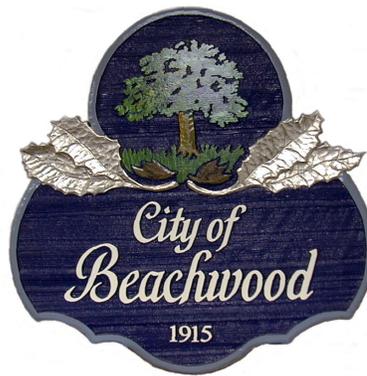


**The City of Beachwood, Ohio  
Storm Water Management Program  
March, 2003**



**Beachwood Storm Water Commission**

Mayor Merle S. Gorden  
Council Member Mark Mintz  
Resident Member Keith Voigt  
Resident Member Richard Barson  
Staff Engineer Thomas S. Kreczko, PE  
Service Director Dale H. Pekarek  
Building Commissioner John D. Korinek  
Assistant Law Director Paul Levin  
Secretary Alison Hirsch

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## *Executive Summary*

The City of Beachwood is required to submit a Storm Water Management Plan (SWMP) in accordance with 40 CFR Part 122.32 and Ohio Law. The document outlines the City of Beachwood program to develop, implement and enforce a storm water management program designed to reduce the discharge of pollutants to the maximum extent practicable, to protect water quality, and to satisfy the appropriate requirement of the Clean Water Act (CWA) in accordance with the Ohio EPA Phase II program. The SWMP addresses the six minimum control measures as required by state regulations. The plan also identifies the city's legal authority to implement the general permit. The Notice of Intent (NOI) and SWMP were submitted March 10, 2003.

### **I. Legal Authorities to Implement the Storm Water Management Program**

The City of Beachwood has the legal authority to implement the 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.

Numerous sections of the Codified Ordinance of the City of Beachwood govern and regulate storm and sanitary sewer connections, grease traps, drainage, pollution prevention and storm water management. Two new chapters were added to the Codified Ordinance in 2002 to supplement the Planning and Zoning Code. The two chapters added are Chapter 1175- Storm Water Pollution Prevention Plan and Site Development and Chapter 1179- Storm Water Management and Site Development.

### **II. Financial Ability to Implement the Storm Water Management Program**

In 2003 the City of Beachwood will fund the additional activities necessary to implement its SWMP through dollars from the general fund. In 2004 the City of Beachwood Storm Water Management Coordinator (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 Community Storm Water System**

The storm water management plan traverses all areas within the city limits. The City of Beachwood is 5.25 square miles with a population of 12,000 residents. There are approximately 50 center line miles of roadway within the City.

The City of Beachwood is the headwater of five watersheds. The two major watersheds are Euclid Creek and Mill Creek. The three lesser watersheds are Chagrin River, Tinker's Creek and Doan Brook. Twenty (20) water outfalls discharge to the waters of the State (see Master Storm Sewer Map). All the developed areas of the community are sewerred.

The City of Beachwood has taken a leadership role in the formation of a regional watershed group, The Euclid Creek Watershed Partnership. The 10 communities within the Euclid Creek

Watershed came together in an informal council as a forum to discuss common storm water problems. With the assistance of NOACA, a grant was obtained from the Ohio Lake Erie Protection Fund. Matching funds from each community were used to start a pilot watershed program. As a result of that pilot project, a grant was obtained from the Ohio Department of Natural Resources to develop a regional watershed action plan and to formalize the Euclid Creek Watershed Council (ECWC) into a watershed partnership. On December 16, 2002, by Ordinance 2002-185, the Council of the City of Beachwood authorized the Mayor to enter into said partnership via a Memorandum of Understanding with the Cuyahoga Soil and Water Conservation District as the coordinating agency. The City of Beachwood has committed to an annual contribution of \$2,500 for the next six years as our local share of the cost to support the Euclid Creek Watershed Coordinator.

The City of Beachwood is also an active participant in the Mill Creek Watershed Partnership. Beachwood participated in the Kerruish Park Storm water management Project, contributing \$38,475 towards the watershed stakeholders local share of the construction cost of the facility.

On December 16, 2002, by Ordinance number 2002-184, the City of Beachwood established a Storm Water Commission. The purpose of the Storm Water Commission is to facilitate the development of a SWMP for the City of Beachwood. The Storm Water Commission consists of: The Mayor, Council Representative, Building Commissioner, Staff Engineer, Law Director or Assistant Law Director, Service Director and two residents. It is the intent of the Storm Water Commission to meet periodically to review and implement the City's SWMP.

#### **IV. Description of Permit Development and Decision Process**

To develop its SWMP, the City of Beachwood 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 Work Group included representatives from each watershed community. The groups met monthly in 2002. Our community's representative is the staff engineer. Working with ECWC, the Committee reviewed the general requirements of each Minimum Control Measure (MCM) and discussed Best Management Practices (BMP) 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 ECWC 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 BMPs being suggested for the six MCMs.

On December 16, 2002 at a regularly scheduled meeting of the Beachwood City Council, a presentation was made to the public on the NPDES Phase II permit process and requirements to develop and implement a SWMP addressing the six MCMs.

2. **Assigned Staff Engineer to coordinate and develop SWMP.**
3. **Established a Storm Water Commission:** December 16, 2002, Ordinance 2002-184.
4. **Reviewed the specific requirements of the Ohio EPA draft NPDES Phase II permit:** After reviewing the general Phase II requirements and inventorying our existing BMPs, we examined the specific requirements of under each MCM.
5. **Approach to the Phase II Storm Water Management Plan:** The NOACA Model Plan as well as the Euclid Creek Watershed Model Plan were used as a guide to formulate the City of Beachwood Plan. The City of Beachwood subscribes to the NOACA objectives of the model development effort and the regional and watershed approach to storm water management.

Upon review of the NOACA and Euclid Creek Watershed Models, the City determined the extent to which its current activities meet the specific recommended BMPs. The City also determined that the BMPs recommended by the Model Plans would fill any shortfalls in the existing program. The City therefore elected to incorporate the Model Plan BMPs into Beachwood's BMPs with modifications based on our financial and legal ability to implement these practices as well as their suitability for our community.

6. **Selected measurable goals and assigned responsible parties:** After BMPs were selected; they were assigned to specific staff for implementation by set dates.
7. **Storm Water Commission Review:** The storm water commission reviewed and approved the SWMP on February 20, 2003.
8. **Finalized Storm Water Management Program:** Finalized the Storm Water Management Program based on the comments, recommendations and approval of the Storm Water Commission.
9. **Held Public Hearings:** The City of Beachwood presented the draft SWMP at a public meeting on March 3, 2003.
10. **Approved:** The City of Beachwood City Council approved the SWMP on March 3, 2003.

