8. Action Plan

Source: Basetree, 2005.

Acronyms

BMP	Best Management Practices
FSA	Farm Service Agency
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
GAAMPS	Generally Acceptable Agricultural Management Practices
GLA	Greater Lansing Area
GLRC	Greater Lansing Regional Committee
IDEP	Illicit Drain Elimination Program
LID	Low Impact Development
MDA	Michigan Department of Agriculture
MDEQ	Michigan Department of Environmental Quality
MTA	Michigan Township Association
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
O&M	Operations and Maintenance
PEP	Public Education Plan
PIPP	Pollution Incident Prevention Plan
SOP	Standard Operating Procedures
TCRPC	Tri-County Regional Planning Commission
WMP	Watershed Management Plan

Introduction

This section details the actions supporting the goals and objectives for the watershed. As discussed in Section 6 of this WMP, the goals and objectives were developed based on input from community stakeholders and the general public. The actions in this section are presented in a table under their corresponding goal and objective and are accompanied by a schedule, responsible party, evaluation mechanism, and cost. In addition, each objective is marked with a 'Yes' or 'No' indicating its role in fulfilling the Michigan Watershed-Based National Pollutant Discharge Elimination System (NPDES) Permit as introduced in Section 6 of this WMP.

Watershed-Based NPDES Permit Fulfillment

The Grand River Watershed is composed of 13 distinct political jurisdictions working together with public and stakeholder involvement to develop a Watershed Management Plan (WMP) as discussed in Section 3 of this WMP. Each jurisdiction is bound to the requirements of the Watershed-Based NPDES Permit and is committed to considering all environmental stressors within their watershed. To this end, the jurisdictions engage in an iterative watershed management planning process that includes goal-setting; data collection and analysis; problem identification; action development and implementation; and evaluation. The development of the action plan in this section is a result of goal-setting, data collection and analysis, and problem identification.

Furthermore, the actions fulfill Storm Water Pollution Prevention Initiative (SWPPI) requirements contained in Part I.B.2 of the Watershed-Based NPDES Permit (see Appendix C). The SWPPI is required to contain actions specified in the WMP and has specific requirements for good house-keeping/pollution prevention and post-construction elements. The WMP action plan was developed so that each watershed jurisdiction can bring the actions they are responsible for directly into their SWPPI.

Critical Items Identified by Stakeholders

In February 2003, Governor Granholm convened a 26 member council to address the trends, causes, and consequences of unmanaged growth and development in Michigan (Executive Order 2003-4). The Michigan Land Use Leadership Council (MLULC) provided more than 150 recommendations to the governor and the legislature designed to minimize the impact of current land use trends on Michigan's environment and economy. The council used the following smart growth tenets for many of the recommendations. These ten tenets can form the basis for establishing a set of state land use goals.

1. Create a range of housing opportunities and choices
2. Create walkable neighborhoods
3. Encourage community and stakeholder collaboration
4. Foster distinctive, attractive communities with a strong sense of place
5. Make development decisions predictable, fair, and cost-effective
6. Mix land uses
7. Preserve open space, farmland, natural beauty and critical environmental areas
8. Provide a variety of transportation choices
9. Strengthen and direct development towards existing communities
10. Take advantage of compact development design

"Anything else you're interested in is not going to happen if you can't breathe the air and drink the water.

Don't sit this one out.

Do something.

You are by accident of fate alive at an absolutely critical moment in the history of our planet."

- Carl Sagan

Stakeholders who participated in the workshops consistently referred to the ten smart growth tenets but recognized that with regard to watershed management they encompass more than may be necessary for the WMPs purposes. Consequently, it was agreed that in the WMP any actions that were intended to mitigate developments' impacts on waterways (e.g. BMPs like riparian buffers) would be referred to as "Water Quality Friendly Development."

Participants in the workshops also made the connection between surface water and groundwater; that they were two key components of the whole hydrologic cycle. As such, combining programs where appropriate only seems logical. It was recommended that the GLRC should look for ways to coordinate with groundwater protection initiatives and cooperate on grant applications.

There was recognition by stakeholders of the need to be good neighbors due to potential upstream and downstream pollution impacts on water quality. This recognition was extended to rural areas too. Although NPDES permitting is only required for municipalities, it was felt there was a need to include the agricultural community. Stakeholders thought the best way to engage farmers was through existing agricultural programs (see Section 7).

The current fiscal climate faced by municipalities dictates that they look for new and creative ways to deliver programming. Stakeholders recommended that municipalities and watershed committees look to form partnerships with existing organization to achieve their goals. Two examples of programs that have public service requirements in order for participants to achieve certification are MSU Extension's "Master Gardner" and "Citizen Planner" programs.

Action Plan Table

The remainder of this section is composed primarily of the action plan table. There are nine goals and a number of objectives and actions to assist in fulfilling each goal.

The Action Plan contains a number of new committees that have been developed to assist in implementation of the WMP. These committees are discussed in detail in Section 10, Plan Sustainability.

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 a: **Youth Programs (K-12) School Education: Assist local school districts in developing a science curriculum on watershed studies.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships

Supporting Agencies: MDEQ, Project Green

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Conduct information and educational presentations to school boards on stormwater and MDEQ Water Quality Curriculum.	PEP Subcommittee and/or GLRC Coordinator	Jan - April 2006	none	4 hours per presentation	School Boards adopt curriculum.
2. Purchase curriculum and distribute to School Administrators/Teachers. Post to GLRC Public Web Site.	PEP Subcommittee	May-July 2006	Reproduction: $30 per manual 50 copies $1500 - $2000	40 hours	Number of watershed curriculum purchased and distributed.
3. Work with teachers one on one and with schools to implement curriculum and develop a contact database.	PEP Subcommittee and/or GLRC Coordinator	Jul 2006 - Jun 2007	none	100-200 hours/year	Teachers implementing curriculum in their classroom.
4. Work to link Project Green and the Lansing water festival to MDEQ water quality curriculum to broaden and deepen program (e.g. Okemos School District program)	PEP Subcommittee and/or GLRC Coordinator	Beginning Jul 2006 and annually thereafter	none	40 hours/year	Number of schools participating in Project Green and MDEQ Curriculum.

