

Appendix K
CAPITAL IMPROVEMENT PLAN

DISTRIBUTION PROJECT SHEETS



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-1
Project Name: Easements - Unincorporated KC; New Pipe
Facility Type: Pipe

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Project Description:

D-1A: Easements for Pipe installation of Unincorporated King County

Multiple areas of new pipe segments will require private easements before installation. This project provides funds to initially acquire the easements for the following pipe segments:

D-1B: 227th Ave NE New Pipe

Install 8-inch new pipe segment east of 227th Avenue NE and west of NE 152nd Place.

Objective: This project will create a new loop to improve system reliability and mitigate a dead-end fire flow deficiency.

Priority: Lower

D-1C: 226th Ave NE New Pipe

Install new 8-inch pipe segment to connect 226th Ave NE and NE 145th St.

Objective: This project will create a new loop to improve system reliability and mitigate a dead-end fire flow deficiency.

Priority: Lower

D-1D: NE 140th St. New Pipe

Install new 8-inch pipe segment at the intersection of 232nd Avenue NE and NE 140th Street, east of Kathryn Taylor Equestrian Park.

Objective: This project will create a new loop to improve system reliability and mitigate dead-end deficiency.

Priority: High because it addresses many fire flow deficiencies in Zone 670 East.

D-1E: NE 177th St. New Pipe

Install 345 LF new 8-inch pipe north of Mink Road NE, between NE 177th Street and NE Woodinville Duvall Road.

Objective: This project will create a new loop to improve system reliability and mitigate a dead-end fire flow deficiency.

Priority: Lower



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Project ID: D-1
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Facility Type: Pipe

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D-1F: NE 169th Place New Pipe

Install 244 LF of 8-inch pipe from east of 194th Avenue to 169th St.

Objective: This project will create a new loop to improve system reliability and mitigate a dead-end deficiency.

Priority: Med High - Addresses many fire flow deficiencies in Zone 420 Central.

D-1G: NE 128th St. New Pipe

Install 747 LF of 8-inch pipe along NE 128th Street, between 181st Avenue NE and Avondale Road NE.

Objective: This project will create a new loop to connect Zone 420 Central and Zone 420 Central (S). It will address fire flow deficiencies and improve system reliability.

Priority: Med High

D-1H: 184th Ave NE New Pipe

Install 553 LF of new 8-inch pipe between 180th and 184th Ave NE, and between NE 138th and 141st Place.

Objective: This project will create a new loop to improve system reliability and mitigate a dead-end fire flow deficiency.

Priority: Lower

D-1I: Dead End Connection at NE 175th St and 213th Ave NE

Connect the dead end at NE 175th Street to tie into 213th Ave NE, approximately 750 LF.

Objective: Purpose is to create looping to eliminate dead ends.

Priority: High

D-1J: 159th Ave NE New Pipe

Install 341 LF of 8-inch pipe in between the south ends of 159th Ave NE and NE 173rd Street.

Objective: This project will create a new loop to improve system reliability and mitigate a dead-end deficiency.

Priority: Med Low

D-1K: Dead-end NE 150th Court

Install 338 LF of 8-inch pipe to connect the dead-end at NE 150th Court and NE 165th Street.

D-1L: East Hollywood Reservoir New Pipe

Replace 12-inch water main east of Hollywood Reservoir with 8-inch pipe



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Project ID: D-1
Project Name: Easements - Unincorporated KC; New Pipe
Facility Type: Pipe

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Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| D-1A: Easements - Unincorporated | 4,854 | LF | \$ 45 | \$ 218,430 | \$ 65,529 | \$ 43,686 | \$ 327,645 |
| D-1B: 227th Ave NE New Pipe | 287 | LF | \$ 268 | \$ 76,916 | \$ 23,075 | \$ 15,383 | \$ 115,374 |
| D-1C: 226th Ave NE New Pipe | 348 | LF | \$ 268 | \$ 93,264 | \$ 27,979 | \$ 18,653 | \$ 139,896 |
| D-1D: NE 140th St. New Pipe | 844 | LF | \$ 268 | \$ 226,192 | \$ 67,858 | \$ 45,238 | \$ 339,288 |
| D-1E: NE 177th St. New Pipe | 345 | LF | \$ 268 | \$ 92,460 | \$ 27,738 | \$ 18,492 | \$ 138,690 |
| D-1F: NE 169th Place New Pipe | 244 | LF | \$ 268 | \$ 65,392 | \$ 19,618 | \$ 13,078 | \$ 98,088 |
| D-1G: NE 128th St. New Pipe | 747 | LF | \$ 268 | \$ 200,196 | \$ 60,059 | \$ 40,039 | \$ 300,294 |
| D-1H: 184th Ave NE New Pipe | 553 | LF | \$ 268 | \$ 148,204 | \$ 44,461 | \$ 29,641 | \$ 222,306 |
| D-1i: Dead End at NE 175th St | 750 | LF | \$ 268 | \$ 201,000 | \$ 60,300 | \$ 40,200 | \$ 301,500 |
| D-1J: 159th Ave NE New Pipe | 341 | LF | \$ 268 | \$ 91,388 | \$ 27,416 | \$ 18,278 | \$ 137,082 |
| D-1K: Deadend at NE 150th Ct | 338 | LF | \$ 268 | \$ 90,584 | \$ 27,175 | \$ 18,117 | \$ 135,876 |
| D-1L: Hollywood Rsvr New Pipe | 578 | LF | \$ 268 | \$ 154,904 | \$ 46,471 | \$ 30,981 | \$ 232,356 |
| Total Project Cost | | | | | | | \$ 2,488,395 |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|---------|--------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 2,488,395 |
| Total Project Cost | 100% | \$ 2,488,395 |

Project Timing:

| Project Element | Timing | Cost |
|----------------------------------|-----------|--------------|
| D-1A: Easements - Unincorporated | 2026 | \$ 327,645 |
| D-1B: 227th Ave NE New Pipe | Long-term | \$ 115,374 |
| D-1C: 226th Ave NE New Pipe | Long-term | \$ 139,896 |
| D-1D: NE 140th St. New Pipe | Long-term | \$ 339,288 |
| D-1E: NE 177th St. New Pipe | Long-term | \$ 138,690 |
| D-1F: NE 169th Place New Pipe | Long-term | \$ 98,088 |
| D-1G: NE 128th St. New Pipe | Long-term | \$ 300,294 |
| D-1H: 184th Ave NE New Pipe | Long-term | \$ 222,306 |
| D-1i: Dead End at NE 175th St | Long-term | \$ 301,500 |
| D-1J: 159th Ave NE New Pipe | Long-term | \$ 137,082 |
| D-1K: Deadend at NE 150th Ct | Long-term | \$ 135,876 |
| D-1L: Hollywood Rsvr New Pipe | Long-term | \$ 232,356 |
| Total Project Cost | | \$ 2,488,395 |



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Project ID: D-2
Project Name: 205th Ave NE R&R
Facility Type: Pipe

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Project Description:
Repair & Replacement
 Approximately 648 Lf of 6-inch AC pipe to be replaced with 8-inch pipe along 205th Ave NE between 51st Ave SE and 47th Ave SE. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Lower

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|-----------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| 205th Ave NE R&R 8-inch | 648 | LF | \$ 268 | \$ 173,664 | \$ 52,099 | \$ 34,733 | \$ 260,496 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 260,496 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
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Project ID: D-2
Project Name: 205th Ave NE R&R
Facility Type: Pipe

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Cost Allocation:

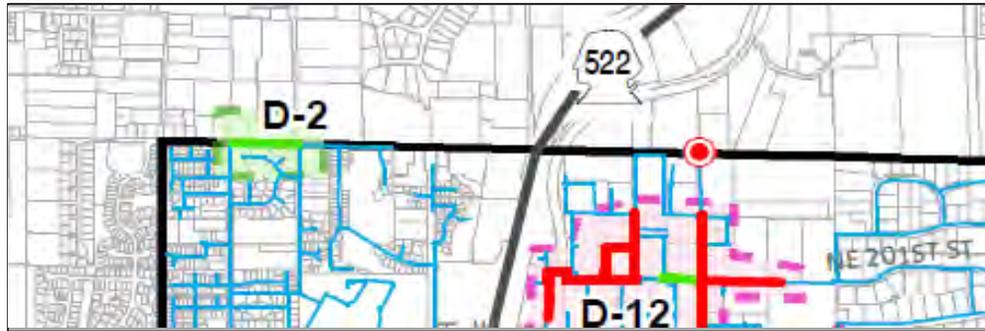
| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 260,496 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 260,496 |

Project Timing:

| Project Element | Timing | Cost |
|-------------------------|-----------|------------|
| 205th Ave NE R&R 8-inch | Long-term | \$ 260,496 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 260,496

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
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Project ID: D-3
Project Name: NE 184th Place, NE 192nd Place Pipe Upsize; 132nd Avenue NE Pipe Replacement
Facility Type: Pipe

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Project Description:

NE 184th Place Pipe Upsize

Upsize 165 LF pipe segment from 6-inch to 8-inch along NE 132nd Place to where it meets with NE 184th Place.

Objective: This project is required because the section of 4-inch pipe creates significant headloss and upsizing it will improve fire flow to the multi-family neighborhood at NE 182nd Place. District may want to confirm fire flow requirement of 2,500 gpm with Fire Marshall for this duplex neighborhood.

Priority: Lower

NE 192nd Street Pipe Upsize

Upsize 2,035 LF from 6-inch to 8-inch pipe along NE192nd Street, 133rd Place NE, NE 193rd Place, 131st Avenue NE up to NE195th Street.

Objective: This project is required because this area shows low C-factors. Upsizing will decrease headloss and help mitigate fire flow deficiencies in the area.

Priority: Med High

NE 132nd Place Pipe Upsize

Upsize 264 LF from 6-inch to 8-inch along NE 132nd Place, meeting with NE184th Place .

Objective: This project is required to serve the 2,500-gpm fire flow at the multi-family neighborhood at NE 182nd Place. District may want to confirm fire flow requirement with Fire Marshall for this duplex neighborhood.

Priority: Lower

132nd Avenue NE Pipe Replacement

Replace 1,984 LF of pipe segment along 132nd Ave NE, in between NE 190th Street and NE 182nd Street.

Objective: This project is required due to the 8-inch AC having a low C-factor, causing high headloss in the system. This improvement will help mitigate fire flow in the multi-family residential area located south of the pipeline.

Priority: Lower

Repair and Replacement

Replace approximately 3,700 LF of 4, 6, and 8-inch AC pipe with 8-inch pipe. Replace approximately 79 LF of 12-inch pipe with 12-inch pipe. Refer to map for specific locations of pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Lower



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Project ID: D-3
Project Name: NE 184th Place, NE 192nd Place Pipe Upsize; 132nd Avenue NE Pipe Replacement
Facility Type: Pipe

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Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|--------------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 184th Place Pipe Upsize (A) | 165 | LF | \$ 268 | \$ 44,220 | \$ 13,266 | \$ 8,844 | \$ 66,330 |
| NE 192nd Street Pipe Upsize | 2,035 | LF | \$ 268 | \$ 545,380 | \$ 163,614 | \$ 109,076 | \$ 818,070 |
| NE 184th Place Pipe Upsize (B) | 264 | LF | \$ 268 | \$ 70,752 | \$ 21,226 | \$ 14,150 | \$ 106,128 |
| 132nd Ave NE Pipe Replacement | 1,984 | LF | \$ 268 | \$ 531,712 | \$ 159,514 | \$ 106,342 | \$ 797,568 |
| R&R - 8-inch | 3,700 | LF | \$ 268 | \$ 991,600 | \$ 297,480 | \$ 198,320 | \$ 1,487,400 |
| R&R - 12-inch | 79 | LF | \$ 298 | \$ 23,542 | \$ 7,063 | \$ 4,708 | \$ 35,313 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |

Total Project Cost \$ 3,310,809

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Project ID: D-3
Project Name: NE 184th Place, NE 192nd Place Pipe Upsize; 132nd Avenue NE Pipe Replacement
Facility Type: Pipe

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Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|--------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 70% | \$ 2,320,281 |
| Improvement: | 30% | \$ 990,528 |

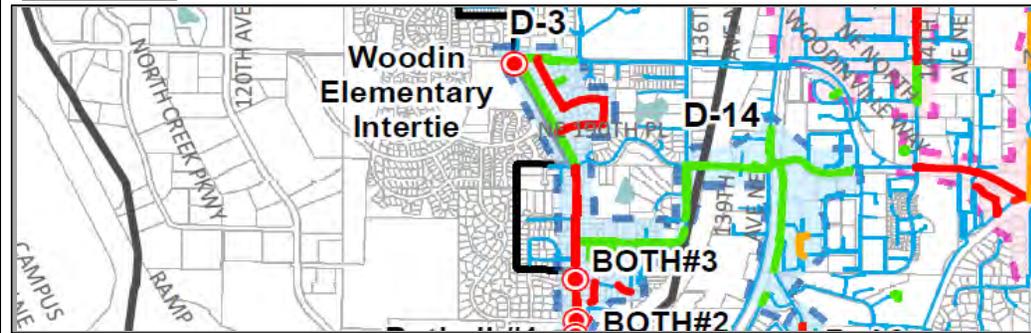
| | | |
|---------------------------|------|--------------|
| Total Project Cost | 100% | \$ 3,310,809 |
|---------------------------|------|--------------|

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|---------------|
| D-3: Year 1 | 2023 | \$ 331,080.90 |
| D-3: Year 2 | 2024 | \$ 2,493,039 |
| D-3: Year 3 | 2025 | \$ 486,689 |
| | | \$ - |

| | |
|---------------------------|--------------|
| Total Project Cost | \$ 3,310,809 |
|---------------------------|--------------|

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
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Project ID: D-4
Project Name: NE 178th Street R&R
Facility Type: Pipe

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Project Description:
Repair & Replacement
 Replace approximately 2,273 LF of 6- and 8-inch AC pipe with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Medium-High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| NE 178th Street R&R 8-inch | 2,273 | LF | \$ 268 | \$ 609,164 | \$ 182,749 | \$ 121,833 | \$ 913,746 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 913,746 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Project ID: D-4
Project Name: NE 178th Street R&R
Facility Type: Pipe

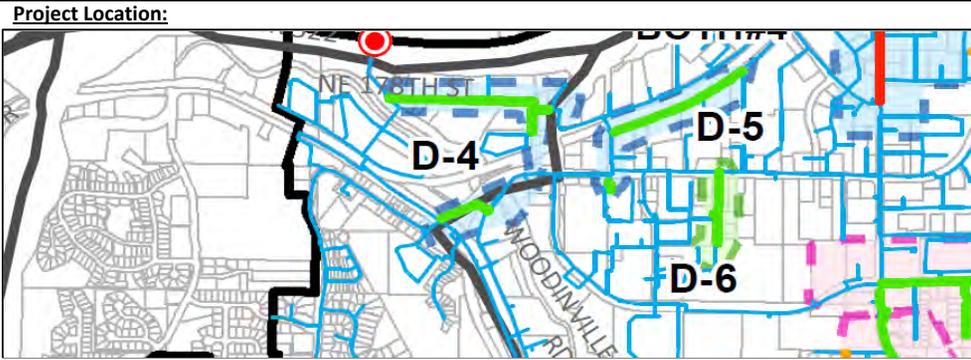
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Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 913,746 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 913,746 |

Project Timing:

| Project Element | Timing | Cost |
|----------------------------|-----------|-------------------|
| NE 178th Street R&R 8-inch | Long-term | \$ 913,746 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 913,746 |



Notes:
See full map on "Maps" tab.

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Woodinville Water District
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Project ID: D-5
Project Name: NE 177th Place R&R
Facility Type: Pipe

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Project Description:
Repair & Replacement
 Approximately 1,488 LF of 6-inch AC pipe to be replaced with 8-inch pipe. Refer to map for pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| NE 177th Place R&R 8-inch | 1,488 | LF | \$ 268 | \$ 398,784 | \$ 119,635 | \$ 79,757 | \$ 598,176 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 598,176 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
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Project ID: D-5
Project Name: NE 177th Place R&R
Facility Type: Pipe

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Cost Allocation:

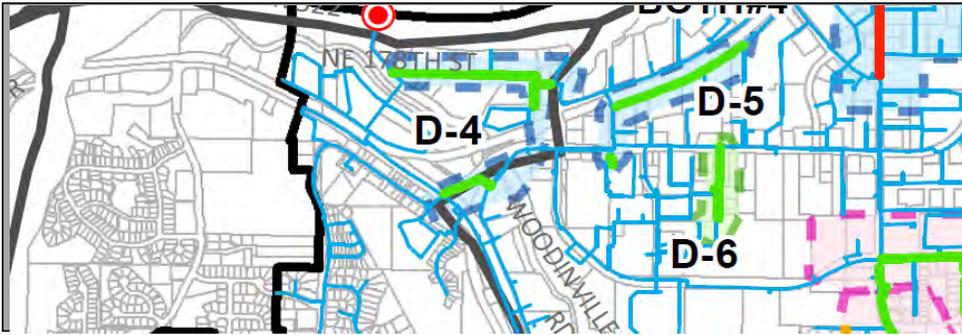
| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 598,176 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 598,176 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|------------|
| NE 177th Place R&R 8-inch | Long-term | \$ 598,176 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 598,176

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
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Project ID: D-6
Project Name: 135th Ave NE R&R
Facility Type: Pipe

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Project Description:

Repair & Replacement

Approximately 42 LF of 6-inch, 733 LF of 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Lower

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|-------------------------|----------|------|---------------------|------------|-------------|-----------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| 135th Ave NE R&R 8-inch | 774 | LF | \$ 268 | \$ 207,432 | \$ 62,230 | \$ 41,486 | \$ 311,148 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |

| | |
|---------------------------|-------------------|
| Total Project Cost | \$ 311,148 |
|---------------------------|-------------------|

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
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Project ID: D-6
Project Name: 135th Ave NE R&R
Facility Type: Pipe

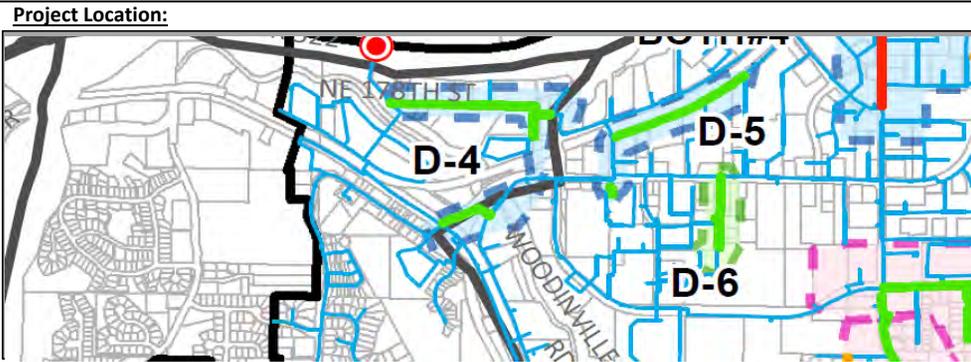
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Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 311,148 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 311,148 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|-------------------|
| 135th Ave NE R&R 8-inch | Long-term | \$ 311,148 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 311,148 |



