



McGOEY, HAUSER and EDSALL
CONSULTING ENGINEERS P.C.

RICHARD D. McGOEY, P.E. (NY & PA)

WILLIAM J. HAUSER, P.E. (NY & NJ)

MARK J. EDSALL, P.E. (NY, NJ & PA)

JAMES M. FARR, P.E. (NY & PA)

MAIN OFFICE

33 Airport Center Drive

Suite 202

New Windsor, New York 12553

(845) 567-3100

fax: (845) 567-3232

e-mail: mheny@mhepc.com

**ENGINEERING REPORT
FOR
CITY OF NEWBURGH MUNICIPAL
SEPARATE STORM SEWER SYSTEM (MS4)
PERMIT NO. GP-02-02
ANNUAL PROGRAM REPORT**

CITY OF NEWBURGH, ORANGE COUNTY, NEW YORK

SPDES NO. NYR20A240

CLIENT:

City of Newburgh
83 Broadway
Newburgh, New York 12550

PREPARED BY:

McGoey, Hauser and Edsall Consulting
Engineers, P.C.
33 Airport Center Drive, Suite 202
New Windsor, NY 12553

**ANY UNAUTHORIZED ALTERATION OR
ADDITION TO THIS DOCUMENT IS A
VIOLATION OF SECTION 7209(2) OF THE
NEW YORK STATE EDUCATION LAW**

**Job No. 03-123
Date: 19 May 2004**

REGIONAL OFFICES

- 507 Broad Street • Milford, Pennsylvania 18337 • 570-296-2765 •
- 540 Broadway • Monticello, New York 12701 • 845-794-3399 •

TABLE OF CONTENTS

- I. Executive Summary**
 - II. Public Education and Outreach on Stormwater Impacts**
 - III. Public Involvement/Participation**
 - IV. Illicit Discharge Detection and Elimination**
 - V. Construction Site Stormwater Runoff Control**
 - VI. Post Construction Stormwater Management**
 - VII. Pollution Prevention/Good Housekeeping for Municipal Operations**
 - VIII. Summary of Funding**
- Attachment I - Implementation Schedule**

I. EXECUTIVE SUMMARY

The City of Newburgh has received coverage for the operation and maintenance of its separate storm sewer system. The entire City of Newburgh has been designated as an urban area for the 2000 census and, therefore, must receive coverage for discharge of stormwater from its separate storm sewer system. The majority of the City of Newburgh is covered under a New York State Department of Environmental Conservation SPDES permit (NY-002-6310), NYSDEC No. 3-3311-0063-00003. The City of Newburgh operates a combined sewer system conveying both sanitary sewer effluent as well as surface runoff from portions of the City. The City of Newburgh's Stormwater Management Plan, as adopted, does not specifically exclude portions of the City covered by the combined sewer system versus those portions of the City having separate collection systems. Approximately 80% of the City is serviced by the combined sewer system while small areas on the peripheral portions of the City discharge to various water bodies which are tributary to Quassaick Creek or directly to the Hudson River. During the adoption of the City's stormwater management program, six specific items were identified to be addressed.

1. Public Education and Outreach.
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post Construction Stormwater Management
6. Pollution Prevention and Housekeeping for Municipal Operators

The City's Stormwater Management Plan addresses each of the six items and provides a schedule of implementation for measurable goals contained under each of the above referenced headings. It is the intent of this annual report to address each of the items specifically identified above and provide information on the City's progress toward meeting measurable goals during the first permit year.

The City has indicated its willingness to participate in a consortium of municipal entities for funding of activities covered under its Stormwater Management Plan. The Orange County Water Authority and Orange County Soil and Water Conservation District have been the lead in an effort to obtain grant funding to assist many municipal entities within Orange County in order to assist each of the entities in meeting measurable goals under their permits. To date, this funding has not been provided, however, the City continues to be willing to participate in the program should funding become available to support various program items.

II. PUBLIC EDUCATION AND OUTREACH ON STORMWATER IMPACTS

The City of Newburgh has begun to provide public education and outreach to inform residents and businesses in the City regarding stormwater management as well as water quality issues. The City of Newburgh has received and filed the notice of intent and an associated engineering report outlining specific measurable goals to be met under its education and outreach program. During the first permit term, the City of Newburgh obtained pamphlets, flyers and posters from the United States Environmental Protection Agency. This information was placed at publicly accessible areas within the City Hall to provide for educational material on stormwater and related issues. In addition a large poster displaying proper implementation of best management practices has been provided to the office of the Building Inspector for display in areas where building permit applications are filed.

