



\*3GQ1000220110801\*

LORAIN

AVON

CITY OF AVON

3GQ10002 2011/08/01

MACPHERSON,  
LINDSIE

This document has been removed. imaged and is now stored electronically.

**Environmental  
Protection Agency**

Ohio Department of  
Natural Resources  
190 East Broad Street  
Columbus, Ohio 43260-1090  
614.644.3300  
www.epa.ohio.gov  
Director

July 29, 2011

RE: LORAIN COUNTY  
CITY OF AVON  
PERMIT NO. 3GQ10002\*BG  
MUNICIPAL STORM WATER  
PROGRAM INSPECTION

Mr. Robert Knopf  
City Engineer  
City of Avon  
36080 Chester Road  
Avon, OH 44011

Dear Mr. Knopf:

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 14, 2011, Ohio EPA met with you and other representatives of the City of Avon to determine compliance with the NPDES permit and the Storm Water Management Plan (SWMP) submitted by the City in March 2003. 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. In addition, you will find comments suggesting ways to improve your MS4 program. The following is a summary of our audit findings:

**Violations:**

- **Failure to update construction and post-construction ordinance(s) within two years of permit renewal.** This is a violation of Part III.B.4.a.i and Part III.B.5.c of the Ohio EPA General Storm Water NPDES permit #OHC000002. The City was required to revise their ordinances to be equivalent with the technical requirements set forth in the Ohio EPA NPDES General Storm Water Permits for Construction Activities, which include the following EPA NPDES

Permits: OHC000003, OHCD0001 and OHCO00001. This was to be completed within two years of when the City's coverage under the MS4 general permit was granted (June 3, 2009). At this time the City has written a model ordinance for comprehensive storm water management as their update, but the update is still in the review process and has not passed. Please provide the EPA with a plan of action and time frame for passing the model ordinance.

- **Failure to escalate enforcement to achieve compliance with the local construction site ordinance.** This is a violation of Part III.B.4.a.vi of the Ohio EPA General Storm Water NPDES permit # OHQ000002. Our file review and interview revealed that the City is deficient in written Notices of Violation under City of Avon letterhead for non-compliance with Chapter 1050 of the municipal code (Construction Site Soil Erosion, Sediment, Storm Water Runoff and Storm Water Quality Controls and Regulation). The City was only able to provide documentation for one Notice of Violation sent to the Heritage Village property. Stop work orders and court actions are also permitted by Chapter 1050, but are rarely implemented. Yet, during the field inspections for this audit, as well as other inspections conducted by the Ohio EPA for the French Creek Recreational Area project and the Recreation Boulevard Extension project, Ohio EPA personnel noted many compliance issues that would require an enforcement action. The City must develop an enforcement escalation protocol so as to provide inspectors and the City Engineer with a clear policy on when to take enforcement to the next level and how that is to be achieved. The City also needs to ensure written inspection reports are sent to the legal entity which holds NPDES permit-coverage and the entity responsible for most of the earth disturbance and installation and maintenance of erosion and sediment controls. Ohio EPA suggests that the inspectors develop a form that could be used during the inspection and then left with the contractor for written notification of violations or deficiencies.

The audit also revealed that the Mayor has instructed the City Engineer to tone down his language in the City's violation letters because the overall attitude of the letters was too harsh and demanding on developers. This action may be an impediment to enforcement and the effectiveness of the City's overall construction and post-construction program and may need to be rethought.

- **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 Ohio EPA General Storm Water NPDES permit # OHQ000002. 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. 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. The City is also working on requiring the submittal of long-term maintenance plans, which is not yet a requirement for post-construction BMPs in the community.

- **Failure to provide training to contractors and developers within the first permitting term.** This is a violation of Part III.B.1.c of the Ohio EPA General Storm Water NPDES permit # OHQ000002. The City's storm water public education and outreach program should include more than one mechanism and target at least five different storm water themes over the permit term, and at least one of the themes should target the development community. Please ensure that this requirement is met during the 2009 – 2014 permit term.
- **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. Our records show that the City of Avon has five (5) active projects permitted under the Ohio EPA General Storm Water NPDES Permit for Construction Activities but indicated during the interview that two (2) of the projects were completed and have reached final stabilization. Please submit an NOT for these projects that are completed.

#### Deficiencies:

- The City was heavily relying on Sediment Control Solutions (SCS) for a large portion of their construction and post-construction programs before the company closed in April 2011. A majority of records associated with the City of Avon construction and post-construction programs still reside with SCS personnel and have not been handed over to the City. In the future, if the City decides to use a third party, a set of these records should be maintained in the Engineering or Service Department, as appropriate. Although there was a Memorandum of Understanding between the City and SCS, this arrangement was terminated when least expected and the City is now faced with not having access to their records. Without access, the City was unable to provide the Ohio EPA with documentation for inspection dates and reports, sample as-built inspections, NOV letters, and Storm Water Pollution Prevention Plans (SWPPPs) for the file review.
- The City does not currently have a tracking system for construction activity beyond the Excel spreadsheet generated by Greg Masson for individual lot construction. There were several instances where the construction site inspector was unaware that construction was occurring on an active site, for example, the

Miller Nature Preserve. The City was also uncertain about the status of many of the sites on the Ohio EPA NPDES NOI list and did not know how to obtain the permit list for their community. Overall, the City does not keep an inventory of construction projects subject to inspection under the NPDES permit nor does it track the status of such projects. Please be aware that performance standards established under Part III.B.4.c of the NPDES permit require the City to inspect all construction sites where 1 or more acre of land is disturbed or the larger common plan of development or sale disturbs one or more acres of land. These sites must be inspected when construction begins and at least monthly thereafter as long as the project is active. In order to ensure that this performance standard is met, Ohio EPA strongly recommends the City begin keeping an inventory or list of construction projects and tracking their status as well as Individual-Lot and CO-Permittee NOI submittal.

- The City has not yet completed mapping all privately-owned post-construction BMPs approved after April 21, 2003. Per Part III.B.5.d of the NPDES permit, the City is obligated to ensure long-term operation and maintenance (O&M) of these post-construction practices, as well as any public facilities that may be constructed in the City of Avon in the future. Part III.B.3.b of the NPDES permit requires these practices to be mapped by the end of the current NPDES permit term. Once developed, procedures need to be adopted to keep the map current. This map will form the basis of an *inventory* of post-construction BMPs installed in the City. The City does not currently track BMP location, type, as-built inspections, O&M requirements, and long-term operation and maintenance inspection findings. This information will be required to implement an effective long-term O&M program.
- Although the City has been providing numbers to Ohio EPA in the Annual Report, it does not appear that the City has a system to track construction site inspection findings, enforcement actions, complaints, or NOI submittal to accurately generate the numbers reported to Ohio EPA. Please clarify how the City has been generating the numbers reported to Ohio EPA required under Part III.B.4.d of the NPDES permit, and how the City plans to generate these numbers for the future.
- The Ohio EPA recommends the City develop or adopt checklists for use by inspectors when conducting construction and post-construction site inspections. This will ensure all practices are inspected 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 audit, the City noted that an inspection checklist for construction sites does exist, but the inspector noted that he had run out and does not use them anymore.

