

GWC CAPITAL IMPROVEMENT PLAN

FUNDED FISCAL YEAR 2017-18

Barren River Lake Water Treatment Plant (WTP #1)	\$517,500
Beaver Creek Water Treatment Plant (WTP #2)	\$118,000
Water Distribution System	\$4,400,000
Waste Water Collection System	\$1,040,000
Waste Water Treatment Plant (WWTP)	\$410,000
Administrative / Operations / Engineering	\$328,000
Maintenance Operations	\$150,000
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	\$6,963,500

UNSCHEDULED INFRASTRUCTURE AND EQUIPMENT NEEDS 2018-58

Barren River Lake Water Treatment Plant (WTP #1)	\$38,641,000
Beaver Creek Water Treatment Plant (WTP #2)	\$130,000
Water Distribution System	\$29,390,000
Waste Water Collection System	\$13,152,500
Waste Water Treatment Plant (WWTP)	\$14,765,000
Administrative / Operations / Engineering	\$2,970,000
Maintenance Operations	\$1,310,000
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	\$100,358,500

COMPLETED FISCAL YEAR 2016-17

Barren River Lake Water Treatment Plant (WTP #1)	\$231,090
Beaver Creek Water Treatment Plant (WTP #2)	\$64,580
Water Distribution System	\$1,676,008
Waste Water Collection System	\$5,852,054
Waste Water Treatment Plant (WWTP)	\$355,600
Administrative / Operations / Engineering	\$5,000
Maintenance Operations	\$551,237
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	\$8,735,569

Barren River Lake Water Treatment Plant (WTP #1)

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$200,000	Pump and Agitator Equipment for Sludge Lagoon Cleanout	Purchase equipment to annually cleanout WTP Sludge Lagoons.
Immediate	\$20,000	Additional Coagulant Storage	Coagulant storage to ensure proper delivery time.
Immediate	\$50,000	Main Building Rehab	Repair structural deficiencies, replace old windows, doors and lights with energy efficient units. Paint exterior brick with GWC color scheme.
Immediate	\$20,000	Chlorine Building Upgrade	Improve safety of chlorine feed system place on SCADA and finish blower system.
Immediate	\$7,500	Intake Structure Raw Water Piping painting	Remove corrosion and re-paint raw water piping within intake structure.
Immediate	\$25,000	Paint Filter Gallery	Paint filter gallery with an epoxy paint and remove flaking existing paint. The existing paint is flaking off in large pieces, due to the moisture when the filter gallery was originally painted.
Immediate	\$20,000	Bisulfite Chemical Building	Construct building and equipment to implement bisulfite chemical feed to comply with KY DOW chlorine residual requirement.
Immediate	\$120,000	Replace Venturi Meter	Replace original meter installed in 1965 to increase flow measurement accuracy.
Immediate	\$5,000	Security Camera System	Implement facility security camera system.
