

RCAP Asset Management Webinar Series
Completing a Capital Improvement Plan

Presented by

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Your Speakers Today



Julie Ward



Kurtis Strickland

Today's Class is sponsored by



***Division of Drinking &
Ground Waters***

Today's session is being recorded.

Participant Instructions

- Please submit questions using the webinar chat box in the lower left hand corner of your screen.
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- If you are at a site with multiple people watching on one computer, and one or more attendees wish to receive a contact hour, please designate one person as the room monitor, and use the sign-in sheet provided with the reminder email this morning.

Please complete the evaluation form at the end!



RCAP Asset Management Webinar Series

Sept 8

Completing an Asset Inventory

Sept 15

Completing a Condition Assessment



Sept 22

Completing a Capital Improvement Plan

Sept 27

**Completing a Preventative & Predictive
Maintenance Plan**

Sept 29

Budgeting for P&P, CIPs & Sustainability

Each webinar is from 10 AM – 11 AM.

Please register for the other webinars at www.ohiorcap.org.



"Improving the quality of life in rural communities"

Ohio Rural Community Assistance Program



Ohio RCAP provides technical assistance to communities for infrastructure and community development. Often, those under 10,000 population can receive free assistance under our grant funded programs. We assist with project planning, development and funding. Often, we work with communities to evaluate their rate structures and financial capacity. In addition to helping individual communities, we offer several utility management classes each year to local officials and operators. RCAP also has a GIS Team and operates a GIS Cooperative for communities.

What we'll discuss today...



- Basics of a Capital Improvement Plan
- The Steps in Capital Improvement Planning
- Tools & Techniques to Get Your Plan Done
- Where to Get Additional Resources

Let's try a poll!



"Improving the quality of life in rural communities"

Do you have a multi-year capital improvement plan for your water facilities?

- a. Yes
- b. No
- c. Not applicable to me

What is a Capital Improvement Plan?



"Improving the quality of life in rural communities"

- A capital improvement plan or CIP is a short-range plan, usually four to ten years, which identifies capital projects and equipment purchases.
- It includes an implementation schedule and identifies options for financing the plan.

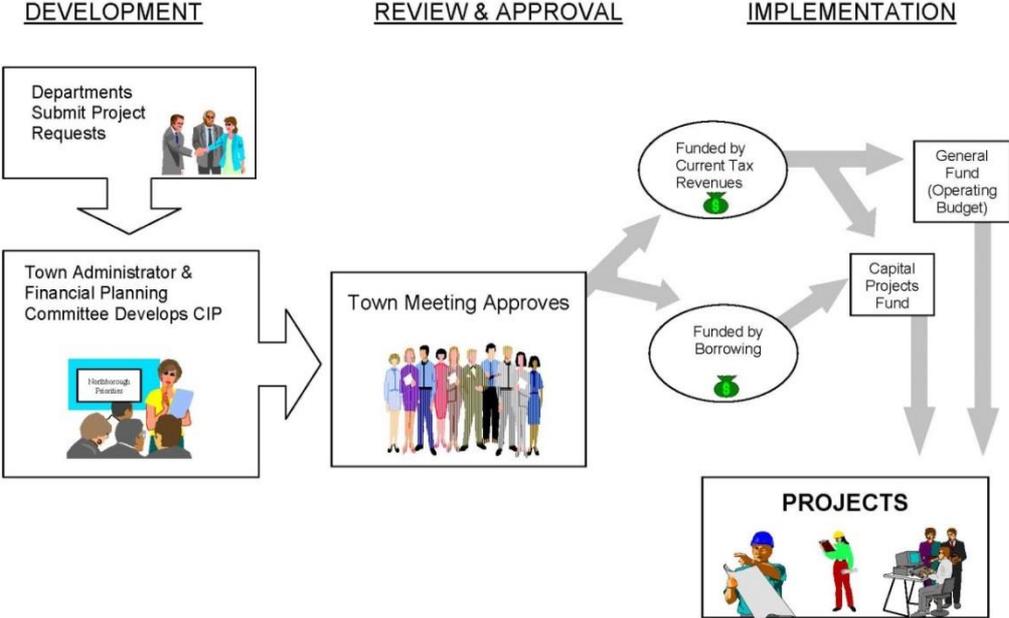
What is a Capital Improvement Plan?



