

City of South Euclid, Ohio

Storm Water Management Program

March 7, 2003

Revisions May, 2005



Euclid Creek Watershed Pilot Project
c/o Cuyahoga Soil & Water Conservation District
(216)524-6580 fax (216) 524-6584
jrybka@cuyahogawcd.org

and

Stephen Hovancsek & Associates
City Engineer

TABLE OF CONTENTS

I. Legal Authority to Implement the Storm Water Management Program.....3

II. Financial Ability to Implement the Storm Water Management Program.....3

III. Overview of City Storm Water System.....3

IV. Description of Permit Development and Decision Process.....3

V. Storm Water Management Program.....5

 A. Public Education and Outreach on Storm Water Impacts and Public
 Involvement/Participation (MCM #1 and #2).....5

 B. Illicit Discharge Detection and Elimination (MCM #3).....14

 C. Construction Site Storm Water Runoff Control (MCM #4).....20

 D. Post-Construction Storm Water Management in New Development and
 Redevelopment (MCM #5).....26

 E. Pollution Prevention/Good Housekeeping for City Operations
 (MCM #6).....34

VI. Monitoring, Recordkeeping, and Reporting.....39

VII. Appendices.....40

Acronyms Used in this Document Include:

- | | |
|---|---|
| BMP: Best Management Practice | MS4: Municipal Storm Sewer System |
| E&SC: Erosion and Sediment Control | NOI: Notice of Intent |
| HSTS: Home Sewage Treatment System | NPDES: National Pollutant Discharge
Elimination System |
| MCM: Minimum Control Measure | Ohio EPA: Ohio Environmental Protection
Agency |
| MOU: Memorandum of Understanding | SWMP: Storm Water Management Program |
| NOACA: Northeast Ohio Areawide
Coordinating Agency | SWTF: Storm Water Task Force |
| NEORS: Northeast Ohio Regional Sewer
District | SWCD: Soil & Water Conservation District |
| PIPE: Public Involvement, Public Education | |

I. Legal Authority to Implement the Storm Water Management Program

The City of South Euclid has the legal authority to implement the following Storm Water Management Program under Article XVIII, Section 3 of the Ohio Constitution granting municipalities the authority to adopt land use and control measures for promoting the peace, health, safety, and general welfare of their citizens.

II. Financial Ability to Implement the Storm Water Management Program

In 2003 the City of South Euclid will fund the additional activities necessary to implement its SWMP through dollars from the general fund. In 2004 the City of South Euclid Storm Water Manager (see Table 1 for details on Coordinator formation) will evaluate the costs of implementing the SWMP and, if necessary, suggest alternative funding arrangements.

III. Overview of City Storm Water System

The City of South Euclid is located in the Euclid Creek, Nine Mile Creek and Dugaway Brook watersheds. The City of South Euclid is 4.66 square miles in area and drains into Euclid Creek, Nine Mile Creek, and the Dugaway Brook. (See attached map). The vast majority of the City is sewered. Through the Regional 208 Plan, the City has determined that the four (4) remaining on-lot systems will be maintained and that no new on-site treatment systems will be installed. New sanitary sewer lines, as needed, will be constructed for new developments.

The City storm water system consists mostly of streets with curbs, gutters, and storm sewers; major conveyance culverts; a regional retention basin known as the Langerdale Retention Basin; some roadside ditches; and open creeks such as the Euclid Creek and portions of Nine Mile Creek. The City is located in the headwaters of Nine Mile Creek and Dugaway Brook, and most of the length of these creeks within the City limits are in enclosed storm sewers.

IV. Description of Permit Development and Decision Process

To develop its SWMP, the City of South Euclid followed the steps detailed below:

- 1. Assigned staff to participate in the Euclid Creek Watershed Program-Storm Water Management Work Groups:** These work groups, the Storm Water Ordinance Task Force and Public Involvement/Public Education (PIPE) Work Group included representatives from each watershed City. The groups met monthly in 2002. Our City's representatives include Kevin Lynch, Public Service Director, and Andrew K. Blackley, P.E., City Engineer. Working with Euclid Creek Watershed Council, the Committee reviewed the general requirements of each MCM and discussed Best Management Practices (BMPs) to meet these general requirements.

Two public meetings were held in June, 2002. Approximately 75 residents attended to learn more about the work of the Euclid Creek Watershed Council and NPDES Phase II. These residents were also given an opportunity to discuss water quality concerns and possible actions to correct the problems.

On September 18, 2002 a meeting was held for elected officials, engineers, and service directors in the watershed to discuss the permit process and to present recommended Best Management Practices (BMPs) being suggested for the six MCMs.

- 2. Reviewed the specific requirements of the Ohio EPA draft NPDES Phase II permit:** The City of South Euclid is predominantly residential in character and is an “inner ring” suburb of the City of Cleveland. Nearly all open land tracts were developed by the early 1960s. Some redevelopment activities are encouraged and are beginning to occur.

After reviewing the general Phase II requirements and inventorying our existing BMPs, we examined the specific requirements of under each MCM. We determined the extent to which our current activities meet these specific requirements and selected additional BMPs to fill any short falls in our existing programs. Our BMPs were selected based on our financial and legal ability to implement these practices as well as their suitability for our City.

- 3. Selected measurable goals and assigned responsible parties:** After BMPs were selected, we assigned these to specific staff and set dates for implementation.
- 4. Finalized Storm Water Management Program:** Using the Draft developed by the Euclid Creek Watershed Council, we finalized our Storm Water Management Program.
- 5. Held Public Hearings:** The City Council of the City of South Euclid the reviewed the draft SWMP at a public meeting held on February 10, 2003.
- 6. Approved:** The City of South Euclid City Council approved the SWMP on February 10, 2003.

V. Storm Water Management Program

A. Public Education and Outreach on Storm Water Impacts and Public Involvement/Participation (MCM #1 and #2)

1. The Permit Requirement (per Ohio EPA draft NPDES Permit)

- a) 3.2.1.1 Implement a public education program to distribute educational materials to the City or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and steps that the public can take to reduce pollutants in storm water runoff.
- b) 3.2.2.1 Comply with State and local public notice requirements when implementing a public involvement/participation program.

2. Public Involvement and Education Plan

The City of South Euclid has agreed to work in unison with the other communities in the watershed on a comprehensive, watershed-based PIPE Program. Given the similarity of these two MCMs, the Euclid Creek Watershed Council has developed a unified Public Involvement and Education Program. The BMPs, measurable goals, and responsible parties in this Public Involvement and Education Plan are detailed in Table 1.

In addition to Table 1, per Ohio EPA draft NPDES permit requirement 3.2.1.2 and 3.2.2.2, we are documenting our decision process with the following information required by the draft permit.

3.2.1.2.1 & 3.2.1.2.2 How you plan to inform individuals and households about the steps they can take to reduce storm water pollution and how to become involved in the storm water management program.

As presented in Table 1, we will inform our residents about the steps they can take to reduce storm water pollution and ways to get involved in our Storm Water Management Program through a combination of workshops, City activities, and print media including newsletters, brochures and fact sheets, new resident outreach, the City website, and building department permit inserts.

Our newsletter reaches every resident and business each quarter. Our City activities, including the Home Days, are long-standing events and very well attended by residents. We currently send packets of information to new homeowners. We will provide fact sheets to individuals who obtain building permits.

3.2.1.2.3 & 3.2.2.2.3 Who are the target audiences for your Public Involvement and Education plan who are likely to have significant storm water impacts and why those target audiences were selected? Include a description of the types of

ethnic and environmental groups engaged and steps to involve all potentially affected stakeholders including businesses, trade associations, environmental groups, homeowners associations, and educational organizations.

Every attempt is being made to link to as many people, young and old, in the watershed as possible. Information will be available at City Hall and will be distributed through internal channels, such as the City newsletter, website and new homeowner kits. City events, such as Home Days, provide opportunities for participation from a large variety of groups. Businesses will also receive information through the newsletter, and City events. Outreach to school children in the watershed will help educate a diverse student body and also provide opportunities for further involvement.

