

Frequently Asked Questions – One Water Marble Falls Plan

Like many Texas cities, Marble Falls faces water supply challenges due to population growth and changing climate conditions. To meet these challenges, the City is embracing the One Water plan – a comprehensive, integrated approach to water management that optimizes water use, treatment, and reuse combined with conservation. By leveraging diverse water resources – including Lake Marble Falls, City-owned groundwater wells, conservation, and advanced water recycling – the plan seeks to ensure a reliable, safe and sustainable water supply to continue our excellent quality of life.

This is a list of frequently asked questions about One Water and what's needed to help Marble Falls achieve water independence.

One Water Plan: Purpose & Need

Q: How is Marble Falls ensuring it has water in the future?

A: Marble Falls is experiencing rapid population growth and changing climate conditions. Since 2018, the City's population has increased nearly three times the state average and is projected to almost double by 2040. Texas is projected to continue to get hotter and drier. These two factors are straining water resources.

The City's primary water source is the drought-prone Highlands Lake system. This source has been augmented by securing some additional groundwater supplies, but future demands require expanding the City's water supply portfolio, and conservation alone will not meet Marble Falls' future water needs. A water supply study based on projected moderate population growth of 6% annually indicates Marble Falls could run short of water by 2045 if new solutions are not implemented.

To tackle these challenges, Marble Falls has launched the One Water Plan. This innovative and comprehensive solution will diversify the City's water supply.

Q: What is the City doing to diversify its water supply?

A: As part of the One Water Plan, the City will be adding a new water source by recycling and reusing reclaimed water. The City will also continue its commitment to water conservation and promote efficiency to reduce wasteful water use and conserve this precious resource. By expanding the community's water portfolio to include recycling and reusing water along with conservation, Marble Falls will continue to have a safe, reliable water supply that can weather growth and climate change well into the future.

Q: What other cities in Texas are doing this?

A: Other Texas cities that have implemented water recycling include:

- Big Spring and Wichita Falls
- City of El Paso (going online in late 2020s)

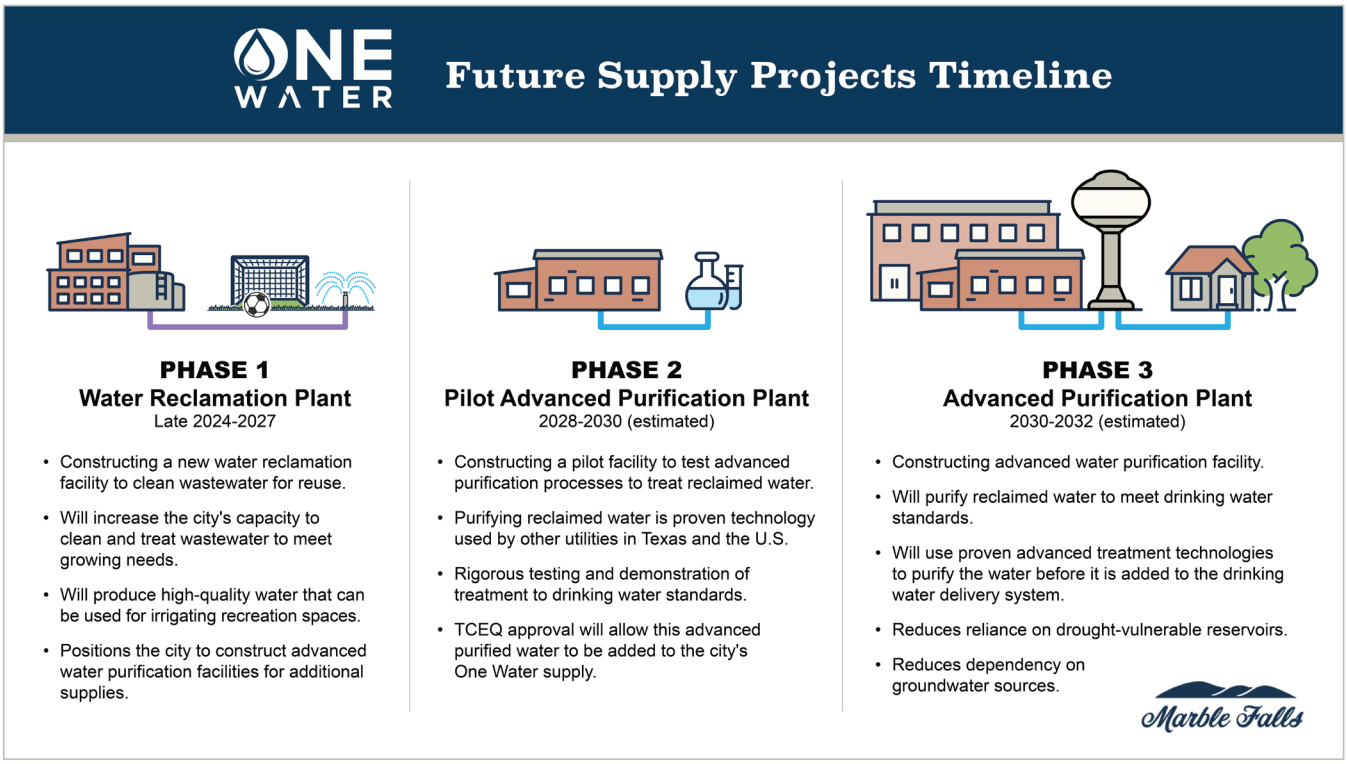
Other Texas cities and utilities in various stages of planning for and/or implementing water recycling include:

