

City of University Place

Phase II NPDES Stormwater Management Program



2016 Update

SECTION 1

PUBLIC EDUCATION AND OUTREACH PROGRAM

Public Education and Outreach. An informed and knowledgeable community is crucial to the success of a stormwater management program since it helps to ensure greater support for the program and greater compliance. To satisfy this minimum control measure, the permittee needs to:

1. *Each permittee shall provide an education and outreach program for the area served by the MS4. The program shall be designed to educate target audiences about the stormwater problem and provide specific actions they can follow to minimize the problem.*
 - a. *To build general awareness, Permittees shall select from the following target audiences and subject areas:*
 - i. *General public (including school age children), and businesses (including home-based and mobile businesses)*
 - *General impacts of stormwater flows into surface waters.*
 - *Impacts from impervious surfaces.*
 - *Impacts of illicit discharges and how to report them.*
 - *Low Impact Development (LID) principles and LID BMPs.*
 - *Opportunities to become involved in stewardship activities.*
 - ii. *Engineers, contractors, developers, and land use planners*
 - *Technical standards for stormwater site and erosion control plans.*
 - *LID principles and LIP BMPs*
 - *Stormwater treatment and flow control BMPs.*
 - b. *To effect behavior change, Permittees shall select from the following target audiences and BMPs:*
 - i. *General public (which may include school age children), and businesses (including home-based and mobile businesses)*
 - *BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps and other hazardous materials.*
 - *Equipment maintenance*
 - *Prevention of illicit discharges.*
 - ii. *Residents, landscapers and property managers/owners*
 - *Yard care techniques protective of water quality.*
 - *Use and storage of pesticides and fertilizers and other household chemicals.*
 - *Carpet cleaning and auto repair and maintenance.*
 - *Vehicle, equipment and home/building maintenance.*
 - *Pet waste management and disposal*
 - *LID principles and LID BMPs.*
 - *Stormwater facility maintenance.*

- *Dumpster and trash compactor maintenance.*
- c. *Each Permittee shall create stewardship opportunities and/or partner with existing organizations to encourage residents to participate in activities such as stream teams, storm drain marking, volunteer monitoring, riparian plantings and education activities.*
- d. *Each Permittee shall measure the understanding and adoption of the targeted behaviors or at least one target audiences in at least one subject area. No later than February 2, 2016, Permittees shall use the resulting measurements to direct education and outreach resources most effectively, as well as to evaluate changes in adoption of the targeted behavior. Permittees may meet this requirement individually or as a member of a regional group.*

The City of University Place has developed a Public Education and Outreach Program designed to educate the target audiences as noted above. This program consists of the following elements:

- **University Place Newspaper**
A City newspaper is regularly sent out to all of the residents of the City. A minimum of four education oriented articles related to stormwater will be published on a yearly basis.
- **City Website**
The City will post educational information on its website. This information will include articles, notices of educational opportunities, contact information, photos, maps, and links to other stormwater resource websites.
- **Public Education Workshops**
The City will participate in at least one public education event featuring storm drainage every three years. Topics at these events may include rain gardens, natural yard care, storm drainage operations and maintenance, environmental impacts of stormwater, etc...
- **Car Wash Units**
The City has available portable units that are designed for the proper handling of wastewater from car washing activities. These units are available to organizations and individuals upon request. Any person checking out these units will be given instructions on their use as well as guidelines for protecting stormwater from car wash run-off.
- **Catch Basin Markers**
The City has marked all catch basins adjacent to concrete curbs with a marker that identifies where the storm water drains (ie drains to stream) and notifies the public not to dump pollutants. These markings are intended to increase the awareness of the public on where storm water ultimately drains.
- **Annual Questionnaire**
The City will on an annual basis send out a questionnaire designed to establish a baseline of citizen behavior and identify any changes in behaviors that have resulted from the City's educational efforts.

- **Stormwater Basin Education Map:** The City has developed a storm drainage basin education map which is attached in Appendix C. This map is included once a year in the City Newsletter and is posted on the City's webpage.
- **Pierce Conservation District Stream Team:** The City has partnered with the Pierce Conservation District Stream Team to encourage and create stewardship opportunities for the public.
- **Other Educational Opportunities**
In addition to the above noted elements, the City will continue to seek out new opportunities for public education and outreach.

SECTION 2

PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

Public Involvement and Participation Program. Public involvement/participation activities can be effective tools used to gain much needed public support for stormwater management program implementation. To satisfy this minimum control measure, the permittee needs to:

1. *Permittees shall provide ongoing opportunities for public involvement and participation through advisory councils, public hearings, watershed committees, participation in developing rate-structures or other similar activities. Each Permittee shall comply with applicable state and local public notice requirements when developing elements of the SWMP.*
 - a. *Permittees shall create opportunities for the public to participate in the decision-making processes involving the development, implementation and update of the Permittee's entire SWMP.*
 - b. *Each Permittee shall post on their website their SWMP and the annual report required under S9.A no later than May 31st each year. All other submittals shall be available to the public upon request. To comply with the posting requirement, a permittee that does not maintain a website may submit the updated SWMP in electronic format to the Department for posting on the Department's website*

The City of University Place employs the following opportunities for the public to participate in the decision-making process involving the City's SWMP.

- All updates to the City's SWMP will be adopted by the City Council during a Public Meeting. At this meeting, any who wish to comment on the SWMP will be given the opportunity to provide comments. In addition, this meeting will be filmed and broadcast on the City's public information television channel: UPTV.
- The SWMP and any subsequent updates will be posted on the City's website. Contact information for comments will be posted on the same web page as the link to the SWMP.

SECTION 3

ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Illicit Discharge Detection and Elimination. Discharges from cities often include wastes and wastewater from non-stormwater sources. Illicit discharges enter the system through either direct connections, such as wastewater piping mistakenly or deliberately connected to the storm drains, or indirect connection, such as infiltration from cracked sanitary sewers, spills collected by drain outlets, or materials dumped into storm drains. To satisfy this minimum control measure, the permittee must develop, implement and enforce an illicit discharge detection and elimination program. Permittees shall fully implement an ongoing illicit discharge detection and elimination program no later than three years from the effective date of this permit.

The minimum performance measures are:

- a. *Mapping of the MS4 shall continue on an ongoing basis. MS4 maps shall be periodically updated. Update maps if necessary to meet the requirements of this section no later than February 2, 2018. At a minimum, all maps shall include the following information:*
 - i. *Known MS4 outfall and known MS4 discharge points.*
 - ii. *Receiving waters, other than ground water.*
 - iii. *Stormwater treatment and flow control BMPs/facilities owned or operated by the Permittee.*
 - iv. *Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. The following attributes must be mapped:*
 - *Tributary conveyance type, material and size where known.*
 - *Associated drainage areas.*
 - *Land use.*
 - v. *All connections to the MS4 authorized or allowed by the Permittee after February 16, 2007.*
 - vi. *Connections between the MS4 owned or operated by the Permittee and other municipalities or public entities.*
 - vii. *Geographic areas served by the Permittee's MS4 that do not discharge stormwater to surface waters.*
 - viii. *To the extent consistent with national security laws and directives, each Permittee shall make available to Ecology upon request, MS4 map(s) depicting the information required in S5.C.3.a.i through vi above. The preferred format for mapping will be an electronic format with fully described mapping standards. An example description is available on Ecology website.*
 - ix. *Upon request, and to the extent appropriate, Permittees shall provide mapping information to federally-recognized Indian Tribes, municipalities, and other Permittees. This permit does not preclude Permittees from recovering reasonable costs associated with fulfilling mapping information requests by federally-recognized Indian Tribes, municipalities, and other Permittees.*
- b. *Each Permittee shall implement an ordinance or other regulatory mechanism to effectively prohibit non-stormwater, illicit discharges into the Permittee's MS4 to the maximum extent allowable under State and Federal law.*

- i. *The regulatory mechanism does not need to prohibit the following categories of non-stormwater discharges:*
 - *Diverted stream flows.*
 - *Rising ground waters.*
 - *Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)).*
 - *Uncontaminated pumped ground water.*
 - *Foundation drains.*
 - *Air conditioning condensation.*
 - *Irrigation water from agricultural sources that is commingled with urban stormwater.*
 - *Springs.*
 - *Uncontaminated water from crawl space pumps.*
 - *Footing drains.*
 - *Flows from riparian habitats and wetlands.*
 - *Non-stormwater discharges covered by another NPDES permit.*
 - *Discharges from emergency fire fighting activities in accordance with S2 Authorized Discharges.*
- ii. *Conditionally Allowable Discharges: The regulatory mechanism may allow the following categories on non-stormwater discharges only if the stated conditions are met:*
 - *Discharges from potable water sources, including but not limited to water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned Discharges shall be dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted, if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4.*
 - *Discharges from lawn watering and other irrigation runoff. These shall be minimized through, at a minimum, public education activities (see section S5.C.1) and water conservation efforts.*
 - *Dechlorinated swimming pool discharges. The discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and reoxygenized if necessary, volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Discharges shall be thermally controlled to prevent and increase in temperature of the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.*
 - *Street and sidewalk wash water, water used to control dust, and routine external building wash down that does not use detergents. The Permittee shall reduce these discharges through, at a minimum, public education activities (see section S5.C.1.) and/or water conservation efforts. To avoid washing pollutants into the MS4, Permittees must minimize the amount of street wash and dust control water used.*
 - *Other non-stormwater discharges. The discharges shall be in compliance with the requirements of the stormwater pollution prevention plan reviewed by the Permittee, which addresses control of construction site de-watering discharges.*
- iii. *The Permittee shall further address any category of discharges in (i) or (ii) above if the discharges are identified as significant sources of pollutants to waters of the State.*

- iv. *The ordinance or other regulatory mechanism shall include escalating enforcement procedures and actions.*
 - v. *The Permittee shall implement a compliance strategy that includes informal compliance actions such as public education and technical assistance as well as the enforcement provisions of the ordinance or other regulatory mechanism. To implement an effective compliance strategy, the Permittee's ordinance or other regulatory mechanism may need to include the following tools:*
 - *The application of operational and/or structural source control BMPs for pollutant generating sources associated with existing land uses and activities where necessary to prevent illicit discharges. The source control BMPs referenced in this subsection are in Volume IV of the Stormwater Management Manual for Western Washington, or an equivalent manual approved by Ecology under the 2013 Phase I Permit.*
 - *The maintenance of stormwater facilities which discharge into the Permittee's MS4 in accordance with maintenance standards established under S5.C.4 and/or S5.C.5 where necessary to prevent illicit discharges.*
 - vi. *The Permittee's ordinance or other regulatory mechanism in effect as of the effective date of this permit shall be revised if necessary to meet the requirement of this section no later than February 2, 2018.*
- c. *Each Permittee shall implement an ongoing program designed to detect and identify non-stormwater discharges, spills, illicit connections into the Permittee's MS4. The program shall include:*
- i. *Procedures for conducting investigations of the Permittee's MS4, including field screening and methods for identifying potential sources.*

The Permittee shall implement a filed screening methodology appropriate to the characteristics of the MS4 and water quality concerns. Screening for illicit connections may be conducted using: A Guidance Manual for Program Development and Technical Assessments, Center for Watershed Protection, October 2004, or other methodology of comparable or improved effectiveness. The Permittee shall document the field screening methodology in the relevant Annual Report.

The Permittee shall complete field screening for at least 40% of the MS4 no later than December 31, 2017, and on average 12% each year thereafter.

- ii. *A publicly listed and publicized hotline or other telephone number for public reporting of spills and other illicit discharges.*
- iii. *An ongoing training program for all municipal field staff, who, as part of their normal job responsibilities, might come into contact with or otherwise observe an illicit discharge and/or illicit connection to the MS4, on the identification of an illicit discharge and/or connection, and on the proper procedures for reporting and responding to the illicit discharge and/or connection. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements, or staffing. Permittees shall document and maintain records of the trainings provided and the staff trained.*

- d. *Each Permittee shall implement an ongoing program designed to address illicit discharges, including spills and illicit connections, into the Permittee's MS4. The program shall include:*
- i. *Procedures for characterizing the nature of, and potential public or environmental threat posed by, any illicit discharges found by or reported to the Permittee. Procedures shall address the evaluation of whether the discharge must be immediately contained and steps to be taken for containment of the discharge.*
 - ii. *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.*
 - iii. *Procedures for eliminating the discharge; including notification of appropriate authorities; notification of the property owner; technical assistance; follow-up inspections; and use of the compliance strategy developed pursuant to S5.C.3.b.v, including escalating enforcement and legal actions if the discharge is not eliminated.*
 - iv. *Compliance with the provisions in (i), (ii), and (iii) above, shall be achieved by meeting the following timelines:*
 - *Immediately respond to all illicit discharges, including spills, which are determined to constitute a threat to human health, welfare, or the environment, consistent with General Condition G3.*
 - *Investigate (or refer to the appropriate agency with the authority to act) within 7 days, on average, any complaints, reports or monitoring information that indicates a potential illicit discharge.*
 - *Initiate an investigation within 21 days of any 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.*
 - *Upon confirmation of an illicit connection, use the compliance strategy in a documented effort to eliminate the illicit connection within 6 months. All known illicit connections to the MS4 shall be eliminated.*
- e. *Permittees shall train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges, including spills, and illicit connections, to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques, requirements or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*
- f. *Permittees shall track and maintain records of the activities conducted to meet the requirements of this section.*

The City of University Place has implemented the following:

- **Municipal storm sewer system map:** The City has produced a map of its storm sewer system. This map has been posted on the City's website and is available in the City's Engineering office for viewing by the public.

- **After hours on-call phone line:** The City has established an after hours phone number that the public can call to report any public works concerns including concerns regarding surface water management and illicit discharges. This number is posted on the City's website.
- **Illicit Discharge Detection and Elimination (IDDE) program:** The City has implemented its Illicit Discharge Detection and Elimination program which is attached in Appendix D.
- **Dry Weather Field Screening and Analytical Monitoring Program:** The City has adopted this program as an aspect of the overall IDDE program. This program establishes the procedures for locating high risk illicit discharge areas and for testing and inspecting water quality for the purposes of tracking, characterizing, and eliminating illicit discharges.
- **Illicit discharge detection and elimination training program:** The City has developed a training program in order to train field personnel in the detection and elimination of illicit discharges to the City's storm drainage system. All engineering and operations field personnel are required to participate in this program. The training program consists of:
 - *Initial training meeting and orientation video*
 - *Periodic field training conducted by senior staff*

In addition to these items, the City will continue to seek out new opportunities for training in this field.

SECTION 4

CONTROL STORMWATER RUNOFF FROM NEW DEVELOPMENT, REDEVELOPMENT, AND CONSTRUCTION SITES

Site Runoff Control. Polluted stormwater runoff from construction and developed sites ultimately is discharged into local rivers and streams. The Phase II Final Rule requires an operator of a regulated small city to develop, implement, and enforce a program to reduce pollutants in stormwater runoff to their city from construction activities that result in a land disturbance of greater than or equal to one acre or contain less than one acre and are part of a larger common plan of the development or sale. The permittee is required to have:

- a. *The program shall include an ordinance or other enforceable mechanism that addresses runoff from new development, redevelopment, and construction site projects. Pursuant to S5.A.2, in adopting this ordinance or other regulatory mechanism, existing local requirements to apply stormwater controls at smaller sites, or at lower thresholds than required pursuant to S5.C.4., shall be retained. The ordinance or other enforceable mechanism shall be in place no later than thirty months from the effective date of this Permit. The ordinance or other enforceable mechanism shall include, at a minimum:*
 - i. *The Minimum Requirements, technical thresholds, and definitions in Appendix 1 or an equivalent approved by Ecology under the NPDES Phase I Municipal Stormwater Permit, for new development, redevelopment, and construction sites. Adjustment and variance criteria equivalent to those in Appendix 1 shall be included. More stringent requirements may be used, and/or certain requirements may be tailored to local circumstances through the use of basin plans or other similar water quality and quantity planning efforts. Such local requirements shall provide equal protection of receiving waters and equal levels of pollutant control to those provided in Appendix 1.*
 - ii. *A site planning process and BMP selection and design criteria that, when used to implement the minimum requirements in Appendix 1 (or equivalent approved by Ecology under the Phase I Permit) will protect water quality, reduce the discharge of pollutants to the maximum extent practicable and satisfy the State requirement under Chapter 90.48 RCW to apply all known, available and reasonable methods of prevention, control and treatment (AKART) prior to discharge. Permittees shall document how the criteria and requirements will protect water quality, reduce the discharge of pollutants to the maximum extent practicable, and satisfy State AKART requirements. Permittees who choose to use the site planning process and BMP selection and design criteria in the 2005 Stormwater Management Manual for Western Washington, or an equivalent manual approved by the Department under the Phase I Permit, may cite this choice as their sole documentation to meet this requirement.*
 - iii. *The legal authority, through the approval process for new development, to inspect private stormwater facilities that discharge to the Permittee's MS4.*
 - iv. *Provisions to allow non-structural preventive actions and source reduction approaches such as Low Impact Development Techniques (LID), measures to minimize the creation of impervious surfaces and measures to minimize the*

