2022 Indio Subbasin Alternative Plan Update

Public Workshop #3

SUMMARY

November 19, 2020 at 2:00 pm – 4:00 pm

GoToMeeting for Presentation and Microsoft Teams for Spanish Translation Services

Members of the Public

- Amy McNeill, Riverside County Flood Control and Water Conservation District
- Brian Macy, Mission Springs Water District
- Cathy Sanford, Regional Water Quality Control Board
- Chuck Jachens, Bureau of Indian Affairs
- Craig Kessler, Southern California Golf Association and CVWD Golf and Water Task Force
- Daniel Carney, Eastern Municipal Water District
- Diana Ugarte Navarro, Torres Martinez Desert Cahuilla Indians
- Golf Course Superintendents Association of America
- Hector, La Quinta Grower
- Jennifer Harkness, United States Geologic Survey (USGS)
- John Covington, Morongo Band of Mission Indians
- Justin Conley, Agua Caliente Band of Cahuilla Indians
- Kevin Fitzgerald – Southern California Golf Association
- Kimberly Romich, California Department of Fish & Wildlife
- Kim Taylor, USGS
- Manny Rosas, Agua Caliente Water Authority
- Margaret Park, Agua Caliente Band of Cahuilla Indians
- Nataly Escobedo Garcia, Leadership Counsel for Justice & Accountability
- Nina Waszak, Coachella Valley Water Keeper
- Randy Roberts, Palm Desert Resident
- Ron Buchwald, Valley Sanitary District
- Steven Ledbetter, Mission Springs Water District
- Tarren Torres, Egoscue Law Group representing Agua Caliente Band of Cahuilla Indians
- Tim Bradshaw, La Quinta Grower
- Tom Calabrese, Envirologic Resources

Groundwater Sustainability Agencies (GSAs)

- Angela Johnson, Coachella Valley Water District (CVWD)
- Ashley Metzger, Desert Water Agency (DWA)
- Castulo Estrada, Coachella Water Authority (CWA)
- Ivory Reyburn, CVWD
- Jamie Pricer, CVWD
- Jason Lucas, CVWD
- Jim Barrett, CVWD
- Katie Evans, CVWD
- 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
- Maureen Reilly, Todd Groundwater
- Nicole Poletto, Woodard & Curran
- Rosalyn Prickett, 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. She reintroduced the project team working on the Indio Subbasin Alternative Plan Update. The Indio Subbasin Groundwater Sustainability Agencies (GSAs) are Coachella Valley Water District (CVWD), Coachella Water Authority (CWA), Desert Water Agency (DWA), and Indio Water Authority (IWA). The Consultant team includes Todd Groundwater Inc. and Woodard & Curran, Inc. Ms. Prickett held a roll call for all attendees of the virtual meeting. There were approximately 40 attendees; some callers were unidentified.

Ms. Iris Priestaf, Todd Groundwater reviewed the meeting objectives and presented the agenda for today's workshop.

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.

- Will maps include where DAC communities are located?
    - Yes, we have included mapping of DACs.
- Will DAC communities be included on the monitoring networks map?
    - If this question is asking if there is adequate monitoring for DACs, we can compare the maps. Part of the monitoring program is to assess where monitoring sites are and where additional monitoring sites may be needed.
    - This may be something that we bring back into our presentation on the monitoring network. While we may not include it in the Plan itself, we could include it in the February workshop.
    - We could also include small water systems on this map.
        - That would be great!

Hydrogeologic Conceptual Model (HCM)

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

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.

Demand Forecast

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).

Discussion: What industries are changing? How is residential seasonality changing over time?

- Is there a demand forecast for tourism and the impact that will have on water demands?
    - Yes, tourism was considered in the Commercial, Industrial, Institutional category of the municipal demand forecast

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.

Discussion: Is agriculture stable, growing, or shrinking over the next 20 years? What are current trends in local agriculture? What crops are changing and where?

- Due to a scheduling conflict, many of the agricultural stakeholders could not attend today's meeting. CVWD will be following up with them.
- How are conservation savings factored into your plan of 42,000 AF?
    - We are separating passive and active conservation programs in the Alternative Plan Update. This forecast only includes passive conservation.
    - The goal of 42,000 AF has been deferred for 10 years and I'd like to see it referenced in this plan. I have been bringing this up for multiple years. Conservation goals need to be addressed.

