

PROJECT NAME: Stormwater Master Plan

PROJECT ID: 7.01

PROJECT TYPE: Stormwater Management

SUBMITTED BY: City Staff

PRIORITY: IMPORTANT

TOTAL COST: \$239,000

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

DESCRIPTION:

Comprehensive stormwater infrastructure analysis and study encompassing the entire City.

PROJECT JUSTIFICATION:

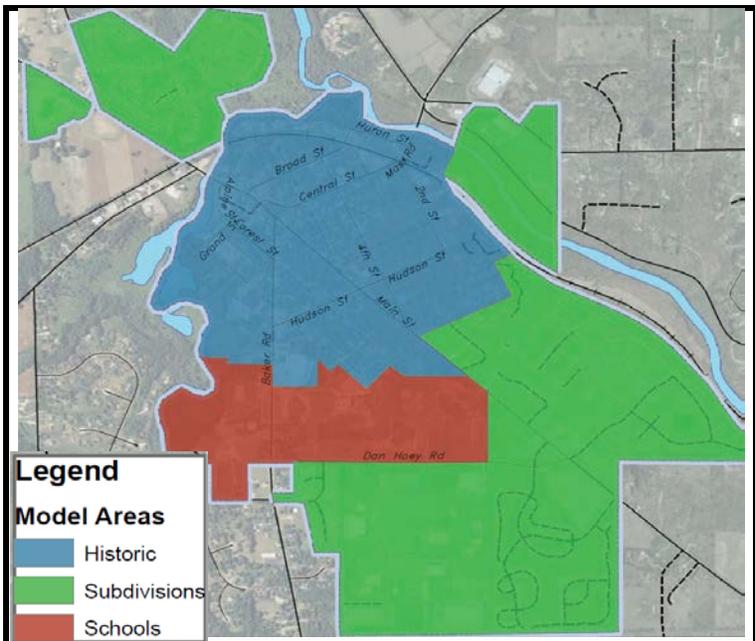
Value indicates the degree to which the project will help to: 0=Not Applicable
1=Somewhat Important 2=Important 3=Very Important

2	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
11	TOTAL SCORE

BENEFICIAL IMPACTS:

Tool to help better identify, prioritize, plan for and manage stormwater improvement projects.

LOCATION MAP:



MASTER PLAN AND/OR STUDY REFERENCE:

MS4 Permit; Stormwater Education; Long Range Planning for Stormwater needs

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2013		2014
Design/Acquisition:				
Construction:				

SAW Grant application submitted Dec 2014. While application not selected in SAW Lottery it remains eligible for funding in the future.

PROJECT COST DETAIL:

Major/Local Streets	\$20,200
S2 Grant	\$215,130
Schools	\$3,670

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Major/Local Streets				\$20				\$20
S2 Grant				\$215				\$215
Schools				\$4				\$4
TOTALS	\$0	\$0	\$0	\$239	\$0	\$0	\$0	\$239

PROJECT NAME: Regional Storm Basin

PROJECT ID: 7.03

PRIORITY: IMPORTANT

PROJECT TYPE: Stormwater Management

TOTAL COST: \$274,000

SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 7 (2009)

DESCRIPTION:

Construct a wetland within the Mill Creek watershed at the end of 2 storm outfalls along Baker Road behind the day care center. The wetland will serve as a stormwater treatment facility, educational area and can hold additional storm water generated from development in the area.

LOCATION MAP: West of Baker Road, north of schools



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
2	Enhance social, cultural, recreational, aesthetics opportunities
1	Improve customer service, convenience for citizens
12	TOTAL SCORE

BENEFICIAL IMPACTS:

Will improve the quality of up to 15% of the stormwater from the City entering the Mill Creek and reduce the nutrients, sediments, etc entering the creek and improve the natural habitat with the creek.

MASTER PLAN AND/OR STUDY REFERENCE:

Clean Michigan Initiative (CMI) Part 319 Grant Application 2009 and 2010, both denied - AND Mill Creek Park Master Plan

SCHEDULE:

	Start		End	
	Month	Year	Month	Year
Study:		2008		2009
Design/Acquisition:		2010		2011
Construction:		2011		2012

SCHEDULE JUSTIFICATION:

CMI Grant not awarded, application will be resubmitted as CMI priorities meet City needs. City should consider HRWC submittal of project based on funding awards in 2009. Project should be coordinated with other funded projects, including Mill Creek Park Development or private redevelopment of the former PILOT site on Grand Street. Project should also be included in Stormwater Asset Management Plan. This project is tied to ID #7.01.

