

DRAFT

Maumee Area of Concern Stage 2 Watershed Restoration Plan

Volume 2

January 2006

Approved by Maumee RAP on December 8, 2005
Approved by Duck and Otter Creeks Partnership on January 19, 2006

Stage 2 Approval Process

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Future submissions to US EPA and International Joint Commission in 2006

State of Ohio Endorsement Approval Process

Submitted to Ohio DNR for State Endorsement Consideration on December 16, 2004
Submitted to Ohio DNR for State Endorsement Consideration on January 31, 2006

*This plan has been developed by the Maumee RAP and the Duck and Otter Creeks Partnership,
in conjunction with the Ohio Environmental Protection Agency,
Toledo Metropolitan Area Council of Governments, and
other partners for the use and benefit of the Maumee AOC Community.*

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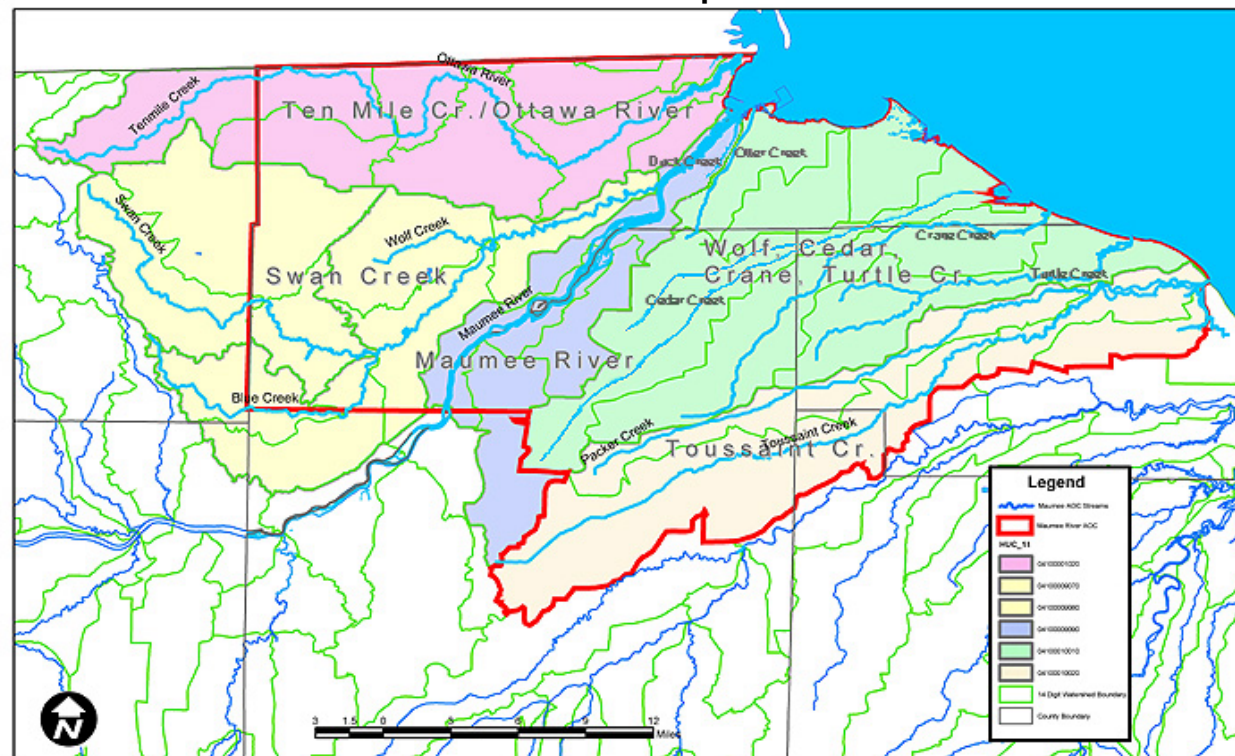


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The *Stage 2 Watershed Plan* focuses on the Maumee AOC, plus the headwaters of the Ottawa River and Swan Creek. Whenever the Maumee AOC is referred to throughout the document, it includes the headwaters unless otherwise noted. Although these areas are not officially within the Maumee AOC they are often addressed by RAP projects.

The formal boundaries of the Maumee AOC extend from the Bowling Green water intake near Waterville along the Maumee River (RM 22.8) downstream to Maumee Bay. This area includes direct drainage into the waters that are within Lucas, Ottawa, and Wood counties. The watersheds include Ottawa River (Ten Mile Creek), Swan Creek, Grassy Creek, Duck Creek, Otter Creek, Wolf Creek, Cedar Creek, Crane Creek, Turtle Creek, Packer Creek, and the Toussaint River. The entire Area of Concern drains ultimately to Lake Erie. The Maumee AOC is comprised of six 11-digit HUCs and one large river unit. For ease of use, this plan has put both Swan Creek HUCs into one chapter and addressed the large river unit with the HUC that it flows through. The map illustrates the Maumee AOC, 11-digit HUC areas, large river unit area, and watershed grouping used throughout this document.

Maumee Area of Concern plus Headwaters



The Watershed Projects Tables (WPTs) are the portion of the report that will change and grow, as projects are implemented and goals are attained. These tables have been organized by Causes and Sources and include Projects, Potential Project Partners, Funding Sources, Timeline, Status, Performance/Environmental Measures, HUC/Stream Segment Addressed, and indicate the Beneficial Use Impairment (BUI) that could be effected by the project. Also incorporated into the table (where applicable) is a reference to the ODNR Coastal Management Measures that may benefit from the implementation of an identified project.

There are differing levels of detail in the WPTs, often depending on how soon a project will be implemented, what source will be funding it, or by the amount of data available for that watershed. The status of projects in the WPTs have been organized and color coded as follows:

- **In Progress:** These projects are currently funded, have a detailed workplan, and are underway. *In progress* projects have the text colored red in the WPTs.
- **Planning:** These projects may have a rough workplan or grant application developed, but are lacking some component to make it implementable (i.e. project coordinator, funding, project site). These are usually shorter range projects. *Planning* projects have the text colored pink in the WPTs.
- **Concept:** These project maybe something that is needed or desired, but a plan or method for implementation has not been developed. These are usually longer range projects. *Concept* projects have the text colored blue in the WPTs.
- **Ongoing:** These projects are reoccurring projects that repeat usually annually. These are commonly public involvement, outreach or educational projects (i.e. cleanups, sampling, monitoring). *Ongoing* projects have the text colored green in the WPTs.
- **Complete:** These projects are those that have been finished. Many past activities have been recorded in previous reports. Some of them have been kept here to explain past steps that are leading/developing to future projects. (i.e. hot spot delineation to risk assessment to remedial design). *Complete* projects have the text colored black in the WPTs.

Fourteen beneficial use impairments (BUI) have been used to define the problems in Areas of Concern. These problems are negative changes in the physical, chemical or biological integrity sufficient to cause any of the following:

- BUI #1 Restrictions on fish and wildlife consumption;
- BUI #2 Tainting of fish and wildlife flavor;
- BUI #3 Degradation of fish and wildlife populations;
- BUI #4 Fish tumors and other deformities;
- BUI #5 Bird or animal deformities or reproduction problems;
- BUI #6 Degradation of benthos;
- BUI #7 Restrictions on dredging activities;
- BUI #8 Eutrophication or undesirable algae;
- BUI #9 Restrictions on drinking water consumption, or taste and odor problems;
- BUI #10 Beach closings;
- BUI #11 Degradation of aesthetics;
- BUI #12 Added costs to agriculture or industry;
- BUI #13 Degradation of phytoplankton and zooplankton populations; and
- BUI #14 Loss of fish and wildlife habitats.

When the Maumee Area of Concern was defined in the late 1980s, the Maumee RAP Public Advisory Council determined which beneficial uses were impaired based on the entire AOC. This was done because the only way of delisting an AOC was a comprehensive one; all listed or all delisted. Now that there are alternative methods for incrementally delisting an AOC by watershed or impairment, the Maumee RAP will maintain a record of the status of each BUI in each major watershed of the Maumee AOC. The status of the BUIs in each watershed is summarized in the adjacent table.

The staff for the Maumee RAP (Ohio EPA and TMACOG) and Duck and Otter Creeks Partnership facilitated the creation of the *Stage 2 Watershed Plan*. They will also be responsible for maintaining this as a living document, which includes updating completed projects and adding any new projects being planned or implemented. If there are additions, changes, or updates to the plan please contact one of the following:

Ohio EPA – Northwest District Office
 Maumee RAP Coordinator
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 (419)352-8461

Toledo Metropolitan Area Council of Governments (TMACOG)
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**Beneficial Use Impairments In 2005
 for the Maumee Area of Concern**
(last updated 12/1/05)

	Ottawa	Swan	Maumee	Grassy	Duck	Otter	Wolf	Cedar	Crane	Turtle	Packer	Toussaint
BUI 1: Restriction on fish and wildlife consumption	Impaired	Not impaired	Impaired	Not impaired	Impaired	Impaired	Impaired	Not impaired	Impaired	Impaired	Impaired	Impaired
BUI 2: Tainting of fish & wildlife flavor	Unknown	Not impaired	Unknown	Not impaired	Unknown	Unknown	Not impaired	Not impaired	Not impaired	Not impaired	Not impaired	Not impaired
BUI 3: Degradation on fish and wildlife populations	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired
BUI 4: Fish tumors or other deformities	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Not impaired	Impaired	Unknown	Impaired
BUI 5: Bird or animal deformities or reproductive problems	Unknown	Unknown	Unknown	Not impaired	Not impaired	Not impaired	Not impaired	Not impaired	Not impaired	Not impaired	Unknown	Impaired
BUI 6: Degradation of benthos	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired
BUI 7: Restriction on dredging activities	Impaired	Not impaired	Impaired	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Impaired
BUI 8: Eutrophication or undesirable algae	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Impaired	Impaired
BUI 9: Restrictions on drinking water consumption, or taste and odor	Not impaired	Not impaired	Not impaired	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
BUI 10: Beach closings	Impaired	Impaired	Impaired	Impaired	Not impaired	Not impaired	Impaired	Not impaired	Impaired	Not impaired	Not impaired	Not impaired
BUI 11: Degradation of aesthetics	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired
BUI 12: Added cost to agriculture and industry	Impaired	Not impaired	Unknown	Unknown	Not impaired	Not impaired	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
BUI 13: Degradation of phytoplankton & zooplankton populations	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
BUI 14: Loss of fish and wildlife habitat	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired	Impaired