## **V. Storm Water Management Program**

The plan outlines the six MCMs that are expected to result in reductions in pollutants discharged by the City of Beachwood.

The identified water quality pollutant problems are organic enrichment, degraded habitat and toxic chemicals. Threatening water quality pollutant problems are excessive nutrients.

The six MCMs are:

- 1) Public Education/Outreach
- 2) Public Participation/Involvement
- 3) Illicit Discharge Detection/Elimination
- 4) Construction Site Runoff Control
- 5) Post Construction Runoff Control
- 6) Pollution Prevention/Good Housekeeping.

The City's Storm Water Management Program to address the six minimum control measures is as follows:

## **Public Involvement and Public Education Plan (PIPE)**

The requirements and strategies to implement the Public Education/Outreach and Public Participation/Involvement minimum control measures are similar and overlap. Therefore the City of Beachwood has chosen to develop a unified Public Involvement and Public Education Plan (PIPE).

As a member of the Euclid Creek Watershed Partnership, The City of Beachwood has agreed to work in unison with other communities in the Euclid Creek Watershed on a comprehensive, watershed based PIPE program. The Euclid Creek Watershed is one of the two largest in Beachwood. Therefore the Euclid Creek Watershed PIPE Program will be of relevant scope to encompass the entire community. We will also utilize the services and resources available through other regional agencies such as NOACA, NEORSD, Cuyahoga County Board of Health and Cuyahoga Soil and Water Conservation District to provide educational materials and public involvement activities for our residents.

Our PIPE program is detailed in Table 1.

A model PIPE Program developed by Jan Rybka, Euclid Creek Watershed pilot project coordinator, was used as the primary source to develop Beachwood's PIPE, since the City's PIPE is unified with the other Euclid Creek Watershed communities. The NOACA model PIPE was used as a secondary source. Please note: Ms. Rybka served on NOACA's Regional Storm Water Steering Committee as a work group leader of the Public Education and Involvement Subcommittee. Therefore the program used by the City as a primary source includes information and expertise from both programs.

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, community activities, and print media including newsletters, brochures and fact sheets, new resident outreach, and web site postings, aimed at reaching the diverse audiences within the city.

Our newsletter *The Upperclassman* reaches every resident bimonthly and our web site, beachwoodohio.com, is very active. Also, the City purchases advertising space for community information articles in two independent local community newsletters, *The Beachwood Buzz* and *The Beachwood Business FAX*. *The Beachwood Buzz* reaches every resident and business monthly. *The Beachwood Business FAX* is a weekly publication. Our community activities, including the Family Fun Day, are long-standing events and very well attended by residents. We will be upgrading our website to include information about Storm Water Issues and public participation. We currently send packets of information to new homeowners.

Every attempt is being made to link to as many people, young and old, in the community as possible. Information will be available at City Hall and will be distributed through internal channels, such as community newsletters, website and new homeowner kits. Community events, such as Family Fun Day provide opportunities for participation from a large variety of groups, both young and old. Businesses will also receive information through newsletters, website, and

community events. Outreach to school children in the community 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.

Because the majority of the identified 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 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. We will also include in our program of education material for understanding of watershed and municipal sewage systems.

Our outreach strategy is to work with the other communities in the Euclid Creek Watershed to raise awareness of watershed issues, to involve citizens in water quality discussions, to help change behaviors, and to 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 community events, brochures, articles, electronic information, school programs and community events. The media will be used to help promote programs and to report on the progress being made to address storm water concerns.

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 public was invited to participate in the planning process. Work groups met on a regular basis, and community meetings and events were held to keep citizens informed. At the December 16, 2002 regularly scheduled Council meeting a presentation was made to the public on NPDES Phase II permitting process and the requirement to develop and implement a SWMP.

The final BMPs were presented to the Euclid Creek Watershed Council Storm Water Ordinance Task Force, PIPE Work Group, the Euclid Creek Watershed Council, including engineers and service personnel, City Council, and our City's Storm Water Commission for their approval. Over the five 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.

As detailed in Table 1, we appointed a Community 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 a watershed-based PIPE program. The program will be relevant to the entire community. The Watershed Coordinator has encouraged citizen representation in the PIPE activities. Beachwood will appoint representative(s) to serve on the PIPE Work Group. Community residents will also be encouraged to participate.

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 and the storm water management plan to various residents of the ten communities in the watershed. The second meeting, sponsored by the Euclid Creek coordinator, had 22 participants who presented the Watershed Council with a draft SWMP. City council passed a resolution in support of the SWMP on March 3, 2003.

A Watershed Coordinator, with assistance from our Storm Water Manager is responsible for the overall management and implementation of our Public Involvement and Education Plan. The Watershed Coordinator will report quarterly to the Storm Water Management Committee. To assist the City in implementing its activities under the Public Involvement and Education Plan, Beachwood has entered into a “Partnership Agreement” and signed a Memorandum of Understanding with the Cuyahoga Soil and Water Conservation District to assist us in carrying out our mission. See Appendix for letter confirming Partnership Agreement.

The Watershed Coordinator will adhere to the list of BMPs (see table 1). The coordinator will facilitate activities with assistance from the PIPE Work Group. Goals were established with assistance from the PIPE work group and based on the needs in the community.

**Table 1: PUBLIC INVOLVEMENT AND PUBLIC EDUCATION PLAN (PIPE)**

<b>BEST MANAGEMENT PRACTICE</b>	<b>STRATEGY</b>	<b>MEASURABLE GOALS</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTY</b>
<b>Community Storm Water Manager</b>	<p>Will designate a community Storm Water Manager to oversee the implementation of the entire storm water management plan for that community. This person will delegate duties to responsible staff, track progress, assemble and submit annual report to the OEPA.</p> <p>Staff Engineer has been appointed by the Mayor to be Beachwood's Storm Water Manager</p>	<ul style="list-style-type: none"> <li>▪ Assign/appoint tasks to various parties for implementation</li> <li>▪ Prepare and submit annual progress report for compliance purposes to the OEPA</li> </ul>	Annually	Staff Engineer
<b>Euclid Creek Watershed Program</b>	<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 community 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> <p>Ordinance 2002-185, passed December 16, 2002 authorizes the Mayor to enter into Euclid Creek Watershed Partnership via a Memorandum of Understanding with Cuyahoga Soil and Water Conservation District as coordinating agency.</p>	<ul style="list-style-type: none"> <li>▪ Assign a person(s) to be the community representative on the watershed PIPE committee</li> <li>▪ Participate in quarterly meetings</li> <li>▪ Develop annual work plan</li> <li>▪ Submit quarterly progress reports to the Community Storm Water Manager</li> </ul>	<p>Establish in 2003</p> <p>Participate annually.</p>	<p>The community Storm Water Manager is responsible for appointing community representatives to serve as the city's representatives on the Euclid 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>

