

PROJECT NAME: Second Street Watermain

PROJECT ID: 9.03

PRIORITY: IMPORTANT

PROJECT TYPE: Utility Construction

TOTAL COST: \$290,000

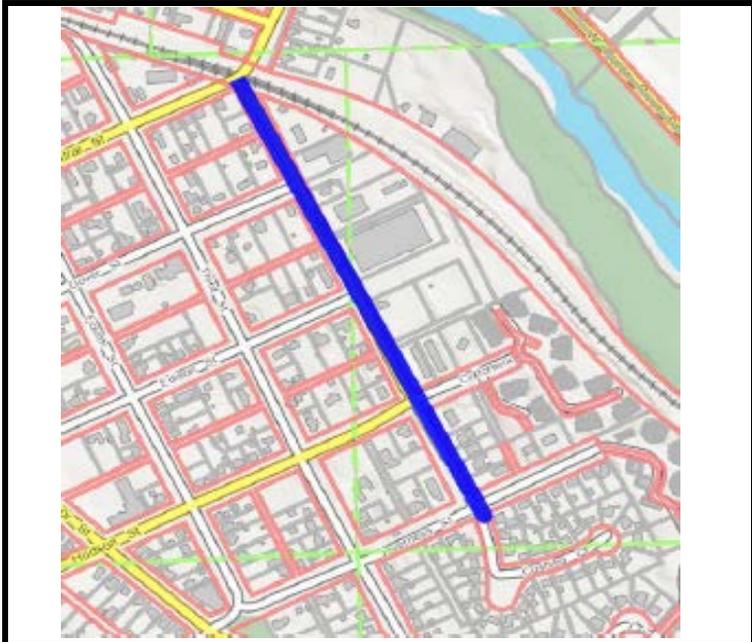
SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 3 (2013)

DESCRIPTION:

Replacement of 6" watermain on Second from Central to Cushing Court with 8" main; Approximately 2000 lineal feet.

LOCATION MAP: Second Street



PROJECT JUSTIFICATION:

Value indicates the degree to which the project will help to: 0=Not Applicable
1=Somewhat Important 2=Important 3=Very Important

1	Protect health, safety, lives of citizens
3	Maintain or improve public infrastructure, facilities
2	Reduce energy consumption, impact on the environment
1	Enhance social, cultural, recreational, aesthetics opportunities
3	Improve customer service, convenience for citizens
10	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		2020

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	\$0	\$290	\$290

PROJECT NAME: Water System - Equipment Assets

PROJECT ID: 9.04

PRIORITY: IMPORTANT

PROJECT TYPE: Asset maintenance

TOTAL COST: \$295,000

SUBMITTED BY: Asset Management Plan

YEARS IN CIP (Beginning year): 5 (2011)

DESCRIPTION:

Water system equipment assets in need of replacement over the next 5-10 years as identified in the Asset Management Plan as part of the DWRP Project Plan.

PROJECT JUSTIFICATION:

Value indicates the degree to which the project will help to: 0=Not Applicable 1=Somewhat Important 2=Important 3=Very Important

3	Protect health, safety, lives of citizens
3	Maintain or improve public infrastructure, facilities
2	Reduce energy consumption, impact on the environment
1	Enhance social, cultural, recreational, aesthetics opportunities
2	Improve customer service, convenience for citizens
11	TOTAL SCORE

BENEFICIAL IMPACTS:

Asset maintenance and management, budget planning.

LOCATION MAP: Throughout the Village Water System

Water System – Equipment Assets	Asset ID	Quantity	Unit Price	2010 Replacement Cost
3" Gate Valves (Filter #1 & #2)	013A	2	\$1,500	\$3,000
3/4" Gate Valves (Filter #1 & #2)	014A, 014B	2	\$50	\$100
Electric Distribution Panel (WTP)	210	1	\$1,200	\$1,200
Control System (WTP)	214	1	\$15,000	\$15,000
Transfer Switch (WTP)	213	1	\$15,000	\$15,000
Filter #1 & #2 (WTP)	012	2	\$75,000	\$150,000
Transformer (WTP)	211	1	\$1,000	\$1,000
Generator (WTP)	212	1	\$20,000	\$20,000
Electric Service Panel (WTP)	209	1	\$15,000	\$15,000
Detention Tank (WTP)	010	1	\$75,000	\$75,000
Subtotal Water System – Equipment Assets				\$295,300

MASTER PLAN AND/OR STUDY REFERENCE:

Asset Management Plan

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2010		2011
Design/Acquisition:		2011		2016
Construction:		2011		2020

As funding permits projects will be completed. For budgeting purposes project funding has been allocated evenly across 5-10 years.