Ten Mile Creek and Ottawa River Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete,)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
All	All	Conduct a TMDL	1) Design watershed survey, 2) Collect water quality data, 3) Assess waterbodies, 4) Identify target conditions, 5) Develop restoration projects, 6) Select restoration scenario, 7) Prepare implementation plan, 8) Submit TMDL report, 9) Implement TMDL (inside Ohio EPA), 10) Implement TMDL (outside OEPA), 11) Annual validation activities, and 12) Validate water quality status	OEPA	OEPA	2011-2013	concept				X	X	X	X	X	X	X	X	X	X	X	X	X	Source: OEPA	
All	All	GIS Water Quality database (Phase 1)	1) Create relational database from OEPA water resources inventory data for Maumee AOC	University of Toledo, Maumee RAP	US EPA GLNPO	2004-2005	complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 1)	2) Export LE Tribes data to a GIS format				complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 1)	3) Publish relational database and GIS online				complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 2)	Expand GIS to entire AOC				in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	1) Determine waterways to study and map versus redelinate	Lucas County Engineer and Auditor Offices, FEMA	Lucas County, FEMA	2005-2010	in progress	Study 60+ miles of stream to determine the current floodplain			X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	2) Conduct new studies			2005-2008	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	3) Redelinate existing studies			2005-2008	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	4) Request public comment on draft maps			2009	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	5) Finalize maps and release electronically			2010	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow alterations	Channelization	Install Flood Control structure (detention/retention systems)		SWC and its partners, Maumee RAP Urban Runoff Action Group	SWC and its partners	2006-2010	concept			RM 24 to headwaters			X		X					X			X		
Flow alterations	dams	Ottawa Hills Dam Removal and Restoration Project	1) Develop plans and specs for dam removal	Village of Ottawa Hills; University of Toledo; Maumee RAP; TMACOG	Ohio EPA 319	2006-2008	planning	# of fish species found upstream of removed dam - sediment movement results	Chapter 7	RM 11.5 to RM 11.9			X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal and Restoration Project	2) Develop plans and specs for restoration in near dam areas				planning						X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal and Restoration Project	3) Hire contractor(s)				planning						X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal and Restoration Project	4) Remove dam				planning						X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal and Restoration Project	5) Install restoration practices				planning						X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal Study	1) Conduct HEC-RAS hydrology study/model	Village of Ottawa Hills; University of Toledo	ODNR - CZM, University of Toledo, Village of Ottawa Hills	2003-2004	complete	study report		RM 11.5 to RM 12.0			X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal Study	2) Conduct sediment survey for quantity and quality transport concerns				complete		7.5.1; 7.5.2				X		X				X			X	X		
Flow alterations	dams	Ottawa Hills Dam Removal Study	3) Conduct fisheries study/survey				complete	study report	7.5.1; 7.5.2	RM 17.25			X		X				X			X	X		
Flow alterations	dams	Remove Camp Miakonda Dam	1) Conduct sediment sampling for possible transport of contaminants upon removal of dam	Boy Scouts of America, Hull & Associates, ORKA,	Boy Scouts of America, US Fish and Wildlife Foundation, ORKA,	2003	complete	dam removed					X		X				X			X	X		
Flow alterations	dams	Remove Camp Miakonda Dam	2) Remove dam			2003	complete	dam removed					X		X				X			X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 1)	1) Discontinue mowing	City of Toledo	City of Toledo	mid 1980's-1999	complete	37 acres of natural area restored and hydrology of floodplain restored to improve wildlife habitat	5.5.1; 8.3.2	RM 8.5 to RM 9.5			X									X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 1)	2) Allow area to naturalize			mid 1980's-1999	complete						X									X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 2)	1) Reestablish non-mowing and naturalization practices (Phase 1)	City of Toledo	Ohio EPA 319, Clean Ohio Fund	2005	concept	Improved hydrology, sediment retention, and enrich soil and seed bank	5.5.1, 8.3.2; Chapter 10.5	RM 9.5 to RM 10.5			X									X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 2)	2) Improve access for educational purposes with access drive and system of mowed trails			2005-06	concept						X									X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 2)	3) Excavate the streambank and build earthen embankments to direct floodwaters into the floodplain during storm events			2005-06	concept						X									X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 2)	4) Grade bottomland to create seasonal impoundments			2005-06	concept						X									X	X		
Flow alterations	Streambank modification	Jermain Meadow/Park Restoration (Phase 3)	1) Manage site for biological diversity	City of Toledo	City of Toledo	2007	concept	Improved hydrology, sediment retention, and enrich soil and seed bank	5.5.1, 8.3.2; Chapter 10.9				X									X	X		
Habitat modification	Changing land uses	Hoffman Road Boardwalk (Phase 1)	1) Design Boardwalk	City of Toledo	City of Toledo	2000	complete	number of annual visitors	Chapter 10.5; Chapter 7, Recom. 3a, 3b	RM 3.4 to RM 3.8			X						X			X			
Habitat modification	Changing land uses	Hoffman Road Boardwalk (Phase 1)	2) Construct Boardwalk				complete						X						X			X			

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Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete,)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
organic enrichment	urban runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 3)	Conduct public Storm Drain Stenciling events	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF, ODNR/CZM grants; foundations, Maumee RAP, TMACOG, local jurisdictions, organizations	April - Oct	ongoing	# of new storm drains stenciled; # of households given ed materials; # of volunteers participating		all of watershed	X		X			X	X			X	X				
Pathogens	Human & animal excreta	Educate Horse owners on proper disposal of manure	Implement Equine Environmental Assurance and Liability Program for Fulton, Lucas and Wood Counties	LSWCD, WSWCD Ohio Livestock Coalition, Farm Bureau	Ohio Livestock Coalition, Farm Bureau, ODRN-DSWC	2006	concept				X		X			X	X			X	X				
Pathogens	Septic systems	Expand Student Watershed Watch Program into additional schools		Maumee RAP, TMACOG, Ohio EPA, public and private schools	private donations	year round	ongoing			all of watershed			X				X	X		X	X				
Pathogens	Septic systems	Extend sewer system to eliminate septic systems	Identify areas needing sewer system, conduct necessary sampling and sewer upgrades	Ohio EPA, local cities, townships, county and villages	Ohio EPA, US Rural Development		concept	septic systems eliminated, bacteria level in river		all of Ottawa River Watershed in Lucas/Fulton	X		X					X	X		X	X			
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	1) Scan paper copies to create electronic files of existing septic systems	TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office	Lake Erie Protection Fund, TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office	2002-2005	complete	electronic database completed	5.6.2;	all of Ottawa River Watershed in Lucas County			X					X	X		X	X			
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	2) Convert electronic data into GIS map files			2002-2005	complete						X					X	X		X	X			
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	3) Intergrate with AERIS data			2002-2005	complete						X					X	X		X	X			
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	4) Train Health Dept personnel to input data and use GIS system			2005	in progress						X					X	X		X	X			
Pathogens	Septic systems	Install sewers in Berkey		Ohio EPA, Village of Berkey	Village of Berkey, US Rural Development		planning	septic systems eliminated, bacteria level in river decreases		RM 31.5 to 34	X		X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	1) Identify stream sampling locations	TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office, Wood County Health Dept	US ACE [WRDA sec. 401]	2004	complete	Sample 50 stream sites and dye test 100 septic systems per county to reduced discharges of unmeasurable amounts of inadequately treated sewage	5.6.2; Chapter 11	all of Ottawa River Watershed in Lucas County			X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	2) Identify septic system dye testing locations			2004	complete						X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	3) Conduct stream sampling and dye testing			2004	complete						X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	4) Prioritize areas for enforcement based on testing results			2004	complete						X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	5) Pursue enforcement requiring upgrades or replacement of failed or inadequate systems			2004	complete						X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 2)	1) Conduct additional stream sampling and dye testing	TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office, Wood County Health Dept	WRDA 401, Ohio EPA 319	2005 - ?	concept	Sample additional 50 stream sites and dye test additional 100 septic systems per county to reduced discharges of unmeasurable amounts of inadequately treated sewage	5.6.2; Chapter 11	all of Ottawa River Watershed in Lucas County			X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 2)	2) Modify priority areas (if necessary)			2005- ?	concept						X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 2)	3) Pursue enforcement requiring upgrades or replacement of failed or inadequate systems with cost share incentives (if available)			2005- ?	concept						X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 3)	1) Continue to sample and dye test to identify problem areas	TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office, Wood County Health Dept	WRDA 401, Ohio EPA 319	2006 - ?	concept	Sample stream sites and dye test septic systems as needed per county to reduced discharges of unmeasurable amounts of inadequately treated sewage	5.6.2; Chapter 11	all of Ottawa River Watershed in Lucas County			X					X	X		X	X			
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 3)	2) Continue to pursue enforcement requiring upgrades or replacement of failed or inadequate systems with cost share incentives (if available) until priority areas are addressed		WRDA 401, Ohio EPA 319	2006 - ?	concept						X					X	X		X	X			
Pathogens	Septic systems	Student Watershed Watch	1) Enlist teacher/schools to participate	Maumee RAP, TMACOG, Ohio EPA, public and private schools	private donations	August - November	ongoing	annual data collection that documents water quality changes throughout the watershed; # of teachers/schools participating		all of watershed			X					X	X		X	X			
Pathogens	Septic systems	Student Watershed Watch	2) Conduct teacher training (see SWW Teacher Training/Creditable Data Certification)			Sept	ongoing						X					X	X		X	X			

Ten Mile Creek and Ottawa River Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete,)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	3) Identify data gaps				complete				X		X	X		X	X	X	X	X					
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	4) Collect additional samples				complete				X		X	X		X	X	X	X	X					
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	5) Analyze results				complete				X		X	X		X	X	X	X	X					
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	6) Determine remedial options				complete				X		X	X		X	X	X	X	X					
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	7) Select remedial option				complete				X		X	X		X	X	X	X	X					
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	8) Implement remediation activities				complete				X		X	X		X	X	X	X	X					
Toxic substances	Industrial discharges (current or old)	Unnamed Tributary Remediation Project	9) Regrade and seed site				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Dura Landfill	1) Install engineered base and liners	PRP's	PRP's	1999-2000	complete	percentage reduction of leachate		RM 5.6	X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Dura Landfill	2) Install monitoring wells				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Dura Landfill	3) Install protective cap & seed				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap King Road Landfill	1) Conduct Remedial Investigation	Lucas County, PRPs	Lucas County, PRPs		complete	percentage reduction of leachate		RM ?? (King Rd. between Central Ave and Sylvania Ave)	X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap King Road Landfill	2) Conduct Feasibility Study			2003	complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap King Road Landfill	3) Develop Preferred Plan			2004	in progress				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap King Road Landfill	4) Release Decision Document			2006	in progress				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap King Road Landfill	5) Determine Remedial Design				in progress				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap King Road Landfill	6) Implement Remedial Action				in progress				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap North Cove Landfill	1) Conduct Remedial Investigation	City of Toledo	City of Toledo	? - 2005	complete	percentage reduction of leachate		RM 7.5 to RM 8.0	X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap North Cove Landfill	2) Conduct Feasibility Study				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap North Cove Landfill	3) Develop Preferred Plan				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap North Cove Landfill	4) Release Decision Document				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap North Cove Landfill	5) Determine Remedial Design				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap North Cove Landfill	6) Implement Remedial Action				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Stickney & Tyler Landfills (and part of XXKem)	1) Grub and regrade site	STAG	STAG	1998-1999	complete	percentage reduction of leachate		RM 5 to RM 6.3	X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Stickney & Tyler Landfills (and part of XXKem)	2) Install engineered base and liners				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Stickney & Tyler Landfills (and part of XXKem)	3) Install leachate collection/extraction systems & monitoring wells				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Cap Stickney & Tyler Landfills (and part of XXKem)	4) Install protective cap & seed				complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Continue to Implement remediation activities for other sites and sources (i.e. capping, etc.)	Develop Projects	PRPs, US EPA, Ohio EPA	PRPs, US EPA		ongoing				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Ottawa River AquaBlok Demonstration Proj.	1) Collect samples (sediment & biological)	City of Toledo, Hull & Associates	City of Toledo, LEPP	1998-2000	complete			RM 5.5 To RM 6.3	X		X	X		X	X	X	X	X	Final report expected after 5 year benthic study is conducted in 2004				
Toxic substances	Landfills (current or old)	Ottawa River AquaBlok Demonstration Proj.	2) Apply AquaBlok			Aug-99	complete				X		X	X		X	X	X	X	X					
Toxic substances	Landfills (current or old)	Ottawa River AquaBlok Demonstration Proj.	3) Monitor & sample site			2004	complete				X		X	X		X	X	X	X	X					
Toxic substances	Urban Runoff	Develop and Implement Stormwater Management Plans (Phase I and II)	1) Identify illicit connections	MS4, Ohio EPA DSW	MS4		in progress			RM 0 to RM 23.5	X		X	X		X	X	X	X	X					
Toxic substances	Urban Runoff	Develop and Implement Stormwater Management Plans (Phase I and II)	2) Eliminate illicit sources				in progress				X		X	X		X	X	X	X	X					
Toxic substances	Urban Runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	1) Develop project	Maumee RAP, TMACOG, local Jurisdictions, US F&WS, ODNR	OEEF, local jurisdictions, US F&WS, ODNR, Maumee RAP, TMACOG	2003-2006	complete	Educate public on sources/pathways of nonpoint and point source pollution; pre- and post-campaign surveys show increased awareness of citizens	5.6.2; 5.7.1; Chapter 10.5	Sylvania & Washington Twp			X		X	X			X	X					
Toxic substances	Urban Runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	2) Release RFP/Hire contractors			9/3/04	complete						X		X	X			X	X					
Toxic substances	Urban Runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	3) Create and distribute TV, cinema and newspaper ads			10/03-4/05	complete						X		X	X			X	X					
Toxic substances	Urban Runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	4) Create and distribute 6 tip cards & bonus items			10/03-4/05	complete						X		X	X			X	X					

