

LEGEND

|   |            |
|---|------------|
| Major Resiliency Improvement                  |            |
| Ongoing Project or Requirement                | \$ 100,000 |
| Identified and Included in a Prior Year's CIP | \$ 100,000 |
| New Project                                   | \$ 100,000 |

Attachment 2

| CIP    | Project Name  | FY 2024      | FY 2025      | FY 2026       | FY 2027       | FY 2028       | 5 year total  | Comments  |
|--------|---|--------------|--------------|---------------|---------------|---------------|---------------|---|
| 270-04 | Jordan Lake Raw Water Supply Allocation   | \$ 10,000    | \$ 10,000    | \$ 10,000     | \$ 10,000     | \$ 10,000     | \$ 50,000     | Ongoing required payment  |
| 270-09 | Quarry Reservoir Development  | \$ 95,000    | \$ 15,000    | \$ 15,000     | \$ 15,000     | \$ 15,000     | \$ 155,000    | Ongoing required payment  |
| 270-16 | Cane Creek Pump Station Improvements  | \$ 25,000    | \$ 250,000   | \$ 2,041,000  |               |               | \$ 2,316,000  | Installation of variable frequency drives (VFDs), automatic generator transfer switchgear, and enclosure for generator  |
| 270-28 | University Lake Permanganate Facility   | \$ 1,000,000 |              |               |               |               | \$ 1,000,000  | New chemical storage and feed facility to improve treatment (taste and odor)  |
| 270-30 | Cane Creek Dam Rehabilitation (part 2)  | \$ 50,000    |              |               |               |               | \$ 50,000     | Spillway rehabilitation recommendation due to dam inspections   |
| 270-34 | Western Intake Partnership Projects   | \$ 500,000   | \$ 1,467,000 | \$ 1,467,000  | \$ 1,467,000  | \$ 14,667,000 | \$ 19,568,000 | Western Intake Partnership required participation in several studies to prepare for the intake and transmission line  |
| 270-xx | University Lake Dam Improvements Project  | \$ 75,000    |              |               |               |               | \$ 75,000     | Improvement recommendations due to dam inspection   |
| 270-xx | Cane Creek Dam Diversion Tunnel Improvements Project  | \$ 50,000    | \$ 100,000   |               |               |               | \$ 150,000    | Diversion tunnel improvements due to dam inspection   |
| 271-xx | University Lake RWM Assessment  |              |              |               |               | \$ 125,000    | \$ 125,000    | Assess condition of the University Lake Raw Water Main  |
| 272-37 | WTP Belt Filter Press Replacement   | \$ 1,100,000 | \$ 1,000,000 |               |               |               | \$ 2,100,000  | Installation of new solids thickening equipment for redundancy, conveyance improvements   |
| 272-49 | Supervisory Control and Data Acquisition (SCADA) Master Plan Recommendations                        | \$ 800,000   | \$ 1,000,000 | \$ 700,000    | \$ 500,000    | \$ 500,000    | \$ 3,500,000  | Funding for priority improvements identified in the SCADA master plan at the WTP  |
| 272-52 | WTP Electrical Distribution Improvements  | \$ 1,000,000 | \$ 6,720,000 | \$ 1,955,000  |               |               | \$ 9,675,000  | Conversion of plant electrical distribution system to an updated voltage standard   |
| 272-55 | WTP Clearwell Rehab/Flash Mix Basin Improvements  | \$ 25,000    |              | \$ 100,000    | \$ 214,000    | \$ 736,000    | \$ 1,075,000  | Concrete and structural repairs needed based on the FY2020 inspections  |
| 272-59 | WTP Finished Water Pump #4 Motor and Pump Replacement   | \$ 325,000   |              |               |               |               | \$ 325,000    | Finished Water 4 Pump and Motor Replacement due to end of useful life   |
| 272-60 | Admin Bldg IT Server Room HVAC  | \$ 150,000   |              |               |               |               | \$ 150,000    | Mid Year Request from FY 2023 to replace failing Server Room HVAC. New HVAC has long equipment lead time  |
| 272-63 | PFAS study, design and treatment  | \$ 800,000   | \$ 3,200,000 | \$ 11,000,000 | \$ 20,000,000 | \$ 15,500,000 | \$ 50,500,000 | Study, Design, and Construction of treatment for PFAS   |
| 272-xx | Water Supply and Treatment Condition Assessments  | \$ 100,000   | \$ 100,000   | \$ 100,000    |               |               | \$ 300,000    | Condition assessment of prioritized areas of the WTP  |
| 273-xx | Highway 54 Pump Station Improvements  | \$ 75,000    |              |               |               |               | \$ 75,000     | Improvements needed based on recent interconnect utilization with Durham  |
| 273-xx | Barbee Chapel Booster Pump Station (includes adjacent main replacements/up sizing)                  |              |              |               |               | \$ 68,000     | \$ 68,000     | Improvements to be finalized with the Hydraulic Model update to be complete in FY 24  |