Notes:
See full map on "Maps" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-7
Project Name: NE 165th St Pipe Upsize and New Pipe
Facility Type: Pipe

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Project Description:
NE 165th St. Pipe Upsize
 Upsize 211 LF of pipe segment from 8-inch to 12-inch at the intersection of NE 165th Street and 124th Avenue NE.
Objective: This project is required to accommodate the high velocities in the area (flows at 2,500 gpm).
Priority: Med High

NE 165th St. New Pipe
 Create a loop by installing 497 LF of 8-inch pipe extending off of the end of 165th Street to the east, in between 124th Ave NE and 126th Ave NE. Connect to pipe along 124th Ave NE downstream of PRV #2.
Objective: This project is required to improve system reliability and provide 2,500-gpm fire flow at the church downstream of PRV #2.
Priority: Med High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|-----------|--------------------------|-------------------|
| | | | | | 30% | 20% | 20% | |
| NE 165th St Pipe Upsize | 211 | LF | \$ 298 | \$ 62,878 | \$ 18,863 | \$ 12,576 | \$ 94,317 | |
| NE 165th St. New Pipe | 497 | LF | \$ 268 | \$ 133,196 | \$ 39,959 | \$ 26,639 | \$ 199,794 | |
| Easement | 270 | LF | \$ 45 | \$ 12,150 | \$ 3,645 | \$ 2,430 | \$ 18,225 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 312,336 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
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Capital Improvement Program



Project ID: D-7
Project Name: NE 165th St Pipe Upsize and New Pipe
Facility Type: Pipe

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Cost Allocation:

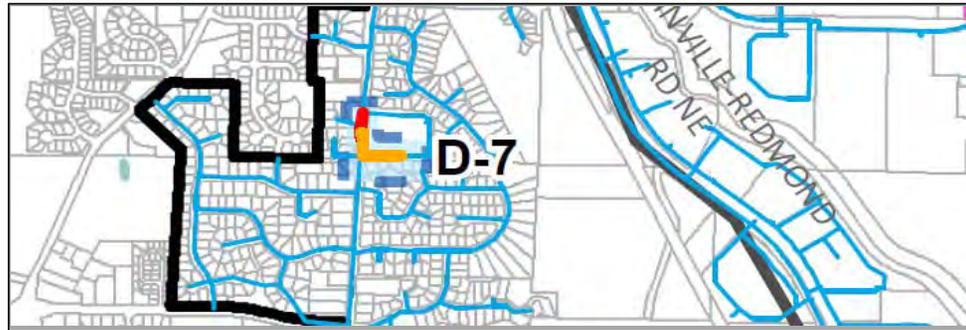
| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 312,336 |
| Total Project Cost | 100% | \$ 312,336 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|---------------|
| D-7: Year 1 | 2025 | \$ 31,233.60 |
| D-7: Year 2 | 2026 | \$ 281,102.40 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 312,336

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
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Project ID: D-8
Project Name: 305 West Zone Investigation.
Facility Type: Pipe

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Project Description:
 Hydrant testing and model show extremely low C factors in Zone 305 West. Investigate why C factors are low. Check for closed/partially closed valves in the area. Run camera and/or pig through main to check for growth along interior of pipe.
Objective: Investigate high headloss in Zone 305 West
Priority: Lower

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|------------------------------|----------|------|---------------------|-----------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| 305 West Zone Investigation. | 1 | LS | \$ 50,000 | \$ 50,000 | \$ 15,000 | \$ 10,000 | \$ 75,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 75,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
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Project ID: D-8
Project Name: 305 West Zone Investigation.
Facility Type: Pipe

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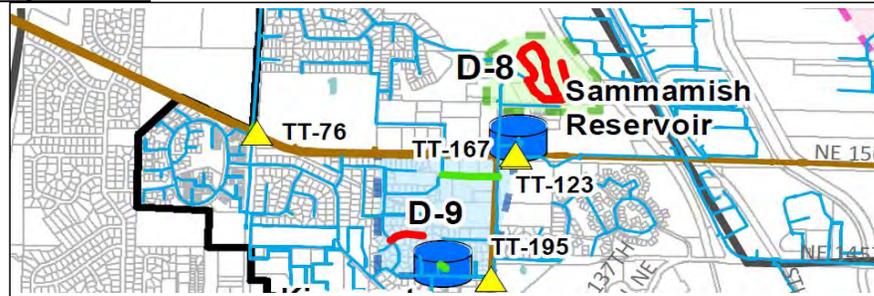
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 75,000 |
| Total Project Cost | 100% | \$ 75,000 |

Project Timing:

| Project Element | Timing | Cost |
|------------------------------|-----------|------------------|
| 305 West Zone Investigation. | Long-term | \$ 75,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 75,000 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-9
Project Name: NE 145th Place Pipe Upsize; Leak Row Service Lines; R&R Pipe
Facility Type: Pipe

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Project Description:

NE 145th Place Pipe Upsize

Upsize 400 LF of pipe from 4-inch to 8-inch along NE 145th Place, east of 129th Avenue NE.

Objective: This project is required to mitigate the 1,000 gpm fire flow deficiency.

Priority: Low

Repair & Replacement

Replace approximately 654 LF of 6-inch AC pipe with 8-inch pipe and replace approximately 69 LF of 10-inch pipe with 10-inch. Refer to map for pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Med high

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|--------------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| NE 145th Place Pipe Upsize | 400 | LF | \$ 268 | \$ 107,200 | \$ 32,160 | \$ 21,440 | \$ 160,800 |
| Leak Row Service Lines | 10 | Service Line | \$ 2,000 | \$ 20,000 | \$ 6,000 | \$ 4,000 | \$ 30,000 |
| R&R Pipe 8-inch | 654 | LF | \$ 268 | \$ 175,272 | \$ 52,582 | \$ 35,054 | \$ 262,908 |
| R&R Pipe 10-inch | 69 | LF | \$ 286 | \$ 19,734 | \$ 5,920 | \$ 3,947 | \$ 29,601 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |

Total Project Cost \$ 483,309

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-9
Project Name: NE 145th Place Pipe Upsize; Leak Row Service Lines; R&R Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

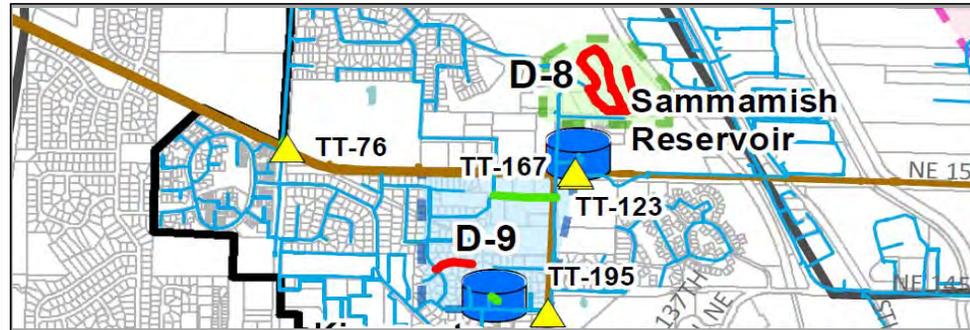
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 61% | \$ 292,509 |
| Improvement: | 39% | \$ 190,800 |
| Total Project Cost | 100% | \$ 483,309 |

Project Timing:

| Project Element | Timing | Cost |
|----------------------------|--------|-------------------|
| NE 145th Place Pipe Upsize | 2019 | \$ 160,800 |
| Leak Row Service Lines | 2019 | \$ 30,000 |
| R&R Pipe 8-inch | 2019 | \$ 262,908 |
| R&R Pipe 10-inch | 2019 | \$ 29,601 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 483,309 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-10
Project Name: NE 140th St R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
127th Place NE (Leak Row)
 This cul de sac is known as leak row. Replace all services along 127th PI NE south of NE 140th St.
Objective: Upgrade the services to eliminate the constant breaks of PVC pipe.
Priority: Lower

Repair & Replacement
 Replace 1,711 LF of 6-inch AC main along NE 140th St between 124th Ave NE and 132nd Ave NE. Replace 485 LF 6-inch main along NE 141st PI, 125th PI NE and 126th Ave NE as shown on map below.
Objective: To eliminate AC pipe from the distribution system.
Priority: Medium-High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|--------------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| NE 140th St R&R 8-inch | 1,711 | LF | \$ 268 | \$ 458,548 | \$ 137,564 | \$ 91,710 | \$ 687,822 |
| 141st PI NE R&R 10-inch | 485 | LF | \$ 286 | \$ 138,710 | \$ 41,613 | \$ 27,742 | \$ 208,065 |
| Leak Row Service Lines | 10 | Service Line | \$ 2,000 | \$ 20,000 | \$ 6,000 | \$ 4,000 | \$ 30,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 925,887 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-10
Project Name: NE 140th St R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

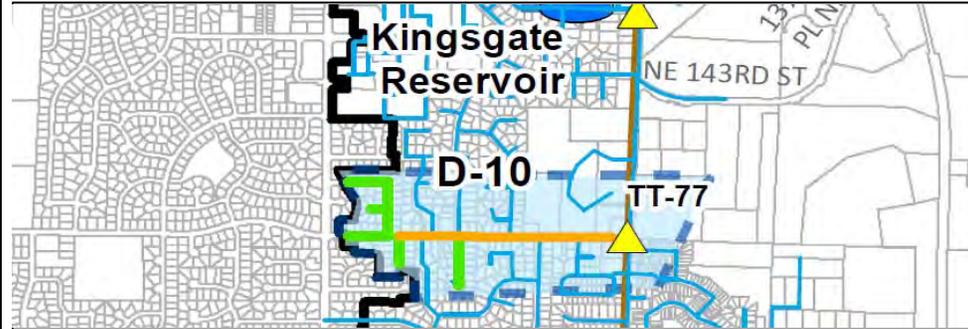
| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 925,887 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 925,887 |

Project Timing:

| Project Element | Timing | Cost |
|-------------------------|-----------|------------|
| NE 140th St R&R 8-inch | Long-term | \$ 687,822 |
| 141st Pl NE R&R 10-inch | Long-term | \$ 208,065 |
| Leak Row Service Lines | Long-term | \$ 30,000 |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 925,887

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-11
Project Name: NE 132nd St R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Along NE 132nd St between 124th Ave NE and 136th Ave NE, approximately 2019 LF of 4-inch, 7,655 LF of 6-inch, and 3,008 LF of 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Med-high

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|--------------|------------|--------------------------|---------------------|
| | | | | | 30% | 20% | | |
| NE 132nd St R&R 8-inch | 12,681 | LF | \$ 268 | \$ 3,398,508 | \$ 1,019,552 | \$ 679,702 | \$ 5,097,762 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 5,097,762 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-11
Project Name: NE 132nd St R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 5,097,762 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 5,097,762 |

Project Timing:

| Project Element | Timing | Cost |
|------------------------|-----------|--------------|
| NE 132nd St R&R 8-inch | Long-term | \$ 5,097,762 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 5,097,762

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-12
Project Name: NE 200th Street, 144th Avenue NE, 142nd Avenue NE Pipe Upsize
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

NE 200th Street/Woodinville-Snohomish Road Pipe Upsize

Upsize 1,995 LF of pipe segment from 8-inch to 12-inch along Woodinville-Snohomish Rd and NE 200th St.

Objective: This project is required for upsizing the distribution system to provide 3,500-gpm industrial fire flows in the 260 West Zone.

Priority: High because it addresses many fire flow deficiencies in the northern part fo the 260 Zone.

NE 200th Street Pipe Upsize

Upsize 780 LF of pipe segment along NE 200th St, from 144th Ave NE to PRV 27 to 12-inch diameter.

Objective: This project is required to upsize the existing pipes feeding to 3,500 gpm industrial fire flow from PRV #27.

Priority: High because it addresses many fire flow deficiencies in Zone 420 Central (NW).

144th Avenue NE Pipe Upsize

Upsize 1,950 LF of pipe segment from 8-inch to 12-inch along 144th Avenue NE, between NE 203rd Street and NE 195th Street.

Objective: This project is required to upsize the existing pipes providing 3,500 gpm industrial fire flow from PRV #27.

Priority: High because it addresses many fire flow deficiencies in Zone 420 Central (NW).

142nd Avenue NE Pipe Upsize

Upsize pipe segment from 8-inch to 12-inch north of NE 200th Street, along 142nd Avenue NE, ending before the curve.

Objective: This project is required to convey the 3,500-gpm industrial fire flows in the 260 West Zone.

Priority: High because it addresses many fire flow deficiencies in the northern part fo the 260 Zone.

Repair & Replacement

Approximately 970 LF of AC pipe to be replaced with 8-inch pipe. Refer to map for pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|--|----------|------|---------------------|------------|-------------|------------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| NE 200th St./Woodinville Snohomish Pipe Upsize | 1,995 | LF | \$ 298 | \$ 594,510 | \$ 178,353 | \$ 118,902 | \$ 891,765 | |
| NE 200th St. Pipe Upsize | 780 | LF | \$ 298 | \$ 232,440 | \$ 69,732 | \$ 46,488 | \$ 348,660 | |
| 144th Ave NE Pipe Upsize | 1,950 | LF | \$ 298 | \$ 581,100 | \$ 174,330 | \$ 116,220 | \$ 871,650 | |
| 142nd Ave NE Pipe Upsize | 693 | LF | \$ 298 | \$ 206,514 | \$ 61,954 | \$ 41,303 | \$ 309,771 | |
| R&R Pipe - 8-inch | 970 | LF | \$ 268 | \$ 259,960 | \$ 77,988 | \$ 51,992 | \$ 389,940 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |

Total Project Cost \$ 2,811,786

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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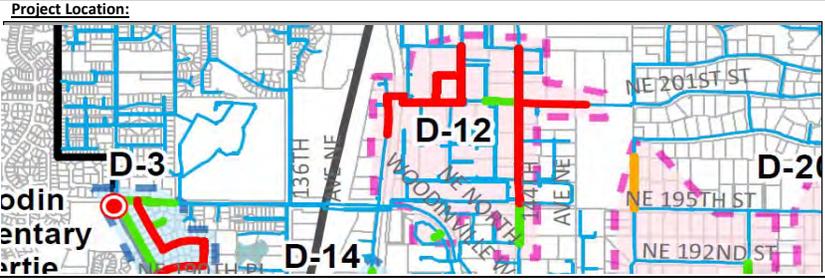
Woodville Water District
Water System Plan
Capital Improvement Program



Project ID: D-12
Project Name: NE 200th Street, 144th Avenue NE, 142nd Avenue NE Pipe Upsize
Facility Type: Pipe

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|-------------|---------------------|---------------------------|--------|---------------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | D-12: Year 1 | 2021 | \$ 199,637 |
| Repair & Replacement: | 14% | \$ 389,940 | D-12: Year 2 | 2022 | \$ 1,999,180 |
| Improvement: | 86% | \$ 2,421,846 | D-12: Year 3 | 2023 | \$ 612,969 |
| | | | | | \$ - |
| | | | | | \$ - |
| Total Project Cost | 100% | \$ 2,811,786 | Total Project Cost | | \$ 2,811,786 |



Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-13
Project Name: N. Woodinville Way Pipe Upsize; 148th Ave NE New Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

NE Woodinville-Duvall Road New Pipe

New pipe to connect NE Woodinville-Duvall road pipe to water main along NE North Woodinville Way.

Objective: Create looping and provide sufficient fire flow.

Priority: Med High

148th Ave NE New Pipe

A) Install 730 LF of 8-inch pipe along 148th Ave NE, between NE 192nd Street and NE Woodinville-Duvall Road.

B) Install 639 LF of 8-inch pipe along 148th Avenue NE between 195th Street NE and 198th Street NE.

Objective: This project is required to improve system reliability and mitigate a dead-end fire flow deficiency.

Priority: Med Low

152nd Ave NE Pipe Upsize

Upsize 893 LF of pipe segment from 6-inch to 8-inch along 152nd Ave NE, in between NE 190th Street and NE Woodinville-Duvall Road.

Objective: This project is required to limit headloss and help mitigate fire flow deficiencies in the area.

