

June 23, 2014

STORMWATER MANAGEMENT PROGRAM

CITY OF SOUTH CHARLESTON

Annual Report

Period Ending October 19, 2013

City of South Charleston
P.O. Box 8597
South Charleston, WV 25303
304 744 5301

Table of Contents

Minimum Control Measures

Minimum Control Measure 1 Public Education And Outreach	6
Minimum Control Measure 2 Public Involvement And Participation	14
Minimum Control Measure3 Illicit Discharge Detection And Elimination	18
Minimum Control Measure 4 Controlling Runoff From Construction Sites	26
Minimum Control Measure 5 Controlling Runoff From New Development And Redevelopment	31
Minimum Control Measure 6 Pollution Prevention And Good Housekeeping For Municipal Operations	41

Sampling and Testing

MINIMUM CONTROL MEASURES

The implementation and evaluation of the six minimum control measures, detailed as follows, comprise the basis of the Storm Water Management Program. Within each Minimum Control Measure category, specific BMPs were selected based on a number of factors, including the results of physical observations of local creeks and the City's storm drainage system.

Each Minimum Control Measure addresses a particular aspect within the City as a potential source of stormwater pollution:

The Public Education and Outreach Minimum Control Measure addresses the need to inform city staff, city officials, residents, business owners, and the local construction industry of the problems associated with stormwater pollution and ways to modify their awareness, attitudes and behavior.

The Public Involvement and Participation Minimum Control Measure is intended to create opportunities for residents, citizen groups, and business owners, to be involved in the Stormwater Management Program. .

The Illicit Discharge Protection and Elimination Minimum Control Measure focuses on the detection and elimination of pollutants being discharged into the city's storm sewer system.. The primary focus is to detect and eliminate any discharge into the storm drainage system other than unpolluted stormwater runoff.

The Controlling Runoff From Construction Sites Minimum Control Measure creates regulatory control of construction activities within the City pertaining to erosion and sediment control.

The Post Construction Development and Redevelopment Minimum Control Measure addresses control of runoff from new and re-development projects.

The Pollution Prevention and Good Housekeeping for Municipal Operations Minimum Control Measure implementation of a program to minimize or eliminate pollution from all City operations, and facilities,

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

The Stormwater Management Program includes an education program for residents, businesses, industries, elected officials, policy makers, planning staff and other employees of the City.

The general goals of the Public Education And Outreach program is to increase the number of member in the community that are informed and knowledgeable of the Stormwater Management Program. The greater the number of informed and knowledgeable people in the community will result in greater public support of the program and greater compliance with the program requirements. Greater public support will be beneficial for enacting new initiatives and seeking volunteers to help implement the program. Greater compliance through education will be achieved as the community understands their responsibilities to help achieve clean water

The minimum performance measures required by the General Permit are:

The City shall continue to implement their education and outreach program that was established during the previous permit cycle.

The outreach program shall be designed to achieve measurable improvements in the target audience's understanding of stormwater pollution and steps they can take to reduce their impacts.

Education and outreach subject area for the general public shall be:

1. General impacts of stormwater flows into surface waters.
 - Impacts from impervious surfaces.
 - Best management Practices to control the sources of stormwater pollution and environmental stewardship actions including opportunities in the areas of pet waste, vehicle maintenance, landscaping, and rain water reuse.
2. Education and outreach subject areas for the general public, ***business, and industrial users of stormwater system***, including home based and mobile businesses, shall be:
 - Best Management Practices for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.
 - Impacts of illicit discharges and how to report them.
 - ***BMP 1.1 through BMP 1.8 describe practices to be employed to educate business, and industrial users of stormwater system, including homeowners, landscapers, and property managers.***
3. Education and outreach subject areas for homeowners, landscapers, and property managers are:
 - Yard care techniques that protect water quality.
 - Best Management Practices for use and storage of pesticides and fertilizers.
 - Best Management Practices for carpet cleaning and auto repair and maintenance.
 - Runoff reduction techniques, including site design, pervious paving, retention of forests and mature trees.

- Stormwater pond maintenance.
4. Education and outreach subject areas for engineers, contractors, developers, review staff, and land use planners are:
- Technical standards for construction site sediment and erosion control.
 - Runoff reduction techniques, including site design, pervious pavement, alternative parking lot design, retention of forests and mature trees.
 - Stormwater treatment and flow control Best management Practices.
 - Impacts of increased stormwater flows into receiving water bodies.

The General Permit requires the City to measure the degree of understanding and behavior modification achieved for each audience.. The resulting measurements shall be used to direct education and outreach resources most effectively, as well as to evaluate changes in behaviors.

The General Permit requires the City to track and maintain records of public education and outreach activities.

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.1 Educational Materials, Brochures, Fact Sheets

Description.

- Make available and distribute a series of educational materials, literature, graphic illustrations and informational brochures on Stormwater Management Program and storm water quality.
- Create a portable stormwater information display utilizing brochures and graphics for use at meetings.
- Brochures are available from the United States Environmental Protection Agency and a variety of other sources.
- Brochure subject matter is greatly varied but available to inform the reader regarding stormwater pollution, effects on environment of such pollution, sources of pollutants, tips for reducing pollutants, and tips for reducing runoff, low impact design, etc.
- Distribute brochures by making them available to the public at City Hall, Sanitary Board, and Community Center.
- Distribute brochures to each City Council member via council agenda packets.
- Distribute brochures with each building permit.
- Distribute brochures with each Municipal Planning Commission application.
- Distribute brochures with distribution of city garbage and recycling bags.
- ***Target audience residents, business, and industrial users of stormwater system.***

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- 200 brochures per year

Goal Tracking.

- Maintain records of the number of brochures distributed.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.2 Web Page and Face Book

Description.

- Add a Stormwater Management page to the City's internet web site.
- Page to include information on city's Stormwater Management Program, frequently asked questions, brochures, tips for reducing pollution and runoff, this Stormwater Management Program, Annual Report.
- Create Face Book Page for City with profile pertaining to stormwater management and references to web page. Solicit users to be "fans" of City.
- Page to include graphics depicting effects of stormwater pollution.
- Page to include phone number and contacts for stormwater hotline.
- Page to provide links to other pages of stormwater management interest such as WVDEP, and EPA.
- Make public aware of new information on web site through notice on municipal service billing and sanitary sewer billing.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Continuous through 2014.

Measurable Goals.

