3GQ0003420110816

LAKE	MENTOR	CITYOF MENTOR	3GQ00034	2011/08/16	MACPHERSON, LINDSIE

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Environmental
Protection Agency

Governor
Lt. Governor
Director

August 15, 2011

RE: LAKE COUNTY
CITY OF MENTOR
PERMIT NO. 3GQ00034*BG
MUNICIPAL STORM WATER
PROGRAM INSPECTION

Mr. Brian Ashurst
Assistant City Engineer
City of Mentor
8500 Civic Center Blvd.
Mentor, OH 44060

Dear Mr. Ashurst:

Ohio EPA has completed an audit for a portion of your municipal storm water program. Our audit primarily focused on implementation of minimum control measure (MCM) #4: Construction Site Storm Water Runoff Control and MCM #5: Post-Construction Storm Water Management in New Development and Redevelopment. This program is a requirement of the Ohio EPA General Storm Water National Pollutant Discharge Elimination System (NPDES) Permit for Small Municipal Separate Storm Sewers Systems (MS4s) OHQ000002 and Ohio Administrative Code 3745-39.

On June 1, 2011, Ohio EPA met with you and other representatives of the City of Mentor to determine compliance with the NPDES permit and its associated Storm Water Management Program (SWMP). In performing this audit, Ohio EPA implemented a modified version of the Municipal Storm Water Program Evaluation Guide developed by the United States Environmental Protection Agency.

Attached are the Municipal Storm Water Program Evaluation, File Review, and Field Inspection Worksheet(s) completed for your community. Please review these documents in detail to determine specific elements where your construction and post-construction programs need improvement as well as suggestions to improve your MS4 program. The following is a summary of our audit findings:

Violations:

- **Failure to ensure permittees amend plans for sediment and erosion control, controls for other wastes, and post-construction best management practices, i.e., the Storm Water Pollution Prevention Plan (SWP3), when a change has occurred.** This is a violation of Part III.B.4.a.i of the Ohio EPA General Storm Water NPDES permit # OHQ000002. Part III.B.4.a.i requires the City's local construction ordinance to be equivalent with the technical

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requirements set forth in the Ohio EPA General Storm Water NPDES Permit for Construction Activities #OHC000003 (CGP). Please note that the CGP requires a permittee to amend the SWP3 whenever there is a change in design, construction, operation or maintenance, which significantly affects the potential for the discharge of pollutants to surface waters of the State, or if the SWP3 proves to be ineffective in controlling pollutants in storm water discharges. When conducting a compliance inspection, Ohio EPA recommends that municipal inspectors ask the construction site operator if the SWP3 has been amended and ensure that the City Engineer has reviewed amendments, as needed.

- **Failure to inspect construction sites at least once per month.** This is a violation of Part III.B.4.c of the NPDES permit. Unless the City's Storm Water Management Program (SWMP) provides a procedure for prioritizing construction site inspections, the NPDES permit requires the City to inspect active construction sites for compliance with the SWP3 at least once per month. Although some sites were inspected at the required frequency, the City was unable to document that all active sites were inspected per the required frequency.

- **Failure to escalate enforcement to achieve compliance with the local construction site and post-construction ordinances.** This is a violation of Part III.B.4.a.vi of the NPDES permit. Our file review and interview revealed that the City does not send written Notices of Violation (NOVs) during the construction process for non-compliance with Chapter 1353 of the municipal code (Erosion and Sediment Control Ordinance). No actions such as stop work orders or court actions as permitted by Chapter 1353 have been implemented to date. The City must develop and implement an enforcement escalation protocol so as to provide inspectors and the City Engineer a clear policy on when to take enforcement to the next level and how that is to be achieved.

  Ohio EPA recommends the City provide a written inspection report or NOV to the construction site operator(s) which holds NPDES permit-coverage, i.e., developer, homebuilder and/or contractor, to summarize inspection findings and compliance issues. The City currently has a policy to work with construction site operators on a verbal basis, but this fails to provide documentation needed to escalate enforcement and achieve compliance. NOVs should note the section(s) of Chapter 1352 and 1353 that the operator has violated and set a deadline for compliance. During the field inspection and file review, it was stated that inspection reports are completed by inspectors from either the Engineering Department or Building Department, but these reports are simply filed away and the contractor, developer or homebuilder is not instructed to take corrective action.

- **Failure to develop a program to ensure adequate long-term operation and maintenance (O&M) of privately-owned post-construction best management practices (BMPs).** This is a violation of Part III.B.5.d and Part III.B.5.f of the NPDES permit. All privately-owned post-construction BMPs on development and redevelopment sites that obtained NPDES permit coverage on or after April 21, 2003, must be included in your long-term maintenance program. The City must develop a program to ensure the long-term maintenance of these structures. Ohio EPA recommends that each facility be inspected at least once a year either by the City or the party responsible for long term maintenance, e.g., the property owner or homeowners' association. The City is working towards compliance with this requirement, but they have not finalized their O&M standards, long-term maintenance agreements, or the inspection forms. Please provide me a proposed timeframe to complete the standards, agreements and inspection forms required to enact your O&M program for privately-owned post-construction BMPs. The City of Mentor will remain in violation of this section of the NPDES permit until these items are completed and the program is implemented.

- **Failure to submit a Notice of Termination within 45 days of reaching final stabilization on municipal construction projects.** This is a violation of Part IV.A of the Ohio EPA General Storm Water NPDES permit #OHC000003, i.e., storm water associated with construction activities. Our records show that the City of Mentor has 3 active projects permitted under the CGP, but indicated during the interview that 2 of the projects were completed and have reached final stabilization. Please submit an NOT for both projects that are completed and final stabilization has been achieved.

Deficiencies:

- There are instances when the Planning Commission issues a plan approval without first ensuring the Engineering Department has approved the Storm Water Pollution Prevention Plan (SWP3). This may result in construction starting without the installation of appropriate sediment and erosion controls and can limit the ability of the Engineering Department to ensure the implementation of the appropriate post-construction practices. The Planning Commission should amend its plan approval procedure to prevent the approval of plans without an approved SWP3.

- Although the Engineering Department requires a pre-construction meeting with developers and contractors, the Building Department does not. Thus, pre-construction meetings are only held for subdivisions and utility mainline projects. No pre-construction meeting occurs for commercial, industrial and individual

home construction. The pre-construction meeting provides an opportunity to discuss the storm water pollution prevention plan (SWP3) with those responsible for its implementation. Compliance rates should improve if pre-construction meetings include a discussion of the SWP3 and how BMP installation relates with the sequence of construction. Ohio EPA recommends that the City amend its procedures to provide a pre-construction discussion of the SWP3 for commercial, industrial and individual house construction.

- During the inspection, we noted that the City does not track the submittal of Individual Lot NOIs nor Co-Permittee NOIs, but they do track general NOI submittal for NPDES permit coverage. Individual Lot NOIs are to be submitted by the operator of construction activities on a sublot within a larger development. Co-Permittee NOIs are typically submitted by contractors that are responsible for day-to-day operations at the construction site required to ensure compliance with the SWP3. To be equivalent to the NPDES permit program for storm water associated with construction activity, the City should begin ensuring that all construction site operators have submitted the appropriate NOI to Ohio EPA and have obtained NPDES permit coverage. NOI lists are found on the Ohio EPA website at www.epa.ohio.gov/dsw/permits/gplist.aspx.

- The City utilitzes the Energov system to keep an inventory of construction sites and schedule construction site inspections, however it was not apparent to Ohio EPA that this system is capable of producing a list of active construction sites. It appears that the system is producing an inventory of post-construction BMPs. This does not necessarily produce an inventory of active construction sites, as not all sites are subject to post-construction requirements. Please review the report generation capabilities of Energov and determine if it can be used to produce a list of construction sites with active and valid NOIs and Individual Lot NOIs. Ohio EPA considers these NOI lists to be an inventory of active construction sites. Further, we noted that the Energov system does not currently schedule inspections for sites for which the City has issued a grading permit. Sites where grading disturbs 1 or more acres are subject to the construction site inspection requirements of the MS4 permit.

- Construction site inspectors need more training on sediment and erosion control and post-construction water quality practices. We noted several instances where inspectors failed to identify compliance issues on the construction sites we observed them inspect during this audit. The City needs to provide continuing education for construction site inspectors. Inspectors should be intimately familiar with the requirements of the local construction and post-construction ordinances and the specifications contained in ***Rainwater and Land Development***, *Ohio's Standards for Stormwater Management, Land*

Development and Urban Stream Protection (Ohio Department of Natural Resources) and/or the approved SWP3. *Please review Construction Field Review Worksheets for an evaluation of the construction site inspectors for the City of Mentor.*

- The Ohio EPA recommends the City develop or adopt checklists for use by inspectors when conducting construction and post-construction site inspections. This should ensure a more thorough inspection and that all BMPs are constructed and maintained according to the City's adopted standards and the approved plans. The use of checklists also ensures a certain amount of consistency between different inspection personnel.

