

Attachment B

# **Capital Investment Program**

## **Water, Wastewater and Stormwater Utilities**

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June 28, 2022

Chip Corder, Finance Director





# Purpose

To prepare Council for upcoming budget discussion regarding the Capital Investment Program.

- 2023-2028 Capital Investment Program Overview
  - Water
  - Wastewater
  - Stormwater

# Utilities Overview

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- Water
- Wastewater
- Stormwater

Reliable

Equitable

Efficient

Sustainable

Resilient

Collaborative



# Capital Investment Program

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Water

# Water Portfolio Overview



- Provide safe and reliable drinking water
- Our System:
  - 5 water supply wells
  - 333 miles of water pipe
  - 24 million gallons of water storage
  - 7 million gallons used per day
  - 96 groundwater monitoring wells
  - 26 drinking water sampling stations
  - 4150 fire hydrants

Safe to Drink

Reliable Service

Fire Protection

# Long-Term Portfolio Management

- Vision: Provide safe, reliable drinking water and fire protection.
- Strategies:
  - Protect the aquifer for independent supply
  - Membership in Cascade Water Alliance for regional supply
  - Coordinate with Kirkland and Bellevue for storage and connectivity
  - Maintain and replace pipes, valves, pumps, electronics, and reservoirs as they age
  - Upgrade security and control systems
  - Expand to accommodate growth

# 2023-2028 Portfolio Management

- Goals and objectives
  - Replace aging systems before they fail
  - Coordinate improvements with other CIP investments
  - Meet obligations to Bellevue and Kirkland
- Investment impact on maintenance and operation cost
  - These investments reduce costs for reactive maintenance and allow shift to focus on preventive maintenance.



# Existing Programs



| Program Name                                         | Timeframe | 2023-2024<br>Total | 2025-2028<br>Total | 2023-2028<br>Total |
|------------------------------------------------------|-----------|--------------------|--------------------|--------------------|
| Groundwater Protection Infiltration Retrofit Program | Ongoing   | \$729,636          | \$1,459,272        | \$2,188,908        |
|                                                      |           |                    |                    |                    |
|                                                      |           |                    |                    |                    |
|                                                      |           |                    |                    |                    |
|                                                      |           |                    |                    |                    |
|                                                      |           |                    |                    |                    |
|                                                      |           |                    |                    |                    |

# Revised Projects



| Project Name                                                            | Project Timeframe | 2023-2024 Project Cost | 2025-2028 Project Cost | Total Project Cost<br>(including prior expenditures) |
|-------------------------------------------------------------------------|-------------------|------------------------|------------------------|------------------------------------------------------|
| Kirkland Joint Use – South Reservoir Tank Painting and Seismic Retrofit | 2013-2025         | \$1,914,849            | \$728,158              | \$2,900,000                                          |
| Control System and Telemetry Upgrades- Phase 2 and Phase 3              | 2018-2025         | \$3,600,000            | \$634,343              | \$5,205,057                                          |
| Control System and Telemetry Upgrade - Phase 4                          | 2025-2027         |                        | \$2,310,620            | \$2,310,620                                          |
| Booster Pump Station Replacements (Education Hill, SE Redmond, Perrigo) | 2028-2029         |                        | \$962,709              | \$4,073,343                                          |
| Pressure Reducing Value and Meter Replacement Project #2                | 2019-2023         | \$5,964,522            |                        | \$8,946,808                                          |
| Pressure Reducing Value and Meter Replacement Project #3                | 2027-2029         |                        | \$2,820,515            | \$9,467,579                                          |
| Asbestos Cement Watermain Replacement – Phase 1 (Viewpoint North)       | 2025-2029         |                        | \$4,259,764            | \$5,551,825                                          |

# New Projects



| Rank | Project Name                                                                             | Project Timeframe | 2023-2024 Project Cost | 2025-2028 Project Cost | Total Project Cost |
|------|------------------------------------------------------------------------------------------|-------------------|------------------------|------------------------|--------------------|
| 7    | Asbestos Cement Watermain Replacement - Phase 2 (2400 179 <sup>th</sup> Avenue) <b>D</b> | 2026-2028         |                        | \$274,358              | \$274,358          |
| 21   | Asbestos Cement Watermain Replacement - Phase 3 (Viewpoint South)                        | 2027-2029         |                        | \$791,403              | \$5,003,917        |
| 29   | Bellevue Joint Use - 40 <sup>th</sup> Meter Replacement <b>S</b>                         | 2027-2028         |                        | \$143,525              | \$143,525          |
| 54   | Novelty Hill Advanced Metering Infrastructure <b>D S</b>                                 | 2023-2026         | \$499,574              | \$1,213,075            | \$1,712,649        |
| 57   | 51 <sup>st</sup> Street Watermain Replacement                                            | 2027-2029         |                        | \$1,057,892            | \$4,712,380        |
| 70   | Willows Road Watermain Extension                                                         | 2024-2027         | \$140,792              | \$2,796,033            | \$2,936,825        |
| 72   | Groundwater Aquifer Monitoring Network Improvements <b>D S</b>                           | 2025-2026         |                        | \$294,822              | \$294,822          |



