

SECTION 8 - ACTION PLAN

The Broad Goals were refined by the Shiawassee River Watershed workgroup. They were then ranked reviewed by stakeholders and the public. Throughout the process, specific actions or concerns were proposed by the public or stakeholders and implemented whenever possible to create Goals 1 through 5, their objectives and specific actions. Goal 6 and 7 is taken from the NPDES Ph 2 permit language. Goal 8 was added to address sustainability issues that did not fit under the other goals.

Public Act (PA) 342 of 1939

In 2001, the Board of Commissioners of Genesee County made a resolution to establish the Genesee County Drain Commissioner's Office the agency for the County to provided for the management and operation of a system of storm water management services pursuant to the above act, to enable the County and cities, townships and charter townships located within the County to comply with the requirements of the Phase II regulations and also to engage in other watershed management activities necessary for the public health and welfare of the residents of those cities, townships and charter townships. Because of the PA 342, the Drain office was able to sign a contract with the communities to provide services.

(See Section 7 for details)

Throughout the action plan under the Labor Hours & Material cost estimate section many of the line items indicate E342C. This code indicates that these are services provided or costs included in the contract between the Drain office & the communities.

Although all Genesee County Communities have signed a contract with the Drain office to provide services, only those Phase II communities that have a certificate of coverage (permittees) are shown in the action plan.

Genesee County is the NPDES permit holder. Within the action plan, various County departments are named as the responsible agency for specific actions.

Specific actions within the action table that must be performed or done by each permittee are highlighted in gray. Other actions are done by committee or when necessary, by contract with a third party.

Schedule: Definitions of terms

S	Short term (Before May 1, 2009)
L	Long term (after May 1, 2009)
W	Wish List (no commitment or means)
N/A	Not Applicable
C	Complete (specific action complete)
O	Ongoing (currently being done and will continue being done)

Other Definitions

E342C	Contract for Services between Communities and Drain Office
TBD	To be Determined
BMP	Best Management Practices
MM	Monitoring & Mapping
PE	Public Education
NRCS	Natural Resources Conservation Service
FRWC	Flint River Watershed Coalition
SWM	Genesee County Drain Commissioner's Office- Surface Water Management
WWS	Genesee County Drain Commissioner's Office-Water and Waste Management
Ad hoc	The Ad hoc Committees are formed to work on a specific objective until complete.

*Livingston & Oakland Counties made commitments under different WMP's see page 117 for details

GOAL #1 – PROTECT PUBLIC HEALTH

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Ordinance to have septic systems inspected at "time of sale"	Draft an ordinance requiring inspection of septic systems at time of property sale. (County Wide)	Health Dept WWS BMP Committee	S	E342C 80-100 hours \$5,000 - \$10,000
	Develop fee structure options for septic ordinance.	Health Dept WWS BMP Committee	S	E342C 80-200 hours \$5,000 - \$10,000
	Responsible permittees will adopt new ordinance for septic inspection. Non Responsible Permittees will support the ordinance.	County Phase II Permittees	S	E342C 20-100 hours legal fees per comm.
	Responsible permittees will make appropriate staff available to be trained on enforcement.	Health Dept or responsible permittee	S	E342C \$300-\$2000 100-400 hours
	Enforcement of the new septic ordinance	Health Dept or responsible permittee	L	Cost and Hours TBD
	Develop & implement septic system tracking program for evaluation purposes.	Health Dept SWM	L	Cost and Hours TBD
Develop Educational Materials For Homeowners With Septic Systems to be Given at "Time of Sale" Main Topic: Septic System Maintenance. Other Topics: Include Lawn Maintenance, Auto Care, Well Water, Household Hazardous Waste Disposal, and well protection	Explore funding options. Potentially use advertising to fund costs.	PE Committee	S	40-200 hours of prioritizing and finding funding
	Develop partnership with local organizations, such as real estate agents. to promote and distribute information on septic systems.	SWM PE Committee	S	\$1-\$3 ea 500 - 1000 packets \$500 - \$3000 Total 40-100 hours of development, 20-50 hours of distribution
	Implement distribution of booklet for new homeowners with septic systems.	PE Committee Phase II Permittees	S	Costs TBD, dependent on distribution method
	Develop tracking mechanism for evaluation purposes.	PE Committee	S	Brochures \$2000-\$10,000; 120 hours of organizing mailing

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
1 a		1	Draft ordinance is produced and adopted by Committee	Y	Dec 08'	Dec 08'	Dec 08'	Dec 08'	Dec 08'			Dec 08'
		2	Document that outlines fee options and evaluates the practicality of each of them. Adoption of a funding options)	Y	Dec 08'	Dec 08'	Dec 08'	Dec 08'	Dec 08'			Dec 08'
		3	No. of communities supporting ordinance.	Y	May 09'	May 09'	May 09'	May 09'	W			May 09'
		4	Attendance to Training	Y	N/A	N/A	N/A	N/A	N/A			May 09'
		5	No. of Inspections Long Term Failure Rate Trend. Improvement in water quality, especially in rural areas.	Y	N/A	N/A	N/A	N/A	N/A			2011
		6	No. of Inspections Long Term Failure Rate Trend	Y	N/A	N/A	N/A	N/A	N/A			2011
1 b		1	Memo on options Presentations to appropriate authorities Adoption of a funding option	Y	Dec 08'	Dec 08'	Dec 08'	Dec 08'	Dec 08'			Dec 08'
		2	Distribution channels are established and maintained. No. of packets distributed by partners.	Y	Dec 08'	Dec 08'	Dec 08'	Dec 08'	Dec 08'			Dec 08'
		3	Count # packets distributed Targeted Public Survey by PEP No. of Volunteers	Y	May 09'	May 09'	May 09'	May 09'	May 09'			May 09'
		4	No. of packets printed and distributed by Permittees and organization. Social Survey	Y	May 09'	May 09'	May 09'	May 09'	May 09'			May 09'

