

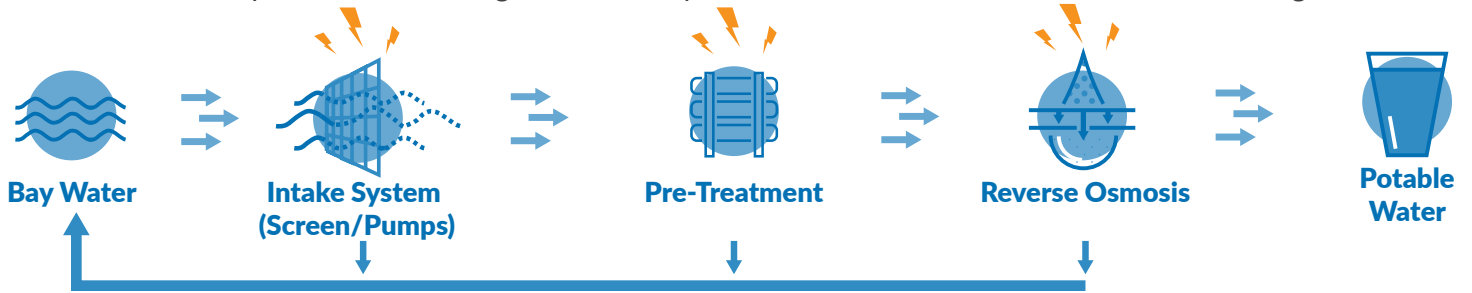
Water Supply Option: Desalination

Marin Water has explored desalination options to address both near and long-term water shortages.



What is desalination?

Desalination is the process of removing salts from bay water to create freshwater suitable for drinking.



Temporary desalination occurs using containerized systems that may be purchased or leased and brought online quickly to address an urgent water shortage. The capacity of each system is limited to what is readily available in the market and could be dismantled at the end of the water shortage.

Permanent desalination facilities address long-term water supply needs, are permanent structures, and take a much more involved and extended timeline to develop and implement.

Will temporary desalination work for Marin?

In July 2021, the District's reservoirs were projected to drop to near-empty levels by the following summer, so the District narrowed its focus to further investigate the potential of temporary desalination to provide supplemental water in response to the near-term emergency. In October 2021, the District concluded temporary desalination was not the right project to pursue due to the following challenges:

Timing

While expedited compared to establishing permanent desalination facilities, the projected timeline to bring the temporary system online was not responsive to the looming water shortage.

Cost

The overall cost of the temporary project per acre foot was extremely high without providing any benefit for the District's long-term drought resilience needs.

Resources

The current market lacked available containerized systems with the capacity required to provide Marin Water with the needed volume of water to address its water shortage.



As of January 2022, thanks to incredible winter rainfall, reservoir storage levels have risen enough to ensure adequate water supply for the next two years, and the focus has shifted to long-term drought resilience efforts.

What about desalination for long-term water supply needs?

The District is continuing to investigate a **permanent** desalination facility as a future supplemental water supply option. Various potential permanent desalination facility opportunities are being explored and include: 1) a facility serving just Marin Water; 2) a north bay regional facility; and 3) a regional east bay facility that the District could potentially access if its proposed intertie pipeline project were constructed providing a connection.

An identified challenge to a permanent facility is that the District's supplemental water needs are only in times of drought. A permanent facility needs to operate continuously and so the ongoing operational costs of producing additional water, even during the majority of years when it is not needed, must be carefully considered. The District is looking at these desalination options and other water supply opportunities to strengthen our drought resilience.

Learn more:

marinwater.org/WaterSupplyProjects