



AMI Data Collector Authorization

AB6529 | September 17, 2024



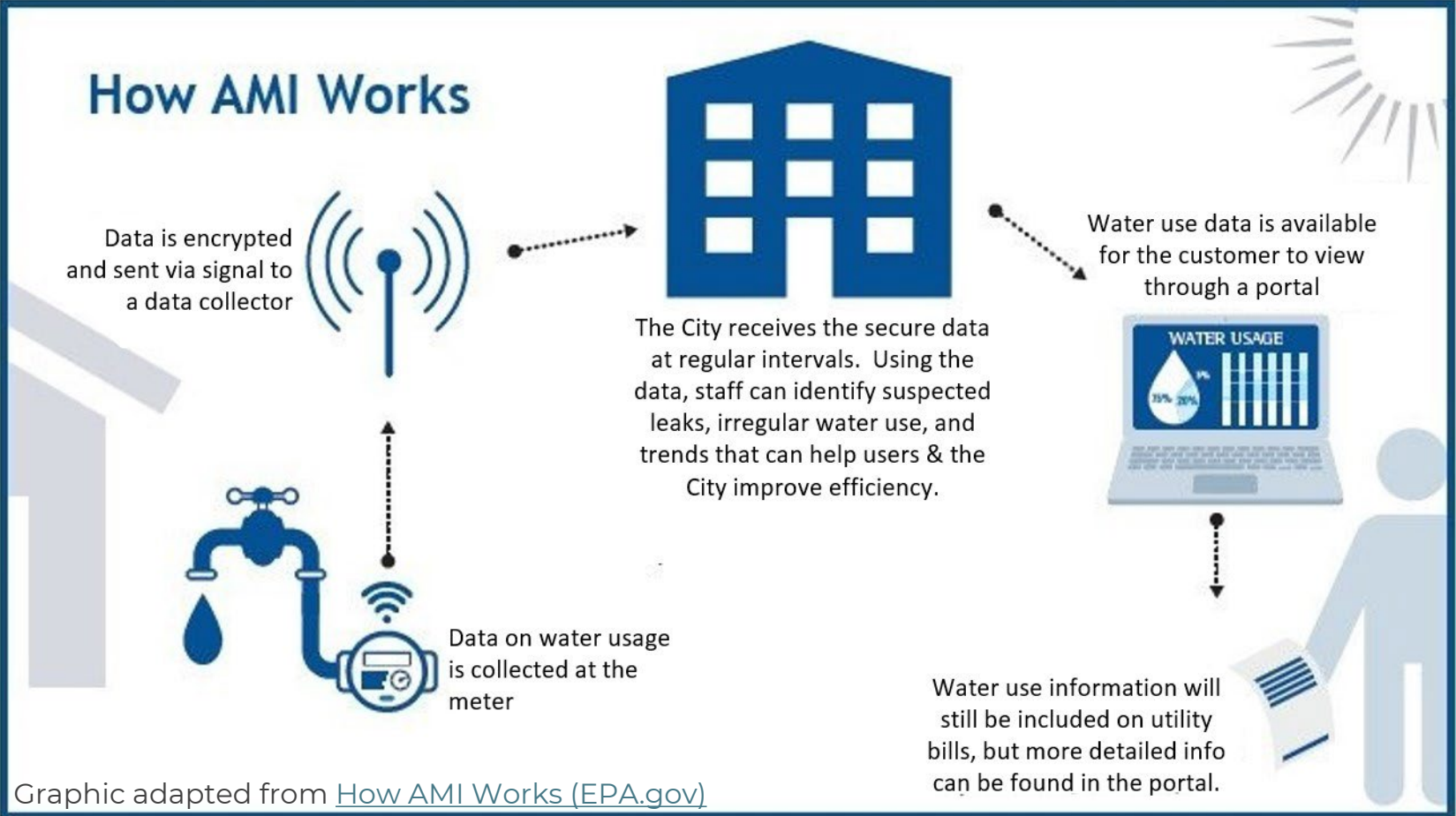


Presentation Overview

- AMI Project Overview
- Permitting and Public Outreach
- Data Collector Status
- Project Cost
- Next Steps