- 1 web site modification.
- 100 "hits" per year.
- Add 100 "fans per year.

Goal Tracking.

- Verification of web site being operable.
- Monitor "hits" on site page.
- Monitor fans on Facebook.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.3. Event Participation

Description.

- Distribute educational materials, literature, graphic illustrations and informational brochures on Stormwater Management Program and storm water quality and EPA fact sheets at City events.
- Attend civic meetings such as Economic Development, Lions Club, Rotary Club, Chamber of Commerce, Business After Hours to discuss the Stormwater management Program.
- Use stormwater display at City events such as Moundfest.
- Knowledgeable city employee to man display to answer questions and provide verbal information.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- Two civic organizations attended for purpose of stormwater management education per year.
- 1 event (Moundfest) per year.
- 200 people reached per year.

Goal Tracking.

- Maintain records of the number of events attended.
- Count number of people that view the display.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.4. Refrigerator Magnets

Description.

- Make available and distribute refrigerator magnets with “Only Rain Down the Drain” slogan.
- Distribute by making magnets available to the public at City Hall, Sanitary Board, and Community Center.
- Distribute magnets to each City Council member via council agenda packets.
- Distribute brochures with distribution of city garbage and recycling bags.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- 200 magnets per year.

Goal Tracking.

- Maintain records of the number of brochures distributed.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.5 Storm Drain Stenciling

Description.

- Mark all storm manhole lids, drains, drop inlets, catch basins, with markers that say "Only Rain - Down the Drain".
- Purpose is to decrease number of illicit materials such as yard waste being deposited into storm drains.

Schedule For Implementation.

- ***Commence on approval of SWMP***
- Continuous through 2014.

Measurable Goals.

- 100 items marked per year.

Goal Tracking.

- Maintain records of the number of items marked.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH
Best Management Practices
BMP 1.6 Stormwater Hotline

Description.

- Make known that Sanitary Board and Public Work phone numbers are available for use as “Stormwater Hotline”.
- Purpose is to provide avenue for residents to report illicit discharges, water quality issues, over flows, or ask questions related to stormwater such as how to dispose of materials that are prohibit discharges into the storm drainage system.
- “Stormwater Hotline” concept and appropriate phone numbers advertised to public on municipal service fee and sanitary sewer billings, televised city council meetings.
- City to provide prompt response to complaints and questions.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Advertise hotline phone numbers and contacts **continuous through 2014.**
- **Hotline in use** Continuous through 2014.

Measurable Goals.

- Calls per year
- Target 100 calls per year.

Goal Tracking.

- Maintain records of calls received.
- Maintain records of responses to complaints.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.7 Rain Garden Demonstration Project

Description.

- Construct rain garden at South Charleston Sanitary Board as demonstration project.
- Location to be selected for maximum visibility by customers coming to sanitary board office.
- Prepare design plans and other graphic illustrations pertaining to rain garden.
- Make available plans and graphics to public.
- Make public aware of demonstration project through televised city council meetings, municipal service fee billing, sanitary sewer billing.
- Provide literature to public describing demonstration project and providing tips to residents for installing.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Construction complete by end 2013.
- Visitation and viewing by public continuous through 2014.

Measurable Goals.

- 1 rain garden construction.
- 100 viewer comments.

Goal Tracking.

- Document rain garden construction..
- Maintain record of viewer comments.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 1 PUBLIC EDUCATION AND OUTREACH

Best Management Practices

BMP 1.8 Library Information

Description.

- File at South Charleston Public Library educational materials, literature, graphic illustrations and informational brochures on Stormwater Management Program and storm water quality, including this Stormwater Management Program, Annual Report, Rain Garden demonstration project, General Permit, and EPA fact sheets.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- 1 library file.
- 100 visitors to file per year.

Goal Tracking.

- Document materials on file at library.
- Library staff to estimate number of people viewing file.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 2 PUBLIC INVOLVEMENT AND PARTICIPATION

This minimum control measure is intended to foster active community support for the Stormwater Management Program. Participation by the public ensures that the program reflects community values and priorities and thus has the highest potential for success. All public notices related to this minimum control measure will be conducted in compliance with applicable public notice requirements.

The Stormwater Management Program will include ongoing opportunities for public involvement through advisory councils, watershed associations and/or committees, stewardship programs, environmental activities or other similar activities. The City shall facilitate opportunities for direct action, educational, and volunteer programs such as riparian planting, volunteer monitoring programs, or stream cleanup programs.

The general requirements for Public Involvement and Participation activities are:

- The City will create opportunities for the public to participate in the decision making processes involving the development, implementation and update of the Stormwater Management Program and develop and implement a process for consideration of public comment.
- The City will establish a method of routine communication to groups such as watershed associations, environmental organizations, and organizations that conduct environmental stewardship projects. The purpose of this requirement is to make these groups aware of opportunities for their direct involvement and assistance in stormwater activities.
- The City will make the Stormwater Management Program and the annual report available to the public when requested and post both documents on the City's website.

MINIMUM CONTROL 2 PUBLIC INVOLVEMENT AND PARTICIPATION

Best Management Practices

BMP 2.1 Public Meetings

Description.

- Hold regular public meetings to impart information and solicit public comments.
- Public meetings to be advertised using appropriate legal notice in Charleston Newspapers.
- Public meetings to be held in City Council chambers.
- Provide complimentary refreshments catered by Little Creek Clubhouse.
- Subject of meeting will be to present the Stormwater Management Program, Annual Report, and updates of progress gained on various activities listed in the program.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- 2 meeting per year..
- 10 attendees per meeting.
- 5 public comments per meeting.

Goal Tracking.

- Document meeting with minutes..
- Document number of attendees.
- Document public comments and incorporate into minutes..

10-19-14 Annual Report
No Progress

MINIMUM CONTROL 2 PUBLIC INVOLVEMENT AND PARTICIPATION

Best Management Practices

BMP 2.2 Coordination With Environmental Stewardship Organizations and Watershed Associations

Description.

- Establish lines of communication with local Environmental Stewardship and Watershed organizations.
- Purpose of communication is to inform others regarding the City's Stormwater Management Program and solicit input from interested parties.
- Provide assistance by making trucks and equipment available to privately organized environmental groups that are engage in conservation, clean up or stream bank restoration projects.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- 20 instances of communication per year..
- 2 instances of organization comments or input per year.
- 2 days of donating trucks and equipment to appropriate environmental organization projects conducted within City per year.