Immediate	\$50,000	HVAC Upgrade for High Service Pump Building	Upgrade/replace aging HVAC system for High Service Pump Building. VFD drives and electrical components require cooling to operate within normal conditions. Current HVAC system is failing during hot weather conditions.
	\$517,500	Funded FY 2017-18	
1-5 Years	\$30,000	Vehicle for Water Treatment Plant	4x4 vehicle for WTP and distribution sample collection.
1-5 Years	\$35,000	Replace Floc blade shafts, sprockets, chain and packing Gland (Basin #2)	The existing floc blade shafts, sprockets, chain and packing glands are original equipment (1965). Corrosion and wear are requiring replacement.
1-5 Years	\$10,000	SCADA addition	Place new Coagulant pumps on SCADA (Dosage and alarms)
1-5 Years	\$20,000	Actuator Repair	Existing EIM actuators need to be repaired
1-5 Years	\$6,000	Continuous Monitoring Top of Filter Turbidity and Chlorine Units	Replace the remaining turbidity unit that is out of date and parts not available, replace old chlorine analyzer that is not functioning
1-5 Years	\$25,000	Replace existing Fluoride, H2O2 and phosphate pumps with new Blue/White pumps and add to SCADA system	Replace existing pumps with High quality pumps with SCADA capability (SCADA addition)
1-5 Years	\$100,000	Barren River Lake USACE Withdrawal Permit increase from 12MGD to 24MGD	Permit process will be lengthy and require detailed engineering services. Additional withdrawal capacity will be need prior to future expansion capacity of the Lucas WTP. Expanded capacity will be need as future growth occurs and demand increases.
5 Years	\$50,000	Valve Replacement	Replace old valves that are leaking in filter gallery.
5 Years	\$20,000	Replace exterior lighting and light poles around plant.	Replace existing Outdoor lighting with energy efficient LED lighting and poles
1-5 Years	\$120,000	Replace Venturi Meter	Replace meter installed in 1965 to more measure more accurate flow.
6-10 Years	\$1,500,000	Floating Intake Structure	Replace existing intake structure with floating intake to eliminate silt and sedimentation of lake channel and improve water quality and lower operation cost.
6-10 Years	\$250,000	Bulk Carbon Feeder System and Silo	Replace existing bulk carbon system (Install current system at Beaver Creek WTP), updating Barren River Lake's Carbon feeder with an emphasis on expansion, while saving money on chemical cost at Beaver Creek. And Barren Lake WTP.
6-10 Years	\$250,000	Bulk Pneumatic Lime Injection Feed System and Silo	Replace aging lime feed system (eliminate elevator need, lower chemical cost, eliminate dust in building & prepare for growth)
6-10 Years	\$225,000	High Service Pump Motor and Variable Frequency Drive (VFD)	Add a 5,000 gpm VFD drive, motor, and pump to meet future water system demands and redundant maximum capacity.

