

CAPITAL IMPROVEMENT PROGRAM
Projects Listing

| Service Area | LINE ID | Project | Fiscal Year Ending | Project Costs | CARRYOVER | | | | Notes |
|---------------|---------|--|--------------------|--------------------|------------------|----------------|----------------|------------------|--|
| | | | | | Residual Funds | 2020 | 2021 | 2022 | |
| | 1 | PROJECTS WITH DEBT SERVICE | | | | | | | |
| Central | 2 | Energy Saving Project - Central WWTP | | | | | | | Majority of the costs is in the blowers; also includes modifying the plant DO and level controls. |
| | 3 | Central Wastewater Treatment Upgrades (VRA) | 2022 | \$4,243,599 | | | 66,930 | 318,335 | |
| | 4 | Central Wastewater Treatment Upgrades (Addtl) | | \$1,038,000 | 1,038,000 | | | | Additional capital from residual funds to subsidize VRA loan. |
| Forest | 5 | Ivy Creek 5 & 6 Design, Construction & Capacity | 2023 | \$12,520,000 | | | | | Payments begin 6 months after construction is complete. |
| | 8 | WATER PROJECTS | | | | | | | |
| | 27 | Operational Needs | | | | | | | |
| Central | 28 | Forest to Lakes Permanent Booster Station | | \$2,000,000 | 2,000,000 | | | | Needed for transferring water from Forest to Central or Lakes, or if serving all of Forest from the Lakes. Provides backup source upon failures on Route 122 water main, and removes need for temporary pump station setup and maintenance. |
| | 31 | Sample Hydrants Phase 1 (5) | 2022 | \$5,000 | | | | 5,000 | Guarantees accessibility and representative water for compliance samples. (Phased) |
| Central | 35 | Central Water Upgrades | | | | | | | |
| | 36 | Replace control valves (influent, bw, rewash) CARRYOVER | 2020 | \$80,000 | | 80,000 | | | Valves are original 1972 hydraulic valves that are leaking and will not close without water supply - no hand option; no replacement parts are available. Replace with electronic controllers and hand wheel backup. Cannot operate due to concerns of further problems and inability to repair. |
| | 37 | Replace control valves (waste) | 2022 | \$30,000 | | | | 30,000 | 16" waste valves are plunger type; replacement will require fabricated knife gates with transitions. |
| | 39 | Upgrade chemical feeders to liquid chemical (Delpac/PaCl) | 2022 | \$10,000 | | | | 10,000 | Changing coagulant to liquid PACI (DELPAC) will extend filter runs, reduce waste, delay media replacement, reduce lime use by 75% and improve water quality. With no dry chemicals added to the water, less sediment would need to be cleaned and hauled. |
| Central | 43 | Stoney Creek Reservoir Telemetry | 2022 | \$10,000 | | | | 10,000 | New broadband tower enables ability to provide telemetry upon equipment being installed. |
| Central | 44 | Reservoir Drain Valve Analysis & Contingency Plan | 2022 | \$15,000 | | | | 15,000 | Drain valve should be operated annually; DCR recommended contingency plan from consultant prior to operation. May analyze use of siphon system to allow access for valve operation without use of boat. |
| Stewartsville | 45 | Stewartsville GAC & Rechlorination PER | 2022 | \$30,000 | | | | 30,000 | Review feasibility of repurposing GAC units from Highpoint to remove DBPs and boost chlorination for adequate residual. |
| Lakes | 46 | Bridgewater Bay Pressure Reducing Valve (PRV) | 2022 | \$65,000 | | | | 65,000 | System pressures of 130-170psi. Piping materials rated to 200 psi, while meters rated at 150 psi. Customers' standard residential PRVs insufficient for pressure and regularly failing. |
| Lakes | 48 | Mountain View Shores Filter Replacement | 2022 | \$150,000 | | | | 150,000 | The filters are in danger of failure due to serious corrosion. Price is for full replacement. |
| | 49 | Paradise Point SCADA | 2022 | \$15,000 | | | | 15,000 | Provide remote monitoring of well system; included in rate evaluation for Paradise Point. |
| Lakes | 50 | SML WTF (Costs represent shared portion with WVWA) | | | | | | | |
