SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

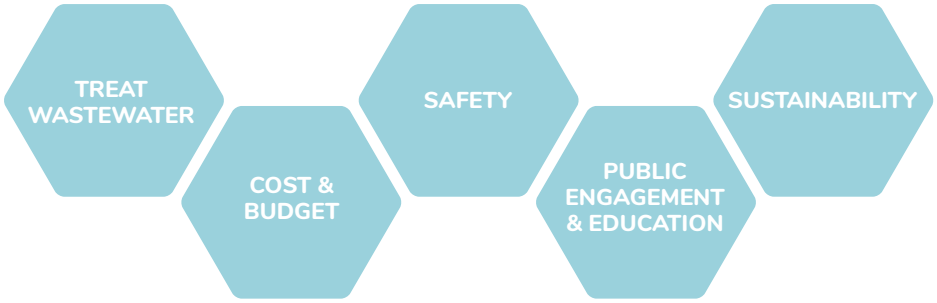
WATER RECLAMATION FACILITY

Construction Update

It's been three years since construction kicked off on Salt Lake City's New Water Reclamation Facility (wastewater treatment plant), which is being built next to the existing facility at 1365 West 2300 North.

If you look out over the site today, you can see six construction cranes busily moving materials to assist the 375 workers building the new facility. So far, more than 61,000 cubic yards of concrete have been poured. One standard concrete truck can carry up to 10 cubic yards, so 6,100 truckloads of concrete have been used and that is about 60 percent of what the project will need. Amid all this construction and activity, the existing facility continues to operate 24-hours a day without missing a beat, while complying with all required regulations. That's amazing, considering the 60+-year-old facility treats an average of 30 million gallons of wastewater every day.

THE PROJECT'S GUIDING PRINCIPLES



We are building the New Water Reclamation Facility to meet new water quality regulations, improve efficiency, resiliency, and reliability, and avoid potential risks associated with the existing facility being near the end of its service life.

OUR STEWARDSHIP RESPONSIBILITIES

As one of the oldest retail water providers in the West, Public Utilities has a long and successful history of providing customers with high-quality drinking water, managing flood control and stormwater, collecting and treating wastewater to standards that exceed EPA regulations, and maintaining and enhancing the City's Street lighting system. We understand the stewardship responsibility we have been given for water, the environment, and protecting public health, and we take that stewardship very seriously.

What is water stewardship? At Public Utilities, we think of water stewardship as the responsibility of managing water resources in a way that is socially and culturally equitable, environmentally sustainable, and economically beneficial. It is the job of managing stormwater, protecting our water supply, treating, and delivering drinking water to the community, collecting used water in our wastewater system, responsibly treating this wastewater, and returning it to the environment. It is achieved through a stakeholder-inclusive process that benefits people and nature. This stewardship is carried out by the Department's hundreds of employees following established practices and policies in their day-to-day actions to ensure quality and reflect the responsibility we feel as community water stewards.

MEET ALEX CHRISTENSEN

PROGRAM MANAGER, TEAM PLAYER, & LIVE MUSIC LOVER

A talent for math and skill at building with Legos when he was growing up, combined with an ongoing curiosity about how the life-sustaining water cycle works, led Alex Christensen to a career as a wastewater engineer and a critical role as a program manager for Salt Lake City Department of Public Utilities' New Water Reclamation Facility.

"My mom always told me I should be an engineer," says Alex. "By high school, I knew it was the direction I was going to take. I never even thought to try something else."

After earning a bachelor's degree in environmental engineering at Utah State University and a master's degree in civil and environmental engineering at San Diego State University, Alex worked for several engineering consulting firms before joining Salt Lake City Department of Public Utilities. He is certified as a Professional Engineer in Utah and California.

"I liked working for engineering companies but knew that I someday wanted to work for a municipality. I did mostly water projects at Black & Veatch Engineering and investigated breaking down complex chemicals in wastewater as part of my thesis at San Diego State University. I'm really interested in how the water cycle works; it's essential for life and requires us to manage this resource responsibly."

SEEING THROUGH AN ENGINEER'S EYES

As the water reclamation facility program manager, Alex has oversight and management duties at both the current facility and the new facility being constructed. Looking through the lens of an engineer, Alex monitors progress, tracks budgets, and helps ensure that resources are in place to keep the existing facility running and the new facility construction on track.

"My work style, or a guiding principle as I work, is to pay close attention to details," he says. "I'm organized and structured at work, as well as in life. It's innately who I am, and my career has helped teach me how to do this well."