- The City does not provide continuing education for construction site inspectors and uses inspectors who are under trained for such a job. Throughout the field inspections, the lack of training to the inspector was evident, for example, the inspector was not able to identify the purpose of sediment settling basins or the need for soil stabilization. It is important to provide him with on-going education to ensure that he is aware of the latest standards and specifications for erosion and sediment control, as well as other storm water related topics. *Please review Construction Field Review Worksheets for an evaluation of the construction site inspector for the City of Avon.*
- The training records for the plan reviewer were never submitted the Ohio EPA. Please submit these records to the Northeast District Office with the City's response to this letter.
- The current construction and post-construction ordinance for the City of Avon has not 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), but should consider doing so to minimize arguments and negotiations on what constitutes an acceptable BMP. Although Ohio EPA does require post-construction BMPs on small construction sites, the requirements are not prescriptive. Thus, reliance on Ohio EPA requirements for small construction sites may not lead to the types of BMPs the City would prefer to see.
- The City did not provide sample contract language for active public projects not developed or inspected in-house. Contracts with third party planners and engineers should include language that specifies that sediment and erosion control and post-construction storm water BMPs must be incorporated into the design. Also, if third party inspectors are to be used, language to ensure minimum inspection, maintenance, and reporting requirements should be specified in the contract.
- The City has reviewed their ordinances to facilitate the use of non-structural and low-impact development (LID) practices and has incorporated these practices in their ordinance that remains under review. To further promote use of LID practices, the City may also want to consider adding a runoff reduction requirement to the ordinance or allow a reduction in the size of storm water management structures if LID is used. Planning and zoning codes should be reviewed to encourage balanced growth and smart growth principles such as policies to promote conservation development design and compact development, infill and vertical development, and allowing the use of meadow grass or low-maintenance vegetation, where appropriate.

MR. ROBERT KNOPF  
JULY 29, 2011  
PAGE 6

Also, while conducting the field inspection for the Elizabeth/ Joseph/ Puth sewer project, the Ohio EPA revealed an illicit discharge cross connection between the storm sewer and the septic tanks for the houses in the development. This matter will be followed up with a letter from the Ohio EPA.

Please review my comments and provide Dan Bogoevski with a letter of response indicating the actions you will take to address my concerns. **Your response should be received no later than August 24, 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 me at (330) 963-1138 or [lindsie.macpherson@epa.state.oh.us](mailto:lindsie.macpherson@epa.state.oh.us) or Dan Bogoevski at (330) 963-1145 or [dan.bogoevski@epa.state.oh.us](mailto:dan.bogoevski@epa.state.oh.us).

Sincerely,



Lindsie MacPherson  
Assistant to the District Engineer  
Division of Surface Water

LM:bo

pc: James A. Smith, Mayor, City of Avon w/ Enclosure

ec: Dan Bogoevski, Ohio EPA, NEDO, DSW

# Municipal Storm Water Program Evaluation

## Construction and Post-Construction Component Worksheet

<b>Date of Evaluation</b>
June 14, 2011
<b>Evaluator Name, Title</b>
Dan Bogoevski, District Engineer Lindsie MacPherson, Ass. District Engineer
<b>MS4 Permittee</b>
City of Avon

**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.

<b>Staff Interviewed</b>		
<b>Name</b>	<b>Department/Agency</b>	<b>Phone Number/Email</b>
Robert Knopf City Engineer	City Engineer City of Avon	(440) 934-7520 rknopf@cityofavon.com
Greg Masson Building Inspector	Building Department City of Avon	(440) 937-7811 building@cityofavon.com

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
Ordinance used to require storm water BMPs at construction sites?	<b>YES</b>
Name and/or code section(s)	Chapter 1050: Construction Site Erosion, Sediment, Storm Water Runoff and Storm Water Quality Controls and Regulations  A new ordinance passed two months ago that gives the City authority to inspect construction of individual lot construction.
Date initially enacted:	February 13, 2006
Threshold for coverage (e.g., 1 acre, 100 cubic yards, etc.)	1 or more acre of disturbance
<i>NOTE: 1 acre is minimum requirement.</i>	

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Exclusions from coverage allowed:</p> <p><i>NOTE: To align with NPDES permit program, the only exclusions allowed are (a) if rainfall erosivity factor, R, is &lt; 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 &lt; 5 acres is disturbed, (c) silvicultural disturbances, (d) agricultural disturbances or (e) construction related to oil &amp; gas well exploration.</i></p> <p><i>Ohio EPA website has fact sheet on what constitutes "agricultural disturbance" and "routine maintenance" versus regulated construction activity.</i></p> <p><i>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.</i></p>	<p>Does not apply to:</p> <p>Any agricultural disturbance, silvicultural operation, existing strip mining operations, and existing surface mining operations.</p>
<p>Does your construction program include the following types of construction activity:</p> <p>Single-family residential?</p> <p>Multi-family residential?</p> <p>Commercial development?</p> <p>Institutional development (schools or government facilities)?</p> <p>Mixed-use development?</p> <p>Non-subdivided development?</p> <p>Non-exempt construction on agriculturally-zoned lands? (barn on a farm)</p> <p>Non-silvicultural tree clearing?</p> <p>Your own municipal construction projects?</p> <p>Construction and demolition debris landfills?</p>	<p><b>YES</b></p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
Construction by other public entities within your political jurisdiction, e.g., a county road project within a municipality?	<b>YES</b>
Earth disturbance associated with open spaces and parks (e.g., trails within a park or parking lot improvements at a park)?	<b>YES</b>
Private pond construction?	<b>YES</b>
Construction of wind or solar panel farms?	<b>YES</b>
Establishment of borrow or spoil areas that service multiple, unrelated construction projects?	<b>YES</b>
Utility construction projects (including tree clearing along utility corridors or pipeline projects that cross multiple political jurisdictions)?	<b>YES</b>
<p><i><b>NOTE:</b> Construction must be regulated if it does not 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.</i></p>	
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.)?	<b>YES</b>
Has ordinance been updated to reflect minimum requirements of Ohio EPA NPDES permit #OHC000003?	<b>NO</b>
Date of updates?	The renewal is in process. It will be going to the Service Committee of City Council next week. Once they review, they make recommendations to the City Council to pass. The ordinance only needs to go in front of council for one meeting. It should be passed by August 2011.
<p><i><b>NOTE:</b> Check database for date of NPDES permit renewal prior to inspection. MS4 permit #OHQ000002 required updates within 2 years of permit renewal.</i></p>	
Date of MS4 Permit Renewal: <b>June 3, 2009</b>	This is a permit violation. Failure to update ordinance within 2 years of permit renewal.

