

# Municipal Storm Water Program Evaluation

## Construction and Post-Construction Component Worksheet

<b>Date of Evaluation</b> 7/18/12
<b>Evaluator Name, Title</b> Tim McParland, DSW, NEDO
<b>M54 Permittee</b> North Ridgeville #3GQ10009*BG

**Instruction:** Use this worksheet as a guide for questioning M54 staff and reviewing applicable documents. Keep in mind that additional questions may be necessary based on local regulations, M54 permit requirements, implementation strategies, or water quality issues. Remember to obtain copies of any applicable documents or files which may assist in writing the M54 evaluation report.

Staff Interviewed		
Name	Department/Agency	Phone Number/Email
Cathy Becker, P.E.	Assistant City Engineer	cbecker@nridgeville.com 440-353-0823
Michael Vandrasik	Resident Project Representative/ Chief Inspector	mvandrasik@nridgeville.org 440-353-0842
Scott Wangler, P.E.	City Engineer	swangler@nridgeville.org 440-353-0842

Ordinance/Legal Authority	
Interview Questions	Response
<b>Construction Ordinance</b>	
Ordinance used to require storm water BMPs at construction sites?	YES
Name and/or code section(s)	Chapter 1056: Construction Site Soil Erosion, Sediment, Storm Water Runoff and Storm Water Quality Controls and Regulations
Date initially enacted:	10-16-2006
Threshold for coverage (e.g., 1 acre, 100 cubic yards, etc.)	Any disturbance of greater than or equal to 1 acre.
Exclusions from coverage allowed:	Agricultural activities, Silvicultural activities, existing surface mining operations, existing strip mining operations

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
Does your construction program include the following types of construction activity:	
Single-family residential?	<b>YES</b>
Multi-family residential?	<b>YES</b>
Commercial development?	<b>YES</b>
Institutional development (schools or government facilities)?	<b>YES</b>
Mixed-use development?	<b>YES</b>
Non-subdivided development?	<b>YES</b>
Non-exempt construction on agriculturally-zoned lands? (barn on a farm)	<b>YES</b>
Non-silvicultural tree clearing?	<b>YES</b>
Your own municipal construction projects?	<b>YES</b>
Construction and demolition debris landfills?	<b>YES</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> (If at least one acre of earth disturbance was within the City's jurisdiction)

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
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> Chapter 1056.05 (o)
Has ordinance been updated to reflect minimum requirements of Ohio EPA NPDES permit #OHC000003?	<b>YES</b>
Date of updates?	10-19-2009
Date of MS4 Permit Renewal:	6-4-2009
<b>Post-Construction Ordinances</b>	
Ordinances used to require post-construction storm water BMPs on new development or redevelopment projects:	<b>YES</b>
<b>Treatment of Water Quality Volume (WQv)</b> Name and code section:	<b>YES</b> Chapter 1056.07: Storm Water Management Plan Requirements
Date initially enacted:	10/16/2006
Has this ordinance been updated to reflect the minimum requirements of Ohio EPA General Permit #OHC000003?	<b>YES</b>
Date of update:	10-19-2009
<b>Riparian and Wetland Setback Ordinance</b> Name and code section:	<b>YES</b> Chapter 1028 & Chapter 1056
If YES, does ordinance require protection of native vegetation within riparian area or can manicured lawns be established?	<b>NO</b>
If YES, does ordinance allow the location of storm water infrastructure within the riparian setback?	<b>NO</b>
<b>Runoff Reduction</b> (e.g., infiltration or mitigation of a recharge volume)? Name and code section:	<b>NO</b> Post construction BMPs encourage infiltration but nothing in the local code explicitly requires or encourages its use.

