



# 2022 Indio Subbasin Alternative Plan Update

## SGMA Tribal Workgroup

### SUMMARY

November 19, 2020 at 10:00 am – 12:00 pm

GoToMeeting for Presentation

<p><b>Tribal Workgroup and Supporting Members</b></p> <ul style="list-style-type: none"> <li>• Chuck Jachens, Bureau of Indian Affairs</li> <li>• John Covington, Morongo Band of Mission Indians</li> <li>• Justin Conley, Agua Caliente Band</li> <li>• Levi Anderson, Twenty-Nine Palms Band of Mission Indians</li> </ul>	<p><b>Groundwater Sustainability Agencies (GSAs)</b></p> <ul style="list-style-type: none"> <li>• Ashley Metzger, DWA</li> <li>• Castulo Estrada, CWA</li> <li>• Katie Evans, CVWD</li> <li>• Mark Krause, DWA</li> <li>• Melanie Garcia, CVWD</li> <li>• Reymundo Trejo, IWA</li> <li>• Ryan Molhoek, DWA</li> <li>• Steve Bigley, CVWD</li> <li>• Trish Rhay, IWA</li> <li>• Zoe Rodriguez del Rey, CVWD</li> </ul> <hr/> <p><b>Consultant Team</b></p> <ul style="list-style-type: none"> <li>• Iris Priestaf, Todd Groundwater</li> <li>• John Ayres, Woodard &amp; Curran</li> <li>• Maureen Reilly, Todd Groundwater</li> <li>• Nicole Poletto, Woodard &amp; Curran</li> <li>• Rosalyn Prickett, Woodard &amp; Curran</li> </ul>
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### 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 then presented the meeting objectives and agenda. She reintroduced the project team working on the Indio Subbasin Alternative Plan Update, including the Indio Subbasin Groundwater Sustainability Agencies (GSAs) and Consultant team.

Ms. Iris Priestaf, Todd Groundwater reviewed the meeting objectives and an overview of the Workgroup timeline over the two-year planning period. This included the quarterly meeting schedule for both Public Workshops and Tribal Workgroup meetings.

### Alternative Plan Status

Ms. Priestaf 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 information included in the Plan Area chapter.

The Plan Area chapter will include maps that note the location of cities and counties, tribal lands, federal and state lands, and disadvantaged communities, etc. The purpose of these maps is to depict the location of agencies that have water management and/or land use planning roles and to understand the region. One map depicts water management facilities including water sources and infrastructure in the region as well as accompanying descriptions. A water resource monitoring networks and programs map introduces climate, streamflow, subsidence, groundwater elevations, surface water and groundwater quality, groundwater pumping, and drain flows.

If anyone has any updated information or input for the maps, please let the team know.

Discussion: Are there any other items to describe or introduce in the Plan Area chapter?

- Will the plan include maps indicating areas affected by the primary water quality constituents?
  - That information will be located in the Groundwater Conditions chapter. The Plan Area chapter will depict the basic monitoring network.

### **Hydrogeologic Conceptual Model (HCM)**

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Ms. Priestaf introduced the HCM which establishes the physical framework for the Plan Area. The HCM cross sections allow for a depth view of the basin and depict geology, wells, faults, and groundwater levels to improve understanding of what is below the surface. Ms. Priestaf walked the attendees through a cross-section graphic to explain the constituents that make up the basin. The lighter colored sand and gravel is permeable, and as the constituents get darker, they become less permeable. For example, clay is less permeable compared to sand. Slide 19 indicates how fault zones impact water levels in the basin, decreasing depth to surface and then causing a sudden drop in flow due to faults.

Ms. Priestaf also explained groundwater inflow and outflow in the Indio Subbasin. Slide 21 depicts a panoramic view of the topography of the Basin. There are markers along the cross section to let you know where you are located on land. In the upper valley, the basin is permeable, and as you move towards the Salton Sea, there is more clay soil. Groundwater levels near the Salton Sea are much closer to the surface compared to the upper valley. With this information, the groundwater model will simulate the Subbasin.