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Ordinance for Disconnecting of Footing Drains From Sanitary to Reduce Sanitary Sewer Overflows	Draft ordinance to disconnect footing drains.	WWS BMP Committee	W	E342C 100-200 hours \$5,000 - \$10,000
	Develop fee structure options to fund ordinance.	WWS BMP Committee	W	E342C 80-200 hours \$5,000 - \$10,000
	Responsible Permittees will Adopt new footing drain ordinance. Non- responsible Permittees will support ordinance.	Phase II Permittees	W	E342C 20-100 hours legal fees per comm.
	Responsible permittees will make appropriate staff available to be trained on enforcement.	WWS Phase II Permittees	W	E342C Advertising: \$300-\$2000 100-400 hours
	Provide Permittees with education material for homeowners outlining disconnection options that promote storm water infiltration.	PE Committee	W	E342C
	Distribute education material through municipalities	PE Committee Phase II Permittees	W	Cost and Hours TBD
	Enforce new footing drains ordinance.	WWS Phase II Permittees	W	Cost and Hours TBD
	Develop database and track disconnecting footing drains throughout the community.	WWS Phase II Permittees	W	Cost and Hours TBD
Identify Existing Wellhead Protection Programs	Work with MDEQ to identify existing wellhead protection programs within watershed	MM Committee Ad hoc Committee	W	Cost and Hours TBD
	Identify responsible parties that would benefit from a Wellhead protection program	MM Committee Ad hoc Committee	W	Cost and Hours TBD
	Communities will examine potential to participate in the development of new wellhead protection program	MM Committee Ad hoc Committee	W	Cost and Hours TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
1 c		1	Draft ordinance is produced and adopted by Committee		W	W	W	W	W			W
		2	Document that outlines fee options and evaluates the practicality of each of them. Adoption of a funding options)		W	W	W	W	W			W
		3	No. of ordinances supported locally		W	W	W	W	W			W
		4	Attendance to Training		W	W	W	W	W			W
		5	Number of disconnections. Percent of those that encourage storm water infiltration.		W	W	W	W	W			W
		6	Number of education material distributed by each permittee		W	W	W	W	W			W
		7	No. of footing drains removed. Long Term SSO Trend		W	E	E	E	W			W
		8	Creation of tracking system. Statistics on "disconnections" No. of Disconnections		W	W	E	E	W			W
1 d		1	Done		W	W	E	W	W			W
		2	List of potential Wellhead protection programs		W	W	E	W	W			W
		3	New wellhead protection program adoption. Future recognition of WHP in WMP		W	W	E	W	W			W

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Ordinance for testing drinking water wells at time of sale	Draft ordinance requiring testing of drinking water wells at time of sale.	Health Dept BMP Committee	W	E342C 100-500 hours \$5,000 - \$15,000
	Develop fee structure options for ordinance.	Health Dept WWS BMP Committee	W	E342C 80-200 hours \$5,000 - \$10,000
	Permitees to adopt new drinking water well ordinance.	Phase II Permitees	W	E342C 20-100 hours legal fees per community
	Responsible permittees will make appropriate staff available to be trained on new ordinance.	Health Dept or Phase II Permitees	W	E342C Advertising: \$300-\$2000 100-400 hours
	Permitees to enforce new ordinance.	Health Dept or designated permittee	W	TBD as part of ordinance
	Develop and implement tracking system	Phase II Permitees	W	Cost and hours TBD
Map arsenic levels for drinking wells	Identify existing arsenic levels that have been tested in the watershed	Health Dept M&M Committee	W	Cost and Hours TBD
	Make information available to decision makers and general public	To be Determined	W	Cost and Hours TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
1 e		1	Draft ordinance is produced and adopted by Committee		W	W	W	W	W			W
		2	Document that outlines fee options and evaluates the practicality of each of them. Adoption of a funding options)		W	W	W	W	W			W
		3	No. of ordinances supported locally		W	W	W	W	W			W
		4	Attendance to Training No. of advertisements.		W	W	W	W	W			W
		5	# of Inspections Long Term Trend. Improvement in water quality, especially in rural areas.		W	W	W	W	W			W
		6	Number of tests performed Test results		W	W	W	W	W			W
1 f		1	Production of a County map indicating arsenic levels		W	W	W	W	W			W
		2	# of hits on website No. of maps distributed. No. of drinking water tests requested.		W	W	W	W	W			W

GOAL #2 – ESTABLISH A WATERSHED STEWARDSHIP ETHIC AMONG THE PUBLIC

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Educate the public about the 7 required education elements (As outlined on page 54)	Update www.ClearGeneseeWater.org with watershed wide educational material, monitoring results, permit information, meeting information and committees as needed.	PE Committee	O	E342C Part of Education Media Campaign Budget 80-200 hours/ year
	Place link on website connecting to above website if available.	Phase II Permitees	S	Cost Varies Time Varies
	Develop print media to educate public.	PE Committee	C	E342C \$2000-\$5000 60 hours
	Distribute media through municipalities.	SWM Phase II Permitees	O	E342C Part of Public Ed Budget 20 hours/ year
	Develop evaluation method to track effectiveness of media	PE Committee	S	Cost and Hours TBD
Direct Mailing to Riparian Land owners (Rivers/Lakes)	Design riparian landowner educational materials emphasizing protecting and managing the riparian corridor.	PE Committee	S	Brochures Part of Education Media Campaign Budget \$2,000-\$10,000
	Develop & maintain a list of riparian landowners.	PE Committee	S	Develop Cost Analysis 20 hours per community
	Implement direct mailings to land owners and updating public education materials.	PE Committee	S	\$4,000 - \$8000 30+ hours
	Develop evaluation method to track effectiveness of program	PE Committee	S	Cost and Hours TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
2 a	1	No. of hits on website and downloads. List of information kept on website.		Y	E	E	E	E	E			E
	2	Counters recording number of hits on permittees websites		Y	Jun 08'	Jun 08'	Jun 08'	Jun 08'	Jun 08'			E
	3	Print material developed		Y	E	E	E	E	E			E
	4	No. of ad's, print material and units distributed (etc.) by each permittee Social survey		Y	E	E	E	E	E			E
	5	No. of ad's, print material and units distributed (etc.) by each permittee Social survey		Y	Jun 08'	Jun 08'	Jun 08'	Jun 08'	Jun 08'			Jun 08'
2 b	1	Creation of riparian landowner brochure.		Y	Jun 08'	Jun 08'	Jun 08'	Jun 08'	Jun 08'			Jun 08'
	2	List developed with regularly scheduled updates (5 yrs)		Y	Jun 08'	Jun 08'	Jun 08'	Jun 08'	Jun 08'			Jun 08'
	3	No. of information packets distributed No. of hits on web site. Returned postcard from newsletter		Y	Jun 08'	Jun 08'	Jun 08'	Jun 08'	Jun 08'			Jun 08'
	4	No. of information packets distributed No. of hits on web site. Specific Survey		Y	Jun 08'	Jun 08'	Jun 08'	Jun 08'	Jun 08'			Jun 08'

