An Information and Education Strategy for the Macatawa Watershed

Part of the Macatawa Watershed Management Plan

2/2/2012
Prepared by the
Macatawa Area Coordinating Council
301 Douglas Avenue
Holland, Michigan 49424
616-395-2688
www.the-macc.org

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I. Introduction

To best implement the goals of the Macatawa Watershed Management Plan, the community and all relevant stakeholder groups need to be aware of the water quality problems facing Lake Macatawa *and* be aware of their role in resolving those problems. The Information and Education (I/E) Strategy is intended to serve as a communication guide to accomplish these tasks. The I/E Strategy will be utilized to best focus time, attention and resources on messages and activities that have the greatest potential to help improve local water quality.

In general, the techniques described herein are meant to raise awareness, clearly articulate the local importance of clean water and empower local citizens to change their behavior.

II. Development

The I/E Strategy was developed by members of the Information and Education Subcommittee, in consultation with the members of the Watershed Planning Committee (Table 1.). A draft of this plan was presented to the MACC Policy Board for review in December of 2011. A special thanks to members of the various watershed committees who offered their specific review comments to this document include Rob Venner, Travis Williams, Tom Hendrickson, Bruce Washburn, Bruce Panse, Mark Ludwig, Heather Simeneta, Graham Peaslee, Cathy Mader, Wes Koops, Jerry Hunsburger, Glenn Pomp, Carl VanFaasen, Michelle Storey, Steve Vanhoeven, John Darling, Linda Brown, Jamie Krupka, Paul Lilley, Kathy Winnett-Murray, Ann Saliers and Glenn Berghorst.

Table 1. Organizations, entities, or groups participating in the Watershed Planning Committee. Asterisk indicates members of the Information and Education Subcommittee.

Allegan County Road Commission	Michigan Department of Natural Resources
Allegan Conservation District	Michigan State University Extension
City of Holland*	Ottawa Conservation District
City of Zeeland	Ottawa County Health Department *
Holland BPW *	Ottawa County Drain Office
Holland Public Schools*	Ottawa County Natural Resources Conservation District
Holland Township	Ottawa County Parks Department
Hope College	Ottawa County Road Commission
Local Citizens *	Outdoor Discovery Center-Macatawa Greenway *
Macatawa Watershed Association*	Park Township*
Michigan Department of Environmental Quality *	

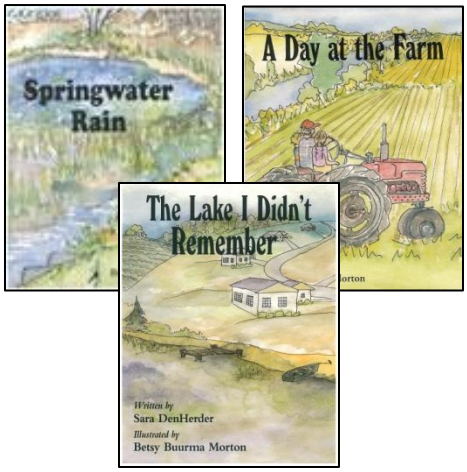
The Macatawa Watershed I/E Strategy is divided into two parts. The first part focuses on increasing **general awareness** of local water problems and the feelings of stewardship towards our water resources. The second part is aimed at **achieving behavior changes** and implementing actions that will help improve water quality.

III. Historical Public Outreach

Informing and educating the public about water quality and the Macatawa Watershed is one of the most important tasks conducted by the Macatawa Watershed Project (MWP). Since its inception in the late 1990s, the MWP has worked to increase and improve public outreach.

Historically, the public outreach work of the MWP was guided by the *Community Action Plan*, which was first developed in 2000 and later revised in 2005. The MWP made great strides under the auspices of these plans and developed the following public outreach components:

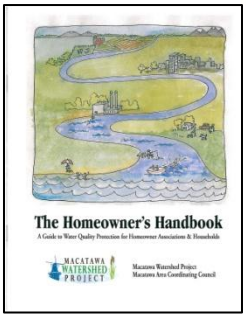
- Watershed Project Logo
- Lawn Care Seal of Approval Program
- Three Children's Books
    - A Day at the Farm
    - The Lake I Didn't Remember
    - Springwater Rain
- General Watershed Brochure
- Award – winning *Into the Watershed* DVD
- An Agricultural Advisory Committee
- Homeowner's Handbook
- Watershed Stakeholder of the Year Award



Many of these public outreach components have undergone updates and are still in use today at the MWP. Additional public outreach activities have been conducted under the auspices of the *Public Education Plan*, developed for compliance with the State of Michigan's MS4 Storm Water Program (Municipal Separate Storm Sewer System). The latest *Public Education Plan* was updated in August of 2010 and is still in use today (included as Attachment A).

Current public outreach activities include:

- An updated Watershed Project Logo
- General Watershed Brochure
- Lawn Care Brochure
- Project Specific Fact Sheets
- Updated Homeowner's Handbook
- Two Tabletop Displays
- Storm Drain Stenciling Kits
- Facebook Page



IV. Demographics and Community Characteristics

The Macatawa Watershed covers approximately 175 square miles of land and consists of all the land that drains to Lake Macatawa, which includes parts of nine townships and two cities. The overall population within these geographic areas is estimated to be approximately 130,000 people (American Community Survey 2005-2009). The data below was obtained from the American Community Survey 5-year Estimates of the United States Census Bureau. The estimated population that lives within the Macatawa Watershed boundary is 107,000 people.

The values were calculated based on the percentage land area of each unit of government that lies within the Macatawa Watershed (Table 2). For instance, the entire City of Holland lies within the watershed boundaries, so 100% of Holland's population was included in the watershed population estimate. In comparison, only 61% of Laketown Township falls within the watershed boundary so only 61% of Laketown's total population was included in the watershed population estimate. This method of calculation assumes a uniform population density throughout each unit of government, so these estimates should be considered rough estimates especially for townships that have heavily populated areas outside the watershed boundary (Laketown, Port Sheldon and Blendon Townships). Note that only a small fraction of the watershed stretches into Jamestown, Georgetown, Manlius Township, and Salem Townships and those population estimates were not included in this data.

Table 2. Population estimate for the Macatawa Watershed based on American Community Survey, 2005-2009.

Geographic Area	Total Population	Land Area Within Watershed Boundary	Estimated Population Within Watershed
Holland Township	34,684	100%	34,684
City of Holland	33,051	100%	33,051
Park Township	17,915	81%	14,511
Zeeland Township	9,633	91%	8,766
City of Zeeland	5,610	100%	5,610
Laketown Township	5,573	61%	3,400
Fillmore Township	2,723	88%	2,396
Olive Township	4,786	33%	1,579
Overisel Township	2,882	51%	1,470
Blendon Township	5,808	19%	1,104
Port Sheldon Township	4,302	7%	301
Total	129,967		**106,872**

Data can be accessed at www.census.gov/acs/www/

A detailed assessment of demographics is included in Attachment B. Review of the demographic data indicates some important characteristics that may be pertinent to implementation of the I & E Strategy (Table 3).

Table 3. Summary of important demographic data (more detailed information available in Attachment B).

Category	Comments
Population	• Evenly distributed between males and females • Average population density is 6.11 people/square mile • City of Holland density: 1,994 people/square mile
Age	• 7.6% of the population under 5 years of age • 23.5 % of the population between 5 and 19 years of age • 9.5% of the population over 65 years of age
Race and Ethnicity	• Majority of the population identifies as "White" • 16.5% consider themselves Hispanic or Latino • 5.4% of Asian descent
Households	• Approximately 39,000 households within the watershed • 2.78 people is the average household size • Approximately 15,000 dogs in the watershed (39% of households own at least one dog[1])
Educational Attainment	• 89% have a high school graduate degree or higher • 26% have a bachelors degree or higher
School Enrollment	• 32,000 students enrolled (pre K thru college) • 40% of students in Grades 1-8 • Six public school districts within the watershed
Language	• 76% speak only English at home • 16.4% speak a language other than English • 10.9% speak Spanish at home
Income	• $69,532 is the mean household income • 7% of the population lives below poverty level • 20% of households earn less than $24,999 annually • 27% earn $25,000 to $49,999 annually • 35% earn $50,000 to $99,999 annually • 16% earn over 100,000 annually

1. U.S. Pet Ownership Statistics from The Humane Society of the United States (www.humanesociety.org)

Agricultural Data

Much of the Macatawa Watershed is in agricultural land. In fact, Allegan and Ottawa County are among some of the most agriculturally productive counties in the State of Michigan. Approximately 46% of the watershed land area is designated as agricultural land based on a review of 2009 land use data. Agriculture is such an important part of the watershed, that it deserves greater analysis. The data below was taken from the 2007 Census of Agriculture and can be accessed **http://quickstats.nass.usda.gov/**

Table 4. Summary of agricultural data (by county) for the Macatawa Watershed.

	County		Totals
	Ottawa	Allegan	
Number of farms	1,451	1,595	3,046
Total Acres of Farms	170,539	275,120	445,659
Total Acres of Cropland	130,023	226,541	356,564
Total Number of Orchards	65	94	159

The 2007 Census of Agriculture provides data on a county and zip codes basis. The majority of the watershed falls into four zip codes including 49423, 49424, 49464 and 49419.

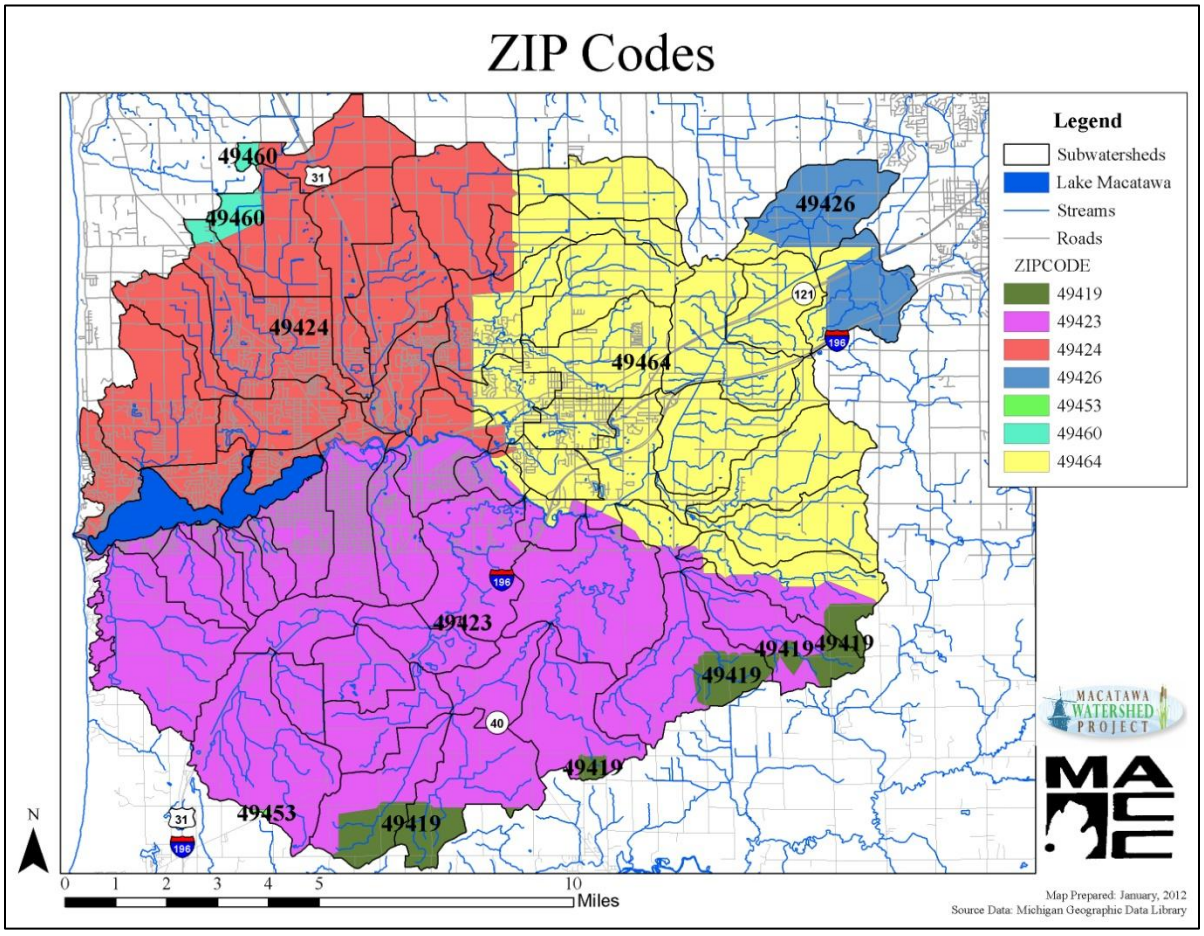


Table 5. Summary of agricultural data by zip codes for the Macatawa Watershed.

	Zip codes				Totals
	49423	49424	49464	49419	
Operations Enrolled in Conservations Programs	10	7	5	4	26
# of Harvested Cropland Operations	133	139	181	102	555
# of Total Farm Operations	165	168	264	140	737
Tenure Full Owner Operations	110	120	163	92	485
Family Primary Occupation of Owner	64	82	109	65	320
Farm Serves as Residence	136	137	226	119	618
Total Berry Operations	5	44	4	4	59
Total Corn, Grain Operations	51	32	83	40	206
Total Corn Silage Operations	5	9	26	7	47
Total Crop Operations	122	104	145	98	469
Total Horticulture Operations	22	16	26	12	76
Total Orchards	9	0	2	5	16
Total Soybean Operations	46	18	48	26	138
Total Open Air Vegetable Operations	5	3	19	7	34
Total Animal Operations	80	53	155	55	343
Total Cattle Operations	30	23	93	19	165
Total Hog Operations	29	13	26	20	88
Total Dairy/Milk Operations	7	3	16	3	29
Total Poultry Operations	19	21	39	10	89

The data below was taken from the 2007 Census of Agriculture and can be accessed **http://quickstats.nass.usda.gov/**

One of the most staggering statistics outlined above is the very small number of farm operations that are enrolled in conservation programs under the Natural Resources Conservation Service. Of the 737 total number of farm operations in these zip code regions, only 3.5% (26) are currently enrolled in a conservation program. There is an abundance of both crop and animal operations in the region and most farms also serve as the primary residence of the owner. This important stakeholder group was surveyed in 2010. See Section V, Table 8 for a more information on the agricultural community in the Macatawa Watershed.

V. Results from Previous Surveys

The Macatawa Watershed has conducted a number of surveys since 2000 and has gathered a wealth of information from and about local residents, local government officials and local farmers (Table 6). Much of the data collected has helped to guide the development of the I/E Strategy and will also be used to evaluate the success of our outreach activities in the future. A summary of the surveys listed at the right has been included here. For more detailed information about the surveys listed below please visit the MACC's website at www.the-macc.org and click on "Research".