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p><b>BMPs designed to control temperature</b> for discharges to cold water habitat streams? Name and code section:</p>	N/A
<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>	<p><b>YES</b> Chapter 1423.02 Requires downspouts to discharge onto splash blocks and not onto pavement or directly into a stream.</p>
<p>Permit the installation of rain gardens and other bioretention facilities? Names and code section:</p>	<p><b>YES</b> Chapter 1056.07 Allows for these facilities to be constructed; however the code does not explicitly encourage them.</p>
<p>Allow rainwater harvesting (rain barrels and cisterns)? Name and code section:</p>	<p><b>YES</b> The code does not prohibit rainwater harvesting; however it does not encourage it either.</p>
<p>Allow or require the use of pervious pavement systems? Name and code section:</p>	<p><b>YES</b> The code does not prohibit the use of pervious pavement; however it does not encourage it either.</p>
<p>Allow reduction in the size of traditional storm water management structures if LID used? Name and code section:</p>	<p><b>YES</b> Up to City Engineer's Discretion.</p>
<p>Provide a credit to a storm water utility fee if LID is used? Describe:</p>	N/A
<p><b>Balanced Growth Principles</b>, i.e., other non-structural ordinances or codes that promote better site design: Allow conservation design as a subdivision layout (retain <math>\geq</math> 40% open space by maintaining existing zoned density) Standard or variance required? Name and code section:</p>	<p><b>YES</b> <b>STANDARD</b> A minimum of a twenty percent (20%) green space must be established in any new subdivision.</p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<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><b>NO</b></p> <p>Chapter 660.15: Property Management code requires grass to be kept under twelve (12) inches. Native grasses are not prohibited but must be maintained to remain compliant with the code.</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><b>YES</b></p> <p>Planning commission will approve the use of shared parking and landbanked parking but nothing in the code encourages or requires it.</p> <p>Chapter 1273.23</p>
<p>Allow sidewalks on only one side of the road in residential neighborhoods  Name and code section:</p>	<p><b>NO</b></p> <p>The City requires a sidewalk on both sides of the street; however exceptions have been made if a larger common walking path is established (e.g. Meadow Lakes Subdivision).</p> <p>Chapter 1024.05</p>
<p>Zoning that encourages smart growth in compact neighborhoods or mixed-use development:</p>	<p><b>NO</b></p> <p>The Planned Community Development (PCD) ordinance, which encouraged smart growth zoning and other similar balanced growth principles, was recently repealed. Chapter 1279.</p>
<p>If YES, does zoning create walkable neighborhoods with access to commercial areas and employment centers? Describe:</p>	<p><b>N/A</b></p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>If YES, does this zoning provide incentives for vertical development rather than horizontal sprawl? Describe:</p>	N/A
<p>If YES, does this zoning encourage a range of housing options for people of various incomes? Describe how:</p>	N/A
<p>If YES, do you provide incentives for infill development or development in the core? Describe incentive programs:</p>	N/A
<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>	N/A
<b>Provisions within Ordinances</b>	
<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>Construction</p>	NO
<p>Post-Construction</p>	NO
	<p>Tree clearing and grading can begin before the plan is approved as long as erosion and sediment controls are in place. The City must verify that adequate controls are in place before any grading or clearing may begin.</p>
<p>Permits &amp; Type (Building, Grading, etc.)</p>	
<p>Construction</p>	NO
<p>Post-Construction</p>	NO
	<p>No utility work or structural work can begin without building permits; however grading and clearing may begin before a permit is issued or plan is approved. (See Above)</p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
Does your definition of "construction activities" include any grading, grubbing, filling, clearing or excavating activity?	<b>YES</b>
<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 style="text-align: center;"><b>NO</b></p> <p>Developers may submit their plans either before or after Planning Commission has approved the project. After planning commission approval, City Council must approve the project as well. If variances are required, the developer must report to the Zoning Board for appeals. If plans are submitted before the project is accepted, they don't have to be complete at that time. The plans must however be approved by the Planning Commission, Building Department, and Engineering Department before any utility or structural work can commence. As described above, the City will allow grading and clearing to begin prior to plan approval as long as the essential erosion and sediment controls are in place.</p>
<p>Does your ordinance explicitly specify selection criteria or minimum acceptable BMP design?</p> <p style="padding-left: 40px;">Construction</p> <p style="padding-left: 40px;">Post-Construction</p> <p>If NO, are these standards referenced?</p> <p style="padding-left: 40px;">Construction</p> <p style="padding-left: 40px;">Post-Construction</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>N/A</b></p> <p style="text-align: center;"><b>N/A</b></p>
<b>CONSTRUCTION SITE ENFORCEMENT AUTHORITY</b>	
Types of enforcement mechanisms available for construction site issues per your ordinance:	<p>Notices of Violations (NOV)   <b>YES</b></p> <p>Administrative fines           <b>YES</b></p> <p>Stop-work orders               <b>YES</b></p> <p>Civil penalties                   <b>NO</b></p> <p>Criminal penalties               <b>YES</b></p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
Which type of enforcement action have you most commonly implemented?	The most common type of enforcement action is typically a notice of non-compliance letter sent to the property owner and developer (if different).
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	The City will allow clearing and grading to commence without a plan approval as long as they verify that the appropriate erosion and sediment controls are in place prior to grading. If utility or structural work were to begin prior to a plan approval, the Engineering department will be informed and a stop work order will be issued until the appropriate permits are issued and the plan is approved.
2. A BMP indicated on the SWP3 has not been installed or requires maintenance (first incidence)	Typically the first incidence will involve verbal communication with the contractor/developer if they are on site at the time of the inspection. A phone call or e-mail will be sent if the contractor/developer is not on site.
3. A BMP is required but not shown on the SWP3	The City's inspector would inform the Engineering Department of the issue. The Engineering Department would then evaluate the situation and request that the contractor/develop submit a revised SWP3 plan if necessary.
4. A BMP has not been installed or maintained despite prior notification from the MS4 (repeated incidences)	Notice of non-compliance letters will be sent to the contractor/developer three (3) times. If the responsible party continues to remain non-compliant after three (3) separate notices, a stop work order is issued. They will also be cited to Mayor's Court, and subject to a possible fine.
5. If using a third party inspection service provider, e.g., the SWCD, MS4 receives inspection report indicating repeated non-compliance issue	N/A

<b>Ordinance/Legal Authority</b>											
<b>Interview Questions</b>	<b>Response</b>										
<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><i>NOTE: In municipalities, letters from the SWCD are not considered NOV's unless the community's ordinance specifically gives the SWCD enforcement authority. This is not the case typically. The SWCD is simply notifying the developer and community that there are compliance issues on the site, but they have no inherent enforcement authority in a municipality.</i></p>	<p>On July 13, 2012, Pioneer Ridge Subdivision No. 9 was inspected by Mike Vandasik. A notice of non-compliance was sent to the developer (Pulte Homes) describing the deficiencies he noted during the inspection such as stabilization issues, missing rock construction entrances, inadequate silt fence, and concrete wash pit maintenance. The letter specifically referenced sections of the local code which were violated, and requested a response from Pulte Homes by July 17<sup>th</sup>, 2012 describing how they planned to correct the issues noted during his inspection. The letter did not explicitly spell out "Notice of Violation"; however this was only the first incidence.</p>										
<p>Have your enforcement protocols and procedures for construction site issues been formalized in a written enforcement escalation plan?</p>	<p><b>YES</b></p>										
<b>POST-CONSTRUCTION ENFORCEMENT AUTHORITY</b>											
<p>Types of enforcement mechanisms available for post-construction site issues per your ordinance:</p>	<table> <tr> <td>Notices of Violations (NOV)</td> <td style="text-align: center;"><b>YES</b></td> </tr> <tr> <td>Administrative fines</td> <td style="text-align: center;"><b>YES</b></td> </tr> <tr> <td>Stop-work orders</td> <td style="text-align: center;"><b>YES</b></td> </tr> <tr> <td>Civil penalties</td> <td style="text-align: center;"><b>NO</b></td> </tr> <tr> <td>Criminal penalties</td> <td style="text-align: center;"><b>YES</b></td> </tr> </table>	Notices of Violations (NOV)	<b>YES</b>	Administrative fines	<b>YES</b>	Stop-work orders	<b>YES</b>	Civil penalties	<b>NO</b>	Criminal penalties	<b>YES</b>
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<p>Which type of enforcement action have you most commonly implemented?</p>	<p>The most common type of enforcement action is typically a letter sent to the property owners.</p>										
<p>Describe the enforcement mechanism used when the following compliance situations are encountered regarding post-construction:</p> <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> <li>2. The post-construction BMP has not been maintained (first incident)</li> </ol>	<p>Verbal communication between the inspector and the contractor/developer requesting them to be protect the BMP from siltation or reconstruct the BMP at the appropriate time.</p> <p>A letter will be sent to the Homeowner's Association and property owner (if different)</p>										