As part of this work, Alex is overseeing the construction of the new influent pump station and force mains, which are critical to the New Water Reclamation Facility. Located about one mile south of the New Water Reclamation Facility, these projects are commencing and will be built adjacent to the existing pump station, which will be decommissioned once the new one becomes operational.

Alex also coordinates logistics for two related nearby projects, the 1800 North Sewer Realignment Project and the 1200 West Waterline Replacement.

MODERN DESIGN MEETS NEW STANDARDS

When completed in 2026, the New Water Reclamation Facility will replace the current facility, which was built 60+ years ago and is nearing the end of its useful life. The New Water Reclamation Facility is the largest construction project ever undertaken by Salt Lake City Department of Public Utilities and plays a critical role in maintaining our community's high quality of life.

"The New Water Reclamation Facility is such a massive project and will ultimately be a big part of how our City functions. City utilities go unnoticed for the most part," Alex says. "But when something goes wrong with these facilities, it can disrupt standards of living and people's lives, without them even understanding or knowing what is happening. We work hard to keep that from happening and these new facilities and infrastructure will really help."

TEAMWORK AND SATISFYING RESULTS

For Alex, working as a team with key staff at Salt Lake City Department of Public Utilities, and the engineering and construction firms involved in the New Water Reclamation Facility efforts coming to fruition is a satisfying motivator.

"We couldn't do this project without the help of partners that are experts in their fields," says Alex. Jacobs Engineering is providing overall program management services, AECOM is providing engineering design and construction management services, Sundt/PCL is constructing the New Water Reclamation Facility, Ralph L Wadsworth Construction is constructing the new influent pump station, and VanCon is installing the new force mains. In total there are about 500 construction workers involved with these projects.

Alex says he feels fortunate to work on so many aspects of these large and indispensable projects. "Getting to see them through, from start to finish, is a big deal for an engineer. I get to work on it all – the design, construction, commissioning, and operation. For me, these projects are a feather in the cap."

WHAT ABOUT CHILL TIME?

When he's not working, Alex is likely to be spending time with his significant other Jessica and planning his next outing to see live music. "Jessica has always been there for me and has always encouraged me throughout my career. I have her to thank for a lot of my success."

"My biggest hobby is watching live music. I like to see local shows, as well as traveling to see shows. I have a wide range of music interest – electronic, rock, metal, '80s – all over the board."

NEW WATER RECLAMATION FACILITY
CONSTRUCTION ACTIVITIES

Precast Panel

Primary Clarifiers

Secondary Clarifiers

Biological Nutrient Reactor (BNR) Facility

PRECAST PANELS BEING PRODUCED

Production of precast panels that will be used on the Dewatering Building has begun. These panels will ensure insulation and energy code requirements are met to keep the buildings' heating and air systems operating efficiently. They are more durable and have a longer life than other types of materials used in wet and corrosive environments such as the New WRF. In addition, they are quicker to install than traditional masonry or cast in place concrete, which will save us time and money. The precast panels are being designed with architectural elements and colors so the buildings can carry out our architectural vision for the New Water Reclamation Facility in a cost-effective manner. The panels are light gray with some acid wash to show the rocks and sand used in the concrete mix and some have a liner form that references the grasses and plant life supported by the treated water that is returned to the Great Salt Lake watershed.

CLARIFIERS CONSTRUCTION CONTINUES

Construction of the large, circular clarifiers continues, with concrete being placed nearly every day. Clarifiers are used to separate heavy solids from the liquid stream of wastewater entering the facility. The set of clarifiers (primaries) near the head of the treatment process, which are visible to those who fly over the area, are designed to separate the water and solids streams. There is also a second set of clarifiers located downstream that are used to separate the microbiology (or bugs) that consume organic material in the waste stream. Did you know that there are millions of bugs hard at work at our Water Reclamation Facility helping us treat wastewater. Yep. These little guys are simply amazing little workers, and they work for nothing but food.

BIOLOGICAL NUTRIENT REMOVAL (BNR) CONSTRUCTION

The construction of the BNR's basin walls continues. The BNR reactors include different phases of treatment designed to facilitate the growth of different bacteria to optimize consumption of organics, removal of nitrogen, and uptake of phosphorus. A large Blower Building is also being constructed to house the four large blowers that will provide air flow needed for the BNR process and the control rooms of the facility.

