



August 16, 2023

The Honorable Maria D. Hernandez
Presiding Judge of the Superior Court of California
700 Civic Center Drive West
Santa Ana, CA 92701

Re: Irvine Ranch Water District's Response to the Orange County Grand Jury's Report Titled
"Historic Rain, Yet Drought Remains"

Presiding Judge Hernandez:

On June 9, 2023, the Orange County Grand Jury released a report titled "*Historic Rain, Yet Drought Remains.*" This report requested that the Irvine Ranch Water District (IRWD) respond to certain findings and recommendations. Per the 2022-2023 Orange County Grand Jury's request, and in accordance with Penal Code 933.05, below are IRWD's responses to Findings F1, F2, F3, F4, F5, F6, F7, F8, F9, F10, F11, and F12, and Recommendations R2 and R4.

Background Information:

IRWD provides high-quality drinking water, reliable wastewater collection and treatment, groundbreaking water recycling programs, and environmentally sound urban runoff treatment to approximately 450,000 residents and a daytime population of 600,000. IRWD remains a longstanding leader in the areas of water resource management and planning, with an emphasis on sustainability. The District is also a recognized leader in drought preparedness and emergency supply development and has earned durable success with water conservation and water use efficiency. The District's drought preparedness rests on our successful efforts to diversify our supplies.

In 1990, imported water comprised two-thirds of the District's water source portfolio. By 2021, potable and non-potable reuse comprised more than 50 percent of IRWD's water supply portfolio while imported water fell to 18 percent. In short, through foresight, long-term planning and investment, the District has developed a diversified portfolio with drought-resilient sources.

IRWD Responses to Findings and Recommendations:

Finding F1: "*Future water supplies are impacted by climate change and current supplies will not meet future demands.*"

Response: IRWD disagrees partially with this finding.

IRWD agrees that climate change is impacting and will continue to impact California's water supplies. The evidence suggests that changes to

California's weather cycles are already affecting water resources throughout the state and, in turn, negatively impacting ecosystems, economies, and communities.

The District disagrees that current supplies will not meet future demands. IRWD employs long-range planning techniques and water supply modeling programs to determine the future water and wastewater needs of its community. We plan for and anticipate being able to meet all of the future demands of the community that we serve.

The District agrees that California can and should take action to build greater water resilience into its water resource management and planning in order to account for climate change.

Finding F2: *“Climatologists predict future extended periods of low moisture with occasional wet years.”*

Response: IRWD disagrees partially with this finding.

California has a climate that cycles between periods of large amounts of precipitation and times of drought. While the future impacts of climate change on California's weather cycles are not known with complete certainty, many climate scientists have predicted that California will receive the same, if not more, precipitation. In fact, the California Department of Water Resources tweeted on June 14, 2023, that:

“Climate scientists tell us that atmospheric river #storms, like the ones we experienced in the January of 2023, are expected to increase in intensity and frequency in California due to climate change.”
https://twitter.com/CA_DWR/status/1669033110519054336?t=c8INL3sRX4m_H9a_GB9VA&s=09

Because of climate change, California will likely continue to see “weather whiplash” and will have weather cycles that will result in more rainfall and less snow in the mountains, earlier snowmelt, more intense rain events, and increasingly frequent droughts. This is why the District partially agrees and disagrees with Finding F2.

The District agrees that California will see extended periods of less precipitation. We disagree that we will see only occasional wet years. More likely than not, we will see greater variability on when precipitation falls in California in terms of time of year, receiving the same or more amount of water, instead of only seeing wet periods occasionally.

Finding F3: *“Climate change is inevitable and is exacerbated by human behavior.”*

Response: IRWD agrees with this finding.

As indicated above, IRWD agrees that climate change is occurring. California is already seeing its impacts and will continue to see its impacts on the state’s ecosystems, economies, and communities.

Finding F4: *“South Orange County relies primarily on the importation of water.”*

Response: IRWD agrees with this finding.

Approximately 50 percent of all the water used throughout Orange County comes from imported supplies. In southern Orange County there is a higher level of dependence on imported water, as compared to northern Orange County, because southern Orange County does not have access to groundwater. This is different from northern Orange County because that region has access to a vast supply of groundwater, which is actively recharged. The result is that southern Orange County primarily relies on imported water to meet its water demands.

Finding F5: *“Local water suppliers recognize that enhanced stormwater capture and storage, wastewater recycling, and infrastructure improvements will not be sufficient to address the long-term forecast of drought and its effects on supply.”*

Response: IRWD disagrees wholly with this finding.