Watershed activities will also include public meetings to raise awareness of storm water issues and meetings with various business entities. Public environmental groups such as the Friends of the Euclid Creek are encouraged by the City in their public education and awareness efforts, and their organization of clean-up days of the Creek and other activities. The City supports these groups by providing meeting space in the City Center and listing their activities in the newsletter.

3.2.1.2.4 What are the target pollutant sources your public education plan is designed to address?

We will target pollutant sources common to the Euclid Creek, Nine Mile Creek and Dugaway Brook watersheds, including sediment pollution from stream bank erosion and improperly controlled construction sites; habitat alteration due to land use changes; bacteria and nutrient pollution from illicit discharges, and household hazardous wastes.

Because the majority of these pollution problems are caused by increases in impervious cover and the resulting increases in storm water volume and velocity, we will focus our Public Involvement and Public Education Program on increasing public awareness of the links between land use practices and storm water pollution. Topics may include lawn and garden care, pesticide management, proper disposal of household hazardous wastes and stream stewardship.

3.2.1.2.5 What is your outreach strategy, including mechanisms (e.g. printed brochures, newspapers, media, workshops, ect.) you will use to reach your target audiences, and how many people you expect to reach with the outreach strategy over the permit term?

Our outreach strategy is to work with the other communities in the Euclid Creek Watershed to 1) raise awareness of watershed issues, 2) involve citizens in water quality discussions, 3) help change behaviors, and 4) encourage citizen participation in BMPs. With the assistance of a Watershed Coordinator, we will implement the activities outlined in Table 1.

Outreach mechanisms will be varied in an effort to reach diverse audiences. These mechanisms will include an exhibit for City events, brochures, articles, electronic information on the City website, school programs and City events. The media will be used to help promote programs and to report on the progress being made to address storm water concerns. The newsletter is expected to reach every homeowner in the City.

3.2.2.2.1 How have you involved the public in the development and submittal of your NOI and SWMP.

Throughout 2002, the Euclid Creek Watershed Council work groups, which were open to the public, met to discuss the permit requirements, and potential BMPs. Two public meetings were held in June, 2002. A public meeting targeted to city engineers, mayors, councilpersons and service directors was held in September, 2002 to provide an update about the planning process and to outline recommended BMPs.

The final draft of the SWMP was presented to the public on February 10, 2003 for comments. City council voted to adopt the plan at their meeting on February 10, 2003.

3.2.2.2.2 What is your plan to actively involve the public in the development and implementation of your plan?

The public was invited to participate in the planning process. Work groups met on a regular basis, and City meetings and events were held to keep citizens informed. Information was also dispersed at our Home Days Event.

The final BMPs were presented to the Storm Water Ordinance Work Group, PIPE Work Group, the Euclid Creek Watershed Council, including engineers and service personnel, City Council, and our city Storm Water Committee for their approval. Over the 5 years of the program a Watershed Coordinator will be charged with coordinating with work groups to help with planning initiatives and outreach activities on an annual basis.

3.2.2.2.4 What types of public involvement activities are included in your plan? Where appropriate consider the following types of public involvement activities:

3.2.2.2.4.1 Citizen Representatives on storm water management panel.

As detailed in Table 1, we appointed a City Storm Water Manager to facilitate/manage the development of our SWMP and its implementation during the permit term. A Watershed Coordinator has been hired to help coordinate the PIPE program. Each City in the watershed has designated at least one representative from the city and/or a citizen representative to serve on the PIPE Committee. City residents will be encouraged to participate in public meetings.

3.2.2.2.4.2 Public hearings.

Two public meetings related to storm water were held in 2002. The meetings were held for the entire watershed on June 18 in South Euclid, and June 19 in Highland Heights, with a total of 70 participants. These meetings included a presentation by Euclid Creek Watershed Council of the draft model Storm Water Management Plan to various residents of the ten communities in the watershed. The second meeting, sponsored by the Euclid Creek Watershed Council, had 22 participants. The Watershed Coordinator presented the Watershed Council with a draft SWMP at that time. This version was extensively reviewed and modified by the South Euclid Storm Water Management Committee before it was adopted as final by the our City Council on February 24, 2003.

3.2.2.2.4.3 Working with citizen volunteers willing to educate others about the program.

3.2.2.2.4.4 Volunteer monitoring or stream clean-up activities.

3.2.1.2.6 & 3.2.2.2.5 Who is responsible for overall management and implementation of your Pubic Involvement and Education Plan?

The Euclid Creek Watershed Coordinator, with assistance from our Storm Water Manager, is responsible for the overall management and implementation of our Public Involvement and Public Education Plan. The Watershed Coordinator will report periodically to the Storm Water Management Committee. To assist the City in implementing its activities under the Public Involvement and Public Education Plan, we will have entered into Memorandums of Understanding (MOU) with the Cuyahoga County Board of Health, and the Euclid Creek Watershed Council. The City will have a Letter of Agreement to provide services with the Cuyahoga Soil and Water Conservation District. These documents are attached in the Appendix and these partner organizations are listed in Table 1.

3.2.1.2.7 & 3.2.2.2.6 How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs?

The Storm Water Manager, the Watershed Coordinator, and other city staff members as delegated, will adhere to the list of BMPs (see Table 1). Activities will be facilitated by the Coordinator, with assistance from the PIPE Work Group. Goals were established with assistance from the PIPE Work Group and based on the needs in the City.

Table 1: Public Involvement/ Public Education (PIPE)

MANAGEMENT PRACTICE	STRATEGY	MEASURABLE GOALS	TIME FRAME	RESPONSIBLE PARTY
<p>City Storm Water Manager</p>	<p>Each City will designate a City Storm Water Manager to oversee the implementation of the entire storm water management plan for that City. This person will delegate duties to responsible staff, track progress, assemble and submit annual report to the OEPA.</p>	<ul style="list-style-type: none"> ▪ Assign/appoint tasks to various parties for implementation ▪ Prepare and submit annual progress report for compliance purposes to the OEPA 	<p>Annually</p>	<p>Permit holder</p>
<p>Euclid Creek Watershed Program (Committee)</p>	<p>Elect to join the Euclid Creek Watershed Program, which serves as the oversight committee for public involvement and education initiatives in the watershed. The city’s Storm Water Manager appoints one or more people to represent the City at quarterly planning meetings regarding the Public Involvement/Public Education Program.</p> <p>Committee members work with the Euclid Creek Watershed Coordinator who facilitates the Watershed Program and coordinates the PIPE activities with input and assistance from the PIPE Committee members.</p>	<ul style="list-style-type: none"> ▪ Assign a person(s) to be the City representative on the watershed PIPE committee ▪ Participate in quarterly meetings ▪ Develop annual work plan ▪ Submit periodic progress reports to the City Storm Water Manager 	<p>Establish in 2003.</p> <p>Participate annually.</p>	<p>The City Storm Water Manager is responsible for appointing City representatives to serve as the city’s representatives on the Watershed Program Public Involvement/Public Education (PIPE) Committee</p> <p>The Committee liaisons are responsible for coordinating with the Euclid Creek Watershed Coordinator to bring information and materials back to the city for implementation.</p>