<b>Ordinance/Legal Authority</b>		
<b>Interview Questions</b>	<b>Response</b>	
<p>3. The post-construction BMP has not been maintained after multiple notifications</p> <p>4. A homeowner has cut down trees in the riparian setback area (if applicable)</p> <p>5. A homeowner has installed a shed in a vegetated filter strip disrupting sheet flow runoff</p>	<p>The City will send out three (3) notice of non-compliance letters. If the responsible party does not comply, they are summoned to Mayor's court.</p> <p>Engineering Department personnel will be dispatched to the site to assess the situation. If corrective action is necessary (and possible), it will be required. The offender will also be educated on the importance of riparian setbacks while on site.</p> <p>The Engineering Department would request that the drainage of that area be modified to still receive the proper treatment or else the shed would have to be relocated.</p>	
<p>Describe the last enforcement action your community has taken against a property owner/homeowners association for non-compliance with post-construction site requirements and provide the documentation to demonstrate the action.</p>	<p>Braemore Subdivision was inspected for detention basin maintenance requirements. The inspection concluded that the banks of the basins were eroded and required re-seeding. Also, rock channel protection (rip-rap) needed to be placed at the inlet headwalls and trash removed from the outlet structures. The first notice of non-compliance letter was sent on March 15, 2012 to the Homeowner's Association and the developer requesting corrective action to be completed by May 1, 2012. The property was re-inspected May 30, 2012 and some of the issues noted during the first inspection had yet to be addressed. A second letter was issued and requested corrective action be completed by August 1, 2012.</p>	
<p>Have your enforcement protocols and procedures for post-construction issues been formalized in a written enforcement escalation plan?</p>	<p><b>YES</b></p>	
<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Sediment and Erosion Control Ordinance	<b>YES</b>	<b>YES</b>
Post-Construction Storm Water BMP Ordinances(s)	<b>YES</b>	<b>YES</b>
<p>Enforcement escalation plan or procedures</p> <p>Construction: (Same for both)</p> <p>Post-Construction: (Same for both)</p>	<b>YES</b>	<b>YES</b>
<b>Notes</b>		

<b>Construction Project Inventory</b>													
<b>Interview Question</b>	<b>Response</b>												
<p>Do you keep an inventory of construction projects that are actively occurring in your community? If YES, how?</p> <p>Do you track construction projects &lt;1 acre (e.g., individual lot within a subdivision or small addition to a business)?</p>	<p style="text-align: center;"><b>YES</b></p> <p>Active construction sites are tracked on a Microsoft Word document and organized in a table.</p> <p style="text-align: center;"><b>NO</b></p> <p>Individual lots are not on the active construction inventory; however if an individual lot is active, the subdivision as a whole is on the list. Building additions would be included on the inventory list (although not applicable at this time). <i>Ohio EPA recommends that individual lot #'s are tracked on the active construction inventory such that previous compliance issues and other information can be referenced.</i></p>												
How often is your inventory of construction projects updated?	Typically anytime a plan is approved, or an Ohio EPA permit is issued.												
Information tracked:	<table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Project status</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td>Inspection Findings</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td colspan="2">(Separate list than active construction site list)</td> </tr> <tr> <td>Enforcement Actions</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td>Complaints</td> <td style="text-align: right;"><b>YES</b></td> </tr> <tr> <td>NOI submittal</td> <td style="text-align: right;"><b>YES</b></td> </tr> </table>	Project status	<b>YES</b>	Inspection Findings	<b>YES</b>	(Separate list than active construction site list)		Enforcement Actions	<b>YES</b>	Complaints	<b>YES</b>	NOI submittal	<b>YES</b>
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<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>If construction sites are <b>not</b> inspected at least once per month, how do you prioritize or determine inspection frequency?</p> <p>Criteria used:</p> <p>Is this inspection criteria and frequency explicitly stated in your SWMP?</p>	<p style="text-align: center;"><b>YES</b></p> <p><i>(The City states that sites are inspected "weekly"; However, the file review indicates that this is not the case)</i></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 70%;">Proximity to water body</td> <td style="text-align: right;"><b>N/A</b></td> </tr> <tr> <td>Water body impairment</td> <td style="text-align: right;"><b>N/A</b></td> </tr> <tr> <td>Size of project</td> <td style="text-align: right;"><b>N/A</b></td> </tr> <tr> <td>Slope of project site</td> <td style="text-align: right;"><b>N/A</b></td> </tr> </table> <p style="text-align: right;"><b>N/A</b></p> <p style="text-align: right;"><b>N/A</b></p>	Proximity to water body	<b>N/A</b>	Water body impairment	<b>N/A</b>	Size of project	<b>N/A</b>	Slope of project site	<b>N/A</b>				
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Slope of project site	<b>N/A</b>												

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):	8
<b>Applicable Documents</b>	
List of active construction projects	<b>Reviewed</b> <b>Obtained</b>
List of projects covered under a state/EPA general permit	<b>YES</b> <b>YES</b>

<b>Notes</b>
The NOI list reveals that at least twelve (12) projects still have active construction (individual lots at a minimum). The City stated that active sites which began before 2012 are tracked but on a separate list from the year which construction began and that if individual lots are still active, the name of the subdivision as a whole will still appear on the list. <i>The city needs to ensure that they are fully aware of any active sites occurring within the community. Ohio EPA recommends that the City develops a single cohesive list of active construction within the community, including individual lots such that inspectors as well as engineering staff are fully aware of the status and compliance history of all earth disturbing activities within the community and are aware of which sites need to be inspected at a minimum of once per month.</i>

<b>Post-Construction BMP Inventory</b>	
<b>Interview Question</b>	<b>Response</b>
Are post-construction BMPs tracked?	<b>YES</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?	<b>YES</b>
Information tracked:	Location <b>YES</b> Type <b>YES</b> Maintenance Requirements <b>YES</b> Inspection findings <b>NO</b> Other (e.g., Ownership): <b>Specifications, elevations.</b>
Database used?	<b>NO</b> Post-construction BMP inventory is kept on a Microsoft Word document and organized in a table.
Number of private post-construction structural BMPs installed in community	<b>115</b> (This includes retention basins not designed for water quality purposes)

<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Inventory of Post-Construction BMPs	YES	YES .

<b>Construction and Post-Construction BMP Standards</b>		
<b>Interview Questions</b>	<b>Response</b>	
<b>CONSTRUCTION BMPs</b>		
Do your erosion and sediment control standards include BMP selection criteria?	YES <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  Different stabilization procedures and seed mixes for different times of the year.	
Do your standards include operation and maintenance requirements?	YES	
<b>POST-CONSTRUCTION BMPs</b>		
Do your post-construction standards include BMP selection criteria?	YES <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?	YES  <ul style="list-style-type: none"> <li>• Bioretention Cells</li> <li>• Dry or Wet Enhanced Water Quality Swales</li> <li>• Pocket Wetlands</li> <li>• Infiltration Trenches</li> <li>• Grass Filter Strips</li> <li>• Sand Filters</li> </ul>	
Do your standards include operation and maintenance requirements?	YES	
<b>Applicable Documents</b>		
BMP guidance or technical document	Reviewed YES	Obtained YES