- During the inspection, Ohio EPA noted many deficiencies in the plan review process. The sediment basin for the Blackbrook Golf Course was designed per outdated specifications that do not provide the minimum drawdown time (48 hours) of the dewatering volume as required by the CGP and Chapter 1353 of the municipal code. Also, detail drawings explaining how to modify the ponds for the Springbrook Lake Development to act as temporary sediment basins during construction were missing from the project SWP3. Post-construction BMPs were not provided for all drainage areas within the Hampton Inn project. The rooftop and the area at the entrance of the site discharge directly to the MS4. Although this then flows to a regional detention basin, the basin is not designed to be an extended detention pond that treats the Water Quality Volume (WQv). Ohio EPA expects that post-construction BMPs be provided for all areas of a new development project. None of these errors was caught during the plan review process for these projects.

- The City has not provided a public education and outreach program to target the development community during the current NPDES permit term. Ohio EPA reminds the City that your public education and outreach program (Minimum Control Measure #1) must target the development community with one of its education messages during this NPDES permit term (January 30, 2009 to January 29, 2014). Please ensure that your education program is aware of this requirement and plans accordingly to ensure compliance with this requirement.

- The City has reviewed their ordinances to facilitate the use of non-structural and low-impact development (LID) practices in some instances. However, we noted the omission of rain barrels and cisterns from this ordinance. To further promote the use of LID practices, the City may also want to consider adding a runoff reduction requirement to Chapter 1532 of the municipal code. Planning and zoning codes should be reviewed to encourage balanced growth principles such as conservation design, vertical development, and allowing the use of meadow

grass or low-maintenance vegetation, where appropriate. The City should also look into updating their parking codes to reduce parking lot size requirements.

- The City does not ensure that contract language for municipal construction projects whose design is outsourced includes a requirement to ensure the development of a sediment and erosion control plan and post-construction water quality plan. Please add language to contracts for municipal construction projects to ensure the implementation of Chapter 1352 and 1353 on such projects. Further, the City typically uses a third party inspector on municipal construction projects. Please ensure that contract language with the third party inspector includes a requirement that sites are inspected for compliance with the SWP3 once every 7 days and within 24 hours of a 0.5-inch or greater rainfall. Copies of these inspection reports should be provided to the appropriate municipal official that can ensures compliance with Chapter 1352 or 1353.

Please review my comments and provide me with a letter of response indicating the actions you will take to address my concerns. **Your response should be received no later than September 16, 2011.** Please note that this response does not replace the requirement to submit an Annual Report. Your annual report for 2011 will be due on April 1, 2012.

If you have any questions, please contact Dan Bogoevski at (330) 963-1145 or dan.bogoevski@epa.state.oh.us.

Sincerely,

Lindsie MacPherson
Assistant to the District Engineer
Division of Surface Water

LM/mt

cc: Kenneth J. Filipiak, City Manager, City of Mentor w/ Enclosure
City Council, City of Mentor
Dan Bogoevski, Ohio EPA, NEDO, DSW

Municipal Storm Water Program Evaluation

Construction and Post-Construction Component Worksheet

Date of Evaluation	June 1, 2011
Evaluator Name, Title	Dan Bogoevski, District Engineer Lindsie MacPherson, Asst to District Engr
MS4 Permittee	City of Mentor

Instructions: Use this worksheet as a guide for questioning MS4 staff and reviewing applicable documents. Keep in mind that additional questions may be necessary based on local regulations, MS4 permit requirements, implementation strategies, or water quality issues. Remember to obtain copies of any applicable documents or files which may assist in writing the MS4 evaluation report.

Staff Interviewed		
Name	**Department/Agency**	**Phone Number/Email**
Brian Ashurst, P.E. Asst City Engineer/ Storm Water Program Manager	Department of Engineering & Building City of Mentor	(440) 255-1100 ext. 2612 ashurst@cityofmentor.com
Mike Jeffrey Engineering Tech II	Department of Engineering & Building City of Mentor	(440) 974-5785 jeffery@cityofmentor.com
Tim Wiley Engineering Tech II	Department of Engineering & Building City of Mentor	(440) 974-5785 wiley@cityofmentor.com
Lorne Vernon Public Works Supervisor	Department of Public Works City of Mentor	(440) 974-5781 vernon@cityofmentor.com
Aric Spence Planning Administrator	AICP City of Mentor	(440)974-5740 spence@cityofmentor.com

Ordinance/Legal Authority	
Interview Questions	**Response**
[redacted]	[redacted]
Ordinance used to require storm water BMPs at construction sites?	**YES**
Name and/or code section(s)	Chapter 1353: Erosion & Sediment Control
Date initially enacted:	**March 2, 2004**

Ordinance/Legal Authority	
Interview Questions	**Response**
Threshold for coverage (e.g., 1 acre, 100 cubic yards, etc.) ***NOTE:*** *1 acre is minimum requirement.*	Land disturbance of 1 acre or more Abbreviated plan can be required for smaller disturbances at the discretion of the City Engineer. This abbreviated SWP3 is required for individual residential sublots within a larger development.
Exclusions from coverage allowed: ***NOTE:*** *To align with NPDES permit program, the only exclusions allowed are (a) if rainfall erosivity factor, R, is < 5 for the project, (b) construction is "routine maintenance" to re-establish the original line, grade or hydraulic capacity of storm water infrastructure, i.e., ditch cleaning and detention basin dredging, where < 5 acres is disturbed, (c) silvicultural disturbances, (d) agricultural disturbances or (e) construction related to oil & gas well exploration.* *Ohio EPA website has fact sheet on what constitutes "agricultural disturbance" and "routine maintenance" versus regulated construction activity.* *Some communities allow an abbreviated SWP3 for individual home construction or other small construction. That is fine as long as intent of regulation is met.*	Abbreviated plan not required for disturbances of less than 0.1 acre of land on residential properties, e.g., installation of a shed or deck.
Does your construction program include the following types of construction activity:	
Single-family residential?	**YES**
Multi-family residential?	**YES**
Commercial development?	**YES**
Institutional development (schools or government facilities)?	**YES**
Mixed-use development?	**YES**
Non-subdivided development?	**YES**
Non-exempt construction on agriculturally-zoned lands?	**YES**

Ordinance/Legal Authority	
Interview Questions	**Response**
Non-silvicultural tree clearing?	**YES**
Your own municipal construction projects?	**YES**
Construction and demolition debris landfills?	**YES** But, there are no C&DD landfills in the City of Mentor at this time. But, they would likely look at it as a construction activity and at least require a grading permit.
Construction by other public entities within your political jurisdiction, e.g., a county road project within a municipality?	**YES** But, the City does not conduct ODOT plan reviews or inspections.
Earth disturbance associated with open spaces and parks (e.g., trails within a park or parking lot improvements at a park)?	**YES**
Private pond construction?	**YES**
Construction of wind or solar panel farms?	**YES**
Establishment of borrow or spoil areas that service multiple, unrelated construction projects?	**YES**
Utility construction projects (including tree clearing along utility corridors or pipeline projects that cross multiple political jurisdictions)?	**YES**
NOTE: *Construction must only be regulated if it doesn't meet one of the exclusions and the larger common plan of development or sale disturbs 1 or more acre of land. The intent of this line of questioning is to simply highlight the scope of regulated construction activity that the MS4 may have to contend with.*	
Does ordinance regulate the discharge of pollutants other than sediments on a construction sites (e.g., construction wastes, fuel tanks, cement truck washwater, trash, chemicals, etc.)?	**YES**

Ordinance/Legal Authority	
Interview Questions	**Response**
Has ordinance been updated to reflect minimum requirements of Ohio EPA NPDES permit #OHC000003?	**YES**
Date of updates?	**October 5, 2010**
NOTE: Check database for date of NPDES permit renewal prior to inspection. *MS4 permit #OHQ000002 required updates within 2 years of permit renewal.*	
Date of MS4 Permit Renewal: **June 3, 2009**	
POST-CONSTRUCTION ORDINANCE	
Ordinances used to require post-construction storm water BMPs on new development or redevelopment projects:	
Treatment of Water Quality Volume (WQv)	**YES**
Name and code section:	Chapter 1352: Comprehensive Storm Water Management
Date initially enacted: **March 2, 2004**	*WQv treatment was included in 2004 ESC ordinance but moved to Chapter 1352 when re-written in 2010.
Has this ordinance been updated to reflect the minimum requirements of Ohio EPA General Permit #OHC000003?	**YES**
Date of update: **October 5, 2010**	
Riparian and Wetland Setback Ordinance	**NO, but…**
Name and code section:	Chapter 1115.09: Stream valley preservation. Establishes a conservation protection zone within 25 feet of the normal stream edge for watersheds of 100 acres or more on new subdivisions. Only applies to parcels being subdivided.
If YES, does ordinance require protection of native vegetation within riparian area or can manicured lawns be established?	**NATIVE CONDITION,** unless approved by Planning Commission
If YES, does ordinance allow the location of storm water infrastructure within the riparian setback?	**YES** Encroachment has to be approved by the Planning Commission.