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 b: General Education: Public Participation Develop and maintain Storm Drain Marking. Provide routine updates to the general public, the stakeholders and the municipal officials.

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: GLRC

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Design and purchase curb markers and door hangers.	PEP Sub-committee/ Individual Communities	Apr-June 2005	Curb markers: ~ $1-$3 each 500 ct. per year $500 - $1,500 annually Door hangers: ~ $0.25 each 500 ct. per year $125 annually	10 hours of designing and purchasing curb markers and door hangers.	NA
2. Develop Curb Marker Volunteer Program Instructions and Start Up Kit.	PEP Sub-committee	July-Oct 2005	Volunteer kit ~$50 per kit 5 kits $250.00	20 hours	Number of kits developed
3. Solicit and Train Volunteers.	Individual Communities	Jan 2006 - Mar 2008	none	40 hours	Number of volunteers that have participated in the program.
4. Install Curb Markers in targeted community locations.	Individual Communities	Mar 2006 - Mar 2008 seasonally	none	40 hours/year	Number of curb markers and door hangers installed.
5. Compile/Track all Curb Marker Locations in watershed.	Tri-County Regional Planning Commission / Individual Communities	Ongoing once installation begins	none	40 hours/year	Area of watersheds marked. Number of Phone calls received by community members regarding illicit discharges

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 c: **General Education: Support participation in Adopt-A-River program.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: Conservation Districts

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Coordinate with Conservation Districts to promote and participate in semi-annual Adopt-A-River program.	PEP Sub-committee	Twice yearly - April and October	$500/year	40 hours/year	Number of volunteers that participate in the program.

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 d: **General Education: Develop an educational campaign to encourage preservation and reestablishment of native riparian vegetation and to emphasize the importance of wetlands in the community. (Links to Goal 7 Municipal O&M Practices)**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: Master Gardeners, Local Gardening Clubs, MSUE

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Identify prominent municipal locations as candidates to install riparian buffer preservation (no mow).	Watershed Committee	Jun-Aug 2006	none	20-200 hours of identifying riparian buffer locations	NA
2. Determine and mark areas where riparian buffers will be allowed to grow. Where opportunities exist, encourage the planting of native wild flowers and prairie grasses.	Watershed Committee, Master Gardner, Local Gardening Clubs	Sep 2006	minimal	40-400 hours marking buffer locations	Estimate number of acres of municipal property protected by riparian buffers
3. Install an educational posting within buffer to create a demonstration project and explain and promote the practice of Riparian Buffer BMPs and the reestablishment of native vegetative species.	Watershed Committee	Oct-Dec 2006	Sign: $50 each 2- 20 signs depending on size of riparian buffer	·4-20 hours of designing sign ·4-40 hours of installing signs	-
4. Determine best media to reach riparian landowners and develop campaign based on municipal experience.	PEP Sub-committee	Jan-Mar 2007	Brochures: $0.20 each 10,000 - 50,000 ct. $2,000-$10,000	20-100 hours of determining communication	Number of Brochures distributed

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1e: **General Education: Homeowner Education, Develop an educational campaign for maintenance and operation of on-site sewage disposal systems, household hazardous waste, lawn maintenance, automobile maintenance, and private wellhead protection for all homeowners.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, MSU

Supporting Agencies: Realtors, Civic Organizations

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Develop partnership with local organizations (possibly realtors) to promote homeowner information topics such as septic maintenance, lawn & auto care, well water, proper household hazardous waste disposal, and wellhead protection. Track contracts in a database.	PEP Sub-committee/ Individual Communities	June-Nov 2006	none	20-200 hours	NA
2. Create homeowner information packet (brochures and tip cards) for distribution; use advertising to potentially fund printing costs.	PEP Sub-committee/ Individual Communities	Dec 2006 - May 2007	$1-$3.00 per packet 500-1000 packets $500-$3000 Total minus advertising reimbursement	•40-100 hours of creating information •20-50 hours of distributing to realtors annually	•Number of packets printed. •Number of packets distributed to homeowners.
3. Distribute brochures and tip cards to homeowners through a mailing.	PEP Sub-committee	Jun 2007- May 2008	Brochures/tip cards: $0.20 each 10,000 - 50,000 ct. $2,000-$10,000	40 hours of organizing mailing	Number of brochures/tip cards distributed.
4. Evaluate success of information through discussion/survey of homeowners. Refer to Section 9.	PEP Sub-committee	Annually	none	20 hours of evaluation	Determine any changes needed for future packets.
5. Post information on GLRC Public Web Site. (Obj 1f), and distribute additional informational material to environmental organization (Mid-MEAC).	GLRC Executive Committee	As needed.	none	4 hours of posting	Number of downloads of information.

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 f: **General Education: Maintain GLRC Public and Project Web Site.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: None

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Appoint person to maintain Web Site. Consider contract employee.	GLRC Executive Committee	Jan-06	none	none	NA
2. Update site with educational material for public viewing and reproduction. Conduct routine maintenance.	Appointed person	Ongoing	none	80-200 hours per year	•Number of hits per page. •Number of downloads.
3. Review and update Web site for significant changes. Include links to all community Web sites.	Appointed person	Ongoing	none	200 hours annually	List of information kept on Web site.

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 g: **Public Participation: Develop a community based volunteer group and train them to assist with watershed-wide actions such as stream corridor inventories and road stream crossings and publicize the results.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: Target Girl Scouts, Boy Scouts, 4H groups, lake associations, homeowner associations, environmental groups

MID-MEAC volunteer contact list

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Appoint group chairperson.	PEP Sub-committee, Mid-MEAC has volunteer contact list.	Feb-Mar 2006	none	none	NA
2. Chairperson to solicit members and set priorities.	Chairperson	Apr-July 2006	none	10-40 hours of soliciting members and setting priorities	NA
3. Prioritize needed projects and find funding sources (both in kind, grants, and donations from communities and sponsors).	Volunteer Group	Aug 2006 - Dec 2006	none	40-200 hours of prioritizing projects and finding funding	Number of grant(s) received.
4. Develop a Technical Memorandum specifying the priority projects, costs, and responsible parties.	Volunteer Group	Jan -Apr 2007	none	20-100 hours	NA
5. Implement chosen projects; supply volunteer labor toward field projects.	Volunteer Group	Jan-Dec 2007	TBD	TBD	Number of volunteers
6. Post results on GLRC Public Web Site. (Obj. 1f)	GLRC Coordinator	As needed.	none	Objective 1 f	Number of downloads of information.