"Improving the quality of life in rural communities"

CAPITAL IMPROVEMENT PROGRAM

CAPITAL PROJECTS FLOW CHART



What is a Capital Improvement?



"Improving the quality of life in rural communities"

- ❖ Upgrades, expansions, replacement, and restoration.
- ❖ Anything that adds value to the system or its service.
- ❖ Must be a physical improvement.
- ❖ Must have an anticipated life of not less than 5 years.
- ❖ Must have a cost of at least \$25,000.



Why a Capital Improvement Plan?



"Improving the quality of life in rural communities"

- A CIP requires a systematic evaluation of all potential projects at the same time.
- A CIP requires a utility to prioritize.
- A CIP allows the governing board to better project future revenue needs.

Why a Capital Improvement Plan?



"Improving the quality of life in rural communities"

- A CIP can better position utilities for grant funding.
- A CIP allows a utility to stabilize debt and consolidate projects to reduce borrowing costs.
- A CIP serves as a public relations and economic development tool.

Why a Capital Improvement Plan?



"Improving the quality of life in rural communities"

- A CIP focuses on preserving a utility's infrastructure while ensuring the efficient use of public funds.
- A CIP is an essential part of a local government's strategic plan and budget.

Let's try another poll!

What's the most important reason to have a multiyear capital improvement plan?

- a. To do a systematic evaluation of all projects at the same time.
- b. To better project future revenue needs.
- c. To ensure the efficient use of public funds.

Potential Sources of Data

- Maps
- Ohio EPA sanitary survey
- NPDES permit
- Maintenance records
- Complaint log
- Future demand information
- Economic development/growth considerations



Steps in Completing a CIP



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1. Identify the team
2. Decide on a format
3. Establish rating criteria
4. Identify projects
5. Identify project costs
6. Complete a project list
7. Rate projects
8. Prioritize projects
9. Group projects
10. Complete a schedule
11. Complete the report
12. Implement the plan

Update the plan

1. Identify the Team

Village Administrator/City Manager

Fiscal Officer or Clerk

Utility Committee Members

Utility Superintendent

Laborers

Operator

Engineer

Others/Technical Assistance Provider (RCAP)



2. Decide on a Format

What do you want the result to be?

Ohio Public Works Commission
Five Year Capital Improvement Plan/Maintenance of Effort

City of Wellston 079-82712 2/6/2012
Subdivision Code Date

Project Name/Description	Funding Code(s)	Status (A) Approved (P) Pending (C) Complete	Total Cost	Two Year Effort		Five Year Plan					
				2010	2011	2012	2013	2014	2015	2016	
				Funded		Planned					
Honeysuckle Lane/Braleey Rd Waterline Replacement	EPA	C	\$ 279,689	\$ 279,689							
Jenkins Tank Replacement	EPA	C	\$ 648,000		\$ 648,000						
North WTP Improvements Phase 1	EPA	C	\$ 750,000		\$ 750,000						
Broadway Tank Inspection	Local	P	\$ 10,000			\$ 10,000					
Broadway Tank Painting	Local	P	\$ 80,000			\$ 80,000					
Broadway Tank Circulation Improvements	Local	P	\$ 65,000			\$ 65,000					
Water Meter Improvements Project	EPA	P	\$ 500,000				\$ 500,000				
North WTP Improvements Phase 2	EPA	P	\$ 270,000				\$ 270,000				
South WTP Improvements	ARC/EPA	P	\$ 730,000					\$ 730,000			
SWTP/Jenkins Tank Waterline Replacement	ARC/EPA	P	\$ 625,000					\$ 625,000			
North Water Distribution System Improvements	EPA/OPWC/ARC	P	\$ 2,493,950						\$ 2,493,950		
South Water Distribution System Improvements	EPA/OPWC/ARC	P	\$ 2,435,890							\$ 2,435,890	
West 11th Sewer Rehabilitation	EPA/OPWC	P	\$ 375,000							\$ 375,000	
South Pennsylvania Sewer Rehabilitation	EPA/OPWC	P	\$ 250,000							\$ 250,000	
Sewer Video Taping/Smoke Testing	Local	P	\$ 125,000			\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	\$ 25,000	
Manhole Rehabilitation	Local	P	\$ 250,000			\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Sewer Replacement	Local	P	\$ 250,000			\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	
Wastewater Treatment Plant Improvements	EPA/OPWC	P	\$ 430,000								\$ 430,000