- disturbance of native soils and vegetation. Provisions for LID should take into account site conditions, access and long-term maintenance.*
- v. *If the Permittee chooses to allow construction sites to apply the “Erosivity Waiver” in Appendix 1, Minimum Requirement #2, the ordinance or regulatory mechanism shall include appropriate, escalating enforcement sanctions for construction sites that provide notice to the Permittee of their intention to apply the waiver but do not meet the requirements (including timeframe restrictions, limits on activities that result in non-stormwater discharges, and implementation of appropriate BMPs to prevent violations of water quality standards) to qualify for the waiver.*
- b. *The program shall include a permitting process with plan review, inspection and enforcement capability to meet the standards listed in (i) through (iv) below, for both private and public projects, using qualified personnel (as defined in Definitions and Acronyms). At a minimum, this program shall be applied to all sites that disturb a land area 1 acre or greater, including projects less than one acre that are part of a larger common plan of the development or sale. The process shall be in place no later than thirty months from the effective date of this Permit.*
 - i. *Except as provided in S5.C.4.b.vii. below, review of all stormwater site plans for proposed development activities.*
 - ii. *Except as provided in S5.C.4.b.vii. below, inspect, prior to clearing and construction, all known development sites that have a high potential for sediment transport as determined through plan review based on definitions and requirements in Appendix 7 Identifying Construction Site Sediment Transport Potential.*
 - iii. *Except as provided in S5.C.4.b.vii. below, inspect all known permitted development sites during construction to verify proper installation and maintenance of required erosion and sediment controls. Enforce as necessary based on the inspection.*
 - iv. *Inspect all permitted development sites upon completion of construction and prior to final approval or occupancy to ensure proper installation of permanent stormwater controls such as stormwater facilities and structural BMPs. Also, verify a maintenance plan is completed and responsibility for maintenance is assigned. Enforce as necessary based on the inspection.*
 - v. *Compliance with the inspection requirements in (ii), (iii) and (iv) above shall be determined by the presence and records of an established inspection program designed to inspect all sites and achieving at least 95% of scheduled inspections.*
 - vi. *An enforcement strategy shall be developed and implemented to respond to issues of non-compliance.*
 - vii. *If the Permittee chooses to allow construction sites to apply the “Erosivity Waiver” in Appendix 1, Minimum Requirement #2, the Permittee is not required to review the construction stormwater pollution prevention plans as part of the site plan review in (i) above, and is not required to perform the construction phase inspections identified in (ii) and (iii) above related to construction sites which are eligible for the erosivity waiver.*
 - c. *The program shall include provisions to verify adequate long-term operation and maintenance (O&M) of post-construction stormwater facilities and BMPs that are permitted and constructed pursuant to (b) above. These provisions shall be in place no later than thirty months from the effective date of this Permit and shall include:*
 - i. *Adoption of an ordinance or other enforceable mechanism that clearly identifies the party responsible for maintenance, requires inspection of facilities in accordance with the requirements in (ii) through (iv) below, and establishes enforcement procedures.*

- ii. *Each Permittee shall establish maintenance standards that are as protective or more protective of facility function than those specified in Chapter 4 of Volume V of the 2005 Stormwater Management Manual for Western Washington. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.*
- (1) *The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between the period of inspections is not a permit violation.*
- (2) *Unless there are circumstances beyond the Permittees control, when an inspection identifies an exceedence of the maintenance standard, maintenance shall be performed:*
- *Within 1 year for wet pool facilities and retention/detention ponds.*
 - *Within 6 months for typical maintenance.*
 - *Within 9 months for maintenance requiring re-vegetation, and*
 - *Within 2 years for maintenance that requires capital construction of less than \$25,000.*
- Circumstances beyond the permittees control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedence of the required timeframe, the Permittee must document the circumstances and how they were beyond their control.*
- iii. *Annual inspections of all stormwater treatment and flow control facilities (other than catch basins) permitted by the Permittee according to S5.C.4.b. unless there are maintenance records to justify a different frequency. Reducing the inspection frequency shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.*
- iv. *Inspections of all new flow control and water quality treatment facilities, including catch basins, for new residential developments that are a part of a larger common plan of development or sale, every 6 months during the period of heaviest house construction (i.e., 1 to 2 years following subdivision approval) to identify maintenance needs and enforce compliance with maintenance standards as needed.*
- d. *The program shall include a procedure for keeping records of inspections and enforcement actions by staff, including inspection reports, warning letters, notices of violations, and other enforcement records. Records of maintenance inspections and maintenance activities shall be maintained. Permittees shall keep records of all projects disturbing more than one acre, and all projects of any size that are part of a common plan of development or sale that is greater than one acre that are approved after the effective date of this Permit.*
- e. *The program shall make available copies of the "Notice of Intent for Construction Activity" and copies of the "Notice of Intent for Industrial Activity" to representatives of proposed new development and redevelopment. Permittees will continue to enforce local ordinances controlling runoff from sites that are also covered by stormwater permits issued by Ecology.*

- f. *No later than thirty months from the effective date of this Permit, each Permittee shall verify that all staff responsible for implementing the program to control stormwater runoff from new development, redevelopment, and construction sites, including permitting, plan review, construction site inspections, and enforcement, are trained to conduct these activities. Follow-up training shall be provided as needed to address changes in procedures, techniques or staffing. Permittees shall document and maintain records of the training provided and the staff trained.*

The City of University Place has a program to address site run-off control from new development, redevelopment and construction sites. This program includes the following:

- **Adopted surface water management regulations:** The City has adopted ordinances that regulate water quality, and controlling runoff from new development, redevelopment and construction sites. This portion of the City's municipal code is attached as Appendix A of the SWMP. As part of these regulations, the City has adopted the King County Surface Water Design Manual (2005).
- **Plan Reviews:** The City requires permits and reviews plans for all new development and redevelopment projects. The City also requires permits and reviews plans for any construction project that disturbs 20,000 square feet of soil, and for any project that otherwise requires drainage review as specified in the King County Surface Water Design Manual.
- **Construction Inspections:** The City conducts inspections of all permitted storm drainage and erosion/sedimentation control facilities within the City.
- **Training:** All personnel in the City conducting construction inspections and/or plan reviews are either trained as Certified Erosion and Sedimentation Control Leads or are licensed professional engineers registered with the State of Washington. In addition, the City will continue to seek out additional training opportunities.
- **Post Development Inspections:** The City conducts post development inspections of all permitted storm drainage facilities within the City.
- **Low Impact Development:** The City's stormwater regulations contain provisions encouraging low impact development.
- **Enforcement Provisions:** The City has adopted stringent enforcement provisions for non-compliance of its stormwater regulations. These enforcement provisions are attached in Appendix A.
- **Sensitive Water Bodies:** The City has identified and prioritized the sensitive receiving waters in the City. In addition, the City's regulations identify specific drainage standards based on the drainage basin sensitivity.

SECTION 5

POLLUTION PREVENTION AND OPERATIONS AND MAINTENANCE FOR MUNICIPAL OPERATIONS PROGRAM

As with the other elements, Ecology developed permit requirements for the pollution prevention (good housekeeping) program minimum measure of the federal NPDES Phase II permit program. The following program is based on DOE's permit requirements.

This measure requires the City to examine and subsequently alter their 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 environmentally damaging land development and flood management practices or maintenance of storm sewer systems.

The DOE Phase II permit states that the "Within three years of the effective date of this permit, each Permittee shall develop and implement an Operations & Maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations."

The permit regulations require the permit holder to do the following:

- a. *Each Permittee shall establish maintenance standards that are as protective, or more protective, of facility function than those specified in Chapter 4 of Volume V of the Stormwater Management Manual for Western Washington. For facilities which do not have maintenance standards, the Permittee shall develop a maintenance standard.*
 - i. *The purpose of the maintenance standard is to determine if maintenance is required. The maintenance standard is not a measure of the facilities required condition at all times between inspections. Exceeding the maintenance standard between inspections and/or maintenance is not a permit violation.*
 - ii. *Unless there are circumstances beyond the Permittees control, when an inspection identifies an exceedence of the maintenance standard, maintenance shall be performed:*
 - *Within 1 year for wet pool facilities and retention/detention ponds.*
 - *Within 6 months for typical maintenance.*
 - *Within 9 months for maintenance requiring re-vegetation.*
 - *Within 2 years for maintenance that requires capital construction of less than \$25,000.*

Circumstances beyond the permittees control include denial or delay of access by property owners, denial or delay of necessary permit approvals, and unexpected reallocations of maintenance staff to perform emergency work. For each exceedence of the required timeframe, the Permittee shall document the circumstances and how they were beyond their control.
- b. *Annual inspection of all municipally owned or operated permanent stormwater treatment and flow control facilities, other than catch basins, and taking appropriate maintenance actions in accordance with the adopted maintenance standards. The annual inspection requirement may be reduced based on inspection records.*

Reducing the inspection frequency shall be based on maintenance records of double the length of time of the proposed inspection frequency. In the absence of maintenance records, the Permittee may substitute written statements to document a specific less frequent inspection schedule. Written statements shall be based on actual inspection and maintenance experience and shall be certified in accordance with G19 Certification and Signature.

- c. Spot checks of potentially damaged permanent treatment and flow control facilities (other than catch basins) after major (greater than 24-hour-10-year recurrence interval rainfall) storm events. If spot checks indicate widespread damage/maintenance needs, inspect all stormwater treatment and flow control facilities that may be affected. Conduct repairs or take appropriate maintenance action in accordance with maintenance standards established above, based on the results of the inspections.*
- d. Inspection of all catch basins and inlets owned or operated by the Permittee at least once before the end of the Permit term. Clean catch basins if the inspection indicates cleaning is needed to comply with maintenance standards established in the 2005 Stormwater Management Manual for Western Washington. Decant water shall be disposed of in accordance with Appendix 6 Street Waste Disposal. Inspections may be conducted on a “circuit basis” whereby a sampling of catch basins and inlets within each circuit is inspected to identify maintenance needs. Include in the sampling an inspection of the catch basin immediately upstream of any system outfall. Clean all catch basins within a given circuit at one time if the inspection sampling indicates cleaning is needed to comply with maintenance standards established under S5.C.4.c., above.
As an alternative to inspecting catch basins on a “circuit basis,” the Permittee may inspect all catch basins, and clean only catch basins where cleaning is needed to comply with maintenance standards.*
- e. Compliance with the inspection requirements in a, b, c and d above shall be determined by the presence of an established inspection program designed to inspect all sites and achieving inspection of 95% of all sites.*
- f. Establishment and implementation of practices to reduce stormwater impacts associated with runoff from streets, parking lots, roads or highways owned or maintained by the Permittee, and road maintenance activities conducted by the Permittee. The following activities shall be addressed:*
 - Pipe cleaning*
 - Cleaning of culverts that convey stormwater in ditch systems*
 - Ditch maintenance*
 - Street cleaning*
 - Road repair and resurfacing, including pavement grinding*
 - Snow and ice control*
 - Utility installation*
 - Pavement striping maintenance*
 - Maintaining roadside areas, including vegetation management*
 - Dust control*
- g. Establishment and implementation of policies and procedures to reduce pollutants in discharges 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, and stormwater treatment and flow control facilities. 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.*
- h. Develop and implement an on-going training program for employees of the Permittee whose construction, operations or maintenance job functions may impact stormwater quality. The training program shall address the importance of protecting water quality, the requirements of this Permit, operation and maintenance standards, inspection procedures, selecting appropriate BMPs, 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 training shall be provided as needed to address changes in procedures, techniques or requirements. Permittees shall document and maintain records of training provided.*
- i. Development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the Permittee in areas subject to this Permit that are not required to have coverage under the Industrial Stormwater General Permit. Implementation of non-structural BMPs shall begin immediately after the pollution prevention plan is developed. A schedule for implementation of structural BMPs shall be included in the SWPPP. Generic SWPPPs that can be applied at multiple sites may be used to comply with this requirement. The SWPPP shall include periodic visual observation of discharges from the facility to evaluate the effectiveness of the BMP.*
- j. Records of inspections and maintenance or repair activities conducted by the Permittee shall be maintained in accordance with S9 Reporting Requirements.*

The City of University Place has developed a operations and maintenance program that

- 1) Identifies maintenance standards for drainage facilities.(see Appendix B)
- 2) Includes a SWPPP for our maintenance facility (see Appendix E)
- 3) Established an active IDDE program to protect water quality. Within the program track illicit discharges and insure field staff training in elimination is conducted annually. (see Appendix D)
- 4) Established a program that all municipal facilities are inspected annually.
- 5) Insures all field staff is trained in ESA track trainings and CESCL certified train our supervisors and inspectors.
- 6) Implement practices to reduce storm water impacts associated with public streets and public property.
- 7) Adopted maintenance standards as protective or more than those indicated in the DOE manual.
- 8) Developed a watershed and outfall inventory that identifies all primary outfalls of the City's stormwater conveyance system (see Appendix F)

SECTION 6

MONITORING PLAN

The City of University Place has elected to pay into Ecology's collective funds to meet its monitoring requirements.

SECTION 7

REPORTING REQUIREMENTS

The following requirements shall be met:

- A. *No later than March 31 of each year beginning in 2015, each Permittee shall submit an annual report. The reporting period for the first annual report will be from January 1, 2014 through December 31, 2014. The reporting period for all subsequent annual reports will be the previous calendar year unless otherwise specified.*

Permittees must submit annual reports electronically using Ecology's Water Quality Permitting Portal (WQWebPortal) available on Ecology's Website unless otherwise directed by Ecology.

- B. *Each Permittee is required to keep all records related to this permit and the SWMP for at least five years.*
- C. *Each Permittee shall make all records related to this permit and the Permittee's SWMP available to the public at reasonable times during business hours. The Permittee will provide a copy of the most recent annual report to any individual or entity, upon request.*
1. *A reasonable charge may be assessed by the Permittee for making photocopies of records.*
 2. *The Permittee may require reasonable advance notice of intent to review records related to this Permit.*

- E. *The annual report for cities, towns, and counties*

Each annual report shall include the following:

1. *A copy of the Permittee's current Stormwater Management Program as required by S5.A.2.*
2. *Submittal of the annual report form as provided by Ecology pursuant to S9.A, describing the status of implementation of the requirements of this permit during the reporting period.*
3. *Attachments to the annual report form including summaries, descriptions, reports, and other information as required, or as applicable, to meet the requirements of this permit during the reporting period.*
4. *If applicable, notice that the MS4 is relying on another governmental entity to satisfy any of the obligations under this permit.*
5. *Certification and signature pursuant to G19.D, and notification of any changes to authorization pursuant to G19.C*
6. *A notification of any annexations, incorporations or jurisdictional boundary changes resulting in an increase or decrease in the Permittee's geographic area of permit coverage during the reporting period.*

The City of University Place will produce an annual report that meets these guidelines.

APPENDIX A

**UNIVERSITY PLACE
PERMITTING & STORMWATER REGULATIONS
UPMC 12.10, 13.05 and UPMC 13.25**

Chapter 12.10
WATER QUALITY STANDARDS

Sections:

[12.10.010](#) Purpose.

[12.10.020](#) Definitions.

[12.10.030](#) Discharges into city of University Place waters.

12.10.040 Stormwater Manual Adopted.

[12.10.050](#) Best management practices.

[12.10.060](#) Administration.

12.10.070 Inspections.

[12.10.080](#) Hazards.

[12.10.090](#) Enforcement.

[12.10.100](#) Civil penalties.

[12.10.110](#) Criminal penalty.

12.10.120 Discharges of pollutants into municipal separate storm sewer system – Liability for Expenses

[12.10.130](#) Private wells prohibited.

[12.10.140](#) Construction – Intent.

12.10.010 Purpose.

The purpose of this chapter is to protect the city's surface and ground water quality by providing minimum requirements for reducing and controlling the discharge of contaminants. The city council recognizes that water quality degradation can result either directly from one discharge or through the collective impact of many small discharges. Therefore, this chapter prohibits the discharge of contaminants into surface and storm water and ground water, and outlines preventive measures to restrict contaminants from entering such waters. These measures include the implementation of best management practices (BMPs) by the residents of the city of University Place.

The city council finds this chapter is necessary to protect the health, safety and welfare of the residents of the city of University Place and the integrity of the city's resources for the benefit of all by: minimizing or eliminating water quality degradation; preserving and enhancing the suitability of waters for recreation, fishing, and other beneficial uses; and preserving and enhancing the aesthetic quality and biotic integrity of the water. The city council recognizes that implementation of this chapter is required under the federal Clean Water Act, 33 U.S.C. 1251 et seq. In meeting the intent of the Clean Water Act, the city council also recognizes the importance of maintaining economic viability while providing necessary environmental protection and believes this chapter helps achieve both goals.

12.10.020 Definitions.

The following definitions shall apply in the interpretation and enforcement of this chapter:

- A. "AKART" means an acronym for "all known, available, and reasonable methods of prevention, control, and treatment." AKART shall represent the most current methodology that can be reasonably required for preventing, controlling, or abating the pollutants associated with a discharge.
- B. "Best management practices" or "BMPs" mean the schedules of activities, prohibitions of practices, maintenance procedures, and reasonable physical, structural, managerial, or behavioral activities that, when used singly or in combination, prevent or reduce the release of pollutants or other adverse impacts to surface and/or ground waters of the State.
- C. "Chapter" means this chapter and any administrative rules and regulations adopted to implement this chapter.
- D. "City" means the city of University Place.
- E. "Clean Water Act" means 33 U.S.C. 1251 et seq., as amended.
- F. "Department" means the city of University Place public works department, or other department designated by the City Manager.
- G. "Director" means the city of University Place public works department director, or other person designated by the City Manager, or any duly authorized representatives of the directors.
- H. "Discharge" means to throw, drain, release, dump, spill, empty, emit, or pour forth any matter to flow, run, or seep from land or be thrown, drained, released, dumped, spilled, emptied, emitted, or poured into the City's municipal separate storm sewerages or waters of the State.
- I. "Ground water" means all waters that exist beneath the land surface or beneath the bed of any stream, lake, or reservoir, or other body of surface water, whatever may be the geological formation or structure in which such water stands or flows, percolates or otherwise moves.