PROJECT COST DETAIL:

Constructed Wetland	Major/Local Streets	\$69,000
	CMI 319 Grant	\$205,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Street Fund				\$69				\$69
CMI 319 Grant/Other				\$205				\$205
TOTALS	\$0	\$0	\$0	\$274	\$0	\$0	\$0	\$274

PROJECT NAME: Baker Road Storm Channel Rehabilitation

PROJECT ID: 7.04

PRIORITY: IMPORTANT

PROJECT TYPE: Stormwater Maintenance

TOTAL COST: Unknown

SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 7 (2009)

DESCRIPTION:

Rehabilitate the storm channel between the storm outlet from Baker Road and the proposed constructed wetland with pool steps and riparian buffers. Current channel heavily eroded from flash flows and likely contributes to significant sediment in Mill Creek.

LOCATION MAP: West of Baker Road north of schools



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
2	Enhance social, cultural, recreational, aesthetics opportunities
2	Improve customer service, convenience for citizens
13	TOTAL SCORE

BENEFICIAL IMPACTS:

Reduction of pollutants entering the Mill Creek, rehab of a channel that is heavily eroded, improve quality of stormwater entering the Mill Creek watershed.

MASTER PLAN AND/OR STUDY REFERENCE:

Clean Michigan Initiative (CMI) Part 319 Grant Application 2009 and Mill Creek Park Master Plan

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End		
	Month	Year	Month	Year	
Study:		2008		2009	Project important and should be considered when funding available. CMI Grants should be actively pursued.
Design/Acquisition:		2010		2010	
Construction:		2014		2015	

PROJECT COST DETAIL:

Channel Rehabilitation	Major/Local Streets	\$14,000
	CMI 319 Grant	TBD

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Streets Fund			\$14					\$14
CMI 319 Grant			TBD					\$0
TOTALS	\$0	\$0	\$14	\$0	\$0	\$0	\$0	\$14

PROJECT NAME: Fourth Street Storm Sewer

PROJECT ID: 7.05

PRIORITY: IMPORTANT

PROJECT TYPE: Storm Sewer Construction TOTAL COST: \$100,000

SUBMITTED BY: Utility Department

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

DESCRIPTION:

Construction of storm sewer near the old library site (Fourth Street between Central and Broad Streets) to reduce flooding and soil erosion. Curb and gutter should be considered to accommodate on street parking.

LOCATION MAP: Fourth St between Central and Broad



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:

Improve stormwater conveyance, eliminate yard flooding and eliminate erosion of roadway shoulder.

MASTER PLAN AND/OR STUDY REFERENCE:

Storm Water Management Study 2004 and OHM recommendation

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End		
	Month	Year	Month	Year	
Study:		2004		2005	Project should be coordinated with any redevelopment of the former library site OR should be completed following Fifth and Central Street drainage issues. This project is tied to ID#6.02.
Design/Acquisition:		2014		2015	
Construction:		2015		2016	

PROJECT COST DETAIL:

Storm sewer construction Major/Local Streets \$100,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Streets Fund				\$100				\$100
								\$0
								\$0
								\$0
TOTALS	\$0	\$0	\$0	\$100	\$0	\$0	\$0	\$100

PROJECT NAME: Grand Street Storm Sewer

PROJECT ID: 7.06

PRIORITY: IMPORTANT

PROJECT TYPE: Storm Sewer Construction

TOTAL COST: \$135,000

SUBMITTED BY: Utility Department

YEARS IN CIP (Beginning year): 7 (2009)

DESCRIPTION:

Adding storm sewer along Grand Street improves the redevelopment potential in accordance with the DDA Plan. Storm sewer is needed to convey water off-site and accommodate development. Swales would likely be used on south side of street. Water can be conveyed to Mill Pond park detention area for additional treatment.

LOCATION MAP: Grand Street between Baker and Mill Creek



PROJECT JUSTIFICATION:

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

2	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
10	TOTAL SCORE

BENEFICIAL IMPACTS:

Improves redevelopment potential, improves the City's storm sewer system, meets Phase 2 requirements.

MASTER PLAN AND/OR STUDY REFERENCE:

Storm Water Management Study 2004 and DDA Development Plan recommendations

SCHEDULE:

	Start		End	
	Month	Year	Month	Year
Study:		2004		2010
Design/Acquisition:		2014		2015
Construction:		2015		2016

SCHEDULE JUSTIFICATION:

Additional research will be necessary for project, should be coordinated with Mill Creek Park storm basin construction, water and sewer improvements slated inconjunction with redevelopment along Grand Street. This project is tied to the 3045 Broad Street (ID# 1.0) and Grand Street/Baker Road redevelopments.

