ARCADIS

SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Erskine Wellfield

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Permanent Generator Installation	Install permanent Generator with auto transfer switch. Integrate wells to run on generator.	Emergency Power	3	$430,000
PLC Upgrades	Upgrade existing PLC to 5000 platform including programming (flow pacing of fluoride, phosphate and chlorine feeds)	Process Control	3	$90,000
Chlorinator Upgrades	Install two V10K Chlorinators and Integrate into SCADA	Chemical Feed	2	$35,000
Backup chlorine injector	Install back-up chlorine injector for chlorination system	Chemical Feed	2	$4,000
Backup booster pump for chlorination system	Install back-up booster pump for chlorination system	Emergency	2	$3,000
Sump pump Installation	Install sump pump for metering pit	Maintenance	2	$6,000
Fluoride containment coating	Provide coating for fluoride containment walls and floor	Maintenance	2	$4,000
Physical Security Upgrades - Cameras	Install security camera and integrate to SCADA	Physical Security	2	$22,000
Physical Security Upgrades - Doors	Install three new doors and frames	Physical Security	2	$9,000
Roof Repairs	Repair roof in main building	Structural Integrity	2	$6,000
Connection to the Sewer System	Connect failing drywell system in well #2 to the nearest sewer	Process Control	3	$89,000
TOTAL				**$698,000**

ARCADIS

SOUTH BEND WATER WORKS
SOUTH BEND, INDIANA

Capital Needs

North Filtration Plant

Project Name	Planned Scope	Purpose/ Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Dehumidification System Desiccant Wheel Replacement	Replace Desiccant Wheel	Equipment Protection	2	$38,000
HVAC System Replacement	Replace 5 HVAC units	Maintenance	2	$180,000
High Service #1 Pump, Motor Refurbishment and VFD Replacement	Rebuild High Service #1 Pump end and 200 hp Motor; Upgrade/replace existing VFD	Distribution Supply	2	$60,000
High Service #3 Pump refurbishment, Motor Refurbishment and VFD Replacement	Rebuild High Service #3 pump end and 200 hp motor; Upgrade/replace existing VFD	Distribution Supply	2	$60,000
High Service #4 Motor Replacement and VFD Installation	Replace High Service #4 200 hp motor and install VFD	Distribution Supply	2	$45,000
High Service Pump #2 VFD Installation	Install VFD for High Service pump #2	Motor Control	2	$27,000
PLC Upgrades	Upgrade existing PLC to 5000 platform with new HMI and programming	Process Control	3	$270,000
Chlorine Gas System Upgrades	Replace CL2 emergency gas shutoff valves, install new CL2 gas plumbing and rehabilitate chlorine scrubber's electrical, instrumentation and controls	Chemical Storage	3	$120,000
Parking Lot Improvements	Re-pave the parking lot; and re-paint parking spaces	Maintenance	2	$150,000
Well #1B Inspection, Cleaning and Rehabilitation	Inspect, clean and rehabilitate well #1B, replace/refurbish pump ends and motor	Source Water	2	$64,000
Well #2A Inspection, Cleaning and Rehabilitation	Inspect, clean and rehabilitate well #2A, replace/refurbish pump ends and motor	Source Water	2	$64,000
Well #3A Inspection, Cleaning and Rehabilitation	Inspect, clean and rehabilitate well #3A, replace/refurbish pump ends and motor	Source Water	2	$64,000
Well #5A Inspection, Cleaning and Rehabilitation	Inspect, clean and rehabilitate well #5A, replace/refurbish pump ends and motor	Source Water	2	$64,000
Carpet Replacement in Lower and Upper Level of Main Building	Replace carpet and padding in upper and lower level of the main building	Maintenance	2	$48,000
Sludge Pump #1 & #2 Replacement	Replace sludge pump #1 and #2	Operations	2	$28,000

