Construction Overview

The existing Water Reclamation Facility sits on 135 acres and includes 29 buildings and 20 processing unites. The new facility will stay within the existing site. New buildings will be constructed, some facility elements will remain, and other existing elements will be removed or decommissioned until they can be removed. Key elements include:

- **Biological nutrient removal (phosphorus)**
- **UV disinfection**
- **Capturing and reusing energy**
- **Odor control**
- **Reusing biosolids**
- **Creating educational component**

Our Construction Team

Jacobs is providing overall Program Management services. Jacobs leads a global professional services sector providing solutions for a more connected, sustainable world. With $13 billion in revenue and a talent force of more than 55,000, Jacobs provides a full spectrum of services.

AECOM is providing engineering design services. AECOM is a $20.2 billion global company with 87,000 employees and more than 100 years of experience designing and managing water systems.

Sundt/PCL (Joint Venture) is providing construction management and general contractor services. Sundt Construction is a 129-year-old firm and is 100 percent employee owned. Sundt was ranked #58 on Engineering-News Record's Top 400 Contractors in the US. PCL Construction was established in 1906 and works internationally in the United States, Canada, the Caribbean, and in Australia. PCL was ranked #7 on Engineering-News Record's Top 400 Contractors in the US.

Construction Update

A lot of work has taken place since construction started in 2020. Because we must ensure the current facility stays operational 24/7, without interruption, or operational surprises, we have had to systematically approach the construction work that needs to happen very strategically. The project's guiding principles:

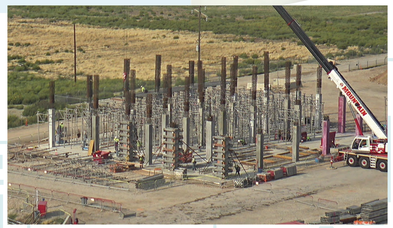
- **Treat wastewater > Mitigating impacts of price escalation**
- **Cost and budget**
- **Safety**
- **Public engagement and education**
- **Sustainability**

Pre-load Material

- 1.6 million tons
- 35 feet tall
- Covered 23 acres
- Compressed soil up to 6 feet in some areas
- Saved approximately $40 million

Biosolids Storage Pad

- In use
- Temporarily storing stabilized biosolids
- Public should not detect odors



Mechanical Dewatering Building

- 144 16-inch-diameter steel piles
- First, second and third levels framed
- To be completed June 2024

Odor Reduction
UV Disinfection Building

Public Utilities

Sustainability

The City's Green Mission

Salt Lake City has wisely invested in its green mission to help our community conserve resources, reduce pollution, minimize carbon emissions, and ensure a healthy, sustainable future. The City has done a fantastic job developing sustainability programs and is seen as a sustainability leader among American cities.

The New Water Reclamation Facility provides us with an opportunity to evaluate and incorporate sustainability measures into the project.

Policy to Project Application

Executive Order / Policy	Sustainability Measure	Project Application
LEED Design Standards	LEED Gold	Initially reviewed; shift to Redwood Campus
Sustainable Infrastructure	Envision Platinum	Applied site wide to promote sustainability, equity, and resilience
Energy Management of SLC Facilities	Sustainable Return on Investment (SROI)	Promote best value across project life cycle

Envision Elements

Overview of Envision Elements
- Consideration of ***life cycle costs:*** planning, design, construction, and operation (accounting for resilience and sROI)
- ***Public outreach*** to focus on key issues that impact the community and consider equity
- Use of ***local and recycled*** *materials* in construction
- Pushing for higher levels of achievement when possible; ***balancing with project costs***

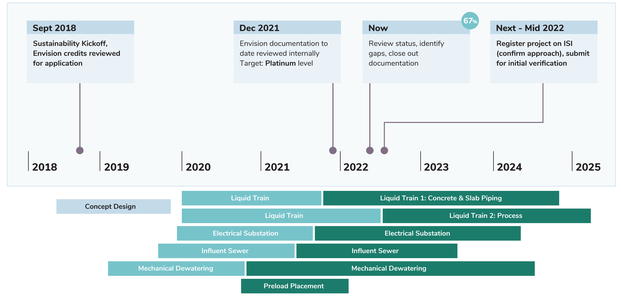
Accreditation
- Targeting a higher % than required to allow flexibility to reduce points based on cost/effectiveness
- Team is focused on low hanging fruit; encouraging team to identify good opportunities and innovate (e.g., purchase materials close to site)
- Submit for accreditation following 95% design completion

Accreditation	Bronze	Silver	Gold	Platinum
Total Applicable Points	20%	30%	40%	50%

