

City of Normandy Park Stormwater Management Plan - 2013 Update

CITY OF NORMANDY PARK

2013 UPDATE

STORMWATER MANAGEMENT PLAN

(SWMP)

AS REQUIRED BY

The Western Washington Phase II Municipal Stormwater Permit

State of Washington Department of Ecology

Permit # WAR 04-5534

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2013 update prepared by

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1. INTRODUCTION

1.1 Overview

The City of Normandy Park Stormwater Management Plan was prepared to guide the City in planning, funding and implementing a comprehensive program for addressing current and future regulatory and policy requirements for managing stormwater runoff, and the City's natural resources. The City's stormwater program currently consists of many separate programs, conducted by the Public Works and Planning Departments. These programs are typically implemented to respond to regulatory requirements, the need for public services and safety, and the City's commitment to protect and improve the quality of its natural resources. Examples include capital improvement projects for stormwater and flood control, maintenance of public stormwater systems, resource monitoring of streams to assess and respond to water quality problems, private stormwater facility inspection, and public involvement and education.

The purpose of the Stormwater Management Plan is to comprehensively address how to meet the many different but related regulations, adopted plans and programs, and policies that affect urban stormwater, flooding and associated water resources. Because many of these requirements from different sources affect the same activities, an overall stormwater plan is needed to address the interrelationships of the programs and efficient approaches for meeting requirements and implementing policy, consistent with long-term goals, objectives and policies as outlined in the City of Normandy Park Comprehensive Plan.

1.2 Regulations

Many Federal, State, and Local laws and codes pertain to stormwater issues. Below is a brief summary of some of the main regulations which pertain to stormwater.

CLEAN WATER ACT (CWA) HISTORY

1899 Rivers and Harbors Act

1972 Clean Water Act

1977 CWA amendments address toxics released to sewers and surface waters

1987 NPDES (National Pollution Discharge Elimination System) Stormwater program established to control non-point pollution

CWA SECTION 402

- NPDES Stormwater Phase II permits required for all small Municipal Separate Stormwater Sewer Systems (MS4's) with a population over 1,000 people 402 p(3)(B) of CWA requires all discharges into storm sewers or surface waters to reduce pollutants to the Maximum Extent Possible (MEP)

CWA SECTIONS 505 & 510

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- 505 allows citizens' suits and attorney's fees to prevailing, or substantially prevailing party
- 510 clarifies that states can adopt and enforce Water Quality (WQ) standards and controls, provided that state standards cannot be less stringent than federal standards.

STATE WATER QUALITY REGS

- RCW 90.48 – Water Pollution Control Act
- Department of Ecology (DOE) designated state CWA agency
- WAC 173-201A – Surface WQ Standards
- WAC 173-220 – NPDES Program
- WAC 173-226 – Waste Discharge General Permit Program

NORMANDY PARK MUNICIPAL CODE

- NPMC Title 13 Environment
- NPMC Title 9 Flood Hazards
- NPMC Title 14 Building Code
- NPMC Title 16 Shoreline Management

Policies provide official guidance on approaches and likely courses of action for meeting City goals, objectives, and obligations. Current Municipal Code lays out general requirements for stormwater management and adopts the 2005 Stormwater Management Manual for Western Washington as its primary design manual. The City also utilizes the City of Normandy Park Small Project Drainage Requirements and Technical Guidance Manual, as well as the PSAT Low Impact Development Manual. Programs and projects that are referenced in the Stormwater Management Plan are consistent with the policies of the City Comprehensive Plan.

1.3 NPDES Phase II Permit Requirements

NPDES Permit Compliance Status

A Notice of Intent (NOI) to comply with the NPDES Phase II Western Washington Municipal Stormwater Permit was sent to DOE in March 2003.

Notice of Coverage

A Notice of Coverage letter was received from DOE in January of 2007 identifying that the City was now covered under Permit No. WAR04-5534.

SWMP Development

One of the permit requirements is for municipalities to develop and implement a Stormwater Management Program (SWMP). A SWMP, as described in the NPDES Permit, is a planning tool used to describe a municipality's current implementation of the permit, as well as plans for implementing additional program elements. A SWMP is a living document that will be updated annually.