Goal Tracking.

- Document instances of communication..
- Document comments and input from appropriate organizations.
- Document days of truck and/or equipment donation.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL 2 PUBLIC INVOLVEMENT AND PARTICIPATION

Best Management Practices

BMP 2.3 City Wide Clean up

Description.

- Modify City's current city wide cleanup program to include stream bank and intermittent stream drainage channel cleanup.
- Invite public to participate by attending and/or serving picnic style lunch to city employees engaged in clean up. Picnic could be made more attractive to public by incorporating music or family entertainment, possibly coupled with other city recreation facilities having "open house".
- Public is not invited to participate in actual cleanup work for liability reasons.
- Advertise in Charleston newspapers, city web site, stormwater Facebook page, city council meeting,
- Post event reporting in newspaper or other forum to create interest for following events.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Continuous through 2014.

Measurable Goals.

- 2 events per year.
- 50 attendees from general public per event
- 100 cubic yards (estimated) of refuse collected.
- 1 post event article published in appropriate forum per permit period.

Goal Tracking.

- Document city wide clean up events..
- Document number of attendees from public.
- Document estimated quantity of refuse collected.
- Document post event article.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL MEASURE 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

This minimum control measure of the Storm Water Management Program is intended to reduce pollutants in storm water runoff to receiving waters. It requires the development and implementation of a system to identify and eliminate sources of illicit discharge and illegal dumping. The City will enhance its current system to identify and eliminate illicit discharges. The system will primarily depend on the periodical review and inspection of common problem areas in the City.

The City will require an accurate map that clearly shows “trouble spots and potential illegal dumping areas”. Input for the mapping will need to be provided by City Council representatives, Municipal Planning Commissioners and Council, Public Works staff, Sanitary Board staff, and residents. The “Hotline” and public meetings may also provide input as to the location of trouble spots.

The Stormwater Management Program shall include an ongoing program to detect and remove illicit connections, discharges, and improper disposal, including any spills into the municipal separate storm sewers owned or operated by the City.

Federal regulations define an illicit discharge as any discharge into the municipal separate storm sewer system that is not composed entirely of rainwater. Illicit discharges are considered as “illicit” because the City’s storm sewer system is not designed to accept, process, or discharge non-stormwater wastes. There are some exceptions to non-stormwater waste such as wastewater permitted to an industrial entity through a NPDES permit and fire fighting activities.

MINIMUM CONTROL 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION
Best Management Practices
BMP 3.2 Storm System Mapping

Description.

- Complete mapping of storm sewer system to include the following:
 - all known and/or found storm sewer outfalls,
 - receiving waters
 - structural stormwater BMPs owned, operated or maintained by the City.
 - all other stormwater conveyances located within the boundaries of the City's watershed.
 - known connections to the municipal separate storm sewer authorized or allowed by the City after the effective date of this permit.
 - Geographic areas that discharge stormwater into the City's storm sewer system not be located within the municipal boundary.
 - Storm manholes
 - Storm catch basins and inlets.
 - Storm sewer piping.
- Mapping will require mobile gps apparatus.
- Mapping may require video camera inspection to determine certain locations.
- Mapping will be continuous as new or corrected information is discovered.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Continuous through 2014..

Measurable Goals.

- 90 Man days spend on mapping field work and drafting per year.
- 1 map in progress by % complete per year.
- 1 final map pending updates.

Goal Tracking.

- Document man days of mapping.
- Document map in progress.
- Document final map pending updates.

10-19-14 Annual Report

- **Purchased video camera equipment with GPS locator and tractor device capable of inspecting storm sewers.**

MINIMUM CONTROL 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION
Best Management Practices
BMP 3.3 Ordinance

Description.

- Adopt a illicit discharge detection and elimination ordinance as a part of a comprehensive stormwater management ordinance that includes definitions, prohibited discharges, escalating enforcement provisions, procedures and actions, and penalties.

Schedule For Implementation.

- ***The target date to propose to City Council for adopting composite stormwater ordinance is September 30, 2012, as described in response to Consent Order 7510. Ordinance passage time is two council readings or approximately one month.***
- Implementation after adoption through 2014..

Measurable Goals.

- 1 ordinance.

Goal Tracking.

- Document ordinance adoption.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION
Best Management Practices
BMP 3.4 Illicit Discharge Detection And Elimination Program and Procedures

Description.

- Adopt and implement illicit discharge detection and elimination procedures to detect and address non-stormwater discharges, spills, illicit connections and illegal dumping into the storm sewer system to include the following:
 - Procedures for locating priority areas likely to have illicit discharges, including at a minimum, evaluating land uses associated with business/industrial activities, areas where complaints have been registered in the past; and areas with storage of large quantities of materials that could result in spills.
 - Field assessment activities, including visual inspection of priority outfalls identified during dry weather and for the purposes of verifying outfall locations, identifying previously unknown outfalls, and detecting illicit discharges.
 - Receiving waters will be prioritized for visual inspection no later than three years from the effective date of the general permit, including a field assessment of at least two water bodies. At a minimum, one field assessment will be made each year thereafter.
 - Screening for illicit connections will be conducted consistent with: Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004, or another methodology of comparable effectiveness.
 - Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the City. These procedures will include detailed instructions for evaluating whether the discharge must be immediately contained and steps to contain the discharge. Compliance will be achieved by investigating within fifteen days, any complaints, reports or monitoring information that indicates a potential illicit discharge, spill, or illegal dumping, and immediately investigating problems and violations determined to be emergencies or otherwise judged to be urgent or severe. In some instances, when imminent water quality impairments are deemed severe or urgent, the incident should be referred to WVDEP.
 - Procedures for tracing the source of an illicit discharge; including visual inspections, and when necessary, opening manholes, using mobile cameras, collecting and analyzing water samples, and/or other detailed inspection procedures.
 - Procedures for removing the source of the discharge; including notification of appropriate authorities; notification of the property owner; follow up inspections, and if necessary; escalating enforcement and legal actions if the discharge is not eliminated. Compliance will be

**MINIMUM CONTROL 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION
Best Management Practices**

BMP 3.4 Illicit Discharge Detection And Elimination Program and Procedures

achieved by initiating an investigation within fifteen days of a report or discovery of a suspected illicit connection to determine the source of the connection, the nature and volume of discharge through the connection, and the party responsible for the connection. The City will establish a system to prioritize responding to and verifying elimination of illicit connections. The City will assign a higher priority on illicit connections that pose an imminent threat to water quality.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Implementation continuous through 2014..