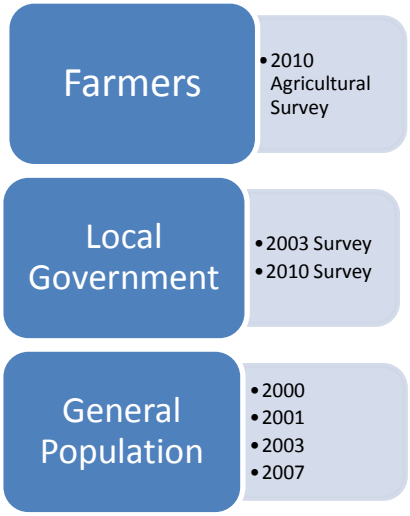
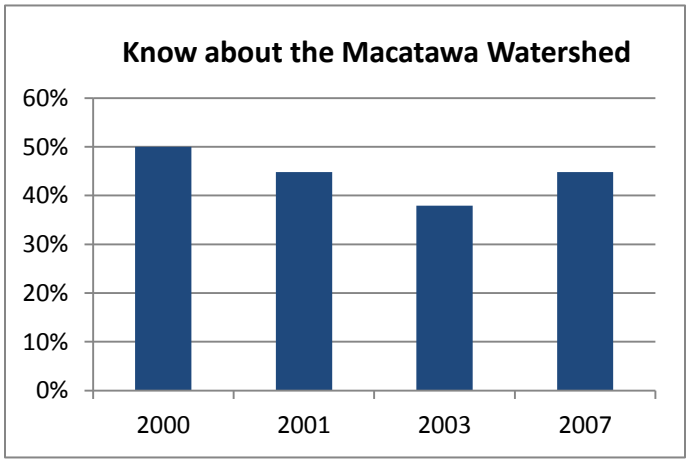
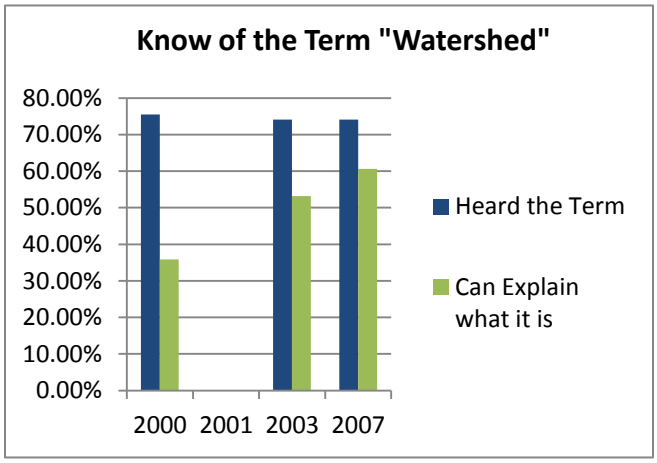


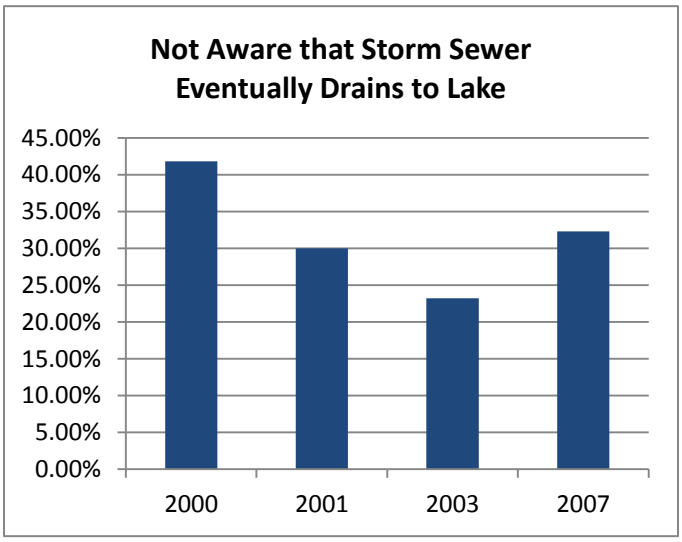
Table 6. Summary of residential surveys conducted by the Macatawa Area Coordinating Council.

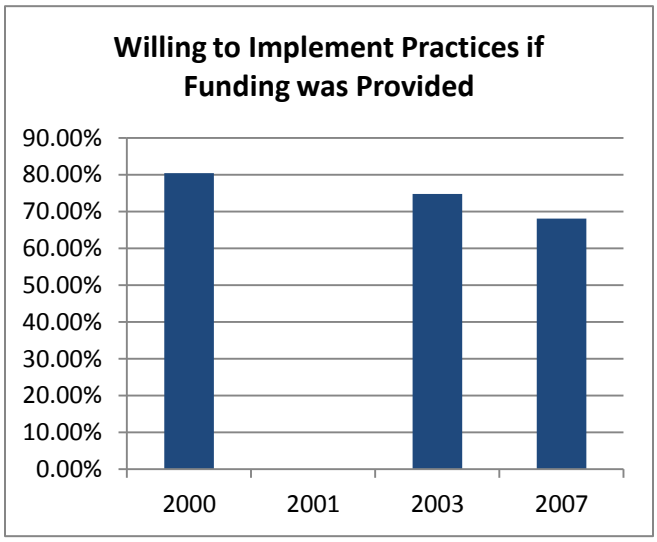
Survey Name & Year	Focus	Mode	Survey Size	Distribution	Results
2000 Resident Survey	Water use, behaviors regarding surface water quality and opinions about policies designed to ensure water quality	Telephone	523	66% urban, suburban, city neighborhood 12% agricultural 22% rural residential	Watershed education programs would be useful, behavioral goals and objectives to improve water quality should be identified, initiatives to improve water quality would be met with support from citizens, and further research into citizens' view of funding is suggested.
2001 Resident Survey	Storm water issues, water use, behaviors regarding surface water quality and opinions about policies designed to ensure water quality	Telephone	493	Demographics not available	Change will come slowly and with concerted effort, there exists a high need to educate the citizenry – awareness is low, a decrease in lawn fertilization will be met with large resistance from the public.
2003 Resident Survey	Knowledge of watershed issues, household beliefs, characteristics and behaviors related to water quality, and willingness to adopt behaviors that improve water quality	Telephone	502	24% Urban 55% Suburban 21% Rural or agricultural	Frequency of fertilizer use has decreased, yet willingness to reduce lawn fertilization is met with the greatest resistance. High level of willingness to participate in behaviors that will improve water quality. Bacterial contamination was issue of greatest importance.
2007 Resident Survey	Same as above	Telephone	483	25% Urban 52% Suburban 23% Rural or agricultural	Bacterial contamination was issue of greatest importance, followed by soil erosion and then flooding. Frequency of lawn fertilization increased to 2001 levels. The issue of lawn fertilization remains an important concern.

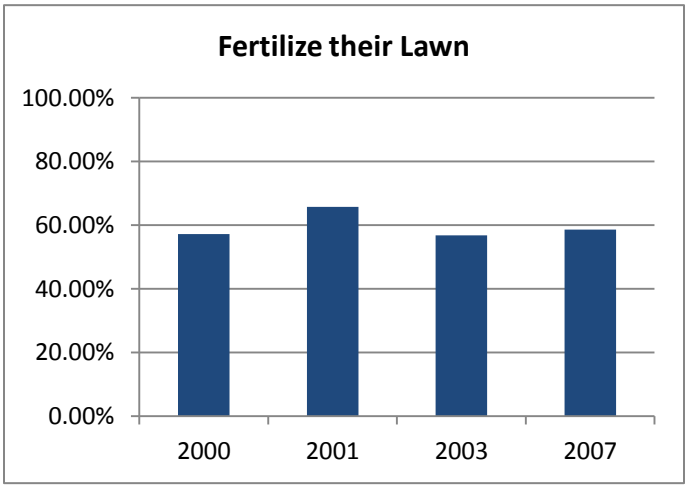
Collecting data from the same general population over a period of seven years has provided enough information to start examining trends (see figures below). It appears that roughly 45-50% of the general population is familiar with the Macatawa Watershed and since 2000, there has been a significant increase in the percentage of residents that can explain what a watershed actually is. However, about 30-35% of the general population is not aware that storm water eventually drains to Lake Macatawa (and not to a wastewater treatment plant).

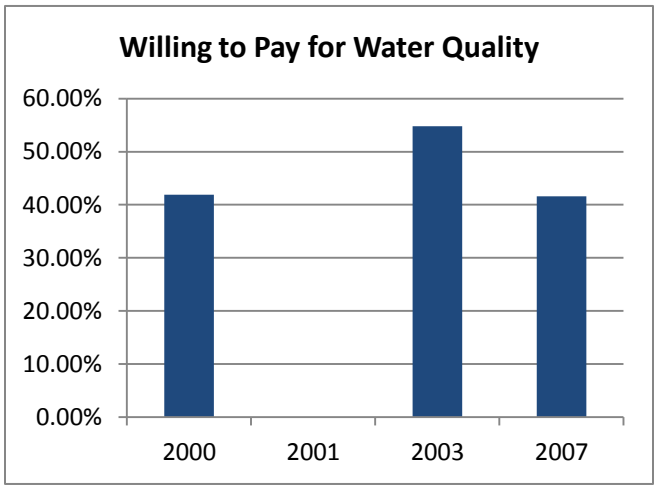












A majority of the general population (58-62%) reports fertilizing their lawn regularly. In 2000 and 2001 about 20% of respondents indicated they had their soil tested for existing nutrient levels, while in 2003 and 2007 almost 25% of respondents had their soil tested.

Approximately 68-80% of the population surveyed indicated they would be willing to implement practices to improve water quality *if funding was provided to them*. Surprisingly, 42-55% even indicated a willingness to pay for water quality.

Two surveys were conducted in 2003 and 2010 that focused specifically on local government officials (specifically those who serve on the MACC's Policy Board). The majority of respondents indicated that the MACC is making progress on educating the community, raising awareness of storm water issues and implementing demonstration projects. However, respondents also expressed concern about the long term implications of the work (i.e. detectable changes in water quality), creating and maintaining partnerships, and the involvement of shoreline residents. General information about these surveys is included in Table 7.

Table 7. Summary of local government surveys conducted by the Macatawa Area Coordinating Council.

Survey Name & Year	Focus	Mode	Survey Size	Results
2003 Local Government Survey	Reducing phosphorus, informing the community, implementing best management practices, sustaining long-term progress, cooperation and partnerships.	Email and Telephone	20	Progress is being made in the areas of reducing phosphorus, informing the community, and implementing BMP's. Less success related to sustaining long-term progress, cooperation and partnerships. More progress needs to be made in the residential areas. Need more awareness of the Macatawa Watershed Project.
2010 Local Government Survey	Same as above	Email and telephone	20	A majority of respondents have seen improvement in effectiveness and progressiveness with storm water education, compliance with requirements, decreased storm water run-off, and involvement with regulations, although much is yet to be done. They expressed concern about the cooperation of property owners around Lake Mac and the need for further education. There is a high concern for quality and quantity of storm water entering the system.

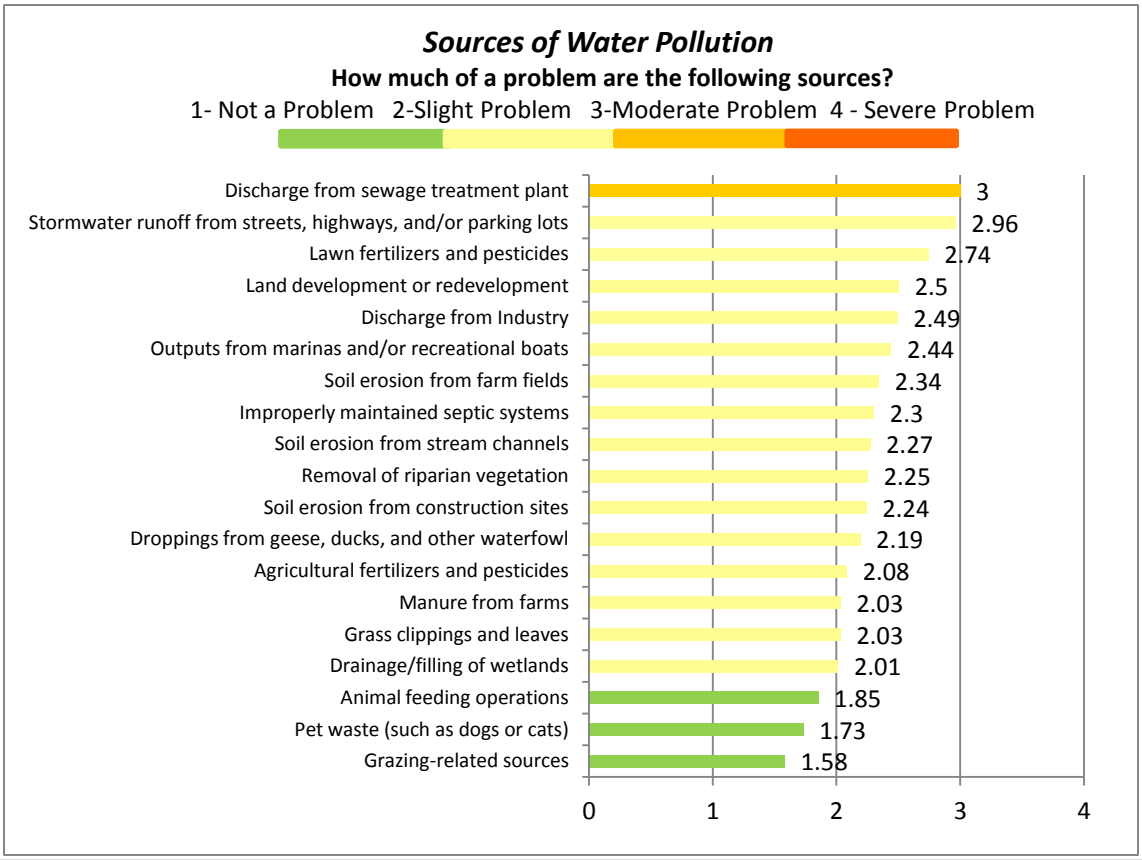
*Representatives from the following local units of government were surveyed: City of Holland, City of Zeeland, Allegan and Ottawa County, Allegan and Ottawa County Road Commission, the townships of Holland, Zeeland, Park, Olive, Port Sheldon, Laketown and Fillmore, and the Macatawa Area Express Transit Authority

In 2010, the MACC conducted a survey of the agricultural community within the Macatawa Watershed area. The purpose of the survey was to gain valuable insight from farmers on topics of water related issues, the use of best management practices by the farm, and participation in government-funded cost share programs. General information about the survey is included in Table 8 (the final survey report can be accessed at http://www.the-macc.org/wp-content/uploads/2009/04/Ag_survey_report_FINAL.pdf).

Table 8. Summary of results from 2010 Agricultural Survey, conducted by the Macatawa Area Coordinating Council.