Public Participation

The City encourages public comment and participation in the development and implementation of the SWMP. The City plans to utilize the following venues in an effort to keep our residents informed on the progress of the SWMP, so they can provide comments and input as the SWMP develops: 1) The City web page; 2) The City's newsletter; 3) Public Notices in local newspapers; and 4) Public Meetings – Open Houses/Workshops and City Council Meetings.

1.4 Stormwater Management Plan

The City of Normandy Park Storm Water Utility is well established with an existing surface water utility rate structure and some of the NPDES Phase II Permit program elements already in place. The Stormwater Management Program being developed includes the following elements:

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

Each of these elements is discussed in detail on the following pages.

2. PUBLIC EDUCATION AND OUTREACH

2.1 Overview

The City of Normandy Park is implementing a Public Education and Public Involvement Program. We use a variety of approaches to inform residents and businesses about stormwater pollution prevention, the Capital Improvement Program, watershed planning and maintenance activities, engaging both citizens and other stakeholders.

We believe that public education is an integral part of protecting our water resources. It is our goal to increase water quality compliance by helping people realize their individual and collective responsibilities for protecting our waterways. An informed community can be a great deal more effective at keeping a watchful eye on our waterways than a few members of city staff.

In 2008 the city adopted the 2005 Stormwater Management Manual for Western Washington published by the Washington State Department of Ecology as the general stormwater design manual for the City. For small residential projects with less than 10,000 square feet of total site impervious surface, and that add and/or replace less than 5,000 square feet of paved area, the city adopted the 2008 City of Normandy Park Small Project Drainage Requirements and Technical Guidance Manual (See Appendix F).

These documents provide educational information to tenants and residents on the impact of stormwater discharges on receiving waters, and steps that can be taken to reduce pollutants in stormwater runoff.

2.2 Low Impact Development

The City adopted the 2005 PSAT Low Impact Development Technical Guidance Manual for LID design.

Low impact development is a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation and use of on-site natural features, site planning, and distributed stormwater management practices that are integrated into a project design. LID strategies can be applied to new development, urban retrofits, infrastructure improvements and revitalization projects to protect aquatic resources.

The goal of LID is to prevent measureable physical, chemical or biological degradation to streams, lakes, wetlands, and other natural aquatic systems from commercial, residential or industrial development sites.

City staff will recommend that City Council adopt the Puget Sound Partnership Low Impact Development Technical Guidance Manual for Puget Sound, December 2012, which updates the PSAT LID Manual with the latest techniques and information.

The Low Impact Development Manual is available in the office of the city clerk for use and examination by the public.

2.3 Stormwater Pond Maintenance

The primary purpose of all stormwater ponds is to manage stormwater runoff generated by impervious surfaces such as rooftops and pavement. These ponds are not designed to be recreational ponds for fishing or boating, and they are not permitted solely for beautification of the landscape. They are engineering devices, intended to moderate flood surges and reduce stormwater pollution. As with other engineered devices, stormwater ponds require maintenance to prevent them from falling into disrepair. That being said, stormwater ponds that are well maintained may provide additional benefits beyond simply managing stormwater.

Drainage facilities accepted by the city of Normandy Park for maintenance

The city performs the maintenance and operation of drainage facilities that have formally been accepted for maintenance and operation by the city manager.

The city may assume maintenance of privately maintained drainage facilities only if the following conditions have been met:

- All necessary easements or dedications entitling the city to properly maintain the drainage facility have been conveyed to the city.
- The city manager has determined that the facility is in the dedicated public road right-of-way, easement or tract and that maintenance of the facility will contribute to protecting or improving the health, safety and welfare of the community.

Drainage facilities not accepted by the city of Normandy Park for Maintenance

The applicant and owners of a property required to construct a drainage facility shall remain responsible for the facilities continual performance, operation and maintenance in accordance with the standards and requirements of the city and shall remain responsible for any liability arising out of these duties.

2.4 Public Education Programs:

The City has implemented several education programs to address the following issues:

Natural Yard Care

These informative workshops provide residents with the information and tools they need to adopt environmentally friendly yard care techniques, such as Smart Watering, Composting/Mulching and Alternatives to Fertilizers and Pesticides. This work is coordinated with our Basin Steward program.

