

Municipal Storm Water Program Evaluation

Construction and Post-Construction Component Worksheet

Date of Evaluation
June 19, 2012
Evaluator Name, Title
Dan Bogoevski, DSW, NEDO Tim McParland, DSW, NEDO
MS4 Permittee
City of Strongsville (3GQ00033*BG)

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
Lori Daley	Assistant City Engineer	(440) 580-3123 Lori.daley@strongsville.org
Tony Biondillo	Building Commissioner	(440) 580-3107 Tony.biondillo@strongsville.org

Ordinance/Legal Authority	
Interview Questions	Response
Construction Ordinance	
Ordinance used to require storm water BMPs at construction sites?	YES
Name and/or code section(s)	Chapter 1058: Storm Water Management and Erosion Control
Date initially enacted:	4/2/2007
Threshold for coverage (e.g., 1 acre, 100 cubic yards, etc.)	Up to City Engineer's discretion, but as small as 0.5 acres according to the City's code. Any disturbance of 1 or more acres is automatically regulated.
<i>NOTE: 1 acre is minimum requirement.</i>	
Exclusions from coverage allowed:	Section 1058.02. Agricultural, Silvicultural, coal surface mining, other surface mining operations with respect to Chapter 1514 of the Ohio Revised Code, transportation projects subject to specific OEPA rules, sites less than ½ acre
	(See Note 1 on Pg.10)

Ordinance/Legal Authority	
Interview Questions	Response
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? (barn on a farm)	YES (if disturbance is greater than 1 acre)
Non-silvicultural tree clearing?	YES The City requires erosion and sediment controls, but has not been requesting those who clear cut to file an NOI with Ohio EPA. <i>Please be aware that an NOI is required for clear cutting.</i>
Your own municipal construction projects?	YES
Construction and demolition debris landfills?	YES
Construction by other public entities within your political jurisdiction, e.g., a county road project within a municipality?	YES
Earth disturbance associated with open spaces and parks (e.g., trails within a park or parking lot improvements at a park)?	YES (Excluding Cleveland Metroparks)
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

Ordinance/Legal Authority	
Interview Questions	Response
Utility construction projects (including tree clearing along utility corridors or pipeline projects that cross multiple political jurisdictions)?	NO Utilities do not typically obtain permits from the Engineering Department. The community's Law Director's opinion is that the City does not have the authority to regulate these types of projects. <i>Please provide Ohio EPA with the Law Director's written opinion (if it exists).</i>
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 Chapter 1058.05(u)
Has ordinance been updated to reflect minimum requirements of Ohio EPA NPDES permit #OHC000003?	YES
Date of updates?	January 3, 2011
Date of MS4 Permit Renewal:	June 4, 2009
Post-Construction Ordinances	
Ordinances used to require post-construction storm water BMPs on new development or redevelopment projects:	
Treatment of Water Quality Volume (WQv) Name and code section:	YES Chapter 1158.06
Date initially enacted:	April 2, 2007
Has this ordinance been updated to reflect the minimum requirements of Ohio EPA General Permit #OHC000003?	YES
Date of update:	January 3, 2011
Riparian and Wetland Setback Ordinance Name and code section:	NO
If YES, does ordinance require protection of native vegetation within riparian area or can manicured lawns be established?	N/A

Ordinance/Legal Authority	
Interview Questions	Response
If YES, does ordinance allow the location of storm water infrastructure within the riparian setback?	N/A
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
Encouraging Green Infrastructure or low-impact development practices: Allow downspout disconnection and use of open storm water conveyance systems? Names and code sections:	NO <i>Local code requires downspout connection into storm sewers. Ohio EPA recommends that you allow (and encourage) downspouts to discharge into rain gardens, swales, or other open conveyances.</i>
Permit the installation of rain gardens and other bioretention facilities? Names and code section:	YES The code does not prohibit rain garden installation; however it does not encourage it either.
Allow rainwater harvesting (rain barrels and cisterns)? Name and code section:	YES The code does not prohibit rain water harvesting; however it does not encourage it either.
Allow or require the use of pervious pavement systems? Name and code section:	NO (See Note 2 on Pg.10)
Allow reduction in the size of traditional storm water management structures if LID used? Name and code section:	NO
Provide a credit to a storm water utility fee if LID is used? Describe:	N/A

Ordinance/Legal Authority	
Interview Questions	Response
<p>Balanced Growth Principles, i.e., other non-structural ordinances or codes that promote better site design:</p> <p>Allow conservation design as a subdivision layout (retain $\geq 40\%$ open space by maintaining existing zoned density) Standard or variance required? Name and code section:</p>	<p>NO</p> <p>The City does allow cluster developments, but only retaining up to a 30% open space. <i>Ohio EPA recommends that City officials not only allow conservative design but also encourage it.</i></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>NO</p> <p>The public perception is that common areas should be well kept and maintained on a regular basis. Ohio EPA recommends that 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, landbanked parking, parking garages rather than surface lots, etc.) Name of code section</p>	<p>NO</p> <p>The City does allow developers to submit plans of reducing impervious parking spaces to the Planning Commission, which can then be approved as a deviation (not a formal variance). <i>Ohio EPA recommends that the local code be updated to allow and encourage a reduction of impervious parking spaces for future developments.</i></p>
<p>Allow sidewalks on only one side of the road in residential neighborhoods Name and code section:</p>	<p>NO (Only in industrial developments)</p>
<p>Zoning that encourages smart growth in compact neighborhoods or mixed-use development:</p>	<p>NO</p>
<p>If YES, does zoning create walkable neighborhoods with access to commercial areas and employment centers? Describe:</p>	<p>N/A</p>
<p>If YES, does this zoning provide incentives for vertical development rather than horizontal sprawl? Describe:</p>	<p>N/A</p>