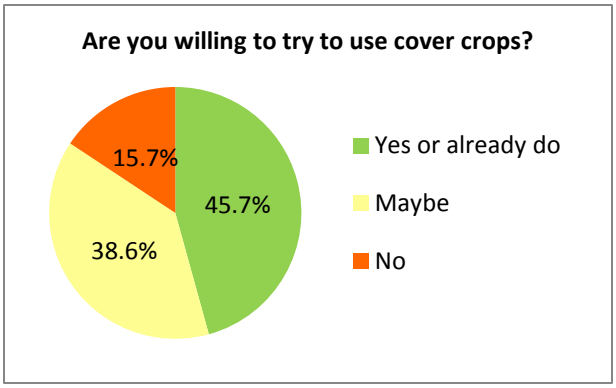
Survey Name & Year	Focus	Mode	Survey Size	Results
2010 Agricultural Survey	Attitudes about water quality, implementation rate of best management practices, identify obstacles to implementing BMPs	Written	150 (30% return rate)	Almost 90% of farmers know the rain that runs off of their farms goes into a surrounding water body. About 50% of respondents report using buffer strips and conservation tillage. 87% of respondents say they agree or strongly agree that it is their personal responsibility to help protect water quality

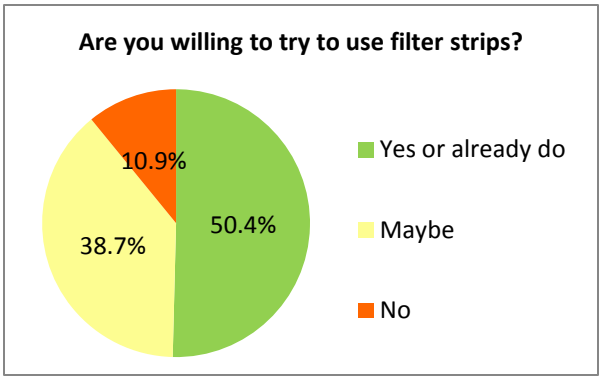
A majority of respondents were males (87%) and were in the role of decision maker on the farm (91%). Over half of the respondents (65%) owned relatively small farms in the category of 1-99 acres. Most of the respondents showed concern for water quality and an understanding of their connection to the Macatawa Watershed. Although most agreed with the need for good water quality and recognized phosphorus and sediment as the main pollutants of concern, many did not have sufficient information about the sources of those pollutants.

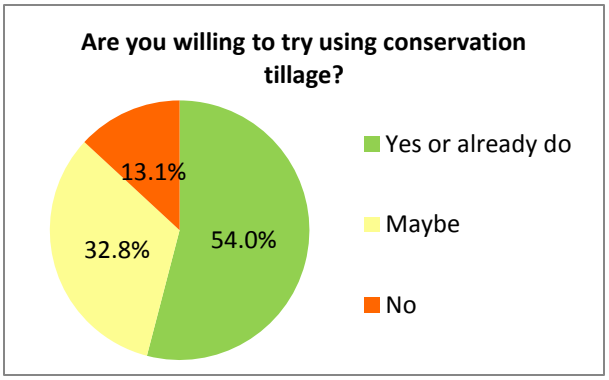


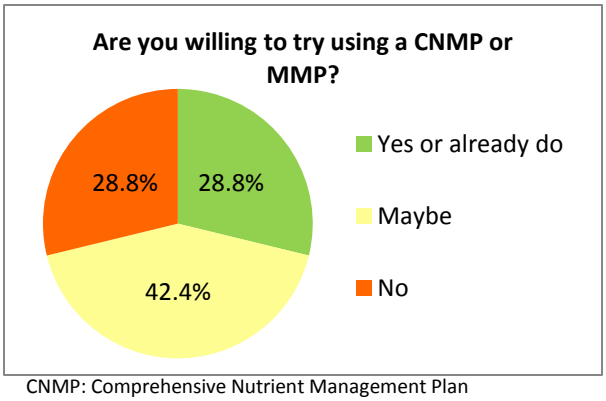
For instance, the graphic above indicates that most of the respondents think that the largest source of water pollution comes from sewage treatment plants and another popular, though incorrect answer, was discharge from industry. Soil erosion from farmland is arguably one of the largest contributors of phosphorus and sediment to the Macatawa Watershed, however respondents ranked it seventh behind other sources of lesser concern.

A major objective of the survey was to measure the use of various best management practices (BMPs) which are practices shown to be effective and practical for preventing or reducing pollution on the farm. In most cases about half of the respondents indicated they are currently using each of the BMPs listed in the survey including grassed waterways, filter strips, cover crops, conservation tillage and nutrient management plans (including Comprehensive Nutrients Management Plans and Manure Management Plans). For those who were not currently using a practice, a large percentage indicated that they are willing or a may be willing to use such practices on their farm (see figures below).





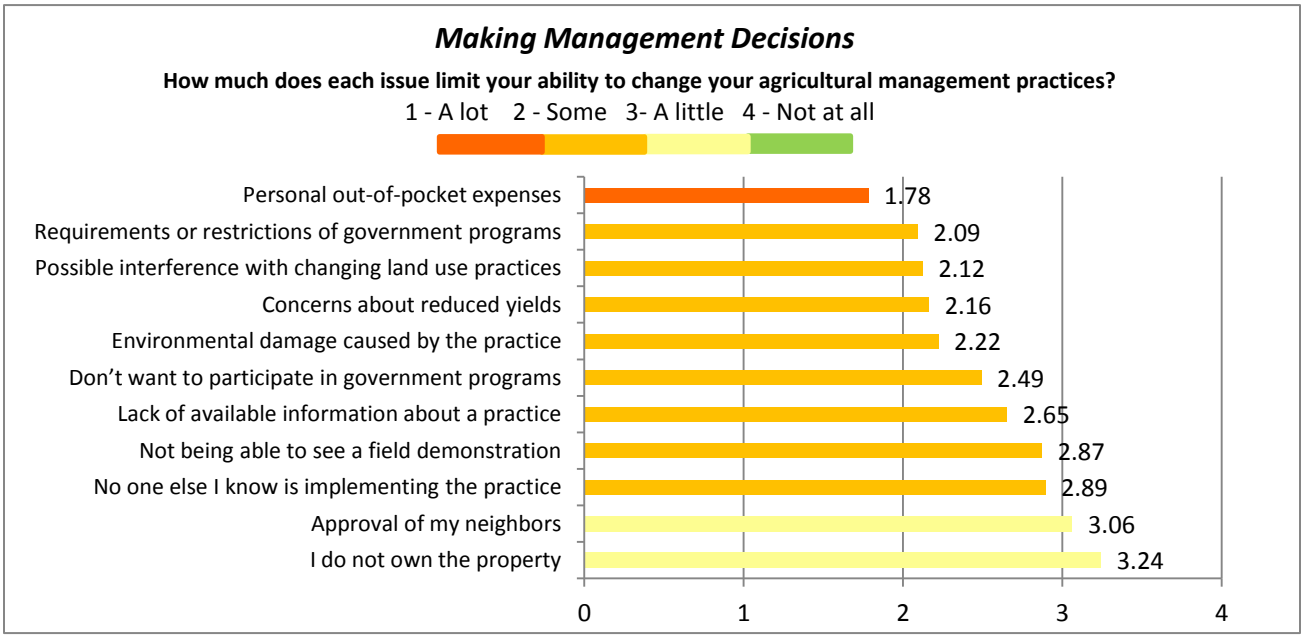




CNMP: Comprehensive Nutrient Management Plan
MMP: Manure Management Plan

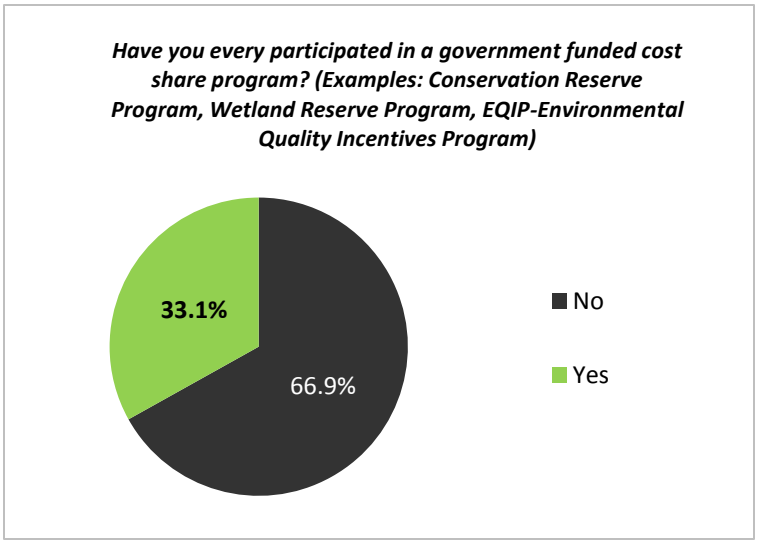
To be successful in helping farmers to implement these BMPs, the goal is to try to reduce the obstacles that typically impede implementation. When making management decisions, often certain issues limit a farmer's ability and/or desire to change. Most respondents felt they are limited in making changes to their management practices because of personal out-of-pocket expenses (40%), requirements or restrictions of government programs (31%), concerns about reduced yields (27%) and interference with their flexibility to change practices as conditions warrant in the future (25%). The issues of least concern

were ownership of the property, approval of neighbors, and that no one else they know is implementing the project (see figure below).



To address the concerns indicated above, it appears that one of the best ways to convince farmers to implement BMPs will be to offer cost-share funding and/or develop a cost-benefit analyses that tangibly shows the monetary savings and yield increases that might result from implementing these practices.

However, the typical delivery method for cost-share funding is via government funded programs. Most farmers (67%) indicated that they have never participated in a such a program (see figure at right). It appears that Ottawa County farmers are more likely than Allegan County farmers to have never participated in such programs. A higher percentage of farms with 1,000-2,000 or more acres have participated in a government funded cost share program than those with less than 1,000 acres.



VI. Target Audiences

The physical land area of the watershed spans 175 square miles that includes parts of two counties. The population can be further categorized and described in many different ways. It's not prudent to conduct outreach to every group of individuals in the watershed using the same messages and delivery mechanisms. Therefore, to use resources as efficiently as possible, target audiences were identified and prioritized (Table 9) by members of the Watershed Planning Committee and Information and Education Subcommittee (by discussion and consensus). Six groups were identified as high priority target audiences including farmers, local government, residents, institutions, environmental advocacy groups and schools.

This I/E strategy directly supports the overall goals of the watershed management plan (restoration, protection and enhancement). The target audiences were identified and prioritized with these goals in mind. This I/E strategy only focuses on outreach to target audiences that have been designated as *High Priority*.

Furthermore, the six high priority groups were further subdivided into 37 subgroups! This extensive list of subgroups underwent even further prioritization. This level of detail is necessary to enable us to craft messages that will resonate with each specific subgroup. For instance, a local elected official might respond well to a message about passing ordinances to reduce storm water runoff from new developments. However, this message would be irrelevant for a farmer or schoolteacher. Likewise, local urban residents might benefit greatly from water quality information posted on a well-placed billboard, however this mode of delivery would be ineffective for communicating with farmers or other rural residents. There is a great need to have very specific strategies to effectively communicate with each of our high priority target audiences.

Table 9. Prioritized list of target audiences for the Macatawa Watershed Information and Education Plan (gray font indicates a low priority target audience).

Priority Level	Target Groups	Specific Subgroups (listed in order of approximate priority, page numbers direct you to more detail)
High	Farmers	Row Crop/Riparian Farmers (pg 25) Pork and Dairy Producers(pg 26) Poultry and Vegetable Producers (pg 27) Nurseries/Greenhouses (pg 28) Blueberry Farmers (pg 28) Farm Services Horse Owners Urban Farmers
	Local Government	Elected Officials/Managers (pg 28) Department Engineers (pg 29) Planning/Zoning Commission (pg 30) Drain Commission (pg 31) Road Commission (pg 31) Parks Departments (pg 32) Public Works Staff Health Department Building Department Staff
	Residents	Riparian Landowners (pg 33) Urban Residents (pg 33) Suburban Residents (pg 34) Rural Residents (pg 35) Spanish Speaking Residents (pg 36)
	Institutions	Churches (pg 37) Corporations (Big and Small Industries, pg 38) Retirement Communities (pg 38) Higher Education (pg 39) Hospitals
	Environmental Advocacy Groups	Local Groups (pg 40) Regional Groups (pg 41) State Groups
	Schools	Building and Ground Departments (pg 41) Curriculum Directors (pg 20) Elementary/Middle Schools Teachers (pg 20) Principals (pg 20 and pg 41) Ottawa Area Intermediate School District (pg 20) High School Teachers (pg 20 and pg 42) Higher Education (Profs and Students, pg 20 and 42) Superintendents (pg 20) Homeshoolers (pg 20)
Moderate	Lawn Care and Landscaping	NA
	Developers/Contractors/Consultants	
	Service Groups	
	Marinas	
Low	Recreational Users	
	Camp Grounds	
	Golf Courses	
	Septic Installers/Septic Haulers	

VII. Information and Education Strategy Goals

The overall purpose of the I/E Strategy is to directly support the overall goals of the watershed management plan. In general, there are three overarching goals of the watershed management plan:

1. *Restore water quality to meet state water quality standards and Total Maximum Daily Load*
2. *Protect natural areas for water quality improvement*
3. *Enhance the watershed for desired uses that are of community importance:*
    a. *Recreation*
    b. *Public Access*
    c. *Fish and Wildlife*
    d. *Open Space*

To accomplish these goals, stakeholders in the Macatawa Watershed need to be aware of local water quality issues, understand why clean water is important and have the knowledge to take actions to improve the Macatawa Watershed. Therefore, the I/E Strategy is divided into two main parts, **General Awareness** and **Taking Action**. The I/E Strategy has been developed based on the following objectives:

1) *Increase community awareness of local water quality issues,*
2) *Demonstrate the importance of clean water,*
3) *Provide information about actions that will improve the watershed, and*
4) *Facilitate desired behavior changes by providing technical assistance.*

The “desired actions” are the ultimate goal of the I & E Strategy and each one of these actions directly helps us meet the goals of the watershed management plan. Actions could be thought of as Restoration Actions, Protection Actions or Enhancement Actions.

I/E Strategy: General Awareness

The *General Awareness* part of the I/E Strategy is based on a three-pronged approach. Three types of messages are defined for each high priority target audience (as identified in Table 9):

***Fact Messages**: What are the facts each target group needs to understand?*

***Importance Messages**: Why is clean water important to the target group?*

***Behavior Messages**: What actions can the target group take to improve water quality?*

Refer to Table 10 for a complete description of the General Awareness Strategy. Please note that timelines provided are approximate (short term is 1-2 years, mid term is 3-4 years, and long term is 5 plus years). In general, we aim to achieve awareness and acceptance of the facts in the short term and behavior changes in the mid and long term. To start seeing behavior changes, each of the target audiences will have to believe in the importance of improving local water quality.

The Macatawa Watershed Project already coordinates a myriad of public outreach activities that are meant to increase general awareness of water quality issues (see the "Current Activities" column of Table 10). These activities will continue. There are several new activities that are proposed as part of this I & E Strategy that are meant to increase the effectiveness of this outreach campaign (see the "Proposed Activities" column of Table 10). In general these additional activities include:

- Public service announcements (PSAs) on local radio and television stations,
- Advertising via billboards,
- Articles in local township and city newsletters,
- Flyers distributed at various community locations and events,
- Local workshops,
- Cinema and local transit advertisements,
- Giveaways (ex. rain barrels or native plants),
- Watershed signs along roadways,
- Tours of local best management practices,
- Targeted direct mail,
- Media coverage of events and volunteer activities,
- Use of MSU's NECO system (Networked Neighborhoods for Eco-Conservation Online)
- Watershed-related events and contests.

A very new idea to promote general awareness of the watershed and water quality issues is to explore the use of food, arts and culture to engage the community. We see this new avenue as directly supporting our Watershed Vision Statement, which refers to "a vibrant and sustainable community". We hope to partner with local restaurants, and arts and culture organizations to promote the watershed by hosting special food events, developing a unique Lake Macatawa beer at local breweries, painting/photography exhibits, story writing contests, dramatic performances and other similar events. Much of this work would be targeted at creating awareness among local residents and school children.