MANAGEMENT PRACTICE	STRATEGY	MEASURABLE GOALS	TIME FRAME	RESPONSIBLE PARTY
<p>City Improvement Day</p>	<p>Offer opportunities to get public active in visible pollution control. Host an annual clean up or watershed improvement day: Activities may include, but are not limited to, litter clean ups and various hazardous waste collection days. PIPE Committee members determine date, activity locations and disperse information through city channels. Work with groups such as the Friends of Euclid Creek.</p>	<ul style="list-style-type: none"> ▪ Organize an activity; publicize; train volunteers ▪ Number of activities ▪ Where and how advertised ▪ Number participants 	<p>Establish in 2003. Maintain annually</p>	<p>Watershed Coordinator PIPE Committee members assist.</p>
<p>K-12 Education</p>	<p>Partner with organizations to provide information to teachers and local schools. Activities may include: Educational displays, drain stenciling, educational videos, fact sheets and special programs. PIPE Committee members assist by getting the info into the schools and for following up and registering teachers.</p>	<ul style="list-style-type: none"> ▪ One classroom per year participating in activity ▪ One teacher training session offered ▪ Record # of teachers trained ▪ Record # of presentations in schools ▪ Record # of students participating in the activities 	<p>Establish in 2004. Maintain annually</p>	<p>Watershed Coordinator</p>
<p>Storm Water Website</p>	<p>Create a page on the City’s website to address storm water concerns for the City. Information may include current PIPE activities, storm water/water quality information, and links to other sites. Advertise Web site in City newsletter and/or local media outlets. PIPE Committee members submit information attained from Watershed Coordinator to create website and for supply regular updates about activities to the Web Master</p>	<ul style="list-style-type: none"> ▪ Create website ▪ Update regularly ▪ Website creation ▪ Print updates, file ▪ Record # of hits 	<p>Establish in 2003. Maintain regularly.</p>	<p>Local Web Master</p>

MANAGEMENT PRACTICE	STRATEGY	MEASURABLE GOALS	TIME FRAME	RESPONSIBLE PARTY
City Newsletter Articles	<p>Include an article, on the subject of storm water and water quality, in at least 50% of City newsletters.</p> <p>The Watershed Program PIPE Committee will suggest topics for each year. They will help disperse the information through the appropriate City outreach channels.</p>	<ul style="list-style-type: none"> ▪ 50% of newsletters ▪ Keep a copy of each newsletter ▪ Record # distributed 	<p>Establish in 2003.</p> <p>Maintain annually</p>	Watershed Coordinator
Brochures and Fact Sheets	<p>Printing of brochures, fact sheets or watershed newsletters is suggested on the following topics:</p> <ul style="list-style-type: none"> • Municipal sewer system or watersheds • Home sewage treatment systems • Lawn & garden care-pesticide management • Household hazardous wastes-no dumping • Stream Stewardship or Riparian guide <p>PIPE Committee will work with the Watershed Coordinator to determine appropriate topics and to assist in dispersing information to the public.</p>	<ul style="list-style-type: none"> ▪ Create and distribute one per year to a target audience representing at least 20% of City residents ▪ Record number of brochures printed and to whom distributed 	<p>Establish in 2003.</p> <p>Maintain annually</p>	Watershed Coordinator
Educational display/exhibit	<p>Determine an annual theme. Create a display for City events, libraries, schools, and City events to educate the public about pollution prevention and methods to protect water quality. Suggested topics:</p> <ul style="list-style-type: none"> • Municipal sewer system or watersheds • Home sewage treatment systems • Lawn & garden care • Pesticide management • Household hazardous wastes (no dumping) • Composting • Stream Stewardship or Riparian guide 	<ul style="list-style-type: none"> ▪ Create a display ▪ Target 2 locations per year ▪ Record of type of display ▪ Record of locations housing the display 	<p>Establish in 2003.</p> <p>Maintain annually</p>	Watershed Coordinator

MANAGEMENT PRACTICE	STRATEGY	MEASURABLE GOALS	TIME FRAME	RESPONSIBLE PARTY
<p>Storm Drain Stenciling/Storm Drain Replacement</p>	<p>Initiate a storm drain stenciling educational program (Dump No Waste). Purchase supplies that can be utilized by City groups. Advertise and coordinate periodic training sessions. Additionally, on all new drainage projects, old curb inlet castings will be replaced with new castings that read: “No Dumping-Drains to River”; Utilize volunteers to distribute educational literature.</p>	<ul style="list-style-type: none"> ▪ Stencil 20% storm drains in the City each year ▪ # of storm drains stenciled or # of catch basins installed containing message “No dumping” ▪ Report # of educational pieces distributed ▪ Report # volunteers 	<p>Establish in 2004.</p> <p>Maintain annually</p>	<p>Watershed Coordinator</p> <p>And/or</p> <p>Service Director</p>
<p>Public Meetings</p>	<p>Host annual meetings to educate stakeholders about water quality issues, best management practices and potential improvement actions.</p> <p>PIPE Committee will work with the Watershed Coordinator to determine appropriate topics, dates and to assist in dispersing information to the public.</p>	<ul style="list-style-type: none"> ▪ Coordinate and schedule meeting; arrange speakers; coordinate complimentary activities ▪ Record meeting times, dates, advertisements ▪ Record attendees ▪ Record stakeholder comments 	<p>Establish in 2003.</p> <p>Maintain annually</p>	<p>Watershed Coordinator: will coordinate with PIPE Committee</p>
<p>Stream Monitoring</p>	<p>Work with public to identify key areas to monitor for changes or improvements to water quality using a method best suited for the City or watershed. Groups such as the Friends of Euclid Creek will encouraged to assist in this effort.</p>	<ul style="list-style-type: none"> ▪ Organize an outreach and training program ▪ How advertised ▪ # of participants ▪ # of monitoring sites ▪ Monitoring report 	<p>Establish in 2004.</p> <p>Maintain annually</p>	<p>Watershed Coordinator.</p>

MANAGEMENT PRACTICE	STRATEGY	MEASURABLE GOALS	TIME FRAME	RESPONSIBLE PARTY
<p>City Service Hours</p>	<p>Establish opportunities for students to get City service credit for storm water related activities including storm drain stenciling, stream bank planting, clean-ups.</p> <p>PIPE Committee will work with the Watershed Coordinator to disperse information to the public.</p> <p>Facilitate Boy Scout and Girl Scout Conservation Merit Badge Programs.</p>	<ul style="list-style-type: none"> ▪ Establish program ▪ # of students involved in the program ▪ # of hours committed 	<p>Establish with schools in 2004.</p> <p>Maintain annually</p>	<p>Watershed Coordinator</p>
<p>Environmental Complaint Line</p> <p>Also See section 3.2.4.1.5</p>	<p>Using various outreach methods, advertise existing complaint phone numbers, especially for erosion/sediment issues. The Storm Water Manager will assign a person responsible for taking messages, tracking and following through with the complaint.</p> <p>PIPE Committee will work with the Watershed Coordinator to determine appropriate methods of educating the public.</p>	<ul style="list-style-type: none"> ▪ Utilize existing complaint procedures ▪ Develop complaint forms 	<p>Establish 2004</p> <p>Maintain annually</p>	<p>Storm Water Manager/ PIPE Committee</p>

B. Illicit Discharge Detection and Elimination (MCM #3)

1. The Permit Requirement (per Ohio EPA draft NPDES Permit)

- a) 3.2.3.1.1 & 3.2.3.1.4 Develop, implement, and enforce a program to detect and eliminate illicit discharges into your small MS4 (for illicit discharges to your MS4 via a neighboring interconnected MS4, you are only required to inform the neighboring MS4 and the Ohio EPA in your annual report submission, of their existence).
- b) 3.2.3.1.2 Develop a storm sewer system map showing the location of all outfalls and the names and locations of all surface waters of the State that receive discharges from those outfalls.
 - c) 3.2.3.1.2.1 Within three years of when your coverage under this general permit is granted, you must submit the following to Ohio EPA:
 - 1. 3.2.3.1.2.1.1 A list of all on-site sewage disposal systems connected to discharge to your MS4 (a.k.a. home sewage treatment systems (HSTS)) including addresses.
 - 2. 3.2.3.1.2.1.2 A storm sewer map showing the location of all HSTS connected to your MS4. This map shall include details on the type and size of conduits/ditches in your MS4 that receive discharges from HSTSs, as well as the water bodies receiving the discharges from your MS4.
- d) 3.2.3.1.3 To the extent allowable under State or local law, effectively prohibit through ordinance or other regulatory mechanism illicit discharges to your storm sewer system and implement appropriate enforcement procedures and actions.
- e) 3.2.3.1.5 Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

2. Illicit Discharge Detection and Elimination Plan

The BMPs, measurable goals, and responsible parties in this Illicit Discharge Detection and Elimination Plan are detailed in Table 2. In addition to Table 2, per Ohio EPA draft NPDES permit requirement 3.2.3.2, we are documenting our decision process with the following information required by the draft permit.

