2022 Indio Subbasin Alternative Plan Update

Public Workshop #7
SUMMARY

October 20, 2021 at 2:00 pm – 4:00 pm
Virtual Meeting

Members of the Public	**Groundwater Sustainability Agencies (GSAs)**
• Alena Callimanis, resident • Amy McNeill, Riverside County Flood Control and Water Conservation District • Ben Olson, Olson Engineering • Benjamin Whittle, student, UC Irvine • Cathy Sanford, RWQCB • Craig Kessler, Southern California Golf Association • Dale Tyerman, resident • Kevin Fitzgerald, Southern California Golf Association • Kimberly Romich, California Department of Fish & Wildlife • Marion Champion, Mission Springs Water District • Pakiza Chatha, CA Department of Water Resources • PJ Iyer • Sachi Itagaki, Kennedy/Jenks Consultants • Sarah Spinuzzi, Coachella Valley Gatekeeper • Sheila Warren, resident • Steve Ledbetter, TKM Engineering on behalf of Mission Springs Water District • Tarren Torres, Egoscue Law Group representing Agua Caliente Band of Cahuilla Indians	• Alejandro Lara, CVWD • Ashley Metzger, DWA • Berlinda Blackburn, CWA • Ivory Reyburn, CVWD • Joseph Mellinger, CVWD • Katie Evans, CVWD • Luis Sanchez, CVWD • Mark Krause, DWA • Michelle Tse, IWA • Nancy Munoz, CVWD • Reymundo Trejo, IWA • Ryan Molhoek, DWA • Steve Bigley, CVWD • Zoe Rodriguez del Rey, CVWD **Consultant Team** • Iris Priestaf, Todd Groundwater • Maureen Reilly, Todd Groundwater • Rosalyn Prickett, Woodard & Curran • Vanessa De Anda, Woodard & Curran

Welcome and Introductions

Ms. Rosalyn Prickett, Woodard & Curran, greeted participants as they joined the call. Ms. Prickett welcomed everyone to the workshop and reviewed how to use the virtual GoToMeeting platform. She then reviewed the meeting objectives and provided an overview of the project team. She noted that this is the final public workshop specific to the *2022 Indio Subbasin Alternative Plan Update* (*Alternative Plan Update*) before submittal to the State in December 2021.

Alternative Plan Status

Ms. Iris Priestaf, Todd Groundwater, presented an overview of the *Alternative Plan Update*. Ms. Priestaff reviewed the methods in which people have been engaged, which included seven public workshops, seven SGMA Tribal Workgroups, a website with monthly updates, and regular email announcements and updates. The four GSAs are developing the *Alternative Plan Update* for the Indio Subbasin (Subbasin) and areas that are, or are likely to be, supplied groundwater from the Subbasin.

The importance of supplemental supply to alleviate groundwater overdraft has been noted for decades. The water supply portfolio includes capture and recharge of stormflows, completion of the Coachella Canal, acquirement of State Water Project (SWP) contracts, and use of recycled water.

Ms. Priestaf reviewed the *Alternative Plan Update* goal: "To reliability meet current and future water demands in a cost-effective and sustainable manner". She also reviewed the refined objectives being included in and guiding the development of the *Alternative Plan Update*, including a new 7th objective: "Reduce vulnerability to climate change and drought impacts". Plan implementation has resulted in significant groundwater levels increases regionally and cumulative groundwater storage increases across the Subbasin.

Public comments and questions included the following:

- What kind of water can be substituted in exchange for the Colorado River water?
    - There is a contractual element to the exchange. Both DWA and CVWD receive SWP water, but they exchange it for Colorado River water through Metropolitan Water District. At this point, there is no physical way to get SWP water to the Valley.

Groundwater Conditions and Sustainable Management

Ms. Priestaf presented an overview of the Subbasin and groundwater flows, noting that it extends from the San Gorgonio Pass Subbasin to the Salton Sea. Groundwater flow moves downhill through the Subbasin supplying wells and discharging into the Salton Sea.

Ms. Priestaf presented an overview of undesirable results for six sustainability indicators, which are all addressed in the *Alternative Plan Update* and listed below. A minimum threshold (MT) is a numeric value used to define undesirable results.

Groundwater Levels

Undesirable results include significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses, and impacts to relatively shallow wells, including small water systems and private drinking water supply wells. Hydrographs in the *Alternative Plan Update* show declining groundwater level trends in the Subbsain from the 1990s to around 2009. As such, the MTs have been defined as the historical lows measured at 57 Key Wells in around 2009 with no reported shortages. An undesirable result has been defined to occur when the MT is crossed in five consecutive low-season monitoring events in at least 25% of wells across the Subbasin.