Measurable Goals.

- 1 set final procedures.
- 20 man days visual screening and inspection of receiving streams and priority areas.
- 20 man days field work illicit discharge detection and complaint inspections per year.
- Report number of stormwater related complaints investigated per year.
- Report enforcement actions per year.

Goal Tracking.

- Document final procedures.
- Document man days of inspections.
- Document stormwater related complaints.
- Document enforcement actions and their disposition.

10-19-14 Annual Report

- **Investigate illicit dumping near 302 Rosemont Ave. Paint dumped into storm catch basin. No NOV issued because person responsible for violation could not be proven.**
- **Photographs document inspection.**

MINIMUM CONTROL 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION
Best Management Practices
BMP 3.5 Employee Training

Description.

- Train employees responsible for illicit discharge detection and elimination inspections and enforcement.
- Train other employees in identification of illicit discharges.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Ongoing training continuous through 2014...

Measurable Goals.

- 2 training session per year.
- 10 attendees total trained per year.

Goal Tracking.

- Document training dates.
- Document attendees trained.

10-19-14 Annual Report
No Progress

MINIMUM CONTROL 3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Best Management Practices

BMP 3.6 Education and Outreach

Description.

- Make available and distribute a series of educational materials, literature, graphic illustrations and informational brochures on Stormwater Management Program and storm water quality.
- Use brochures or other educational materials to inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.
- Distribute by mailing, hand delivery, or making available at various city facilities appropriate information to target audiences.
- Publicly list and publicize a "hotline" or other local telephone number for public reporting of spills and other illicit discharges, keep a record of calls received, and follow-up actions taken in response to complaints, and include a summary in the annual report.

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Continuous through 2014.

Measurable Goals.

- 100 brochures per year

Goal Tracking.

- Maintain records of the number of brochures distributed.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 4 CONTROLLING RUNOFF FROM CONSTRUCTION SITES

The purpose of the Controlling Construction Site Runoff Minimum Control Measure is to prevent soil and construction waste from entering storm water. Sediment is usually the main pollutant of concern. During a short period of time construction sites can contribute more sediment to creeks than can be deposited naturally over decades. The resulting siltation and the contribution of other pollutants from construction sites can cause physical, biological, and chemical harm to local waterways.

The Stormwater Management Program shall include an ongoing program to assess, implement, and enforce measures to reduce pollutants in stormwater runoff from construction site activities

MINIMUM CONTROL MEASURE 4 CONTROLLING RUNOFF FROM CONSTRUCTION SITES

Best Management Practices

BMP 4.1 Ordinance

Description.

- Adopt ordinance to control construction site stormwater that includes the following:
 - Implementation of erosion and sediment control Best Management Practices at regulated construction sites. Sediment and erosion control Best Management Practices will be consistent with the Best Management Practices contained in West Virginia's Erosion and Sediment Control Best Management Practices Manual and/or other State manuals, as appropriate.
 - Requirements for construction site operators to implement appropriate erosion and sediment control Best Management Practices. More stringent requirements may be used, and certain requirements may be tailored to local circumstances through the use of basin or watershed plans or other similar water quality and quantity planning efforts. Such local requirements will provide equal protection of receiving waters and equal levels of pollutant control to those provided by WV/NPDES stormwater permits.
 - Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.
 - Requirements for demonstration that registration under the WV/NPDES construction stormwater general permit has been obtained for those sites one acre and greater. Provided that the DWWM has not approved the City as a 'Qualifying Local Program' in which coverage under WV/NPDES construction stormwater permit will be issued by the City.
 - Establishment of authority for site plan review, which incorporate consideration of potential water quality impacts and review of individual pre-construction site plans to ensure consistency with local and State sediment and erosion control requirements.
 - Establishment of authority for receipt and consideration of comments and information submitted by the public.
 - Establishment of authority for site inspections and enforcement of control measures including steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.
 - Adequate funding for site inspections and enforcement of control measures.
 - Measures to provide educational and training measures for construction site operators, including requiring a stormwater pollution prevention plan for construction sites within your jurisdiction.

MINIMUM CONTROL MEASURE 4 CONTROLLING RUNOFF FROM CONSTRUCTION SITES

Best Management Practices

BMP 4.1 Ordinance

Schedule For Implementation.

- ***The target date to propose to City Council for adopting composite stormwater ordinance is September 30, 2012, as described in response to Consent Order 7510. Ordinance passage time is two council readings or approximately one month.***
- Implementation after adoption through 2014..

Measurable Goals.

- 1 ordinance.

Goal Tracking.

- Document ordinance adoption.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 4 CONTROLLING RUNOFF FROM CONSTRUCTION SITES

Best Management Practices

BMP 4.2 Procedures

Description.

- Adopt permitting and/or approval process with plan review, inspection and enforcement capability, for both private sector and public sector construction sites that incorporates the following.
 - Procedures to incorporate plan review of new and redevelopment projects with the planning and approval process of these same projects with other municipal departments within the City.
 - Procedures for routine inspections of permitted construction sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforcement will be conducted as necessary based on the inspection.
 - Development of an enforcement strategy to respond to issues of non-compliance.
 - Procedures for providing educational and training measures for construction site operators and the City's inspectors.
 - Development of an application process whereby the construction site operator will describe the sediment and erosion control measures to be taken on the site. This application process can include submittal of the stormwater pollution prevention plan that was used to obtain registration under DWWM WV/NPDES construction stormwater permit. The application will include a listing of all water bodies into which the construction site will discharge and whether or not they are on the 303(d) list for impaired waters.
 - Development of procedures for keeping records of all regulated construction activities within your MS4, inspection reports, warning letters, and any other enforcement documentation. A summary of inspection and enforcement activities that are conducted will be included in the annual report.

Measurable Goals.

- 1 set final procedures.
- Report number of stormwater related permits for sediment and erosion control issued per year.
- Report number stormwater related inspections for sediment and erosion control per year.
- Report number of stormwater related complaints investigated per year.
- Report enforcement actions per year.

Goal Tracking.

- Document final procedures.
- Document man days of inspections.