**Table 1: PUBLIC INVOLVEMENT AND PUBLIC EDUCATION PLAN (PIPE)**

<b>BEST MANAGEMENT PRACTICE</b>	<b>STRATEGY</b>	<b>MEASURABLE GOALS</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTY</b>
<b>Storm Water Commission</b>	<p>Form a Storm Water Commission to facilitate, oversee and implement the SWMP. Membership to include two residents.</p> <p>Storm Water Commission was formed on December 16, 2002 by Ordinance 2002-14.</p>	<ul style="list-style-type: none"> <li>▪ Meet at least twice per year</li> </ul>	<p>Establish in 2003</p> <p>Annually</p>	Storm Water Manager
<b>Mill Creek Watershed Partnership</b>	Continued participation in the NEORSD Mill Creek Watershed Partnership	<ul style="list-style-type: none"> <li>▪ Participate in meetings</li> </ul>	Participate Annually	Storm Water Manager
<b>Community Improvement Day</b>	<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, stream clean ups; beautification day; or hazardous waste collection day.</p> <p>PIPE Committee members determine date, activity locations and disperse information through city channels</p>	<ul style="list-style-type: none"> <li>▪ Organize an activity; publicize; train volunteers</li> <li>▪ Number of activities</li> <li>▪ Where and how advertised</li> <li>▪ Number participants</li> </ul>	<p>Establish in 2003</p> <p>Maintain annually</p>	<p>Watershed Coordinator</p> <p>PIPE Committee members assist.</p>

**Table 1: PUBLIC INVOLVEMENT AND PUBLIC EDUCATION PLAN (PIPE)**

<b>BEST MANAGEMENT PRACTICE</b>	<b>STRATEGY</b>	<b>MEASURABLE GOALS</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTY</b>
<b>K-12 Education</b>	<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.</p> <p>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"> <li>▪ One classroom per year participating in activity</li> <li>▪ One teacher training session offered</li> <li>▪ Record # of teachers trained</li> <li>▪ Record # of presentations in schools</li> <li>▪ Record # of students participating in the activities</li> </ul>	<p>Establish in 2004</p> <p>Maintain annually</p>	Watershed Coordinator
<b>Storm Water Website</b>	<p>Provide information on the City's website to address storm water concerns for the community. Information may include current PIPE activities, storm water/water quality information, and links to other sites. Advertise Web site in community newsletter and/or local media outlets.</p> <p>PIPE Committee members submit information attained from Euclid Creek Watershed Coordinator to create website and for supply regular updates about activities to the Web Master.</p>	<ul style="list-style-type: none"> <li>▪ Update regularly</li> <li>▪ Print updates, file</li> <li>▪ Record # of hits</li> </ul>	<p>Establish in 2003</p> <p>Maintain regularly</p>	Communication Coordinator

**Table 1: PUBLIC INVOLVEMENT AND PUBLIC EDUCATION PLAN (PIPE)**

<b>BEST MANAGEMENT PRACTICE</b>	<b>STRATEGY</b>	<b>MEASURABLE GOALS</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTY</b>
<b>Community Newsletter Articles</b>	<p>Include an article on the subject of storm water and water quality a minimum of once a year in a community newsletter.</p> <p>The Euclid Creek Watershed Program PIPE Committee will suggest topics for each year. They will help disperse the information through the appropriate community outreach channels.</p>	<ul style="list-style-type: none"> <li>▪ Keep a copy of each newsletter</li> <li>▪ Record # distributed</li> </ul>	<p>Establish in 2003</p> <p>Maintain annually</p>	Watershed Coordinator
<b>Brochures and Fact Sheets</b>	<p>Distribution of brochures, fact sheets or watershed newsletters on one of the following topics:</p> <ul style="list-style-type: none"> <li>• Municipal sewer system or watersheds</li> <li>• Lawn &amp; garden care-pesticide management</li> <li>• Household hazardous wastes-no dumping</li> <li>• Stream Stewardship or Riparian guide</li> </ul> <p>PIPE Committee will work with the Euclid Creek Watershed Coordinator to determine appropriate topics and to assist in dispersing information to the public.</p>	<ul style="list-style-type: none"> <li>▪ Create and distribute one per year to a target audience representing at least 100% of community residents</li> <li>▪ Record number of brochures printed and to whom distributed</li> </ul>	<p>Establish in 2003</p> <p>Maintain annually</p>	Watershed Coordinator
<b>Educational display/exhibit</b>	<p>Determine an annual theme. Create a display for community events, libraries, schools, and community events to educate the public about pollution prevention and methods to protect water quality. Suggested topics:</p> <ul style="list-style-type: none"> <li>• Municipal sewer system or watersheds</li> <li>• Home sewage treatment systems</li> <li>• Lawn &amp; garden care</li> <li>• Pesticide management</li> <li>• Household hazardous wastes (no dumping)</li> <li>• Composting</li> <li>• Stream Stewardship or Riparian guide</li> </ul>	<ul style="list-style-type: none"> <li>▪ Create a display</li> <li>▪ Target 2 locations per year</li> <li>▪ Record of type of display</li> <li>▪ Record of locations housing the display</li> </ul>	<p>Establish in 2003</p> <p>Maintain annually</p>	Watershed Coordinator