Project Overview

Upgrade Mercer Island's water meter system to an Advanced Metering Infrastructure (AMI) system



AMI System Operations

- When the AMI system is fully operational:
 - Water meters will transmit hourly water usage data to City system on 4-6 hour intervals.
 - Minimal meter reading required, allowing staff to focus on resolving meter issues.
 - Allow customers to monitor their water use through a customer portal.
 - Send notifications about potential leaks to City and customers, prompting faster response and issue resolution, and reducing water.



Project Timeline

- 2018 City began work with HDR to evaluate best system for Mercer Island
- 2019 Request for Proposals (RFP) issued, nine proposals received
- 2020 Ferguson/Sensus selected after extensive selection process, including pilot study
- 2022 Contract awarded to Ferguson (AB 6112)
- 2022-2023 Equipment procurement
- 2023 Meter boxes cleaned and repaired by City
- 2024 Meter replacements (March - August)
Two data collectors activated (June)

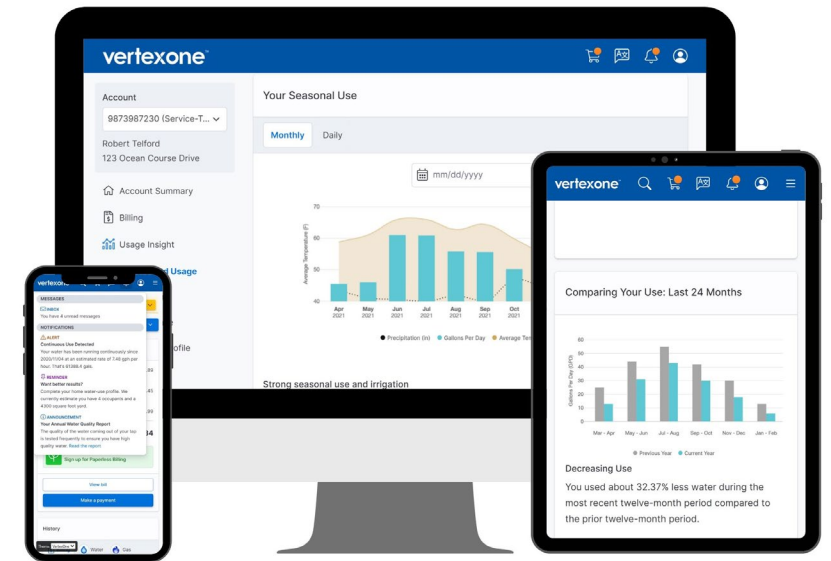
Meter Replacements

- Approximately 7,900 water meters
 - 7,415 residential and business meters replaced by contractor
 - 250+ replaced by City staff
 - Handful of contractor corrections and 'tricky' meters remain
 - Most of the remaining meters are ones that are not part of AMI system: fire meters, etc.



Customer Portal

- Will allow water customers to see their hourly water use, set leak alerts and use notifications
- **Expected to launch late fall 2024**
- Customers will receive information about how to sign up and use the portal once it is activated



Data Collector Stations

- Last major element of AMI system, required to make system operational
- Make up the wireless system that allows data to be collected from individual meters
- Each station consists of:
 - Antenna - mounted higher to capture signal
 - Base station - mounted closer to ground for access






Permitting & Public Outreach





Permit Requirements

- Each data collector requires the approval of a Conditional Use Permit (CUP)
 - Authorize the use of the equipment as an Essential Public Facility
 - Prior to submitting permit application, must conduct robust outreach effort to nearby properties
 - Hearing Examiner determines the outcome of each CUP application
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Public Outreach



- Significant public outreach to all residents, businesses, and property owners within 300 ft of proposed location
- Engagement strategy includes:
 - Informational letter & FAQ flier mailing
 - Doorhangers
 - Let's Talk page - specific information about each location, including a map of the area, equipment information, and photo renderings.
- Encourage public to provide comments and questions to staff through the Let's Talk page or via e-mail