In the upcoming permit year, the City of Newburgh intends to continue its education and outreach through updating pamphlets, literature and fact sheets as they become available from State and Federal agencies. The City will provide stuff sheets in municipal bulk mailings undertaken by the City including items such as sewer and water bills, tax receipts and other periodic information distributed within the City. The City will encourage attendance at workshops and seminars provided by environmental groups and agencies regarding stormwater. The City will participate with the Orange County Water Authority and the Orange County Soil and Water Conservation District in attempts to obtain funding for a more regional approach to public education through workshops and seminars located at larger venues within the County.

The Orange County Water Authority currently provides education on water resources within the Newburgh Enlarged City School District. The Water Authority's program is geared towards providing grade school children with information regarding the hydrologic cycle and stormwater/water quality issues in general.

III. PUBLIC INVOLVEMENT/PARTICIPATION

The City of Newburgh received and filed the Stormwater Management Plan in early April 2003 after receipt of acknowledgement of Notice of Intent. Copies of the Stormwater Management Plan were distributed through various department heads that had responsibilities under the plan. The City Manager has been designated as the official contact point for information pertaining to the City's Stormwater Management Plan. Copies of the plan have been maintained at the City Clerks Office and available for public review and inspection during normal business hours. To date, no input on the plan has been received from the public.

Copies of the draft annual report were received by the City Council at a workshop meeting on 20 May 2004. A public comment period has been published on the City of Newburgh's agenda for 24 May 2004. Public input and comment will be included as an attachment to the annual report filed with the New York State Department of Environmental Conservation. In addition, the City of Newburgh has identified groups or organizations interested in stormwater or environmental issues and included them in the Stormwater Management Plan.

During the upcoming permit term the City of Newburgh will continue to provide notice of the annual reports and information regarding stormwater management in general. Notification of the public through posting of City Council agendas and/or legal notices will be provided as appropriate. Comments received from the public, either at public hearings or in writing over the permit year, will be addressed by the appropriate City agency or Board.

IV. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The City of Newburgh has prepared base maps for mapping of the stormwater system. Existing combined sewer mapping is utilized to identify the majority of stormwater piping within the City. During the first permit year, the City of Newburgh has painted, for identification, all catch basin inlets and outfall locations. This painting is being undertaken such that stormwater inlets can be identified in an aerial photographs and mapping being performed within Orange County. Copies of the aerial photos will be evaluated for use in mapping the City's stormwater as well as other utilities. The Countywide mapping is being undertaken by a State agency and coordinate through the Orange County Water Authority. It is anticipated that aerial mapping will be utilized to completely map utilities within the City of Newburgh during the permit term.

Representatives of the City's Department of Public Works, as well as the contract operators for the City's sewer collection and treatment system received periodic training and issues regarding operation and maintenance of the City's combined sewer system, as well as operation and maintenance of the separate stormwater system. Maintenance of the City's stormwater systems is undertaken by Department of Public Works personnel. DPW personnel are trained to an awareness level regarding illicit detection. Representatives of the DPW have the ability to perform dye testing for the location of illicit connections to the City's collection system. DPW personnel notify appropriate agencies for response based on situations.

During the upcoming permit term the City of Newburgh will draft and adopt a City ordinance pertaining to stormwater management. A portion of the stormwater management ordinance will prohibit illicit connections or discharge to the City's separate storm drianage system. The majority of the City currently is covered by the City's sewer use ordinance due to the fact that the sewer system is a combined system. The sewer use ordinance is used as an enforcement mechanism for prohibitions to illicit discharges to the combined sewer system. Similar regulations will be implemented to protect water quality for the separate stormwater systems located outside the combined sewer systems areas. Additional employee training will be implemented for DPW as well as Code and Building Department personnel regarding stormwater issues.

V. CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

Currently construction site stormwater runoff control is undertaken by several agencies within the City of Newburgh. The Planning, Zoning and Engineering Departments review plans for compliance with City regulations as well as stormwater management and soil erosion control. All plans prepared for submission to the City of Newburgh for approval require soil erosion and sediment control plans as well as stormwater management plans. The City of Newburgh has, as a matter of policy, required compliance with NYSDEC regulations regarding stormwater quantity as well as quality controls on construction sites which disturb greater than one acre. Approval of the above referenced plans requires the implementation of the plan during construction as part of the complete site plan and/or subdivision.