Ordinance/Legal Authority	
Interview Questions	Response
<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? Describe incentive programs:</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)? Describe how:</p>	<p>N/A</p> <p>N/A</p> <p>N/A</p>
Provisions within Ordinances	
<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 Construction</p> <p>Post-Construction</p> <p>Permits & Type (Building, Grading, etc.) Construction</p> <p>Post-Construction</p> <p>Does your definition of "construction activities" include any grading, grubbing, filling, clearing or excavating activity?</p>	<p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p> <p>YES</p>
<p>Are plans for storm water controls used during construction submitted separately from plans that depict post-construction BMPs?</p> <p>Describe the submission process and the timing of plan submission:</p>	<p>NO</p> <p>The Planning Commission gives approval for a project, but the developer must also seek approval from the Building Department. The Engineering department will review/approve the construction/post-construction plans during this process. The typical review process is about 2 weeks. But, in all cases, plan approval must be obtained before construction can begin. This</p>

Ordinance/Legal Authority													
Interview Questions	Response												
	includes approval of both sediment and erosion controls and post-construction BMPs. City Council must also provide approval for anything that is dedicated to the City. The same procedure applies for municipal construction projects as well.												
Does your ordinance explicitly specify selection criteria or minimum acceptable BMP design?													
Construction	YES												
Post-Construction	YES												
If NO, are these standards referenced?													
Construction	N/A												
Post-Construction	N/A												
If YES, list references:													
Construction	<i>Rainwater and Land Development</i> manual												
Post-Construction	<i>Rainwater and Land Development</i> manual												
CONSTRUCTION SITE ENFORCEMENT AUTHORITY													
Types of enforcement mechanisms available for construction site issues per your ordinance:	<table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Notices of Violations (NOV)</td> <td style="text-align: center;">YES</td> </tr> <tr> <td>Administrative fines</td> <td style="text-align: center;">NO</td> </tr> <tr> <td>Stop-work orders</td> <td style="text-align: center;">YES</td> </tr> <tr> <td>Civil penalties</td> <td style="text-align: center;">YES</td> </tr> <tr> <td>Criminal penalties</td> <td style="text-align: center;">YES</td> </tr> <tr> <td>Other (Describe):</td> <td style="text-align: center;">Permit Revocation</td> </tr> </table> <p>The City code allows either the City Engineer or Building Commissioner to provide enforcement actions, but the practice has been to use the Building Commissioner.</p>	Notices of Violations (NOV)	YES	Administrative fines	NO	Stop-work orders	YES	Civil penalties	YES	Criminal penalties	YES	Other (Describe):	Permit Revocation
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Other (Describe):	Permit Revocation												
Which type of enforcement action have you most commonly implemented?	Notice of Violation. If the developer/contractor does not complete corrective action within 3 days, they are summoned into court and subject to a \$250 fine. This procedure will typically result in the corrective action being completed before the situation escalates even further. Because of this, fines have only been issued a half-dozen times or so. Contractors must be registered to work in the City. If a violation is on record and has not been corrected, the contractor will not be allowed to register.												

Ordinance/Legal Authority	
Interview Questions	Response
<p>Describe the enforcement mechanism used when the following compliance situations are encountered on construction sites:</p> <ol style="list-style-type: none"> 1. Construction has commenced without a permit or plan approval 2. A BMP indicated on the SWP3 has not been installed or requires maintenance (first incidence) 3. A BMP is required but not shown on the SWP3 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 	<p style="text-align: center;">Stop Work Order and Notice of Violation</p> <p style="text-align: center;">The site inspector is authorized to order the corrective action for first incidence. This is typically a verbal communication between the inspector and the contractor or developer on site.</p> <p style="text-align: center;">Inspectors are authorized to require corrective actions such as additional silt fence, etc. however major revisions require approval from the City's Engineering Department.</p> <p style="text-align: center;">The Building Department will issue an NOV. If corrective action is not completed within 3 days, the developer/contractor is summoned to court and subject to a \$250 fine.</p> <p style="text-align: center;">N/A</p>
<p>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>	<p>The last enforcement action was taken against an individual lot in the Avery Walden subdivision (Phase 2, S/L 46). The City issued a NOV to repair and maintain the silt fence and address off-site tracking issues. The Building Commissioner then obtained a copy of a court summons. The \$250 fine was not levied in this situation because corrective action was taken after the summons was sent.</p>

Ordinance/Legal Authority											
Interview Questions	Response										
Have your enforcement protocols and procedures for construction site issues been formalized in a written enforcement escalation plan?	NO Escalation procedures must be formalized in a written policy within the SWMP.										
POST-CONSTRUCTION ENFORCEMENT AUTHORITY											
Types of enforcement mechanisms available for post-construction site issues per your ordinance:	<table border="0"> <tr> <td>Notices of Violations (NOV)</td> <td style="text-align: right;">YES</td> </tr> <tr> <td>Administrative fines</td> <td style="text-align: right;">NO</td> </tr> <tr> <td>Stop-work orders</td> <td style="text-align: right;">NO</td> </tr> <tr> <td>Civil penalties</td> <td style="text-align: right;">YES</td> </tr> <tr> <td>Criminal penalties</td> <td style="text-align: right;">YES</td> </tr> </table>	Notices of Violations (NOV)	YES	Administrative fines	NO	Stop-work orders	NO	Civil penalties	YES	Criminal penalties	YES
Notices of Violations (NOV)	YES										
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Which type of enforcement action have you most commonly implemented?	Typically a letter is sent to the responsible party stating that they have not submitted their annual Long Term Maintenance report. However, the City has not yet determined what to do in the case that there is no response to the letter. This situation has already occurred more than once. <i>Ohio EPA recommends that a formalized written enforcement escalation plan is developed that can be applied to both construction and post-construction non-compliance issues.</i>										
Describe the enforcement mechanism used when the following compliance situations are encountered regarding post-construction: <ul style="list-style-type: none"> 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) 2. The post-construction BMP has not been maintained (first incident) 3. The post-construction BMP has not been maintained after multiple notifications 4. A homeowner has cut down trees in the riparian setback area (if applicable) 5. A homeowner has installed a shed in a vegetated filter strip disrupting sheet flow runoff 	<p>Inspectors will request that corrective action be taken immediately. This is typically a verbal communication on site with the developer/contractor.</p> <p>Engineering Department issues a written notification to the property owner/responsible party.</p> <p style="text-align: center;"><i>Has yet to be determined.</i></p> <p style="text-align: center;">N/A</p> <p>The Engineering Department will require the shed to be relocated before issuing the necessary permit.</p>										

