Duck Creek Watershed Projects 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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
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	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	
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	
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	
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	
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					X			X	
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	2) Conduct new studies			2005-2008	in progress				X	X	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					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					X			X	
Flow Alterations	Changing Land Use	Lucas County Floodplain Map	5) Finalize maps and release electronically			2010	in progress				X	X	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	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												

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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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
habitat modifications	changing land use	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												
habitat modifications	changing land use	Regional Storm Water Standards Manual (Phase 3)	Maintain and update manual as needed				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	Duck and Otter Creeks Partnership, Inc.; US Coking; other new businesses	none needed	2004-2006	ongoing		5.3.1; 5.3.2	all of watershed			X											X	
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	Duck and Otter Creeks Partnership, Inc.; US Coking; other new businesses	none needed	2004-2006	ongoing		5.3.1; 5.3.2	all of watershed			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		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	construction	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	construction	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	construction	Regional Storm Water Standards Manual (Phase 1)	2) Write manual				complete						X												
habitat modifications	construction	Regional Storm Water Standards Manual (Phase 1)	3) Identify alternative development designs/layouts that protect water quality				complete						X												
habitat modifications	construction	Regional Storm Water Standards Manual (Phase 1)	4) Encourage local jurisdictions to adopt manual as their standards				complete						X												
habitat modifications	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												
habitat modifications	construction	Regional Storm Water Standards Manual (Phase 2)	2) Update chapters with new content and regulations			2005-2006	in progress						X												
habitat modifications	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												
habitat modifications	construction	Regional Storm Water Standards Manual (Phase 3)	Maintain and update manual as needed				ongoing						X												
habitat modifications	removal of riparian vegetation	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	1) Identify and map trees removed or slated for removal in watershed	Duck and Otter Creeks Partnership, Inc; MetroParks or local parks dept.; Cities; Maumee RAP	federal funding; grant funding, 319, ODNR CZM; local partners or members	2006-2007	concept	# of trees replaced; # of landowners enrolled		Duck Creek, priority to adjacent landowners			X			X								X	
habitat modifications	removal of riparian vegetation	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	2) Secure funding				concept						X			X								X	
habitat modifications	removal of riparian vegetation	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	3) Enroll landowners				concept						X			X								X	
habitat modifications	removal of riparian vegetation	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	4) Distribute replacement trees				concept						X			X								X	
habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	1) Develop scope and tasks for project	Duck and Otter Creeks Partnership; Sunoco; BP Amoco; Port Authority	US EPA CZM grant	2002-2003	complete	7 preliminary sites identified; detailed site plans for 4 sites	8.3.1; 8.3.2; 8.3.3	Duck Creek and riparian corridor w/in 500 feet			X			X								X	
habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	2) Distribute RFP and hire consultants			2002	complete						X			X								X	

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habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	3) Desktop review of watershed to id preliminary wetland sites			2002-2003	complete						X			X								X	
habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	4) Secure property owner permission for site access for field visits			2003	complete						X			X								X	
habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	5) Conduct detailed survey of each priority site			2003	complete						X			X								X	
habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	6) Develop detailed conceptual plans and cost estimates for restoration/enhancement of identified wetlands			2003	complete						X			X								X	
habitat modifications	removal of riparian vegetation	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	7) Distribute WIRP to interested stakeholders, agencies, etc			2004	complete						X			X								X	
habitat modifications	removal of riparian vegetation	Propose alternative development designs/layouts and BMPs that protect habitat and water quality		Duck and Otter Creeks Partnership, Inc.; US Coking; other new businesses		2004-2005	ongoing			all of watershed														X	
habitat modifications	removal of riparian vegetation	Re-planting program	Secure grant and identify available space along creeks for replanting				concept		5.5.1; 7.6.1				X												
habitat modifications	removal of riparian vegetation	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			all of watershed			X			X								X	
habitat modifications	removal of riparian vegetation	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	2) create GIS map of wetlands and potential wetlands				complete						X			X								X	
habitat modifications	removal of riparian vegetation	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	3) Identify restoration needs				complete						X			X								X	
habitat modifications	streambank modification	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	1) Identify and map trees removed or slated for removal in watershed	Duck and Otter Creeks Partnership, Inc; MetroParks or local parks dept.; Cities; Maumee RAP	federal funding; grant funding, 319, ODNR CZM; local partners or members	2006-2007	concept	# of trees replaced; # of landowners enrolled		Duck Creek, priority to adjacent landowners			X			X								X	
habitat modifications	streambank modification	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	2) Secure funding				concept						X			X								X	
habitat modifications	streambank modification	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	3) Enroll landowners				concept						X			X								X	
habitat modifications	streambank modification	Conduct ash tree replacement program for private property owners whose ash trees removed due to emerald ash tree borer invasion	4) Distribute replacement trees				concept						X			X								X	
habitat modifications	streambank modification	Continue working with City of Toledo on "The Duck Creek Wetland Restoration, Conservation and Public Access Project" (SEP)	1) Determine wetland SEP location	US EPA, Ohio EPA, City of Toledo w/input from Duck and Otter Creeks Partnership, Inc.	$500,000 City of Toledo SEP	2003-2004	complete	Establish 1 wetland enhancement or restoration project on Duck Creek within 3 years	8.3.2; 8.3.3	Duck Creek watershed			X			X								X	
habitat modifications	streambank modification	Continue working with City of Toledo on "The Duck Creek Wetland Restoration, Conservation and Public Access Project" (SEP)	2) Develop detailed workplan	US EPA, Ohio EPA, City of Toledo w/input from Duck and Otter Creeks Partnership, Inc.		2005	in progress						X			X								X	
habitat modifications	streambank modification	Continue working with City of Toledo on "The Duck Creek Wetland Restoration, Conservation and Public Access Project" (SEP)	3) Implement community involvement and awareness program, focusing on social aspects of wetland restoration	Bowling Green State University; Duck and Otter Creeks Partnership, Inc.		2005	in progress						X			X								X	Continues throughout project and after project to fostor adoption of the wetland and involvement in the process
habitat modifications	streambank modification	Continue working with City of Toledo on "The Duck Creek Wetland Restoration, Conservation and Public Access Project" (SEP)	4) Implement wetland restoration	City of Toledo		2006-2007	in progress						X			X								X	
habitat modifications	streambank modification	Continue working with City of Toledo on "The Duck Creek Wetland Restoration, Conservation and Public Access Project" (SEP)	5) Assist with public outreach, education and access	Duck and Otter Creeks Partnership, Inc.; Bowling Green State University	US EPA GLNPO, National Fish and Wildlife Foundation, other grants, private donors	2005-2007	in progress						X			X								X	

