

**Table 15 - Septic System Management Implementation Plan Elements and Schedule**

Plan Elements	NPS Category Elements	Target/ Milestone	Completion Dates
1. stakeholders	<ul style="list-style-type: none"> <li>- <u>8</u> County Health Departments</li> <li>- Installers of septic systems</li> <li>- Septic haulers &amp; service providers</li> <li>- Home builders &amp; developers</li> <li>- Realtors Associations</li> <li>- Home owners with septic systems, especially riparians</li> <li>- Lake Associations</li> <li>- Local elected and appointed officials (MTA, MML, etc.)</li> <li>- DEQ Drinking Water &amp; Radiological Protection Division, Sewage Program (area of responsibility)</li> <li>- Local Municipal/Twp. Environmental Committees (EHAC in Kazoo Cnty)</li> <li>- WWTP operators</li> </ul>	<ul style="list-style-type: none"> <li>- Meet w/ Health Dept. contacts</li> <li>- Make contact with pertinent Associations and/or have necessary contact information</li> <li>- Strengthen activities that bring in more stakeholders to spread information</li> </ul>	<p>February-March 2002</p> <p>May 2002</p> <p>May 2002-ongoing</p>
2. regulations	<ul style="list-style-type: none"> <li>- <u>Each</u> MI county has own code for residences &amp; duplexes (no State-wide system)</li> <li>- Minimum program requirements set by MDEQ for <u>each</u> county</li> <li>- Annual report to MDEQ</li> <li>- Existing residential standards are prescriptive-based only (# of bedrooms, occupants, laundry, setbacks, etc.)</li> <li>- Commercial facilities DO have standards</li> <li>- MI Subdivision Control Act will regulate residential developments</li> </ul>	<ul style="list-style-type: none"> <li>- Obtain codes for pertinent counties</li> <li>- Review MDEQ requirements per county</li> <li>- determine if these are the same within watershed counties</li> <li>- Seek opportunity for multi-county, watershed-wide adoption of same codes for consistency within various health departments</li> </ul>	<p>As needed</p> <p>As needed May 2002</p> <p>May 2002 Ongoing</p>

<p>3. goals</p>	<ul style="list-style-type: none"> <li>- Move incrementally to performance based sanitary codes</li> <li>- Explore benefits of licensing septic installers throughout watershed</li> <li>- Follow “failing septic systems grant” in Pavilion Twp. for <u>E.coli</u> impact to surface waters</li> <li>- Determine if phosphorus can be added for analysis in Pavilion Twp project</li> <li>- Develop a consistent tracking system for pumping of septic systems and proper handling of septage</li> <li>- Develop an active and effective watershed-wide educational component</li> <li>- Strive for compatibility of data base systems between all watershed counties (Allegan, Kalamazoo, Barry &amp; Eaton now have same system)</li> <li>- Track &amp; record types of systems that fail and why with uniformity for all watershed counties</li> <li>- Seek to develop incentives for more frequent maintenance “carrots”</li> <li>- Establish consistent watershed-wide inspection requirement and protocols for “alternative” systems (i.e., minimum once every-other-year mandatory inspections?)</li> </ul>	<ul style="list-style-type: none"> <li>- Monitor transition over 5-years</li> <li>- Identify benefits; promote if useful</li> <li>- Use results in education element for all</li> <li>- ongoing</li>   <li>- Identified where and how to start; expend as possible</li> <li>- Investigate and develop as potential</li> <li>- Who takes lead? Timetable to accomplish w/in watershed</li> <li>- Develop one system to track; how many counties adopt in 5-years</li> <li>- Private sector lead? # of customers on program</li> <li>- Determine acceptability and capability of option</li> </ul>	<p>Throughout study</p> <p>2002-2003</p> <p>2002-2003</p> <p>2002</p> <p>2003-2004</p> <p>2002-ongoing</p> <p>Ongoing-2005</p> <p>2003-ongoing</p> <p>2003-ongoing</p> <p>2003-2004</p>
<p>4a. ongoing efforts</p>	<ul style="list-style-type: none"> <li>-EHAC (Kalamazoo County) looking to respond to gaps in on-site sewage disposal educational and other aspects</li> <li>- Portage River &amp; Dorance Creek <u>E. coli</u> work</li> <li>- Education by County Health Depts., MSU Extn., and others</li> <li>- MSUE file folder, WQ-39, <u>Managing Your Septic System</u>, provided w/ permit in K. County</li> <li>- One-on-one meetings with Health Dept. staff (K County)</li> <li>- Customer service survey (K. Cnty)</li> <li>- Better understanding of on-site alternatives</li> </ul>	<ul style="list-style-type: none"> <li>-ID stakeholders; work 11-01 to 6-02;</li> <li>- Track results; add P?</li> <li>- Seek cooperative development of materials</li> <li>- Possible expansion of use</li> </ul>	<p>Mid 2002</p> <p>2003</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>2002-2003</p> <p>Ongoing</p>