Ordinance/Legal Authority		
Interview Questions	Response	
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.	The City requires the property owner to submit a LTM inspection report by May 1 of every year. If one is not received, a letter is sent to the responsible party as a reminder to submit. Once the report is received, the City reviews it to see if there are maintenance issues. If there are any, then a follow-up letter is sent to the responsible party to make corrections in a timely manner. The most recent situations include the Edno Club (no report sent) and Hickory Branch Subdivision (maintenance required). The City has not developed a protocol for situations where a response to the letters is not received.	
Have your enforcement protocols and procedures for post-construction issues been formalized in a written enforcement escalation plan?	NO	
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	Does not exist

Notes
<p>1) 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.</p> <p>2) The City requires traditional pavement on publicly-owned roads, but would consider allowing its use in parking lots and privately-owned roads. However, Strongsville has never had a request or proposal from anyone to use it. <i>Ohio EPA recommends that the local code be updated to explicitly allow and encourage the use of permeable pavements in the community.</i></p>

Construction Project Inventory	
Interview Question	Response
Do you keep an inventory of construction projects that are actively occurring in your community? If YES, how?	NO
Do you track construction projects <1 acre (e.g., individual lot within a subdivision or small addition to a business)?	NO

How often is your inventory of construction projects updated?	N/A	
Information tracked:	Project status	NO
	Inspection Findings	NO
	Enforcement Actions	YES
	Complaints	YES
	NOI submittal	YES
	*(but not for individual lot NOIs)	
Are site inspections at active construction sites conducted at a frequency of at least once per month?	YES (See Note 1 on Pg.12)	
If construction sites are not inspected at least once per month, how do you prioritize or determine inspection frequency?	Proximity to water body	N/A
	Water body impairment	N/A
	Size of project	N/A
	Slope of project site	N/A
	Other: _____	
Criteria used:	N/A	
Is this inspection criteria and frequency explicitly stated in your SWMP?	N/A	
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):	<ul style="list-style-type: none"> - 5 residential subdivisions - No commercial, industrial, institutional, or municipal at this time. 	
*DNE - Does Not Exist.	Site #1:	Most recent inspection date: *DNE Prior inspection date: *DNE
	Site #2:	Most recent inspection date:*DNE Prior inspection date:*DNE
Applicable Documents	Reviewed	Obtained
List of active construction projects	Does not exist	Does not exist
List of projects covered under a state/EPA general permit	YES	YES

Notes
<p>1) No formal documentation of inspection findings exists. This is a violation of Part III.B.4.a. of the NPDES Permit #OHQ000002 for Small MS4 operators. Only if the inspector deems that a site is non-compliant after several incidences will the engineering department and building commissioner be notified and escalate enforcement. The first official notification of non-compliance that the developer/contractor receives is the NOV/summons to court for formal enforcement action. No formal documentation or inspection reports for storm water related issues exist. The City does have a database to track enforcement actions and complaints, but will typically only follow up on complaints.</p>

Post-Construction BMP Inventory			
Interview Question		Response	
Are post-construction BMPs tracked?		YES The City has inventory, but only includes BMPs constructed since April 2, 2007 (i.e. the date the code was enacted)	
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	
Information tracked: *As reported by a P.E., CPSWQ, or Landscape Architect. The City does not conduct their own inspections.		Location	YES
		Type	YES
		Maintenance Requirements	YES*
		Inspection findings	YES*
		Other (e.g., Ownership):	YES
Database used?		NO (Only a Microsoft Word document)	
Number of private post-construction structural BMPs installed in community		Approximately 22 BMPs have been installed since the City's ordinance went into effect on April 2, 2007. NOTE: All privately owned post-construction BMPs built after April 21, 2003 must be tracked.	
Applicable Documents		Reviewed	Obtained
Inventory of Post-Construction BMPs		YES	YES

Construction and Post-Construction BMP Standards	
Interview Questions	Response
CONSTRUCTION BMPs	

Construction and Post-Construction BMP Standards		
Interview Questions	Response	
Do your erosion and sediment control standards include BMP selection criteria?	YES (As specified in the <i>Rainwater and Land Development</i> manual)	
Do your construction site standards account for different needs for different times of the year (e.g., growing season vs. winter)? Please elaborate:	YES Seeding and stabilization procedures are different in the winter vs. the spring, etc.	
Do your standards include operation and maintenance requirements?	YES (As specified in the <i>Rainwater and Land Development</i> manual)	
POST-CONSTRUCTION BMPs		
Do your post-construction standards include BMP selection criteria?	YES (As specified in the <i>Rainwater and Land Development</i> 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?	NO N/A	
Do your standards include operation and maintenance requirements?	YES (As specified in the <i>Rainwater and Land Development</i> manual)	
Applicable Documents		Reviewed
BMP guidance or technical document		OBTAINED
	YES	YES

Plan Review Procedures	
Interview Questions	Response
Who is responsible for erosion and sediment control plan review?	The Engineering Department: Ken Mikula, City Engineer Lori Daley, Assistant City Engineer Joe Allen, Staff Engineer
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A
Who is responsible for post-construction plan review?	The Engineering Department: Ken Mikula, City Engineer Lori Daley, Assistant City Engineer Joe Allen, Staff Engineer