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habitat modifications	streambank modification	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	1) Solicit cooperation/support of landowners for 1 priority restorations sites on Duck Creek	Residential property owners, City of Toledo, Duck and Otter Creeks Partnership, etc.	US EPA GLNPO through National Fish and Wildlife Foundation, City of Toledo SEP monies, mitigation monies, donations, etc.	March 2004-2007	complete	Establish 1 wetland enhancement or restoration project within 5 years	8.3.1; 8.3.2; 8.3.3	Hecklinger Pond and Ravine Park, RM 4.0+			X			X								X	in conjunction w/City of Toledo SEP project
habitat modifications	streambank modification	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	2) Secure grant funding to implement wetland restoration activities			2005	complete						X			X								X	
habitat modifications	streambank modification	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	3) Implement community involvement and awareness program, focusing on social aspects of wetland restoration	Bowling Green State University; Duck and Otter Creeks Partnership, Inc.		2005	in progress						X			X								X	Continues throughout project and after project to fostor adoption of the wetland and involvement in the process
habitat modifications	streambank modification	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	4) Implement wetland restoration			2006-2007	in progress						X			X								X	
habitat modifications	streambank modification	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	3) Implement community involvement and awareness program, focusing on social aspects of wetland restoration	Bowling Green State University; Duck and Otter Creeks Partnership, Inc.		2005	in progress						X			X								X	Continues throughout project and after project to fostor adoption of the wetland and involvement in the process
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	1) Develop scope and tasks for project	Duck and Otter Creeks Partnership; Sunoco; BP Amoco; Port Authority	US EPA CZM grant	2002-2003	complete	7 preliminary sites identified; detailed site plans for 4 sites	8.3.1; 8.3.2; 8.3.3	Duck Creek and riparian corridor w/in 500 feet			X			X								X	
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	2) Distribute RFP and hire consultants			2002	complete						X			X								X	
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	3) Desktop review of watershed to id preliminary wetland sites			2002-2003	complete						X			X								X	
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	4) Secure property owner permission for site access for field visits			2003	complete						X			X								X	
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	5) Conduct detailed survey of each priority site			2003	complete						X			X								X	
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	6) Develop detailed conceptual plans and cost estimates for restoration/enhancement of identified wetlands			2003	complete						X			X								X	
habitat modifications	streambank modification	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	7) Distribute WIRP to interested stakeholders, agencies, etc			2004-	complete						X			X								X	
habitat modifications	streambank modification	Re-planting program	Secure grant and identify available space along creeks for replanting				concept		5.5.1; 7.6.1				X												
habitat modifications	streambank modification	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			all of watershed			X			X								X	
habitat modifications	streambank modification	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	2) create GIS map of wetlands and potential wetlands				complete						X			X								X	
habitat modifications	streambank modification	Wetlands Inventory and Mapping (Phase 1) (Lucas Co.)	3) Identify restoration needs				complete						X			X								X	
nutrients	urban runoff	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…		all of watershed			X												Over 11,000 ed brochures distributed; 23 attendees at Open House; at least 6 Friends of…to date
nutrients	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	2) Hire consultant			Mar-05	complete						X												

