SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

Water Reclamation Facility

Construction Update: Fall 2021

It has been over a year since we began construction of Salt Lake City's new Water Reclamation Facility, located next to the existing facility at 1365 West 2300 North. As work continues on this major project, we want to keep you up to date on what work has happened, what will happen in the near future and changes we have made.

We have been working hard to keep the project on schedule and within budget. The construction industry is very volatile right now because of the COVID situation, supply chain challenges, material costs, limited availability of skilled labor, and large amount of construction work happening in Utah and across the nation. We have also been working hard to be a good neighbor and responsible community member as work progresses on this project.

The Project's Guiding Principles

- Treat wastewater
- Cost and budget
- Safety
- Public engagement and education
- Sustainability

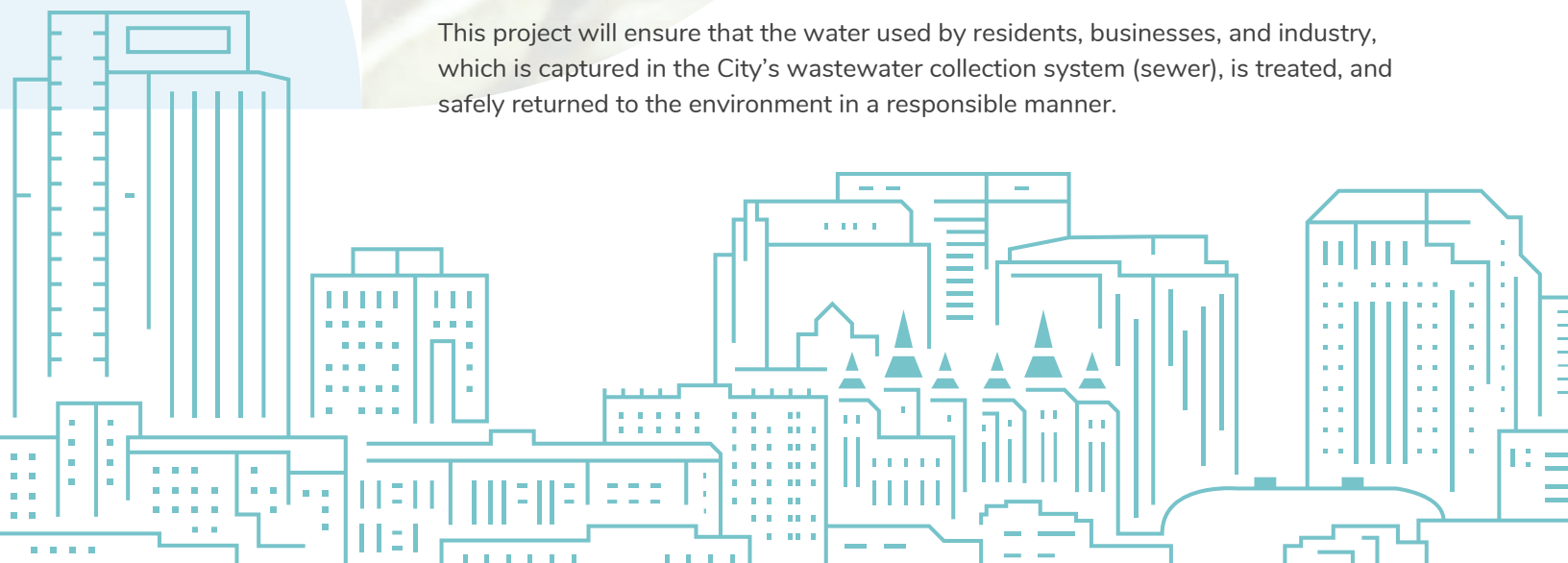
About the Project

The new Water Reclamation Facility, the largest public utility project in Salt Lake City's history, will take approximately six years to construct.

We are rebuilding the facility to meet mandatory new water quality standards, improve efficiency and reliability, and avoid risks associated with the operation of a 55-year-old facility near the end of its service life.

The existing Water Reclamation Facility is the only wastewater (sewage) treatment facility in Salt Lake City and treats an average of 35 million gallons of wastewater every day. That means the facility must operate 24/7/365 without interruption, even during construction.

This project will ensure that the water used by residents, businesses, and industry, which is captured in the City's wastewater collection system (sewer), is treated, and safely returned to the environment in a responsible manner.