Car Washing

Even biodegradable soaps are toxic to aquatic life and unlike our sanitary sewer system, water that runs into our storm drains flows directly to our lakes, streams and wetlands with little to no treatment. The program includes education and provides free use of a car-wash kit which pumps water from a catch basin into the sanitary sewer or grassy area for absorption.

Shoreline Stewardship Booklet

This public education booklet outlines the natural processes and functions of the Puget Sound shoreline and describes environmentally friendly techniques on topics like beach access, landscaping and shoreline erosion protection. The booklet was provided to the City courtesy of the Puget Sound Action Team.

Shoreline Property Owners Workshop

King Conservation District Shoreline property owners program is an established program on its fifth year of operation. The program includes three King County area weekend workshops, and individual site visits by District staff. The workshops cover Marine ecology, coastal processes, best management practices and engineering, and native planting information.

3. PUBLIC PARTICIPATION/INVOLVEMENT

Volunteers are an important part of our stormwater pollution prevention program. Below are some of the programs the City is developing as a part of the Stormwater Management Plan.

3.1 Storm Drain Marking Program

To increase the public awareness of stormwater pollution and their path to water bodies, the City will be implementing a Catch Basin Marker Program. Through this program, partnerships with organizations such as Scout groups, will help to mark storm drain inlets or catch basins with stencils and paint.

3.2 Basin Steward Program

Thanks to a partnership of local governments, residents in the Miller and Walker Creeks basin will have more help in taking care of streamside habitat and cleaning up stormwater. Dennis Clark is the basin steward for the creeks, which drain nine square miles of Burien, Normandy Park, SeaTac, and White Center. The basin steward will serve as a resource for citizens who want to improve native vegetation along the creeks, decrease stormwater runoff from their property, and reduce stormwater pollution. Homeowners and businesses can request free consultations to learn what they can do to help improve the local aquatic ecosystem. Contact Dennis Clark at 206-296-1909 or dennis.clark@kingcounty.gov.

3.3 Noxious Weed Control

Noxious weeds are non-native plants that have been introduced accidentally or as ornamentals. They spread quickly, displacing desirable plant species and destroying native habitat important for good water quality. Through the years, the City of Normandy Park has partnered with volunteer groups on numerous projects to remove noxious weeds along critical waterways. These revegetation efforts have enhanced the aquatic habitat of our local streams, thus improving water quality.

4. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The City of Normandy Park is in the process of developing programs to address illicit discharge issues in the city. Several important elements of the SWMP relate to this issue and are as follows:

4.1 Stormwater System Mapping Project

One of the conditions of the permit is to provide an inventory of the City's stormwater facilities. Mapping of the City's Stormwater System is complete. This mapping work included mapping of both pipes and open channels including identification of all known stormwater outfalls.

4.2 Illicit Discharge Detection and Elimination (IDDE) Program

In October 2008, the City adopted Title 13.08.200 Discharges into city of Normandy Park waters which describes prohibited discharges into surface, stormwater and groundwater and identifies possible enforcement actions.

A formal Illicit Discharge Detection and Elimination (IDDE) program is planned. Areas throughout the City will be targeted for water quality inspections due to their potential impacts to the City's infrastructure and downstream surface waters.

On-site assessments are made using visual methods to detect non-stormwater discharges or illicit connections. Best Management Practices (BMPs) at the facility are reviewed, and all known stormwater discharge points are inspected for odors, discolorations, abnormal flows or abnormal conditions. Observations will be documented, and physical evidence (photos, water quality samples) may be collected when warranted.

When stormwater violations are found, the City of Normandy Park will allow the facility owner to correct the problem within a reasonable time frame. In addition, the SWMP provides educational material such as that found in the City's adopted stormwater manual for the property or business owner to use as a reference for compliance. Civil enforcement action, including issuance of monetary penalties, may be evoked when serious or on-going violations occur.