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nutrients	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	3) Develop educational materials			Summer 2005	complete						X												
nutrients	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	4) Distribute materials			Fall 2005	complete						X												
nutrients	urban runoff	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						X												
nutrients	urban runoff	Develop or adopt existing program for Fertilizer/pesticide education/reduction for general public and commercial users					concept		5.7.1; Chapter 10.5	all of watershed			X												Collins Park Golf Course
nutrients	urban runoff	periodic observations by watershed coordinator and/or other volunteers to determine if nuisance algae is present	Volunteer reports if nuisance algae is observed and its location, daytime temp, conditions, etc.	Partnership members/volunteers; community members?	none needed	2005	concept											X							
nutrients	urban runoff	Review existing dissolved oxygen data	Determine if creek meets Ohio WQS or if data is lacking		none needed	2005	concept											X							
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, 2) Distribute to landowners, especially adjacent to creek				concept	# of households reached; survey of individual implementation?	Chapter 10.5	Duck Creek			X			X									
organic enrichment	decaying plant/animal matter	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	East Toledo near Duck Creek											X			X	
organic enrichment	decaying plant/animal matter	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete														X			X	
organic enrichment	decaying plant/animal matter	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	
organic enrichment	decaying plant/animal matter	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	2003-2005	ongoing	# of stenciling manuals sold	Chapter 10.5; 5.7.1												X			X	
organic enrichment	decaying plant/animal matter	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	2) Fill orders for local jurisdictions and organizations as placed				ongoing														X			X	
organic enrichment	decaying plant/animal matter	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		East Toledo near Duck Creek											X			X	Aug 2005 event: 44 drains stenciled, approx. 300 door hangers/flyers distributed
organic enrichment	discarded litter/food waste	CYS Day	1) Establish planning team	Maumee RAP; Duck and Otter Creeks Partnership; ORKA; Cities of Oregon, Northwood, Toledo; TMACOG; Lake Erie Commission; various other community partners	Solicit private and public contributions, grants when available	April - Sept (annually)	ongoing	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	sites vary each year typically 3-6 sites between RM 2.0 and 4.0 on Duck Creek, including Hecklinger Pond			X			X								X	
organic enrichment	discarded litter/food waste	CYS Day	2) Solicit contributions and site captain support			April - Sept	ongoing						X			X								X	
organic enrichment	discarded litter/food waste	CYS Day	3) Distribute promotional materials			June - Sept	ongoing						X			X								X	
organic enrichment	discarded litter/food waste	CYS Day	4) Select waterways and sites to be cleaned			Aug	ongoing						X			X								X	
organic enrichment	discarded litter/food waste	CYS Day	5) Conduct site captain training			Sept	ongoing						X			X								X	
organic enrichment	discarded litter/food waste	CYS Day	6) Hold event and appreciation picnic			Sept	ongoing						X			X								X	
organic enrichment	discarded litter/food waste	Work with local communities to encourage "adopt a stream segment" or neighborhood stewardship program		City of Toledo, City of Oregon, City of Northwood			concept						X											X	
organic enrichment	human and animal excreta	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	
organic enrichment	human and animal excreta	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	
organic enrichment	human and animal excreta	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	
organic enrichment	human and animal excreta	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	2003-2004	ongoing	# of stenciling manuals sold	Chapter 10.5; 5.7.1				X			X				X	X			X	

Duck Creek Watershed Projects 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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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	human and animal excreta	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	
organic enrichment	human and animal excreta	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		East Toledo near Duck Creek			X			X				X	X			X	Aug 2005 event: 44 drains stenciled, approx. 300 door hangers/flyers distributed
organic enrichment/ nutrients	urban runoff	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…		Duck Creek						X									Over 11,000 ed brochures distributed; 23 attendees at Open House; at least 6 Friends of…to date
organic enrichment/ nutrients	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	2) Hire consultant			Mar-05	complete									X									
organic enrichment/ nutrients	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	3) Develop educational materials			Summer 2005	complete									X									
organic enrichment/ nutrients	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	4) Distribute materials			Fall 2005	complete									X									
organic enrichment/ nutrients	urban runoff	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									X									
organic enrichment/ nutrients	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							X									
organic enrichment/ nutrients	urban runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	2) Release RFP/Hire contractors			9/3/2004	complete									X									
organic enrichment/ nutrients	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									
organic enrichment/ nutrients	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									
organic enrichment/ nutrients	urban runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	5) Create and Implement pre-/post-campaign phone survey			12/03 & 5/05	complete									X									
organic enrichment/ nutrients	urban runoff	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									X									
organic enrichment/ nutrients	urban runoff	Give Water a Hand Campaign (Phase 3) (Watershed Awareness Campaign)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete									X									
organic enrichment/ nutrients	urban runoff	Give Water a Hand Campaign (Phase 3) (Watershed Awareness Campaign)	3) Distribute signs for local jurisdictions and organizations to use			Jul-05	complete									X									
organic enrichment/ nutrients	urban runoff	Give Water a Hand Campaign and educational materials	Distribute info at events, programs and presentations	Duck and Otter Creeks Partnership, Inc; Maumee RAP; Lucas, Ottawa and Wood SWCDs	Duck and Otter Creeks Partnership, Inc; Maumee RAP; Lucas, Ottawa and Wood SWCDs	year round	ongoing	1) Distributed at Oregon Days annually 2) Distributed at CYS Days annually 3) Distributed at Partnership Open House biennially		all of watershed	X		X	X		X									2005: Distributed at Oregon Days, Open House
organic enrichment/ nutrients	urban runoff	Give Water a Hand Campaign and educational materials (Phase 4)	Seek grant to distribute series of 6 GWAH tip cards to E. Toledo residents	Maumee RAP; City of Toledo	OEEF; local jurisdictions; Dana Foundation; other foundations	2004-2005	planning	Survey at end of program; # of households distributed to in our watershed; # of additional events brochures were distributed at		all of Duck Creek watershed	X		X	X		X									
pathogens	human and animal excreta	Implement baseline water quality sampling program	1) Implement seasonal sampling for variety of parameter at fixed, repeated locations, 2) Share data with other entities, such as UT LERC and Partnership, 3) Identify problems areas and/or trends	City of Toledo	Cities	2004-?	ongoing	# of samples taken, # of locations sampled	Chapter 11	Duck Creek										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		5.6.2											X					
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	2) Convert electronic data into GIS map files				complete													X					
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	3) Integrate with AERIS data				complete													X					
pathogens	Septic systems	GIS Septic System Inventory (Phase 1)	4) Train Health Dept personnel to input data and use GIS system				in progress													X					