Ordinance/Legal Authority	
Interview Questions	**Response**
Runoff Reduction (e.g., infiltration or mitigation of a recharge volume)? Name and code section:	**NO**
BMPs designed to control temperature for discharges to cold water habitat streams? Name and code section:	**N/A** There are no cold water habitat streams within the City's jurisdiction.
Encouraging Green Infrastructure or low-impact development practices: Allow downspout disconnection and use of open storm water conveyance systems?	**YES** Require downspout disconnection for new development only. The City also lists extended conveyance as a BMP option.
Names and code sections:	Chapter 1352.09 requires downspout disconnection and Chapter 1532 lists extended conveyance.
Permit the installation of rain gardens and other bioretention facilities? Names and code section:	**YES** Chapter 1532: Comprehensive Storm Water Management – bioretention is an option
Allow rainwater harvesting (rain barrels and cisterns)? Name and code section:	**NO** **Ohio EPA Comment:** Rainwater harvesting is a tool for storm water retrofitting and should be considered for inclusion in your BMP tool box.
Allow or require the use of pervious pavement systems? Name and code section:	**YES** Chapter 1532 – Under this code the City considers pervious pavers as an infiltration BMP
Allow reduction in the size of traditional storm water management structures if LID used? Name and code section:	**YES** Chapter 1532: If they can show that post-developed peak discharge rate is at or below the pre-developed peak discharge rate for the critical storm and subsequent discharge rates for storms that exceed the critical storm, then they allow the reduction of detention volume. May be able to show that they do not even need additional detention structure. This was allowed on Center Street Development where permeable pavement was used to eliminate the need for detention or retention.

Ordinance/Legal Authority	
Interview Questions	**Response**
Provide a credit to a storm water utility fee if LID is used? Describe:	N/A – they do not have a storm water utility fee.
Balanced Growth Principles, i.e., other non-structural ordinances or codes that promote better site design: Allow conservation design as a subdivision layout (retain ≥ 40% open space by maintaining existing zoned density) Standard or variance required? Name and code section:	**NO** But, Chapter 1359 does allow developments to voluntarily establish conservation easements. Village Green Zoning requires 15% open space, but looking to bump that up. Will better define what constitutes open space. This practice is a goal in the Comprehensive Development Plan, which was recently updated. Plan will be e-mailed to the Ohio EPA, which will include dates.
Encourage the use of vegetation that requires little to no maintenance in common areas (e.g., meadow vegetation vs. mowed lawn) Name and code section:	**NO**
Reduce impervious area created by commercial parking lots (e.g., update codes so that they are context-specific, allow shared parking, land-banked parking, parking garages rather than surface lots, etc.) Name of code section	**NO** Do allow some land banking, but the City is not sure if they reduced parking requirements and will get back to the EPA with this answer. Updating parking codes in comprehensive plan which is expected to decrease the parking spaces required.
Allow sidewalks on only one side of the road in residential neighborhoods	**YES** Only in private development, not where infrastructure is publicly-owned. Do not require sidewalks in industrial developments where they do not expect a lot of pedestrian traffic.
Name and code section:	Chapter 1115.03 – requires sidewalks to be constructed located 1-foot inside ROW and minimum 5-feet.
Zoning that encourages smart growth in compact neighborhoods or mixed-use development:	**YES** Old Village District allows mixed use, but public perception is still negative. May implement some of this at Great Lakes Mall in future.
If YES, does zoning create walkable neighborhoods with access to commercial areas and employment centers? Describe:	**YES** However, voter referendum turned the plan for townhouses in Center Street Village down, so the project is sitting idle.

Ordinance/Legal Authority	
Interview Questions	**Response**
If YES, does this zoning provide incentives for vertical development rather than horizontal sprawl?	**NO**
If YES, does this zoning encourage a range of housing options for people of various incomes? Describe how:	**YES** Allows mixed housing types in Old Village District.
If YES, do you provide incentives for infill development or development in the core? Describe incentive programs:	**YES** The area is designated a community reinvestment area. You do get a tax break, but the City does not know the specifics.
If YES, does zoning direct growth in areas where there are a variety of transportation choices (walking, biking, public transportation vs. just the car)? Describe how:	**YES** Area is connected to neighboring residential areas by sidewalks. City also has a bike lane plan that is not fully implemented yet. Looking to connect Mentor Headlands State Park to residential neighborhoods.
NOTE: *The point of this line of questioning is to emphasize to the MS4 that post-construction storm water management, land use planning and building and zoning codes must be linked to create a meaningful storm water program. A good MS4 program goes beyond the WQv requirement. The storm water program manager must work with the planning commissioner and building department to affect development patterns in their community that negatively impact storm water quality.*	
Do permit or plan approvals have to be issued before construction activities that disturb 1 or more acre can commence? Plan Approvals Construction Post-Construction	 **YES** **YES**

Ordinance/Legal Authority	
Interview Questions	**Response**
Permits & Type (Building, Grading, etc.) Construction Post-Construction Does your definition of "construction activities" include any grading, grubbing, filling, clearing or excavating activity?	 **YES** **YES** Would either be a grading permit or building permit. There is no specific definition, but included in purpose and scope section of Chapter 1352 and 1353.
Are plans for storm water controls used during construction submitted separately from plans that depict post-construction BMPs? Describe the submission process and the timing of plan submission:	**NO** Plans go through Planning Commission review first. During that process, the Engineering and Building Department submit comments on the plans. After Planning Commission issues approval, applicant submits for a Building Permit. On occasion, the City does issue a grading permit to allow earth disturbance to begin without finalizing the post-construction plans and issuing a building permit. This is typically to allow site clearing and grading, and sometimes utilities installation. If plan involves utility installation, they do require post-construction BMPs to be finalized.
Does your ordinance explicitly specify selection criteria or minimum acceptable BMP design? Construction Post-Construction	 **YES** Also reference to Rainwater manual. **YES** Also reference to Rainwater manual.
[redacted]	
Types of enforcement mechanisms available for construction site issues per your ordinance:	Notices of Violations (NOV) **YES** Administrative fines **YES** Stop-work orders **YES** Civil penalties **NO** Criminal penalties **YES** Other (Describe): The City will also complete the work and charge developer. See below. Chapter 1353.12 – Monitoring for compliance. Site is subject to inspection by City of Mentor. City to provide written notice to do stop work order up to 90

Ordinance/Legal Authority	
Interview Questions	**Response**
	days. City Engineer can require the immediate installation of ESCs whenever he determines that intent of Chapter is not being met. Chapter 1353.15 – City shall cause violation to be corrected or removed. City can either do the work themselves or hire a contractor and then charge the developer for costs. A 10% penalty is added (administrative fine) in addition to cost. Chapter 1353.16 – Prosecution of violation. City may proceed through court to obtain a criminal charge. Is a third degree misdemeanor.
Which type of enforcement action have you most commonly implemented?	Notice of Violation. However, if there is no violation, there is no report issued to developer or homebuilder.
Describe the enforcement mechanism used when the following compliance situations are encountered on construction sites:	
1. Construction has commenced without a permit or plan approval	Issue a stop work order. There are times when the Planning Commission issues an approval, work starts, yet plan approval is not complete. But, typically, they simply instruct the developer to install the required ESCs.
2. A BMP indicated on the SWP3 has not been installed or requires maintenance (first incidence)	Speak with representative in the field. If he agrees to correct immediately, they do not send a written notice. If there is no representative on site, they will send a written notice giving the site operator 10 days to 2 weeks to correct.
3. A BMP is required but not shown on the SWP3	Instruct them to install the additional BMP, but do not require the SWP3 to be updated. **Ohio EPA Comment:** This conflicts with NPDES requirements for construction sites. The NPDES permit issued by Ohio EPA to the developer or homebuilder requires the SWP3 to be kept up-to-date. The City must amend its current procedures for this enforcement issue and require the SWP3 to be kept up-to-date. This does not necessarily mean that the plan must go through a new review and approval process. The City may choose to impose such a requirement, particularly for modifications that involve sediment ponds, but it is not Ohio EPA's expectation that this would occur.