Swan Creek and Blue Creek Watershed Projects Table*

* BUI color coding is based on Swan Creek

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.	
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14		
Habitat Modification	Streambank modification	Swan Creek Watershed Pilot Project	2) Determine priority conservation areas (PCA) and priority development areas (PDA)				in progress				X		X			X			X							
Habitat Modification	Streambank modification	Swan Creek Watershed Pilot Project	3) Encourage local jurisdictions to adopt PCAs and PDAs				in progress				X		X			X			X							
nutrients	Cropland or pasture where manure is spread	Educate Horse owners on proper disposal of manure	Implement Equine Environmental Assurance and Liability Program for Fulton, Lucas and Wood Counties	LSWCD, WSWCD Ohio Livestock Coalition, Farm Bureau, ODRN-DSWC	Ohio Livestock Coalition, Farm Bureau, ODRN-DSWC	2006	concept				X		X			X			X	X						
Nutrients	Erosion and runoff from fertilized fields	Tillage Transect	Drive the transect points and mark in GPS and note land use.	USDA-NRCS, ODRN-SWCD, LSWCD	NRCS, ODRN-SWCD	2006-07	concept	Ability to calculate no-till acres and developed acres.				X				X									X	
Nutrients	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	1) Design new Drains are for Rain storm drain stencils and companion door hangers	Maumee RAP, TMACOG, local jurisdictions, organizations	Maumee RAP, TMACOG, local jurisdictions, organizations	Spring 2005	complete	# of supplies ordered; # of households given educational materials; # of purchasing	Chapter 10.5; 5.7.1		X		X			X	X			X			X	X		
Nutrients	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete				X		X			X	X			X			X	X		
Nutrients	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	3) Distribute stencils and door hangers for local jurisdictions and organizations to use			Jul-05	complete				X		X			X	X			X			X	X		
Nutrients	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	1) Design new Drains are for Rain storm drain stenciling Field Manuals	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF; 319 grants; ODRN/CZM grants; foundations; local donations; cities	year round	ongoing	# of stenciling manuals sold	Chapter 10.5; 5.7.1		X		X			X	X			X			X	X		
Nutrients	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	2) Fill orders for local jurisdictions and organizations as placed				ongoing				X		X			X	X			X			X	X		
Nutrients	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 3)	Conduct public Storm Drain Stenciling events	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF, ODRN/CZM grants; foundations, Maumee RAP, TMACOG, local jurisdictions, organizations	April - Oct	ongoing	# of new storm drains stenciled; # of households given ed materials; # of volunteers participating			X		X			X	X			X			X	X		
Organic Enrichment	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	1) Design new Drains are for Rain storm drain stencils and companion door hangers	Maumee RAP, TMACOG, local jurisdictions, organizations	Maumee RAP, TMACOG, local jurisdictions, organizations	Spring 2005	complete	# of supplies ordered; # of households given educational materials; # of purchasing	Chapter 10.5; 5.7.1		X		X			X	X			X			X	X		
Organic Enrichment	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete				X		X			X	X			X			X	X		
Organic Enrichment	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	3) Distribute stencils and door hangers for local jurisdictions and organizations to use			Jul-05	complete				X		X			X	X			X			X	X		
Organic Enrichment	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	1) Design new Drains are for Rain storm drain stenciling Field Manuals	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF; 319 grants; ODRN/CZM grants; foundations; local donations; cities	year round	ongoing	# of stenciling manuals sold	Chapter 10.5; 5.7.1		X		X			X	X			X			X	X		
Organic Enrichment	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	2) Fill orders for local jurisdictions and organizations as placed				ongoing				X		X			X	X			X			X	X		
Organic Enrichment	Urban Runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 3)	Conduct public Storm Drain Stenciling events	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF, ODRN/CZM grants; foundations, Maumee RAP, TMACOG, local jurisdictions, organizations	April - Oct	ongoing	# of new storm drains stenciled; # of households given ed materials; # of volunteers participating			X		X			X	X			X			X	X		
Pathogens	Human & animal excreta	Educate Horse owners on proper disposal of manure	Implement Equine Environmental Assurance and Liability Program for Fulton, Lucas and Wood Counties	LSWCD, WSWCD Ohio Livestock Coalition, Farm Bureau	Ohio Livestock Coalition, Farm Bureau, ODRN-DSWC	2006	concept				X		X			X	X			X	X					
Pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	1) Scan paper copies to create electronic files of existing septic systems	TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office	LEPF, TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office	2002-2005	complete		5.6.2;	all of Otter Creek watershed									X	X						
Pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	2) Convert electronic data into GIS map files			2003	complete												X	X						
Pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	3) Integrate with AREIS data			2004	complete												X	X						
Pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	4) Train Health Dept personnel to input data and use GIS system			2005	in progress												X	X						
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	1) Identify stream sampling locations	TMACOG, Toledo/Lucas County Health Dept, Lucas County Auditor's Office, Wood County Health Dept	US ACE [WRDA sec. 401]	2004	complete	Sample 50 stream sites and dye test 100 septic systems per county to reduced discharges of unmeasurable amounts of inadequately treated sewage	5.6.2; Chapter 11	RM 2.0									X	X						
Pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	2) Identify septic system dye testing locations				complete												X	X						

Swan Creek and Blue Creek Watershed Projects Table*

* BUI color coding is based on Swan Creek

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
Sediment/Siltation	Construction	Regional Storm Water Standards Manual (Phase 1)	3) Identify alternative development designs/layouts that protect water quality				complete				X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Regional Storm Water Standards Manual (Phase 1)	4) Encourage local jurisdictions to adopt manual as their standards				complete				X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Regional Storm Water Standards Manual (Phase 2)	1) Review existing manual	Maumee RAP Urban Runoff Action Group, SWC	GLC	2005-2007	in progress	Completion and distribution of revised manual	Chapter 10.5; 5.7.1	all of watershed	X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Regional Storm Water Standards Manual (Phase 2)	2) Update chapters with new content and regulations			2005-2006	in progress				X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Regional Storm Water Standards Manual (Phase 2)	3) Conduct workshops and site visits for consultants, developers, contractors on stormwater plan preparation and post-construction BMPs			2006-2007	in progress	50 percent of consultants, developers, contractors that work in the area participate			X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Regional Storm Water Standards Manual (Phase 3)	Maintain and update manual as needed				ongoing				X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Require BMPs on smaller developments					concept			all of watershed	X		X	X		X	X	X		X		X	X		
Sediment/Siltation	Construction	Swan Creek Watershed Pilot Project	1) Enlist the participation of a majority of the jurisdictions in the watershed	TMACOG, more than 75% of the jurisdictions in the Swan Creek watershed	LEPF	2006-2008	in progress	State of Ohio and a majority of the participating jurisdiction endorses PCA/PDA		all of the watershed	X		X		X	X				X			X		
Sediment/Siltation	Construction	Swan Creek Watershed Pilot Project	2) Determine priority conservation areas (PCA) and priority development areas (PDA)				in progress				X		X		X	X				X			X		
Sediment/Siltation	Construction	Swan Creek Watershed Pilot Project	3) Encourage local jurisdictions to adopt PCAs and PDAs				in progress				X		X		X	X				X			X		
Sediment/Siltation	Cropland	Develop potential project list based on Cropland Inventory Project Results					concept			all of watershed	X		X		X	X	X			X			X		
Sediment/Siltation	Cropland	Identify extent & benefit of conservation tillage and other BMPs used by farmers in watershed					concept			all of watershed	X		X		X	X	X			X			X		
Sediment/Siltation	Cropland	Incentive programs for implementation of agricultural BMPs such as filter strips & conservation tillage, fertilizer/pesticide management	Continue to promote and support the implementation of these programs	Ohio Lake Erie Commission USDA - NRCS SWCDs (Fulton & Lucas in Ohio)	Ohio Lake Erie Commission USDA - NRCS SWCDs (Fulton & Lucas in Ohio)		ongoing		3.3.1	all of watershed	X		X		X	X			X			X			
Sediment/Siltation	Cropland	Inventory watershed for amount of acreage in cropland	1) Develop inventory methodology utilizing existing AERIS system and other available resources	Maumee RAP Ag Runoff Action Group, SWCDs (Fulton & Lucas in Ohio), ODNR - SWC	U.S. ACE, Section 319, NatureWorks (ODNR)		concept		3.3.1; 3.3.4	all of watershed	X		X		X	X	X			X			X		
Sediment/Siltation	Cropland	Inventory watershed for amount of acreage in cropland	2) Convert electronic data into GIS map files				concept				X		X		X	X	X			X			X		
Sediment/Siltation	Cropland	Inventory watershed for amount of acreage in cropland	3) Intergrate with AERIS data				concept				X		X		X	X	X			X			X		
Sediment/Siltation	Cropland	Inventory watershed for amount of acreage in cropland	4) Determine impact on watershed and possible projects to reduce or eliminate				concept				X		X		X	X	X			X			X		
Sediment/Siltation	Cropland	Reduce the impact of erosion of water quality	Educate watershed landowners of their impact on water quality and of the benefits of riparian habitat protection or restoration	Maumee RAP Ag Runoff Action Group, SWCDs (Fulton & Lucas in Ohio), ODNR - SWC, Ohio EPA 319	Ohio EPA 319		concept		3.3.1	all of watershed	X		X		X	X	X			X			X		
Sediment/Siltation	Land clearing and infilling for development	Swan Creek Watershed Pilot Project	1) Enlist the participation of a majority of the jurisdictions in the watershed	TMACOG, more than 75% of the jurisdictions in the Swan Creek watershed	LEPF	2006-2008	in progress	State of Ohio and a majority of the participating jurisdiction endorses PCA/PDA		all of the watershed	X		X		X	X				X			X		
Sediment/Siltation	Land clearing and infilling for development	Swan Creek Watershed Pilot Project	2) Determine priority conservation areas (PCA) and priority development areas (PDA)				in progress				X		X		X	X				X			X		
Sediment/Siltation	Land clearing and infilling for development	Swan Creek Watershed Pilot Project	3) Encourage local jurisdictions to adopt PCAs and PDAs				in progress				X		X		X	X				X			X		
Sediment/Siltation	Land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	1) Identify and evaluate existing wetlands using remote sensing	University of Toledo, Maumee RAP, TMACOG, Lucas Co.	OEPA 319	1999-2003	complete			portion on watershed in Lucas Co			X		X	X				X			X		
Sediment/Siltation	Land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	2) create GIS map of wetlands and potential wetlands				complete						X		X	X				X			X		
Sediment/Siltation	Land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	3) Identify restoration needs				complete						X		X	X				X			X		
Sediment/Siltation	Pasture	Cost share to install all-weather paddocks for horse owners	Install demonstration paddock in Lucas County	ODNR-DSWC, SWCD, NRCS	NRCS, ODNR-SWCD		concept				X		X		X	X			X			X			
Sediment/Siltation	Pasture	Develop potential project list based on Pasture Inventory Project Results					concept				X		X		X	X				X			X		