Groundwater Storage and Land Subsidence

The MTs for groundwater levels have a strong correlation with, and are therefore a proxy for, the groundwater storage and land subsidence sustainability indicators. The change in groundwater storage indicated declines between 1987 to 2009, and reversal of overdraft and increase of storage in 2009. This correlates with the change of groundwater levels seen across the Subbasin around 2009. Since then, there has been an increase of about 840,000 AF in storage that can be used during periods of drought. Similarly, the Subbasin experienced up to 2 feet of land subsidence between 1995

to 2010 correlated with groundwater declines due to groundwater pumping. Stabilization and uplift have been documented in the Subbasin since 2010 with increasing groundwater levels.

Groundwater Quality

The GSAs are tracking numerous water quality constituents. Large water systems meet all drinking water standards, but small water systems and domestic wells may be affected by some constituents like nitrate from multiple sources and naturally occurring hexavalent chromium and arsenic. The GSAs are coordinating with community representatives and domestic systems to ensure access to high-quality water. The *Alternative Plan Update* provides a comprehensive assessment of groundwater quality that incorporates an extensive discussion of eight constituents of concern, including maps, cross-sections, and time concentration plots. As an example, Ms. Priestaf presented a map showing total dissolved solids (TDS) concentrations in the Subbasin to provide an overview of groundwater quality. The map shows TDS concentrations are below the recommended levels in the majority of the Subbasin, but higher concentrations are found along the Subbasin boundaries and near the Salton Sea. The *Alternative Plan Update* resulted in an improved basis to study the rate and level of increased salt in groundwater from all sources. Coordination with the Coachella Valley Salt and Nutrient Management Plan (CV-SNMP) will start in 2022.

Seawater Intrusion

The Subbasin is bounded by one end of the Salton Sea, which is distinguished by salinity that is twice that of the ocean and increasing, and decreasing surface water levels and shoreline. Seawater intrusion is a consequence of overdraft and is therefore closely tracked by the GSAs. Numerical modeling indicates there was net inflow from the Salton Sea into the Subbasin from 1997 to 2014 and a net outflow from the Subbasin to the Salton Sea since 2015. Seawater intrusion has been reversed.

Interconnected Surface Water and Groundwater Dependent Ecosystems (GDEs)

The *Alternative Plan Update* reviewed the Coachella Valley Multiple Species Habitat Conservation Plan and other documents for protected species, performed a desktop analysis of polygons provided by DWR's Natural Communities Commonly Associated with Groundwater (NCAG), conducted a field survey of 13 sites, and mapped potential GDEs. The analysis found that 5% of the evaluated sites were probable GDEs that partially rely on surface water or snowmelt, 89% of the evaluated sites are probable non-GDEs that include agricultural fields and drainages, uplands, and dry washes, and 6% are playa wetlands that depend on agricultural drain flows and occur along the Salton Sea exposed seabed. This analysis is included in an appendix to the *Alternative Plan Update*.

Public comments and questions included the following:

- On slide 14, you mention working with Tribes on a shared set of objectives. What are those shared objectives and what are the names of the Tribes you worked with?
    - The GSAs have been consistently working and meeting with five Tribes in the Plan Area through the SGMA Tribal Workgroup. The GSAs are committed to continue coordinating with the Tribes. The Tribes include: Agua Caliente Band of Cahuilla Indians, Augustine Band of Cahuilla Indians, Cabazon Band of Mission Indians, Torres-Martinez Desert Cahuilla Indians, and Twenty-Nine Palms Band of Mission Indians.
- On groundwater quality - PFAS was in the headline in the NYT today. How are you addressing current or potential PFAS or PFOA in groundwater? It wasn't part of the list of constituents.