<p>4b. recommendations by Nonpoint Source Categories</p>	<ul style="list-style-type: none"> <li>- Move to performance based sanitary codes (SIGNIFICANT STEP) in watershed</li> <li>- Optional residential treatment processes for single family, including low to no water systems</li> <li>- Systems suitable for cluster developments</li> <li>- Wetlands treatment (small discharges)</li> <li>- State-wide educational component</li> <li>- Coordinate educational efforts within the watershed to stakeholders</li> <li>- GKAR (Greater Kalamazoo Assoc. of Realtors ) can pass info. on to property owners; public ed. in <u>Home</u> magazine; sponsor ed. sessions, etc.</li> <li>- License haulers</li> <li>- Record keeping for what works and what doesn't under what conditions</li> <li>- Track maintenance, frequency of pumping; create incentives (subsidy) for good maintenance (pump once/three years and 5<sup>th</sup> time free)</li> <li>- Service providers could develop &amp; market inspection/maintenance programs (same as HVAC firms and others do now)</li> <li>- Increase phosphorus uptake by installation of shallower systems (within upper 24" of soil)</li> <li>- Better performing systems to be charged lower permit fees</li> <li>- Annual inspection required for alternative systems</li> <li>- Move toward elimination of land application</li> </ul>	<ul style="list-style-type: none"> <li>- Agreement on approach and movement forward</li> <li>- Identify most likely elements for application and implementation</li> <li>- Demonstrations</li> <li>- Obtain funding and agreements necessary to move select elements ahead</li> <li>- Prepare materials and begin</li> <li>-Determine if feasible</li> <li>- Set up process for tracking what works and maintenance items</li> <li>- Evaluate as option and start if feasible</li> <li>-Establish guidelines for technique and promote where soils are adequate</li> <li>-Determine feasibility and implement if it is</li> </ul>	<p>2002-2005</p> <p>2002-2004</p> <p>2003-2004</p> <p>2003-2004</p> <p>2003-2004</p> <p>2003</p> <p>2003-2004</p> <p>2003-2004</p> <p>2002-2005</p> <p>2003-2005</p> <p>Ongoing</p>
<p>5. funding resources</p>	<ul style="list-style-type: none"> <li>- Capture WWTP increased rates for septage disposal</li> <li>- Apply surcharge to haulers and direct it to County fund for incentives, etc.</li> <li>- Increase cost of permit for system based upon technical-performance merit</li> <li>- Taxes/fees for new development/connections</li> <li>- EPA - State Revolving Funds (SRF)</li> <li>- Grants for innovative technologies or for research (EPA, others)</li> </ul>	<ul style="list-style-type: none"> <li>- All elements need to be explored for economic and political feasibility within the watershed; start wherever most acceptable</li> </ul>	<p>Ongoing</p>

6. program resources	<ul style="list-style-type: none"> <li>- County Health Departments</li> <li>- Cooperative Extension</li> <li>- Greater Kalamazoo Association of Realtors</li> <li>- MDEQ (operator training, unit P removal, joint pilot projects, assistance, support for new tools/flexibility)</li> <li>- National Sanitation Foundation</li> <li>- WEF technical resources (local, state, national)</li> <li>- Private sector</li> <li>- Professional Associations</li> <li>- Grants/Demonstration projects (CMI, other)</li> <li>- EPA Guidelines for Management of Onsite/Decentralized Wastewater Systems (<a href="http://www.epa.gov/owm/decent/index.htm">www.epa.gov/owm/decent/index.htm</a>)</li> </ul>	<ul style="list-style-type: none"> <li>- Continue to seek coordination and cooperation for mutually reinforcing activities watershed-wide</li> <li>- Update and produce materials suitable for use watershed-wide when possible</li> <li>- Seek new outlets for assistance with outreach</li> </ul>	Ongoing
7. cost optimization	<ul style="list-style-type: none"> <li>- Feasibility studies/pilot programs</li> <li>- Performance based standards</li> <li>- Municipally operated septage pumping and maintenance contracts with owners</li> <li>- Current costs of new system, maintenance of existing system, replacement of acceptable new system</li> <li>- Comparison of performance (efficacy of systems) both traditional and alternative</li> <li>- Capital costs alternative systems and systems for new cluster developments</li> <li>- Service providers could develop &amp; market inspection/maintenance programs (same as HVAC firms and others do now) that would optimize owners system costs</li> </ul>	<ul style="list-style-type: none"> <li>- Share information between all health departments and appropriate entities to maximize positive impacts</li> </ul>	Ongoing
8. data gaps	<ul style="list-style-type: none"> <li>- Data on installation dates, frequency of maintenance, system performance under differing on-site conditions</li> <li>- Phosphorus levels within discharge from leach fields</li> <li>- Costs to implement controls</li> <li>- Effective and approved alternatives known to installers, builders, customers</li> <li>- Owners understanding of how and why system functions and best maintenance procedures</li> <li>- Known locations of failures and impacts to nearby surface waters</li> </ul>	<ul style="list-style-type: none"> <li>- See that information is shared and made available for the most suitable users by 2004</li> <li>- Necessary funds obtained to undertake and perform these elements</li> </ul>	2002-2004