6-10 Years	\$18,000,000	Upgrade WTP from 12 MGD to 18 MGD	Expanded capacity will be needed as future growth occurs and demand increases.
10+ Years	\$18,000,000	Upgrade WTP from 18 MGD to 24 MGD	Expanded capacity will be needed as future growth occurs and demand increases.
	\$38,641,000	TOTAL	
Completed	\$92,350	Filter #1-6 Anthracite media replacement	Replace existing anthracite media in filters 1-6, based on the filter media analysis the anthracite.
Completed	\$121,240	Replace tube settler media (Old settling basins #1 & #2)	Existing media has reached and exceeded its anticipated useful life.
Completed	\$17,500	Chlorine Building Upgrade	Improve safety of chlorine feed system and place on SCADA, blower system, enclose cylinders and scales
	\$231,090	Completed FY 2016-17	

Beaver Creek Water Treatment Plant (WTP #2)

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$105,000	Chlorine, Intake Structure and Admin Building Upgrade and Structural Repairs	Repair and upgrade structural repairs as outlined in detailed engineering report. Improve safety of chlorine feed system, implement SCADA monitoring and construct wall addition to isolate HS pumps from operator occupied space.
Immediate	\$3,000	Filter Profile	Filter Profile to determine the health of the filters and filter media.
Immediate	\$10,000	Clean out top sludge lagoon	Clean out top sludge lagoon with track hoe and haul off sludge to landfill
	\$118,000	Funded FY 2017-18	
1 Year	\$5,000	Drop Ceiling in Main Front Room	Add a drop ceiling in the main building to help the efficiency of the heating system.
1-5 Years	\$90,000	Filter #1-5 Anthracite Media Replacement	Replace existing anthracite media in filters 1-5, based on the filter media analysis the anthracite.
6-10 Years	\$30,000	High Service Pump Motor Variable Frequency Drive (VFD)	VFD on high service motors to optimize treatment process and electrical peak demand.
6-10 Years	\$5,000	Bulk Carbon Feeder (Relocate current feeder from Lucas to Beaver Creek)	Build Elevated concrete pad on North side of chemical building to accommodate the bulk carbon system. Dependent upon Carbon Machine replacement at Lucas WTP. Re-route existing water lines around new pad.
	\$130,000	TOTAL	
Completed	\$64,580	Replace tube settler media	Existing media has reached its anticipated useful life.
	\$64,580	Completed FY 2016-17	

