

Table 5.5 Lower Huron River Watershed Action Plan

KEY:

- ✓ currently doing
- planned for short-term
- planned for long-term
- not planned currently
- × not applicable

♣ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addressed										Level of Effort	Cost		Technical/Financial Resources	Entities												
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District
Managerial: Illicit Discharge Elimination																												
1	Conduct outfall screening program ♣						✓	✓				sewered areas	\$100/staff investigation per property ^b			●	○	●	●	●	✓	●	●	□	✓	●	●	
2	Perform smoke/dye testing ♣						✓	✓				sewered areas	\$600/dye test ^b \$30/manhole for smoke testing ^a			✓	●	□	●	✓	✓	✓	●	✓	●	○	○	
3	Develop reporting system/ follow-up plan for illicit connections ♣	✓					✓	✓				13 entities	\$100/hr per municipal staff ^a			✓	✓	✓	✓	●	●	✓	✓	●	✓	●	✓	
4	Trace illicit discharges ♣						✓	✓				sewered areas	\$100/staff investigation per property ^b						✓	●			●	✓	✓	○		
5	Enforcement for non-correction of illicit discharges ♣	✓					✓	✓				sewered areas	\$5k-15k per property ^b						×	●	✓		●	●	✓	×		
6	Train staff to identify illicit discharges ♣	✓					✓	✓				6 entities	\$100/hr municipal staff ^a						✓	●	✓		●	✓	✓	○		
7	Minimize seepage from sanitary sewers						✓	✓				sewered areas	\$1-2/lineal ft for TV inspection ^c and design/construction costs						✓	✓	✓		●	✓	✓			
8	Minimize seepage from on-site sewage disposal systems						✓	✓				2 entities							×	×	✓		●	×	✓			
9	Update outfall and/or drainage map						✓	✓				5 entities	\$100/hr per municipal staff ^a						●	●	✓		○	●	□	○		
10	Develop and implement method to identify and record outfalls from new construction						✓	✓				sewered areas	\$100/hr per municipal staff ^a						●	✓			○	●	□	○		

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997

Table 5.5 Lower Huron River Watershed Action Plan

KEY:
 ✓ currently doing
 ● planned for short-term
 ○ planned for long-term
 □ not planned currently
 ✕ not applicable

