SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

WATER RECLAMATION FACILITY

As we enter the fourth year of construction on our New Water Reclamation Facility, we'd like to share what it takes to plan and manage financing for the largest public utility project in Salt Lake City's history...

Everything we do at Salt Lake City Department of Public Utilities (SLCDPU) is driven by our core belief in responsible water stewardship. We manage our water resources in a way that is socially and culturally equitable, environmentally sustainable, and economically beneficial. This is carried out by hundreds of employees following established practices and policies in their day-to-day work, especially when focusing on our infrastructure maintenance and replacement projects, like building the New Water Reclamation Facility.

A PROUD HISTORY OF WATER PLANNING

We have been very fortunate in Salt Lake City that those who came before us planned and built much of the water system that supports our community today. This is a legacy of which we are very proud and one that guides us to put sound systems in place today which will serve those who follow. This commitment is vital to providing the critical services which are essential in our daily lives, including supplying high-quality drinking water, managing stormwater, collecting and treating wastewater, and lighting our City's streets. These services keep our City running, our communities safe and healthy, and our economy strong.

Being mindful of the importance of our water system and our duty of wise stewardship, we began the process of identifying the need and planning for the New Water Reclamation Facility more than 10 years ago. The New Water Reclamation Facility has been designed to replace aging infrastructure, increase resiliency, and to meet new limits set upon the use of phosphorus and ammonia nutrients in the treatment process. When complete in Fall 2026, the New Water Reclamation Facility will be able to treat an average of 48 MGD of wastewater per day, with the ability for increased capacity in the future. We are also mindful that the New Water Reclamation Facility's operation and maintenance will not only be carried out by those of us at Public Utilities now but for decades to come. As a result, we are keeping careful records of the Facility's design and construction elements.

THE CITY'S GROWTH AND AGING SYSTEMS MAKE PLANNING MORE IMPORTANT THAN EVER

Salt Lake City is experiencing tremendous growth and prosperity that increases demand placed upon critical public utility services. This is happening throughout the region in conjunction with a major drought and environmental changes resulting from our changing climate. This growth and changing environment are putting pressure on the fragile watershed areas in the gorgeous Wasatch Mountains, where much of our water comes from, and on the magnificent Great Salt Lake, where treated water is safely returned to the environment.

In addition, since most of our existing water-related infrastructure system was built many decades ago, we must be vigilant and continue necessary maintenance and repairs to keep it running and in compliance with the many state and federal requirements. All of this requires careful and thoughtful planning and investment.

The following are some of the specific projects we are focused on right now.

- Rebuilding the City's Water Reclamation Facility
- Implementing a new federal rule to inventory lead and copper pipes
- Upgrading the City Creek Water Treatment Plant
- Rehabilitating Mountain Dell Dam and other City-owned dams
- Renovating portions of the stormwater collection system
- Updating our Watershed Management Plan
- Continuing the Great Salt Lake wetlands and habitat preservation project

FINANCIAL LEADERSHIP AND READINESS ARE KEY

Maintaining and building water infrastructure like the New Water Reclamation Facility is a large investment and requires significant financial planning and ingenuity. Because of this, we have developed long-term strategies to financially support our aging water infrastructure, including structured changes to utility rates, bonds, and grants. The costs incurred by major capital improvement projects, such as the New Water Reclamation Facility, are too large to place solely upon today's rate paying customers. Rather, financial stewardship obligates us to search for funding sources which are of the greatest benefit to our community. We are fortunate to have received the most-favorable financing available – a federal loan made possible under the Water Infrastructure Finance and Innovation Act (WIFIA). We are pleased that Salt Lake City Department of Public Utilities is the first recipient of a WIFIA loan in the Intermountain region. We estimate that WIFIA financing will save City residents up to $100 million over the life of the project when compared to traditional bonding. A variety of funding sources allow us the option of gradual repayment so that we can more equitably distribute the financial impact between the customers of today as well as those who will follow.

FINANCIAL PLANNING AND UPCOMING RATE STUDY

The Salt Lake City Department of Public Utilities team is continuously and consistently assessing the Department's current financial status, future needs, and how to best position the Department for sustainable growth. We closely monitor incoming revenue and outgoing expenses, while also anticipating future needs, and developing budgets and reserves to pay for those needs. Accordingly, we are undertaking a study of our current rates, something we do every few years. A rate study is a detailed examination of our revenue requirements to provide prudent and adequate funding levels for operations and maintenance and for future capital infrastructure improvements. The rate study also provides us with options for developing an equitable rate structure and how best to allocate costs to our customers.