ENVISION

Institute for Sustainable Infrastructure

Envision Schedule



Implementing Wastewater Treatment Solutions with a Focus on ESG

Project Planning
- ***Define Sustainability Goals*** and roadmap to implementation
- Plan with a commitment to ***support community***
- ***Engage City Sustainability Leadership***
- Adapt Wastewater Systems to address a changing climate
- Promote system resilience and hazard mitigation
- ***Early engagement with community groups***

Integrating ESG throughout Design, Construction
- ***Target Sustainability Certifications*** (LEED / Envision)
- Identify solutions that ***reduce embedded emissions***
- Determine ***baseline energy demand*** of existing facility and opportunities for efficiency/improvements
- ***Promote job creation and local hiring and implement operator training***
- Targeting ***low interest loan/grants*** to reduce rate payer impact
- Prioritizing community ***engagement to drive equity*** and reflect community through project
- Seek opportunities to integrate ***Nature Based Solutions*** (stormwater management, treatment wetlands, BNR)

Maintaining ESG Commitment through Operations
- Implement with a focus on ***reducing emissions*** across life of facility
- Identify alternatives to ***reduce impact to community and environment*** (odors, lighting, noise)
- Seek opportunities for ***on-site energy generation*** (solar, geothermal)
- ***Capture/Utilize system byproducts*** (methane)

Sustainability - Envision

Leadership
- Collaboration
- Planning
- Economy

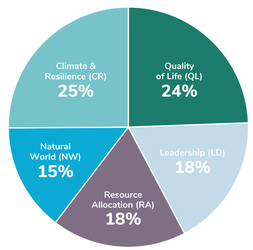
Quality of Life
- Wellbeing
- Mobility
- Community

Resource Allocation
- Materials
- Energy
- Water

Natural World
- Siting
- Conservation
- Ecology

Climate and Resilience
- Emissions
- Resilience

SLCWFR Credit Rate By Category

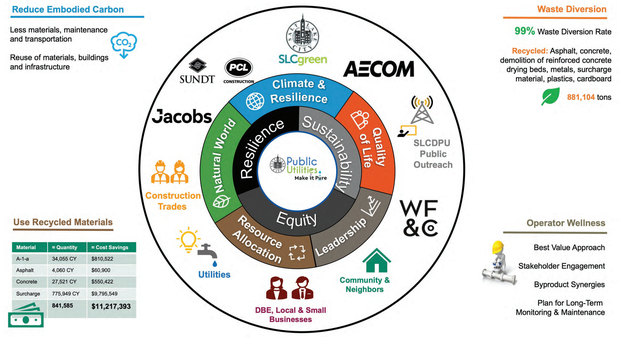


Envision Status

Project team is targeting Platinum: 50%; on track for 67%
- Team is focused on low hanging fruit; encouraging team to identify good opportunities and innovate (e.g., purchase materials close to site)
- Target a higher % than require to allow flexibility to reduce points based on cost/effectiveness

Overview of Envision Elements
- Consideration of ***life cycle costs:*** planning, design, construction, and operation (accounting for resilience and sROI)
- Suggestions for ***public outreach*** to focus on key issues that impact the community and consider equity
- Formal ***Sustainability Management Plan*** with periodic update to track progress
- Construction use of ***local and recycled materials***
- Pushing for higher levels of achievement when possible; ***balancing with project costs***

Project team is targeting Platinum: 50%; on track for 67%
- Quality of Life (QL): 81%
- Leadership (LD): 59%
- Resource Allocation (RA): 60%
- Natural World (NW): 48%
- Climate and Resilience (CR): 83%

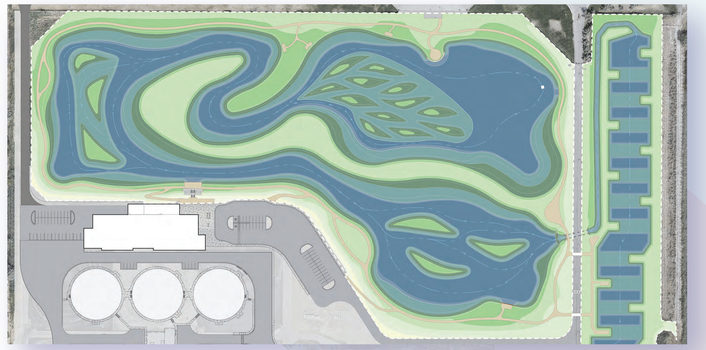


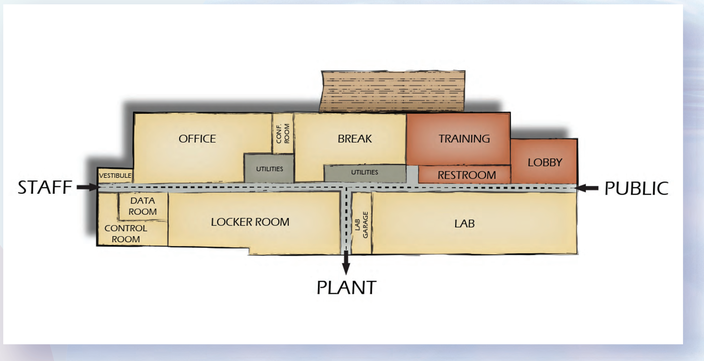
Through the reuse of materials and tracking quantities of these materials, we have been able to determine the actualized cost savings.