Ordinance/Legal Authority	
Interview Questions	**Response**
4. A BMP has not been installed or maintained despite prior notification from the MS4 (repeated incidences) 5. If using a third party inspection service provider, e.g., the SWCD, MS4 receives inspection report indicating repeated non-compliance issue	City sends NOV to tell developer that if it is not corrected by given date, the City can abate the work and charge the developer for the costs. N/A
Describe the last enforcement action your community has taken against a contractor or developer for non-compliance with construction site requirements and provide the documentation to demonstrate the action. ***NOTE:*** *In municipalities, letters from the SWCD are not considered NOVs unless the community's ordinance specifically gives the SWCD enforcement authority. This is not the case typically. The SWCD is simply notifying the developer and community that there are compliance issues on the site, but they have no inherent enforcement authority in a municipality.*	In October 2010, Department of Public Works performed street sweeping to abate an off-site tracking issue at the Woodridge Road Waterline site. However, none of this is documented except in field notes of inspector. No written notices of the violation were provided to the developer or contractor. "Compliance Required" notice provided during "Final Inspection". They do not send out written notices of violation during the construction process. Policy is to work it out with contractor on a verbal basis. Need to improve and increase written notifications.
Have your enforcement protocols and procedures for construction site issues been formalized in a written enforcement escalation plan?	**NO** The city follows the code. No formal escalation plan. Operators are given 2 or 3 tries to comply. What is done after that is played by ear, depending on the situation. **Ohio EPA Comment:** The existing enforcement escalation process needs improvement to provide clear indicators of what type of enforcement action should be taken and how and when enforcement should be escalated when repeated violations occur. This provides clear direction to the Engineer and Building Inspector and should lead to better compliance in a quicker timeframe.
[redacted]	
Types of enforcement mechanisms available for post-construction site issues per your ordinance:	Notices of Violations (NOV) **YES** Administrative fines **NO** Stop-work orders **NO** Civil penalties **NO** Criminal penalties **YES** Other (Describe):

Ordinance/Legal Authority	
Interview Questions	**Response**
	The City performs a final site inspection to ensure BMP is constructed per approved plan. If a deficiency is noted, applicant receives a written notice to correct BMP. Section 1352.13: On-going inspections. Allows City to inspect site periodically. If maintenance need is noted, City shall provide written notification and set a timeframe for corrective action. Section 1532.14: If responsible party fails to comply, City can correct problem and bill responsible party. Chapter 1369 – Maintenance code for non-residential properties could be used to require maintenance needs (includes drainage facilities).
Which type of enforcement action have you most commonly implemented?	Property maintenance violation citation. Ponding water in detention basin longer than normal or blockage of outlet would be noted using this method.
Describe the enforcement mechanism used when the following compliance situations are encountered regarding post-construction:	
1. The post-construction BMP has been installed too early in the construction process (e.g., the permanent WQv outlet has been installed when the sediment control outlet is still required, **or** the bioretention soil has been placed prior to upland areas being stabilized)	Would require developer to go back and do retrofit, but it does not appear that this issue is caught during site inspection.
2. The post-construction BMP has not been maintained (first incident)	Citation issued under property maintenance code.
3. The post-construction BMP has not been maintained after multiple notifications	Prosecute in court per the property maintenance code. Could also abate violation and charge developer under comprehensive storm water management code.
4. A homeowner has cut down trees in the riparian setback area (if applicable)	Depends on how it is dedicated on the plat. City would consult with Law Director to prosecute through civil courts. No criminal violation in code at this time.
5. A homeowner has installed a shed in a vegetated filter strip disrupting sheet	BMP would have been placed in a storm drainage easement. That easement specifies who is

Ordinance/Legal Authority	
Interview Questions	**Response**
flow runoff	responsible for maintenance. Property maintenance code could be used to prosecute violation.
Describe the last enforcement action your community has taken against the responsible party for non-compliance with post-construction site requirements and provide the documentation to demonstrate the action.	Existing detention basin outlet was blocked and was issued a citation to remove blockage and clean out. That was a number of years ago. Will get back to us on documentation. The project is off SR 306. Can also occur during re-occupancy. DeBella Subs had to re-excavate a detention basin that had been silted in before they were given an occupancy permit.
Have your enforcement protocols and procedures for post-construction issues been formalized in a written enforcement escalation plan?	**NO** The City goes by the property maintenance code.

Applicable Documents	Reviewed	Obtained
Sediment and Erosion Control Ordinance	YES	YES
Post-Construction Storm Water BMP Ordinances(s)	YES	YES
Enforcement escalation plan or procedures Construction: Post-Construction:	Does not exist	

Construction Project Inventory	
Interview Question	**Response**
Do you keep an inventory of construction projects that are actively occurring in your community? If YES, how?	**YES**
Do you track construction projects <1 acre (e.g., individual lot within a subdivision or small addition to a business)?	**YES** However, need to begin tracking submittal of Individual Lot NOIs to Ohio EPA
How often is your inventory of construction projects updated?	City uses the Energov data tracking system. Energov list is updated when a plan is submitted to City for review and approval.
Information tracked:	Project status **YES** Inspection Findings **YES** Enforcement Actions **Not sure** Complaints **YES** NOI submittal **YES** **But not for individual lots or co-permittees**

If construction sites are **not** inspected at least once per month, how do you prioritize or determine inspection frequency? :	The City states that all active sites on NOI list are inspected once a month. However, the Dairy Queen Lakeshore Blvd site has not been inspected since April 12, 2011. Further, sites with grading permits do not get added to the list of sites requiring storm water inspection. **Ohio EPA Comment:** The NPDES permit sets a minimum performance standard for construction site inspection at once per month on all active sites. However, please note below that the City was unable to provide documentation to support this claim. The NPDES permit allows the City to establish an alternative schedule for construction site inspections if procedures for prioritizing construction site inspections are documented in the SWMP and are based on factors such as proximity to waterways, amount of disturbed area, compliance status or activity level. However, the City of Mentor has not amended the SWMP to do so.
Number of active construction sites on date of interview (for subdivisions where only individual lot construction is occurring, count the entire subdivision or phase of subdivision as one site): ***NOTE:*** *Select two sites from NOI list and ask if they are active. Ask for the dates of the last two site inspections at each site.*	City was able to show us a listing of permits that have been issued. The list is generated by Energov. It was noted that construction on each individual lot is listed separately. Thus, the City was not able to determine how that equates to the number of active sites on the Ohio EPA NOI list. Site #1: Blackbrook Golf Course Most recent inspection date: 5/26/11 Prior inspection date: 5/23/11 Site #2: Dairy Queen Lakeshore Blvd. Most recent inspection date: April 12, 2011 Prior inspection date: February 16, 2011 The City was not able to document that all construction sites are inspected at least once per month as required by Part III.B.4.c of the NPDES permit.

Applicable Documents	**Reviewed**	**Obtained**
List of active construction projects	YES	YES
List of projects covered under a state/EPA general permit	YES	YES

Notes
Tracking Construction Sites Requiring Inspection The City's system of tracking active construction sites, and thus the sites that require a monthly inspection, is flawed. The system does not schedule inspections for sites with grading permits. As a result, the City has not been inspecting the Tinman Spoil Area site. Also, inspectors do not inspect ODOT projects (SR 2). The City was asked for a list of construction projects covered by an Ohio EPA storm water permit. In response, the City produced what is essentially an inventory of post-construction BMPs, not active construction sites. The City believes Energov can be used to generate such a list, but was unable to demonstrate that during this audit. Ohio EPA recommends that the City reference the lists of permittees covered under the Ohio EPA General Storm Water NPDES Permit for Construction Activities. This list is updated daily and is available on-line at http://www.epa.ohio.gov/dsw/permits/gplist.aspx. The City should review the List of Permittees, List of Co-Permittees and List of Individual Lots regularly to ensure construction site operators have obtained NPDES permit coverage. This list will provide you the list of active construction sites per Ohio EPA records. When construction is complete, the permittee, co-permittee or individual lot permittee should be instructed to terminate NPDES permit coverage. This will ensure that the Ohio EPA list is truly a record of active construction sites and will provide you with an updated list of sites to inspect at least once per month. Energov has ability to track enforcement actions, but the City is not sure if they are using it to do so. Complaints are tracked, however, not through Energov. Inspectors keep a complaint log and Mr. Ashurst compiles those logs. **Municipal Construction Projects** There were several municipal construction projects on the Ohio EPA NPDES permit list but work on those projects has been completed. Please note that the Ohio EPA General Storm Water NPDES Permit for Construction Activities #OHC000003 requires the City to submit a Notice of Termination (NOT) to Ohio EPA within 45 days of when a project reaches final stabilization. The City is in violation of Ohio EPA General Storm Water NPDES Permit for Construction Activities for City projects that are complete but failed to submit a NOT within 45 days of reaching final stabilization. **Please note that the City was notified of this violation during our inspection of your Pollution Prevention Good Housekeeping program in Januar y 2010, yet you have failed to modify your procedures to ensure that the City is submitting Notices of Termination.**

Post-Construction BMP Inventory	
Interview Question	**Response**
Are post-construction BMPs tracked? *Remind MS4 that they must be shown on MS4 map.*	**YES**
Does this include all types of BMPs, e.g., riparian setback area, green roof or pervious pavement as well as bioretention cells and extended detention ponds?	**YES, with the exception of Conservation Setbacks** The City needs to include non-structural post-construction BMPs such as conservation setbacks in its post-construction inventory. These areas should be inspected periodically to ensure that they have not been compromised by landowners. Placing these areas in a conservation easement or environmental covenant may also be prudent.

