



# San Diego County Water Authority

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SAN DIEGO  
COUNTY GRAND JURY

August 1, 2013

The Honorable Robert J. Trentacosta  
Presiding Judge  
San Diego County Superior Court  
330 W. Broadway, Suite 477  
San Diego, CA 92101

MEMBER AGENCIES

- Carlsbad Municipal Water District
- City of Del Mar
- City of Escondido
- City of National City
- City of Oceanside
- City of Poway
- City of San Diego
- Fallbrook Public Utility District
- Helix Water District
- Lakeside Water District
- Olivenhain Municipal Water District
- Otay Water District
- Padre Dam Municipal Water District
- Camp Pendleton Marine Corps Base
- Rainbow Municipal Water District
- Ramona Municipal Water District
- Rincon del Diablo Municipal Water District
- San Dieguito Water District
- Santa Fe Irrigation District
- South Bay Irrigation District
- Vallecitos Water District
- Valley Center Municipal Water District
- Vista Irrigation District
- Yuima Municipal Water District

Dear Presiding Judge Trentacosta:

The San Diego County Water Authority has reviewed the San Diego County Grand Jury report, "Reduce Dependence on Imported Water". The Water Authority commends the Grand Jury for its thoughtful investigation into the Water Authority's long-term strategy to water supply reliability for the region and specifically reducing dependence on imported water supplies.

In accordance with California Penal Code Section 933(c), the Water Authority offers the following responses to the Grand Jury's findings and recommendations:

**Finding 03: Desalination is a viable local source of water. Plans for use of desalinated water should be expanded as part of a long-term water strategy.**

Response: The San Diego County Water Authority agrees with Finding 03.

A reliable, high quality water supply is critical to the economy and quality of life in San Diego County. The development of seawater desalination supplies plays an important role in ensuring a reliable supply. The Water Authority and its member agencies face numerous uncertainties and challenges to providing a reliable supply. These include such factors as population and economic growth, droughts, increasing stringent water quality and environmental regulations, climate change and potential catastrophic events such as earthquakes.

The Water Authority's approved 2010 Urban Water Management Plan (UWMP) makes it clear that a diverse, multi-faceted approach to providing a reliable supply is needed – that there is no "silver bullet" resources strategy that will resolve the entire region's water supply challenges and uncertainties. The UWMP contemplates that the Water Authority and its member agencies will continue to implement programs and projects that encourage efficient water use through conservation and water recycling and that additional supply options are being pursued to address the multiple challenges to providing future water supply reliability.

OTHER REPRESENTATIVE

County of San Diego

*A public agency providing a safe and reliable water supply to the San Diego region*

When identifying potential supply projects, another important factor to consider is that there is not a “one-size-fits-all” approach; each water agency’s resource strategies will be unique to their local condition. For example, San Diego County does not have large groundwater basins as a supply source or large non-potable water intensive industries that can maximize use of recycled water, which are found in other southern California regions. In turn, the Water Authority and its member agencies have looked to developing other types of reliable supplies, such as long-term water transfers, indirect potable reuse, and seawater desalination.

Being a local, drought-proof supply, seawater desalination serves as a significant strategy to help manage the uncertainties that exist to providing a reliable water supply. Seawater desalination specifically helps manage supply availability risks linked to weather variability and imported supplies. The Water Authority’s imported deliveries from the Metropolitan Water District of Southern California (MWD) include water from the State Water Project, which draws supplies that travel through the Sacramento-San Joaquin Delta. Over the years, the Delta’s ecosystem has deteriorated. The decline in the ecosystem has led to historic restrictions in water supply deliveries. Development of local supplies, like seawater desalination, is critical to reducing reliance on SWP supplies.

Understanding the importance of seawater desalination to providing a reliable supply, the Water Authority Board of Directors approved entering into the Carlsbad Desalination Project Water Purchase Agreement with Poseidon Resources in November 2012. Once on-line in 2016, the project will provide between 48,000 acre-feet and 56,000 acre-feet of reliable local supplies to help manage imported water supply uncertainties and help ensure a reliable supply of water for San Diego County’s residents and businesses.