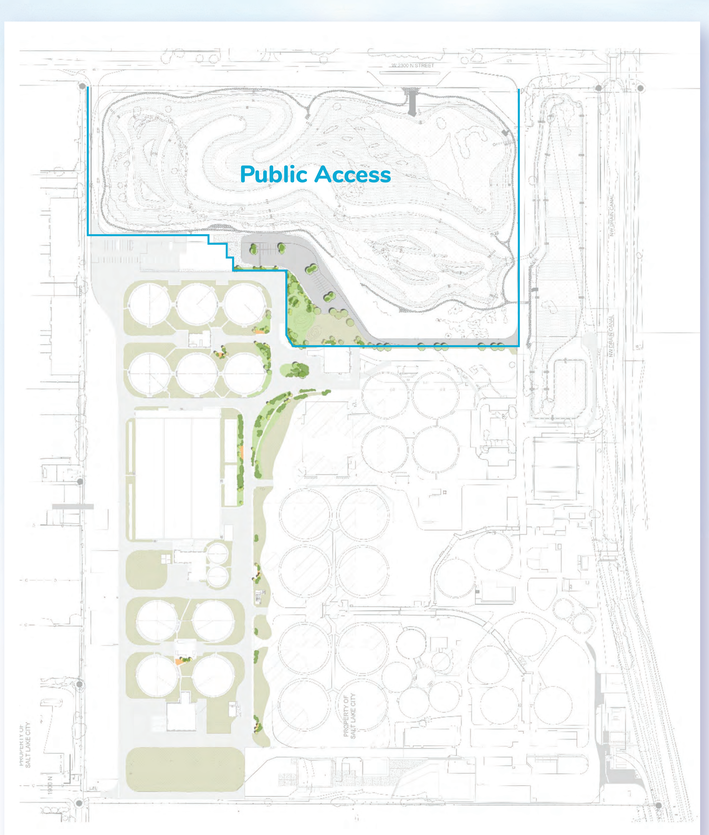
Wetlands & Public Access

The 20.21 acres of constructed treatment wetlands located on the north side of the Water Reclamation Facility have been temporarily shutdown and the area is being used as a construction staging area. This project provides us an opportunity to redesign and improve these polishing wetlands and provide wildlife habitat and public access to them.

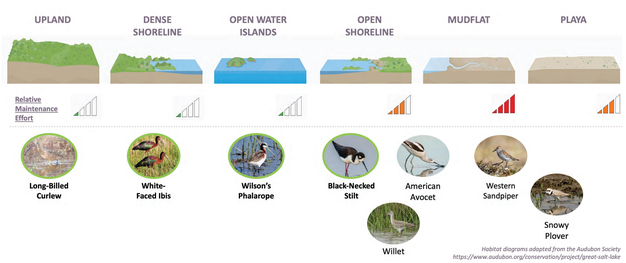
The current wetlands design includes a perimeter trail, information gathering and bird watching areas, space allocated for future arts and education elements, educational nodes, interpretive features, bird blind structures, overlooks and educational signage.



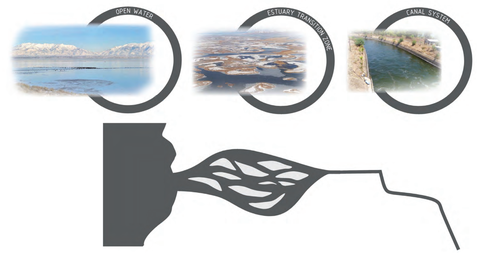




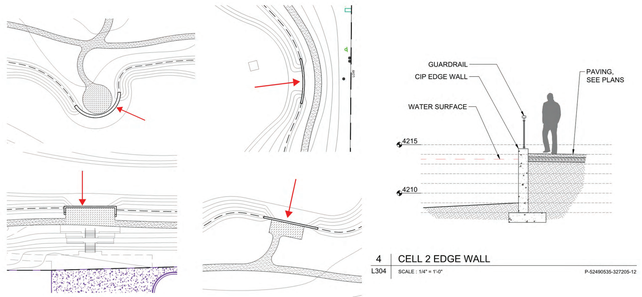
Stakeholder Engagement



Matching Target Species to Target Habitat



Cell 2 Overlook Areas



Materials Palette