Information tracked:	Location **YES** Type **YES** Maintenance Requirements **NO** Inspection findings **YES** The City knows what has passed and what has failed, and they keep inspection reports, so information can be tracked. Not sure if this is entered into Energov. Inspect only the publicly-owned BMPs at this time. Other (e.g., Ownership): Information is entered into Energov and obtained through Lake County GIS. The property owner is by default the party responsible for long-term maintenance. **Ohio EPA Comment:** The City needs to track compliance and maintenance status of post-construction BMPs, both public and private. The City needs to ensure that Energov has the capability to document that the post-construction BMP has been built per approved plan and then, its on-going long-term maintenance.
Database used?	**YES**
Number of private post-construction structural BMPs installed in community	92 Noted that on the inventory, the Dairy Queen on Lakeshore Blvd has blank next to the type of post- construction BMP. This is a redevelopment project where imperviousness was reduced by > 20%. **Ohio EPA Comment:** Reduction of impervious area by ≥ 20% is an acceptable post-construction BMP for redevelopment projects. The database should reflect this to ensure that these now permeable areas are not turned back into impermeable surfaces in the future.

Applicable Documents	Reviewed	Obtained
Inventory of Post-Construction BMPs	YES	YES

Construction and Post-Construction BMP Standards	
Interview Questions	**Response**
[redacted]	
Has your community established standards for the design of **sediment and erosion controls** and controls for other wastes on construction sites? If you have established standards by referencing a BMP manual, please identify the manual. Is this manual referenced in your construction site ordinance or within your SWMP?	**YES** Chapter 1353 contains standards for BMP selection and sizing requirements. This code also references the Rainwater manual for guidance. In addition, the City developed SWP3 General Notes in 2010 and intends to require this be added to all SWP3s. **YES** In ordinance.
Do your standards include BMP selection criteria?	**YES**
Do your construction site standards account for different needs for different times of the year (e.g., growing season vs. winter)? Please elaborate:	**YES** Include stabilizations in CGP in their local ordinance.
Do your standards include operation and maintenance requirements?	**YES**
[redacted]	
Has your community established standards for the design of **post-construction BMPs** on new development and redevelopment where 1 or more acre is disturbed? If you have established standards by referencing a BMP manual, please identify the manual. Is this manual referenced in your post-construction storm water ordinance or within your SWMP?	**YES** Chapter 1352 provides a table of standard BMPs with required drawdown time. BMPs must be sized to treat WQv. This also includes criteria for off-site mitigation and use of alternative BMPs. No reference to Rainwater manual in post-con ordinance. For construction of roads, ODOT's L&D manual is referenced. **YES** - In ordinance
Do your standards include BMP selection criteria?	**YES** But primarily by publishing a standard BMP list.
Has your community established standards for post-construction BMP selection and design for small construction activities (i.e., where the larger common plan of development or sale disturbs < 5 acres)? If so, what are your standards?	**YES** A flow-through design for swales and filter strips is permitted for small construction sites. Alternative BMPs can be used with approval of City Engineer. They stick with the 80% TSS removal using TARP protocol, although it is not codified.

Construction and Post-Construction BMP Standards	
Interview Questions	**Response**
Do your standards include operation and maintenance requirements?	**In progress** City is starting to develop a standard maintenance task list for post-construction BMPs

Applicable Documents	Reviewed	Obtained
BMP guidance or technical document	Draft obtained	Draft reviewed

Notes

Plan Review Procedures	
Interview Questions	**Response**
Who is responsible for erosion and sediment control plan review?	City Engineer
Who is responsible for post-construction plan review?	City Engineer
What training or professional certifications have plan review personnel received?	
Construction	CPESC and PE
Post-Construction	CPESC and PE Training attendance list obtained.
How many years of experience does plan review personnel have inspecting storm water BMPs?	
Construction	Residential since 1991. Commercial/industrial since 1995.
Post-Construction	Since 2003.
How often do plan review personnel receive training? Construction Post-Construction	One or two per year on construction and post-construction.
NOTE: *Make MS4 operator aware of training opportunities provided by Ohio EPA and archived at www.epa.ohio.gov/ocapp/storm_water.aspx.*	

Plan Review Procedures	
Interview Questions	**Response**
Do you use a checklist to conduct plan review? Construction Post-Construction	 **YES** **YES** Use the Ohio EPA SWP3 checklist as well as following City code.
Size threshold for plan review (i.e. 1 acre, 10,000 square feet)?	All subdivision plans get reviewed for SWP3 as well as all commercial/industrial site development. Abbreviated plans are required for individual lot (single-family residential). Utility mainline construction also requires plan review. This review is for both construction and post-construction.
Do you verify the submission of a Notice of Intent (NOI) or Individual Lot NOI to Ohio EPA as part of your plan review process?	**YES** But, do not verify submission of an Individual Lot NOI or Co-permittee NOI.
Do you require a pre-construction meeting with developers and/or contractors?	**For some** Required for subdivision and utility mainline, but not for commercial/industrial or individual house construction. **Ohio EPA Comment:** A pre-construction meeting to discuss the SWP3 is a required performance standard for your municipal construction program. You must amend procedures to include pre-construction meetings for all commercial/industrial and individual house construction (as appropriate). Further, the City should initiate the pre-construction meeting. At times, the City waits for the contractor to inform them that construction has begun on a particular site before a meeting is held or an initial inspection has been completed.
Is the sequence of implementation of sediment and erosion controls discussed during these meetings?	**YES**
Is the timing of installation of post-construction BMPs discussed during these meetings?	**YES** But need to improve detail of those discussions.

Plan Review Procedures	
Interview Questions	**Response**
Does your community have standard conditions of plan approval?	**YES** This is typically for utility construction. Do have general notes for subdivisions.
Do they include erosion and sediment control and/or post-construction water quality requirements?	**NO** Notes do not include this. The SWP3 contains this detail.
Does your community require a performance bond that can be used to pay for BMPs (site stabilization) in the event the developer does not complete the project?	**YES** Contractors are registered and bonded for commercial/industrial development. For residential sites, the City requires a performance bond or letter of credit from bank. Grading permits require a site stabilization bond.
Does your community require a long-term maintenance plan for post-construction BMPs?	**YES** Is codified, but the law director is finalizing the format of the long-term maintenance agreements that the City will collect from the developer. So, details are still in progress.
If YES, is the plan required to include the following:	
Identify the party responsible for long-term maintenance?	**YES**
A list of routine and non-routine maintenance tasks and the frequency for their performance?	**YES**
A map that identifies the types and locations of post-construction BMPs and their maintenance or access easements?	**NO** But, would reference the site development plan that is on file. All plans are scanned or microfilmed. **Ohio EPA Comment:** It may be better to include this information directly in the long-term maintenance plan so all pertinent information is in one document.
A list of deed restrictions, conservation easements or environmental covenants required to maintain post-construction BMPs in perpetuity?	**NO** Contained in building permit on file. Energov allows these documents to be scanned and kept in digital format. **Ohio EPA Comment:** The NPDES permit that developers obtain directly from Ohio EPA to discharge storm water associated with

Plan Review Procedures	
Interview Questions	**Response**
	construction sites requires the deed restrictions, conservation easements and environmental covenants to be included in the long-term maintenance plan. It would be best if the City set up parallel requirements.
Is this plan kept on file or input into a database for future reference to ensure the required tasks are being completed?	**YES**

Applicable Documents	Reviewed	Obtained
Copy of standard conditions of approval	Does not include storm water requirements so not collected	
Example of standard conditions applied to an approved project	See note above.	
Checklist used by plan reviewers	YES	YES

Project Inspections	
Interview Questions	**Response**
Who is responsible for erosion and sediment control site inspection?	Engineering Technicians in City Engineering Department
Are site inspections at active construction sites conducted at a frequency of at least once per month? ***NOTE:*** *This is the minimum performance standard in the NPDES permit for small MS4s.*	**YES** Building Department has software that allows inspections to be scheduled once per month. **Ohio EPA Comments:** But, see prior notes. Although this is primarily true, the City was not able to provide documentation that all sites are inspected once per month.
Who is responsible for post-construction site inspection?	**As-built:** Engineering Technician in Engineering Department **Long-Term Maintenance:** Just started doing this, but is responsibility of the Engineering Technician in the Engineering Department. (Five site inspections per year.)
Is an "as-built" inspection conducted at the time a post-construction BMP is installed to ensure compliance with the approved BMP construction plan?	**YES** Is called a Final Inspection.

Project Inspections	
Interview Questions	**Response**
Does the MS4 conduct inspections for long-term maintenance of privately-owned post-construction BMPs? If YES, at what frequency? If NO, does the MS4 collect inspection reports from the responsible party? At what frequency?	**YES** The City focuses on public BMPs. but will include private BMPs in the future. All sites are inspected for as-built. Five (5) sites per year are inspected for long-term maintenance. Publicly-owned "hotspots" are inspected after every rain event.
Findings from construction and post-construction inspections tracked in a database?	**YES** Energov is the software being utilized.
What training or professional certifications have site inspection personnel received? Construction Post-Construction	In 2004, erosion and sediment control training was provided for city employees and developers. LTAP course in 2008 or 2009. Will look for certificate.
How many years of experience does site inspection personnel have inspecting storm water BMPs? Construction Post-Construction	Mike – 4 years Tim – 20 years They do both construction and post-construction.
How often do site inspection personnel receive training? Construction Post-Construction ***NOTE:*** *Make MS4 operator aware of training opportunities provided by Ohio EPA and archived at www.epa.ohio.gov/ocapp/storm_water.aspx.*	Once every 3-5 years. Is not part of any new employee training at this point, but they would pair a new employee with an existing inspector to get them trained. **Ohio EPA Comment:** Post-construction storm water management is a fast-changing field. It would be beneficial to provide training to post-construction inspectors on an annual basis. See note to the left. Most of these training events are free.
Do you use a checklist or the approved plan to conduct site inspections? Construction Post-Construction	**YES** **YES** The City has developed a Final Site Inspection Form for as-built inspection and a

Project Inspections	
Interview Questions	**Response**
	Retention/Detention Basin Inspection Form for long-term maintenance. Are still working on forms for other types of BMPs.

