PROJECT SUMMARY

- Location: Seattle, WA
- Project Owners: Seattle Public Utilities and King County Wastewater Treatment Division
- Prime Consultant: Jacobs Engineering
- Project Value: $650M
- Project Duration: 5 Years
- Project Delivery: Design-Bid-Build

PROJECT OBJECTIVES

- Standardize data collection into a customized Inspector Daily Report, inclusive of photos and metadata, to create unassailable documentation.
- Enable real-time trouble-shooting from the jobsite, making workflows more efficient to minimize inspector overtime.
- Provide a higher level of oversight for the construction manager, engineering teams, and the project owner by providing immediate access to project data.

FAST FACTS

- Solutions: HeadLight Fieldbook and HeadLight Portal
- No. of Inspectors: 11
- No. of Observations: 157,670
- No. of Personnel: 41,649

ROI

- Configured an easy-to-use daily report format, creating an easily searchable digital project database.
- Reduced inspector overtime, recouping 100+ hours per week, saving $200k+ annually.
- 100% inspection uptime, even underground without a reliable internet connection.

Jacobs Employs a Technological Approach to Environmental Challenges

Digital Construction Management Technology Proved Key to Improving Underground Water Infrastructure

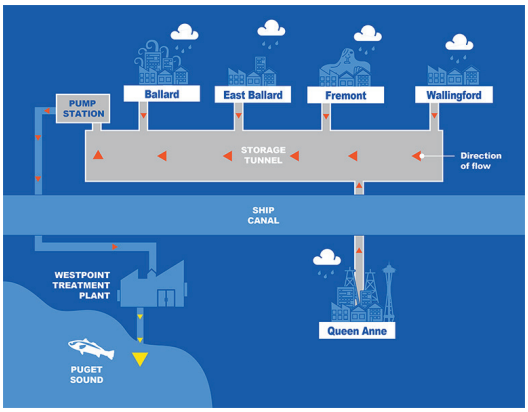
Investing in Water Quality: Seattle's Infrastructure Initiative

Each year, 75 million gallons of polluted stormwater and sewage threaten Seattle's waterways. Now, an ambitious infrastructure project is turning the tide on water pollution. Seattle Public Utilities and King County Wastewater Treatment Division are building an underground storage tunnel to protect the continued health of nearby waterways such as Lake Washington Ship Canal, Salmon Bay, and Lake Union.

The Ship Canal Water Quality Project is designed to intercept sewer overflows and temporarily store more than 29 million gallons of untreated stormwater and sewage before it reaches waterways. This initiative will enhance regional water quality and mitigate negative impacts on fish, wildlife, and local neighborhoods.

Navigating Complexity: Jacobs Engineering's Role in Water Management

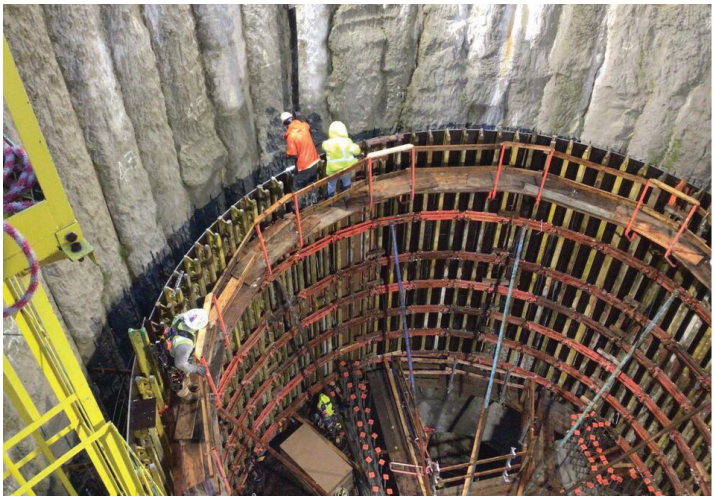
Managing a project of this complexity requires real-time visibility into progress, safety, and compliance. To achieve this, Jacobs Engineering Group, serving as the Construction Management consultant, leveraged HeadLight's construction management platform, ensuring seamless coordination between field and office teams.



A main priority of this project is to build an underground storage tunnel to store up to 29 million gallons of overflows until they can be transported to the treatment facility. This 2.7-mile-long tunnel will run from the Ballard to Wallingford neighborhood, measure just under 19 feet in diameter, and be buried 40-80 feet below ground. The tunnel is connected to the original sewer lines via a series of diversion drop structures. A tunnel boring machine called the MudHoney, is being used to excavate the space necessary to construct the tunnel and associated diversion shafts. The subterranean location of this project required thoughtful planning into how teams could communicate project updates continuously without disruption while maintaining safety. Additionally, tunneling projects have unique reporting requirements.

