize the 2020 Annual Report and submit to DWR by April 1. The 2020 Annual Report will be presented to the CVWD Board on March 9 and uploaded to the CVRMWG website (http://www.cvrwmg.org/).

Ms. Prickett invited participants to offer any additional comments or questions. For any additional information, please contact Rosalyn Prickett at indiosubbasinSGMA@woodardcurran.com.