Water Distribution System

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$40,000	Pump Station (Total Project \$220,000)	This project will construct a new pump station to serve the 966 pressure zone and wholesale customers to the east and west. The project will allow the Lucas WTP to supplement water to the 966 pressure zone and cut back production at the Beaver Creek WTP.
Immediate	\$3,400,000	Redundant 24 Inch Transmission Line - Phase 4 (20,000 L.F. +/-)	This project will construct 24 Inch water transmission line to increase delivery (transmission) capacity from the Barren River Water Treatment Plant.
Immediate	\$125,000	Meter Replacement Program	Replace approximately 1,200 water meters.
Immediate	\$60,000	Meter Testing Program	Purchase meter testing equipment and implement comprehensive meter testing program.
Immediate	\$45,000	Valley View Water Main Replacement Project	Replace and upgrade 3,000 LF of 4 and 2 inch water main to 8 and 6 inch to eliminate historical break areas, provide additional fire protection and improve water quality.
Immediate	\$350,000	Lexington Drive Tank Rehab	Paint and rehab tank
Immediate	\$80,000	South and West Square Water Main Reconstruction Project	Replace and upgrade 810 LF of 8 and 6 inch water main to 8 inch around the square.
Immediate	\$300,000	Water Infrastructure Replacement	Replace aging water infrastructure to eliminate water quality issues and provide fire protection and increased capacity. \$175,000 annually over the next 40 years.
	\$4,400,000	Funded FY 2017-18	
1-5 Years	\$4,500,000	Redundant 24 Inch Transmission Line Phase 5	This project will construct 24 Inch water transmission line to increase delivery (transmission) capacity from the Barren River Water Treatment Plant. DUE TO SIZE AND COST THIS PROJECT MAY BE CONSTRUCTED IN MULTIPLE PHASES.
1-5 Years	\$2,500,000	West Glasgow Water Tank – 1 Million Gallons	This project will construct a new 1 MG tank. The increased storage capacity will service approximately 25 industrial customers while increasing high demand capacity, fire protection in the 920 pressure zone area, and system storage capacity. Further, the project will provide additional delivery capacity to the interconnections with 4 wholesale water utility companies. PLEASE NOTE: THE STATUS OF THE PROJECT COULD CHANGE TO IMMEDIATE DEPENDENT UPON FUTURE DEMANDS PLACED ON THE SYSTEM BY NEW INDUSTRY, WHOLESALE OR CUSTOMER GROWTH.
1-5 Years	\$750,000	16 Inch Transmission Line Feed from New Tank	This project will construct a 16 Inch water transmission line feed from new water tank to water distribution system
1-5 Years	\$3,000,000	16 Inch Transmission Line around Outer Loop	This project will construct a 16 Inch water transmission line around the Glasgow Outer Loop Highway to serve the northern pressure zone and wholesale customers to the east and west.
1-5 Years	\$200,000	Distribution System Pressure Zone Metering (Phase 1)	Deploy pressure zone metering that will be monitoring to SCADA to utilize realtime leak detection and improve water loss capabilities.
1-40 Years	\$12,000,000	Water Infrastructure Replacement	Replace aging water infrastructure to eliminate water quality issues and provide fire protection and increased capacity. \$300,000 annually over the next 40 years.
6-10 Years	\$1,225,000	Distribution Tank Maintenance and Rehab	Perform routine maintenance and rehab for Pritchardville Tank, West Main Tank, Burkesville Rd Tank, Lick Branch Tanks, Freedom Tank, and Love Knob Tank.
6-10 Years	\$590,000	North Race St Water Line Replacement Project	Replace and upgrade 5,900 LF of 8 and 6 inch water main to 8 inch along North Race St.
6-10 Years	\$1,125,000	Columbia Ave Water Line Replacement Project	Replace and upgrade 9,000 LF of 4 and 6 inch water main to 12 inch along Columbia Ave.
6-10 Years	\$3,500,000	Automatic Meter Reader (AMR) - City	Replace 7,000 aging city area meters with automatic meter reading technology to improve meter accuracy and water loss(revenue loss) and eliminate manual meter reads.
	\$29,390,000	TOTAL	
Completed	\$32,640	SCADA Radio Upgrade	Replace All existing SCADA radios with new radio technology. New radio technology does not support current radio and replacement availability is becoming an issue. Old radios will be repurposed and used as spares for the collection system SCADA system.
Completed	\$24,000	Distribution System Hydraulic Model	Update engineering distribution system hydraulic model to reflect updated GIS data, system and customer demands. Model is critical for future capital improvement projects design.
Completed	\$18,000	Leak Detection Equipment	Loggers to leave out over night and scan a larger section of the distribution system.
Completed	\$19,000	Leak Detection Equipment	Correlators to zone in on known leaks, or area detected by the loggers. Correlators give you an instant result in the field to determine the location of the leak.