**Table 1: PUBLIC INVOLVEMENT AND PUBLIC EDUCATION PLAN (PIPE)**

<b>BEST MANAGEMENT PRACTICE</b>	<b>STRATEGY</b>	<b>MEASURABLE GOALS</b>	<b>TIME FRAME</b>	<b>RESPONSIBLE PARTY</b>
<b>Storm Drain Replacement</b>	Replace catch basin curb casting where feasible with new curb casting which include the “No Dump” message cast into the casting on Roadway Improvement Projects.	<ul style="list-style-type: none"> <li>▪ # of catch basins installed containing message “No dumping”</li> <li>▪ Report # of educational pieces distributed</li> </ul>	Establish in 2003  Maintain annually	Staff Engineer
<b>Public Meetings</b>	<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 Euclid Watershed Coordinator to determine appropriate topics, dates and to assist in dispersing information to the public.</p>	<ul style="list-style-type: none"> <li>▪ Coordinate and schedule meeting; arrange speakers; coordinate complimentary activities</li> <li>▪ Record meeting times, dates, advertisements</li> <li>▪ Record attendees</li> <li>▪ Record stakeholder comments</li> </ul>	Establish in 2003  Maintain annually	Euclid Watershed Coordinator will coordinate with PIPE Committee
<b>Storm Water Quality Complaint Line</b>	<p>Using various outreach methods, announce location an environmental complaint hotline, 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 Euclid Watershed Coordinator to determine appropriate methods of educating the public.</p>	<ul style="list-style-type: none"> <li>▪ Establish complaint procedure</li> <li>▪ Develop complaint forms</li> <li>▪ # of calls received</li> <li>▪ detail response and information mailed to residents</li> </ul>	Establish in 2005  Maintain annually	Staff Engineer

## **Illicit Discharge Detection and Elimination**

Table 2 details the City's Illicit Discharge Detection and Elimination program.

The City's Master Storm Map has been recently updated and converted to electronic medium by the City's Consulting Engineering Firm. Data for the Master Sewer Map update include existing master sewer mapping, available sewer record plats, improvement plans, and field surveys. The same methods will be used to regularly update the map. Beachwood will investigate the feasibility of GPS and GIS mapping systems.

Numerous sections of the Codified Ordinance of the City of Beachwood govern and regulate storm and sanitary sewer connections, grease traps, drainage, pollution prevention and storm water management, hazardous waste, mud on streets, public nuisance, etc.

The City will review its regulations during 2003 to determine if modifications are necessary to conform to Federal and State Regulations. If modifications are necessary, they will be presented for Council's consideration during 2004. In addition, as a member of the Euclid Creek Water Shed Council, the City will participate in any effort by ECWC to develop a model ordinance for illicit discharge and elimination.

Beachwood's current regulations provide enforcement procedures. The City will review the enforcement procedures and recommend updates in the same manner and timetable as described above.

As detailed in Table 2, the City will perform 20% of outfall dry weather inspections on a yearly basis continuing until all outfalls are inspected by the end of 2007. Outfall inspections will be prioritized by the end of 2003 based on the age of sanitary sewers within an outfall drainage area. The City will respond to complaints of illicit discharges regardless of the priority schedule.

If an inspection or complaint investigation indicates a probable illicit discharge, the City will begin the initial tracing of the source by utilizing the services of the Cuyahoga Board of Health to sample and test the discharge. Once a pollutant has been verified, the City will continue an upstream investigation to trace the source. Techniques to find the source could include TV inspection, dye or smoke testing, and sampling and testing. Some of the activities may be performed by the Service Department. For additional assistance, the City will utilize the services of the Cuyahoga County Sanitary Engineer and the Cuyahoga County Board of Health.

Illicit discharges found to be caused by the City's storm or sanitary sewer systems will be repaired. Illicit discharge source traced to originate on private property or caused by private action, i.e. improper dumping of waste into a catch basin, will be rectified by enforcement procedure of the City's Codified Ordinance.

Once the illicit discharge source is removed from an outfall's drainage area, the outfall will be visually re-inspected during dry weather.

As detailed in Table 2, the City currently has many programs and policies to reduce pollutants from both illicit discharges and the disposal of waste. These programs include catch basin cleaning, paint and pesticide collection program and sewer system evaluations. The City intends to continue these programs.

In October 2002, the City completed a sanitary sewer improvement project for Ramsay Road, North Woodland Road and the North side of Fairmount Boulevard from North Woodland Road to the Easterly corporation line. This project provides new sanitary sewer access to 55 homes currently on Home Sewage Treatment Systems (HSTS). The Cuyahoga County Board of Health has given these homeowners until October 2003 to abandon their individual household septic system and connect to the new sanitary sewers. Three additional homes for which an existing sanitary sewer is available have also been notified to connect to the sanitary sewer system by October 2003. After these 58 homes are connected to the sanitary sewer system there will remain only two known homes within the City of Beachwood utilizing HSTS. These two parcels are not readily accessible to a sanitary sewer.

The City's PIPE Plan and Pollution Prevention /Good Housekeeping Plan are programmed to inform the general public, businesses and public employees of the hazards associated with illegal discharges and improper disposal of waste.

The Storm Water Manager is responsible for the overall management and implementation of this plan. Each BMP has been assigned to a responsible party to implement. In addition, each BMP lists the measurable goal which will be documented in the annual report.

**Table 2: Illicit Discharge Detection and Elimination Minimum Control Measure**

<b>Best Management Practice</b>	<b>Strategy</b>	<b>Recommended Measurable Goals/Timeframe</b>	<b>Responsible Party</b>
<p>Develop a storm sewer system map, showing the location of all outfalls and HSTSs and the surface waters that receive discharges from those outfalls. (Sections 3.2.3.1.2 and 3.2.3.1.2.1.2)</p>	<p>The City's Master Storm Sewer Map has been recently updated. The map identifies outfalls and the storm drainage system. The Master Storm Sewer Map is included as part of this document (see Appendix).</p> <p>Data for the Master Sewer Map was obtained from available sewer record plats, improvement plans and field surveys. The map has been converted to electronic medium for ease of updating.</p> <p>The City will investigate the feasibility of converting the Sewer Map System to a GIS System.</p>	<p>Storm Sewer Map updated annually and submitted with Annual Report. HSTS location will be added by the end of 2006. If feasible, convert mapping to a GIS System by 2007.</p>	<p>Staff Engineer</p>
<p>Submit list of all on-site sewage disposal systems (HSTSs) connected to MS4. (Section 3.2.3.1.2.1.1)</p>	<p>Develop and submit the list of on-site HSTSs as required.</p>	<p>List of on-site HSTS submitted by 2006. HSTS mapped by 2006.</p>	<p>Staff Engineer</p>
<p>Prohibit, through ordinance, illicit discharges and implement appropriate enforcement procedures. (Section 3.2.3.1.3)</p>	<p>Identify if required ordinance already exists.</p>	<p>By December 2003</p>	<p>Assistant Law Director</p>
	<p>Numerous sections of the Codified Ordinance of the City of Beachwood govern and regulate storm and sanitary sewer connections, grease traps, drainage, pollution prevention and storm water management. These ordinances will be reviewed and if necessary, new or updated ordinances will be recommended to Council to prohibit illicit discharges in conformance with Federal and State regulation. Enforcement provisions will be included.</p>	<p>Review of existing ordinance, federal and state regulations during 2003.</p> <p>Updated or new ordinance presented to Council by December 2004.</p> <p>Annual report will provide summary of activities.</p>	