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Ordinances used to require post-construction storm water BMPs on new development or redevelopment projects:</p> <p><b>Treatment of Water Quality Volume (WQv)</b> Name and code section:</p> <p>Date initially enacted:</p> <p>Has this ordinance been updated to reflect the minimum requirements of Ohio EPA General Permit #OHC000003?</p> <p>Date of update:</p> <p><b>Riparian and Wetland Setback Ordinance</b> Name and code section:</p> <p>If YES, does ordinance require protection of native vegetation within riparian area or can manicured lawns be established?</p> <p>If YES, does ordinance allow the location of storm water infrastructure within the riparian setback?</p>	<p style="text-align: center;"><b>YES</b></p> <p>Chapter 1050: Construction Site Erosion, Sediment, Storm Water Runoff and Storm Water Quality Controls and Regulations</p> <p><b>Feb 13, 2006</b></p> <p style="text-align: center;"><b>NO</b></p> <p>Same as above for construction. In process, but not yet passed by City Council. This is also a permit violation.</p> <p style="text-align: center;"><b>YES</b></p> <p>Chapter 1050: Construction Site Erosion, Sediment, Storm Water Runoff and Storm Water Quality Controls and Regulations</p> <p>Current ordinance requires a riparian buffer of FEMA floodplains around watercourses. New ordinance will establish specific widths: "Streams of the state" is 50 feet from top of bank, Zone 1 is first 20 feet – no disturbance at all, but light grading can occur outside of this zone. Stream of the state is any stream with federal oversight by ACOE or EPA. Major ditches are 25 foot setbacks with 10 foot (Zone 1) having to be kept natural. New ordinance will not allow structures within Zone 1 unless approved by the City Engineer.</p> <p style="text-align: center;"><b>NO</b></p> <p style="text-align: center;"><b>YES</b></p> <p>These answers will change with update of ordinance.</p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p><b>Runoff Reduction</b> (e.g., infiltration or mitigation of a recharge volume)? Name and code section:</p>	<b>NO</b>
	But, the new code will provide credits for runoff reduction – credits are provided for the overall sizing of flood control structures (water quantity controls). Chapter 1050.12.03 – is the section of new ordinance that discusses this.
<p><b>BMPs designed to control temperature</b> for discharges to cold water habitat streams? Name and code section:</p>	<b>N/A</b>
<p><b>Encouraging Green Infrastructure</b> or low-impact development practices: Allow downspout disconnection and use of open storm water conveyance systems? Names and code sections:</p>	<b>YES</b>
	There is no ordinance that requires connection of downspouts to storm sewers or that would prohibit open channels, but this only comes up if someone proposes it.
<p>Permit the installation of rain gardens and other bioretention facilities? Names and code section:</p>	<b>YES</b>
	Is allowed, but no specific code currently. New ordinance does list the BMP table from CGP.
<p>Allow rainwater harvesting (rain barrels and cisterns)? Name and code section:</p>	<b>YES</b>
	Is allowed, but no specific code currently.
<p>Allow or require the use of pervious pavement systems? Name and code section:</p>	<b>YES</b>
	Is allowed, but no specific code currently. New ordinance does list the BMP table from CGP.
<p>Allow reduction in the size of traditional storm water management structures if LID used? Name and code section:</p>	<b>NO</b>
	New code will provide credits to detention basin sizing if LID is used. For now, it's a 1:1 credit on volume reduction.
<p>Provide a credit to a storm water utility fee if LID is used? Describe:</p>	<b>N/A</b>
	No storm water utility at this time.

**Ordinance/Legal Authority**

Interview Questions	Response
<p><b>Balanced Growth Principles</b>, i.e., other non-structural ordinances or codes that promote better site design:</p>	
<p>Allow conservation design as a subdivision layout (retain ≥ 40% open space by maintaining existing zoned density)</p>	<p align="center"><b>NO</b></p> <p>Would allow, but not currently required. Current minimum open space is 20%. Current code does not allow cluster home developments.</p>
<p>Standard or variance required? Name and code section:</p>	<p align="center"><b>VARIANCE</b></p> <p>Not sure what code prohibits cluster home development.</p>
<p>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:</p>	<p align="center"><b>NO</b></p> <p>Mowing ordinance does not allow vegetation height over 12 inches, except for agricultural settings.</p>
	<p><b>Ohio EPA Comment:</b> The benefits of low-maintenance grasses should be a topic for your public education program to change perceptions about this.</p>
<p>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</p>	<p align="center"><b>YES</b></p> <p>Allows joint parking. Reduced parking spaces needed for fast food restaurants based on transportation engineering guidelines. Space must be available to meet full parking specs based on building size, but only 50% of that has to be paved.</p>
<p>Allow sidewalks on only one side of the road in residential neighborhoods Name and code section:</p>	<p>DEPENDS, but most traditional development does require sidewalks on both sides. A bike path can substitute for sidewalk, but it still creates impervious area.</p>
<p>Zoning that encourages smart growth in compact neighborhoods or mixed-use development:</p>	<p align="center"><b>NO</b></p> <p>But, the French Creek Development Corp controls development within the traditional downtown core.</p>
<p>If YES, does zoning create walkable neighborhoods with access to commercial areas and employment centers?</p>	<p align="center"><b>NO</b></p>
<p>If YES, does this zoning provide incentives for vertical development rather than horizontal sprawl?</p>	<p align="center"><b>NO</b></p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>If YES, does this zoning encourage a range of housing options for people of various incomes?</p> <p>If YES, do you provide incentives for infill development or development in the core?</p> <p>If YES, does zoning direct growth in areas where there are a variety of transportation choices (walking, biking, public transportation vs. just the car)?</p> <p><i>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.</i></p>	<p style="text-align: center;">NO</p> <p style="text-align: center;">NO</p> <p style="text-align: center;">NO</p> <p>But, City is trying to connect various corridors throughout the City with sidewalks.</p>
<p>Do permit or plan approvals have to be issued before construction activities that disturb 1 or more acre can commence?</p> <p>Plan Approvals</p> <p style="padding-left: 20px;">Construction</p> <p style="padding-left: 20px;">Post-Construction</p> <p>Permits &amp; Type (Building, Grading, etc.)</p> <p style="padding-left: 20px;">Construction</p> <p style="padding-left: 20px;">Post-Construction</p> <p>Does your definition of "construction activities" include any grading, grubbing, filling, clearing or excavating activity?</p>	<p style="text-align: center;">YES</p>
<p>Are plans for storm water controls used during construction submitted separately from plans that depict post-construction BMPs?</p>	<p style="text-align: center;">NO</p>