J. "Hyperchlorinated" means water that contains more than 10 mg/Liter chlorine. Disinfection of water mains and appurtenances requires a chlorine residual of 10 mg/L at the end of the disinfection period. This level is well above the Maximum Residual disinfectant Level of an annual average of 4 mg/Liter chlorine for potable water.

K. "Illicit connection" means any man-made conveyance that is connected to the City's municipal separate storm sewer without a permit, excluding roof drains and other similar type connections. Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the municipal separate storm sewer system.

L. "Illicit discharge" means any direct or indirect discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges expressly allowed by this Chapter

M. "King County Surface Water Design Manual" ("KCSWDM") means the City's adopted Storm Water Manual that sets forth the drainage and erosion control requirements, BMPs, design, and maintenance procedures and guidance for stormwater management.

N. "Low Impact Development (LID)" means a stormwater management and land development strategy applied at the parcel and subdivision scale that emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic pre-development hydrologic functions.

O. Municipal Separate Storm Sewer System (MS4) means a conveyance, or a system of conveyances, (including roads with stormwater drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

- (i) owned or operated by the City;
- (ii) designed or used for collecting or conveying stormwater;
- (iii) which is not a combined sewer; and
- (iv) which is not part of a publicly owned treatment works as defined at 40CFR 122.2.

P. "National Pollutant Discharge Elimination System" or "NPDES" means the national program for issuing, modifying, revoking, and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the Federal Clean Water Act, for the discharge of pollutants to surface waters of the state from point sources. These permits are referred to as NPDES permits and, in Washington State, are administered by the Washington Department of Ecology. The City's NPDES permit means the Western Washington Phase II Municipal Stormwater Permit issued by the Department of Ecology.

Q. "Non-Stormwater Discharge" means any discharge to the storm drainage system that is not composed entirely of storm water. Examples include but are not limited to sanitary wastewater, laundry wastewater, noncontact cooling water, vehicle wash wastewater, radiator flushing wastewater, spills from roadway accidents, improperly disposed motor oil, solvents, lubricants, and paints.

R. "Notice of Intent" means the application forms for coverage under the Baseline General Permit for stormwater discharges associated with industrial activities.

S. "Person" means an individual, their agents or assigns, municipality; political subdivision; government agency; partnership; corporation; business; or any other entity.

T. "Pollution" means such contamination, or other alteration of the physical, chemical, or biological properties of surface waters including change in temperature, taste, color, turbidity, or odor of the waters, or such discharge of any liquid, gas, solid, radioactive, or other substance into any surface waters as will or is likely to create a nuisance or render such waters harmful, detrimental or injurious to the public health, safety, or welfare or to domestic, commercial, industrial, agricultural, recreational, or other legitimate beneficial uses of the water or to livestock, wild animals, birds, fish, or other aquatic life.

U. "Source control BMP" means a BMP to prevent contaminants from entering surface and storm water and/or ground water including the modification of processes to eliminate the production or use of contaminants. Source

control BMPs can be either structural or nonstructural. Structural source control BMPs involve the construction of a physical structure on-site, or other type of physical modification to a site; for example, building a covered storage area. A nonstructural source control BMP involves the modification or addition of managerial or behavioral practices; for example, using less toxic alternatives to current products or sweeping parking lots.

V. "State waste discharge permit" means an authorization, license, or equivalent control document issued by the Washington State Department of Ecology in accordance with Chapter 173-216 WAC.

W. "Storm water manual" or "manual" means the manual and supporting documents as appropriate describing best management practices, design, maintenance, procedures, and guidance for stormwater management which has been adopted by the City.

X. "Stormwater Drainage Facility" means the facilities, including the City's municipal separate storm sewer system, by which storm water is collected and /or conveyed, including but not limited to any roads with drainage , municipal streets, gutters, curbs, inlets, piped storm drains, pumping facilities, retention and detention basins, natural and human-made or altered drainage channels, reservoirs, and other drainage structures. Storm drainage systems may be both public and private.

Y. ""Storm water" means water runoff during and following precipitation and snowmelt events, including surface runoff and drainage.

Z. "Treatment BMP" means a BMP intended to remove contaminants once they are already contained in storm water. Examples of treatment BMPs include oil/water separators, biofiltration swales, and wet-settling basins.

12.10.030 Discharges into City of University Place waters.

A. Illicit Discharges Prohibited.

1. It is unlawful for any person to make any illicit discharge or to discharge any pollution or contaminants into the City's MS4 or waters of the State except as provided by this Chapter. Contaminants include, but are not limited to, the following:

- a. Trash or debris;
- b. Construction materials;
- c. Petroleum products including but not limited to oil, gasoline, grease, fuel oil, heating oil;
- d. Antifreeze and other automotive products;
- e. Metals in either particulate or dissolved form;
- f. Flammable or explosive materials;
- g. Radioactive material;
- h. Batteries;
- i. Acids, alkalis, or bases;
- j. Paints, stains, resins, lacquers, or varnishes;
- k. Degreasers and/or solvents;
- l. Drain cleaners;

- m. Pesticides, herbicides, or fertilizers;
- n. Steam cleaning wastes;
- o. Soaps, detergents, or ammonia;
- p. Swimming pool or spa filter backwash (diatomaceous earth);
- q. Chlorine, bromine, and other disinfectants;
- r. Heated water;
- s. Domestic animal wastes;
- t. Sewage;
- u. Recreational vehicle waste;
- v. Animal carcasses;
- w. Food wastes;
- x. Bark and other fibrous materials;
- y. Collected lawn clippings, leaves, or branches;
- z. Silt, sediment, concrete, cement, or gravel;
- aa. Dyes (except as stated in subsection (C)(1) of this section);
- bb. Chemicals, not normally found in uncontaminated water;
- cc. any other process associated discharge except as otherwise allowed under this Chapter.
- dd. Any hazardous material or waste, not listed above.

2. Illicit Connections. The construction, use, maintenance, or continued existence of an illicit connection to convey storm water or illicit discharge to the City's MS4 or waters of the State is prohibited. This prohibition expressly includes, without limitation, illicit connections made in the past, regardless of whether the connection was permissible under law or practices applicable or prevailing at the time of connection.

B. Allowable Discharges. The following types of discharges shall not be considered illicit discharges for the purpose of this chapter unless the director determines that the type of discharge, whether singly or in combination with others, is causing or likely to cause significant contamination of surface water or ground water:

1. Diverted stream flows,
2. Rising ground waters,
3. Uncontaminated ground water infiltration as defined in 40 CFR 35.2005(20),
4. Uncontaminated pumped ground water,
5. Foundation drains,
6. Air conditioning condensation,
7. Irrigation water from agricultural sources that is comingled with urban stormwater,
8. Springs,
9. Water from crawl space pumps,
10. Footing drains,

11. Flows from riparian habitats and wetlands,
12. Discharges from emergency fire fighting activities.

C. Conditional Discharges. The following types of discharges shall not be considered an illicit discharge for the purposes of this chapter so long as the conditions stated in this section are met, and unless the director determines that the type of discharge, whether singly or in combination with others, is causing or is likely to cause significant contamination of surface water or ground water:

1. Potable water, including water from water line flushing, hyperchlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water. Planned discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary and in volumes and velocities controlled to prevent re-suspension of sediments in the stormwater system.
2. Lawn watering and other irrigation runoff, if minimized to the extent possible.
3. Dye testing, upon notification to the Department at least one day in advance.
4. Dechlorinated swimming pool discharges. Planned discharges shall be dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary and in volumes and velocities controlled to prevent re-suspension of sediments in the stormwater system.
5. Street and sidewalk wash water, water used to control dust, and routine external building wash so long as there is no use of detergents and runoff is minimized to the extent possible. At active construction sites, street sweeping must be performed prior to washing the street.
6. Non-stormwater discharges covered by another NPDES permit so long as the permittee is in full compliance with all requirements of the permit, waiver, order, or other applicable laws.
7. Other non-stormwater discharges so long as the discharges are in compliance with a City approved stormwater pollution prevention plan.
8. Emergency response activities or other actions that must be undertaken immediately to avoid an imminent threat to public health or safety, so long as the person responsible for the emergency response activities can demonstrate that all steps were taken to ensure that the discharges resulting from such activities are minimized to the greatest extent possible. In addition, this person shall evaluate BMPs and the site plan, where applicable, to minimize recurrence.

12.10.040 Stormwater Manual Adopted.

The King County Surface Water Design Manual, the King County Stormwater Pollution Prevention Manual, and all associated documents referenced in UPMC 13.25.120(A) herein are hereby adopted as the City's Stormwater Manual and are hereby incorporated fully into this Chapter by this reference.

12.10.050 Best management practices.

A. Best Management Practices.

1. The KCSWDM presents the BMPs and the standards and procedures for existing facilities and activities and for new development activities not covered by the city's Public Works Code. The manual describes the types of regulated activities; the types of contaminants generated by each activity, and the contaminant's effect on water quality; the required source control BMPs and available treatment BMPs; and a schedule for BMP implementation.
2. Property owners are responsible for the maintenance, operation and repair of stormwater facilities and the BMPs within their property. Property owners shall maintain, operate and repair these facilities in compliance with the requirements of this Chapter and the City's stormwater manual.
3. The Director shall apply and implement the BMPs within the KCSWDM as follows. The director shall first require the implementation of non-structural source control BMPs. If these are not sufficient to prevent contaminants from entering surface and storm water or ground water, the director may require implementation of structural source control BMPs or of treatment BMPs, utilizing AKART.

B. Exemptions.

1. Persons implementing BMPs through another federal, state or local program will not be required to implement the BMPs prescribed in the city's stormwater manual, unless the director determines the alternative BMPs to be ineffective at reducing the discharge or contaminants. If the other program requires the development of a plan, the person shall make their plan available to the city upon request. Persons who qualify for exemptions include, but are not limited to, persons who are:

- a. Required to obtain a general or individual NPDES permit for storm water discharges from the Washington State Department of Ecology;
- b. Implementing and maintaining, as scheduled, a Pierce County conservation district- approved farm management plan;
- c. Permitted under a Washington State Department of Ecology NPDES general or individual permit for commercial dairy operations;
- d. Implementing BMPs in compliance with the city's zoning ordinance – development standards: animals, home occupation, home industry;
- e. Implementing BMPs in compliance with the management program of the county's municipal NPDES permit;
- f. Engaged in forest practices, with the exception of Class IV, and Class IV-A special general forest practices. This section will apply to Class IV general forest practices occurring on lands platted after January 1, 1960, or on lands being converted to another use, or where the activity is taking place in areas designated by the Washington State Department of Natural Resources as "lands with a likelihood of future conversion"; or regulatory authority is otherwise provided to local government by RCW 76.09.240; or
- g. Identified by the director as being exempt from this section.

2. Persons conducting normal single-family residential activities will not be required to implement the BMPs prescribed in the city's manual, unless the director determines that these activities pose a hazard to public health, safety, or welfare, endanger any property, or adversely affect the safety and operation of city right-of-way, utilities, and/or other property owned or maintained by the city.

12.10.060 Administration.

The director is authorized to promulgate and adopt administrative rules and regulations for the purpose of implementing and enforcing the provisions of this chapter. The director will coordinate the implementation and enforcement of this chapter with other public entities as applicable.

12.10.070 Inspections.

A The director is authorized to develop inspection procedures and requirements for all stormwater facilities and to make such inspections and take such actions as may be required to enforce the provisions of this chapter.

B The director is authorized enter at all reasonable times in or upon any property to inspect the property and the storm water facility, observe best management practices, review maintenance records, or examine or sample surface and storm water or ground water as often as may be necessary to determine compliance with this chapter. Prior to such entry, the director shall obtain permission to enter the premises unless a hazard exists as set forth in 12.10.060. If entry is refused the City shall have recourse via every remedy provided by law to secure entry.

C When the director has reason to believe that any person is violating this chapter, the director may require the violator to sample and analyze any discharge, surface and storm water, ground water, and/or sediment, in

accordance with sampling and analytical procedures or requirements determined by the director. If the violator is required to complete this sampling and analysis, a copy of the analysis shall be provided to the department.

12.10.080 Hazards.

Whenever the director determines that any violation of this chapter poses a hazard to public health, safety, or welfare, endangers any property, or adversely affects the safety and operation of city right-of-way, utilities, and/or other property owned or maintained by the city, the person holding title to the subject property, and/or other person or agent in control of said property, upon receipt of notice in writing from the director shall within the period specified therein address the cause of the hazardous situation in conformance with the requirements of this chapter.

Notwithstanding any other provisions of this chapter, whenever it appears to the director that conditions covered by this chapter exist requiring immediate action to protect the public health and/or safety, the director is authorized to enter at all times in or upon any such property, public or private, for the purpose of inspecting, investigating, and correcting such emergency conditions. The director may without prior notice issue an emergency order for the immediate discontinuance of any activity leading to the emergency condition, including but not limited to, suspending and discontinuing the access to the City's MS4.

12.10.090 Enforcement.

A. The Director is authorized to carry out enforcement actions pursuant to the enforcement and penalty provisions of this chapter and Chapter [1.20](#) UPMC. The director is authorized to enforce against prohibited illicit discharges, prohibited illicit connections, and other violations of this chapter.

B. The Director shall gain compliance with this chapter by requiring the implementation of operational BMPs and, when necessary, AKART. The director shall initially rely on education and informational assistance as much as possible to gain compliance with this chapter, unless the director determines a violation is a result of an intentional act or poses a hazard as defined in UPMC [12.10.060](#).

C. The Director may order the correction or discontinuance of any unsafe condition or operation or correction of any violation of this Chapter. Any order issued by the Director may be appealed to the City's Hearings Examiner within 14 days of the order in accordance with the provisions of UPMC 1.20. Such an appeal does not stay the requirement to comply with the order, and in particular any emergency order issued under UPMC 12.10.080.

D. In addition to or in the alternative to a correction order or civil infraction, the Director may issue a Notice of Civil Violation for a violation of this Chapter with a penalty of up to \$10,000, based upon the factors set forth in UPMC 12.10.100.

E. In addition to or in the alternative to a correction order or Notice of Civil Violation, the Director may issue a civil infraction for a violation of this Chapter, with a penalty in an amount of \$100 per violation for minor violations, and \$1,000 per violation for significant violations. Each day the violation shall continue shall constitute a separate violation. A minor violation shall be one in which the damage or risk to the public or water quality is low and the violator acted unknowingly or in good faith. A significant violation is one in which the damage or risk to the public or water quality is great or is a repeat violation or the violator acted in bad faith.

.F. In addition to any other penalty or method of enforcement, the prosecuting attorney may bring actions for injunctive or other relief to enforce this Chapter.

12.10.100 Civil penalties.

The enforcement provisions for water quality are intended to encourage compliance with this chapter. To achieve this, violators will be required to take corrective action and comply with the requirements of this chapter, and may be required to pay a civil penalty for the redress of ecological, recreational, and economic values lost or damaged due to the unlawful action.

A. The provisions in this section are in addition to and not in lieu of any other penalty, sanction or right of action provided by law.

B. Any person in violation of this chapter may be subject to civil penalties assessed as follows:

An amount, not to exceed \$10,000, that is reasonable based upon the nature and gravity of the violation, the cost to the City of enforcing this Chapter against the violator, and the economic benefit derived from the violation by the violator.

C. Any person who, through an act of commission or omission, aids or abets in a violation shall be considered to have committed the violation for the purposes of the civil penalty.

D. Each violator is jointly and severally liable for a violation of this chapter. The director may take enforcement action, in whole or in part, against any violator or against each violator. The decisions whether to take enforcement action, what type of action to take, and which person to take action against, are all entirely within the director's discretion. Factors to be used in taking such enforcement actions and determining equitable allocation of damages, costs, and expenses shall be:

1. Awareness of the violation;
2. Ability to correct the violation;
3. Cooperation with government agencies;
4. Degree of impact or potential threat to water or sediment quality, human health or safety, or the environment.

E. Penalties may be reduced based upon one or more of the other following mitigating factors:

1. The person responded to city attempts to contact the person and cooperated with efforts to correct the violation;
2. The person showed due diligence and/or substantial progress in correcting the violation; or
3. An unknown person was the primary cause of the violation.

Payment of a monetary penalty pursuant to this chapter does not relieve the person of the duty to correct the violation.

F. All civil penalties recovered during the enforcement of this chapter shall be deposited into the surface water management fund and shall be used for the protection of surface and storm water or ground water as set forth in this chapter, through education or enhanced implementation.

12.10.110 Criminal penalty.

Any willful violation of an order issued pursuant to UPMC [12.10.080](#) or [12.10.090](#) for which a criminal penalty is not prescribed by state law is a misdemeanor.

12.10.120 Discharges of pollutants into municipal separate storm sewer system—Liability for expenses.

Any person responsible for any pollutant discharge into the City's municipal separate storm sewer system who fails to immediately collect, remove, contain, treat, or disperse such pollutant materials at the director's request is responsible for the necessary expenses incurred by the City in carrying out the abatement of the pollution, including the collection, removal, containment, treatment, or disposal of such materials.

12.10.130 Private wells prohibited.

Except for the replacement of an existing non-contaminated water well, no person shall hereafter drill or install, or cause to be drilled, a nonpublic domestic water supply well, as defined in Chapter 173.160 WAC (Minimum Standards for Construction and Maintenance of Wells), within the following area located within the city of University Place: the area bounded by Orchard Street to the east; by 44th Street West, if extended, (and also the city limits at this location) to the north; by Cirque Drive to the south; and by Leach Creek on the west. Any replacement well must comply with all state and local laws and regulations and must be tested for the presence of landfill contaminants as noted in Table 3 of the Tacoma Landfill Consent Decree Scope of Work.

