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CUYAHOGA BERA

CITY OF BERA OHIO

3GQ00015 2011/07/08

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Environmental  
Protection Agency

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

July 6, 2011

RE: CUYAHOGA COUNTY  
CITY OF BEREA  
PERMIT NO. 3GQ00015\*BG  
MUNICIPAL STORM WATER  
PROGRAM INSPECTION

Mr. Tony Armagno, P.E.  
City Engineer  
City of Berea  
11 Berea Commons  
Berea, OH 44017

Dear Mr. Armagno:

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

On May 26, 2011, Ohio EPA met with you and other representatives of the City of Berea to determine compliance with the NPDES permit and the Storm Water Management Plan (SWMP) submitted by the City in March 2003. In performing this audit, Ohio EPA implemented a modified version of the Municipal Storm Water Program Evaluation Guide developed by the United States Environmental Protection Agency.

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

**Violations:**

- **Failure to conduct a review of plans for sediment and erosion control, controls for other wastes, and post-construction best management practices, i.e., the Storm Water Pollution Prevention Plan (SWP3), for municipal construction projects.** This is a violation of Part III.B.4.c and Part

III.B.5.f of the Ohio EPA General Storm Water NPDES permit # OHQ000002. During our inspection, we reviewed the file for the Beech Street project and performed a site inspection. The plan does not include a complete SWP3, only a one-page grading and erosion control plan with no detail drawings for erosion and sediment practices. Further, no post-construction BMPs have been provided for this project. Ohio EPA expects the City to review SWP3s for municipal construction projects in the same manner that they are reviewed for private development.

- **Failure to refer post-construction BMP plans for large construction projects to Ohio EPA for case-by-case approval when plans call for alternative post-construction BMPs.** This is a violation of Part III.B.5.c of the Ohio EPA General Storm Water NPDES permit # OHQ000002. Part III.B.5.c requires the City's local post-construction ordinance to be equivalent with the technical requirements set forth in the Ohio EPA General Storm Water NPDES Permit for Construction Activities #OHC000003 (CGP). Please note that this permit requires approval from Ohio EPA on a case-by-case basis whenever a developer requests to use an alternative post-construction BMP not listed in Table 2 on Page 23 of the CGP. During our file review and site inspection of the Race Road Elementary School, we noted the use of an Isolator Row. Ohio EPA has no record of approving this practice for this project. Please update local plan review procedures to ensure that alternative post-construction BMP installations on large construction sites are approved by Ohio EPA before the City approves the plans. Large construction sites are defined as any project where the larger common plan of development or sale disturbs 5 or more acres of land.
- **Failure to escalate enforcement to achieve compliance with the local construction site ordinance.** This is a violation of Part III.B.4.a.vi of the Ohio EPA General Storm Water NPDES permit # OHQ000002. Our file review and interview revealed that the City has only issued one Notice of Violation for non-compliance with Chapter 320A of the municipal code (Construction Erosion, Sediment, and Other Wastes and Storm Runoff Ordinance) since its passage on October 2, 2006. No actions such as stop work orders or court actions as permitted by Chapter 320A.99 have been implemented to date. Yet, the file indicates that compliance issues at Sandstone Ridge South Subdivision have been on-going for some time. The City must develop an enforcement escalation protocol so as to provide inspectors and the City Engineer a clear policy on when to take enforcement to the next level and how that is to be achieved.
- **Failure to develop a program to ensure adequate long-term operation and maintenance (O&M) of publically-owned post-construction Best**

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**Management Practices (BMPs).** This is a violation of Part III.B.5.d of the Ohio EPA General Storm Water NPDES permit # OHQ000002. The City must develop a program to ensure the long-term maintenance of these structures. Ohio EPA recommends that each facility be inspected at least once a year by the City.

- **Failure to submit a Notice of Termination within 45 days of reaching final stabilization on municipal construction projects.** This is a violation of Part IV.A of the Ohio EPA General Storm Water NPDES permit #OHC000003. Our records show that the City of Berea has 3 active projects permitted under the Ohio EPA General Storm Water NPDES Permit for Construction Activities but indicated during the interview that 2 of the projects were completed and have reached final stabilization. Please submit an NOT for both projects that are completed or no longer viable.

**Deficiencies:**

- The City does not keep an inventory of construction projects subject to inspection under the NPDES permit nor does it track the status of such projects. Please be aware that performance standards established under Part III.B.4.c of the NPDES permit require the City to inspect all construction sites where 1 or more acre of land is disturbed. These sites must be inspected when construction begins and at least monthly thereafter as long as the project is active. In order to ensure that this performance standard is met, Ohio EPA strongly recommends the City begin keeping an inventory or list of construction projects and track their status.
- The City has not yet completed mapping all publicly-owned post-construction BMPs and those privately-owned post-construction BMPs approved after April 21, 2003. Per Part III.B.5.d of the NPDES permit, the City is obligated to ensure long-term operation and maintenance (O&M) of these post-construction practices. Part III.B.3.b of the NPDES permit requires these practices to be mapped by the end of the current NPDES permit term. Once developed, procedures need to be adopted to keep the map current. This map will form the basis of an inventory of post-construction BMPs installed in the City. The City does not currently track BMP location, type, as-build inspections, O&M requirements, and long-term operation and maintenance inspection findings. This information will be required to implement an effective long-term O&M program.
- The Ohio EPA recommends the City develop or adopt checklists for use by inspectors when conducting construction and post-construction site inspections. This will ensure that all practices are inspected and that all BMPs are constructed

and maintained according to the City's adopted standards and the approved plans. The use of checklists also ensures a certain amount of consistency between different inspection personnel.

- The City does not provide construction site inspection reports to all appropriate parties. At the Sandstone Ridge Subdivision, the City only sends a report of inspection findings to Blaze Construction rather than Lopat Ltd., i.e., the legal entity which holds NPDES permit-coverage. In addition, inspection reports are not sent to Ryan Homes, the homebuilder. Ryan Homes is the entity responsible for most of the earth disturbance currently occurring at the site.
- The City does not provide continuing education for construction site inspectors. Although the City uses a retired professional engineer for construction site inspections, it is important to provide him with on-going education to ensure that he is aware of the latest standards and specifications for erosion and sediment control, as well as other storm water related topics. Please review Construction Field Review Worksheets for an evaluation of the construction site inspector for the City of Berea.
- Although the City has been providing numbers to Ohio EPA in the Annual Report, it does not appear that the City has a system to track construction site inspection findings, enforcement actions, complaints, or NOI submittal to accurately generate the numbers reported to Ohio EPA. Please clarify how the City has been generating the numbers reported to Ohio EPA required under Part III.B.4.d of the NPDES permit.
- The City does not require a performance bond from developers for sediment and erosion control. The Ohio EPA recommends performance bonds to be used as a means to ensure that there is money to stabilize a site should a developer fall into default or otherwise walk away from a project. The existing enforcement provisions of Chapter 320A.99 are of limited use in such situations.
- Although the City requires private post-construction BMP owners to submit a BMP inspection report each year, the City was not able to produce a long-term maintenance plan (LTMP) for any of the sites we reviewed during this inspection. The LTMP identifies the type and location of post-construction BMPs, the routine and non-routine maintenance tasks, a schedule for those tasks and identifies the location of maintenance and access easements. This information must be available to the City in order to effectively administer a long-term O&M program as required by Part III.B.5.d of the NPDES permit.

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- Post-construction BMPs were not provided for all drainage areas within the Berea Crossings project. Please clarify if this project was a new development or redevelopment project. Ohio EPA expects that post-construction BMPs be provided for all areas of a new development project.
- The City has reviewed their ordinances to facilitate the use of non-structural and low-impact development (LID) practices as demonstrated in the City of Berea proposed ordinance Chapter 308: Sustainable Facility Standards. However, we noted the omission of permeable pavement systems from this ordinance. Ohio EPA anticipates permeable pavement systems to play an increasingly important role in post-construction storm water management due to its ability to reduce runoff volume. To further promote use of LID practices, the City may also want to consider adding a runoff reduction requirement to Chapter 320B of the municipal code. Planning and zoning codes should be reviewed to encourage vertical development and allow the use of meadow grass or low-maintenance vegetation, where appropriate.