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 h: **Update Public Education Plan (PEP) to reflect this WMP.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: None

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Compare existing plan with objectives and actions from Goal 1 of this WMP.	PEP Sub-committee	Nov-Dec 2005	none	10 hours	NA
2. Update PEP to reflect objectives and actions presented in this WMP.	PEP Sub-committee	Jan-Feb 2006	none	20-60 hours of revising	NA
3. Submit revised PEP to MDEQ.	PEP Sub-committee	Mar 2006	none	2 hours	NA

Goal 1: Educate the Public about the Importance of Protecting and Managing the Watershed

Objective 1 i: **Business Education: Salt application, good housekeeping of parking lots and grounds, oil/grease disposal, cleaning agent use Restaurant Education: No Grease in Storm Drains**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commission, Road Commission, MSU

Supporting Agencies: Central Michigan Sustainable Business Forum

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Prioritize businesses through a focus group. Include private salt appliers, restaurants, and automobile service stations.	Individual Communities/ Focus Group	Jun - Sep 2006	none	40-80 hours of prioritizing businesses	NA
2. Work with Central MI Sustainable Business Forum (CMSBF) to identify companies that conduct their business in an environmentally responsible way. Mid-MEAC and Chamber of Commerce are starting point.	PEP Sub-committee and GLRC Coordinator	Jan 2006 through life of program.	none	40-80 hours	List of sustainable businesses, presentations to CMSBF and others.
3. Determine the best way to reach the businesses. Work with companies identified in Action 2 to devise strategies.	Individual Communities/ Focus Group	Oct-Nov 2006	none	20-40 hours	NA
4. Develop and provide businesses with educational materials. Such as a Tour of Environmentally Friendly Businesses, Dumpster Stickers, Industry Certifications, and Presentations. Consider requiring permit for private salt appliers.	PEP Sub-committee draft information/ Individual Communities distribute	Beginning Dec 2006	Brochures: $0.20 each 2,000 copies $400	40-200 hours/ per year	Number of brochures distributed.

Goal 2: Provide a Sustainable and Equitable Funding Source

Objective 2a: Develop and adopt a funding strategy to support the WMP.

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: None

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Create a Funding Sub-committee and evaluate need to hire a consultant.	GLRC Executive Committee	Jan 2006	none	10-50 hours	NA
2. Determine anticipated budget needs.	Funding Sub-committee/ Consultant (if needed)	Feb-Apr 2006	none	40-100 hours	NA
3. Determine alternate funding mechanism with advantages and disadvantages.	Funding Sub-committee/ Consultant (if needed)	May-Aug 2006	none	40-200 hours	NA
4. Select preferred mechanism.	Funding Sub-committee/ Individual Communities	Sep-Oct 2006	none	50-100 hours	NA

Goal 3: Encourage Water Quality Friendly Development

Objective 3 a: **Promote intergovernmental coordination and cooperation for Water Quality Friendly Development practices which includes wetland and waterbody setbacks.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: Michigan Townships Association, Greater Lansing Area Homebuilders and Realtors

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Create Policy and Procedure Sub-committee.	GLRC	Feb 2006	none	none	NA
2. Research and compile an information packet regarding Water Quality Friendly Development. Work with MTA, GLA Homebuilders and Realtors to find incentives and economically viable implementation vehicles.	Policy and Procedure Sub-committee.	Mar-May 2006	$10 per packet 200 copies $2000 Total	40-200 hours	NA
3. Present and distribute Water Quality Friendly Development information to government officials and other applicable persons.	Policy and Procedure Sub-committee	June-Nov 2006	$100-$300 in presentation and reproduction costs	20 hours of distributing plus 4 hours per presentation	Number of Water Quality Friendly Development information packets distributed.
4. Conduct a Water Quality Friendly Development roundtable to discuss issues associated with promoting and implementing Water Quality Friendly Development practices within the community.	Policy and Procedure Sub-committee	Dec 2006	$100-$300 in presentation and reproduction costs	40-100 hours	Attendance of roundtable discussion.

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
5. Hold a watershed-wide workshop to discuss Water Quality Friendly Development practices with builders, planners, developers, businesses, and interested residents.	Individual Communities with Policy and Procedure Sub-committee	Jan-June 2007	Cost of Workshop: $50-$150 per person assuming at least 40 people	40-100 hours	Number of Workshop attendees
6. Provide informational packets for those not able to attend workshop.	Individual Communities	July 2007 - Dec 2007	none	none	Number of additional packets distributed
7. Plan the next stop.	Policy and Procedure Sub-committee	Jan-Mar 2008	none	40-100 hours	Description of future plans.

Goal 3: Encourage Water Quality Friendly Development

Objective 3 b: **Develop a development standards manual which outlines economically viable Water Quality Friendly Development practices.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: Interested Stakeholders

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review existing development standards for Water Quality Friendly Development requirements including storm water BMPs, wellhead protection, and floodplain development control. Consider input from roundtable discussions (Obj 3a).	Policy and Procedure Sub-committee	Jan-Apr 2007	none	100-500 hours	NA
2. Recommend revisions to, or a new draft of, a development standards manual, including performance standards. Allow for different standard levels to accommodate various community needs.	Policy and Procedure Sub-committee	2007	TBD	200-2,000 hours for manual	Number of development manuals distributed.
3. Adopt new ordinances and standards manual watershed-wide which support the development standards manual.	Individual Communities/ Attorneys	2008	TBD	40-200 hours per community	Number of communities that adopt ordinances.
4. Announce new ordinances through notices to appropriate businesses, developers, and builders and through public service announcements (PSA) directed to residents.	Individual Communities	2009	$500-$2,000	100-300 hours	•Number of notices distributed. •Number of PSAs broadcasted. •Estimated number of people reached.