ARCADIS

SOUTH BEND WATER WORKS
SOUTH BEND, INDIANA

Capital Needs

North Filtration Plant

Project Name	Planned Scope	Purpose/ Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Recycle Pump #1 & #2 Replacement	Replace recycle pump #1 and #2	Operations	2	$28,000
Compressed Air Drier Unit Replacement	Replace compressed air drier unit with a 200 gallon tank with a new VFD Unit and a 200 gallon tank	Equipment Protection	2	$35,000
Physical Security	Install and integrate four security cameras into SCADA system	Physical Security	2	$44,000
New Orthophosphate System for Corrosion Control	Install new orthophosphate system for corrosion control and a new building	Corrosion Control	3	$430,000
Finished water flow meter and chemical feed line replacement	Install new pit including two isolation valves, new 30-inch mag meter with and new sump pump. Replace existing upstream and downstream requirements. Replace chemical feed lines.	Flow control	3	$270,000
Root Blower Rebuild / Replacement & Motor	Rebuild root blower and replace motor	Operations	2	$48,000
Replace Filter Valves	Replace pneumatic valves with electronic actuating valves in filters 1,2,3,4,5	Operations	2	$620,000
Main Building Maintenance	Regrout Main Building exterior limestone Bricks (West and north side of building)	Structural Integrity	2	$44,000
High service room maintenance	Regrout brick in high service room and shore up leak points	Structural Integrity	2	$11,000
Main Building Roof Repairs	Inspect and re-coat building roof	Maintenance	2	$22,000
Building Ceiling Repairs	Re-paint ceiling in High service room and Filter Room	Maintenance	2	$57,000
Clearwell Inspection and Repairs	Inspect clearwell, perform roof repairs, and install fall protection	Finished Water Storage	2	$88,000
North Sidewalk Repairs	Replace collapsing sidewalk including effluent Plant pipe rebed	Maintenance	2	$140,000
Window Repairs	Replace office side building windows	Maintenance	2	$85,000
New well with well house	Install new well and well house and integrate into generator	Source Water	3	$1,000,000
Pressure filtration Vessel Refurbishment 1,3,4,5	Refurbish pressure vessels 1,3,4 and 5	Process control	3	$2,600,000
Raw water actuating valves programming	Program EMI raw water actuating valves to operate	Process control	3	$100,000
TOTAL				**$6,904,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Olive GAC Plant

Project Name	Planned Scope	Purpose/ Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Roof Replacement	Replace main building and well house #1 roof. Install ladder to the roof.	Structural Integrity	3	$220,000
GAC Reactivation Vessels 1-6	Reactivate Absorption Media	VOC/SOC Removal	2	$210,000
GAC Reactivation Vessels 7-12	Reactivate Absorption Media	VOC/SOC Removal	2	$210,000
GAC Vessels Painting	Re-paint GAC Vessels	Maintenance	2	$52,000
GAC Vessels Flow Meter Installation	Install new flow meters on Vessels 1-12. Integrate devices to track back flow recording.	Flow Control	2	$110,000
Natural Gas Heating Unit Replacement	Replace three natural gas heating units	Building Heat	2	$32,000
PLC and HMI Upgrades	Upgrade existing PLC to 5000 platform with new HMI and programming	Process Control	3	$270,000
Well #1A Inspection, Cleaning and Rehab, Pump & Motor Refurbishment, VFD Installation	Inspect, clean and refurbish Well# 1A.; refurbish pump and upgrade to inverter duty motor and install VFD	Source Water	2	$120,000
Well #2A Inspection, Cleaning and Rehab, Pump & Motor Refurbishment, VFD Installation	Inspect, clean and refurbish Well# 2A.; refurbish pump and upgrade to inverter duty motor and install VFD	Source Water	2	$120,000
Well #3A Inspection, Cleaning and Rehab, Pump & Motor Refurbishment, VFD Installation	Inspect, clean and refurbish Well# 3A; refurbish pump and upgrade to inverter duty motor and install VFD	Source Water	2	$120,000
Well #4 Inspection, Cleaning and Rehab, Pump & Motor Refurbishment	Inspect, clean and refurbish Well# 4; refurbish pump and upgrade to inverter duty motor	Source Water	2	$64,000
Well #5 Inspection, Cleaning and Rehab, Pump & Motor Refurbishment	Inspect, clean and refurbish Well# 5; refurbish pump and upgrade to inverter duty motor	Source Water	2	$64,000
Physical Security Upgrades - Cameras	Install security cameras and integrate to SCADA	Physical Security	2	$43,000
Physical Security Upgrades - Doors	Install doors and frames for Well house 1 and 2	Physical Security	2	$6,000
Dehumidification System Upgrades	Replace existing dehumidification unit	Equipment Protection	2	$130,000
Permanent Generator Installation	Install stand alone generator with Auto Transfer Switch to run two wells #1 and #2	Emergency Power	3	$640,000
Iron and Manganese Treatment	Install new oxidation/filtration system, including residuals handling system, chemical systems and associated equipment	Treatment	3	$17,500,000
Air conditioning in Hypochlorite Room	Install A/C system in in hypo room to extend hypo storage life	Chemical Storage	3	$490,000
Lighting Upgrades	Convert all existing lighting (18 Fluorescents & 24 High bay Metal Halide) to LED. Integrate all building lighting & essential equipment to run on small generator.	Lighting	2	$14,000
Flow meter Installation	Install new 30" mag meter with upstream and downstream valving to aid in future replacements.	Flow Control	2	$99,000
TOTAL				**$20,514,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Pinhook Filtration Plant