PROJECT COST DETAIL:

See Location Map for detailed project list

Water Fund

\$295,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Water Fund	\$10	\$10	\$10	\$10	\$10	\$10	\$245	\$295
								\$0
								\$0
								\$0
TOTALS	\$10	\$10	\$10	\$10	\$10	\$10	\$245	\$295

PROJECT NAME: Water System - Building Assets

PROJECT ID: 9.05

PRIORITY: IMPORTANT

PROJECT TYPE: Asset maintenance

TOTAL COST: \$48,000

SUBMITTED BY: Asset Management Plan

YEARS IN CIP (Beginning year): 5 (2011)

DESCRIPTION:

Water system equipment assets in need of replacement over the next 5-10 years as identified in the Asset Management Plan as part of the DWRP Project Plan.

PROJECT JUSTIFICATION:

Value indicates the degree to which the project will help to: 0=Not Applicable 1=Somewhat Important 2=Important 3=Very Important

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

BENEFICIAL IMPACTS:

Asset maintenance and management, budget planning.

LOCATION MAP: Throughout the Village Water System

Water System – Building System Assets	Asset ID	Quantity	Unit Price	2010 Replacement Cost
Building Finishes (Generator Building)	124	1	\$5,000	\$5,000
Doors and Hardware (Generator Building)	125	1	\$3,000	\$3,000
Building Shell (Generator Building)	122	1	\$40,000	\$40,000
Subtotal Water System – Building Assets				\$48,000

MASTER PLAN AND/OR STUDY REFERENCE:

Asset Management Plan

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2010		2011
Design/Acquisition:		2012		2016
Construction:		2013		2020

As funding permits projects will be completed. For budgeting purposes project funding has been allocated evenly across 5-10 years.

PROJECT COST DETAIL:

See Location Map for detailed project list

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Water Fund				\$5		\$5	\$18	\$28
								\$0
								\$0
								\$0
TOTALS	\$0	\$0	\$0	\$5	\$0	\$5	\$18	\$28

PROJECT NAME: Emergency Water Storage

PROJECT ID: 9.06

PRIORITY: IMPORTANT

PROJECT TYPE: Water System Upgrades

TOTAL COST: \$1,300,000

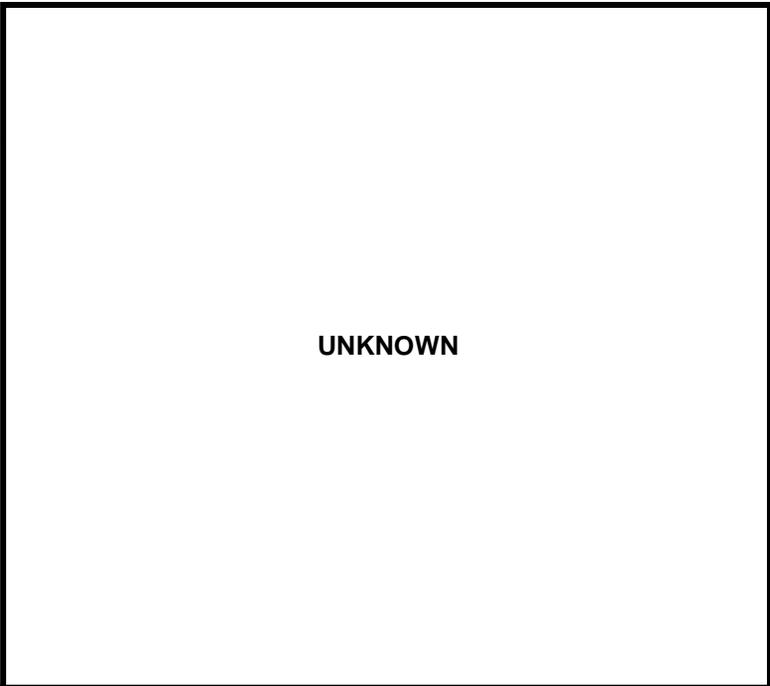
SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 11 (2005)

DESCRIPTION:

Construction of a new 300,000 gallon water tower as recommended by the MDEQ/MDNRE to met future design conditions and capacity requirements. Land Acquisition not included in cost estimate.

LOCATION MAP: LOCATION TBD



PROJECT JUSTIFICATION:

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

BENEFICIAL IMPACTS:

Protects the public and meets water system design needs and compliance with MDEQ/MDNRE recommendation.