Applicable Documents	Reviewed	Obtained
Most recent inspection staff training records	YES	YES
Example of active construction project inspection checklist	YES	YES
Example of inspection record to verify "as-built" of post-construction BMPs	YES	YES
Records from inspection tracking database or filing system	YES	YES
Checklist for inspecting long-term maintenance of post-construction BMPs	YES	YES

Notes

MS4-Owned Construction Projects	
Interview Questions	**Response**
Projects designed in-house or contracted?	Both. Primarily, they are contracted (major capital infrastructure improvement projects).
Designers trained in storm water BMP implementation?	**YES** Has CPESC certification.
Checklist used during to design and/or review public construction projects?	**YES** Use the Ohio EPA SWP3 checklist.
Are projects greater than one acre covered under a general construction permit (has an NOI been submitted)?	**YES** Haven't always in the past, but do now.
If contracted planners and engineers are used for the design of MS4-owned projects, does the contract language specify that sediment and erosion control and post-construction storm water BMPs be incorporated into the design?	**SOMETIMES** Contractor sometimes has responsibility of producing the SWP3. Other times, the contract engineer develops the SWP3. **Ohio EPA Comment:** If the responsibility of developing the SWP3 will be placed on a contractor or contract engineer, please ensure that contract language specifically requires the development of a sediment and erosion control plan and a post-construction storm water quality plan. No such language was found in the contract issued to CT Consultants that was reviewed during this audit.

MS4-Owned Construction Projects	
Interview Questions	**Response**
Are municipal construction projects inspected for compliance with the SWP3?	**YES** But, if project was developed by a contracted engineering service, the inspection service is also contracted out. The City does not receive copies of inspector's reports. Needs improvement. **Ohio EPA Comment:** Ohio EPA recommends that the City spot check the contractor to ensure site inspection is being conducted. This can be done by simply asking that a copy of the inspection report be submitted to the City Engineer. The City ordinance requires sediment and erosion controls to be inspected once every 7 days and within 24 hours of a 0.5-inch or greater rainfall.
Are they inspected with the same frequency for BMP compliance as a private construction project?	**YES** Inspections occur at the frequency required by the Ohio EPA Construction General Permit obtained for the project.
Who inspects municipal construction projects for compliance? ***NOTE:*** *To avoid a conflict of interest, the firm or department that designed the SWP3 should not also inspect the site for compliance.*	Some is contracted. Inspectors are from different engineering firm than the one that developed the SWP3. For non-contracted, use the engineering technicians, city engineer or on occasion the service director.
Project inspectors trained? Frequency:	**YES** But, needs more. See Field Evaluation sheet for Blackbrook Golf Course.
If contracted inspectors are utilized, are minimum inspection, maintenance and reporting requirements specified in the contract?	**YES** Contract references the Ohio EPA CGP, so inspection requirements, frequency and reporting is per that permit.
For municipally-owned post-construction BMPs, how often are they inspected to ensure long-term maintenance?	Program is just starting. Hot spot areas are inspected after every heavy storm event. 5 sites inspected per year, but may increase the frequency.
Which department is responsible for conducting these inspections?	Engineering Department is currently responsible, but may include Service Department in the future.

Applicable Documents	Reviewed	Obtained
MS4-owned project storm water design standards and/or checklist	YES	YES

MS4-Owned Construction Projects	
Interview Questions	**Response**
Contract language for active public project not developed or inspected in-house	YES, but is not adequate. See Notes above.

Outreach and Education	
Interview Questions	**Response**
Type of training provided to construction operators: Designers and Engineers:	None provided to operators regularly. Did have one in 2004. They include examples of ESC plans and details at counter that can be picked up. None provided. Drainage design standards are given to them. **Ohio EPA Comment:** One message from your public education program during the current NPDES permit term must target the construction and development industry. This performance standard must be met by the end of this current permit term, i.e., 2014.
Attendance required?	N/A
Training frequency?	N/A
Number of operators trained:	10 in 2004. None since.
Training topics:	Erosion and Sediment Control for Builders
Presentations given by MS4 staff to professional groups?	**NO**
Brochures or outreach materials targeted at operators:	Do have a sample erosion and sediment control plan for individual lots. Also provide a copy of site inspection report blank to commercial/industrial construction.
How/when is the information distributed?	Inspection blank distributed when they pick up their permit. Others are available at desk, but not distributed per se.

Website used to educate operators?	Yes. Storm water info page has general info for engineers and designers. May have a link to Lake SWCD for operators.
Web address:	www.cityofmentor.com/live/stormwaterinfo

Applicable Documents	Reviewed	Obtained
Training materials	Attendance sign-in sheet	YES
Brochures, outreach materials	YES	YES

Notes

CONSTRUCTION & POST-CONSTRUCTION FILE RECORDS REVIEW

In addition to interviewing staff, select 2 to 3 approved projects with erosion and sediment control plans to review with the permittee. You are essentially conducting a file review. Try to choose different project types (residential, commercial) and sizes. Also, if one exists, review a public project plan to see if the permittee is applying equivalent standards to municipal construction.

Construction Project #1 Name: Blackbrook Golf Course	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	**YES**
Design specifications and details for all BMPs included on the plans?	**YES**
Maintenance requirements specified?	**YES**
Have any NOVs or other enforcement actions issued for this site. ***Obtain copies of NOVs. If none, why not?***	None

Notes:

City issued a grading permit for this project. Plan adequate in scope and detail, but did not properly design the sediment basin. The basin is built per outdated specifications. City indicated that the local code had not been updated by that time, but this excuse is not acceptable. The project has coverage under the Ohio EPA General Storm Water NPDES Permit for Construction Activities #OHC000003; thus, sediment basin design must comply with the requirements of the NPDES permit. The City has since updated its construction site ordinance to meet the requirements of NPDES permit #OHC000003, which should prevent a similar violation in the future.

Please see Field Inspection Worksheet for this site for additional comments on updates required to this plan due to additional grading which has occurred.

Construction Project #2 Name: Springbrook Lake Development	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	**NO**
Design specifications and details for all BMPs included on the plans?	**NO**

Construction Project #2 Name: Springbrook Lake Development	
Maintenance requirements specified?	**YES** But no real tie-in to NPDES requirements.
Have any NOVs or other enforcement actions been issued against this site? ***Obtain copies of NOVs. If none, why not?***	**YES** June 18, 2008, sent letter to developer stating to install ESCs and perform stabilization. Follow-up inspection on June 20, 2008, showed compliance.

Notes:

Plan comment letter provided, but comment mixed up sediment basin requirements with WQv requirements. Plan shows three WQv ponds, but there is no detail on how to modify those ponds to act as sediment basins during construction. There is simply a note that says "basins shall provide temporary sediment control during construction". The WQv ponds are really infiltration basins. There is a calculation showing the storage volume to invert of outlet is > WQv and there is soil permeability showing 6-20 inches per hour permeability rate. However, these soils are being covered with construction site sediment and permeability rate is being decreased. In general, facilities that will act as infiltration BMPs post-construction should not receive sediment from construction activities. SWP3s must call for sediment controls upland from the infiltration facility or should divert sediment-laden flows away from the infiltration BMP to an appropriate sediment control.

Notes include basin clean-out bi-annually and cleaning out storm drains. The plan states that if catch basins have filters, to clean monthly.

Ten houses are under construction in this development at this time. The site is in the individual lot BMP stage. Each has its own file and we did not review each individual file, but City claims each is being inspected at least once per month.

Construction Project #3 Name: Hampton Inn	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	**YES**
Design specifications and details for all BMPs included on the plans?	**YES**
Maintenance requirements specified?	**NO**
Have any NOVs or other enforcement actions been issued against the site? ***Obtain copies of NOVs. If none, why not?***	Final inspection discussed need to finish grading for bioretention cells and to do final stabilization. Letter dated June 1, 2009, labeled Inspection Confirmation. Not really an NOV.

Construction Project #3 Name: Hampton Inn
Notes: Silt fence and storm drain inlet protection are primary ESCs. Detail drawings provided, but maintenance requirements not.