<b>Ordinance/Legal Authority</b>													
<b>Interview Questions</b>	<b>Response</b>												
Describe the submission process and the timing of plan submission:	Planning department must approve first, then to zoning permit, engineering plan approval and then building permit can be issued. Engineering department approval of SWP3 occurs at same time as zoning and building phase. Building permit only required for construction of structures such as homes or commercial buildings.												
Does your ordinance explicitly specify selection criteria or minimum acceptable BMP design?													
Construction	<b>YES</b>												
	New and existing ordinance do provide specifics. Existing ordinance references the Construction permit #OHC000002.												
Post-Construction	<b>NO</b>												
	New ordinance does provide specifics, but existing ordinance does not. Also refers to Rainwater manual.												
If NO, are these standards referenced?													
Construction	<b>NO</b>												
Post-Construction	<b>NO</b>												
If YES, list references:													
Construction													
Post-Construction	Current ordinance just states that City Engineer establishes what is approvable. This is true for both construction or post-construction.												
[REDACTED]													
Types of enforcement mechanisms available for construction site issues per your ordinance:	<table border="0"> <tr> <td>Notices of Violations (NOV)</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td>Administrative fines</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td colspan="2">\$100 per day fine is possible if violation goes beyond timeline for corrective action.</td> </tr> <tr> <td>Stop-work orders</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td colspan="2">If violations are not corrected after a certain number of days, then threatened with fine, then stop work order.</td> </tr> <tr> <td>Civil penalties</td> <td style="text-align: right;"><b>NO</b></td> </tr> </table>	Notices of Violations (NOV)	<b>YES</b>	Administrative fines	<b>YES</b>	\$100 per day fine is possible if violation goes beyond timeline for corrective action.		Stop-work orders	<b>YES</b>	If violations are not corrected after a certain number of days, then threatened with fine, then stop work order.		Civil penalties	<b>NO</b>
Notices of Violations (NOV)	<b>YES</b>												
Administrative fines	<b>YES</b>												
\$100 per day fine is possible if violation goes beyond timeline for corrective action.													
Stop-work orders	<b>YES</b>												
If violations are not corrected after a certain number of days, then threatened with fine, then stop work order.													
Civil penalties	<b>NO</b>												

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
	<p>Criminal penalties <span style="float: right;"><b>YES</b></span>            \$100 per day misdemeanor plus any cost and expenses involved in case.</p>
Which type of enforcement action have you most commonly implemented?	Notice of Violation with threats of fines. This usually gets corrective action to occur.
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	Stop Work Order
2. A BMP indicated on the SWP3 has not been installed or requires maintenance (first incidence)	Send Notice of Violation telling them to take corrective action within a certain timeframe.
3. A BMP is required but not shown on the SWP3	Noted within inspection letter, but is not a violation. Plan just needs to be updated.
4. A BMP has not been installed or maintained despite prior notification from the MS4 (repeated incidences)	City threatens to issue fine, but still gives them time to comply. If not in compliance by this deadline, fine will be issued (\$100/day), but they haven't had to get to this situation yet.
5. If using a third party inspection service provider, e.g., the SWCD, MS4 receives inspection report indicating repeated non-compliance issue	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.	<p>Heritage Village just received a Notice of Violation because sediment from the site was going onto neighboring property (silt fence was down). Followed-up with a meeting with developer representative. The City stated that the developer must install silt fence immediately and then the diversion by next week.</p> <p>Engineer states that Mayor has instructed him to tone down language in letters (too harsh). This may be an impediment to enforcement.</p>

<b>Ordinance/Legal Authority</b>											
<b>Interview Questions</b>	<b>Response</b>										
Have your enforcement protocols and procedures for construction site issues been formalized in a written enforcement escalation plan?	<b>NO</b>  Decisions to escalate enforcement are made by the City Engineer using judgment rather than a set protocol.										
[REDACTED]											
Types of enforcement mechanisms available for post-construction site issues per your ordinance:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Notices of Violations (NOV)</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td>Administrative fines</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td>Stop-work orders</td> <td style="text-align: right;"><b>NO</b></td> </tr> <tr> <td>Civil penalties</td> <td style="text-align: right;"><b>NO</b></td> </tr> <tr> <td>Criminal penalties</td> <td style="text-align: right;"><b>NO</b></td> </tr> </table>	Notices of Violations (NOV)	<b>YES</b>	Administrative fines	<b>YES</b>	Stop-work orders	<b>NO</b>	Civil penalties	<b>NO</b>	Criminal penalties	<b>NO</b>
Notices of Violations (NOV)	<b>YES</b>										
Administrative fines	<b>YES</b>										
Stop-work orders	<b>NO</b>										
Civil penalties	<b>NO</b>										
Criminal penalties	<b>NO</b>										
Which type of enforcement action have you most commonly implemented?	Notice of Violation										
Describe the enforcement mechanism used when the following compliance situations are encountered regarding post-construction:											
<ol style="list-style-type: none"> <li>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)</li> </ol>	Developer would receive a Notice of Violation and ask them to submit a plan for corrective action. City follows-up to ensure implementation of the corrective action. City requires a timeframe of 3 to 7 days for corrective action.										
<ol style="list-style-type: none"> <li>2. The post-construction BMP has not been maintained (first incident)</li> </ol>	Responsible party receives an inspection letter telling them that maintenance is required.										
<ol style="list-style-type: none"> <li>3. The post-construction BMP has not been maintained after multiple notifications</li> </ol>	Responsible party will either be fined or City will go out and do the corrective action and assess the responsible party for costs.										
<ol style="list-style-type: none"> <li>4. A homeowner has cut down trees in the riparian setback area (if applicable)</li> </ol>	Current ordinance does not identify this as an issue for violation. They will probably issue fine once future ordinance is adopted.										
<ol style="list-style-type: none"> <li>5. A homeowner has installed a shed in a vegetated filter strip disrupting sheet flow runoff</li> </ol>	City would send NOV to fix issue, but this issue isn't likely because zoning or building would not issue permit to do this. However, not everyone goes to City to get required permits.										

<b>Ordinance/Legal Authority</b>		
<b>Interview Questions</b>	<b>Response</b>	
Describe the last enforcement action your community has taken against a contractor or developer for non-compliance with post-construction site requirements and provide the documentation to demonstrate the action.	<p>In early 2010, Willow Creek Subdivision had sediment accumulation in the retention basin. The City sent HOA a letter telling them to stabilize embankments. Also added surface flow controls to prevent issue from reoccurring in future.</p> <p>*City will try to find a copy of the letter. It was not readily available.</p>	
Have your enforcement protocols and procedures for post-construction issues been formalized in a written enforcement escalation plan?	<b>NO</b>	
<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
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	

<b>Notes</b>

<b>Construction Project Inventory</b>	
<b>Interview Question</b>	<b>Response</b>
Do you keep an inventory of construction projects that are actively occurring in your community? If YES, how?	<p style="text-align: center;"><b>Only Individual-lots</b></p> <p>Building Department inspector logs home construction in an Excel spreadsheet. Previously contracted with Sediment Control Solutions (SCS) and they kept track, but that is no longer available.</p>
Do you track construction projects <1 acre (e.g., individual lot within a subdivision or small addition to a business)?	<p style="text-align: center;"><b>YES</b></p> <p>As described above, building department does keep list of houses under construction (individual lot construction within subdivisions).</p>