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
5. Site Plan Review using agreed upon standards.	Individual Communities	Beginning 2008	Dependent on Municipality	Dependent on Municipality	•Number of site plans reviewed each year •Summary of water quality impact of typical new development

Goal 3: Encourage Water Quality Friendly Development

Objective 3 c: **Improve ordinance enforcement of all watershed-related ordinances such as Illicit Discharge Elimination Program (IDEP), waste disposal, and wetland protection.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: County Agencies

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review existing ordinance enforcement techniques and develop new or modify existing practices to be more effective in protecting water quality.	Individual communities, Policy and Procedure Sub-committee	Jan-Apr 2007	none	100-200 hours	NA
2. Recommend changes to enforcement techniques.	Policy and Procedure Sub-committee	May-Oct 2007	none	40-200 hours	Evaluate effectiveness of enforcement techniques by reviewing the number and type of annual ordinance offenses.

Goal 3: Encourage Water Quality Friendly Development

Objective 3 d: Incorporate Water Quality Friendly Development practices into land use, zoning, and community development master plans.

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: County Agencies, Tri-County Planning Commission

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review existing land use, zoning plans, and master plans. Use Regional Growth Plan as a starting point.	Policy and Procedure Sub-committee	Nov 2006 - Feb 2007	none	100-300 hours	NA
2. Recommend revisions to land use, zoning plans, and master plans.	Policy and Procedure Sub-committee	Mar-Aug 2007	Reproduction: ~$10 per manual 50 copies $400 - $700	80-200 hours	NA
3. Work with applicable government staff to implement changes to plans.	Individual Communities	Sept 2007 - Aug 2008	none	100-300 hours	Number of meetings held with government staff.

Goal 3: Encourage Water Quality Friendly Development

Objective 3 e: **Implement watershed-wide septic system inspection and abandoned well closure inspection in conjunction with local health agencies.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships

Supporting Agencies: County Health Departments

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Research existing time of sale septic system ordinances and abandoned well closure ordinances.	Policy and Procedure Sub-committee/ Individual Communities.	Jan-Apr 2007	none	80-200 hours	NA
2. Develop septic system/abandoned well closure ordinance. Require point of sale inspection or inspection every 5 years. Consider having septic hauler certified for inspections.	Policy and Procedure Sub-committee/ Individual Communities.	May-Oct 2007	none	80-200 hours	NA
3. Adopt the new ordinance watershed-wide.	Individual Communities	Nov 2007 - Apr 2008	$500-$2,000	20-100 hours per community	Number of copies distributed.
4. Work with both businesses and residents to implement the new ordinance.	Policy and Procedure Sub-committee/ Individual Communities.	May 2008 - Apr 2009	Advertising: $300-$2,000	100-400 hours	Number and circulation of advertisements.
5. Post information on GLRC Public Web Site. (Obj. 1f)	GLRC Executive Committee	As needed.	none	Objective 1 f	Number of downloads of information.

Goal 3: Encourage Water Quality Friendly Development

Objective 3 f: Facilitate the completion of at least one demonstration project within the watershed using low impact development standards.

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review new development properties and approach planners/developers early in the project planning phase. Consider offering incentives.	Policy and Procedure Sub-committee	Jan 2006 - Dec 2006	none	20–200hours	Number of planners/developers approached.
2. Work with developer to incorporate low impact designs into the plans.	Policy and Procedure Sub-committee	Mar 2006 - Feb 2007	none	20-200 hours	Number of LID designs constructed.
3. Promote LID project as a regional model.	Policy and Procedure Sub-committee	Mar 2006 - Feb 2009	Advertising: $100-$1,500	200-400 hours	Number and circulation of advertisements.

Goal 3: Encourage Water Quality Friendly Development

Objective 3 g: **Retrofit areas of high impervious cover with stormwater BMPs to decrease imperviousness. Look for ways to coordinate with groundwater protection and cooperate on grant applications.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review areas (both municipal and private) with high impervious cover and rank according to potential water quality impact, cost, and potential public support.	Policy and Procedure Sub-committee	Jan 2006 - Dec 2006	none	40–200hours	NA
2. Meet with appropriate developers/government staff and officials to gain support.	Policy and Procedure Sub-committee	Jan - Apr 2007	none	20-200 hours	NA
3. Design the project.	Appropriate Staff/ Consultant	May 2007- Apr 2008	TBD	TBD	Estimate annual water quality load reductions
4. Construct project.	Appropriate Staff/ Contractor	May 2008 - Dec 2008	TBD	TBD	NA

Goal 4: Restore and Enhance Recreational Uses through Development of a Watershed Recreation Plan

Objective 4 a: **Research deadfall management techniques and adopt a management plan.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: Natural Resources Conservation Service (NRCS), Michigan Department of Natural Resources (MDNR), MDEQ

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Conduct a literature review of appropriate deadfall management techniques.	Habitat and Recreation Sub-committee (consider working with MSU or similar organization to conduct research)	June-Nov 2007	none	•120 hours of meeting and review for the committee •80 hours of meeting and review for consultant	NA
2. Discuss options and outline a plan with local NRCS Staff, MDNR, MDEQ, Drain Commissioners, MSU extension agents, professors, and municipal officials.	Habitat and Recreation Sub-committee	Dec 2007 - Feb 2008	none	120 hours of meeting	NA
3. Develop a deadfall management plan to manage woody debris in an ecosystem friendly manner as part of an over arching Recreation Plan.	Habitat and Recreation Sub-committee	Mar 2008 - Feb 2009	$1,000 - $1,500	•120 hours for committee •150 hours of development time for appointed person or contractor	NA
4. Promote and adopt plan.	Individual Communities/ Local agencies	Mar-Apr 2009	none	200 hours of discussion	Track the number of local agencies and municipalities that adopt the plan.
5. Post information on GLRC Public Web Site. (Obj. 1e)	GLRC Executive Committee	As needed.	none	Refer to Objective 1 f	Number of downloads of plan.