    - This is included in the *Alternative Plan Update.* Though it is not on the list of eight constituents of concern, these are emerging constituents of concern. The GSAs will continue to monitor evolving regulations.
- Have you considered what impact a potential lithium brine mining at the Salton Sea might have on water levels and quality?
    - The planning team is unaware of potential lithium brine mine that is within the Plan Area of the *Alternative Plan Update*.
- Impressed with the turnaround in groundwater levels in the 2000s. What caused this, and is it sustainable given concerns with drought and less water from alternative sources?
    - The turnaround in groundwater levels is due to supplemental supply and source substitution. The agencies brought additional supplies to decrease reliance on groundwater pumping, acquired new water supplies for increased replenishment, leveraged additional non-potable water supplies, and connected agricultural users to Colorado River water.
- Is aquifer the same as groundwater storage?
    - The Indio Subbasin is a groundwater basin, meaning that it is an area that produces groundwater (as opposed to the mountainous areas that do not support groundwater production). There are aquifers (i.e., permeable areas) within the basin. An aquifer is a geologic term for distinct water bearing areas with permeability like sands and gravels. Groundwater storage refers to groundwater in storage in the basin.
- East Coachella Valley groundwater levels are still very close to their all-time lows. This likely means that subsidence is more likely to impact small wells in these areas. What accounts for the continued depletion of groundwater in East Coachella Valley, and what efforts are being made to increase the availability of municipal water supply for East Coachella Valley residents?
    - There are multiple replenishment facilities in the mid-Valley area. The GSAs are continuing to work on groundwater replenishment and consolidation of SWS with water quality issues. USGS has not studied subsidence on the individual systems, just at a regional scale and found that in most areas subsidence had stopped, been reversed, or significantly slowed down.
- We have only regained up to 25% of the groundwater that was lost as of 2019. Is the next presentation going to talk about how we build all the way up?
    - The Subbasin does not necessarily have to regain all of the groundwater since there are multiple water sources. Though more groundwater in storage is always good, this plan is looking at the overall dynamic operation of the Subbasin.

Water Demands and Supplies

Ms. Prickett presented the demand forecast for 2020 to 2045. The demand forecast was based on 11 geographic units and considered projected land uses, conversion of agricultural lands, historical water use, and conservation trends. Demands were forecasted for municipal, golf, agricultural, and other uses. Municipal demands relied on regional growth projections provided by the Southern California Association of Governments (SCAG), land use inventories, unit demand factors, projected water loss, and adjustment factors (i.e., conservation savings estimates). Forecasted demands for agriculture considered existing agriculture and projected conversions of idle land to urban land uses, and forecasted demands for golf considered market trends and three proposed new golf courses. Other demands included fish farms, duck clubs, polo/turf, and potential surf parks. Total water

demand is expected to increase approximately 8% between 2020 to 2045 with urban demands increasing with urban growth and agricultural demands decreasing as a result of land conversions.

Ms. Prickett presented the supply portfolio for the Subbasin, which includes groundwater, SWP exchange water, Colorado River water, recycled water, surface water, and other supplies. There is an estimated 10% increase in anticipated future supplies accounting for planned projects. Climate change is anticipated to reduce available water projections by up to 40,000 AFY. The total available and planned supplies are presented in the *Alternative Plan Update*.

Public comments and questions included the following:

- Why is recycled water still so low in 2045? It doesn't seem recycled water use is growing.
    - The GSAs are committed to investing in and expanding recycled water.
- Do you assess a scenario in which Colorado River water decreases, and does not get bumped back up to full allocation?
    - Yes, the simulated scenarios assume less than the full entitlement will be delivered.
- Do you have a similar chart for reduction in the Colorado River supply if that happens? This still shows Colorado River water increasing.
    - Colorado River supplies are still ramping up due to negotiated transfers that peak in 2027. The plan scenarios assume less than the full entitlement will be delivered.
- How many surf parks and beaches did you include? And is there any way to find out the breakdown of "other" amounts today versus 2045?
    - There is a table of other projected demands in Chapter 6, but this is not broken down by specific categories.
    - There are 4 proposed surf parks in permitting phases, plus one 34 acre and one 20-acre swimming beaches that are included under the Other category.

Numerical Model, Plan Scenarios, and Projects and Management Actions (PMAs)

Ms. Priestaf presented the updates to the groundwater model. The calibration hydrographs show that the actual and simulated data points align, and therefore this model is deemed to accurately simulate shallow and deep groundwater levels in the Subbasin. The model can be used to predict future water level and storage changes under different inflow and outflow scenarios for 50 years into the future. The model presents a forecast of future drain flows, Salton Sea flow, and water budget conditions. Calibration hydrographs and simulation hydrographs are available in the *Alternative Plan Update*.

Ms. Prickett reviewed the simulation results from the five Plan scenarios. The results of the Baseline scenarios are not realistic because additional projects are already planned by the GSAs. However, the Baseline scenarios provide a comparison of future conditions with and without climate change/drought. The additional three scenarios simulate the implementation of 5-year (i.e., near-term) projects, future projects, and/or expanded agriculture.

The model incorporates climate change assumptions. For local inflow, the Baseline scenario uses long-term hydrology and previously estimated annual recharge volumes. The climate change scenarios use repeated historical conditions only for the period 1995-2019 that include multiple droughts. Additionally, the availability of imported water for direct delivery and groundwater replenishment was reduced consistent with reduced SWP deliveries in the past 14 years as a result of legal, environmental, and drought conditions, and with potential reductions in CVWD's Colorado River water supply if Lake Mead reservoir levels continue to decline, as stipulated in the Lower Basin Drought Contingency Plan.