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Partner with existing household hazardous waste (HHW) program committee to increase awareness and use	Meet with existing household hazardous waste program committee. Investigate options to assist program.	PE Committee HHW committee	W	10- 20 hours
	Conduct needs assessment that includes determining collection dates (annually, monthly or weekly) and locations.	Program Organizers PE Committee	W	Cost TBD 40-80 hours
	Determine feasibility of implementing recommendations from needs assessment.	Program Organizers PE Committee	W	\$1000 - \$5000
	Implement recommendations from needs study as completely as is feasible and identify future opportunities and actions.	SWM HHW Organizer	W	Cost and time TBD
Enhance Existing Benthic Monitoring Program (Description and results on pg 33-35)	Meet with Flint River Watershed Coalition (FRWC) to identified opportunities to develop partnership(s).	MM Committee	C	Cost negligible 5 hours
	Identify additional stream segments that would be desirable to gather macroinvertebrate sampling data on.	FRWC	C	Costs Negligible 10-20 hours
	Determine what additional resources are needed to expand the monitoring program.	MM Committee FRWC	O	20 hours to meet to negotiate contract with FRWC
	Implement a yearly schedule and set up dead lines displaying when stream sections will be inventory yearly.	FRWC SWM MM Committee	O	E342C contract done by FRWC
	Sign contract with FRWC to provide Benthic Monitoring	FRWC SWM MM Committee	C	\$5150.00 / yr
	Review Results from past seasons. Current results will be reviewed each year after monitoring.	MM Committee SWM	S	E342C Costs and hours TBD
	Conduct monitoring	FRWC	O	Done by FRWC

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
2 c	1	1	Increased demand/use of HHW program		W	W	W	W	W			W
		2	List of potential improvements		W	W	W	W	W			W
		3	Document that outlines fee options and evaluates the practicality of each of them. Adoption of a funding options)		W	W	W	W	W			W
		4	Long-term: reduction of the presence of HH chemical in water quality monitoring samples.		W	W	W	W	W			W
2 d	1	1	The 16 sites in Genesee county are tested consistently twice a year	Y	E	E	E	E	E			E
		2	Additional sites are identified.	Y	E	E	E	E	E			E
		3	Report of estimated additional resources needed.	Y	E	E	E	E	E			E
		4	Schedule set	Y	E	E	E	E	E			E
		5	Sign Contract	Y	E	E	E	E	E			E
		6	Trend data is entered and analyzed All monitoring activities should be related together (e.g. road/stream, WQ)	Y	E	E	E	E	E			E
		7	Track WQ improvements over the permit cycle	Y	E	E	E	E	E			E

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Enhance Existing Project GREEN Program	Sign Contract with FRWC to administer program	SWM FRWC	C	\$7500 / yr
(for further information see page 36).	Identify local schools to participate. Meet with school district representatives	FRWC	O	E342C Done by contract with FRWC
	Increase number of classes involved with program	FRWC	O	
	Conduct monitoring	FRWC Participating Schools	O	120+ hours/year
	Review Results	FRWC MM Committee	S	E342C Up to \$5000 20 hours/mo
Stream Crossing Watershed Survey with Photography.	Develop road stream inspection program. (Identify road/stream crossings, information collected)	MM Committee GCRC	C	Partner w/ existing GCRC bridge program. Total Additional Cost \$500-\$2000
	Determine implementation options and responsibilities.	MM Committee GCRC	C	E342C 20 hours
	Provide training to personnel responsible for completing survey	MM Committee Consultant	O	E342C 20 hours
	Conduct survey based on a schedule developed	MM Committee GCRC Consultant	S	E342C 80 hours
	Review results	MM Committee SWM	S	E342C Costs and hours TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
2 e		1	Contract Signed	Y	E	E	E	E	E			E
		2	Organizations that participate are identified No. of classes participating in project Green.	Y	E	E	E	E	E			E
		3	Number of classes participating increase	Y	E	E	E	E	E			E
		4	Samples of DO, Ammonia, Nitrate, PH, Phosphate, and temperature are collected regularly. Monitoring is completed and results are compiled	Y	E	E	E	E	E			E
		5	Results provided for all sites. Trend data is entered and analyzed	Y	E	E	E	E	E			E
2 f		1	Documentation of water and stream characteristics, plant life, foam, trash, etc.	Y	E	E	E	E	E			E
		2	Memo on options Presentations to appropriate authorities	Y	E	E	E	E	E			E
		3	No. of people trained. Program sustained over time.	Y	E	E	E	E	E			E
		4	Schedule is created and implemented. Photos are taken, reports are written	Y	Dec 08'	Dec 08'	Dec 08'	Dec 08'	Dec 08'			Dec 08'
		5	Data entered and analysis performed.	Y	Dec 08'	Dec 08'	Dec 08'	Dec 08'	Dec 08'			Dec 08'

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Hot Spot Water Quality Monitoring for MS4's as needed	Identify initial list of target sites, chemical tests, parameters and collection method.	MM Committee	O	Cost are as needed, comes out of E342C
	Determine testing needed for each site.	MM Committee	C	Costs and time will vary
	Create a protocol manual for fieldwork crews (lab results parameters and collection methods).	Consultant	C	E342C 10 hours
	Schedule and conduct field work done by professionals (Consultants)	Consultant	O	\$1000-\$1500 per site.
	Review Results	MM Committee Consultant	O	Database costs are part of contract with Tetra Tech

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
2	g	1	Documentation of water quality associated with hot spots.	Y	E	E	E	E	E			E
		2	Plan and needs assessment created Advanced sample collection needs to be done by professionals	Y	E	E	E	E	E			E
		3	Sites and protocols established	Y	E	E	E	E	E			E
		4	Schedule established, WQ samples collected	Y	E	E	E	E	E			E
		5	Trend data is entered and analyzed All monitoring activities should be related together (e.g. road/stream, WQ)	Y	E	E	E	E	E			E