### **Groundwater Model Update**

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Ms. Maureen Reilly, Todd Groundwater provided an update on the groundwater model. The HCM shows that the basin has not changed considerably from the previous plan. This model builds upon the consistency of previous estimates, adds new pumping data for all wells, updates subsurface inflow and Salton Sea elevations, and develops recharge estimates for 2010-2019. These updates improve the data and methods used in the 2010 model.

First, the team characterized the inflow in the basin from various sources. Inflow included:

- Mountain and Stream - USGS gages help depict mountain front recharge and stream percolation throughout the basin. Mountain flow routes water through the watershed. Mountain flow is typically in the southern end of the basin and subsurface flow exists in the eastern end of the basin.
- Golf - The team inventoried golf courses in the basin and identified their water supply sources. Comparing the supply with the expected demand gives return flow. The supply and

return flow were similar to the previous analysis in 2010, but improved the spatial variability of irrigation efficiency.

- Agricultural - The agricultural return flow was calculated using the Trimester Crop Census. The Census shows what crops are being grown when and where and can help provide an understanding of the amount of water that is being used. It depicts multicropping and permanent crops to allow for detailed temporal change of water use in the Basin.
- Municipal – Municipal return flow was calculated looking at outdoor water use. The model was able to vary the local outdoor use spatially.

The major outflow in the basin is groundwater pumping, The depth of pumping impacts water conditions. As water use changes, the well depth data can give a better picture of how the basin conditions may change.

In order to confirm if the groundwater model simulates reality, observation wells were used to compare simulated and observed values. The team coordinated with neighboring basins in order to ensure consistency. This tool will allow for scenario planning in the future.

- In the Alternative Plan, 2005 groundwater levels were used as a threshold for land subsidence as an example. Since the model will be redefined, what data will be incorporated [what year] to define groundwater levels, land subsidence, groundwater in storage and of course determining a threshold for sustainability indicators?
  - The model is only a tool and doesn't develop sustainability indicators. It also doesn't calculate subsidence. It calculates water levels and storage based on the inflows and outflows that are entered. The groundwater levels used as the threshold for subsidence will be discussed when the sustainability indicators are discussed at a future meeting.

## **Demand Forecast**

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Ms. Prickett noted that the demand forecast results presented are preliminary. Feedback was encouraged to determine if any changes needed to be made. The demand forecast is based on 11 geographic units used to identify the underlying demographic information that included land use and water use patterns in each area. This includes an east and a west unincorporated area in order to analyze the data at a finer scale.

### *Municipal Demands*

There are five major steps to determine the municipal demands forecast: the regional growth forecast, land use inventories, unit demand factors, projected water loss, and adjustment factors. These steps are discussed in more detail below.

- 1) Regional Growth Forecast – The Southern California Association of Governments (SCAG) 2020 data was used to provide projections for households, employment, and population. SCAG data was used in the previous plans. These growth forecasts are based on the City and County General Plans and other planning documents for the agencies. The SCAG growth forecast projects that for the Plan Area, population will increase by approximately 53%, households will increase 66% and employees will increase 39%. These projections are more in line with the 2002 Plan. Because the Alternative Plan Update is due before the US Census data is released, the SCAG 2020 numbers were used.
- 2) Land Use Inventories – This is important to project housing units in alignment with demand. SCAG and US Census data helped determine the number of occupied households vs planned. About 30% of the housing units in the Plan Area are vacant or are only occupied seasonally

but may continue to have water use and therefore it is important to incorporate. The SCAG land use inventory map shows land use based on the City and County general plans. Over time, a slight shift to multi-family units are expected, but the split between single family and multi-family units will remain relatively equal at the end of the planning horizon.

