

Table 13. Construction Management Implementation Plan Elements and Schedule.

Plan Elements	NPS Category Elements	Target/ Milestone	Completion Dates
1. stakeholders	<p>- Residential, Commercial/Industrial Developers, Home Builders Association, site excavators and other building trades people, Soil Erosion and Sedimentation Permit Providers, Drain Commissioners, County Soil Erosion Control Agents, Approved Public Agencies (APAs), landscape architects, architects, environmental consultants, Chambers of Commerce, issuers of building permits, County Health Departments, Planning Commissions, Site plan review authorities, rural and urban zoning boards, land use groups, SW MI First, BC Unlimited, MDEQ, County Prosecutors (others?)</p> <p>NOTE: there are 35 agencies within the watershed</p>	<p>Meet (several times) to discuss existing processes, concerns and needed or desired alterations (T)</p> <p>Majority agree on approaches (M)</p> <p>Groundwork established by several participants to continue periodic meetings (T & M)</p>	<p>April-May 2002</p> <p>May 2002</p> <p>June 2002</p>
2. regulations	<p>- Federal CWA</p> <p>- Federal Storm Water Regs.</p> <p>- MNREPA (Act 451) Part 91 (Amendments, effective March 2003 reduce size to 1 acre)</p> <p>MDEQ Construction Storm Water Operator (CSO)</p> <p>- Building codes, health codes, zoning and other local ordinances, site plan approval, plat restrictions, specifications within proposals</p> <p>- Local land use master plans</p> <p>- Other local storm water management rules (i.e., Kalamazoo County Soil Erosion and Sedimentation Control Ordinance)</p>	<p>Obtain existing local ordinances, guiding documents, etc., ASAP (T)</p> <p>Track adequacy of regulated programs on those doing construction & development (T)</p>	<p>May-Aug. 2002</p> <p>June 2002-June 2003</p>

<p>3. goals</p>	<ul style="list-style-type: none"> - Select and maintain appropriate BMPs suitable for erosion and sediment control on a specific site - Ensure compliance with current codes and laws re: erosion and sediment control - Promote site designs with less potential for run-off to water bodies (i.e., less total clearing of sites, effective use of BMPs) - Encourage more effective site plan review processes (i.e., new City of Kalamazoo process) - Increase use of knowledgeable certified storm water inspectors as part of construction crews; ensure correct procedures are followed - Encourage State to rescind Certifications of Storm Water Operators for not following requirements - Ensure that property owner understands the “why”, “how to” and his/her responsibility for each site - Practice staged development and site stabilization with minimal grading - More planning prior to actual soil disturbance 	<p>Track efforts throughout five year period and beyond (T)</p> <p>Noticeable decreases in complaints & compliance responses (M)</p> <p>Detectable differences in less sediments on roadways from out-tracking (M)</p>	<p>Throughout five year period and beyond</p>
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<p>4a. ongoing efforts</p>	<ul style="list-style-type: none"> - Compliance and enforcement through inspections and/or permits of Soil Erosion and Sedimentation Permit agents, County Soil Erosion Control Officials, designated MDEQ personnel, Certified Storm Water Operators and other enforcement officials - Assistance provided by RC &D offices, NRCS, Conservation District personnel and MSUE - Proactive approaches being taken within CMI, 319, Watershed Planning efforts and other projects - Continue educational and professional development opportunities within member associations related to construction trades - Recommend and implement “new” approaches by related professionals (design, construction and engineering firms) 	<p>To be expanded and selectively phased in throughout project (T)</p> <p>Implemented alternatives to current practices will signal desired changes taking place (M)</p>	<p>Ongoing</p> <p>Increased efforts should show results within two years of TMDL start</p>
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<p>4b. recommendations by N.P.S. Categories</p>	<ul style="list-style-type: none"> - Make Storm Water Certifications meaningful (take away privilege if not meeting requirements) - Site access drive first for truck clean-off procedures; bring in aggregate (base materials) for driveways & to help eliminate mud tracking onto roads - Educate subcontractors to care about what they do and how it impacts a project site - Desirable to have permit consolidation for building, driveway, soil erosion, etc. - Preconstruction planning directed to minimize soil erosion & sedimentation - Develop positive incentives for stakeholders to incorporate desired approaches - Coordinate all Part 91 agents in watershed for consistency, communication and coordination (uniform regulation & enforcement) - Sites should be inspected early & <u>not</u> when well into the job - Including guidelines as part of the permit would help - Create registry of all contractors doing work within each jurisdiction - Provide rationale for P reductions and role of construction sites as P generators for contractor buy-in 	<p>Observe changes implemented over time (T)</p>	<p>April-May 2002</p>
<p>5. funding resources</p>	<ul style="list-style-type: none"> - Fees for work performed - Demonstration project grants 	<p>Grants prepared and awarded (M)</p>	<p>May 2002</p>
<p>6. program resources</p>	<ul style="list-style-type: none"> - MDEQ CSO Manual - MI BMP Guidebook - Kal. Conservation District - NRCS - RC&D - Professional Associations - Websites for multiple sources of BMPs 		<p>May 2002 - end of program</p>