12.10.140 Construction – Intent.

This chapter is enacted as an exercise of the City's power to protect and preserve the public health, safety and welfare. Its provision shall be exempted from the rule of strict construction and shall be liberally construed to give full effect to the objectives and purposes for which it was enacted. This chapter is not enacted to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this chapter.

The primary obligation of compliance with this chapter is placed upon the person holding title to the property. Nothing contained in this chapter is intended to be or shall be construed to create or form a basis for liability for the city, the department, its officers, employees or agents for any injury or damage resulting from the failure of the person holding title to the property to comply with the provisions of this chapter, or by reason or in consequence of any act or omission in connection with the implementation or enforcement of this chapter by the city, department, its officers, employees or agents.

Chapter 13.05 Administration

Article 1. Title, Purpose & Scope

13.05.110 Title.

13.05.120 Purpose.

13.05.130 Scope.

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13.05.210 General.

13.05.220 Definitions and Terms.

Article 3. Standard Specifications, Guidelines and Regulations

13.05.310 Standard Specifications.

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13.05.630 Street Use Guarantee.

13.05.640 Erosion and Sediment Control/Street Cleaning Guarantee.

13.05.650 Maintenance and Defect Guarantee.

13.05.660 Default Procedures.

13.05.670 Liability Insurance Required.

Article 7. Inspections

13.05.705 General.

13.05.710 Preconstruction Conference.

13.05.715 Hours of Construction.

13.05.720 Inspection Card.

13.05.725 Inspections.

- 13.05.730 Inspection Requests.
- 13.05.735 Approval Required.
- 13.05.740 Reinspections.
- 13.05.745 Professional and Special Inspections.
- 13.05.750 Final Inspection.
- 13.05.755 Notification of Noncompliance.
- 13.05.760 Transfer of Responsibility.
- 13.05.765 Testing.

Article 8. Project Closure

- 13.05.810 As-Builts.
- 13.05.820 Certification from Engineer.
- 13.05.830 City Acceptance.

Article 1. Title, Purpose & Scope

13.05.110 Title. Title 13 of the University Place Municipal Code (UPMC) shall be known as the University Place Public Works Code, may be cited as such and will be referred to herein as “this Code”. “This Code” shall also include other provisions of the UPMC that are referenced herein.

13.05.120 Purpose. The purposes of this Code are (1) to establish standards for public and private improvements to real property; (2) to ensure reasonable and safe development of property; (3) to protect the health, safety, welfare and property of the public; (4) to establish street vacation procedures and to implement the City’s Comprehensive Plan.

13.05.130 Scope. This Code establishes the standards for the construction, improvement and maintenance of transportation and storm drainage facilities, utilities, grading and clearing, emergency vehicle access, and related amenities, whether such activities occur in public rights of way or on private lands. Further, this Code establishes procedures to administer these standards.

13.05.140 Provisions of this Title Not Exclusive. Other provisions of the UPMC apply to the development or improvement to real property. The provisions of Title 13 are not exclusive.

Article 2. Definitions

13.05.210 General. For the purpose of this Code, certain terms, phrases, words and their derivatives shall be construed as specified in this chapter and elsewhere in this Code where specific definitions are provided. The definition of any words not listed in this Article shall have the meaning given in any other Titles of the University Place Municipal Code (UPMC). Where terms, phrases and words are not defined, they shall have their ordinary accepted meanings within the context in which they are used. *Webster's Third New International Dictionary of the English Language, Unabridged*, copyright 1986, shall be considered as providing ordinary accepted meanings. Terms, phrases, and words used in the singular include the plural and the plural the singular. Terms, phrases and words used in the masculine gender include the feminine and the feminine the masculine.

13.05.220 Definitions and Terms.

- **Applicant:** The person or entity that applies for a permit or his duly authorized representative.
- **Average Daily Traffic (ADT):** The average number of vehicles passing a specified point during a 24-hour period. "Annual average daily traffic (AADT)" denotes that daily traffic that is averaged over one calendar year.
- **Building:** Any structure used or intended for supporting or sheltering any use or occupancy.
- **Building Code:** The building construction codes as adopted and amended by UPMC Title 14.
- **City:** The City of University Place or its duly authorized representative.
- **Clearing:** The cutting, moving on site, or removal of standing or fallen timber, the removal or moving of stumps on-site; or the cutting or removal of brush, grass, ground cover, or other vegetative matter from a site in a way which exposes the earth's surface of the site.
- **Commercial driveway:** A driveway that is used to provide access to business, multifamily complexes, or nonresidential enterprises, including but not limited to sales, service, industry, churches or other quasi-public buildings.
- **Critical area:** Wetlands, flood hazard areas, fish and wildlife habitat areas, aquifer recharge areas, geologically hazardous areas and associated buffer areas.
- **Development:** Any manmade change to improved or unimproved real estate including but not limited to buildings or the structures, placement of manufactured home/mobile home, mining, dredging, clearing, filling, grading, stockpiling, paving, excavation, drilling or the subdivision of property.
- **Director:** The City of University Place Development Services Director or duly authorized representative.
- **Drainage Course:** The natural or constructed path of surface water.
- **Driveway:** A vehicular access connecting a development to a street.
- **Driveway approach:** That portion of a driveway located in the right-of-way.
- **Easement:** A grant of an interest in land by the property owner for a specific use by another person, entity, or for the public in general.
- **Emergency vehicle access:** An access way to real property for emergency vehicles.
- **Engineer:** Any Washington State licensed professional engineer
- **Engineer of Record:** The licensed professional engineer designated by the applicant as the responsible engineer for the project.
- **Facility:** A building or use in a fixed location.
- **Grading:** Any excavating or filling or combination thereof.
- **Grubbing:** The digging up of unwanted vegetative matter from a site including but not limited to sod, stumps, roots, buried logs, or other debris. The action of grubbing exposes the surface of the earth such that it is susceptible to erosion.

- **Horizon year:** The year in which future conditions are to be evaluated.
- **Landslide and erosion hazard area:** Areas that are potentially subject to risk of mass movement or severe erosion due to combination of geologic, topographic, and hydrologic factors.
- **Level of service (LOS):** A qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience.
- **Major improvement:** All improvements to a structure (excluding normal maintenance and repair and life/safety improvements) which within a twelve-month period exceeds a cumulative value of twenty-five percent of the assessed value of the structure. The value of the structure shall be conclusively determined from the current records of the Pierce County's Assessor's Office.
- **Parcel:** Any portion, piece, or division of land, fractional part or subdivision of block, according to plat or survey.
- **Project:** A general term encompassing all phases of the work to be performed. A "project" is synonymous with "improvement" or "work". A project may entail work on one or more parcels of land.
- **Residential driveway:** A driveway that is used to provide access to a single-family residence.
- **Right-of-way:** All public streets and property granted or reserved for, or dedicated to, public use for street and storm drainage purposes, walkways, sidewalks, bikeways and horse trails, whether improved or unimproved, including the air rights, subsurface rights and easements related thereto.
- **Sensitive area:** Critical areas or Shorelines of the State.
- **Shared driveway:** A driveway used to provide access to two dwelling units.
- **Street:** A facility providing public or private access. Streets include the traveled way and all other improvements within the right-of-way or easement. The term "street" is used interchangeably with the term "road".
- **Street frontage:** The distance between the two points where the lot lines of a parcel intersect the boundary of a street right-of-way or easement.
- **Structure:** Anything that is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner.
- **Substandard Street:** A street that is not constructed in conformance with the City's design standards.
- **Tract:** Any parcel of land, lot, building site, or contiguous combination thereof under common ownership.
- **Traffic signal warrants:** A list of criteria that establish the need to install a traffic signal as outlined in the Manual on Uniform Traffic Control Devices, U.S. Department of Transportation, Federal Highway Administration.
- **Utility Provider:** Any public or private entity providing public services including, but not limited to: natural gas, oil, electric power, street lighting, telephone, telegraph, telecommunications, water, sewer, storm drainage, or cable television.
- **Wetlands:** Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands generally do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands, if permitted by the City.

Article 3. Standard Specifications, Guidelines and Regulations

13.05.310 Standard Specifications. Except as otherwise provided in this Code, design, detail, workmanship, and materials shall be in accordance with the current edition of the Washington State Department of Transportation "Standard Specifications for Road, Bridge and Municipal Construction" (referred to hereafter as the Standard Specifications), and the "Standard Plans for Road, Bridge and Municipal Construction". These documents are hereby adopted as part of this Code.

13.05.320 Adopted Guidelines and Regulations.

A. The most current version of the following guidelines and standards are hereby adopted as part of this Code. The design detail, workmanship and materials for all projects constructed under this Code shall meet the following guidelines and standards. In case of a conflict among standards, the Director shall determine which standard shall govern.

B. Standards adopted:

1. City of University Place Comprehensive Storm Drainage Plan.
2. Conditions and standards as set forth in the Pierce County Health Department regulations.
3. Conditions and standards as set forth in the Pierce Transit regulations.
4. Conditions and standards as set forth in the University Place Comprehensive Land Use Plan.
5. King County Surface Water Design Manual.
6. U.S. Department Transportation Manual on Uniform Traffic Control Devices (MUTCD), as amended and approved by Washington State Department of Transportation.
7. WSDOT Construction Manual as amended and approved by Washington State Department of Transportation.
8. Conditions and Standards adopted by the State of Washington, Department of Labor and Industries.
9. Traffic Engineering Handbook, Institute of Traffic Engineers.
10. Highway Capacity Manual, Transportation Research Board.
11. I.T.E. Trip Generation Manual.
12. A.A.S.H.T.O., A Policy on Geometric Design of Highways and Streets.
13. King County Road Standards, (for drainage structures, and appurtenances only).
14. Tacoma Electrical Code.
15. Roundabouts: An Informational Guide, Federal Highway Administration.
16. City of University Place Town Center Overlay Design Standards.
17. University Place Municipal Code

Article 4. Organization and Enforcement

13.05.405 Authority. The Director is hereby authorized to interpret and enforce the provisions of this Code and all technical codes referenced herein or incorporated by this Code, and to adopt and amend policies and rules in order to apply the provisions of this Code, including the “University Place Standard Notes and Details” and the “University Place Submittal Requirements” referenced herein.

13.05.410 Conflicting Provisions. In the case of a conflict between a general requirement and a specific requirement under this Code, the specific requirement of this Code shall govern. In the event of a conflict between a general requirement of another Title of the UPMC and a specific requirement of this Code, the specific requirement shall govern.

13.05.415 Alternate Materials and Methods. The provisions of this Code are not intended to prevent the use of any material, alternate design or method of construction not specifically prescribed by this Code. The Director may approve alternative materials and methods if, based upon evidence submitted in writing by the applicant, the Director determines that the proposed design is satisfactory and complies with the provisions of this Code; is based on sound engineering principles; and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this Code in suitability, strength, effectiveness, durability, safety and sanitation. Any alternative must be reviewed and approved in writing by the Director prior to construction.

13.05.420 Modifications.

- A. **Criteria.** The Director may modify the requirements of this Code after submittal of an application and approval of associated information, plans, and/or design data provided by the applicant. The application and associated information shall demonstrate to the satisfaction of the Director and City Engineer that: (1) the requested modification is based upon sound engineering principles, (2) strict application of the requirements of this Code would impose an undue hardship on the applicant; (3) that the requirements for safety, environmental considerations, function, appearance, and maintainability are fully met; (4) granting the modification adequately protects the public health, safety, and welfare; and (5) granting the modification is in the best interest of the public.
- B. **Application.** All applications for modifications shall be on a form provided by the City. All modifications must be approved by the Director in writing prior to the start of construction.
- C. **Notification.**
1. Whenever the Director determines that a proposed modification has the potential to negatively impact surrounding properties, all adjacent property owners will be notified in writing of the application. The Director shall notify abutting property owners of the due date for any written comments about the application. The applicant shall be furnished a copy of all written comments from abutting property owners that will be considered by the Director in making a decision. Abutting property owners shall be mailed a copy of the decision.
 2. The Director may require the notification of additional property owners if he determines they have a potential to be negatively impacted.
 3. All costs associated with public notification shall be borne by the applicant.

D. **Fees.** All fees associated with a modification application shall be in accordance with the Development Services Fee Resolution.

13.05.425 Right of Entry. Upon proper presentation of credentials, the Director or any duly authorized representative may, with the consent of the owner or occupant of a building, development, or premises, or pursuant to a lawfully issued inspection warrant, enter any building, development, or premises to perform the duties imposed by this Code. Any applicant for a permit shall, as a condition of the permit, consent to entry of the Director or any duly authorized representative to inspect the building, development, or premises for compliance with the terms and conditions of the permit. In addition, the Director may enter any premises in the event of an imminent threat to the public health, safety, or welfare or to protect any persons or property.

13.05.430 Stop Work.

A. **Issuance.** Whenever any work occurs contrary to the provisions of this Code or there is a threat to the public health, safety, welfare, or property, the Director may issue a stop work order. The stop work order shall specify the violation and prohibit any work or other activity at the site until the Director authorizes the resumption of work in writing. The stop work order shall be served in writing to any person at the project site or posted prominently on the site in a conspicuous location to be determined by the Director.

B. **Effect of Stop Work Order.** It shall be unlawful to move, remove or deface any stop work order posted by the Director until the Director has authorized removal of the order. It shall be unlawful for any person to fail to comply with a stop work issued by the Director.

13.05.435 Emergency Order.

A. **Issuance.** Whenever any work, use, or activity in violation of this Code threatens the public health, safety, welfare, or property, the Director may issue an emergency order directing the work, use, or activity be discontinued and that the condition causing the threat be corrected. The emergency order shall specify the actions to be taken and the time for compliance. The emergency order shall be served in writing to any person at the project site and posted prominently on the site in a conspicuous location to be determined by the Director.

B. **Compliance.** It shall be unlawful to move, remove or deface any emergency order posted by the Director until the Director has approved, in writing, the corrective action and authorized removal of the order. It shall be unlawful for any person to fail to comply with an emergency order issued by the Director.

C. **Agreement to Abatement by City.** Any person who obtains a permit issued under this Code agrees that the City may abate any condition for which an emergency order has been issued. The applicant shall be financially responsible for all costs incurred by the City in abating the conditions which caused the issuance of an emergency order.

13.05.440 Violations. It is unlawful for any person to do any of the following:

- A. Perform or cause to be performed any work specified in this Code upon any structure, land, or property within the City of University Place without first obtaining a permit or authorization as required by this Code;
- B. Perform or cause to be performed any work upon any structure, land, or property within the City of University Place in a manner not permitted by the terms or conditions of any permit or authorization issued pursuant to this Code;
- C. Misrepresent any material fact in any application, plans, or other information submitted to the City in conjunction with any permit or authorization issued under this Code;
- D. Fail to comply with any stop work order, emergency order, or other lawful order issued under this Code;
- E. Move, remove or deface any sign, notice, or order required by or posted in accordance with this Code;
- F. Fail to comply with any provisions of this Code.

13.05.445 Penalties.

- A. Any violation of this Code shall be a civil violation subject to the penalties and abatement process set forth in UPMC 1.20 as enacted or hereinafter amended.
- B. In addition to or as an alternative to any other remedy provided in this section, any person or entity violating this Code shall be guilty of a misdemeanor punishable as provided for in RCW 9A.20.021.
- C. Any work carried out contrary to the provisions of this Code shall constitute a public nuisance and may be enjoined as provided by state law.
- D. In addition to any other remedies provided for herein, the City may commence legal or equitable action to prevent, enjoin, abate, or terminate any condition that constitutes or threatens to constitute a violation of this Code.
- E. Any violation of this Code may be cause for withholding or withdrawing approval of project plans, revocation of a permit, suspension of building (or other) inspections, forfeiture of financial guarantees submitted to the City, and refusal of the City to accept the work.

13.05.450 Appeals.

- A. **Right to Appeal.** Any person or entity aggrieved by any decision or order of the Director under this Code, except a decision by the Director to seek redress in the courts through either civil or criminal remedies, may appeal the decision to the City of University Place Hearing Examiner pursuant to the provisions of Title 22 UPMC as enacted or hereafter amended. Appeals shall be filed in writing with the City within 14 days of issuance of the decision.

B. Effect of an Appeal. The filing of an appeal shall not act as a stay of the decision or order.

13.05.455 Severability. If any part of these regulations shall be found invalid, all other parts shall remain in effect.

Article 5. Permits.

13.05.510 General.

- A. **Permit Required.** It is unlawful for any person to clear land; cut and/or remove trees; grade, and stockpile material; or to alter, construct, repair, remove, excavate, place, obstruct, damage or disturb any structure, utility, facility or improvement located over, under or upon any property or public right-of-way in the City without first having obtained a permit. It is unlawful for any person to interfere with the free use of any public right-of-way in the City without first having obtained a permit. A separate permit shall be obtained for each separate project. The permits administered under this Code are identified in this Article.
- B. **Licensed Contractor.** All work performed under a permit must be performed by a licensed, bonded contractor. Work on a single family or duplex lot may be performed by the property owner if approved by the Director.
- C. **Permit Fees.** The Development Services Fee Resolution establishes the fees required by this Code.