- 3) Unit Demand Factors – Unit demand factors use 5-year averages from customer billing data (2015-2019). It is important to note that the demand factors show gallons per housing unit or gallons for employee per day for industrial use, which is not equivalent to gallons per capita per day (GPCD). A demand factor for all GSAs was calculated. CVWD’s single family demand factors were calculated for each of the geographic units within their service area. Water demands for small water systems throughout the eastern unincorporated area were applied to the demand factor for CVWD to accommodate other housing units that are not currently served by CVWD’s domestic system. All of DWAs designated land use meters show up in the Commercial, Industrial, and Institutional (CII) category rather than the designated Landscape category.
- 4) Projected Water Loss – Water loss is based on audited water loss reports for the water that is lost between delivery and the meters. Water loss is estimated at about 10%.
- 5) Adjustment Factors – Demands are adjusted by conservation savings estimates for indoor and outdoor water use. Passive conservation includes indoor conservation (e.g. changes in indoor plumbing) and outdoor conservation for only future development (new development efficiencies) and not existing development. Conservation for existing development will be applied separately.

In summary, there is a 43% increase in projected municipal demands over time. Each GSA is depicting a projected increase in demand ranging from 28% (DWA) to 190% (CWA).

#### *Agricultural Demands*

The forecast process was similar to the municipal demands forecast. Ms. Prickett explained that the team analyzed the regional growth forecast, land use inventories, and unit demand factors. The forecast considered the SCAG 2020 growth projections for households, population, and employment. The land use inventory identified idle and agricultural lands for conversion based on SCAG land use mapping to see which agricultural areas may be going out of service. 5-year averages (2015-2019) from agricultural pumping and Canal delivery data were used to develop unit demand factors.

The baseline demand for the 5-year average of 2015-2019 is 205,150 AFY. These projections were applied to the crop census to estimate the total cropped acres and develop demand factors. The average unit demand factors ranged from approximately 4.3 acre-feet/acre to 7.3 acre-feet/acre. This affects the agricultural demand factors because changing agriculture in the future years impact the demand forecast in the geographic units. Within CWA and IWA especially, a total of approximately 14,300 acres are expected to be converted from agricultural or idle land to urban land. The forecast predicts an overall decrease in water demand, even with the addition of approximately another 1,000 acres of agricultural land converted from idle land.

#### *Golf Demands*

The golf water demands followed a similar format to calculate the baseline demand. It also planned for conservation from future golf courses to comply with CVWD Ordinance No. 1302.4. In the last 10 years, two golf courses were opened, and two very small courses were closed, depicting a potential flat line in the golf industry. Ms. Prickett explained that the team also talked to the Southern California Golf Association to understand projected growth, and they did not project significant growth. The current demand forecast assumes three new golf courses will be constructed before 2045.

### *Other Demands*

The other demands include fish farms, duck clubs, surf parks, polo/turf, and environmental water. Through the review of supply assessments and the Salton Sea pilot project, three new users were identified. The baseline average was approximately 19,000 AF. The demand forecast predicts four new users will be added between 2025 and 2035, adding 2,700 AFY of water demands.

### *Summary*

When all demands are rolled together, there is a 7% increase in demand from 2020 to 2045. This is relatively low in comparison to the projected population increase and depicts the impact of changing uses in the Valley. Any input on new or planned demands was requested.

### **Supply Analysis**

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Ms. Prickett noted that there is uncertainty with the supply sources discussed today. In certain scenarios, these supplies may change. The six buckets of the supply portfolio include groundwater, State Water Project exchange water, Colorado River water, recycled water, surface water, and other supplies. These supplies are discussed in more detail below.

The Indio Subbasin provides **groundwater** storage capacity. Total groundwater storage has increased since 2009. The recovery of the groundwater storage demonstrates the success of the 2002 and 2010 Water Management Plans. The water budget is a work in progress (inflows and outflows) and will be evaluated with the model when the water budget calculations are complete. The difference between the inflow and the outflow is the net return flow that is entering the basin. The groundwater model will give a better estimate of the net return flow number. For the watershed model, the long-term average for net watershed runoff is 42,300 AFY (1931-2019). The high was in 1980 and the low was in 2002. The surface water diversions were removed from the average as well as the amount of flow that goes through the Indio gage to the Salton Sea.