<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?	<b>The Engineering Department:</b> Cathy Becker, P.E. Scott Wangler, P.E.
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?	<b>The Engineering Department:</b> Cathy Becker, P.E. Scott Wangler, P.E.
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A
What training or professional certifications have plan review personnel received?	<p>USEPA Webcasts, Lorain County PIPE program, NE Ohio storm Water Council training, Ohio LTAP Center. These workshops and training sessions target a mix of construction and post-construction related topics.</p> <p>Cathy Becker – Approximately 10 years Scott Wangler – Approximately 20 years</p> <p>(This applies for both active construction and post-construction)</p> <p>Cathy Becker - Approximately 10 hours/year Scott Wangler - Approximately 5 hours/year</p> <p>(This training includes a mix of construction and post-construction related topics)</p>
Construction	
Post-Construction	
How many years of experience does plan review personnel have inspecting storm water BMPs?	
Construction	<p>Cathy Becker - Approximately 10 hours/year Scott Wangler - Approximately 5 hours/year</p> <p>(This training includes a mix of construction and post-construction related topics)</p>
Post-Construction	
How often do plan review personnel receive training?	<p>Cathy Becker - Approximately 10 hours/year Scott Wangler - Approximately 5 hours/year</p> <p>(This training includes a mix of construction and post-construction related topics)</p>
Construction	
Post-Construction	
<i>*Training opportunities provided by Ohio EPA are available for your community and are 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 to conduct plan review?	
Construction	<b>YES</b>

<b>Plan Review Procedures</b>	
<b>Interview Questions</b>	<b>Response</b>
Post-Construction If NO, what criteria is used to review plans? Construction Post-Construction	YES  N/A  N/A
Size threshold for plan review (i.e. 1 acre, 10,000 square feet)? Construction Post-Construction	No minimum threshold.  No minimum threshold.
Do you verify the submission of a Notice of Intent (NOI) or Individual Lot NOI to Ohio EPA as part of your plan review process?	YES
Do you require a pre-construction meeting with developers and/or contractors? Is the sequence of implementation of sediment and erosion controls discussed during these meetings? Is the timing of installation of post-construction BMPs discussed during these meetings?	YES  YES  YES
Does your community have standard conditions of plan approval? Do they include erosion and sediment control and/or post-construction water quality requirements?	YES  YES
Does your community require a performance bond that can be used to pay for BMPs (site stabilization) in the event the developer does not complete the project?	YES Performance bonds are required for subdivisions only.
Does your community require a long-term maintenance plan for post-construction BMPs? If YES, is the plan required to include the following: Identify the party responsible for long-term maintenance? A list of routine and non-routine maintenance tasks and the frequency for their performance?	YES  YES  YES

<b>Plan Review Procedures</b>		
<b>Interview Questions</b>	<b>Response</b>	
A map that identifies the types and locations of post-construction BMPs and their maintenance or access easements?	NO	
A list of deed restrictions, conservation easements or environmental covenants required to maintain post-construction BMPs in perpetuity?	YES (Only if applicable)	
Is this plan kept on file or input into a database for future reference to ensure the required tasks are being completed?	YES  OnBase	
<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Copy of standard conditions of approval	YES	YES
Example of standard conditions applied to an approved project	YES	YES
Checklist used by plan reviewers	YES	YES

<b>Project Inspections</b>	
<b>Interview Questions</b>	<b>Response</b>
<b>CONSTRUCTION SITE INSPECTIONS</b>	
Who is responsible for erosion and sediment control site inspection?	<b>The Engineering Department:</b> Mike Vandasik Bob Rousseau James Brewer
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A
<b>POST-CONSTRUCTION INSPECTIONS</b>	
Who is responsible for post-construction site inspection?	<b>The Engineering Department:</b> Mike Vandasik Bob Rousseau James Brewer
If third party, is there an MOU or other agreement in place?	N/A
Is it current?	N/A

<b>Project Inspections</b>	
<b>Interview Questions</b>	<b>Response</b>
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> An "as-built" is conducted as part of the punch list before a final grade permit and occupancy permit is issued.
Does the MS4 conduct inspections for long-term maintenance of privately-owned post-construction BMPs?	<b>YES</b>
If YES, at what frequency?	Typically once per year.
If NO, does the MS4 collect inspection reports from the responsible party? At what frequency?	<b>N/A</b>
<b>CONSTRUCTION &amp; POST-CONSTRUCTION INSPECTION QUESTIONS</b>	
Findings from construction and post-construction inspections tracked in a database?	<b>YES</b>
<p>What training or professional certifications have site inspection personnel received?</p> <p style="padding-left: 40px;">Construction</p> <p style="padding-left: 40px;">Post-Construction</p> <p>How many years of experience does site inspection personnel have inspecting storm water BMPs?</p> <p style="padding-left: 40px;">Construction</p> <p style="padding-left: 40px;">Post-Construction</p> <p>How often do site inspection personnel receive training?</p> <p style="padding-left: 40px;">Construction</p> <p style="padding-left: 40px;">Post-Construction</p> <p><i>*Training opportunities provided by Ohio EPA are available for your community and are 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><b>Mike V.</b> - CESSWI, USEPA Webcasts, Lorain County PIPE program, NE Ohio storm Water Council training, Ohio LTAP Center</p> <p><b>James B.</b> - USEPA Webcasts, NE Ohio Storm Water Council Training</p> <p><b>Bob R.</b> - USEPA Webcasts, NE Ohio Storm Water Council Training</p> <p><b>Mike V.</b> – Approximately 13 years  <b>James B.</b> – Approximately 6 years  <b>Bob R.</b> – Approximately 3 years</p> <p><b>Mike V.</b> – Approximately 10-12 PDUs annually.  <b>James B.</b> – Approximately twice annually.  <b>Bob R.</b> – Approximately twice annually.</p>

<b>Project Inspections</b>			
<b>Interview Questions</b>		<b>Response</b>	
Do you use a checklist or the approved plan to conduct site inspections?			
Construction		YES	
Post-Construction		YES	
If NO, what standards are used to determine if a site is compliance?			
Construction		N/A	
Post-Construction		N/A	
<b>Applicable Documents</b>		<b>Reviewed</b>	<b>Obtained</b>
Most recent inspection staff training records		YES	YES
Example of active construction project inspection checklist		YES	YES
Example of inspection record to verify "as-built" of post-construction BMPs		Does not exist	Does not exist
Records from inspection tracking database or filing system		YES	YES
Checklist for inspecting long-term maintenance of post-construction BMPs		YES	yes
<b>Notes</b>			

<b>MS4-Owned Construction Projects</b>	
<b>Interview Questions</b>	<b>Response</b>
Projects designed in-house or contracted?	<b>BOTH</b> Smaller projects such as concrete street repairs and sewer extensions are designed in house, while larger projects are contracted.
Designers trained in storm water BMP implementation?	YES
Checklist used during the design and/or review of public construction projects?	YES
Are projects greater than one acre covered by 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?	YES