Upcoming Construction Activities

Several construction activities will take place over the next few months.

Ground Improvements

Soil placed to improve ground conditions remains in place. Geotechnical engineers determined that the poor soil conditions and high groundwater level where the new facility will be constructed would result in the new structures settling three to five feet unless the ground was stabilized prior to construction. To stabilize the ground, soil was hauled and piled on the footprint of the new facility. This pre-loading effort started in November 2020 and finished in May 2021. The soil pile (or pre-load material) measures up to approximately 26 feet tall (including the amount settled) and covers 23 acres, which is about the size of 18 football fields. This soil has already compressed the soil up to 6 feet in some areas!! A high-tech monitoring system was installed to monitor the settlement daily and to help engineers determine when the soil has settled sufficiently to begin construction of building foundations. The project's Geotech Engineer is estimating the pre-load material (soil) should be able to be removed this winter or very early spring. Removed soil will be used on site for pipe bedding material or hauled offsite for use on other construction projects.

Mechanical Dewatering Building

During the wastewater treatment process, solids are separated from the liquids. The solids are then treated biologically, physically, and chemically to produce a semisolid, nutrient-rich product known as biosolids. Historically, we have relied on using drying beds to remove water from the biosolids through solar evaporation. To reduce odors in neighboring communities and provide space for construction of the new facility, the drying beds were removed and have been replaced with a temporary mechanical dewatering system while the new three-story building is constructed.

Construction of the mechanical dewatering building started at the end of November 2020, with excavation for the main foundation slab. This facility is located outside of the pre-load ground improvement area. To stabilize the ground beneath the new building, 144 16-inch diameter steel piles were driven 160 feet into the ground. The entire concrete base slab, including electrical conduit and plumbing, has been constructed, as well as the first-floor concrete columns. Construction of this deep foundation system was completed at the end of January 2021. Shoring work has begun for the second-floor suspended slab. The adjacent filtrate tank, which acts as a storage tank for the water produced from the mechanical dewatering building, has been completed below grade. The concrete roof should be completed by the end of August 2021.

Sustainability & Recycling Facts

The project team is working hard to meet the criteria necessary to earn an Envision Platinum Award—the highest achievable level for this large infrastructure project. Envision is a rating system designed specifically to evaluate, grade, and recognize infrastructure projects that have incorporated or advanced sustainability, resiliency, and equity.

“We are pushing for this project to have responsible planning and construction,” says the project’s Sustainability Manager Holly Lopez. “One of the advantages of the Envision protocol is how it encourages a holistic, sustainability approach that ends up having a positive impact on the community.”

57,900

Tons of material has been recycled to date

As part of this work, the project is aiming for at least 25% use of recycled material in construction. So far 43,617 tons of recycled material has been used. The project also has a goal of 50% construction waste reduction. So far 57,900 tons of material has been recycled that would have otherwise ended up in the landfill. Currently, all excavated materials have been sourced or reused within five miles of the project site.

Keeping The Project Within Budget

A lot of team effort has been directed at analyzing design features, systems, equipment, and materials selections for the purpose of achieving essential functions at the lowest life cycle cost with the required performance, reliability and safety needed. For example, we have modified the influent sewer from being a proposed gravity system to a force main construction and have utilized existing site fill material for this project and other projects in the area, rather than hauling it off to the landfill, allowing us to avoid fees for that.

What Is Wastewater And Where Does It Go?

Every day an average of 35 million gallons of wastewater is treated at the Water Reclamation Facility. Wastewater is created by every one of us who live, work, and play in Salt Lake City. Few people think about where wastewater goes and how it is cleaned so it can be safely reused and returned to the environment. But our communities are safe, healthy, and thriving in large part because of the Water Reclamation Facility and our team's commitment to meeting regulatory requirements following rigorous industry standards. Our quality of life would not be possible without this facility and the work our team does.

What Is Wastewater?

Wastewater is used water from homes, businesses, and industry. In homes, it comes from sinks, showers, bathtubs, toilets, washing machines and dishwashers. Wastewater includes human waste, food scraps, oils, soaps, salts, chemicals and more.

Treating Wastewater

The Water Reclamation Facility uses a series of physical, chemical, and biological processes to treat wastewater. These processes include screening, aeration, sedimentation, and disinfection. If not properly cleaned, wastewater can carry disease, impact fisheries and wildlife habitats, and change how we use our lakes and rivers for recreation.