13.05.520 Site Development Permit.

- A. **Permit Required.** A site development permit is required for any of the following activities:
 - 1. Clearing
 - 2. Grading or stockpiling
 - 3. Constructing or modifying storm drainage facilities or drainage courses
 - 4. Constructing or modifying roadways (including but not limited to sidewalks, curbs, gutters, bike lanes, planter strips, and street lighting)
 - 5. Creating or modifying impervious surfaces.
 - 6. Any other activity that the Director determines may impact the right-of-way, adjacent properties, and sensitive areas.
- B. **Permit Exemptions:** A site development permit shall not be required for the activities listed below. Properties which are contiguous and in common ownership at any time during the year preceding will be considered one tract for the purpose of applying these exemptions. Any work that is exempt from the permitting requirements of this Code still must comply with all other applicable provisions of this Code and the UPMC.
 - 1. Construction, maintenance or repair of public roads or public storm drainage facilities when performed by the City.
 - 2. Any grading activity for which a building permit has been issued. Only grading activity that is reasonably connected to, or required to accomplish the work permitted by, the building permit is exempt from a separate permit.
 - 3. Any grading activity qualifying for a permit exemption in accordance with UPMC Title 14.
 - 4. Emergency sandbagging, diking, ditching, filling or similar work when done to protect life or property.
 - 5. The clearing of any area less than 20,000 square feet. This general exemption is not applicable for clearing within a sensitive areas.

6. Any activity that the Director determines will have negligible impact on the right-of-way, sensitive areas, or other properties or persons.

C. **Permit Application.** To obtain a site development permit, the applicant must file a written application on the form furnished by the City for that purpose. Any permit application that does not comply with this section may be ineligible for review. The application shall:

1. Identify and describe all work proposed to be covered by the permit.
2. Provide the legal description, street address or other description of the site on which the proposed work will be done and specify the location on the site where the proposed work will occur.
3. Identify the use for which the work is intended.
4. Be accompanied by plans, diagrams, computations and specifications and any other data required by section D below.
5. Be signed by the applicant, or the applicant's authorized agent.
6. Provide such other data and information as may reasonably be required by the Director to process the application pursuant to the UPMC.
7. Pay the appropriate fees.
8. Identify the Property Owner and the Engineer of Record.

D. **Submittal Documents.** Plans, specifications, engineering calculations, diagrams, geotechnical reports, storm drainage reports, easements, dedications, special inspection and observation programs, and other data required by the Director shall constitute the submittal documents and shall be submitted with each application for a permit. The submittal documents shall be prepared by an engineer licensed in the State of Washington unless the Director determines that the nature of the work applied for is such that an engineered design is not necessary to obtain compliance with this Code. All submittal documents shall conform to the University Place Submittal Requirements.

1. **Plans and Specifications.** Plans and specifications shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that the work proposed will conform to this Code and other applicable laws, ordinances, rules and regulations. The plans shall include all applicable construction notes and details as provided in the University Place Standard Notes and Details.
2. **Engineering Reports.** Engineering reports include, but are not limited to, storm drainage reports, traffic impact analyses, geotechnical reports, and any other engineering calculations or analyses.
3. **Easements and Dedications.** Easements and dedications shall be prepared by a professional land surveyor licensed in the State of Washington. All easements and dedications shall include a legal

description and drawing depicting the easement or dedication area. Easements and dedications shall conform to UPMC 13.10. All easements and dedications to the public must be in a form acceptable to the City Attorney.

4. **Special Inspection and Observation Program.** The special inspection and observation program shall be submitted with the permit application in accordance with UPMC 13.05, Article 7.
5. **Financial Guarantees.** Financial guarantees shall be submitted as required in UPMC 13.06 Article 6 prior to permit issuance.
- E. **Permit Issuance.** The application and submittal documents shall be reviewed by the Director. Such documents may also be reviewed by other departments of the City or independent consultants if determined necessary by the Director. If the Director finds that the work described in an application for a permit and the submittal documents conform to the requirements of this Code, other provisions of the UPMC and any other pertinent ordinances, and that the appropriate fees have been paid and financial guarantees presented, the Director shall issue a permit to the applicant. The Director may attach conditions as may be necessary to ensure compliance with this Code, other provisions of the UPMC and City ordinances.
- F. **Approval Limited to Approved Plan.** When the Director issues a permit where plans are required, the Director shall sign the plans in an approval block. Such approved plans shall not be changed, modified or altered without authorization from the Director. All work regulated by this Code shall be done in accordance with the approved plans.
- G. **Violations.** Failure to obtain a permit is a violation of this Code and may be cause for withholding or withdrawing approval of project plans, revocation of a permit, suspension of building (or other) inspections, forfeiture of financial guarantees submitted to the City, refusal of the City to accept the work or other enforcement action under this Code or other provisions of the UPMC. It shall be unlawful for any work that requires a permit to be undertaken without a permit. Any permit application submitted for work commenced prior to the application submittal shall be subject to a charge equal to double the applicable fees plus the actual cost for any investigation undertaken in conjunction with the consideration of the permit.
- H. **Timely Completion of Work.** The applicant shall complete the work, obtain an engineer's certification of the work, submit any associated maintenance and defect guarantees, and secure the City's acceptance of the work prior to permit expiration.
- I. **Validity of Permit.**
 1. Issuing or granting a permit or approving plans or other submittal documents shall not be construed to be a permit for, or approval of, any violation of this Code or other City ordinance.
 2. Permit issuance shall not prevent the Director from: (1) requiring the correction of errors in the plans, specifications and other data; or (2) preventing construction activities from being carried out in violation of this Code, other provisions of the UPMC, or City ordinances.

3. Permit issuance shall not be construed as approval for any additional work beyond the scope of the permit.
- J. **Expiration.** Site development permits expire upon any of the following:
1. Two years after permit issuance.
 2. 180 days after permit issuance if construction has not commenced.
 3. The work authorized by such permit is either abandoned or suspended for a period of 180 days following commencement of the work.
- K. **Extension of Permit.** A site development permit may be extended for a period not exceeding 180 days. The applicant shall submit a request in writing and demonstrate that circumstances beyond the control of the applicant have prevented completion of the work under the permit. No permit shall be extended more than once.
- L. **Suspension or Revocation.** The Director may suspend or revoke any permit issued in error or on the basis of incorrect information supplied by the applicant. The Director may also suspend or revoke any permit when the applicant fails to comply with the provisions of the permit. Any permit applicant aggrieved by the Director's decision to suspend or revoke a permit may appeal this action as provided in this Chapter.

13.05.530 Right-of-Way Permits.

- A. **Permit Required.** A right-of-way permit is required before any person may cut or remove trees or other vegetation; grade or stockpile material; alter, construct, repair, remove, excavate, place, obstruct, damage or disturb any structure, utility, facility or improvement located in the public right-of-way; or commence any other activity that interferes with the free use of the public right-of-way. A blanket annual right-of-way permit for certain activities may be obtained by utilities operating with a franchise granted by the City. The provisions for annual right-of-way permits are included in the Annual Right-of-Way Permit Procedures.
- B. **Permit Exemptions:** A right-of-way permit shall not be required for the activities listed below. Exemption from the permitting requirements of this section shall not constitute approval for any work done in violation of this Code or any other City Code.
1. Construction, improvement, maintenance, or repair of public roads or public storm drainage facilities when performed by the City.
 2. Emergency sandbagging, diking, ditching, filling or similar work when done to protect life or property.
 3. Any activity that the Director determines does not have the potential to significantly impact the right-of-way or the free use thereof. Any exemption granted under this section shall be issued in writing.
- C. **Permit Application.** To obtain a right-of-way permit, an applicant shall file a written application on a form provided by the City. A permit application that does not comply with this section shall be ineligible for review. An application shall:
1. Identify and describe the work proposed to be covered by the permit.
 2. Describe and locate the area where the proposed work is to be performed.
 3. Indicate the use for which the work is intended.
 4. Be accompanied by plans, diagrams, computations, specifications and other data required in section D below.
 5. Be signed by the applicant, or the applicant's authorized agent.
 6. Give such other data and information as may reasonably be required by the Director to carry out the objectives of this Code and other provisions of the UPMC.
 7. Pay the application fee.
- D. **Submittal Documents.** Plans, financial guarantees and other data required by the Director shall constitute the submittal documents and must be submitted with the application. Plans shall be of

sufficient clarity to indicate the location, nature and extent of the work proposed. The plans shall show in detail that the work will conform to the provisions of this Code and all relevant laws, ordinances, rules and regulations. If the Director determines that the nature of the work applied for is such that an engineered design is necessary to obtain compliance with this Code, the submittal documents shall be prepared by an engineer licensed in the State of Washington. Financial guarantees shall be submitted as required by this chapter prior to permit issuance. All submittal documents shall conform to the University Place Submittal Requirements.

- E. **Permit Issuance.** The application and submittal documents shall be reviewed by the Director. Such documents may also be reviewed by other departments of this City, or independent consultants if determined necessary by the Director. If the Director finds that the work described in an application for a permit and the submittal documents conform to this Code, other provisions of the UPMC and other pertinent laws and ordinances, and that the appropriate fees have been paid, the Director shall issue a permit to the applicant. The Director may attach conditions necessary to ensure compliance with this Code, other provisions of the UPMC and City ordinances.
- F. **Violations.** Failure to obtain a permit is a violation of this Code and may be cause for withholding or withdrawing approval of project plans, revocation of a permit, suspension of building (or other) inspections, forfeiture of financial guarantees submitted to the City, refusal of the City to accept the work or other enforcement action under this Code or other provisions of the UPMC. It shall be unlawful for any work that requires a permit to be undertaken without a permit. Any permit application submitted for work commenced prior to the application submittal shall be subject to a charge equal to double the applicable fees plus the actual cost for any City investigation undertaken in conjunction with the consideration of the permit.
- G. **Timely Completion of Work.** The applicant shall complete the work, submit any associated maintenance and defect guarantees, and secure the City's acceptance of the work prior to permit expiration.
- H. **Validity of Permit.**
1. Issuing or granting a permit or approving plans or other submittal documents shall not be construed to be a permit for, or approval of, any violation of this Code or other City ordinance.
 2. Permit issuance shall not prevent the Director from: (1) requiring the correction of errors in the plans, specifications and other data; or (2) preventing construction activities from being carried out in violation of this Code, other provisions of the UPMC, or City ordinances.
 3. Permit issuance shall not be construed as approval for any additional work beyond the scope of the permit.
- I. **Expiration.** All right-of-way permits expire 180 days after permit issuance. The Director may extend the time for action by the applicant for a period not exceeding 180 days on written request by the applicant showing that circumstances beyond the control of the applicant have prevented work under the permit. No permit shall be extended more than once.

13.05.540 Temporary Right-of-Way Sign Permit.

- A. **Permit Required.** A temporary right-of-way sign permit is required to place any sign, street banner, or other decoration in, along, over, or across any public right-of-way. A temporary right-of-way sign permit may be issued only for placement of signs, street banners, or decorations to promote bona fide community events. A bona fide community event is a carnival, circus, exhibition, fair, farmers' market, festival, parade, holiday celebration, or other community or regional celebration or event that may be of interest to the entire City or a substantial portion thereof.
- B. **Permit Exemptions.** A temporary right-of-way sign permit shall not be required for the following signs, street banners, or decorations. Exemption from the permitting requirements of this section does not constitute authorization to place any signs, street banners, or decorations in violation of the provisions of this Code, the UPMC or other City ordinance.
1. Political signs regulated under UPMC 19.75.
 2. Advisory or regulatory signs installed under a right-of-way or site development permit.
 3. Signs, street banners, or decorations of the City.
 4. Public notice signs required by local and state law.
- C. **Permit Application.** To obtain a temporary right-of-way sign permit, an applicant shall file an application along with the permit fee. The application shall:
1. Describe the size, height, width, number and location of the signs, street banners, or decorations.
 2. Describe the materials of construction of the signs, street banners, or decorations.
 3. Describe the proposed wording and display of the signs, street banners, or decorations.
 4. Identify the duration for which the signs, street banners, or decorations will be displayed.
 5. Indicate the community event or celebration that the signs, street banners, or decorations will be promoting.
 6. Be signed by the applicant or the applicant's authorized agent.
 7. Give such other data and information as may be required by the Director.
- D. **Permit Issuance.** The application and submittal documents shall be reviewed by the Director. Such documents may also be reviewed by other departments of this City. If the Director finds that the work described in an application for a permit and the submittal documents conform to this Code, other provisions of the UPMC and other pertinent laws and ordinances, and that the appropriate fees have been paid, the Director shall issue a permit to the applicant. The Director may attach conditions necessary to ensure compliance with this Code, other provisions of the UPMC and City ordinances. The Director may deny an application if the installation of signs, street banners or decorations would interfere with any planned installation of City sign, street banner or decoration.

No permit will be granted for a proposed sign, street banner, or decoration display more than one year after the date of permit application.

- E. **Validity.** The issuance of a temporary right-of-way sign permit shall not be construed to be a permit for, or an approval of, any violation of any provisions of this Code, other provisions of the UPMC, or other City ordinances.

- F. **Time Limits on Displays.** Temporary right of way sign permits shall be issued for a two-week display prior to the specified community event. An additional extension for up to two weeks may be granted if no other application has been received forty-five (45) days prior to the event. No event shall be advertised or promoted for more than four weeks in a twelve-month consecutive period. All displays advertising or promoting an event shall be removed within three days following the event.

13.05.550 Suspension or Revocation. The Director may suspend or revoke any permit issued in error or on the basis of incorrect information supplied by the applicant. The Director may also suspend or revoke any permit if the applicant fails to comply with the provisions of the permit. Any permit applicant aggrieved by the Director's decision to suspend or revoke a permit may appeal as provided in this Chapter.

Article 6. Financial guarantees

13.05.610 General.

- A. A financial guarantee is financial security posted with the City to ensure timely and proper completion of improvements, to ensure compliance with this Code, and/or to warranty the design, materials, and workmanship associated with improvements. Financial guarantees include assignments of funds, surety bonds, and other forms of financial security acceptable to the City. Other types of financial guarantees may be accepted if approved by the Director For the purposes of this title, the terms performance guarantee, street use guarantee, erosion and sediment control/street cleaning guarantee, and maintenance and defect guarantee are considered sub-categories of financial guarantees.
- B. Financial guarantees shall be in a form acceptable to the City. Financial guarantees under \$5,000 must be an assignment of funds.
- C. All financial guarantees shall: (1) run continuously until released by the City; (2) not be subject to expiration or cancellation without written authorization from the City; (3) be project and site specific; and (4) be non-transferable.
- D. The Director shall determine the amount of the financial guarantee. The Director shall consider an engineer's estimate or an executed construction contract between the applicant and a licensed, bonded contractor in determining the amount of the financial guarantee. An engineer's estimate prepared by applicant's engineer shall detail the quantity of work to be done and shall be presented in a format approved by the City. The estimate shall be based on current construction costs and shall be stamped and signed by the engineer. The Director may consider any other reliable evidence in the Director's sole discretion in determining the amount of the financial guarantee.
- E. If a property for which a financial guarantee has been posted with the City is sold or otherwise transferred, the applicant is responsible for transferring the financial guarantee liability by having the new owner(s) replace any existing financial guarantees that the City is holding. The City will not release a preexisting financial guarantee until such time as the City accepts a replacement guarantee.
- F. The property owner may be required to complete and record a right of entry form prior to acceptance of any financial guarantee covering improvements on private property. The right of entry shall run with the land and shall be recorded with the Pierce County Auditor.
- G. All financial guarantees must be reviewed and approved as to form by the City Attorney.

13.05.620 Performance Guarantee.

- A. A performance guarantee ensures completion of the improvements according to the permit conditions, the University Place Municipal Code and other applicable laws and regulations. If a project requires more than one performance guarantee, the applicant may combine performance guarantees. The combined guarantee shall be for not less than the amount of separate financial guarantees. The combined guarantee shall clearly delineate on its face the separate financial guarantees that it replaces.

- B. Prior to issuance of a site development permit, the applicant shall submit a performance guarantee that ensures the timely and proper construction of all public improvements, storm drainage facilities (both public and private), and any other required improvement that is deemed by the Director to be important to protect the public health, safety, or welfare. The guarantee will include the costs for the installation of landscaping and irrigation systems for both streets and storm drainage facilities.
- C. Prior to final plat, short plat, or final development plan approval, the applicant shall submit a performance guarantee that ensures the timely and proper construction and acceptance by the City of all required improvements.
- D. Performance guarantees shall be in the amount of 125 percent of the engineer's estimate, the executed contract or the decision of the Director to allow for inflation and engineering administration expenses should the City have to complete the project.
- E. The applicant shall complete the work, obtain an engineer's certification of the work, submit any associated maintenance and defect guarantees, and secure the City's acceptance of the work prior to permit expiration.
- F. **Release Procedures.** Any release of the performance guarantee must be in writing to be effective. The City will release the performance guarantee only after each of the following have been met:
 1. The applicant's engineer has submitted a certification that the improvements for which a financial guarantee was submitted were completed in conformance with the approved plans and design. The certification shall comply with UPMC 13.05 Article 8.
 2. The applicant has obtained a final inspection of all guaranteed improvements.
 3. Any deficiencies identified by the City in the final inspection have been corrected.
 4. The City has accepted a maintenance and defect financial guarantee from the applicant as provided in UPMC 13.05 Article 6.
 5. The City has issued a written, final approval of the guaranteed improvements to the applicant.
 6. The applicant or surety has requested in writing the release of the guarantee.
 7. The applicant has paid all outstanding fees.

13.05.630 Street Use Guarantee.

- A. A street use guarantee ensures compliance with right-of-way permit conditions and warranties the design, materials, and workmanship associated with the work performed in a right-of-way. All applicants performing work that will, or has the potential to, disturb, modify, or damage anything within the City right-of-way will be required to post a street use guarantee with the City.
- B. Prior to issuance of a right-of -way permit the applicant shall submit a street use guarantee.
- C. Street use guarantees shall be in the amount of \$5,000.00 unless the Director determines after a review of a permit that a higher amount is appropriate.