Duck Creek Watershed Projects Table

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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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
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											X					no sites in Duck Creek watershed, but Phase 2 or 3 could be expanded to Duck Creek; very few, if any, septic remain in watershed
pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	2) Identify septic system dye testing locations				complete													X					
pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	3) Conduct stream sampling and dye testing				complete													X					
pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	4) Prioritize areas for enforcement based on testing results				complete													X					
pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 1)	5) Pursue enforcement requiring upgrades or replacement of failed or inadequate systems				complete													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		concept	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											X					
pathogens	Septic systems	Stream and Septic System Sampling Project (Phase 2)	2) Modify priority areas (if necessary)				concept													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)				concept													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		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											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				concept													X					
pathogens	urban runoff	Obtain and review current water quality data to id areas of high bacteria or nutrient loading	Contact City of Toledo to obtain current data	City of Toledo, City of Oregon, University of Toledo, TMACOG, Health Depts		2004-2005	in progress			Duck Creek										X					
pathogens	urban runoff	Student Watershed Watch	1) Enlist teacher/schools to participate	Maumee RAP, TMACOG, Duck and Otter Creeks Partnership, BP, Cities of Toledo and Oregon, Clay High School and other schools	private donations	August - November	ongoing			all of watershed										X					2005: one site added on Duck Creek- Hecklinger Pond, RM 4.2
pathogens	urban runoff	Student Watershed Watch	2) Conduct teacher training (see SWW Teacher Training/Creditable Data Certification)				ongoing													X					
pathogens	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													X					
pathogens	urban runoff	Student Watershed Watch	4) Supplies are distributed to participating teacher/schools			Sept	ongoing													X					
pathogens	urban runoff	Student Watershed Watch	5) Teachers conduct student training and sampling on designated sampling day (preferably)			mid-Oct	ongoing													X					
pathogens	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													X					
pathogens	urban runoff	Student Watershed Watch	7) Student share data and finding at Student Summit			mid-Nov	ongoing													X					
pathogens	urban runoff	Student Watershed Watch	Expand Student Watershed Watch Program into additional schools	Maumee RAP, TMACOG, Duck and Otter Creeks Partnership, BP, Cities of Toledo and Oregon, Clay High School and other schools	private donations	year round	ongoing	# of new sites added; # of students involved; # of samples taken	Chapter 10.5; Chapter 11	all of watershed										X					2005: site added- Hecklinger Pond
pathogens	urban runoff	SWW Teacher Training/Creditable Data Certification	1) Conduct Teacher Training	Maumee RAP, Ohio EPA, Lucas SWCD		2006	concept													X					