Maumee River Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
All	All	Conduct a TMDL	1) Design watershed survey, 2) Collect water quality data, 3) Assess waterbodies, 4) Identify target conditions, 5) Develop restoration projects, 6) Select restoration scenario, 7) Prepare implementation plan, 8) Submit TMDL report, 9) Implement TMDL (inside Ohio EPA), 10) Implement TMDL (outside OEPA), 11) Annual validation activities, and 12) Validate water quality status	OEPA	OEPA	2011-2013	concept				X	X	X	X	X	X	X	X	X	X	X	X	X	Source: OEPA	
All	All	GIS Water Quality database (Phase 1)	1) Create relational database from OEPA water resources inventory data for Maumee AOC	University of Toledo, Maumee RAP	US EPA GLNPO	2004-2005	complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 1)	2) Export LE Tribs data to a GIS format				complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 1)	3) Publish relational database and GIS online				complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 2)	Expand GIS to entire AOC				in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	1) Determine waterways to study and map versus redelinate	Lucas County Engineer and Auditor Offices, FEMA	Lucas County, FEMA	2005-2010	in progress	Study 60+ miles of stream to determine the current floodplain			X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	2) Conduct new studies			2005-2008	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	3) Redelinate existing studies			2005-2008	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	4) Request public comment on draft maps			2009	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Uses	Lucas County Floodplain Map	5) Finalize maps and release electronically			2010	in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
habitat modifications	Changing Land Uses	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	1) Identify and evaluate existing wetlands using remote sensing	University of Toledo, Maumee RAP, TMACOG, Lucas Co.	OEPA 319	1999-2003	complete			portion of watershed in Lucas Co			X		X								X		
habitat modifications	Changing Land Uses	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	2) create GIS map of wetlands and potential wetlands				complete						X		X								X		
habitat modifications	Changing Land Uses	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	3) Identify restoration needs				complete						X		X								X		
habitat modifications	Changing Land Uses	Wetlands Inventory and Mapping (Phase 2) (Wood Co.)	1) Identify and evaluate existing wetlands using remote sensing	Maumee RAP, TMACOG, Wood Co, University of Toledo	Lake Erie Protection Fund, USEPA GLNPO, OEPA 319, Ohio Sea Grant	2005-2006	planning			portion of watershed in Wood Co			X		X								X		
habitat modifications	Changing Land Uses	Wetlands Inventory and Mapping (Phase 2) (Wood Co.)	2) create GIS map of wetlands and potential wetlands				planning						X		X								X		
habitat modifications	Changing Land Uses	Wetlands Inventory and Mapping (Phase 2) (Wood Co.)	3) Identify restoration needs				planning						X		X								X		
Nutrients	Cropland	Investigate current phosphorus data					concept																		
nutrients	Cropland or pasture where manure is spread	Educate Horse owners on proper disposal of manure	Implement Equine Environmental Assurance and Liability Program for Fulton, Lucas and Wood Counties	LSWCD, WSWCD	Ohio Livestock Coalition, Farm Bureau, ODRN-DSWC	2006	concept				X		X		X		X	X							
Nutrients	Erosion and runoff from fertilized fields	Expand Student Watershed Watch Program into additional schools		Maumee RAP, TMACOG, Ohio EPA, public and private schools	private donations	year round	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Investigate current phosphorus data					concept																		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	1) Enlist teacher/schools to participate	Maumee RAP, TMACOG, Ohio EPA, public and private schools	private donations	August - November	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	2) Conduct teacher training (see SWW Teacher Training/Creditable Data Certification)				ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	3) Teachers submit requests for supplies needed to Maumee RAP and sampling plan to Ohio EPA (if Qualified Data Collector)			Sept	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	4) Supplies are distributed to participating teacher/schools			Sept	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	5) Teachers conduct student training and sampling on designated sampling day (preferably)			mid-Oct	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	6) Teachers submit student data to Maumee RAP (and Ohio EPA if Qualified Data Collector)			late Oct- early Nov	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	Student Watershed Watch	7) Student share data and finding at Student Summit			mid-Nov	ongoing						X		X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	SWW Teacher Training/Creditable Data Certification	1) Conduct Teacher Training	Maumee RAP, Ohio EPA, Lucas SWCD		2006	concept								X		X	X					X		
Nutrients	Erosion and runoff from fertilized fields	SWW Teacher Training/Creditable Data Certification	2) Award a certificate completion for training				concept								X		X	X					X		

Maumee River Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
Pesticides	Sites of historical usage (chlorinated pesticides)	Develop or support new or existing pesticide disposal programs.					concept				X			X											
Pesticides	Urban runoff	Determine chemical makeup of products used and those currently in use.					concept				X														
Pesticides	Urban runoff	Develop or support educational programs for proper use of pesticides.					concept		5.7.1; Chapter 10.5		X														
Pesticides	Urban runoff	Develop or support new or existing pesticide disposal programs.					concept				X		X												
Pesticides	Urban/Suburban	Organic Lawn Care Clinic	Less fertilizer in urban/suburban runoff	SWCD/Black Swamp Conservancy	SWCD	Annual	ongoing					X		X											
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	1) Develop project	Maumee RAP, TMACOG, local Jurisdictions, US F&WS, ODNR	OEEF, local jurisdictions, US F&WS, ODNR, Maumee RAP, TMACOG	2003-2006	complete	Educate public on sources/pathways of nonpoint and point source pollution; pre- and post-campaign surveys show increased awareness of citizens	5.6.2; 5.7.1; Chapter 10.5	Waterville			X		X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	2) Release RFP/Hire contractors			9/3/04	complete					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	3) Create and distribute TV, cinema and newspaper ads			10/03-4/05	complete					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	4) Create and distribute 6 tip cards & bonus items			10/03-4/05	complete					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	5) Create and Implement pre-/post-campaign phone survey			12/03 & 5/05	complete					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 2) (Business Campaign)	1) Develop project	Maumee RAP, TMACOG, local jurisdictions	Maumee RAP, TMACOG, local jurisdictions	2004-2006	in progress	Educate business owners, manager and employees on sources/pathways of nonpoint and point source pollution; show increased awareness of through the # of businesses voluntarily participating in campaign		Waterville			X		X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 2) (Business Campaign)	2) Create and distribute 4 Guidebooks for local businesses			8/05-12/06	in progress					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 2) (Business Campaign)	3) Create and distribute print ads (newspaper, magazines, newsletters, bulletins)			10/05-12/06	in progress					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 3) (Watershed Awareness Campaign)	1) Design watershed signs for 4 streams (Ottawa, Swan, Maumee & Lake Erie)	Maumee RAP, TMACOG, local jurisdictions, organizations	Maumee RAP, TMACOG, local jurisdictions, organizations	Spring 2005	complete			Waterville			X		X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 3) (Watershed Awareness Campaign)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign (Phase 3) (Watershed Awareness Campaign)	3) Distribute signs for local jurisdictions and organizations to use			Jul-05	complete					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Give Water a Hand Campaign and educational materials	Distribute info at events, programs and presentations	Maumee RAP; Lucas, Ottawa and Wood SWCDs	Maumee RAP; Lucas, Ottawa and Wood SWCDs	year round	ongoing					X		X	X	X	X	X	X	X	X	X	X	X	
Pesticides	Urban/suburban areas	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	1) Design new Drains are for Rain storm drain stencils and companion door hangers	Maumee RAP, TMACOG, local jurisdictions, organizations	Maumee RAP, TMACOG, local jurisdictions, organizations	Spring 2005	complete	# of supplies ordered; # of households given educational materials; # of purchasing	Chapter 10.5; 5.7.1	Waterville			X		X				X				X		
Pesticides	Urban/suburban areas	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete					X		X					X				X		
Pesticides	Urban/suburban areas	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	3) Distribute stencils and door hangers for local jurisdictions and organizations to use			Jul-05	complete					X		X					X				X		
Pesticides	Urban/suburban areas	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	1) Design new Drains are for Rain storm drain stenciling Field Manuals	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF; 319 grants; ODNR/CZM grants; foundations; local donations; cities		ongoing	# of stenciling manuals sold	Chapter 10.5; 5.7.1										X				X		
Pesticides	Urban/suburban areas	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	2) Fill orders for local jurisdictions and organizations as placed				ongoing												X				X		
Pesticides	Urban/suburban areas	Storm Drain Stenciling Program (Drains are for Rain) (Phase 3)	Conduct public Storm Drain Stenciling events	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF, ODNR/CZM grants; foundations, Maumee RAP, TMACOG, local jurisdictions, organizations	April - Oct	ongoing	# of new storm drains stenciled; # of households given ed materials; # of volunteers participating											X				X		

Maumee River Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
Toxic substances	Urban Runoff	Stormwater Coalition (fka. Stormwater Policy Board, Maumee River Regional Stormwater Coalition)	4) Continue to collaborate on regional projects				ongoing				X		X			X			X	X		X			
Toxic Substances	Wastewater treatment plants	Educate public on sources/pathways					concept				X														
Toxic Substances	Wastewater treatment plants	Evaluate existing data for the location of "hot spots".					concept				X		X												
Toxic Substances	Wastewater treatment plants	Identify sources not addressed by existing regulations (i.e. commercial)					concept				X														
Toxic Substances	Wastewater treatment plants	Implement a regional/watershed management program	1) control increases in runoff rates, 2) prevent losses in infiltration, 3) prevent runoff pollution	Toledo & other local governments, RAP Urban Runoff Action Group	Lake Erie Protection fund Local Jurisdiction.		concept				X														
Toxic Substances	Wastewater treatment plants	Implement permit/inspection program to encourage industries to minimize pollutant exposure.					concept				X														
Toxic Substances	Wastewater treatment plants	Provide/identify BMPs (may be based on a performance criteria) to prevent/remove pollutants.					concept				X														

Grassy Creek Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.	
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14		
Toxic Substances	Urban Runoff	Provide venues for proper disposal of wastes					concept		5.7.1																	
Toxic Substances	Urban runoff	Provide/identify BMPs (may be based on a performance criteria) to prevent/remove pollutants.					concept																			
Toxic Substances	Wastewater treatment plants	Educate public on sources/pathways					concept																			
Toxic Substances	Wastewater treatment plants	Evaluate existing data for the location of "hot spots".					concept																			
Toxic Substances	Wastewater treatment plants	Identify sources not addressed by existing regulations (i.e. commercial)					concept																			
Toxic Substances	Wastewater treatment plants	Identify vulnerable areas.		Bowling Green State University	Grant?		concept																			
Toxic Substances	Wastewater treatment plants	Implement a regional/watershed management program	1) control increases in runoff rates, 2) prevent losses in infiltration, 3) prevent runoff pollution	Toledo & other local governments, RAP Urban Runoff Action Group	LEPF, Local Jurisdictions		concept																			
Toxic Substances	Wastewater treatment plants	Implement permit/inspection program to encourage industries to minimize pollutant exposure.					concept																			
Toxic Substances	Wastewater treatment plants	Provide/identify BMPs (may be based on a performance criteria) to prevent/remove pollutants.					concept																			