3.2.3.2.1 How you will develop a storm sewer map showing the location of all outfalls and the names and location of all receiving waters. Describe the sources of information you used for the maps, and how you plan to verify the outfall locations with field surveys. Describe how your map will be regularly updated.

We have developed a City of South Euclid Phase II Storm Sewer Map based upon the existing storm sewer and topographic mapping previously created and maintained by the City Engineer. Sources of information include record drawings of sewers, and other public and private infrastructure improvements built within the City since the early 1900s. Also used were the Cuyahoga County 1:200 topographic maps and tax maps. Field surveys will be conducted in 2003 to verify and locate as many outfall locations as possible. Field investigations will be conducted by the City staff visiting each outfall to verify its existence and location. Follow-up field surveys by professional surveyors will be conducted as required to accurately map any new and/or changed information.

These maps are in an AutoCAD format and the Storm Sewer Map is updated annually, using record information of projects built within the year previous, and other information as available. The locations of the few remaining HSTS will be added to the map in 2003.

3.2.3.2.2 The mechanism (ordinance or other regulatory mechanism) you will use to prohibit illicit discharges and why you chose that mechanism. If you need to develop this mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.

The City of South Euclid is a member of the Euclid Creek Watershed Communities, Inc. EUCLID CREEK WATERSHED COUNCIL will be developing a model ordinance for illicit discharge detection and elimination. As detailed in Table 2, we will review this ordinance and adopt it by 2004.

3.2.3.2.3 Your plan to ensure through appropriate enforcement procedures and actions that your illicit discharge regulation is implemented.

The enforcement procedures will be included in the ordinance once adopted.

3.2.3.2.4 Your plan to detect and address illicit discharges to your system, including discharges from illegal dumping and spills. Your plan must include dry weather field screening for non-storm water flows and field tests of selected chemical parameters as indicators of discharge sources. Your plan must also address on-site sewage disposal systems (including failing on-lot HSTS and off-lot discharging HSTS) that flow into your storm drainage system. Your description must address the following at a minimum:

3.2.3.2.4.1 Procedures for locating priority areas which includes areas with higher likelihood of illicit connections (e.g. areas with older sanitary sewer lines, for example) or ambient sampling to locate impacted reaches.

3.2.3.2.4.2 Procedures for tracing the source of an illicit discharge, including specific techniques you will use to detect the location of the source.

3.2.3.2.4.3 Procedures for removing the source of an illicit discharge.

3.2.3.2.4.4 Procedures for program evaluation and assessment.

Using information provided by the Cuyahoga County Board of Health, areas with the four remaining HSTS will be identified and those sections of the MS4 that are tributary to these areas will be investigated first. The next highest priority will be placed upon areas having older sanitary sewers built with non-premium joints. Lastly, areas with sewers constructed within the last 25 years will be targeted, as these areas have relatively water tight construction. The age, type of construction, and integrity of existing sewers will be evaluated using record information as available to the City, and the data collected during the regular cycle of sewer cleaning and televising that is conducted by the City.

The City will develop an investigation program for all outfalls in the MS4. This will consist of:

- An initial visual inspection within the first two years of the permit period;
- Routine Follow-up Investigation on an annual basis, if feasible;
- Additional Follow-up Investigations will be conducted in response to complaints received from the public;

Outfalls will be prioritized for investigation based on the likelihood of contamination and dry weather flow, as discussed above. Dry weather flow is that flow found in the MS4 after three continuous days with less than 0.1 inches of rainfall. Chemical and bacteriological sampling will be conducted by the Cuyahoga County Board of Health when, in the best professional judgment of the investigator, that the appearance and odor of the dry weather flow encountered at an MS4 outfall is due to sanitary/gray water or other contamination.

If problems are indicated during the visual investigation of the outfall then an Upstream Problem Tracing Investigation will be conducted, as follows:

Starting at the Outfall, check upstream manholes and inflow sources to identify the source of the flow. Additional sampling may be necessary to identify the problem flow or prioritize several problem flows converging at that point; Using the storm sewer mapping and local knowledge, trace flows upstream into each branch of the system until the problem area(s) have been identified; Investigate test tees and cleanouts where residential lateral connections and/or HSTS discharge points connect to the MS4 to pinpoint the source. Investigation techniques such as dye testing, smoke testing, and televising may be needed to locate infiltration/inflow sources and cross connections.

For culverts and roadside ditches a slightly different investigation program will be used, as outlined in the chart in the Appendix entitled “Culvert Inspection Process of Illicit Discharge Detection for NPDES Phase 2”.

Working with the CCBH and other state and local agencies as appropriate, the City will determine the appropriate procedures for the management of illicit discharges on a case-by-case basis, depending on the discharge source, and will evaluate the success of the program based on the results of the investigation and sampling procedures discussed above.

3.2.3.2.5 How you plan to inform public employees, businesses, and the general public of the hazards associated with illegal discharges and improper disposal of waste. Include in your description how this plan will coordinate with your public education minimum measure and your pollution prevention/good housekeeping minimum measure.

As described above, the Watershed Coordinator and the PIPE Committee will distribute educational and informational materials that describe the problems with illicit discharges, and provide the name and phone number of contact persons to report occurrences of such. Additionally, this material will describe the procedure for the proper disposal of waste materials and inform the public of when the City conducts regular collections of such waste materials such as paint, tires, appliances, etc, in conjunction with the County Solid Waste District.

3.2.3.2.6 Who is responsible for overall management and implementation of your storm water illicit discharge detection and elimination plan and, if different, who is responsible for each of the BMPs identified for this plan.

The Storm Water Manager will be responsible for the overall management and implementation of the plan. The City Engineer will develop and maintain the Storm Sewer Map of the City. The Cuyahoga County Board of Health as described in the attached MOU, will provide the locations of all HSTS in the City (which are few in number), and will provide chemical and bacteriological sampling services and assist in the identification and elimination of illicit discharge at outfall points, especially for the HSTS.

The Public Service Director will be responsible for the inspection of the outfall points of the MS4. The Storm Water Manager will review, modify and recommend for adoption an ordinance to prohibit and eliminate illicit discharges into the MS4 of the City.

3.2.3.2.7 How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The Storm Water Manager, the Watershed Coordinator, and other city staff members as delegated, will adhere to the list of BMPs (see Table 2). Activities will be facilitated by the Storm Water Manager, with assistance from the Watershed Coordinator and the Cuyahoga County Board of Health. Goals were established with assistance from the County Board of Health, the City Engineer, and the Public Service Director.

