

Five Year Capital Improvement Plan, 2010-2014

9/8/2009

Project Year 2010

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
4" Water Line Replacement	\$100,000	In-House	Water Construction (303) \$100,000
		Contract	\$0
Replace 4" water lines with 6" or 8" lines to improve domestic flow and fire flow.		Replacement	\$0
Loop Dead-End Water Mains	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Proposed construction will connect various dead-end water mains in the Rona Village area. Completing the projects will improve water quality and fire flows in the affected areas and was a recommended project to undertake to enhance the new pressure booster system in the area.		New Construction	\$0
Water Main Oversizing	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Upgrade size of water mains being put in as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.		New Construction	\$0
Water Main Valve/Hydrant Replacement	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Repair Program.		Replacement	\$0
Well Redevelopment	\$30,000	In-House	Water Depreciation (401) \$30,000
		Contract	\$0
Redevelop an existing well to assure continued operation at highest yield.		Other	\$0

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Project Year 2010

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Dayton-Yellow Springs Road 8" Main Replacement <i>Design and Construction</i>	\$220,000	Consultant	Water Construction (303) \$220,000
		Contract	\$0
Complete upsizing of main on East Dayton-Yellow Springs Road from 8" to 12" from Five Points intersection to Five Points tank to improve water flow.		Replacement	\$0
Kauffman Booster Station <i>Checktronic Valves Installation</i>	\$36,000	In-House	Water Depreciation (401) \$36,000
		In-House	\$0
Replace existing original equipment, high maintenance valves with low maintenance Checktronic valves.		Replacement	\$0

Total Estimated Cost for: *Water*

Project Year: 2010

\$496,000

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Project Year 2011

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
4" Water Line Replacement	\$100,000	In-House	Water Construction (303) \$100,000
		Contract	\$0
Replace 4" water lines with 6" or 8" lines to improve domestic flow and fire flow.		Replacement	\$0
Loop Dead-End Water Mains	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.		New Construction	\$0
Water Main Oversizing	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Upgrade size of water mains being put in as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.		New Construction	\$0
Water Main Valve/Hydrant Replacement	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program.		Replacement	\$0
Well Redevelopment	\$30,000	In-House	Water Depreciation (401) \$30,000
		Contract	\$0
Redevelop an existing well to assure continued operation at highest yield.		Other	\$0

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Project Year 2011

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Water and Sewer Administrative Offices (1/2 Cost) <i>Fence Replacement</i>	\$20,000	In-House	Water Depreciation (401) \$20,000
		Contract	\$0
Replace existing fence with 1' of buried fabric to prevent unauthorized entry; taller fabric on side facing ball fields to prevent vehicle/facility damage and reprofiling to improve truck access.		Replacement	\$0
Mad River Crossing Water Transmission Line <i>Construction</i>	\$1,000,000	Consultant	Bond \$1,000,000
		Contract	\$0
Provides the ability to service new well field, as well as a secondary means of conveying water to Treatment Plant from existing well field to provide redundancy.		New Construction	\$0
Old Yellow Springs Road Extension <i>Design</i>	\$40,000	Consultant	Water Construction (303) \$40,000
		Contract	\$0
Extend water main to allow for connection of properties in Bath Township. Many are seeing failed water wells in this area.		Other	\$0
Water Treatment Plant <i>Generator Replacement/Electrical Upgrade, Design and Construction</i>	\$220,000	Consultant	Water Construction (303) \$220,000
		Contract	\$0
Replace existing 30+ year old generator that will only operate a portion of the plant in emergency situations. New unit will allow for running of entire plant. Modernize electric to accomplish multiple goals including: assuring all of plant can be operated off new generator, replacing units for which parts can no longer be purchased, improving energy efficiency, etc.		Replacement	\$0