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pathogens	urban runoff	SWW Teacher Training/Creditable Data Certification	2) Award a certificate completion for training				concept													X					
pathogens	urban runoff	SWW Teacher Training/Creditable Data Certification	3) Submit certificate to Ohio EPA for Level 1 Qualified Data Collector (QDC) certification				concept													X					
pathogens	urban runoff	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	Health Dept?	2004-2005	complete			Duck Creek, including Hecklinger Pond										X					
pathogens	urban runoff	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					
pathogens	urban runoff	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					
pathogens	urban runoff	Work with University of Toledo to include bacteria sampling in future sediment sampling events		University of Toledo			concept		Chapter 11											X					
pesticides	all land where pesticides are used	Develop or adopt existing program for Fertilizer/pesticide education/reduction for general public and commercial users					concept		5.7.1; Chapter 10.5	all of watershed			X											X	Collins Park Golf Course
pesticides	all land where pesticides are used	Distribute info about existing Household Haz waste Disposal programs	encourage local jurisdictions to host collection days				concept		5.7.1; Chapter 10.5				X	X		X								X	
pesticides	all land where pesticides are used	Educational workshop for residents and other appliers (golf course staff, etc) to stress proper application and alternative management measures					concept		5.7.1; Chapter 10.5	all of watershed															
pesticides	sites of historical usage	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	Phase 1: Oct 2004- Sept 2005	complete	project completion	Chapter 11	Duck Creek, including Hecklinger Pond			X												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	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												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	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												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	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												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	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			Duck Creek, including Hecklinger Pond			X												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	Conduct Ecological and Human Health Risk Assessment for Duck and Otter Creeks watersheds (Phase 2)	2) implement workplan from Phase 1				planning						X												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	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		Duck Creek	X														(reside in sediment?)
pesticides	sites of historical usage	Establish sampling (sediment and/or water) program for creek with the UT	2) Develop project workplan				concept				X														
pesticides	sites of historical usage	Establish sampling (sediment and/or water) program for creek with the UT	3) Secure additional funding or resources if necessary				concept				X														
pesticides	sites of historical usage	Hot Spot Delineation	1) Secure funding; 2) Develop workplan	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	2007-?	concept						X												(e.g. heavy metals, PCBs, etc)
pesticides	sites of historical usage	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			Duck Creek			X												(e.g. heavy metals, PCBs, etc)
pesticides	urban runoff	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…		Duck Creek			X											X	Over 11,000 ed brochures distributed; 23 attendees at Open House; at least 6 Friends of…to date
pesticides	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	2) Hire consultant			Mar-05	complete						X											X	
pesticides	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	3) Develop educational materials			Summer 2005	complete						X											X	
pesticides	urban runoff	Conduct educational campaign for watershed awareness to encourage action by community members	4) Distribute materials			Fall 2005	complete						X											X	
pesticides	urban runoff	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						X											X	

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pesticides	urban runoff	Distribute contact information for household haz. waste disposal options and existing programs for collection	encourage local jurisdictions to host collection days				concept		5.7.1; Chapter 10.5		X			X											
pesticides	urban runoff	Distribute educational material to homeowners and commercial users on proper application techniques and alternative BMPs					concept		5.7.1; Chapter 10.5	all of watershed		X													
pesticides	urban runoff	Educational workshop for residents and other appliers (golf course staff, etc) to stress proper application and alternative management measures					concept		5.7.1; Chapter 10.5	all of watershed	X														Collins Park Golf Course
pesticides	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		Duck Creek			X												
pesticides	urban runoff	Establish sampling (sediment and/or water) program for creek with the UT	2) Develop project workplan				concept						X												
pesticides	urban runoff	Establish sampling (sediment and/or water) program for creek with the UT	3) Secure additional funding or resources if necessary				concept						X												
pesticides	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		X		X	X		X										
pesticides	urban runoff	Give Water a Hand Campaign (Phase 1) (Residential Campaign)	2) Release RFP/Hire contractors			9/3/2004	complete				X		X	X		X									
pesticides	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									
pesticides	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									
pesticides	urban runoff	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									
pesticides	urban runoff	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				X		X	X		X									
pesticides	urban runoff	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									
pesticides	urban runoff	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									
pesticides	urban runoff	Give Water a Hand Campaign and educational materials	Distribute info at events, programs and presentations	Duck and Otter Creeks Partnership, Inc; Maumee RAP; Lucas, Ottawa and Wood SWCDs	Maumee RAP; Lucas, Ottawa and Wood SWCDs	year round	ongoing	1) Distributed at Oregon Days annually 2) Distributed at CYS Days annually 3) Distributed at Partnership Open House biennially		all of watershed	X		X	X		X									2005: Distributed at Oregon Days, Open House
pesticides	urban runoff	Give Water a Hand Campaign and educational materials (Phase 4)	Seek grant to distribute series of 6 GWAH tip cards to E. Toledo residents	Maumee RAP; City of Northwood; City of Oregon	OEEF; local jurisdictions; Dana Foundation; other foundations	2004-2005	planning	Survey at end of program; # of households distributed to in our watershed; # of additional events brochures were distributed at		all of Duck Creek watershed	X		X	X		X									
pesticides	urban runoff	Implement baseline water quality sampling program	1) Implement seasonal sampling for variety of parameter at fixed, repeated locations, 2) Share data with other entities, such as UT LERC and Partnership, 3) Identify problems areas and/or trends	City of Toledo	Cities	2004-?	ongoing	# of samples taken, # of locations sampled	Chapter 11	Duck Creek			X			X									Oregon: 4 sample locations; Otter Creek parameters: depth, temp, DO, pH, conductivity, ORP, TSS, turbidity, ammonia, phosphates, nitrates, e coli, FOGs
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			X							X	X		X	X	
pesticides	urban runoff	Student Watershed Watch	2) Conduct teacher training (see SWW Teacher Training/Creditable Data Certification)				ongoing						X							X	X		X	X	
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						X							X	X		X	X	
pesticides	urban runoff	Student Watershed Watch	4) Supplies are distributed to participating teacher/schools			Sept	ongoing						X							X	X		X	X	
pesticides	urban runoff	Student Watershed Watch	5) Teachers conduct student training and sampling on designated sampling day (preferably)			mid-Oct	ongoing						X							X	X		X	X	
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						X							X	X		X	X	