<p>How often is your inventory of construction projects updated?</p>	<p>When a building permit is issued, Greg adds site to his list. Commercial sites have pre-construction meetings. Site would be added to list at that time. You will not see any commercial projects on the list today because there have not been any commercial projects start since this system was implemented.</p>										
<p>Information tracked:</p>	<table border="0"> <tr> <td>Project status</td> <td><b>YES</b></td> </tr> <tr> <td>Inspection Findings</td> <td><b>YES</b></td> </tr> <tr> <td>Enforcement Actions</td> <td><b>YES</b></td> </tr> <tr> <td>Complaints</td> <td><b>NO</b></td> </tr> <tr> <td>NOI submittal</td> <td><b>YES</b></td> </tr> </table> <p>For residential situations, the Building Inspector does not complete a report for the first inspection.</p> <p>The City Engineer will send the inspector out on complaints when received, but the city does not keep track of the number of complaints and how they were addressed.</p> <p>SCS was tracking NOIs for the City, but they have not received any new NOIs since SCS shut down (April 2011).</p>	Project status	<b>YES</b>	Inspection Findings	<b>YES</b>	Enforcement Actions	<b>YES</b>	Complaints	<b>NO</b>	NOI submittal	<b>YES</b>
Project status	<b>YES</b>										
Inspection Findings	<b>YES</b>										
Enforcement Actions	<b>YES</b>										
Complaints	<b>NO</b>										
NOI submittal	<b>YES</b>										
<p>Are site inspections at active construction sites conducted at a frequency of at least once per month?</p> <p><i>NOTE: This is the minimum performance standard in the NPDES permit for small MS4s.</i></p> <p>Is this inspection criteria and frequency explicitly stated in your SWMP?</p>	<p>Residential is inspected weekly and commercial is inspected once a month.</p> <p>City charges inspection fee, but does not check to see if homebuilders are performing weekly inspections, but for commercial development, they do ensure inspections are occurring.</p> <p>City receives more complaints from residential projects so that is why they are inspected more frequently.</p> <p style="text-align: center;"><b>NO</b></p>										
<p>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):</p>	<p>Estimated about 13. The City does not have an inventory of active construction.</p>										

**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.

Site #1: Elizabeth Avenue  
 Most recent inspection date:  
 The City did not have the records.  
 Prior inspection date:  
 The City did not have the records.

Site #2: Cleveland Clinic (Jacobs Health)  
 Most recent inspection date  
 The City did not have the records.  
 Prior inspection date:  
 The City did not have the records.

SCS has records, but once they closed down, records were not turned over to City.

Applicable Documents	Reviewed	Obtained
List of active construction projects	Obtained what exists, but do not keep a complete list. See notes above.	YES
List of projects covered under a state/EPA general permit	Did not know how to obtain this list, but we did review the list with City.	NO

**Notes**

**Municipal Construction Projects**

Ohio EPA has noted that 2009 Annual Report failed to include the page that reports what activities occurred during 2009. Only included page that says what they plan to do for year to come. Thus, they essentially failed to report construction and post-construction activities for 2009.

City was uncertain about the status of many of the sites on the NPDES list and did not know how to obtain the permit list for their community. The City Engineer stated that SCS provided this service previously. Does not currently have a tracking system for construction activity beyond the Excel spreadsheet generated by Greg for individual lot construction. There were several instances where the construction site inspector was unaware that construction is occurring on an active site, for example the Miller Nature Preserve.

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.

<b>Post-Construction BMP Inventory</b>			
<b>Interview Question</b>		<b>Response</b>	
Are post-construction BMPs tracked?  <i>BMPs must be shown on MS4 map.</i>		<b>NO</b>	
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?		N/A at this time, but under new ordinance, any water quality BMP will be tracked including LID or green infrastructure practices.	
Information tracked:		Location	N/A
<b>Information is not yet tracked, but the City has developed a post-construction inspection form to go along with the new ordinance that will track all of these items.</b>		Type	N/A
		Maintenance Requirements	N/A
		Inspection findings	N/A
Database used?		N/A at this time because they are not tracking this information.	
Number of private post-construction structural BMPs installed in community		N/A at this time because they are not tracking this information.	
<b>Applicable Documents</b>		<b>Reviewed</b>	<b>Obtained</b>
Inventory of Post-Construction BMPs			Does Not Exist

<b>Construction and Post-Construction BMP Standards</b>	
<b>Interview Questions</b>	<b>Response</b>
Do your erosion and sediment control standards include BMP selection criteria?	<b>NO</b>  Not currently, but the proposed ordinance update does state BMP selection criteria. Some is written into ordinance and some is by reference to Rainwater and Land Development manual.
Do your construction site standards account for different needs for different times of the year (e.g., growing season vs. winter)? Please elaborate:	<b>NO</b>  Not currently, but proposed ordinance update does account for different needs for different times of the year. Some is written into ordinance and some is by reference to Rainwater manual.

<b>Construction and Post-Construction BMP Standards</b>			
<b>Interview Questions</b>	<b>Response</b>		
Do your standards include operation and maintenance requirements?	<b>NO</b> Not currently, but proposed ordinance update does include these requirements. Some is written into ordinance and some is by reference to Rainwater manual.		
Do your post-construction standards include BMP selection criteria?	<b>NO</b> Not currently, but proposed ordinance update does. Some is written into ordinance and some is by reference to Rainwater manual.		
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?	<b>NO</b> Not currently, but proposed ordinance update provides some level of selection criteria:  It is left up to the City Engineer's judgment based on soil analysis for permeability. However, the BMP sizing and drawdown is general and applies to all situations, regardless of site size. Use of alternative BMPs on small sites is left up to engineer's judgment. Will require approval from Ohio EPA on large construction for alternative BMPs.		
Do your standards include operation and maintenance requirements?	<b>NO</b> In the future, the ordinance will require submittal of a long-term maintenance plan.		
	<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
	BMP guidance or technical document	Does not exist at this time. Did obtain copy of proposed ordinance.	
<b>Notes</b>			

<b>Plan Review Procedures</b>	
<b>Interview Questions</b>	<b>Response</b>
Who is responsible for erosion and sediment control plan review?	City Engineer
Who is responsible for post-construction plan review?	City Engineer
<p>What training or professional certifications have plan review personnel received?</p> <p>Construction Post-Construction</p> <p>How many years of experience do plan review personnel have inspecting storm water BMPs?</p> <p>Construction Post-Construction</p> <p>How often do plan review personnel receive training?</p> <p>Construction Post-Construction</p> <p><i>NOTE: Make MS4 operator aware of training opportunities provided by Ohio EPA and archived at <a href="http://www.epa.ohio.gov/ocapp/storm_water.aspx">www.epa.ohio.gov/ocapp/storm_water.aspx</a>.</i></p>	<p>Certified for BMP inspection and design from University of North Carolina in 2009. Has a professional engineer's license. Did attend some OCAPP sessions, but records were not available during audit.</p> <p>8 to 10 years 7 years</p> <p>Once per year Once per year</p>
<p>Do you use a checklist to conduct plan review?</p> <p>Construction</p> <p>Post-Construction</p> <p>If NO, what criteria are used to review plans?</p> <p>Construction</p> <p>Post-Construction</p>	<p style="text-align: center;"><b>YES</b></p> <p>There is a checklist, but it is not used.</p> <p style="text-align: center;"><b>NO</b></p> <p>No checklist for post-construction review.</p> <p>They have a checklist, but it is not used to conduct plan review because City Engineer has the experience to know what to look for.</p> <p>City engineer does this based on his years of experience.</p>