Due to continuing uncertainties with imported supply reliability and risks associated with development of other local supplies, the Water Authority continues to explore expanding development of seawater desalination in the region. For the past several years, the Water Authority, in collaboration with Marine Corps Base Camp Pendleton has been analyzing the feasibility of a potential 50 – 150 million gallon per day facility at Camp Pendleton.

**Finding 04: Long-term storage of water for distribution during emergencies is an important component of SDCWA’s water strategy.**

Response: The San Diego County Water Authority agrees with Finding 04.

Water reliability includes both securing reliable supplies and having the necessary facilities to store, treat, and reliably delivery the supplies. The Water Authority’s imported supplies are conveyed through a long and vulnerable delivery system that exposes San Diego County to the potential for a variety of severe risks of supply interruption. The aqueduct systems that bring imported water into San Diego County cross major active fault zones. If the pipelines carrying this water were severed by a catastrophic event, such as an earthquake, the residents and businesses of San Diego County would be severely affected. An important Water Authority strategy is the Emergency Storage Project (ESP), which is the most effective and practicable solution to mitigating these risks.

In June 1998, the Water Authority's Board authorized implementation of the ESP to reduce the risk of potential catastrophic damage that could result from a prolonged interruption of imported water supplies due to earthquake or other disasters. The ESP is a system of reservoirs, pipelines, and other facilities that will work together to store and move approximately 90,100 acre-feet of water around the county in the event of a disaster. The driving principle of the ESP is to protect public health and safety and to prevent or limit economic damage in the region resulting from severe shortage of water supplies. The ESP is nearing completion, with one of the largest components, the San Vicente Dam Raise scheduled to be completed in late 2013.

**Finding 05: The current City and SDCWA objective of six-month emergency water storage capacity is insufficient.**

Response: The San Diego County Water Authority disagrees partially with Finding 05.

The Water Authority agrees that additional storage capacity is necessary in the region to adequately manage shortage situations due to droughts, but disagrees that the ESP six-month emergency water storage capacity is insufficient.

The six-month emergency scenario is described in the ESP Environmental Impact Report/Environmental Impact Statement project purpose and represents the case where an earthquake on either the San Andres or San Jacinto faults would result in multiple breaks in MWD's imported water facilities that supply water to the Water Authority. Although some emergency water would be available from MWD because of reservoirs south of the fault (i.e., Diamond Valley Lake), water supplies would be reduced for a period of 6 months (based on MWD's estimated time of repair). In sizing both the delivery and storage capacity at Diamond Valley Lake, MWD assumed that additional storage would be built in San Diego County. The Water Authority used the six-month emergency scenario as a basis for sizing the ESP, taking into account future growth, local supply development and conservation. The six-month emergency storage capacity remains sufficient to meet the ESP project purpose.

As part of its 2003 Facilities Master Planning effort, the Water Authority did identify the need for an additional 100,000 acre-feet of carryover storage capacity within the region, beyond the 90,100 acre-feet of emergency storage. Carryover storage allows the Water Authority to store water that is available during wet periods for use during dry periods when supplies could be short. Carryover storage enhances the reliability of water supplies, increases system efficiency and provides for better supply management. The current raising of the San Vicente Dam by an additional 117 feet will not only provide 52,100 acre-feet of water stored for emergency use, but also 100,000 acre-feet of carryover storage that will be available during times of water scarcity.

It is also important to note that the Carlsbad Seawater Desalination Project and other highly reliable local supply projects contemplated by the water Authority and its member agencies will also provide water to the region during an ESP type of emergency where imported water delivery has been interrupted. Additional local supplies that were not

envisioned during the planning and sizing of the ESP will only seek to enhance the ability of the ESP water to serve the region during and emergency.