Priority: Med Low

Repair & Replacement

Approximately 669 LF of 6-inch AC pipe to be replaced with 8-inch pipe. Refer to map for pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Low



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-13
Project Name: N. Woodinville Way Pipe Upsize; 148th Ave NE New Pipe
Facility Type: Pipe

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Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| | | | | \$ - | \$ - | \$ - | \$ - |
| NE Woodinville-Duvall Rd New Pipe | | LF | \$ 268 | \$ - | \$ - | \$ - | \$ - |
| 148th Ave NE New Pipe (A) | 730 | LF | \$ 268 | \$ 195,640 | \$ 58,692 | \$ 39,128 | \$ 293,460 |
| 148th Ave NE New Pipe (B) | 639 | LF | \$ 268 | \$ 171,252 | \$ 51,376 | \$ 34,250 | \$ 256,878 |
| 152nd Ave NE Pipe Upsize | 893 | LF | \$ 268 | \$ 239,324 | \$ 71,797 | \$ 47,865 | \$ 358,986 |
| R&R Pipe | 669 | LF | \$ 268 | \$ 179,292 | \$ 53,788 | \$ 35,858 | \$ 268,938 |
| | | | | \$ - | \$ - | \$ - | \$ - |

Total Project Cost \$ 1,178,262

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 23% | \$ 268,938 |
| Improvement: | 77% | \$ 909,324 |

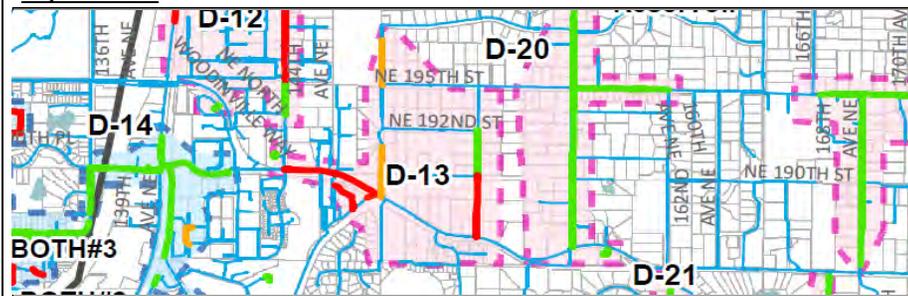
Total Project Cost 100% \$ 1,178,262

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| D-13: Year 1 | 2020 | \$ 117,826 |
| D-13: Year 2 | 2021 | \$ 1,060,436 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,178,262

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-14
Project Name: 141st Ave NE New Pipe; NE 190th Place R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
141st Ave NE New Pipe
 Install 364 LF of 12-inch pipe in between 141st Avenue NE and Woodinville-Snohomish Road.
Objective: This project is required to improve system reliability and mitigate a dead-end fire flow deficiency.
Trigger: Implement project along with commercial redevelopment and increased demands near Woodinville Snohomish Rd and NE 190th St.
Priority: As required by development

Repair & Replacement
 Along NE 190th Place, approximately 3,950 LF of AC pipe to be replaced with 8-inch pipe. Approximately 873 LF of 10-inch AC pipe to be replaced with 10-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Med-high

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 190th Place R&R 8-inch | 3,950 | LF | \$ 268 | \$ 1,058,600 | \$ 317,580 | \$ 211,720 | \$ 1,587,900 |
| NE 190th Place R&R 10-inch | 873 | LF | \$ 286 | \$ 249,678 | \$ 74,903 | \$ 49,936 | \$ 374,517 |
| 141st Ave NE New Pipe | 364 | LF | \$ 298 | \$ 108,472 | \$ 32,542 | \$ 21,694 | \$ 162,708 |
| Easement | 364 | LF | \$ 45 | \$ 16,380 | \$ 4,914 | \$ 3,276 | \$ 24,570 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 2,149,695 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-14
Project Name: 141st Ave NE New Pipe; NE 190th Place R&R
Facility Type: Pipe

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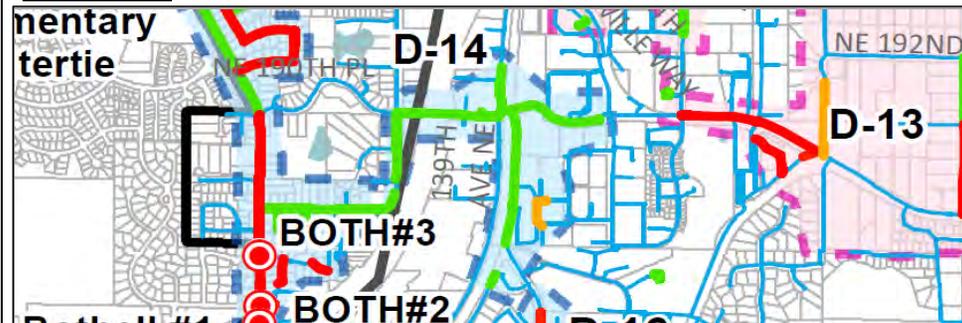
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 2,149,695 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 2,149,695 |

Project Timing:

| Project Element | Timing | Cost |
|----------------------------|-----------|---------------------|
| NE 190th Place R&R 8-inch | Long-term | \$ 1,587,900 |
| NE 190th Place R&R 10-inch | Long-term | \$ 374,517 |
| D-14: Year 1 | 2023 | \$ 18,727.80 |
| D-14: Year 2 | 2024 | \$ 168,550.20 |
| Total Project Cost | | \$ 2,149,695 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-15
Project Name: NE 171st Street, R&R
Facility Type: Pipe

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Cost Allocation:

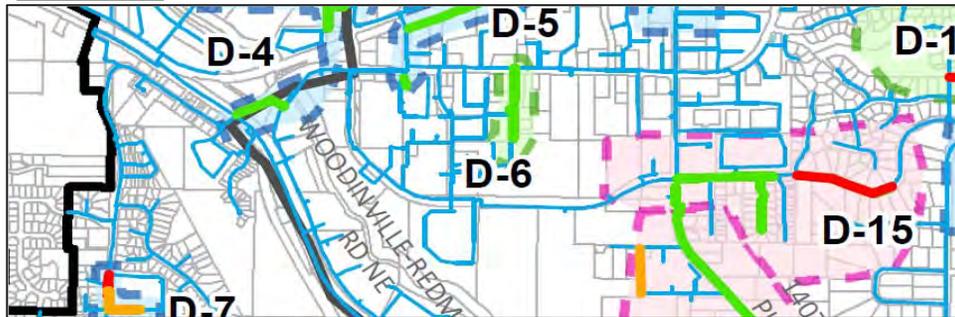
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 61% | \$ 655,662 |
| Improvement: | 39% | \$ 425,544 |
| Total Project Cost | 100% | \$ 1,081,206 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|------------|
| D-15: Year 1 | 2022 | \$ 108,121 |
| D-15: Year 2 | 2023 | \$ 973,085 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,081,206

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-16
Project Name: 140th Avenue NE Pipe Replacement; 142nd Ave NE New Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
140th Ave NE Pipe Replacement
 Replace 1,165 LF of 8-inch AC pipe along 140th Avenue NE, in between NE 178th Street and NE 182nd Street.
Objective: This project is required to address the low C factor causing high headloss in the system. This improvement will help mitigate fire flow deficiencies in the area.
Priority: Med High

142nd Avenue NE New Pipe
 Install 222 LF of 12-inch pipe in the area east of the north end of 142nd Avenue NE, and west of NE Woodinville-Duvall Road. A private easement is required.
Objective: This project is required to improve system reliability and mitigate a dead-end fire flow deficiency.
Priority: Med High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| 140th Avenue NE Pipe Replacement; | 1,165 | LF | \$ 268 | \$ 312,220 | \$ 93,666 | \$ 62,444 | \$ 468,330 |
| 142nd Ave NE New 12-inch Pipe | 222 | LF | \$ 298 | \$ 66,156 | \$ 19,847 | \$ 13,231 | \$ 99,234 |
| Easement | 222 | LF | \$ 45 | \$ 9,990 | \$ 2,997 | \$ 1,998 | \$ 14,985 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 582,549 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-16
Project Name: 140th Avenue NE Pipe Replacement; 142nd Ave NE New Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 80% | \$ 468,330 |
| Improvement: | 20% | \$ 114,219 |
| Total Project Cost | 100% | \$ 582,549 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| D-16 - Year 1 | 2023 | \$ 58,254.90 |
| D-16 - Year 2 | 2024 | \$ 524,294 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 582,549

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-17
Project Name: 154th Court NE Pipe Upsize, NE 177th Drive and NE 178th St. Pipe Replacement
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

NE 177th Drive Pipe Replacement

Replace 8-inch dead-end pipe with low C factor creating H headloss and fire flow deficiencies. C factor is causing significant headloss and triggers deficiency, recommended performing hydrant test to check C factor and residual pressures at hydrant #1267. It is recommended that the C factors be verified through field tests and this project might be eliminated if not needed.

Objective: This project is required to reduce headloss that casues fire flow deficiencies.

Priority: Lower

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost | |
|---------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|------------|
| | | | | | 30% | 20% | | |
| NE 177th Drive Pipe Replacement | 921 | LF | \$ 268 | \$ 246,828 | \$ 74,048 | \$ 49,366 | \$ 370,242 | |
| Total Project Cost | | | | | | | | \$ 370,242 |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-17
Project Name: 154th Court NE Pipe Upsize, NE 177th Drive and NE 178th St. Pipe Replacement
Facility Type: Pipe

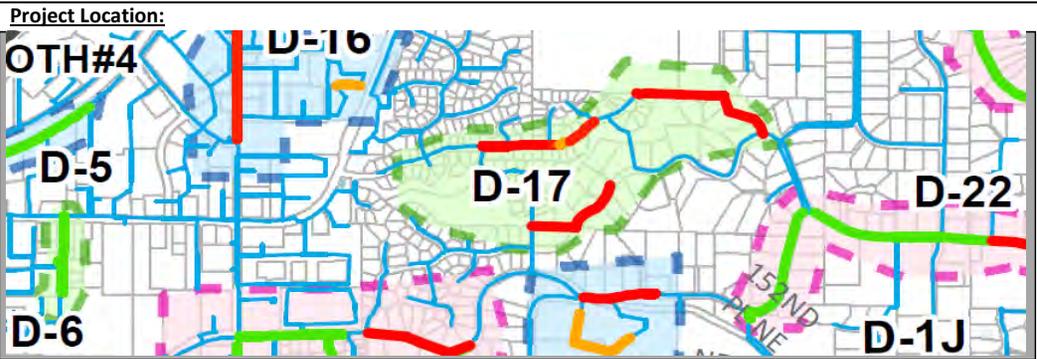
[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 370,242 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 370,242 |

Project Timing:

| Project Element | Timing | Cost |
|------------------------------|-----------|-------------------|
| NE 177th Drive Pipe Replacem | Long-term | \$ 370,242 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 370,242 |



Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-18
Project Name: 173rd St NE Pipe Upsize; 148th Avenue NE New Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
148th Avenue NE New Pipe
 Install 842 LF of 8-inch pipethrough Hollywood Hill.
Objective: This project is required to improve system reliability and mitigate dead-end deficiency.
Priority: Med High

NE 173rd Street Pipe Upsize
 Upsize 639 LF of pipe segment from 8-inch to 12-inch along NE 173rd Street, near the intersections of 173rd-151st Avenue NE and NE 173rd-172nd Street.
Objective: This project is required to improve flow to the 420 Central (NW) Zone from PRV #8 and mitigate fire flow deficiencies.
Priority: Med High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|-----------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| Easement | 842 | LF | \$ 45 | \$ 37,890 | \$ 11,367 | \$ 7,578 | \$ 56,835 | |
| 148th Avenue NE New Pipe | 842 | LF | \$ 268 | \$ 225,656 | \$ 67,697 | \$ 45,131 | \$ 338,484 | |
| 173rd St. NE Pipe Upsize | 639 | LF | \$ 298 | \$ 190,422 | \$ 57,127 | \$ 38,084 | \$ 285,633 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 680,952 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-18
Project Name: 173rd St NE Pipe Upsize; 148th Avenue NE New Pipe
Facility Type: Pipe

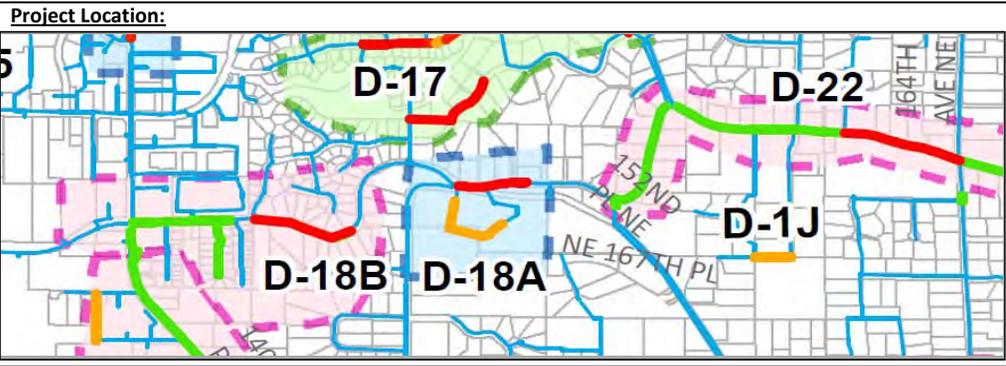
[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 680,952 |
| Total Project Cost | 100% | \$ 680,952 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|-------------------|
| D-18: Year 1 | 2021 | \$ 68,095.20 |
| D-18: Year 2 | 2022 | \$ 612,856.80 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 680,952 |



Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-19
Project Name: Dead-End at 168th St New Pipe; R&R Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

Repair & Replacement
 Approximately 5,237 LF of AC pipe to be replaced with 8-inch pipe along 140th Place NE and 148th Ave NE. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|------------|--------------------------|--------------|
| | | | | | 30% | 20% | | |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| R&R Pipe | 5,237 | LF | \$ 268 | \$ 1,403,516 | \$ 421,055 | \$ 280,703 | \$ 2,105,274 | \$ 2,105,274 |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | | \$ 2,105,274 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-19
Project Name: Dead-End at 168th St New Pipe; R&R Pipe
Facility Type: Pipe

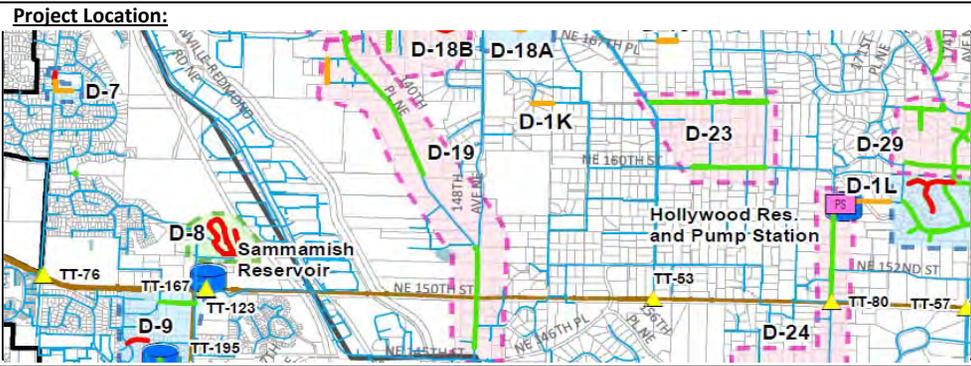
[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 2,105,274 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 2,105,274 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|---------------------|
| D-19: Year 1 | 2026 | \$ 210,527 |
| D-19: Year 2 | 2027 | \$ 1,894,747 |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 2,105,274 |



Notes:
 See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-20
Project Name: 156th Ave NE; NE 195th St. R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

Repair & Replacement

Approximately 6,039 Lf of AC pipe to be replaced with 8-inch pipe along 156th Ave NE between NE 205th St and NE Woodinville Duvall Place and along NE 195th Street between 156th Ave NE and 160th Ave NE. Refer to map for specific locations of pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 156th St R&R 8-inch | 6,039 | LF | \$ 268 | \$ 1,618,452 | \$ 485,536 | \$ 323,690 | \$ 2,427,678 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 2,427,678 |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-20
Project Name: 156th Ave NE; NE 195th St. R&R
Facility Type: Pipe

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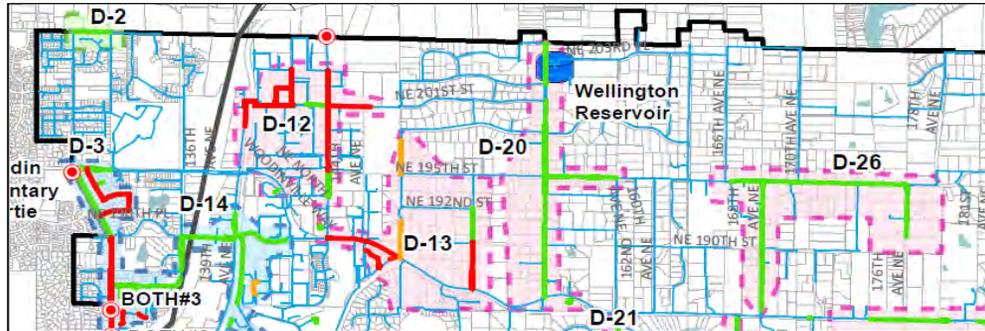
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 2,427,678 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 2,427,678 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| NE 156th St R&R 8-inch | Long-term | \$ 2,427,678 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 2,427,678 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-21
Project Name: NE 180th Street at Lake Leota R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 3,585 Lf of AC pipe to be replaced with 8-inch pipe along NE 180th St going around Lake Leota. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 180th St. R&R 8-inch | 3,585 | LF | \$ 268 | \$ 960,780 | \$ 288,234 | \$ 192,156 | \$ 1,441,170 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,441,170 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-21
Project Name: NE 180th Street at Lake Leota R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 1,441,170 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 1,441,170 |

Project Timing:

| Project Element | Timing | Cost |
|-------------------------|-----------|--------------|
| NE 180th St. R&R 8-inch | Long-term | \$ 1,441,170 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,441,170

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-22
Project Name: NE 175th Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
 Upsize pipe segment along NE 175th Street, between 60th Avenue NE and 164th Avenue NE.
Objective: To improve fire flow to the north end of the 650 Central Zone when the HGL of TT-53 is too low to serve 650. Coordinate this project with PS-3.
Priority: Low

Repair & Replacement
 Approximately 4,202 LF of 6 and 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|------------|--------------------------|--------------|
| | | | | | 30% | 20% | | |
| NE 175th St. Pipe Upsize | 1,132 | LF | \$ 298 | \$ 337,336 | \$ 101,201 | \$ 67,467 | \$ 506,004 | |
| R&R - 8-inch | 4,202 | LF | \$ 268 | \$ 1,126,136 | \$ 337,841 | \$ 225,227 | \$ 1,689,204 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 2,195,208 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-22
Project Name: NE 175th Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

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Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 77% | \$ 1,689,204 |
| Improvement: | 23% | \$ 506,004 |
| Total Project Cost | 100% | \$ 2,195,208 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|--------------|
| D-22: Year 2027 | Long-term | \$ 219,521 |
| D-22: Year 2028 | Long-term | \$ 1,975,687 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 2,195,208

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-23
Project Name: NE 160th St R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 3,498 Lf of AC pipe to be replaced with 8-inch pipe along NE 160th St and NE 165th St between 152nd Place NE and 164th Aven NE. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Medium-high

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|------------|-----------------------|--------------|
| | | | | | 30% | 20% | 20% | |
| NE 160th Place R&R 8-inch | 3,498 | LF | \$ 268 | \$ 937,464 | \$ 281,239 | \$ 187,493 | \$ 1,406,196 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 1,406,196 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-23
Project Name: NE 160th St R&R
Facility Type: Pipe

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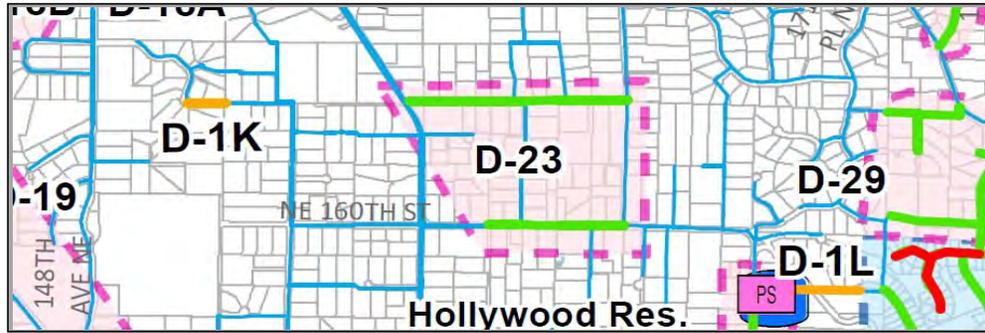
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 1,406,196 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 1,406,196 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| NE 160th Place R&R 8-inch | Long-term | \$ 1,406,196 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 1,406,196 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-24
Project Name: 168th Ave NE, NE 145th St R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

Repair & Replacement

Replace approximately 1,657 LF of 6-inch AC pipe along NE 145th St with 8-inch DI pipe. Replace approximately 1,979 LF of 12-inch AC pipe along 168th Ave NE with 12-inch DI pipe.

Objective: To eliminate AC pipe from the distribution system.

Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 145th St. R&R 8-inch | 1,657 | LF | \$ 268 | \$ 444,076 | \$ 133,223 | \$ 88,815 | \$ 666,114 |
| 168th Ave NE R&R 12-inch | 1,979 | LF | \$ 298 | \$ 589,742 | \$ 176,923 | \$ 117,948 | \$ 884,613 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,550,727 |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-24
Project Name: 168th Ave NE, NE 145th St R&R
Facility Type: Pipe

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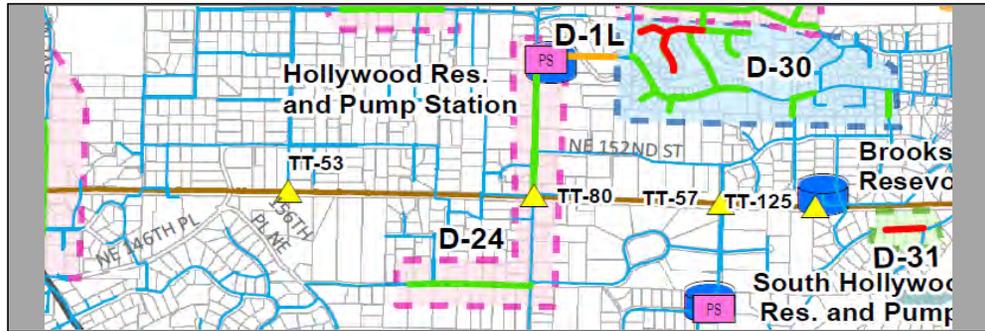
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 1,550,727 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 1,550,727 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| NE 145th St. R&R 8-inch | Long-term | \$ 666,114 |
| 168th Ave NE R&R 12-inch | Long-term | \$ 884,613 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 1,550,727 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-25
Project Name: 162nd Ave NE R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 4,722 Lf of AC pipe to be replaced with 8-inch pipe along NE 141st Place between 157th Place NE and 159th Avenue NE; along 159th Avenue NE between 141st and NE 139th Place; and along 162nd Avenue NE between NE 143rd Street and NE 136th Place.
Objective: This project is required due to 1,000 gpm fire flow deficiencies caused by AC pipes with low C factors.
Priority: High because it addresses many fire flow deficiencies in Zone 420 Central (S).

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| 162nd Ave NE R&R 8-inch | 4,722 | LF | \$ 268 | \$ 1,265,496 | \$ 379,649 | \$ 253,099 | \$ 1,898,244 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,898,244 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-25
Project Name: 162nd Ave NE R&R
Facility Type: Pipe

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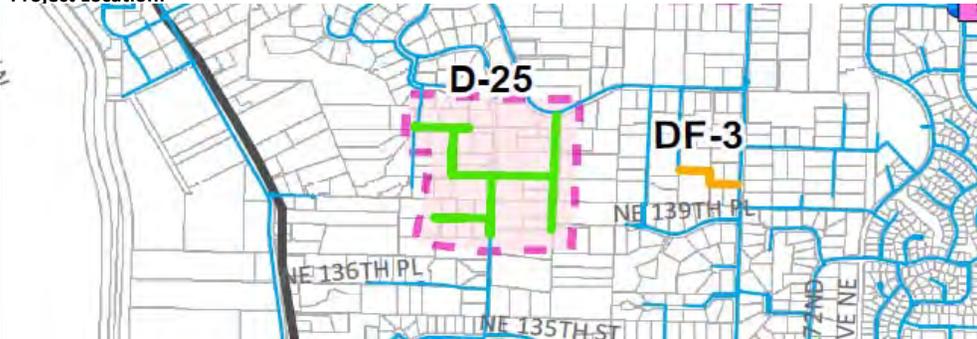
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 1,898,244 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 1,898,244 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| 162nd Ave NE R&R 8-inch | Long-term | \$ 1,898,244 |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 1,898,244 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-26
Project Name: NE 195th Street R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 6,713 Lf of 6 and 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost | |
|----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|--------------|
| | | | | | 30% | 20% | | |
| NE 195th Street R&R 8-inch | 6,713 | LF | \$ 268 | \$ 1,799,084 | \$ 539,725 | \$ 359,817 | \$ 2,698,626 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 2,698,626 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-26
Project Name: NE 195th Street R&R
Facility Type: Pipe

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Cost Allocation:

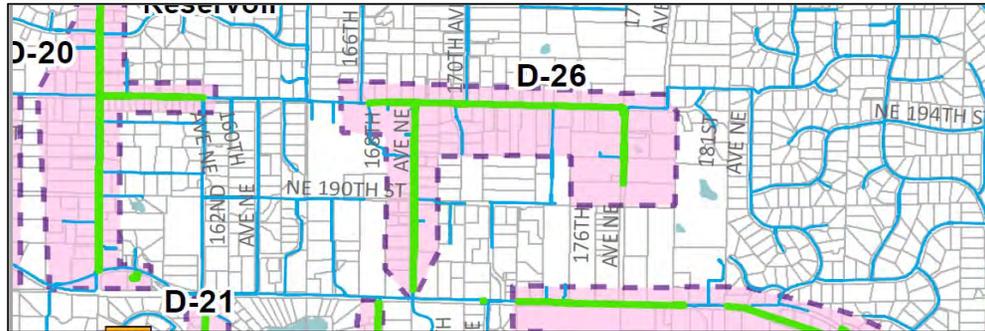
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 2,698,626 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 2,698,626 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| D-26: Year 1 | 2018 | \$ 151,123 |
| D-26: Year 2 | 2019 | \$ 2,547,503 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 2,698,626

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-27
Project Name: NE Woodinville Duvall Rd R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 9,267 Lf of 6 and 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|------------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE Woodinville Duvall Rd R&R | 9,267 | LF | \$ 268 | \$ 2,483,556 | \$ 745,067 | \$ 496,711 | \$ 3,725,334 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 3,725,334 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-27
Project Name: NE Woodinville Duvall Rd R&R
Facility Type: Pipe

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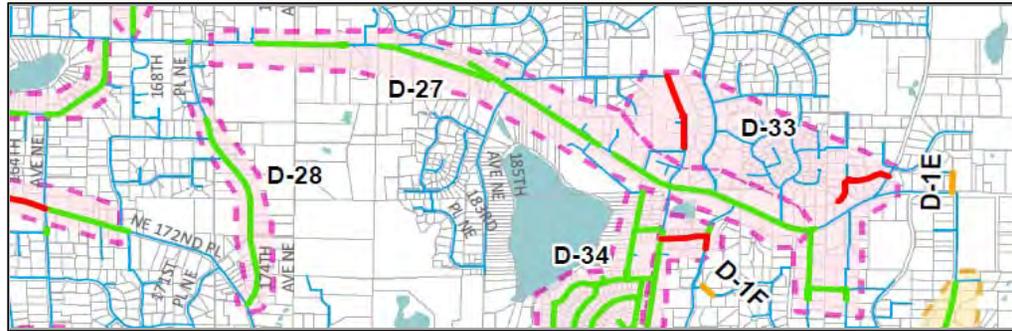
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 3,725,334 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 3,725,334 |

Project Timing:

| Project Element | Timing | Cost |
|------------------------------|-----------|---------------------|
| NE Woodinville Duvall Rd R&R | Long-term | \$ 3,725,334 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 3,725,334 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-28
Project Name: 174th Ave NE R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 3,433 Lf of 6-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| 174th Ave NE R&R 8-inch | 3,433 | LF | \$ 268 | \$ 920,044 | \$ 276,013 | \$ 184,009 | \$ 1,380,066 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,380,066 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-28
Project Name: 174th Ave NE R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 1,380,066 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 1,380,066 |

Project Timing:

| Project Element | Timing | Cost |
|-------------------------|-----------|--------------|
| 174th Ave NE R&R 8-inch | Long-term | \$ 1,380,066 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,380,066

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-29
Project Name: NE 160th PI R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 8,541 Lf of 4, 6, and 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 160th Place R&R 8-inch | 8,541 | LF | \$ 268 | \$ 2,288,988 | \$ 686,696 | \$ 457,798 | \$ 3,433,482 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 3,433,482 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-29
Project Name: NE 160th PI R&R
Facility Type: Pipe

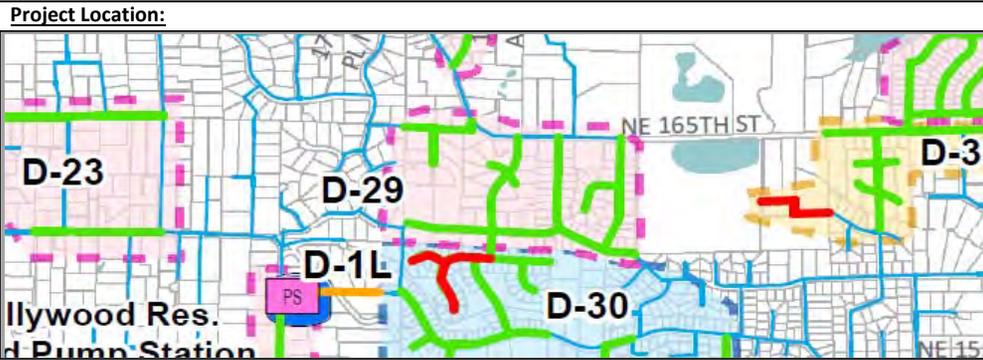
[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 3,433,482 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 3,433,482 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| NE 160th Place R&R 8-inch | Long-term | \$ 3,433,482 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 3,433,482 |



Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-30
Project Name: NE 160th Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

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Project Description:

NE 160th St Pipe Upsize

Upsize pipe segment from 6-inch to 8-inch along NE 160th Street, west of 175th Avenue NE, and along 174th Street NE, south of 160th Street NE.

Objective: This project is required to better serve 1,000-gpm fire flows as current piping has a low C factor.

Priority: Med High because it is an AC pipe.

Repair & Replacement

Replace approximately 4,878 LF of 6 and 8-inch AC pipe with 8-inch pipe. Replace approximately 320 LF of 10-inch pipe with 10-inch pipe. Refer to map for specific locations of pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Med Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 160th Street Pipe Upsize | 1,505 | LF | \$ 268 | \$ 403,340 | \$ 121,002 | \$ 80,668 | \$ 605,010 |
| R&R Pipe 8-inch | 4,878 | LF | \$ 268 | \$ 1,307,304 | \$ 392,191 | \$ 261,461 | \$ 1,960,956 |
| R&R Pipe 10-inch | 320 | LF | \$ 286 | \$ 91,520 | \$ 27,456 | \$ 18,304 | \$ 137,280 |
| | | | | \$ - | \$ - | \$ - | \$ - |

Total Project Cost

\$ 2,703,246

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-30
Project Name: NE 160th Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

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Cost Allocation:

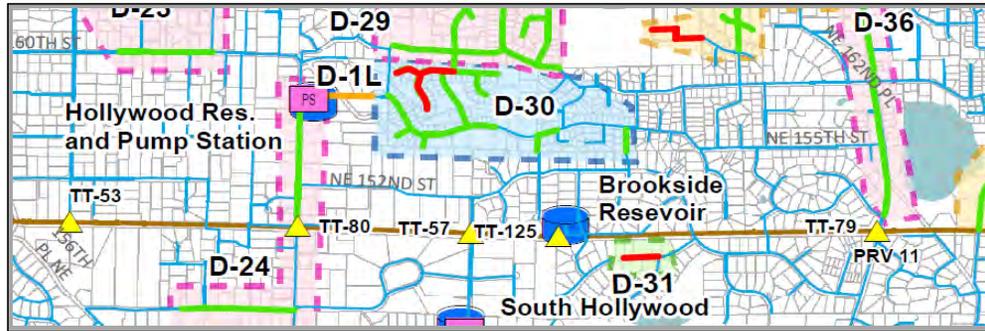
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 78% | \$ 2,098,236 |
| Improvement: | 22% | \$ 605,010 |
| Total Project Cost | 100% | \$ 2,703,246 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------------------|-----------|--------------|
| NE 160th Street Pipe Upsize | Long-term | \$ 605,010 |
| R&R Pipe 8-inch | Long-term | \$ 1,960,956 |
| R&R Pipe 10-inch | Long-term | \$ 137,280 |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 2,703,246

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-31
Project Name: NE 146th Street Pipe Upsize
Facility Type: Pipe

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Project Description:

Hydrant at end of dead end main is not able to provide 1,000-gpm fire flow. Also customers along this line experience low peak hour pressures. Consider serving the fire hydrant from Zone 570 Central. Customer pressure will be too high if served by Zone 570 Central. Recommend monitoring customer pressure and if low pressure is reported, consider upsizing pipe segment along NE 146th Street, between 181st Place NE and 183rd Avenue NE or installing a booster pump for customers with low pressure.

Objective: Project is required to provide 1,000-gpm fire flow and sufficient peak hour pressures.

Priority: Lower

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| NE 146th Street Pipe Upsize | 505 | LF | \$ 298 | \$ 150,490 | \$ 45,147 | \$ 30,098 | \$ 225,735 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 225,735 |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-31
Project Name: NE 146th Street Pipe Upsize
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

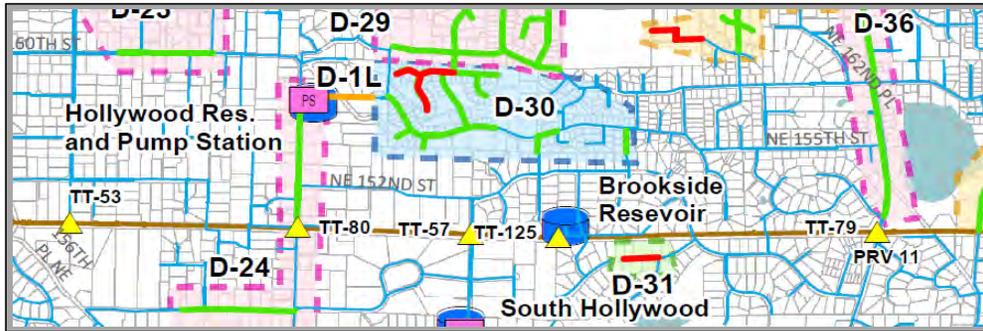
| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 225,735 |
| Total Project Cost | 100% | \$ 225,735 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------------------|-----------|------------|
| NE 146th Street Pipe Upsize | Long-term | \$ 225,735 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 225,735

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-32
Project Name: Dead-end NE 129th Way
Facility Type: Pipe

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Project Description:

Connecting dead end in Tuscany on NE 129th Way to NE 130th Street and Avondale Road NE.
Objective: New loop to improve system reliability and mitigate dead-end deficiency.
Priority: Med Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Dead-end NE 129th Way | 2,761 | LF | \$ 268 | \$ 739,948 | \$ 221,984 | \$ 147,990 | \$ 1,109,922 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,109,922 |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-32
Project Name: Dead-end NE 129th Way
Facility Type: Pipe

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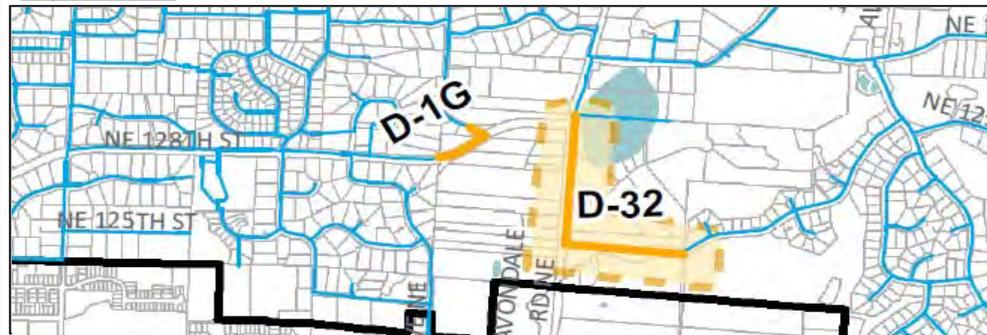
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 1,109,922 |
| Total Project Cost | 100% | \$ 1,109,922 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| Dead-end NE 129th Way | Long-term | \$ 1,109,922 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 1,109,922 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-33
Project Name: Avondale Road NE, NE 176st Street Pipe Upsizes, R&R Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

Avondale Road NE Pipe Upsize

Upsize 1,256 LF of pipe from 8-inch to 12-inch, beginning by the Safeway off of Avondale Road NE, going north along Avondale Road NE.

Objective: This improvement is needed to serve 2,500 gpm to Bear Creek Elementary School.

Priority: High because it involves providing fire flow to a school.

NE 176st Street Pipe Upsize

Model shows low C factor for this pipe that causes enough headloss to restrict flow to below the 1,000-gpm required fire flow. Investigate why C factors are low. Model shows part of the pipe is 8-inch, part is 6-inch. Upsize pipe segment from 6 or 8-inch to 8-inch along NE 176th Street and 201st Avenue NE, between 201st and 204th Ave NE may be required. Looping rather than replacing pipe is possible, but it would require a private easement that is not very likely to be successful because lots are small and structures are close to property lines.

Objective: To provide fire flow.

Priority: Lower

Repair & Replacement

Replace approximately 1,940 LF of 8-inch AC pipe with 8-inch DI pipe. Refer to map for specific locations of pipe segments to be replaced.

Objective: To eliminate AC pipe from the distribution system.

Priority: Low



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-33
Project Name: Avondale Road NE, NE 176st Street Pipe Upsizes, R&R Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost | |
|------------------------------|----------|------|---------------------|------------|-------------|--------------------------|---------------------|--|
| | | | | | 30% | 20% | | |
| Avondale Road NE Pipe Upsize | 1,256 | LF | \$ 298 | \$ 374,288 | \$ 112,286 | \$ 74,858 | \$ 561,432 | |
| NE 176th Street Pipe Upsize | 1,131 | LF | \$ 268 | \$ 303,108 | \$ 90,932 | \$ 60,622 | \$ 454,662 | |
| R&R Pipe 8-inch | 1,940 | LF | \$ 268 | \$ 519,920 | \$ 155,976 | \$ 103,984 | \$ 779,880 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | \$ 1,795,974 | |

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 43% | \$ 779,880 |
| Improvement: | 57% | \$ 1,016,094 |
| Total Project Cost | 100% | \$ 1,795,974 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| D-33: Year 1 | 2019 | \$ 179,597 |
| D-33: Year 2 | 2020 | \$ 1,616,377 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,795,974



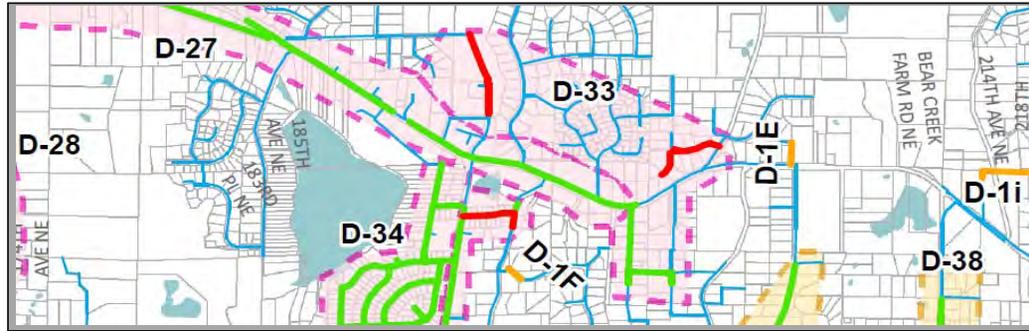
Woodinville Water District
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Capital Improvement Program



Project ID: D-33
Project Name: Avondale Road NE, NE 176st Street Pipe Upsizes, R&R Pipe
Facility Type: Pipe

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Project Location:



Notes:

See full map on "Maps" tab.