<b>MS4-Owned Construction Projects</b>			
<b>Interview Questions</b>		<b>Response</b>	
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?		<b>The Engineering Department:</b> Mike Vandasik Bob Rousseau James Brewer	
<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>			
Project inspectors trained?		YES	
Frequency:		(See Above)	
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?		Typically once annually. (Same frequency as privately owned BMPs)	
Which department is responsible for conducting these inspections?		The Engineering Department	
<b>Applicable Documents</b>		<b>Reviewed</b>	<b>Obtained</b>
MS4-owned project storm water design standards and/or checklist		YES	YES
Contract language for active public project not developed or inspected in-house		YES	YES

<b>Outreach and Education</b>	
<b>Interview Questions</b>	<b>Response</b>
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 January 29, 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:	Informational handouts from the Cuyahoga Soil and Water Conservation District titled <i>Erosion and Sediment Control for Construction Sites</i> .	
How/when is the information distributed?	Handouts are available in City Hall in the main lobby of the Engineering Department.	
Website used to educate operators?  Web address:	The City's webpage contains information about the Phase II storm water program under the Engineering Department.  <a href="http://www.nridgeville.org/departments/engineering.asp">http://www.nridgeville.org/departments/engineering.asp</a>	
<b>Applicable Documents</b>		
Training materials	Reviewed Does not exist	Obtained Does not exist
Brochures, outreach materials	YES	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: LCCC Center Ridge Campus #3GC05601*AG (6.84 AC.)</b>	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	<p><b>YES</b></p> <p><b>Active Construction BMPs Include:</b></p> <ul style="list-style-type: none"> <li>• Perimeter silt fence</li> <li>• Temporary sediment basin to be converted into a permanent detention basin</li> <li>• Inlet protection</li> <li>• Rock construction entrance</li> <li>• Concrete wash pit</li> </ul>
Design specifications and details for all BMPs included on the plans?	<p><b>YES</b></p> <p>Detail drawings are provided for all BMPs as well as narrative description. The plans do contain the appropriate sediment storage volume calculations for the sediment basin as well as provide a capped orifice to ensure the proper drawdown time.</p>
Maintenance requirements specified?	<p><b>YES</b></p> <p>The city of North Ridgeville standards are included as well as additional narrative describing routine maintenance procedures.</p>
Have any NOV's or other enforcement actions issued for this site. <i>Obtain copies of NOV's. If none, why not?</i>	<p><b>NO</b></p> <p>There were no non-compliance letters on file for this site. The inspector has been on this site previously but has never issued a letter. The site has been active since August of 2011.</p>
<p><b>Notes:</b></p> <p>The SWPPP for the LCCC Center Ridge Campus is well done. Detail drawings are included along with routine maintenance requirements for all BMPs. However, issues exist with the information provided for the post-construction BMPs as well as the long term maintenance (LTM) plan. Refer to the post-construction file review for LCCC Center Ridge Campus below for more details.</p>	

**Construction Project #1 Name: LCCC Center Ridge Campus #3GCO5601\*AG (6.84 AC.)**

While on site, it was discovered that the inspector had not previously conducted a storm water inspection at the LCCC site before the date of this interview. However, it appears that the site has been active since August of 2011, almost an entire year. *This is a violation of Part III.B.4.c of the Ohio EPA NPDES General Permit #OHQ00002 for small MS4s. Active construction sites must be inspected at a frequency of at least once per month for compliance with NPDES permit requirements unless you document your procedures for prioritizing inspections such as location to a waterway, amount of disturbed area, compliance of site, etc. within your SWMP (Storm Water Management Plan).* Review of the files for other construction sites throughout the City suggest that a majority of sites are not inspected for storm water compliance at least once per month.

**Construction Project #2 Name: Hampton Place Subdivision No.1 #3GC03483\*AG (65.51 AC.)**

BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?

**YES**

**Active Construction BMPs Include:**

- Perimeter Silt Fence
- Inlet Protection
- Rock Construction Entrance
- Concrete Wash Out
- Temporary Sediment Basins later converted to permanent detention basins

**Room for Improvement:**

- The temporary dewatering devices used on the outlet structures of the sediment basins during construction were built using a design standard which was even outdated at the time in which the Hampton Place plans were first submitted (2007). The structures are equipped with perforated PVC riser pipes with 1" holes spaced every 4" apart and double wrapped in geotextile fabric.
- Dewatering devices should consist of a single orifice sized adequately to allow a proper drawdown time of the water quality volume. The perforated riser pipe can be used *only* if the structure is capped on the inside and a single orifice drilled in the cap controls the flow rate into the outlet structure itself. The City Engineer has been informed that the perforated riser pipes wrapped in geotextile fabric are no longer acceptable temporary dewatering structures.

Design specifications and details for all BMPs included on the plans?

**YES**

Detail drawings and narrative description are included for all erosion and sediment control BMPs during construction.

<b>Construction Project #1 Name: LCCC Center Ridge Campus #3GC05601*AG (6.84 AC.)</b>	
Maintenance requirements specified?	<p style="text-align: center;"><b>YES</b></p> <p>The narrative included with each of the detail drawings consists of routine as well as non-routine maintenance requirements for BMPs</p>
<p>Have any NOVs or other enforcement actions been issued against this site?  <i>Obtain copies of NOVs. If none, why not?</i></p>	<p style="text-align: center;"><b>YES</b></p> <p>A notice of non-compliance letter was sent to Mr. Nicholas Rossi of West End Land Development on January 17, 2008. The letter describes temporary stabilization issues, inadequate perimeter silt fence, missing inlet protection, and lack of a concrete wash out pit. No response letter from West End Land Development was available in the file. Follow up inspections were conducted by the City which indicated corrective actions had not been completed; however no additional letters from the City or any signs of enforcement escalation after repeated incidences of non-compliance were located.</p>
<p><b>Notes:</b>  The file for Hampton Place Subdivision No. 1 contains inspection checklists dated from January 11, 2008, February 4, 2008, May 7, 2008, and August 26, 2009. Inspection photos indicate that the inspector was also on site August 28, 2008, but no inspection checklist was on file for this date. A notice of non-compliance letter was sent to the developer after the first site inspection in January 2008. However, follow up inspections in February and May indicate that several of the issues noted during the initial inspection in January still had not been corrected. No additional letters or documentation of enforcement actions were on file. <i>The City needs to follow their formal enforcement escalation procedure with all applicable non-compliant sites, regardless of the magnitude of the project or the developer's history. According to the City's escalation procedure, the 4th incidence of missing or inadequate erosion and sediment controls should have constituted a summons to Mayor's Court. Again, no adequate documentation that inspections were conducted at least monthly by the City was available.</i></p> <p>The inspector never mentioned that the temporary dewatering structures in use were constructed using an outdated design. The City has been informed of the most current dewatering structure requirements.</p>	

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.