Goal 4: Restore and Enhance Recreational Uses through Development of a Watershed Recreation Plan

Objective 4 b: **Restore fishing opportunities in the watershed. Look at both accessibility and habitat.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: MDNR

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Create a panel composed of watershed representatives, MDNR staff, and representatives from local groups such as Trout Unlimited to discuss the deficiencies in local fishing opportunities and identify potential solutions.	Habitat and Recreation Sub-committee	June-Nov 2007	none	50-200 hours	NA
2. Review solutions and develop a set of actions to improve fishing opportunities. Include in an overarching Recreation Plan. Work with MDNR to select areas for fishery studies.	Habitat and Recreation Sub-committee	Dec 2007 - Feb 2008	TBD	TBD	NA
3. Identify applicable groups, agencies, or municipalities to implement actions and develop a method of measuring progress.	Habitat and Recreation Sub-committee	Mar 2008 - Feb 2009	none	TBD	NA

Goal 4: Restore and Enhance Recreational Uses through Development of a Watershed Recreation Plan

Objective 4 c: **Add at least one canoe landing along Looking Glass River, Red Cedar River, or Grand River.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review public lands along river corridors and other riparian properties for applicable sites, such as the future Water's Edge Park on the Looking Glass River (Wood Rd. & Round Lake Rd.) Determine appropriate location and size for canoe landing demonstration project. Identify appropriate agency to maintain canoe landings.	Habitat and Recreation Sub-committee	Jan-Jun 2007	none	40-120 hours	NA
2. Design landing. Include project in an overarching Recreation Plan.	Habitat and Recreation Sub-committee / Contractor	Jul-Sep 2007	none	TBD	NA
3. Construct canoe landing.	Local jurisdiction or agency / Contractor	Oct 2007 - Jun 2008	TBD	TBD	NA
4. Advertise canoe landing.	Habitat and Recreation Sub-committee	Jun-Sep 2008	Advertising: $300 - $1,500	20-40 hours	Number and circulation of advertisements.

Goal 4: Restore and Enhance Recreational Uses through Development of a Watershed Recreation Plan

Objective 4 d: **Recreational Assessment: Examine the river and stream corridors and construct additional access sites, river trails, and observation decks to improve walking, fishing, and observation opportunities.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review public lands along river corridors and other riparian properties for applicable sites.	Habitat and Recreation Sub-committee	Jan-Jun 2007	none	Coordinate with Action 4c-1	NA
2. Outline possible recreational options and assess feasibility of each option.	Habitat and Recreation Sub-committee	Jul-Dec 2007	none	40-100 hours	NA
3. Determine appropriate project, meet with government officials, and hire a design consultant, if appropriate.	Habitat and Recreation Sub-committee	Jan-Jun 2008	none	•60 hours for the committee •40-100 hours for a contractor	NA
4. Identify appropriate agency to maintain access sites, river trails and/or observation decks.	Habitat and Recreation Sub-committee	Jun-Aug 2008	none	10-20 hours	NA
5. Construct recreational project.	Local jurisdiction or agency / Contractor	Sep 2008 - Jun 2009	TBD	TBD	NA
6. Advertise recreational project.	Habitat and Recreation Sub-committee	Jun-Sep 2009	Advertising: $300 - $1,500	20-40 hours	Number and circulation of advertisements.

Goal 5: Protect and Enhance Habitat for Wildlife and Aquatic Animals through Development of a Watershed Habitat Plan

Objective 5a: **Conduct an inventory of the stream corridors and identify existing riparian buffers and shade cover over streams. Also, identify areas of eroding stream banks and excessive sedimentation. Identify potential sources and rank in order of importance for restoration.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Research stream corridor inventory methods and adopt a methodology applicable to the objective.	Habitat and Recreation Sub-committee/ Contractor (if needed)	July - Dec 2007	none	•30 hours for the committee •60 hours for a contractor	NA
2. Prioritize areas considering location, schedule, and volunteer base.	Habitat and Recreation Sub-committee/ Contractor (if needed)	Jan-Mar 2008	none	•30 hours for the committee •60 hours for a contractor	NA
3. Organize an inventory team and conduct stream corridor inventories throughout the watershed. Consider using volunteers or non-profit organizations.	Habitat and Recreation Sub-committee/ Contractor	Jan 2008 - Dec 2010	Water Quality Testing Equipment: ~$100/kit 10 kits $800-$1,200 GPS unit and software: ~$500-$1,000	•30 hours for the committee •250 hours coordination for contractor and training •For budgeting purposes, investigation average about 2 miles/day for a 3 person crew	•Number of volunteers •Linear miles inventoried.
4. Review the results of the inventory and rank areas in order of severity for restoration.	Habitat and Recreation Sub-committee/ Contractor	Jan - Dec 2011	none	•20 hours for the committee •80 hours for contractor	Ranked list of areas to be restored
5. Identify actions and a timeline for restoring areas of the stream corridor. Include in Watershed Habitat Plan.	Habitat and Recreation Sub-committee/ Contractor	Jan -Dec 2012	none	•20 hours for the committee •50 hours for contractor	Number of sites restored.

Goal 5: Protect and Enhance Habitat for Wildlife and Aquatic Animals through Development of a Watershed Habitat Plan

Objective 5b: **Protect and Enhance Habitat for Wildlife and Aquatic Animals Through Development of a Watershed Habitat Plan.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: NRCS, MDNR, MDEQ

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Meet with local NRCS Staff, MDNR, MDEQ, Drain Commissioners, MSU extension agents, professors, and municipal officials to identify habitat deficiencies within the watershed. Use results of the inventory (Obj. 5b) to assist with this.	Habitat and Recreation Sub-committee/ Contractor	July - Dec 2007	none	•60 hours for committee •100 hours for contractor	NA
2. Discuss options and develop a comprehensive plan with local NRCS Staff, MDNR, MDEQ, Drain Commissioners, MSU extension agents, professors, and municipal officials.	Habitat and Recreation Sub-committee/ Contractor	Jan-Jun 2008	none	•80 hours for committee •100 hours for contractor	NA
3. Adopt the aquatic and terrestrial wildlife plan and include in Watershed Habitat Plan.	Individual Communities/ Local agencies	July 2008 - Jun 2009	Reproduction: ~$25 per plan 50 copies $1,000 - $1,500	80 hours for the communities	Number of local agencies and municipalities that adopt the plan.
4. Implement plan.	Individual communities	Ongoing following adoption	none	Varies annually	Summarize annual accomplishments.
5. Post information on GLRC Public Web Site. (Obj. 1f)	GLRC Executive Committee	As needed.	none	Objective 1 f	Number of downloads of information.