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

If you have any questions, please contact me at (330) 963-1138 or [lindsie.macpherson@epa.state.oh.us](mailto:lindsie.macpherson@epa.state.oh.us).

Sincerely,



Lindsie MacPherson  
Assistant to the District Engineer  
Division of Surface Water

LM/mt

cc: Cyril M. Kleem, Mayor, City of Berea, w/ Enclosure  
James J. Brown, President, City Council, City of Berea, w/ Enclosure  
Dan Bogoevski, Ohio EPA, NEDO, DSW

# Municipal Storm Water Program Evaluation

## Construction and Post-Construction Component Worksheet

<b>Date of Evaluation</b>	May 26, 2011
<b>Evaluator Name, Title</b>	Dan Bogoevski, District Engineer Lindsie MacPherson, Asst to District Engr
<b>MS4 Permittee</b>	City of Berea

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

<b>Staff Interviewed</b>		
<b>Name</b>	<b>Department/Agency</b>	<b>Phone Number/Email</b>
Tony Armagno, P.E. City Engineer	Engineering Dept. City of Berea	440-826-5814 tarmagno@cityofberea.org
Tommy L Ross Engineering Inspector	Engineering Dept. City of Berea  (Is a contract employee –No company name)	440-840-4122 Haley62877@aol.com
Jim Brown Service Director	Service Dept. City of Berea	440-826-5816 jbrown@cityofberea.org
Matt Madzy Director of Building, Planning & Engineering	Building Dept. City of Berea	440-826-5803 mmadzy@cityofberea.org

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<b>Construction Ordinance</b>	
Ordinance used to require storm water BMPs at construction sites?	<b>YES</b>
Name and/or code section(s)	Codified Ordinance, Chapter 320A “Construction Erosion, Sediment and Other Wastes and Storm Water Runoff”
Date initially enacted	<b>Oct 2, 2006</b> Update on Jan 3, 2011 replaces the initial ordinance

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Threshold for coverage (e.g., 1 acre, 100 cubic yards, etc.)</p> <p><i>NOTE: 1 acre is minimum requirement.</i></p>	<p>Applies to all parcels 8,000 square feet or larger. Requirements are more stringent for parcels of 1 or more acre.</p>
<p>Exclusions from coverage allowed:</p> <p><i>NOTE: To align with NPDES permit program, the only exclusions allowed are (a) if rainfall erosivity factor, R, is &lt; 5 for the project, (b) construction is "routine maintenance" to re-establish the original line, grade or hydraulic capacity of storm water infrastructure, i.e., ditch cleaning and detention basin dredging, where &lt; 5 acres is disturbed, (c) silvicultural disturbances, (d) agricultural disturbances or (e) construction related to oil &amp; gas well exploration.</i></p> <p><i>Ohio EPA website has fact sheet on what constitutes "agricultural disturbance" and "routine maintenance" versus regulated construction activity.</i></p> <p><i>Some communities allow an abbreviated SWP3 for individual home construction or other small construction. That is fine as long as intent of regulation is met.</i></p>	<p>For 8,000 to 1 acre, there is a redevelopment exemption. Demolition of older structures can seek this exemption as long as the total impervious area created by the redevelopment is the same or less.</p>
<p>Does your construction program include the following types of construction activity:</p> <p>Single-family residential?</p> <p>Multi-family residential?</p> <p>Commercial development?</p> <p>Institutional development (schools or government facilities)?</p> <p>Mixed-use development?</p> <p>Non-subdivided development?</p> <p>Non-exempt construction on agriculturally-zoned lands?</p> <p>Non-silvicultural tree clearing?</p>	<p style="text-align: right;"><b>YES</b></p> <p style="text-align: right;"><b>N/A</b></p> <p style="text-align: center;"><b>NO- The City does not consider this to be a construction activity.</b></p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
	<p><b>NOTE:</b> Ohio EPA considers tree clearing to be a regulated construction activity if it is not conducted with the intent to harvest timber. Non-silvicultural tree clearing usually results in clear cutting of continuous swaths of land rather than the selective tree clearing of trees larger than a certain diameter usually associated with harvesting timber.</p>
Your own municipal construction projects?	<b>YES</b>
Construction and demolition debris landfills?	<b>YES</b> , but probably not applicable to Berea
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> But, City does not inspect ODOT or OTC projects.
<p><i><b>NOTE:</b> Construction must only be regulated if it doesn't meet one of the exclusions and the larger common plan of development or sale disturbs 1 or more acre of land. The intent of this line of questioning is to simply highlight the scope of regulated construction activity that the MS4 may have to contend with.</i></p>	
Does ordinance regulate the discharge of pollutants other than sediments on a construction sites (e.g., construction wastes, fuel tanks, cement truck washwater, trash, chemicals, etc.)?	<b>YES</b>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Has ordinance been updated to reflect minimum requirements of Ohio EPA NPDES permit #OHC000003?</p> <p>Date of updates?</p> <p><i>NOTE: Check database for date of NPDES permit renewal prior to inspection. MS4 permit #OHQ000002 required update s within 2 years of permit renewal.</i></p> <p>Date of MS4 Permit Renewal: <b>Sept 8, 2009</b></p>	<p><b>YES</b></p> <p><b>January 3, 2011</b></p>
<b>Post-Construction Ordinances</b>	
<p>Ordinances used to require post-construction storm water BMPs on new development or redevelopment projects:</p> <p><b>Treatment of Water Quality Volume (WQv)</b> Name and code section:</p> <p>Date initially enacted: <b>October 2, 2006</b></p> <p>Has this ordinance been updated to reflect the minimum requirements of Ohio EPA General Permit #OHC000003?</p> <p>Date of update: <b>January 3, 2011</b></p> <p><b>Riparian and Wetland Setback Ordinance</b> Name and code section:</p> <p>If YES, does ordinance require protection of native vegetation within riparian area or can manicured lawns be established?</p> <p>If YES, does ordinance allow the location of storm water infrastructure within the riparian setback?</p> <p>What is the minimum setback? Maximum?</p>	<p><b>YES</b></p> <p>Codified Ordinances, Chapter 320B, "Post-Construction Water Quality Runoff"</p> <p><b>YES</b></p> <p><b>YES</b></p> <p>Ordinance No. 2006-63. Codified Ordinance, Chapter 320C, "Riparian and Wetland Setbacks"</p> <p><b>YES</b></p> <p>Permit to allow stream crossings. Storm sewer pipe is considered a crossing, so the ordinance could allow storm water infrastructure within the riparian setback with a permit.</p> <p>For Category 2 &amp; 3 wetlands only 75 – 120 feet Riparian setback along a stream is 25 -300 feet</p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p><b>Runoff Reduction</b> (e.g., infiltration or mitigation of a recharge volume)? Name and code section:</p>	<b>NO</b>
<p><b>BMPs designed to control temperature</b> for discharges to cold water habitat streams? Name and code section:</p>	<b>N/A</b>
<p><b>Encouraging Green Infrastructure</b> or low-impact development practices:</p>	<p>There are no codes on the books that specifically name these items, but they are encouraged and permitted if proposed, upon review. There is a zoning code update under consideration by City Council (proposed Chapter 308) on Sustainable Facility Standards is expected to be passed later in 2011. This will set standards for green roofs, rain barrels and rain gardens.</p>
<p>Allow downspout disconnection and use of open storm water conveyance systems? Names and code sections:</p>	<b>YES</b>
<p>Permit the installation of rain gardens and other bioretention facilities? Names and code section:</p>	<p style="text-align: center;"><b>YES</b></p> <p>The code covers retrofit situations only. This code should be reviewed for consistency with the WQv ordinance.</p>
<p>Allow rainwater harvesting (rain barrels and cisterns)? Name and code section:</p>	<b>YES</b>
<p>Allow or require the use of pervious pavement systems? Name and code section:</p>	<b>NO</b>
<p>Allowed, but not required. Permeable pavement is one consideration for granting a variance in the riparian and wetland setback ordinance (Section 320C.09)</p>	
<p>Allow reduction in the size of traditional storm water management structures if LID used? Name and code section:</p>	<b>NO</b>
<p>Provide a credit to a storm water utility fee if LID is used? Describe:</p>	<b>NO</b>
	N/A -- no utility, but no other incentive is provided for LID