- City of Liberty Hill; City of Buda; City of Austin; Aqua Water Supply Corp.; Dripping Springs Water Supply Corp.; and, West Travis County PUA.

Project Timeline/Construction

Q: What is the timeline for the One Water supply project?

A: Various components will be implemented in three phases to ensure the City meets all state and federal regulatory requirements and can utilize various funding sources. A new water reclamation plant will be built to start. This will replace the city's old wastewater treatment plant. Phase 2 will include constructing a water purification pilot plant, and phase 3 will involve the construction of an advanced purification plant capable of producing potable drinking water.



Q: When will construction start on the Water Reclamation Plant?

A: Construction is anticipated to start in the first quarter of 2025. The Water Reclamation plant will increase the City's capacity to meet growth and produce high-quality water that can be used to irrigate recreation and green public spaces using the City's purple pipe system. The plant is anticipated to be operational in 2027.

Q: How will construction of the new facility affect nearby neighborhoods and traffic?

A: The most significant impacts to neighborhoods and traffic will be along the pipeline routes. Impacts are expected to be temporary with provisions for managing traffic flow and access during construction. The City will be coordinating with the affected areas to minimize impacts where possible and provide advance notice and ongoing updates as construction proceeds.

Q: Why is the new Water Reclamation Plant being built?

A: To serve our growing community, the city needs to increase wastewater treatment capacity from 1.5 million gallons per day (mgd) to 3.0 mgd. The City's existing wastewater treatment plant is in a flood plain, at risk for outages, and at full capacity. The new plant will be located at the City Farm (west of Walmart) built to handle reuse.

The new water reclamation facility is an important component of the One Water plan and will set the stage for implementing advanced water treatment methods to recycle and reuse water.

Q: What will be done with the old wastewater treatment plant?

A: A new pump/lift station will be built at that location to transport wastewater to the new water reclamation plant. The storage tank and pumps for supplying the purple pipe system will remain. All other structures will be demolished, and the adjacent park will utilize this land.

Q: What is the purple pipe network/distribution system? Will purple pipe still be used at the new water reclamation facility?

A: Purple pipes transport non-potable water (not drinking water) to irrigate green spaces. The new reclamation facility will allow the City to expand its purple pipe system to eventually form a large loop north of the river or Lake Marble Falls to irrigate additional green spaces, ball fields, parks and school grounds.