Plan Review Procedures	
Interview Questions	Response
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A
<p>What training or professional certifications have plan review personnel received?</p> <p>Construction</p> <p>Post-Construction</p> <p>How many years of experience does plan review personnel have inspecting storm water BMPs?</p> <p>Construction</p> <p>Post-Construction</p> <p>How often do plan review personnel receive training?</p> <p>Construction</p> <p>Post-Construction</p> <p><i>NOTE: Additional training opportunities provided by Ohio EPA are available at www.epa.ohio.gov/ocapp/storm_water.aspx</i></p>	<p>Ken Mikula and Lori Daley are licensed P.E.s. They also attend the Ohio Storm Water Conference each year and the NE Ohio Storm Water Training Council.</p> <p>Lori Daley - 7 + years Ken Mikula - 12 + years</p> <p>Lori Daley - 5 + years * Ken Mikula - 5 + years *</p> <p>*(i.e. since the local code was established)</p> <p>Once per quarter on average (2 particular to construction)</p> <p>Once per quarter on average (2 particular to post-construction)</p>
<p>Do you use a checklist to conduct plan review?</p> <p>Construction</p> <p>Post-Construction</p>	<p style="text-align: center;">YES</p> <p style="text-align: center;">YES</p> <p>The City has a checklist for use during the plan review process, but the file review indicated that it has not been common practice in the past. <i>It is recommended that the checklist be used during all plan reviews in the future.</i></p>

Plan Review Procedures	
Interview Questions	Response
<p>If NO, what criteria are used to review plans?</p> <p>Construction</p> <p>Post-Construction</p>	<p>N/A</p> <p>N/A</p>
<p>Size threshold for plan review (i.e. 1 acre, 10,000 square feet)?</p> <p>Construction</p> <p>Post-Construction</p>	<p>The SWP3 is reviewed in detail by the Engineering Department for all projects which disturb greater than one (1) acre. Projects which disturb less than one (1) acre are reviewed as well to verify that minimum erosion and sediment controls are incorporated into the plans. This applies for both construction as well as post-construction.</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;">YES</p> <p>However, the City has overlooked the verification of NOI submittal for individual lots in the past. <i>Ohio EPA recommends that the community verifies the submittal of all individual lot NOIs since many times they are not covered under the NPDES permit for the subdivision as a whole.</i></p>
<p>Do you require a pre-construction meeting with developers and/or contractors?</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;">YES</p> <p style="text-align: center;">YES</p> <p style="text-align: center;">YES</p>
<p>Does your community have standard conditions of plan approval?</p> <p>Do they include erosion and sediment control and/or post-construction water quality requirements?</p>	<p style="text-align: center;">NO</p> <p style="text-align: center;">N/A</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;">YES</p> <ul style="list-style-type: none"> - Performance bond on commercial sites. - Escrow agreement on residential sites
<p>Does your community require a long-term maintenance plan for post-construction BMPs?</p>	<p style="text-align: center;">YES</p>

Plan Review Procedures		
Interview Questions	Response	
<p>If YES, is the plan required to include the following:</p> <p>Identify the party responsible for long-term maintenance?</p> <p>A list of routine and non-routine maintenance tasks and the frequency for their performance?</p> <p>A map that identifies the types and locations of post-construction BMPs and their maintenance or access easements?</p> <p>A list of deed restrictions, conservation easements or environmental covenants required to maintain post-construction BMPs in perpetuity?</p> <p>Is this plan kept on file or input into a database for future reference to ensure the required tasks are being completed?</p>	<p>YES</p> <p>NO</p> <p>NO</p> <p>NO</p> <p>NO</p> <p>(Only a copy of the approved BMP details)</p>	
Applicable Documents	Reviewed	Obtained
Copy of standard conditions of approval	N/A	N/A
Example of standard conditions applied to an approved project	N/A	N/A
Recent training records for plan review personnel	YES	YES
Checklist used by plan reviewers	YES	YES

Project Inspections	
Interview Questions	Response
CONSTRUCTION SITE INSPECTIONS	
Who is responsible for erosion and sediment control site inspection?	The Engineering Department: Doug Kowalski, Engineering Inspector Tom Painter, Engineering Inspector
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A

Project Inspections	
Interview Questions	Response
POST-CONSTRUCTION INSPECTIONS	
Who is responsible for post-construction site inspection?	The City is currently developing their post construction site inspection procedures. The intent is that those responsible for active construction site inspections (e.g. Doug Kowalski, Tom Painter) will also be responsible for conducting post construction site inspections. At this time, the City requires the submission of as built drawings at the time of completion as well as annual inspection reports from responsible parties, but they do not conduct inspections themselves.
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A
Is an "as-built" inspection conducted at the time a post-construction BMP is installed to ensure compliance with the approved BMP construction plan?	NO (See Note 1 on Pg.18)
Does the MS4 conduct inspections for long-term maintenance of privately-owned post-construction BMPs?	NO
If YES, at what frequency?	The City only inspects their publicly-owned post-construction BMPs (5 total). They are inspected twice annually (Spring and Fall).
If NO, does the MS4 collect inspection reports from the responsible party? At what frequency?	YES Due by May 1 st of each year.
CONSTRUCTION & POST-CONSTRUCTION INSPECTION QUESTIONS	
Findings from construction and post-construction inspections tracked in a database?	NO
What training or professional certifications have site inspection personnel received?	
Construction	NONE Inspection personnel have only received training for post-construction site inspection. (See Note 2 on Pg.18)
Post-Construction	NE Ohio Storm Water Training Council workshops - Storm water BMP operation and maintenance tour (2010), BMP performance webcasts from US EPA.