Village of Somerset Capital Improvement Plan for Water Facilities



Project Name/Description	Funding	Status (A)ctive (C)omplete (P)ending	Total Cost	Two Year Effort		Eight Year Effort							
				2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
				Planned		Planned							
Water Line Replacement: Maple Street	Local	C	\$50,000	\$50,000									
New Master Meter for County Connection	Local	P	\$20,000	\$20,000									
Water Line Replacement: Ulrich	Local	P	\$50,000		\$50,000								
Water Line Extension: Corner of Heritage and East Avenue, around 1,500 linear feet of 6"	Local	P	\$147,000		\$147,000								
Gator (Need additional vehicle for unidirectional flushing)	Local	P	\$15,000		\$15,000								
Water Line Replacement: Emma	Local	P	\$40,000			\$40,000							
Replace Valve Exercising Equipment	Local	P	\$65,000			\$65,000							
Water Line Replacement: Orchard	Local	P	\$40,000				\$40,000						
Water Line Replacement: Mill Ext.	Local	P	\$40,000					\$40,000					
Water Line Replacement: Cherry 6" to 8"	OPWC/ARC/WSR LA	P	\$600,000						\$600,000				
Upgrade Storage, Reservoir Capacity	OPWC/ARC/WSR LA/OWDA	P	\$750,000							\$750,000			
Looping to Reservoir, upgrade to 6" line from Church to Reservoir; 600 Linear Feet	OPWC/ARC	P	\$73,800								\$73,800		
Looping 1 Project: Park Drive to School House, upgrade to 6", around 200 linear feet	Local	P	\$24,600									\$24,600	
Looping 2 Project: Corner of Church to East Ave, approximately 400 linear feet	Local	P	\$49,200										\$49,200
TOTAL			\$1,964,600	\$70,000	\$212,000	\$105,000	\$40,000	\$40,000	\$600,000	\$750,000	\$73,800	\$24,600	\$49,200

3. Establish Rating Criteria

- Mandated by regulatory agency
- Public health and safety
- Maintenance issues (boil orders, blockages)
- Status of engineering/readiness to proceed
- Needed for economic development
- Remaining useful life
- Fire flow or unaccounted for water
- Reduce operating costs
- Priority of board or council



Poll Time!



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Which rating criteria is the most important to your utility?

- a. Mandated by regulatory agency
- b. Public health and safety
- c. Maintenance issues (boil orders, blockages)
- d. Needed for economic development
- e. Priority of board or council

4. Identify Projects



Use descriptive names

Don't use years in names

Don't group items at this point

Use project information sheet

CITY OF DEXTER * CAPITAL IMPROVEMENTS PLAN

PROJECT NAME: Second Street Watermain
PROJECT ID: 9.03 **PRIORITY:** IMPORTANT
PROJECT TYPE: Utility Construction **TOTAL COST:** \$290,000
SUBMITTED BY: City Staff **YEARS IN CIP (Beginning year):** 3 (2013)

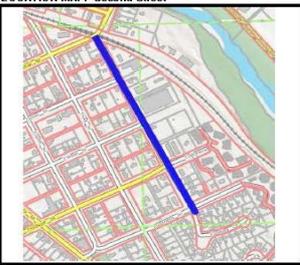
DESCRIPTION: **LOCATION MAP:** Second Street

Replacement of 6" watermain on Second from Central to Cushing Court with 9" main. Approximately 2000 lineal feet.