GOAL #3 – REDUCE IMPACT FROM PEAK FLOWS

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Storm Water Ordinance	Create a storm water design standards/site plan manual.	SWM	S	E342C 200 - 2000 hrs
	Develop table that will show how much the installed BMP's will reduce or prevent post-construction impacts on water quality	BMP Committee	L	Budget and time will vary for each permittee
	Draft a stormwater ordinance that refers to the design/site plan manual that considers quantity and quality BMP's.	BMP Committee	S	E342C Costs TBD 40 -200 hrs per committee members
	Develop new County site plan review process with the following steps: Step 1: Pre-Development Step 2: Prepare site plan Step 3: Coordinated County Review Step 4: Municipal Review Step 5: Site Plan Step 6: Approval	BMP Committee	L	E342C Costs- \$5000 Hours 200+
	Develop permit fee structure to cover the cost of processing and enforcement with provision for future adjustments.	BMP Committee	L	E342C 20-100 hours \$2,500 - \$3,000
	Facilitate community acceptance through public forms and information packets.	Phase II Permittees	L	40 -200 hrs per community
	Permittees to approve/adopt ordinance.	Phase II Permittees	L	Budget and time will vary
	Responsible permittees will make appropriate staff available to be trained on the storm water ordinance, process and design manual.	BMP Committee	L	\$500 10 hours
	SWM Permittees to enforce new storm water ordinance.	Phase II Permittees	L	3 - 4 staff \$120-160 K/yr

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
3	a	1	Creation of a design manual	Y	Aug 08'	Aug 08'	Aug 08'	Aug 08'	Aug 08'			Aug 08'
		2	Mechanism developed to track quantity and types of pollutants removed by various BMP's	Y	2009	2009	2009	2009	2009			2009
		3	Draft ordinance is produced	Y	May 08'	May 08'	May 08'	May 08'	May 08'			May 08'
		4	Process is adopted and followed by county and communities. New development begins to take different form.	Y	2009	2009	2009	2009	2009			2009
		5	Document that outlines fee options and evaluates the practicality of each of them. Adoption of a funding option(s)	Y	2009	2009	2009	2009	2009			2009
		6	Information sessions. No. of information packets distributed by Permittees	Y	2009	2009	2009	2009	2009			2009
		7	No. of Communities that adopt ordinance,	Y	2009	2009	2009	2009	2009			2009
		8	No. of participants in training Advertising of training	Y	2010	2010	2010	2010	2010			2010
		9	No. of citations No. of developments going thru the process.	Y	2010	2010	2010	2010	2010			2010

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Pursue restoration projects on natural watercourses	Develop list of pollution problems along Natural Watercourses not covered by IDEP. (I.E.Bank erosion...)	MM Committee	W	Negligible
	Identify problem areas and prioritize.	MM Committee	W	Negligible
	Determine mechanism under which maintenance/repair can be done to Natural Watercourses	MM Committee	W	Will have to be funded outside of E342C. Grants are most likely
	Provide maintenance or repair to natural watercourse	MM Committee Phase II Permittees	W	E342C 200+ hours Costs TBD
Preserve existing floodplains and wetlands from being filled or developed	Establish criteria that will be used to Identify and prioritize existing wetlands and floodplains	SWM	W	100 + hours Cost nominal
	Identify existing floodplains and wetlands	SWM	W	E342C 120 hrs @ \$50 hr = \$6000 FEMA floodplain is start
	Prioritize existing floodplains and wetlands based on amenity and ability to protect	SWM	W	E342C 40 hrs @ \$50 hr=\$2000
	Determine mechanism under which floodplains & wetlands can be preserve (May include ordinances)	Ad hoc Committee Phase II Permittees	W	Cost shared, TBD
	County and communities implement recommended mechanism's).	County Phase II Permittees	W	Cost shared, TBD
Monitor water quantity to measure hydraulic change within watercourses	Gather data from existing stream gauges and corresponding rain gauges.	MM Committee	W	E342C Costs and hours TBD
	Track water flows as they relate to rain events	SWM	W	E342C Costs and hours TBD
	Review Results	SWM	W	E342C Costs and hours TBD
	Add stream/ precipitation gages as needed in key locations.	MM Committee WWS	W	E342C Costs and hours TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
3 b		1	Work list is developed. Regular updating of inventory		W	W	W	W	W			W
		2	List problem areas as committee becomes aware of them. Problems ranked.		W	W	W	W	W			W
		3	List of options is created		W	W	W	W	W			W
		4	Corrective measures proposed and implemented		W	W	W	W	W			W
3 c		1	Criteria created		W	W	W	W	W			W
		2	List created		W	W	W	W	W			W
		3	Prioritization list is developed.		W	W	W	W	W			W
		4	List of options is created.		W	W	W	W	W			W
		5	Plan for protection is devised. Permitees follow plan. Reduction in the rate of loss of wetlands / floodplain dev.		W	W	W	W	W			W
3 d		1	Establish baseline measure		W	W	W	W	W			W
		2	Use baseline measure to gage future flows vs. current flows		W	W	W	W	W			W
		3	Trend data is entered & analyzed All monitoring activities should be related together (e.g. road/stream, WQ)		W	W	W	W	W			W
		4	Gauges added.		W	W	W	W	W			W

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Produce demonstration projects for (Low Impact Development) for new and retrofit sites	Identify potential existing sites for retrofit with bio-retention. Either on permittee property or by education of private development.	BMP Committee	W	Costs and hours TBD
	Create education materials for permittees and developers	BMP Committee	W	
	Educate developers on the benefits of incorporating low impact development into their site design.	BMP Committee	W	Costs and hours TBD
	Develop mechanism for providing funding or incentives to implement low impact development.	BMP Committee	W	Not part of the E342C Budget
	Have demonstration sites built.	Developer or Permittee	W	Costs and hours TBD
	Track reduction of flow/pollutants	SWM	W	Costs and hours TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
3 e	1		Sites identified and opportunities for redevelopment evaluated.		W	W	W	W	W			W
	2		Relationships have been developed and an indication of their willingness to partner on a project.		W	W	W	W	W			W
	3		Documentation of potential funding schemes and sources.		W	W	W	W	W			W
	4		# of sites built		W	W	W	W	W			W
	5		Flow meters or other measurement devices.		W	W	W	W	W			W
	6		# of Field trips, Presentations, signage, etc.		W	W	W	W	W			W