Table 10. An Information and Education Strategy for the Macatawa Watershed: General Awareness

Focus Group	Key Messages	Current Activities	Proposed Activities	Milestones/Timeline	Evaluation	Cost*
Farmers	**Fact Msg**: Sediment and nutrient runoff from rural areas is contributing to poor water quality. **Fact Msg**: Agricultural drainage ditches are an important part of the watershed and carry water and pollutants directly to Lake Macatawa. **Fact Msg**: Discharges from industry and wastewater treatment plants make up less than 20% of the annual phosphorus loading to Lake Macatawa. **Importance Msg**: Clean water is important to maintain livestock health, improve public perception of modern agriculture and to preserve the resource for future generations. **Behavior Msg**: Rural landowners and farmers can and should take actions to help prevent soil and nutrient loss from their property.	Monitoring in rural areas of the watershed, community presentations, periodic farmer events, quarterly newsletters, press releases and newspaper articles, fund projects through grants, watershed display at meetings	Provide direct evidence through monitoring results, PSAs on local Farm Radio, billboards, conduct one-on-one meetings with farmers, provide articles for township newsletters, direct mail, flyers distributed at locations farmers frequent, partner with Drain Commission staff to distribute educational materials in the field, partner with seed, fertilizer or equipment companies to help distribute material	**Short term**: Develop mailing list for farmers in critical areas, annual direct mailing, raise awareness and acceptance of water quality problems (majority indicate that sediment and nutrients are a "severe problem", *E.coli* bacteria are a "moderate problem" and discharge from sewage treatments plants is only a "slight problem") **Mid term**: Create stronger relationship with farmers and other farm service agencies (farmers indicate an increased level of trust), increase education of "new" BMPs (increase familiarity with two stage ditch design, drainage water management) **Long term**: Increase implementation of key BMPs (50% use cover crops, 50% use filter strips, 60% use conservation tillage, 35% use manure management plan)	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010)	$168,000-$172,000 (Billboard cost is estimated at $120,000 over ten years)
Local Government	**Fact Msg**: Storm water runoff is the major source of sediment and nutrients to the Macatawa Watershed. **Importance Msg**: Improving local water quality is important to increase quality of life and to boost economic growth by attracting jobs and enhancing tourism. **Behavior Msg**: Local governments can and should play a pivotal role in improving water quality by smart planning and requiring development methods that reduce storm water runoff.	Monitoring in urban areas of the watershed, community presentations and MACC Board meetings, committee meetings, press releases and newspaper articles, fund projects through grants, watershed display at local meetings, quarterly newsletter, maintain website and Facebook page	Provide direct evidence through monitoring results, develop and distribute case studies related to the "Water-Based Economy" and how water quality impacts economic growth, conduct one-on-one meetings, host local workshops, offer storm water related training, conduct tours, demonstrate citizen support of water quality programs, evaluate each unit of government via the "Water Quality Scorecard", institute a pledge system	**Short term**: Distribute 10 case studies, conduct 10 one-on-one meetings, offer one storm water training event, raise awareness, recognition and acceptance of water quality problems by 15% over previous survey numbers. Increase knowledge of low impact development practices **Mid term**: Host 2nd local storm water workshop, conduct 2 tours of local BMPs, provide a direct measurement of water quality status (Water Quality Scorecard) to each unit of local government (11 completed reports) **Long term**: Document behavior change (installed rain gardens, bioswales, porous pavement, rainwater collection, green roof, urban tree canopy, storm water ordinances, wetland ordinances, regulate car washing, repair road stream crossings), increase Water Quality Scorecard scores by 20%	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change (previous surveys in 2003 and 2010)	$40,000-$45,000

Focus Group	Key Messages	Current Activities	Proposed Activities	Milestones/Timeline	Evaluation	Cost*
Residents	**Fact Msg**: Lake Macatawa suffers from too much sediment, too much nutrients and elevated levels of E. Coli bacteria. **Fact Msg**: Storm water runoff is the major source of sediment and nutrients to the Macatawa Watershed. **Fact Msg**: Storm water is not treated by the wastewater treatment plant which means your property contributes runoff to local waterways. **Fact Msg**: Applying fertilizer that contains phosphorus is banned in the State of Michigan. **Importance Msg**: Clean water is important so that your family can enjoy Lake Macatawa and stay safe and healthy. **Importance Msg**: Lake Macatawa empties to Lake Michigan which supplies the region's drinking water. **Behavior Msg**: Every single resident in the Macatawa Watershed can make small changes that will make a difference to protect Lake Macatawa for future generations.	Distribute quarterly newsletters/e-newsletters, provide watershed related information upon request, press releases and newspaper articles, take watershed display to community events, community presentations, appearances on local cable programs, volunteer events (rain garden maintenance, river clean ups, kayak tours), maintain website and Facebook page, maintain Lawn Care Seal of Approval program	Radio and Television PSAs, media coverage, billboards, watershed signs along roadways, cinema advertisements, distributing information at public venues, flyers at community events and festivals, involvement in Tulip Time (parade floats), distribute promotional materials, giveaways (ex. rain barrels or native plants), transit ads, advertise food and art-related contests that are watershed focused (painting, photography, writing, dramatic performances, sculpture etc), advertise NECO (Networked Neighborhood for Eco-Conservation Online-MSU)	**Short term**: Maintain at least one local billboard at all times, place 10 road way signs, start cinema advertising campaign, raise awareness of the Macatawa Watershed Project and water related issues by 25% over previous surveys, greater distribution of informational materials **Mid term**: Secure a contract for one local transit ad, create and distribute one radio and one TV PSA, conduct three arts/cultures events, increase in website and Facebook activity (goal is 1000 followers), increased number of volunteers for service projects (goal is 30-50 volunteers per activity) **Long term**: Document behavior changes, implement best management practices (i.e. rain gardens, rain barrels, composting, Seal of Approval Lawn Care), document and track number of local water conservation practices registered on NECO	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change (previous surveys in 2000, 2001, 2003 and 2007)	$405,000-$415,000 (billboard is $120,000, transit ads are $95,000 and cinema advertisements are $47,000 for 10 years)
Riparian Landowners	**Fact Msg**: Removing vegetation from the stream bank increases the rate of stream bank erosion. **Fact Msg**: Applying fertilizer that contains phosphorus is banned in the State of Michigan. **Importance Msg**: Improving water quality in Lake Macatawa is important to reduce flooding and property loss from stream bank erosion. **Behavior Msg**: Riparian homeowners should let vegetation grow along waterways, refrain from lawn fertilization and avoid dumping leaves in the creek at all costs!	Distribute quarterly newsletters/e-newsletters, provide watershed related information upon request, press releases and newspaper articles, take watershed display to community events, community presentations, appearances on local cable programs, volunteer events (rain garden maintenance, river clean ups, kayak tours), maintain website and Facebook page, maintain Lawn Care Seal of Approval program	Radio and television PSAs, billboards, distributing information at public venues, flyers at community events and festivals, distribute promotional materials including Natural Shorelines Brochure, targeted direct mail, implement "Friends of the Macatawa Watershed Project" program	**Short term**: Develop riparian mailing list, conduct at least two direct mailings of information material, maintain at least one local billboard at all times, raise awareness of the Macatawa Watershed Project and water related issues by 25% over previous surveys, greater distribution of informational materials **Mid term**: Create and distribute one radio and one TV PSA, enrollment of at least 100 residents in the "Friends" program **Long term**: Document activities implemented under the "Friends" program (i.e. rain gardens, rain barrels, buffer strips, composting, Seal of Approval Lawn Care), document and track number of local water conservation practices registered on NECO	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change (previous surveys in 2000, 2001, 2003 and 2007)	$215,000-$225,000 (billboard is $120,000 for 10 years)

Focus Group	Key Messages	Current Activities	Proposed Activities	Milestones/Timeline	Evaluation	Cost*
Institutional	**Fact Msg**: Lake Macatawa suffers from too much sediment, too much nutrients and elevated levels of E. Coli bacteria. **Fact Msg**: Storm water runoff from parking lots, roofs and roads is the major source of sediment and nutrients to the Macatawa Watershed. **Importance Msg**: Clean water is important to maintain a high quality of life for everyone in the community. **Behavior Msg**: It is the responsibility of everyone in the watershed to take steps to reduce storm water runoff from their property (rain barrels, rain gardens, storm water retrofits, native vegetation, buffer strips and porous pavement).	Distribute quarterly newsletters/e-newsletters, provide watershed related information upon request, press releases and newspaper articles, take watershed display to community events, community presentations, appearances on local cable programs, volunteer events (rain garden maintenance, river clean ups, kayak tours), maintain website and Facebook page, maintain Lawn Care Seal of Approval program	One-on-one meetings, distributing information at institutional venues, distribute information through Holland and Zeeland Chamber of Commerce, distribute promotional materials, targeted direct mail, implement "Friends of the Macatawa Watershed Project" program, ask for representatives on watershed committees	**Short term**: Conduct 20 one-on-one meetings, have watershed display hosted at 30 local institutions, distribute at least 100 pieces annually through the Chambers, conduct at least two direct mailings **Mid term**: Enrollment of at least 50 institutions in the "Friends" program, increase participation by at least 3 committee members from targeted group **Long term**: Document activities implemented under the "Friends" program (i.e. rain gardens, rain barrels, buffer strips, composting, Seal of Approval Lawn Care), document and track number of local water conservation practices registered on NECO	Track implementation of proposed activities and create an annual report to document progress Conduct first time Institutional survey to measure awareness, knowledge and behavior	$80,000-$85,000
Environmental Advocacy Groups	**Fact Msg**: The Macatawa Watershed Project is looking to collaborate with local groups to improve water quality in Lake Macatawa. **Fact Msg**: There is a plan to improve water quality in the Macatawa Watershed and your organization can help! **Importance Msg**: Collaboration is imperative to start improving water quality in Lake Macatawa. **Behavior Msg**: Help us improve the Macatawa Watershed by enhancing water related recreational activities, increasing public access, restoring fish and wildlife habitat and protecting remaining natural areas.	Partnership with ODC-MG, sponsor community events, member of the Unity Team (community wide parks and trails planning group), distribute quarterly newsletter, conduct community presentations, hold committee meetings, maintain website and Facebook page	One-on-one meeting with key organizations, distribute copies of the Watershed Management Plan, give presentations to these organizations, ask for representatives on watershed committees	**Short term**: Raise awareness of the Macatawa Watershed Project and potential partnering opportunities by conducting 6 one-on-one meetings and distributing 10 copies of watershed management plan **Mid term**: Regular communication with local and regional environmental advocacy groups, increase participation by at least 2 committee members from targeted group **Long term**: Document collaboration projects and results (recreational amenities, wetlands restored or protected, increase in public access points etc)	Track implementation of proposed activities and create an annual report to document progress Conduct first time survey to measure awareness, knowledge and behavior	$20,000-$25,000

Focus Group	Key Messages	Current Activities	Proposed Activities	Milestones/Timeline	Evaluation	Cost*
Schools (curriculum directors, teachers, OAISD, principals, professors, superintendents, homeschoolers)	**Fact Msg**: Watershed curriculum kits, training workshops and other free informational material are available at the MACC. **Fact Msg**: The Macatawa Watershed Project can provide watershed curriculum ideas and projects in accordance with MEAP/GLCE standards. **Fact Msg**: Learning about the water cycle, water use, and watersheds is a fun way to get kids interested in science and chemistry. **Importance Msg**: It is important that students are aware of the value of clean water, as they will be protecting these resources for future generations. **Behavior Msg**: Incorporate local watershed info into science and math curriculum. **Behavior Msg**: Contact the Macatawa Watershed Project to obtain free watershed educational materials for students! **Behavior Msg:** Invite local speakers into the classroom to present environmental science topics. **Behavior Msg**: Make science and outdoor education fun by visiting a local nature center.	Into the Watershed DVD, Children's Books, Enviroscapes, Presentations, Storm drain stenciling, Invasive Species Pulls, River Cleanups	One-on-one meetings, outreach to PTA groups, direct mail to schools and teachers, distribution of watershed curriculum kits, offer associated training workshops, host field trips, develop "Speakers Bureau", develop tabletop watershed display specifically for students to be hosted at school around the watershed, advertise food and art-related contests that are watershed focused (painting, photography, writing, dramatic performances, sculpture etc)	**Short term**: Identify appropriate contacts, develop watershed curriculum kit (specific to each grade and grade requirements), raise awareness of the availability of free educational material, develop list of available speakers, increased communication with target audience by conducting at least 6 one-on-one meetings, give presentations to at least 3 PTA groups, conduct at least one direct mail event annually, develop watershed tabletop display for schools **Mid term**: Increase in number of information and presentation requests from local schools, distribute at least 20 "curriculum kits", host one watershed "field trip" annually for 50 students, host one training workshop annually for 10 teachers, schedule at least 10 schools annually to host the watershed display **Long term**: Conduct at least two arts events for schools, Increase watershed-related education regularly taught in local schools	Track implementation of proposed activities and create an annual report to document progress Conduct first time survey to measure awareness, knowledge and behavior and adoption of watershed curriculum Electronic surveys of target groups conducted every 2-3 years Pre and Post quizzes conducted at 25% of the classroom presentations Gather feedback from training workshops using questionnaires	$100,000-$110,000

*Cost reflects an estimate of the amount of funding needed to implement "proposed activities" only and includes materials, supplies, printing, postage and staff time. Costs do not include fringe benefits, indirect charges or the cost to evaluate the effectiveness of the strategy. Annual costs were calculated for a period of 10 years. Costs for each category are independent of costs from any other category.

In addition to the regular general awareness messages described in Table 10, there are several other public outreach activities that are required by the State of Michigan, for the Public Education Plan under the MS4 Storm Water Permit (No. MIG619000). These additional messages are included in Table 11 and are specifically related to education goals outlined in the permit including:

- Increasing awareness about storm drains,
- Proper disposal of household hazardous wastes,
- Explaining how to report illicit discharges, and
- Minimizing discharges from car washing, fertilizer use, grass clippings, leaves and pet waste.

Please note that there are other public education requirements under the MS4 permit, however, those are sufficiently covered in the others sections of the I/E Strategy and did not need to be handled separately.

The local units of government that hold MS4 permits (with assistance from the MACC) will be primarily responsible for implementing the elements outlined in Table 11. The target audiences outlined in Table 9 will also be the focus of outreach activities in Table 11, as applicable. In addition, one additional target audience, contractors and developers, will be added (as required by the MS4 permit).

Effectiveness of these activities will be measured utilizing the same methods as described for other activities of this plan (See Section IX).

Table 11. Specific Storm Water Permit Requirements of the Information and Education Strategy for the Macatawa Watershed.