| 274-XX | New 740-Foot Pressure Zone Elevated Storage Tank  |              |              |               |               | \$ 312,000    | \$ 312,000    | Final sizing and location and timing to be finalized with the Hydraulic Model update to be complete in FY24   |
| 275-01 | LCRR Compliance   | \$ 250,000   | \$ 100,000   |               |               |               | \$ 350,000    | Consulting services to assist with compliance with the new Lead and Copper Rule Revisions   |
| 275-03 | South Elliot Road Water Main  |              |              |               | \$ 75,000     | \$ 250,000    | \$ 325,000    | Replacement of water main identified by the prioritization model  |
| 275-15 | Reimbursement for Distribution System Improvements  | \$ 115,000   |              |               |               |               | \$ 115,000    | Reimbursements for water main upgrades constructed as part of external projects   |
| 275-20 | High LoF WM Replacements  | \$ 1,009,000 | \$ 1,000,000 | \$ 1,500,000  | \$ 1,500,000  | \$ 1,500,000  | \$ 6,509,000  | Water main projects constructed by OWASA crew and a large meter vault replacement   |
| 275-21 | Rogerson-Berkley Water Mains (contractor)   | \$ 1,100,000 |              |               |               |               | \$ 1,100,000  | Replacement of water main identified by the prioritization model  |
| 275-53 | Distribution System Hydraulic Model   | \$ 250,000   | \$ 30,000    | \$ 30,000     | \$ 30,000     | \$ 30,000     | \$ 370,000    | Model Update complete in FY24 and on-call modeling services for FY25-28   |
| 275-95 | West Rosemary 12" AC  | \$ 200,000   | \$ 100,000   | \$ 4,676,000  | \$ 562,000    |               | \$ 5,538,000  | Replacement of water main identified by the prioritization model  |
| 275-98 | Fordham at Eastowne   |              |              |               |               | \$ 125,000    | \$ 125,000    | Replacement of water main identified by the prioritization model  |
| 275-99 | Distribution System Asset Management: Opp CA, Leak detection, Pressure Monitors                     | \$ 30,000    | \$ 30,000    | \$ 30,000     | \$ 30,000     | \$ 30,000     | \$ 150,000    | Opportunistic condition assessment program, potential leak detection and pressure monitors  |
| 275-XX | AC Water Line Replacement - Model Driven LOF  | \$ 50,000    | \$ 200,000   | \$ 1,000,000  | \$ 1,000,000  |               | \$ 2,250,000  | Replacement of high likelihood of failure water mains identified by the prioritization model  |
| 276-02 | Gravity Sewer >12inch evaluation surveys  | \$ 50,000    | \$ 250,000   |               |               |               | \$ 300,000    | Condition assessment through a third party of prioritized large gravity sewers  |
| 276-06 | Westwood Neighborhood Sewer Replacement   |              |              |               | \$ 100,000    | \$ 300,000    | \$ 400,000    | Complete rehabilitation of deteriorated sewers and laterals, includes easement acquisition  |
| 276-07 | Siphon Line Condition Assessment  |              | \$ 50,000    |               |               |               | \$ 50,000     | Condition assessment through a third party  |
| 276-18 | Gravity Sewer Rehab (several informal packages from crew observations per year)                     | \$ 1,000,000 | \$ 1,000,000 | \$ 1,000,000  | \$ 1,000,000  | \$ 1,000,000  | \$ 5,000,000  | Ongoing gravity sewer rehabilitation with CIPP based on previous studies and ongoing crew observations and CCTV work  |
| 276-45 | Bolinwood Interceptor Replacement   | \$ 50,000    |              |               |               |               | \$ 50,000     | Capacity improvements identified by the collection system master plan   |
| 276-52 | Rocky Branch Interceptor Replacement  |              | \$ 750,000   | \$ 350,000    |               |               | \$ 1,100,000  | Replacement of interceptor to accommodate future WTP process water discharge  |
| 276-53 | Creek Crossing Access Improvements - Site 4 and Site 3(Bolin Creek Near Elizabeth St) and Tennis Ct | \$ 50,000    | \$ 450,000   | \$ 355,000    |               |               | \$ 855,000    | Sitework to improve access to high need creek crossing sites  |
| 276-59 | Morgan Creek Interceptor (at Bartram Drive)   | \$ 1,315,000 | \$ 3,300,000 |               |               |               | \$ 4,615,000  | Capacity and condition improvements identified by the collection system master plan   |
| 276-61 | Brigham Rd Sewer  |              | \$ 50,000    | \$ 170,000    | \$ 1,100,000  |               | \$ 1,320,000  | Capacity improvements identified by the collection system master plan   |