Project Inspections		
Interview Questions	Response	
How many years of experience does site inspection personnel have inspecting storm water BMPs?		
Construction	5+ years	
Post-Construction	5+ years	
How often do site inspection personnel receive training?		
Construction	N/A	
Post-Construction	Once per year.	
Do you use a checklist or the approved plan to conduct site inspections?		
Construction	YES	
Post-Construction	N/A	
(See Note 3 on Pg.18)		
Applicable Documents	Reviewed	Obtained
Most recent inspection staff training records	YES	YES
Example of active construction project inspection checklist	Does not exist	Does not exist
Example of inspection record to verify "as-built" of post-construction BMPs	YES	YES
Records from inspection tracking database or filing system	Does not exist	Does not exist
Checklist for inspecting long-term maintenance of post-construction BMPs	YES	YES

Notes
<p>1) Sites cannot receive final acceptance by the City until the post construction BMP has been approved. Ohio EPA believes that this leads to installation of post-construction BMPs before it may be appropriate to do so just so that developers can begin to sell lots, e.g. Schneider Reserve. However, during the file review it was discovered that the City <i>is not conducting or documenting their own post-construction inspections. This is a violation of Part III.B.5.f of the NPDES Permit #OHQ000002.</i></p> <p>2) It is highly recommended that inspection personnel receive training for active construction BMP's as soon as possible. Please refer to OCAPP (Ohio Compliance Assistance and Pollution Prevention) for upcoming training workshops. A workshop specifically targeted at construction site inspections is scheduled to occur in the near future. Please refer to the website for specific dates and registration forms (when they're available): http://www.epa.ohio.gov/ocapp/storm_water.aspx</p> <p>3) Inspectors are given a copy of the approved plans and are expected to use them during inspections; however, field observations indicate that inspectors are not using the plan as their basis of inspection. Knowledge of the approved plan was poor when questioned in the field. <i>The City needs to ensure that inspection personnel use the approved plans as the basis of their inspections.</i></p>

MS4-Owned Construction Projects	
Interview Questions	Response
Projects designed in-house or contracted?	BOTH (Depends on size and type of project)
Designers trained in storm water BMP implementation?	YES
Checklist used during the design and/or review of public construction projects?	NO
Are projects greater than one acre covered a general construction permit (has an NOI been submitted)?	YES
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?	NO <i>It is recommended that this language is added.</i>
Are municipal construction projects inspected for compliance with the SWP3?	YES
Are they inspected with the same frequency for BMP compliance as a private construction project?	YES
Who inspects municipal construction projects for compliance?	<p>The Engineering Department: Doug Kowalski, Engineering Inspector Tom Painter, Engineering Inspector</p> <p>NOTE: <i>To avoid a conflict of interest, the firm or department that designed the SWP3 for a site should not also inspect that site for compliance.</i></p>
Project inspectors trained?	(Refer to Pg.17)
Frequency:	(Refer to Pg.17)
If contracted inspectors are utilized, are minimum inspection, maintenance and reporting requirements specified in the contract?	N/A
For municipally-owned post-construction BMPs, how often are they inspected to ensure long-term maintenance?	Twice per year (Spring and Fall)
Which department is responsible for conducting these inspections?	Engineering Department

MS4-Owned Construction Projects		
Interview Questions	Response	
Applicable Documents	Reviewed	Obtained
MS4-owned project storm water design standards and/or checklist	Does not exist	Does not exist
Contract language for active public project not developed or inspected in-house	Does not exist	Does not exist

Outreach and Education		
Interview Questions	Response	
Type of training provided to construction operators:	None has been provided. <i>Please be aware that at least one PIPE activity must be targeted to the development community during the current NPDES permit term. None have been reported. Please ensure that your PIPE program targets this group with at least one message by September 2014.</i>	
Designers and Engineers:	No training has been provided for designers or engineers.	
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?	NO	
Brochures or outreach materials targeted at operators:	N/A	
How/when is the information distributed?	N/A	
Website used to educate operators?	YES The City's webpage contains links to the following: <ul style="list-style-type: none"> - Strongsville's SWMP - US EPA - Ohio EPA - CCBH 	
Web address:	www.strongsville.org > Engineering Department	
Applicable Documents	Reviewed	Obtained
Training materials	Does not exist	Does not exist
Brochures, outreach materials	Does not exist	Does not exist

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: Westwood Farms No 16 (Andrus Woods) 3GC00999*AG 18 ac.	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	NO The BMPs only address final grade and not initial and interim grades. The plan only calls for perimeter silt fence and curb and yard inlet protection. Prior to storm sewer installation, topography shows that a portion of site drains to S/L 363, likely requiring a temporary sediment trap. This is not provided on the plans.
Design specifications and details for all BMPs included on the plans?	YES However, Dandy Bags were used for inlet protection on the site. The approved SWP3 does not have Dandy Bags shown as an option for inlet protection, although they are an acceptable practice in the inspector's opinion. Changes to the SWP3 must be submitted and approved by the City before other BMP's can be used on a site.
Maintenance requirements specified?	YES (Except for inlet protection)
Have any NOV's or other enforcement actions issued for this site?	NO No inspection letters or NOV's on file. The City inspectors do not document inspection findings.
<p>Notes: Calculations for the orifice sizing on the modified outlet structure for the preexisting detention basin were provided; however, after checking the calculations Ohio EPA recognized that the sizing of the orifice was too large to ensure a proper draw down time of the Water Quality Volume. Attached with this report is an easy to use Excel spreadsheet which can be used to double check orifice sizing calculations in the future during the plan review process. The calculation is based on the appropriate equations established in the NPDES Permit and the drainage areas associated with the site in question.</p>	

Construction Project #2 Name: Enterprise Rent-a-Car 3GCO4331*AG 7.20 ac.

<p>BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?</p>	<p style="text-align: center;">YES</p> <p>The permanent storm water management basins also served as sediment basins during the construction process. The plan called for the outlet structures to be fitted with Faircloth skimmers for sediment control until the site was completed and stabilized.</p> <p>Other BMPs included: temporary diversions, erosion control matting, inlet protection, and silt fence.</p>
<p>Design specifications and details for all BMPs included on the plans?</p>	<p style="text-align: center;">YES</p> <p>Room for Improvement:</p> <ul style="list-style-type: none"> • Sizing calculations of the orifice for the skimmers to ensure a 48-hour drawdown time of the dewatering volume were not provided on plan. • The detail drawing of the skimmer shows a 1-inch orifice cap on the stub to which the skimmer attaches (located on the inside of the outlet structure). This same orifice size is used for both basins, which seemed unusual considering they handled significantly different drainage areas.
<p>Maintenance requirements specified?</p>	<p style="text-align: center;">YES</p>
<p>Have any NOV's or other enforcement actions been issued against this site?</p>	<p style="text-align: center;">YES</p> <p>However, the only items related to storm water were: (a) no engineering certification for the retention basin and (b) failure to obtain a final grade. The City threatened to issue a \$250 fine if corrective action were not to be taken immediately. The adjudication order (dated 1/4/2010) cited the issues as a violation of the Ohio Residential Code 106.3.1 with no reference to Chapter 1058 of the local code. No inspection reports on file to document ESC inspections occurring at least once monthly.</p>

Construction Project #1 Name: Westwood Farms No 16 (Andrus Woods) 3GC00999*AG 18 ac.