<b>Post-Construction Project #1 Name: LCCC Center Ridge Campus #3CC05601*AG (6.84 AC.)</b>	
Date that project was accepted by community or otherwise deemed "completed"	N/A (Still Active)
<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><b>YES</b></p> <p><b>DA #1: Final Clarification Basin</b> To be used as a sediment basin during active construction and equipped with a temporary dewatering riser (1.75" orifice). All other post-construction BMPs will drain to this basin before finally discharging from the site.</p> <p><b>DA#2: Bioretention Cells</b> The cells are constructed in all of the parking lot islands using a special loamy planting soil mix. A filter bed constructed of #57's with a perforated underdrain system connects to catch basins in each of the islands, and discharges to the final clarification basin.</p> <p><b>DA#3: Permeable Pavers</b> Located in the parking lot with a one inch (1") sand bed and four inches (4") of #57's. Underdrain will discharge to final clarification basin.</p> <p><b>DA#4: Green Roof</b> Located on one of the rooftops in the plaza. Will contain vegetation and infiltrative soils. Underdrain discharges to final clarification basin before leaving the site.</p>
Design specifications and details for all BMPs included on the plans?	<p><b>YES</b></p> <p>Details were provided for all of the above mentioned BMPs.</p> <p><b>Room For Improvement:</b></p> <ul style="list-style-type: none"> <li>• The construction sequence does describe the sub-base and permeable pavers being installed <i>after</i> the site has been stabilized, but does not mention as to when bioretention cells should be installed.</li> <li>• The inspector did not mention anything about the post-construction BMPs</li> </ul>

<b>Post-Construction Project #1 Name: LCCC Center Ridge Campus #3GC05601*AG (6.84 AC.)</b>	
	installed too early in the construction process. Inspectors should be familiar with the sequence of construction activities as well as what BMPs should be in place.
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?	N/A (Still active)
Does MS4 have a copy of the long-term maintenance plan?  Who does the plan say is responsible for long-term maintenance?  Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party? <i>Obtain copy of latest inspection report.</i>	NO The long-term maintenance plan is still currently being developed.  LCCC  N/A (Still active)
<p><b>Notes:</b></p> <p>The city has been requesting the submittal of the long-term maintenance plan for all of the BMP's at the LCCC Center Ridge Campus site. The developer states the plan is still in the development stage and will be submitted once it is finalized.</p> <p>While on site, it was observed that the permeable pavers and bioretention soil mix was in place prior to stabilization of all upslope areas. The construction sequence details that the permeable pavers in the parking lot should not be in place until after site work is complete and vegetation is established. However, the construction sequence does not detail the timing of installation for the bioretention cells. Installing bioretention cells and permeable pavers prior to stabilizing upslope areas creates the potential for siltation of the infiltration beds and soils prior to site completion. The City must require the developer to protect these areas from any sediment laden runoff or reconstruction of the BMPs upon reaching stabilization.</p> <p>The storm water calculation sheet provides the total retention volume capabilities for the combination of BMPs throughout the site and confirms that this volume exceeds the minimum requirements of NPDES permit compliance. However, individual calculations such as the orifice sizing of the basin and the contributing drainage areas to all of the post construction BMPs are not provided. The City should be checking these calculations and noting any deficiencies during the plan review process.</p>	

<b>Post-Construction Project #2 Name: Hampton Place Subdivision No.1 #3GC03483*AG(65.51AC.)</b>	
Date that project was accepted by community or otherwise deemed "completed"	N/A (Not completed)
Were post-construction BMPs provided for all drainage areas associated with the developed site?  List the post-construction BMPs provided:	<b>YES</b>  <b>DA #1:</b> Wet Extended Detention Basin, (4.01 ac.), 1.5" orifice <b>DA #2:</b> Wet Extended Detention Basin, (1.72 ac.), 1.0" orifice <b>DA#3:</b> Wet Extended Detention Basin, (5.18 ac.), 2.0" orifice <b>DA#4:</b> Dry Extended Detention Basin, (4.9 ac.), 1.0" orifice <b>DA#5:</b> Dry Extended Detention Basin, (3.68ac), 1.0" orifice <b>DA#6:</b> Dry Extended Detention Basin, (2.02 ac.), 1.0" orifice
Design specifications and details for all BMPs included on the plans?	<b>YES</b>
Were post-construction BMPs selected appropriate for their drainage areas, site and soil conditions?	<b>YES</b>
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	<b>YES</b> An as-built inspection of the post construction BMPs are part of the City's final inspection. The City observed issues such as missing orifice plates within the outlet structures of the basins during the first attempt of final inspection on February 10, 2012. The City has yet to deem the Hampton Place subdivision as complete until these issues are corrected.
Does MS4 have a copy of the long-term maintenance plan?  Who does the plan say is responsible for long-term maintenance?	<b>NO</b>  The City does not have a copy of the long-term maintenance plan for Phase I since the plans were submitted back in 2007/2008 (i.e. before the City had developed their standards for long-term maintenance and post construction storm water management overall). The Phase II long-term maintenance plan describes that the homeowner's association is responsible for maintaining the basins applicable to that phase, which is likely the same for Phase I.

**Post-Construction Project #2 Name: Hampton Place Subdivision No.1 #3GC03483\*AG(65.51AC.)**

Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party?

*Obtain copy of latest inspection report.*

**NO**

The City has inspected the basins as part of the final inspection for Hampton Place No.1 and observed deficiencies. These issues have yet to have been corrected. As a result, the City has put the permits for Hampton Place No.2 on hold until corrective action is completed.

**Notes:**

The City must ensure that they follow their enforcement escalation procedure very closely if the developer continues to remain non-compliant. Placing the Phase II permit on hold until the issues are corrected is a great place to start and will hopefully force the developer to correct these issues in a timely fashion.

## CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: City of North Ridgeville

MS4 Permit No: 3GQ10009\*BG

Name of Site: LCCC Center Ridge Campus	
Location: 32121 Lorain Rd.	NPDES Permit: #3GC05601*AG
Date of Inspection: 7/19/12	Time of Inspection: 9:15 AM
Name of Inspector: Mike Vandrasik	
Others Present During Inspection: Tim McParland, DSW, NEDO	

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

NO

**Ohio EPA strongly recommends that upon arriving at any active construction site, the City's inspector identifies themselves to the project superintendent or site foreman (if available on site) and states the purpose of their inspection. Refer to the questions below for additional conversation which should exist between the inspector and the superintendent during every site inspection.**

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

NO

**Ohio EPA strongly recommends that the inspector is fully aware of any amendments which may have been made to the SWP3 since their last inspection since the SWP3 should be used as the basis of his or her inspection.**

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

NO

**Ohio EPA strongly recommends that the inspector reviews the site inspection reports to ensure that they are being conducted at least once per week and after heavy rain events; especially if the City finds it difficult to inspect every active site within the community at least once per month. It is important to note any deficiencies which may have been reported in the past and follow up to see if corrective action has been completed.**

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

YES

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

**NO**

**The inspector indicated that this was his first storm water inspection at the LCCC Center Ridge Campus site, although the site has been active since approximately August 2011. Please ensure that active construction sites are inspected at a frequency of at least once per month, unless your inspection frequency criterion is explicitly detailed in your SWMP.**

6. Compliance issues identified by inspector during this inspection:
- **The rock construction entrance is inadequate, which leads to excessive tracking of sediment onto Lorain Rd.**
  - **The concrete wash out pit is full and overflowing onto disturbed earth.**
  - **The outlet structure on the “Final Clarification Basin” is lacking the temporary dewatering structure necessary during active construction.**
  - **Catch basins throughout the site are equipped with inadequate inlet protection.**
  - **The silt fence needs to be maintained by the “Final Clarification Basin”.**
  - **The banks of the sediment basin need to be seeded and stabilized.**
  - **The cap with a single orifice (which is placed inside the outlet structure) to ensure proper drawdown time of the sediment basin is missing.**
7. Deficiencies or NPDES violations not noted by the MS4 inspector during this inspection:
- **The permeable pavers in the parking lot were installed too early in the construction process. Post construction BMPs which rely on infiltration should not be installed until all upslope areas have been sufficiently stabilized to prevent premature clogging. Inspectors must review the construction sequence on the SWP3 to be familiar with what should take place during each phase of the project.**
  - **The bioretention cells in the parking lot islands were installed too early in the construction process. Post construction BMPs which rely on infiltration should not be installed until all upslope areas have been sufficiently stabilized to prevent premature clogging. The cells can be excavated before reaching stabilization; however the bioretention soil mix which is designed to infiltrate and treat storm water runoff should not be in place prior to stabilization of upslope areas. Inspectors must review the construction sequence on the SWP3 to be familiar with what should take place during each phase of the project.**
8. Did the MS4 inspector ask the project superintendent or site foreman to accompany him or her on the inspection?

**NO**

**Ohio EPA strongly recommends that inspectors encourage the superintendent/site foreman to accompany them on their inspection after arriving on site. This allows for the superintendent/foreman to witness compliance issues first-hand, as well as allow the inspector to provide recommendations for the necessary corrective action which must occur to remain compliant. This verbal communication between the superintendent and the City inspector on site will typically “speed up” the corrective action process.**

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

**NO**

**The inspector did not communicate with the superintendent/site foreman while 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.

**YES**

**The inspector will issue a notice of non-compliance to the developer which includes the checklist used during this inspection as well as photos as appropriate.**

**Additional Comments:**

- **The inspector was very thorough during his inspection of the LCCC Center Ridge Campus site. Although this was not intended to be a post-construction BMP inspection, the inspector should have recognized the premature installation of the post construction BMPs such as the bioretention cell parking lot islands and the permeable pavers prior to stabilization of upslope areas. *The City must ensure that upslope areas of these BMPs are stabilized immediately, and that construction vehicles refrain from navigating over the permeable pavers until the site is stable. The bioretention soil mix must be replaced once upslope areas are considered stable to ensure that the cells will function as intended.***

**See Attached Photos**



Figure 1: The bioretention soil mix should not be in place prior to stabilization of all upslope areas.



Figure 2: The permeable pavers should not be installed prior to stabilization of all upslope areas. This picture shows sediment laden runoff flowing through the permeable pavers and into the bioretention cells.



Figure 3: Construction vehicles should refrain from parking on the permeable pavers until the site has been stabilized.

Photos Taken By: Tim McParland  
7/19/2012

## CONSTRUCTION FIELD REVIEW WORKSHEET

Name of MS4: City of North Ridgeville  
MS4 Permit No: 3GQ10009\*BG

Name of Site: Pioneer Ridge Subdivision No.9	
Location: Foxborrow Way/ Ashfield Drive	NPDES Permit: #3GC05647*AG
Date of Inspection: 7/18/12	Time of Inspection: 2:30 PM
Name of Inspector: Mike Vandrasik, Bob Rousseau	
Others Present During Inspection Tim McParland, DSW, NEDO	

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

NO

**The project superintendent/site foreman did not appear to be on site during this inspection. However; the inspectors did not check with any of the other workers to verify this. Ohio EPA strongly recommends that upon arriving at any active construction site, the City's inspector identifies themselves to the project superintendent or site foreman (if available on site) and states the purpose of their inspection.**

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

N/A

**The project superintendent/site foreman did not appear to be on site during this inspection.**

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

N/A

**The project superintendent/site foreman did not appear to be on site during this inspection.**

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

YES

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

YES

**Previous issues with filter socks, silt fence, rock construction entrances, and inlet protection were observed and "followed up on" during this inspection. These issues appeared to have not been corrected even though a previous notice of non-compliance was sent to the developer.**

6. Compliance issues identified by inspector during this inspection:

- **The inlet protections for the curbside catch basins along Foxborrow Way need to be cleaned out.**
- **Areas which appear to have been idle for greater than twenty one days lacked temporary stabilization.**
- **Filter socks were not installed appropriately. A 12" diameter sock must be used and staked to prevent it from "washing out".**
- **Rock construction entrances were inadequate. They must be built per the details in the SWP3.**
- **Good housekeeping practices must occur to keep trash and debris from littering the site and the existing retention basin.**
- **The silt fence requires maintenance near the retention basin and the soybean field.**
- **Concrete wash out stations were full and spilling onto exposed earth.**
- **The streets need to be swept of sediment regularly.**
- **Landscaper's materials need to be covered.**

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

- **Trash dumpsters need to be covered with a lid or a tarp to prevent their contents from exposure to storm water.**
- **Paralleled rows of silt fence or filter socks are not acceptable. If a single row is not a sufficient sediment control, an alternative practice must be implemented and shown on the SWP3.**
- **Proprietary inlet protection was not functional as installed. Ohio EPA does allow for the use of proprietary inlet protection as long as it is appropriate for the catch basin for which it protects, and is installed correctly (e.g. round inlet protections cannot be installed on square catch basins, etc.) as observed in the field. Also, if the catch basin is above grade, a proprietary device cannot be used unless it encases the entire catch basin and is properly trenched. (Refer to the photos attached below).**
- **All concrete wash out must take place in an authorized area. Workers were observed washing concrete off of tools in the middle of the street.**

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

N/A

**The project superintendent/site foreman did not appear to be on site during this inspection.**

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

N/A

**The project superintendent/site foreman did not appear to be on site during this inspection.**

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

**YES**

**The inspector will follow the enforcement escalation procedure and issue a formal Notice of Violation for the second incidence of inadequate inlet protection, rock construction entrances, etc.**

**Additional Comments:**

- **The inspector conducted a very thorough inspection of the Pioneer Ridge Subdivision and observed many compliance issues on site. It is important that the inspector is now familiar with what is acceptable and what is not as far as proprietary inlet protection goes. In addition, it is important that inspectors begin to introduce themselves to project superintendents/foreman at the beginning of each inspection and allows them the chance to accompany him or her on their inspection. If a superintendent does not appear to be on site, it is important that the inspector at least asks someone on site who is in charge and if they are available at that time.**

**See Attached Photos**



Figure 1: Multiple rows of silt fence and filter socks are not acceptable. If a single row is not sufficient, an alternative practice must be implemented. Silt fence should not be placed in areas of concentrated flow.