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p><b>Balanced Growth Principles</b>, i.e., other non-structural ordinances or codes that promote better site design:</p> <p>Allow conservation design as a subdivision layout (retain <math>\geq 40\%</math> open space by maintaining existing zoned density)  Standard or variance required?  Name and code section:</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>Reduce impervious area created by commercial parking lots (e.g., update codes so that they are context-specific, allow shared parking, land banked parking, parking garages rather than surface lots, etc.)  Name of code section</p> <p>Allow sidewalks on only one side of the road in residential neighborhoods  Name and code section:</p> <p>Zoning that encourages smart growth in compact neighborhoods or mixed-use development:</p> <p>If YES, does zoning create walkable neighborhoods with access to commercial areas and employment centers?  Describe:</p>	<p style="text-align: center;"><b>YES</b></p> <p>PUD section could be used to do a conservation development currently. Chapter 209 of proposed update to PUD code will give City more ability to negotiate a conservation design. Current code requires setbacks that really would not allow this, so that is the improvement in code.</p> <p><b>NO</b>, but current zoning is flexible and allows any kind of vegetation. There is no specific meadow protection in place now.  Code broken down by type of land use (separated land uses). Chapter 203 talks about stabilizing to not allow the rapid runoff of storm water. Section 201.14.f.5 states that the use of turf in front landscape design should be minimized.</p> <p>Proposed Chapter 308 calls for new formulas to reduce parking requirements. Compact stall size reduces standards from 10 x 20 to 9 x 18. See Table 11 in 301.11 in proposed codes.</p> <p>There is no code that requires a sidewalk. The decision to include sidewalks and where they are to be placed is determined on a case-by-case basis by the Building &amp; Engineering Dept.</p> <p style="text-align: center;"><b>YES</b></p> <p>There is some of this in the proposed "Commercial Center" zoned areas. They do allow residential (townhouses or multi-family) in commercial center areas. Proposed code calls for "downtown district" that allows second floor residential either multi-family or townhouses. "Uptown district" would allow multi-family dwellings on upper floors. The use of zoning is targeted toward the existing downtown and the land north of Front Street overpass.</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?</p> <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><i>NOTE: The point of this line of questioning is to emphasize to the MS4 that post-construction storm water management, land use planning and building and zoning codes must be linked to create a meaningful storm water program. A good MS4 program goes beyond the WQv requirement. The storm water program manager must work with the planning commissioner and building department to affect development patterns in their community that negatively impact storm water quality.</i></p>	<p style="text-align: center;"><b>NO</b></p> <p>All kinds of housing options allowed, but no specific incentive in proposed code.</p> <p style="text-align: center;"><b>YES</b></p> <p>Tax abatement for redevelopment on a vacant lot or to demo existing building and rebuild. 15-year tax abatement. There are also programs for commercial or industrial development.</p> <p style="text-align: center;"><b>YES</b></p> <p>Master Plan directs growth to transportation hubs. Bike path connects the two hubs where the growth is being encouraged (downtown and Front St overpass). Tax abatement would be provided for development around the Park and Ride center on Sprague Rd.</p>
<p><b>Provisions within Ordinances</b></p>	
<p>Do permit or plan approvals have to be issued before construction activities that disturb 1 or more acre can commence?</p> <p>Plan Approvals Construction Post-Construction</p>	<p style="text-align: center;"><b>YES</b> <b>YES</b></p> <p>However, City has issued grading permits without having full SWP3 approval in demo situations.</p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Permits &amp; 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 style="text-align: center;"><b>YES</b></p> <p>The development package includes all permits. No start until the entire package is complete. They are all building permits.</p> <p style="text-align: center;"><b>YES</b></p> <p style="text-align: center;"><b>YES</b></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 style="text-align: center;"><b>NO</b></p> <p>The development plan is submitted to the Planning Commission. They give preliminary approval, which includes a preliminary layout of post-construction BMPs. Then, they submit detailed construction drawings that include the SWP3 (both construction and post-construction BMPs). The SWP3 is reviewed by the Engineering Department for approval. If approved, the Building Department issues a building permit. The SWP3 must be approved before construction can begin.</p>
<p>Does your ordinance explicitly specify selection criteria or minimum acceptable BMP design?</p> <p>Construction</p> <p>Post-Construction</p>	<p style="text-align: center;"><b>YES</b></p> <p style="text-align: center;"><b>YES</b></p>
<b>CONSTRUCTION SITE ENFORCEMENT AUTHORITY</b>	
<p>Types of enforcement mechanisms available for construction site issues per your ordinance:</p>	<p>Notices of Violations (NOV)      <b>YES</b>  Administrative fines                      <b>NO</b>  Stop-work orders                          <b>YES</b>  Civil penalties                                <b>YES</b>  Criminal penalties                          <b>YES</b>  Other (Describe):</p> <p>If developer does not comply with the NOV, this is a misdemeanor of the 1<sup>st</sup> degree by violating 320A. Fines of up to \$1,000 or prison up to 180 days.</p> <p>Allows City to also go through the civil courts.</p>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
Which type of enforcement action have you most commonly implemented?	NOVs, but the City has never taken any further enforcement than that.
Describe the enforcement mechanism used when the following compliance situations are encountered on construction sites:  <ol style="list-style-type: none"> <li>1. Construction has commenced without a permit or plan approval</li> <li>2. A BMP indicated on the SWP3 has not been installed or requires maintenance (first incidence)</li> <li>3. A BMP is required but not shown on the SWP3</li> <li>4. A BMP has not been installed or maintained despite prior notification from the MS4 (repeated incidences)</li> <li>5. If using a third party inspection service provider, e.g., the SWCD, MS4 receives inspection report indicating repeated non-compliance issue</li> </ol>	<p>Stop work order via "red card". Uniformed police officer with the building department patrols City or if a complaint is received.</p> <p>Verbal warning to developer.</p> <p>Engineer contacts SWP3 designer and developer and request the SWP3 be updated to address the situation.</p> <p>Notice of Violation – written notification</p> <p>N/A</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><i>NOTE: In municipalities, letters from the SWCD are not considered NOVs unless the community's ordinance specifically gives the SWCD enforcement authority. This is not the case typically. The SWCD is simply notifying the developer and community that there are compliance issues on the site, but they have no inherent enforcement authority in a municipality.</i></p>	<p>The last enforcement action was taken against Grindstone Elementary. The community performed an inspection, found deficiencies and then performed an inspection with Ohio EPA. E-mail correspondence with developer and SWP3 designer are on file. The plan was updated and then followed up to ensure the new plan was implemented. Late summer – early Fall 2010.</p> <p>The last NOV sent on City letterhead to any developer is from August 3, 2009 to 925 Berea Industrial Parkway on the Berea Commercial Complex.</p>
Have your enforcement protocols and procedures for construction site issues been formalized in a written enforcement escalation plan?	<b>NO</b>