Completed	\$53,278	Valve Insertion Equipment	New valve insertion equipment to be utilized for older waterline replacement projects and valve exercise program.
Completed	\$15,750	Valve Exerciser	New valve exerciser and hydraulic power pack for valve exercise program and distribution system.
Completed	\$9,600	Barren County Middle School Water Line Extension	Construct approximately 800 LF of 6 inch water main to provide redundant water service to school campus.
Completed	\$6,750	Love Knob and Freedom Tank Maintenance	Clean and replace cathodic protection in both tanks
Completed	\$31,100	Barren County CTE Water Line Project	870 LF of 8 inch water main to accommodate CTE construction.
Completed	\$1,428,540	KY Highway 90 East Water Line Relocation Section 3	This project constructed 19,105 LF of 8 inch and 4,170 LF of 6 inch water line infrastructure for the State Highway 90 East Roadway Project.
Completed	\$10,000	Pin Seekers Subdivision	575 LF of 6 inch water main to serve 16 lot subdivision.
Completed	\$27,350	Professional Park Apartments	700 LF of 6 inch water main and meter connections to serve 56-unit multi-family residential development.
	\$1,676,008	Completed FY 2016-17	

Waste Water Collection System

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$450,000	SSO # 6 Remediation	This project consists of relaying and upgrading a large portion of the Southside interceptor to eliminate historical SSO's and provide additional capacity for future growth. This project consists of upgrading 1,800 feet of existing 8 inch gravity line to 12 inch gravity line from SSO #6 to the previously completed Phase 2 Southside interceptor project (200' north of KY Hwy 68-80).
Immediate	\$150,000	Georgetown Lane and Adairland Court Liftstation Upgrade and Replacement	This project will replace 2 old sewage liftstations. The existing liftstations consistently have mechanical, pumping, and control equipment failures due to the age of the equipment/facility and has exceeded its design life.
Immediate	\$15,000	Beaver Trail Lift Station Mixer	Install mixer to prevent solids build up, overflows and malfunctions of the station.
Immediate	\$125,000	Sewer Camera System	CMOM will require detailed inventory of collection system (approximately 10% of system per year).
Immediate	\$300,000	Sewer Infrastructure Replacement	Replace aging sewer infrastructure to eliminate inflow/infiltration/maintenance problems and increase system capacity. \$175,000 annually over the next 40 years.
	\$1,040,000	Funded FY 2017-18	
1-5 Years	\$5,000	Waste Water Flow Monitors	Purchase 4 additional flow monitors to expand capabilities for uniform basin flow monitoring and analysis.
1-5 Years	\$142,500	Liftstation SCADA	Currently SCADA is installed on 8 of 27 liftstations. This project will Install SCADA on the remaining 19 liftstations.
1-5 Years	\$950,000	Sewer Interceptor Upgrade/Replacement - Gorin Park to Eastbrook Trailer Park	This project consists of rehabilitating approximately 6,300 feet of existing gravity sewer to eliminate inflow/infiltration/maintenance problems and increasing the system capacity in the affected area. Project will start at Hwy 90 east at Gorin Park and continue to Eastbrook Trailer Park.
1-5 Years	\$55,000	Gravity Sewer Upgrade/Replacement - Shane Drive to Rogers Road	This project consists of rehabilitating approximately 4,500 feet of existing gravity sewer line to eliminate inflow/infiltration/maintenance problems and increase the system capacity in the affected area. Project starts at south side of railroad and continues to Shane Drive.
1-40 Years	\$12,000,000	Sewer Infrastructure Replacement CMOM Sewer Rehab Program	Replace aging sewer infrastructure to eliminate inflow/infiltration/maintenance problems and increase system capacity. \$300,000 annually over the next 40 years rehabilitating 25% of the collection system (25.9 miles/136,550 ft of existing gravity sewer).
	\$13,152,500	TOTAL	
Completed	\$5,383,775	Glasgow Southside Interceptor Phase 3. Total Project Budget \$5,500,000 (\$3,500,000 KIA, \$825,000 KYTC, \$1,175,000 GWC Sewer Rehab Funds)	This project consists of relaying and upgrading a large portion of the Southside interceptor to eliminate historical SSO's and provide additional capacity for future growth. This project will consist of upgrading 5,200 feet of existing 24 inch gravity line to 42 inch line from SSO #8 (Old WWTP) to the existing WWTP and upgrading 9,100 feet of existing 24 inch gravity line to 36 inch line from SSO #13 (500' east of KY Hwy 249) to SSO #8 (Old WWTP).
Completed	\$312,000	Burkesville Road Sanitary Sewer Extension	This project constructed 2,850 LF of 8 inch gravity sewer, 1,940 LF of 6 inch sanitary sewer forcemain, a sewer liftstation and 7 LPS pump systems.
Completed	\$12,200	Steeplechase Sanitary Sewer	850 LF of 2 inch low pressure sewer to accommodate new home development.
Completed	\$14,079	Vac-Pump Skid Mount Unit	To clean and maintain low pressure grinder pumps, liftstations and air release valves in the collection system.
Completed	\$130,000	Implementation of EPA Collection System's Management, Operation, and Maintenance (CMOM) program as mandated by KY DOW.	CMOM is a flexible, dynamic framework required for municipalities to identify and incorporate widely accepted wastewater industry practices to better manage, operate, and maintain collection systems, investigate capacity constrained areas of the collection system, and to respond to sanitary sewer overflow (SSO) events. Maintenance employees will require new hires. The Pre-Treatment Coordinator will assume Collection System Manager duties and responsibilities.
	\$5,852,054	Completed FY 2016-17	

Waste Water Treatment Plant (WWTP)