GOAL #4 - CREATE, RESTORE & ENHANCE RECREATIONAL USE

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Educate Public about recreational opportunities near/ on the water	Promote recreational programs (website, brochures, and community news.)	PE Committee Phase II Permittees	S	E342C – Costs and hours TBD
	Distribute materials on recreational programs through municipalities	PE Committee Phase II Permittees	S	E342C- Costs and hours TBD
Protect /Expand Parks Trails and River Walk System	Coordinate with existing Greenways Initiative to compile a list of existing and proposed greenways	PE Committee	W	E342C Costs and hours TBD
	Prioritize list for protection and for future enhancements (e.g. increased accesses)/ acquisition of property- if necessary	PE Committee	W	- Costs TBD 80 200 hours for committee & contractor
	Develop plan for acquiring land (along water) for recreation/ Wildlife protection	PE Committee	W	E342C - Costs TBD 80 200 hours for committee & contractor
	Implement plan based on list of priorities and sign contracts if necessary	PE Committee SWM Phase II Permittees	W	E342C - Costs TBD 80 200 hours for committee & contractor

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
4 a	1	# of hits on recreation page of website # of flyers distributed		Y	Jan 09'	Jan 09'	Jan 09'	Jan 09'	Jan 09'			E
				Y	Jan 09'	Jan 09'	Jan 09'	Jan 09'	Jan 09'			E
4 b	1	Meeting with Greenways List of proposed areas compiled.			W	W	W	W	W			W
					W	W	W	W	W			W
					W	W	W	W	W			W
					W	W	W	W	W			W
	2	List of prioritized areas is created.		W	W	W	W	W			W	
	3	Acres of Land Acquired. List of methods developed		W	W	W	W	W			W	
	4	Acres of Land Acquired. Natural land vs. developed land calculations		W	W	W	W	W			W	

GOAL #5 - RESTORE & PROTECT AQUATIC LIFE, WILDLIFE & HABITAT

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Establish vegetative buffer areas adjacent to sensitive areas	Draft Buffer Strip Ordinance	BMP Committee	L	E342C 100-500 hours \$5,000 - \$15,000
	Develop fee structure options for buffer strip ordinance.	BMP Committee	L	E342C \$5000
	Permitees adopt new ordinance.	County Phase II Permitees	L	20- 100 hours legal fees vary by community
	Responsible permittees will make appropriate staff available to be trained about the new buffer ordinance.	To be determined	L	10 hours per community staff costs vary by community
	Permitees to enforce new stream buffer strip ordinance.	Phase II Permitees	L	Enforcement costs will vary by community
	Develop tracking method for enforcement	Phase II Permitees	L	Costs and hours TBD
Protect key locations of threatened and endangered species and habitat	Identify key locations of threatened and endangered species and habitat. using Natural Features Inventory	MM Committee	W	Ongoing Program with MSUE 60 hours for committee, 100 hours for contractors
	Develop plan to protect areas, or stabilize and enhance habitat	MM Committee	W	E342C 200 = hours Costs TBD
	Adopt plan	Phase II Permitees	W	Costs and hours TBD
	Permitees to implement protection plan for threatened/endangered species.	Phase II Permitees	W	Costs and hours TBD

Goal	Objective	Action	Evaluation Mechanism(Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
5 a		1	Draft ordinance is produced	Y	2010	2010	2010	2010	2010			2010
		2	Document that outlines fee options and evaluates the practicality of each of them. Adoption of a funding option(s)	Y	2010	2010	2010	2010	2010			2010
		3	No. of ordinances supported locally	Y	2011	2011	E	2011	2011			2011
		4	Attendance to Training	Y	2011	2011	2011	2011	2011			2011
		5	Citations issued. No. of miles of buffer strips implemented.	Y	2012	2012	E	2012	2012			2012
		6	Citations issued. No. of miles of buffer strips implemented	Y	2012	2012	E	2012	2012			2012
5 b		1	List created		W	W	W	W	W			W
		2	Develop Plan and Options for implementation		W	W	W	W	W			W
		3	Plan is adopted		W	W	W	W	W			W
		4	Plan is implemented locally. No. of Acres of habitat areas are preserved.		W	W	W	W	W			W

GOAL #6 – MDEQ REQUIREMENT – GOOD HOUSEKEEPING ACTIVITIES

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Ensure Maintenance activities, schedules, and inspection procedures for storm water structural controls (SWSC) as appropriate.	Develop or adopt a BMP manual to provide Permittees with maintenance procedures to be implemented for Good Housekeeping Activities	Phase II Permittees	S	Budget and time will vary for each permittee
	Develop schedule for inspection & maintenance procedures of SWSC owned by permittee	Phase II Permittees	S	Budget and time will vary for each permittee
	Permittees will make appropriate staff available to be trained	BMP Committee Phase II Permittees	S	TBD
	Inspect all SWSC owned by permittee according to schedule	Phase II Permittees	S	Budget and time will vary for each permittee
	Perform maintenance / repair to SWSC owned by permittee (including but not limited to)	Phase II Permittees	S	Budget and time will vary for each permittee
	• Pipes / culverts			Per procedure
	• Ditches			Per procedure
	• Catch Basins			Per procedure
	• Oil-Grit Separators			Per procedure
	• Detention (wet/dry)			Per procedure
	• Vaults or tanks			Per procedure
	• Infiltration Basin			Per procedure
	• Rain Gardens			Per procedure
	• Porous Pavement			Per procedure
• Vegetated Swales			Per procedure	
• Constructed wetlands			Per procedure	
• Filter Strips			Per procedure	
Track inspection and maintenance	Phase II Permittees	S	Budget and time will vary for each permittee	

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
6	a	1	BMP manual developed or adopted	Y	Aug 08'	Aug 08'	Aug 08'	Aug 08'	Aug 08'			Aug 08'
		2	Structural controls Identified. Maintenance and inspection schedule developed	Y	Jan 09'	Jan 09'	E	Jan 09'	Jan 09'			Jan 09'
		3	appropriate staff trained	Y	Mar 09'	Mar 09'	Mar 09'	Mar 09'	Mar 09'			Mar 09'
		4	Inspections done according to schedule	Y	Mar 09'	Mar 09'	Mar 09'	Mar 09'	Mar 09'			Mar 09'
		5	Maintenance of structural controls owned or operated by permittee as needed according to inspection	Y	May 09'	May 09'	May 09'	May 09'	May 09'			May 09'
			Pipes / culverts	Y	N/A	5/09	5/09	5/09	5/09			5/09
			Ditches	Y	N/A	N/A	5/09	N/A	5/09			5/09
			Catch Basins	Y	N/A	5/09	5/09	5/09	5/09			5/09
			Oil-Grit Separators	Y	N/A	N/A	5/09	N/A	N/A			5/09
			Detention (wet/dry)	Y	N/A	N/A	N/A	5/09	N/A			5/09
			Vaults or tanks	Y	N/A	N/A	N/A	N/A	N/A			5/09
			Infiltration Basin	Y	N/A	N/A	N/A	N/A	N/A			N/A
			Rain Gardens	Y	N/A	N/A	N/A	N/A	N/A			N/A
			Porous Pavement	Y	N/A	N/A	N/A	N/A	N/A			N/A
			Vegetated Swales	Y	N/A	N/A	N/A	N/A	N/A			N/A
			Constructed wetlands	Y	N/A	N/A	N/A	N/A	N/A			N/A
			Filter Strips	Y	N/A	N/A	N/A	N/A	N/A			N/A
		6	Inspection findings recorded, maintenance performed Track quantity of pollutants removed or reduced.	Y	May 09'	May 09'	E	May 09'	May 09'			May 09'