MINIMUM CONTROL MEASURE 4 CONTROLLING RUNOFF FROM CONSTRUCTION SITES

Best Management Practices

BMP 4.2 Procedures

- Document stormwater related complaints.
- Document enforcement actions and their disposition.

10-19-14 Annual Report

- **Building permits issued where the work disturbed the ground included provisions for sediment and erosion control. 65 permits issued containing provisions for sediment and erosion control.**
- **Photographs document inspections of sediment and erosion control measures installed.**

MINIMUM CONTROL MEASURE 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

One opportunity to reduce the generation of non-point source pollution from urban runoff is through planning and design, before developments are built. Once built, it is complex and expensive to correct problems. This minimum control measure focuses on site planning and design considerations, which are most effective when addressed in the early stages of project development. Effective long-term management and maintenance are critical, so the best design opportunities are those with the least maintenance needs. The goal of the program is to integrate basic and practical storm water management techniques into new development to protect water quality.

The Stormwater Management Program will include an ongoing program to develop, assess, implement, and enforce the program to reduce pollutants in stormwater runoff to your small MS4 from new development and redevelopment activities. This program will be applied to all sites that disturb a land area one acre or greater, including projects less than one acre that are part of a larger common plan of development or sale. The program will apply to private sector and public sector development, including roads. The program must ensure that controls are in place that will increase groundwater recharge of stormwater runoff where and when possible, and would protect water quality and reduce the discharge of pollutants.

Long-term Stormwater Controls

The City will protect the physical, chemical and biological integrity of receiving waters, and their designated uses, from the impacts of stormwater discharges through the implementation of watershed protection elements and site and neighborhood design elements. The purpose of watershed protection elements is to manage the impacts of stormwater on receiving waters that occur because of regional or watershed-scale management decisions. The primary purpose of site and neighborhood design elements is to manage the impacts of stormwater on receiving waters that occur because of site and neighborhood design management decisions. The technical principles of these management practices have many complementary similarities, and must be implemented in tandem. All elements and standards are required, and must be described in the stormwater management program plan.

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.1 Watershed Protection Subdivision Ordinance

Description.

The City will incorporate watershed protection elements into the subdivision ordinance or equivalent document. In addition, the City will incorporate watershed protection elements into all relevant policy and/or planning documents as they come up for regular review. If a relevant planning document is not scheduled for review during the term of this permit, the City must identify the elements that cannot be implemented until that document is revised, and provide the DWWM a schedule for incorporation and implementation that cannot exceed seven years from the effective date of this permit. Planning documents include, but are not limited to; comprehensive or master plans, subdivision ordinances, general land use plan, zoning code, transportation master plan, specific area plans, such as sector plan, site area plans, corridor plans, or unified development ordinances.

A. Watershed protection elements. As relevant, policy and/or planning documents must include the following, except where noted:

- (1) Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by minimizing the creation, extension and widening of parking lots, roads and associated development.
- (2) Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- (3) Implement stormwater management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- (4) Seek to avoid or prevent hydromodification of streams and other water bodies caused by development, including roads, highways, and bridges.
- (5) Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- (6) Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.

Schedule For Implementation.

- ***The target date to propose to City Council for adopting composite stormwater ordinance is September 30, 2012, as described in response***

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.1 Watershed Protection Subdivision Ordinance

to Consent Order 7510. Ordinance passage time is two council readings or approximately one month.

Measurable Goals.

- 1 ordinance

Goal Tracking.

- Document ordinance.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

Description.

The City will develop a program to protect water resources by requiring all new and redevelopment projects to control stormwater discharge rates, volumes, velocities, durations and temperatures. These standards will apply at a minimum to all new development and redevelopment disturbing one acre or greater, including projects less than one acre that are part of a larger common plan of development or sale. The City will begin implementation of the requirements contained in Part II.C.5.a.ii [other than Part II.C.5.a.ii.A(3) and Part II.C.5.a.ii.A.(4)] within four years after the approval of the Stormwater Management Program.

A. Performance Standards. The City must implement and enforce via ordinance and/or other enforceable mechanism(s) the following requirements for new and redevelopment:

Site design standards for all new and redevelopment that require, in combination or alone, management measures that keep and manage on site the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation. Runoff volume reduction can be achieved by canopy interception, soil amendments, evaporation, rainfall harvesting, engineered infiltration, extended filtration and/or evapotranspiration and any combination of the aforementioned practices. This first one inch of rainfall must be 100% managed with no discharge to surface waters, except when the City chooses to implement the conditions in paragraph 4 below. This can be achieved through on site utilization of practices to include dry swales, bioretention, rain tanks and cisterns, soil amendments, roof top disconnections, permeable pavement, porous concrete, permeable pavers, reforestation, grass channels, green roofs and other practices that alone or combined will capture the first one inch of rainfall runoff volume. Extended filtration practices that are designed to capture and retain up to one inch of rainfall may discharge volume in excess of the first inch through an under drain system. An Underground Injection Control permit may be required when certain conditions are met.

The following additional water quality requirements, as applicable:

- i. A project that is a potential hot spot with reasonable potential for pollutant loading(s) must provide water quality treatment for associated pollutants (e.g., petroleum hydrocarbons at a vehicle fueling facility) before infiltration.
- ii. A project that is a potential hot spot with reasonable potential for pollutant loading(s) that cannot implement adequate preventive or water quality treatment measures to ensure compliance with groundwater and/or surface water quality standards, must properly convey stormwater to a NPDES-permitted wastewater treatment facility or via a licensed waste hauler to a permitted treatment and disposal

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

facility.

iii. A project that discharges or proposes to discharge to any surface water or ground water that is used as a source of drinking water must comply with all applicable requirements relating to source water protection.

When considered at the watershed scale, certain types of development can either reduce existing impervious surfaces, or at least create less 'accessory' impervious surfaces. Incentive standards may be applied to these types of projects. A reduction of 0.2 inches from the one inch runoff reduction standard may be applied to any of the following types of development. Reductions are additive up to a maximum reduction of 0.75 inches for a project that meets four or more criteria. The City may choose to be more restrictive and allow a reduction of less than 0.75 inches if they choose. In no case will the reduction be greater than 0.75 inches.