- D. The applicant shall be responsible to repair all defects resulting from the applicant's activity in the right-of-way. The applicant will not be relieved of this obligation until the right-of-way impacted by the applicant has remained free from defects for a consecutive period of two years. The applicant will be liable for any third party damages that result from a breach of these duties for the duration of the street use guarantee.
- E. During the period of the street use guarantee, City staff will periodically inspect the right-of-way impacted by the applicant. The City shall provide notice to the applicant when maintenance and/or repairs are necessary, specifying a reasonable timeframe within which such work is to be completed. In the event that the applicant does not complete such maintenance and/or repairs, the applicant will be in default subject to the provisions of this Article, and the City may perform such work.
- F. If, on the basis of its inspections, the City determines that repairs must be performed immediately to prevent risk to person(s) or property, the City may make necessary repairs and the cost of those repairs shall be paid by the applicant upon demand. If the applicant fails to pay for the repairs by the time specified by the City, the applicant will be in default subject to the provisions of this Article.
- G. The applicant shall pay for the inspections performed by the City during the duration of the street use guarantee. Inspection fees will be as specified in the Development Services Fee Resolution.
- H. **Release Procedures.** Any release of the street use guarantee must be in writing to be effective. The City of University Place will release a street use guarantee only after each of the following have been met:
 1. The right-of-way construction work completed by the applicant has remained free of defects for two consecutive years.
 2. The applicant or surety has requested in writing the release of the guarantee.
 3. The applicant has paid all outstanding fees.

13.05.640 Erosion and Sediment Control/Street Cleaning Guarantee.

- A. An erosion and sediment control/street cleaning guarantee ensures that required erosion and sedimentation control/street cleaning measures are constructed and maintained in accordance with the UPMC. Prior to permit issuance, the applicant must submit to the City a financial guarantee that guarantees the performance and maintenance of the erosion and sedimentation control facilities and street cleaning. Because of the harm to the public health and safety and the environment arising out of poor erosion and sediment control or failure to clean street properly, all erosion and sediment control/street cleaning guarantees shall require that the guarantor must pay the face amount of the financial guarantee to the City within 14 days of the City's written demand for funds.
- B. If the applicant fails to maintain the erosion and sedimentation control facilities in conformance with this Code, the City may issue a written notice specifying required remedial actions. If the remedial actions are not performed in a timely manner, the City may take action including, but not limited to, issuing a stop work order, entering the property to perform the actions needed; and using the financial guarantee to pay for remedial actions. In the event a hazard exists, the City is not required to provide written notice to the applicant. If the City is forced to utilize the guarantee, any

stop work order issued shall remain in effect until the applicant has restored the guarantee up to either the original amount or such other amount as the Director may reasonably decide is necessary to ensure future compliance with the permit.

C. The amount of the guarantee will be as follows:

1. For any development larger than one single family or duplex building: 125% of the cost of the approved erosion and sedimentation control measures, plus \$5,000 per acre of the disturbed area.
2. For sites impacting a sensitive area, the City may require an additional guarantee amount to compensate for difficulties associated with work in sensitive areas. Any additional amount will be determined by the Director based upon the nature of the sensitive area.

D. **Release Procedures.** Any release of the erosion and sediment control/street cleaning guarantee must be in writing to be effective. The Director will release the erosion and sediment control/street cleaning guarantee only after each of the following have been met:

1. The applicant's engineer has submitted a certification that all disturbed areas within the site have been stabilized in conformance with the permit conditions and the UPMC. The certification shall be as prescribed in UPMC 13.05 Article 8. For single family and duplex building sites, the City may waive the requirement for certification unless the site is located within a landslide and erosion hazard area.
2. The applicant has requested a final inspection of the site.
3. Any deficiencies identified by the City in the final inspection have been corrected.
4. The applicant or surety has requested in writing the release of the guarantee.
5. The applicant has paid all outstanding fees.

13.05.650 Maintenance and Defect Guarantee.

- A. A maintenance and defect guarantee ensures the design, workmanship, maintenance, and operation of improvements to streets, landscaping, and drainage facilities. The City requires three types of maintenance and defect guarantees: storm drainage, street improvement, and landscaping.
- B. An applicant shall submit maintenance and defect guarantees for improvements prior to: (1) release of the performance guarantees associated with a project's storm drainage facilities, street improvements, and public landscaping; and (2) City approval of the constructed improvements.
- C. The applicant shall be responsible for the operation and maintenance of the improvements for the duration of the defect and maintenance guarantee.
- D. During the term of the maintenance and defect guarantee, City staff may periodically inspect the guaranteed improvements. If the Director determines that the improvements are not adequately maintained, do not operate satisfactorily or contain defects in design, materials or workmanship, the City shall notify the applicant, specifying remedial action. If the applicant does not complete the remedial action in a timely manner and to the City's satisfaction, the applicant will be in default.

- E. If, on the basis of its inspections, the City determines that repairs must be performed immediately to prevent risk to person(s) or property, the City may make necessary repairs. The cost of necessary repairs shall be paid by the applicant upon the City's written demand. If the applicant fails to pay for the necessary repairs by the time specified by the City, the applicant will be in default.
- F. The applicant shall pay for inspections performed by the City during the duration of the maintenance and defect guarantee. Inspection fees will be as specified in the Development Services Fee Resolution.
- G. **Storm Drainage Maintenance and Defect Guarantee (public and private).** The storm drainage maintenance and defect guarantee shall be set by the Director in the amount of ten (10) percent of the construction cost of the storm drainage facility.
- H. **Street Improvement Maintenance and Defect Guarantee (public and private).** The street improvement maintenance and defect guarantee shall be set by the Director in the amount of 25 percent of the construction cost of the street improvements.
- I. **Landscaping Maintenance and Defect Guarantee.** The landscaping maintenance and defect guarantee shall be set by the Director in the amount equal to the cost of the landscaping as indicated in the approved engineer's estimate. Any plant material needing replacement shall be replaced in accordance with UPMC 13.20 Article 8 and inspected prior to the release of the maintenance guarantee.
- J. **Release Procedures.** Any release of the maintenance and defect guarantee must be in writing to be effective. The City of University Place will release the maintenance and defect guarantee only after each of the following have been met:
 1. The guaranteed improvements have remained free of defects for two consecutive years.
 2. The applicant has submitted to the City a letter that requests final inspection of the guaranteed improvements and certifies the guaranteed improvements have been cleaned of all debris, dirt, and sediment.
 3. Any deficiencies identified by the City in the final inspection have been corrected.
 4. The applicant or surety has requested in writing the release of the guarantee.
 5. The applicant has paid all outstanding fees.

13.05.660 Default Procedures.

- A. The City may make a determination of default after an inspection has indicated that improvements need to be completed, maintained, or corrected. A default means the failure of the applicant to do any of the following:
 1. Comply with financial guarantee conditions;

2. Complete the improvements in accordance with this Code and the approved plans and conditions within the specified time; or
 3. Maintain the improvements in accordance with this Code and the approved plans and conditions for the specified period of time; or
 4. Correct any deficiencies identified by the City.
- B. In the event of a default, the City shall notify the applicant and the guarantor in writing of the default, the necessary work to remedy the default, and the specified time to complete the remedial work. If the applicant does not perform the remedial work within the specified time, the City may demand payment by the guarantor and perform the remedial work. The guarantor shall be responsible, up to the limits of the financial guarantee, for the payment of any and all costs and expenses that have been or will be incurred by the City in causing the remedial work to be done. Any funds demanded in excess of the costs incurred the City shall be returned to the guarantor upon completion of the remedial work. The applicant shall be responsible for any and all costs incurred by the City in conjunction with the remedial work. This includes any costs that exceed the amount of the financial guarantee. Nothing in this section shall limit the ability of the City to enforce or otherwise compel compliance with conditions of any City permit or approval in accordance with the enforcement provision set forth in UPMC 13.05 Article 4.
- C. Bonds are subject to default upon permit expiration or revocation.

Article 7. Inspections

13.05.705 General.

- A. All activity regulated under this Title shall be subject to inspection by the Director and shall remain accessible and exposed for inspection purposes until approved by the Director. The engineer of record will be responsible to perform professional inspections of the permitted activity. In addition, certain types of construction shall have special inspections, as specified in UPMC 13.05 Article 7.
- B. Approval of inspected work shall not be construed to be an approval of a violation of the provisions of this Code, other provisions of the UPMC or City ordinances. Inspections presuming to give authority to violate or cancel the provisions of this Code or of other ordinances of the City shall not be valid.
- C. It shall be the duty of the applicant to cause the work to remain accessible and exposed for inspection purposes. The applicant shall be liable for any expense entailed in the removal or replacement of any material required to allow inspection. Failure to receive the City's approval can result in removal or modification of construction at the applicant's expense to bring the work into conformance with approved plans.

13.05.710 Preconstruction Conference. A preconstruction conference is required prior to the commencement of work. It is the responsibility of the applicant to arrange for this meeting and to notify the City in advance of the commencement of any authorized work.

13.05.715 Hours of Construction. The hours of construction for any activity permitted under this Code are Monday through Friday, 8:00 a.m. to 5:00 p.m. The Director may authorize work outside of these hours upon request based upon the type of work to be performed or the proximity to residential areas. Requests for extended working hours must be submitted in writing to the Director 24 hours in advance.

13.05.720 Inspection Card. The City will provide the permit holder with the inspection card upon permit issuance. This card shall be on the project site at all times until final approval has been granted by the Director. Any work under the permit shall not be commenced until the permit holder has posted or otherwise made the inspection card available such as to allow the Director to conveniently make the required entries thereon regarding inspection of the work.

13.05.725 Inspections. All permitted work is subject to inspection by the Director at any time. The permit holder, as a condition of obtaining a permit, shall authorize the Director to enter the site for inspection throughout the duration of the project.

13.05.730 Inspection Requests.

- A. It shall be the duty of the applicant to notify the Director that such work is ready for inspection. The Director may require that every request for inspection be filed at least one working day before the desired inspection date. Such request may be in writing or by telephone at the option of the Director. It shall be the duty of the applicant to provide access to and the means to inspect the work.

- B. If all required inspections are not requested before completion of the work, the City may require the applicant to pay for additional testing and analysis to be performed to ensure conformance with the approved plans and as a condition of final inspection and approval of the City.

13.05.735 Approval Required. Work shall not progress beyond the point indicated in each successive inspection without the prior approval of the Director. The Director shall make the requested inspections and shall indicate to the applicant whether the construction is satisfactory as completed, or fails to comply with this Code, other provisions of the UPMC, or other City ordinances. Any portions of the work that do not comply shall be corrected by the applicant. Any such portions of the work shall neither be covered nor concealed until authorized by the Director.

13.05.740 Reinspections.

- A. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for previously have not been made. This section shall not be construed to require imposition of reinspection fees the first time a job is rejected for failure to comply with the permit conditions, this Code, other provisions of the UPMC or other City ordinances. The City, however, may impose a reinspection fees when the applicant has called for an inspection before the work is ready for inspection or reinspection.
- B. Reinspection fees may be assessed for violations including, but not limited to: the inspection record card is not posted or otherwise available on the work site; the approved plans are not readily available to the inspector; failure to provide access on the date for which inspection is requested; or deviating from the plans approved by the Director. If a reinspection fee has been assessed, further approvals of work under the permit are expressly conditioned on prior payment of reinspection fees.

13.05.745 Professional and Special Inspections.

- A. The engineer of record shall prepare an inspection program that shall be submitted to the Director for approval prior to permit issuance. The inspection program shall designate the portions of the work that require professional and special inspection, the stages of construction at which the professional and special inspections are to occur, the name or names of the individuals or firms who are to perform these inspections, and the duties of the inspectors. The inspection program shall include samples of proposed inspection reports and provide time limits for submission of reports.
- B. The Director shall approve or amend the inspection program in conjunction with issuing the permit. The inspection program as approved by the Director shall be a permit condition.
- C. **Professional Inspections.** Professional inspections are those inspections to be performed by the engineer of record. The engineer of record shall provide professional inspection only within the engineer's area of technical specialty. The inspections shall be of a nature that enables the engineer of record to provide a "Certification from Engineer" in conformance with UPMC 13.05 Article 8. If revised plans are required during the course of the work they shall be submitted by the engineer of record.
- D. **Special Inspections.** Special inspections are those inspections identified in the inspection program not performed by the engineer of record. Special inspectors shall be employed by the applicant or the engineer of record. Special inspections will be required for any portion of the project that is outside of the engineer of record's area of expertise. This may include erosion and sedimentation

control, compaction testing, material testing, and geotechnical and structural components of the project.

1. **Special Inspector.** The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the Director, for inspection of the particular type of construction or operation requiring special inspection.
 2. **Duties and Responsibilities of the Special Inspector.** The special inspector shall observe the work assigned for conformance to the approved plans and the permit conditions. The special inspector shall furnish inspection reports at such times as the Director may require. The reports shall be furnished to the Director, the engineer of record, and the applicant. All discrepancies in the work shall be brought to the immediate attention of the contractor for correction and included in the inspection report. The special inspector shall submit a final signed report stating whether the work requiring special inspection was in conformance to the approved plans and the permit conditions.
 3. **Failure to Perform.** If the Director determines that the special inspector has failed to perform the duties and responsibilities indicated above, the Director may require the applicant to replace the special inspector with another qualified person who will assume the duties and responsibilities of the special inspector.
 4. **Exception:** The Director may waive the requirement for the employment of a special inspector if the construction is of a minor nature.
- E. **Investigation:** If the Director determines that the engineer of record or special inspector have failed to ensure compliance with the approved plans and permit conditions, the Director may retain the services of a qualified individual to evaluate the quality of the work. The applicant shall be responsible for all costs incurred by the City in the investigation. Payment of costs incurred by the City is an express condition precedent to final inspection, acceptance of the work by the City, and release of financial guarantees.

13.05.750 Final Inspection. The applicant is responsible to request a final inspection of all permitted activities upon completion. The applicant must secure approval by the City of these facilities prior to use and release of any applicable financial guarantees.

13.05.755 Notification of Noncompliance. If, in the course of fulfilling their respective duties under this Code, the engineer of record or the special inspector finds that the work is not being done in conformance with this Code, the approved plans, or the permit conditions, the discrepancies shall be reported immediately in writing to the applicant and to the Director.

13.05.760 Transfer of Responsibility. If the applicant wishes to change the engineer of record during construction, the work shall be stopped until the replacement engineer agrees in writing to accept the duties and responsibilities of the original engineer of record and certify the work. Such an agreement shall be filed with the City and approved by the Director prior to the recommencement of work.

13.05.765 Testing. Testing shall be as specified in the approved inspection program. Tests shall be performed at the applicant's expense. At a minimum, testing shall be done on all materials and construction as specified in the WSDOT/APWA Standard Specifications, this Code, and the University Place Standard Notes and Details.

Article 8. Project Closure

13.05.810 As-Builts. As-built drawings must be provided to the City for all roadway and storm system construction. As-builts must be prepared by a licensed professional engineer or surveyor, stamped and signed by the professional and submitted prior to the City's acceptance of any improvement. The following, as applicable, shall be included in all as-built submittals.

- Roadway centerline stationing at minimum 50' spacing. Stationing shall include elevations and horizontal control in state plane coordinates.
- Right-of-Way lines and property lines.
- Locations, widths, and composition of travel lanes, sidewalks, curbs, gutters, medians, planter strips, irrigation systems, shoulders and bike lanes.
- Street light locations and types.
- Utility locations.
- Street names.
- Pavement markings and street signs.
- Type and widths of easements.
- Catchbasin type, location, rim elevation, bottom elevation, and inlet/outlet invert elevation.
- Storm drain pipe size, composition, location and invert slope.
- Detention/retention/infiltration facility location, and inlet/outlet locations and elevations.

13.05.820 Certification from Engineer. Following the construction of facilities allowed under a permit, the engineer of record shall provide to the City a letter of certification. This letter shall be stamped, signed and dated by the engineer and shall state that all permitted facilities have been built in accordance with the approved plans, permit conditions, and all applicable codes. In the event that some components of the work have not been built in strict conformance to the plans and conditions and, in the engineer's opinion, these exceptions do not compromise the integrity of the project, the engineer shall identify the exceptions and include a statement in the certification that the exceptions do not constitute a material defect, compromise the integrity of the project, or violate any provisions of this Code.

13.05.830 City Acceptance. Unless a development involves a dedication of a public facility, a development is considered final upon final approval or acceptance by the Director to the applicant. When a development involves a dedication to the public, a development is not considered final until the Director has issued written acceptance of the public facility accepting ownership and addressing responsibility for the dedication.

Chapter 13.25 Surface Water Management

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Article 1. General Considerations

13.25.110 General. This chapter sets forth the minimum surface water management requirements for the City of University Place. Surface Water Management includes the design, construction, operation and maintenance of storm drainage and erosion control facilities and practices.

13.25.115 Adopting King County Surface Water Codes

Sections 9.04 and 16.82.100 of the King County Municipal Code are hereby adopted and incorporated herein fully by this reference with the exceptions enumerated below.