| | 51 | SCADA Upgrades to tie in existing equipment | 2022 | \$10,000 | | | | 10,000 | Any monitor or chemical additions must be added to SCADA; however, all input blocks are full. New rail cabinet and I/O equipment along with programming is needed. Already have equipment waiting to be added. |
| | 53 | PACI System Completion | 2022 | \$5,000 | | | | 5,000 | PACI has been determined to be beneficial for organics removal. The system needs to be finalized per VDH requirements including plans, specs and additional equipment. |
| | 55 | SEWER PROJECTS | | | | | | | |
| | 61 | Operational Needs | | | | | | | |
| Central | 66 | Central WWTP | | | | | | | |
| | 67 | Concrete repairs on anoxic and pre-air tanks | 2022 | \$20,000 | | | | 20,000 | Repair cracks |
| Central | 74 | Central Sewer Pump Stations | | | | | | | |
| | 75 | Pump Stations 1, 2, 3 - Security Cameras | 2022 | \$5,000 | | | | 5,000 | Allow operators to view station remotely for overflow concerns or security issues. |
| | 76 | Pump Station 1 - Soft starts and new control panel | 2022 | \$50,000 | | | | 50,000 | Reduce water hammer effect on receiving force main. |
| | 77 | Pump Station 1 - Replacement Pump #1 | 2022 | \$45,000 | | | | 45,000 | 3 pumps are >20 years old; 1st phase for replacement. Will reduce overflows. |
| | 80 | Pump Station 2 - Replacement Pump #1 | 2022 | \$45,000 | | | | 45,000 | 3 pumps are >20 years old; 1st phase for replacement. Will reduce overflows. |
| | 83 | Pump Station 3 - Replacement Pump #1 | 2022 | \$45,000 | | | | 45,000 | 3 pumps are >20 years old; 1st phase for replacement. Will reduce overflows. |
| | 93 | Pump Station 5 Replacement | 2021 | \$186,000 | | | 186,000 | | Smith & Loveless pump station with failed steel wet well, plug and check valve. Replacing in 20-21 as part of emergency repair of complete failure. |
| | 94 | Pump Station 7 Replacement | 2022 | \$186,000 | | | | 186,000 | Smith & Loveless pump station with failing steel wet well. |
| Lakes | 96 | Mariners Landing Sewer Upgrades | | | | | | | |
| | 97 | WWTP Upgrades | | \$103,000 | 103,000 | | | | Various upgrades identified with system transfer. |
| | 98 | WWTP Upgrades (Additional) | 2022 | \$40,000 | | | | 40,000 | Additional funding needed to complete the rebuild of both BIOWHEELS and new BIOWHEEL gearbox. |
| | 99 | Pump Stations 1 & 2 SCADA | 2022 | \$40,000 | 40,000 | | | | Allow remote view and ability to trend station performance. |
| | 100 | Pump Station 3 SCADA | 2022 | \$10,000 | | | | 10,000 | Allow remote view and ability to trend station performance. |
| | 101 | Pump Station 4 SCADA | 2022 | \$10,000 | | | | 10,000 | Allow remote view and ability to trend station performance. |
| | 102 | OFFICE IMPROVEMENTS | | | | | | | |
| | 103 | Admin Parking Lot [CARRYOVER] | 2020 | \$300,000 | | 300,000 | | | Parking lot redesigned to north side of facilities; changes during design related to property lines & layout increased parking area potential and overall costs. |
| | 105 | Administration Offices - New Gate | 2022 | \$28,000 | | | | 28,000 | The gate is not functioning properly due to being too heavy for the current set-up, creating accessibility and security concerns. |
| | 106 | Administration Offices - Surface coat rear parking lot | 2022 | \$10,000 | | | | 10,000 | Need to have the cracks filled, surface treated, and new lines painted on the rear parking lot behind the Annex Building to prevent complete pavement failure. |
| | 113 | South Mobile Roof Replacement/Repair | 2022 | \$6,000 | | | | 6,000 | Mobile near heated garage. Roof was not replaced upon moving the mobile and moisture is causing damage to files stored inside. If roof determined in adequate shape, may build diversion above mobile to divert stormwater runoff away from base of mobile. Addressing source of water will provide protection to files currently stored and allow file cabinets from Board Room to be moved upon files being scanned. |
| | 116 | PURCHASES | | | | | | | |
| | 117 | <u>Admin</u> | | | | | | | |
| | 118 | Key System - Phase 1a (Admin & Annex-ext/pub) | 2022 | \$50,000 | | | | 50,000 | Replacement key system for all exterior and public area doors on site. Adds security. |