<b>Ordinance/Legal Authority</b>	
<b>Interview Questions</b>	<b>Response</b>
<b>POST-CONSTRUCTION ENFORCEMENT AUTHORITY</b>	
Types of enforcement mechanisms available for post-construction site issues per your ordinance:	Notices of Violations (NOV) <b>YES</b> Administrative fines <b>NO</b> Stop-work orders <b>YES</b> Civil penalties <b>YES</b> Criminal penalties <b>YES</b> Other (Describe):  Misdemeanor of 1 <sup>st</sup> degree. See above and repeat.
Which type of enforcement action have you most commonly implemented?	If City receives a copy of the developer's inspection report and it shows deficiencies, the City follows up by verbal notice to developer. The City requires the developer to submit a follow-up report.
Describe the enforcement mechanism used when the following compliance situations are encountered regarding post-construction:	
1. The post-construction BMP has been installed too early in the construction process (e.g., the permanent WQv outlet has been installed when the sediment control outlet is still required, <b>or</b> the bioretention soil has been placed prior to upland areas being stabilized)	Verbally notify the developer of the deficiency and take action to correct.
2. The post-construction BMP has not been maintained (first incident)	Verbally contact developer.
3. The post-construction BMP has not been maintained after multiple notifications	Written NOV to responsible party.
4. A homeowner has cut down trees in the riparian setback area (if applicable)	This situation has not arisen in this community. Chapter 320 C has same enforcement provisions as 320 A & B.
5. A homeowner has installed a shed in a vegetated filter strip disrupting sheet flow runoff	Require removal. The Building Department does review the plan for any conflicts with post-construction storm water management.
Describe the last enforcement action your community has taken against the responsible party for non-compliance with post-construction site requirements and provide the documentation to demonstrate the action.	None to date.

Ordinance/Legal Authority			
Interview Questions		Response	
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	

Notes

Construction Project Inventory																			
Interview Question	Response																		
Do you keep an inventory of construction projects that are actively occurring in your community? If YES, how?	<b>NO</b>  The City checks Ohio EPA's website for active NOIs. They also maintain a list of sites that received SWP3 approval. But <b>there is no master list of what sites need to be inspected.</b>																		
Do you track construction projects <1 acre (e.g., individual lot within a subdivision or small addition to a business)?	<b>YES</b> They clip inspection reports together in Building Department. These inspections are also done by the Engineering Dept.																		
How often is your inventory of construction projects updated?	<b>The City does not have a formal inventory.</b>																		
Information tracked:	<table> <tr> <td>Project status</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>Inspection Findings</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>Enforcement Actions</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>Complaints</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>NOI submittal</td> <td>YES</td> <td>NO</td> </tr> <tr> <td>Other: _____</td> <td></td> <td></td> </tr> </table> <p><b>They City does not have a tracking system at this time.</b></p>	Project status	YES	NO	Inspection Findings	YES	NO	Enforcement Actions	YES	NO	Complaints	YES	NO	NOI submittal	YES	NO	Other: _____		
Project status	YES	NO																	
Inspection Findings	YES	NO																	
Enforcement Actions	YES	NO																	
Complaints	YES	NO																	
NOI submittal	YES	NO																	
Other: _____																			

<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><i>NOTE: Ask for copy.</i></p>	<p>N/A – Construction site inspections are completed once every two weeks</p> <p>Proximity to water body            YES    NO  Water body impairment            YES    NO  Size of project                        YES    NO  Slope of project site                YES    NO  Other: _____</p> <p style="text-align: center;"><b>YES</b></p>
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<p>Number of active construction sites on date of interview (for subdivisions where only individual lot construction is occurring, count the entire subdivision or phase of subdivision as one site):</p> <p><i>NOTE: Select two sites from NOI list and ask if they are active. Ask for the dates of the last two site inspections at each site.</i></p>	<p>4 development sites</p> <p>Grindstone Elementary  Sandstone Ridge  Beech St  Baldwin Wallace College – 33 Seminary St.</p> <p>Site #1: Sandstone Ridge  Most recent inspection date: May 20, 2011  Prior inspection date: May 10, 2011</p> <p>Site #2: Beech St.  Says that this site is inspected on a daily basis, but there are no inspection reports for this project.</p>
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<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
List of active construction projects	Does not exist	
List of projects covered under a state/EPA general permit	YES	NO

**Notes**

**Municipal Construction Projects**

The City does not generate a storm water inspection report for the Beech Street project. Ohio EPA expects the City to hold municipal construction projects to the same standards as private development. Please be sure to generate a report with inspection findings and documentation that all appropriate parties are notified of compliance issues on municipal construction projects.

There were several municipal construction projects on the Ohio EPA NPDES permit list but work on those projects has been completed. Please note that the Ohio EPA General Storm Water NPDES Permit for Construction Activities #OHC000003 requires the City to submit a Notice of Termination (NOT) to Ohio EPA within 45 days of when a project reaches final stabilization. The City is in violation of Ohio EPA General Storm Water NPDES Permit for Construction Activities for City projects that are complete but failed to submit a NOT within 45 days of reaching final stabilization.

Post-Construction BMP Inventory			
Interview Question	Response		
Are post-construction BMPs tracked? <i>Remind MS4 that they must be shown on MS4 map.</i>	NO		
Does this include all types of BMPs, e.g., riparian setback area, green roof or pervious pavement as well as bioretention cells and extended detention ponds?	N/A - No inventory		
Information tracked:	Location	N/A	
	Type	N/A	
	Maintenance Requirements	N/A	
	Inspection findings	N/A	
	Other (e.g., Ownership):	N/A	
Database used?	NO		
Number of private post-construction structural BMPs installed in community	Does not know		
Applicable Documents		Reviewed	Obtained
Inventory of Post-Construction BMPs		Does not exist	

Construction and Post-Construction BMP Standards	
Interview Questions	Response
<b>CONSTRUCTION BMPs</b>	
Has your community established standards for the design of <b>sediment and erosion controls</b> and controls for other wastes on construction sites?	YES
If you have established standards by referencing a BMP manual, please identify the manual.	<i>Rainwater and Land Development, NRCS Field Office Technical Guide or Ohio EPA</i>
Is this manual referenced in your construction site ordinance or within your SWMP?	YES, Section 320A.9.
Do your standards include BMP selection criteria?	YES

<b>Construction and Post-Construction BMP Standards</b>		
<b>Interview Questions</b>	<b>Response</b>	
Do your construction site standards account for different needs for different times of the year (e.g., growing season vs. winter)?  Please elaborate:	<b>YES</b>  The City follows the Rainwater and Land Development Manual and the ordinance has a chart for stabilization and for BMP applicability on seeding and silt fence.	
Do your standards include operation and maintenance requirements?	<b>YES</b>	
<b>POST-CONSTRUCTION BMPs</b>		
Has your community established standards for the design of <b>post-construction BMPs</b> on new development and redevelopment where 1 or more acre is disturbed?  If you have established standards by referencing a BMP manual, please identify the manual.  Is this manual referenced in your post-construction storm water ordinance or within your SWMP?	<b>YES</b>  Specified in 320B.05. Also reference the Rainwater manual for post-construction BMPs.  <b>YES - 320.B.08</b>	
Do your standards include BMP selection criteria?	<b>YES</b>	
Has your community established standards for post-construction BMP selection and design for small construction activities (i.e., where the larger common plan of development or sale disturbs < 5 acres)?  If so, what are your standards?	<b>YES</b>  Section 320.B.05.0 – Has a statement of how the increased storm water quality will be handled. Allows standard structural BMPs as well as non-structural measures and LID practices. Developer must submit technical justification.	
Do your standards include operation and maintenance requirements?	<b>YES</b>	
	<b>Applicable Documents</b>	<b>Reviewed</b>
	BMP guidance or technical document	<b>Obtained</b>
		YES
		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?	Engineering Dept., City Engineer
Who is responsible for post-construction plan review?	Engineering Dept., City Engineer
<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>All plan review is done by Tony Armagno. Tony has a Masters in Water Resources Engineering and he is a P.E. He has also completed Hydrosphere trainings as well as trainings from the Board of Health and the Ohio EPA.</p> <p>7 years</p> <p>7 years</p> <p>Once per year</p> <p>Once per year</p> <p><i>NOTE: Please be aware of training opportunities provided by Ohio EPA and archived at <a href="http://www.epa.ohio.gov/ocapp/storm_water.aspx">www.epa.ohio.gov/ocapp/storm_water.aspx</a>.</i></p>
<p>Do you use a checklist to conduct plan review?</p> <p>Construction</p> <p>Post-Construction</p>	<p><b>YES</b></p> <p><b>YES</b></p>
<p>Size threshold for plan review (i.e. 1 acre, 10,000 square feet)?</p> <p>Construction</p> <p>Post-Construction</p>	<p>Plans for 8,000 square feet and larger are reviewed for both construction and post-construction. Also review construction (sediment and erosion control) for any site over 6,500 square feet (including infill construction).</p>