Please be aware of the water you use and dispose of because your wastewater is collected in our sewer collection system, treated at our Water Reclamation Facility, and then returned safely to our canal system and ultimately Farmington Bay.

Meet Jamey

Our Water Reclamation Facility Manager brings passion for the present and future to his role.

Jamey West is a boss, a teacher, an organizer, a planner, a mentor—a skilled multi-tasker on a public service path. As Manager of the Salt Lake City Water Reclamation Facility, Jamey oversees a 55-year-old wastewater treatment plant while simultaneously focusing on the design and construction of a new facility—scheduled to come online in 2025. Consider, too, that daily operations continue at the current plant under Jamey's management while construction of the new facility is underway on the same site.

It could be a dizzying role, but Jamey, who was named the facility's manager in 2017, approaches the work methodically and with a sense of calm.

"Coordination, planning, and communication are critical," he says.

Fortunately, Jamey has had plenty of practice polishing those critical skills. He began learning his craft in 1997, after joining the U.S. Air Force. He was sent to Eielson Air Force Base near Fairbanks, Alaska, for training in water and wastewater treatment.

"I was immediately intrigued by wastewater treatment and the science behind it, and blessed with some great mentors during my time at Eielson," he says. Jamey spent three years active duty in U.S. Air Force, and ultimately made wastewater treatment his civilian sector career. He also continued to serve his country in the Air Force Reserve from 2000 to the present, and is currently a member of the Utah Air National Guard, 151st Civil Engineering Squadron, where he is a noncommissioned officer (NCO) in charge of water and fuels systems maintenance. All told, Jamey has given 24 years to the U.S. Air Force, having served in 13 countries and two deployments to the Middle East—in 2010 and 2017.

Military service helped Jamey sharpen structural, organizational, and leadership interests. "I grew a passion for water and our environment, and for people—teaching, mentoring, and helping them develop into the best versions of themselves. I believe these passions have landed me in the perfect career doing what I love."

Jamey has embraced a big challenge, but gives great credit to his dedicated team at the facility for helping to keep all processes in check.

"It's challenging enough to keep our current facility operating and meeting [federal and state] regulations," he says. "We are doing that while designing and building the new facility. In some cases, new construction must overlap on the existing facility. The facility team takes great pride in what they do and that shows by our amazing regulatory compliance record of 27 years with 100 percent compliance with Utah Pollution Discharge Elimination System permit."

Resiliency and reliability are at the foundation of the new facility, Jamey says. "We will be treating to a higher water quality standard with nutrient removal. The new facility will be built to current seismic code. Building, equipment, and treatment technologies have come a long way since the existing facility was built."

In his limited spare time, Jamey treasures his family time with his wife of 24 years, Jill; their son, Colby, age 18; and daughter Morgan, age 16. They enjoy camping and off-roading in the mountains and rock crawling in Utah's deserts. Jamey devotes significant volunteer time to his church, especially in working with youth. "I try to mentor them, especially the young men, to be a positive influence on those around them and contribute to our society through love and service."

Service. To his country, his community, his family, and to public health and the environment. It's the path Jamey West has trained for and hopes to walk for a good, long time.

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CONTACT US

If you have any questions about the Water Reclamation Facility or Salt Lake City Department of Public Utilities, please call our Project Information Line at 801-917-1124 or visit MakeItPureSLC.com. You may also call Public Utilities customer service department at 801-483-6900 or visit slc.gov/utilities.

www.slc.gov/utilities

Facility Receives the Platinum Peak Performance Award

We have been recognized by the National Association of Clean Water Agencies for having 27 consecutive years of perfect permit compliance and have received a Platinum Peak Performance Award for this accomplishment.

"We are honored to accept this acknowledgement from our peers in the clean water sector," says Water Reclamation Facility manager Jamey West. "Being able to achieve zero violations, while operating a facility that is 55 years old and nearing the end of its useful life, is no easy task. Our team is vigilant about the work we do and are dedicated to overcoming any challenge that is thrown our way to protect public health in our community, around the clock."

"This award serves as an acknowledgement and reminder of the important work Jamey West and his team do to treat the water no matter what flows their way," says Salt Lake City Department of Public Utilities Director Laura Briefer. "It stands to show how dedicated they are in staying in compliance, even with the plant being as old as it is."