Notes:

The City did request a SWP3 binder for this project; however it does not provide the required information. Many sections are left blank or simply state "See Sheet 16 of Civil Plans". The City needs to review the SWP3 binder as part of the plan review process and if it does not provide the required information, they should comment on it. The SWP3 review letter simply asks for the SWP3 binder, but no formal indication that it was reviewed was present in the files.

A complaint was received by the City from a neighboring property owner (Jeff Johansen) about excessive erosion occurring on this property due to water flowing from the Enterprise site during the construction process (9/11/09). However, no resolution was indicated in the file.

Final grade was not reached until 1/13/10 according to City inspection. However, the "Final inspection" was conducted on 11/5/09. Why is a final inspection performed prior to reaching final grade for a commercial development? Ohio EPA concluded that it is likely that this is related to occupancy permits, as well as the confusion from developers/contractors about the sequence of converting BMP's from temporary structures to permanent ones observed in the field.

Construction Project #3 Name: Strongsville Police Station 3GC04110*AG 2.63 ac

<p>BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?</p>	<p style="text-align: center;">YES</p> <p>The plan calls for rock construction entrances, inlet protection, and perimeter silt fence. It also calls for a washout pit labeled as a "Truck Wash Settling Trap". Based on the size of the site and the contributing drainage area, these BMP's appeared to be adequate for the site.</p>
<p>Design specifications and details for all BMPs included on the plans?</p>	<p style="text-align: center;">NO</p> <p>Although there are details for most BMPs, there is no detail for the "Truck Wash Settling Trap" beyond a note that says 20' wide, 2:1 side slopes and 2.5' deep. No details were provided as to how the pit should be dewatered when it reaches capacity.</p>
<p>Maintenance requirements specified?</p>	<p style="text-align: center;">YES</p> <p>(With the exception of the Truck Wash Settling Trap as described above)</p>
<p>Have any NOV's or other enforcement actions been issued against the site?</p>	<p style="text-align: center;">NO</p> <p>No site inspections or NOV's on file. The City needs to document ESC inspections at least once per month.</p>

Construction Project #1 Name: Westwood Farms No 16 (Andrus Woods) 3GC00999*AG 18 ac.

Notes:
 The SWP3on file was never signed. During the plan review, it was observed that the City commented to the project engineer (Richard L Bowen & Associates) that the SWP3 certification should be removed from the plans. The response letter on 6/13/2008 from Bowen states that they did not remove the certification because *it is a requirement from Ohio EPA. The City should refrain from attempting to remove SWP3 certification in the future.*

Now, select up to 3 projects from the NOI list that have been completed since the date that the community enacted its post-construction ordinance. Pick projects 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.

Post-Construction Project #1 Name: Westwood Farms Phase 16 3GC00999*AG 18 ac	
Date that project was accepted by community or otherwise deemed "completed"	May 8, 2012
Were post-construction BMPs provided for all drainage areas associated with the developed site?	YES
List the post-construction BMPs provided?	DA #1 Wet Extended Detention Basin However, Ohio EPA questions the sizing of the WQv orifice. A 10-inch diameter pipe is provided when a 6-7 inch diameter pipe is expected to ensure a proper drawdown time of the Water Quality Volume. In the future, the City should check orifice sizing calculations during the plan review process using the quick and easy to use Excel spreadsheet which will be provided with this report.
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 *See Notes Below
Does MS4 have a copy of the long-term maintenance plan?	YES A LTM plan is located within SWP3 binder; however there is no stand-alone long-term maintenance plan <i>as required by the NPDES permit.</i>

Post-Construction Project #1 Name: Westwood Farms Phase 16 3GCO0999*AG 18 ac	
Who does the plan say is responsible for long-term maintenance?	The Homeowners' Association
Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party?	NO
<p>Notes: This basin was originally constructed to service Westwood Farms Phase 14 and eventually was enlarged to serve Phase 16. A letter from Reitz Engineering (project engineer) on 3/26/12 certified that the basin was expanded, reconfigured and is in substantial compliance with the approved drawings. However, no inspection letter from the City's Engineering Inspectors was on file.</p> <p>The community requires the submittal of an as-built inspection for completed projects. The as-built submitted by the project engineer depicts some slight variation of the original design (e.g. the invert of the water quality orifice is 0.1 ft. lower than the original plan) but indicates that the outlet structure will function as intended.</p>	

Post-Construction Project #2 Name: Enterprise Rent-a-Car 3GCO4331*AG 7.20 ac	
Date that project was accepted by community or otherwise deemed "completed"	Final grade achieved on January 13, 2010. No letter of acceptance was on file.
<p>Were post-construction BMPs provided for all drainage areas associated with the developed site?</p> <p>List the post-construction BMPs provided?</p>	<p>YES</p> <p>DA #1 (NORTH) – Wet Extended Detention Basin</p> <p>3-inch orifice at elevation 93.00 inside outlet structure. Extended detention provided to 93.91</p> <p>DA #2 (SOUTH) – Dry Extended Detention Basin</p> <p>1.3-inch orifice at elevation 88.00 inside outlet structure. Extended detention provided to 89.89.</p>
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	YES

Post-Construction Project #2 Name: Enterprise Rent-a-Car 3GCO4331*AG 7.20 ac	
the project was completed?	City required as-built certification from the project engineer (Euthenics), but no evidence that the City's Engineering Inspectors verified that the detention basins were installed per the plan. The City is required to conduct as-builts for all post construction BMP's.
Does MS4 have a copy of the long-term maintenance plan?	YES The LTM plan is briefly narrated in the "Notes" on Sheet C-16 of the construction plans. However; there is no stand-alone document <i>as required by NPDES permit #OHC000003.</i>
Who does the plan say is responsible for long-term maintenance?	The plan states "owner".
Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party?	NO
Notes: No WQv drain time verification for the (South) Dry Extended Detention Basin was available within the Detention and Storm Sewer Design report; however it is sized correctly to meet NPDES permit requirements.	