PROJECT COST DETAIL:

Storm sewer construction	Major/Local Streets	\$135,000
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EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Streets Fund				\$135				\$135
								\$0
								\$0
								\$0
TOTALS	\$0	\$0	\$0	\$135	\$0	\$0	\$0	\$135

PROJECT NAME: Storm Outlet Rehabilitation

PROJECT ID: 7.07

PRIORITY: DESIRABLE

PROJECT TYPE: Storm Water Maintenance

TOTAL COST: \$200,000

SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 7 (2009)

DESCRIPTION:

Storm outlets within the City are in need of rehabilitation. Locations include outdoor lab outlet from Walkabout Creek and other small outlets into the Mill Creek and Huron River.

PROJECT JUSTIFICATION:

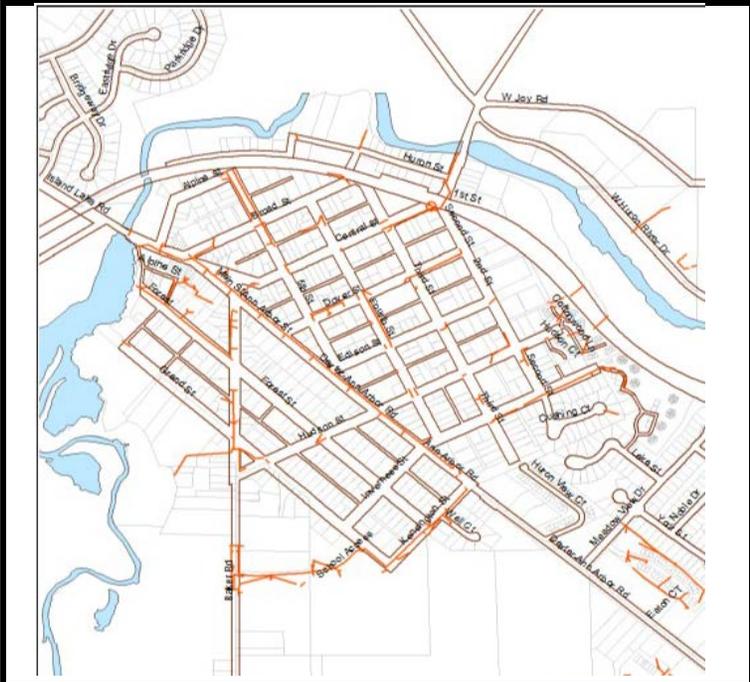
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3	Reduce energy consumption, impact on the environment
2	Enhance social, cultural, recreational, aesthetics opportunities
1	Improve customer service, convenience for citizens
11	TOTAL SCORE

BENEFICIAL IMPACTS:

Compliance with Phase 2 regulations, reduction in pollutants entering the Mill Creek and Huron River and improved infrastructure

LOCATION MAP:



MASTER PLAN AND/OR STUDY REFERENCE:

Storm Water Management Study 2004, Mill Creek Master Plan and regional trail coordination

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2011		2012
Design/Acquisition:		2013		2014
Construction:		2015		2016

Project is not a priority, however should be considered. Outlets at certain locations may be improved with other ongoing projects. Huron Street improvements completed in 2015.

PROJECT COST DETAIL:

Storm Outlet Rehabilitation Major/Local Streets \$200,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Streets Fund	\$30					\$200		\$200
								\$0
								\$0
								\$0
TOTALS	\$30	\$0	\$0	\$0	\$0	\$200	\$0	\$200

PROJECT NAME: Bio-retention systems

PROJECT ID: 7.08

PRIORITY: DESIRABLE

PROJECT TYPE: Stormwater Management

TOTAL COST: \$160,000

SUBMITTED BY: City Staff

YEARS IN CIP (Beginning year): 7 (2009)

DESCRIPTION:

Construct 12 vegetated swales within the right-of-way and 8 rain gardens on private property to help manage and treat stormwater and educate the public.

PROJECT JUSTIFICATION:

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

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

BENEFICIAL IMPACTS:

Improved stormwater quality entering the Mill Creek, reduction of pollutants entering the creek and public involvement and education.

LOCATION MAP:



MASTER PLAN AND/OR STUDY REFERENCE:

Clean Michigan Initiative (CMI) Part 319 Grant Application 2009 and 2011 - denied

SCHEDULE:

SCHEDULE JUSTIFICATION:

	Start		End	
	Month	Year	Month	Year
Study:		2008		2011
Design/Acquisition:		2015		2015
Construction:		2016		2017

Project only a priority with grant funding. CMI Grants should be actively pursued. This project is tied to ID# 7.01.

PROJECT COST DETAIL:

Bio-Retention Swales/Raingardens	Major/Local Streets	\$60,000
	CMI 319 Grant	\$100,000

EXPENDITURES (in thousands)

Funding Source	Prior Yrs	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	Beyond FY21	TOTALS
Streets Fund							\$60	\$60
CMI 319 Grant/Other							\$100	\$100
TOTALS	\$0	\$0	\$0	\$0	\$0	\$0	\$160	\$160