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Implement Controls for reducing or eliminating the discharges of pollutants from streets, roads, highways, parking lots, and storage yards	Develop schedule & procedures for the following controls on pavement that is owned or operated by permittee	Phase II Permittees	S	Budget and time will vary for each permittee
	• Street Sweeping			Per schedule
	• Road Salt Application & Storage			Per Procedure
	• Dust Control			Per Procedure
	• Snow Removal			Per Procedure
	• Maintenance Garage / Storage Yards			Per Procedure
	• Road & Bridge Maintenance			Per schedule
	• Gravel Road Maintenance			Per schedule
	• Roadside Vegetation			Per Procedure
	Track inspection and maintenance of Controls	Phase II Permittees	S	Budget and time will vary for each permittee
Institute Procedures for the proper disposal of operation and maintenance waste from the separate storm water drainage system (from street sweeping, catch basin clean out, etc)	Develop procedure for proper disposal of the following waste collected from maintenance of the storm system owned or operated by permittees	Phase II Permittees	S	Budget and time will vary for each permittee
	• Spoils / sediments			
	• Floatables / oil			
	• Other Debris / Pollutants			
Document disposal method for operation and maintenance waste	Phase II Permittees	S		

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
6 b	1	Schedule and O & M procedures developed		Y	Jan 09'	Jan 09'	Jan 09'	Jan 09'	Jan 09'			Jan 09'
		•	Street Sweeping	Y	N/A	Mar 09'	Mar 09'	N/A	Mar 09'			Mar 09'
		•	Road Salt Application & Storage	Y	Mar 09'	Mar 09'	Mar 09'	Mar 09'	Mar 09'			Mar 09'
		•	Dust Control	Y	N/A	N/A	Mar 09'	N/A	Mar 09'			Mar 09'
		•	Snow Removal	Y	Mar 09'	Mar 09'	Mar 09'	N/A	Mar 09'			Mar 09'
		•	Maintenance Garage / Storage Yards	Y	N/A	N/A	Mar 09'	Mar 09'	Mar 09'			Mar 09'
		•	Road & Bridge Maintenance	Y	Mar 09'	N/A	Mar 09'	N/A	Mar 09'			Mar 09'
		•	Gravel Road Maintenance	Y	N/A	N/A	Mar 09'	Mar 09'	Mar 09'			Mar 09'
		•	Roadside Vegetation	Y	N/A	N/A	Mar 09'	N/A	Mar 09'			Mar 09'
6 c	1	Inspection findings recorded, maintenance performed Track quantity of pollutants removed or reduced.		Y	Mar 09'	Mar 09'	Mar 09'	Mar 09'	Mar 09'			Mar 09'
		1	Procedure developed and implemented	Y	Jan 09'	Jan 09'	E	Jan 09'	Jan 09'			Jan 09'
		•	Spoils / sediments	Y	May 09'	May 09'	E	Jan 09'	Jan 09'			May 09'
		•	Floatables / oil	Y	May 09'	May 09'	E	Jan 09'	Jan 09'			May 09'
		•	Other Debris / Pollutants	Y	May 09'	May 09'	E	Jan 09'	Jan 09'			May 09'
		2	Track quantity of pollutants removed or reduced	Y	Mar 09'	Mar 09'	E	Mar 09'	Mar 09'			May 09'

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Ensure that flood management projects assess the impacts on the water quality of the receiving waters.	Evaluate current or create new procedures to place water quality measures on storm water facilities owned by permittee.	Phase II Permittees	L	Budget and time will vary for each permittee
	Implement procedures on permittee owned facilities	Phase II Permittees	L	Budget and time will vary for each permittee
	Install BMP's were appropriate on permittee owned facilities pursuant BMP manual	Phase II Permittees	L	Budget and time will vary for each permittee
	Assess new projects owned by permittee for water quality impact.	Phase II Permittees	L	Negligible
Reduce the discharge of pollutants related to application of pesticides, herbicides, and fertilizers applied in the permittees regulated area.	If fertilizers are used, permittee will have soil testing performed, prior to application, and fertilizer application will be based on soil testing results.	Phase II Permittees	S	Budget and time will vary for each permittee
	If fertilizers are used, permittee will have fertilizer applied by a licensed individual	Phase II Permittees	S	Budget and time will vary for each permittee
	If herbicides are used, permittee will have herbicides applied by a licensed individual and the herbicides applied should be appropriate for use.	Phase II Permittees	S	Budget and time will vary for each permittee
	If pesticides are used outside, permittee will apply sparingly by a licensed individual	Phase II Permittees	S	Budget and time will vary for each permittee
	Pesticides, herbicides and fertilizers kept on site will be stored appropriately in dry, self contained areas that are not connected to the storm water drainage system.	Phase II Permittees	S	Budget and time will vary for each permittee

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
6 d	1	Procedures for determining water quality measures has been evaluated / developed		Y	2009	2009	2009	2009	2009			2009
	2	Identified procedures implemented		Y	2010	2010	2010	2010	2010			2010
	3	Identified BMP's Installed		Y	2010	2010	2010	2010	2010			2010
	4	Assessment done on site plan. Appropriate BMP's shown in design.		Y	2009	2009	2009	2009	2009			2009
6 e	1	Fertilizer use policy changed if necessary		Y	N/A	N/A	W	Jan 09'	N/A			May 09'
	2	Measure reduction or elimination of phosphorous and or fertilizer due to permittee's change in procedure.		Y	Jan 09'	Jan 09'	May 09'	E	Jan 09'			E
	3	Herbicide use policy changed if necessary Reduce use of herbicide by Permittees		Y	Jan 09'	N/A	N/A	N/A	N/A			E
	4	Pesticide use policy changed if necessary Reduce use of pesticides by Permittees		Y	N/A	N/A	May 09'	N/A	N/A			N/A
	5	Procedures reviewed and adjusted if necessary. Material handling SOP adjusted		Y	N/A	N/A	N/A	N/A	N/A			E