Applicable Target Audiences	Key Messages	Current Activities/ Delivery Mechanisms	Proposed Activities/ Delivery Mechanisms	Milestones/Timeline	Evaluation	Cost
Residents/Visitors Institutions Schools Contractors/Developers	**Storm water Msg**: Storm drains are located everywhere, parking lots, roads, parks, driveways (include pictures). Make sure only clean water is entering storm drains because storm water does not get treated at the wastewater treatment plant.	Distribute quarterly newsletters/e-newsletters, distribution of Homeowner's Handbook, press releases and newspaper articles, take storm watershed display to community events, promote Lawn Care Seal of Approval program, community presentations, appearances on local cable programs, maintain website and Facebook page, sponsor storm drain stenciling activities	Radio PSAs, articles in local township and city newsletters, announcements posted on websites, run announcements as bill inserts, send email blast notices and reminders quarterly	**Short term**: Develop mailing list for contractors and developers, set up reporting hotline (or online system) and reporting procedures, develop and run one PSA annually, start cinema advertising (every other year), distribute and run articles quarterly, quarterly emails to contacts list **Mid term**: Develop billboard, increase in storm drain stenciling projects, increase in website and Facebook activity (goal is 1000 followers) **Long term/Evaluation**: Survey results indicate that community stakeholders have a 20% increase in understanding of storm drains and ways they can prevent pollution of local waterways	Track implementation of proposed activities and create an annual report to document progress including: - increase number of storm drain stenciling projects annually - increase in watershed mailing list annually - track number of phone calls to reporting hotline -number of hits on website announcements increases annually - increase collections of hazardous waste at approved sites annually - track distribution of information and education materials - increase in business for Seal of Approval Companies Conduct Survey (as indicated in Table 10) to measure awareness, knowledge and behavior and adoption of watershed best management practices (goal 20% increase in awareness, knowledge and adoption of practices from previous surveys)	$350,000-$380,000 (Billboard cost is estimated at $120,000 over ten years, hotline cost is 118,000 over 10 years (online reporting system may be less expensive))
Farmers Local Governments Residents/Visitors Institutions Schools Contractors/Developers	**Storm water Msg**: Properly dispose of household hazardous waste, chemicals, motor oil, pharmaceuticals and yard waste!		Radio PSAs, articles in local township and city newsletters, announcements posted on local township and city websites, run announcements as bill inserts, send email blast notices and reminders quarterly			
Residents Institutions Schools Contractors/Developers	**Storm water Msg**: Residents should report to authorities any dumping of anything other than clean water into storm drains.		Radio PSAs, billboards, institute hotline number or online reporting system, articles in local township and city newsletters, cinema advertising, announcements posted on local township and city websites, run announcements as bill inserts, send email blast notices and reminders quarterly			
Farmers Local Governments Residents/Visitors Institutions Schools Contractors/Developers	**Storm water Msg**: Everyday activities can release harmful pollutants to storm drains and local waterways, including car washing, power washing, pesticide and fertilizer use, disposing of grass clippings, leaves and pet waste.		Radio PSAs, articles in local township and city newsletters, announcements posted on local township and city websites, run announcements as bill inserts, send email blast notices and reminders quarterly			

Additional public education activities required by the MS4 Storm water permit (Municipal Separate Storm Sewer System). This table outlines specific responsibilities for City of Holland, City of Zeeland, Ottawa County, Allegan County, Ottawa County Road Commission and Allegan County Road Commission.

I/E Strategy: Taking Action

The *Taking Action* part of the I/E Strategy is more complex and includes detailed information about outreach methods to high priority target groups and subgroups. Each message is directly supportive of encouraging behavior changes that will help achieve the restoration, protection and enhancement goals of the overall watershed management plan.

The *Taking Action* messages are much more specific than the *General Awareness* messages. A broad set of strategies will be required to successfully deliver these messages. An important aspect of this part of the plan is the "Target Groups or Partnering Organizations" column. The Macatawa Watershed Project fully recognizes that many of these messages need to be delivered to specific audiences by specific entities. We have identified possible partnering organizations that may be appropriate in helping us deliver these messages or conduct certain activities. Please note that the MACC has not yet approached all the organizations listed, so they have not yet formally committed to helping the Macatawa Watershed Project and are not obligated to any specific actions. However, some partners are required to support implementation of the I/E Strategy as required under the State of Michigan's MS4 Storm Water Permit. This list includes the City of Holland, City of Zeeland, Ottawa County, Allegan County, Ottawa County Road Commission and Allegan County Road Commission.

The *Taking Action* part of the I & E plan is described using the following table and address each of the target audiences in the following order: Farmers, Local Government, Residents, Institutional, Environmental Advocacy Groups and Schools. The table follows the same general format for each of the six high priority target audiences:

Priority Level
- Focus Group
  - Pollutants
    - Message
      - Delivery Mechanisms
        - Partnering Organizations
          - Milestones/Timeline
            - Estimated Costs

Refer to Table 12 for a complete description of the *Taking Action* Strategy. Please note that timelines provided are approximate (short term is 1-2 years, mid term is 3-4 years, and long term is 5 plus years). Immediately following the table is a description of four new major proposed programs that are referenced in the table.

The costs reflect an estimate of the amount of funding needed to implement "proposed activities" only and includes materials, supplies, printing, postage and staff time. Costs do not include fringe benefits,

indirect charges or the cost to evaluate the effectiveness of the strategy. Annual costs were calculated for a period of 10 years. Costs for each category are independent of costs from any other category.

Table 12. An Information and Education Strategy for the Macatawa Watershed: *Taking Action*

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
FARMERS							
HIGH PRIORITY Row Crop and Riparian Farmers	Sediment Nutrients Hydrology Temp	Message 1: Use appropriate BMPs to reduce sediment and nutrient runoff (i.e. buffer strips, grassed waterways, reduced tillage, cover crops, MAEAP). Supports *Restoration* Goal of WMP	Radio spots on local farm radio (PSA or interview), hold meetings with BMP experts, put on a tour of demonstration plots, articles printed in Farm News or other publications, material distribution at other farm-based meetings	MSUE, Conservation Districts, Industry/ Commodity Associations (ex. Michigan Corn Growers Association), Michigan Farm Bureau, Hamilton Farm Bureau, Farm Services Agencies, MAEAP	**Short term:** Develop mailing list, secure contacts at six relevant partner organizations, at least one PSA or interview on local farm radio station, develop press release and article on cost-benefit analysis of various BMPs, 100 items of watershed materials distributed at 3 other outside farm meetings **Mid term:** Develop and distribute cost benefit analysis, organize at least one field demonstration of a BMP, 1000 pieces of direct mail to farmers in critical areas **Long term:** BMP tour increase in the # of MAEAP verified farms in critical areas, increase in BMP implementation	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires	$90,000-$95,000
HIGH PRIORITY Row Crop and Riparian Farmers	Sediment Nutrients Hydrology Temp	Message 2: Technical and financial assistance is available to implement BMPs. Supports *Restoration* Goal of WMP	Develop "NRCS Help Factsheet" and direct mail to farmers in critical areas, distribute factsheet as an insert in Farm News, radio spots (PSA or interview), distribution at local farm venues	NRCS and CDs, Local Farm Venues, MAEAP	**Short term:** Develop one page simple factsheets for Ottawa and Allegan County (includes contacts for various conservation programs), 1000 pieces of direct mail to farmers in critical areas **Mid term:** Run one Farm News insert annually, develop radio PSA or schedule interviews **Long term:** Increase in the number of new NRCS applications filed annually	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires Annually survey local NRCS office staff to gather feedback about NRCS programs and participation	$40,000-$45,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
FARMERS (Continued)							
HIGH PRIORITY Pork Producers, Dairy Farmers	Nutrients *E.coli*	Message 1: Develop manure management plans to ensure safe application of manure. Supports *Restoration* Goal of WMP	Direct mail announcements and newspaper articles to raise awareness of available NRCS funding to help farmers develop MMPs, local workshops	MSUE, MSU Pork Team, MSU Dairy Team, NRCS, CDs, MDEQ, MDARD, local technical service providers, commodity associations (Ex. Michigan Pork Producers Association), MAEAP	**Short term:** Secure contacts at 6 partnering organizations, develop one page announcement that describes importance of MMPs and how farmers can get cost-share, 200 pieces of direct mail to animal operations throughout watershed **Mid term:** Run one Farm News insert annually, annual press releases to local newspapers, host local workshop/training session every other year **Long term:** 60% of farmers apply manure according to a manure management plans (up from 43% in 2010), 85% of farmers calibrate application equipment regularly (up from 71% in 2010)	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires Annually survey local NRCS office staff to gather feedback about NRCS programs and participation	$35,000-$40,000
HIGH PRIORITY Pork Producers, Dairy Farmers	Nutrients *E.coli*	Message 2: Properly calibrate equipment and train employees in manure application. Supports *Restoration* Goal of WMP	Host local workshops, advertise by direct mail, local newspaper, Farm Radio and flyers at local farm services locations		**Short term:** Identify partners, workshop locations, speakers and frequency **Mid term:** Host 1 workshop in each county every other year (with partners), advertise workshops by 200 pieces of direct mail, newspaper announcement, Farm Radio and 200 flyers distributed to various local farm services locations **Long term**: 50 farm employees trained annually, proper application of manure application and a decrease in the amount of runoff and fish kills	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires	$50,000-$55,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
FARMERS (Continued)							
HIGH PRIORITY Pork Producers, Dairy Farmers	Nutrients *E.coli*	Action Message 3: Avoid applying manure in the winter to frozen ground. Supports *Restoration* Goal of WMP	Farm Radio PSAs, Insert in Farm News, Direct mail of factsheet or other educational material, flyers at local farm services locations	MSUE, MSU Pork Team, MSU Dairy Team, NRCS, CDs, MDEQ, MDARD, local technical service providers, commodity associations (Ex. Michigan Pork Producers Association), MAEAP	**Short term:** Develop PSA and print media to communicate the message **Mid term:** Run 1 PSA on Farm Radio, run inserts in Farm News annually, 200 pieces of direct mail, distribute 200 flyers to various local farm services locations **Long term**: Decrease in winter manure applications	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires	$28,000-$32,000
MODERATE PRIORITY Poultry Farmers	Nutrients *E.coli*	Message 1: Improve and implement manure management plan to reduce risk of nutrient runoff. Supports *Restoration* Goal of WMP	One-on-one meetings, provide educational material via direct mail	Michigan Allied Poultry Industries, MSUE, NRCS, Conservation Districts, technical service providers	**Short term:** Develop mailing list for target audience, make contacts at 3 partner organizations **Mid term:** Conduct 10 one-on-one meetings with producers, increase number of farmers who conduct soil tests by 10%, develop educational material and distribute 100 pieces by direct mail **Long term:** Increase in the number of manure management plans and dry stacking facilities	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires Annually survey local NRCS office staff to gather feedback about NRCS programs and participation	$5,000-$10,000
MODERATE PRIORITY Vegetable Farmers	Sediment Nutrients Hydrology Temp	Message 1: Use appropriate BMPs to reduce sediment and nutrient runoff (i.e. irrigation and wind erosion practices). Supports *Restoration* Goal of WMP	One-on-one meetings, provide educational material via direct mail, sponsor local workshops, run articles or advertisements in Vegetable Growers News	Michigan Vegetable Council, Vegetable Growers News (Sparta, MI), MSUE Vegetable Team, Conservation Districts, NRCS	**Short term:** Secure contacts at 3 partnering organizations, develop mailing list for target audience **Mid term:** Conduct 8 one-on-one meetings with growers, develop one page articles or factsheets and distribute 50 pieces of direct mail, run 2 annual articles in print media **Long term:** Host local workshops for at least 25 individuals every other year, document 10 new BMP practices in critical areas	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires	$25,000-$30,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
FARMERS (Continued)							
MODERATE PRIORITY Nurseries/ Greenhouses	Sediment Nutrients Hydrology Temp	Message 1: Use appropriate BMPs to reduce sediment and nutrient runoff (i.e. disconnect floor drains from surface waters, septic system maintenance, minimize runoff, MAEAP). Supports *Restoration* Goal of WMP	One-on-one meetings and direct mail, sponsor local workshops, articles in association print media	Michigan Nursery and Landscape Association, Western Michigan Greenhouse Association, Michigan Sod Growers Association, Conservation Districts, NRCS, MAEAP	**Short term:** Develop mailing list for target audience, make contacts at 3 partner organizations **Mid term:** Conduct 10 one-on-one meetings with growers, develop one page articles or factsheets and distribute 50 pieces of direct mail, run 2 articles annually in print media **Long term:** Host local workshops for 25 growers every other year , increase in MAEAP verifications, increase in the number of implemented BMPs	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires Annually survey local NRCS office staff to gather feedback about NRCS programs and participation	$23,000-$28,000
MODERATE PRIORITY Blueberry Farmers	Sediment Nutrients Hydrology Temp	Message 1: Use appropriate BMPs to reduce sediment and nutrient runoff (i.e. drip irrigation, wind erosion, cover crops, MAEAP). Supports *Restoration* Goal of WMP	One-on-one meetings and direct mail, distribute materials at integrated pest management meetings that the growers are already attending, run articles in Fruit Growers News	Michigan Blueberry Growers Association, Michigan United Blueberry Producers, Fruit Growers News, MSUE, Conservation Districts, NRCS, MAEAP	**Short term:** Develop mailing list for target audience, secure contacts at 3 partnering organizations, run 2 articles annually in print media **Mid term:** Conduct 5 one-on-one meetings with producers, document current level of BMP usage, develop one page articles or factsheets and distribute 50 pieces of direct mail **Long term:** 35% increase in the number of BMPs implemented	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Agricultural Survey to measure increase in awareness, knowledge and behavior change(previous survey 2010) Gather feedback from workshops and tours using questionnaires Annually survey local NRCS office staff to gather feedback about NRCS programs and participation	$14,000-$19,000
LOCAL GOVERNMENT							
HIGH PRIORITY Elected Officials/ Managers	Sediment Nutrients Hydrology Temp	Message 1: Implement ordinances and policies to help reduce storm water runoff. Supports *Restoration* Goal of WMP	One on one meetings, presentations, workshops/training sessions, providing educational material/examples/case studies, support attendance at local conferences, provide "Water Based Economy" analysis	Local units of government, Michigan Townships Association, Michigan Municipal League, Michigan Green Communities Conference, Michigan Citizen Planner, Lakeshore Advantage, Holland/Zeeland Chamber of Commerce, Drain Offices	**Short term:** Secure contacts at 4 partnering organizations, research and prepare educational materials and presentations, conduct 10 one-on-one meetings **Mid term:** Conduct 10 board/council presentations, host two local workshops for at least 10 local officials, 5 local representatives attendance at local green conference **Long term:** 5 new policies or ordinances adopted	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from workshops and tours using questionnaires	$20,000-$25,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
LOCAL GOVERNMENT (Continued)							
HIGH PRIORITY Elected Officials/ Managers	Sediment Nutrients Hydrology Temp	Message 2: Enable staff to get the relevant training regarding storm water planning and low impact development. Supports *Restoration* Goal of WMP	One-on-one meetings, letters via direct mail, announcements of training opportunities	Local units of government, Michigan Townships Association, Michigan Municipal League, Michigan Green Communities Conference, Michigan Citizen Planner, Lakeshore Advantage, Holland/Zeeland Chamber of Commerce, Drain Offices	**Short term:** Conduct 10 one-on-one meetings, provide educational materials on the importance of storm water planning and low impact development **Mid term:** Send annual letters/emails advocating for training, maintain email listserv of at least 25 contacts announcing 5 training opportunities annually, develop analysis of the local water-based economy, 5 local representatives attendance at local green conference **Long term:** Increase in the number of local township, city and county staff receiving training	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from workshops and tours using questionnaires	$40,000-$45,000
HIGH PRIORITY Elected Officials/ Managers	NA	Message 3: Enhance water-related recreational use and amenities, as well as public access in the Macatawa Watershed. Supports *Enhancement* Goals of WMP	One-on-one meetings, letters via direct mail, presentations to boards/councils	Outdoor Discovery Center-Macatawa Greenway, DeGraaf Nature Center, Ottawa County Parks, Local Canoe/Kayak outfitters	**Short term**: Develop specific requests and project ideas, conduct 10 one-on-one meetings **Mid term**: Conduct 5 presentations to boards and councils **Long term:** Document new projects	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from workshops and tours using questionnaires	$3,500-$4,500
HIGH PRIORITY Department Engineers	Sediment Nutrients Hydrology Temp	Message 1: Encourage developers to incorporate low impact development practices into new developments. Supports *Restoration* Goal of WMP	One-on-One meetings, host training sessions, distribute case study examples and Low Impact Development Handbook, provide a tour of demonstration sites	Local units of government, local developers or consulting firms, Drain Offices	**Short term:** Research, prepare and distribute 8 local case study fact sheets, 10 one-on-one meetings conducted **Mid-term:** Three regional training session held for 15 participants, host three tour for 10 participants **Long term:** Document 10-20 local development projects using low impact development	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings and tours using questionnaires	$20,000-$25,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
LOCAL GOVERNMENT (Continued)							
HIGH PRIORITY Department Engineers	Sediment Nutrients Hydrology Temp	Message 2: Reduce storm water runoff by retrofitting sites with low impact development practices. Supports *Restoration* Goal of WMP	One-on-One meetings, host training sessions, distribute case study examples, provide a tour of demonstration retrofit sites	Local units of government, local developers or consulting firms, Drain Offices	**Short term:** Research and prepare educational materials, 5 one-on-one meetings **Mid term:** One regional training session for 10 participants, prepare and distribute 5 local case study fact sheets, host 2 tours with at least 5 participants **Long term**: Document 10-15 successful projects	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings and tours using questionnaires	$10,000-$15,000
HIGH PRIORITY Department Engineers	Sediment Nutrients Hydrology Temp	Message 3: Advocate for the development of stronger storm water policies and improvement of storm water infrastructure. Supports *Restoration* Goal of WMP	One-on-One meetings, support attendance at regional or national storm water conference, host a workshop	Local units of government, local developers or consulting firms, Drain Offices	**Short term:** Research and prepare educational materials, 5 one-on-one meetings **Mid term:** Two regional training session for 10 participants, 4 local representatives at local, regional or national storm water workshops **Long term:** Document 5-10 additional policies or infrastructure improvements projects	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings and tours using questionnaires	$14,000-$19,000
HIGH PRIORITY Planning/ Zoning Commission	Sediment Nutrients Hydrology Temp	Message 1: Protect wetlands, riparian and natural areas for water quality improvement. Supports *Protection* Goal of WMP	One-on-one meetings, presentations to commission members, distribute Conservation Priority Area Map, host training session, distribute case study examples, provide specific recommendations on each master plan	Local units of government, Michigan Citizen Planner, local consultants and developers	**Short term:** Review and make water quality recommendations on each master plan, 10 one-on-one meetings conducted, presentations made to 5 local commissions **Mid term:** Two regional training session conducted for at least 10 participants **Long term:** Document changes in master planning or ordinances that protect wetland, riparian or natural areas	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$15,000-$20,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
LOCAL GOVERNMENT (Continued)							
HIGH PRIORITY Planning/ Zoning Commission	Sediment Nutrients Hydrology Temp	Message 2: Encourage developers to incorporate low impact development practices into new developments. Supports *Restoration* Goal of WMP	One-on-one meetings, presentations to commission members, host training session, distribute case study examples, provide a copy of Michigan's Low Impact Development Handbook, sponsor attendance at local, regional or national storm water conferences	Local units of government, Michigan Citizen Planner, local consultants and developers	**Short term:** 10 one-on-one meetings, prepare and research and distribute 5 case study examples **Mid-term:** Host one training session for 10 participants, provide 10 copies of LID manual **Long term:** Attendance of 5 local representatives to storm water conference, document 10-20 low impact development practices that were implemented	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$18,000-$23,000
HIGH PRIORITY Drain Commission	Sediment Nutrients Hydrology Temp	Message 1: Reduce storm water runoff and stream bank erosion by implementing best management practices (flood retention, buffer strips, two stage ditch design). Supports *Restoration* Goal of WMP	One-on-one meetings, work to identify a list of potential locations, provide case study examples	County Drain Offices, local consultants, Michigan Association of County Drain Commissioners	**Short term:** Conduct 4 one-on-one meetings, prepare and deliver list of potential locations **Mid term:** Prepare and distribute at least 4 case study examples **Long term:** Document 10 new projects and a change in maintenance practices	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$5,000-$10,000
MODERATE PRIORITY Road Commission	Sediment Nutrients Hydrology Temp	Message 1: Reduce storm water runoff by implementing best management practices during road projects. Supports *Restoration* Goal of WMP	One-on-one meetings, presentations to commission members, distribute Bank Erosion Study, host training session, distribute case study examples, sponsor attendance at local, regional or national storm water or road stream crossing conferences	Local units of government, Road Commissions	**Short term:** Conduct 4 one-on-one meetings, research and develop 5 case study examples, distribute 5 copies of the Bank Erosion study **Mid-term:** Host (or sponsor attendance at) one training session for 4 participants, provide detailed list of recommendations **Long term:** Attendance of 4 local representatives to storm water or road stream crossing conference, document 5-10 new road BMPs that have reduced pollutant loading	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$10,000-$15,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
LOCAL GOVERNMENT (Continued)							
MODERATE PRIORITY Parks Departments	Sediment Nutrients Hydrology Temp	Message 1: Protect wetlands, riparian and natural areas for water quality improvement. Supports *Protection* Goal of WMP	One-on-one meetings, presentations to boards/commissions, distribute Conservation Priority Area Map and Wetlands Restoration Map, provide specific recommendations on new or existing parks and areas that need to be protected or enhanced	County Parks Departments, Local Nature Center, Local Units of Government, West Michigan Land Conservancy, Unity Team	**Short term:** Conduct 5 one-on-one meetings, present to at least 4 local Parks boards or commissions, distribute and explain Conservation Priority Map and Wetland Restoration Map **Mid-term:** Research and develop parks recommendations **Long term:** Document natural land protected or wetlands restored	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$2,000-$7,000
MODERATE PRIORITY Parks Departments	Sediment Nutrients Hydrology Temp	Message 2: Implement best management practices to improve local water quality (wetland restoration, native vegetation, tree canopy). Supports *Restoration* Goal of WMP	One-on-one meetings, presentations to boards/commissions, distribute Wetlands Restoration Map and maps of critical watershed areas, provide specific recommendations on park enhancements needed		**Short term:** Conduct 5 one-on-one meetings, present to at least 4 local Parks boards or commissions, distribute and explain Wetland Restoration Map and Critical Areas Map **Mid-term:** Research and develop parks recommendations **Long term:** Document implemented best management practices	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$2,000-$7,000
MODERATE PRIORITY Parks Departments	NA	Message 3: Enhance water-related recreational use and amenities, as well as public access in the Macatawa Watershed. Supports *Enhancement* Goal of WMP	One-on-one meetings, press releases and newspaper articles, community presentations, make specific recommendations	County Parks Departments, Local Nature Center, Local Units of Government, West Michigan Land Conservancy, Unity Team	**Short term**: Conduct 5 one-on-one meetings, present to at least 4 local Parks boards or commissions, develop and distribute list of specific recommendations **Long term**: Document an increase in recreational amenities and public access points in the watershed.	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Local Government Survey to measure increase in awareness, knowledge and behavior change(previous survey 2003 and 2010) Gather feedback from trainings using a questionnaire	$2,000-$7,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
RESIDENTS							
HIGH PRIORITY Riparian Landowners	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zone, native plants, rain barrels, compost leaves, Seal of Approval Lawn Care, soil tests etc). Supports *Restoration* Goal of WMP	Disseminate Homeowners Handbook and other products via direct mail, run inserts in bills, billboards, newsletter/newspaper articles, website and Facebook, workshops/community events, radio PSAs, appearances on local TV, develop "Friends of the Macatawa Watershed Project" program NECO (Networked Neighborhood for Eco-Conservation Online-MSU)	Macatawa Watershed Association, Vacation Rentals, residents living on tributaries to the Macatawa River, Lawn Care Seal of Approval Companies, Drain Offices	**Short term:** Develop mailing list for riparian homeowners, develop "Friends of the Macatawa Watershed Project" incentive program, distribute 1000 copies of the Homeowners Handbook **Mid term:** Run 5,000 informational inserts through municipal billing, place 2 billboards, increase number of digital newsletters distributed to 600 addresses, increase Facebook fans to 500, conduct workshops for 200 riparian residents, run 2 PSAs on radio and/or local cable **Long term:** Enroll 50 residents in "Friends" program, 500 riparian residents implement best management practices	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire Track increase in BMPs using NECO	$190,000-$195,000 (Billboard cost is estimated at $120,000 over ten years)
HIGH PRIORITY Urban Residents	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (native plants, rain barrels, compost leaves etc). Supports *Restoration* Goal of WMP	Radio and TV PSAs, press releases, newspaper articles, distribute flyers at downtown businesses, festivals, and community events, cinema advertisements, run bill inserts, conduct rain barrel workshop, billboards, storm drain stenciling projects, newsletter, watershed display at festivals, community events and urban public venues, develop "Friends of the Macatawa Watershed Project" program	South Side, 360, Historical, Heights of Hope, Apartment Communities, Downtown residents, Lawn Care Seal of Approval Companies, Urban residents in Critical Areas	**Short term:** Develop PSAs, billboards, flyers and bill inserts, start cinema ads, develop "Friends of the Macatawa Watershed Project" incentive program, increase dist. of digital newsletters to 600 addresses and paper newsletters to 1500 addresses, watershed display hosted at a total 12 community events yearly **Mid term**: Conduct 3 rain barrel workshops for 200 residents, distribute 2000 flyers, place 1 billboard, 10,000 bill inserts, 1 cable PSA and 2 radio PSAs, stencil 400 catch basins in urban areas **Long term:** Enroll 100 residents in "Friends" program, 500 rain barrels, 100 rain gardens, 50 native plantings)	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire Track increase in BMPs using NECO	$280,000-$290,000 (billboard is $120,000 and cinema advertising is $47,000 over ten years)