Total Estimated Cost for: *Water*

Project Year: 2011 \$1,520,000

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Project Year 2012

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
4" Water Line Replacement	\$100,000	In-House	Water Construction (303) \$100,000
		Contract	\$0
Replace 4" water lines with 6" or 8" lines to improve domestic flow and fire flow.		Replacement	\$0
Loop Dead-End Water Mains	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.		New Construction	\$0
Water Main Oversizing	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Upgrade size of water mains being put in as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.		New Construction	\$0
Water Main Valve/Hydrant Replacement	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program.		Replacement	\$0
Well Redevelopment	\$30,000	In-House	Water Depreciation (401) \$30,000
		Contract	\$0
Redevelop an existing well to assure continued operation at highest yield.		Other	\$0

Five Year Capital Improvement Plan, 2010-2014

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Project Year 2012

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Metering System ERT Replacement	\$150,000	In-House	Water Depreciation (401) \$150,000
		Contract	\$0
Replace meter interface units (ERT's) for the mobile meter reading system due to expected battery life (1st phase).		Replacement	\$0
Parallel Raw Water Line	\$100,000	Consultant	Water Construction (303) \$100,000
<i>Design</i>		Contract	\$0
Install a 20" raw water line from the Mad River Well Field to the Water Treatment Plant to provide additional capacity and redundancy.		New Construction	\$0
Water Treatment Plant	\$100,000	In-House	Water Construction (303) \$100,000
<i>Property Purpose for Expansion</i>		In-House	\$0
Purchase property adjacent to the Water Treatment Plant for future expansion. May require environmental assessment prior to purchase.		Other	\$0

Total Estimated Cost for: *Water*

Project Year: 2012

\$590,000

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Project Year 2013

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
4" Water Line Replacement	\$100,000	In-House	Water Construction (303) \$100,000
		Contract	\$0
Replace 4" water lines with 6" or 8" lines to improve domestic flow and fire flow.		Replacement	\$0
Loop Dead-End Water Mains	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.		New Construction	\$0
Water Main Oversizing	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Upgrade size of water mains being put in as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.		New Construction	\$0
Water Main Valve/Hydrant Replacement	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program.		Replacement	\$0
Well Redevelopment	\$30,000	In-House	Water Depreciation (401) \$30,000
		Contract	\$0
Redevelop an existing well to assure continued operation at highest yield.		Other	\$0

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Project Year 2013

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Metering System ERT Replacement	\$150,000	In-House	Water Depreciation (401) \$150,000
		Contract	\$0
Replace meter interface units (ERT's) for the mobile meter reading system due to expected battery life (2nd phase).		Replacement	\$0
Parallel Raw Water Line	\$1,000,000	Consultant	Water Construction (303) \$1,000,000
<i>Construction</i>		Contract	\$0
Install a 20" raw water line from the Mad River Well Field to the Water Treatment Plant to provide additional capacity and redundancy.		New Construction	\$0
Rona Hills Tank Cleaning and Repair	\$330,000	Consultant	Water Depreciation (401) \$330,000
		Contract	\$0
To properly maintain a water storage tank and to get the longest life expectance, it is recommended that it be cleaned, repaired, and repainted on a routine basis. This tank was last painted in 1994. Project will also include installation of an altitude valve as recommended in the Water Master Plan and dome replacement as recommended in the most recent tank inspection report.		Repair	\$0
Stationary Generator and Building	\$80,000	Consultant	Water Construction (303) \$80,000
		Contract	\$0
Build an addition to the Mad River Well Field building to house a permanent stationary generator and transfer switch. This will allow for automatic transfer in the event of a power loss. It will replace the use of a 1970's vintage portable generator that is stored off site and must be manually connected when there is a power loss.		New Construction	\$0
Water Storage Tank for Southeast Area of Fairborn	\$200,000	Consultant	Bond \$200,000
<i>Design</i>		Contract	\$0
It is expected that the growth of east Fairborn will necessitate an elevated storage tank to provide needed capacity and pressure for domestic and fire usage.		Other	\$0

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Project Year 2013

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Water Treatment Plant	\$200,000	Consultant	\$200,000
<i>Expansion, Design</i>		Contract	\$0
Expand to provide softening and iron and manganese removal capabilities and increase the treatment capacity to 8.3 mgd. Design will include provision of office space and staff quarters.		Other	\$0