PROJECT JUSTIFICATION:
Value increases the degree to which the project will help to:
1=General important 2=Important 3=Very important

1	Protect health, safety, lives of citizens
3	Maintain or improve public facilities
2	Reduce energy costs, improve the environment
1	Enhance social, cultural, recreational, and historic opportunities
3	Improve customer service, customer access for citizens

TOTAL SCORE:
BENEFICIAL IMPACTS:
Remaining area of City with 6" watermain. Water main breaks have occurred on this pipe.



MASTER PLAN AND/OR STUDY REFERENCE:
Water System Reliability Study (2005)

SCHEDULE: **SCHEDULE JUSTIFICATION:**

	Start		End	
	Month	Year	Month	Year
Study:		2017		2017
Design/Acquisition:		2017		2017
Construction:		2020		2023

As breaks continue to occur project will become a priority.

PROJECT COST DETAIL:
Replace/Upgrade Water Main \$290,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Water Fund							\$290	\$290
								\$0
								\$0
TOTALS		\$0	\$0	\$0	\$0	\$0	\$290	\$290

5. Identify Project Costs



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- Use an engineer
- Include hard and soft costs
- Include prevailing wage
- Include contingencies

Item No.	Description	Unit	Est. Amount	Est. Cost/Unit	Total Est. Cost of Item
1	New Fine Screen & Grit Channel Improvements	LS	1	\$135,000.00	\$135,000
2	Replace Three Blowers	LS	1	\$210,000.00	\$210,000
3	Replace Aeration Tank Diffusers, Valves, Piping	LS	1	\$60,000.00	\$60,000
4	New Final Clarifier	LS	1	\$449,000.00	\$449,000
5	New UV System	LS	1	\$181,000.00	\$181,000
6	Pump Station Valve Replacement	LS	1	\$7,000.00	\$7,000
7	Existing Clarifiers Repairs and Painting	LS	1	\$80,000.00	\$80,000
8	New Sand Filter	LS	1	\$6,000.00	\$6,000
9	New Lab/office and Demolish Existing	LS	1	\$62,000.00	\$62,000
10	Mobilization and General Conditions	LS	1	\$119,000.00	\$119,000
11	New Vacuum Truck	LS	1	\$350,000.00	\$350,000
	Construction Subtotal				\$1,659,000
	Contingencies				\$131,000
	Design Engineering				\$105,000
	Construction Engineering Services				\$92,000
	Survey and Soil Borings				\$10,000
	Permits and Legal				\$15,000
	Project Total				\$2,012,000

6. Complete List of Projects



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Project Name	Total Cost
First Avenue water main replacement	\$ 275,000
Second Street water tank replacement	\$ 648,000
Water treatment plant improvements	\$ 1,500,000
Wastewater treatment plant improvements	\$ 2,400,000
Broadway tank demolition	\$ 500,000
Water meter replacement	\$ 400,000
East side sanitary sewer rehab	\$ 1,000,000
Main Street water main replacement	\$ 625,000
First Avenue sewer line replacement	\$ 250,000
Ohio Avenue sewer line replacement	\$ 350,000
Carter Avenue storm sewer rehabilitation	\$ 750,000
Brown Avenue water main replacement	\$ 575,000
Emergency generators	\$ 150,000