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
RESIDENTS (Continued)							
HIGH PRIORITY Urban Residents	Sediment Nutrients *E.coli*	Message 2: Never dump anything but clean water in a storm drain and report illegal dumping. Supports *Restoration* Goal of WMP	Radio and TV PSAs, press releases, newspaper articles, distribute flyers at downtown businesses, festivals, and community events, cinema advertisements, run bill inserts, conduct rain barrel workshop, billboards, storm drain stenciling projects, newsletter, watershed display at festivals, community events and urban public venues, develop "Friends of the Macatawa Watershed Project" program	South Side, 360, Historical, Heights of Hope, Apartment Communities, Downtown residents, Lawn Care Seal of Approval Companies, Urban residents in Critical Areas	**Short term:** Develop PSAs, billboards, flyers and bill inserts, start cinema ads, develop "Friends of the Macatawa Watershed Project" incentive program, increase dist. of digital newsletters to 600 addresses and paper newsletters to 1500 addresses, watershed display hosted at a total 12 community events yearly **Mid term**: Distribute 2000 flyers, place 1 billboard, 10,000 bill inserts, 1 cable PSA and 2 radio PSAs, stencil 400 catch basins in urban areas **Long term:** Enroll 100 residents in "Friends" program	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire	Included in above cost estimate
HIGH PRIORITY Suburban Residents	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, rain barrels, compost leaves, Seal of Approval Lawn Care, soil tests etc). Supports *Restoration* Goal of WMP	PSAs on radio and local cable channel, press releases, newspaper articles, distribute flyers at downtown businesses, festivals, and community events, cinema advertisements, run bill inserts, conduct rain barrel workshop, billboards, storm drain stenciling projects, newsletter, watershed display at festivals, community events and public venue, develop "Friends of the Macatawa Watershed Project" program NECO (Networked Neighborhood for Eco-Conservation Online-MSU)	Housing communities, neighborhood associations, Lawn Care Seal of Approval Companies, Septic Hauling Companies, County Health Departments	**Short term**: Develop and design PSAs, billboards, flyers and bill inserts, develop "Friends of the Macatawa Watershed Project" incentive program, start cinema ad campaign, increase distribution of digital newsletters to 600 addresses and paper newsletters to 1500 addresses, watershed display hosted at a total 12 community events or public places annually **Mid term**: Conduct rain barrel workshops for 200 residents, distribute 2000 flyers, rotate placement of one billboard throughout suburban areas, run 5,000 bill inserts, run 1 cable PSA and 3 radio PSAs, stencil 500 catch basins in suburban areas **Long term**: Enroll 100 residents in "Friends" program, implement best management practices (500 rain barrels, 100 rain gardens, 50 native plantings)	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Track increase in BMPs using NECO	$295,000-$305,000 (billboard is $120,000 and cinema advertising is $47,000 over ten years)
HIGH PRIORITY Suburban Residents	Sediment Nutrients *E.coli*	Message 2: Never dump anything but clean water in a storm drain. Supports *Restoration* Goal of WMP					

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
RESIDENTS (Continued)							
HIGH PRIORITY Suburban Residents	Nutrients *E.coli*	Message 3: Maintain septic systems where appropriate. Supports *Restoration* Goal of WMP	Direct mailings of Homeowner's Handbook and Septic System Awareness kit, newsletter articles, press releases and newspaper announcements	Housing communities, neighborhood associations, Lawn Care Seal of Approval Companies, Septic Hauling Companies, County Health Departments	**Short term:** Identify at least 6 Septic Hauling Companies as partners, mail 300 pieces of direct mail to high risk septic system parcels, run two septic related articles per year in newsletter, run 2 announcements in newspaper (how to report illicit discharges) **Mid term**: 5 newsletter announcements in township newsletters, distribute 200 coupons for septic system cleaning **Long term**: Increase routine maintenance on local septic systems	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Track redemption of coupons Conduct first time survey of local septic hauling companies	$20,000-$25,000
MODERATE PRIORITY Rural Residents	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, rain barrels, compost leaves, Seal of Approval Lawn Care, soil tests etc). Supports *Restoration* Goal of WMP	PSAs on radio, press releases, newspaper articles, distribute flyers at community events and at Big Box retailers (Meijer, Lowes, Menards etc), run bill inserts, conduct rain barrel workshop, billboards, newsletter, watershed display at festivals, community events and public venue, develop "Friends of the Macatawa Watershed Project" program NECO (Networked Neighborhood for Eco-Conservation Online-MSU)	Rural Homeowners, emphasis on those within Critical Areas (large percentage), Drain Offices	**Short term**: Develop and design PSAs, billboards, flyers and bill inserts, develop "Friends of the Macatawa Watershed Project" incentive program, increase distribution of digital newsletters to 600 addresses and paper newsletters to 1500 addresses, watershed display hosted at a total 12 community events or public places annually **Mid term**: Conduct 2 rain barrel workshops for 200 residents, distribute 2000 flyers, rotate placement of 1 billboard in rural location, run 10,000 bill inserts, run 1 cable PSA and 3 radio PSAs **Long term**: enroll 100 residents in "Friends" program, Implementation of best management practices (500 rain barrels, 100 rain gardens, 50 native plantings)	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire Track increase in BMPs using NECO	$250,000-$260,000 (billboard is $120,000 and radio PSAs are $54,000 over ten years)