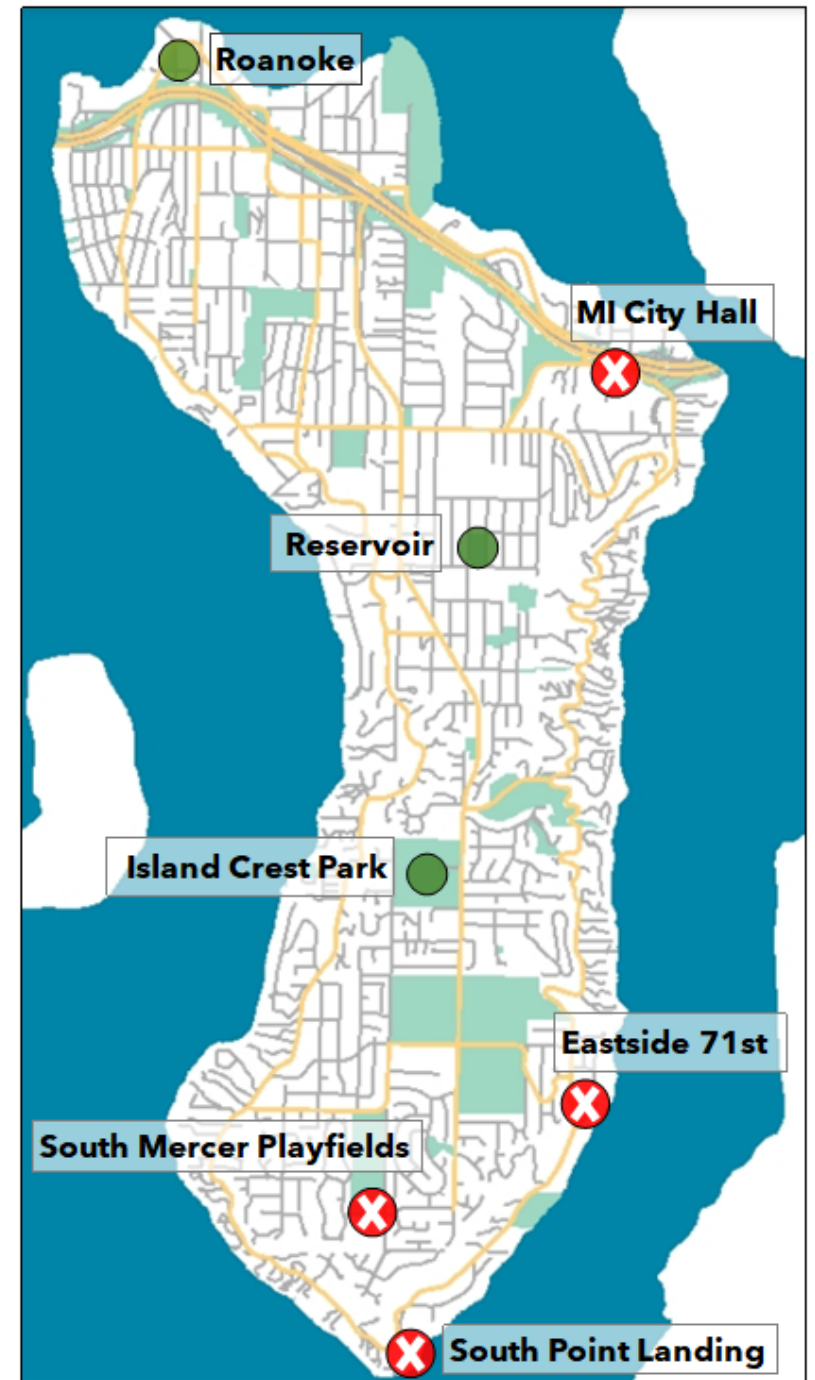


Data Collector Status



Previous Collector Locations

- In fall 2023, City launched public outreach regarding seven proposed locations for data collectors
- City received significant feedback about three of the sites
- **Four sites were removed from consideration**
- New propagation study conducted in early 2024
- Updated locations proposed at March 2024 City Council meeting ([AB6422](#))