# Capital Investment Program

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Wastewater

# Wastewater Portfolio Overview



- Provide safe and sanitary collection and conveyance of wastewater to King County for treatment
- Our System:
  - 233 miles of pipe
  - 22 wastewater lift stations
  - 7,336 manholes
  - 16,000 sanitary sewer connections

# Long-Term Portfolio Management

- Vision: Provide safe and sanitary collection and conveyance of wastewater to King County for treatment.
- Strategies:
  - Target lift station upgrades for critical needs
  - Replace lift stations and pipes when needed
  - Use development extensions to accommodate growth and allow septic system customers to connect
  - Upgrade security and control systems

# 2023-2028 Portfolio Management

- Goals and objectives
  - Prepare for future growth by increasing system capacity
  - Perform targeted equipment upgrades before failure
- Investment impact on maintenance and operation cost
  - Targeted equipment upgrades in the lift stations reduces system failures, decreases reactive operations, and increases capacity for preventative maintenance
  - The two large new lift stations and force mains will increase operations costs by about \$30,000 each.



# Existing Projects



| Project Name                                                       | Project Timeframe | 2023-2024 Project Cost | 2025-2028 Project Cost | Total Project Cost<br>(including prior expenditures) |
|--------------------------------------------------------------------|-------------------|------------------------|------------------------|------------------------------------------------------|
| Lift Station 12 Replacement                                        | 2012-2024         | \$413,248              |                        | \$4,878,332                                          |
| Lift Station 13 Replacement and 70 <sup>th</sup> Street Force Main | 2018-2023         | \$430,795              |                        | \$13,760,795                                         |
| Wastewater Pipe Rehabilitation Project #2                          | 2025-2027         |                        | \$569,540              | \$569,540                                            |
|                                                                    |                   |                        |                        |                                                      |
|                                                                    |                   |                        |                        |                                                      |
|                                                                    |                   |                        |                        |                                                      |

# Existing Projects

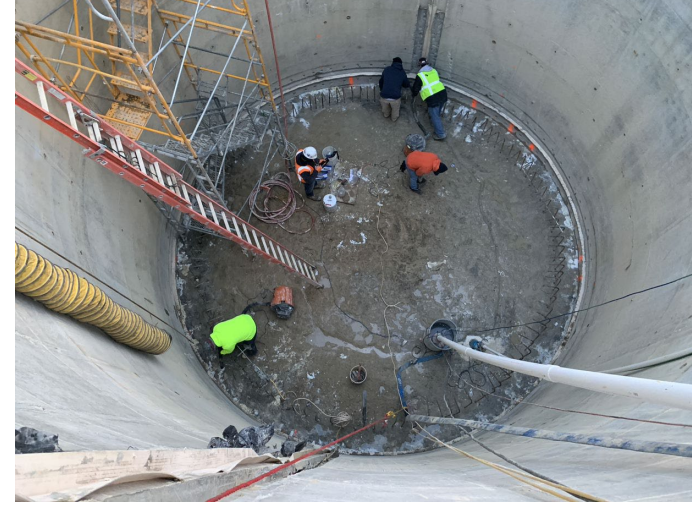


| Project Name             | Project Timeframe | 2023-2024 Project Cost | 2025-2028 Project Cost | Total Project Cost<br>(including prior expenditures) |
|--------------------------|-------------------|------------------------|------------------------|------------------------------------------------------|
| Lift Station 5 Upgrades  | 2018-2024         | \$846,696              |                        | \$1,276,244                                          |
| Lift Station 6 Upgrades  | 2018-2024         | \$1,065,419            |                        | \$1,753,591                                          |
| Lift Station 8 Upgrades  | 2021-2024         | \$236,713              |                        | \$383,685                                            |
| Lift Station 11 Upgrades | 2021-2024         | \$1,095,901            |                        | \$1,342,898                                          |
| Lift Station 15 Upgrades | 2012-2024         | \$1,416,582            |                        | \$2,227,594                                          |
|                          |                   |                        |                        |                                                      |

# Revised Projects



| Project Name                                                | Project<br>Timeframe | 2023-2024<br>Project Cost | 2025-2028<br>Project Cost | Total<br>Project Cost<br><small>(including prior expenditures)</small> |
|-------------------------------------------------------------|----------------------|---------------------------|---------------------------|------------------------------------------------------------------------|
| Connection to King County Wastewater System – Avondale Road | 2024-2028            | \$19,780                  | \$1,368,561               | \$1,388,341                                                            |
|                                                             |                      |                           |                           |                                                                        |
|                                                             |                      |                           |                           |                                                                        |
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# Capital Investment Program