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
RESIDENTS (Continued)							
MODERATE PRIORITY Rural Residents	Nutrients *E.coli*	Message 2: Maintain septic systems. Supports *Restoration* Goal of WMP	Direct mailings of Homeowner's Handbook and Septic System Awareness kit, newsletter articles, press releases and newspaper announcements	County Health Departments, Local Septic Haulers	**Short term**: Identify at least 6 Septic Hauling Companies as partners, mail 300 pieces of direct mail to high risk septic system parcels, run two septic related articles per year in newsletter, run 2 announcements in newspaper (how to report illicit discharges) **Mid term**: 5 newsletter announcements in township newsletters, distribute 200 coupons for septic system cleaning **Long term**: Increase routine maintenance on local septic systems	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire	$20,000-$25,000
MODERATE PRIORITY Spanish Speaking Residents	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, rain barrels, compost leaves, Seal of Approval Lawn Care, soil tests etc). Supports *Restoration* Goal of WMP	Distribute Spanish version of the Homeowner's Handbook and other watershed documents, PSAs on radio and local cable channel, run bill inserts, conduct rain barrel workshop, billboards, storm drain stenciling projects (in Spanish), Spanish version of the watershed display at festivals, community events and public venues, develop "Friends of the Macatawa Watershed Project" program	City of Holland, Hispanic Center of Western Michigan, West Michigan Hispanic Chamber of Commerce, Latino News, Latin Americans United for Progress, Lakeshore Latino Outreach Center	**Short term**: Develop Spanish PSAs, billboards, flyers, bill inserts, storm drain stencil, Homeowner's Handbook and watershed display, develop "Friends of the Macatawa Watershed Project" incentive program, watershed display hosted at a total 4 community events or public places annually **Mid term**: Conduct rain barrel workshops for 100 residents, distribute 500 flyers, include Spanish message on 2 billboards in urban areas, include Spanish wording on 1,000 bill inserts, run 1 radio PSA, complete Spanish storm drain stencil on 100 storm drains **Long term**: Enroll 50 residents in "Friends" program, implement best management practices	Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire Track increase in BMPs using NECO	$60,000-$65,000
MODERATE PRIORITY Spanish Speaking Residents	Sediment Nutrients *E.coli*	Message 2: Never dump anything but clean water in a storm drain. Supports *Restoration* Goal of WMP				Track implementation of proposed activities and create an annual report to document progress Conduct follow-up Resident Survey to measure increase in awareness, knowledge and behavior change(previous survey 2000, 2001, 2003 and 2007) Gather feedback from trainings using a questionnaire	

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
INSTITUTIONS							
HIGH PRIORITY Churches	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, rain barrels, porous pavement, Seal of Approval Lawn Care, soil tests etc). Supports *Restoration* Goal of WMP	Presentations to local churches, distribution of information and publications, workshops, newsletters/news, storm drain stenciling, develop "Friend of Macatawa Watershed Project" program	Members of West Michigan Creation Care (St Francis DeSales, Third Reformed Church, First United Methodist, First Presbyterian, New Community Truth KCA, Hope Church) **Also:** Other Area Churches, Youth Groups, Young Life Churches within Critical Areas (CA): 25% of churches fall within this category	**Short Term:** Present watershed info to 15 churches, provide 500 flyers and 500 Homeowners Handbooks for distribution, develop criteria for "Friends" program **Mid Term:** 15 churches to host watershed display or disseminate materials, 100 storm drain stenciled, 10 churches install rain gardens or rain barrels **Long term:** Document projects (2 porous pavement projects, 5 buffer strips, 10 native vegetation plantings), 50 members of the "Friends" program	Track implementation of proposed activities and create an annual report to document progress Conduct first-time church survey to measure increase in awareness, knowledge and behavior change Track increase in BMPs using NECO (Networked Neighborhood for Eco-Conservation Online-MSU)	$40,000-$45,000
	Nutrients *E.coli*	Message 2: Maintain and prevent leaking septic systems. Supports *Restoration* Goal of WMP					
HIGH PRIORITY Churches	NA	Message 3: Volunteer for watershed activities. Supports *Enhancement* Goal of WMP	Quarterly newsletters, press releases, electronic announcement of events, direct mail, church bulletins, website and Facebook announcements		**Short term**: Direct mail to churches about volunteer events annually, increase churches represented on electronic mailing list by 25%, send event announcements **Mid term**: Increase in the number of volunteers at events by 25%	Track implementation of proposed activities and create an annual report to document progress Conduct first-time church survey to measure increase in awareness, knowledge and behavior change Track increase in BMPs using NECO (Networked Neighborhood for Eco-Conservation Online-MSU	$10,000-$12,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
INSTITUTIONS (Continued)							
HIGH PRIORITY Corporations	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, porous pavement, lawn care). Supports *Restoration* Goal of WMP	One-on-one meetings, promote Lawn Care Seal of Approval members, direct mail of promotional material, host watershed display for employees, Develop "Friend of Macatawa Watershed Project" program	Corporations within Critical Areas, along waterways and other large area organizations	**Short term:** Develop contacts at 15 local corporations, conduct 15 one-on-one meetings, develop business criteria for "Friends" program **Mid Term:** Distribute 1500 pieces of promotional material, 10 businesses host watershed display, 10 additional businesses that use Seal of Approval Lawn care **Long term**: Document best management practices, 30 members of the "Friends" program	Track implementation of proposed activities and create an annual report to document progress Conduct first-time corporation survey to measure increase in awareness, knowledge and behavior change	$35,000-$40,000
MODERATE PRIORITY Retirement Community/ Condo Associations	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, porous pavement, lawn care). Supports *Restoration* Goal of WMP	One-on-one meetings, promote Lawn Care Seal of Approval members, direct mail to distribute watershed information, develop "Friend of Macatawa Watershed Project" program	Evergreen Commons, Oak Crest Communities, Freedom Village, Wildwood Creek Manor, Resthaven. Emphasis on those that are in Critical Areas	**Short term**: Develop contacts at 10 local retirement/condo associations, conduct 10 one-on-one meetings, develop criteria for "Friends" program **Mid Term**: Distribute 1000 pieces of promotional material, 5 associations to host watershed display, 5 additional associations that use Seal of Approval Lawn care **Long term**: Document best management practices, 15 members of the "Friends" program	Track implementation of proposed activities and create an annual report to document progress Conduct first-time survey to measure increase in awareness, knowledge and behavior change	$35,000-$40,000
	NA	Message 2: Volunteer for watershed activities. Supports *Enhancement* Goal of WMP	Quarterly newsletters, press releases, electronic announcement of events, direct mail, website and Facebook announcements		**Short term**: Direct mail about volunteer events annually, Increase contacts represented on electronic mailing list by 25%, send event announcements **Mid term**: Increase in the number of volunteers at events by 25%	Track implementation of proposed activities and create an annual report to document progress Conduct first-time survey to measure increase in awareness, knowledge and behavior change	$10,000-$12,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
INSTITUTIONS (Continued)							
MODERATE PRIORITY Higher Education	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (native plants, porous pavement, lawn care). Supports *Restoration* Goal of WMP	One-on-one meetings, direct mail to distribute watershed information, workshops/trainings offered, develop "Friend of Macatawa Watershed Project" program	Hope College, GVSU, Davenport (focus on Building and Grounds Maintenance)	**Short term**: Develop contacts at 3 local institutions, conduct 3 one-on-one meetings with building/lawn maintenance departments, develop criteria for "Friends" program **Mid Term**: Distribute 25 pieces of promotional material, 3 institutions to host watershed display **Long term**: Document best management practices, 3 new members of the "Friends" program	Track implementation of proposed activities and create an annual report to document progress Conduct first-time survey to measure increase in awareness, knowledge and behavior change	$8,000-$12,000
MODERATE PRIORITY Higher Education	NA	Message 2: Volunteer for watershed activities. Supports *Restoration* Goal of WMP	Quarterly newsletters, press releases, electronic announcement of events, direct mail, website and Facebook announcements	Hope College Biology/ Science Classes and Student Groups, GVSU Biology/Science Classes and Student Groups, Davenport Student Groups	**Short term**: Direct mail and posting flyers for volunteer events, increase contacts represented on electronic mailing list by 25%, send event announcements **Mid term**: Increase in the number of volunteers at events by 25%	Track implementation of proposed activities and create an annual report to document progress Conduct first-time survey to measure increase in awareness, knowledge and behavior change	$15,000-$20,000
ENVIRONMENTAL ADVOCACY GROUPS							
HIGH PRIORITY Local Environment Groups	NA	Message 1: Enhance water-related recreational use and amenities in the Macatawa Watershed. Supports the *Protection* and E*nhancement* Goals of the WMP	One-on-one meetings with key contacts, workshops, press releases and newspaper articles	Outdoor Discovery Center-Macatawa Greenway, DeGraaf Nature Center, Macatawa Watershed Association, Hope College Student Organizations, Local Outfitters, GVSU Student Chapter of the Soil and Water Conservation Society	**Short term**: Make at least 6 contacts with partnering organizations, hold one-on-one meetings, develop subcommittee **Mid term**: Develop strategic plan with partner input **Long term**: Document projects	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$5,000-$8,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
ENVIRONMENTAL ADVOCACY GROUPS (Continued)							
HIGH PRIORITY Local Environment Groups	NA	Message 2: Increase public access to Lake Macatawa and tributaries. Supports the *Protection* and E*nhancement* Goals of the WMP	One-on-one meetings with key contacts, workshops, press releases and newspaper articles	Outdoor Discovery Center-Macatawa Greenway, DeGraaf Nature Center, Macatawa Watershed Association, Hope College Student Organizations, Local Outfitters, GVSU Student Chapter of the Soil and Water Conservation Society	**Short term**: Make at least 6 contacts with partnering organizations, hold one-on-one meetings, develop subcommittee **Mid term**: Develop strategic plan with partner input **Long term**: Document projects	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$5,000-$8,000
HIGH PRIORITY Local Environment Groups	Sediment Nutrients Hydrology Temp	Message 3: Protect remaining open space and natural areas. Supports the *Protection* and E*nhancement* Goals of the WMP	One-on-one meetings, distribute Conservation Priority Area Map	Outdoor Discovery Center-Macatawa Greenway, DeGraaf Nature Center, Macatawa Watershed Association, Hope College Student Organizations, Local Outfitters, GVSU Student Chapter of the Soil and Water Conservation Society	**Short term:** Distribute map and hold one-on-one meetings, develop subcommittee **Mid term**: Identify most beneficial properties to be protected, develop strategic plan with partner input **Long term**: Document amount of natural areas protected	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$10,000-$15,000
HIGH PRIORITY Local Environmental Groups	NA	Message 4: Improve fish and wildlife habitat in the Macatawa Watershed. Supports the *Protection* and E*nhancement* Goals of the WMP	One-on-one meetings	Outdoor Discovery Center-Macatawa Greenway, DeGraaf Nature Center, Fish and Game Club, Bass Masters, Tulip City Rod and Gun Club, MDNR	**Short term:** Conduct one-on-one meetings, develop list of possible projects **Mid term**: Submit grant applications to fund habitat projects **Long term**: Document number of habitat projects completed	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$10,000-$15,000
	NA	Message 5: Volunteer for watershed activities. Supports the *Protection* and E*nhancement* Goals of the WMP	Quarterly newsletters, press releases, electronic announcement of events, direct mail, website and Facebook announcements	Boy Scout and Girl Scout troops, Hope College Student Organizations, High School Ecology Clubs, Macatawa Watershed Association	**Short term**: Direct mail about volunteer events annually, increase contacts represented on electronic mailing list, send event announcements **Mid term**: Increase in the number of volunteers at events	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$4,000-$6,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
ENVIRONMENTAL ADVOCACY GROUPS (Continued)							
MODERATE PRIORITY Regional Environmental Groups	NA	Message 1: Enhance water-related recreational use and amenities in the Macatawa Watershed. Messages support the *Protection* and *Enhancement* Goals of WMP	One-on-one meetings with key contacts, workshops	West Michigan Outdoor Group, West Michigan Coastal Kayakers Association	**Short term**: Make at least 4 contacts with partnering organizations, hold one-on-one meetings **Mid term**: Hold a workshop every other year and develop a plan for recommendations **Long term**: Document projects	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$5,000-$7,000
	Sediment Nutrients Hydrology Temp	Message 2: Protect remaining open space and natural areas. Messages support the *Protection* and *Enhancement* Goals of WMP		West Michigan Land Conservancy			
	NA	Message 3: Improve fish and wildlife habitat in the Macatawa Watershed. Messages support the *Protection* and *Enhancement* Goals of WMP	One-on-one meetings	West Michigan Land Conservancy, West Michigan Outdoor Group, West Michigan River Anglers, MDNR	**Short term**: Conduct one-on-one meetings, develop list of possible projects **Mid term**: Submit grant applications to fund habitat projects **Long term**: Document number of habitat projects completed	Track implementation of proposed activities and create an annual report to document progress Gather feedback from meetings using a questionnaire	$10,000-$15,000
SCHOOLS (Note: Most outreach to this target group will be for the purpose of General Awareness (Table 10)							
HIGH PRIORITY Building and Grounds Managers, Principals	Sediment Nutrients Hydrology Temp	Message 1: Implement best management practices to reduce storm water runoff (buffer zones, native plants, rain barrels, porous pavement, Seal of Approval Lawn Care, soil tests etc). Supports *Restoration* Goal of WMP	One-on-one meetings, presentations, distribution of information and publications, workshops, newsletters/news, storm drain stenciling, develop "Friend of Macatawa Watershed Project" program	Local School Districts, Lawn Care Seal of Approval Companies, Septic Haulers	**Short Term:** Identify appropriate contacts at each school district, present watershed info to 4 maintenance departments, develop criteria for "Friends" program **Mid Term:** 100 storm drain stenciled, 10 schools install rain gardens or rain barrels **Long term:** Document projects (2 porous pavement projects, 5 buffer strips, 10 native vegetation plantings), 15 schools become members of the "Friends" program	Track implementation of proposed activities and create annual report to document progress Conduct survey to measure increase in awareness, knowledge and behavior change Track BMPs using NECO (Networked Neighborhood for Eco-Conservation Online-MSU)	$48,000-$52,000

Focus Group	Pollutant	Message	Delivery	Target Groups or Partnering Organizations	Milestones/Timeline	Evaluation	Cost
SCHOOLS (Continued)							
HIGH PRIORITY Building and Grounds Managers, Principals	Nutrients *E.coli*	Message 2: Maintain and prevent leaking septic systems. Supports *Restoration* Goal of WMP	One-on-one meetings, presentations, distribution of information and publications, workshops, newsletters/news, storm, develop "Friend of Macatawa Watershed Project" program	Local School Districts, Lawn Care Seal of Approval Companies, Septic Haulers	**Short Term:** Identify appropriate contacts at each school district, present watershed info to 4 maintenance departments, develop criteria for "Friends" program **Mid Term:** 10 schools have septic tanks pumped and inspected **Long term:** Document maintenance projects	Track implementation of proposed activities and create annual report to document progress Conduct survey to measure increase in awareness, knowledge and behavior change	Included in the above calculated costs of $48,000-$52,000
HIGH PRIORITY Secondary Teachers, Professors	NA	Message 1: Volunteer for watershed activities. Supports *Enhancement* Goal of WMP	Quarterly newsletters, press releases, electronic announcement of events, direct mail, website and Facebook announcements	Local Science Teachers	**Short term**: Increase contacts represented on electronic mailing list, sending event announcements **Mid term**: Increase in the number of volunteers at events **Long term**: Increase in the number of teachers coordinating their own watershed outreach events.	Track implementation of proposed activities and create annual report to document progress Conduct survey to measure increase in awareness, knowledge and behavior change	$4,000-$6,000

VIII. New Proposed Programs

Several new programs have been identified to help achieve the goals of the *General Awareness* and *Taking Action* Sections of the I/E Strategy. The following proposed programs were all identified as goals in the *Taking Action* Strategy and were referenced in the previous table. These programs are described below:

The Water Based Economy (Target Audience: Local Government, Institutions, Residents)

The Water-Based Economy is a general term used here as a way to refer to the aspects of the local economy that depend on clean water, and the aspects of clean water that enforce a strong economy. Michigan is a water-rich state and there is evidence that clean water strongly supports economic growth. The range of industries that rely on clean water is immense and includes tourism, farming, fishing, beverage production, manufacturing, transportation and energy generation among others. In 2009, Michigan's Office of the Great Lakes developed the Michigan Great Lakes Plan that details all the ways that our economy depends on clean water (see figure below).