GOAL #7 – MDEQ REQUIREMENT – POST CONSTRUCTION CONTROLS

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Evaluate and implement site appropriate, cost-effective structural and nonstructural best management practices (BMPs) that prevent or minimize post construction impacts on water quality.	Adopt BMPs manual from <u>Objective 3a</u> or develop and adopt a BMP manual to protect water quality in both new development and significant redevelopment	Phase II Permittees	S	Budget and time will vary for each permittee
	Adopt the <u>Objective 3a</u> Stormwater ordinance to enforce BMP manual or develop and adopt individual Stormwater ordinance.	Phase II Permittees	L	Budget and time will vary for each permittee
	Responsible permittees will make appropriate staff available to be trained on enforcement	Phase II Permittees	L	Budget and time will vary for each permittee
	Develop tracking system	Phase II Permittees	L	Budget and time will vary for each permittee
Establish long-term operation and maintenance practices for storm water BMPs for new development and significant redevelopment on private property.	Review existing O&M practices as it relates to the adopted BMP manual.	Phase II Permittees	S	Budget and time will vary for each permittee
	Develop a procedure to enforce new O & M practices on private storm water systems.	Phase II Permittees	L	Budget and time will vary for each permittee
	Adopt necessary ordinances to enforce new O & M practices on private storm water systems.	Phase II Permittees	L	Budget and time will vary for each permittee
	Responsible permittees will make appropriate staff available to be trained on enforcement	Phase II Permittees	L	Budget and time will vary for each permittee
	Develop tracking system	Phase II Permittees	L	Budget and time will vary for each permittee

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
7 a	1	Assessment is completed. BMP Manual created and adopted by permittees No. of people that use the manual. SOP are adjusted		Y	Aug 08'	Aug 08'	Aug 08'	Aug 08'	Aug 08'			Aug 08'
	2	Necessary ordinances developed and adopted		Y	2009	2009	2009	2009	2009			N/A
	3	Number trained Number of sites enforced		Y	2010	2010	2010	2010	2010			2010
	4	Mechanism developed to track number of sites, types of BMP's quantity of pollutants removed reduced		Y	2010	2010	2010	2010	2010			2010
7 b	1	Completion of review. Ability to determine needed O&M procedures		Y	Mar 09'	Mar 09'	Mar 09'	Mar 09'	Mar 09'			N/A
	2	O&M procedures developed and supported by local communities.		Y	2009	2009	2009	2009	2009			N/A
	3	Necessary ordinances developed and adopted O&M manual/ procedures reflect new requirements		Y	2010	2010	2010	2010	2010			N/A
	4	Number trained Number of sites enforced		Y	2010	2010	2010	2010	2010			2010
	5	Mechanism developed to track number of sites, types of BMP's quantity of pollutants removed reduced		Y	2010	2010	2010	2010	2010			2010

GOAL #8 –OPPORTUNITIES FOR SUSTAINABILITY

Objective	Action	Responsible Parties	Schedule	Labor Hours & Material cost estimate
Secure funding options available for implementation	Sign E342C contract (through May 1, 2008)	Phase II Permittees	C	
	Review E342C contract for renewal	Phase II Permittees	S	TBD
	Sign new contract or develop funding mechanism to support independent program	Phase II Permittees	S	TBD
	Identify existing federal, state, and local funding opportunities.	Ad hoc Committee	W	10,000 250-500 Hrs (includes action 3)
	Coordinate the development of grant proposals.	SWM	W	100-150 hrs
Institutionalize the committee structure.	Phase II permittee representative to site on PE Committee.	Phase II Permittees GISD	O	100+ hrs/yr for administrator 24+ hrs/yr for members.
	Phase II permittee representative to site on BMP Committee.	Phase II Permittees	O	100+ hrs/yr for administrator 24+ hrs/yr for members.
	Phase II permittee representative to site on MM Committee.	Phase II Permittees	O	100+ hrs/yr for administrator 24+ hrs/yr for members.
	Phase II permittee representative to site on an Ad hoc Committee.	Phase II Permittees	S	TBD

Goal	Objective	Action	Evaluation Mechanism	Included in SWPPI	Argentine Township	Clayton Township	City of Fenton	Fenton Township	City of Linden	Livingston County	Oakland County	Genesee County
8 a	1	Permitee sign contract- see application		Y	E	E	E	E	E			E
	2	Contract has been reviewed by permittee		Y	Mar 08'	Mar 08'	Mar 08'	Mar 08'	Mar 08'			Mar 08'
	3	Permitee either signs new contract based on new permit cycle or permittee pursue implementation of permit with independent funding.		Y	May 08'	May 08'	May 08'	May 08'	May 08'			May 08'
	4	Funding Strategies and opportunity document created.			W	W	W	W	W			W
	5	Multi-jurisdictional grants are applied for and received.			W	W	W	W	W			W
8 b	1	Meeting Minutes Action plan items are implemented. Attendance		Y	N/A	E	N/A	N/A	N/A			E
	2	Meeting Minutes Action plan items are implemented. Attendance		Y	N/A	N/A	N/A	N/A	E			E
	3	Meeting Minutes Action plan items are implemented. Attendance		Y	E	N/A	E	E	N/A			E
	4	Meeting Minutes Action plan items are implemented. Attendance		Y	W	W	W	W	W			E