| 276-70 | Collection System On-Call Modeling  | \$ 20,000    | \$ 20,000    | \$ 20,000     | \$ 20,000     | \$ 20,000     | \$ 100,000    | On-call collection system modeling services   |
| 276-99 | Collection System Asset Management  | \$ 40,000    | \$ 50,000    | \$ 50,000     | \$ 50,000     | \$ 50,000     | \$ 240,000    | Funding for flow monitors to assess infiltration/inflow   |
| 276-x2 | Morgan Creek Interceptor - Flagstone Ct / "Phase 2"   |              | \$ 340,000   | \$ 3,500,000  |               |               | \$ 3,840,000  | Capacity and condition improvements identified by the collection system master plan and asset management activities   |
| 276-x2 | Creek Crossing Assess Improvements - Site 1 (Brookview Drive)                                       |              |              |               | \$ 100,000    |               | \$ 100,000    | Sitework to improve access to high need creek crossing site   |
| 276-XX | Gravity Sewer Rehab FY 26-29 (large contractor)   | \$ 125,000   | \$ 125,000   | \$ 1,500,000  | \$ 1,500,000  | \$ 1,500,000  | \$ 4,750,000  | Replacement of high likelihood of failure sewer mains identified by CCTV and previous studies that needs major construction (bypass pumping and significant repair) |
| 276-XX | Creek Crossing Access Improvements - Site 6 (Morgan Creek Bent Ct)                                  | \$ 65,000    |              |               |               |               | \$ 65,000     | Study to assess options to improve access to high need creek crossing site  |
| 276-xx | Cobb Terrace Sewer Rehabilitation   | \$ 50,000    | \$ 150,000   | \$ 450,000    |               |               | \$ 650,000    | Design and construction to address sewer location along eroding slope   |
| 277-21 | Force Main Condition Evaluations  |              |              | \$ 50,000     |               | \$ 50,000     | \$ 100,000    | Prioritized condition assessment of selected force mains  |
| 277-43 | Rogerson Drive FM/PS Asset Mgmt Program   | \$ 100,000   |              |               |               |               | \$ 100,000    | Risk assessments  |
| 277-44 | Rogerson Drive Pump Station Capacity Upgrade  |              |              |               | \$ 100,000    | \$ 200,000    | \$ 300,000    | Planning and design for future potential capacity improvements  |
| 277-45 | Chapel Hill North PS Rehab  | \$ 400,000   |              |               |               |               | \$ 400,000    | Pump replacement and minor site and electrical improvements   |
| 277-47 | Rogerson Drive Fuel Storage Improvements  |              | \$ 90,000    | \$ 500,000    |               |               | \$ 590,000    | Additional fuel storage for generator to achieve desired generator run time   |
| 277-48 | Lake Ellen PS Rehab   |              |              | \$ 60,000     | \$ 250,000    |               | \$ 310,000    | Replacement and rehabilitation of pumps, VFDs and other components as recommended by recent condition assessment  |
| 277-50 | Knolls PS   |              |              | \$ 100,000    | \$ 250,000    | \$ 600,000    | \$ 950,000    | Pump Station relocation and improvements  |
| 277-xx | Force Main ARV Replacements   | \$ 80,000    | \$ 350,000   |               |               |               | \$ 430,000    | Replacement of ARVs on force mains due to condition and age   |
| 277-XX | Eastowne Generator Replacement  | \$ 50,000    |              |               |               |               | \$ 50,000     | Replacement of failed generator   |
| 277-XX | Piney Mountain Force Main MH Lining   | \$ 15,000    |              |               |               |               | \$ 15,000     | Force Main MH lining based on FY23 condition assessment   |
| 278-   | WWTP and PS PLC Replacement   | \$ 650,000   | \$ 850,000   |               |               |               | \$ 1,500,000  | Replacement of obsolete and aging components  |
| 278-03 | WWTP Digester 3 and 4 Stairwell Safety Improvements   | \$ 200,000   |              |               |               |               | \$ 200,000    | Funding to address NFPA Code Compliance Deficiencies  |
| 278-15 | Wastewater Condition Assessments  | \$ 40,000    | \$ 50,000    | \$ 50,000     | \$ 50,000     |               | \$ 190,000    | Condition assessment of prioritized areas of the WWTP   |

| CIP           | Project Name                                       | FY 2024              | FY 2025              | FY 2026              | FY 2027              | FY 2028              | 5 year total          | Comments   |
|---------------|--|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|--|