"Clean, safe water and beaches are the face of Pure Michigan. Michigan, with its abundant lakes, streams, wetlands and Great Lakes beaches, should be a leader and must act to protect this asset and use it to our economic and environmental advantage."
~Rick Snyder, Governor

An important piece of the I/E Strategy is to convince the community that clean water is important to our local economy. By developing local data and describing local case studies, we can make this case more convincingly.

Economic Value of the Great Lakes

Michigan is the Great Lakes state with more freshwater coastline than any other state in the nation. Our lakes, rivers, and streams define not only our boundary but also provide a path to environmental, economic, and social progress. Michigan's Great Lakes provide:

- Jobs for nearly 823,000 Michigan residents.
- A world-renown commercial and sport fishery – collectively valued at more than $4 billion annually.
- Breathtaking scenic views and charming coastal resort communities that are the backbone of the state's $12.8 billion travel industry.
- Water for an agriculture and food industry that is now the state's second largest industry.
- Invaluable source water to Michigan manufacturing that currently produces 60 percent of the continent's steel and 60 percent of automobiles made in North America.
- The basis for a charter boat industry that provides Michigan's economy with an estimated $21 million in economic benefits annually.
- A maritime transportation network linking North America's heartland with ports and markets throughout the world.
- First class harbors and marinas that generate $2 billion annually from the recreational boating industry.

The *Taking Action Strategy* recommends **developing various case studies describing how Lake Macatawa impacts local economic growth.**

Figure excerpted from the Michigan Great Lakes Plan, 2009 by the Michigan Office of the Great Lakes, MDEQ.

Water Quality Scorecard (Target Audience: Local Government)

The Water Quality Scorecard is an assessment tool developed by the Environmental Protection Agency in October of 2009. The purpose of the tool is to establish an objective system to evaluate the ability of local units of government to "incorporate green infrastructure practices at the municipal, neighborhood and site scales". The evaluation is based on a point system that will in turn, help to identify obstacles, revise and create codes and ordinances and create incentives to implement low impact development practices.

To complete the Water Quality Scorecard, a municipality may need to refer to zoning ordinances, subdivision codes, street standards or road design guidelines, parking requirements, setbacks, height limitations, open space plans and or comprehensive master plans. The review process relies on the expertise and knowledge of various staff members in park and recreation, public works, planning, environmental protection, utilities and transportation. Completing the Water Quality Scorecard and tracking progress over time, will provide a quantitative way to evaluate the effectiveness of water quality related programs and activities.

The *Taking Action Strategy* recommends using the Water Quality Scorecard to evaluate each of the local units of government (with land inside the Macatawa Watershed Boundary). Once baseline scores are established we can then work with each unit of government to devise strategies to improve their scores.

The "Friends of the Macatawa Watershed Project" Program (All Target Audiences)

The success of the water quality programs proposed by the Macatawa Watershed Project ultimately depend on the efforts of many community stakeholders taking steps to implement practices that will protect and improve water quality. Community stakeholders include all the target audiences listed in Table 9 including citizens, businesses, governments, farmers, schools and institutions.

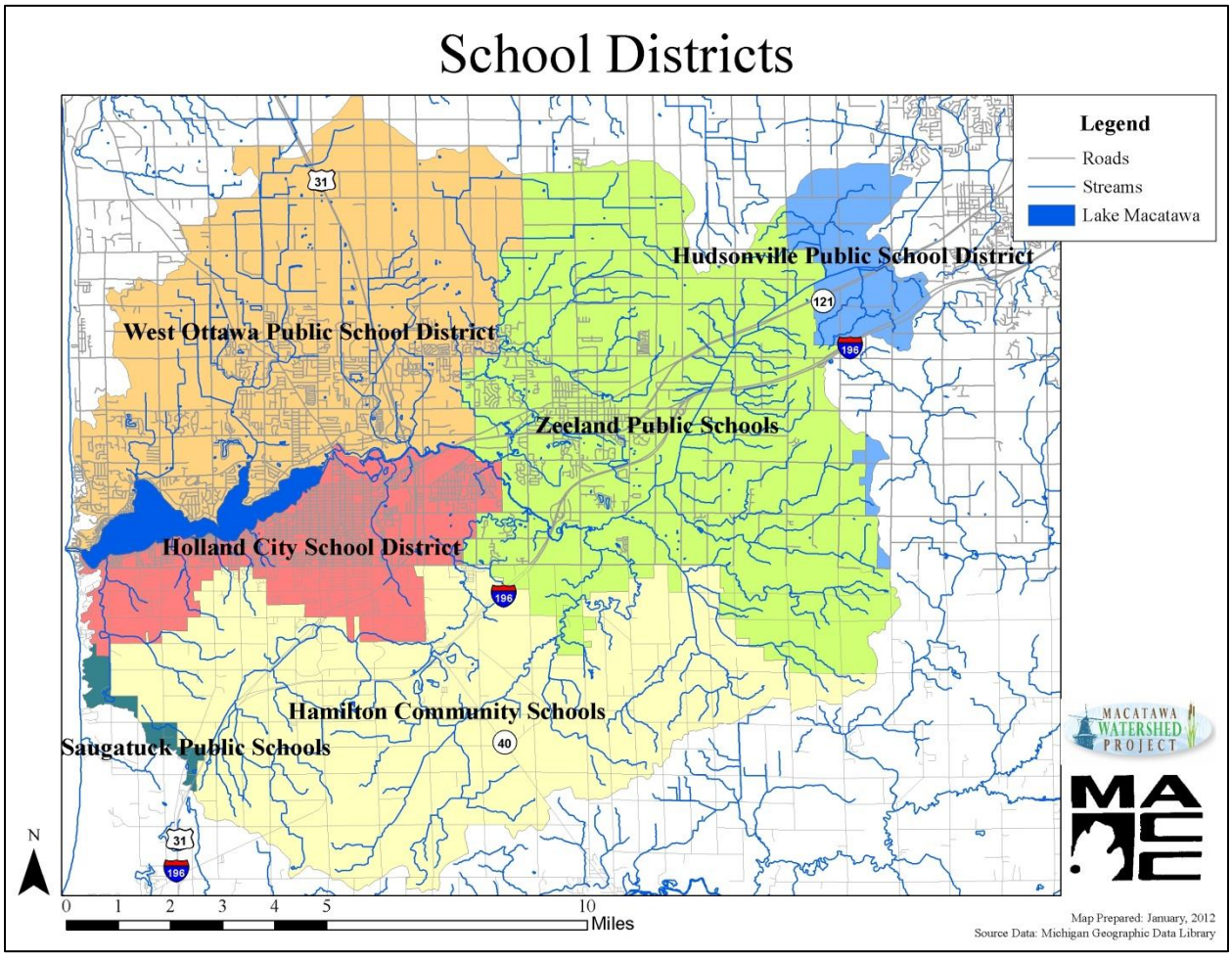
As a way to encourage the implementation of best management practices, we have proposed developing a recognition and incentive program. Community stakeholders who meet designated water quality criteria can become official "Friends of the Macatawa Watershed Project". Members of the program will be recognized for their efforts through the use of yard signs, window signs, t-shirts, and/or local media, and may be offered a variety of incentives. Membership in the program also offers another way to create general awareness of local water quality issues and provides a system to track and evaluate progress over time.

Residents, churches, businesses, farmers and schools could become enrolled in the program. The outcomes of the program will be tracked and recorded yearly. One requirement of the program will be that any water quality friendly practices that are implements must be entered in the NECO internet site. NECO stands for Networked Neighborhoods for Eco-Conservation Online and is a website maintained by Michigan State University.

Watershed Curriculum Kits and Associated Training Workshops (Target Audience: Schools)

The Macatawa Watershed Project has a wealth of informational and educational materials available free of charge to any interested community stakeholders. Many of the materials could be easily used in science, math or history classroom settings. To increase the distribution and use of these materials, we propose creating "watershed curriculum kits". Different versions of the kits would be designed for each target grade. Target grades will be determined by reviewing the Grade Level Content Expectations (GLCEs) and identifying which are appropriate for watershed-related information. The kits will be developed with direct application to the state's science curriculum mandates and will be easy for the teachers to implement as they will be come equipped with lesson plans, worksheets, quizzes etc.

In addition to developing the kits, we will also present annual or biannual training workshops to teach local educators how to use and implement the watershed curriculum kits. We believe that developing these kits will increase the use of our educational material and help spread water quality education to more local teachers and students.



IX. Evaluation

To ensure the ultimate success of our Information and Education Strategy, we need to be consciously and consistently evaluating our progress. The intended outcomes of our strategy are described as milestones in Tables 10, 11 and 12.

Some of the milestones are inherently quantitative and can be easily tracked and evaluated over time (example: number of Homeowner's Handbooks distributed, number of presentations given or number of Facebook fans).However, some of the milestones are entirely qualitative (ex. increase in awareness of water quality issues) and need to be measured in other ways.

We intend to produce an annual report on the progress of this I & E Strategy To more adequately measure progress and effectiveness we intend to conduct periodic surveys of each of the target audiences.

Quantitative Outcomes

Implementation of most activities can and will be tracked on an annual basis. Annual implementation of activities will be reported via the annual report that is submitted to the MDEQ as a requirement of the MS4 permitting program. The report will document implementation of the activities proposed in Tables 10, 11 and 12 including but not limited to:

- # of materials distributed (via watershed display, direct mail and other venues)
- # of radio and/or TV public service announcements played
- # of one-on-one meetings conducted
- # of local workshops, trainings or tours conducted and attendance at each event
- # and location of billboards, transit and cinema advertisements
- # of committee meetings and attendance at each meeting
- # of individuals/institutions enrolled in the "Friends of the Macatawa Watershed" Program
- # community and school presentations conducted
- # of bill inserts and email reminders sent
- # website/Facebook followers
- # calls to a illicit discharge hotline number

Finally, as a way to track implementation of on-the-ground best management practices we will encourage watershed stakeholders to enter their activities into MSU's Online NECO system (Networked Neighborhoods for Eco-Conservation Online, described in Section VIII). Annual reports can be downloaded from the site (by zip code or watershed area) and will include number of storm water best management practices that have been implemented by private citizens.

Qualitative Outcomes

Ultimately, we want to measure the effectiveness of the outreach activities in meeting the goals of the strategy. The basic goal of the strategy is to improve attitudes and increase knowledge that results in behavior change that help protect or improve water quality. These qualitative outcomes are much more difficult to measure over time than quantitative outcomes. Surveys could include:

- broad phone or written surveys intended to reach a large audience (more than 75) and usually conducted by an outside consultant or entity,
- email surveys to moderate sized groups and targeted audiences (up to 75) using a survey software (ex. Survey Monkey),
- written surveys or questionnaires for workshop or tour participants,
- "clicker" surveys (real time electronic surveys using Microsoft Powerpoint software) for meeting participants, and/or
- Pre- and post-surveys to measure increase in knowledge after small group informational presentations.

Surveys are typically one of the most effective, unbiased and quantitative ways to evaluate public outreach strategies. Section V describes some of the historical surveys that have been conducted by the MACC. In addition to recording our outreach efforts and the number of certain best management practices that are installed, we propose to continue periodically surveying the local watershed population to measure progress over time. Please note that the survey costs have not been factored into any of the specific task related costs that are described in Tables 10, 11 and 12.

In addition to periodically conducting major (statistically significant) surveys, we propose conducting more frequent surveys of smaller target audiences when they are involved in meetings, workshops, training events and/or tours. Surveys will be conducted in written or electronic format and the results will be reported with the annual report. In some instances, before and after surveys will be conducted to directly measure immediate increases in knowledge and awareness of water quality issues. Before and after surveys will most likely be conducted in conjunction with classroom and community presentations.

X. Summary and Conclusion

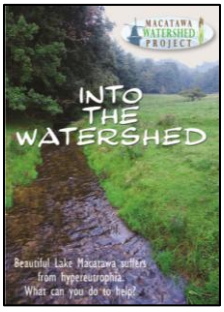
The Information and Education Strategy is a critical piece of the watershed implementation plan. All the tasks described herein directly support the three overarching goals of the Macatawa Watershed Management Plan of *restoration, protection and enhancement*. These tasks will be implemented in relation to the high priority target audiences which include farmers, residents, local government, institutions, environmental advocacy groups and schools.

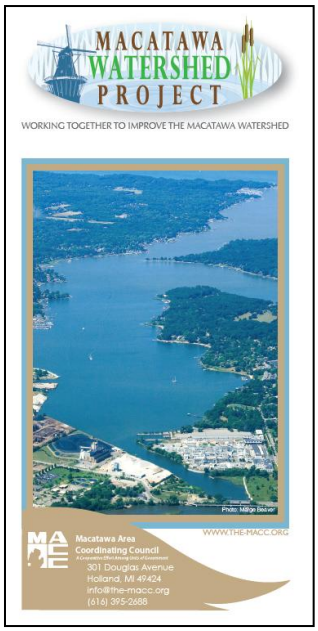
The I/E Strategy has been developed based on the following objectives:

1) *Increase community awareness of local water quality issues,*
2) *Demonstrate the importance of clean water,*
3) *Provide information about actions that will improve the watershed, and*
4) *Facilitate desired behavior changes by providing technical assistance.*

The MACC will continue to implement "current activities" as described in Tables 10 and 11, including:

- Lawn Care Seal of Approval Program
- Three Children's Books
  - A Day at the Farm
  - The Lake I Didn't Remember
  - Springwater Rain
- Award – winning *Into the Watershed* DVD
- Watershed Stakeholder of the Year Award
- Quarterly newsletters
- General Watershed Brochure
- Lawn Care Brochure
- Project Specific Fact Sheets
- Homeowner's Handbook
- Two Tabletop Watershed Displays
- Storm Drain Stenciling Kits
- Facebook Page





In addition, the MACC will aim to implement newly proposed strategies and programs, including:

- More one-on-one meetings
- Trainings/workshops
- Radio and television advertisements
- Billboards and transit ads
- Tours and school field trips
- Arts and culture events and/or contests
- Watershed signage along roadways
- Cinema advertisements
- "Friends of the Macatawa River" incentive program
- "Water Quality Scorecard" Assessments
- Watershed Curriculum Kits and training workshops

The MACC intends to track and report on implementation of the outreach tasks annually and to evaluate the effectiveness of these strategies periodically using the methods described. The ultimate goal of the plan is to help the MACC, and the broader community, take actions that will help us realize our vision for the Macatawa Watershed.

XI. References

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