Post-Construction Project #3 Name: Strongsville Police Station 3GCO4110*AG 2.63 ac This is a redevelopment project.	
Date that project was accepted by community or otherwise deemed "completed"	October 15, 2010
Were post-construction BMPs provided for all drainage areas associated with the developed site?	NO No post-construction BMPs were provided for this project.
List the post-construction BMPs provided?	There appears to be 3 drainage areas on this property: DA #1 - 0.65-ac area drains to existing 30-inch storm sewer on south. DA #2 - largest area drains to Royalton Rd. DA #3 - former house demo. and expanded parking. Connects to an existing 8-inch storm sewer.

Post-Construction Project #3 Name: Strongsville Police Station 3GC04110*AG 2.63 ac This is a redevelopment project.	
Design specifications and details for all BMPs included on the plans?	<p style="text-align: center;">NO</p> <p>No post-construction BMPs were provided for this site. Must provide treatment for 20% of the WQv or reduce overall imperviousness by 20% to meet redevelopment requirements. However, site redevelopment resulted in an increased overall impervious area.</p>
Were post-construction BMPs selected appropriate for their drainage areas, site and soil conditions?	<p style="text-align: center;">NO</p> <p>No post-construction BMPs were provided for this project.</p>
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	<p style="text-align: center;">N/A</p> <p>No post-construction BMPs were provided for this project.</p>
Does MS4 have a copy of the long-term maintenance plan?	<p style="text-align: center;">N/A</p> <p>No post-construction BMPs were provided for this project.</p>
Who does the plan say is responsible for long-term maintenance?	N/A
Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party?	N/A
<p>Notes: The project was managed through the Building Department, but Engineering did review the plans. No SWP3 review letter was in the file, but a response from Richard L. Bowen & Associates indicating that there was a plan review letter was located. Bowen noted that the SWP3 signature cannot be removed from the plans as this is an Ohio EPA requirement. There are no comments from the City or Bowen regarding the fact that there are no post-construction BMPs provided on this project. <i>The City is required to retrofit to correct this violation.</i> As detailed in the NPDES Permit #OHC000003 for general construction activities, redevelopment projects need to treat 20% of the WQv or reduce the overall imperviousness of an area by redevelopment by 20%. If on-site retrofit is not feasible, the City will be required to develop off-site mitigation at one and a half (1.5) times the water quality volume associated with the redevelopment.</p>	

CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: City of Strongsville
MS4 Permit No: 3GQ00033*BG

Name of Site: Westwood Farms Phase 16	
Location: Countryside & Saddlebrook Ln.	NPDES Permit: #3GC03875*AG
Date of Inspection: 6/19/12	Time of Inspection: 2:15PM
Name of Inspector: Doug Kowalski	
Others Present During Inspection: Lori Daley, Assistant City Engineer Dan Bogoevski, DSW, NEDO Tim McParland, DSW, NEDO	

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

N/A

No superintendent or foreman was on site. The inspector did indicate that he would typically speak to the excavating company upon arrival (rather than Parkview, the Homebuilder).

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

N/A

No superintendent or foreman was on site. The inspector did not reference the approved SWP3 until prompted by Ohio EPA.

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?

N/A

No one who could access such information was on site.

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

NO

The inspector did not reference the approved SWP3 until prompted by Ohio EPA.

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

NO

The inspector did however indicate that the developer was previously advised to install silt fence along the curb of S/L 355.

6. Compliance issues identified by inspector during this inspection:
- **Stabilization issues were apparent and additional seeding/mulch and watering is required during.**
 - **Dandy Bags were acceptable as inlet protection (although not detailed in the SWP3). The SWP3 needs to be amended to detail this.**
 - **The geotextile-frame inlet protection around the catch basins was inadequate. They must be reinstalled per the details on the SWP3.**
 - **S/L 355 requires SF around the soil stock piles**
 - **The inspector is recommending installing SF or filter socks along the curb**
7. Deficiencies or NPDES violations not noted by the MS4 inspector during this inspection:
- **The inspector did not mention the bare areas beyond the right of way which required stabilization**
 - **S/L 360 did not have SF surrounding the lot as depicted in the SWP3**
 - **The inspector did not recognize the need for silt fence on the rear side of the active lots until prompted by Ohio EPA**
 - **Street sweeping was necessary to address off-site tracking**
 - **A dark oily liquid was visible on disturbed soil where tree-cutting was taking place**
8. Did the MS4 inspector ask the project superintendent or site foreman to accompany him or her on the inspection?

N/A
(Not on site)

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

N/A
(Not on site)

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.

The inspector stated that he will speak with Parkview Homes about SF issues and stabilization issues and allow them a specific timeframe to complete corrective action.

Additional Comments:

- **In the past, the inspector indicated that he has previously been informing the plumbing contractor (Heritage) about storm water related issues rather than the site developer and permittee (Parkview Homes). In the future, storm water related issues need to be conveyed to the site developer/permittee since they are essentially responsible for all ESC's regardless if they sub-contract them out.**

- It is very important that the site inspector references the approved plans as the basis of their inspections. The inspector did not do such until prompted by the Ohio EPA.

(See Attached Photos)



Figure 1: Silt fence needs to be installed on a level contour. Stock piles undisturbed for 21 days or greater need to be temporarily stabilized.