Duck Creek Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
All	All	Conduct a TMDL	1) Design watershed survey, 2) Collect water quality data, 3) Assess waterbodies, 4) Identify target conditions, 5) Develop restoration projects, 6) Select restoration scenario, 7) Prepare implementation plan, 8) Submit TMDL report, 9) Implement TMDL (inside Ohio EPA), 10) Implement TMDL (outside OEPA), 11) Annual validation activities, and 12) Validate water quality status	OEPA	OEPA	2006-2008	planning	Distribution of the TSD and implementation of the applicable TMDL for each sub-watershed		all of watershed	X	X	X	X		X	X	X	X	X	X	X	Source: OEPA		
All	All	GIS Water Quality database (Phase 1)	1) Create relational database from OEPA water resources inventory data for Maumee AOC	University of Toledo, Maumee RAP	US EPA GLNPO	2004-2005	complete			all of AOC	X	X	X	X	X	X	X	X	X	X	X	X			
All	All	GIS Water Quality database (Phase 1)	2) Export LE Tribs data to a GIS format				complete				X	X	X	X	X	X	X	X	X	X	X	X			
All	All	GIS Water Quality database (Phase 1)	3) Publish relational database and GIS online				in progress				X	X	X	X	X	X	X	X	X	X	X	X			
All	All	GIS Water Quality database (Phase 2)	Expand GIS to entire AOC				in progress			all of watershed	X	X	X	X	X	X	X	X	X	X	X	X			
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	1) Determine waterways to study and map versus redelinate	Lucas County Engineer and Auditor Offices, FEMA	Lucas County, FEMA	2005-2010	in progress	Study 60+ miles of stream to determine the current floodplain		all of watershed	X	X	X							X					
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	2) Conduct new studies			2005-2008	in progress				X	X	X							X					
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	3) Redelinate existing studies			2005-2008	in progress				X	X	X							X					
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	4) Request public comment on draft maps			2009	in progress				X	X	X							X					
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	5) Finalize maps and release electronically			2010	in progress				X	X	X							X					
flow alterations	changing land use	Re-planting program	Secure grant and identify available space along creeks for replanting				concept		7.6.1; 8.3.3	all of Duck Creek										X					
flow alterations	construction	Re-planting program	Secure grant and identify available space along creeks for replanting				concept		7.6.1; 8.3.3	all of Duck Creek										X					
flow alterations	streambank modifications	Discuss periodic "controlled releases" w/City of Toledo from Hecklinger Pond into Duck Creek to increase flow in creek					concept						X									X			
flow alterations	streambank modifications	Identify areas of creek where stream "curves" can be re-created					concept						X									X			
flow alterations	streambank modifications	Identify areas of creek where stream bank stabilization is needed	Continue "walking" creek and general observations annually	City of Toledo; Duck and Otter Creeks Partnership staff and/or volunteers		2004	ongoing		5.5.1; 7.6.1	all of Duck Creek			X												
flow alterations	streambank modifications	Work w/local cities and county to review code and incorporate environmental planning/setbacks					concept		Chapter 5											X					
flow alterations	streambank modifications	Work with new development/industries moving into the watershed to develop strategies to minimize their impact on the watershed	Identify BMPs to recommend and literature to support it; become familiar with local storm water rules, wetland and	Duck and Otter Creeks Partnership, Inc.; US Coking;	none needed	2004-2006	ongoing		5.3.1; 5.3.2	all of watershed										X					
habitat modifications	changing land use	Educate developers/contractors on need and use of BMPs		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed			X												
habitat modifications	changing land use	Implement the Phase 2 storm water management program	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	Cities of Toledo, Oregon, Northwood and/or Wood and Lucas county	local jurisdictions; additional grants if necessary	2004	ongoing	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping		all of watershed			X												
habitat modifications	changing land use	Propose alternative development designs/layouts and BMPs that protect habitat and water quality		Duck and Otter Creeks Partnership, Inc.; US Coking; other new businesses		2004	ongoing			all of watershed			X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	1) Determine contents for manual	RAP Urban Runoff Action Group, MRRSWC	Lake Erie Protection Fund	2002	complete	Implement a regional/watershed management program: a) control increases in runoff rates, b) prevent losses in infiltration, c) prevent runoff pollution		all of AOC			X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	2) Write manual				complete						X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	3) Identify alternative development designs/layouts that protect water quality				complete						X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	4) Encourage local jurisdictions to adopt manual as their standards				complete						X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 2)	1) Review existing manual	Maumee RAP Urban Runoff Action Group, SWC	GLC	2005-2007	in progress	Completion and distribution of revised manual	Chapter 10.5; 5.7.1	all of watershed			X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 2)	2) Update chapters with new content and regulations			2005-2006	in progress						X												

Otter Creek Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
All	All	Conduct a TMDL	1) Design watershed survey, 2) Collect water quality data, 3) Assess waterbodies, 4) Identify target conditions, 5) Develop restoration projects, 6) Select restoration scenario, 7) Prepare implementation plan, 8) Submit TMDL report, 9) Implement TMDL (inside Ohio EPA), 10) Implement TMDL (outside OEPA), 11) Annual validation activities, and 12) Validate water quality status	OEPA	OEPA	2008-2010	concept	Distribution of the TSD and implementation of the applicable TMDL for each sub-watershed			X	X	X	X	X	X	X	X	X	X	X	X	X	Source: OEPA	
All	All	GIS Water Quality database (Phase 1)	1) Create relational database from OEPA water resources inventory data for Maumee AOC	University of Toledo, Maumee RAP	US EPA GLNPO	2004-2005	complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 1)	2) Export LE Tribs data to a GIS format				complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 1)	3) Publish relational database and GIS online				complete				X	X	X	X	X	X	X	X	X	X	X	X	X		
All	All	GIS Water Quality database (Phase 2)	Expand GIS to entire AOC				in progress				X	X	X	X	X	X	X	X	X	X	X	X	X		
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	1) Determine waterways to study and map versus redelinate	Lucas County Engineer and Auditor Offices, FEMA	Lucas County, FEMA	2005-2010	in progress	Study 60+ miles of stream to determine the current floodplain			X	X	X								X				
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	2) Conduct new studies			2005-2008	in progress				X	X	X								X				
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	3) Redelinate existing studies			2005-2008	in progress				X	X	X								X				
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	4) Request public comment on draft maps			2009	in progress				X	X	X								X				
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	5) Finalize maps and release electronically			2010	in progress				X	X	X								X				
flow alterations	changing land use	Re-planting program	Secure grant and identify available space along creeks for replanting				concept		7.6.1; 8.3.3																
flow alterations	streambank modifications	Identify areas of creek where stream "curves" can be re-created					concept						X											X	
flow alterations	streambank modifications	Identify areas of creek where stream bank stabilization is needed	Continue "walking" creek and general observations annually	City of Oregon; Duck and Otter Creeks Partnership staff and/or volunteers		2004-	ongoing		5.5.1; 7.6.1				X											X	
flow alterations	streambank modifications	Work w/local cities and county to review code and incorporate environmental planning/setbacks					concept		Chapter 5												X				
flow alterations	streambank modifications	Work with new development/industries moving into the watershed to develop strategies to minimize their impact on the	Identify BMPs to recommend and literature to support it; become familiar with local storm water rules, wetland and	Duck and Otter Creeks Partnership, Inc.; US Coking;	none needed	2004-2006	ongoing		5.3.1; 5.3.2												X				
habitat modifications	changing land use	Educate developers/contractors on need and use of BMPs		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed			X												
habitat modifications	changing land use	Implement the Phase 2 storm water management program		Cities of Toledo, Oregon, Northwood and/or Wood and Lucas county	local jurisdictions; additional grants if necessary	2004-	ongoing	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping					X												
habitat modifications	changing land use	Implement the Phase 2 storm water management program	Review all site plan and require pre/post construction controls for water quality, even for sites < 1 acre	City of Oregon	City of Oregon	2004-	ongoing		5.3.1; 5.3.2; 5.3.3; 5.4.1; 5.4.2	Otter Creek within Oregon (RM 0.5-6.5)				X										Oregon requires a water quality feature on site to reduce urban runoff	
habitat modifications	changing land use	Implement the Phase 2 storm water management program	Revise storm water regulations and ordinances; may incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references	City of Oregon	City of Oregon	2004- 2005	complete	stricter BMPs, ordinances that are more protective of stream health	Chapter 5	Otter Creek within Oregon (RM 0.5-6.5)				X											
habitat modifications	changing land use	Propose alternative development designs/layouts and BMPs that protect habitat and water quality		Duck and Otter Creeks Partnership, Inc.; US Coking; other new businesses		2004-	ongoing						X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	1) Determine contents for manual	RAP Urban Runoff Action Group, MRRSWC	Lake Erie Protection Fund	2002	complete	Implement a regional/watershed management program: a) control increases in runoff rates, b) prevent losses in infiltration, c) prevent runoff pollution		all of AOC				X											
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	2) Write manual				complete						X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	3) Identify alternative development designs/layouts that protect water quality				complete						X												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 1)	4) Encourage local jurisdictions to adopt manual as their standards				complete						X												

Otter Creek Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
pesticides	urban runoff	Student Watershed Watch	1) Enlist teacher/schools to participate	Maumee RAP, TMACOG, Ohio EPA, public and private schools	private donations	August - November	ongoing			all of watershed														one site usually	
pesticides	urban runoff	Student Watershed Watch	2) Conduct teacher training (see SWW Teacher Training/Creditable Data Certification)				ongoing																		
pesticides	urban runoff	Student Watershed Watch	3) Teachers submit requests for supplies needed to Maumee RAP and sampling plan to Ohio EPA (if Qualified Data Collector)			Sept	ongoing																		
pesticides	urban runoff	Student Watershed Watch	4) Supplies are distributed to participating teacher/schools			Sept	ongoing																		
pesticides	urban runoff	Student Watershed Watch	5) Teachers conduct student training and sampling on designated sampling day (preferably)			mid-Oct	ongoing																		
pesticides	urban runoff	Student Watershed Watch	6) Teachers submit student data to Maumee RAP (and Ohio EPA if Qualified Data Collector)			late Oct- early Nov	ongoing																		
pesticides	urban runoff	Student Watershed Watch	7) Student share data and finding at Student Summit			mid-Nov	ongoing																		
pesticides	urban runoff	Student Watershed Watch (Phase 2)	Expand Student Watershed Watch Program into additional schools	Maumee RAP, TMACOG, Ohio EPA, public and private schools	private donations	year round	ongoing																		
pesticides	urban runoff	SWW Teacher Training/Creditable Data Certification	1) Conduct Teacher Training	Maumee RAP, Ohio EPA, Lucas SWCD		2006	concept																		
pesticides	urban runoff	SWW Teacher Training/Creditable Data Certification	2) Award a certificate completion for training				concept																		
pesticides	urban runoff	SWW Teacher Training/Creditable Data Certification	3) Submit certificate to Ohio EPA for Level 1 Qualified Data Collector (QDC) certification				concept																		
pesticides	urban runoff	Wildlife officials surveyed to determine if reports of tainting; if unknown by wildlife officials, survey local residents to determine if eat fish and if so, if tainted?		University; volunteer student; ODNR, Maumee RAP	unknown		concept																		Ask wildlife officials? Mark S says probably not-ODNR would have heard reports, but tainting is subjective
Pesticides	Urban/Suburban	Organic Lawn Care Clinic	Less fertilizer in urban/suburban runoff	SWCD/Black Swamp Conservancy	SWCD	Annual	ongoing	# of attendees																	
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	1) Secure funding	Duck and Otter Creeks Partnership, Inc	Great Lakes Aquatic Habitat Network and Fund, Lucas County Commissioners	2005	complete	# of educational brochures distributed; # of attendees at meeting; # of new members or Friends of...		Otter Creek															Over 11,000 ed brochures distributed; 23 attendees at Open House; at least 6 Friends of...to date
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	2) Hire consultant			Mar-05	complete																		
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	3) Develop educational materials			Summer 2005	complete																		
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	4) Distribute materials			Fall 2005	complete																		
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	5) Hold Open House to highlight opportunities for involvement w/Partnership			Oct-05	complete																		
Refuse, litter	litter	Continue/expand Sign our Streams program to increase community awareness of stream locations and increase stewardship of stream by the community (in turn, reduce dumping/aesthetic degradation)	1) Purchase signs/images from Clearwater	Duck and Otter Creeks Partnership, City of Oregon, City of Northwood, City of Toledo	ODNR Operating Support grant, in-kind from Cities	2003	complete	# of locations "signed"	Chapter 10.5	10 locations on Otter Creek															2005: 8 locations signed; 2 pending and more signs printing
Refuse, litter	litter	Continue/expand Sign our Streams program to increase community awareness of stream locations and increase stewardship of stream by the community (in turn, reduce dumping/aesthetic degradation)	2) Identify sign locations at visible road crossings in community			2004	complete																		
Refuse, litter	litter	Continue/expand Sign our Streams program to increase community awareness of stream locations and increase stewardship of stream by the community (in turn, reduce dumping/aesthetic degradation)	3) Install signs			2005	In progress																		