1. All references within these codes to King County or County shall be construed to be the City of University Place.
2. All references to King County Departments shall be construed to be the City of University Place Engineering Department.
3. Section 9.04.020.Z.3 is hereby revised to read: Has a project site of fifty acres or more within a critical aquifer recharge area, as defined in UPMC 17.20.
4. Section 9.04.020.VV is hereby revised to read: “Surface Water Design Manual” means the manual, and supporting documentation referenced or incorporated in the manual, describing surface and storm water design and

analysis requirements, procedures and guidance that has been formally adopted in UPMC 13.05.320

5. Section 9.04.030(4) is hereby revised to read: Contains or is adjacent to a flood hazard area as defined in UPMC 17.30.
6. Section 9.04.050(A)(7) is hereby revised to read: Financial guarantees and liability. All drainage facilities constructed or modified for projects, except downspout infiltration and dispersion systems for single family residential lots, must comply with the liability requirements of K.C.C 9.04.100 and the financial guarantee requirements of UPMC 13.05 Article VI.
7. Section 9.04.050(C)(4) is hereby revised to read: A request for an adjustment shall be processed in accordance with the procedures specified in the Surface Water Design Manual and UPMC 13.05.
8. Section 9.04.050(D) is hereby revised to read: The drainage review requirements in this section and in the Surface Water Design Manual may be modified or waived under the procedures in UPMC 13.05.
9. Section 9.04.095 is hereby revised to read: Vesting period for lots in final short plats. Unless the department finds that a change in conditions creates a serious threat to the public health or safety in the short subdivision, for a period of five years after recording, a lot within a short subdivision shall be governed by the provisions of this chapter in effect at the time a fully completed application for short subdivision approval was filed in accordance with UPMC 22.05.
10. The last sentence of Section 9.04.100 is hereby revised to read: If this liability insurance is not kept in effect as required, University Place may initiate enforcement action pursuant to UPMC 1.20.
11. Section 9.04.140(A)(1) is hereby revised to read: The director is authorized to promulgate and adopt administrative rules under the procedures specified in UPMC 13.05 for the purpose of implementing and enforcing the provisions of this chapter.
12. Section 9.04.196 is hereby deleted.
13. Section 16.82.100(A)(2) is hereby revised to read: All disturbed areas including faces of cuts and fill slopes shall be prepared and maintained to control erosion in compliance with UPMC 13.25 Article III.

13.25.120 Design standards.

A. The King County Surface Water Design Manual (KCSWDM) and the King County Stormwater Pollution Prevention Manual and the portions of the King County Road Standards referenced therein are hereby adopted and incorporated fully into this chapter

by this reference. The King County Surface Water Design Manual sets forth the drainage and erosion control requirements as supplemented herein. In these documents, all references to King County or the County shall be construed to refer to the City of University Place; all references to the King County Department of Development and Environmental Services (DDES) or the Water and Land Resources Division of the King County Department of Natural Resources (WLR), shall be hereby revised to read the City of University Place Community Development Engineering Department or such other department as the City Manager may designate to enforce this chapter.

B. The design standards shall be applied in the following hierarchy of precedence:

1. University Place Municipal Code;
2. King County Surface Water Design Manual;
3. King County Stormwater Pollution Prevention Manual
4. King County Road Standards;
5. Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction;
6. WSDOT Design Manual;
7. WSDOT Construction Manual.

C. The term “critical drainage area” in the King County Surface Water Design Manual shall have the meaning of “critical area” as defined in Chapter 13.05 UPMC, Article II, and classified in UPMC Title 17.

D. The term “landslide hazard drainage area” in the King County Surface Water Design Manual shall have the meaning of “landslide and erosion hazard area” as defined in Chapter 13.05 UPMC, Article II, and classified in UPMC Title 17.

E. A site development permit is added to the permits and approvals listed in Section 1.1.1 of the King County Surface Water Design Manual.

F. Core Requirement No. 3 “Impervious Surface Performance Exemption” of the KCSWPM is deleted and not in effect.

G. Core Requirement No. 5 provision for the allowance for projects in the residential zone that result in no more than 4% total impervious surface and no more than 15% pervious surface is deleted and not in effect.

H. Soil equality and depth criteria located in reference Section 4-A of the KCSWPM is hereby specifically adopted by reference as the sole criteria.

I. King County's approved method for modeling impervious area for rain garden credits in the KCSWDM is hereby specifically adopted by reference as the method for determining credits for Treatment under Minimum Requirement No. 6.

(Ord. 518 § 1, 2008; Ord. 423 § 40, 2004; Ord. 395 § 3, 2003).

Article 2. Storm Drainage.

13.25.210 Design.

- A. When a storm drainage report is required, it must include any relevant data from the City comprehensive storm water plan.
- B. Any development within the Leach or Chambers Creek drainage basins shall be held to a Level 2 flow control standard as defined in the KCSWDM.
- C. Any development in the Morrison Pothole drainage basin shall be held to a Level 3 flow control standard as defined in the KCSWDM.
- D. Certain portions of the storm system on 27th Street West within the Day Island Waterway Basin is identified as a Conveyance System Nuisance Problem (Type 1 downstream problem) as defined in the KCSWDM. Additional flow control, as identified in the KCSWDM, or system improvements are required for development projects that are tributary to the deficient portions of the system.
- E. For the purpose of rainfall modeling, the City of University Place will be considered to have the same rainfall characteristics as the City of Federal Way.

13.25.220 Construction. All workmanship and materials shall be in accordance with the UPMC, KCSWDM, King County Road Standards, and the Standard Specifications.

13.25.230 Excavation and Backfill. All excavation and backfill of storm drainage facilities shall be in conformance with UPMC 13.20.260.

13.25.240 Street Patching and Restoration. All street patching and restoration shall be in conformance with UPMC 13.20.265.

13.25.250 Roof Downspout Controls. Roof downspout systems that tie into storm drainage facilities shall be constructed in accordance with the Plumbing Code as adopted by UPMC Title 14 and the following criteria:

- A. Connections to the storm drainage facility must be made at a catch basin. Connections made in the right-of-way or public easement require a right-of-way permit.
- B. Roof downspouts systems installed in conjunction with work performed under a building permit will be administered under that permit.

13.25.260 Storm drainage inventory.

All new and modified storm drainage facilities will be mapped on the University Place G.I.S. inventory system. The storm drainage inventory fee to be adopted must shall be paid by the applicant at the time of permit issuance to compensate the City for this activity.

(Ord. 518 § 1, 2008; Ord. 395 § 3, 2003).

13.25.270 Operation and Maintenance. Operation and maintenance of all drainage facilities is the responsibility of the applicant or property owner, except for those facilities for which the City assumes operation and maintenance responsibility as described below.

A. Drainage facilities to be maintained by private parties.

1. Prior to permit issuance, the applicant shall be required to record a storm drainage maintenance agreement and restrictive covenant with the Pierce County Auditor. The form for this document is available at the City of University Place permit counter. The Operation and Maintenance Manual, as described below, will be included as an attachment to the agreement.
2. All privately owned drainage facilities must be maintained as specified in the King County Surface Water Design Manual. A copy of the Operation and Maintenance Manual submitted as part of the permit application shall be retained on site and shall be transferred with the property to any new owner. The property owner(s) shall keep a record of all maintenance activity indicating when the maintenance occurred and where waste was disposed of. These records shall be available for inspection by the City. The City may inspect all privately owned drainage facilities for compliance with these requirements. If property owner(s) fail to maintain their facilities, the City may issue a written notice specifying required actions. If these actions are not performed in a timely manner, the City may enter the property to perform the actions needed. The property owner is responsible for the costs incurred by the City. In the event an imminent hazard to public safety or the environment exists, written notice may not be required. Actions performed by the City on privately owned drainage facilities do not constitute an official assumption of operation and maintenance of these facilities.
3. An easement must be recorded granting right-of-access to the City for all storm facilities in accordance with UPMC 13.10. The easement must also be depicted and described on the face of the plat, short plat, final development plan, or binding site plan.

B. Drainage facilities to be maintained by the City.

1. Drainage facilities to be owned and operated by the City must be located in a tract or

right-of-way dedicated to the City. Access roads serving these facilities must also be located in the tract or right-of-way and must be connected to an improved public road right-of-way. Any dedications shall be in conformance with UPMC 13.10.

2. The City will provide written notification to the applicant, officially assuming maintenance and operation of these facilities only after each of the following has been met:
 - a) The design engineer has submitted a certification that the work has been completed per the approved design. The certification shall be as prescribed in UPMC 13.05.820.
 - b) The City has accepted a maintenance financial guarantee from the applicant or property owner as prescribed in UPMC 13.05 Article 6.
 - c) The City has issued a written, final approval of the constructed facility to the applicant or property owner.
 - d) A minimum of 85% of the homes in the development have been occupied.
 - e) All of the public improvements required to be constructed by the applicant have been completed and accepted by the City.
 - f) The storm drainage system is free of all sediment and debris.

Article 3. Erosion Control

13.25.310 General. All proposed projects that will clear, grade or otherwise disturb a site must provide erosion and sediment controls to prevent, to the maximum extent possible, the transport of sediment from the project site to downstream drainage facilities, water resources, and adjacent properties. Both temporary and permanent erosion and sediment controls shall be designed, implemented and maintained as described in Section 1.2.5 and Appendix D of the King County Surface Water Design Manual.

13.25.320 Maintenance. All erosion and sediment control measures shall be maintained and inspected on a regular basis as prescribed in Appendix D of the KCSWDM. The applicant shall designate an erosion and sedimentation control (ESC) supervisor who shall be responsible for maintenance and inspection of the erosion and sedimentation control measures for compliance with all permit conditions relating to erosion and sediment control as described in Appendix D. The ESC supervisor will be responsible to submit reports to the City for each inspection of the site. Section D.5.4 of Appendix D of the King County Surface Water Design Manual sets forth the minimum schedule for erosion and sediment control reviews/inspections. For sites within or impacting sensitive areas, the City may require the ESC supervisor to be a licensed professional engineer with demonstrated expertise in erosion and sediment control. This professional shall be designated as a special inspector in conformance with UPMC 13.05 Article 7.

13.25.330 Erosion and Sediment Control/Road Cleaning Financial Guarantee. Prior to permit issuance, the applicant must submit to the City a financial guarantee, guaranteeing the performance and maintenance of the erosion and sedimentation control facilities. The financial guarantee shall be as specified in UPMC 13.05 Article 6.

13.25.340 Final Stabilization. Prior to obtaining final construction approval and the release of financial guarantees, the site shall be stabilized, structural erosion and sediment control measures (such as silt fences and sediment traps) shall be removed and the drainage facilities shall be cleaned as specified in Appendix D of the King County Surface Water Design Manual.

APPENDIX B

**UNIVERSITY PLACE
STORMWATER MAINTENANCE STANDARDS
(KING COUNTY APPENDIX A)**

APPENDIX A

MAINTENANCE REQUIREMENTS FOR FLOW CONTROL, CONVEYANCE, AND WQ FACILITIES

This appendix contains the maintenance requirements for the following typical stormwater control facilities and components:

- No. 1 – Detention Ponds (p. A-2)
- No. 2 – Infiltration Facilities (p. A-3)
- No. 3 – Detention Tanks and Vaults (p. A-5)
- No. 4 – Control Structure/Flow Restrictor (p. A-7)
- No. 5 – Catch Basins and Manholes (p. A-9)
- No. 6 – Conveyance Pipes and Ditches (p. A-11)
- No. 7 – Debris Barriers (e.g., Trash Racks) (p. A-12)
- No. 8 – Energy Dissipaters (p. A- 13)
- No. 9 – Fencing (p. A-14)
- No. 10 – Gates/Bollards/Access Barriers (p. A-15)
- No. 11 – Grounds (Landscaping) (p. A-16)
- No. 12 – Access Roads (p. A-17)
- No. 13 – Basic Biofiltration Swale (grass) (p. A-18)
- No. 14 – Wet Biofiltration Swale (p. A-19)
- No. 15 – Filter Strip (p. A-20)
- No. 16 – Wetpond (p. A-21)
- No. 17 – Wetvault (p. A-23)
- No. 18 – Stormwater Wetland (p. A-24)
- No. 19 – Sand Filter Pond (p. A-26)
- No. 20 – Sand Filter Vault (p. A-28)
- No. 21 – Stormfilter (Cartridge Type) (p. A-30)
- No. 22 – Baffle Oil/Water Separator (p. A-32)
- No. 23 – Coalescing Plate Oil/Water Separator (p. A-33)
- No. 24 – Catch Basin Insert (p. A-35)

NO. 1 – DETENTION PONDS			
Maintenance Component	Defect or Problem	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed
Site	Trash and debris	Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.	Trash and debris cleared from site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Top or Side Slopes of Dam, Berm or Embankment	Rodent holes	Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents removed or destroyed and dam or berm repaired.
	Tree growth	Tree growth threatens integrity of slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat or not interfering with access or maintenance, they do not need to be removed.	Trees do not hinder facility performance or maintenance activities.
	Erosion	Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.	Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.
	Settlement	Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.	Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.
Storage Area	Sediment accumulation	Accumulated sediment that exceeds 10% of the designed pond depth.	Sediment cleaned out to designed pond shape and depth; pond reseeded if necessary to control erosion.
	Liner damaged (If Applicable)	Liner is visible or pond does not hold water as designed.	Liner repaired or replaced.
Inlet/Outlet Pipe.	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Emergency Overflow/Spillway	Tree growth	Tree growth impedes flow or threatens stability of spillway.	Trees removed.
	Rock missing	Only one layer of rock exists above native soil in area five square feet or larger or any exposure of native soil on the spillway.	Spillway restored to design standards.

NO. 2 – INFILTRATION FACILITIES			
Maintenance Component	Defect or Problem	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed
Site	Trash and debris	Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.	Trash and debris cleared from site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Infiltration Pond, Top or Side Slopes of Dam, Berm or Embankment	Rodent holes	Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents removed or destroyed and dam or berm repaired.
	Tree growth	Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.	Trees do not hinder facility performance or maintenance activities.
	Erosion	Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.	Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.
	Settlement	Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.	Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.
Infiltration Pond, Tank, Vault, Trench, or Small Basin Storage Area	Sediment accumulation	If two inches or more sediment is present or a percolation test indicates facility is working at or less than 90% of design.	Facility infiltrates as designed.
Infiltration Tank Structure	Plugged air vent	Any blockage of the vent.	Tank or vault freely vents.
	Tank bent out of shape	Any part of tank/pipe is bent out of shape more than 10% of its design shape.	Tank repaired or replaced to design.
	Gaps between sections, damaged joints or cracks or tears in wall	A gap wider than ¼-inch at the joint of any tank sections or any evidence of soil particles entering the tank at a joint or through a wall.	No water or soil entering tank through joints or walls.
Infiltration Vault Structure	Damage to wall, frame, bottom, and/or top slab	Cracks wider than ½-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.	Vault is sealed and structurally sound.

NO. 2 – INFILTRATION FACILITIES			
Maintenance Component	Defect or Problem	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed
Inlet/Outlet Pipes	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can be opened as designed.
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and covers access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.
Infiltration Pond, Tank, Vault, Trench, or Small Basin Filter Bags	Plugged	Filter bag more than ½ full.	Replace filter bag or redesign system.
Infiltration Pond, Tank, Vault, Trench, or Small Basin Pre-settling Ponds and Vaults	Sediment accumulation	6" or more of sediment has accumulated.	Pre-settling occurs as designed
Infiltration Pond, Rock Filter	Plugged	High water level on upstream side of filter remains for extended period of time or little or no water flows through filter during heavy rain storms.	Rock filter replaced evaluate need for filter and remove if not necessary.
Infiltration Pond Emergency Overflow Spillway	Rock missing	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.	Spillway restored to design standards.
	Tree growth	Tree growth impedes flow or threatens stability of spillway.	Trees removed.

NO. 3 – DETENTION TANKS AND VAULTS			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.	Trash and debris cleared from site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Tank or Vault Storage Area	Trash and debris	Any trash and debris accumulated in vault or tank (includes floatables and non-floatables).	No trash or debris in vault.
	Sediment accumulation	Accumulated sediment depth exceeds 10% of the diameter of the storage area for ½ length of storage vault or any point depth exceeds 15% of diameter. Example: 72-inch storage tank would require cleaning when sediment reaches depth of 7 inches for more than ½ length of tank.	All sediment removed from storage area.
Tank Structure	Plugged air vent	Any blockage of the vent.	Tank or vault freely vents.
	Tank bent out of shape	Any part of tank/pipe is bent out of shape more than 10% of its design shape.	Tank repaired or replaced to design.
	Gaps between sections, damaged joints or cracks or tears in wall	A gap wider than ½-inch at the joint of any tank sections or any evidence of soil particles entering the tank at a joint or through a wall.	No water or soil entering tank through joints or walls.
Vault Structure	Damage to wall, frame, bottom, and/or top slab	Cracks wider than ½-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.	Vault is sealed and structurally sound.
Inlet/Outlet Pipes	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 3 – DETENTION TANKS AND VAULTS			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can be opened as designed.
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and covers access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.

NO. 4 – CONTROL STRUCTURE/FLOW RESTRICTOR			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Structure	Trash and debris	Trash or debris of more than ½ cubic foot which is located immediately in front of the structure opening or is blocking capacity of the structure by more than 10%.	No Trash or debris blocking or potentially blocking entrance to structure.
		Trash or debris in the structure that exceeds 1/3 the depth from the bottom of basin to invert the lowest pipe into or out of the basin.	No trash or debris in the structure.
		Deposits of garbage exceeding 1 cubic foot in volume.	No condition present which would attract or support the breeding of insects or rodents.
	Sediment	Sediment exceeds 60% of the depth from the bottom of the structure to the invert of the lowest pipe into or out of the structure or the bottom of the FROP-T section or is within 6 inches of the invert of the lowest pipe into or out of the structure or the bottom of the FROP-T section.	Sump of structure contains no sediment.
	Damage to frame and/or top slab	Corner of frame extends more than ¼ inch past curb face into the street (if applicable).	Frame is even with curb.
		Top slab has holes larger than 2 square inches or cracks wider than ¼ inch.	Top slab is free of holes and cracks.
		Frame not sitting flush on top slab, i.e., separation of more than ¼ inch of the frame from the top slab.	Frame is sitting flush on top slab.
	Cracks in walls or bottom	Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering structure through cracks, or maintenance person judges that structure is unsound.	Structure is sealed and structurally sound.
		Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering structure through cracks.	No cracks more than ¼ inch wide at the joint of inlet/outlet pipe.
	Settlement/ misalignment	Structure has settled more than 1 inch or has rotated more than 2 inches out of alignment.	Basin replaced or repaired to design standards.
	Damaged pipe joints	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the structure at the joint of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of inlet/outlet pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Ladder rungs missing or unsafe	Ladder is unsafe due to missing rungs, misalignment, rust, cracks, or sharp edges.	Ladder meets design standards and allows maintenance person safe access.
FROP-T Section	Damage	T section is not securely attached to structure wall and outlet pipe structure should support at least 1,000 lbs of up or down pressure.	T section securely attached to wall and outlet pipe.
		Structure is not in upright position (allow up to 10% from plumb).	Structure in correct position.
		Connections to outlet pipe are not watertight or show signs of deteriorated grout.	Connections to outlet pipe are water tight; structure repaired or replaced and works as designed.
		Any holes—other than designed holes—in the structure.	Structure has no holes other than designed holes.
Cleanout Gate	Damaged or missing	Cleanout gate is missing.	Replace cleanout gate.