Data Collector Locations

Updated propagation study found that **6 antennas** are required for full coverage of the island:

Location	Antenna mount height
1 - Roanoke/70 th & 20 th	55'
2 - WMW & SE 32 nd St	55'
3 - Crestwood	55'
4 - West Mercer Way & East Mercer Way	55'
5 - City Reservoir (existing pole)	80'
6 - Island Crest Park (existing pole)	110'



Island Crest Park & City Reservoir

- Both activated in June 2024, following permit approvals
- Reliably receive data from ~80% of water meters
- Utility billing staff can access hourly data for these accounts at customer request

- Approximately 1,500 meters are not within range, due to topography, distance, and/or tree canopy.



Roanoke / 70th and 20th

- Public outreach for the site took place in fall 2023
- Discussed with City Council at March 2024 meeting
- Application for CUP submitted in May 2024
- Public hearing scheduled for September 26, 2024
- Request for 55' pole replacement is pending with PSE
- If CUP is approved and PSE application is successful, equipment will be installed and activated in 2025.





West Mercer Way & SE 32nd St

- Needed to collect meter data in northwest area
- Area is residential, desire to minimize number of utility poles
- Propose replacing one PSE pole in area with a 55' pole
- **Requesting authorization to proceed with outreach and permitting**



Crestwood

- Needed to collect meter data in northeast area
- Area is residential, desire to minimize number of utility poles
- Propose replacing one utility pole in area with a 55' pole
- **Requesting authorization to proceed with outreach and permitting**

Photo rendering of pole replacement and equipment





Photo rendering of pole installation and equipment

West Mercer Way & East Mercer Way

- Needed for collecting meter data in south portion of island
- Along arterial roadway, wooded area
- Propose installing new 55' tall, City-owned utility pole
- **Requesting authorization to proceed with outreach and permitting**

Summary

Location	Antenna mount height	Status
1 - Roanoke/70 th & 20 th	55'	Permit review in process, PSE pole replacement application under review
2 - WMW & SE 32nd St	55'	Recommendation: Start permit process to install equipment on replacement PSE pole
3 - Crestwood	55'	Recommendation: Start permit process to install on equipment replacement utility pole
4 - West Mercer Way & East Mercer Way	55'	Recommendation: Start permit process to install equipment on new City-owned pole
5 - City Reservoir	80'	Permit approved, equipment installed and activated
6 - Island Crest Park	110'	Permit approved, equipment installed and activated



Project Cost

- Project implementation cost - \$7.4 million
 - Ferguson/Sensus installation and service contracts
 - Permitting
 - Project management
 - City project staff
- Recommendations presented here can be implemented within project budget





Next Steps

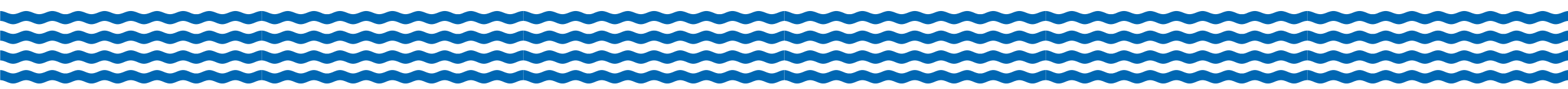


Next Steps

If Council authorizes staff to proceed with the three remaining sites, staff will:

1. Launch public outreach effort for each site
2. Apply for Conditional Use Permit for each site
3. Coordinate pole replacement/installation for each site

If permits and pole replacements are approved, data collectors would likely be **activated in late 2025**.



Recommended Action

Authorize staff to apply for permits for the three remaining data collector stations, and if permits are approved, install and activate them for use with the AMI system.



Contact Us

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Let's Talk

[Water Meter Replacement Project](#)

[Water Meter Data Collection Stations](#)



Questions?

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