<b>Plan Review Procedures</b>	
<b>Interview Questions</b>	<b>Response</b>
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?	<b>YES</b>
Do you require a pre-construction meeting with developers and/or contractors? <i>NOTE: This is a required performance standard for both construction and post-construction.</i>	<b>YES</b> Any site 1 acre or larger, but not for individual lot construction.
Is the sequence of implementation of sediment and erosion controls discussed during these meetings?	<b>YES</b>
Is the timing of installation of post-construction BMPs discussed during these meetings?	<b>YES</b>
Does your community have standard conditions of plan approval?	<b>NO</b>
Do they include erosion and sediment control and/or post-construction water quality requirements?	
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?	<b>NO</b>
Does your community require a long-term maintenance plan for post-construction BMPs?	<b>YES</b>
If YES, is the plan required to include the following:	
Identify the party responsible for long-term maintenance?	<b>YES</b>
A list of routine and non-routine maintenance tasks and the frequency for their performance?	<b>YES</b>
A map that identifies the types and locations of post-construction BMPs and their maintenance or access easements?	<b>YES</b>
A list of deed restrictions, conservation easements or environmental covenants required to maintain post-construction BMPs in perpetuity?	<b>YES</b>
Is this plan kept on file or input into a database for future reference to ensure the required tasks are being completed?	<b>YES</b>

Plan Review Procedures		
Interview Questions	Response	
Applicable Documents	Reviewed	Obtained
Copy of standard conditions of approval	Does not exist	
Example of standard conditions applied to an approved project	Does not exist	
Checklist used by plan reviewers	YES	YES

Project Inspections		
Interview Questions	Response	
<b>CONSTRUCTION SITE INSPECTIONS</b>		
Who is responsible for erosion and sediment control site inspection?	Engineering Department – both Tony and Tom do the inspections	
Are site inspections at active construction sites conducted at a frequency of at least once per month?  <i>NOTE: This is the minimum performance standard in the NPDES permit for small MS4s.</i>	<b>YES</b>  Inspections are conducted once every 2 weeks for sediment and erosion controls.	
If construction sites are <b>not</b> inspected at least once per month, what is the average inspection frequency?	See above – once every 2 weeks.	
How do you prioritize or determine inspection frequency?	N/A	
Criteria used:	Proximity to water body      YES    NO Water body impairment      YES    NO Size of project                    YES    NO Slope of project site            YES    NO Other: _____	
Is this inspection criteria and frequency explicitly stated in your SWMP?  <i>NOTE: Ask for copy.</i>		
<b>POST-CONSTRUCTION INSPECTIONS</b>		
Who is responsible for post-construction site inspection?	Tony does post construction (City Engineer)	
Is an “as-built” inspection conducted at the time a post-construction BMP is installed to ensure compliance with the approved BMP construction plan?	<b>YES</b>  A final grading inspection is conducted by the City. This inspection includes verification that BMPs have been installed. The developer submits an as-built drawing stamped by his professional engineer for post-construction BMPs.	

<b>Project Inspections</b>	
<b>Interview Questions</b>	<b>Response</b>
<p>Does the MS4 conduct inspections for long-term maintenance of privately-owned post-construction BMPs?</p> <p>If NO, does the MS4 collect inspection reports from the responsible party? At what frequency?</p>	<p style="text-align: center;"><b>NO</b></p> <p>Owner does an inspection and submits an annual report by May 31<sup>st</sup> of each year.</p>
<p>Findings from construction and post-construction inspections tracked in a database?</p>	<p style="text-align: center;"><b>NO</b></p> <p>Filing system is still paper file system.</p>
<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><b>NOTE:</b> Make MS4 operator aware of training opportunities provided by Ohio EPA and archived at <a href="http://www.epa.ohio.gov/ocapp/storm_water.aspx">www.epa.ohio.gov/ocapp/storm_water.aspx</a>.</i></p>	<p>Tom- On-the-job training with City Engineer and P.E. Tony- Masters in Water Resources Engineering and P.E.</p> <p>Tom- 2 years (since June 2009) Tony- 7 years Tony- 7 years</p> <p>Tom has no annual refresher training, but does review information on internet to stay up-to-date. Tony receives training once a year. Once a year.</p>
<p>Do you use a checklist or the approved plan to conduct site inspections?</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>Plan and inspection form are both used.</p> <p style="text-align: center;"><b>NO – do not perform in house</b></p> <p>Owner is required to submit a long-term maintenance plan. They submit an annual inspection report. This must be conducted by a P.E., professional landscaper, etc.</p>

Project Inspections		
Interview Questions	Response	
Applicable Documents	Reviewed	Obtained
Most recent inspection staff training records	YES	YES
Example of active construction project inspection checklist	Ohio EPA checklist	
Example of inspection record to verify "as-built" of post-construction BMPs	Will provide us with a copy of what developer submits	
Records from inspection tracking database or filing system	YES	YES
Checklist for inspecting long-term maintenance of post-construction BMPs	Does not exist	

Notes

MS4-Owned Construction Projects	
Interview Questions	Response
Projects designed in-house or contracted?	Contracted out
Designers trained in storm water BMP implementation?	Send out RFPs with qualifications. The SWP3 is reviewed by Tony.
Checklist used during the design and/or review of public construction projects?	YES
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?	YES  Separate line item allows contractor to be paid and technical specifications for ESC and post-con are included in contract.
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?	Engineering Department, but can be contracted out.
<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>	

<b>MS4-Owned Construction Projects</b>			
<b>Interview Questions</b>	<b>Response</b>		
Project inspectors trained?	<b>YES</b>		
Frequency:	See responses under previous sections regarding training. Tommy and Tony do the inspections on municipal projects.		
If contracted inspectors are utilized, are minimum inspection, maintenance and reporting requirements specified in the contract?	<b>YES</b>		
For municipally-owned post-construction BMPs, how often are they inspected to ensure long-term maintenance?  Which department is responsible for conducting these inspections?	<b>They are not inspected.</b>  The City does not inspect publicly-owned BMPs annually. They are not inspected regularly. The City plans to develop a program, but has not done so yet. The Service Director expects to have a program up and running by October 1, 2011.		
<b>Applicable Documents</b>		<b>Reviewed</b>	<b>Obtained</b>
MS4-owned project storm water design standards and/or checklist		NO	NO
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 is provided. Cuyahoga SWCD does PIPE, and in 2009, the theme was LID with outreach to development community. Engineering department provided copies to developers at time of plan submission.
Designers and Engineers:	None.
Attendance required?	Do not hold training events.
Training frequency?	One time only in 2009.
Number of operators trained:	Five brochures were provided that year.
Training topics:	Low Impact Development practices.
Presentations given by MS4 staff to professional groups?	<b>NO</b>
Brochures or outreach materials targeted at operators:	Tony will provide. LID.
How/when is the information distributed?	With plan submittal.