**Table 2: Illicit Discharge Detection and Elimination Minimum Control Measure**

<b>Best Management Practice</b>	<b>Strategy</b>	<b>Recommended Measurable Goals/Timeframe</b>	<b>Responsible Party</b>
Develop and implement a plan to detect and eliminate non-storm water discharges, including illegal dumping, to your system. (Section 3.2.3.1.4)	Develop an investigation program to perform initial and follow-up investigations of community outfalls.	Perform 20% of outfall dry weather visual inspection on a yearly basis until all outfalls are inspected through 2007 Report annually on the number of outfalls inspected.	Superintendent of Streets and Utilities and Staff Engineer
	Continue policy of follow-up investigations of complaint-generated reports of non-storm water discharges.	Report number of complaints and resolution of problem.	Superintendent of Streets and Utilities
	Continue inspection and repair program of mainline sewers and laterals on streets scheduled for annual road improvement project. Deficient sanitary and storm sewers and deficient sewer laterals from the City's side of tee to the mainline sewers are then repaired or replaced. Included with the Capital Roadway Improvement Project.	Report number of laterals repaired/replaced.  Report location of mainline sewers repaired/replaced.	Staff Engineer
	Continue inspection/repair program of sewer lateral condition on a back-up complaint. Deficient laterals within the City right-of-way will be repaired.	Report number of complaints and resolution of problem.	Superintendent of Streets and Utilities
	Continue catch basin cleaning program.	Report number of catch basins cleaned.	Superintendent of Streets and Utilities
	Continued strong enforcement of load droppings and tracking mud on any public way, per Section 440.06 of the Beachwood Codified Ordinance.	Report number of citations.	Police Chief
	Continue no aerial spray policy for care of City trees. City uses systemic agent for tree care.	Annual summary of program.	Assistant Service Director
	Continue TV inspection program of the City's sewer system utilizing the services of the Cuyahoga County Sanitary Engineer.	Report streets inspected.	Superintendent of Streets and Utilities
	Continue used motor oil drop-off program.	Report quantity collected.	Superintendent of Field Operations
	Continue annual paint and pesticide collection program in cooperation with Cuyahoga County Solid Waste District.	Report number of drop offs.	Superintendent of Field Operations

**Table 2: Illicit Discharge Detection and Elimination Minimum Control Measure**

<b>Best Management Practice</b>	<b>Strategy</b>	<b>Recommended Measurable Goals/Timeframe</b>	<b>Responsible Party</b>
	Initiate a program to provide for problem tracing follow-up investigations to respond to prioritized dry-weather discharges or complaint-based investigations.	Develop program by December 2003.  Annual summary report of on-going investigations.	Staff Engineer
Inform public of hazards associated with illegal discharges. (Section 3.2.3.1.5)	Identify messages and methods of informing public through the PIPE Plan.	Educational activities will be performed and reported annually through the PIPE Plan.	Watershed coordinator
	Perform public education program through the PIPE Plan.		
Address the non-storm water discharges identified as significant pollutant contributors. (Section 3.2.3.1.6)	There are no non-storm water discharges or flows identified as significant contributors of pollutants in our community.	Reviewed annually. If upon annual review, a non-storm water discharge is identified as significant pollutant contributor, the pollutant discharge will be identified in the annual report and a plan developed to address the discharge.	Staff Engineer
	If so, develop a plan to address these non storm-water discharges.	As necessary, throughout permit cycle.	
Develop a list of other non-storm water discharges that will not be addressed as illicit discharges. (Section 3.2.3.1.7)	Begin assessment of non-storm water discharges in community.	By December 2003	Staff Engineer
	Develop list of non-storm water discharges that will not be addressed.	Revise list annually or as needed.	

## **Construction Site Runoff Control**

Table 3 details The City of Beachwood's Construction Site Runoff Control Program.

The City of Beachwood began addressing water quality of construction site runoff with the passage of Ordinance No. 2002-30 on April 15, 2002. This ordinance added Chapter 1175 Storm Water Pollution Prevention Plan and Site Development to the City's Code. The purpose of this chapter is to:

- 1) Reduce the impact of soil erosion and sedimentation caused by construction activities.
- 2) Reduce damage to the receiving streams and drainage systems caused by increases in sedimentation discharged from development activities.
- 3) Reduce deterioration of the quality of the receiving waters.

As previously documented, The City of Beachwood is an active member of the Euclid Creek Watershed Council (ECWC). In April 2001 the ECWC prioritized the objective of establishing a storm water management ordinance that will be consistent throughout the watershed.

The municipal engineers of the ten (10) Euclid Creek Watershed Communities were invited to participate in the Model Storm Water Management Ordinance Task Force. The initial meeting of the Task Force took place on April 18, 2001. In August 2002 the Task Force completed its work and presented a Model Erosion and Sediment Control Ordinance to the ECWC. The City of Beachwood was an active participant in the Task Force with our Staff Engineer being its co-chair.

Chapter 1175 added to The City's Code in April 2002 is similar in scope to the August 2002 ECWC Model Ordinance. However as indicated in the City's detailed program the ECWC Model Ordinance and also NOACA's Regional Model will be reviewed. After review, recommendations will be made to City Council to make appropriate changes to Beachwood's City Code.

Violation of or noncompliance with any of the provisions of Chapter 1175 are deemed to be in violation of the Zoning Code Section 1105.99 (see appendix) as a misdemeanor of the first degree. Penalty is prescribed under Section 101.99 (see appendix). The zone Code is enforced by the Building Commissioner who has the power under Section 1105.01 (see appendix) to issue a "stop work" order. Sanctions will be reviewed along with current ordinance as detailed in Table 3.

Requirements for site construction operators to implement erosion and sediment control BMP and control waste at construction sites that may cause adversely impact water quality will be reviewed and upgraded to conform to Federal and State regulations. The disposition of discarded building materials, concrete truck washouts, chemicals, litter and sanitary waste will be included in the review process.