The rate study is currently underway, and we plan to complete it in Fall 2024. The Public Utilities Advisory Committee will review recommendations proposed based on the rate study findings. A final proposal will be submitted to Salt Lake City's Mayor Erin Mendenhall and the Salt Lake City Council for formal consideration and adoption.

IMPLEMENTING FINANCIAL BEST PRACTICES

We continually track and manage our departmental budget, while also tracking and managing budgets for all the projects happening throughout the Department's water service area. With a budget of over $500M, saying this is a big task is putting it mildly. Internal controls enable us to safeguard public funds.

It's an understatement to say that a lot of effort has gone into managing the costs associated with the New Water Reclamation Facility project. We think the results speak for themselves: collaboration throughout the New WRF project has saved City rate payers, businesses, and residents more than $157 million, as a result of evaluating costs and value engineering whenever feasible. That's something of which we can all be proud!

MEET LISA TARUFELLI

FINANCIAL ADMINISTRATOR
SLCDPU

In January 2024, Lisa Tarufelli marked her 5th anniversary as SLCDPU's Finance Administrator. To say her role is critical would be an understatement. Among many responsibilities, one of her top priorities is ensuring that the organization can undertake projects in a way which is financially sound. There are currently over 200 active utility projects and managing the Department's finances is no small task. But one of the largest projects, the New Water Reclamation Facility, is in a class all its own.

Salt Lake City's Water Reclamation Facility is the only wastewater treatment plant serving the community. It is the most critical of infrastructure. This is just one of many aspects which makes it unique from the perspective of financial management. The cost is one factor: the New WRF is the largest construction project in SLCDPU's history. Lisa and her team have put their problem-solving skills to the test, working to identify new and varied funding sources to ensure that the burden of paying for the project will not rest solely on Salt Lake City's rate payers.

External funding sources, like bonds and loans, are essential to funding massive capital projects like the New WRF, but regular revenues fund the majority of SLCDPU construction projects. It should go without saying that revenues generated by rate payers are key to the organization's financial health. Given their importance in overall financial planning, it is crucial to determine a rate structure which is sustainable, financially sound, socially conscious, and equitable. In 2024, SLCDPU is undertaking a rate study. Rate studies are conducted every few years and are vital to informing how much and, more importantly, how customers are charged for the products (drinking water, wastewater treatment, stormwater conveyance, and street lighting) they use every day.

"The New WRF is a multi-generational project," Lisa commented. "We are incurring construction costs today, but repayment cannot be limited solely to our current community members." Funding sources for the New WRF include 30-year bonds as well as a low-interest federal loan from the Water Infrastructure Finance and Innovation Act (WIFIA). When considering any SLCDPU project, no matter the size, Lisa's first thought is to understand how funding the project in question will impact the entire organization. The Department must consider the financial implications of new infrastructure beyond its construction, factoring in the costs to own, operate, and maintain facilities throughout their life cycle.

Lisa is a problem-solver by nature. Before coming to SLCDPU, she was the Director of Administrative Services for the City of Rock Springs, Wyoming. That experience, plus her dedication to researching issues and possible solutions, makes her the ideal person for the role of Finance Administrator. Caring for the finances of the City's Department of Public Utilities is challenging and can sometimes be stressful. "My husband told me that I wouldn't have taken this job if I didn't think I could make a difference," Lisa stated.

Lisa does indeed make a difference. In recent years, SLCDPU has become more efficient when it comes to initiating and completing infrastructure projects. Thanks to thoughtful oversight and long-term planning, the Department boasts a 70-80% construction completion rate (which is well above the industry standard). This is thanks, in no small part, to financial efficiency enabling the team to accomplish more using the same amount of resources. "Our community trusts us to be good financial stewards with public money," said Lisa. When it comes to financial stewardship, that means accepting bids whose low cost does not sacrifice safety, quality of work, or our ability to meet forthcoming or existing regulations.

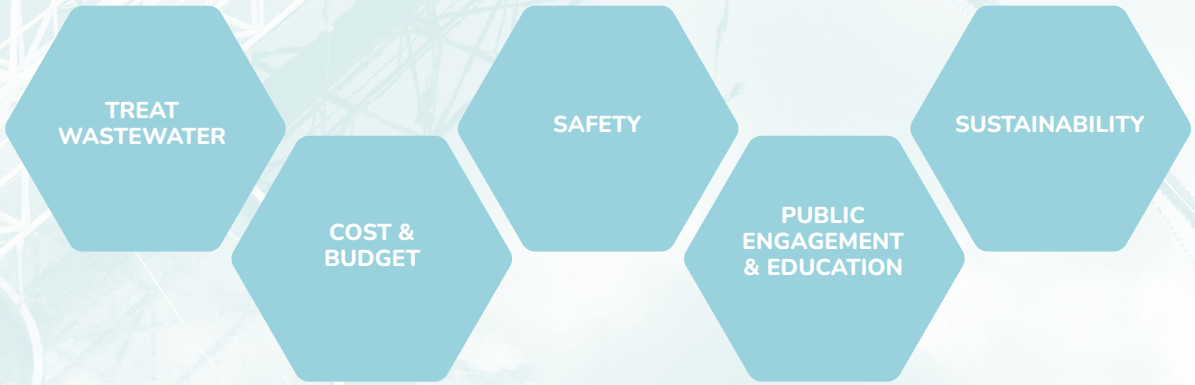
The products SLCDPU provides to our community are essential needs. It is imperative that our financial planning considers short- and long-term impacts and the ways in which our actions affect our entire Department, the City, and our community as a whole.