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Capital Improvement Program



Project ID: D-34
Project Name: NE 165th Place R&R
Facility Type: Pipe

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Project Description:
Repair & Replacement
 Approximately 9,124 Lf of 4 and 6-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Med Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 165th Street R&R 8-inch | 9,124 | LF | \$ 268 | \$ 2,445,232 | \$ 733,570 | \$ 489,046 | \$ 3,667,848 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 3,667,848 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
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Capital Improvement Program



Project ID: D-34
Project Name: NE 165th Place R&R
Facility Type: Pipe

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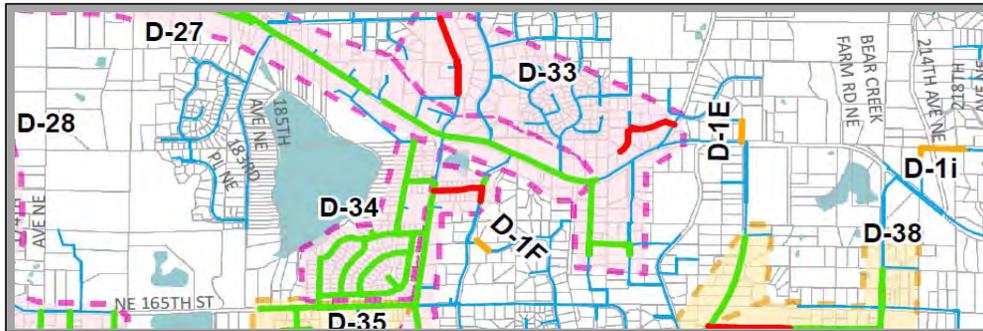
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 3,667,848 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 3,667,848 |

Project Timing:

| Project Element | Timing | Cost |
|----------------------------|-----------|---------------------|
| NE 165th Street R&R 8-inch | Long-term | \$ 3,667,848 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 3,667,848 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-35
Project Name: NE 161st PL and NE 172nd Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
NE 161st PL Pipe Upsize (D-35)
 Upsize AC pipe segment from 6-inch to 8-inch running parallel to Cottage Lake Creek, between the west end of NE 161st Place and 183rd Place NE.
Objective: Needed to provide 1,000-gpm fire flow.
Priority: Lower

Repair & Replacement
 Approximately 3,458 LF of 4 and 6-inch AC pipe to be replaced with 8-inch pipe. Approximately 1,123 LF of 10-inch pipe to be replaced with 10-inch pipe. Refer to map for specific location of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Med Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|------|---------------------|------------|-------------|------------|--------------------------|---------------------|
| | | | | | 30% | 20% | 20% | |
| NE 161st Place Pipe Upsize | 873 | LF | \$ 268 | \$ 233,964 | \$ 70,189 | \$ 46,793 | \$ 350,946 | |
| R&R Pipe - 8-inch | 3,458 | LF | \$ 268 | \$ 926,744 | \$ 278,023 | \$ 185,349 | \$ 1,390,116 | |
| R&R Pipe - 10-inch | 1,123 | LF | \$ 286 | \$ 321,178 | \$ 96,353 | \$ 64,236 | \$ 481,767 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 2,222,829 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-35
Project Name: NE 161st PL and NE 172nd Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

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Cost Allocation:

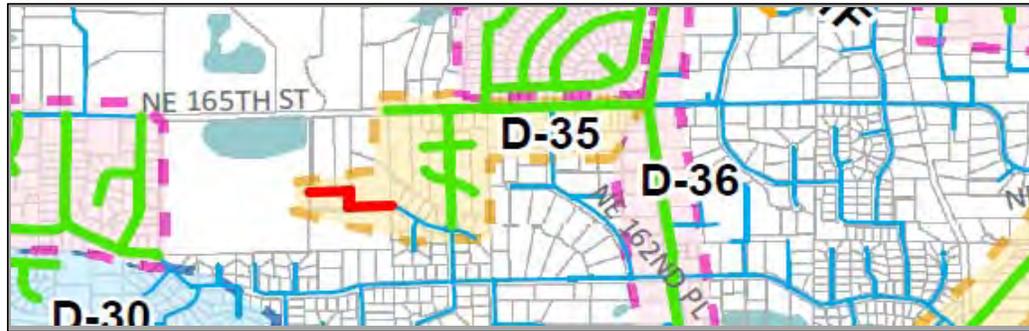
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 84% | \$ 1,871,883 |
| Improvement: | 16% | \$ 350,946 |
| Total Project Cost | 100% | \$ 2,222,829 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| D-35: Year 1 | 2024 | \$ 222,283 |
| D-35: Year 2 | 2025 | \$ 2,000,546 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 2,222,829

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-36
Project Name: NE 161st PL and NE 172nd Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

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Project Description:
NE 172nd Street Pipe Upsize
 Upsize pipe segment from 6-inch to 8-inch along NE 172nd Street between Avondale Road NE and 194th Avenue NE. Contingency for this project increased to 45% to account for extra cost of traffic control.
Objective: This project is required to mitigate 1,000 gpm fire flow deficiency.
Priority: Med High - Addresses many fire flow deficiencies in Zone 420 Central.

Repair & Replacement
 Approximately 6,101 LF of 6 and 8-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|--------------|-------------|------------|--------------------------|--------------|
| | | | | | 45% | 20% | 20% | |
| NE 172nd Street Pipe Upsize | 955 | LF | \$ 268 | \$ 255,940 | \$ 115,173 | \$ 51,188 | \$ 422,301 | |
| R&R 8-inch | 6,101 | LF | \$ 268 | \$ 1,635,068 | \$ 735,781 | \$ 327,014 | \$ 2,697,862 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 3,120,163 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-36
Project Name: NE 161st PL and NE 172nd Street Pipe Upsize; R&R Pipe
Facility Type: Pipe

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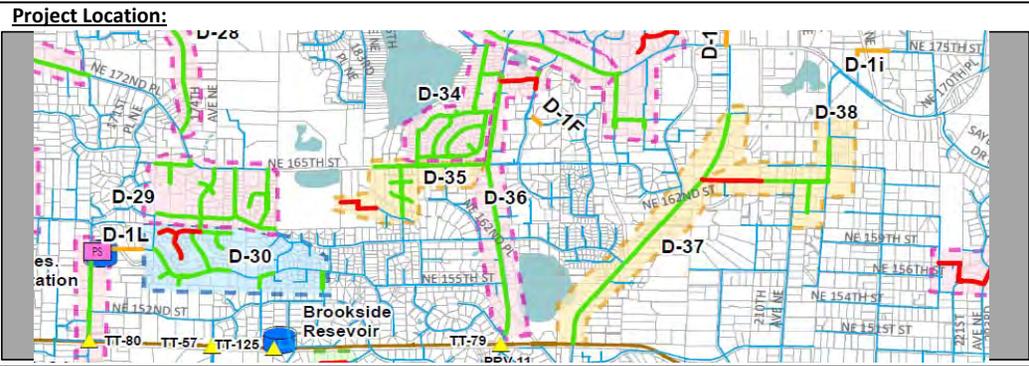
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 86% | \$ 2,697,862 |
| Improvement: | 14% | \$ 422,301 |
| Total Project Cost | 100% | \$ 3,120,163 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|--------------|
| D-36: Year 1 | 2026 | \$ 312,016 |
| D-36: Year 2027 | Long-term | \$ 2,808,147 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 3,120,163



Notes:
See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-37
Project Name: Mink Road R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Repair & Replacement
 Approximately 6,037 Lf of 8-inch pipe to be replaced with 8-inch pipe along Mink Road. Refer to map for specific locations of pipe segments to be replaced.
Objective: To eliminate AC pipe from the distribution system.
Priority: Med Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Mink Road R&R 8-inch | 6,037 | LF | \$ 268 | \$ 1,617,916 | \$ 485,375 | \$ 323,583 | \$ 2,426,874 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 2,426,874 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-37
Project Name: Mink Road R&R
Facility Type: Pipe

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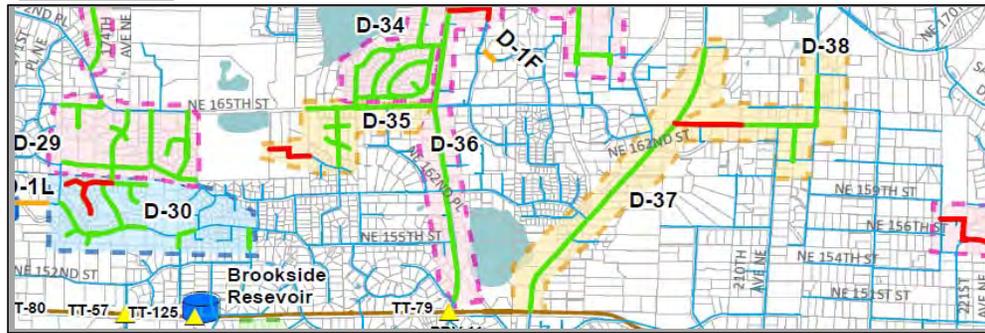
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 2,426,874 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 2,426,874 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| Mink Road R&R 8-inch | Long-term | \$ 2,426,874 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 2,426,874 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-38
Project Name: NE 164th Street Pipe Upsize, Dead End Connection at NE 175th St and 213th Ave NE, R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
NE 164th Street Pipe Upsize
 Upsize 1,228 LF of 6-inch AC pipe segment to 8-inch along NE 164th street, from Mink Road NE to 209th Avenue NE.
Objective: Needed to provide 1,000-gpm fire flow.
Priority: Low

Repair & Replacement
 Approximately 3,002 LF of 6-inch AC pipe to be replaced with 8-inch pipe. Refer to map for specific locations of pipe segments to be replaced. All but one short section of pipe to be replace is 6-inch AC. The short section is 6-inch CI pipe.
Objective: To eliminate AC pipe from the distribution system.
Priority: Med Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| NE 164th Street Pipe Upsize | 1,228 | LF | \$ 268 | \$ 329,104 | \$ 98,731 | \$ 65,821 | \$ 493,656 |
| R&R Pipe 8-inch | 3,002 | LF | \$ 268 | \$ 804,536 | \$ 241,361 | \$ 160,907 | \$ 1,206,804 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,700,460 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: D-38
Project Name: NE 164th Street Pipe Upsize, Dead End Connection at NE 175th St and 213th Ave NE, R&R
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

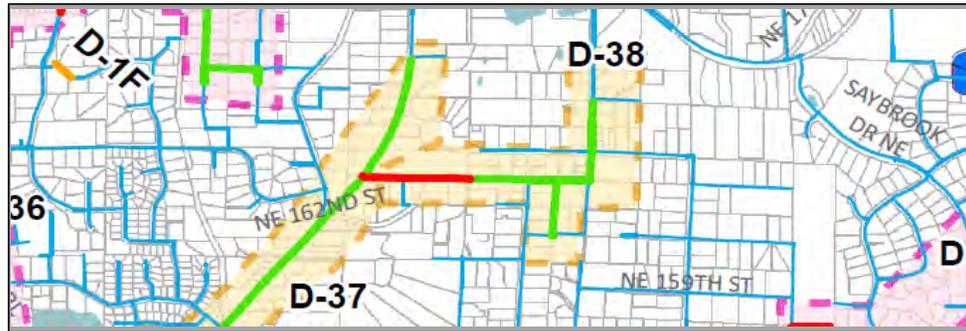
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 71% | \$ 1,206,804 |
| Improvement: | 29% | \$ 493,656 |
| Total Project Cost | 100% | \$ 1,700,460 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|--------------|
| D-38: Year 2027 | Long-term | \$ 200,654 |
| D-38: Year 2028 | Long-term | \$ 1,499,806 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,700,460

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-39
Project Name: 223rd Avenue NE, Dead end at NE 166th Street
Facility Type: Pipe

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Project Description:
223rd Avenue NE Pipe Upsize
 Upsize pipe segment from 8-inch to 12-inch along 223rd Avenue NE and NE 156th Street.
Objective: This project is required in order to serve 2,500 gpm fire flow to the East Ridge Elementary School.
Priority: High because it involves providing fire flow to a school.

Dead End at NE 166th Street New Pipe
 Install approximately 802 LF of new pipe segment to connect dead ends on NE 166th St between 232nd Ave.
Objective: New loop to improve system reliability and mitigate dead-end deficiency.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|------------|--------------------------|--------------|
| | | | | | 30% | 20% | | |
| 223rd Ave NE Pipe Upsize | 1,702 | LF | \$ 298 | \$ 507,196 | \$ 152,159 | \$ 101,439 | \$ 760,794 | |
| Dead End at NE 166th St. | 802 | LF | \$ 268 | \$ 214,936 | \$ 64,481 | \$ 42,987 | \$ 322,404 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 1,083,198 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-39
Project Name: 223rd Avenue NE, Dead end at NE 166th Street
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

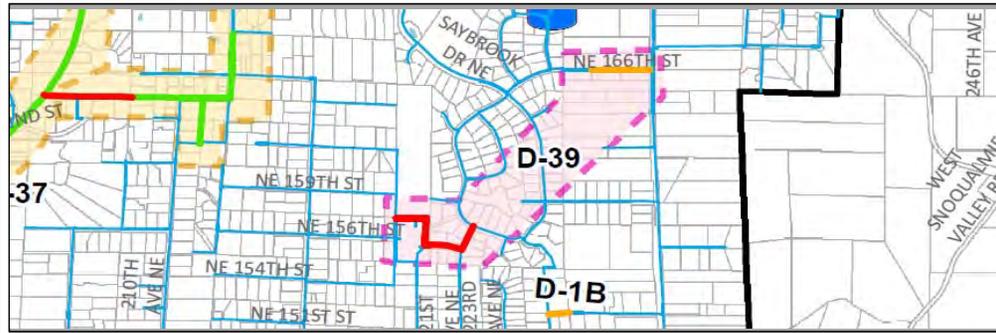
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 1,083,198 |
| Total Project Cost | 100% | \$ 1,083,198 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|---------------|
| D-39: Year 1 | 2019 | \$ 108,319.80 |
| D-39: Year 2 | 2020 | \$ 974,878.20 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,083,198

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-40
Project Name: NE 133rd Street Pipe Upsize; NE 133rd Street New Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

216th Way NE Pipe Upsize

Upsize 348 LF pipe segment along 216th Way NE, between NE 141st Street and 216th Ave NE from 8-inch to 12-inch.

Objective: Improvement recommended due to headloss observed when serving 2,500 gpm fire at the Laura Ingalls Wilder Elementary School.

Priority: High

NE 133rd Street Pipe Upsize

Upsize 929 LF of pipe segment north of NE 133rd Street, and south of NE 137th Street to 12-inch.

Objective: Improvement needed to serve 2,500 gpm to Laura Ingalls Wilder Elementary School.

Priority: High

NE 133rd Street New Pipe

Install 1,058 LF of 12-inch pipe along NE 133rd Street, between Laura Ingalls Wilder Elementary School and 227th Avenue NE.

Objective: A loop is needed to help the Redmond 133rd Intertie supply fire flow to the Laura Ingalls Wilder Elementary School.

Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| 216th Way NE Pipe Upsize | 595 | LF | \$ 298 | \$ 177,310 | \$ 53,193 | \$ 35,462 | \$ 265,965 |
| NE 133rd Street Pipe Upsize | 929 | LF | \$ 298 | \$ 276,842 | \$ 83,053 | \$ 55,368 | \$ 415,263 |
| NE 133rd Street New Pipe | 1,058 | LF | \$ 298 | \$ 315,284 | \$ 94,585 | \$ 63,057 | \$ 472,926 |
| | | | | \$ - | \$ - | \$ - | \$ - |

Total Project Cost \$ 1,154,154

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: D-40
Project Name: NE 133rd Street Pipe Upsize; NE 133rd Street New Pipe
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

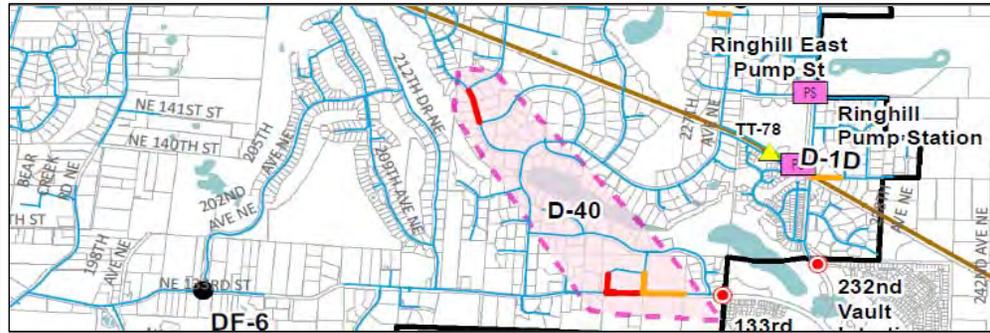
| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 1,154,154 |
| Total Project Cost | 100% | \$ 1,154,154 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| D-40: Year 1 | 2018 | \$ 115,415 |
| D-40: Year 2 | 2019 | \$ 1,038,739 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 1,154,154

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)

PRESSURE ZONE PROJECT SHEETS



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-1
Project Name: New PRV Station
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Project Description:
 Install a new PRV between the 420 Central (S) and 260 zones.
Objective: To provide fire flow to the 260 Zone industrial customers.
Priority: High because it addresses many fire flow deficiencies in Zone 260 West.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|----------|---------------------|------------|-------------|-----------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| New PRV Station | 1 | Lump Sum | \$ 100,000 | \$ 100,000 | \$ 30,000 | \$ 20,000 | \$ 150,000 | |
| 12-inch Piping | 728 | LF | \$ 298 | \$ 216,944 | \$ 65,083 | \$ 43,389 | \$ 325,416 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 475,416 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-1
Project Name: New PRV Station
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 475,416 |
| Total Project Cost | 100% | \$ 475,416 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|-------------------|
| PZ-1: Year 1 | 2019 | \$ 49,919 |
| PZ-1: Year 1 | 2020 | \$ 425,497 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 475,416 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-2
Project Name: Zone 670 Study
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Project Description:
 Evaluation of how to provide required storage and maintain peak hour and fire flow pressures in the southern part of Zone 670 East. Solutions may include operational changes to the Ringhill PS, a new pump station at the Aspenwood Reservoir to pump out dead storage (PS-1), and a new storage standpipe in the southern part of the 670 East Zone (ST-1).
Objective: Solve storage and pressure deficiencies in the 670 East Zone.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|-----------|-------------|--------------------------|------------|
| | | | | | 20% | | |
| Zone 670 Study | 1 | LS | \$ 60,000 | \$ 60,000 | \$ 12,000 | \$ - | \$ 72,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 72,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-2
Project Name: Zone 670 Study
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|-----------|---------------------------|--------|-----------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | Zone 670 Study | 2019 | \$ 72,000 |
| Repair & Replacement: | 0% | \$ - | | | \$ - |
| Improvement: | 100% | \$ 72,000 | | | \$ - |
| | | | | | \$ - |
| | | | | | \$ - |
| | | | | | \$ - |
| Total Project Cost | 100% | \$ 72,000 | Total Project Cost | | \$ 72,000 |