In general, Chapter 1175 applies to all land disturbing activities greater than one half acre. An applicant for a Building Permit shall include with the permit application a Storm Water Pollution Prevention Plan. Sections 1175.03 and 1175.04 further define projects which are governed by Chapter 1175 (see Appendix).

The City's PIPE Plan has programmed the establishment of a Storm Water Quality Complaint Line to be implemented in 2005. In the interim, complaints will be directed to the Staff Engineer. Upon receipt of a complaint, representatives of the City will inspect the site. A written notification regarding sediment and erosion control and construction waste needs, at the site will be issued to the owner/operator of the site. The owner/operator will be given a reasonable time as determined by the Staff Engineer to remedy problems. Enforcement will be in accordance with the Zoning Code.

Site Inspection will generally take place once a month while land disturbing activities are taking place unless the site has been stabilized. Sensitive environmental sites such as those adjacent to wetlands or a natural water course will have a higher priority and be inspected more frequently as determined by the Staff Engineer.

Site inspection or enforcement procedures will be reviewed with the ordinance review. Modifications will be recommended to be in compliance with Federal and State requirements.

The Storm Water Manager is responsible for the overall management and implementation of this plan. Each BMP has been assigned to a responsible party to implement. Each BMP lists the measurable goal which will be documented in the annual report.

**Table 3: Construction Site Runoff Control Minimum Measure**

<b>Best Management Practice</b>	<b>Strategy</b>	<b>Recommended Measurable Goals/Timeframe</b>	<b>Responsible Party</b>
Review existing and model ordinances to require erosion and sediment control. (Section 3.2.4.1.1)	Review existing City Code Chapter 1175, the NOACA Regional Model Ordinance and the Euclid Creek Watershed Council Model Ordinance.	Complete review by December 2004.	Assistant Law Director
	Recommend to City Council appropriate changes to the City Coded to be in compliance with Federal and State regulations	Submit a copy of enacted legislation.  Submit an annual report that summarizes implementation of enacted legislation and any variances granted starting with 2004.	
Establish requirements for the use of erosion/sedimentation Best Management Practices (BMPs). (Section 3.2.4.1.2)	Adopt a policy that requires community plan approval personnel and building site inspectors to be trained in the proper use of erosion/sedimentation BMPs. The city will rely on regional agencies to provide training program.	Annual training report starting with 2004 or the first year that such training is available.	Staff Engineer
Establish requirements to control construction wastes. (Section 3.2.4.1.3)	Review current ordinances and NOACA Regional Model Ordinance.	Complete review by December 2004	Building Commissioner
	Recommend to City Council appropriate changes to the City Coded to be in compliance with Federal and State regulations	Submit copy of enacted legislation.  Submit annual report summarizing implementation of enacted legislation starting with 2004.	
Review existing and model ordinances that incorporate consideration of potential water quality impacts. (Section 3.2.4.1.4)	Review existing City Code Chapter 1175, the NOACA Regional Model Ordinance and the Euclid Creek Watershed Council Model Ordinance.	Complete review by December 2004.	Assistant Law Director
	Recommend to City Council appropriate changes to the City Coded to be in compliance with Federal and State regulations	Submit a copy of enacted legislation.  Submit annual report summarizing implementation of enacted legislation starting with 2004.	
Establish procedures for receipt and consideration of information submitted by the public. (Section 3.2.4.1.5)	See PIPE Plan – Storm Water Quality Complaint Line.  In the interim, complaints/inquiries will be directed to the Staff Engineer	See PIPE Plan	Staff Engineer

**Table 3: Construction Site Runoff Control Minimum Measure**

<b>Best Management Practice</b>	<b>Strategy</b>	<b>Recommended Measurable Goals/Timeframe</b>	<b>Responsible Party</b>
Review existing procedures. Review model ordinances for site inspection and enforcement of control measures. (Section 3.2.4.1.6)	Review existing City Code Chapter 1175, the NOACA Regional Model Ordinance and the Euclid Creek Watershed Council Model Ordinance.	Complete review by December 2004.	Assistant Law Director
	Recommend to City Council appropriate changes to the City Coded to be in compliance with Federal and State regulations	Submit a copy of enacted legislation.  Submit annual report summarizing implementation of enacted legislation starting with 2004	

## **Post Construction Runoff Control**

Table 4 details The City of Beachwood's Post Construction Site Runoff Control Program.

The City of Beachwood began addressing water quality of post construction runoff control with the passage of Ordinance No. 2002-30 on April 15, 2002. This ordinance added Chapter 1179 Storm Water Management and Site Development to the City's Code. The purpose of this chapter is to:

1. Reduce downstream flooding by controlling increased runoff caused by construction.
2. Reduce damage to the receiving streams and drainage systems which may be caused by increases in the quantity and/or rate of water discharged from the new development activities.
3. Establish a basis of design for storm water management practices.
4. Establish a method for the inspection and maintenance of storm water management systems.

As previously documented, The City of Beachwood is an active member of the Euclid Creek Watershed Council (ECWC). In April 2001 the ECWC prioritized two objectives. One of these objectives was to establish a storm water management ordinance that will be consistent throughout the watershed.

The municipal engineers of the ten (10) Euclid Creek Watershed Communities were invited to participate in the Model Stormwater Management Ordinance Task Force. The initial meeting of the Task Force took place on April 18, 2001. In August 2002 the Task Force completed its work and presented a Model Storm Water Management Ordinance to the ECWC. The City of Beachwood was an active participant in the Task Force with our Staff Engineer being its co-chair.

Chapter 1179 added to The City's Code in April 2002 is similar in scope to the August 2002 ECWC Model Ordinance. However as indicated in the City's detailed program the ECWC Model Ordinance and also NOACA's Regional Model will be reviewed. After review recommendations will be made to City Council to make appropriate changes to Beachwood's City Code.

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

This program will be targeted at undeveloped vacant land of the community. The majority of undeveloped land, approximately 408 acres is located in the Southerly portion of the City commonly known as Chagrin Highlands.

The City's water quality concerns are those related to increases in storm water runoff as impervious cover increases, increased flooding due to increases in storm water volume and habitat losses as riparian and the remaining wetlands areas are impacted by development.

The City will explore the implementation of zoning that encourages non-structural storm water management. This includes riparian and wetland setbacks and conservation subdivisions for residential areas.

The City will review the current post construction ordinance along with other model ordinances as it relates to storm water quality and quantity, use of non-structural storm water management techniques and also low impact development practices.

Recommendations will be made to the City Council to adopt improved storm water management techniques suitable for the City and in conformance to Federal and State regulations.