MASTER PLAN AND/OR STUDY REFERENCE:

Water System Study 2005, Engineering Recommendations and MDEQ/MDNRE requirements

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2008		2009
Design/Acquisition:		2015		2016
Construction:		2016		2017

Drinking Water Revolving Funding (DWRf) awarded in 2010 for specific water system upgrades. Design and acquisition for a new water tower should be considered in a few years.

PROJECT COST DETAIL:

Water Tower Property Acquisition, Design and Construction

\$1,300,000

100% Federal Aid / DWRf Loan

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Federal Aid / DWRf Loan			\$1,300					\$1,300
								\$0
								\$0
								\$0
TOTALS	\$0	\$0	\$1,300	\$0	\$0	\$0	\$0	\$1,300

PROJECT NAME: Research Location of New Water Well (#6)

PROJECT ID: 9.08

PRIORITY: IMPORTANT

PROJECT TYPE: Water System Upgrades

TOTAL COST: \$165,000

SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 2 (2014)

DESCRIPTION:

Locate site of new water well (#6). City hired Williams and Works to do initial background to determine new water well location.

LOCATION MAP:



PROJECT JUSTIFICATION:

Value indicates the degree to which the project will help to: 0=Not Applicable
1=Somewhat Important 2=Important 3=Very Important

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

BENEFICIAL IMPACTS:

Increase water production to meet needs of City residents based on MDEQ/MDNRE requirements.

MASTER PLAN AND/OR STUDY REFERENCE:

Water System Study 2005, Engineering Recommendations and MDEQ/MDNRE requirements

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2008		2009
Design/Acquisition:		2015		2016
Construction:		2017		2018

Project a priority due to existing and future growth and development.

PROJECT COST DETAIL:

Well Construction 100% Federal Aid / DWRP Loan \$165,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Federal Aid / DWRP Loan		\$15		\$150				\$165
TOTALS	\$0	\$15	\$0	\$150	\$0	\$0	\$0	\$165

PROJECT NAME: Water Reliability Study and General Plan

PROJECT ID: 9.09

PRIORITY: URGENT

PROJECT TYPE: Water System Assess.

TOTAL COST: \$20,500

SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 0 (2016)

DESCRIPTION:

The Reliability Study focuses on planning items including population and water demands for three separate planning periods (existing, 5-year, and 20-year). The General Plan includes the hydraulic analysis of the system as well as the Capital Improvement Plan.

PROJECT JUSTIFICATION:

Value indicates the degree to which the project will help to: 0=Not Applicable 1=Somewhat Important 2=Important 3=Very Important

3	Protect health, safety, lives of citizens
3	Maintain or improve public infrastructure, facilities
3	Reduce energy consumption, impact on the environment
3	Enhance social, cultural, recreational, aesthetics opportunities
3	Improve customer service, convenience for citizens
15	TOTAL SCORE

BENEFICIAL IMPACTS:

Satisfies MDEQ regulatory requirement, and ensures safe drinking water.

LOCATION MAP:

The Reliability Study focuses on planning items including population and water demands for three separate planning periods (existing, 5-year, and 20-year). Average day, maximum day and peak hour water demand are calculated. Fire protection needs (typically based on zoning) are identified. The Reliability Study also documents the capacity of the existing water source, treatment, and storage and compares that capacity to the existing and future needs of the system.

The General Plan includes the hydraulic analysis of the system as well as the Capital Improvement Plan. The hydraulic analysis must include creation of pressure contour maps for the various water demand conditions for the three planning periods. Available fire protection must also be provided. In addition, a comprehensive map of the system showing service boundaries, location of water system components, water main size, material, age and the location of hydrants and valves must be shown. The final component of the General Plan is the Capital Improvement Plan. The Capital Improvement Plan must identify necessary system improvements for the 5-year and 20-year planning periods.

The Water Reliability Study must include the items listed under Part 12, Reliability, R 325.11203 and R 325.11204 of the Michigan Safe Drinking Water Act (Act 399) and also include Part 16, General Plans R 325.11604 through R 325.11606.

MASTER PLAN AND/OR STUDY REFERENCE:

Water System Study 2005, Engineering Recommendations and MDEQ/MDNRE requirements

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:	Jan	2016	Jun	2016
Design/Acquisition:		TBD		TBD
Construction:		TBD		TBD

The MDEQ requested the City perform a Water Reliability Study and General Plan. Must be completed by June 2016.

PROJECT COST DETAIL:

Study:	Water Fund	\$20,500
Design:	TBD	
Construction:	TBD	

EXPENDITURES (in thousands)

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