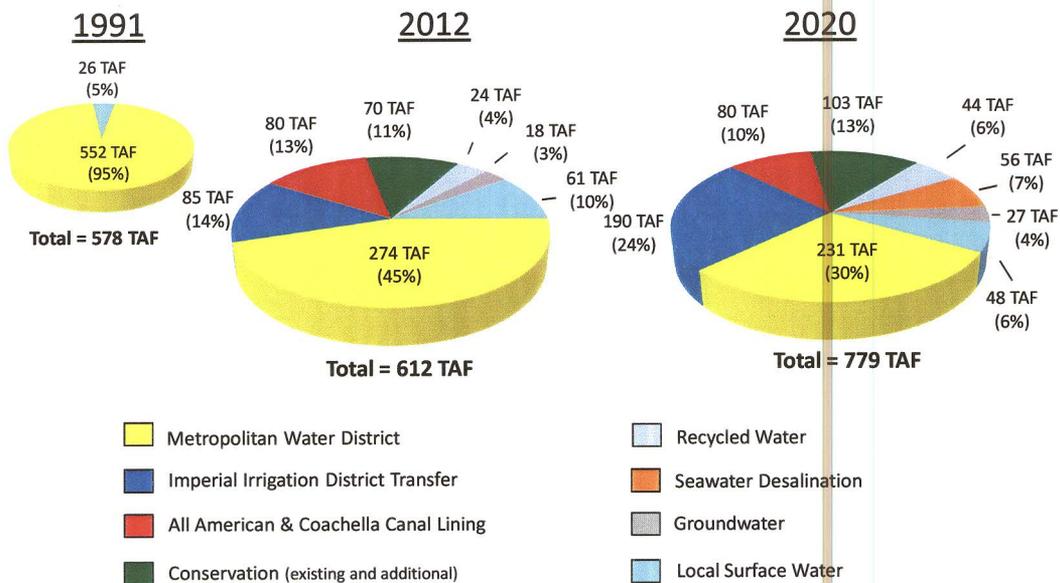
**Recommendation 13-67: Continue to pursue a vigorous policy to lessen dependence on imported water by continued conservation, reuse and reclamation, additional emergency storage projects and new desalination projects with an ultimate goal of sustainable and reliable water independence for the County.**

Response: Recommendation 13-67 has been implemented, and is ongoing.

Since the early 1990's the Water Authority and its member agencies have been aggressively taking actions to lessen dependence on imported supplies from MWD. During the 1987-1992 drought, the Water Authority was 95 percent reliant on a single source of supply (MWD), experienced 30 percent cutbacks in its supply and faced the potential of 50 percent cutbacks. Continued shortages at this level would have had a devastating effect on the region's economy. Based on lessons learned during this shortage period, the Water Authority and its member agencies have been diversifying the region's supply sources to reduce or eliminate exposure to future imported supply shortages from MWD.

As shown in the figure below, reliance on MWD has dropped by over 50 percent, from roughly 95 percent in 1991 to 45 percent in 2012.

## Increasing San Diego County's Water Supply Reliability through Supply Diversification



TAF=Thousand Acre-Feet

This has been achieved through a variety of policies, programs and projects, such as:

- Implementation of the water use efficiency programs and initiatives by the Water Authority and its member agencies since 1991 have conserved nearly 800,000 acre-feet of water. These savings have been achieved through measures ranging from incentives on water-efficient devices, to legislative efforts, to outreach campaigns and programs. In 2012, approximately 70,000 acre-feet was conserved by residents and businesses within the Water Authority's service area. The region is on track to meet or beat the state's mandate to reduce per capita water use 20 percent by 2020.
- Implementation of local supply projects by Water Authority member agencies have increased groundwater and recycled water yields to approximately 42,000 acre-feet in 2012.
- The Water Authority entered into a conservation and transfer agreement with the Imperial Irrigation District and separate agreement to receive water conserved by lining parts of major agricultural canals in the Imperial and Coachella valleys. These transfer supplies, which are independent from Colorado River water purchased from MWD, are a cornerstone of the Water Authority's diversification strategy. In 2012, these supplies continued to ramp up, delivering 165,000 acre-feet.