DWA and CVWD have contracts for **State Water Project Water** (SWP). SWP water is exchanged with Metropolitan Water District (MWD) for Colorado River Water and it is annually variable due to Northern California hydrology. The SWP Table A amount assumes a reliability of 58% annually that will decrease to 52% over time. If the Delta Conveyance Facility is constructed, reliability will improve assumedly back to 58% or more.

CVWD has a QSA entitlement and MWD SWP transfer. **Colorado River water** is generally delivered by the Coachella Canal to farmers in the eastern portion of the Valley. The MWD transfer can be delivered to the Canal or Whitewater and can be recharged at Whitewater River GRF. The plan includes a ramp up of QSA entitlement minus conveyance and transfer losses (436,000 AFY at its peak). The supply forecast reflects the ramp up (5,000 AFY per year) in accordance with 2003 QSA, minus conveyance and transfer losses.

**Surface water** diversions occur at Snow, Falls, Chino Creeks in the San Jacinto Mountains and Whitewater River Canyon. Water is delivered directly to agriculture and municipal users in the West Valley. Forecast is continued delivery of that supply from 2,360 AFY to 6,000 AFY over time.

**Recycled water** is produced at three Water Reclamation Plants (WRPs) including CVWD's WRP-7 and WRP-10 and DWA's WRP. Existing wastewater flow at these plants is 19,400 AFY but current capacity is over 30,000 AFY. About 35% of the available supply is recycled at these plants. The forecast is based on difference of these projected flows. The amount of indoor water use is the projection for available wastewater going forward. If this additional water up to design capacity is recycled, this could be about 32,500 AFY. This is the potential supply but there might not be any infrastructure to distribute. This will be discussed further in the Projects and Management Actions chapter of the GSP.

**Other supplies** include several other transfers and supplies not covered by the other buckets. This includes the Yuba Accord, Rosedale Rio-Bravo, and the construction of Sites Reservoir.

Ms. Prickett echoed that the Supply forecast results are preliminary, and feedback is encouraged. The existing supplies forecast totals to about 640,000 AF by 2045. If future additional supplies are added, supplies are over 700,000 AFY. The water supplies for the future are dependent on the implementation of projects based on the projects and management sections of the GSP.

- Will there be a discussion of uncertainty? Such as annual variations, drought, data error, etc.
  - Yes, in the Alternative Plan Update we will discuss uncertainty. In the scenarios there is the option to change some of the supply projections. For example, in a drought scenario there would be less surface water available from runoff and therefore the supply numbers will be updated accordingly for that projection.
- Uncertainty would potentially include Sites and DCP?
  - The uncertainty will include potential future supplies that haven't been discussed yet and are not controllable by the suppliers in the basin. We will take into account how that will impact the supply and demand moving forward.
- Can you explain the increase in surface diversion from the Snow, Falls, Chino creek, San Jacinto Mountains, and Whitewater River Canyon from 2,630 to 6,000 AFY?
  - The projected increase in diversions is projected based on the available supply that DWA has projected from watershed runoffs.
  - Is that mountain runoff?
    - Yes, it is watershed runoff.
  - What is that dependent on?
    - It is dependent on development of customers in that geography, just like a recycled water project. There is potential for supply, but it is dependent on projects for delivery.
- Where would additional data greatly improve the certainty of the conclusions?
  - We are working through processing that kind of data while working through our supply forecast to understand long term supply certainty and are talking with State water supply contractors to improve our understanding. The goal is to make it as accurate as possible.
- Will that information be included in the plan?
  - Yes, the assumptions that we did for the supply forecast will be included in the Plan. There will also be a scenario on climate change that will be included in the plan.

## **Next Steps**

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Ms. Priestaf reviewed next steps for the team for the next few months. This includes the documentation of groundwater dependent ecosystems, completing the update of the groundwater model, quantifying the Indio Subbasin water budget, identifying projects and management actions, developing proposed sustainability criteria, and identifying emerging issues.

For the context of emerging issues, SGMA identifies six undesirable results, and serve as the indicators for what sustainable management within the basin means. The team needs to determine what the criteria are to maintain sustainable management goals. The emerging issues identified in

2010 need to be updated. These issues included specific water quality constituents, water conservation, seismic risk, subsidence, invasive species, climate change. What are some emerging issues that concern you now?