<p>Website used to educate operators?</p> <p>Web address:</p>	<p>Website references City codes. Website is currently being updated, and the City intends to include storm water education material on the new website.</p> <p><u>www.bereanho.com</u> will be replaced with <u>www.cityofberea.org</u>. Transition will occur this year.</p>
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<b>Applicable Documents</b>	<b>Reviewed</b>	<b>Obtained</b>
Training materials	NO	NO
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: Beech Street Reconstruction</b>	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	<b>NO</b>
Design specifications and details for all BMPs included on the plans?	<b>NO</b>
Maintenance requirements specified?	<b>YES</b>
Have any NOV's or other enforcement actions issued for this site. <i>Obtain copies of NOV's. If none, why not?</i>	<b>NO</b>
<p><b>Notes:</b></p> <p>A complete SWP3 has not been developed for this project. The "plan" is simply one sheet titled Grading and Erosion Control Plan. It shows the use of storm drain inlet protection during construction, but the plan does not include any non-sediment pollutant control requirements or post-construction storm water best management practices. The project adds angled parking stalls along the roadway, but remains within existing right-of-way. As such, the project can be viewed as a redevelopment project. Post-construction practices must be provided and meet the requirements for redevelopment, i.e., treat 20% of the WQv or decrease impervious area by 20%. One method that can be used to decrease impervious area is to install permeable pavement. The City should consider the installation of permeable pavement for the new parking stalls.</p> <p>There is no evidence that SWP3 review was conducted on this plan. Ohio EPA expects the City to review SWP3s for municipal construction projects in the same manner that they are reviewed for private development.</p>	

<b>Construction Project #2 Name: Center for Innovation and Growth – Baldwin Wallace College</b>	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	<b>YES</b>
Design specifications and details for all BMPs included on the plans?	<b>YES</b>
Maintenance requirements specified?	<b>YES</b>

<b>Construction Project #2 Name: Center for Innovation and Growth – Baldwin Wallace College</b>	
Have any NOV's or other enforcement actions been issued against this site? <i>Obtain copies of NOV's. If none, why not?</i>	None in file.
<b>Notes:</b>  Plan review for this project was quite thorough and plans were detailed and complete. We did not see any site inspections for this project in the file. Were any storm water inspections conducted on this project?	

<b>Construction Project #3 Name: Sandstone Ridge South Ph 3A &amp; 3B</b>	
BMPs adequately incorporated into the plan to address erosion control, sediment control, and housekeeping?	<b>NO</b>  The SWP3s show silt fence and inlet protection specifically for each phase. However, the storm sewers service a common drainage area of > 10 acres. The NPDES permit requires the use of sediment basins in such situations. The developer has modified the detention basin to act as a sediment control during construction. This is not reflected in the SWP3s.  Also, the detention basin is located within a stream channel and the developer has not obtained permits from the US Army Corps of Engineers for this impact or impacts to wetlands which have occurred. Per discussion with the Army Corps, the matter was to be resolved by relocating the detention basin off-line of the stream and performing on-site stream restoration. <b>The City may consider withholding building permits or taking enforcement action allowed under Chapter 320A or 320B until the corrective action required by the Corps is completed.</b>
Design specifications and details for all BMPs included on the plans?	<b>YES</b>
Maintenance requirements specified?	<b>YES</b>
Have any NOV's or other enforcement actions been issued against the site? <i>Obtain copies of NOV's. If none, why not?</i>	<b>None in file.</b>
<b>Notes:</b>  Although the basin is not in post-construction mode, the City has been collecting annual post-construction inspection reports from the Sandstone Ridge Homeowners' Association since 2009. Why? This basin is serving a sediment control function at this time and is yet to be reverted to its permanent function. The	

<b>Construction Project #3 Name: Sandstone Ridge South Ph 3A &amp; 3B</b>	
skimmer devices are intended for sediment control.	
Inspection reports are only sent to Blaze Construction, which is a different legal entity than Lopat Development, Ltd, the developer of record for this subdivision. Ryan Homes does not receive a copy of the inspection reports even though they are responsible for installation and maintenance of the silt fence and storm drain inlet protection shown on the SWP3s for Phase 3A & 3B.	
Inspection reports for this project show that the City lacks an enforcement escalation plan. Reports dated April 28, 2011, May 10, 2011, and May 20, 2011 inspection reports all note the following deficiencies in common, yet the City has not sent the developer a Notice of Violation:	
<ol style="list-style-type: none"> <li>1. Large stockpile at detention basin needs regrading and seeding. This has been noted continuously in inspection reports since May 29, 2009.</li> <li>2. Erosion gullies to detention basin need to be repaired.</li> <li>3. Inlet protection needs repair behind condos and homes on Stone Ridge Way.</li> </ol>	
To date, the City has never issued a Notice of Violation to Lopat Development, Ltd or Ryan Homes (NVR Corporation) regarding compliance issues on this site.	

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: Race Road Elementary School</b>	
Date that project was accepted by community or otherwise deemed "completed"	Project is nearing completion, but is not yet complete. The bioretention cells are still under construction.
Were post-construction BMPs provided for all drainage areas associated with the developed site?	<b>YES</b>
List the post-construction BMPs provided?	DA #1 – Bioretention CS 7 DA #2 – Bioretention CS 8 DA #3 – Bioretention CS 9 DA #4 – Isolator Row MH 2 DA #5 – Isolator Row North Detention
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>NO</b>

<b>Post-Construction Project #1 Name: Race Road Elementary School</b>	
	This is a large construction project, i.e., larger common plan of development or sale disturbs 10.5 acres. Thus, the use of alternative post-construction BMPs, i.e., Isolator Row, required prior approval from Ohio EPA. Developer did not obtain prior approval from Ohio EPA. The City's plan review process must ensure that developer obtain approvals from Ohio EPA to implement alternative post-construction BMPs on large construction sites.
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	N/A – Project is still being completed.  City must verify the installation of post-construction BMPs per the MS4 permit performance criteria for their post-construction program.
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>	<b>NO</b>  The City must obtain a long-term maintenance plan for the post-construction BMPs implemented on this project. The responsible party must be named in the long-term maintenance plan.  N/A – Project is still being completed.
Notes:	

<b>Post-Construction Project #2 Name: Berea Crossings</b>	
Date that project was accepted by community or otherwise deemed "completed"	Project completed, but don't know date of completion. First request for long-term maintenance report was in 2009.
Were post-construction BMPs provided for all drainage areas associated with the developed site?  List the post-construction BMPs provided?	<b>NO</b>  DA #1 Wet Extended Detention Basin  DA #2 No BMP provided for the 0.14 acres which drains to the NW.