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Well #1A Inspection, Cleaning and Rehabilitation	Inspect, clean and rehabilitate Well #1A	Source Water	2	$56,000
Well #5 Inspection, Cleaning and Rehabilitation	Inspect, clean and rehabilitate Well #5	Source Water	2	$56,000
High Service #1 pump refurbishment and motor replacement	Refurbish HS pump #1 and replace motor with 200 hp inverted duty motor	Distribution Supply	2	$69,000
High Service #2 pump refurbishment and motor replacement	Refurbish HS pump #2 and replace motor with 200 hp inverted duty motor	Distribution Supply	2	$69,000
High Service #3 pump refurbishment and motor replacement	Refurbish HS pump #3 and replace motor with 200 hp inverted duty motor	Distribution Supply	2	$69,000
High Service #4 pump refurbishment and motor replacement	Refurbish HS pump #4 and replace motor with 200 hp inverted duty motor	Distribution Supply	2	$69,000
PLC Upgrades and HMI Integration	Program existing PLC 5000 platform with new chemical dosing strategy	Process Control	3	$58,000
Permanent Generator Installation	Add a new generator for Wells #2,3,4	Emergency Power	3	$430,000
Automatic Transfer Switch Replacement	Replace auto transfer switch in existing generator	Emergency Power	2	$64,000
Physical Security Upgrades - Cameras	Install security cameras and integrate to SCADA	Physical Security	2	$43,000
Physical Security Upgrades - Doors	Install doors and frames for Well house 1 and 2	Physical Security	2	$6,000
Well #2 Replacement	Replace Well #2	Source Water	3	$840,000
Well #3 Replacement	Replace Well #3	Source Water	3	$840,000
Well #4 Replacement	Replace Well #4	Source Water	3	$840,000
Backwash pumps #1,#2 and #3 Refurbishment	Refurbish backwash pumps #1 #2 #3	Process Control	2	$130,000
Drain pumps #1 and #2 Refurbishment	Refurbish drain pumps #1 and #2	Process Control	2	$81,000
Fluoride Tank Storage Upgrades	Increase fluoride bulk capacity from 900 gals to 1600 gals	Chemical Feed	2	$18,000
Filter Weir Replacement	Replace filter weir	Process Control	2	$37,000
Filter Valve Replacement	Replace 21 (nine 10" valves and twelve 14" valves) valves/actuators	Process Control	2	$570,000
Raw Influent Flow Meter Replacement	Replace existing 24" mag meter	Flow Control	2	$33,000
Finished water Flow Meter Replacement	Replace existing 24" mag meter. Re-locate pit to a better location for future replacements	Flow Control	3	$70,000
Roof Replacement and Repairs	Replace flat roof membrane sections and miscellaneous repair work on the flat metal roof section.	Structural Integrity	2	$30,000
Pre-chlorination Chemical Feed Line Replacement	Replace pre-chlorination chemical feed lines	Chemical Feed	3	$100,000
TOTAL				**$4,578,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