7. Complete Criteria Data



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Project Name	Total Cost	Type	Mandate	H&S	O&M	RTP	ED	UL	FF/UAW	RO	BP
First Avenue water main replacement	\$ 275,000	WD		X	X	D		1	X		X
Second Street water tank replacement	\$ 648,000	WD				CE		3			X
Water treatment plant improvements	\$ 1,500,000	WT		X	X	CE		2		X	
Wastewater treatment plant improvements	\$ 2,400,000	ST	X	X	X	PTI	X	1		X	
Broadway tank demolition	\$ 500,000	WD				CE		5			
Water meter replacement	\$ 400,000	WD				CE		4	X		
East side sanitary sewer rehab	\$ 1,000,000	SC	X	X	X	D		2			
Main Street water main replacement	\$ 625,000	WD		X	X	CE	X	3	X		X
First Avenue sewer line replacement	\$ 250,000	SC		X	X	CE		2			
Ohio Avenue sewer line replacement	\$ 350,000	SC		X	X	CE		4			
Carter Avenue storm sewer rehabilitation	\$ 750,000	SS				CE		5			
Brown Avenue water main replacement	\$ 575,000	WD		X	X	D		2	X		X
Emergency generators	\$ 150,000	SC	X	X		CE		N/A			

8. Prioritize Projects Based on Criteria



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Project Name	Priority	Total Cost	Type	Mandate	H&S	O&M	RTP	ED	UL	FF/UAW	RO	BP
East side sanitary sewer rehab	1	\$ 1,000,000	SC	X	X	X	D		2			
Emergency generators	1	\$ 150,000	SC	X	X		CE		N/A			
Wastewater treatment plant improvements	1	\$ 2,400,000	ST	X	X	X	PTI	X	1		X	
Brown Avenue water main replacement	2	\$ 575,000	WD		X	X	D		2	X		X
First Avenue water main replacement	2	\$ 275,000	WD		X	X	D		1	X		X
Main Street water main replacement	3	\$ 625,000	WD		X	X	CE	X	3	X		X
Second Street water tank replacement	3	\$ 648,000	WD				CE		3			X
First Avenue sewer line replacement	4	\$ 250,000	SC		X	X	CE		2			
Ohio Avenue sewer line replacement	4	\$ 350,000	SC		X	X	CE		4			
Water treatment plant improvements	4	\$ 1,500,000	WT		X	X	CE		2		X	
Broadway tank demolition	5	\$ 500,000	WD				CE		5			
Carter Avenue storm sewer rehabilitation	5	\$ 750,000	SS				CE		5			
Water meter replacement	5	\$ 400,000	WD				CE		4	X		

9. Group projects for funding



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Project Name	Priority	Total Cost	Type
East side sanitary sewer rehab	1	\$ 1,000,000	SC
Emergency generators	1	\$ 150,000	SC
Wastewater treatment plant improvements	1	\$ 2,400,000	ST
Brown, First, Main water main replacement	2	\$ 1,475,000	WD
Second Street water tank replacement	3	\$ 648,000	WD
First and Ohio sewer line replacement	4	\$ 600,000	SC
Water treatment plant improvements	4	\$ 1,500,000	WT
Broadway tank demolition	5	\$ 500,000	WD
Carter Avenue storm sewer rehabilitation	5	\$ 750,000	SS
Water meter replacement	5	\$ 400,000	WD

10. Complete Schedule



Project Name	Priority	Total Cost	Type	Source	2018	2019	2020	2021	2022
East side sanitary sewer rehab	1	\$ 1,000,000	SC	OPWC/Local	\$ 1,000,000				
Emergency generators	1	\$ 150,000	SC	OEPA		\$ 150,000			
Wastewater treatment plant improvements	1	\$ 2,400,000	ST	USDA		\$ 2,400,000			
Brown, First, Main water main replacement	2	\$ 1,475,000	WD	OEPA/OPWC		\$ 1,475,000			
Second Street water tank replacement	3	\$ 648,000	WD	OWDA/Local			\$ 648,000		
First and Ohio sewer line replacement	4	\$ 600,000	SC	OWDA/Local			\$ 600,000		
Water treatment plant improvements	4	\$ 1,500,000	WT	OEPA				\$ 1,500,000	
Broadway tank demolition	5	\$ 500,000	WD	OWDA/Local					\$ 500,000
Carter Avenue storm sewer rehabilitation	5	\$ 750,000	SS	OPWC/Local					\$ 750,000
Water meter replacement	5	\$ 400,000	WD	Local					\$ 400,000

11. Complete Report



"Improving the quality of life in rural communities"

Village of Somerset Capital Improvement Plan for Water Facilities



Ohio RCAP
Administered by
WSOS Community Action Commission, Inc.
219 S. Front Street
Fremont, Ohio 43420
1-800-775-9767

Poll Time!