Otter Creek Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.		
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14			
toxic substances	industrial discharges (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 1)	3) complete screening HHRA	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Sep-05	complete				X		X	X		X									(e.g. heavy metals, PCBs, etc)		
toxic substances	industrial discharges (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 1)	4) complete workplans for Phase 2 sampling	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Sep-05	complete				X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	industrial discharges (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 2)	1) Secure funding	Duck and Otter Creeks Partnership, Inc.	US EPA; foundations, private donors	2006	planning			Otter Creek	X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	industrial discharges (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 2)	2) implement workplan from Phase 1				planning				X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	industrial discharges (current or old)	Continue to add new information to GIS inventory	Map of NPDES locations; basic information on type of discharge, frequency of use, permit parameters, etc	university volunteer or graduate student in GIS		2002-2006	ongoing				X															No hunting allowed in city limits; watershed w/in city limits	
toxic substances	industrial discharges (current or old)	Determine where active NPDES discharges are located and what parameters are sampled for and compliance rates	Map of NPDES locations; basic information on type of discharge, frequency of use, permit parameters, etc.	OEPA; Partnership members		2004-2005	in progress						X														
toxic substances	industrial discharges (current or old)	Establish sampling (sediment and/or water) program for creek with the UT	1) Collaborate with UT professor	UT Lake Erie Research Center or other dept.; Duck and Otter Creeks Partnership, Inc.	UT or grant	2004-2006	concept	# of samples taken in creek		Otter Creek	X		X	X		X											
toxic substances	industrial discharges (current or old)	Establish sampling (sediment and/or water) program for creek with the UT	2) Develop project workplan				concept				X		X	X		X											
toxic substances	industrial discharges (current or old)	Establish sampling (sediment and/or water) program for creek with the UT	3) Secure additional funding or resources if necessary				concept				X		X	X		X											
toxic substances	industrial discharges (current or old)	Hot Spot Delineation	1) Secure funding; 2) Develop workplan	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	2007-?	concept				X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	industrial discharges (current or old)	Identify NPDES permits (current or recent past) that include testing for phenols; research historical usage/disposal in watershed	Map of NPDES locations; basic information on type of discharge, frequency of use, permit parameters, etc.	OEPA; Partnership members or staff		2006-2007	concept		Chapter 11	all of Otter Creek	X		X	X		X		X	X	X	X	X	X	X		found old newspaper articles about historic problems w/releases into Otter creek incl. Phenol-related compounds	
toxic substances	industrial discharges (current or old)	Implement baseline water quality sampling program	1) Implement seasonal sampling for variety of parameter at fixed, repeated locations	City of Oregon	Cities	2004-	ongoing	# of samples taken, # of locations sampled	Chapter 11	Otter Creek within Oregon (RM 0.5-6.5)			X			X										Oregon: 4 sample locations; Otter Creek parameters: depth, temp, DO, pH, conductivity, ORP, TSS, turbidity, ammonia, phosphates, nitrates, e coli, FOGs	
toxic substances	industrial discharges (current or old)	Implement baseline water quality sampling program	2) Share data with other entities, such as UT LERC and Partnership		none needed		ongoing						X			X											
toxic substances	industrial discharges (current or old)	Implement baseline water quality sampling program	3) Identify problems areas and/or trends				ongoing						X			X											
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 1)	1) Collect GIS coordinates for all current NPDES permits	Ohio EPA DSW	Ohio EPA	2005-07	in progress	Coordinates for all permits collected			X		X	X		X	X		X	X	X	X	X	X			
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 1)	2) Convert electronic data into GIS map files				in progress				X		X	X		X	X		X	X	X	X	X				
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 2)	Integrate with AERIS data	TMACOG, Lucas County Auditor's Office	Maumee RAP		planning				X		X	X		X	X		X	X	X	X	X				
toxic substances	industrial discharges (current or old)	Remedial Alternatives (if needed) for sediment contamination	1) Secure funding; 2) Develop workplan	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO--Great Lakes Legacy Act	2008	concept				X		X		X											(e.g. heavy metals, PCBs, etc)	
toxic substances	industrial discharges (current or old)	Work with Health Dept to review available sediment and water data for creeks to identify if contact advisories should be posted	1) Review data with Health Dept to id problem areas	Lucas and Wood Co. Health Depts; Ohio EPA		2004-2005	complete			all of Otter Creek	X																
toxic substances	industrial discharges (current or old)	Work with Health Dept to review available sediment and water data for creeks to identify if contact advisories should be posted	2) Send available data to LC Health Dept for review				complete				X																
toxic substances	industrial discharges (current or old)	Work with Health Dept to review available sediment and water data for creeks to identify if contact advisories should be posted	3) Meet with L.C. Health Dept. to determine next steps (i.e additional sampling?)				ongoing				X																
toxic substances	landfills (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 1)	1) Secure contractor	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Oct 2004-Sept 2005	complete	project completion	Chapter 11	Otter Creek	X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	landfills (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 1)	2) Compilation of existing data and integration w/GIS	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Jan-Mar 2005	complete				X		X	X		X										(e.g. heavy metals, PCBs, etc)	

Otter Creek Watershed Projects Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.		
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14			
toxic substances	landfills (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 1)	3) complete screening HHRA	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Sep-05	complete				X		X	X		X									(e.g. heavy metals, PCBs, etc)		
toxic substances	landfills (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 1)	4) complete workplans for Phase 2 sampling	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Sep-05	complete				X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	landfills (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 2)	1) Secure funding	Duck and Otter Creeks Partnership, Inc.; UT Lake Erie Research Center	US EPA; foundations, private donors	2006	planning			Otter Creek	X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	landfills (current or old)	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 2)	2) implement workplan from Phase 1				planning				X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	landfills (current or old)	Establish sampling (sediment and/or water) program for creek with the UT	1) Collaborate with UT professor	UT Lake Erie Research Center or other dept.; Duck and Otter Creeks Partnership, Inc.	UT or grant	2004-2006	concept	# of samples taken in creek		Otter Creek	X		X	X		X											
toxic substances	landfills (current or old)	Establish sampling (sediment and/or water) program for creek with the UT	2) Develop project workplan				concept				X		X	X		X											
toxic substances	landfills (current or old)	Establish sampling (sediment and/or water) program for creek with the UT	3) Secure additional funding or resources if necessary				concept				X		X	X		X											
toxic substances	landfills (current or old)	Hot Spot Delineation	1) Secure funding; 2) Develop workplan	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	2007-?	concept				X		X	X		X										(e.g. heavy metals, PCBs, etc)	
toxic substances	landfills (current or old)	Implement baseline water quality sampling program	1) Implement seasonal sampling for variety of parameter at fixed, repeated locations	City of Oregon	Cities	2004-	ongoing	# of samples taken, # of locations sampled	Chapter 11	Otter Creek within Oregon (RM 0.5-6.5)																Oregon: 4 sample locations; Otter Creek parameters: depth, temp, DO, pH, conductivity, ORP, TSS, turbidity, ammonia, phosphates, nitrates, e coli, FOGs	
toxic substances	landfills (current or old)	Implement baseline water quality sampling program	2) Share data with other entities, such as UT LERC and Partnership		none needed		ongoing						X			X											
toxic substances	landfills (current or old)	Implement baseline water quality sampling program	3) Identify problems areas and/or trends				ongoing						X			X											
toxic substances	landfills (current or old)	Remedial Alternatives (if needed) for sediment contamination	1) Secure funding; 2) Develop workplan	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO--Great Lakes Legacy Act	2008	concept																			(e.g. heavy metals, PCBs, etc)	
toxic substances	urban runoff	Begin trial sampling program for metals in co-located water, sediment and plant samples at 10 locations on Otter Creek		UT Lake Erie Research Center: Research Experience for Undergraduates; Dr. Spongberg and students	UT LERC and NSF grant	Summer 2004	complete	# of samples taken in creek	Chapter 11	Otter Creek , 10 sites				X													
toxic substances	urban runoff	Conduct survey of local residents to determine if fish and/or turtles caught in creek are eaten	Obtain funding or student volunteer	University of Toledo; Bowling Green State U		2006-2007	concept			all of Otter Creek	X																
toxic substances	urban runoff	Establish sampling (sediment and/or water) program for creek with the UT	1) Collaborate with UT professor	UT Lake Erie Research Center or other dept.; Duck and Otter Creeks Partnership, Inc.	UT or grant	2004-2006	concept	# of samples taken in creek		Otter Creek	X		X	X		X											
toxic substances	urban runoff	Establish sampling (sediment and/or water) program for creek with the UT	2) Develop project workplan				concept				X		X	X		X											
toxic substances	urban runoff	Establish sampling (sediment and/or water) program for creek with the UT	3) Secure additional funding or resources if necessary				concept				X		X	X		X											
toxic substances	urban runoff	periodic observations by watershed coordinator or other volunteers to report noticeable "free froms"	enlist volunteers and discuss what to look for and report	Partnership members or staff, Friends of volunteers, community members	none needed	2006-2007	concept			all of Otter Creek										X							
toxic substances	urban runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	1) Design new Drains are for Rain storm drain stencils and companion door hangers	Maumee RAP, TMACOG, local jurisdictions, organizations	Maumee RAP, TMACOG, local jurisdictions, organizations	Spring 2005	complete	# of supplies ordered; # of households given educational materials; # of purchasing	Chapter 10.5; 5.7.1	all of watershed			X			X				X				X			
toxic substances	urban runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete						X			X				X				X			
toxic substances	urban runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	3) Distribute stencils and door hangers for local jurisdictions and organizations to use			Jul-05	complete						X			X				X				X			
toxic substances	urban runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	1) Design new Drains are for Rain storm drain stenciling Field Manuals	Duck and Otter Creeks Partnership, Maumee RAP, TMACOG, local jurisdictions, organizations	OEEF; 319 grants; ODNR/CZM grants; foundations; local donations; cities		ongoing	# of stenciling manuals sold	Chapter 10.5; 5.7.1	all of watershed										X							