♣ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addressed										Level of Effort	Cost		Technical/Financial Resources	Entities													
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District	
Managerial: Public Information & Education																													
11	Homeowner education about septic system maintenance ♣	✓					✓	✓					communities with septics	\$0.2/hh for print ads; \$0.5/piece for print and mail ^c		I/E materials from HRWC; SE MI Partners for Clean Water	●	✕	✕	□	●	✕	□	●	●	✓	✓	✕	●
12	Provide watershed education materials to residents ♣	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	community-wide	\$0.2/hh for print ads; \$0.5/piece for print and mail ^c		I/E materials from HRWC; SE MI Partners for Clean Water	●	●	●	●	●	●	●	●	●	✓	✓	●	●	
13	Provide Trash management information and education to public ♣	✓									✓	community-wide	\$0.2/hh for print ads; \$0.5/piece for print and mail ^c			●	✓	●	●	●	✓	✓	●	●	✓	✓	✓	○	
14	Provide Information and education program to homeowners on yard and lawn care, native landscapes ♣	✓	✓		✓	✓	✓					community-wide	\$0.2/hh for print ads; \$0.5/piece for print and mail ^c		I/E materials from HRWC; SE MI Partners for Clean Water	●	✓	●	✓	●	✓	✓	●	●	✓	✓	✓	○	
15	Provide Information and education program to homeowners on proper pet waste management ♣	✓					✓	✓				sewered areas	\$0.2/hh for print ads; \$0.5/piece for print and mail ^c		I/E materials from HRWC; SE MI Partners for Clean Water	●	○	✓	✓	●	✓	✓	●	●	✓	✓	✓	○	
16	Provide Information and education to farmers ♣	✓	✓		✓	✓	✓	✓				agricultural communities				●	✕	□	□	●	✕		●	●	□	□	✕	✕	
17	Recreational Vehicle (RV) Waste Disposal Education ♣	✓					✓	✓			✓	public facilities			Materials from SEMCOG; SE MI counties	●	○	●	●	●	✓	□	●	●	●	✓	●	○	
18	Environmental Information Line and Pollution Complaint Hotline ♣	✓	✓	✓								watershed-wide			provided through Wayne County						●			●	✓	✓			
19	Regular storm water-related information on cable TV	✓		✓								community-wide	\$100/hr+cost for cable TV, consult w/ local media ^c				✓		●	●	●	✓		●	✓	✕	✓	□	
20	Send watershed press releases to local media outlets	✓		✓								community-wide	\$100/release + printing costs				✓		✓	●	□	●		●	✓	✓	●	✕	
21	Watershed-related articles in community newsletters ♣	✓		✓								community-wide	\$50-100/hr ^d			●	●	●	●	●	●	●	●	●	●	●	●	●	
22	Watershed-related news and I & E materials on entity website ♣	✓		✓								community-wide	\$50-100/hr to update website ^{a,c}			●	●	●	●	●	●	●	●	●	●	✓	●	●	
23	Maintain Lower Huron River Watershed Webpage	✓		✓								3-5 hrs/month	\$100/hr ^d												●				
24	Develop and distribute education materials on LID tools for land use decision makers	✓		✓							✓	community-wide				●	●	●	●	●	●	●	●	●	✓	✓	●	●	
25	Promote reporting system for illicit discharges ♣	✓						✓	✓			community-wide	\$100/hr +cost for cable TV, consult w/ local media ^c			●	●	●	●	●	●	●	●	●	✓	✓	●	●	
26	Household Hazardous Waste Collection Site/Day ♣	✓										per community	Recycling station expenses ^e			●	●	●	●	●	●	●	●	●	✓	✓	✓	●	
27	Yard Waste Collection and/or Recycling ♣	✓										per community	Recycling station expenses ^e			●	●	●	●	●	●	●	●	●	✓	✓	✓	●	
28	Watershed and River crossing signage	✓										strategic locations along road ROW and public facilities			in coordination w/ county road commissions, SEMCOG	○	○	○	○	○	○	○	○	○	○	○	✓	✓	○

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997

Table 5.5 Lower Huron River Watershed Action Plan

KEY:
 ✓ currently doing
 ● planned for short-term
 ○ planned for long-term
 □ not planned currently
 * not applicable