ULTRAVIOLET (UV) FACILITY CONSTRUCTION CONTINUES

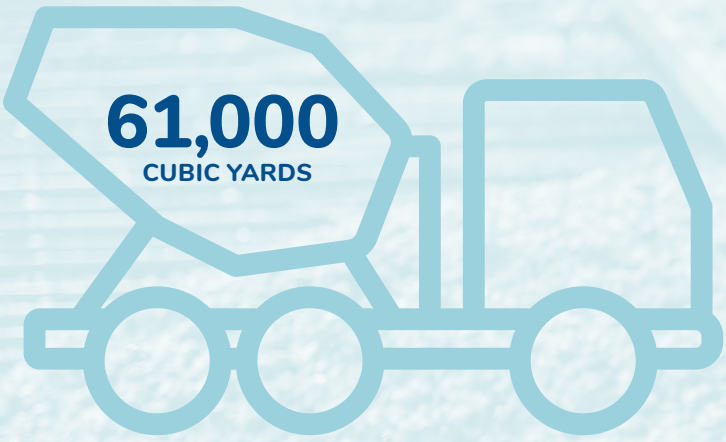
The UV facility continues to take shape, with the completion of concrete water channels for various UV treatment trains. UV disinfection will replace current chlorine gas disinfection. This change will improve safety for both plant staff and the surrounding area.

Ultraviolet Final Treatment (UV) Building

NEW ELECTRICAL SUBSTATION & STANDBY GENERATOR FACILITY

A new electrical substation is being built in collaboration with Rocky Mountain Power. The substation will be able to supply all of the power needed for the new plant. A standby generator facility is also being constructed to provide backup power in case of a power outage.

Blower Building (lower left) and Gravity Thickener (upper right) Facilities

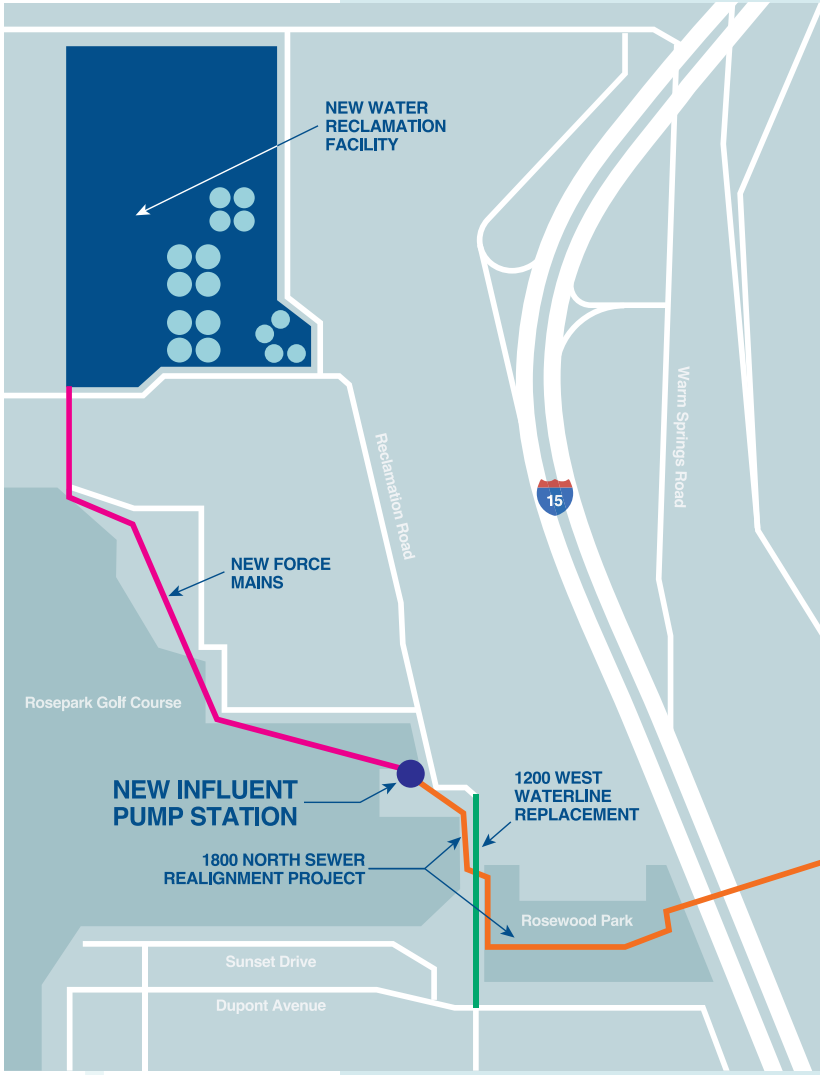


SO FAR, MORE THAN 61,000 CUBIC YARDS OF CONCRETE HAVE BEEN POURED.
THAT'S 6100 TRUCKLOADS!