<b>Post-Construction Project #2 Name: Berea Crossings</b>	
	DA #3 No BMP provided for unknown perimeter area along Bagley Road. Total site about 3 ac.
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>  The small drainage area size directed to the basin results in a 1.6-inch water quality orifice. This is acceptable, but may pose maintenance concerns. Ohio EPA would encourage the City to use BMPs that do not rely on an orifice to control drain time when dealing with small drainage areas, i.e., < 5 acres. BMPs that do not rely on a WQ orifice and are more appropriate for small drainage areas include bioretention cells, enhanced swales and sand filters.
Did the community verify the installation of post-construction BMPs per the approved plan at the time the project was completed?	<b>NO</b>  Although the City indicated that they ensure post-construction BMPs are installed per approved plans, no record of this verification was found in the file.
Does MS4 have a copy of the long-term maintenance plan?	<b>NO</b>
Who does the plan say is responsible for long-term maintenance?	City needs to obtain a long-term maintenance plan from the developer.
Has the MS4 conducted any long-term maintenance inspections or collected any long-term maintenance inspection reports from the responsible party? <i>Obtain copy of latest inspection report.</i>	<b>YES</b>  The City has started to require the submittal of an annual long-term maintenance inspection report. The property owner did submit a report for 2010. How does the City plan to follow up on the recommendations for maintenance included in the report?
<b>Notes:</b>	

<b>Post-Construction Project #3 Name: Richland Berea Apartments (aka Stoneridge Apartments)</b>	
Date that project was accepted by community or otherwise deemed "completed"	Project is completed, but do not know date.
Were post-construction BMPs provided for all drainage areas associated with the developed site?  List the post-construction BMPs provided?	<b>YES</b>  DA #1 Wet Extended Detention Pond  Total site acreage is 9 ac.
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>NO</b>  There is no indication in the file that the City verified the installation of the wet extended detention basin.
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>	<b>NO</b>  There is a small note about post-construction maintenance on the plan sheets, but it does not provide the routine and non-routine maintenance tasks with expected schedule for performing those tasks. It only lists that the basin shall be inspected twice per year, on May 1 <sup>st</sup> and October 1 <sup>st</sup> .  Response letter from project engineer indicates private development owner is responsible.  <b>YES</b>

## CONSTRUCTION FIELD REVIEW WORKSHEET

**Name of MS4:** City of Berea  
**MS4 Permit No:** 3GQ00015\*BG

<b>Name of Site:</b> Sandstone Ridge Ph 3A & 3B	
<b>Location:</b> off Nobottom Rd east of Lewis Rd	<b>NPDES Permit #</b> 3GC04306*AG
<b>Date of Inspection:</b> May 31, 2011	<b>Time of Inspection:</b> 10:15 am
<b>Name of Inspector:</b> Dan Bogoevski and Lindsie MacPherson, DSW, NEDO	
<b>Others Present During Inspection:</b>	
Tommy Ross, Inspector, City of Berea Engineering Dept. John Petras, Project Manager, Ryan Homes Tim McParland, DSW, NEDO Michelle Hummel, DSW, NEDO	

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

Not initially, but did at the conclusion of the inspection.

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

No. However, amendments to the plan were posted in the trailer.

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, Ohio EPA did ask to see the reports and did note that they are being conducted. However, we noted that the Ryan Homes inspector did not note that storm drain inlet protection was not built per the detail drawings contained in their SWP3.

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

Inspector was familiar with the plan but did not have it with him during the inspection. Focus seemed to be more on silt fence and inlet protection.

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

He noted that issues had been raised previously, but corrections had not occurred.

6. Compliance issues identified by inspector during this inspection:

Inspector focused on silt fence and storm drain inlet protection. He noted where silt fence was down and where most inlet protection needed maintenance. He also noted the need to address erosion gullies into the detention basin and the back of the mound along the railroad tracks. He noted the need to stabilize the large stockpile, but this continues to be an on-going violation. **The City is deficient on the follow-up of sending a Notice of Violation for repeat violations.**

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

Inspector did not note the need to temporarily stabilize the green space at the west end of River Rock Drive.  
The inspector did not note the need to maintain a rear yard drain in the vicinity of S/L 1186-1187.  
The inspector did not note the need to wrap two sections of silt fence together before staking into the ground.  
The inspector did not note that yard inlet protection does not have cross braces. Also, the inspector did not note that some of the silt sacks protecting the curb inlets were full and required cleanout. Others were damaged and needed repair because a hole had been poked in the fabric.  
Inspector did not note the illicit discharge flowing into one of the backyard drains from the leachate of the grass clippings that a home owner is dumping in their backyard.  
The inspector does not normally check the skimmer device and outlet structure of the sediment basin to ensure proper dewatering of the basin. At the time of the inspection, the water level of the basin was high, indicating that the basin may have been discharging at too slow of a rate and blockage may have occurred.

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

**NO.** The inspector made contact with the site foreman after the completion of the inspection and only upon Ohio EPA request. The inspector should always make his presence on site known to the parties responsible for implementation and maintenance of storm water controls.

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

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

10. Is the community planning on taking any enforcement actions based on the results of today's inspection? If so, what are those actions? Did the inspector provide a deadline for corrective action? If so, provide details.

The inspector will send an inspection report to the site foreman indicating his findings, but nothing was said about sending a notice of violation. Many deficiencies were repeated offences and should qualify for a notice of violation to

be sent to the developer, co-permittee and/or homebuilder with a deadline for corrective action at minimum.

**Pictures:**



**Figure 1 (LT):** Silt fence is not installed per the Ohio Rainwater and Land Development manual. The ends are not wrapped together and silt fence required maintenance.

**Figure 2 (RT):** Inlet protection is not built per the facility's SWP3. There is no cross bracing and the silt is torn and requires maintenance.



**Figure 3 (LT):** Temporary or permanent stabilization is required for these yards depending on the circumstance.

**Figure 4 (RT):** The yard drains running along the back of the properties require inlet protection per the facility's SWP3. The protection provided in the picture above is not an accepted design of this BMP.



**Figure 5 (LT):** A homeowner is dumping grass clippings in the drainage swale and causing an illicit discharge of leachate to the City's MS4.



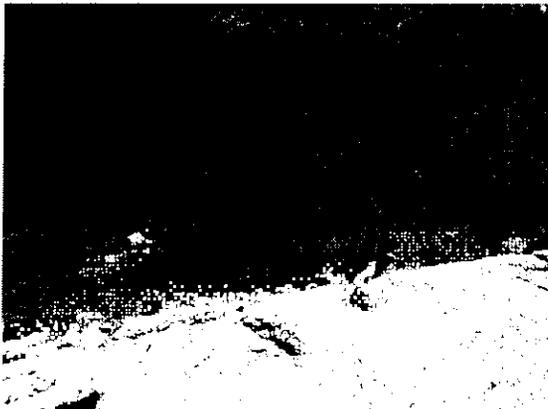
**Figure 6 (RT):** The embankment slope parallel to the railroad tracks requires more adequate stabilization (>70% coverage).



**Figure 7 (LT):** Open space at the west end of the property off of River Rock Way requires stabilization.



**Figure 8 (RT):** Erosion control should be provided to the area surrounding the basin to prevent erosion gullies such as those shown in the image above.



**Figure 9 (LT):** The large stockpile on the west end of the site requires stabilization. This should be a case for enforcement, for this violation has been noted many times for this site.



**Figure 10 (LT):** Silt fence is not the proper BMP for this location. Silt fence is designed to intercept sheet flow only not concentrated flow. Instead, the swale should be stabilized and rock check dams should be provided along the length of the swale.

## CONSTRUCTION FIELD REVIEW WORKSHEET

**Name of MS4:** City of Berea  
**MS4 Permit No:** 3GQ00015\*BG

<b>Name of Site:</b> New Berea Elementary School	
<b>Location:</b> 191 Race St., OH 44017	<b>NPDES Permit #</b> 3GC04652*AG
<b>Date of Inspection:</b> May 31, 2011	<b>Time of Inspection:</b> 1:05 pm
<b>Name of Inspector:</b> Dan Bogoevski and Lindsie MacPherson, DSW, NEDO	
<b>Others Present During Inspection</b>	
Tommy Ross, Inspector, City of Berea Engineering Dept. Tim McParland, DSW, NEDO Michelle Hummel, DSW, NEDO	

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

The project superintendent was not present at the time the inspection was conducted.

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

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

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

No. The project superintendent was not on site at the time.

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

Yes, the inspector had the plans with him and used the plans as a guide for his inspection, but the plans were outdated and incomplete. Two sediment traps were added to the site, but the SWP3 does not provide adequate details for either basin. The riser detail for one of the traps is present but is incomplete and would only apply to one of the basins.

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

The inspector mentioned items that had been addresses since his last inspection, but no outstanding issues were addressed except the missing grate from a catch basin in the far west corner of the site.