Total Estimated Cost for: *Water*

Project Year: 2013

\$2,200,000

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Project Year 2014

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
4" Water Line Replacement	\$100,000	In-House	Water Construction (303) \$100,000
		Contract	\$0
Replace 4" water lines with 6" or 8" lines to improve domestic flow and fire flow.		Replacement	\$0
Loop Dead-End Water Mains	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected areas.		New Construction	\$0
Water Main Oversizing	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Upgrade size of water mains being put in as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.		New Construction	\$0
Water Main Valve/Hydrant Replacement	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program.		Replacement	\$0
Well Redevelopment	\$30,000	In-House	Water Depreciation (401) \$30,000
		Contract	\$0
Redevelop an existing well to assure continued operation at highest yield.		Other	\$0

Five Year Capital Improvement Plan, 2010-2014

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Project Year 2014

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Metering System ERT Replacement	\$150,000	In-House	Water Depreciation (401) \$150,000
		Contract	\$0
Replace meter interface units (ERT's) for the mobile meter reading system due to expected battery life (3rd phase).		Replacement	\$0
Old Yellow Springs Road Extension	\$325,000	Consultant	Water Construction (303) \$325,000
<i>Construction</i>		Contract	\$0
Extend water main to allow for connection of properties in Bath Township. Many are seeing failed septic systems in this area.		New Construction	\$0
Water & Sewer Administrative Offices Upgrade (1/2 Cost)	\$500,000	Consultant	Water Construction (303) \$500,000
<i>Design/Construction</i>		Contract	\$0
Current offices are located in a flood plain and have experienced flooding to the doors of the buildings in the past. A major flood could damage facilities and impact ability for the division to respond to water and sewer emergencies. The modular that houses the foreman offices/lunchroom and employee locker rooms was installed in 2000 and has already experienced some infrastructure issues. Insufficient parking is available for service vehicles.		New Construction	\$0
Water Storage Tank for Southeast Area of Fairborn	\$2,000,000	Consultant	Bond \$2,000,000
<i>Construction</i>		Contract	\$0
Expected that the growth of east Fairborn will necessitate an elevated water storage tank to provide needed capacity and pressure for domestic and fire usage.		New Construction	\$0
Water Treatment Plant	\$20,000	In-House	Water Depreciation (401) \$20,000
<i>Roof Replacement</i>		Contract	\$0
Replace portion of roof over the furnace/chlorine/generator and operator's office. The current roofing warranty expired in 2008.		Replacement	\$0

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Project Year 2014

Water

*Estimated
Total Cost*

*Engineering Performed by
Construction Performed by
Project Type*

Funding

Total Estimated Cost for: *Water*

Project Year: 2014

\$3,235,000

Five Year Capital Improvement Plan, 2010-2014

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Project Year *Other*

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
4" Water Line Replacement	\$150,000	In-House	Water Construction (303) \$150,000
		Contract	\$0
Replace 4" water lines with 6" or 8" lines to improve domestic flow and fire flow.		Replacement	\$0
Loop Dead-End Water Mains	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Proposed construction will connect various dead-end water mains in the City. Completing the projects will improve water quality and fire flows in the affected area.		New Construction	\$0
Water Main Oversizing	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Upgrade size of water mains being put in as part of property development to help assure the ability to meet needs of adjoining properties as they are developed.		New Construction	\$0
Water Main Valve/Hydrant Replacement	\$30,000	In-House	Water Construction (303) \$30,000
		In-House	\$0
Replace malfunctioning valves/hydrants at various locations throughout the City. High priority will be given to those areas targeted by the Street Program.		Replacement	\$0
Well Redevelopment	\$30,000	In-House	Water Depreciation (401) \$30,000
		Contract	\$0
Redevelop an existing well to assure continued operation at highest yield.		Other	\$0