Q: Can we get purple pipe water at our businesses/houses?

A: No, as water from the Purple Pipe System is primarily used to provide irrigation water for public use areas. Future capacity may increase using a proposed loop system north of the lake and west of US 281. As capacity increases, significant users along the route may be added to the system.

Q: Will the future phases involve treating this reclaimed water for drinking?

A: Yes. The limited fresh water available on Earth has all been recycled and reused. The difference is where the water is collected and how it is treated. The new Advanced Purification Plant will be constructed in approximately the 2028-2032 timeframe. Using proven advanced technologies, the reclaimed water will be treated and purified to safe drinking water standards to be combined with other drinking water sources for the community.

Before the Advanced Purification Plant can come online, the Texas Commission on Environmental Quality (TCEQ) requires a pilot testing phase for this and all water treatment plants in Texas that purify reclaimed water to meet drinking water standards. El Paso and Wichita Falls also underwent the TCEQ two-year pilot testing phase before bringing their reclaimed water plants online. Constructing the Pilot Advanced Purification Plant is Phase 2 of the One Water plan. A smaller pilot plant will be built to conduct rigorous testing and optimize the treatment processes before the full plant is constructed. It is anticipated this phase will take approximately two years.

Water Treatment & Safety

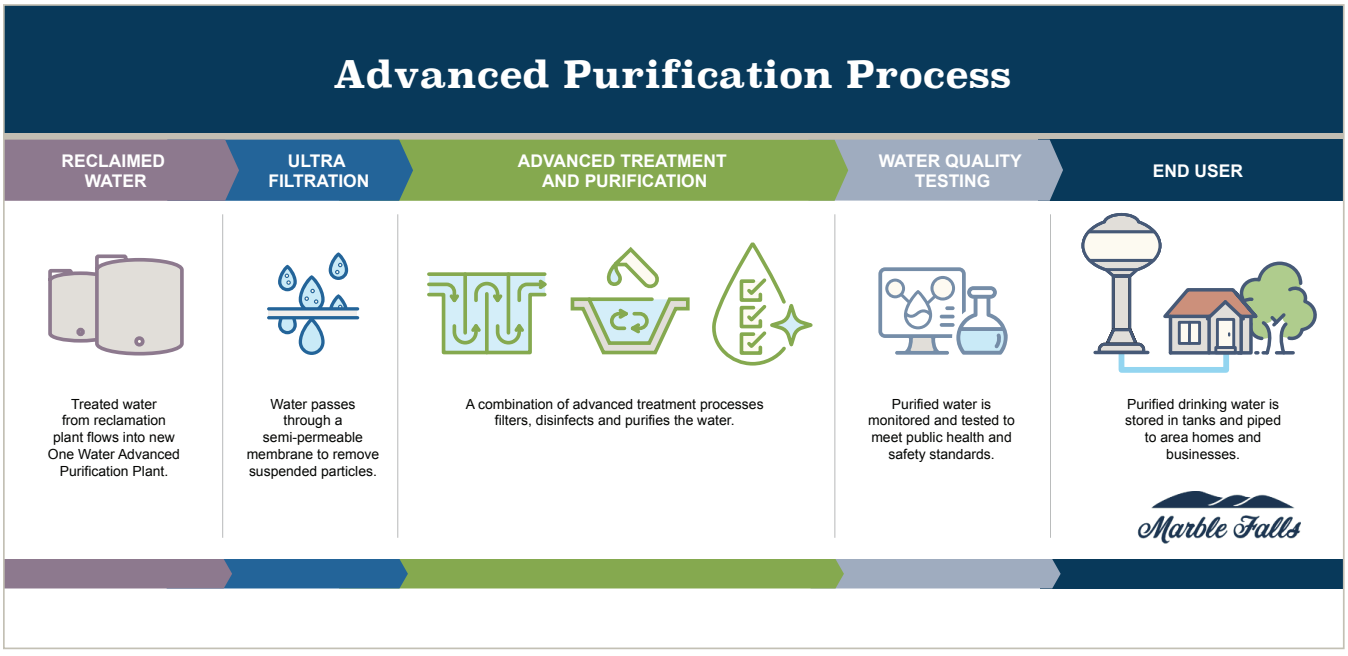
Q: How will reclaimed water be treated?

