

Table 11 - Implementation Plan Elements and Schedule for Agriculture

Note: **IC** = TMDL Implementation Committee; **M** = Milestone, **T** = Target

Plan Elements	NPS Category Elements	Target/ Milestone	Completion Dates
1. Stakeholders	Agricultural Producers including livestock, crop, crop/livestock, MDA, MDEQ, Agribusiness, crop consultants, drain commissioners, SUE Ag & NR Agents (ANRs), NRCS Resource Conservationists (Rcs), Conservation Districts (CDs), land use planning commissions, zoning boards, land conservancies, Mich. Twp. Assoc. , non-agricultural property owners in zoned ag. areas, utility right-of-way owners	M: ANRs TMDL orientation and determination of liaison/network to IC-3 Ag producer input sessions (<i>see Attachments</i>) - CD liaison to IC T: Develop similar NRCS liaison and RCs network 2002 T: Contact other ag stakeholders thru ed/info sessions 2006	Completed Winter 2000 Completed Winter 2002
2. Regulations & guidelines	Clean Water Act Michigan Natural Resources and Environmental Protection Act Guidelines: -MI Ag Env. Assurance Program (MAEAP) -Generally Accepted Agricultural Management Practices (GAAMPs) - Conservation Reserve Enhancement Program (CREP) in Michigan will expand and could include the Kazoo River basin, if sought. -Water Quality Trading Rules	M: permitting of livestock farms over 1000 A Units M: MAEAP certification 2001 T: farmstead 2002 T: cropping 2004 SCD, County or local office responsible for permits and enforcement	2002-03?? 2001 2001 & ongoing
3. Goals	Reduce P delivery by 50% thru continued improvements in: - nutrient mgmt. - soil erosion control - manure & fertilizer storage/handling - to determine the existing phosphorus sediment load as part of the equation to determine success of implementations. See Attachments for summary of agriculture stakeholder input sessions.	M: reduced P sales in feed and fertilizer over last 5 years in certain parts of the watershed T: Identify potential sources and their relative contributions T: continued adoption of P reduction practices thru a systems and/or whole farm approach on individual farms	Ongoing

4a. Ongoing efforts	<ul style="list-style-type: none"> -MAEAP systems education & implementation -RTF complaint verification & correction -Farmstead & field risk assessments for groundwater & surface water -Manure Mgmt Systems Planning on farms -Installation of Farm Bill BMPs -CWA 319 watershed programs -MDEQ compliance and enforcement efforts 	<p>Ongoing</p> <p>M: 4 planning grants awarded in the basin</p> <p>T: 4 implementation grants awarded 2003-04</p>	2001-02
4b. Recommendations	<ul style="list-style-type: none"> - Expand and target installation of Farm Bill BMPs thru RC network - Permitting of all CAFO operations in the watershed that require a permit - Create case studies of three farms successfully managing P to use in producer education - Create new educational initiatives targeting agribusiness and crop consultants/water quality logo (<i>see attached</i>) - Continue with MGSP, MMSP, CNMP and MAEAP education and implementation - Resolve direct discharge violations through compliance/enforcement - Reduce direct discharge violations thru education - CREP application for Kazoo River -Water Quality Trading 	<p>ongoing</p> <p>T: 2004</p> <p>T: 2006</p> <p>ongoing</p> <p>ongoing</p>	
5. Funding resources	<ul style="list-style-type: none"> Individual producers Farm Bill programs Sub basin 319s CMI USDA 406 Water Quality Funds MDNR Inland Fisheries grant program Agriculture associations/organizations Great Lakes Fisheries Trust Fund CREP WQ Trading 	<p>Ongoing</p> <p>M: 2001-02</p> <p>M: 2001</p> <p>M: 2001</p> <p>M: 2001</p> <p>Fund availability</p> <p>Fund availability</p>	May 2002
6. Program resources	<ul style="list-style-type: none"> CDs MSU Extension ANR network NRCS RC network RC&Ds MDEQ MDA Farm Bureau MSU WQ Trading and project partners to include KEC, consultants, paper companies, Friends of the Kazoo River, etc. 	<p>T: 2002</p>	May 2002

7. Cost optimization	<ul style="list-style-type: none"> - Focus efforts in 2 high ag. contributing sub-basins Battle Creek River Gun River - Whole farm systems approach on farms in those 2 sub-basins - Ag and non-ag nonpoint sources, individually or cooperatively - Recognize and address social boundaries as well as sub-basin boundaries. Turn social boundaries into watershed “fits”, so that physical as well as social successes can be measured. - Use of standardized designs - WQ Trading 		
8. Data gaps	<ul style="list-style-type: none"> Reductions not created by implementing traditional farm bill BMPs (lack of P reduction calculations) Lack of soil testing information Lack of P balance figures for individual farms Locations of major contributions/loads Minimal riparian soil loss information Mapped existing locations of buffers, no-till operations, farm drains and tiled fields 		
9. Accountability structure	<ul style="list-style-type: none"> - MDA MAEAP - NRCS Farm Bill Implementation - MDEQ compliance and regulatory enforcement procedures -TMDL Implementation Committee 		
10. Reporting	<ul style="list-style-type: none"> - NRCS Farm Bill implementation - county quotas - MDEQ compliance and regulatory enforcement procedures - CDs - tillage acreages - MAEAP certifications -CREP 		
11. Timeline	Reduction goals	50% collective ag. NPS reduction in P load	2006

<p>12. Tracking (Both social and physical parameters need to be tracked or monitored.)</p>	<p>CAFO regulated farms Direct discharge violations Acres under MMSP Acres under CNMP P balance on farms - cumulative acreage All relevant installations for P reduction Educational programs and demo sites Possible CREP Multiple interactions/activities in the Kalamazoo River watershed that have already taken place between stakeholders</p>	<p>T: Tracking 319 Annual MSU Reports thru 2004 -New BMPs implemented -Number of NRCS Whole Farm Plans prepared, accepted and acted upon</p>	<p>2002-2005</p>
<p>13. Monitoring</p>	<p>- Database Development/Maintenance (MSUE/MSU) monitoring results - CAFO regulated farms - Direct discharge violations - P balance on farms (cumulative acreage) - Data analysis (Public and Private sectors) - Public availability of data and analysis</p>	<p>M: Funding Received T: 2004 Ongoing</p>	<p>2001 - 2005</p>
<p>14. Contingency Plan</p>	<p>Create additional self-funding incentives and/or other funding for stakeholder education and implementation of BMPs. Review & revise educational strategies on basis of stakeholder buy-in, feedback and compliance. Recommend designation of smaller livestock facilities for CAFO permitting.</p>	<p>Number of sites actively involved in implementation Are education outcomes measurable?</p>	<p>2003-2005 2003-2005 2006-2008</p>
<p>15. Updating Strategy</p>	<p>- Through TMDL committee/authority - Tracking system created and agreed to by all participants</p>		<p>2006</p>