<b>Plan Review Procedures</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Size threshold for plan review (i.e. 1 acre, 10,000 square feet)?</p> <p>Construction</p> <p>Post-Construction</p>	<p>1 or more acre of disturbance, but does not include individual lot plans for house construction at this time.</p> <p>1 or more acre of disturbance.</p>
<p>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?</p>	<p style="text-align: center;"><b>YES</b></p> <p>Operator is required to show City the NOI at the pre-construction meetings. Pre-construction meetings are held for all residential subdivisions and commercial lots. Does not include individual lots.</p>
<p>Do you require a pre-construction meeting with developers and/or contractors?</p> <p><i>NOTE: This is a required performance standard for both construction and post-construction.</i></p> <p>Is the sequence of implementation of sediment and erosion controls discussed during these meetings?</p> <p>Is the timing of installation of post-construction BMPs discussed during these meetings?</p>	<p style="text-align: center;"><b>YES</b></p> <p style="text-align: center;"><b>YES</b></p> <p style="text-align: center;"><b>YES</b></p>
<p>Does your community have standard conditions of plan approval?</p> <p>If YES, do they include erosion and sediment control and/or post-construction water quality requirements?</p>	<p>Subdivider agreement.</p> <p style="text-align: center;"><b>YES</b></p> <p>Subdivider language includes this any time a BMP is created.</p>
<p>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?</p>	<p style="text-align: center;"><b>YES</b></p>
<p>Does your community require a long-term maintenance plan for post-construction BMPs?</p>	<p style="text-align: center;"><b>NO</b></p>
<p>If YES, is the plan required to include the following:</p>	<p style="text-align: center;">N/A</p>

<b>Plan Review Procedures</b>		
<b>Interview Questions</b>	<b>Response</b>	
Identify the party responsible for long-term maintenance?	N/A	
A list of routine and non-routine maintenance tasks and the frequency for their performance?	N/A	
A map that identifies the types and locations of post-construction BMPs and their maintenance or access easements?	N/A	
A list of deed restrictions, conservation easements or environmental covenants required to maintain post-construction BMPs in perpetuity?	N/A	
Is this plan kept on file or input into a database for future reference to ensure the required tasks are being completed?	N/A since they don't require a LTMP at this time, but the City will try to develop a database to track this information. Still needs to be created.	
<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Copy of standard conditions of approval	NO	NO
Example of standard conditions applied to an approved project	NO	NO
Checklist used by plan reviewers	NO	NO

<b>Project Inspections</b>	
<b>Interview Questions</b>	<b>Response</b>
Who is responsible for erosion and sediment control site inspection?	Inspections are performed by Building Department Inspectors, but City Engineer is ultimately responsible to ensure they occur.
Who is responsible for post-construction site inspection?	City Engineer
Is an "as-built" inspection conducted at the time a post-construction BMP is installed to ensure compliance with the approved BMP construction plan?	<b>YES</b>
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?	<b>NO</b>  Plan to do this in future.

Project Inspections		
Interview Questions	Response	
Findings from construction and post-construction inspections tracked in a database?	YES	
What training or professional certifications have site inspection personnel received?	<p>Construction</p> <p>SCS provided a training class for building department inspectors. SCS used a CESSWI certified inspector to conduct this training.</p> <p>Post-Construction</p> <p>Rob has attended workshops, but will need to compile attendance certificates. Not available at time of inspection.</p>	
How many years of experience do site inspection personnel have inspecting storm water BMPs?	<p>Construction</p> <p>Greg - 2 months</p> <p>Post-Construction</p> <p>Rob - 8 years</p>	
How often do site inspection personnel receive training?	<p>Construction</p> <p>Once per year</p> <p>Post-Construction</p> <p>Once per year</p>	
<i>NOTE: Make MS4 operator aware of training opportunities provided by Ohio EPA and archived at <a href="http://www.epa.ohio.gov/ocapp/storm_water.aspx">www.epa.ohio.gov/ocapp/storm_water.aspx</a>.</i>		
Do you use a checklist or the approved plan to conduct site inspections?	<p>Construction</p> <p>YES</p> <p>Approved SWP3.</p> <p>Post-Construction</p> <p>YES</p> <p>Approved construction plans and SWP3.</p>	
Applicable Documents	Reviewed	Obtained
Most recent inspection staff training records	NO	NO
Example of active construction project inspection checklist	YES	YES
Example of inspection record to verify "as-built" of post-construction BMPs	NO	NO

<b>Project Inspections</b>		
<b>Interview Questions</b>	<b>Response</b>	
Records from inspection tracking database or filing system	NO	NO
Checklist for inspecting long-term maintenance of post-construction BMPs	NO, but are in process of creating one. Has not yet been implemented.	NO

**Notes**

The inspection form is filled out only if inspector feels site is in violation. The form is not used as a basis for the inspection. The completed form is provided to the City Engineer, and he sends an NOV to the developer if there is a compliance issue. The City should consider completing an inspection form for every site inspection in order to standardize the inspection process. Another recommendation is to fill out an inspection report onsite while conducting the inspection and leave a copy with the site foreman, indicating any violations and deficiencies noted and the time frame for corrective action. The City may even want to require the foreman to sign the form, agreeing to the compliance actions required.

<b>MS4-Owned Construction Projects</b>	
<b>Interview Questions</b>	<b>Response</b>
Projects designed in-house or contracted?	Contracted out.
Designers trained in storm water BMP implementation?	N/A
Checklist used during the design and/or review of public construction projects?	<b>NO</b> City Engineer reviews plan to ensure BMPs are satisfactory once he receives plan back from the designer.
Are projects greater than one acre covered under a general construction permit (has an NOI been submitted)?	<b>YES</b>
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?	<b>NO</b> RFP includes the requirement that an SWP3 be provided, but City does not provide guidance to the contracted engineering firms on plan content.
Are municipal construction projects inspected for compliance with the SWP3?	<b>YES</b>

<b>MS4-Owned Construction Projects</b>		
<b>Interview Questions</b>	<b>Response</b>	
Are they inspected with the same frequency for BMP compliance as a private construction project?	<b>YES</b> Once per month.	
Who inspects municipal construction projects for compliance?  <i>NOTE: To avoid a conflict of interest, the firm or department that designed the SWP3 should not also inspect the site for compliance.</i>	Building Department	
Project inspectors trained?  Frequency:	<b>YES</b>  Once per year.	
If contracted inspectors are utilized, are minimum inspection, maintenance and reporting requirements specified in the contract?	<b>NO</b>	
For municipally-owned post-construction BMPs, how often are they inspected to ensure long-term maintenance?	City does not own any post-construction BMPs	
<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
MS4-owned project storm water design standards and/or checklist	NO	City will need to provide this.
Contract language for active public project not developed or inspected in-house	NO	City will need to provide this.