ABOUT THE NEW WATER RECLAMATION FACILITY

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. While the new facility is being built, the existing facility must continue to operate without interruption.

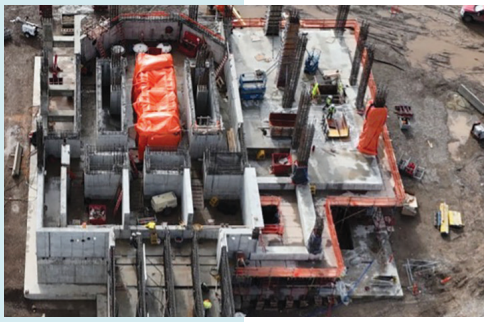
Construction on the New Water Reclamation Facility began in March 2020 and is expected to go through 2026. New federal and state water quality standards go into effect in 2025.

THE PROJECT'S GUIDING PRINCIPLES

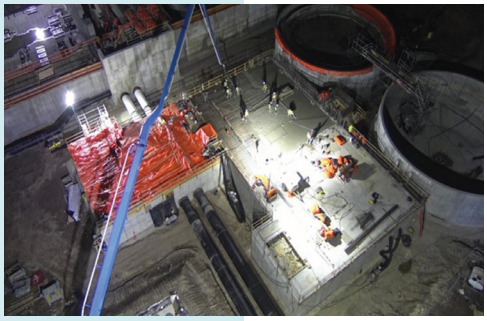


WATER RECLAMATION FACILITY
CONSTRUCTION ACTIVITIES

Dewatering Building



Headworks



Blower Building and Gravity Thickeners

Influent Pump Station

DEWATERING BUILDING

Precast concrete panels have been installed on the exterior of Dewatering Building. This building is now completely enclosed with panels which mimic the appearance of the grasses and natural plant life which is supported by the water being treated inside. Work to complete the electrical, mechanical and process piping can now proceed. The Dewatering Building will be the tallest structure on the site and the tasks that will be completed within are some of the most critical in the process. The equipment housed inside this facility removes water from the biosolids, allowing for their reuse.

HEADWORKS

Construction is progressing on the Headworks facility. The Headworks is where the raw sewage enters the plant and begins the treatment process. Within the Headworks are large, motorized screening equipment which remove rags from sewage before it flows into grit removal equipment. Then, this flow is directed to the next stage of the treatment process at the Primary Clarifiers.

BLOWER BUILDING AND GRAVITY THICKENERS

Construction of the Blower building continues. The treatment process requires the movement of a large amount of air to facilitate the growth of different bacteria to consume the organics, remove nitrogen, and uptake phosphorus from the wastewater flow. Blowers housed within the Blower building provide the air to the treatment process. Concrete placement for the two Gravity Thickeners is nearing completion. The Gravity Thickeners are used to thicken the sludge collected in the Primary Clarifiers before it is sent to the Anaerobic Digesters, where it is converted into biosolids.

INFLUENT PUMP STATION

Construction proceeds at the new Influent Pump Station (IPS), located about ¾ of a mile south of the Water Reclamation Facility (WRF). The depth of the IPS must match the elevation of the existing gravity sewers entering the site. This requires an excavation of approximately 50-feet below the existing ground surface. High-capacity pumps housed withing the IPS will convey incoming raw sewage through twin 48-inch diameter pipelines to the new Headworks facility at the WRF.

Influent Force Mains

INFLUENT FORCE MAINS

Construction of the twin 48-inch diameter force mains is well underway. The force mains are being installed northwest of the IPS, near Rose Park Golf Course, and connect into the Headworks facility. Upon completion of the force mains, the areas of Rose Park Golf Course impacted by construction will be restored to their pre-construction beauty.

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

Water Reclamation Facility
Construction Update:
April 2024

SALT LAKE CITY WATER RECLAMATION FACILITY

Construction Update
APRIL 2024