Pure Water San Diego Miramar Reservoir FAQ

The City of SAN DIEGO



Completing our Water Cycle, Securing our Future

What is Pure Water San Diego?

Pure Water San Diego is the City's phased, multi-year program that will provide one-third of San Diego's water supply locally by 2035. The Pure Water Program uses proven technology to clean recycled water to produce safe, high-quality drinking water.

Why does the purified water need to be stored in a surface water reservoir?

For protection of public health, regulatory agencies require the purified water has detention time in an environmental buffer, either a groundwater basin or a surface water reservoir, prior to being blended into the drinking water system. San Diego does not have viable groundwater basins, which is why it will be sent to a surface water reservoir.

Why was Miramar Reservoir selected to store the purified water?

Miramar Reservoir was selected because it is the most cost-effective option. By sending the purified water to Miramar Reservoir, Phase 1 will be completed and operational by 2021, two years sooner than initially planned.

The length of the pipeline from the North City Pure Water Facility to Miramar Reservoir will be eight miles instead of 28 miles if the water was sent to San Vicente Reservoir. The route of the pipeline to Miramar Reservoir will also have fewer environmental impacts to the surrounding communities during construction. Additionally, the water pumped to Miramar Reservoir will be powered with renewable energy, which provides significant environmental benefits and reduces energy costs and usage.

How much purified water will be stored in Miramar Reservoir?

Thirty million gallons of purified water per day will be piped to Miramar Reservoir.

How will purified water affect the quality of water in the Miramar Reservoir?

The addition of the purified water to the Miramar Reservoir will meet all regulatory requirements for dilution in the reservoir. It is anticipated to improve the reservoir's water quality.

What is being done to evaluate potential environmental impacts?

The City is in the process of analyzing potential environmental impacts on the region, the fishery, and the wildlife at Miramar Reservoir as part of the Pure Water San Diego Program, North City Environmental Impact Report/Environmental Impact Statement (EIR/EIS). The draft report is expected to be available for public review and comment in July 2017. The City continues to work closely with stakeholders representing various community interests to obtain their input.

Will there be minerals added to the purified water before putting it in the reservoir?

Yes. The purified water will be re-mineralized by adding calcium and carbonate, and the pH will be adjusted, before being conveyed through a pipeline to Miramar Reservoir.

What will be the effects on nutrient levels in the reservoir?

The purified water will have low levels of phosphorus, which is a nutrient for algae and plants. However, there are other sources of phosphorus in the reservoir, including the sediment and detritus on the bottom, deposition from the atmosphere, and the rooted plants growing in shallow water. The other key nutrient is nitrogen, which will be present in purified water at levels similar to the imported that has historically filled the reservoir. Studies are underway to determine if there will be any change in the overall balance of nutrients in the reservoir.

Will the amount of purified water coming in and out of the reservoir remain balanced and consistent?

The inflow rate of purified water will vary about 10% on an annual cycle – less in the summer and more in the winter. The outflow from the reservoir to the water treatment plant will remain in balance with the inflows such that the reservoir level will not vary appreciably.

How will the purified water affect the turnover rate of water at the reservoir?

Like nearly all reservoirs in Southern California, Miramar Reservoir experiences "stratification," with warm water near the surface and colder water deep. In mid-winter the reservoir mixes to be uniform temperature top-to-bottom – an event called "turnover." The introduction of purified water in Miramar Reservoir will not change this pattern of stratification and turnover.

When will the purified water start being sent to Miramar Reservoir and become part of the drinking water supply?

The North City Pure Water Facility is scheduled to come online and begin producing water that will be sent to Miramar Reservoir in 2021. From Miramar Reservoir, the purified water will be blended with imported and local water supplies and cleaned again at the nearby drinking water plant before being sent to taps.

What construction will take place at Miramar Reservoir?

A one-mile-long underwater pipeline that will be located along the bottom of the reservoir will be constructed on site. The pipeline will release the purified water into the reservoir via various ports.

How will recreational activities at Miramar Reservoir be impacted during construction?

The City is currently evaluating the specific impacts construction will have on recreation at the reservoir and will mitigate impacts as much as possible. The public will be given advanced notice of construction impacts.

What is the current status of implementation of the Pure Water Program? Has City Council approved the Program?

The Phase 1 projects are currently in design and construction is expected to start in late 2018. In 2016, City Council approved the Pure Water Program and funding for the design of the Phase 1 projects. Additional approvals are needed from City Council prior to construction of the Phase 1 projects.

How much is the Program going to cost?

Phase 1 has an estimated cost of $1.2 billion. The estimated cost of converting the Point Loma Wastewater Treatment Plant (Point Loma) if the City does not reduce ocean discharges through the Pure Water Program is $1.8 billion, and would provide no new water. Investing in the Pure Water Program and seeking federal legislation to allow San Diego to meet modified secondary standards would eliminate the necessity for costly construction to Point Loma and create more local water for San Diego.

With the current cost of imported water ($1,200 to $1,400) expected to double in the next ten years, investing in the Pure Water Program is ultimately a more cost-effective option.

Local **residents**, community **groups**, environmental **organizations** and local **businesses** support the **Pure Water Program.**

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Pure Water San Diego