4.3 Planned Program

- Documentation of existing programs and procedures
- Review and update the Normandy Park Municipal Code as needed
- Document and update existing enforcement strategy
- Continue to implement and refine outfall screening program
- Update and augment education programs on the hazards of illicit discharges, and on reducing pollutants in permitted non-stormwater discharges
- Develop centralized record-keeping for actions associated with illicit discharges
- Develop IDDE training program for city staff

During the summer and fall of 2009 the City, in cooperation with the Washington State Department of Ecology, investigated on-going oil pollution discharge into the City's storm system in the area of Normandy Terrace SW. A combination of mapping fuel oil sources and tracing the source led to the identification of a leaking oil tank and its removal and remediation.

4.4 Hazardous Materials

The City of Normandy Park will promote responsible hazardous waste management in the City through the Local Hazardous Waste Management Program in King County. The city will explore ways to promote use of the programs offered such as the Voucher Incentive Program (VIP) – a way for local businesses to reduce the amount of contaminants discharged to stormwater. For residents, the program's "wastemobile" will be promoted by including the program on the City website and newsletter (see Appendix D).

5. CONSTRUCTION SITE RUNOFF CONTROL

In order to help mitigate the negative impacts associated with changing the natural landscape, the City has implemented several policies which strengthen protection against many of the stormwater issues related to construction sites. These are outlined below:

5.1 Plan Review

The City has retained an outside civil engineering consultant to provide third-party review of storm water drainage plans. The city has adopted the 2005 Stormwater Management Manual for Western Washington published by the Washington State Department of Ecology as the general stormwater design manual for the City. For small residential projects with under 10,000 square feet of total site impervious surface, and that add and/or replace less than 5,000 square feet of paved area, the city adopted the 2008 City of Normandy Park Small Project Drainage Requirements and Technical Guidance Manual. In addition the City adopted the PSAT Low Impact Development Technical Guidance Manual for LID design.

Per Normandy Park Municipal Code a drainage review is required when any proposed project is subject to a city of Normandy Park building permit; land clearing, grading or filling permit; shoreline substantial development permit; flood control zone permit; or subdivision or plat approval, and meets one of the following criteria:

- (a) Any single-family residence or permitted modification that adds impervious surface;
- (b) Would construct or modify a drainage pipe or ditch that is 12 inches or more in diameter or depth or receives surface and stormwater runoff from a drainage pipe or ditch that is 12 inches or more in diameter or depth;
- (c) Contains or is adjacent to a floodplain, stream, lake, wetland or closed depression, or a sensitive area as defined in Chapter 13.16 NPMC excluding seismic hazard areas; or
- (d) Any other project that adds or replaces impervious surface. Pavement maintenance projects not requiring or associated with other permits, such as seal coats, pavement overlay, and repavement of existing residential use concrete or asphalt paved areas such as parking lots, patios, or driveways shall be excluded from drainage review, unless the drainage patterns are substantially modified.
- (e) Any project which includes land-disturbing activities which expose more than 120 square feet of soil. Routine landscape maintenance practices outside critical areas, and ongoing gardening and farming activities shall be excluded from drainage review unless the drainage patterns are substantially modified.

The drainage review for any proposed project shall be targeted to the scope of the project's size, type of development and potential for impacts to the regional surface water system. If drainage review for a proposed project is required, the city shall determine which of the following drainage reviews apply:

- (a) Small-site drainage review; or
- (b) Full drainage review

5.2 Drainage Plan Requirements

- (1) Minimum requirements. Every permit application with drainage review must meet each of the following requirements, which are described in detail in the 2005 Stormwater Management Manual for Western Washington. Small single-family residential projects with less than 10,000 square feet of total impervious surfaces and less than 5,000 square feet of paved area may be able to use the City of Normandy Park Small Project Drainage Requirements and Technical Guidance Manual for project planning, design, and submittal purposes. Redevelopment projects shall mitigate the impacts from existing impervious surfaces to the extent practical, and as required by the appropriate stormwater management manual.
 - a. Requirement No. 1: Preparation of Stormwater Site Plans. All projects shall prepare a stormwater site plan for city review. Stormwater site plans shall be prepared in accordance with the requirements of the applicable stormwater or drainage manual.
 - b. Requirement No. 2: Construction Stormwater Pollution Prevention. All projects shall comply with construction stormwater pollution prevention and erosion control as required by the manual utilized. All proposed projects that will clear, grade, or otherwise disturb the site shall provide erosion and sediment control that prevents, to the maximum extent practical, the transport of sediment from the site to drainage facilities, water resources and adjacent properties.
 - c. Requirement No. 3: Source Control of Pollutants. Source control BMPs prevent stormwater from coming in contact with pollutants. They are a cost-effective means of reducing pollutants in stormwater and therefore, should be a first consideration in all projects. All multifamily residential, commercial, and industrial projects shall implement source control BMPs. Source control BMPs shall be selected, designed, and maintained according to the 2005 Stormwater Management Manual for Western Washington.
 - d. Requirement No. 4: Preservation of Natural Drainage Systems. All surface and stormwater runoff from a project shall be discharged at the natural location so as not to be diverted onto, or away from, downstream properties. The manner in which runoff is discharged from the project site shall not create any adverse impacts to downhill properties or drainage systems as specified in the discharge requirements of the applicable stormwater or drainage manual.
 - e. Requirement No. 5: On-site Stormwater Management. Projects shall employ on-site stormwater management BMPs to infiltrate, disperse, and/or retain stormwater runoff on-site to the maximum extent feasible without causing flooding or erosion impacts. The application for proposed projects shall include an analysis of potential off-site drainage impacts associated with development of the proposed site and proposed BMPs for stormwater management including control of flows, run-off conveyance, and off-site discharge as required by the applicable stormwater or drainage manual. Drainage systems shall be designed to accommodate, at a minimum the 50-year peak flow.
- (2) Additional Requirements. Single-family residential projects with over 10,000 square feet of total impervious surface and/or that add or replace over 5,000 square feet of paved surface, and all other projects which add or replace over 5,000 square feet of impervious surface must meet

each of the following requirements as required by the 2005 Stormwater Management Manual for Western Washington.

- a. Requirement No. 6: Runoff Treatment – Water Quality. Proposed projects shall provide water quality treatment facilities to treat polluted surface and stormwater runoff generated by the addition or replacement of 5,000 square feet or more of pollution-generating impervious surface (PGIS) or one-half acre or more of pollutant-generating pervious surface (PGPS). These facilities shall meet the area-specific water quality treatment requirements and the water quality implementation requirements applicable to the project site as specified in the stormwater management manual.
 - b. Requirement No. 7: Flow and Flow Duration Control. Projects must provide flow and flow duration control to reduce the impacts of stormwater runoff from impervious surfaces and land cover conversions. The requirement below applies to projects that discharge stormwater directly, or indirectly through a conveyance system, into one of the city's lakes wetlands, creeks, streams or the natural drainage systems. Flow control BMP design will be based on continuous hydrologic modeling analysis. The design will assure that flows will approximate, but in no case exceed, durations ranging from 50 percent of the two-year to the 50-year peak flow.
 - c. Requirement No. 8: Wetlands Protection. Projects that deliver flow to wetlands will also be designed to preserve pre-project wetland hydrologic conditions unless specifically waived or exempted by regulatory agencies with permitting jurisdiction.
 - d. Requirement No. 9: Basin Planning. If a proposed project is in designated critical drainage areas, or is in an area included in an adopted master drainage plan, basin plan, lake management plan or shared facility plan, then the proposed project shall meet the applicable drainage requirements of the critical drainage area, master drainage plan, basin plan, lake management plan or shared facility plan.
 - e. Requirement No. 10: Operation and Maintenance. Maintenance of all drainage facilities in compliance with the city of Normandy Park maintenance standards is the responsibility of the applicant/property owner as described in the adopted stormwater manual, except those facilities for which Normandy Park is granted an easement or covenant and assumes maintenance and operation.
- (3) Engineering Required. All projects, except single-family residential projects with less than 5,000 square feet of total site impervious surface, are required to have a drainage plan prepared by an engineer licensed in the state of Washington. This requirement may be waived by the city for projects with less than 10,000 square feet of total site impervious surface if the project design and conditions indicate a low likelihood of any adverse impacts due to a lack of professional involvement in the design.
- (4) Landscaping and Aesthetics. Proposed projects shall incorporate landscape buffers and/or passive recreational features into the design of detention/retention and treatment facilities. The landscaping shall meet the landscaping requirements of the adopted stormwater manual. When possible, retention/detention facilities should be integrated into the project's design to take advantage of the improved appearance and function of the facility.