7. cost optimization	<ul style="list-style-type: none"> - Pass penalty costs or additional clean-up costs on to responsible subcontractor(s) - Maintain storm water on site when possible - Reduce clear-cutting; leave on-site vegetation for erosion control 	<p>Implement mechanism for this (M) Pass ordinance (M)</p>	Through next 5-10 years
8. data gaps	<ul style="list-style-type: none"> - Lack of understanding on the part of subcontractors for the impact of the results of their actions - Simple inventory of all local resources 	<p>Provide at least one training program per year for education through participant contacts (M) Track decrease in problems=success (T) Compile resource inventory (M)</p>	Every year
9. accountability structure	<ul style="list-style-type: none"> - Permits and Enforcement - Site log book requirement of Certified Storm Water Operators - Knowledge of site owner and specifications for work to be performed - Visual on and off-site observations - Target market is the person managing the site; one-third of all residential permits are issued to the homeowner and most have no idea what their responsibilities are with this permit; accountability needs to be brought to their attention 	<ul style="list-style-type: none"> - Number of permits issued (T) - Number of enforcement inspections (T) - Number of complaints filed (T) - Number of sites fined or closed (T) 	Ongoing
10. reporting	<ul style="list-style-type: none"> - Ongoing compliance tracking/reporting results from MDEQ and local agencies 	<ul style="list-style-type: none"> - Annual report should include tracking 	Annually

11. timeline	<ul style="list-style-type: none"> - Ongoing opportunities for improvements 	<ul style="list-style-type: none"> - Reductions in identified problems (M) - Improvements in areas draining to water compiled (T) 	May 2002 and throughout process
12. tracking	<ul style="list-style-type: none"> - Documentation kept by responsible agencies for number and type of permits issued - On-site reports prepared and maintained by Certified Storm Water Operators - Logged number of enforcement actions - Reduction in P loading - Locations where work performed (discharge areas?) 	<ul style="list-style-type: none"> - Include summary in annual report (T) - Real increase in log books prepared and maintained (M) - Reduction noted in enforcement calls (M) - Reduction measured in P monitoring (M) 	Ongoing
13. monitoring	<ul style="list-style-type: none"> - Seasonal impact of construction on P levels (variations) detected 	Evaluate on annual basis	Ongoing
14. contingency plan	<ul style="list-style-type: none"> - Implement educational and voluntary approaches - Adjust annually if necessary - More aggressive enforcement if voluntary actions fail 	<ul style="list-style-type: none"> - Strategy - Strategy - Strategy 	May 2002 March 2003 March 2004 March 2005
15. updating strategy	<ul style="list-style-type: none"> - Through TMDL committee/authority (timing of reports/reviews/updates...yearly, 5 years) 	<ul style="list-style-type: none"> - Annual Reports (T) - 5-year permit cycle (T) 	(December) Dec. 2004