Wolf Creek and Berger Ditch Watershed Project Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
Toxic substances	Wastewater treatment plant/ package plant	Identify and assess package plant discharges	2) Review NPDES permits				concept				X		X	X		X					X				
Toxic substances	Wastewater treatment plant/ package plant	Identify and assess package plant discharges	3) Identify plants operating without permit				concept				X		X	X		X					X				
Toxic substances	Wastewater treatment plant/ package plant	Identify and assess package plant discharges	4) Sample adjacent streams				concept				X		X	X		X					X				
Toxic substances	Wastewater treatment plant/ package plant	Identify and assess package plant discharges	5) Assess water quality impacts				concept				X		X	X		X					X				

Crane Creek Watershed Project Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
Sedimentation/Siltation	Cropland or pasture where manure is spread	Plankton Survey and Bioassay	4) Analyze data				concept				X		X			X			X						
Sedimentation/Siltation	Cropland or pasture where manure is spread	Plankton Survey and Bioassay	5) Determine status				concept				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Incentives and equipment rental for conservation tillage		Lucas and Wood SWCDs			ongoing				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Land use/ land cover analysis and mapping of AOC	Use remote sensing and GIS to classify major land use/land cover types	Maumee RAP, TMACOG, Lucas, Wood, Ottawa Co., University of Toledo	Lake Erie Protection Fund, USEPA GLNPO, OEPA 319, Ohio Sea Grant	2005-2006	concept			Maumee AOC	X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	1) Identify and evaluate existing wetlands using remote sensing	University of Toledo, Maumee RAP, TMACOG, Lucas Co.	OEPA 319	1999-2003	complete			portion of watershed in Lucas Co	X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	2) create GIS map of wetlands and potential wetlands				complete				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	3) Identify restoration needs				complete				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 2) (Wood Co.)	1) Identify and evaluate existing wetlands using remote sensing	Maumee RAP, TMACOG, Wood, Ottawa Co., University of Toledo	Lake Erie Protection Fund, USEPA GLNPO, OEPA 319, Ohio Sea Grant	2005-2006	planning			portion of watershed in Wood Co	X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 2) (Wood Co.)	2) create GIS map of wetlands and potential wetlands				planning				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 2) (Wood Co.)	3) Identify restoration needs				planning				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 3) (Ottawa Co.)	1) Identify and evaluate existing wetlands using remote sensing	Maumee RAP, TMACOG, Wood, Ottawa Co., University of Toledo	Lake Erie Protection Fund, USEPA GLNPO, OEPA 319, Ohio Sea Grant	2005-2006	concept			portion of watershed in Ottawa Co	X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 3) (Ottawa Co.)	2) create GIS map of wetlands and potential wetlands				concept				X		X			X			X						
Sedimentation/Siltation	land clearing and infilling for development	Wetlands Inventory and Mapping (Phase 3) (Ottawa Co.)	3) Identify restoration needs				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Develop potential project list based on Pasture Inventory Project Results					concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Identify extent & benefit of BMPs used by farmers in watershed		Ohio Lake Erie Commission, USDA - NRCS, SWCDs	Ohio Lake Erie Commission, USDA - NRCS, SWCDs		concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Implementation of Agricultural BMPs	1) Identify potential Partners	Maumee RAP Rural Runoff Action Group, SWCD [Lucas, Wood, Ottawa Co]	LEPF, USEPA GLNPO, OEPA 319, GLC Great Lakes Basin Program for Soil Erosion and Sediment Control	2005-2010	concept			HUC 04100010010	X		X			X			X						
Sedimentation/Siltation	Pasture	Implementation of Agricultural BMPs	2) Assess possible BMPs				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Implementation of Agricultural BMPs	3) Select demonstration sites				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Implementation of Agricultural BMPs	4) conduct land owner contact				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Implementation of Agricultural BMPs	5) conduct public education				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Implementation of Agricultural BMPs	6) complete project				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Incentive programs for implementation of agricultural BMPs such as filter strips, manure management, pesticide management	Continue to promote and support the implementation of these programs				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Inventory watershed for amount of acreage in pasture	1) Develop inventory methodology utilizing existing AERIS system and other available resources	RAP Ag Runoff Action Group, SWCDs, ODNR - SWC	U.S. ACE, Section 319, NatureWorks (ODNR)		concept			entire watershed	X		X			X			X						
Sedimentation/Siltation	Pasture	Inventory watershed for amount of acreage in pasture	2) Convert electronic data into GIS map files				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Inventory watershed for amount of acreage in pasture	3) Intergrate with AERIS data				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Inventory watershed for amount of acreage in pasture	4) Determine impact on watershed and possible projects to reduce or eliminate				concept				X		X			X			X						
Sedimentation/Siltation	Pasture	Reduce the impact of erosion of water quality	Educate watershed landowners of their impact on water quality and of the benefits of riparian habitat protection or restoration				concept				X		X			X			X						
Sedimentation/Siltation	Streambanks	Collect additional data, as needed					concept				X		X			X			X						

Turtle Creek Watershed Project Table

											BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														
Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	Comments & Misc. Info.
thermal stress/sunlight	riparian cooridor destruction	Wetlands Inventory and Mapping (Phase 3) (Ottawa Co.)	2) create GIS map of wetlands and potential wetlands				concept						X				X							X	
thermal stress/sunlight	riparian cooridor destruction	Wetlands Inventory and Mapping (Phase 3) (Ottawa Co.)	3) Identify restoration needs				concept						X				X							X	
Toxic substances	Industrial discharges (current or old)	Identify point sources		Ohio EPA	Ohio EPA		concept						X	X							X			X	
Toxic substances	Industrial discharges (current or old)	Maintain compliance with NPDES permits		Ohio EPA Permitees	Ohio EPA		concept						X	X							X			X	
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 1)	1) Collect GIS coordinates for all current NPDES permits	Ohio EPA DSW	Ohio EPA	2005-07	in progress	Coodinates for all permits collected			X		X	X			X			X	X	X	X	X	
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 1)	2) Convert electronic data into GIS map files				in progress				X		X	X			X			X	X	X	X	X	
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 2)	Intergrate with AERIS data	TMACOG, Lucas County Auditor's Office	Maumee RAP		planning				X		X	X			X			X	X	X	X	X	
Toxic substances	Urban Runoff	Educate public on sources/pathways					concept						X	X						X				X	
Toxic substances	Urban Runoff	Evaluate capacity/condition of existing systems; analysis of storm water flow, thermal impacts, runoff quality, erosion and sedimentation, and groundwater recharge.					concept						X	X						X				X	
Toxic substances	Urban Runoff	Evaluate impact of Phase II Stormwater regulations		Possibly Health Dept, permitted Phase 2 stormwater jurisdictions			concept						X	X						X				X	
Toxic substances	Urban Runoff	Evaluate upstream contributions					concept						X	X						X				X	
Toxic substances	Urban Runoff	Give Water a Hand Campaign and educational materials	Distribute info at events, programs and presentations	Maumee RAP; Lucas, Ottawa and Wood SWCDs	OEEF; local jurisdictions	year round	ongoing						X	X						X				X	
Toxic substances	Urban Runoff	Identify illicit connections					concept						X	X						X				X	
Toxic substances	Urban Runoff	Identify sources not addressed by existing regulations (i.e. commercial)					concept						X	X						X				X	
Toxic substances	Urban Runoff	Identify vulnerable areas					concept						X	X						X				X	
Toxic substances	Urban Runoff	Implement a regional/watershed management program:	1) control increases in runoff rates, 2) prevent losses in infiltration, 3) prevent runoff pollution	SWC & other local governments, RAP Urban Runoff Action Group	LEPF, local jurisdictions		concept						X	X						X				X	
Toxic substances	Urban Runoff	Performance bond/tie compliance into building permits.					concept						X	X						X				X	
Toxic substances	Urban Runoff	Provide venues for proper disposal of wastes		Lucas County Solid Waste Mgmt Distrct			concept						X	X						X				X	
Toxic substances	Urban Runoff	Provide/identify BMPs (may be based on a performance criteria) to prevent/remove pollutants					concept						X	X						X				X	
Toxic substances	Wastewater treatment plant	Identify and assess package plant discharges	1) Locate package plants	Maumee RAP, TMACOG, Wood, Lucas, Ottawa Co., Health Depts., OEPA	LEPF, Ohio Sea Grant, USEPA, OEPA	2005-2006	concept			entire watershed			X	X						X				X	
Toxic substances	Wastewater treatment plant	Identify and assess package plant discharges	2) Review NPDES permits				concept						X	X						X				X	
Toxic substances	Wastewater treatment plant	Identify and assess package plant discharges	3) Identify plants operating without permit				concept						X	X						X				X	
Toxic substances	Wastewater treatment plant	Identify and assess package plant discharges	4) Sample adjacent streams				concept						X	X						X				X	
Toxic substances	Wastewater treatment plant	Identify and assess package plant discharges	5) Assess water quality impacts				concept						X	X						X				X	

Packer Creek Watershed Project Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
All	All	Conduct a TMDL	1) Design watershed survey, 2) Collect water quality data, 3) Assess waterbodies, 4) Identify target conditions, 5) Develop restoration projects, 6) Select restoration scenario, 7) Prepare implementation plan, 8) Submit TMDL report, 9) Implement TMDL (inside Ohio EPA), 10) Implement TMDL (outside OEPA), 11) Annual validation activities, and 12) Validate water quality status	OEPA	OEPA	2003-2005	in progress					X	X	X	X	X	X	X	X	X	X	X	X	X	Source: OEPA
All	All	GIS Water Quality database (Phase 1)	1) Create relational database from OEPA water resources inventory data for Maumee AOC	University of Toledo, Maumee RAP	US EPA GLNPO	2004-2005	complete					X	X	X	X	X	X	X	X	X	X	X	X	X	
All	All	GIS Water Quality database (Phase 1)	2) Export LE Tribes data to a GIS format				complete					X	X	X	X	X	X	X	X	X	X	X	X	X	
All	All	GIS Water Quality database (Phase 1)	3) Publish relational database and GIS online				complete					X	X	X	X	X	X	X	X	X	X	X	X	X	
All	All	GIS Water Quality database (Phase 2)	Expand GIS to entire AOC				in progress					X	X	X	X	X	X	X	X	X	X	X	X	X	
Habitat Modifications	changing land use	Create Regional Storm Water Standards Manual		RAP Urban Runoff Action Group, MRRSWC	Lake Erie Protection Fund	2002	complete							X											
Habitat Modifications	changing land use	Educate developers/contractors on need and use of BMPs		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	changing land use	Implement the Phase 2 storm water management program		City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area	local jurisdictions; additional grants if necessary	2006	ongoing							X											
Habitat Modifications	changing land use	Implement the Phase 2 storm water management program	Revise storm water regulations and ordinances; may incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references	City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area		2004	ongoing	stricter BMPs, ordinances that are more protective of stream health	Chapter 5					X											revision/adoption should be complete early 2005
Habitat Modifications	changing land use	Maintain and update Stormwater Standards Manual (as needed)		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	changing land use	Propose alternative development designs/layouts and BMPs that protect habitat and water quality				2004-2005	ongoing							X											
Habitat Modifications	changing land use	Work with new development/industries moving into the watershed to develop strategies to minimize their impact on the creeks (for instance, storm water BMPs, setbacks, habitat buffers, etc)	Identify BMPs to recommend and literature to support it; become familiar with local storm water rules, wetland and stream mitigation rules, etc		none needed	2004-2006	ongoing		5.3.1; 5.3.2					X										X	
Habitat Modifications	channelization	Modified dredging procedures, Natural stream channel and/or 2-Stage ditch design	Demonstrate a natural stream channel anywhere in watershed	ODNR, SWCDs, County Engineers	ODNR, NOAA/Coastal NPS, 319 grants	2007	planning	Increase QHEI score to 60.		all of watershed				X											
Habitat Modifications	construction	Create Regional Storm Water Standards Manual		RAP Urban Runoff Action Group, MRRSWC	Lake Erie Protection Fund	2002	complete							X											
Habitat Modifications	construction	Implement the Phase 2 storm water management program	Revise storm water regulations and ordinances; may incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references	City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area		2004	ongoing	stricter BMPs, ordinances that are more protective of stream health	Chapter 5					X											revision/adoption should be complete early 2005
Habitat Modifications	construction	Work with new development/industries moving into the watershed to develop strategies to minimize their impact on the creeks (for instance, storm water BMPs, setbacks, habitat buffers, etc)	Identify BMPs to recommend and literature to support it; become familiar with local storm water rules, wetland and stream mitigation rules, etc		none needed	2004-2006	ongoing		5.3.1; 5.3.2					X										X	
Habitat Modifications	construction	Educate developers/contractors on need and use of BMPs		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	construction	Implement the Phase 2 storm water management program		City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area	local jurisdictions; additional grants if necessary	2006	ongoing							X											
Habitat Modifications	construction	Maintain and update Stormwater Standards Manual (as needed)		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	construction	Propose alternative development designs/layouts and BMPs that protect habitat and water quality				2004-2005	ongoing							X											
Habitat Modifications	removal of riparian vegetation	Adopt riparian setback ordinances in residential and urban areas					concept							X											