5.3 Critical Drainage and Erosion Areas

Development in areas where the city has determined that the existing flooding, drainage or erosion conditions present an imminent likelihood of harm to the welfare and safety of the surrounding community shall meet special drainage requirements set by the city engineer or designee until such time as the community hazard is alleviated. Such conditions may include the limitation of the volume of discharge from the subject property to predevelopment levels, preservation of wetlands or other natural drainage features or other controls necessary to protect against community hazard. Where application of this section will deny all reasonable use of a property and a facility or design that produces a compensating or comparable result cannot be obtained, then a best practicable alternative may be obtained, to be determined by the city engineer.

5.4 Construction Timing and Final Approval

No work related to permanent or temporary storm drainage control for a permitted development may proceed without the approval of the city manager.

Erosion and sediment control measures associated with both interim and permanent drainage systems shall be:

- (a) Constructed in accordance with the approved plan prior to any grading or land clearing other than that associated with an approved erosion and sediment control plan; and
- (b) Satisfactorily sequenced and maintained until all improvements, restoration, and landscaping associated with the permit and approval for the project are completed and the potential for on-site erosion has passed.

Prior to the construction of any improvement or building on the site, or to final recording of a plat or short plat, those portions of the drainage facilities necessary to accommodate the control of surface and stormwater runoff discharging from the site shall be constructed and in operation, but, after receipt of a written request, the city may authorize recording to minimize impacts that may result from construction during inappropriate times of the year.

5.5 Drainage Hazards

Whenever the city manager determines that any existing construction site, erosion and sedimentation problem or drainage facility poses a hazard to life and limb, endangers any property, or adversely affects the condition or capacity of other drainage facilities, the safety and operation of city right-of-way, utilities, or other property owned or maintained by the city, the applicant/person to whom the permit was issued, the owner of the property within which the drainage facility is located, the applicant/person responsible for maintenance of the facility, and/or other person or agent in control of said property, upon receipt of notice in writing from the city manager, shall within the period specified repair or otherwise address the cause of the hazardous situation in conformance with the requirements.

If the city manager has reasonable cause to believe that the situation is so hazardous as to preclude written notice, the city manager may take the measures necessary to eliminate the hazardous situation;

provided, that the city manager shall first make a reasonable effort to locate the owner before acting. In such instances the applicant of who a drainage plan was required, the owner of the property and/or the person responsible for the maintenance of the facility shall be obligated for the payment of all costs incurred. If costs are incurred and a financial guarantee pursuant to this chapter or other city requirement has been posted, the city manager shall have the authority to collect against the financial guarantee to cover costs incurred.

5.6 Enforcement

Any project which is subject to drainage review shall be subject to inspection. Inspections include pre-construction inspections, inspections during construction, and post-construction inspections. Additionally the city may perform inspections as needed to address an identified water quality or flow not in compliance with the requirements of this chapter. The city manager is authorized to enforce the provisions of this chapter, the ordinances and resolutions codified in it, and any rules and regulations promulgated thereunder pursuant to the enforcement and penalty provisions of the city.

5.7 Improved Inspections

The City now requires regular inspection on all commercial projects and subdivisions. In addition, the City has hired a third-party engineering consultant to provide plan review and drainage inspections, described below:

Pre-construction Meetings

The City requires pre-construction meetings for all new construction requiring a drainage permit. The purpose of the preconstruction meeting is to review the approved permits and conditions, exchange contact information for inspectors, contractors and primary sub-contractors, review the proposed temporary erosion and sediment control requirements, review the construction sequence, review the proposed drainage plan, review the proposed grading plan, review the necessary inspection points, review connections to the existing utilities, and review any proposed work in the right-of-way.

Temporary Erosion and Sediment Control Inspections

A temporary erosion and sediment control (TESC) inspection is required for all new construction requiring a drainage permit. The TESC inspection will include inspection of clearing and grading limits, installation of tree protection, location and installation of silt fences, location of construction entrance, location of catch basin inserts, and other requirements such as straw wattles, sediment pond, baker tank, cover of exposed earth and spoil piles, stabilized material storage areas and construction vehicle parking and staging areas, to eliminate tracking of dirt and mud onto public right-of-way. In addition, annual TESC inspections will be required in order to ensure continued compliance with TESC measures for projects that exceed a 1-year construction schedule.