Providing for a reliable and safe water supply is the primary mission of Irvine Ranch Water District. For IRWD, the District must be able to provide sufficient water to its service area to meet customer water demands under all reasonably foreseeable hydrological and system outage conditions – including more frequent drought.

This is why IRWD regularly evaluates of the District’s water supplies and system reliability – separately and in combination, where appropriate – taking into consideration factors such as long-term drought on the Colorado River, difficulties in approving and constructing an alternate conveyance to bypass flows around the Sacramento-San Joaquin Delta, the risk of Delta levee failures, local and regional earthquakes, State Water Project and Colorado River facility failures, long-term climate change and reductions in water available for recharge in to the Orange County basin, etc. These evaluations and studies take into consideration the frequencies, magnitudes, probabilities, timing, and durations associated with events that could affect our reliability.

Implicit in the concept of reliability is the responsibility of a water supplier to develop an array of strategies to meet existing and future water needs. Recognizing this and in acknowledgment of the risks associated with state water supplies and an increased probability for drought due to climate change, IRWD has actively developed and made substantial investments in alternative local supplies, recycled water, water storage, flood water capture, water infrastructure, and water use efficiency to prepare for times of dryness and limited imported water supplies.

These efforts have not only allowed the District to become more self-reliant, but also more resilient. Based on current modeling, which includes various climate change scenarios, the District is well prepared for climate change and drought – even if it is more frequent.

Further investment in enhanced stormwater capture and storage, wastewater recycling, and other infrastructure improvements, which include new surface and groundwater storage, conveyance, and emergency supply development may be sufficient for others to be positioned like IRWD to weather long-term droughts and their impact of water supplies.

Finding F6: *“There is significant water infrastructure planning, but inadequate implementation.”*

Response: IRWD disagrees partially with this finding.

The planning, approval, permitting, and development of water infrastructure is complex. The District agrees that there is significant planning taking place to develop water infrastructure in Orange County and across the state. The issue regarding adequate or inadequate implementation is not as simple as counting the number of projects completed during a defined period of time.

The planning and development of water infrastructure must balance the needs of people, businesses, agriculture, and the environment. As a result, water infrastructure projects take time to plan, design, and get approved. They are also often large projects that take time to construct.

The District agrees that California needs to do more to expedite the approval of water infrastructure projects and get projects built faster. But while implementation may seem inadequate to some, from IRWD’s perspective it is less an issue of inadequate implementation and more an issue of decreasing the permitting and approval time it takes to bring new infrastructure projects online. This is particularly true for large-scale water infrastructure projects that could provide broader statewide benefits, but often take decades to complete.

Finding F7: *“The review and approval process for major water capital projects is cumbersome and overly restrictive.”*

Response: IRWD agrees with this finding.

As noted above, the decentralized review and approval process for major water capital projects is cumbersome and extends the time it takes to construct and bring online water infrastructure projects. To expedite the review and approval process will require regulatory streamlining at the State level. While some streamlining was recently enacted, the state’s and county’s water resource management could benefit from further streamlining.

Finding F8: *“Failing to find solutions to water shortages will have a significant impact on the Orange County economy.”*

Response: IRWD disagrees partially with this finding.

IRWD agrees that if Orange County experiences significant or extended water shortages there will be a significant impact on the Orange County economy. The District disagrees with the finding’s presumption that water shortages in Orange County are inevitable without implementation of the report’s preferred water supply solution: the implementation of ocean desalination in Orange County.

For IRWD, even as California contends with reoccurring drought, we do not see a substantial risk of running out of water for our community due to our diverse and reliable water supplies. To ensure this, we continued to invest in cost-effective infrastructure, and appropriate supplies to preserve our community’s high level of water reliability.

Finding F9: *“Continued development in Orange County creates additional water supply needs.”*

Response: IRWD disagrees wholly with this finding.

New development does increase water demands within a community, but that does not necessarily create a need for additional water supplies. As water demand increases with new development within IRWD’s service area, the District has the ability to meet those new demands with existing supplies. This is because, as discussed above, IRWD has diversified its water supply portfolio, and actively developed and made substantial investments in alternative local supplies, recycled water, and water use efficiency in order to meet all current and future demands within its service area.

Finding F10: *“Conservation and efficient use of water is essential.”*

Response: IRWD agrees with this finding.