What do you think would be the most difficult step in completing a capital improvement plan?

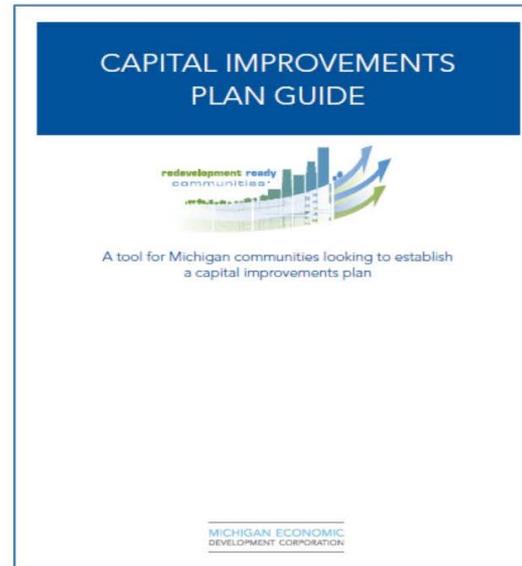
- a. Identify the team
- b. Establish rating criteria
- c. Identify project costs
- d. Complete criteria data
- e. Prioritize projects
- f. Complete the report
- g. Implement the plan

Resources



"Improving the quality of life in rural communities"

http://www.michiganbusiness.org/cm/Files/Redevelopment_Ready_Communities/CIP-guide.pdf



Resources



"Improving the quality of life in rural communities"

<http://www.mass.gov/dor/docs/dls/tab/cipguidefinal.pdf>

CAPITAL IMPROVEMENT PLANNING GUIDE

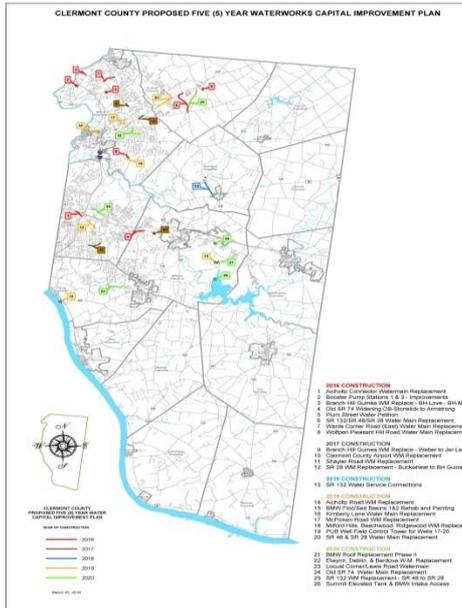
DEVELOPING A COMPREHENSIVE COMMUNITY PROGRAM