♣ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addressed										Level of Effort	Cost		Technical/Financial Resources	Entities												
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District
Managerial: Ordinances and Policies																												
29	Adopt fertilizer reduction ordinance or policy	✓	✓				✓					7 entities	\$10k		obtain sample ordinances	○	○	□	○	●	□		○	○	○	*		*
30	Adopt native landscaping ordinance or policy ♣	✓	✓		✓	✓	✓		✓			10 entities	\$5k-10k		obtain sample ordinances	●	●	●	●	●	●	✓	●	●	●	□		*
31	Adopt no dumping ordinance or policy ♣	✓						✓				12 entities	\$5k-10k		obtain sample ordinances	●	✓	✓	✓	✓	✓	✓	●	✓	✓	✓	✓	*
32	Adopt pet waste ordinance or policy	✓					✓	✓				5 entities	\$5k-10k		obtain sample ordinances	□	□	●	✓	□	●	□	□	●	□	*	✓	*
33	Adopt private roads ordinance or policy		✓		✓				✓			6 entities	\$5k-10k		obtain sample ordinances	✓	●	□	□	✓	□	□	✓	●	○	*	□	*
34	Adopt Purchase of Development Rights ordinance		✓						✓			3 entities	\$5k-10k ^d		obtain sample ordinances	●	●	□	□	□	*	□	●	□	□	□		*
35	Adopt stormwater management ordinance (e.g., Wayne Co.) ♣	✓	✓		✓	✓	✓		✓			10 entities	\$5k-10k ^a			□	✓	●	✓	●	●	✓	□	✓	✓	✓	✓	*
36	Adopt wetlands ordinance w/ natural features setback; create local map of wetlands ♣	✓	✓		✓	✓	✓	✓	✓			9 entities	\$5k-10k		obtain HRWC model ordinance; GIS, GPS capabilities	●	✓	●	●	○	●		●	○	●	□		*
37	Support County OSDS Ordinance	✓					✓	✓				5 entities	\$3k-5k ^d			*	●	□	□	●	*	●	*	●	✓	✓	□	*
38	Adopt overlay zoning for riparian corridor ♣	✓	✓			✓	✓	✓				8 entities				●	●	□	□	●	○	○	●	○	○	*		*
39	Disallow Occupancy Permits pending inspection for illicit connections						✓	✓				8 entities				●	*	✓	✓	●	✓		●	*	●	*	✓	*
40	Enhance site plan review requirements ♣		✓		✓				✓			11 entities	\$5k-10k ^d		County Drain Offices; HRWC	✓	●	●	✓	●	●		✓	●	✓	✓	✓	*
41	Incorporate Low Impact Development principles ♣		✓		✓	✓	✓	✓	✓			watershed-wide				●	○	●	●	●	✓	✓	●	○	○	✓	●	*
42	Implement septic system inspection at time-of-sale	✓					✓	✓				4 entities	\$5k-10k ^a	\$300/ inspection		□	●		*	●	*	✓	*	□	*	✓		*
43	Improve enforcement of litter laws and nuisance properties	✓	✓							✓		11 entities				✓	●	●	●	●	●		✓	●	●	✓	✓	*
44	Improve enforcement of SESC policies					✓	✓					4 entities				*	*	*	✓	●	*	✓	*	*	*	✓	*	*
45	Improve enforcement of construction site inspections ♣		✓		✓	✓	✓					11 entities				●	✓	●	●	●	●		●	●	●	✓	●	*
46	Minimize total impervious cover in zoning ordinance ♣		✓		✓				✓			10 entities	\$5k-10k		obtain sample ordinances	✓	●	●	✓	✓	●		✓	●	✓	*	○	*
47	Promote open space preservation in zoning ordinance and master plan ♣	✓	✓		✓	✓	✓	✓	✓	✓		10 entities	\$5k-10k ^a			✓	✓	✓	✓	✓	●	✓	✓	○	✓	*		*
48	Review and revise grading and land clearing policies ♣		✓		✓	✓	✓		✓			11 entities	\$5k-10k ^a		obtain sample standards	●	●	●	✓	●	✓	✓	●	●	●		●	*
49	Review and revise SESC policies and practices	✓	✓		✓	✓	✓					7 entities	\$5k-10k ^a		obtain sample standards	*	*	*	✓	●	●	✓	*	*	●	✓	✓	*
50	Revise parking standards for new development/ redevelop. ♣		✓		✓				✓			11 entities	\$5k-10k ^a		obtain sample standards	●	●	●	✓	✓	●	✓	●	●	✓	*	✓	*
51	Revise Stormwater Management Standards - pond landscaping					✓	✓	✓				10 entities			County Drain Offices	●	○	●	●	□	●		●	●	●	✓	●	*

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997

Table 5.5 Lower Huron River Watershed Action Plan

KEY:
 ✓ currently doing
 ● planned for short-term
 ○ planned for long-term
 □ not planned currently
 ✕ not applicable