| | 119 | Key System - Phase 1b (Admin & Annex-interior) | 2022 | \$50,000 | | | | 50,000 | Replacement key system for all interior doors on site. |
| | 122 | Website Redesign | 2022 | \$65,000 | | | | 65,000 | BRWA website currently on an outdated platform that limits and prohibits some functionality of the site. Site will no longer be supported after April 2021. |
| | 124 | <u>Customer Service</u> | | | | | | | |
| | 125 | Billing Software - InHance Impresse | 2022 | \$79,600 | | | | 79,600 | BillMaster no longer supported. InHance Impresse part of same parent company for smooth transition. |
| | 127 | Bill Pay Kiosk | 2022 | \$33,275 | | | | 33,275 | To allow customers to pay their bill when the office is closed (whether through pandemic, after-hours, or weekends). The kiosk will allow the customer to pay with cash, by check or credit/debit card and receive a receipt. |
| | 128 | <u>Water Operations</u> | | | | | | | |
| | 129 | Leak Detection Equipment (linked to new position) | 2022 | \$30,000 | | | | 30,000 | To be used by new Water Operations distribution position. |
| | 130 | Vehicle for New Water Operations Position | 2022 | \$26,050 | | | | 26,050 | Associated with personnel request. |
| | 131 | <u>Maintenance</u> | | | | | | | |
| | 132 | Aluminum Trench Boxes (2) | 2022 | \$18,000 | | | | 18,000 | Wider and lighter trench boxes with 4 sides instead of 2. Beneficial where sloping not required. Better protection for employees and within VOSH standards. Rental costs to obtain necessary trench boxes until these are purchased. |
| | 133 | Mini Excavator | 2022 | \$50,000 | | | | 50,000 | Currently have 4 line crews and only 3 excavators, including one that should be sold since it was replaced; includes John Deere 35G w/ thumb & angle blade. |
| | 134 | Mini Excavator - Trailer | 2022 | \$7,000 | | | | 7,000 | Hooper trailer to carry requested mini-excavator. |
| | 135 | Mini Excavator - Rock hammer | 2022 | \$9,000 | | | | 9,000 | Rock hammer to fit new excavator; each excavator has its own. |
| | 136 | Plate compactor - excavator attachment | 2022 | \$8,000 | | | | 8,000 | Plate compactor will help compaction, especially around roadways. Can be used with existing equipment. To be used where handheld jumping-jack compactor cannot be used. |
| | 137 | Skid Steer Attachment-Bush Hog | 2022 | \$15,000 | | | | 15,000 | Reduces time and labor necessary for compacting backfill. |
| | 138 | Skid Steer Attachment-Power Rake | 2022 | \$14,000 | | | | 14,000 | Assists with easement clearing; provides access into smaller areas than tractor. |
| | 139 | Skid Steer Attachment - Sewer Clearing Easement Machine | 2022 | \$20,000 | | | | 20,000 | More efficient and smoother cleanup than manual rakes. |
| | 140 | Dump Truck (single Axle) | 2022 | \$120,000 | | | | 120,000 | Larger dump truck to dedicate to CIP crew construction; crew typically requires use of 2 dump trucks of the 4 currently owned. |
| | 141 | New FM Employee-Dodge RAM 2500 w\ utility body | 2022 | \$52,000 | | | | 52,000 | Vehicle required for additional employee allotted for Facilities Maintenance. |
| | 142 | New FM Employee - Tools for new vehicle | 2022 | \$15,000 | | | | 15,000 | Tools to outfit new Facilities Maintenance vehicle. |
| | 143 | Utility Body & Ladder Rack for Supervisor Truck | 2022 | \$16,000 | | | | 16,000 | 2014 RAM 2500 converted to supervisor vehicle and needs associated utility body installed. |
| | 144 | <u>Preventative Maintenance</u> | | | | | | | |
| | 145 | Push Camera Tilt/Pan Head for existing unit | 2022 | \$13,000 | | | | 13,000 | This will replace the existing camera head, providing pan/tilt capabilities required for inspecting laterals. |
| | 146 | Diamond blade can root cutters | 2022 | \$13,000 | | | | 13,000 | These cutters will allow root removal, reducing back-ups. Will inflict less damage to aging sewer system. |
| | | Total Purchases Maintenance: | | | | | | 370,000 | |
| | | TOTALS: | | \$8,187,925 | 3,181,000 | 380,000 | 186,000 | 1,548,925 | |