AUGUST 2016



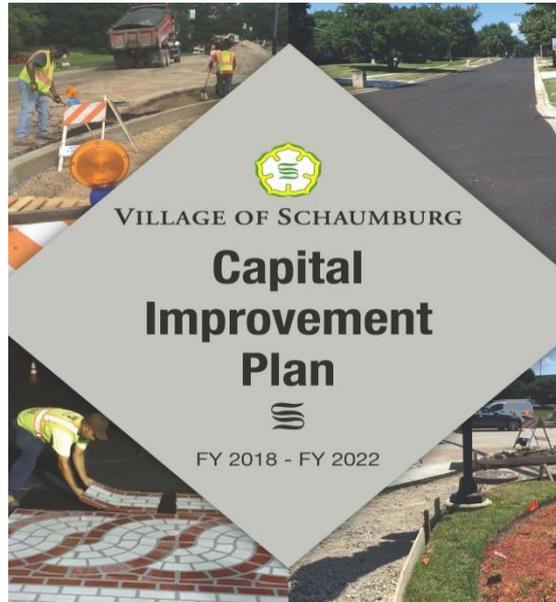
Resources

<http://wrd.clermontcountyohio.gov/capital-improvement/>



Resources

<http://www.ci.schaumburg.il.us/documents/Finance/CIP/FY%2018%20Final%20CIP-%20Web.pdf>



Resources



"Improving the quality of life in rural communities"

<http://www.dextermi.gov/capital-improvements-plan>

CITY OF DEXTER * CAPITAL IMPROVEMENTS PLAN

PROJECT NAME: Baker Road Watermain Replacement

PROJECT ID: 8.07 **PRIORITY:** IMPORTANT

PROJECT TYPE: Utility Construction **TOTAL COST:** \$750,000

SUBMITTED BY: City Staff **YEARS IN CIP (Beginning year):** 4 (2012)

DESCRIPTION: **LOCATION MAP:** Water Main from Baker to Jeffords

Upgrade portions of water main along Baker Road to meet the capacity needs of the corridor and to be redevelopment ready.

PROJECT JUSTIFICATION:
Value indicates the degree to which the project will help to: (Other Agencies: Municipal, Regional, Department, State, Federal)

3	Protect health, safety, lives of citizens
3	Maintain or improve public infrastructure, facilities
2	Reduce energy consumption, impact on the environment
2	Promote social, cultural, recreational, aesthetic opportunities
2	Improve customer services, convenience for citizens
12	TOTAL SCORE

BENEFICIAL IMPACTS:

May promote redevelopment, provides necessary capacity needs for existing and future uses.



MASTER PLAN AND/OR STUDY REFERENCE:

Water System Reliability Study (2005)

SCHEDULE:

	Start		End	
	Month	Year	Month	Year
Design/Acquisition:		2016		2016
Construction:		2017		2018

SCHEDULE JUSTIFICATION:

Project a priority due to the area and the potential for redevelopment. Project should be coordinated with potential sanitary sewer upgrades and streetscape projects.

PROJECT COST DETAIL:

Replace/Upgrade Water Main	Water Fund	\$750,000
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EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Water Fund				\$750				\$750
								\$0
								\$0
								\$0
TOTALS	\$0	\$0	\$0	\$750	\$0	\$0	\$0	\$750

Resources

http://www.town.northborough.ma.us/Pages/NorthboroughMA_WebDocs/FY2013Budget/Section9-CIP.pdf

*Proposed
Capital Improvement Program*



2013 - 2018

Town of Northborough, Massachusetts

Resources



"Improving the quality of life in rural communities"

<http://www.lebanonohio.gov/index.aspx?NID=331>

<http://hilliardohio.gov/government/departments/public-service/engineering-division/five-year-capital-improvements-program>

<http://www.fairfield-city.org/finance/capital.cfm>

<https://neorsd.org/cip.php>

<https://www.findlayohio.com/proposed-capital-improvements-plan/>

Poll Time!

What will be the most difficult part of implementing the capital improvement plan?

- a. Obtaining financing for each project.
- b. Achieving buy-in from the governing board.
- c. Meeting project schedules.

Want to learn more?

Please register for the rest of our webinar series and other Ohio RCAP training events this fall!

Visit www.ohiorcap.org!

Contact RCAP for help!



If you need more information preparing a capital improvement plan, or would like information about RCAP's services to help communities with inventory development, data collection, GIS development and mapping, asset management plan development, or rate studies, please contact us!

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jaward@wsos.org

740-743-1816

Thank you!

Please don't forget to fill out the evaluation form following this presentation!

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Division of Drinking and Groundwaters



Questions