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$75,000	Peracetic Acid (PAA) Process Implementation	Change WWTP disinfection process from chlorine/sulfur dioxide gas to Peracetic Acid (PAA) bulk system.
Immediate	\$150,000	WWTP Outfall Relocation and Disinfection Basin Upgrade	Modify disinfection basin to match hydraulic capacity of WWTP after recent improvements. Installation of new effluent flow meter connected to SCADA system for continuous monitoring as well as control of chemical feed system. Change outfall discharge location from Huggins Branch to South Fork Creek. Discharge location affects effluent limitations of the WWTP and local limit parameters for pre-treatment industries. KYPDES Draft WWTP Permit has indicated increased parameters. New WWTP outfall to South Fork Creek primarily to lessen potential impact to industry regarding effluent limits if outfall remains at Huggins Branch.
Immediate	\$30,000	Admin and Blower Building Rehab	Complete rehab of existing buildings (paint exterior of buildings, install new gutters, foam insulation, etc.)
Immediate	\$5,000	Security Camera System	Implement facility security camera system.
Immediate	\$150,000	Nutrient Removal	Chemical addition for new nutrient limit (KPDES) requirement (Phosphorus).
	\$410,000	Funded FY 2017-18	
1-5 Years	\$25,000	Non-potable Wash Down Water for the Peak Storm Surge Basin	Needed to clean the basin. Would rather see us using the non-potable water to clean the basin with and reduce city water consumption at the Wastewater Treatment Plant.
1-5 Years	\$750,000	Aeration Piping and Diffuser Replacement	Upgrade aeration piping and diffusers to eliminate air leaks and improve operating efficiency. Current system (Old Swing Arm) has been in service since 1977 and has exceeded it's operational life.
1-5 Years	\$80,000	Pavement and Concrete	Install concrete in heavy traffic areas and chip-and-seal access road.
1-5 Years	\$1,000,000	Upgrade Treatment Process - Nutrient Removal	Have a capital plan in place for new nutrient limit (KPDES) requirements (Total Nitrogen and Phosphorus).
1-5 Years	\$50,000	Upgrade to Tandem Dump Truck	Purchased larger used dump truck to haul waste solids to the landfill. Larger truck would reduce
6-10 Years	\$10,860,000	Glasgow WWTP Improvement Phase III – Upgrade Plant from 4 MGD to 6 MGD	Upgrade WWTP from 4 MGD to 6 MGD using Integrated Fixed-film Activated Sludge (IFAS) process; install baffle walls and screens in aeration tanks; install IFAS media; reconfigure plant piping; construct nutrient removal and tertiary treatment process, upgrade chlorine contact chamber, reconfigure aeration basin gates and valves, and, install new process SCADA. PLEASE NOTE: THE STATUS OF THE PROJECT COULD CHANGE TO IMMEDIATE DEPENDENT UPON FUTURE EPA/DOW REGULATIONS AND/OR DEMANDS PLACED ON THE SYSTEM BY NEW INDUSTRY.
6-10 Years	\$2,000,000	Bio-solids Permitting	Federal EPA may issue permits on the quality of bio-solids. New treatment of the bio-solids may be required.
	\$14,765,000	TOTAL	
Completed	\$250,000	Blower Upgrade/Rehab	Rehab existing blowers, and install VFDs to improve operation power efficiency and lower peak demand charges. Existing blowers are original to 1977 plant upgrade and are obsolete. Total project costs \$250,000. Approximately \$180,000 spent during 2015-16 FY.
Completed	\$25,000	Certified Lab	Update lab and equipment to comply with state certified lab requirements (BOD incubator, Auto-Clave, PH & NH3 Meter, Microscope, Muffle Furnace, and other equipment).
Completed	\$30,000	SCADA	Install SCADA system to operate and monitor new WWTP upgrade processes and operations.
Completed	\$25,000	Administration Building Rehab	Replace old windows and doors with energy efficient units, and rehab building structure.
Completed	\$25,600	WWTP Fencing	Replace/Install chain link fence after construction for security.
	\$355,600	Completed FY 2016-17	

