

CAPITAL IMPROVEMENT PROGRAM
Projects Listing

Service Area	LINE ID	Project	Timeframe To Start (Years)	Fiscal Year Ending	Project Costs	Residual/Other Funds	2023	Total Priority Score	Notes	Priority Score Color Codes
										20
	1	PROJECTS WITH DEBT SERVICE								
Central	2	Energy Saving Project - Central WWTP						67	Majority of the costs is in the blowers; also includes modifying the plant DO and level controls.	
	3	Central Wastewater Treatment Upgrades (VRA)	-1	2022	\$4,243,599		319,110			
	4	Central Wastewater Treatment Upgrades (Addtl)	R		\$1,038,000	1,038,000			Additional capital from residual funds to subsidize VRA loan.	
Forest	5	Ivy Creek 5 & 6 Design, Construction & Capacity	0	2023	\$12,520,000		84,771	77	Payments begin 6 months after construction is complete.	
	6	Total Debt Service:			\$16,763,599		403,881			
	7	ARPA FUNDED PROJECTS								
	8	Town Projects								
Central	9	Helm Street Tank Replacement	0	2023	\$2,000,000		2,000,000	46	Design and construction of a new tank and associated appurtenances.	
Central	10	Bell Town Road Waterline Extension	0	2023	\$500,000		500,000	46	Waterline extension to serve properties affected by Town landfill leachate.	
Central	11	Town & Country Subdivision Sewer Replacements	0	2023	\$2,000,000		2,000,000	46	Rehabilitation and replacement of sewer lines serving the Town & Country subdivision.	
	12	Total ARPA Funding:			\$4,500,000		4,500,000			
	13	WATER PROJECTS								
	26	System Structures & Tanks								
Boonsboro	27	Fox Runn Booster Station - Structure repairs/replacement	0	2023	\$25,000		25,000	56	Building is in need of repair and door needs to be replaced for accessibility and security. Due to condition of building, door cannot be replaced without repairs to the structure.	
	31	Operational Needs								
Central	32	Forest to Lakes Permanent Booster Station	R		\$2,300,000	2,300,000		56	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.	
Various	35	Lead Service Line (LSL) Inventory	0	2023	\$50,000		50,000	60	EPA is requiring localities to perform an LSL inventory, replacements and compliance planning as necessary by October 2024. The inventory is the first step towards meeting this requirement.	
	36	SCADA Needs								
Various	37	SCADA Hatch Intrusion Switches for Water Tanks	0	2023	\$25,000		25,000	53	For water system security, as identified in the 2021 Risk and Resilience Assessment for 7 BRWA tanks and 3 SML tanks.	
Central	43	Central Water Upgrades								
	49	Central WTP - Install Security Alarm and Fire Alarm Systems	0	2023	\$20,000		20,000	56	Facility is not staffed for 16 hours of each day, and security cameras are not monitored during off hours. A single vandalism or fire event could cause significant damage to critical equipment necessary to provide service to customers.	
	51	Central WTP Replacement Turbidimeters (4)	0	2023	\$20,000		20,000	52	Replacement of the 4 existing turbidimeters that monitor particulate water quality at different stages of treatment. The existing units are failing, no longer supported by the manufacturer, and are critical for VDH compliance.	
	52	Central WTP Flocculators	0	2023	\$65,000		65,000	54	The 1st flocculator mixer has crumbled apart from rust and is not functional. The 2nd and 3rd are in similar condition. All must be replaced for proper water treatment.	
	53	Central WTP Filter Control SCADA Interface (2)	0	2023	\$35,000		35,000	39	The new valves and meters that are being installed can not be controlled using the old pneumatic levers. These interface panels will integrate all the new filter control valves, sensors and meters into one system to replace the old filter table controls which operated the old valves via water pressure.	
	54	Central WTP Motor Control Center Replacement	0	2023	\$100,000		100,000	54	Main switch gear is corroded and does not cut power, with other parts of the panel corroded. Failure of this equipment would render the plant inoperable.	
	55	Central WTP Streaming Current Monitor	0	2023	\$15,000		15,000	47	Replacement of a manual 50 year old zeta meter used for bench testing to determine optimum chemical dosage, with a streaming current monitor to provide constant monitoring of the treatment effectiveness.	
Central	56	Stoney Creek Reservoir - Ph 1 (Repairs & PER)	0	2023	\$100,000		100,000	54	Drain valve and sluice gate require replacement to operate, involving dredging to access both. Drain line is leaking and in need of repairs. A PER will review options and costs to provide access to the outside of the dam for draining the reservoir during an emergency, with design upon completion of PER.	