IRWD agrees that the management of any limited resource includes the practice of efficient use and conservation, and conservation and efficient use of water is essential in the effective management of water resources. For over three decades, the District has implemented innovative water efficiency programs in our service area aimed at increasing water use efficiency and minimizing water waste. These water efficiency programs have produced sustained, long-term reductions in our customers’ water use.

Finding F11: *“Increased outreach and public education are necessary.”*

Response: IRWD agrees with this finding.

IRWD agrees that increased outreach and public education are necessary when it comes to educating the public about the value of water, efficient use of water, and the importance of water infrastructure investments. This is why IRWD has a long-running and extensive outreach program targeted at its customers.

The District’s outreach and education programs aim to encourage our customers to value water and use it efficiently. The programs also aim to move our customers to action, asking them to make changes in how they use water – especially in how they use water outdoor.

From IRWD’s experience, motivating customers to action is a long process that starts with building awareness, slowly changes opinion, generates buy-in, and results in action. This is why the District agrees increased outreach and public education on water across the state is needed.

Finding F12: *“Desalination has proven to be technologically and environmentally feasible and is slowly being embraced as a drought-resistant source of water.”*

Response: IRWD disagrees partially with this finding.

IRWD agrees that ocean desalination is a proven technology that could provide Southern California with supplemental supplies of drinking water that are reliable, though very expensive, if the environmental concerns with ocean desalination projects can be addressed. A water supply from ocean desalination would be locally available and drought-resistant, as it is it less vulnerable to hydrological impacts and other uncertainties. Without

substantial outside subsidies, ocean desalination is generally not cost effective at this time.

Significantly less expensive water supply options are available, including but not limited to water transfers, exchanges, treatment of impaired groundwater, and water recycling. It is this cost difference along with various environmental concerns that has limited the acceptability of ocean desalination. From IRWD's perspective, ocean desalination projects should only be implemented when costs for treatment and distribution are competitive with existing reliable supplies or with other supplies under development. Many others hold this point of view, which is why IRWD disagrees that ocean desalination is slowly being embraced.

Recommendation 2: *“Orange County water agencies should expedite the planning, development, and construction of desalination plants over the next five years to insure a sustainable and reliable drought-resistant source of water. F1, F2, F3, F4, F5, F6, F7, F8, F9, F11, F12”*

Response: The recommendation will not be implemented by IRWD because based upon the diversity and reliability of IRWD's existing and planned water supplies, and the District's current and projected cost of water, IRWD does not need to invest in expensive ocean desalination in order to reliably provide our community with a secure drought-resistant water supply well into the future.

As noted above, from IRWD's perspective, ocean desalination projects should only be implemented when costs for treatment and distribution are competitive with existing reliable supplies or with other supplies under development. This is currently not the case for ocean desalination.

IRWD does support the investigation of cost-effective alternative supplies of water and supports the development of technologies for both brackish water and ocean water desalination, regulatory streamlining, public acceptance, and the pursuit of regional, state, and federal funding programs to ensure the feasibility of future water supplies.

The District leaves open the possibility that it may consider developing ocean desalination projects in the future when the economics become more favorable and delivery costs are comparable to alternative supplies then available to IRWD.

Recommendation 4: *“Orange County water agencies should update their public communication strategies, by calendar year end 2023, to inform the public of lifestyle changes if additional water sources are not developed. F10, F11, F12”*

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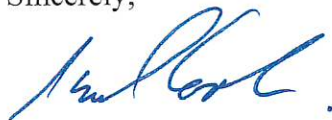
Response: The recommendation will not be implemented by IRWD because the District disagrees with the report's conclusion that lifestyle changes will be needed to adapt to climate change should additional water sources not be developed.

As discussed above, IRWD has actively developed and made substantial investments in alternative local supplies, recycled water, water storage, flood water capture, water infrastructure, and water use efficiency in order to prepare for times of dryness and limited imported water supplies. These efforts have not only allowed the District to become more self-reliant, but also water resilient. As a result, IRWD is already well prepared to continue providing our community the level of water service it has come to expect, even with climate change.

For this reason, the District will not be updating its public communication strategies to inform the public of lifestyles changes if additional water sources are not developed. We will continue our active public communications efforts to educate our customers about the value of water, how to use water efficiently, and the importance of water infrastructure investments.

If you need further information regarding this response, please contact me at (949) 453-5590.

Sincerely,



Paul A. Cook, P.E.
General Manager

cc: Orange County Grand Jury
IRWD Board of Directors