Packer Creek Watershed Project Table

											BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														
Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	Comments & Misc. Info.
Organic Enrichment	decaying plant/animal matter	Develop or obtain educational material to deter landowners from dumping grass clippings and such into creeks	1) Research available materials				concept	# of households reached; survey of individual implementation?	Chapter 10.5				X			X								X	
Organic Enrichment	decaying plant/animal matter	Develop or obtain educational material to deter landowners from dumping grass clippings and such into creeks	2) Distribute to landowners, especially adjacent to creek				concept						X			X								X	
Organic Enrichment	decaying plant/animal matter	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	1) Identify additional project partners		OEEF; 319 grants; ODNR/CZM grants; foundations; local donations; cities		concept	# of new storm drains stenciled; # of households given ed materials; # of volunteers participating	Chapter 10.5; 5.7.1	all of watershed										X				X	
Organic Enrichment	decaying plant/animal matter	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	2) Identify specific grant funding				concept														X			X	
Organic Enrichment	decaying plant/animal matter	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	3) Revise/update old SDS manual and supplies				concept														X			X	
Organic Enrichment	decaying plant/animal matter	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	4) Secure funding to kickoff project in watershed				concept														X			X	
Organic Enrichment	decaying plant/animal matter	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	5) Implement project in subwatersheds				concept														X			X	
Organic Enrichment	discarded litter/food waste	CYS Day	1) Establish planning team	TMACOG; various other community partners	Solicit private and public contributions, grants when available		concept	Relative to previous years: 1) tons of garbage and debris removed from area streams; 2) number of volunteers that participate; 3) # of sites/RM cleaned 4) amount of support received for planning and funding the event	Chapter 10.5							X								X	
Organic Enrichment	discarded litter/food waste	CYS Day	2) Solicit contributions and site captain support				concept						X			X								X	
Organic Enrichment	discarded litter/food waste	CYS Day	3) Distribute promotional materials				concept						X			X								X	
Organic Enrichment	discarded litter/food waste	CYS Day	4) Select waterways and sites to be cleaned				concept						X			X								X	
Organic Enrichment	discarded litter/food waste	CYS Day	5) Conduct site captain training				concept						X			X								X	
Organic Enrichment	discarded litter/food waste	CYS Day	6) Hold event and appreciation picnic				concept						X			X								X	
Organic Enrichment	discarded litter/food waste	Work with local communities to encourage "adopt a stream segment" or neighborhood stewardship program					concept						X											X	
Organic Enrichment	human and animal excreta	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	1) Identify additional project partners		OEEF; 319 grants; ODNR/CZM grants; foundations; local donations; cities		concept	# of new storm drains stenciled; # of households given ed materials; # of volunteers participating	Chapter 10.5; 5.7.1	all of watershed						X				X				X	
Organic Enrichment	human and animal excreta	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	2) Identify specific grant funding				concept						X			X					X			X	
Organic Enrichment	human and animal excreta	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	3) Revise/update old SDS manual and supplies				concept						X			X					X			X	
Organic Enrichment	human and animal excreta	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	4) Secure funding to kickoff project in watershed				concept						X			X					X			X	
Organic Enrichment	human and animal excreta	Implement Storm Drain Stenciling Program (to reduce pet waste and other dumping)	5) Implement project in subwatersheds				concept						X			X					X			X	
Organic Enrichment	human and animal excreta	Install pet waste bag/collection stations in Public access areas with educational signage					concept	# of stations installed	Chapter 10.5				X			X					X				
Organic Enrichment	septic systems	Connect to sanitary sewer or provide centralized wastewater treatment					ongoing						X				X								
Organic Enrichment	septic systems	Develop approved Home Sewage Treatment System (HSTS) Plans for counties in the watershed	Inventory the home sewage systems throughout the county and designate critical areas with priority for connection to sewers, installation of centralized treatment facilities or replacement with an individual on-site treatment system.	Local HDs, TMACOG, Maumee RAP committee, Ohio EPA	LEPF local sources	2005	complete	Approved county wide or watershed HSTS plan	5.6.1; 5.6.2	whole watershed							X								
Organic Enrichment	septic systems	Repair or replace failed home sewage treatment systems	Provide grant or loan assistance to eligible homeowners in critical HSTS areas	Local Health Departments	DEFA Linked Deposit loan, 319 grants	2006	planning	Eliminate discharge to surface of ground water; Increase D.O. to 5 mg/l avg; Fecal coliforms below 1000 per 100ml	5.6.1; 5.6.2	RM 15.6 and other critical areas throughout watershed						X									
Organic Enrichment	urban runoff	Watershed partners distribute GWAH tip cards at community events	1) Distributed at County Fairs and community events.	Counties and local jurisdictions		2006 - ??	ongoing		5.6.2; 5.7.1; Chapter 10.5		X		X	X		X									
Pathogens	Human & animal excreta	Educate Horse owners on proper disposal of manure	Implement Equine Environmental Assurance and Liability Program for Fulton, Lucas and Wood Counties	LSWCD, WSWCD Ohio Livestock Coalition, Farm Bureau	Ohio Livestock Coalition, Farm Bureau, ODRN-DSWC	2006	concept				X		X		X		X			X	X				

Toussaint Creek, Toussaint River and Rusha Creek Watershed Project Table

Causes of Impairment (Pollutant or Stressor)	Sources of Pollutant	Projects	Major Tasks/ Milestones	Potential Project Partners	Funding Source(s)	Timeline	Status (in progress, planning, concept, ongoing, complete)	Performance Indicator/Environmental Results (Loadings)	Coastal Management Measure	HUC/Stream Segment Addressed	BUI Color Code: ■ Impaired ■ Not Impaired ■ Unknown ■ Not Applicable														Comments & Misc. Info.
											BUI #1	BUI #2	BUI #3	BUI #4	BUI #5	BUI #6	BUI #7	BUI #8	BUI #9	BUI #10	BUI #11	BUI #12	BUI #13	BUI #14	
All	All	Conduct a TMDL	1) Design watershed survey, 2) Collect water quality data, 3) Assess waterbodies, 4) Identify target conditions, 5) Develop restoration projects, 6) Select restoration scenario, 7) Prepare implementation plan, 8) Submit TMDL report, 9) Implement TMDL (inside Ohio EPA), 10) Implement TMDL (outside OEPA), 11) Annual validation activities, and 12) Validate water quality status	OEPA	OEPA	2003-2005	in progress					X	X	X	X					X	X	X		X	Source: OEPA
All	All	GIS Water Quality database (Phase 1)	1) Create relational database from OEPA water resources inventory data for Maumee AOC	University of Toledo, Maumee RAP	US EPA GLNPO	2004-2005	complete					X	X	X	X	X	X	X		X	X	X		X	
All	All	GIS Water Quality database (Phase 1)	2) Export LE Tribes data to a GIS format				complete					X	X	X	X	X	X	X		X	X	X		X	
All	All	GIS Water Quality database (Phase 1)	3) Publish relational database and GIS online				complete					X	X	X	X	X	X	X		X	X	X		X	
All	All	GIS Water Quality database (Phase 2)	Expand GIS to entire AOC				in progress					X	X	X	X	X	X	X		X	X	X		X	
Habitat Modifications	changing land use	Create Regional Storm Water Standards Manual		RAP Urban Runoff Action Group, MRRSWC	Lake Erie Protection Fund	2002	complete							X											
Habitat Modifications	changing land use	Educate developers/contractors on need and use of BMPs		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	changing land use	Implement the Phase 2 storm water management program		City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area	local jurisdictions; additional grants if necessary	2006-	ongoing							X											
Habitat Modifications	changing land use	Implement the Phase 2 storm water management program	Review all site plan and require pre/post construction controls for water quality, even for sites < 1 acre	City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area		2004-	ongoing			5.3.1; 5.3.2; 5.3.3; 5.4.1; 5.4.2				X											
Habitat Modifications	changing land use	Implement the Phase 2 storm water management program	Revise storm water regulations and ordinances; may incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references	City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area		2004	ongoing	stricter BMPs, ordinances that are more protective of stream health	Chapter 5					X											
Habitat Modifications	changing land use	Maintain and update Stormwater Standards Manual (as needed)		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	changing land use	Propose alternative development designs/layouts and BMPs that protect habitat and water quality				2004-2005	ongoing							X											
Habitat Modifications	changing land use	Work with new development/industries moving into the watershed to develop strategies to minimize their impact on the creeks (for instance, storm water BMPs, setbacks, habitat buffers, etc)	Identify BMPs to recommend and literature to support it; become familiar with local storm water rules, wetland and stream mitigation rules, etc		none needed	2004-2006	ongoing			5.3.1; 5.3.2				X									X		
Habitat Modifications	Channelization	Modified dredging procedures, Natural stream channel and/or 2-Stage ditch design	Demonstrate a natural stream channel anywhere in watershed	ODNR, SWCDs, County Engineers	ODNR, NOAA/Coastal NPS, 319 grants	2007	planning	Increase QHEI score to 60.	7.4.1; 7.4.2	RM 36.5 13.9 4.7				X											
Habitat Modifications	construction	Create Regional Storm Water Standards Manual		RAP Urban Runoff Action Group, MRRSWC	Lake Erie Protection Fund	2002	complete							X											
Habitat Modifications	construction	Educate developers/contractors on need and use of BMPs		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	construction	Implement the Phase 2 storm water management program		City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area	local jurisdictions; additional grants if necessary	2006-	ongoing							X											
Habitat Modifications	construction	Implement the Phase 2 storm water management program	Review all site plan and require pre/post construction controls for water quality, even for sites < 1 acre	City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area		2004-	ongoing			5.3.1; 5.3.2; 5.3.3; 5.4.1; 5.4.2				X											
Habitat Modifications	construction	Implement the Phase 2 storm water management program	Revise storm water regulations and ordinances; may incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references	City of Bowling Green, portions of Wood and Ottawa county in Toledo urbanized area		2004	ongoing	stricter BMPs, ordinances that are more protective of stream health	Chapter 5					X											
Habitat Modifications	construction	Maintain and update Stormwater Standards Manual (as needed)		Maumee RAP Urban Runoff Action Group, SWC	Ohio Environmental Education Fund, GLC	2005	planning		5.3.1; 5.3.2; 5.5.1; Chapter 10.5	all of watershed				X											
Habitat Modifications	construction	Propose alternative development designs/layouts and BMPs that protect habitat and water quality				2004-2005	ongoing							X											