Code Compliance and Building Department personnel undertake plan reviews with applicants prior to issuing of building permits. Stormwater management and soil erosion control, required by the Planning Board and City Engineer, are incorporated in building permit plans and required to be implemented.

During the upcoming permit term the City of Newburgh will implement a City ordinance codifying the requirements for soil erosion control and water quantity/quality control on all projects submitted to the Planning Board. This will allow for additional enforcement capabilities for City Code and Building Departments. Currently, as a matter of policy, the Planning Board has required compliance with NYSDEC regulations and plans submitted to the Boards are reviewed for compliance. Through the implementation of the local law, additional enforcement capabilities will be available to City personnel. Continued review of projects before the Planning Board, by the Planning Board and its consultants, will be undertaken to mitigate impacts of development on stormwater quality and quantity. Building Department personnel will continue with preconstruction review with building permit applicants.

VI. POST CONSTRUCTION STORMWATER MANAGEMENT

Post construction stormwater management currently falls under the jurisdiction of the Code Compliance and Building Department with assistance from the City Engineer. Plans approved by the

Planning Board must include soil erosion and sediment control as well as stormwater management plans which are required to be implemented on construction sites. Code Compliance and Building Departments utilize the services of the City Engineer, as required, for review and evaluation of post construction stormwater management. The City Planning Board, as a matter of policy, the establishment of homeowner associations and/or maintenance agreements within subdivisions in order to provide for funding mechanisms for long term maintenance of stormwater management facilities.

During the upcoming permit term the City will adopt a stormwater management ordinance which will include provisions to require post construction stormwater management. The ordinance will require maintenance of best management practices on subdivisions and site plans approved by the City Planning Board.

VII. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The majority of City owned facilities are located in areas serviced by the City's combined sewer system. The City DPW facility has located any portion of the City which is not serviced by the combined system and contains separate sanitary sewer systems. Over the last several years the City has removed existing petroleum storage tanks and installed a state-of-the art petroleum bulk storage facility at the City DPW garage in order to centralize bulk storage of petroleum products and eliminate numerous underground storage tanks located throughout the City of Newburgh. The City has recently constructed a salt storage facility in order to store ice control salt within a structure away from the effects of precipitation. The City continuously monitors ice control activities in order to reduce the amount of ice control materials deposited within the City while still providing safe passage for vehicular traffic. City of Newburgh personnel received training regarding safe storage of products and chemicals utilized by DPW personnel. The City undertakes a routine maintenance of the stormwater collection system including cleaning of sumps and pipes as required. The City of Newburgh has a program in place to maintain stormwater related facilities on a periodic basis. Records of this maintenance are kept by the DPW Superintendent.

The City of Newburgh has a street sweeping program which provides for removal of sediment and debris from City streets on a periodic basis. City DPW personnel operate street sweeping equipment on a routine basis during the spring, summer and fall. By providing street sweeping, and the removal of sediment and debris, water quality benefits are provided as well as the maintenance of the stormwater collection system is significantly reduced.

During the upcoming permit term continued routine maintenance of the City's stormwater collection system will be undertaken. The City will continuously evaluate City owned facilities with regard to issues regarding water quality. Training of employees regarding proper housekeeping and storage of materials and chemicals will be periodically undertaken. The City will evaluate individual facilities on a routine basis in order to mitigate impacts to stormwater from City owned or maintained facilities.

VIII. SUMMARY OF FUNDING

Funding of the City's Stormwater Management Plan has been provided solely by the City of Newburgh. The City has indicated its intent to participate with a consortium of municipal entities with the Orange County Water Authority acting as lead agency. The Orange County Water Authority has applied for grants to assist several municipal entities with implementation of various portions of their stormwater management plans. The City realizes benefits can be more readily achieved through cooperation of several municipalities including the ability to provide training for personnel and the dissemination of public information at seminars and workshops provided on a more regional basis. The City will continue implementation of its Stormwater Management Plan based on the schedule of implementation included with the original NOI. Funding of the Orange County Water Authority's grant would greatly assist the City of Newburgh and other municipalities in the implementation of their respective plans.

ATTACHMENT I
IMPLEMENTATION SCHEDULE