Ms. Prickett presented the differing suites of projects and management actions (PMAs). The GSAs established priorities in the selection of PMAs, which are broken down into four categories: Water Conservation, Water Supply Development, Source Substitution and Replenishment, and Water Quality Protection. The Plan scenarios reflect varying water supplies and suite of PMAs. The PMAs have varying assumptions of total supply availability and the timeframe in which these supplies will be available. The *Alternative Plan Update* includes supply graphics showing how much water will be available and where the water will flow. The simulation results show that the Baseline scenarios will likely result in a negative cumulative change in storage and will not achieve Subbasin sustainability. In comparison, the three project scenarios show an increasing cumulative change in groundwater storage and groundwater levels. Therefore, it is concluded that the 5-year PMAs are needed to achieve a supply-demand balance in the Subbasin. Additional future PMAs will be needed for reliability in the face of climate change and uncertainty with future water supplies and demands.

Public comments and questions included the following:

- If SWP declines are 45% over the last 14 years, what has the allocation over the last one to two years? The point was made it was from a high of 80% of contract amount received to a low of 5%.
    - SWP allocations for the past two years have been 20% and 5%. The 45% assumption looks at a combination of wet and dry years. DWR is modeling long-term reliability at 58%, but the Plan is choosing to go with the lower, more conservative 45%.
- Iris mentioned that we expect the operation of groundwater to be dynamic and will likely get down to the Minimum Threshold (MT). At that point, does that mean groundwater pumping would need to be curtailed?
    - There are no plans to curtail groundwater pumping. After looking at all the scenarios and available supplies, the Subbasin is no longer in overdraft and remains above the MTs.
- Governor Newsom declared a drought emergency and is calling for everyone to voluntarily reduce water use by 15%, including Riverside County. How does this affect the Plan?
    - The *Alternative Plan Update* includes conservation as part of the PMAs. Conservation includes everything from turf rebates to toilet replacements, which are being done by the GSAs. All water conservation will be tracked by the GSAs and reported in the Annual Reports.
- What do you see as the biggest risks and challenges in executing the Plan? You mentioned that cost management is one of the goals. How will this impact water rates in the foreseeable future?
    - From a cost-effectiveness perspective, the GSAs are aware of the costs associated with the PMAs in their Capital Improvement Plans and how this may impact their rate structure. The GSAs' governing bodies decide which projects will be implemented. For reference, the *2010 Plan Update* was created at a time when the Valley was anticipated to grow explosively, so there were a lot of projects planned. However, a lot of the projects were not implemented because regional growth did not materialize. The *Alternative Plan Update* will take an adaptive management approach and implement projects as needed while tracking population growth and development. Challenges include the uncertainties associated with demands and supplies.

Plan Evaluation and Implementation

Ms. Prickett presented the implementation activities that the GSAs will employ as part of the *Alternative Plan Update*. Implementation activities include, but are not limited to, GSA program management, monitoring programs, tribal coordination, stakeholder outreach, and annual reports. The GSAs have established a list of priorities, listed in the *Alternative Plan Update*, that will guide the implementation of PMAs.

Ms. Prickett presented the key takeaway from the *Alternative Plan Update,* which is that with the implementation of the PMAs, the three project scenarios have adequate supplies to meet the projected demand forecast. The water budgets for the three project scenarios show that each scenario has an average inflow higher than outflow, which will result in a cumulative increase in groundwater storage. The *Alternative Plan Update* demonstrates that the GSAs can meet the established goal and the Subbasin can be sustainable. The GSAs will continue to monitor trends in demand and supply availability and implement the PMAs as needed.

There were no public comments.

Next Steps

Ms. Priestaf presented the next steps for the *Alternative Plan Update*. The Draft *Alternative Plan Update* can be downloaded at http://www.indiosubbasinsgma.org/. Public comments are due on October 29, 2021. Comments should be submitted via email to IndioSubbasinSGMA@woodardcurran.com. The GSAs will review all comments submitted and incorporate revisions as appropriate. The Final *Alternative Plan Update* will be prepared and released for adoption by the GSA governing bodies in early December. The GSAs will submit the *Alternative Plan Update* to the State for review and approval before January 1, 2022.

Public comments and questions included the following:

- Given the large amount of information provided in the Plan, 30 days is too short for a comment period; 45 days seems more appropriate.
    - The *Alternative Plan Update* is due to the State by the end of December 2021. The planning team understands that 30 days is a short period, but the comment period needs to close to finalize the Plan and submit it to the GSAs for their Boards to approve in early December 2021.