Table 2: Illicit Discharge Detection and Elimination Plan

Best Management Practice	Schedule and Measurable Goals	Responsible Party
<p>Map storm sewer system: Map storm sewer system with:</p> <ol style="list-style-type: none"> 1. Location of outfalls. 2. Names and location of surface waters to which outfalls discharge. 3. Location of HSTS. 4. Type and size of conduits/ditches through which HSTS discharge. 	<p>Develop maps in 2003</p> <p>Add location of HSTS by end of 2003.</p> <p>Update & finalize maps by end of 2008.</p>	<p>Board of Health: See below.</p> <p>Storm Water Manager: Ensure schedule for map development is met.</p>
<p>List HSTS: Inventory HSTS connected to storm sewer system.</p>	<p>Locate HSTS and develop list by end of 2003.</p>	<p>Board of Health: Determine number, type, and location of HSTS.</p>
<p>Develop program to detect and eliminate illicit discharges: Develop a program to proactively determine if there are dry weather flows in storm sewer system, the source of these flows, and possible methods to eliminate their sources.</p>	<p>Program to be developed and submitted with updates to the Storm Water Management Program in 2004.</p> <p>Program implemented in 2005 and refined throughout permit term.</p>	<p>Storm Water Manager & Board of Health: Develop draft program and refine through permit term.</p> <p>Service Department: Inspect outfalls for dry weather flows and notify Board of Health for assistance in determining source and possible elimination options.</p>
<p>Adopt ordinance prohibiting illicit discharges: Prohibit illicit discharges to storm sewer system and implement enforcement procedures as necessary.</p>	<p>Adopt EUCLID CREEK WATERSHED COUNCIL model ordinance in 2005.</p>	<p>EUCLID CREEK WATERSHED COUNCIL: Develop model ordinance.</p> <p>Storm Water Manager: Review model ordinance, tailor to City needs, and recommend adoption to Council.</p> <p>Council: Adopt ordinance.</p>

C. Construction Site Storm Water Runoff Control (MCM #4)

1. The Permit Requirement (per Ohio EPA draft NPDES Permit)

- a) 3.2.4.1 Develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction sites that result in a land disturbance of greater than or equal to 1 acre. Reduction of storm water discharges from construction activity disturbing less than 1 acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb 1 or more acres. Your program must include the development and implementation of, at a minimum:
 1. 3.2.4.1.1 An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State or local law.
 2. 3.2.4.1.2 Requirements for construction site operators to implement appropriate erosion and sediment control BMPs.
 3. 3.2.4.1.3 Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary wastes at the construction site that may cause adverse impacts to water quality.
 4. 3.2.4.1.4 Procedures for site plan review which incorporate consideration of potential water quality impacts.
 5. 3.2.4.1.5 Procedures for receipt and consideration of information submitted by the public.
 6. 3.2.4.1.6 Procedures for site inspections and enforcement of control measures.

2. Construction Site Storm Water Control Plan

The BMPs, measurable goals, and responsible parties in this Construction Site Storm Water Runoff Control Plan are detailed in Table 3. In addition to Table 3, per Ohio EPA draft NPDES permit requirement 3.2.4.2, we are documenting our decision process with the following information required by the draft permit.

3.2.3.2.1 The regulatory mechanism you will use to require E&SC at construction sites and why you chose that mechanism. If you need to develop this mechanism, describe your plan and schedule to do so. If your mechanism is already developed, include a copy of the relevant sections with your SWMP.

Currently the City has an ordinance in effect in the Building Code, Ch. 1326 “Stormwater Management and Urban Sediment Pollution Abatement”, adopted by Council in May, 1991, controlling development and land disturbing activities on sites equal to or greater than 5,000 square feet.

The Euclid Creek Storm Water Ordinance Work Group has also developed and refined a model ordinance for Erosion and Sedimentation Control (E&SC). Our City is reviewing this ordinance in 2003 with the intention of passing the ordinance in 2004.

The model ordinance stipulates the procedures, content, and time frame for the submittal of Storm Water Pollution Prevention Plan (SWP3). Included are provisions for proof of compliance with Ohio EPA General Storm Water NPDES Permit, Section 404 of the Clean Water Act of 1972, and the Ohio Dam Safety Law. Also included are inspection procedures, the control of construction materials and debris, and the requirement to obtain a permit and to post a cash/surety bond prior to the commencement of any land disturbing activity greater than 1 acre, or as set forth in the ordinance.

3.2.3.2.2 Your plan to ensure compliance with your E&SC regulatory mechanism, including the sanctions and enforcement mechanisms you will use to ensure compliance. Describe your procedures for when you will use certain sanctions. Possible sanctions include non-monetary penalties (such as a stop work order), fines, bonding requirements, and/or permit denials for non-compliance.

This will be as described above and in the E&SC ordinance.

3.2.3.2.3 Your requirements for construction site operators to implement E&SC BMPs and control waste at construction sites that may cause adverse impacts on water quality. Such waste includes discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste.

This will be as described above and in the E&SC ordinance.

3.2.3.2.4 Your procedures for site plan review, including the review of pre-construction site plans, which incorporate considerations of potential water quality impacts. Describe your procedures and the rationale for how you will identify certain sites for site plan review, if not all plans will be reviewed. Describe the estimated number and percentage of sites that will have pre-construction site plan review.

All construction activities within the City require authorization by the City of South Euclid Building Department in the form of a Building Permit.

When an application for a Permit is made by a person or entity the Building Commissioner collects a fee on deposit for the payment of professional services rendered by the Engineer, Architect, and/or Law Director.

Prior to the issuance of the Permit the site plans must be reviewed and approved by the Engineer. As part of the plan approval process, the plans receive a detailed technical review by the Engineer for compliance with the E&SC ordinance.

Enforcement activities include the issuance of a stop-work order and the forfeiture of the cash/surety bond posted prior to the issuance of a Building Permit, if corrective action is not performed in a timely manner.

3.2.3.2.5 Your procedures for receipt and consideration of information submitted by the public. Consider coordinating this requirement with your Public Involvement and Education plan.

Our city will continue to utilize the existing procedures for complaints about construction sites. Citizen complaints are directed to the Building Department who then assigns the appropriate staff member to investigate. If necessary the City Engineer and Law Director are also consulted.

Citizens will receive information related to sediment and erosion control and will be encouraged to get involved by calling in complaints. Staff will inspect the site and issue written notification regarding sediment and erosion control needs at the site. Builders and developers will need to remedy the problem within a timely manner or a stop work order may be issued.

3.2.3.2.6 Your procedures for site inspection and enforcement of control measures, including how you will prioritize sites for inspection.

As set forth in the E&SC ordinance the sites will be inspected every seven days and within twenty-four hours of a 0.5” rainfall event. A written log of these inspections, including the name of the inspector, the date of inspection, weather conditions, actions required, and date that actions were taken, shall be maintained on-site by the site owner or designee, and copied to the City Building Department. Periodically, representatives from the Building Department and the City Engineer shall also visit the site to insure compliance with the regulations, and who will issue notice of violation of the Building Permit, if conditions warrant.

Enforcement activities include the issuance of a stop-work order and the surrender of the cash/surety bond posted prior to the issuance of a Building Permit if corrective action is not performed in a timely manner.

Sites will be prioritized based on the area of disturbance and the potential for downstream sedimentation pollution.

3.2.3.2.7 Who is responsible for the overall management and implementation of your construction site storm water control plan, and if different, who is responsible for each of the BMPs identified in this plan.

The Storm Water Manager/Building Commissioner will be responsible for the overall management and implementation of the plan, assisted by the City Engineer. The City Engineer will review and approve all SWP3 plans as part of the site plan approval process. The Cuyahoga Soil and Water Conservation District will assist in the inspection of the BMPs as described in the attached Letter of Agreement. The Storm Water Manager/Building Commissioner will review, modify and recommend for adoption an improved E&SC model ordinance.

3.2.3.2.8 Describe how you will evaluate the success of this minimum measure, including how you selected the measurable goals for each BMP.

The Storm Water Manager, the Watershed Coordinator, and other City staff members as delegated, will adhere to the list of BMPs (see Table 3). Activities will be facilitated by the Storm Water Manager and the Building Commissioner, with assistance from the Watershed Coordinator and the Cuyahoga Soil and Water Conservation District. Goals were established with assistance from the Public Service Director, the Building Commissioner, the City Engineer, and the County Soil and Water Conservation District.