Redevelopment

Brownfield redevelopment

High density (>7 units per acre)

Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre)

Mixed use and Transit Oriented Development (within ½ mile of transit)

For projects that cannot meet 100% of the runoff reduction requirement on site, two alternatives are available: off-site mitigation and payment in lieu. If these alternatives are chosen, then the City must develop and fairly apply criteria for determining the circumstances under which these alternatives will be available. A determination that standards cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria that would rule out an adequate combination of the practices set forth in section 1, above, such as: too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; soil instability as documented by a thorough geotechnical analysis; a site use that is inconsistent with capture and reuse of stormwater; too much shade or other physical conditions that preclude adequate use of plants. In instances where alternatives to complete on site management of the first inch of rainfall are chosen, technical justification as to the infeasibility of on site management is required to be documented.

These alternatives are available, in combination or alone, for up to 0.6 inches of the original obligation at a 1:1.5 ratio, i.e., mitigation or payment in lieu must be for 1.5 times the amount of stormwater not managed on site. If, as demonstrated to the City, it is technically infeasible to manage on site a portion of all of the remaining 0.4 inches, off site mitigation or payment in lieu will be applied at a 1:2 ratio for that portion. For any of these options to be available, the City must create an inventory of appropriate mitigation projects, and develop appropriate institutional standards and

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

management systems to value, evaluate and track transactions.

i. Off-site mitigation. Runoff reduction practices may be implemented at another location in the same sewershed/watershed as the original project, approved by the City. The City will identify priority areas within the sewershed/watershed in which mitigation projects can be completed. Mitigation must be for retrofit or redevelopment projects, and cannot be applied to new development. The City will determine who will be responsible for long term maintenance on mitigation projects.

ii. Payment in lieu. Payment in lieu may be made to the City, who will apply the funds to a public stormwater project. MS4s will maintain a publicly accessible database of approved in lieu projects.

When public (local or otherwise) streets or parking lots, that are greater than 5000 square feet but less than one acre, are modified or reconstructed runoff reduction practices will be included in the design work. These requirements apply only to projects begun after the effective date of this permit.

B. Plan Review, Approval and Enforcement. To ensure that all new development and redevelopment projects conform to the standards stipulated in Part II, Section C.5.ii, the City will develop project review, approval and enforcement procedures. The review, approval and enforcement procedures will apply at a minimum to all new development and redevelopment disturbing greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, and will include:

(1) Requirements to submit for review and approval a pre-application concept plan that describes how the performance standards will be met. A pre-application meeting attended by a project land owner or developer, the project design engineer, and municipal planning staff to discuss conceptual designs may also meet this requirement.

(2) Development of procedures for the site plan review and approval process(es) that include inter-departmental consultations, as needed, and a required re-approval process when changes to an approved plan are desired.

(3) A requirement for submittal of 'as-built' certifications within 90 days of completion of a project.

(4) A post-construction verification process to ensure that stormwater standards are being met, that includes enforceable procedures for bringing noncompliant projects into compliance.

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

(5) A description of a program to educate both internal staff and external project proponents of the requirements of Part II, Section C.5 of this permit.

C. Maintenance Agreements. The City will require that all development subject to the requirements of Part II, Section C.5.ii. of this permit develop a maintenance agreement and maintenance plan for approved stormwater management practices. The City will require that property owners or operators provide verification of maintenance for the approved stormwater management practices. These agreements will allow the City, or its designee, to conduct inspections of the stormwater management practices and also account for transfer of responsibility in leases and/or deed transfers. The agreement will also allow the City, or its designee, to perform necessary maintenance or corrective actions neglected by the property owner/operator, and bill or recoup costs from the property owner/operator when the owner/operator has not performed the necessary maintenance within thirty (30) days of notification by the City or its designee. Verification will include one or more of the following as applicable: 17

(1) The owner/developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; and/or

(2) Written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; and/or

(3) Written conditions in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control stormwater management practices; and/or

(4) Any other legally enforceable agreement that assigns permanent responsibility for maintenance of structural or treatment control stormwater management practices.

D. Inventory and Tracking of Management Practices. The City will develop a system designed to track stormwater management practices deployed at new development and redevelopment projects. Tracking of stormwater management practices will begin during the plan review and approval process with a database or geographic information system (GIS). The database or tracking system will include information on both public and private sector projects that are within the jurisdiction of the City. In addition to the standard information collected for all projects (such as project name, owner, location, start/end date, etc.), the tracking system will also include: Source control stormwater management practices (type, number, design or performance specifications)

Treatment control stormwater management practices (type, number, design or performance specifications)

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

Latitude and longitude coordinates of stormwater BMP controls using a global positioning system

Digital photographs of stormwater management practice controls

Maintenance requirements of stormwater management practices (frequency of required maintenance and inspections)

Inspection information (date, findings, follow up activities, compliance status)

E. Stormwater BMP Inspections. In order to ensure that all stormwater Best Management Practices are operating correctly and are properly maintained, the City will, at a minimum:

Develop an inspection calendar for stormwater Best Management Practices. Inspections should be performed so that all stormwater BMP's are inspected at least once during the permit cycle.

Complete inspection reports will include:

- i. Facility type,
- ii. Inspection date,
- iii. Name and signature of inspector,

18

GIS location and nearest street address,
Management practice ownership information (name, address, phone number, fax, and email),

A description of the stormwater BMP condition including the quality of: vegetation and soils; inlet and outlet channels and structures; embankments, slopes, and safety benches; spillways, weirs, and other control structures; and sediment and debris accumulation in storage and forebay areas as well as in and around inlet and outlet structures,

Photographic documentation of all critical stormwater BMP components, and Specific maintenance items or violations that need to be corrected by the stormwater BMP owner along with deadlines and reinspection dates.

Develop an enforcement and response plan to ensure that stormwater Best Management Practices are properly maintained. This plan will include procedures to enforce correction orders and include a contingency plan if correction orders are not followed through by the responsible party. The City will promptly notify the stormwater BMP owner or operator of any deficiencies discovered during a maintenance inspection. The City will follow its enforcement response plan to ensure that management practices are maintained. The City must conduct a subsequent

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

inspection to ensure completion of all required repairs.

F. Reporting. The City will demonstrate compliance with the requirements for post-construction controls by summarizing the following in the Annual Report:

(1) A description of how the City's legal authority addresses the watershed protection elements in Part II, Section C.5.

(2) A summary of the number and types of projects that the City reviewed for new and development considerations.

(3) A summary of the number and types of stormwater Best Management Practices approved in new and redevelopment projects, including the number of approved projects that qualified for each of the incentives described in Part II, Section C.5.a.ii.A.3, and that qualified for each of the alternatives described in Part II, Section C.5.a.ii.A.4.