And it's only about 60 percent of what the project will need.

NEW INFLUENT PUMP STATION

A new influent pump station is being built about one mile south of the New Water Reclamation Facility, adjacent to the existing pump station on Reclamation Road. The new influent pump station will be more efficient, resilient, and reliable. Four large sewer trunk lines currently collect and transmit the wastewater from throughout the City to the existing pump station and will continue to be used to transmit wastewater to the new influent pump station. The new influent pump station will have the capacity to receive around 48 million gallons of wastewater per day and will pump that through two forty-eight-inch diameter force mains (pressurized pipelines) to the New Water Reclamation Facility for treatment.



HERE'S WHAT YOU CAN EXPECT

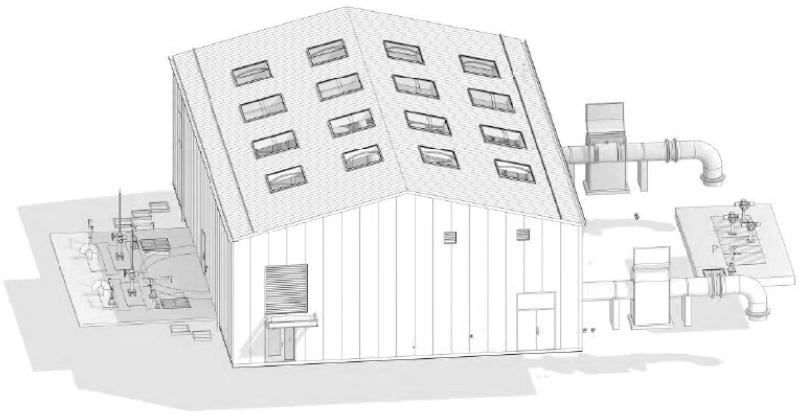
Work on the new influent pump station began in October 2023 and will continue through 2026. We will work closely with residents and entities near this area, sharing information, and letting them know whom to call if they have questions or concerns.

OUR COMMITMENT TO YOU

Realizing this work may be disruptive to the surrounding community, we have arranged for construction workers to enter the site primarily from 1900 North or Redwood Road, and to be respectful of our neighbors and neighborhood.

Our public engagement specialists will help coordinate with neighbors and the community. They will be meeting with nearby schools, parks, and neighbors to provide project details and seek feedback, so that construction continues to go as smoothly as possible.

WHAT THE INFLUENT PUMP STATION WILL LOOK LIKE



ADDITIONAL PROJECTS IN THE ROSE PARK AREA

To ensure we can continue to provide our services, requires us to repair and replace aging infrastructure. The following projects will also take place in the Rose Park area.Public Utilities' general information line at 801-483-6900 or visit www.slc.gov/utilities.

1800 NORTH SEWER REALIGNMENT PROJECT

October 2023 – March 2025

Phase two of a three-phased project will realign and rehabilitate the 1800 North Sewer Line. For more information about this project call the project hotline at **801-217-3430**, email ***slcwaterprojects@slcgov.com***, or visit ***www.slc.gov/utilities/projects/1800-north-sewer.***

1200 WEST WATERLINE REPLACEMENT

Construction Date Pending

Installation of a waterline on 1200 West from Dupont Avenue to north of Rosewood Park. For more information about this project call Public Utilities' general information line at **801-483-6900** or visit ***www.slc.gov/utilities***.

THE CONSTRUCTION TEAM

AECOM has developed the design work for the new influent pump station, Ralph L Wadsworth Construction is constructing it, and VanCon is installing the new force mains (pipelines that convey wastewater under pressure).

Salt Lake City
Department of Public Utilities
1530 South West Temple
Salt Lake City, UT 84115

Water Reclamation Facility
Construction Update:
Fall 2023

WATER RECLAMATION FACILITY

WE WANT TO BE A GOOD NEIGHBOR

We've been out in the nearby Rose Park community to say hello, provide information on the projects we are working on in the area, explain how we want to work with our neighbors to make construction go smoothly, and to let people know what we do in general.

So far, we've met with Salt Lake City Council Member Petro, the Guadalupe School, Salt Lake City's Parks Department, the Rose Park Golf Course, and the Rose Park Community Council. We've also participated in the Rose Park Community Festival, the Guadalupe School back-to-school night, and Groove in the Grove.

If you have any questions about the New Water Reclamation Facility or the new influent pump station, please call our project hotline at 801-917-1124 or visit the project website at www.makeitpureslc.com. For questions about Public Utilities in general you can call our general information line at 801-483-6900 or visit www.slc.gov/utilities.