| 278-16        | WWTP Morgan Creek PS Ventilation and Coatings      | \$ 25,000            |                      |                      | \$ 200,000           | \$ 90,000            | \$ 315,000            | Design and installation of coating and ventilation improvements based on recommendations from recent study   |
| 278-17        | WWTP Aeration Basin Rehab                          |                      | \$ 405,000           | \$ 700,000           |                      |                      | \$ 1,105,000          | Rehabilitation of concrete and structures based on condition assessment  |
| 278-18        | WWTP IPS #1 Improvements                           |                      |                      | \$ 372,000           |                      |                      | \$ 372,000            | Replacement of VFDs and wiring, control and conduit wiring, and ventilation equipment for the building   |
| 278-20        | WWTP Clarifier #4 Conversion                       | \$ 560,000           | \$ 2,900,000         | \$ 1,000,000         |                      |                      | \$ 4,460,000          | Addresses corrosion of critical components and conversion from inboard launders to conventional outboard launders  |
| 278-21        | WWTP Primary Effluent to IPS Capacity Improvements |                      |                      |                      | \$ 50,000            |                      | \$ 50,000             | Add parallel line and improve plant capacity when one primary clarifier is out of service  |
| 278-75        | WWTP Facilities Planning                           | \$ 150,000           |                      |                      |                      |                      | \$ 150,000            | Completion of the WWTP Master Plan   |
| 278-85        | WWTP Gas monitoring                                | \$ 280,000           |                      |                      |                      |                      | \$ 280,000            | Installation of gas monitoring equipment in prioritization locations at the WWTP   |
| 278-86        | WWTP Primary Clarifier Rehabilitation              |                      |                      | \$ 200,000           | \$ 3,010,000         |                      | \$ 3,210,000          | Rehabilitation to address deterioration in primary influent and effluent distribution boxes and effluent troughs and replacement of aging equipment                        |
| 278-89        | WWTP RAS Pumping Improvements                      |                      | \$ 150,000           | \$ 250,000           |                      |                      | \$ 400,000            | Piping improvements to increase operational efficiency   |
| 278-92        | WWTP Stormwater PS to IPS                          |                      |                      |                      |                      | \$ 50,000            | \$ 50,000             | Study to evaluate connection from the stormwater PS back into the treatment process  |
| 278-94        | WWTP Biogas Removal System Improvements            | \$ 150,000           |                      |                      |                      |                      | \$ 150,000            | Installation of sole-sourced equipment   |
| 278-97        | WWTP Digester #3 and #4 Rehab                      | \$ 400,000           | \$ 100,000           |                      |                      |                      | \$ 500,000            | Continuation of dewatering activities to draw down digesters to complete inspections and then complete needed repairs and rehabilitations                                  |
| 278-XX        | Future Mason Farm Upgrades (nutrient removal)      |                      | \$ 50,000            | \$ 100,000           | \$ 200,000           | \$ 200,000           | \$ 550,000            | Placeholder funding for addition of nutrient removal technologies to meet regulatory compliance at the WWTP. To be finalized after the WWTP Master Plan is complete in FY4 |
| 279-14        | RCW Water Quality Evaluation                       | \$ 75,000            |                      |                      |                      |                      | \$ 75,000             | Study to evaluate conductivity issues and use of corrosion inhibitor   |
| 279-15        | Reclaimed Water RECAP                              |                      |                      |                      | \$ 80,000            | \$ 80,000            | \$ 160,000            | Recapitalization funding   |
| 280-XX        | OWASA Facilities Improvements                      | \$ 1,000,000         | \$ 1,500,000         | \$ 500,000           | \$ 1,000,000         | \$ 1,000,000         | \$ 5,000,000          |  |
| <b>Totals</b> |  | <b>\$ 16,124,000</b> | <b>\$ 28,302,000</b> | <b>\$ 35,901,000</b> | <b>\$ 34,463,000</b> | <b>\$ 39,008,000</b> | <b>\$ 153,798,000</b> |  |