Duck Creek Watershed Projects 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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
pesticides	urban runoff	Student Watershed Watch	7) Student share data and finding at Student Summit			mid-Nov	ongoing						X							X	X		X	X	
pesticides	urban runoff	Student Watershed Watch	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	
pesticides	urban runoff	SWW Teacher Training/Creditable Data Certification	1) Conduct Teacher Training	Maumee RAP, Ohio EPA, Lucas SWCD		2006	concept						X							X	X		X	X	
pesticides	urban runoff	SWW Teacher Training/Creditable Data Certification	2) Award a certificate completion for training				concept						X							X	X		X	X	
pesticides	urban runoff	SWW Teacher Training/Creditable Data Certification	3) Submit certificate to Ohio EPA for Level 1 Qualified Data Collector (QDC) certification				concept						X							X	X		X	X	
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			all of watershed		X													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						X			X									
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	2005	complete	# of educational brochures distributed; # of attendees at meeting; # of new members or		Duck Creek											X				Over 11,000 ed brochures distributed; 23
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	2) Hire consultant			Mar-05	complete														X				
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	3) Develop educational materials			Summer 2005	in progress														X				
Refuse, litter	litter	Conduct educational campaign for watershed awareness to encourage action by community members	4) Distribute materials			Fall 2005	in progress														X				
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	in progress														X				
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 Toledo	ODNR Operating Support grant, in-kind from Cities	2003	complete	# of locations "signed"	Chapter 10.5												X				Two existing signs; 6 locations planned
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														X				
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														X				
Refuse, litter	litter	periodic observations by watershed coordinator or other volunteers to report noticeable "free froms"	1)Throughout year, compile list of potential CYS sites and areas that regularly have litter, etc	Partnership members, Friends of volunteers, community members; watershed coordinator	none needed	2004-	ongoing			all of Duck Creek											X				
Refuse, litter	litter	periodic observations by watershed coordinator or other volunteers to report noticeable "free froms"	2) enlist volunteers and discuss what to look for and report	watershed coordinator or volunteer	none needed	2005-2006	ongoing														X				
Refuse, litter, etc	litter	CYS Day	1) Establish planning team	Maumee RAP; Duck and Otter Creeks Partnership; ORKA; Cities of Oregon, Northwood, Toledo; TMACOG; Lake Erie Commission; various other community partners	Solicit private and public contributions, grants when available	April - Sept (annually)	ongoing	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	sites vary each year typically 3-6 sites between RM 2.0 and 4.0 on Duck Creek, including Hecklinger Pond			X								X				2004-2005: Hecklinger Pond
Refuse, litter, etc	litter	CYS Day	2) Solicit contributions and site captain support			April - Sept	ongoing						X								X				
Refuse, litter, etc	litter	CYS Day	3) Distribute promotional materials			June - Sept	ongoing						X								X				
Refuse, litter, etc	litter	CYS Day	4) Select waterways and sites to be cleaned			Aug	ongoing						X								X				
Refuse, litter, etc	litter	CYS Day	5) Conduct site captain training			Sept	ongoing						X								X				
Refuse, litter, etc	litter	CYS Day	6) Hold event and appreciation picnic			Sept	ongoing						X								X				

Duck Creek Watershed Projects Table

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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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
Refuse, litter, etc	litter	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				
Refuse, litter, etc	litter	Storm Drain Stenciling Program (Drains are for Rain) (Phase 1)	2) Place bulk order for local jurisdictions and organizations			Jun-05	complete														X				
Refuse, litter, etc	litter	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				
Refuse, litter, etc	litter	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				
Refuse, litter, etc	litter	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	2) Fill orders for local jurisdictions and organizations as placed				ongoing														X				
Refuse, litter, etc	litter	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		East Toledo near Duck Creek											X				Aug 2005 event: 41 drains stenciled, approx. 500 door hangers/flyers distributed; 37 volunteers, also picked up trash
salinity	road deicing	Implement alternative deicing products (such as corn-based products) and other control measures	Begin using alternative deicing products	City of Toledo	City of Toledo	2005-	concept	% of salt use reduced; # of miles of road where alternative applied	5.8.4	all of watershed			X			X								X	
salinity	road deicing	Install computerized spreaders on all salt trucks to control application rate		City of Toledo	City of Toledo	2005-	concept	# of trucks converted; % of salt use reduced	5.8.4	all of watershed			X			X								X	
salinity	road deicing	Sampling program for conductivity, pH, and other salinity factors during winter months	Determine if salinity is a limiting factor or concentrated pollutant leading to fish/habitat impairments	UT LERC; Cities		2005-	concept		Chapter 11				X			X								X	
sediment/siltation	construction	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			X	
sediment/siltation	construction	Regional Storm Water Standards Manual (Phase 1)	2) Write manual				complete														X			X	
sediment/siltation	construction	Regional Storm Water Standards Manual (Phase 1)	3) Identify alternative development designs/layouts that protect water quality				complete														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	
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	
sediment/siltation	construction	Regional Storm Water Standards Manual (Phase 2)	2) Update chapters with new content and regulations			2005-2006	in progress														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	
sediment/siltation	construction	Revise storm water regulations and ordinances; incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references		City of Toledo	City of Toledo	2004-2006	in progress	stricter BMPs, ordinances that are more protective of stream health	Chapter 5	Duck Creek, primarily East Toledo														X	
sediment/siltation	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	Duck and Otter Creeks Partnership, Inc.; US Coking; other new businesses	none needed	2004-2006	ongoing		5.3.1; 5.3.2	all of watershed			X			X					X				
sediment/siltation	roads	Implement alternative deicing products (such as corn-based products) and other control measures		City of Toledo, City of Oregon	City of Toledo, City of Oregon	2005-	ongoing	% of salt use reduced; # of miles of road where alternative applied	5.8.4	Duck Creek, primarily East Toledo						X									
sediment/siltation	roads	Install computerized spreaders on all salt trucks to control application rate		City of Toledo	City of Toledo	2005-	ongoing	# of trucks converted; % of salt use reduced	5.8.4							X									
sediment/siltation	roads	Revise storm water regulations and ordinances; may incorporate Maumee RAP manual, ODNR Rainwater manual, regional Storm Water Coalition recommendations and other references		City of Toledo	City of Toledo	2004-2006	concept	stricter BMPs, ordinances that are more protective of stream health	Chapter 5							X									