South Wellfield

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
New Water Main	Install additional water main from South WTP into South pressure zone	Pump directly into South Pressure Zone	3	$920,000
Well #4A Inspection, Cleaning and Rehab	Inspect, clean (double disc surge cleaning) and rehabilitate the wells; upgrade to inverter duty motor	Source Water	2	$64,000
Well #5 Inspection, Cleaning and Rehab	Inspect, clean (double disc surge cleaning) and rehabilitate the wells; upgrade to inverter duty motor	Source Water	2	$64,000
Permanent Generator Installation	Install permanent generator with auto transfer switch	Emergency Power	3	$430,000
PLC and HMI upgrades	Upgrade existing PLC to 5000 platform with new HMI	Process Control	2	$180,000
GAC Vessels 1-4 Reactivation	Reactivate media in vessels 1-4. Needs to be reactivated every 5-10 years depending on usage	VOC/SOC Removal	2	$150,000
Dehumidification System Replacement	Replace HVAC unit	Equipment Protection	2	$120,000
GAC Vessel Flow meter replacement	Replace four 6" flow meters on GAC vessels	Track backwash water usage	2	$36,000
New Chlorine Scrubber Unit Installation	Install new dry chlorine scrubbing equipment to handle leak from 1 one-ton gas cylinders	Safety	3	$580,000
Roof Repairs	Repair roofs on well houses #4A and #5	Structural Integrity	2	$12,000
New Well and Well house Installation	Install new well with well house	Redundancy	3	$1,000,000
Physical Security Upgrades - Cameras	Install security camera and integrate to SCADA	Physical Security	2	$44,000
Chemical Feed line replacement	Replace fluoride, chlorine and phosphate discharge piping	Maintenance	3	$100,000
TOTAL				**$3,700,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Fellows Booster Station

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Pump Station Improvements	New building, New pumps/equipment (4 local service pumps; 3 high service pumps), New generator, New transformer, New flow meters/valves, VFD drives, Demolition of existing building, New cathodic protection	Aging Infrastructure	3	$9,400,000
Inspection and Cleaning of Clearwell	Inspect and clean tank with the help of divers to allow tank to remain in-service	Maintenance	2	$48,000
Physical Security Upgrades - Cameras	Install security camera and integrate to SCADA	Physical Security	2	$22,000
Physical Security Upgrades - Doors	Install one hollow metal door and frame	Physical Security	2	$3,000
Physical Security Upgrades - Fencing	Install new 8' chain link fence and a drive way gate	Physical Security	2	$56,000
TOTAL				**$9,529,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Ireland Tank and Booster Station

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Pump # 1 refurbishment and motor replacement	Refurbish pump with new pump end. Replace motor with 15 Hp inverted duty motor.	Distribution Supply	2	$12,000
Pump # 2 refurbishment and motor replacement	Refurbish pump with new pump end. Replace motor with 15 Hp inverted duty motor.	Distribution Supply	2	$12,000
Pump # 3 refurbishment and motor replacement	Refurbish pump with new pump end. Replace motor with 15 Hp inverted duty motor.	Distribution Supply	2	$12,000
Permanent Generator Installation	Install permanent Generator with auto transfer switch	Emergency Power	3	$160,000
PLC and HMI upgrades	Upgrade existing PLC to 5000 platform with new HMI and programming	Process Control	3	$90,000
Tank Rehabilitation	Shutdown, Inspect and clean 3.5 MG Tank. Provide interior and exterior coatings. Add cathodic protection. Full tank exterior paint stripped down to metal with dust tent.	Preventative Maintenance	3	$1,500,000
Flow meter replacement	Replace existing 8" flow meter with mag meter. Includes piping or valve modifications required.	Flow control	2	$6,000
Valve pit refurbishment	Replace cover on existing valve pit with watertight hatch and regrade around pit	Maintenance	2	$6,000
Physical Security Upgrades - Cameras	Install security camera and integrate to SCADA	Physical Security	2	$22,000
TOTAL				**$1,820,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Locust Booster Station

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
New Pump #3 Installation	Includes design of new pump 3, motor and drive, controls and programming; pump base and the associated piping already in place. Need to include engineering to look at hydraulics	Distribution Supply	3	$150,000
Pump #1 and #2 replacement	Update existing pumps 1 and 2 to correct size	Distribution Supply	2	$220,000
Permanent Generator Installation	Install permanent Generator with auto transfer switch	Emergency Power	3	$640,000
PLC and HMI upgrades	Upgrade existing PLC to 5000 platform with new HMI	Process Control	3	$90,000
Flow meter replacement	Replace existing 8" flow meter with mag meter. Includes piping or valve modifications required.	Flow control	2	$6,000
Roof Repairs	Membrane roof needs to be replaced	Structural Integrity	2	$6,000
Physical Security Upgrades - Cameras	Install security camera and integrate to SCADA	Physical Security	2	$22,000
TOTAL				**$1,134,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