Project Location:

Notes:
No map required

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: PZ-3
Project Name: Zone 420 Central Fire Flow Deficiency
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Project Description:
 A fire flow deficiency exists by 2022 on the Zone 420 Central side of the closed valve between that zone and Zone 570 Central. Evaluate the possibility of serving this hydrant from the 570 Central Zone.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|----------|-------------|--------------------------|------------|
| | | | | | 30% | | |
| Replace Hydrant Lateral | 30 | LF | \$ 250 | \$ 7,500 | \$ 2,250 | \$ - | \$ 9,750 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 9,750 |

Notes on Cost Estimation:
 This is an internal evaluation and does not have a cost estimate.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-3
Project Name: Zone 420 Central Fire Flow Deficiency
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

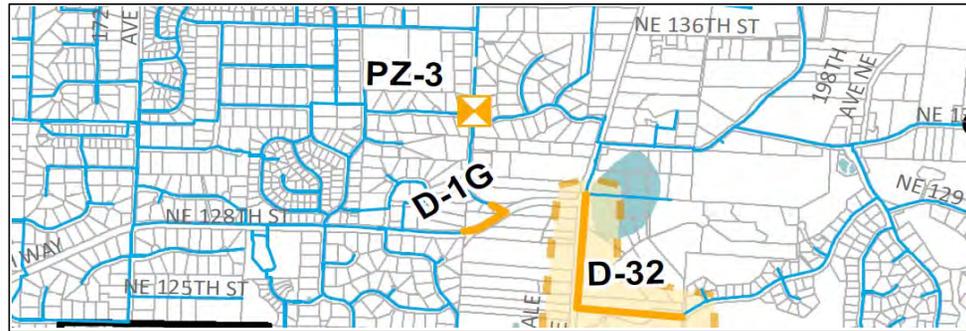
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-----------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 9,750 |
| Total Project Cost | 100% | \$ 9,750 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|-----------------|
| Replace Hydrant Lateral | Long-term | \$ 9,750 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 9,750 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-4
Project Name: PRV Station Rehabs
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Project Description:
Annual rehabilitation for PRV stations.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | | | |
| PRV Station Rehabs | 17 | EA | \$ 60,000 | \$ 1,020,000 | \$ - | \$ - | \$ 1,020,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,020,000 |

Notes on Cost Estimation:
This is an internal evaluation and does not have a cost estimate.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-4
Project Name: PRV Station Rehabs
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|-------------|---------------------|---------------------------|-----------|---------------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | 2021 Budget | 2021 | \$ 60,000 |
| Repair & Replacement: | 0% | \$ - | 2022 Budget | 2022 | \$ 60,000 |
| Improvement: | 100% | \$ 1,020,000 | 2023 Budget | 2023 | \$ 60,000 |
| | | | 2024 Budget | 2024 | \$ 60,000 |
| | | | 2025 Budget | 2025 | \$ 60,000 |
| | | | 2026 Budget | 2026 | \$ 60,000 |
| | | | 2027 Budget | 2027 | \$ 60,000 |
| | | | Long-Term | Long-term | \$ 600,000 |
| | | | | | \$ - |
| | | | | | \$ - |
| Total Project Cost | 100% | \$ 1,020,000 | Total Project Cost | | \$ 1,020,000 |

Project Location:

Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-5
Project Name: PRV and Pipe Replacement along 178th St.
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Project Description:
 Install new PRV between the 570 Central Zone and the 420 Central (NW) Zone. Replace 520 feet of 4-inch pipe along NE 178th St with 8-inch pipe. Also investigate high headloss in the area.
Objective: Provide sufficient fire flow.
Priority: Lower

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|-----------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| Pipe Replacement | 520 | LF | \$ 268 | \$ 139,360 | \$ 41,808 | \$ 27,872 | \$ 209,040 | |
| New PRV Station | 1 | LS | \$ 100,000 | \$ 100,000 | \$ 30,000 | \$ 20,000 | \$ 150,000 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 359,040 |

Notes on Cost Estimation:
 This is an internal evaluation and does not have a cost estimate.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-5
Project Name: PRV and Pipe Replacement along 178th St.
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

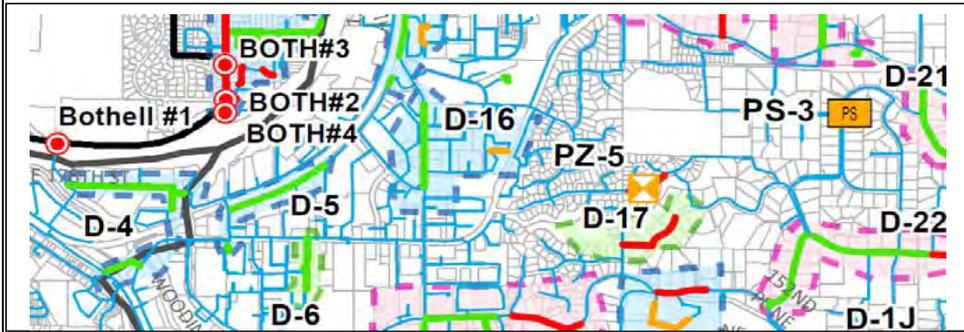
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 359,040 |
| Total Project Cost | 100% | \$ 359,040 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|-------------------|
| Pipe Replacement | Long-term | \$ 209,040 |
| New PRV Station | Long-term | \$ 150,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 359,040 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-6
Project Name: Zone 420 Central (NE) Fire Flow Deficiency
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

Project Description:
 A fire flow deficiency exists by 2022 on the Zone 420 Central (NE) side of the closed valve between that zone and Zone 570 Central along 202nd Place NW. Evaluate the possibility of serving this hydrant from the 570 Central (E) Zone.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost | |
|---------------------------|----------|------|---------------------|----------|-------------|--------------------------|------------|--------------|
| | | | | | 30% | | | |
| Replace Hydrant Lateral | 30 | LF | \$ 250 | \$ 7,500 | \$ 2,250 | \$ - | \$ 9,750 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | \$ | 9,750 |

Notes on Cost Estimation:
 This is an internal evaluation and does not have a cost estimate.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PZ-6
Project Name: Zone 420 Central (NE) Fire Flow Deficiency
Facility Type: Pressure Zone

[Go to CIP Summary Table](#)

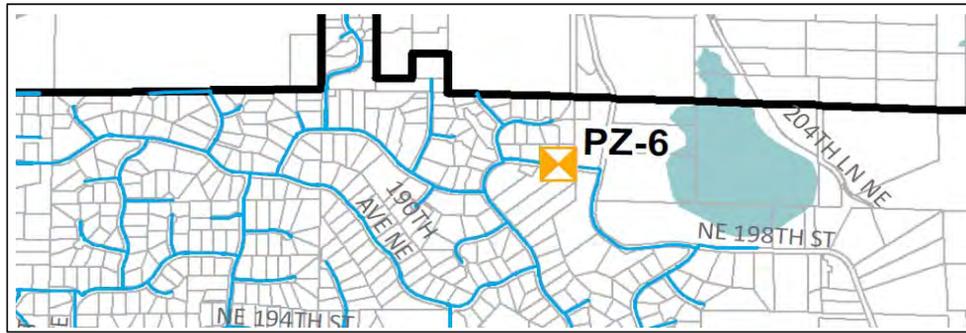
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-----------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 9,750 |
| Total Project Cost | 100% | \$ 9,750 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|-----------------|
| Replace Hydrant Lateral | Long-term | \$ 9,750 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 9,750 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)

SUPPLY PROJECT SHEETS



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: S-1
Project Name: SRRWA Annual Funding
Facility Type: Supply

[Go to CIP Summary Table](#)

Project Description:
 Annual budget for funding Snohomish River Regional Water Authority (SRRWA) supply development.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|-------|---------------------|------------|-------------|------|--------------------------|------------|
| | | | | | 30% | 20% | | |
| SRRWA Annual Funding | 20 | Years | \$ 15,000 | \$ 300,000 | \$ - | \$ - | \$ - | \$ 300,000 |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | | \$ 300,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: S-1
Project Name: SRRWA Annual Funding
Facility Type: Supply

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 300,000 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|------------|
| Annual Funding | 2018 | \$ 15,000 |
| Annual Funding | 2019 | \$ 15,000 |
| Annual Funding | 2020 | \$ 15,000 |
| Annual Funding | 2021 | \$ 15,000 |
| Annual Funding | 2022 | \$ 15,000 |
| Annual Funding | 2023 | \$ 15,000 |
| Annual Funding | 2024 | \$ 15,000 |
| Annual Funding | 2025 | \$ 15,000 |
| Annual Funding | 2026 | \$ 15,000 |
| Annual Funding | 2027 | \$ 15,000 |
| Annual Funding | Long-term | \$ 150,000 |

Total Project Cost 100% \$ 300,000

Total Project Cost \$ 300,000

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: S-2
Project Name: East Service Area 2nd Tap to SPU Tolt River Line
Facility Type: Supply

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| East Service Area 2nd Tap to | 1 | LS | \$ 425,000 | \$ 425,000 | \$ - | \$ - | \$ 425,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 425,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: S-2
Project Name: East Service Area 2nd Tap to SPU Tolt River Line
Facility Type: Supply

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|------------|--------------------------------|--------|------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | East Service Area 2nd Tap to S | 2025 | \$ 425,000 |
| Repair & Replacement: | 0% | \$ - | | | \$ - |
| Improvement: | 100% | \$ 425,000 | | | \$ - |
| Total Project Cost | | | Total Project Cost | | |
| | 100% | \$ 425,000 | | | \$ 850,000 |

Project Location:

Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)

STORAGE PROJECT SHEETS



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-1
Project Name: Zone 670 East Storage
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Install a 0.2 MG elevated storage tank to maintain the HGL in the southern part of Zone 670 East. Coordinate this project with projects PZ-2 and PS-1.
Objective: Solve pressure deficiencies in southern part of Zone 670 East.
Priority: Medium low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|---------|---------------------|------------|-------------|------------|--------------------------|--------------|
| | | | | | 30% | 20% | 20% | |
| Zone 670 East Storage | 200,000 | gallons | \$ 4 | \$ 800,000 | \$ 240,000 | \$ 160,000 | \$ 160,000 | \$ 1,200,000 |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | | \$ 1,200,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-1
Project Name: Zone 670 East Storage
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 1,200,000 |
| Total Project Cost | 100% | \$ 1,200,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|-----------|---------------------|
| Zone 670 East Storage | Long-term | \$ 1,200,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 2,400,000 |



Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: ST-2
Project Name: Hollywood Reservoir - Upgrade Improvements
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Correct seismic deficiencies and complete upgrades to meet current AWWA seismic requirements as recommended by Tank Industry Consultanta (TIC). TIC recommends lowering the maximum operating level 4-feet. Analysis needed to determine affects to system. If lowering possible, reduce project by (\$285,200). Relocate overflow. Install check valve and clog-resistant vent. Improve platform, ladder and roof manhole. Cleaning and painting.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Hollywood Res. Upgrades | 1 | LS | \$ 1,266,000 | \$ 1,266,000 | \$ 379,800 | \$ 253,200 | \$ 1,899,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,899,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-2
Project Name: Hollywood Reservoir - Upgrade Improvements
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|--------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 1,899,000 |

| | | |
|---------------------------|------|--------------|
| Total Project Cost | 100% | \$ 1,899,000 |
|---------------------------|------|--------------|

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| ST-2: Year 1 | 2019 | \$ 150,021 |
| ST-2: Year 2 | 2020 | \$ 1,748,979 |
| | | \$ - |
| | | \$ - |

| | |
|---------------------------|--------------|
| Total Project Cost | \$ 3,798,000 |
|---------------------------|--------------|



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-3
Project Name: James Bard Reservoir -Upgrade Improvements
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Modify piping, operating level and roof. Correct seismic deficiencies and complete upgrades to meet current AWWA seismic requirements as recommended by TIC. TIC recommends lowering the maximum operating level 13-inches. Analysis needed to determine affects to system. If lowering is not possible, estimated budget would be increased to include shell modifications (\$285,200). Relocate overflow. Install check valve and clog-resistant vent. Improve platform and ladder. Recoat inside/outside as needed.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| James Bard Reservoir | 1 | LS | \$ 1,200,000 | \$ 1,200,000 | \$ 360,000 | \$ 240,000 | \$ 1,800,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,800,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-3
Project Name: James Bard Reservoir -Upgrade Improvements
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 50% | \$ 900,000 |
| Improvement: | 50% | \$ 900,000 |

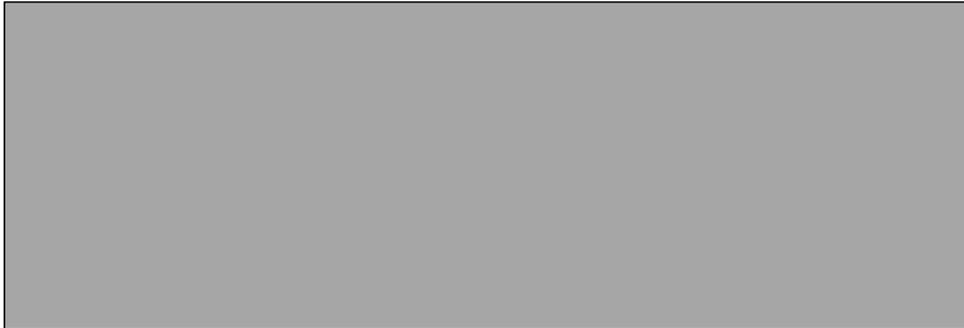
Total Project Cost 100% \$ 1,800,000

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| ST-3: Year 1 | 2020 | \$ 149,400 |
| ST-3: Year 2 | 2021 | \$ 1,650,600 |
| | | \$ - |
| | | \$ - |

Total Project Cost \$ 3,600,000

Project Location:



Notes:

See full map on "Maps" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: ST-4
Project Name: Aspenwood Standpipe - Upgrade
Facility Type: Storage

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Project Description:
 Retrofit foundation and anchors. Modify operating level. Correct seismic deficiencies and complete upgrades to meet current AWWA seismic requirements as recommended by TIC. TIC recommends lowering the maximum operating level 14-inches. Shell modifications were not included in estimated budget, (\$100,000). Relocate overflow. Install check valve. Improve platform, ladder, roof manhole and ventilation. Recoat inside/outside as needed.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Aspenwood Standpipe Upgrade | 1 | LS | \$ 1,055,240 | \$ 1,055,240 | \$ 316,572 | \$ 211,048 | \$ 1,582,860 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,582,860 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-4
Project Name: Aspenwood Standpipe - Upgrade
Facility Type: Storage

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|-------------------|---------------------------|--------|--------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | ST-4: Year 1 | 2024 | \$ 158,286 |
| Repair & Replacement: | 50% | \$ 791,430 | ST-4: Year 2 | 2025 | \$ 1,424,574 |
| Improvement: | 50% | \$ 791,430 | | | \$ - |
| | | | | | \$ - |
| Total Project Cost | | 100% \$ 1,582,860 | Total Project Cost | | \$ 1,582,860 |

Project Location:

Notes:
See full map on "Maps" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: ST-5
Project Name: Sammamish Reservoir Upgrade
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Retrofit foundation and anchors. Modify operating level. Correct seismic deficiencies and upgrades to meet current AWWA seismic requirements. TIC recommends lowering the maximum operating level 2-feet. Analysis needed to determine affects to system. If lowering the level is not possible, estimated budget would be increased to include shell modifications (\$427,800). Relocate overflow, install check valve, improve platform, ladder, roof manhole and ventilation. Recoat the inside/outside as necessary.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Sammamish Reservoir Upgrad | 1 | LS | \$ 1,504,000 | \$ 1,504,000 | \$ 451,200 | \$ 300,800 | \$ 2,256,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 2,256,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program

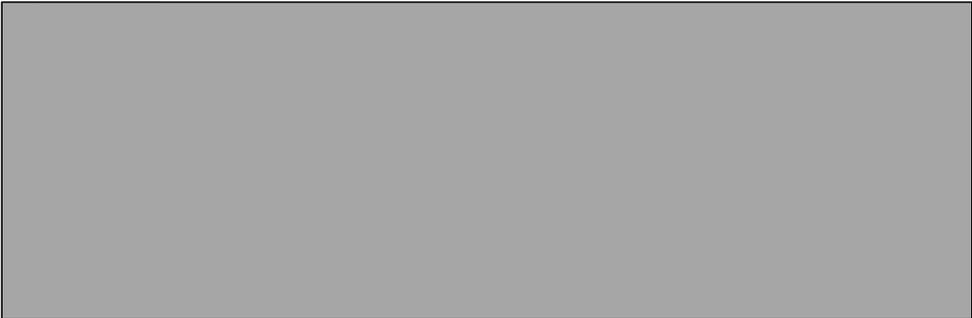


Project ID: ST-5
Project Name: Sammamish Reservoir Upgrade
Facility Type: Storage

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| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|--------------|---------------------------|--------|--------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | ST-5: Year 1 | 2025 | \$ 225,600 |
| Repair & Replacement: | 50% | \$ 1,128,000 | ST-5: Year 2 | 2026 | \$ 2,030,400 |
| Improvement: | 50% | \$ 1,128,000 | | | \$ - |
| | | | | | \$ - |
| Total Project Cost | | | Total Project Cost | | |
| | 100% | \$ 2,256,000 | | | \$ 2,256,000 |

Project Location:



Notes:
See full map on "Maps" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: ST-6
Project Name: Wellington Reservoir Upgrade
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Replace foundation and anchors. Modify shell. Correct seismic deficiencies and complete upgrades to meet current AWWA seismic requirements. TIC recommends lowering the maximum operating level 7-feet, 4-inches. Analysis needed to determine affects to system. If lowering the level is possible, estimated budget would be reduced by eliminating shell modifications (\$385,000). Relocate overflow, install check valve, imporve platform, ladder, roof manhole and ventilation. Recoat interior/exterior as necessary.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost | |
|------------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|--------------|
| | | | | | 30% | 20% | | |
| Wellington Reservoir Upgrade | 1 | LS | \$ 1,225,000 | \$ 1,225,000 | \$ 367,500 | \$ 245,000 | \$ 1,837,500 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 1,837,500 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-6
Project Name: Wellington Reservoir Upgrade
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 50% | \$ 918,750 |
| Improvement: | 50% | \$ 918,750 |
| Total Project Cost | 100% | \$ 1,837,500 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|---------------------|
| ST-6: Year 1 | 2026 | \$ 183,750 |
| ST-6: Year 2 | 2027 | \$ 1,653,750 |
| | | \$ - |
| Total Project Cost | | \$ 1,837,500 |

Project Location:

Notes:
See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-7
Project Name: S. Hollywood Reservoir Upgrades
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Replace foundation and anchors. Modify shell. Correct seismic deficiencies and complete upgrades to meet current AWWA seismic requirements. TIC recommends lowering the maximum operating level 19-feet, 6-inches. Analysis needed to determine affects to system. If it si possible, estimated budget would be reduced by eliminating shell modifications, (\$299,500). Improve platform, ladder, roof manhole and ventilation. Recoating interior/exterior as necessary.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| S. Hollywood Res. Upgrades | 1 | LS | \$ 1,205,000 | \$ 1,205,000 | \$ 361,500 | \$ 241,000 | \$ 1,807,500 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,807,500 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-7
Project Name: S. Hollywood Reservoir Upgrades
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 50% | \$ 903,750 |
| Improvement: | 50% | \$ 903,750 |

| | | |
|---------------------------|------|--------------|
| Total Project Cost | 100% | \$ 1,807,500 |
|---------------------------|------|--------------|

Project Timing:

| Project Element | Timing | Cost |
|-----------------|--------|--------------|
| ST-7: Year 1 | 2026 | \$ 180,750 |
| ST-7: Year 2027 | 2027 | \$ 1,626,750 |
| | | \$ - |
| | | \$ - |

| | |
|---------------------------|--------------|
| Total Project Cost | \$ 1,807,500 |
|---------------------------|--------------|

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-8
Project Name: Kingsgate Standpipe - Construction
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:

Construct additional storage for 510 West Zone. If additional work is not to be done to existing Kingsgate Reservoir, a Kingsgate Reservoir replacement will be needed. Provide a cumulative minimum of 2.1 MG of effective storage to meet projected demands for the 510 West Zone.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-------------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Kingsgate Standpipe - Constru | 1 | LS | \$ 3,208,500 | \$ 3,208,500 | \$ 962,550 | \$ 641,700 | \$ 4,812,750 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |

Total Project Cost \$ 4,812,750

Notes on Cost Estimation:

Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-8
Project Name: Kingsgate Standpipe - Construction
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 50% | \$ 2,406,375 |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 50% | \$ 2,406,375 |
| Total Project Cost | 100% | \$ 4,812,750 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|---------------------|
| ST-8: Year 1 | 2021 | \$ 298,391 |
| ST-8: Year 2 | 2022 | \$ 2,406,375 |
| ST-8: Year 3 | 2023 | \$ 2,107,985 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 4,812,750 |



Notes:
See full map on "Maps" tab.