Jacobs implemented HeadLight's construction management platform to:

- Enable inspectors to troubleshoot issues remotely, reducing costly overtime and unnecessary site visits.
- Provide real-time data access to engineers, managers, and project owners, leading to faster, more informed decisions and fewer delays.
- Create one-click daily reporting, cutting administrative work and allowing inspectors to focus on critical field operations.
- Ensure data integrity, consistency, and transparency, keeping all stakeholders aligned throughout the project.



Maximizing Efficiency with Digital Tools

Having realized the value of HeadLight technology on the Seattle Waterfront project and Tacoma Link project, the team at Jacobs chose to implement HeadLight's cloud-based solution on the Ship Canal Water Quality Project. The ability to connect the field to the office in real time allowed teams to collaborate remotely and capture data offline. The team was able to make inspection progress and uphold safety standards, even when offline and underground. For example, Jacobs inspectors were able to identify potential issues and provide photo documentation that included comments along with the exact GPS location to all necessary stakeholders within the same day. This empowered the team to swiftly resolve concerns based on reliable data from the field, preventing accidents and costly delays.

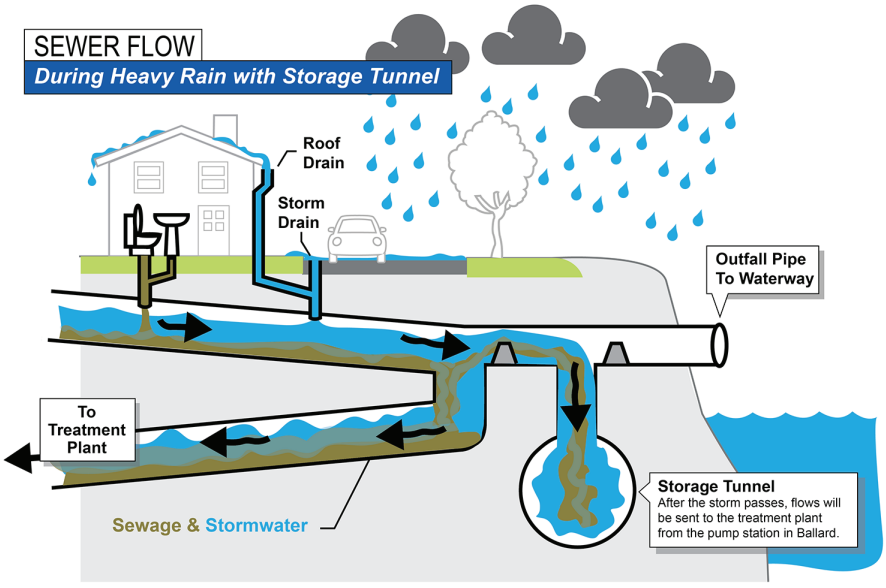
The inherent flexibility of HeadLight's technology allows the team to track project progress easily as well. Observations taken in the field include metadata, like GPS locations and timestamps, creating a visual log indicating which segment of the tunnel is being worked on. Each inspector's daily report automatically includes this data, which helps to minimize inspector overtime by reducing the administrative burden.

HeadLight's Fieldbook unifies the Jacobs team with a single source of truth. Construction project inspectors are able to collect rich data, including photos and videos, and are able to track equipment and personnel in the field. Teams are unified by shared data and are able to share information with project stakeholders in near real-time.

Outcomes & Ongoing Benefits

By incorporating HeadLight's technology into their strategy, Jacobs engineers were able to identify and resolve jobsite issues. The team was also able to provide consistent, quality reporting to the client as well as reduce inspector overtime. Reports included embedded photos, which provided indisputable evidence of the project's quality.

Storing data on the cloud enabled all stakeholders to easily gain visibility into project information regardless of physical location. Data integrity, consistency, and transparency across the organization had multiple benefits—both during pre-construction and during construction work on the SPU Ship Supply Water Quality project.



Beyond construction, this project not only improves the region's water quality today but also sets a new standard for how digital tools can future-proof critical infrastructure for generations to come. With a comprehensive digital record, Seattle Public Utilities and King County can streamline maintenance, optimize future projects, and ensure the long-term health of the region's waterways.

Want to see how digital construction management can transform your next project?
Request a demo today and experience the power of real-time data for smarter, safer infrastructure.