Table 3: Construction Site Storm Water Control Plan

Best Management Practice	Schedule and Measurable Goals	Responsible Party
<p>Adopt revised Erosion and Sediment Control (E&SC) ordinance. This ordinance will enhance our existing E&SC regulation; it will require the control of construction site waste, document site inspections, and provide additional enforcement. The details of these activities are included as individual BMPs in this Table.</p>	<p>Adopt EUCLID CREEK WATERSHED COUNCIL model ordinance in 2004.</p>	<p>EUCLID CREEK WATERSHED COUNCIL: Provide Phase II compliant model ordinance.</p> <p>Storm Water Manager/Building Commissioner: Review model, tailor to City needs, and recommend adoption to Council.</p> <p>Council: Adopt zoning ordinance.</p>
<p>Workshop on E&SC Regulations: City will provide workshops on erosion and sediment control best management practices, how to comply with the regulation, and other information relevant to developers.</p>	<p>Beginning after regulation passed and annually.</p>	<p>SWCD: Provide workshop.</p> <p>Euclid Creek Watershed Program: Host and advertise workshops each year.</p>
<p>Attend SWCD trainings: City staff assigned to implement E&SC ordinance will attend regular SCWD training.</p>	<p>Training in 2003 with annual refresher courses.</p>	<p>SWCD: Provide training.</p> <p>Storm Water Manager/Building Commissioner: Ensure training and annual updates occur.</p> <p>City staff: Attend training and updates.</p>
<p>Review site plans: City staff will continue to review SWP3 site plans of construction sites, however such Plans will be more detailed than currently required.</p>	<p>Continue existing review and approval of plans for regulated sites prior to granting zoning permits.. Require more detailed SWP3 after ordinance adopted and training complete.</p>	<p>City Engineer: Review E&SC</p>

Best Management Practice	Schedule and Measurable Goals	Responsible Party
<p>Inspect active sites: City staff will continue to inspect active construction sites. New E&SC Ordinance will require more documentation from owner/developer.</p>	<p>Continue existing site inspections, documentation and frequency to increase after modified ordinance adopted and training complete.</p>	<p>Building Department/City Engineer: Inspect active sites.</p>
<p>Enforcement actions: When inspection reveals that work is not proceeding in accordance with approved SWP3 plan, the City may issue a stop work order halting construction until problems are corrected.</p>	<p>Enforcement actions begin after ordinance and MOU adopted and training complete and as necessary.</p>	<p>Building Department/Law Director/City Engineer: Determine necessary enforcement and issue stop work orders and corrective action requirements.</p>
<p>Respond to public complaints regarding construction activities: In addition to regular inspections of active construction sites, the City will advertise through the newsletter and on the web site a phone number for residents concerned about specific construction activities.</p>	<p>Provide existing phone number(s) and include on all print media under Public Involvement and Education Program.</p>	<p>Storm Water Manager/Building Commissioner: Ensure BMP completed.</p> <p>City Staff: Review complaints and respond appropriately.</p>

D. Post-Construction Storm Water Management in New Development & Redevelopment (MCM #5)

1. The Permit Requirement (Per Ohio EPA draft NPDES Permit)

- a) 3.2.5.1.1 Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to 1 acre, including projects less than 1 acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.
- b) 3.2.5.1.2 Develop and implement strategies which include a combination of structural and/or non-structural BMPs appropriate for you City.
- c) 3.2.5.1.3 Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law.
- d) 3.2.5.1.4 Ensure adequate long-term operation and maintenance of BMPs

2. Post-Construction Storm Water Management in New Development and Redevelopment Plan.

The BMPs, measurable goals, and responsible parties in this Post-Construction Storm Water Management Plan are detailed in Table 4. In addition to Table 4, per Ohio EPA draft NPDES permit requirement 3.2.5.2, we are documenting our decision process with the following information required by the draft permit.

3.2.5.2.1 Your program to address storm water runoff from new development and redevelopment projects. Include in this description any specific priority areas for this program

Currently the City has an ordinance in effect in the Building Code, Ch. 1326 “Stormwater Management and Urban Sediment Pollution Abatement”, adopted by Council in May, 1991, controlling development and land disturbing activities on sites equal to or greater than 5,000 square feet.

The Euclid Creek Storm Water Ordinance Work Group has also developed and refined a model ordinance for Storm Water Management. Our City is reviewing this ordinance in 2003 with the intention of adopting the ordinance in 2004.

The model ordinance requires stipulates the procedures, content, and time frame for the submittal of Storm Water Management Plan. Included are provisions for

proof of compliance with Ohio EPA General Storm Water NPDES Permit, Section 404 of the Clean Water Act of 1972, and the Ohio Dam Safety Law. Also included are inspection and maintenance procedures, the requirement for “as-built” documentation, and the requirement to obtain a permit and to post a cash/surety bond prior to the commencement of any land disturbing activity.

As detailed in Table 4, we will use a combination of planning activities, education, and non-structural and structural practices to address storm water runoff from new development and redevelopment projects.

3.2.5.2.2 How your program will be specifically tailored for you local City, minimize water quality impacts, and attempt to maintain pre-development runoff conditions.

Our City is a residential City with limited commercial and institutional developments. Our water quality concerns are those related to increases in storm water runoff as impervious cover increases and include sedimentation due to stream bank erosion, increased flooding due to increases in storm water volume, temperature due to increases in storm water temperature in detention facilities, and habitat loss as riparian and the remaining wetland areas are impacted by development.

To address this we will update our existing *City of South Euclid Comprehensive Land Use Plan* detailing remaining undeveloped parcels and the natural resource features and functions, including flood control, erosion control, and water quality protection of these parcels. This plan will also inventory the natural resource functions of land throughout our City.

From this plan, we will explore the implementation of zoning that encourages non-structural storm water management. This includes conservation subdivisions for residential areas and riparian and wetland setbacks.

We will also adopt an improved storm water management regulation that addresses both storm water quality and quantity and encourages the use of non-structural storm water management techniques. This ordinance will also encourage the use of low impact development practices on our commercial and institutional areas.

Because these BMPs represent significant changes in storm water management in Northeast Ohio, education for landowners, developers, planners, engineers, and others is necessary to support their implementation. Euclid Creek Watershed Program will provide such educational opportunities throughout the permit term. We will continue to support this education through our membership in Euclid Creek Watershed Program.

3.2.5.2.3 Any non-structural BMPs in your program, including, as appropriate:

3.2.5.2.3.1 Policies and ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation.

In 2004 we will explore the appropriateness of riparian setbacks, wetland setbacks, and conservation development to our City. If appropriate, we will work with EUCLID CREEK WATERSHED COUNCIL to tailor these requirements for implementation in our zoning code.

3.2.5.2.3.2 Policies or ordinances that encourage infill development in higher density urban areas, and areas with existing storm sewer infrastructure.

The City of South Euclid is an “inner ring” suburb of Cleveland, and is substantially “built-out”. Most new developments are in-fill type projects. In 2000 we adopted zoning resolution 722.06 permitting the development of Planned Unit Residential Developments that require the provision of open, common green space. We will continue this program under Phase II.

3.2.5.2.3.3 Education programs for developers and the public about project designs that minimize water quality impacts.

Through our participation in Euclid Creek Watershed Program we will continue to make workshops on storm water management available to developers and the public.

3.2.5.2.3.4 Other measures such as minimization of the percentage of impervious area after development, use of measures to minimize directly connected impervious areas and source control measures often thought of as a good housekeeping, preventable maintenance and spill prevention.

The City of South Euclid will explore these measures. This is addressed below.

3.2.5.2.4 Any structural BMPs in your program, including, as appropriate:

3.2.5.2.4.1 Storage practices such as wet ponds and extended-detention outlet structures.

We currently require subdivisions to control their storm water quantity through the use of detention ponds. In 2003 we will explore various options to add water quality measures to our detention requirements. These measures will be implemented in our storm water management regulation in 2004.

3.2.5.2.4.2 Filtration practices such as grassed swales, bioretention cells, sand filters and filter strips.

We will explore the implementation of these practices through our process to adopt an improved storm water management regulation in 2004.

3.2.5.2.4.3 Infiltration practices such as infiltration basins and infiltration trenches.

We will explore the implementation of these practices through our process to adopt an improved storm water management regulation in 2004.

3.2.5.2.5 What are the mechanisms (ordinance or other regulatory mechanisms) you will use to address post-construction runoff from new developments and redevelopments and why you chose that mechanism. If you need to develop a mechanism, describe your plan and a schedule to do so. If your ordinance or regulatory mechanism is already developed, include a copy of the relevant sections with your program.