♣ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addressed										Level of Effort	Cost		Technical/Financial Resources	Entities												
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District
Managerial: Practices																												
52	Incorporate results of conservation planning analyses into local ordinances and policies ♣	✓	✓									watershed-wide	\$3k-5k ^d		utilizing HRWC's conservation planning analysis	●	●	●	●	●	●	□	●	●	●	●	●	✕
53	Reduce directly connected impervious surfaces	✓	✓		✓	✓						8 entities 1st: new development; 2nd: retrofits	\$50/house ^b			○	●	□	○	○	✓	□		○	○	✓	○	✕
54	Increase amount of refuse containers and review their distribution		✓								✓	8 entities			in coordination w/ HCMA	○	●	○	○	□	●		○	□	○	□	●	✕
55	Practice high-powered street and paved area sweeping ♣					✓	✓	✓				7 entities; every 1-2 wks except during freeze	\$100k-200k ^{a,b}	\$30-65/curb mile \$10-20/cubic yd disposal	in coordination w/ MDOT; County Road Commissions	✕	✓	✓	●	✓	○	✓	✕	✕	✕	□	✓	✕
56	Practice nutrient management on agricultural land						✓					4 entities	\$10/acre	\$10/acre	USDA programs: EQIP; CRP	○	○	□	□	□	✕		✕	○	✕	✕	●	✕
57	Provide pet waste bags in parks and public areas	✓					✓	✓				public facilities	\$100/station ^d	some maintenance		□	□	✓	●	□	□	□	□	□	○	✕	●	□
58	Practice alternative drain practices that rehabilitate stream and riparian habitats		✓		✓	✓	✓					watershed-wide	\$5k-10k		in coordination w/ County Drain Offices	✕	●	✕	○	○	●		✕	○	○	✓	✕	✕
59	Storm drain/catch basin marking ♣	✓	✓		✓		✓	✓				sewered areas	\$1.50/Lexan marker \$3/ crystal coated marker		Volunteers apply markers and hang educational fliers	●	✓	✓	✓	✓	✓	✓	●	○	✓	✓	✓	□
60	Expand Greenways Trails Network									✓		9 entities			in coordination w/ Metropolitan Affairs Coalition	○	○	○		●	○		○	□	✓	○	○	✕

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997

Table 5.5 Lower Huron River Watershed Action Plan

KEY:
 ✓ currently doing
 ● planned for short-term
 ○ planned for long-term
 □ not planned currently
 ✕ not applicable

♣ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addresssed										Level of Effort	Cost		Technical/Financial Resources	Entities												
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District
Managerial: Studies and Inventories																												
61	Develop or adapt QAPPs for applicable parameters ♣										✓	as needed	\$100/hr		MDEQ, HRWC	●	●	●	●	●	●	□	●	●	●	●	●	●
62	Develop and implement a coordinated monitoring strategy to measure water quality, water quantity and biota ♣	✓	✓	✓	✓	✓	✓	✓	✓	✓	watershed-wide		\$50k-100k	in coordination w/ county governments; HRWC Adopt-A-Stream; MDEQ; MDNR; Stream Team	●	●	●	●	●	●	□	●	●	●	●	●	●	●
63	Initiate hydrologic and hydraulic studies ♣			✓						✓	watershed-wide	\$35k-75k ^d	\$10k-25k	MDEQ; USGS; consultant services	●	●	●	●	●	●	□	●	●	●	●	●	●	
64	Inventory and stabilize eroding streambanks	✓			✓	✓				✓	as needed	\$1k/mile inventory ^{a, f} \$1.50-3/pp live stake \$2-9/pp joint planting stake \$5-9/ft live fascine \$10-25/sq ft live cribwall \$25-35/sq yd 8" rip-rap \$30-45/sq yd 16" rip-rap \$20-30/ft gabion baskets \$30-75/lineal ft A-Jacks		in coordination w/ County Drain Offices		●	●	●	○	○			□	□	●		✕	
65	Inventory areas lacking stormwater management for retrofit opportunities			✓	✓	✓						\$100/hr per municipal staff		consultant services	●	●	○	○	●	○		●	□	●	✓	○	✕	
66	Investigate opportunities for recreation areas	✓								✓		\$100/hr per municipal staff			✓	✓	✓	○	●	✓	✓	○	✓	□		✕		
67	Measure pollutant removal efficiencies of BMPs		✓		✓	✓	✓	✓	✓						○	○	○	○	□	□		○	□	□	●		□	
68	Conduct field work to refine natural features information and develop a methodology to prioritize for protection ♣	✓								✓	watershed-wide			MI Natural Features Inventory; universities; consultants; SE MI Stewardship Network; HRWC	●	●	●	●	●	□	□	●	○	●	●	●	●	
69	Conduct natural features inventories ♣	✓								✓	watershed-wide			MI Natural Features Inventory; universities; consultants; SE MI Stewardship Network; HRWC	●	●	●	●	●	□	□	●	○	✓	●	●	●	
70	Establish BMP case studies	✓								✓					●	○	○	○	○	○	●	○	○	○	✓	●	○	
71	Study drainage around Cogswell and make improvements	✓		✓																●		✕						