<b>Outreach and Education</b>	
<b>Interview Questions</b>	<b>Response</b>
Type of training provided to construction operators:  Designers and Engineers:	Do not provide any training or educational materials to builders, contractors or developers.  Do not provide any training or educational materials to SWP3 designers.  <b>Ohio EPA Comment:</b> Please note that the current MS4 permit requires that you provide at least one storm water message in your public education program target the development community. Please ensure that this requirement is met during the 2009 – 2014 permit term.
Attendance required?	N/A

Training frequency?	N/A
Number of operators trained:	N/A
Training topics:	N/A
Presentations given by MS4 staff to professional groups?	<b>NO</b>
Brochures or outreach materials targeted at operators:	City created an instructional video along with City of Avon Lake regarding long-term maintenance of post-construction BMPs.
How/when is the information distributed?	The DVD has been distributed to some HOAs that have called with questions, but it has not been distributed on a wider scale yet. Once new ordinance passes, it will require annual inspection by responsible party. A copy of the DVD will be provided to responsible parties once the City sends out notice that the ordinance is now in effect.
Website used to educate operators?	Engineering page of the website
Web address:	<a href="http://www.cityofavon.com">www.cityofavon.com</a>

<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Training materials	NO	NO
Brochures, outreach materials	YES Ohio EPA has copy of DVD	YES

<b>Notes</b>

## 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.

<b>Construction Project #1 Name: Elizabeth/ Joseph/ Puth/ Detroit</b>	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	<b>YES</b>
Design specifications and details for all BMPs included on the plans?	<b>YES</b>  Bramhall provided 3 specifications for inlet protection on the SWP3 (Dandy bag, Dandy Pop, and the basin specs from the ODNR Rainwater manual) and none of them were used, as observed on the field inspection.
Maintenance requirements specified?	<b>YES</b>
Have any NOV's or other enforcement actions issued for this site. <i>Obtain copies of NOV's. If none, why not?</i>	The City will provide the Ohio EPA with a copy of the inspection reports, and any possible violations.
<b>Notes:</b>	
The SWP3 back at the office was not updated with the newly installed silt fence, but the field SWP3 with Tom Hardwick may be updated. Also, all site inspections are kept with Tom and were not provided at the time of the file review.	
There was no evidence of a site file for this site or any site for that matter, in regards to storm water and sediment and erosion control.	
As a regulated MS4, the City of Avon is required to consider storm water retrofitting if the opportunity arises in linear road projects where there is no increase in impervious area. <i>Please justify why no storm water retrofitting was provided for this project.</i>	
The contractor needs to submit a Co-Permittee NOI.	

<b>Construction Project #2 Name: St. James Phase 4</b>	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	<b>YES</b>
Design specifications and details for all BMPs included on the plans?	<b>NO</b>  No design specifications were provided for individual lots.
Maintenance requirements specified?	<b>YES</b>
Have any NOV's or other enforcement actions been issued against this site? <i>Obtain copies of NOV's. If none, why not?</i>	No NOV's have been sent for this site. Inspection reports were not available upon request. The City stated that most of the files reside with SCS and that they will work to obtain the documentation.
<b>Notes:</b>  The engineer was not provided with the calculations to ensure that the basin was designed correctly. The sediment basin was designed per the old specifications that do not provide the minimum 48 hour drawdown time of the dewatering volume. Also, the WQv outlet structure was installed during construction opposed to the temporary sediment control outlet structure.	

Now, select a project from the NOI list that has been completed since the date that the community enacted its post-construction ordinance. Pick a project from a variety of project types (commercial, residential, institutional) and sizes (< 5 acres and 5 or more acres). If one exists, review a public project to ensure that plans included provisions for post-construction BMPs.

<b>Post-Construction Project #1 Name: St. James Phase 4</b>	
Date that project was accepted by community or otherwise deemed "completed"	Not Complete
Were post-construction BMPs provided for all drainage areas associated with the developed site?	<b>NO</b>
List the post-construction BMPs provided?	DA #1- Detention Basin – not designed properly
Design specifications and details for all BMPs included on the plans?	<b>NO</b>
Were post-construction BMPs selected appropriate for their drainage areas, site and soil conditions?	<b>NO</b>
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	<b>NO</b> No, the WQv outlet structure was installed too early, when the BMP should have been a temporary sediment basin.
Does MS4 have a copy of the long-term maintenance plan?	<b>NO</b>
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? <i>Obtain copy of latest inspection report.</i>	<b>NO</b>
<b>Notes:</b>	
No calculations were provided to verify that the installed structure is correctly designed. The storm water management plan for the site indicates a different design for the post-construction BMP than the site drawings show.	

## CONSTRUCTION FIELD REVIEW WORKSHEET

**Name of MS4:** City of Avon  
**MS4 Permit No:** 3GQ10002\*BG

<b>Name of Site:</b> Richard E. Jacobs Family Health Center, CC	
<b>Location:</b> E. Nagel Rd.	<b>NPDES Permit #</b> 3GC04676*AG
<b>Date of Inspection:</b> 6/14/11	<b>Time of Inspection:</b> 2:10 p.m.
<b>Name of Inspector:</b> Greg Masson	
<b>Others Present During Inspection</b>	
Dan Bogoevski, DSW, NEDO Lindsie MacPherson, DSW, NEDO Rob Knopf	

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

No the inspector did not speak to the site foreman.

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?

No. The inspector should ask to see the inspection reports to ensure they are being conducted.

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

No, the inspector was not familiar with the SWP3 plan or with the intended purposes of some of the erosion and sediment control BMPs such as the sediment basin.

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

Inspector noted that some of the compliance issues from his last inspection (silt fence repairs) had been completed, while others remained unrepaired.

6. Compliance issues identified by inspector during this inspection:

The inspector focused on the silt fence along the perimeter of the site. He noted where silt fence was down and where the fencing required maintenance. The inspector noted that he thought the slopes of the basin should be seeded more but

he was not sure why and was unaware of the purpose and functionality of the sediment basin. It appeared as if improper soils were present for seeding.

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

Inspector did not note that the entire site needed to be stabilized as well as the stockpile on the side of the building as the primary form of erosion control.

The inspector made most of his comments on the silt fence but was not aware that silt fence should be twisted together at the connecting points. In addition, the inspector did not comment on the missing silt fence adjacent to Chester Drive where the area was flooded with muddy water.

Also, the inspector did not note that the skimmer was not attached to the outlet structure of the sediment basin, therefore not functioning as a sediment control BMP.

The inspector did not indicate that the slopes beyond the curbs of the parking lot require stabilization.

The inspector did not note that the organic bioretention soils were placed prior to the site reaching final stabilization, therefore compromising the functionality of the cells.

Inspector did not note the hose located at the entrance of the facility that was dewatering a pit into the street side ditch.

The inspector did not use a checklist or any other standard as a basis for his inspection.

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.