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Woodinville Water District
 Water System Plan
 Capital Improvement Program



Project ID: ST-9
Project Name: Brookside Reservoir Upgrade Improvements
Facility Type: Storage

[Go to CIP Summary Table](#)

Project Description:
 Upgrade Brookside Reservoir. See District's details for allocation of cost estimates.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 0% | 0% | |
| Brookside Reservoir Upgrade | 1 | LS | \$ 2,385,000 | \$ 2,385,000 | \$ - | \$ - | \$ 2,385,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 2,385,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: ST-9
Project Name: Brookside Reservoir Upgrade Improvements
Facility Type: Storage

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 2,385,000 |
| Total Project Cost | 100% | \$ 2,385,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|---------------------|
| ST-8: Year 1 | 2018 | \$ 2,198,970 |
| ST-8: Year 2 | 2019 | \$ 186,030 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 4,770,000 |

Project Location:



Notes:

See full map on "Maps" tab.

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PUMP STATION PROJECT SHEETS



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-1
Project Name: Aspenwood Pump Station
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
 Build a new pump station at the Aspenwood resevoir (similar concept to the Kingsgate Pump Station). The pump station needs to have a firm capacity of 2,500 gpm to meet fire flow demands for East Ridge Elementary School. Coordinate this project with project PZ-2.
Objective: This pump station would be used in a case of an emergency to access dead storage while isolating the Aspenwood reservoir from the distribution system.
Priority: Med High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|--------------|-------------|------------|--------------------------|--------------|
| | | | | | 30% | 20% | 20% | |
| Aspenwood Pump Station | 1 | LS | \$ 1,500,000 | \$ 1,500,000 | \$ 450,000 | \$ 300,000 | \$ 2,250,000 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 2,250,000 |

Notes on Cost Estimation:
 Based on cost of approximately \$3.5 million for the Kingsgate Pump Station, which has a firm capacity of 6,000 gpm.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-1
Project Name: Aspenwood Pump Station
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|---------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 2,250,000 |
| Total Project Cost | 100% | \$ 2,250,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|---------------------|
| Design | 2020 | \$ 299,250 |
| Construction | 2021 | \$ 1,476,000 |
| Construction | 2022 | \$ 474,750 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 2,250,000 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-2
Project Name: Ringhill East Pump Station Upgrade
Facility Type: Pump Station

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Project Description:

This project is to upgrade the fire flow pump at the Ringhill East Pump Station.

Objective: According to the pump data used for the system analysis, the existing fire pump does not have enough head to serve fire flow in the 770 Zone. Confirm the accuracy of this assumption by performing a hydrant flow test.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| Ringhill East Pump Station Up | 1 | LS | \$ 200,000 | \$ 200,000 | \$ 60,000 | \$ 40,000 | \$ 300,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 300,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-2
Project Name: Ringhill East Pump Station Upgrade
Facility Type: Pump Station

[Go to CIP Summary Table](#)

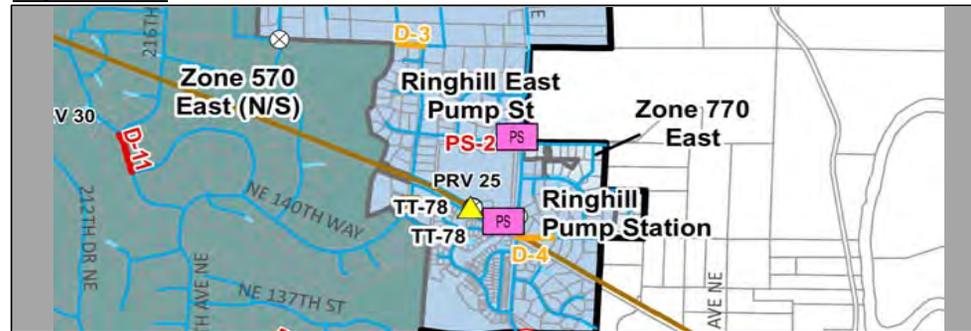
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 300,000 |
| Total Project Cost | 100% | \$ 300,000 |

Project Timing:

| Project Element | Timing | Cost |
|-------------------------------|--------|-------------------|
| Ringhill East Pump Station Up | 2018 | \$ 300,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 300,000 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-3
Project Name: Emergency BPS in 650 Central Zone
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:

Construct an emergency/supplemental booster pump station in Zone 650 Central to be supplied by Tolt Tap 53 - Wellington Reservoir transmission main. Coordinate this project with PS-9 Hollywood BPS Replacement.

Objective: Required if and when TT-53 minimum contractual head is realized per SPU supply contract. This will improve fire flow and pressure reliability in the north portion of the 650 Central Zone. The firm capacity of the pump station should be 1,000 gpm to meet the required fire flow of the 650 Central Zone. An alternative could include modifications to the existing Hollywood BPS.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| Emergency BPS in 650 Central | 1 | LS | \$ 500,000 | \$ 500,000 | \$ 150,000 | \$ 100,000 | \$ 750,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 750,000 |

Notes on Cost Estimation:

Based on 2008 Water System Plan cost estimate of \$550,000 escalated for 2018 dollars. The January 2008 ENR U.S. 20-City Construction Cost Index was 8090.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-3
Project Name: Emergency BPS in 650 Central Zone
Facility Type: Pump Station

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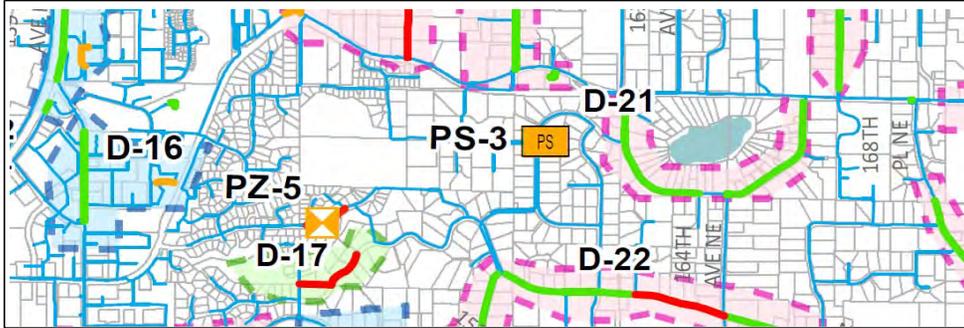
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 750,000 |
| Total Project Cost | 100% | \$ 750,000 |

Project Timing:

| Project Element | Timing | Cost |
|------------------------------|-----------|-------------------|
| Emergency BPS in 650 Central | Long-term | \$ 750,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 750,000 |

Project Location:



Notes:

See full map on "Maps" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: PS-4
Project Name: Low Pressure Program
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
 This CIP item is a program for the District to improve pressure to high elevation customers. Some areas in the District's system experience pressures below 30 psi during peak hour demand. These areas include near Wellington Reservoir, at the boundary between the 570 Central and 420 Central (S) zones and other small pockets. The District can address low pressures by installing small jockey pumps for these small communities or individual customers.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|----------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| Low Pressure Program | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ - |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: PS-4
Project Name: Low Pressure Program
Facility Type: Pump Station

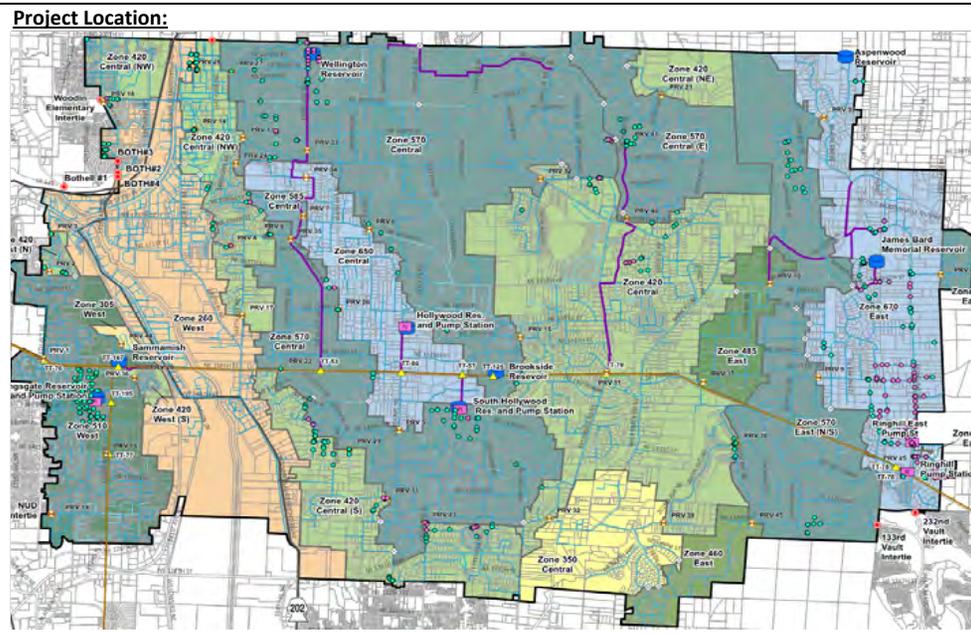
[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ - |
| Total Project Cost | 100% | \$ - |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|-------------|
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ - |



Notes:
See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-5
Project Name: Replace Hollywood Pumps
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
Description: Replace aged pumps in Hollywood Pump Station
Objective: Install extra pump in station and have the pump removed overhauled and reinstalled as pump #2. Then overhaul the pump just pulled out and install it as pump #3. Have the last pump pulled overhauled and place on shelf as extra.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| Replace Hollywood Pumps | 1 | LS | \$ 200,000 | \$ 200,000 | \$ - | \$ - | \$ 200,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 200,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-5
Project Name: Replace Hollywood Pumps
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|---------|------------|
| Capacity: | | \$ - |
| Repair & Replacement: | 100% | \$ 200,000 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 200,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|------------|
| Replace Hollywood Pumps | 2018 | \$ 200,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 400,000 |

Project Location:

Notes:
See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-6
Project Name: Replace Ringhill Pumps
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
Description: Replace aged pumps in Ringhill Pump Station
Objective: Purchase extra pump for station, install, and have the pump removed overhauled and reinstalled as pump #2. Then overhaul the pump just pulled out and install it as pump #3. Have the last pump pulled overhauled and place on shelf as extra.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| Replace Ringhill Pumps | 1 | LS | \$ 250,000 | \$ 250,000 | \$ - | \$ - | \$ 250,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 250,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-6
Project Name: Replace Ringhill Pumps
Facility Type: Pump Station

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|------------|---------------------------|--------|------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | | \$ - | Replace Ringhill Pumps | 2018 | \$ 250,000 |
| Repair & Replacement: | 100% | \$ 250,000 | | | \$ - |
| Improvement: | 0% | \$ - | | | \$ - |
| Total Project Cost | | | Total Project Cost | | |
| | 100% | \$ 250,000 | | | \$ 500,000 |

Project Location:

Notes:
See full map on "Maps" tab.

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**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: PS-7
Project Name: Wellington Booster Pump Station
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
Description: Construct booster station to utilize 0.90 MG of dead storage in Wellington Reservoir. Install variable frequency drive pumps for constant pressure. Only to be used as needed. Match boosting potential of South Hollywood Boster Pump Station to maintain consistent head throughout common service areas.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Wellington Booster Pump Sta | 1 | LS | \$ 720,000 | \$ 720,000 | \$ 216,000 | \$ 144,000 | \$ 1,080,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,080,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-7
Project Name: Wellington Booster Pump Station
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|--------------|
| Capacity: | 100% | \$ 1,080,000 |
| Repair & Replacement: | | \$ - |
| Improvement: | 0% | \$ - |

| | | |
|---------------------------|------|--------------|
| Total Project Cost | 100% | \$ 1,080,000 |
|---------------------------|------|--------------|

Project Timing:

| Project Element | Timing | Cost |
|---------------------------------|-----------|--------------|
| Wellington Booster Pump Station | Long-term | \$ 1,080,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

| | | |
|---------------------------|--|--------------|
| Total Project Cost | | \$ 1,080,000 |
|---------------------------|--|--------------|

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-8
Project Name: New Generator for Ringhill BPS
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
Description: Replace aging generator at the Ringhill BPS.
Objective: Generator is getting hard to find parts for repairs.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| New Generator for Ringhill BP | 1 | LS | \$ 110,000 | \$ 110,000 | \$ 33,000 | \$ 22,000 | \$ 165,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 165,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-8
Project Name: New Generator for Ringhill BPS
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | | \$ - |
| Repair & Replacement: | 100% | \$ 165,000 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 165,000 |

Project Timing:

| Project Element | Timing | Cost |
|-------------------------------|--------|-------------------|
| New Generator for Ringhill BP | 2019 | \$ 165,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 165,000 |

Project Location:

Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-9
Project Name: Hollywood Pump Station Replacement
Facility Type: Pump Station

[Go to CIP Summary Table](#)

Project Description:
 Replace Hollywood Pump Station. Coordinate this project with PS-3 Emergency BPS in 650 Central Zone.
Objective: Replace aging pump station. Pump station was constructed in 1978.
Priority: Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 30% | 20% | |
| Replace Hollywood Pump Stat | 1 | Ls | \$ 1,000,000 | \$ 1,000,000 | \$ 300,000 | \$ 200,000 | \$ 1,500,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 1,500,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: PS-9
Project Name: Hollywood Pump Station Replacement
Facility Type: Pump Station

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|-------------------|-----------------------------|-----------|--------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | Replace Hollywood Pump Stat | Long-term | \$ 1,500,000 |
| Repair & Replacement: | 100% | \$ 1,500,000 | | | \$ - |
| Improvement: | 0% | \$ - | | | \$ - |
| Total Project Cost | | | Total Project Cost | | |
| | | 100% \$ 1,500,000 | | | \$ 3,000,000 |

Project Location:

Notes:
 See full map on "Maps" tab.

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DISTRICT FINANCED PROJECT SHEETS



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-1
Project Name: 2016 Water System Plan Update
Facility Type: Non-facility project

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| 2016 Water System Plan Update | 1 | LS | \$ 138,000 | \$ 138,000 | \$ - | \$ - | \$ 138,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 138,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-1
Project Name: 2016 Water System Plan Update
Facility Type: Non-facility project

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|-----------|
| Capacity: | 33% | \$ 45,540 |
| Repair & Replacement: | 33% | \$ 45,540 |
| Improvement: | 34% | \$ 46,920 |

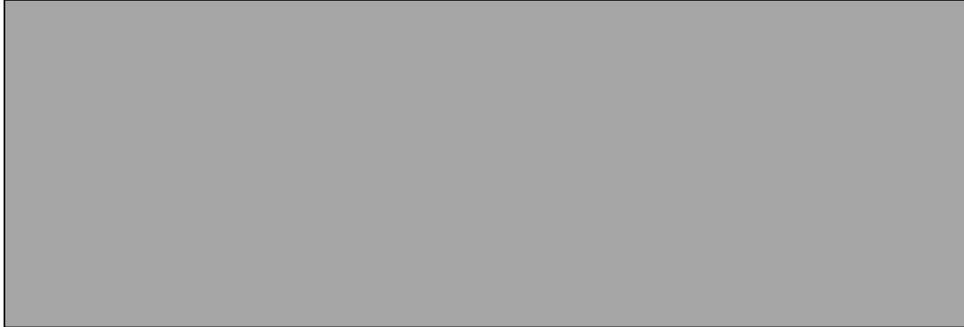
| | | |
|---------------------------|------|------------|
| Total Project Cost | 100% | \$ 138,000 |
|---------------------------|------|------------|

Project Timing:

| Project Element | Timing | Cost |
|-------------------------------|--------|------------|
| 2016 Water System Plan Update | 2018 | \$ 138,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

| | | |
|---------------------------|--|------------|
| Total Project Cost | | \$ 276,000 |
|---------------------------|--|------------|

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: DF-2
Project Name: Dead End Main Program
Facility Type: Distric Funded

[Go to CIP Summary Table](#)

Project Description:
 This is a program to address fire flow deficiencies at dead end pipes that require 2,500 gpm or more. A singel hydrant cannot supply these ranges of flow. The District should evaluate each deficiency on a case by case basis to determine how to best provide flow. Possible solutions include: Confirm fire flow requirement, determine if customer is served by multiple hydrants that combined can provide required fire flow, add pipe looping, upsize dead end pipes.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------|----------|-------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | | | |
| Annual Dead End Main Progra | 10 | Years | \$ 50,000 | \$ 500,000 | \$ - | \$ - | \$ 500,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 500,000 |

Notes on Cost Estimation:
 Based on the pipe cost per linear foot assumptions found on the "Assumptions" tab.