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Project Year *Other*

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Black Lane Water Main Extension <i>Broad Street to Armstrong Road</i> Oversizing of proposed water main to be extended on Black Lane to support development and to eventually provide a secondary service loop from the northern area of the water system once water is extended down Broad Street.	\$75,000	Consultant	Water Construction (303) \$75,000
		Contract	\$0
		New Construction	\$0
City of Dayton Raw Water Interconnect <i>Construction</i> City of Dayton owns property near the I-675/I-70 interchange that is earmarked for a future well field. Depending on the location of their raw water line, it would be desirable for have an emergency connection to provide an alternate source of water if needed.	\$90,000	Consultant	Water Construction (303) \$90,000
		Contract	\$0
		New Construction	\$0
Kauffman Booster Station <i>Pump Installation</i> Kauffman Booster Station was constructed in 1972 to serve Meadow Run Apartments and surrounding area. An additional pump is necessary to meet future water demands expected as growth continues. Building modifications will be needed to accommodate the additional equipment.	\$150,000	In-House	Water Construction (303) \$150,000
		In-House	\$0
		New Construction	\$0
Master Plan Update Update Master Plan to determine future projects needed to maintain existing infrastructure and potential growth.	\$50,000	Consultant	Water Construction (303) \$50,000
		Contract	\$0
		Other	\$0
Metering System ERT Replacement Replace meter interface units (ERTs) for the mobile meter reading system due to expected battery life.	\$150,000	In-House	Water Depreciation (401) \$150,000
		Contract	\$0
		Replacement	\$0

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Project Year

Other

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
State Route 235 Water Main Extension Oversizing	\$30,000	Consultant	Water Construction (303) \$30,000
		Contract	\$0
Upgrade size of sewer main to be installed from existing pipe to the I-675 area to allow for further development in this corridor location.		New Construction	\$0
System Medium Service Capacity Increase	\$150,000	In-House	Water Construction (303) \$150,000
		In-House	\$0
Increase capacity through installation of one more pump or replacement of existing pumps with larger pumps. Building modifications will accommodate additional equipment.		New Construction	\$0
System Medium Service Generator	\$50,000	In-House	Water Construction (303) \$50,000
		Contract	\$0
Portable generator must be brought on site for emergency backup. An on-site generator will allow for automatic switchover in the event of loss of power.		New Construction	\$0
Trebein Road Loop Construction	\$2,000,000	Consultant	Bond \$2,000,000
		Contract	\$0
Project will provide future capacity to the northeast section of the City.		New Construction	\$0
Water Treatment Plant Expansion, Construction	\$2,000,000	Consultant	Bond \$2,000,000
		Contract	\$0
Expand to provide softening and iron and manganese removal capabilities and increase the treatment capacity to 8.3 MGD. Design will include upsizing of the generator to assure ability to meet higher energy demands.		Other	\$0

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Project Year *Other*

Water

	<i>Estimated Total Cost</i>	<i>Engineering Performed by Construction Performed by Project Type</i>	<i>Funding</i>
Water Treatment Plant <i>Filters Enclosure</i>	\$70,000	In-House	Water Construction (303) \$70,000
		Contract	\$0
		New Construction	\$0
Install a plexiglass enclosure wall to isolate the filters from the rest of the building. This would reduce exposure of equipment and operators to chlorine. An improved ventilation system would also be installed as part of this improvement. Wall would be removable to allow for filter maintenance.			
Water Treatment Plant <i>Raw Water Flush Line Installation</i>	\$60,000	In-House	Water Construction (303) \$60,000
		In-House	\$0
		New Construction	\$0
Install a line and flush hydrant to allow for flushing of the raw water line on a routine or as needed basis. This will reduce the potential for red water or high turbidity in the event of disruptions in the line or extremely high usage and would provide a means for purging the line if a contamination event occurred.			
Well Fields Capacities Increase	\$1,000,000	Consultant	Bond \$1,000,000
		Contract	\$0
		New Construction	\$0
Install additional wells in both old and new Mad River Well Fields to meet future demands and provide backup.			
Yellow Springs-Fairfield Road Supplemental Water Main	\$685,000	Consultant	Bond \$685,000
		Contract	\$0
		New Construction	\$0
Recommendation of the 2006 Distribution Model to increase water pressure for drinking water and firefighting capabilities.			

Total Estimated Cost for: *Water*

Project Year: *Other* \$6,850,000