SR 23 Booster Station

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Permanent Generator Installation	Install permanent Generator with auto transfer switch	Emergency Power	3	$250,000
#1 Pump refurbishment , motor replacement and VFD installation	Add new impeller, replace 30 hp motor and add VFDs	Distribution Supply	2	$34,000
#2 Pump refurbishment , motor replacement and VFD installation	Add new impeller, replace 30 hp motor and add VFDs	Distribution Supply	2	$34,000
PLC and HMI upgrades	Upgrade existing PLC to 5000 platform with new HMI	Process Control	3	$90,000
Flow meter replacement	Replace existing 6" flow meter with mag meter. Includes piping or valve modifications required.	Flow control	2	$5,000
Dehumidification Upgrades	Install new hydronic chiller	Equipment Protection	2	$9,000
Cathodic Protection	Design and install Impressed Current Cathodic Protection (ICCP) system	Corrosion Protection	2	$33,000
Physical Security Upgrades - Cameras	Install CCTV camera and integrate with SCADA	Physical Security	2	$22,000
Physical Security Upgrades - Fencing	Install new 8' chain link fence and a drive way gate	Physical Security	2	$6,000
TOTAL				**$483,000**

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SOUTH BEND WATER WORKS
SOUTH BEND, INDIANA

Capital Needs

Topsfield Booster Station

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
#1 Pump refurbishment, motor replacement and VFD installation	Replace impeller, seals, 20 hp motor and add drives for pump #1	Distribution Supply	2	$33,000
#2 Pump refurbishment, motor replacement and VFD installation	Replace impeller, seals, 20 hp motor and add drives for pump #2	Distribution Supply	2	$33,000
PLC and HMI upgrades	Upgrade existing PLC to 5000 platform with new HMI	Process Control	3	$90,000
Flow meter replacement	Replace existing 8" flow meter with megameter. Includes piping or valve modifications required.	Flow control	2	$6,000
Dehumidification Upgrades	Install new hydronic chiller	Equipment Protection	2	$9,000
Cathodic Protection	Design and install Impressed Current Cathodic Protection (ICCP) system	Corrosion Protection	2	$37,000
Pipe repair	Repair broken underground pipes causing water intrusion issue and affecting station equipment	Equipment Protection	2	$23,000
TOTAL				**$231,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Winterberry Booster Station

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Permanent Generator Installation	Install permanent Generator with auto transfer switch	Emergency Power	3	$640,000
#1 Pump refurbishment , motor replacement and VFD replacement	Add new impeller, replace 50 hp motor and add VFDs and enclosures	Distribution Supply	2	$58,000
#2 Pump refurbishment , motor replacement and VFD replacement	Add new impeller, replace 125 hp motor and add VFD and enclosures	Distribution Supply	2	$110,000
#3 Pump refurbishment , motor replacement and VFD replacement	Add new impeller, replace 125 hp motor and add VFDs	Distribution Supply	2	$110,000
PLC and HMI upgrades	Upgrade existing PLC to 5000 platform with new HMI	Process Control	3	$90,000
Cathodic Protection	Design and install Impressed Current Cathodic Protection (ICCP) system	Corrosion Protection	2	$33,000
Flow Meter Replacement	Replace existing with new 12-inch mag meter	Flow control	2	$17,000
Driveway	Add new driveway	Operations	2	$3,000
Physical Security Upgrades - Cameras	Install CCTV camera and integrate with SCADA	Physical Security	2	$22,000
Physical Security Upgrades - Fencing	Install new 8' chain link fence and a drive way gate	Physical Security	2	$8,000
Suction line Upsizing	Evaluate and upsize existing 16" suction line to a larger main to use full output capacity of Winterberry Booster station	Efficiency	3	$9,800,000
TOTAL				**$10,891,000**