Because Storm Water Management BMP represent a significant change from current management practices in Northeast Ohio, education of landowners, developers, planners, engineers and others is necessary to support improved storm water management techniques. ECWC will provide such educational opportunities throughout the permit term for all interested parties in the entire City. The City will continue to support this education through our membership in ECWC.

In 2005, the plan is programmed to explore the appropriateness of riparian setbacks, wetland setbacks, and conservation development to our community. If appropriate, the City will work with the ECWC to tailor these requirements to the City's Zoning Code.

The PIPE Plan is programmed to educate developers and the public about project designs that minimize water quality impacts.

With the ordinance review in 2005, other measures such as minimization of the percentage of impervious areas after development, use of measures to minimize directly connected impervious areas and source control measures will be explored.

The City currently requires development to control storm water quantity through the use of detention ponds or underground storage conduits. Various options to add water quality measures will be explored in 2005 including wet-ponds, extended detention outlet structures, filtration practices such as grassed swales, bioretention cells, sand filters and filter strips and infiltration practices such as infiltration basins and infiltration trenches. Feasible practices will be recommended to Council for implementation.

Chapter 1179 addresses the current mechanisms the City uses to address post-construction runoff from new development and redevelopment and the operation and maintenance of these facilities. The plan is programmed to review the current ordinance and other model ordinances by the end of 2005. The review process includes addressing both these issues. Upon completion of review, improvements to the code will be recommended to Council which are suitable to Beachwood and conform to Federal and State regulations.

The Storm Water Manager is responsible for the overall management and implementation of this plan. Each BMP has been assigned to a responsible party to implement. Each BMP lists the measurable goal which will be documented in the annual report.

**Table 4: Post Construction Runoff Minimum Control Measure**

Best Management Practice	Strategy	Recommended Measurable Goals/Timeframe	Responsible Party
<p>Develop and implement strategies that include a combination of structural and/or nonstructural BMPs. (Section 3.2.5.1.2)</p> <p>Review existing and model ordinances or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects. (Section 3.2.5.1.3)</p>	<p>Review existing City Code Chapter 1179, the NOACA Regional Model Ordinance and the Euclid Creek Watershed Council Model Ordinance.</p>	<p>Complete review by December 2005.</p>	<p>Storm Water Manager</p>
	<p>Recommend to City Council appropriate changes to the City Code to be in compliance with Federal and State regulations</p>	<p>Submit a copy of enacted legislation.</p> <p>Submit an annual report that summarizes implementation of enacted legislation and any variances granted starting with 2005.</p>	<p>Assistant Law Director</p>
	<p>Explore the appropriateness of riparian setbacks, wetland setbacks and conservation development to the community. If appropriate, will work with ECWC to tailor these requirements in the City's Zoning Code.</p> <p>Recommend to Planning Commission and City Council appropriate modification to the City's Zoning Code to be in compliance with Federal and State regulations.</p>	<p>Determine appropriateness by December 2005</p> <p>Submit copy of enacted legislation.</p> <p>Submit an annual report summarizing implementation of enacted legislation starting with 2005.</p>	<p>Assistant Law Director</p>
	<p>The PIPE Plan is programmed to educate the public on the protection and function of riparian and wetland areas.</p>	<p>See PIPE Plan</p>	<p>Watershed Coordinator</p>
	<p>Continue requirement of the use of the "Critical Storm" approach to managing storm water quantities from development action.</p>	<p>Annual certification by community engineer that storm water retention/detention basin design requirements incorporate the Critical Storm procedure as defined in Chapter 1179 or any revisions thereto.</p>	<p>Staff Engineer</p>
	<p>Review existing City Code Chapter 1179, the NOACA Regional Model Ordinance and the Euclid Creek Watershed Council Model Ordinance for Post Construction Runoff Control to require the treatment of the Water Quality Volume by controlled release with the use of storm water ponds or other appropriate structural post-construction BMPs to reduce the pollutant content of post-construction runoff.</p>	<p>Complete review by December 2005.</p>	<p>Assistant Law Director</p>

**Table 4: Post Construction Runoff Minimum Control Measure**

Best Management Practice	Strategy	Recommended Measurable Goals/Timeframe	Responsible Party
	Recommend to City Council appropriate changes to the City Code to be in compliance with Federal and State regulations	Submit a copy of enacted legislation.  Submit an annual report that summarizes implementation of enacted legislation and any variances granted starting with 2005.	
Ensure adequate long-term operation and maintenance of BMPs. (Section 3.2.5.1.4)	Review existing City Code Chapter 1179, the NOACA Regional Model Ordinance and the Euclid Creek Watershed Council Model Ordinance to address long-term operation and maintenance of post-construction BMPs.  Recommend to City Council appropriate changes to the City Code to be in compliance with Federal and State regulations	Complete review by December 2005. Submit a copy of enacted legislation.  Submit a copy of enacted legislation.  Submit an annual report that summarizes implementation of enacted legislation and any variances granted starting with 2005.	Assistant Law Director
	Adopt a policy that requires community engineering department be trained in the proper design and use of the post-construction BMPs.  The City will rely on regional agencies to provide training program.	List of trained inspectors and their level of training reported annually starting with 2003 or the first year that such training becomes available.	Staff Engineer

## **Pollution Prevention/Good Housekeeping**

Table 5 details The City of Beachwood's Pollution Prevention/Good Housekeeping programs.

The NOACA model was used to formulate The City's program with minor modification to meet the particular needs and current operation policies of the City. As demonstrated in our program, the majority of the Best Management Practices are currently being performed by City Staff. For those BMP's only record keeping procedures may need modification.

The City currently has training programs for the following BMPs:

Chemical Lawn Care- All applicators are trained and are licensed by the Ohio Department of Agricultural as Pesticide Applicators.

Snow removal and street salting- All operators are trained in-house by the Assistant Service Director. Salt spreaders are calibrated prior to the snowfall season.

Educational material developed through the PIPE Plan will be made available to the City's Public Employees.

Current maintenance activities include annual programs to clean catch basins and televised inspections and cleaning of sewers.

Streets and municipal parking lots are swept on a regular schedule from April through November and as weather permits. The community's leaf recycling program runs from September through December. The City has one fleet maintenance shop at the Service Center. Vehicle maintenance is performed inside the service building. Salt is stored in a 2,000 ton domed storage building. The service yard serves as a temporary storage area for catch basin debris, leaves, street sweeping debris and construction debris. These materials are typically moved from the storage yard to an approved land-fill after one week.