Goal 5: Protect and Enhance Habitat for Wildlife and Aquatic Animals through Development of a Watershed Habitat Plan

Objective 5c: **Consider restoration or purchase of key wildlife habitat areas based on the management plan.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Identify jurisdictions or organizations interested in purchasing or restoring key wildlife habitat areas. Consider acquisition options including fee simple and development rights.	Watershed Committee	Nov 2006 - Jan 2007	none	20 hours of meeting	NA
2. Identify funding options and practicality. Promote in kind grants and donations from communities and sponsors. Include recommendation in Watershed Habitat Plan.	Watershed Committee and GLRC	Feb-Jul 2007	none	60 hours for identifying funding options	Provide a document to the GLRC discussing the effectiveness and next steps.

Goal 6: Protect and Increase Wetlands through Development of a Watershed Habitat Plan

Objective 6 a: **Inventory wetlands within the watershed and determine the general health of wetlands, primary impacts and sources of these impacts.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Create a Habitat and Recreation Sub-committee.	GLRC	Jul-06	none	none	NA
2. Develop methods to inventory wetlands, wetland health, impacts, and sources. (See Chapter 3 of this WMP for a definition of wetland.)	Habitat and Recreation Sub-committee/ Contractor	Aug-Sep 2006	none	•30 hours for committee •80 hours for contractor	NA
3. Prioritize wetland areas based on location, schedule, volunteer base, and opportunities.	Habitat and Recreation Sub-committee/ Contractor	Oct-Dec 2006	none	•30 hours for committee •80 hours for contractor	NA
4. Conduct wetland inventory. Consider acquisition opportunities.	Habitat and Recreation Sub-committee/ Contractor	Several years begin 2007	none	•20 hours for committee •8 hours per wetland for contractor	NA
5. Review data and present findings to GLRC. Post data and reports on project Web site and include in the Watershed Habitat Plan.	Habitat and Recreation Sub-committee/ Contractor	Jan-Jun 2007	none	•20 hours for committee •5 hours per wetland for contractor	Findings presented to appropriate audience

Goal 6: Protect and Increase Wetlands through Development of a Watershed Habitat Plan

Objective 6 b: **Develop and adopt wetland protection measures.**

Permit Requirement: No

Participating Permit tees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Use the findings of the inventory to develop a list of development standards to preserve and protect wetlands.	Habitat and Recreation Sub-committee/ Contractor	Mar-Apr 2007	none	•20 hours for committee •40 hours for contractor	Number of development standards considered
2. Based on the list of development standards, develop an ordinance to be adopted by each community. Include in Watershed Habitat Plan.	Habitat and Recreation Sub-committee/ Contractor / Policy and Procedure Sub-committee	May-Jun 2007	none	•30 hours for committee •20 hours for contractor	NA
3. Adopt ordinance.	Individual Communities	July-Sep 2007	none	None	Number of communities adopting ordinance

Goal 6: Protect and Increase Wetlands through Development of a Watershed Habitat Plan

Objective 6 c: **Implement advanced wetland restoration / protection measures**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Research advanced measures (e.g., 'wetland conservancy', 'wetland banking') and determine applicability.	Habitat and Recreation Sub-committee/ Contractor	Apr-May 2006	none	•20 hours for committee •30 hours for contractor	Number of advanced measures considered
2. Develop plan to implement advanced measures and assess feasibility. Include in Watershed Habitat Plan.	Habitat and Recreation Sub-committee/ Contractor	Jun-Nov 2006	none	•20 hours for committee •60 hours for contractor	Criteria used to assess feasibility
3. Implement feasible measures on appropriate scale.	Habitat and Recreation Sub-committee / Individual Communities	Ongoing once plan is complete	none	40 hours annually	•Number of measures implemented by each community •Scale of implementation