Duck Creek Watershed Projects Table

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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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
sediment/siltation	streambanks	Identify and/or establish program to provide incentive to landowners for filter strips and replanting/preserving habitat along creek	1) Identify grant opportunities for this program, 2) identify target areas in watershed to maintain or re-plant habitat	Maumee RAP or Duck and Otter Creeks Partnership, Inc; landowners; Cities of Oregon, Toledo, and Northwood	319 program, ODNR/CZM grants; private foundations, National Fish and Wildlife Foundation, US EPA	2006	concept		5.5.1; 7.6.1				X												
sediment/siltation	streambanks	Identify areas of creek where stream bank stabilization is needed	Continue "walking" creek and general observations	City of Toledo; Duck and Otter Creeks Partnership staff and/or volunteers		2004-?	ongoing		7.6.1; 8.3.3	all of watershed														X	
sediment/siltation	streambanks	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	1) Solicit cooperation/support of landowners for 1 priority restorations sites on Duck Creek	Residential property owners, City of Toledo, Duck and Otter Creeks Partnership, Inc, Bowling Green State University, community volunteers	USEPA GLNPO (through National Fish and Wildlife Foundation), Duck and Otter Creeks Partnership, Inc; project partners, City of Toledo SEP monies, mitigation monies, private donations	Mar-05	complete	Establish 1 wetland enhancement or restoration project within 5 years	8.3.1; 8.3.2; 8.3.3	Hecklinger Pond and Ravine Park, RM 4.0+			X			X								X	In conjunction w/City of Toledo SEP project
sediment/siltation	streambanks	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	2) Secure grant funding to implement wetland restoration activities			2005	complete			Ravine Park Integrated Restoration Project at RM 4			X			X								X	
sediment/siltation	streambanks	Implement Wetland Id and Restoration Plan for Duck and Otter Creeks to identify and encourage priority areas for enhancement/restoration of wetlands	4) Implement wetland restoration			2006-2007	in progress						X			X								X	
sediment/siltation	streambanks	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				
sediment/siltation	streambanks	Regional Storm Water Standards Manual (Phase 2)	2) Update chapters with new content and regulations			2005-2006	in progress						X			X					X				
sediment/siltation	streambanks	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				
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	1) Develop scope and tasks for project	Duck and Otter Creeks Partnership; Sunoco; BP Amoco; Port Authority	US EPA CZM grant	2002-2003	complete	7 preliminary sites identified; detailed site plans for 4 sites	8.3.1; 8.3.2; 8.3.3	Duck Creek and riparian corridor w/in 500 feet														X	
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	2) Distribute RFP and hire consultants			2002	complete																	X	
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	3) Desktop review of watershed to id preliminary wetland sites			2002-2003	complete																	X	
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	4) Secure property owner permission for site access for field visits			2003	complete																	X	
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	5) Conduct detailed survey of each priority site			2003	complete																	X	
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	6) Develop detailed conceptual plans and cost estimates for restoration/enhancement of identified wetlands			2003	complete																	X	
sediment/siltation	streambanks	Inventory watershed for existing wetland sites and potential wetland restoration sites; focus on riparian corridor w/in 500 feet of stream	7) Distribute WIRP to interested stakeholders, agencies, etc			2004	complete																	X	
sediment/siltation	streambanks	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			X					X				
sediment/siltation	streambanks	Regional Storm Water Standards Manual (Phase 1)	2) Write manual				complete						X			X					X				