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.

Discussion: Are you aware of any new or planned golf courses? What are current trends in golf?

- We've predicted that by 2030 there will be three less golf courses than there are now and we are not projecting any additional future courses. COVID-19 has caused an incredible spike in golf play. The desert is a seasonal and out of town market, and we are waiting to see if the increase in golf play is reflected here. It may be negatively impacted by the restrictions on foreign travel. We are hopeful that a portion of the spike in golf play will remain in the future, but it is unknown. I think you guessed right for the demand forecast.
    - In the demand forecast, we are assuming conservation only for the new courses, and no passive conservation for existing programs. We are reserving those conservation programs for the Projects and Management Actions to calculate water savings for those programs. Any turf rebate that a golf course would take advantage of would be active savings.

- In 2014/2015, Governor Brown mandated a 10% cut back on water usage for golf courses. Golf courses in Coachella Valley are not very drought tolerant and contain "wall to wall" grass on private country clubs. On Google satellite view you can see that golf courses are only a fraction of the water being used to water the surrounding areas of the golf courses. Golf is considered an unreasonable use of water and is a matter of public policy. I'm not seeing anything about conservation for the water use for golf courses outside of the courses themselves that are using 1,000-1200 AFY.
    - Those surrounding areas are considered in the conservation ordinance calculations on maximum allowable water.
        - I think you are missing what I am saying. The surrounding areas aren't exactly the golf courses. All of the area surrounding the golf courses (HOAs and country clubs) are considered golf course use. The grass extends for acres that has nothing to do with playing golf. It is very important that it is quantified. It is considered by the golf course as part of their water use.
    - I will add clarification to Randy Robert's comment, that conservation for existing development by sector will be considered in the Project & Management Actions section of the Plan Update. Stay tuned for more on that topic in upcoming workshops!
- Regarding Mr. Roberts' comments about golf's conservation record, I'd like to point out that the 108 courses served by CVWD are currently irrigating at levels significantly below both 2010 and 2013. They can and will do better over time, but to suggest that they are profligate in that use is not sustained by the data.
    - Thank you both, I know it is a hot topic.

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.

Discussion: Are there any other water demands that we should consider? Have all potential users been included in the forecast?

- How often will these forecasts be updated? For example, Riverside County just approved the development of the Thermal Beach Club. Is something like that included in this forecast?
    - SGMA requires a 5-year update and there will most likely be a comprehensive update of the demand forecast in those 5-year updates. We reached out to all of the municipalities in the Plan area to see if there were any current developments that were not included in the SCAG 2020 data. We received information back from those agencies in the Spring of 2020.
- The Thermal Beach Club was just approved like 2 weeks ago; so, would that mean it is not included?
    - Even though the project wasn't approved yet we had the data to work into the calculations from the Water Supply Assessment/Water Supply Verification (WSA/WSV).
    - It is included as are all such water uses with approved WSA/WSVs

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

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.

- It looks like watershed runoff was below normal since 1996; not just the last 10 years.
    - Yes, that is correct. When we added in the last 10 years, overall average decreased.
- Will this presentation be made available on the Indio Subbasin website?
    - Yes, the presentation is already available on the website and can be accessed here: http://www.indiosubbasinsgma.org/get-involved-faq/.
- How much of the one million acre feet gain in groundwater storage is advanced deliveries?
    - CVWD tracks the advanced delivery account; unsure of the volume at this time.
- Where is groundwater pumping accounted for in this water supply?
    - It is not accounted for in the supply; pumping is included in demands.
- Beside PFAS, are there other concerns for groundwater contaminants in groundwater (nitrate, arsenic)?
    - Yes, we have both ongoing issues and emerging issues.

Next Steps

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, which 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
- Chromium-6 has been recognized for a while but standards change, and that may have an impact on our systems.

Get Involved

Ms. Priestaf encouraged attendees to sign up for the stakeholder list on the Indio Subbasin website and mark the calendar for the next public workshop scheduled for February 2021. The workshop will be held from 2:00-4:00 p.m. and will most likely be virtual due to COVID-19. For any additional information, please contact Rosalyn Prickett at indiosubbasinSGMA@woodardcurran.com.