Emerging issues identified by attendees include:

- Salt and Nutrient Management Plan - Will a discussion of the SNMP and its influence on this plan be included? The regulatory aspects of salt and nutrient management can greatly influence water supply.
- Chromium-6 MCL to be developed/updated in the future is a concern

### **Other Planning Efforts**

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Ms. Zoe Rodriguez del Rey, CVWD provided updates on the *Salt and Nutrient Management Plan* (SNMP), a separate but concurrent update process with the *Indio Subbasin Alternative Plan Update*. The Regional Board sent a letter on February 19, 2020 and an SNMP Workplan and Monitoring Plan will be completed by December 31, 2020 to address their concerns. A workplan is being developed and the due date has been extended to April 30, 2021. The draft monitoring plan was submitted November 16 and there is a meeting in December to review. The SNMP development workplan is being collaboratively prepared by water and wastewater agencies with input from the Regional Water Quality Control Board.

Ms. Ashley Metzger, DWA announced the *2020 Urban Water Management Plan* (UWMP) update is underway. UWMPs must be submitted every five years. The 2020 plans are due July 1, 2021. DWR has released the draft Guidebook. There are new requirements this round including reporting on energy use and Delta reliance. DWA is also working on water shortage contingency planning. The first stakeholder meeting on the UWMP is December 14, 2020 from 2:00-4:00. Email Ashley (ashley@dwa.org) if you are interested in receiving more info. A final draft is due to DWR July 2021.

- DWR's review of the Alternative Plan included seven recommended action items to be addressed in future updates of the Alternative Plan. Additionally, the Tribes provided comments related to the review of the Alternative Plan. How can the tribes be assured that these action items and comments will be addressed or considered? Note: I am not representing any other tribe other than Morongo based on the contents of my question.
  - We plan to integrate our work in response to DWR's recommendations into the Plan itself. We will specifically address DWR's recommendations by integrating those recommendations and all comments we receive into our document. I think these issues will be coming up in future workshops, and the interaction in workshops have been key to understanding what the concerns are.

### **Groundwater Dependent Ecosystems (GDEs)**

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Ms. Prickett reviewed a "bonus slide" focused on the GDE Field Assessment Sites. The *Natural Communities Commonly Associated with Groundwater* (NCAG) geospatial dataset were included on a map with the California Natural Diversity Database (CNDDB) vegetation sites. Of the NCAG data set parcels identified, the team is looking to understand which sites are groundwater dependent ecosystems. The data set captures everything that could be related to waterways including streams, riparian corridors, and dry washes and the team is fact checking the NCAG data sets to see where there are habitats that could be accessing groundwater for survival.

15 sites have been identified for field assessments in December. Four sites have been identified as tribal owned sites: Sites 3, 7, 13, and 14. Sites 3 and 7 may be Torrez Martinez and are identified as

Department of Interior parcels (assumedly BIA). 13 and 14 may be on Agua Caliente lands. Can you help our team get access to those sites for the field assessment so we can verify if they are GDEs?

- Site 9 looks like it is near Twenty-Nine Palms Reservation land. Where is this?
  - It says it is federal government owned – you are correct, it is probably Twenty-Nine Palms.
  - Would need to see a closer look. Cabazon Reservation and Twenty-Nine Palms are adjacent.
- Even if GDEs are not on Tribal lands, they may have significant values to the Tribes.
  - We look forward to that input next time when we discuss the results of the field study
- Who do we follow up with if we find a site that is not publicly accessible but is on tribal land?
  - Some of these lands may be publicly accessible. I am seeing one that is Torres Martinez but it may be close to something that CVWD operates. We will narrow down to the site list to sites that may not be publicly accessible.
- Who will go out from your team?
  - A wetland biologist will conduct the field assessment. They have looked at the Multiple Species Conservation plan and completed their desktop analysis. The results of this analysis and the field survey will be presented at the next meeting.
- Site 15 looks like it is open to the public.