(4) A summary of the number and types of maintenance agreements approved.

(5) A summary of stormwater BMP maintenance inspections conducted by the City, including a summary of the number requiring maintenance or repair, the number brought into compliance and the number of enforcement actions taken.

(6) A summary of any evaluation data collected for long-term stormwater controls, including water quality information, stormwater BMP performance, and model results.

*

b. Assessments

The City will conduct the following assessment to provide a foundation for program improvements to be implemented during the next permit term.

1. Street/Parking Design Assessment. 19

City will submit to DWWM a report assessing current street design guidelines and parking requirements that affect the creation of impervious cover, with the third year annual report. The assessment will include recommendations and proposed schedules for incorporating policies and standards into relevant documents and procedures to maximize vegetation and to minimize impervious cover attributable to parking and street designs. The local planning commission and the local transportation commission should be involved in the assessment

Schedule For Implementation.

- ***The target date to propose to City Council for adopting composite stormwater ordinance is September 30, 2012, as described in response to Consent Order 7510. Ordinance passage time is two council readings or approximately one month.***

Measurable Goals.

MINIMUM CONTROL 5 CONTROLLING RUNOFF FROM NEW DEVELOPMENT AND REDEVELOPMENT

Best Management Practices

BMP 5.2 Site and Neighborhood Design Ordinance

- 1 ordinance

Goal Tracking.

- Document ordinance.

10-19-14 Annual Report

No Progress

MINIMUM CONTROL MEASURE 6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The purpose of this minimum control measure is to assure that the City's delivery of public services occurs in a manner protective of storm water quality to the Maximum Extent Practicable and protect overall water quality. In this way the City may serve as a model to the community.

MINIMUM CONTROL 6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Best Management Practices

BMP 6.1 Municipal Facilities Maintenance Program

Description.

Develop and implement an operation and maintenance program that incorporates good housekeeping components at all municipal facilities, including but not limited to; municipal waste water treatment facility, potable drinking water facility, municipal fleet operations, maintenance garages, parks and recreation, street and infrastructure maintenance, and grounds maintenance operations.

i. Each city will develop and establish maintenance standards at all municipal facilities that will help protect the physical, chemical and biological integrity of receiving waters.

ii. Each city will establish an inspection schedule in which to perform inspections to determine if maintenance standards are being met. Inspections will be performed no less than once per calendar year.

iii. Each city will develop procedures for record keeping and tracking inspections and maintenance at all municipal facilities.

b. Establish and implement policies and procedures to reduce the discharge of pollutants in stormwater runoff from all lands owned or maintained by the city and subject to this permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, water/sewer infrastructure and stormwater treatment and flow practices. These policies and procedures will address, but are not limited to:

- ***Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans.***
- ***Sediment and erosion control.***
- ***Landscape maintenance and vegetation disposal.***
- ***Trash management.***
- ***Building exterior cleaning and maintenance.***
- ***Chemical and material storage***
- ***Street sweeping and inlet/catch basin cleaning.***
- ***Stormwater pipe, inlet, drainage, facility repair, replacement, or new installation.***
- ***Sanitary sewer and manhole repairs.***
- ***Erosion protection on natural storm drains.***
- ***Sanitary sewer overflow removal.***
- ***Sanitary sewer ex filtration repairs***

Schedule For Implementation.

- ***Commence on approval of SWMP.***
- Implementation continuous through 2014.

Measurable Goals.

- Report number of facility inspections
- Report number of stormwater related repairs.

Goal Tracking.

- Document procedures.

MINIMUM CONTROL 6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Best Management Practices

BMP 6.1 Municipal Facilities Maintenance Program

- Document inspections.

10-19-14 Annual Report

- Establish maintenance and cleaning procedures – inspect and clean all catch basing, drainage swales, and off road inlet structures throughout city prior to a predicted precipitation event, after a significant precipitation event, and at regular intervals between events.
- Stormwater repair or replacement projects – 21
- Stormwater system maintenance and/or cleaning – 55 days
- Stormwater complaint issues resolved – 88
- Significant cleaning, maintenance and repairs after the August 20, 2014 flash flood.

MINIMUM CONTROL 6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Best Management Practices

BMP 6.2 Municipal Operations Policies and Procedures

Description.

Establish and implement policies and procedures to reduce the discharge of pollutants in stormwater runoff from all lands owned or maintained by the permittee and subject to this permit, including but not limited to: parks, open space, road right-of-way, maintenance yards, water/sewer infrastructure and stormwater treatment and flow practices.

These policies and procedures shall address, but are not limited to:

- **Application of fertilizer, pesticides, and herbicides including the development of nutrient management and integrated pest management plans.**
- **Sediment and erosion control.**
- **Landscape maintenance and vegetation disposal.**
- **Trash management.**
- **Building exterior cleaning and maintenance.**
- **Chemical and material storage**
- **Street sweeping and inlet/catch basin cleaning.**
- **Stormwater pipe, inlet, drainage, facility repair, , replacement, or new installation.**
- **Sanitary sewer and manhole repairs.**
- **Erosion protection on natural storm drains.**
- **Sanitary sewer overflow removal.**
- **Sanitary sewer ex filtration repairs**

Schedule For Implementation.

- **Commence on approval of SWMP.**
- **Ongoing training continuous through 2014.**

Measurable Goals.

- **1 set final procedures.**
- **200 man days repair field work.**
- **50 man days field inspection of facilities.**
- **Report number of stormwater related complaints investigated per year.**
- **Report number sanitary sewer complaints investigated per year.**
- **Report enforcement actions per year.**

Goal Tracking

- **Document final procedures.**
- **Document man days field work repairs.**
- **Document man days of inspections.**
- **Document stormwater related complaints.**
- **Document enforcement actions and their disposition.**

10-19-14 Annual Report

- **Submitted to WVDEP Plan of Action to comply with SSO elimination. Plan of Action is approximately \$80,000,000 over a 20 year period to eliminate all SSO's. Submitted to WVDEP on July 13, 2012.**
- **Purchased property to be used for sanitary sewer overflow storage tank serving the Upton Creek pump station.**
- **Completed sanitary sewer comprehensive facility plan than evaluated and analyzed sanitary sewer overflows, their cause and possible solutions.**

MINIMUM CONTROL 6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Best Management Practices

BMP 6.3 Municipal Employee Training

Description.