As discussed above, the mechanisms we will consider for use to address post-construction runoff from new developments and redevelopments include ordinances requiring riparian and wetland setbacks, an improved storm water management regulation, and an ordinance providing landowners with the option of developing conservation designed subdivisions.

We chose these mechanisms because they address our water quality concerns which are related to increases in storm water runoff as land is developed. These mechanisms provide flexibility to landowners, while ensuring that new impervious cover is minimize; the flood control, erosion control, and water quality functions of our watercourse and wetlands are maintained; and that when storm water is created, it is managed for both quality and quantity.

3.2.5.2.6 How will you ensure the long-term operation and maintenance (O&M) of your selected BMPs. Options to help ensure that future operation and maintenance responsibilities are clearly identified include an agreement between you and another party such as a post-development landowners or regional authorities.

Non-structural BMPs including riparian and wetland setbacks would be maintained as any other setbacks are maintained in the City of South Euclid. As with all setbacks, landowners proposing activities in setbacks must request a variance and this request is reviewed, modified, and approved or disapproved by the City Engineer and the Planning and Zoning Commission. The open space created through Conservation Subdivisions will be maintained through permanent conservation easements.

Structural BMPs created through our improved storm water management regulation will be maintained by post-development landowners. If these land owners do not complete necessary operation and maintenance, the City of South Euclid will reserve the right to complete this work and assess these landowners.

3.2.5.2.7 Who is responsible for overall management and implementation for your post-construction plan and, if different, who is responsible for each of the BMPs identified for this program.

The responsible parties for each component of our Post-Construction Storm Water Management Plan are detailed in Table 4.

3.2.5.2.8 How will you evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

We will evaluate the success of this minimum measure through our ability to successfully implement riparian and wetland setbacks, conservation subdivisions, and improved storm water management by 2004. If these practices are not adopted, we will consider additional BMPs to achieve similar outcomes.

Table 4: Post-Construction Storm Water Management Plan

Best Management Practice	Schedule and Measurable Goals	Responsible Party
<p>Comprehensive Land Use Plan: As with most land use plans, this Plan will review the City’s existing Land Use Plan and recommend future changes. As part of Phase II, however, this Plan may also inventory the natural resource functions, including flood control, erosion control, and water quality in the City.</p>	<p>Plan completed by 2005</p>	<p>Mayor & Council: Ensure plan executed and coordinated with mapping activities under MCM #3.</p>
<p>Site Planning Forum: Participate in Euclid Creek Watershed Council Site Planning Forum to examine current development practices and potential modifications of these practices to reduce the creation of storm water and to minimize the impacts of impervious cover.</p>	<p>Euclid Creek Watershed Program: host Site Planning Forum in 2003. Participate in Site Planning Forum in 2003</p>	<p>Euclid Creek Watershed Program: Host Forum. Mayor/Council: Ensure participation.</p>
<p>Workshops for Development City: Workshops for landowners, builders, developers, and City officials on storm water management.</p>	<p>2003 & on-going</p>	<p>Euclid Creek Watershed Program: Provide workshops. Storm Water Management Committee: Advertise through web site, newsletter, and local paper.</p>
<p>Measures reducing impervious cover: The City will consider adopting limits on the amount of the impervious cover in residential and commercial developments.</p>	<p>Begin review of BMP in 2003. Determine applicability of BMP by 2004.</p>	<p>Planning and Zoning Commission: Explore BMP and recommend approval or disapproval. If disapproval recommended, recommend alternative BMP. Storm Water Management Committee: Assist Planning and Zoning Commission in review. If City decides not to</p>

Best Management Practice	Schedule and Measurable Goals	Responsible Party
		implement BMP, suggest other non-structural BMPs to meet the requirements of MCM #5.
<p>Conservation residential/industrial subdivisions: City will explore adopting zoning ordinances allowing interested landowners the option of maintaining open space to control storm water runoff.</p>	<p>Begin review of BMP in 2003.</p> <p>Determine applicability of BMP by 2004.</p>	<p>Planning and Zoning Commission: Explore BMP and recommend approval or disapproval. If disapproval recommended, recommend alternative BMP.</p> <p>Storm Water Management Committee: Assist Planning and Zoning Commission in review. If City decides not to implement BMP, suggest other non-structural BMPs to meet the requirements of MCM #5.</p>
<p>Riparian and Wetland Setbacks: City will explore adopting zoning ordinances creating setbacks from certain watercourses and wetlands.</p>	<p>Begin review of BMP in 2003.</p> <p>Determine applicability of BMP by 2004.</p>	<p>Planning and Zoning Commission: Explore BMP and recommend approval or disapproval. If disapproval recommended, recommend alternative BMP.</p> <p>Storm Water Management Committee: Assist Planning and Zoning Commission in review. If City decides not to implement BMP, suggest other non-structural BMPs to meet the requirements of MCM #5.</p>
<p>Storm Water Management Ordinance: Adopt EUCLID CREEK WATERSHED COUNCIL model storm water management ordinance.</p>	<p>Review ordinance in 2003.</p> <p>Adopt by 2004.</p>	<p>Planning and Zoning Commission: Review ordinance, work with EUCLID CREEK WATERSHED COUNCIL to tailor to City needs, and recommend adoption to Council.</p>

Best Management Practice	Schedule and Measurable Goals	Responsible Party
This ordinance includes provisions for both new development and redevelopment activities.		Storm Water Management Committee: Assist Planning and Zoning Commission in review and tailoring of model ordinance.

E. Pollution Prevention / Good Housekeeping for City Operations (MCM #6)

1. The Permit Requirement (per Ohio EPA draft NPDES Permit)

- a) 3.2.6.1.1 Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from City operations; and
- b) 3.2.6.1.2 Using training materials that are available from Ohio EPA or other organizations, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

2. Pollution Prevention and Good Housekeeping Plan

The BMPs, measurable goals, and responsible parties in this Pollution Prevention and Good Housekeeping Plan are detailed in Table 5. In addition to Table 5, per Ohio EPA draft NPDES permit requirement 3.2.6.2, we are documenting our decision process with the following information required by the draft permit.

3.2.6.2.1 Your operation and maintenance program to prevent or reduce pollutant runoff from your City operations. Your program must specifically list the City operations that are impacted by this operation and maintenance program. You must also include a list of industrial facilities your City owns or operates that are subject to the Ohio EPA’s Industrial Storm Water General Permit or individual NPDES permits for discharges of storm water associated with industrial activity that ultimately discharge to your MS4. Include the Ohio EPA permit number or a copy of the Industrial NOI for each facility.

The City facilities that are impacted by this permit include:

- 1. Service Department Facility, 4224 Monticello Boulevard. This facility houses the all of the street and sewer maintenance equipment of the City, and serves as the central maintenance and repair shop for all City owned vehicles. The facility is also the location of a recently constructed salt storage building which has capacity for over 5,000 tons of salt storage.
- 2. Fire and Police Station, 1349 South Green Road. The City Fire Department fire trucks, emergency rescue and response vehicles and equipment, and the City Police Department vehicles and equipment, and hazardous material spill response equipment are housed at this facility.
- 3. The City operates chlorinated swimming pools at three facilities: Bexley Park, Quarry Park, and Victory Park. These facilities have been recently modernized and discharge into the sanitary sewer system.

3.2.6.2.2 Any government employee training program you will use to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance. Describe any existing, available materials you plan to use. Describe how this training program will be coordinated with the outreach program developed for the Public Involvement and Education minimum measure and the illicit discharge minimum measure.

The City will utilize available training material provided by the Euclid Creek Watershed Council, the PIPE Committee, Ohio EPA, OSHA, and ODOT. The PIPE Committee will be responsible for the collection and dissemination of this material to the Storm Water Manager, for distribution to the City employees.

The City Fire Department handles all hazardous waste spills. The Fire Department will offer training materials that will be disseminated to the public and to the City employees. The Department will offer training to City employees in hazardous material management once every year and will report on this training to the Storm Water Manager.