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 a: **Ensure that ordinances and Standard Operating Procedures (SOP) comply with Phase II permit requirements.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review existing operation and maintenance-related ordinances and SOPs for compliance with Phase II requirements.	Policy and Procedure Sub-committee	Present - Jan 2006	none	100 hours of reviewing each community's ordinance	NA
2. Recommend changes to ordinances and SOPs to make them Phase II compliant.	Policy and Procedure Sub-committee	Feb-Mar 2006	none	•20 hours of meeting •40 hours of drafting changes	NA
3. Adopt new ordinances and revise SOPs appropriately.	Individual Communities/ Attorneys	Apr 2006 - Jul 2007	none	100 hours of revising and adopting	Number of new ordinances adopted.
4. Train municipal staff, other appropriate agencies, and public utilities on new procedures. Include basic storm water management awareness information.	Individual Communities	Ongoing begin once ordinance is adopted	Training Materials: $100-$300	50 hours initial training; 20 hours annually thereafter	•Number of staff trained. •Frequency of training.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 b: **Review municipal pesticide and fertilizer application procedures for municipally-owned property. Ensure that directions are followed, low-phosphorus fertilizers are used, and soil testing is conducted to determine fertilizer need.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Determine a baseline model of fertilizer and pesticide procedures and compare with existing community procedures.	Policy and Procedure Sub-committee/ Individual Communities	Jan-Feb 2007	none	20 hours of reviewing per community	NA
2. Recommend improvements to be made to procedures.	Policy and Procedure Sub-committee/ Individual Communities	Mar-Jul 2007	none	30 hours of meeting and drafting changes per community	NA
3. Train Staff on new application procedures, as needed.	Individual Communities	Ongoing once procedures are accepted	Training Materials: $100-$300	30 hours initial training preparation per community; 20 hours annually thereafter per community	•Number of staff trained. •Frequency of training.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 c: **Provide maintenance activities and inspection procedures for permanent structural storm water best management practices (retention basins, swales, created wetlands, rain gardens, etc.).**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Research permanent structural BMPs including inspection and maintenance procedures and pollutant removal efficiencies.	Policy and Procedure Sub-committee	Nov 2006 - Jan 2007	none	•30 hours of meeting •30 hours of BMP research	NA
2. Develop a BMP manual including design standards, inspection requirements, maintenance requirements, and pollutant removal efficiencies. Consider consultant assistance.	Policy and Procedure Sub-committee / Consultant (if necessary)	Feb-Jul 2007	none	•80 hours for the committee •consultant fees	Number of people that use the manual.
3. Adopt BMP manual.	Individual Communities/ Local agencies	Aug - Sep 2007	Reproduction: ~$25 per plan 50 copies $1,000 - $1,500	80 hours for the communities	Number of local agencies and municipalities that adopt the manual.
4. Implement manual.	Individual communities	Ongoing following adoption	none	TBD	Summarize annual accomplishments.
5. Post information on GLRC Public Web Site. (Obj. 1e)	GLRC Executive Committee	As needed.	none	4 hours of posting	Number of downloads of information.
6. Train Staff on new BMPs and BMP maintenance procedures, as needed.	Individual Communities	Ongoing once manual is adopted	Training Materials: $100-$300	30 hours initial training; 20 hours annually thereafter	•Number of staff trained. •Frequency of training.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 d: **Assess the impacts on water quality from flood management projects.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Use the BMP Manual when designing new flood management BMPs. Determine pollutant removal efficiencies to assess impacts on water quality.	Individual Communities	Ongoing once manual is adopted	none	NA	Specific location of flood management BMPs throughout watershed.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 e: **Reduce discharge of pollutants from streets, roads, highways, parking lots, and maintenance garages.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Determine a baseline model of street sweeping, catch basin cleaning, and hydrant flushing procedures and compare to existing procedures. Review Pollution Incident Prevention Plans (PIPP) for maintenance garages, if they exist.	Policy and Procedure Sub-committee/ Individual Communities (include procedure discussions with public utilities and drain commissioners)	Aug-Sep 2007	none	10-40 hours of reviewing	NA
2. Depending on review results, recommend improvements to be made to existing programs or create new programs.	Policy and Procedure Sub-committee/ Individual Communities	Oct - Dec 2007	none	50 hours of meeting and drafting changes	NA
3. Train Staff on new street sweeping, catch basin cleaning, hydrant flushing, and PIPP procedures, as needed.	Individual Communities	Ongoing once procedures are accepted	Training Materials: $100-$300	30 hours initial training; 20 hours annually thereafter	•Number of staff trained. •Frequency of training.
4. Develop method to track quantity of sediment and debris removed.	Individual Communities	Jan-Dec 2008	none	50 hours of developing debris tracking method	Quantity of debris removed from streets and catch basins annually.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 f: **Dispose of operation and maintenance waste from the separate storm water drainage system appropriately. This includes street sweeping, catch basin cleaning, dredge spoil, sediments, floatables, and other debris.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review existing operation and maintenance waste disposal procedures for proper practices.	Individual Communities	Jan-Feb 2007	none	20 hours of reviewing	NA
2. Recommend improvements to be made to disposal procedures.	Individual Communities	Mar-May 2007	none	50 hours of meeting and drafting changes	NA
3. Train Staff on new waste disposal procedures as needed.	Individual Communities	Ongoing once procedures are accepted	Training Materials: $100-$300	30 hours initial training; 20 hours annually thereafter	•Number of training attendees. •Frequency of training.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 g: **Add or revise municipal ordinances to require low or no phosphorus fertilizer for both business and residential use.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Research and develop an ordinance that requires low or no phosphorous fertilizers. Discuss with local distributors and manufacturers.	Policy and Procedure Sub-committee	Mar - Dec 2007	none	•20 hours of meeting •40 hours of ordinance development	NA
2. Adopt ordinance in watershed communities.	Individual Communities	Jan 2008 - Jan 2009	none	30 hours of meetings	Number of communities that adopted ordinance.
3. Work with both businesses and residents to see this new ordinance implemented.	Individual Communities	Mar 2008 - Feb 2010	Advertising: $300- $1,500	100 hours of meetings and communication initially; 20 hours annually thereafter	Number and circulation of advertisements.
4. Develop/Distribute brochures and tip cards to businesses and residents through a mailing.	PEP Sub-committee	Mar 2008- Feb 2009	Brochures/tip cards: $0.20 each 10,000 - 50,000 ct. $2,000-$10,000	•80 hours of developing •40 hours of organizing mailing	Number of brochures/tip cards distributed.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 h: **Ensure that excess salt is not being spread in watershed. (Coordinate with Obj. 1 i and Obj. 7 e)**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Review existing excess salt application practices including truck calibration, salt loading, and salt storage.	Individual Communities	Jun - Jul 2006	none	20 hours of reviewing	NA
2. Recommend improvements to be made to existing practices or create new practices.	Individual Communities	Aug - Sep 2006	none	50 hours of meeting and drafting changes	NA
3. Train Staff on new salt storage, application, and truck calibration practices, as needed.	Individual Communities	Ongoing once procedures are accepted	Training Materials: $100-$300	50 hours initial training; 20 hours annually thereafter	•Number of training attendees. •Frequency of training.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 i: **Remove trash and debris from river. Coordinate with O&M Departments to plan for events that result in excessive trash and debris, such as festivals, street fairs, and football games.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners, MSU

Supporting Agencies: School Districts, Chamber of Commerce's, Parks and Recreation Departments

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Coordinate with existing river clean-up programs to identify new locations and extend programs to other portions within the watershed.	PEP Sub-committee	Mar 2006 - Feb 2007	none	120 hours for coordination and planning	•Number of clean-up events. •Number of volunteers. •Quantity of trash collected.
2. Meet with MSU, school districts, chamber of commerce, parks and recreation department, and O & M departments to coordinate public service following community events.	PEP Sub-committee	Mar 2007 - Feb 2008	none	120 hours for meeting	•Number of clean-up events. •Number of volunteers. •Quantity of trash collected.