Duck Creek Watershed Projects Table

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sediment/siltation	streambanks	Regional Storm Water Standards Manual (Phase 1)	3) Identify alternative development designs/layouts that protect water quality				complete						X			X					X				
sediment/siltation	streambanks	Regional Storm Water Standards Manual (Phase 1)	4) Encourage local jurisdictions to adopt manual as their standards				complete						X			X					X				
Sediment/Siltation	Urban/Suburban	Pond Clinic	Educate landowners on proper application of herbicides and alternate approaches to pond management; proper construction techniques including storm water BMPs.	OSU Extension Sea Grant, Fulton OSU Extension, Progressive Fisherman's Club		Annual	ongoing						X	X	X	X				X	X				
thermal stress/sunlight	riparian corridor destruction	Encourage landowners re-planting or maintaining of buffers along creeks		Duck and Otter Creeks Partnership, Inc.			concept		5.5.1; 7.6.1	all of watershed			X					X						X	
toxic substances	industrial discharges (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	Phase 1: Oct 2004- Sept 2005	complete	project completion	Chapter 11	Duck 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 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)
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			Duck Creek, including Hecklinger Pond	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	updated map available			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	updated map available		Duck Creek			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					
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					
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					
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)	Implement baseline water quality sampling program	1) Implement seasonal sampling for variety of parameter at fixed, repeated locations	City of Toledo	Cities	2004-?	ongoing	# of samples taken, # of locations sampled	Chapter 11	Duck Creek						X									
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									
toxic substances	Industrial discharges (current or old)	Implement baseline water quality sampling program	3) Identify problems areas and/or trends				ongoing									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																	
Toxic substances	Industrial discharges (current or old)	NPDES permit GIS inventory (Phase 1)	2) Convert electronic data into GIS map files				in progress																		
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																		
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				X					(e.g. heavy metals, PCBs, etc)
Toxic substances	Industrial discharges (current or old)	Work with City of Toledo to review need for "No Contact/No Eating Fish" posting at Hecklinger Pond		City of Toledo; county Health Depts			planning				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	Health Dept?	2004-2005	complete			Duck Creek, including Hecklinger Pond	X									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									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									X					

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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	Phase 1: Oct 2004- Sept 2005	complete	project completion	Chapter 11	Duck Creek										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					(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)	3) complete screening HHRA	Duck and Otter Creeks Partnership, Inc.	US EPA GLNPO	Sep-05	complete													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					(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			Duck Creek, including Hecklinger Pond										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					(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		Duck Creek										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					
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					
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					(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 Toledo	Cities	2004-	ongoing	# of samples taken, # of locations sampled	Chapter 11	Duck Creek										X					
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					
toxic substances	landfills (current or old)	Implement baseline water quality sampling program	3) Identify problems areas and/or trends				ongoing													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													X					(e.g. heavy metals, PCBs, etc)
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 Duck 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		Duck Creek				X											
toxic substances	urban runoff	Establish sampling (sediment and/or water) program for creek with the UT	2) Develop project workplan				concept							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											
toxic substances	urban runoff	periodic observations by watershed coordinator or other volunteers to report noticeable "free froms" and unusual spills or occurrences	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 Duck 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				
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				
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				
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												X				
toxic substances	urban runoff	Storm Drain Stenciling Program (Drains are for Rain) (Phase 2)	2) Fill orders for local jurisdictions and organizations as placed				ongoing														X				

Duck Creek Watershed Projects 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)	Decrease in sediment load; decrease in turbidity; decrease in storm drain dumping	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.
toxic substances	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		Duck Creek, primarily East Toledo											X				Aug 2005 event: 41 drains stenciled, approx. 500 door hangers/flyers distributed; 37 volunteers, also picked up trash
toxic substances	urban runoff	Student Watershed Watch	1) Enlist teacher/schools to participate	Maumee RAP, TMACOG, Duck and Otter Creeks Partnership, BP, Cities of Toledo and Oregon, Clay High School and other schools	private donations	August - November	ongoing			all of watershed			X							X	X		X	X	2005: Hecklinger Pond added
toxic substances	urban runoff	Student Watershed Watch	2) Conduct teacher training (see SWW Teacher Training/Creditable Data Certification)				ongoing						X							X	X		X	X	
toxic substances	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						X							X	X		X	X	
toxic substances	urban runoff	Student Watershed Watch	4) Supplies are distributed to participating teacher/schools			Sept	ongoing						X							X	X		X	X	
toxic substances	urban runoff	Student Watershed Watch	5) Teachers conduct student training and sampling on designated sampling day (preferably)			mid-Oct	ongoing						X							X	X		X	X	
toxic substances	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						X							X	X		X	X	
toxic substances	urban runoff	Student Watershed Watch	7) Student share data and finding at Student Summit			mid-Nov	ongoing						X							X	X		X	X	
toxic substances	urban runoff	Student Watershed Watch	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	
toxic substances	urban runoff	SWW Teacher Training/Creditable Data Certification	1) Conduct Teacher Training	Maumee RAP, Ohio EPA, Lucas SWCD		2006	concept						X							X	X		X	X	
toxic substances	urban runoff	SWW Teacher Training/Creditable Data Certification	2) Award a certificate completion for training				concept						X							X	X		X	X	
toxic substances	urban runoff	SWW Teacher Training/Creditable Data Certification	3) Submit certificate to Ohio EPA for Level 1 Qualified Data Collector (QDC) certification				concept						X							X	X		X	X	