Post-Construction Plan File Reviews

Post-Construction Project #1 Name: Newell Creek Ph 1	
Date that project was accepted by community or otherwise deemed "completed"	August 10, 2005
Were post-construction BMPs provided for all drainage areas associated with the developed site? List the post-construction BMPs provided?	**YES** DA #1 Wet Extended Detention Basin
Design specifications and details for all BMPs included on the plans?	**YES**
Were post-construction BMPs selected appropriate for their drainage areas, site and soil conditions?	**YES**
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	**YES**
Does MS4 have a copy of the long-term maintenance plan? Who does the plan say is responsible for long-term maintenance? Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party? ***Obtain copy of latest inspection report.***	**YES** Newell Creek Homeowners' Association **NO** As noted within the Interview Worksheet, the City of Mentor has not yet implemented a program for long-term maintenance of privately-owned post-construction BMPs. This is a violation of Part III.B.5.d of the NPDES permit.

Notes:

Pond serves a 104-acre drainage area for Phases 1 – 8. Ohio EPA verified that the pond has been designed for water quality.

<u>Long-Term Maintenance of Privately-Owned Post-Construction BMPs</u>
Ohio EPA provided clarification on requirements for long-term maintenance programs within the Response to Comments when the NPDES permit for small MS4s was renewed in 2009. Please refer the

Post-Construction Project #1 Name: Newell Creek Ph 1
Question and Response from that document provided below: ***Comment 31: Part III.B.3.b. What is a "storm water facility" – is it any public or private conveyance, storage, and/or treatment facility (which could be interpreted as broadly as roof gutters, downspouts, swales along property lines, and lateral connections that collect storm water from private property), or is a facility only those devices designed to control storm water pollution?*** ***Response 31:*** *Ohio EPA's intent with the term "public and private storm water facilities" was to include flood control facilities (retention/detention ponds) and post-construction water quality BMPs owned/operated by the MS4 operator as well as private post-construction water quality BMPs which have been installed to satisfy Ohio EPA's NPDES Construction Storm Water general permit and/or the MS4 operator's local post-construction water quality BMP requirements.* Ohio EPA's NPDES Construction Storm Water general permit has required the installation of post-construction BMPs for all development sites where the larger common plan of development or sale disturbs 1 or more acre for sites permitted on or after April 21, 2003. Ohio EPA records show the Newell Creek Subdivision (Phase 1 & 2) received NPDES permit coverage on August 11, 2004. Thus, the City of Mentor must implement its long-term maintenance program for the Newell Creek wet extended detention basin. The Response to Comments is available on our website at http://www.epa.ohio.gov/dsw/permits/GP_MS4StormWater.aspx.

Post-Construction Project #2 Name: Hampton Inn	
Date that project was accepted by community or otherwise deemed "completed"	Certificate of occupancy granted June 22, 2009
Were post-construction BMPs provided for all drainage areas associated with the developed site? List the post-construction BMPs provided?	**NO** See previous notes. Roof and entrance not accounted for. Swale design not per post-construction requirements.
Design specifications and details for all BMPs included on the plans?	**YES**
Were post-construction BMPs selected appropriate for their drainage areas, site and soil conditions?	**YES**
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	**YES**
Does MS4 have a copy of the long-term maintenance plan? Who does the plan say is responsible for long-term maintenance?	Did not require a specific long-term maintenance plan at time this project went through review process. There are some notes on the plan. Property owner. Plan does not specify the name of property owner.

Post-Construction Project #2 Name: Hampton Inn	
Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party? ***Obtain copy of latest inspection report.***	**NO**

Notes:

Identifying the Party Responsible for Long-Term Maintenance

Although it may be acceptable for long-term maintenance plans to name the "property owner" as the responsible party for long-term maintenance, Ohio EPA recommends that the City of Mentor implement a long-term maintenance program where the actual name and contact information of the "property owner" is known to the City at all times. The County Auditor should be able to provide this information. It is also important that any subsequent property owner is aware of the long-term maintenance obligations that come with purchase of the property. The long-term maintenance plan may need to be incorporated into legal documents that follow the property through ownership changes.

Post-Construction Plan Review

The post-construction plan for this site was not in compliance with the requirements of the Ohio EPA General Storm Water NPDES Permit for Construction Activities #OHC000003. Not all post-construction flows are directed to post-construction BMPs. In particular, we noted that rooftops, and the drainage area around the site entrance, discharge directly to storm sewers without water quality treatment. This should have been flagged by the Engineering Department as a problem during the plan review process and the plan should have been amended to provide post-construction BMPs for all developed portions of the site. **NOTE:** The Hampton Inn is a new development site. On redevelopment sites, post-construction requirements only require treatment of 20% of the WQv, thus it is possible to provide treatment for only a portion of the developed area in those situations.

The post-construction BMP plan did include two bioretention cells and a "grass filter strip" for the portions of the site where post-construction BMPs were provided. We noted that the "grass filter strip" is nothing more than an ordinary grass swale. Please be aware that this is not a grass filter strip. Although the consultant provided a detail of a grass filter strip from the ***Rainwater and Land Development*** manual, please note that a grass filter strip accepts diffuse sheet flow from a developed area, such as the flow off the edge from the full width of a parking lot. The situation on the Hampton Inn site was nothing more than the discharge from the storm sewer system flowing through a grass channel. If the intent was to provide post-construction treatment in a swale, the plan reviewer should have asked that the grass channel be designed as a wet or dry enhanced swale. Wet swales are essentially linear constructed wetlands while dry swales are turfed linear bioretention cells.

CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: **City of Mentor**
MS4 Permit No: **3GQ00034*BG**

Name of Site: Pako Inc.	
Location: 7655 Jenther Drive	**NPDES Permit** #3GC05131*AG
Date of Inspection: 6/1/11	**Time of Inspection:** 2:05 p.m.
Name of Inspector: Tim Wiley, Engineering Dept.	
Others Present During Inspection: Dan Bogoevski and Lindsie MacPherson, DSW, NEDO Lorne Vernon Brian Ashurst Mike Jeffery	

1. Did MS4 inspector identify himself to the project superintendent or site foreman and state the purpose of his inspection?

   Tim will usually deal directly with the operator or excavator, but he does not regularly speak to the operator for each inspection.

2. Did the MS4 inspector ask if any amendments have been made to the SWP3 since his or her last inspection?

   No. The inspector did not indicate whether plans were located on site, and the project superintendent was not present for the inspection.

   Ohio EPA Comment: SWP3s are required to be kept up-to-date and amended if there are any changes in design, construction, operation or maintenance that affects the effectiveness of the plan. The inspector should ask the project superintendent or site manager if amendments have been made to the plan. Certain amendments may require review and approval by the City Engineer.

3. Did the MS4 inspector review the site inspection reports required of the developer once every 7 days and within 24 hours of a 0.5-inch or greater rainfall?

   No. Inspections required of the site operator were not verified by the municipal inspector.

4. Did the inspector reference the approved SWP3 or use it as the basis of his or her inspection?

   Yes, the inspector had the plans with him but he requires more training on how to interpret the plans. He did not identify a major point of plan implementation that is essential to the success of the SWP3. The outlet of the sediment basin was

never installed, leading the contractor to pump runoff collecting in the basin to the receiving stream (See Item 7 below).

5. Did the inspector follow-up on any compliance issues found during his or her last inspection?

   The inspector did not discuss any previous compliance issue with this site.

6. Compliance issues identified by inspector during this inspection:

   The inspector noted that repairs in the silt fence at the back of the facility were necessary.

   Inspector noted that the temporary outlet structure for the sediment basin was never installed, but he has not required the contractor to correct this point of violation. This indicates that the inspector is not properly enforcing the construction sequence contained in the SWP3.

   The inspector also commented that site stabilization was required and that inlet protection was not provided, but he allowed this because the contractor agreed to jet the storm sewers after construction.

   Ohio EPA Comment: Please note that jetting storm sewers will flush sediment from them. Thus, it is critical that the temporary outlet required for sediment control be installed in the basin and maintained until after the storm sewers are jet-cleaned.

7. Deficiencies or NPDES violations <u>not</u> noted by the MS4 inspector during this inspection:

   The inspector did not note that because there was no outlet structure installed on the basin, the contractor has been pumping sediment-laden water from the bottom of the basin directly to the adjacent creek. The municipal inspector should have ordered the contractor to use BMPs for dewatering activities.

   Ohio EPA Comment: The Ohio EPA NPDES permit for construction activities would require the water to be pumped to a sediment basin or other equally effective BMP. This may include using a dewatering bag, building a sump pit within the basin and pumping from within the perforated and geotextile-wrapped standpipe or requiring the runoff to settle in place within the basin for at least 24 hours and then floating an intake hose on the top surface.

   The inspector did not note that the diversion to the sediment basin in the back of the site was not installed according to the SWP3, and there were multiple failure points along this side of the site where the contractor had cut through the embankment to drain the site directly to the creek.
   The inspector's interpretation of site stabilization did not include the soil stockpiles.

   Ohio EPA Comment: Soil stockpiles are subject to the stabilization requirements of the local ordinance and the Ohio EPA NPDES storm water permit for construction activities.

8. Did the MS4 inspector ask the project superintendent or site foreman to accompany him or her on the inspection?

   NO. Project superintendent not present at time of inspection. The inspector should always make his presence on site known to the parties responsible for implementation and maintenance of storm water controls.

9. Did the MS4 inspector recap his findings upon completion of his or her inspection?

   N/A – The project superintendent were not present at time of inspection.