A: This water will be treated using proven, state-of-the-art purification technologies to filter and disinfect water in multiple stages to meet drinking water standards. The pilot plant and Advanced Purification Plant will utilize technologies currently used in Texas and across the nation, including NASA. Astronauts drink reclaimed water that has been purified. Water from all sources – surface, ground and reclaimed will be tested to ensure it meets public health and safety standards.

Q: What safety measures are being built into the Advanced Purification Plant?

A: The plant will be designed with redundant systems that surpass the minimum treatment requirements. This multiple-barrier approach will protect public health and treat water to a level that meets and exceeds water quality standards.

When the plant begins operations following the piloting and demonstration period, each process stage will be monitored, and routine testing will be performed to confirm that operations are within the required operating limits. It is anticipated construction of the Advanced Purification Plant will start in the early 2030s and be operating sometime in 2032.



Q: What would happen if the Advanced Purification Plant had a malfunction?

A: If the treatment system failed in any way, it will be taken offline, and all water would be provided by the water treatment plant on the south side of the city while repairs are made. Conversely, if there were a failure at the plant on the south side of town, that plant would be taken offline and repaired while the Advanced Purification Plant provided water. Having two water treatment plants enhances reliability to protect the city from catastrophic events like floods that could cause prolonged water outages, like what has happened in Houston.

Q: Once the reclaimed water is treated, where does it go?

A: Water from the Advanced Purification Plant One Water Plant is fully tested before it is moved into a finished water storage facility and eventually flows into the water distribution system along with treated water from surface and/or groundwater sources.

Project Cost

Q: How much will the projects cost and how will they be paid for?

A: The estimated cost to construct the Water Reclamation Plant is $86.6 million and will be funded by grant money from the Texas Water Development Board, low-interest loans, and impact fees. The City is working to maximize grants and zero-interest loans to offset rate impacts. Investing in water recycling infrastructure can lead to cost savings over time in water treatment and distribution. Marble Falls' rates have been comparable to other regional utilities and are expected to stay that way, as neighboring utilities face many of the same challenges.

Q: Will my water bill go up because of this project?

A: The rate impacts of this project have been addressed in the future utility budgets and are not expected to result in rate increases beyond those that have already been planned.

Project Benefits

Q: How will Marble Falls and residents benefit from the One Water Plan?

A: Marble Falls and residents will receive multiple benefits from the One Water Plan including:

- **Sustainable Future:** By reducing our dependence on drought-prone reservoirs, the One Water Plan positions Marble Falls as a leader in water management, joining leading Texas communities, like El Paso and Wichita Falls, in water reuse. It creates water independence and a reliable water supply crucial to our community's economic viability and quality of life.
- **Provides Drought Resilience:** One Water diversifies our water sources, adding a new source through recycling and reuse that works together with other water sources to make Marble Falls more resilient to changing weather patterns and extended dry periods.

- **Ensures Long-Term Water Security:** With the population expected to double by 2040, One Water ensures a reliable supply despite rapid growth and climate challenges.
- **Cost-Effective Solution:** The new water reclamation facility provides the most efficient way to increase the required wastewater treatment capacity, protect against floods and outages, and enables Marble Falls to recycle water in the future.
- **Funded for Success:** Supported by Texas Water Development Board grants, low and zero-interest loans, and impact fees, the funding plan will make this a cost-effective solution to meet long-term water needs and keep our community and economy vibrant.