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997

Table 5.5 Lower Huron River Watershed Action Plan

KEY:

- ✓ currently doing
- planned for short-term
- planned for long-term
- not planned currently
- * not applicable

◆ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addressed										Level of Effort	Cost		Technical/Financial Resources	Entities												
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District
Vegetative																												
84	Construct stormwater wetlands	✓		✓	✓	✓	✓					where feasible	\$30k-50k/acre ^f	2-4% of construction	USDA programs; USFWS; Ducks Unlimited; County Drain Offices; consultant services	* ● □ □ ○ ○ ✓ * □ ○ □ ○ □												
85	Create and maintain grassed waterways			✓	✓	✓						4 entities	\$3.5k/acre \$4k/acre w/ tile ^b	\$70-90/acre	USDA programs: EQIP; CRP; NRCS	* ✓ □ □ ● * ✓ * □ * □ ✓ □												
86	Create and maintain vegetated filter strips	✓		✓	✓	✓						6 entities	\$200/acre	\$4/acre	USDA programs: EQIP; CRP; NRCS	○ ○ □ □ ● * □ ○ ○ ✓ □												
87	Plant and maintain riparian buffer with native vegetation	✓		✓	✓	✓	✓					10 entities	\$350/acre ^b	1-2% of installation	USDA programs; NRCS	● ✓ ○ ○ ● ✓ ● □ ○ ○ ✓ □												
88	Install bioretention systems in developed/redeveloping areas			✓	✓	✓	✓	✓				where feasible	\$6.80/cubic ft ^b	2% for O & M		□ ● ● ● ○ ✓ □ □ □ ● □ ○ □												
89	Install grassed swales, where feasible	✓		✓	✓	✓	✓	✓				11 entities				✓ ✓ ● ○ ○ ✓ ✓ ✓ □ ● ○ ✓ □												
90	Install pond buffer native plantings	✓		✓	✓	✓	✓					10 entities	\$350/acre ^b	1-2% of installation		● ○ ● ○ ● ● ● □ ● □ ● ○ ● □												
91	Install vegetated roofs	✓		✓								6 entities	\$12-24/sq ft			○ ○ ● ○ □ ○ □ ○ □ □ □ □ □												
92	Practice agricultural conservation cover			✓	✓	✓						4 entities	\$225/acre	\$11.15/acre	USDA programs: EQIP; CRP; NRCS	○ ○ □ □ * * ○ ○ * * * □												
93	Practice conservation crop rotation with cover crop and mulch/no-till			✓	✓	✓						2 entities	\$170/acre Cover Crop \$10-15/acre Mulch/No-till	\$170/acre Cover Crop \$10-15/acre Mulch/No-till	USDA programs: EQIP; CRP; NRCS	○ □ □ □ * * ○ □ * * * □												
94	Restore wetlands, recreate storage	✓		✓	✓	✓				✓		6 entities	\$700-2k/acre ^b	2-4% of construction	USFWS; USDA; Ducks Unlimited; County Drain Offices	□ ● ○ ○ ○ □ ✓ □ □ □ □ ○ □												
95	Install rain gardens											residential sites w/ appropriate soils	\$500/homesite, or \$3-5/sq ft up to \$10-12/sq ft for professional work	4% of construction		✓ □ ○ ○ ● ✓ ○ ○ ○ ○ □ □												
96	Reduce turf with shrubs and trees			✓	✓	✓	✓					10 entities				✓ ○ ✓ ● ● ● ✓ ○ ● □ ○ □												
97	Evaluate areas for installing woody debris or habitat structures and install	✓								✓		5 entities	\$60/ft ^f		consultant services	● ○ □ ○ ✓ □ □ □ ○ □												
98	Stabilize soils at crossing embankments	✓		✓	✓	✓						per Lower Huron Stream Crossing Inventory			in coordination w/ County Drain Offices; County Road Commissions; MDOT	□ ● ○ ● ● ✓ □ □ □ ○ ○ ● □												