   Ohio EPA Comment: Inspector should always recap his findings with the site operator at the conclusion of his inspection and establish a timeframe for compliance.

10. Is the community planning on taking any enforcement actions based on the results of today's inspection? If so, what are those actions? *(NOTE: Ask community to send you a copy of the enforcement action.)* Did the inspector provide a deadline for corrective action? If so, provide details.

    NO, the City did not indicate any plan to take enforcement action based on the site conditions.

    Ohio EPA Comment: This site was not in compliance with its approved SWP3. The City must issue a Notice of Violation and escalate enforcement as necessary to achieve compliance on this site.

    The City waits for the contractor to inform them that construction has begun on a particular site. The City must initiate a pre-construction meeting to discuss erosion and sediment controls and the sequence of construction before construction commences on a site. This is a minimum performance standard in your MS4 permit.

CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: **City of Mentor**
MS4 Permit No: **3GQ00034*BG**

Name of Site: Blackbrook Golf Course	
Location: 8900 Lakeshore Blvd	**NPDES Permit** #3GC05117*AG
Date of Inspection: 6/1/11	**Time of Inspection:** 1:15 p.m.
Name of Inspector: Lorne Vernon, Department of Public Works	
Others Present During Inspection Dan Bogoevski and Lindsie MacPherson, DSW, NEDO Tim Wiley Brian Ashurst Mike Jeffery	

1. Did MS4 inspector identify himself to the project superintendent or site foreman and state the purpose of his inspection?

   This site is a municipal project inspected by the Department of Public Works. But, the inspector should have made contact with the foreman for the contractor and make him aware that he is performing an inspection of storm water control practices.

2. Did the MS4 inspector ask if any amendments have been made to the SWP3 since his or her last inspection?

   No.

3. Did the MS4 inspector review the site inspection reports required of the developer once every 7 days and within 24 hours of a 0.5-inch or greater rainfall?

   Yes. All inspection reports were filed in Lorne's binder.

4. Did the inspector reference the approved SWP3 or use it as the basis of his or her inspection?

   The inspector did not have the plans for this site with him at the time of the inspection.

5. Did the inspector follow-up on any compliance issues found during his or her last inspection?

   Inspector did not comment on any previous issues with the site

6. Compliance issues identified by inspector during this inspection:

The inspector checked the outlet structure and the discharge at the outfall location for clear water.

The inspector also focused on the perimeter controls and noted the need for better seeding and stabilization.

7. Deficiencies or NPDES violations not noted by the MS4 inspector during this inspection:

The inspector did not note that the sediment basin and riser were designed per old specifications that do not meet NPDES permit and City of Mentor requirements. The current riser pipe does not provide the required 48 hour to 7 day dewatering time (1" diameter holes spaced apart every 4" and wrapped in geotextile fabric is an outdated specification).

Ohio EPA Comment: The sediment basin requires a riser with one orifice or a skimmer device to provide the required dewatering time. A sediment storage volume of at least 1000 cubic feet per acre of disturbed area must be provided below the invert of the dewatering device and a dewatering volume of at least 67 cubic yards per acre of total contributing drainage area must be provided above the invert of the dewatering device.

The inspector did not note that the site was left bare over the winter months. The site was cleared in September of 2010 and, as of the date of this audit, there has been no attempt to temporarily stabilize areas that remained idle for 21 days or longer or are at final grade.

The inspector did not inspect for non-sediment pollutants such as the yardwaste pile at the back of the facility. The pile is producing leachate with is considered and illicit discharge if this leachate is discharged off the site. The yardwaste needs to be removed from the site and disposed of properly at a composting facility.

The inspector did not note the need for a sediment trap at the tee box end of the site in order to control the discharge of sediment running off this portion of the property. The SWP3 did not originally indicate that runoff from construction activities would be directed to this area. Thus, the inspector should have either required the contractor to direct runoff as intended by the approved SWP3 or required the installation of an additional control measure. On the date of this audit, a straw bale barrier had been installed, but, please note that the Ohio EPA does not accept straw bale barriers for sediment control.

The inspector did not note that the "natural buffer" surrounding the site should not be the only sediment control for the perimeter and that silt fence should also be installed.

8. Did the MS4 inspector ask the project superintendent or site foreman to accompany him or her on the inspection?

NO. The site is a municipal project, but the inspector should always make his presence on site known to the parties responsible for implementation and maintenance of storm water controls.

9. Did the MS4 inspector recap his findings upon completion of his or her inspection?

NO. The inspector did not approach the contractor during this inspection.

10. Is the community planning on taking any enforcement actions based on the results of today's inspection? If so, what are those actions? *(NOTE: Ask community to send you a copy of the enforcement action.)* Did the inspector provide a deadline for corrective action? If so, provide details.

NO, the City did not indicate any plan to take enforcement action based on the site conditions.

Site Photos Taken By Lindsie MacPherson, DSW, NEDO

Figure 1 (LT): The riser for the sediment basin was designer per the old specifications. This riser does not provide the proper drain down time of 48 hours to 7 days.
Figure 2 (RT): The sediment basin design does not meet the criteria per the NPDES permit requirements for sediment settling ponds.

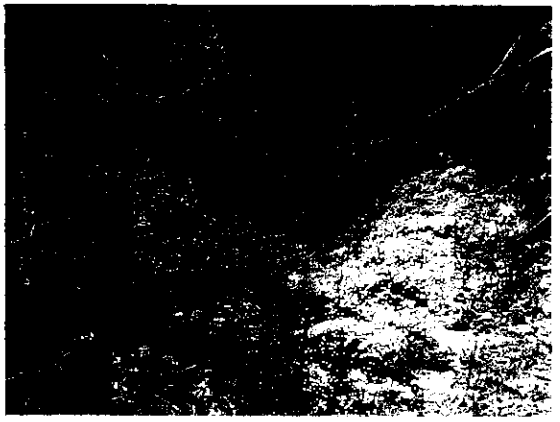

Figure 3 (LT): The sediment basin discharges into a stream at the back of the site.

Figure 4 (RT): The yardwaste pile at the back of the facility is producing a leachate that is considered and illicit discharge to the City's MS4 if the leachate discharges off the site. The yardwaste must be removed and disposed of properly.

Figure 5 (LT): The BMP provided is not an accepted form of sediment control. The city should be controlling the runoff from this part of the site in a sediment trap to avoid the discharge of sediment from the site.
Figure 6 (RT): The "natural buffer" used as a perimeter control for this site is not acceptable. At minimum, silt fence should be provided around the perimeter of the site to control sheet flow.

CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: **City of Mentor**
MS4 Permit No: **3GQ00034*BG**

Name of Site: Newell Creek Subdivision PH 8	
Location: W. SR 615, N. Norton Pkwy	**NPDES Permit** #3GC04814*AG
Date of Inspection: 6/1/11	**Time of Inspection:** 3:00 p.m.
Name of Inspector: Mike Jeffery	
Others Present During Inspection Dan Bogoevski and Lindsie MacPherson, DSW, NEDO Tim Wiley Lorne Vernon Brian Ashurst	

1. Did MS4 inspector identify himself to the project superintendent or site foreman and state the purpose of his inspection?

   This project is in the individual lot building stage. The project superintendent for the homebuilder was not present at the time the inspection was conducted.

2. Did the MS4 inspector ask if any amendments have been made to the SWP3 since his or her last inspection?

   No. The inspector did not indicate whether plans were located on site, and the project superintendent was not present for the inspection.

3. Did the MS4 inspector review the site inspection reports required of the developer once every 7 days and within 24 hours of a 0.5-inch or greater rainfall?

   No. Superintendent not on site at time of inspection.

4. Did the inspector reference the approved SWP3 or use it as the basis of his or her inspection?

   The inspector did not have a copy of the approved plans or an abbreviated SWP3 for the individual lot.

5. Did the inspector follow-up on any compliance issues found during his or her last inspection?

   No.

6. Compliance issues identified by inspector during this inspection:

The inspector will inspect the inlet protection box structures, the street inlets, the stone construction entrance, and he will check to ensure the streets are being swept.

7. Deficiencies or NPDES violations not noted by the MS4 inspector during this inspection:

   The inspector did not note the need for on-lot silt fence. Filter socks may also be used for this purpose if they are sized according to the drainage area (12" diameter staked at intervals per ***Rainwater*** manual). It is <u>not</u> acceptable to simply rely on seeding along the frontage of each lot.

8. Did the MS4 inspector ask the project superintendent or site foreman to accompany him or her on the inspection?

   NO. The inspector should always make his presence on site known to the parties responsible for implementation and maintenance of storm water controls.

11. Did the MS4 inspector recap his findings upon completion of his or her inspection?

    No – Project superintendent not on site at time of inspection.

9. Is the community planning on taking any enforcement actions based on the results of today's inspection? If so, what are those actions? *(NOTE: Ask community to send you a copy of the enforcement action.)* Did the inspector provide a deadline for corrective action? If so, provide details.

   No, the City did not indicate any plan to take enforcement action based on the site conditions.