<p>9. accountability structure</p>	<p>(Accountability/Consequences)</p> <ul style="list-style-type: none"> <li>- More effective and accessible record keeping for installation, maintenance and related on-site actions</li> <li>- Consider municipally operated pumping &amp; maintenance contracts with owners of systems</li> <li>- Test/pump riparian systems once per three years</li> <li>- Builders/developers must provide information to owners</li> <li>- Prior to sale of home, documentation should be provided to purchaser for when last pumped</li> <li>- Identify where problems are most frequently occurring in the watershed</li> <li>- Magnitude of phosphorus impacts from failed/failing systems in watershed (P contribution as TMDL factor)</li> </ul>	<ul style="list-style-type: none"> <li>- Seek acceptability of concepts among participants</li> <li>- Begin process of developing elements for implementation</li> <li>- Identify responsible party for types of on-site systems and provide each with documentation that explains liabilities</li> </ul>	<p>2002-2003</p> <p>2002-2004</p> <p>2003</p>
<p>10. reporting</p>	<ul style="list-style-type: none"> <li>- Annual report by Health Departments to MDEQ</li> <li>- Interim data shared between Health Departments</li> <li>- Annual volume of septage received at WWTP (tracking) to health departments</li> <li>- Service providers record frequency of service per site &amp; provide to County Health Dept. once per three years</li> <li>- Annual number of residences switched to sewer</li> </ul>	<ul style="list-style-type: none"> <li>- Annual report</li> </ul>	<p>As determined necessary by Steering Group; minimal 1/year</p>
<p>11. timeline</p>	<p>(implementation elements, reporting, reduction goals)</p> <p>Consider Preparation of Worksheet</p>	<ul style="list-style-type: none"> <li>- Annual updates</li> </ul>	<p>May 2002</p> <p>Continues through 2005</p>
<p>12. tracking</p>	<ul style="list-style-type: none"> <li>- Coordination of all county health dept. records for new installations, service provided, replacements installed or switched to sewer</li> <li>- Types &amp; number of systems installed</li> <li>- Volumes of septage collected annually</li> <li>- Number of service providers per county</li> <li>- Number of jobs performed per service provider per year</li> </ul>	<ul style="list-style-type: none"> <li>- Identify how to increase coordination and tracking efforts and determine how best to accomplish tasks</li> </ul>	<p>Ongoing</p>
<p>13. monitoring</p>	<ul style="list-style-type: none"> <li>- Frequency and location of reported discharges to surface water</li> <li>- Frequency and location of reported septic failures &amp; replacements</li> <li>- River/lake monitoring, (MDEQ/ other)</li> <li>- Database maintenance/accessibility (determine responsibility for this aspect)</li> <li>- Data analysis should be shared responsibility of Steering Group</li> </ul>	<ul style="list-style-type: none"> <li>- Funding for monitoring as described received by 2003</li> </ul>	<p>Quarterly or annual results of monitoring to be shared with all parties</p>

<p>14. contingency plan</p>	<ul style="list-style-type: none"> <li>- (CONSIDERATIONS)</li> <li>- (Short-term response to not meeting monthly or seasonal goals)</li> <li>- (5-year plan considerations if goals are not met)</li> <li>- (Long-range plans...zoning/health regulation prohibiting septic systems within 100 feet of a waterbody with routine pumping)</li> </ul>	<ul style="list-style-type: none"> <li>- Strategy in plan</li> <li>- Strategy in plan</li> <li>- Strategy in plan</li> </ul>	<p>May 2002 March 2003  March 2004  March 2005</p>
<p>15. updating strategy</p>	<ul style="list-style-type: none"> <li>- Through TMDL committee/authority (timing of reports/reviews/updates...yearly, 5 years)</li> </ul>	<ul style="list-style-type: none"> <li>- Annual Reports</li> <li>- 5-year permit cycle</li> </ul>	<p>(December)  Dec. 2004</p>