6. Compliance issues identified by inspector during this inspection:

Again, the City inspector focused on silt fence and storm drain inlet protection. He noted where silt fence was down and where most inlet protection needed maintenance.

The inspector questioned whether construction entrances were necessary at this stage of construction, and the EPA determined that a construction entrance was still appropriate for the amount of work occurring on the east end of the property.

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

The inspector did not note that the bioretention soil mix should not have been in place until final stabilization had occurred on the surrounding areas of the site. Evidence of sediment-laden runoff was present in the basin just east of the extended parking lot, which causes permanent failure to the bioretention facilities.

The inspector did not note that the perimeter should have been stabilized before the winter months.

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

No. Project superintendents not present at time of inspection.

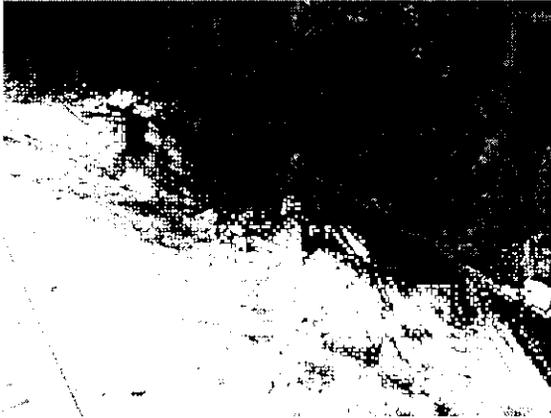
9. Did the MS4 inspector recap his findings upon completion of his or her inspection?

Upon encouragement from the EPA, the inspector recapped his findings.

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

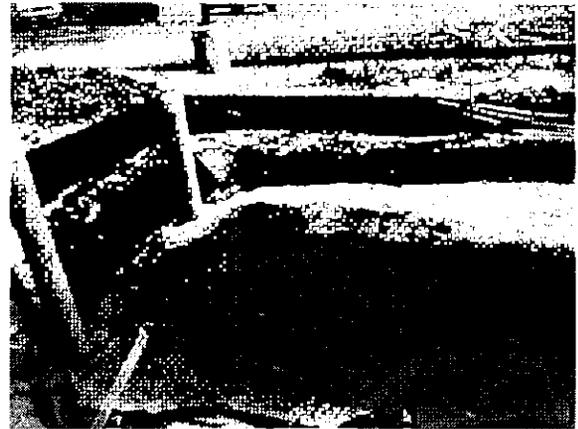
No, the City did not indicate any plan to take enforcement action based on the site conditions.

**Pictures:**



**Figure 1 (LT):** The silt fence along the perimeter requires maintenance, and the slopes to the silt fence should be stabilized to provide erosion control.

**Figure 2 (RT):** A construction entrance should be placed at the entrance on the east side of the site until stabilization occurs.



**Figure 3 (LT):** The inlet protection shown is not an accepted form of curb inlet protection if the spillway is not protected as well as the grate, leaving only a small space at the top for emergency spillage.

**Figure 4 (RT):** The bioretention soils should not have been placed in the constructed cell until all areas that drain to the BMP were stabilized. The sediment that has now mixed with the soils will cause permanent failure of the bioretention cell if the sediment is not removed.

## CONSTRUCTION FIELD REVIEW WORKSHEET

**Name of MS4:** City of Berea  
**MS4 Permit No:** 3GQ00015\*BG

<b>Name of Site: Beech Street Reconstruction Project</b>	
<b>Location:</b> Beech Street B/T Fifth Ave. and Bagley	<b>NPDES Permit #</b> 3GC05359*AG
<b>Date of Inspection:</b> May 31, 2011	<b>Time of Inspection:</b> 12:30 pm
<b>Name of Inspector:</b> Dan Bogoevski and Lindsie MacPherson, DSW, NEDO	
<b>Others Present During Inspection</b>	
Tommy Ross, Inspector, City of Berea Engineering Dept. Tim McParland, DSW, NEDO Michelle Hummel, DSW, NEDO	

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

Not initially, but did at the conclusion of the inspection.

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

No. The project is a City of Berea project that Tom inspects on a regular basis.

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. Please clarify if this requirement has been put on the contractor. Also, please clarify if the contractor has submitted a Co-Permittee NOI to Ohio EPA.

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

**There is no SWP3 for the Beech Street reconstruction project. The City developed a one-page grading and erosion control plan, but there are no detail drawings for erosion and sediment control BMPs to be used on the site and the erosion and sediment control notes are outdated. The page shows the use of storm drain inlet protection during construction, but the plan does not include any non-sediment pollutant control requirements or post-construction storm water best management practices. The project is viewed as a redevelopment project, and post-construction practices must be provided and meet the requirements for redevelopment, i.e., treat 20% of the WQv or decrease impervious area by 20%.**

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

The inspector conducts inspections for the site several times a week, and commented on the amount of water ponding in the street as a result of the inlet protection compared to previous inspections.

6. Compliance issues identified by inspector during this inspection:

The inspector did not note any particular deficiencies at this site without encouragement from the Ohio EPA.

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

The inspector did not note that the inlet protection throughout the site was not built properly, and the wrong geotextile fabric was used.  
The inspector did not take note of the stone pile dumped on top of the inlet grate.  
The Inspector did not catch the leak from the backhoe at the south end of the street. The spill needs to be cleaned up, and the inspector needs to determine if a spill kit is located on site, as it should.

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

No.

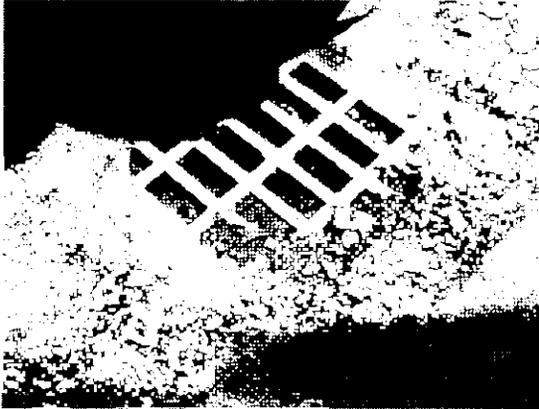
9. Did the MS4 inspector recap his findings upon completion of his or her inspection?

The inspector recapped his findings with the project superintendent once encouraged to do so by the Ohio EPA.

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

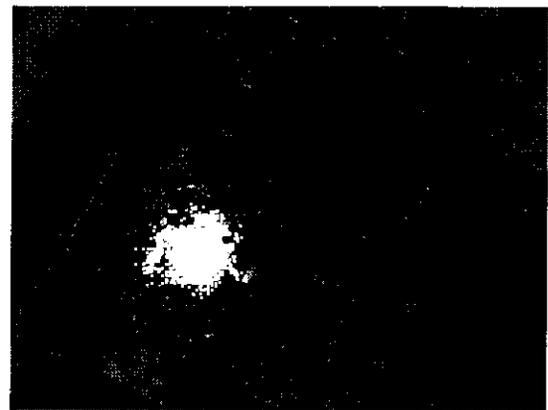
The community did not mention any plans to take enforcement action based on the findings of the inspection.

**Pictures:**



**Figure 1 (LT):** No inlet protection was provided to the grate on the North end of the Beech Street construction.

**Figure 2 (RT):** This is not the accepted form of curb inlet protection as found in the Ohio Rainwater and Land Development Manual.



**Figure 3 (LT):** Non-woven geotextile fabric placed under the inlet grate is not an acceptable form of curb inlet protection. Products such as dandy bags or silt sacs should be considered when protecting curb inlets.

**Figure 4 (RT):** A spill was noted at the edge of the site at the intersection of Beech and Bagley. There was no indication that this spill was noted of that the crew had any intention on cleaning the spill up. A spill kit should be present at the site to handle situations where there is a non-sediment pollutant such as this leak from the backhoe.