Goal 7: Provide Pollution Prevention/Good Housekeeping Practices for Municipal Operations

Objective 7 j: **Adopt stream and ditch management techniques for channel rehabilitation focused on drains and open ditches.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissioners

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Research stream and ditch management techniques used in other areas around Michigan and nationwide to both maintain drains and protect the environment.	Policy and Procedure Sub-committee	Mar-May 2006	none	•20 hours for committee •100 hours for contractor	NA
2. Hold roundtable discussion with those involved in ditch and drain cleanout/maintenance.	Policy and Procedure Sub-committee / Contractor	Jun - Jul 2006	Roundtable Materials: $100-$300	•20hours for committee •50 hours for contractor	NA
3. Develop a management plan.	Policy and Procedure Sub-committee / Contractor	Aug 2006 - Jan 2007	Reproduction: ~$10 per plan 50 copies $400 - $700	•20 hours for committee •100 hours for contractor	NA
4. Adopt management plan.	Individual communities	Feb-Apr 2007	none	80 hours of discussions	NA
5. Implement management plan.	Individual communities	Ongoing begin May 2007	none	varies annually	Track locations of ditch and channel rehabilitation projects.
6. Evaluate areas of ditches that have been rehabilitated.	Policy and Procedure Sub-committee / Contractor	Annually	none	80 hours of evaluation and recommendation annually	NA
7. Post information on GLRC Public Web Site. (Obj. 1e)	GLRC Executive Committee	As needed.	none	4 hours of posting	Number of downloads of information.

Goal 8: Strive to Eliminate Pathogens to Meet Total and Partial Body Contact for Recreational Uses

Objective 8a: **Minimize and/or manage sanitary sewer overflows (SSOs) and combined sewer overflow (CSOs).**

Permit Requirement: No

Participating Permittees: Wastewater Treatment Plant NPDES Permit

Supporting Agencies: TBD

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. None	NA	NA	NA	NA	NA

Actions associated with SSOs and CSOs are managed by other agencies within the municipality.

Goal 8: Strive to Eliminate Pathogens to Meet Total and Partial Body Contact for Recreational Uses

Objective 8b: **Conduct an illicit discharge removal program including: finding problems by checking for leaking sanitary systems, leaking septic systems, and illicit connections; removing the source of the problem and prohibiting their reoccurrence through municipal code and ordinances.**

Permit Requirement: Yes

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: County Health Departments

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Implement municipal separate storm sewer system illicit discharge elimination plans. (Part of IDEP document.)	Individual Communities	Apr 2005 - Nov 2009	To be determined	Contractor cost and cost to correct problems.	Number of Corrective Actions Taken.
2. Work with the county health department to develop septic system tracking program.	IDEP Sub-committee/ Health Departments	May 2007 - April 2008	none	100 hours of developing program	NA
3. Implement septic system tracking program in the Tri-County Area.	IDEP Sub-committee/ Health Departments	Ongoing beginning May 2008	none	•80 hours of initial implementation •20 hours annually of updating	Willingness of County Health Departments to use tracking system
4. Develop a campaign to reduce pet waste. Consider signs in parks and pet waste bags.	IDEP Sub-committee/ Health Departments	May 2007 - April 2008	none	100 hours of developing campaign	Track usage of pet waste bags.

Goal 9: Encourage Water Quality Friendly Agricultural Practices

Objective 9a: **Promote and support the existing agricultural programs and encourage water quality friendly practices. Focus on creating incentives.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: Conservation Districts, Michigan Department of Agriculture (MDA), Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS)

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Create an Agricultural Water Quality Committee that links urban and rural concerns.	Conservation Districts	Apr 2007 - Mar 2008	none	20 hours of meetings and coordination	Number of partnerships with agencies.
2. Research agricultural programs designed to protect water quality. Examples include CREP (Federal and State) CRP (Federal), Effluent trading, MI Agriculture Environmental Assurance Program (MAEAP), and tax assessment on drains. Identify incentives to be promoted.	Individual Communities and Agricultural Water Quality Committee(s)	Aug-Sept 2006	none	20-400 hours	NA
3. Promote water quality friendly agricultural practices with local farmers through NRCS, FSA and MDA etc.	Individual Communities	Oct 2006 - Mar 2007	Advertisement: $500-$1,500	40-200 hours	•Number of farmers contacted. •Number of farmers willing to consider water quality friendly practices.
4. Implement demonstration projects.	Agricultural Water Quality Committee(s)	Oct 2006 - Mar 2007	none (grant funded)	40-200 hours	Number of people attending site.
5. Ensure that water quality friendly agricultural practices are promoted through the distribution of existing materials and programs.	Individual Community	Ongoing once partnerships are established	Brochures: ~$0.20 each 2,000 - 5,000 ct. $400 - $1,000	Ongoing 20 hours annually	Number of brochures distributed.

Goal 9: Encourage Water Quality Friendly Agricultural Practices

Objective 9b: **Support annual community meetings on agriculture in the watershed.**

Permit Requirement: No

Participating Permittees: Cities, Townships, Drain Commissioners, Road Commissions, MSU

Supporting Agencies: Conservation Districts, Natural Resources Conservation Service (NRCS)

Action	Lead Agency	Schedule	Material Cost Estimate	Labor Hour Estimate	Evaluation Mechanisms Measure of Usage of Facilities or Material
1. Coordinate with the Conservation District to incorporate annual community meeting on agricultural practices into their annual meeting.	Watershed Committee / NRCS	Annually begin Feb 2008	Annual Advertising: $300 - $600	40 hours of coordinating annually	Number of people attending.
2. Set annual goals during each meeting.	Watershed Committee / NRCS	Annually begin Mar 2008	none	20 hours of meeting and follow-up	Record annual goals.

References

Basetree. "Starting line photo." via http://www.basetree.com/photos/bay-to-breakers/the-race.html. Last accessed May 24, 2005.

Michigan Land Use Leadership Council, (August, 2003). *Michigan's Land, Michigan's Future* (2003). Accessed July 26, 2005 at *http://www.smartgrowth.org/pdf/gettosg.pdf.*