Figure 2: A dark oily liquid was visible on exposed soil where tree cutting had taken place. Good housekeeping measures need to be taken to ensure proper removal of the contaminant and prevent it from occurring in the future.



Figure 3: The silt fence had collapsed around the stock piles and needs to be replaced. Inspectors need to check that the SF is properly trenched/backfilled, and that the ends of each section are twisted together to ensure proper ponding of runoff.



Figure 4: The inspector did not mention anything about the exposed earth beyond the right of way which requires stabilization.

Photos Taken By: Tim McParland
6/11/2012

CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: City of Strongsville
MS4 Permit No: 3GQ00033*BG

Name of Site: Cedar Creek Sub-division	
Location: W. of Prospect / N. of Breckenridge	NPDES Permit: #3GC05014*AG
Date of Inspection: 6/19/12	Time of Inspection: 3:10PM
Name of Inspector: Doug Kowalski	
Others Present During Inspection: Lori Daley, Assistant City Engineer Dan Bogoevski, DSW, NEDO Tim McParland, DSW, NEDO	

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

N/A

No superintendent or foreman was on site.

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

N/A

No superintendent or foreman was on site.

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?

N/A

No superintendent or foreman was on site.

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

NO

The inspector did not reference the approved SWP3 until prompted by Ohio EPA. It was observed that the inspector did not enforce the installation of Sediment Trap 2 as depicted on the SPW3 during the construction process. It seems likely that Sediment Trap 1 was never installed either.

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

NO

The inspector only described previous compliance issues once prompted by Ohio EPA. These issues included stabilizing driveway entrances and mounds at the entrance of the sub-division.

6. Compliance issues identified by inspector during this inspection:
- **The soil mound in the front of the sub-division (along Prospect Rd.) requires seeding/mulch and silt fence until a 70% growth density is established.**
 - **Driveway entrances and slopes along the preexisting stream need to be stabilized**
7. Deficiencies or NPDES violations not noted by the MS4 inspector during this inspection:
- **The protective hood was not provided inside the outlet structure of the detention basin as detailed in the SWP3.**
 - **The inspector did not observe the permanent outlet structure or detention basins until prompted by Ohio EPA to do such**
 - **The stream running through the subdivision was running very muddy (due to earth disturbance further up the stream and not this particular sub-division)**
8. Did the MS4 inspector ask the project superintendent or site foreman to accompany him or her on the inspection?

N/A
(No one on site)

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

N/A
(No one on site)

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.

The inspector stated that he had previously discussed stabilization issues with Ed Lechler, the developer. He also stated that he will discuss the situation with the City Engineer to see if enforcement actions should be escalated.

Additional Comments:

- **The inspector did not question or investigate the source of the stream running muddy through the sub-division due to upstream activity. The City should investigate the possibility of the Breckenridge Sub-division contributing to such a muddy stream.**
- **The approved SWP3 plan needs to be the basis of conducting storm water inspections. Again, the inspector did not refer to the approved plans during his inspection until prompted by the Ohio EPA.**

(See Attached Photos)



Figure 1: The creek appeared to be running very muddy from activity upstream of the development. The inspector did not comment on this during the inspection.



Figure 2: Silt fence needs to be removed from areas that have reached a 70% growth density. If this density has not yet been established, the silt fence needs to be repaired or replaced as necessary.



Figure 3: The dirt mound at the entrance of the site needs to be stabilized with seeding and mulching if it is to remain undisturbed for 21 days or greater.



Figure 4: The source of the sediment in the creek should be investigated by the City.

CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: City of Strongsville
MS4 Permit No: 3GQ00033*BG

Name of Site: Schneider Reserve Phase IV (S/L 120)	
Location: 9509 N. Bexley	NPDES Permit: #3GC05137*AG
Date of Inspection: 6/19/12	Time of Inspection: 4:00PM
Name of Inspector: Tom Painter	
Others Present During Inspection: Lori Daley, DSW, NEDO Dan Bogoevski, DSW, NEDO Tim McParland, DSW, NEDO Ed Wojtowicz, Pulte Homes	

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

YES

The project superintendent approached us upon arrival. The inspector indicated that sometimes he will talk to the superintendent while conducting inspections, while other times he does not. The inspector should *always* identify himself to the project superintendent and state the purpose of his inspection in the future.

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

However, the project superintendent did verify that reports were kept in the construction office once prompted by Ohio EPA.

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

NO

The inspector had a plan with him for the individual lot, but was not aware of the overall SWP3 plan for the sub-division.

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

NO

The inspector stated that individual lots are typically inspected only one time once the basement has been excavated, but no follow-up.

6. Compliance issues identified by inspector during this inspection:

- **The compost filter socks surrounding the lot need to be maintained or replaced as necessary**
- **The yard inlet protection is acceptable although the inspector did not have detail drawings for them**

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

- **Sediment traps were not installed as depicted on the SWP3**
- **The inspector was not aware of/ familiar with the overall approved SWP3 plan for the sub-division**
- **The compost filter socks were incorrectly sized. The approved compost filter socks require a twelve inch (12") diameter sock whereas the socks in practice had an eight inch (8") diameter**

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

NO

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

NO

The project superintendent had to ask the inspector to clarify that the only corrective action necessary was to maintain the compost filter socks.

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

Additional Comments:

- **The approved SWP3 for the sub-division calls for three (3) sediment traps to be installed prior to the installation of storm sewers. Ohio EPA observed that this was not the case. This is a prime example of why it is important that the City's inspectors are familiar with the approved SWP3 plan for the sites which they inspect, as well as use the plan as the basis of the inspection findings.**
- **The inspector did not inspect the detention basin for the sub-division. He was not aware of whether or not the permanent outlet structure of the basin had been modified with a riser pipe or skimmer during the construction process. The superintendent stated that he "believed it had been capped off". It is very important that the City's inspectors investigate such claims and inspect permanent BMP's as part of their site inspections.**