Regarding on-going policies to diversify the region's supply portfolio and lessen demands on imported supplies from MWD, the Water Authority's 2010 Urban Water Management Plan serves as the agency's policy document on supply planning and highlights continued diversification efforts. This includes achieving the mandated 20 percent reduction in water use by 2020, expansion of member agency local recycled and groundwater supplies and development of new supplies, such as seawater desalination. In addition, in 2012, the Water Authority's board of directors adopted a set of water use efficiency policy principles. The principles provide long-term, strategic direction on the prioritization, development, and implementation of future water use efficiency programs and initiatives.

**Recommendation 13-68: Further demonstrate the economic feasibility of expansion of desalination projects to include a Camp Pendleton location.**

Response: Recommendation 13-67 has not yet been fully implemented, but will be implemented upon completion of the Water Authority's Regional Water Facilities Optimization and Master Plan Update.

The Water Authority continues to work cooperatively with Marine Corps Base Camp Pendleton (MCBCP) on evaluating the feasibility of a seawater desalination project at Camp Pendleton. Below are major activities associated with evaluation of the proposed project:

- In June 2009, the Water Authority, in collaboration with the Marine Corps Base Camp Pendleton (MCBCP), completed a feasibility study for a 50 to 150 million gallons per day

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(MGD) seawater desalination project at Camp Pendleton focusing on two possible seawater desalination plant sites in the southwest corner of the base near the mouth of the Santa Margarita River.

- In June 2009, the Board approved a new CIP project to perform additional technical and environmental studies to complete planning efforts for the project. The additional studies will better define the project and refine project cost estimates.
- In April 2010, a Memorandum of Understanding (MOU) between the Water Authority and MCBCP was executed to establish the framework for cooperation between the two parties during the performance of the additional studies and to ensure that the activities do not conflict, impede, or interfere with MCBCP's primary mission of training its operational force. The MOU did not commit either party to advance the project beyond the planning studies contemplated in the MOU.
- In March and July of 2011, the Water Authority board of directors approved consultant contracts to conduct the additional technical studies that evaluate the issues and impacts surrounding offshore seawater intake and discharge facilities and conduct additional site development evaluations, covering the desalination plant and other appurtenances onshore. To date, all of the major study tasks, authorized under the MOU, have been completed and the final study reports are being finalized.

The information derived from these additional studies will be used collectively to evaluate the timing and need for additional seawater desalination in the 2013 Regional Water Facilities Master Plan Update currently under way. The Master Plan Update is scheduled to be completed in February 2014.

**Recommendation 13-69: Extend the objective of the water supply Emergency Storage Program beyond the current proposed six months.**

Response: Recommendation 13-69 has not been fully implemented, but will be implemented upon completion of the San Vicente Dam Raise Carryover Storage Project.

The emergency storage capacity objective remains sufficient to meet the primary purpose of the ESP, which is to provide supplies to the region during an earthquake or other catastrophic event. Changes in the parameters used to size the ESP (future demands, local supply development and conservation) have not necessitated the need to revise the emergency storage capacity.

Due to the other numerous supply uncertainties the region faces, the Water Authority, as part of the 2003 Water Facilities Master Planning process, did identify the need for 100,000 acre-feet of carryover storage capacity to help manage these uncertainties. The uncertainties include factors such as population and economic growth, droughts, climate change and increasing stringent water quality and environmental regulations. The San Vicente Dam Raise Carryover Storage Project will meet this need by providing approximately 100,000 acre-feet of local storage and facilitate the reliable and efficient

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delivery of water to residents of the Water Authority service area. It will be located in the San Vicente Reservoir above the reservoir expansion for the ESP and will increase water storage reliability for the region.

Construction of the dam raise began in 2009 and is scheduled for completion in 2013. It will take three to four years to fill the reservoir, depending on rainfall, availability of imported supplies and water demands. Based on this schedule the Water Authority will have an additional 100,000 acre-feet of carryover storage available within the region to provide additional supply reliability by approximately 2017.

The San Diego County Water Authority appreciates the time and effort spent by the 2012-2013 San Diego County Grand Jury in producing its report on reducing dependence on imported water supplies.

Sincerely,

A handwritten signature in blue ink, appearing to read "Maureen A. Stapleton". The signature is stylized with a large initial "M" and a long horizontal line extending to the right.

Maureen A. Stapleton  
General Manager