Central	57	Stoney Creek Reservoir - Ph 2 (Repairs / Design)	0	2023	\$100,000		100,000	54	Additional funding to complete repairs and/or design and begin installation of a siphon system to drain the reservoir, removing the need to access the drain valve by water or by way of the dam in an emergency situation. PER and design are needed first to determine construction cost.	
SML	60	SML WTF (Costs represent shared portion with WVWA)								
	61	Sewer Pump Station 4 Upgrades Ph 1 (EQ)	0	2023	\$20,000		20,000	54	Inadequate capacity at the station to handle large backwash discharge volumes from SMLWTF. An existing septic tank on site can be converted to an equalization chamber to modulate flows.	
	63	SMLWTF - Add Security System to Fire Alarm System	0	2023	\$10,000		10,000	56	Facility is not staffed for 16 hours of each day, and security cameras are not monitored during off hours. A single vandalism or fire event could cause significant damage to critical equipment necessary to provide service to customers.	
	64	SMLWTF GAC Pump and associated parts	0	2023	\$25,000		25,000	44	Purchase larger capacity pump, variable frequency drive and associated plumbing to enable full treatment capacities of both GAC units.	
	66	Raw Water Intake Standby Generator	0	2023	\$50,000		50,000	50	Permanent standby power generator for the SMLWTF raw water pumps to replace the older portable generator. Will reduce manpower needed to operate the portable generator and provide greater flexibility and automation.	
	68	SEWER PROJECTS								
	74	Operational Needs								
Lakes	75	Moneta WWTP								
	79	New chains on Train 1 BIOWHEELS	0	2023	\$20,000		20,000	46	Chains are showing wear and have cracked and had to replace links	
Lakes	81	Moneta Pump Stations								
	82	Blower system at pump station 1	0	2023	\$15,000		15,000	54	Reduce/eliminate gases due to low flows. Concrete in wet starting to deteriorate.	
Central	83	Central WWTP								
	89	New RAS Pump #1	0	2023	\$55,000		55,000	47	Existing pumps are 20+ years old. The primary settling tank is currently out of service due to broken railings, drives, and chains.	
	92	Replace railings and chains on primary basin #1	0	2023	\$20,000		20,000	54	Railings are currently broke and not operating (basin is being bypassed)	
	95	Carport to cover sludge dumpster	0	2023	\$8,000		8,000	31	Keep solids dry for less expensive disposal.	
Central	96	Central Sewer Pump Stations								
	97	Pump Station 3 Bank Restoration and armoring	0	2023	\$40,000		40,000	59	The creek bank has washed away at the fence line near the overflow pipe.	
	105	Pump Station 7 SCADA	0	2023	\$20,000		20,000	52	Allow remote view and ability to trend station performance.	
Mariners	108	Mariners WWTP								
	109	New control panels for both Trains	0	2023	\$25,000		25,000	46	Some of the controls are not functioning had contractor inspect and suggested replacing both control panels.	
	110	Install bracing on influent basin on Train 1 and 2	0	2023	\$20,000		20,000	51	The old bracing is rusting causing a safety hazard.	
Mariners	111	Mariners Pump Stations								
	112	Pump Stations pump replacement	0	2023	\$20,000		20,000	54	This will allow us to start replacing pumps that are 20+ years old.	
	113	Pump Station 5 SCADA	0	2023	\$10,000		10,000	57	Allow remote view and ability to trend station performance. If failure occurs, flow will go directly into the lake.	
	114	Pump Station 9 SCADA	0	2023	\$10,000		10,000	57	Allow remote view and ability to trend station performance. If failure occurs, flow will go directly into the lake.	
	122	PURCHASES								
	123	Admin								
	124	Key System - Phase 2A (Various sites)	0	2023	\$20,000		20,000	59	Creates a distributed SCADA server network for redundancy and resiliency. Updates to the latest version of Ignition from 7.9 to 8.1, a major update.	
	133	Operations								
Various	135	SCADA Server Architecture Reliability Enhancements	0	2023	\$78,000		78,000	59	For communications equipment to have power during a power outage.	
Forest	136	New London Tank Standby Generator	0	2023	\$6,000		6,000	49	Additional space needed to store legal records.	
	137	Engineering								
	138	Fireproof Safe	0	2023	\$5,500		5,500	46	Additional space needed to store legal records.	
	142	Maintenance								
	143	John Deere Skid Steer	0	2023	\$90,000		90,000	36	Skid steer to be used with PM crew for easement management.	
	144	DODGE RAM 5500 with dump bed	0	2023	\$90,000		90,000	36	Additional smaller dump truck for line crews to use to ensure availability when needed.	
TOTALS:					\$ 26,904,099	3,338,000	1,212,500			