Figure 2: Trash dumpsters must be covered by a lid or a tarp to prevent exposure to storm water.



Figure 3: Concrete wash out can only occur in authorized areas. Workers were observed washing tools off in the middle of the street.



Figure 4: Proprietary inlet protection is acceptable only if it is appropriate for the situation. This round device is not acceptable on a square CB.

Photos Taken By: Tim McParland  
7/18/2012

## POST-CONSTRUCTION INSPECTION WORKSHEET

**NOTE:** Use two of the post-construction sites you performed a file review on. This will speed up the inspection process since you will already have familiarity with the plan.

<b>Name of MS4: City of North Ridgeville</b>
<b>MS4 Permit No: 3GQ10009*BG</b>

Name of Site: Dyke Avenue Redevelopment	
Location: Dyke Avenue (South of Simon St.)	NPDES Permit: #3GC04041*AG (?)
Date of Inspection: 7/18/12	Time of Inspection: 1:45 PM
Name of Inspector: Mike Vandrasiak, Bob Rousseau	
Post-Construction BMPs on this Site (list by drainage area)	
<p>DA #1: West Side of Dyke Ave; Enhanced Vegetated Swale Basin, 13' x 61'</p> <p>DA #2: East Side of Dyke Ave; Enhanced Vegetated Swale Basin, 20' x 58'</p> <p>Water Quality Elevation is one foot (1') above the bottom of the bank for both swales. A four inch (4") underdrain is placed in a twenty seven inch (27") deep gravel bed below the basins. Seven inch (7") deep loamy soil planting mix is placed above the gravel bed for infiltration. The swale basins are maintained by the City.</p>	

1. Has the MS4 conducted an as-built inspection of the post-construction BMPs on this site?

**YES**

**The vegetated swale basins were built per the specifications on the SWP3 plan and are City maintained.**

2. Using the approved post-construction plan on file with the MS4, verify that the planned BMPs have been installed. If a post-construction BMP has not been installed, what does the MS4 intend to do about it?

**YES**

**All post-construction BMPs have been installed.**

3. For post-construction BMPs properly installed, did the inspector use the approved long-term maintenance plan as his basis for inspection?

**NO**

**The inspector used a checklist created by the City of North Ridgeville as the basis of his inspection. The vegetated swales are City maintained; any necessary maintenance is conducted by the Service Department.**

4. Long-term maintenance issues noted by the MS4 inspector during this inspection.  
**NOTE:** If maintenance issues are found, ask the MS4 to provide you with a copy of their notification to the responsible party.
  - **Excessive weed growth near the outlet structures need to be maintained.**
  - **The banks need to be re-seeded and stabilized where necessary.**
5. Did the MS4 inspector demonstrate knowledge of post-construction BMP function and essential long-term maintenance issues?

**YES**

**The inspector was familiar with the BMPs as well as their intended function. However; see additional comments.**

**Additional Comments:**

- **The City should be familiar with the Long Term Maintenance agreements in place for the BMPs which they are inspecting. Ohio EPA recommends that the inspectors have a copy of the Long Term Maintenance Plan with them on site while conducting post-construction BMP inspections.**

**See Attached Photos**



**Figure 1: Any areas which have not established a 70% or greater growth density should be re-seeded.**

Photo Taken By: Tim McParland  
7/18/2012

## POST-CONSTRUCTION INSPECTION WORKSHEET

**NOTE:** Use two of the post-construction sites you performed a file review on. This will speed up the inspection process since you will already have familiarity with the plan.

<b>Name of MS4: City of North Ridgeville</b>
<b>MS4 Permit No: 3GQ10009*BG</b>

Name of Site: Frito-Lay Building	
Location: 38819 Taylor Parkway	NPDES Permit # ?
Date of Inspection: 7/18/12	Time of Inspection: 2:15 PM
Name of Inspector: Mike Vandasik, Bob Rousseau	
Post-Construction BMPs on this Site (list by drainage area)	
<p>DA #1: East Side of Building: Dry Extended Detention Basin, six inch (6") diameter orifice in outlet structure on the North end of the basin, inv. 728.79</p> <p>DA #2: West Side of Building: Dry Extended Detention Basin, six inch (6") diameter orifice in outlet structure on the North end of the basin, inv. 729.65</p>	

1. Has the MS4 conducted an as-built inspection of the post-construction BMPs on this site?

**YES**

**The dry extended detention basins were built per the specifications on the SWP3 plan.**

2. Using the approved post-construction plan on file with the MS4, verify that the planned BMPs have been installed. If a post-construction BMP has not been installed, what does the MS4 intend to do about it?

**YES**

**All post-construction BMPs have been installed.**

3. For post-construction BMPs properly installed, did the inspector use the approved long-term maintenance plan as his basis for inspection?

**NO**

**The inspector used a checklist created by the City of North Ridgeville as the basis of his inspection.**

4. Long-term maintenance issues noted by the MS4 inspector during this inspection.  
**NOTE:** If maintenance issues are found, ask the MS4 to provide you with a copy of their notification to the responsible party.
- **The basins, including their banks need to be re-seeded such that a 70% or greater growth density is established.**
  - **Rocks and garbage need to be removed from the basins.**
  - **Erosion gullies need to be filled in and stabilized.**
5. Did the MS4 inspector demonstrate knowledge of post-construction BMP function and essential long-term maintenance issues?

**YES**

**The inspector was familiar with the BMPs as well as their intended function. However; see additional comments.**

**Additional Comments:**

- **The City should be familiar with the Long Term Maintenance agreements in place for the BMPs which they are inspecting. Ohio EPA recommends that the inspectors have a copy of the Long Term Maintenance Plan with them on site while conducting post-construction BMP inspections.**

**See Attached Photos**



Photos Taken By: Tim McParland  
7/18/2012