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997

Table 5.5 Lower Huron River Watershed Action Plan

KEY:
 ✓ currently doing
 ● planned for short-term
 ○ planned for long-term
 □ not planned currently
 ✕ not applicable

◆ = will be reflected in SWPPIs, PEPs, and IDEPs as commitments

#	Management Alternative	Goals Addressed										Level of Effort	Cost		Technical/Financial Resources	Entities												
		1 Public Info & Ed	2 Protect Natural Features	3 WMP Fulfillment	4 Reduce Flow Variability	5 Soil Erosion/Sediment	6 Reduce Nutrients	7 Reduce Pathogens	8 Low Impact Development	9 Increase Monitoring	10 Recreational Uses		Capital	Annual		Berlin Twp	Brownstown Twp	Flat Rock	Gibraltar	Huron Twp	Rockwood	Romulus	South Rockwood	Sumpter Twp	Van Buren Charter Twp	Wayne County	Woodhaven	W-B School District
Structural																												
99	Construct infiltration basins/trenches	✓		✓	✓	✓	✓	✓			at strategic locations in 9 entities	\$2-5/cubic ft ^b	<5% of construction	consultant assistance	✓	●	○	○	○	✓	□	✓	○	□	□	○	□	
100	Construct retention/wet extended detention ponds for new developments	✓		✓		✓	✓				variable, depends on amount of development/redevelopment			in coordination w/ County Drain Offices	□	✓	●	✓	○	✓	✓	□	○	✓	□	✓	□	
101	Install best available technology to reduce nutrients at permitted point sources					✓	✓				NPDES facilities in 5 entities	varies depending on technology and pollutant			✓	○	○	□	□	○	✓	✕	✕	✕	□	□		
102	Install catch basin inserts	✓			✓	✓	✓				sewered areas	\$50-800 each ^f	\$20-40/each		●	○	○	○	○	○	✓	●	○	□	□	□		
103	Install grade stabilization structures for agricultural operations	✓		✓	✓	✓	✓				2 entities	\$5k-6k geotextile \$8.5k-9k fabricated	\$50-95/each		□	○	□	□	□	✕	✕	○	✕	✕	✕	□		
104	Install porous pavement				✓	✓	✓	✓	✓		at appropriate new developments and redevelopments	\$40k-80k/acre ^f	\$200/acre		●	○	●	○	●	●	□	●	○	●	□	○	□	
105	Install sand and organic filters	✓			✓	✓					1st: new development; 2nd: retrofits	\$5/cubic ft	\$0.54/cubic ft		□	○	□	□	□	●		□	□	○	○	□		
106	Install sediment traps or basins at construction sites	✓		✓	✓	✓					All sites	\$6k ^b	10% of installation		□	✓	●	✓	●	✓		□	□	✓	○	✓	□	
107	Install waste storage facilities				✓	✓	✓				where feasible	\$100k-250k ^b	\$2k-5k	USDA programs: EQIP; CRP	○				✕	✕		○	□	✕	✕		□	
108	Repair misaligned/obstructed culverts	✓		✓	✓	✓					as identified in Lower Huron Stream Crossing Inventory	\$150k-200k/site		County Road Commissions; MDOT; consultant assistance	○	○	○	○	✓	✓	✓	○	□	○	✓	○	□	
109	Stabilize road/bridge surfaces			✓	✓	✓					as identified in Lower Huron Stream Crossing Inventory			County Road Commissions; MDOT; consultant assistance	○	○	✓	○	●	✓	✓	○	□	✕	✓	○	□	

^a Combined Downriver WMP
^b Mill Creek WMP
^c Middle 1 Rouge SWMP
^d HRWC Estimate
^e Lower Grand WMP
^f RPO Cost Estimating Guidelines 1997