Administrative / Operations / Engineering

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$10,000	Document Management System	Document management system software to scan, archive, and retrieve a digital back-up of all GWC documents. The system will utilize the existing terabyte server.
Immediate	\$30,000	Programing and IT software	Software for data integration by IT Specialist to be used to meet CMOM Requirements.
Immediate	\$30,000	Hardware Refresh	Computer hardware replacement/upgrade.
Immediate	\$4,500	Survey Data Collector	Data collector to utilize total station fully for topographic survey and construction staking.
Immediate	\$3,500	Data Collector for Total Station	Will provide increased capabilities of Total Station to allow for data collection and construction staking in areas where GPS accuracy is reduced.
Immediate	\$250,000	Real estate for Operations Center	Acquisition of prospective real estate property for future operations center.
	\$328,000	Funded FY 2017-18	
1-5 Years	\$60,000	GIS Package	Purchase of a true GIS platform with a dedicated server to enable data from all departments accessible from a single source. The software will prove invaluable in meeting the requirements of CMOM, developing an asset management plan and long term capital improvement plan.
1-5 Years	\$30,000	Replace/Upgrade GPS Mapping Equipment	The current equipment is approaching 5 years of service and both units are beginning to exhibit operational issues. Given that the units are utilized daily, replacements needs to prepared for.
1-5 Years	\$20,000	Sewer Modeling Software (GIS Compatible)	Purchase of sewer modeling software to determine overall system capacities, assist in planning improvement projects and determine impact of future rehabilitation projects. The system would be fully interactable into the GIS system.
1-5 Years	\$20,000	Water Modeling Software (GIS Compatible)	Purchase of water modeling software compatible with the proposed GIS system and capable of utilizing SCADA data to maintain a near real-time model of the system for evaluating capital improvements, water quality verification and determining how operational changes will affect the system.
1-5 Years	\$125,000	Asset Inventory Program	Software for asset data management and record keeping to integrate with GIS.
1-5 Years	\$15,000	Large Format Printer / Scanner	Large format document station to enable staff to create plans in-house with scanning capabilities to allow archive plans to be backed-up digitally.
1-5 Years	\$100,000	Portable Emergency Electric Generator (2 units)	Purchase portable emergency electric generator to be used at water pump stations and sewer lift stations in the event of an extended power outage or emergency.
1-5 Years	\$100,000	Portable Emergency Water Pump	Purchase portable emergency water pump to be used in the distribution system in the event of a pump station failure or water shortage to pump across system pressure zones.
1-5 Years	\$2,500,000	Operations Center	Construct/repurpose a facility to allow GWC operations to be centrally located together. This would incorporate all departments except WWTP and WWTP in one location to improve operations. Further, it would allow better customer interaction, bill pay, parking, drive thru window, etc. The current number of GWC employees has out growing the current office location.
	\$2,970,000	TOTAL	
Immediate	\$5,000	KY Pipe Upgrade	Upgrade existing hydraulic water modeling software to meet demands of the updated distribution hydraulic system model.
	\$5,000	Completed FY 2016-17	

Maintenance Operations

<u>Target Period</u>	<u>Estimated Amount</u>	<u>Project / Item</u>	<u>Description</u>
Immediate	\$150,000	4 Service Trucks	Two 1 ton service truck (utility bed), one 1 ton service truck (flat bed) and one locate/service truck.
	\$150,000	Funded FY 2017-18	
1-5 Years	\$1,000,000	Warehouse	Expand warehouse and equipment storage facility. Maintenance operations has outgrown current facility.
1-5 Years	\$70,000	2 Service Trucks	Two 3/4 ton service truck (utility bed).
1-5 Years	\$90,000	Backhoe Replacement	Purchase new backhoe.
1-5 Years	\$30,000	Lowboy Tractor	Replace 1980 Mack Tractor Trailer.
6-10 Years	\$100,000	Dump Truck	Add new dump truck to fleet for construction division.
6-10 Years	\$20,000	Lowboy Trailer	Add new lowboy trailer to haul heavy equipment.
	\$1,310,000	TOTAL	
Completed	\$85,900	Backhoe Replacement	Purchase new backhoe and reallocate oldest backhoe for non construction activities (use to load rock and off load equipment at W Main Tank Lot).
Completed	\$66,234	(2) Service Trucks	New 4WD Full Size Crew Cab Pickup Truck for Engineering and Administration. Existing Engineering Pickup Truck will be reallocated to Collection System Manager and will replace 2006 Chevy Colorado (189,151 miles) and existing Chevy Tahoe will be reallocated to Engineering for transport of survey GPS instrumentation/GPR unit and will replace 2008 Chevrolet Silverado (170,346 miles).
Completed	\$357,603	Vac-Truck Replacement	Replace 2004 model Vac-Truck (6,480 hrs) with multi-engine setup for truck and pump/vacuum. Current truck would be utilized for backup, LPS maintenance and valve work, and hydro-excavation. CMOM will require detailed cleaning/maintenance log (approximately 10% of system cleaned and inventoried per year).
Completed	\$41,500	Hydraulic Rock Hammer for Trackhoe	New hydraulic rock hammer for trackhoe.
	\$551,237	Completed FY 2016-17	