Table 8-1: Benefits of each Objective

	Objectives	Benefits
1a	Ordinance to have septic systems inspected at time of sale	<ul style="list-style-type: none"> Reduction in bacteria levels in waterways. (D)
1b	Develop education materials for homeowners with septic systems to be given at time of sale	<ul style="list-style-type: none"> Increase in level of public awareness of homeowner actions on the health of local waters. (D) Reductions in pollutants generated by homeowners from reaching waterways. (I)
1c	Ordinance to disconnect footing drains from Sanitary	<ul style="list-style-type: none"> Reduced SSO events. (D) Reduced flashiness in waterways. (D)
1d	Identify existing wellhead protection programs	<ul style="list-style-type: none"> Avoid duplication of effort, Maximize between program efficiencies. (D)
1e	Drinking water well test at time of sale ordinance	<ul style="list-style-type: none"> Protect public health. (D) Record of polluted groundwater. (D, if a database is maintained)
1f	Map arsenic levels for drinking wells	<ul style="list-style-type: none"> Protect public health. (D) Adjust development priorities. (I)
2a	Educate public on 7 required education elements	<ul style="list-style-type: none"> Raise public awareness about water quality and quality of life. (D)
2b	Direct mailing to riparian land owners (Rivers/Lakes)	<ul style="list-style-type: none"> Change behavior of those having greatest impact on waterways. (D)
2c	Partner with existing household hazardous waste program committee to evaluate existing program and expand program if necessary.	<ul style="list-style-type: none"> Additional reductions in volume of household hazardous waste entering waterways. (D)
2d	Enhance existing benthic monitoring program	<ul style="list-style-type: none"> Improved understanding on the health of local waterways. (D)
2e	Enhance existing Project GREEN program	<ul style="list-style-type: none"> Improved understanding on the health of local waterways. (D)
2f	Stream crossing watershed survey with photography.	<ul style="list-style-type: none"> Improved understanding on the health of local waterways. (D)
2g	Hot spot water quality monitoring for MS4's as needed	<ul style="list-style-type: none"> Improved understanding on the health of local waterways. (D)
3a	Storm Water Ordinance	<ul style="list-style-type: none"> Ongoing structural changes to improve the management of stormwater throughout the watershed. (D)
3b	Pursue restoration projects on natural watercourses	<ul style="list-style-type: none"> Ongoing structural changes to improve the management of stormwater and minimize flooding throughout the watershed. (D) Reduce volume of sediments entering local waterways (D) Increases in water quality (D)

3c	Preserve existing floodplains and wetlands from being filled or developed	<ul style="list-style-type: none"> • Protection of excess natural storage capacity on the landscape. (D) • Protection of vital components of the landscape that provide habitat connectivity and environmental services. (D) • Reduced financial burden on communities (floodplain). (D) •
3d	Monitor water quantity to measure hydraulic change within watercourses	<ul style="list-style-type: none"> • Improved understanding on the health of local waterways. (D) • Provide information that will help prioritize future activities. (I)
3e	Produce demonstration projects for Low Impact Development for new and retrofit sites	<ul style="list-style-type: none"> • Help public and developers visualize some of the infrastructure actions being proposed under Phase II. (D) • Improve water quality in immediate vicinity. (D)
4a	Promote local recreational opportunities	<ul style="list-style-type: none"> • Increase public awareness/appreciation and use of local natural resources. (D) • Increase desire to protect these resources. (I)
4b	Protect /expand parks trails and river walk system	<ul style="list-style-type: none"> • Increase public awareness/appreciation and use of local natural resources. (D) • Increase desire to protect these resources. (I)
5a	Establish vegetative buffer areas adjacent to sensitive areas	<ul style="list-style-type: none"> • Reduce pollutant loadings reaching waterways. (D) • Allow for more natural stream processes to occur. (D) • Wetland/ floodplain protection (D)
5b	Protect key locations of threatened and endangered species and habitat	<ul style="list-style-type: none"> • Protection of vital components of the landscape that provide habitat connectivity and environmental services. (D) • Increases species populations and diversity. (D)
6a	Ensure maintenance activities, schedules, and inspection procedures for storm water structural controls are appropriate.	<ul style="list-style-type: none"> • Reductions in pollutants generated by municipal activities from reaching waterways. (D)
6b	Implement controls for reducing or eliminating the discharges of pollutants from streets, roads, highways, parking lots, and maintenance.	<ul style="list-style-type: none"> • Reductions in pollutants generated by municipal activities on municipal property from reaching waterways. (D)

6c	Institute Procedures for the proper disposal of operation and maintenance waste from the separate storm water drainage system (dredge spoil, accumulated sediments, floatables, and other debris) by street sweeping, catch basin clean out and vacuuming debris.	<ul style="list-style-type: none"> • Reductions in pollutants generated by municipal activities on municipal property from reaching waterways. (D)
6d	Ensure that flood management projects assess the impacts on the water quality of the receiving waters.	<ul style="list-style-type: none"> • Improved water quality over previous flood management project/infrastructure. (D) • Reductions in pollutants generated by municipal activities on municipal property from reaching waterways. (D)
6e	Reduce the discharge of pollutants related to application of pesticides, herbicides, and fertilizers applied in the permittees regulated area.	<ul style="list-style-type: none"> • Reductions in pollutants generated by municipal activities on municipal property from reaching waterways. (D)
7a	Evaluate and implement site appropriate, cost-effective structural and nonstructural best management practices (BMPs) that prevent or minimize the impacts on water quality. *	<ul style="list-style-type: none"> • Reductions in pollutants generated by municipal activities on municipal property from reaching waterways. (D)
7b	Establish long-term operation and maintenance practices for storm water BMPs on private property.	<ul style="list-style-type: none"> • Long-term maintenance of privately operated stormwater structures this reducing the public's future financial burden. (D) •
8a	Secure funding options available for implementation.	<ul style="list-style-type: none"> • Stormwater control will be implemented at a more rapid rate. (D) • Stormwater management will become common practice. (I)
8b	Institutionalize the committee structure.	<ul style="list-style-type: none"> • Permittees will deliver a uniform program throughout the County. (D) • Savings will be realized through the cooperative effort. (D) • Action Items will be implemented. (D)

D = Direct Benefit as a result of implementing the objective.
I = Indirect Benefit as a result of implementing the objective.

Livingston County has produced the Upper 2 Shiawassee River WMP & the Huron Channel Lakes WMP. The Livingston County Road and Drain Commissioner's office are using both of these watershed plans as their primary watershed plans. The SWPPI for both has been submitted and revised January 1, 2008 to comply with their NPDES Ph II permit. Any required actions within this watershed (Shiawassee main channel) will comply with the submitted SWPPI for the Upper 2 Shiawassee.

Oakland County is involved in 5 watersheds. The Rouge, Middle Flint River, Shiawassee (Upper 2 and Main), Huron and **Clinton Main**. The Clinton Main is the primary watershed plan Oakland County is functioning under. Having reviewed the various WMPs they have developed and submitted a SWPPI on May 1, 2007 to comply with their NPDES Ph II permit. The SWPPI was approved for the above 5 watersheds. Please see Oakland County approved SWPPI for their individual commitments. Furthermore, Oakland County does not have any urbanized area within the Shiawassee River WMP.