[Go to Assumptions Tab](#)



**Woodinville Water District
Water System Plan
Capital Improvement Program**



Project ID: DF-2
Project Name: Dead End Main Program
Facility Type: Distric Funded

[Go to CIP Summary Table](#)

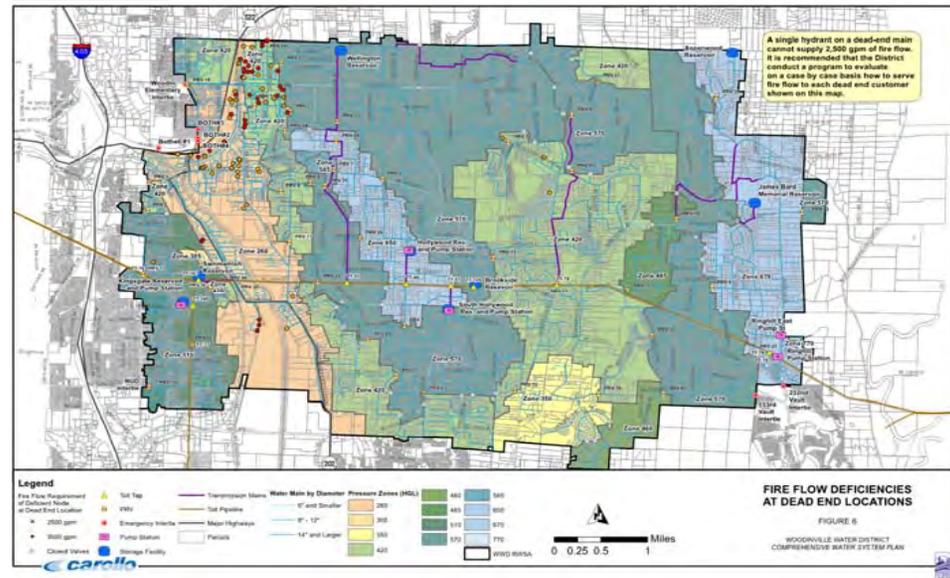
Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 500,000 |
| Total Project Cost | 100% | \$ 500,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|-------------------|
| Annual Program | 2018 | \$ 50,000 |
| Annual Program | 2019 | \$ 50,000 |
| Annual Program | 2020 | \$ 50,000 |
| Annual Program | 2021 | \$ 50,000 |
| Annual Program | 2022 | \$ 50,000 |
| Annual Program | 2023 | \$ 50,000 |
| Annual Program | 2024 | \$ 50,000 |
| Annual Program | 2025 | \$ 50,000 |
| Annual Program | 2026 | \$ 50,000 |
| Annual Program | 2027 | \$ 50,000 |
| Total Project Cost | | \$ 500,000 |

Project Location:



Notes:

This map shows fire flow deficiencies at dead end locations. See larger map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-3
Project Name: Little Dead End
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:

Description: Loop dead-end through parcel #2426059038 in existing 15 foot easement, to connect to water main located in 168th Ave NE. Approximately 820 lf of new 8-inch DI will be need to be installed to make this connection.
Objective: To eliminte a dead end water main that has required regular fushing to keep the water fresh.
Priority: High

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost | |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|------------|
| | | | | | 30% | 20% | | |
| Little Dead End | 820 | LF | \$ 268 | \$ 219,760 | \$ 65,928 | \$ 43,952 | \$ 329,640 | |
| Easement | 300 | LF | \$ 45 | \$ 13,500 | \$ 4,050 | \$ 2,700 | \$ 20,250 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 349,890 |

Notes on Cost Estimation:

Costs provided by WWD

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-3
Project Name: Little Dead End
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | | \$ - |
| Repair & Replacement: | | \$ - |
| Improvement: | 100% | \$ 349,890 |

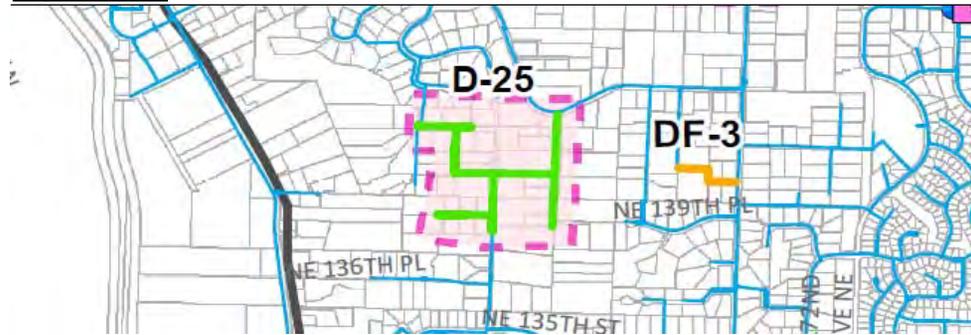
| | | |
|---------------------------|------|------------|
| Total Project Cost | 100% | \$ 349,890 |
|---------------------------|------|------------|

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|------------|
| Little Dead End | Long-term | \$ 329,640 |
| Easement | Long-term | \$ 20,250 |
| | | \$ - |
| | | \$ - |

| | | |
|---------------------------|--|------------|
| Total Project Cost | | \$ 699,780 |
|---------------------------|--|------------|

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-4
Project Name: 2016 PRV Rehabilitation
Facility Type: Non-Facility Project

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| 2016 PRV Rehabilitation | 1 | LS | \$ 500,000 | \$ 500,000 | \$ - | \$ - | \$ 500,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 500,000 |

Notes on Cost Estimation:
 Costs provided by WWD.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-4
Project Name: 2016 PRV Rehabilitation
Facility Type: Non-Facility Project

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | | \$ - |
| Repair & Replacement: | 100% | \$ 500,000 |
| Improvement: | 0% | \$ - |

| | | |
|---------------------------|------|------------|
| Total Project Cost | 100% | \$ 500,000 |
|---------------------------|------|------------|

Project Timing:

| Project Element | Timing | Cost |
|-------------------------|--------|------------|
| 2016 PRV Rehabilitation | 2020 | \$ 500,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

| | | |
|---------------------------|--|--------------|
| Total Project Cost | | \$ 1,000,000 |
|---------------------------|--|--------------|

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-5
Project Name: KC 218th Ave NE Drainage Imp
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Description: Relocate water main in preparation for King County road improvements.
Objective: Relocate pipe as necessary.
Priority: Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| KC 218th Ave NE Drainage Imp | 1 | LS | \$ 125,000 | \$ 125,000 | \$ 37,500 | \$ 25,000 | \$ 187,500 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 187,500 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-5
Project Name: KC 218th Ave NE Drainage Imp
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | | \$ - |
| Repair & Replacement: | 100% | \$ 187,500 |
| Improvement: | 0% | \$ - |

Project Timing:

| Project Element | Timing | Cost |
|------------------------------|--------|------------|
| KC 218th Ave NE Drainage Imp | 2019 | \$ 187,500 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

| | | |
|---------------------------|------|------------|
| Total Project Cost | 100% | \$ 187,500 |
|---------------------------|------|------------|

| | |
|---------------------------|------------|
| Total Project Cost | \$ 375,000 |
|---------------------------|------------|

Project Location:

Notes:
See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-6
Project Name: KC NE 133rd St/NE 128th St Rd Imp.
Facility Type: Pipe

[Go to CIP Summary Table](#)

Project Description:
Description: Relocate water main in preparation for King County road improvements.
Objective: Relocate pipe as necessary.
Priority: Low

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 30% | 20% | |
| KC NE 133rd St/NE 128th St Rd | 1,400 | LF | \$ 268 | \$ 375,200 | \$ 112,560 | \$ 75,040 | \$ 562,800 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 562,800 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-6
Project Name: KC NE 133rd St/NE 128th St Rd Imp.
Facility Type: Pipe

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | | \$ - |
| Repair & Replacement: | 100% | \$ 562,800 |
| Improvement: | 0% | \$ - |

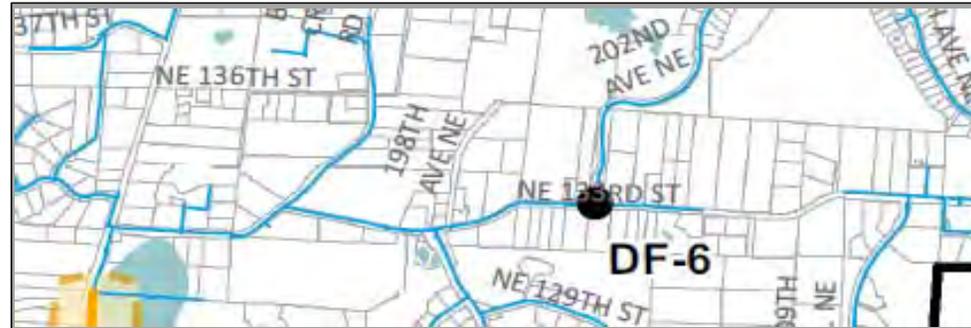
| | | |
|---------------------------|------|------------|
| Total Project Cost | 100% | \$ 562,800 |
|---------------------------|------|------------|

Project Timing:

| Project Element | Timing | Cost |
|-------------------------------|--------|------------|
| KC NE 133rd St/NE 128th St Rd | 2019 | \$ 562,800 |
| | | \$ - |
| | | \$ - |
| | | \$ - |

| | | |
|---------------------------|--|------------|
| Total Project Cost | | \$ 562,800 |
|---------------------------|--|------------|

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-7
Project Name: Chlorine Stations
Facility Type: Chlorine Stations

[Go to CIP Summary Table](#)

Project Description:
 Install chlorine booster stations throughout distribution system to maintain adequate chlorine residual. Proposed sites for chlorine booster stations are:
 Bard Reservoir, one at inlet, one at outlet
 Ringhill East BPS
 PRV 30
 Kingsgate Reservoir

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|-----------|-------------|----------|--------------------------|------------|
| | | | | | 30% | 20% | 20% | |
| Bard Reservoir Stations | 2 | EA | \$ 20,000 | \$ 40,000 | \$ 12,000 | \$ 8,000 | \$ 60,000 | |
| Ringhill East BPS Station | 1 | EA | \$ 20,000 | \$ 20,000 | \$ 6,000 | \$ 4,000 | \$ 30,000 | |
| PRV 30 Station | 1 | EA | \$ 20,000 | \$ 20,000 | \$ 6,000 | \$ 4,000 | \$ 30,000 | |
| Kingsgate Station | 1 | EA | \$ 20,000 | \$ 20,000 | \$ 6,000 | \$ 4,000 | \$ 30,000 | |
| | | | | \$ - | \$ - | \$ - | \$ - | |
| Total Project Cost | | | | | | | | \$ 150,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-7
Project Name: Chlorine Stations
Facility Type: Chlorine Stations

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|-------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 150,000 |
| Total Project Cost | 100% | \$ 150,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|-----------|
| Bard Reservoir Stations | 2018 | \$ 60,000 |
| Ringhill East BPS Station | 2018 | \$ 30,000 |
| PRV 30 Station | 2019 | \$ 30,000 |
| Kingsgate Station | 2019 | \$ 30,000 |
| | | \$ - |

Total Project Cost \$ 150,000

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF_8
Project Name: Certification of Emergency Well
Facility Type: Non-Facility Project

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------------|----------|------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| Certification of Emergency Well | 1 | LS | \$ 150,000 | \$ 150,000 | \$ - | \$ - | \$ 150,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 150,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF_8
Project Name: Certification of Emergency Well
Facility Type: Non-Facility Project

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|-----------------|---------------------------------|--------|------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 0% | \$ - | Certification of Emergency Well | 2018 | \$ 150,000 |
| Repair & Replacement: | 0% | \$ - | | | |
| Improvement: | 100% | \$ 150,000 | | | |
| Total Project Cost | | 100% \$ 150,000 | Total Project Cost | | \$ 150,000 |

Project Location:

Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-10
Project Name: 2028 Water System Plan Update
Facility Type: Non-facility project

[Go to CIP Summary Table](#)

| Cost Allocation: | | | Project Timing: | | |
|---------------------------|---------|------------|-------------------------------|-----------|------------|
| Project Type | Percent | Cost | Project Element | Timing | Cost |
| Capacity: | 33% | \$ 99,000 | 2028 Water System Plan Update | Long-term | \$ 300,000 |
| Repair & Replacement: | 33% | \$ 99,000 | | | \$ - |
| Improvement: | 34% | \$ 102,000 | | | \$ - |
| Total Project Cost | | | Total Project Cost | | |
| | 100% | \$ 300,000 | | | \$ 300,000 |

Project Location:

Notes:
See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-11
Project Name: Bulk Water Station
Facility Type: District-Funded

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|-----------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| Bulk Water Station | 1 | EA | \$ 62,000 | \$ 62,000 | \$ - | \$ - | \$ 62,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 62,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-12
Project Name: COW Sammamish River Bridge AC Replacement
Facility Type: District-Funded

[Go to CIP Summary Table](#)

Project Description:
 Replace the AC pipe segments near the City of Woodinville's Sammamish River Bridge.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|-----------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| AC Replacement | 1 | LS | \$ 41,500 | \$ 41,500 | \$ - | \$ - | \$ 41,500 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 41,500 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-12
Project Name: COW Sammamish River Bridge AC Replacement
Facility Type: District-Funded

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 41,500 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 41,500 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|------------------|
| AC Replacement | 2018 | \$ 41,500 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 41,500 |

Project Location:



Notes:

See full map on "Maps" tab.

[Go to Maps Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-13
Project Name: WSDOT Lt. Bear Creek/SR-202 Culvert Replacement
Facility Type: District-Funded

[Go to CIP Summary Table](#)

Project Description:
 Replace the culvert near the Lt. Bear Creek/SR-202.

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|------|---------------------|-----------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| Culvert Replacement | 1 | LS | \$ 30,000 | \$ 30,000 | \$ - | \$ - | \$ 30,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 30,000 |

Notes on Cost Estimation:

[Go to Assumptions Tab](#)



Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-13
Project Name: WSDOT Lt. Bear Creek/SR-202 Culvert Replacement
Facility Type: District-Funded

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|---------------------------|-------------|------------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 100% | \$ 30,000 |
| Improvement: | 0% | \$ - |
| Total Project Cost | 100% | \$ 30,000 |

Project Timing:

| Project Element | Timing | Cost |
|---------------------------|--------|------------------|
| Culvert Replacement | 2018 | \$ 30,000 |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| | | \$ - |
| Total Project Cost | | \$ 30,000 |

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-14
Project Name: Misc. COW and KC Projects
Facility Type: District-Financed

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|-------|---------------------|------------|-------------|--------------------------|------------|
| | | | | | 0% | 0% | |
| Misc. COW and KC Projects | 20 | Years | \$ 20,000 | \$ 400,000 | \$ - | \$ - | \$ 400,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 400,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-14
Project Name: Misc. COW and KC Projects
Facility Type: District-Financed

[Go to CIP Summary Table](#)

Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 400,000 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|------------|
| Annual Budget | 2018 | \$ 20,000 |
| Annual Budget | 2019 | \$ 20,000 |
| Annual Budget | 2020 | \$ 20,000 |
| Annual Budget | 2021 | \$ 20,000 |
| Annual Budget | 2022 | \$ 20,000 |
| Annual Budget | 2023 | \$ 20,000 |
| Annual Budget | 2024 | \$ 20,000 |
| Annual Budget | 2025 | \$ 20,000 |
| Annual Budget | 2026 | \$ 20,000 |
| Annual Budget | 2027 | \$ 20,000 |
| Annual Budget | Long-term | \$ 200,000 |

Total Project Cost 100% \$ 400,000

Total Project Cost \$ 400,000

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-15
Project Name: ESA Removals
Facility Type: District-Financed

[Go to CIP Summary Table](#)

Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|---------------------------|----------|-------|---------------------|------------|-------------|--------------------------|-------------------|
| | | | | | 0% | 0% | |
| ESA Removals | 20 | Years | \$ 25,000 | \$ 500,000 | \$ - | \$ - | \$ 500,000 |
| | | | | | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 500,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-15
Project Name: ESA Removals
Facility Type: District-Financed

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Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 500,000 |

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|------------|
| Annual Budget | 2018 | \$ 25,000 |
| Annual Budget | 2019 | \$ 25,000 |
| Annual Budget | 2020 | \$ 25,000 |
| Annual Budget | 2021 | \$ 25,000 |
| Annual Budget | 2022 | \$ 25,000 |
| Annual Budget | 2023 | \$ 25,000 |
| Annual Budget | 2024 | \$ 25,000 |
| Annual Budget | 2025 | \$ 25,000 |
| Annual Budget | 2026 | \$ 25,000 |
| Annual Budget | 2027 | \$ 25,000 |
| Annual Budget | Long-term | \$ 250,000 |

Total Project Cost 100% \$ 500,000

Total Project Cost \$ 500,000

Project Location:



Notes:

See full map on "Maps" tab.

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-16
Project Name: District Participation in DE Projects
Facility Type: District-Financed

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Project Description:

Project Cost Estimate:

| Project Element | Quantity | Unit | Unit Cost (\$/Unit) | Subtotal | Contingency | Engineer/ Legal/Admin | Total Cost |
|-----------------------------------|----------|-------|---------------------|--------------|-------------|--------------------------|--------------|
| | | | | | 0% | 0% | |
| District Participation in DE Proc | 20 | Years | \$ 100,000 | \$ 2,000,000 | \$ - | \$ - | \$ 2,000,000 |
| | | | | \$ - | \$ - | \$ - | \$ - |
| Total Project Cost | | | | | | | \$ 2,000,000 |

Notes on Cost Estimation:

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Woodinville Water District
Water System Plan
Capital Improvement Program



Project ID: DF-16
Project Name: District Participation in DE Projects
Facility Type: District-Financed

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Cost Allocation:

| Project Type | Percent | Cost |
|-----------------------|---------|--------------|
| Capacity: | 0% | \$ - |
| Repair & Replacement: | 0% | \$ - |
| Improvement: | 100% | \$ 2,000,000 |

Total Project Cost 100% \$ 2,000,000

Project Timing:

| Project Element | Timing | Cost |
|-----------------|-----------|--------------|
| Annual Budget | 2018 | \$ 100,000 |
| Annual Budget | 2019 | \$ 100,000 |
| Annual Budget | 2020 | \$ 100,000 |
| Annual Budget | 2021 | \$ 100,000 |
| Annual Budget | 2022 | \$ 100,000 |
| Annual Budget | 2023 | \$ 100,000 |
| Annual Budget | 2024 | \$ 100,000 |
| Annual Budget | 2025 | \$ 100,000 |
| Annual Budget | 2026 | \$ 100,000 |
| Annual Budget | 2027 | \$ 100,000 |
| Annual Budget | Long-term | \$ 1,000,000 |

Total Project Cost \$ 2,000,000

Project Location:



Notes:

See full map on "Maps" tab.

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