Using training materials that are available from WVDEP, USEPA or other organizations, develop and implement an on-going training program for employees of the city whose construction, operations or maintenance job functions may impact stormwater quality. The training program will include, but is not limited to, employees who work in the following areas:

Street/sewer and right-of-way construction and maintenance,

Water and sewer departments,

Parks and recreation department,

Municipal water treatment and waste water treatment,

Fleet maintenance,

Fire departments,

Building maintenance and janitorial,

Garage and mechanic crew,

Contractors and subcontractors who may be contracted to work in the above described areas,

Personnel responsible for answering questions about the city's stormwater program, this includes persons who may take phone calls about the program,

Any other department of the city that may impact stormwater runoff

i. The training program will address the importance of protecting water quality, the requirements of this permit, operation and maintenance standards, inspection procedures, selecting appropriate Best management practices, ways to perform their job activities to prevent or minimize impacts to water quality, and procedures for reporting water quality concerns, including potential illicit discharges. Follow-up and refresher training will be provided at a minimum of once every twelve months, and will include any changes in procedures, techniques or requirements. City's will document and maintain records of training provided.

Schedule For Implementation.

- **Commence on approval of SWMP.**
- Ongoing training continuous through 2014.

Measurable Goals.

- 2 training session per year.
- 10 attendees total trained per **session**.

Goal Tracking.

- Document training dates.
- Document attendees trained.

10-19-14 Annual Report
No Progress

SAMPLING AND TESTING

REPRESENTATIVE OUTFALL

- 4.d. Latitude and Longitude of representative outfall:
Longitude- Degrees: **81 Minutes: 42 Seconds: 54 W**
Latitude- Degrees: **38 Minutes: 21 Seconds: 28 N**

Tip: The MS4 general permit requires that you sample from one representative outfall twice a year. The location of this outfall will be in your most densely populated area.

Part IV.B.

- 4.e. Describe the physical location of your representative outfall. If a street address is not possible use cross street descriptions. **74" diameter culvert near 600 Liberty St.**

Part IV.B.

- 4.f. Describe your monitoring plan to include the frequency and parameters. **Sample and test twice per year. Test for BOD, SS, fecal coliform, FOG Total Nitrogen, TKN, Phosphorus.**

SAMPLING AND TESTING

IMPAIRED WATERBODIES

14.b. Describe your monitoring plan for impaired waterbodies and those with TMDLs. Give locations and frequencies. ***Sampling and testing frequency two times per year.***

<i>Kanawha River</i>	<i>Boat ramp off Old MacCorkle Avenue near mouth of David Creek</i>	<i>38-21-42 N</i>	<i>81-43-01W</i>
<i>Davis Creek</i>	<i>East side of bridge on Old MacCorkle Ave.</i>	<i>38-21-41N</i>	<i>81-42-57W</i>
<i>Wards Branch</i>	<i>Coal yard</i>	<i>38-21-34N</i>	<i>81-42-15W</i>
<i>Trace Fork</i>	<i>Near mouth at Davis Creek</i>	<i>38-20-39N</i>	<i>80-42-40W</i>
<i>Joplin Branch</i>	<i>Near end of Mountain Shadow Dr,</i>	<i>38-21-40N</i>	<i>81-40-40W</i>

Representative Outfall				
Pollutant	Sample date	Sample date	Sample date	Sample date
	12-23-11	7-5-12	6-27-13	12-30-13
pH	7.76	7.52	7.32	6.84
BOD (mg/l)	<3	6	4	<2
N (mg/l)	1.3	1.1	0.878	1.68
Phosphorus (mg/l)	0.11	0.18	0.1	0.04
TKN (mg/l)	2	2	1	<1
FOG (mg/l)	<5	<5	<1.4	<4.76
TSS (mg/l)	7	32	13	5
Fecal Coliform (counts /100ml)	5900	60000	59000	2300

Kanawha River				
Pollutant	Sample date	Sample date	Sample date	Sample date
		7-5-12	6-27-13	12-30-13
pH		7.90	7.63	6.6
BOD (mg/l)		<2	<2	<2
N (mg/l)		0.4	0.619	0.659
Phosphorus (mg/l)		0.05	<0.02	0.034
TKN (mg/l)		<1	1	<1
FOG (mg/l)		<5	<1.4	<4
TSS (mg/l)		16	21	7
Fecal Coliform (counts /100ml)		550	10000	370

Davis Creek				
Pollutant	Sample date	Sample date	Sample date	Sample date
		7-5-12	6-27-13	12-30-13
pH		7.34	7.6	6.69
BOD (mg/l)		9	4	<2
N (mg/l)		1.5	0.574	0.664
Phosphorus (mg/l)		0.02	0.15	0.034
TKN (mg/l)		5	1	<1
FOG (mg/l)		<5	1.4	<4
TSS (mg/l)		33	157	<2
Fecal Coliform (counts /100ml)		>60000	55000	320

Wards Branch				
Pollutant	Sample date	Sample date	Sample date	Sample date
			6-27-13	12-30-13
pH			7.72	7.52
BOD (mg/l)			3	<2
N (mg/l)			0.766	0.747
Phosphorus (mg/l)			0.07	0.062
TKN (mg/l)			1	<1
FOG (mg/l)			<1.4	<4
TSS (mg/l)			9	2
Fecal Coliform (counts /100ml)			4900	36

Trace Fork				
Pollutant	Sample date	Sample date	Sample date	Sample date
		7-5-12		12-30-13
pH		7.43		6.36
BOD (mg/l)		18		<2
N (mg/l)		0.4		0.527
Phosphorus (mg/l)		0.46		0.040
TKN (mg/l)		3		<1
FOG (mg/l)		<5		<4
TSS (mg/l)		53		23
Fecal Coliform (counts /100ml)		>60000		144

Joplin Branch				
Pollutant	Sample date	Sample date	Sample date	Sample date
		7-5-12	6-27-13	12-30-13
pH		8.09	8.19	7.58
BOD (mg/l)		8	3	<2
N (mg/l)		0.8	0.904	1.09
Phosphorus (mg/l)		0.21	0.11	0.044
TKN (mg/l)		1	1	<1
FOG (mg/l)		<5	<1.40	<5
TSS (mg/l)		10	17	2
Fecal Coliform (counts /100ml)		>60000	>60000	3000