3.2.6.2.3 Your program description must specifically address the following areas:

3.2.6.2.3.1 Maintenance activities, schedules, and long-term inspection procedures for controls to reduce floatables and other pollutants in your MS4.

The City has a program to sweep streets three times every season (weather permitting) or more often as needed. Storm sewer catch basins are generally equipped with sumps, hydro-brakes, and traps that prevent most objectionable material from entering the MS4. These are cleaned on a rotating schedule, typically once every four years.

3.2.6.2.3.2 Controls for reducing or eliminating the discharge of pollutants from streets, City parking lots, maintenance and storage yards, waste transfer stations, fleet maintenance shops with outdoor storage areas, and salt/sand storage locations and snow disposal areas you operate.

All City owned parking lots have catch basins with sumps that are cleaned on a regular basis (see above). The Service Department Facility and the three parks mentioned above have had storm water management facilities installed to reduce the impact of runoff. This facility can trap sediment and floatables. Vehicles are repaired and maintained within an enclosed facility. Engines and other component parts designated for disposal are not allowed to remain in uncovered storage. Oils and other fluids from maintenance activities are collected and disposed of by a licensed contractor.

The City has recently built a 5,000 ton, 100 foot diameter salt storage facility in order that all salt used by the City is stored under cover.

3.2.6.2.3.3 Procedures for the proper disposal of waste removed from your MS4 and your City operations, including dredge spoil, accumulated sediments, floatables, and other debris.

Material collected from street sweeping and catch basin cleaning activities are disposed of by a licensed contractor and sent to a sanitary landfill.

3.2.6.2.3.4 Procedures to ensure that new City flood management projects are assessed for impacts on water quality and that existing projects are assessed for incorporation of additional water quality protection devices and practices.

Construction and maintenance activities within the jurisdictional waters of the United States are done in compliance with Sections 402 and 404 of the Clean Water Act. Plans and specifications of such activities requiring permits and NOI are forwarded to the Ohio EPA and/or the Corps of Engineers, when appropriate. The City requires the use sedimentation and erosion control measures on all municipal projects. Projects are reviewed by the City Engineer, the Public Service Director and the Building Commissioner, as appropriate.

3.2.6.2.4 Who is responsible for overall management and implementation of your pollution prevention/good housekeeping program and, if different, who is responsible for each BMP identified in this program.

The responsible parties for each component of our Pollution Prevention/Good Housekeeping Plan are detailed in Table 5.

3.2.6.2.5 How you will evaluate the success of this minimum measure, including how you selected the measurable goals for each of the BMPs.

The Storm Water Manager, the Watershed Coordinator, and other City staff members as delegated, will adhere to the list of BMPs (see Table 5). Activities will be facilitated by the Storm Water Manager and the Public Service Director, with assistance from the Watershed Coordinator and the Cuyahoga Soil and Water Conservation District. Goals were established with assistance from the Public Service Director, the Fire and Police Departments, the City Engineer, and the County Soil and Water Conservation District.

Table 5: Pollution Prevention and Good Housekeeping Plan

Best Management Practice	Schedule and Measurable Goals	Responsible Party
<p>Operation and maintenance program to prevent or reduce storm water pollution from City operations.</p>	<p>Develop program in 2004. Implement program in 2005.</p>	<p>Storm Water Management Committee: Working with Service Director/City Engineer, develop an O&M program. Service Director/City Engineer: Assist in O&M program development. Implement O&M program.</p>
<p>City staff education program on pollution prevention.</p>	<p>Develop program in 2003 Implement program in 2004</p>	<p>Watershed Coordinator/Storm Water Management Committee: Working with Service Director and City Engineer develop education program. Service Director/City Engineers: Assist in education program development. Implement education program.</p>
<p>Street Sweeping and Catch Basin Cleaning: City will continue current street sweeping and catch basin cleaning program.</p>	<p>Streets are swept three times every season or more often as needed. Catch basins are cleaned on a rotating schedule, once every 4 years.</p>	<p>Service Director</p>
<p>Salt Storage and Applications: City uses an average of 4,500 to 5,000 tons per season. In snow situations, hills and main roads are salted on the first pass and roads with heavier volume receive more attention.</p>	<p>Current practices will be continued. Review salt application/storage</p>	<p>Service Director</p>

Best Management Practice	Schedule and Measurable Goals	Responsible Party
Applications include a combination of salt, and calcium under extreme conditions. These are stored under roof in a newly constructed salt storage facility.	for pollution prevention options in 2004	
<p>Fleet Maintenance: Oil is drained from equipment into drain pans and transferred to an above ground tank. Oil is disposed of by a licensed contractor. Oil spills are cleaned with oil dry. Containers with fresh and used oil dry are located in covered vehicle maintenance area.</p>	<p>Continue existing fleet maintenance. Review fleet maintenance for pollution prevention options in 2004.</p>	Service Director/Mechanic
<p>Disposal of Waste Collected through City Operations: Collected leaves are composted at an approved composting facility. Tree branches are collected and shredded, and the mulch made available to residents. Waste collected from storm water system maintenance is de-watered and sent to an approved landfill.</p>	<p>Continue existing activities. Review waste disposal for pollution prevention in 2004</p>	Service Director

VI. Monitoring, Recordkeeping, and Reporting

A. Shared Responsibility

The City will retain responsibility for storm water program development and implementation under the permit. However, certain organizations will play a vital role in assisting the City to implement MCMs # 1-5. These organizations will work with the City in accordance with the documents attached in Appendices F and G. A summary of organizational assistance to the City is as follows. Please note that the City currently has working relationships with the Board of Health, Cuyahoga SWCD, and the Cuyahoga County Solid Waste District. These relationships will continue and the City will continue to receive services from these county agencies as indicated in our BMPs. Additional MOUs and Letters of Agreement were developed to summarize additional services that these organizations will provide.

The Cuyahoga County Board of Health (CCBH) will assist in the implementation of MCM #3 by conducting testing on samples to determine if dry weather discharges are illicit and by following up on enforcement of illicit discharges. Appendix F to this document contains an agreement by which the CCBH agrees to perform the necessary services to implement the control measure. Reporting functions will be retained by the City

The Euclid Creek Watershed Council (ECWC) will assist in the implementation of MCMs # 1, 2, 3, 4, & 5 by providing written materials, training, workshops, and model regulations. Appendix G contains an agreement by which ECWC agrees to perform the necessary services to implement the control measures. Reporting functions will be retained by the City.

Cuyahoga SWCD will assist in the implementation MCMs # 1 & 2 by providing written materials, training, and workshops. SWCD will assist in the implementation of MCM # 4 by training the City Building Department and Engineering Department Inspectors. CSWCD will also advise the City on MCM #5, in developing zoning regulations and other BMPs to control post-construction storm water runoff. The City will retain reporting functions under the permit.

B. Monitoring

Monitoring will be performed in accordance with section 5.1 of NPDES Permit No.: OHQ00001.

C. Record Keeping

All records will be kept in accordance with Section 5.2 of the Permit.

D. Reporting

Reports will be submitted annually starting one year after the date of general permit coverage. Reports will contain the information required in Section 5.3 of the General Permit.

VII. Appendices

Appendices to the City of South Euclid Storm Water Program

- A. Map of City of South Euclid
- B. Map of Storm Sewer System
- C. City of South Euclid Zoning Map
- D. Ordinance 18-03, Accepting the Storm Water Management Program
- E. Newsletter and newspaper articles on the Euclid Creek and the Storm Water Program
- F. MOU, Cuyahoga County Health Department.
- G. Letter and Draft MOU, Euclid Creek Watershed Council
- H. Ch. 1326 “Storm Water Management and Urban Sediment Pollution Abatement” (E&SC)
- I. City of South Euclid Comprehensive Master Plan, Ch. VII “Development Policies”
- J. Flow Chart “Culvert Inspection Process of Illicit Discharge Detection for NPDES Ph. II”