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SOUTH BEND WATER WORKS

SOUTH BEND, INDIANA

Capital Needs

Northwest Elevated Tank

Project Name	Planned Scope	Purpose/Driver	Project Type	Total Estimated Project Cost (2020 dollars)
Tank Improvements	Includes exterior overcoat, wet interior roof repaint, and installation of fall protection with lift assist, cathodic system replacement and painters rails installation and repainting pit while tank is down	Maintenance / Corrosion Control	3	$830,000
Physical Security	Install security camera and integrate to SCADA	Physical Security	2	$22,000
12"' Swing Check Valve Replacement	Replace 12" swing check valve	Flow control	2	$15,000
16" Altitude Valve Re-build/Repair	Re-build / Repair 16" altitude valve	Flow control	2	$49,000
TOTAL				**$916,000**

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SOUTH BEND WATER WORKS
SOUTH BEND, INDIANA

Capital Needs
Distribution System Improvements

Project Name	Planned Scope	Purpose	Project Type	Total Estimated Project Cost (2020 dollars)
Water Main, Hydrant & Valve Replacement	Replace 1% of water mains annually over a five year period	Revenue	3	$36,400,000
Water Meter Replacement	Replace water meters annually over a five year period	Revenue	1	$4,000,000
Lathrop St-Bendix Drive to Portage Ave	Replacement of 4,100 ft. of 12" water main including street reconstruction	Distribution Supply	3	$990,000
Trail ROW-Dublin St to Cripe St	Replacement of 1,370 ft. of 12" water main including street reconstruction	Distribution Supply	3	$330,000
First New 2 MG Elevated Storage Tank[1]	First of two new storage tanks for Central Pressure Zone; includes $1M allowance for water main installation and land acquisition	Distribution Storage and Redundancy	3	$8,100,000
Second New 2 MG Elevated Storage Tank[1]	Second of two new storage tanks for Central Pressure Zone; includes $250,000 allowance for water main installation costs; assumes tank will be installed on existing South Bend property and large main is located nearby	Distribution Storage and Redundancy	3	$7,400,000
30st Main Replacement (Railroad Crossing)	Replace 6" main under rail crossing	Distribution Supply	3	$200,000
Green Lawn Main Replacement (Railroad Crossing)	Replace 6" main under rail crossing	Distribution Supply	3	$200,000
TOTAL				**$57,620,000**

Notes:
1. Based on high level storage evaluation and to be used for planning purposes only. Additional evaluation is needed to identify the optimal number, location and size of tanks required. Costs include

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SOUTH BEND WATER WORKS
SOUTH BEND, INDIANA

Capital Needs

Other Capital Improvements

Item	Description	Project Type	Total Estimated Project Cost (2020 dollars)
Vehicle Replacement	Replacement vehicles annually over a five year period	N/A	$2,500,000
New Office Building	New Building for Customer Service, Admin, and Billing	3	$2,000,000
Technology Updates	Assess current hardware and software systems for their ability to meet needs during an emergency, including if staff must work off site. In particular, transition to laptop computers.	N/A	$50,000
Business Continuity Plan	Develop a Business Continuity Plan to guide return to normal operations after an event.	N/A	$50,000
Assessment of SCADA Hardware	Assess SCADA location and equipment to identify upgrades needed to ensure security and resilience	N/A	$15,000
Asset Management Program	Development of an up-to-date inventory of all vertical and horizontal assets, assessment of asset condition and development of risk score, that can be carried into the Comprehensive Water Master Plan.	N/A	$300,000
Comprehensive Water Master Plan	Comprehensive evaluation of all water supply, treatment and distribution system needs based on asset risk, updated water demand projects, and current and future regulatory requirements; includes use of existing hydraulic model (i.e., no updates and/or calibration); alternatives evaluation; project grouping and prioritization, and a risk-based 15-year or 20-year capital improvement plan for entire system.	N/A	$400,000 - $600,000
Lead Service Line (LSL) Inventory	Development of an initial records based LSL inventory as required under the final Lead and Copper Rule Revisions.	N/A	$100,000
Lead Service Line Replacement (LSLR) Plan	Development of a plan for full LSLR as required under the final Lead and Copper Rule Revisions.	N/A	$100,000
TOTAL			**$5,615,000**

ATTACHMENT EH-5
TO BE LATE FILED