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

Yes the inspector recapped his findings to the EPA, **but only after being prompted by the Ohio EPA.**

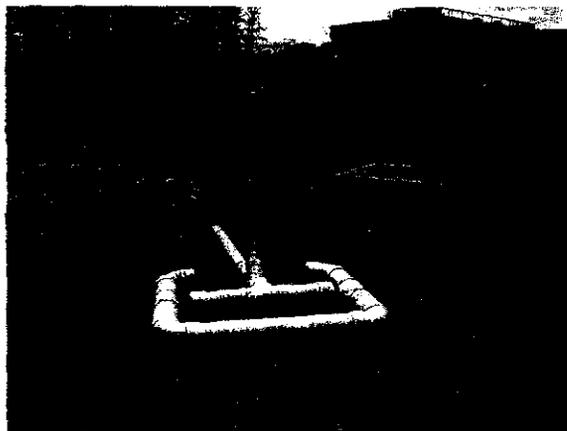
10. Is the community planning on taking any enforcement actions based on the results of today's inspection? If so, what are those actions? *(NOTE: Ask community to send you a copy of the enforcement action.)* Did the inspector provide a deadline for corrective action? If so, provide details.

A full inspection report with pictures will be submitted to the site foreman, but there was no mention of any enforcement action being taken on this site due to its current condition. Many of the deficiencies and violations found on this site should qualify the site for the submittal of a violation letter.



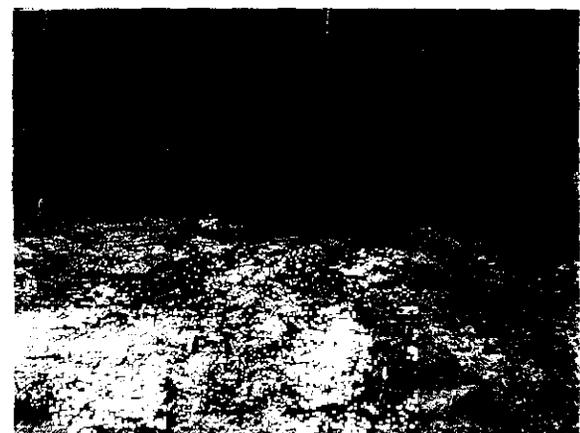
**Fig 1(LT):** The stockpile at the side of the building requires temporary stabilization.

**Fig 2(RT):** The sediment basin does not have 70% coverage and requires additional stabilization. This may be caused by the use of improper soils for the seeding.



**Fig 3(LT):** The skimmer for the temporary outlet structure of the sediment basin was removed and placed on the side of the basin. The basin is now not providing any sort of sediment control and has failed as a BMP.

**Fig 4(RT):** A view from inside the outlet structure of the orifice now draining the basin that was supposed to be connected to the skimmer device.



**Fig 5&6:** The area between the curbs and the fence line should be stabilized.



**Fig 7(LT):** The organic bioretention soils were placed into the cells before the entire site was paved and/or stabilized, allowing sediment to clog the organic soils and decrease the infiltration properties. Also, once the soils were added the cells filled with the weeds shown above.

**Fig 8 (RT):** Missing silt fence adjacent to Chester Rd. Part of the area is flooded with muddy water.



**Fig 9:** Stockpile adjacent to the parking lot requires temporary stabilization.

## CONSTRUCTION FIELD REVIEW WORKSHEET

**Name of MS4:** City of Avon  
**MS4 Permit No:** 3GQ10002\*BG

<b>Name of Site: St. James Wood Subdivision Phase 4</b>	
<b>Location:</b> Nagel/ Augusta/ Williams	<b>NPDES Permit #</b> 3GC01501*AG
<b>Date of Inspection:</b> 6/14/11	<b>Time of Inspection:</b> 3:30 p.m.
<b>Name of Inspector:</b> Greg Masson	
<b>Others Present During Inspection</b>	
Dan Bogoevski, DSW, NEDO Lindsie MacPherson, DSW, NEDO Rob Knopf	

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

No, the inspector did not make an attempt to contact the site foreman.

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?

No. The inspector should ask to see the inspection reports to ensure they are being conducted.

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

The inspector was recently assigned to this site and has never seen the SWP3 for this project.

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

The inspector mentioned problems with the sediment basin in the past, but he was not familiar with the basins purpose and how it functioned.

6. Compliance issues identified by inspector during this inspection:

The City Engineer indicated that the outlet pipe for the sediment basin was installed 14" too short. He also stated that the basin is not in use and that it filled with spring water the day it was excavated.

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

The inspector was not aware of the difference between a sediment basin and a storm water management pond, and was notable to provide a proper inspection of the basin. The outlet structure was not designed properly.

Inspector was not aware of the inlet protection specifications and did not note the improper protection provided to the basins throughout the site. Also, the curb inlet protection was not installed properly.

The inspector did not comment on the channel purposely cut to drain the sediment laden runoff from the site into the drainage ditch.

The inspector did not comment on the need for temporary stabilization on the site.

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.

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

Yes the inspector recapped his findings to the EPA, **but only after being prompted by the Ohio EPA.**

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.

There was no discussion of enforcement actions to be taken on this site, although there were many compliance issues, including the continual problem with the basin.



**Fig 1&2:** Conditions resemble those of wetland conditions, but the City Engineer says a wetland delineation was completed for this site.



**Fig 3(LT):** Inlet protection installed improperly.  
**Fig 4(RT):** Blue ribbon on trees possibly marking wetland territories.



**Fig 5(LT):** Channel cut out to provide drainage of sediment laden runoff from the site to the adjacent drainage ditch.  
**Fig 6(RT):** improper installation of curb inlet protection.



**Fig 7:** The site requires temporary stabilization.

## CONSTRUCTION FIELD REVIEW WORKSHEET

**Name of MS4:** City of Avon  
**MS4 Permit No:** 3GQ10002\*BG

<b>Name of Site: Elizabeth/ Joseph/ Puth/ Detroit</b>	
<b>Location</b>	<b>NPDES Permit #3GC05146*AG</b>
<b>Date of Inspection: 6/14/11</b>	<b>Time of Inspection: 4:30 p.m.</b>
<b>Name of Inspector: Rob Knopf, City Engineer</b>	
<b>Others Present During Inspection</b>	
Dan Bogoevski, DSW, NEDO Lindsie MacPherson, DSW, NEDO	

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

No. The site is a municipal road project.

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?

No. The inspection reports for this site are with Tom Hardwick.

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

The City Engineer was familiar with the SWP3, but did not have the SWP3 at the time of the inspection.

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:

Rob indicated that the inlets were covered with silt, and he was not sure if all the inlets were provided with inlet protection. He stated that the SWP3 called for inlet protection on all basins.

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

Rob did not note that the wrong material, non-woven geotextile fabric, was used for the inlet protection.

The developer dug all the way to the “minor ditch” or stream, and the rip rap outlet spillway into the stream was minimal or absent, which is required for outlet protection from erosion.

An open can of gasoline was found on the site with no containment.

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. The inspector did not recap his findings for this site.

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 enforcement was discussed at the time of the inspection.



**Fig 1 (LT):** Many inlets on the site were found covered in silt. The inlets with protection should be cleaned out, and the others must be provided with inlet protection.

**Fig 2 (RT):** An open can of gasoline was found on site without any form of containment.



**Fig 3 (LT):** Rip rap must be provided to the outlet spillway as an erosion control.

**Fig 4 (RT):** The site was dug all the way to the stream and no buffer was left.