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Stormwater

# Stormwater Portfolio Overview



- Prevent flooding, reduce stormwater impacts to the environment, restore stream habitat
- Our system:
  - 323 miles of pipe
  - 400 stormwater treatment facilities
  - 50 miles of streams
  - 11 billion gallons of rainfall managed annually

# Long-Term Portfolio Management

- Vision - Build a stormwater infrastructure that minimizes flooding, supports growth, and supports healthy streams in an urban landscape.
- Strategy
  - Regional Facilities
  - Watershed Management Plan
  - Groundwater Protection
  - Stream Restoration



# 2023-2028 Portfolio Management

- Goals and objectives
  - Improve Regional Facility function
  - Restore stream habitat
  - Repair aging infrastructure
- Investment impact on maintenance and operation cost
  - The Overlake Regional Facilities Phase 3 Active Stormwater Control system has an annual operational cost of \$27,000.
  - Evans Creek post construction maintenance: \$20,000.
  - System repairs – no cost. There will be savings due to reduction in reactive response to problems.



# Existing Projects



| Project Name                                                                          | Project Timeframe | 2023-2024 Project Cost | 2025-2028 Project Cost | Total Project Cost<br>(including prior expenditures) |
|---------------------------------------------------------------------------------------|-------------------|------------------------|------------------------|------------------------------------------------------|
| Evans Creek Relocation                                                                | 2012-2025         | \$10,936,379           | \$1,979,840            | \$19,003,074                                         |
| Country Creek Culvert Replacement                                                     | 2023              | \$200,000              |                        | \$200,000                                            |
| Stormwater Infrastructure Replacement Improvement Project #2 – Sunset Hills Landslide | 2024-2027         | \$32,386               | \$299,448              | \$331,834                                            |
| Stormwater Infrastructure Replacement Improvement Project #3 – King County Lake Hills | 2026-2027         |                        | \$229,157              | \$229,157                                            |
| Stormwater Infrastructure Replacement Improvement Project #4 – Cured in Place Pipe    | 2026-2028         |                        | \$1,403,583            | \$1,403,583                                          |
|                                                                                       |                   |                        |                        |                                                      |

# Revised Projects



| Project Name                          | Project<br>Timeframe | 2023-2024<br>Project Cost | 2025-2028<br>Project Cost | Total<br>Project Cost<br><small>(including prior expenditures)</small> |
|---------------------------------------|----------------------|---------------------------|---------------------------|------------------------------------------------------------------------|
| 10,000 Block of Avondale Road Erosion | 2019-2024            | \$2,453,982               |                           | \$3,680,983                                                            |
|                                       |                      |                           |                           |                                                                        |
|                                       |                      |                           |                           |                                                                        |
|                                       |                      |                           |                           |                                                                        |
|                                       |                      |                           |                           |                                                                        |
|                                       |                      |                           |                           |                                                                        |
|                                       |                      |                           |                           |                                                                        |

# New Projects



| Rank | Project Name                                                                               | Project Timeframe | 2023-2024 Project Cost | 2025-2028 Project Cost | Total Project Cost |
|------|--------------------------------------------------------------------------------------------|-------------------|------------------------|------------------------|--------------------|
| 21   | Overlake Regional Stormwater Facilities Phase 3 - Overlake Station Vault Retrofit <b>D</b> | 2023-2025         | \$606,701              | \$255,730              | \$862,431          |
| 52   | Monticello Pond Major Sediment Removal <b>S</b>                                            | 2024-2027         | \$14,252               | \$242,281              | \$256,533          |
| 58   | Corrugated Metal Stormwater Pipe Replacement - Phase 1 <b>S</b>                            | 2025-2027         |                        | \$713,442              | \$713,442          |
| 59   | Stormwater Infrastructure Replacement Improvement Project #6 - Pond Repair <b>S</b>        | 2026-2028         |                        | \$305,340              | \$305,340          |
|      |                                                                                            |                   |                        |                        |                    |

# Next Steps

| Description                                                                                                                                                                              | Meeting Date |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 2023-2026 BTIP Review                                                                                                                                                                    | July 12      |
| Project sheets ("one-pagers") will be developed for the preliminary budget document                                                                                                      | Oct 4        |
| Final Review of 2023-2028 CIP and 2023-2026 BTIP <ul style="list-style-type: none"><li>Changes will be highlighted between CIP/BTIP Review in June/July and Preliminary Budget</li></ul> | Nov 10       |

# Thank You

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Any Questions?

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