Footing, roof and area drain systems

Footings, roof and area drain systems are required to be inspected prior to backfill. Inspection of these systems include: verification of pipe material, pipe bedding, backfill material, foundation wall sealant, mira-drain-type drain material, wall drainage, flow control, dispersion and infiltration systems, area drains, detention and retention systems, outfalls and connection to the public storm drain system.

Final Inspection

A final drainage inspection is required prior to issuance of the temporary occupancy certificate. The purpose of the final inspection is to ensure that the constructed drainage facilities have been completed per the approved plan and approved revisions. Elements of the final inspection include: downspout connections are complete, clean outs and area drains have been installed per plan, catch basins and other concrete structures have been grouted and cleaned, detention tanks have been installed per plan and cleaned, runoff from impervious surfaces has been collected and directed to the appropriate drain system, pump systems have been installed per approved plans, final grades are per approved plans and no point discharges are observed at adjacent property lines, TESC measures have been removed, restoration is complete including landscaping if it is integral to storm water treatment and runoff control, all permit conditions have been met, restoration of the public right-of-way is complete.

Enforcement

For each of the above inspection elements, there is the ability to correct, amend and enforce stormwater management requirements. Violations can be reported by concerned citizens, adjacent property owners, city staff or consultants. Reports of permit violations will be investigated by the appropriate City staff member. Staff will observe the condition and document any violations. Site photos and field reports will be used to document violations. The City will determine the level of enforcement required to correct the violation. Enforcement will be conducted pursuant to the enforcement and penalty provisions of the city.

5.8 Coordination with State Construction Permit

The City now notifies all grading permit applicants about the Department of Ecology NOI requirements and requires all affected projects to apply.

6. POST-CONSTRUCTION RUNOFF CONTROL

6.1 Improved Regulation

In 2008 the City passed a new drainage ordinance which included adoption of the 2005 Stormwater Management Manual for Western Washington from the Department of Ecology.

6.2 Maintenance Inspection Program

The purpose of the maintenance inspection program is to assure the ongoing performance of storm and surface water facilities. The inspection program insures that water flow structures remain operational and that trapped sediment is removed from pipes and catch basins as needed.

6.2 Rain Garden Program

The City is exploring opportunities to encourage voluntary construction of small scale stormwater management systems on private property. One program the City will be pursuing is a partnership with the King Conservation District to utilize the District cost-share program for private LID retrofit projects.

7. POLLUTION PREVENTION/GOOD HOUSEKEEPING

Pollution Prevention/Good Housekeeping Operations is one of the Phase II NPDES Permit minimum control measures. As a result, the City of Normandy Park has implemented a Pollution Prevention/Good Housekeeping program for our own municipal operations.

The Phase II permit requires the city to examine and subsequently alter our own actions to help ensure a reduction in the amount and type of pollution that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as poor maintenance of storm sewer systems. Recognizing the benefits of pollution prevention practices, the City has undertaken the following:

- Implementation of an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system;
- Development of individual Stormwater Pollution Prevention Plans (SWPPP) for Surface Water Maintenance, Streets, and Parks that include best management practices (BMPs); and
- Providing employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, field construction activities and land disturbances, and storm water system maintenance.

The City has begun to implement improvements to the Public Works Operation facility, including regrading and repaving of the yard near the vector decant facility, and installed a new stormwater quality / spill control structure at the bottom of the yard in Spring / Summer 2010.

8. CONCLUSION

8.1 Summary

This SWMP has been prepared to demonstrate compliance with the requirements of the NPDES Phase II Permit. In conformance with the permit, it is updated annually to reflect progress with implementing the stormwater management program components required for compliance.

8.2 Resources

Links to the current Annual Report, Stormwater Management Program, and Phase II NPDES permit can be found on the City’s website.

8.3 Requests for Comments

The public is encouraged to participate in the development of the SWMP. Please contact Chad Tibbits with questions, comments, or suggestions. The SWMP may be viewed at City Hall or on-line at the City’s website.

8.4 Contact Information

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