Community projects are required to go through the same review process as any private development which includes conformance to the current Storm Water Pollution Prevention and Storm Water Management Ordinances.

The Storm Water Manager is responsible for the overall management and implementation of this plan. Each BMP has been assigned to a responsible party to implement. Each BMP lists the measurable goal which will be documented in the annual report.

**Table 5: Pollution Prevention/Good Housekeeping For Municipal Operations Minimum Control Measure**

<b>Best Management Practice</b>	<b>Strategy</b>	<b>Time Frame</b>	<b>Measurable Goals</b>	<b>Responsible Party</b>
Chemical lawn care use	Minimize the use of herbicides, fertilizers, and insecticides by community personnel to no more than the recommended levels.	Continue existing policy and training program.  Annually	Annual Report reviewing of use policies and application procedures.	Assistant Service Director
Disposal of Construction Debris from in-house Community projects	Verify that all in-house construction debris is disposed in a proper manner.	Annually	Maintain a file containing the record of recycling or disposal of debris at an approved landfill. Document in Annual Report.	Superintendent of Streets and Utilities
Disposal of catch basin material	Verify that all catch basin debris is disposed in a proper manner, at a special waste landfill.	Annually	Maintain a file containing the record of disposal of catch basin debris at a certified special waste landfill. Document in Annual Report.	Superintendent of Streets and Utilities
Disposal of Street Sweepings	Verify that all sweeping debris is disposed in a proper manner.	Annually	Maintain a file containing the record of disposal of sweeping debris. Document in Annual Report.	Superintendent of Streets and Utilities
Fleet Maintenance	Inventory all maintenance locations. Determine if stored products are protected from spillage. Insure that all waste products are properly disposed or recycled. All spills shall be contained and collected.	Continue existing policy and training program.  Annually	Maintain a file containing the record of inspections of maintenance sites, and documenting any spills and disposal of waste products. Document in Annual Report.	Superintendent of Vehicles and Building Maintenance
Leaf Recycling Program	Leaf collection program runs from September through December. Collected leaves are temporarily stored on-site and disposed of on a weekly basis. Leaves are not collected or stored on-site from January through September. If the current leaf pick up and disposal program should change to a permanent on-site leaf recycling program, the permanent leaf storage facilities will be designed to control runoff to a sanitary sewer	Annually	Maintain a file containing the record of disposal of leaves. Document in Annual Report.	Superintendent of Field Operations

**Table 5: Pollution Prevention/Good Housekeeping For Municipal Operations Minimum Control Measure**

Best Management Practice	Strategy	Time Frame	Measurable Goals	Responsible Party
Municipal Parking Lot Sweeping	The city will sweep parking lots on an established schedule. Lots will only be swept when weather permits (normally April through November) No sweeping is done during inclement weather.	Annually	Maintain a file containing the record of parking lot sweepings. Document in Annual Report.	Superintendent of Streets and Utilities
Open Space Management	The City of Beachwood’s public lands and parks which are currently accessible to the public do not have natural water courses traversing through the parcels. Undeveloped, vacant parcels owned by the City are left undisturbed in their natural state except for those areas within and immediately adjacent to the public right-of-way. Should any City owned undeveloped parcel be improved in the future in which a stream traverses, a policy will be instituted to establish a no-mow zone near the stream banks.	Policy will be established at time of public land development containing natural watercourse.  Annually thereafter through 2007	Annual report reviewing and documenting public land development.  Implementation of policy at time of land development.	Superintendent of Public Parks and Grounds
Outdoor Storage	Verify that all runoff is collected in a trapped, sumped catch basin(s). Install trapped, sumped catch basin(s) if needed. Once the catch basin is verified or installed, the drainage is to be checked at least twice per year, and cleaned as necessary.	Verify by December 2003. If necessary, install by 2006	Document verification in annual report. After positive verification or installation of catch basin, maintain a file containing the record of each inspection, and the work order for each cleaning required.	Superintendent of Streets and Utilities
Salt Storage	Verify that all runoff is collected in a trapped, sumped catch basin(s). Install trapped, sumped catch basin(s) if needed. Once the catch basin is verified or installed, the drainage is to be checked at least twice per year, and cleaned as necessary.	Verify by December 2003. If necessary, install by 2006	Document verification in annual report. After positive verification or installation of catch basin, maintain a file containing the record of each inspection, and the work order for each cleaning required.	Superintendent of Streets and Utilities
Snow removal & Street Salting	Verify that the program for snow removal is followed to minimize salt discharge to the environment.	Annually	Maintain a file containing the record of snow removal practices and training provided. Document in Annual Report.	Service Director

**Table 5: Pollution Prevention/Good Housekeeping For Municipal Operations Minimum Control Measure**

Best Management Practice	Strategy	Time Frame	Measurable Goals	Responsible Party
Street Sweeping	The community will sweep streets when weather permits (normally April through November) No sweeping is done during inclement weather.	Continue policy and training program annually though 2007.	Annual report documenting number of passes through the city	Superintendent of Streets and Utilities
Waste Transfer Station garbage	<b>Not applicable. Beachwood does not operate a waste transfer station.</b>			
Waste Transfer Stations catch basin material	<b>Not applicable. Beachwood does not operate a waste transfer station.</b>			
Ditch Cleaning	The City of Beachwood has only a few unimproved streets with roadside ditches. The ditches on these streets are typically graded as shallow ditches or swales. The ditches/swales are generally grassed, landscaped areas maintained by the homeowner during normal lawn maintenance activities. Therefore, the City does not have a regular program to maintain roadside ditches. However, the city does respond to roadside ditch drainage problems on a case-by-case basis, either when notified by residents or from observation of problems by city staff. If necessary, the ditches/swales are then cleaned to alleviate the drainage problem. The city will continue the policy to respond to roadside ditch/swale drainage problems on a case-by-case basis.	Continue existing policy.  Annually	Annual report documenting length cleaned per calendar year.	Superintendent of Streets and Utilities

## **Appendix**

Cuyahoga Soil and Water Conservation District letter confirming Euclid Creek Watershed Partnership Agreement

Codified Ordinance   Chapter 1175  
                                  Chapter 1179  
                                  Section 101.99  
                                  Section 1105.01  
                                  Section 1105.99

Building Commissioner's Memo Regarding Debris and Erosion Control Section of Beachwood Codified Ordinances

Master Storm Sewer Map (Separate Cover)