NO. 4 – CONTROL STRUCTURE/FLOW RESTRICTOR			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
		Cleanout gate is not watertight.	Gate is watertight and works as designed.
		Gate cannot be moved up and down by one maintenance person.	Gate moves up and down easily and is watertight.
		Chain/rod leading to gate is missing or damaged.	Chain is in place and works as designed.
Orifice Plate	Damaged or missing	Control device is not working properly due to missing, out of place, or bent orifice plate.	Plate is in place and works as designed.
	Obstructions	Any trash, debris, sediment, or vegetation blocking the plate.	Plate is free of all obstructions and works as designed.
Overflow Pipe	Obstructions	Any trash or debris blocking (or having the potential of blocking) the overflow pipe.	Pipe is free of all obstructions and works as designed.
	Deformed or damaged lip	Lip of overflow pipe is bent or deformed.	Overflow pipe does not allow overflow at an elevation lower than design
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than 1/2-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.
Metal Grates (If Applicable)	Unsafe grate opening	Grate with opening wider than 7/8 inch.	Grate opening meets design standards.
	Trash and debris	Trash and debris that is blocking more than 20% of grate surface.	Grate free of trash and debris. footnote to guidelines for disposal
	Damaged or missing	Grate missing or broken member(s) of the grate.	Grate is in place and meets design standards.
Manhole Cover/Lid	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open structure requires urgent maintenance.	Cover/lid protects opening to structure.
	Locking mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to Remove	One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.	Cover/lid can be removed and reinstalled by one maintenance person.

NO. 5 – CATCH BASINS AND MANHOLES			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Structure	Sediment	Sediment exceeds 60% of the depth from the bottom of the catch basin to the invert of the lowest pipe into or out of the catch basin or is within 6 inches of the invert of the lowest pipe into or out of the catch basin.	Sump of catch basin contains no sediment.
	Trash and debris	Trash or debris of more than ½ cubic foot which is located immediately in front of the catch basin opening or is blocking capacity of the catch basin by more than 10%.	No Trash or debris blocking or potentially blocking entrance to catch basin.
		Trash or debris in the catch basin that exceeds ⅓ the depth from the bottom of basin to invert the lowest pipe into or out of the basin.	No trash or debris in the catch basin.
		Dead animals or vegetation that could generate odors that could cause complaints or dangerous gases (e.g., methane).	No dead animals or vegetation present within catch basin.
		Deposits of garbage exceeding 1 cubic foot in volume.	No condition present which would attract or support the breeding of insects or rodents.
	Damage to frame and/or top slab	Corner of frame extends more than ¾ inch past curb face into the street (if applicable).	Frame is even with curb.
		Top slab has holes larger than 2 square inches or cracks wider than ¼ inch.	Top slab is free of holes and cracks.
		Frame not sitting flush on top slab, i.e., separation of more than ¼ inch of the frame from the top slab.	Frame is sitting flush on top slab.
	Cracks in walls or bottom	Cracks wider than ½ inch and longer than 3 feet, any evidence of soil particles entering catch basin through cracks, or maintenance person judges that catch basin is unsound.	Catch basin is sealed and structurally sound.
		Cracks wider than ½ inch and longer than 1 foot at the joint of any inlet/outlet pipe or any evidence of soil particles entering catch basin through cracks.	No cracks more than ¼ inch wide at the joint of inlet/outlet pipe.
	Settlement/ misalignment	Catch basin has settled more than 1 inch or has rotated more than 2 inches out of alignment.	Basin replaced or repaired to design standards.
	Damaged pipe joints	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the catch basin at the joint of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of inlet/outlet pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 5 – CATCH BASINS AND MANHOLES			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Metal Grates (Catch Basins)	Unsafe grate opening	Grate with opening wider than $\frac{7}{8}$ inch.	Grate opening meets design standards.
	Trash and debris	Trash and debris that is blocking more than 20% of grate surface.	Grate free of trash and debris. footnote to guidelines for disposal
	Damaged or missing	Grate missing or broken member(s) of the grate. Any open structure requires urgent maintenance.	Grate is in place and meets design standards.
Manhole Cover/Lid	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open structure requires urgent maintenance.	Cover/lid protects opening to structure.
	Locking mechanism Not Working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to Remove	One maintenance person cannot remove cover/lid after applying 80 lbs. of lift.	Cover/lid can be removed and reinstalled by one maintenance person.

NO. 6 – CONVEYANCE PIPES AND DITCHES			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Pipes	Sediment & debris accumulation	Accumulated sediment or debris that exceeds 20% of the diameter of the pipe.	Water flows freely through pipes.
	Vegetation/roots	Vegetation/roots that reduce free movement of water through pipes.	Water flows freely through pipes.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Damage to protective coating or corrosion	Protective coating is damaged; rust or corrosion is weakening the structural integrity of any part of pipe.	Pipe repaired or replaced.
	Damaged	Any dent that decreases the cross section area of pipe by more than 20% or is determined to have weakened structural integrity of the pipe.	Pipe repaired or replaced.
Ditches	Trash and debris	Trash and debris exceeds 1 cubic foot per 1,000 square feet of ditch and slopes.	Trash and debris cleared from ditches.
	Sediment accumulation	Accumulated sediment that exceeds 20% of the design depth.	Ditch cleaned/flushed of all sediment and debris so that it matches design.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Vegetation	Vegetation that reduces free movement of water through ditches.	Water flows freely through ditches.
	Erosion damage to slopes	Any erosion observed on a ditch slope.	Slopes are not eroding.
	Rock lining out of place or missing (If Applicable)	One layer or less of rock exists above native soil area 5 square feet or more, any exposed native soil.	Replace rocks to design standards.

NO. 7 – DEBRIS BARRIERS (E.G., TRASH RACKS)			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed.
Site	Trash and debris	Trash or debris plugging more than 20% of the area of the barrier.	Barrier clear to receive capacity flow.
	Sediment accumulation	Sediment accumulation of greater than 20% of the area of the barrier	Barrier clear to receive capacity flow.
Structure	Cracked broken or loose	Structure which bars attached to is damaged - pipe is loose or cracked or concrete structure is cracked, broken or loose.	Structure barrier attached to is sound.
Bars	Bar spacing	Bar spacing exceeds 6 inches.	Bars have at most 6 inch spacing.
	Damaged or missing bars	Bars are bent out of shape more than 3 inches.	Bars in place with no bends more than ¼ inch.
		Bars are missing or entire barrier missing.	Bars in place according to design.
		Bars are loose and rust is causing 50% deterioration to any part of barrier.	Repair or replace barrier to design standards.

NO. 8 – ENERGY DISSIPATERS			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed.
Site	Trash and debris	Trash and/or debris accumulation.	Dissipater clear of trash and/or debris.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Rock Pad	Missing or moved Rock	Only one layer of rock exists above native soil in area five square feet or larger or any exposure of native soil.	Rock pad prevents erosion.
Dispersion Trench	Pipe plugged with sediment	Accumulated sediment that exceeds 20% of the design depth.	Pipe cleaned/flushed so that it matches design.
	Not discharging water properly	Visual evidence of water discharging at concentrated points along trench (normal condition is a "sheet flow" of water along trench).	Water discharges from feature by sheet flow.
	Perforations plugged.	Over 1/4 of perforations in pipe are plugged with debris or sediment.	Perforations freely discharge flow.
	Water flows out top of "distributor" catch basin.	Water flows out of distributor catch basin during any storm less than the design storm.	No flow discharges from distributor catch basin.
	Receiving area over-saturated	Water in receiving area is causing or has potential of causing landslide problems.	No danger of landslides.
Gabions	Damaged mesh	Mesh of gabion broken, twisted or deformed so structure is weakened or rock may fall out.	Mesh is intact, no rock missing.
	Corrosion	Gabion mesh shows corrosion through more than ¼ of its gage.	All gabion mesh capable of containing rock and retaining designed form.
	Collapsed or deformed baskets	Gabion basket shape deformed due to any cause.	All gabion baskets intact, structure stands as designed.
	Missing rock	Any rock missing that could cause gabion to lose structural integrity.	No rock missing.
Manhole/Chamber	Worn or damaged post, baffles or side of chamber	Structure dissipating flow deteriorates to ½ or original size or any concentrated worn spot exceeding one square foot which would make structure unsound.	Structure is in no danger of failing.
	Damage to wall, frame, bottom, and/or top slab	Cracks wider than ½-inch or any evidence of soil entering the structure through cracks, or maintenance inspection personnel determines that the structure is not structurally sound.	Manhole/chamber is sealed and structurally sound.
	Damaged pipe joints	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering the structure at the joint of the inlet/outlet pipes.	No soil or water enters and no water discharges at the joint of inlet/outlet pipes.

NO. 9 – FENCING			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Erosion or holes under fence	Erosion or holes more than 4 inches high and 12-18 inches wide permitting access through an opening under a fence.	No access under the fence.
Wood Posts, Boards and Cross Members	Missing or damaged parts	Missing or broken boards, post out of plumb by more than 6 inches or cross members broken	No gaps on fence due to missing or broken boards, post plumb to within 1½ inches, cross members sound.
	Weakened by rotting or insects	Any part showing structural deterioration due to rotting or insect damage	All parts of fence are structurally sound.
	Damaged or failed post foundation	Concrete or metal attachments deteriorated or unable to support posts.	Post foundation capable of supporting posts even in strong wind.
Metal Posts, Rails and Fabric	Damaged parts	Post out of plumb more than 6 inches.	Post plumb to within 1½ inches.
		Top rails bent more than 6 inches.	Top rail free of bends greater than 1 inch.
		Any part of fence (including post, top rails, and fabric) more than 1 foot out of design alignment.	Fence is aligned and meets design standards.
		Missing or loose tension wire.	Tension wire in place and holding fabric.
	Deteriorated paint or protective coating	Part or parts that have a rusting or scaling condition that has affected structural adequacy.	Structurally adequate posts or parts with a uniform protective coating.
	Openings in fabric	Openings in fabric are such that an 8-inch diameter ball could fit through.	Fabric mesh openings within 50% of grid size.

NO. 10 – GATES/BOLLARDS/ACCESS BARRIERS			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Chain Link Fencing Gate	Damaged or missing members	Missing gate.	Gates in place.
		Broken or missing hinges such that gate cannot be easily opened and closed by a maintenance person.	Hinges intact and lubed. Gate is working freely.
		Gate is out of plumb more than 6 inches and more than 1 foot out of design alignment.	Gate is aligned and vertical.
		Missing stretcher bar, stretcher bands, and ties.	Stretcher bar, bands, and ties in place.
	Locking mechanism does not lock gate	Locking device missing, no-functioning or does not link to all parts.	Locking mechanism prevents opening of gate.
	Openings in fabric	Openings in fabric are such that an 8-inch diameter ball could fit through.	Fabric mesh openings within 50% of grid size.
Bar Gate	Damaged or missing cross bar	Cross bar does not swing open or closed, is missing or is bent to where it does not prevent vehicle access.	Cross bar swings fully open and closed and prevents vehicle access.
	Locking mechanism does not lock gate	Locking device missing, no-functioning or does not link to all parts.	Locking mechanism prevents opening of gate.
	Support post damaged	Support post does not hold cross bar up.	Cross bar held up preventing vehicle access into facility.
Bollards	Damaged or missing	Bollard broken, missing, does not fit into support hole or hinge broken or missing.	No access for motorized vehicles to get into facility.
	Does not lock	Locking assembly or lock missing or cannot be attached to lock bollard in place.	No access for motorized vehicles to get into facility.
Boulders	Dislodged	Boulders not located to prevent motorized vehicle access.	No access for motorized vehicles to get into facility.
	Circumvented	Motorized vehicles going around or between boulders.	No access for motorized vehicles to get into facility.

NO. 11 – GROUNDS (LANDSCAPING)			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash or litter	Any trash and debris which exceed 1 cubic foot per 1,000 square feet (this is about equal to the amount of trash it would take to fill up one standard size office garbage can). In general, there should be no visual evidence of dumping.	Trash and debris cleared from site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Trees and Shrubs	Hazard	Any tree or limb of a tree identified as having a potential to fall and cause property damage or threaten human life. A hazard tree identified by a qualified arborist must be removed as soon as possible.	No hazard trees in facility.
	Damaged	Limbs or parts of trees or shrubs that are split or broken which affect more than 25% of the total foliage of the tree or shrub.	Trees and shrubs with less than 5% of total foliage with split or broken limbs.
		Trees or shrubs that have been blown down or knocked over.	No blown down vegetation or knocked over vegetation. Trees or shrubs free of injury.
		Trees or shrubs which are not adequately supported or are leaning over, causing exposure of the roots.	Tree or shrub in place and adequately supported; dead or diseased trees removed.

NO. 12 – ACCESS ROADS			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Trash and debris exceeds 1 cubic foot per 1,000 square feet (i.e., trash and debris would fill up one standards size garbage can).	Roadway drivable by maintenance vehicles.
		Debris which could damage vehicle tires or prohibit use of road.	Roadway drivable by maintenance vehicles.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Blocked roadway	Any obstruction which reduces clearance above road surface to less than 14 feet.	Roadway overhead clear to 14 feet high.
Any obstruction restricting the access to a 10- to 12 foot width for a distance of more than 12 feet or any point restricting access to less than a 10 foot width.		At least 12-foot of width on access road.	
Road Surface	Erosion, settlement, potholes, soft spots, ruts	Any surface defect which hinders or prevents maintenance access.	Road drivable by maintenance vehicles.
	Vegetation on road surface	Trees or other vegetation prevent access to facility by maintenance vehicles.	Maintenance vehicles can access facility.
Shoulders and Ditches	Erosion	Erosion within 1 foot of the roadway more than 8 inches wide and 6 inches deep.	Shoulder free of erosion and matching the surrounding road.
	Weeds and brush	Weeds and brush exceed 18 inches in height or hinder maintenance access.	Weeds and brush cut to 2 inches in height or cleared in such a way as to allow maintenance access.
Modular Grid Pavement	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Damaged or missing	Access surface compacted because of broken or missing modular block.	Access road surface restored so road infiltrates.

NO. 13 – BASIC BIOFILTRATION SWALE (GRASS)			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash and/or debris accumulated on the bioswale site.	No trash or debris on the bioswale site.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Swale Section	Sediment accumulation	Sediment depth exceeds 2 inches in 10% of the swale treatment area.	No sediment deposits in grass treatment area of the bioswale.
		Sediment inhibits grass growth over 10% of swale length.	Grass growth not inhibited by sediment.
		Sediment inhibits even spreading of flow.	Flow spreads evenly through swale
	Erosion/scouring	Eroded or scoured swale bottom due to channelization or high flows.	No eroded or scoured areas in bioswale. Cause of erosion or scour addressed.
	Poor vegetation coverage	Grass is sparse or bare or eroded patches occur in more than 10% of the swale bottom.	Swale has no bare spots and grass is thick and healthy.
	Grass too tall	Grass excessively tall (greater than 10 inches), grass is thin or nuisance weeds and other vegetation has taken over.	Grass is between 3 and 4 inches tall, thick and healthy. No clippings left in swale. No nuisance vegetation present.
	Excessive shade	Grass growth is poor because sunlight does not reach swale.	Health grass growth or swale converted to a wet bioswale.
	Constant baseflow	Continuous flow through the swale, even when it has been dry for weeks or an eroded, muddy channel has formed in the swale bottom.	Baseflow removed from swale by a low-flow pea-gravel drain or bypassed around the swale.
	Standing water	Water pools in the swale between storms or does not drain freely.	Swale freely drains and there is no standing water in swale between storms.
Channelization	Flow concentrates and erodes channel through swale.	No flow channels in swale.	
Flow Spreader	Concentrated flow	Flow from spreader not uniformly distributed across entire swale width.	Flows are spread evenly over entire swale width.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 14 – WET BIOFILTRATION SWALE			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash and/or debris accumulated at the site.	No trash or debris at the site.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Swale Section	Sediment accumulation	Sediment depth exceeds 2 inches in 10% of the swale treatment area.	No sediment deposits in treatment area.
	Erosion/scouring	Eroded or scoured swale bottom due to channelization or high flows.	No eroded or scoured areas in bioswale. Cause of erosion or scour addressed.
	Water depth	Water not retained to a depth of about 4 inches during the wet season.	Water depth of 4 inches through out swale for most of wet season.
	Vegetation ineffective	Vegetation sparse, does not provide adequate filtration or crowded out by very dense clumps of cattail or nuisance vegetation.	Wetland vegetation fully covers bottom of swale and no cattails or nuisance vegetation present.
	Insufficient water	Wetland vegetation dies due to lack of water.	Wetland vegetation remains healthy (may require converting to grass lined bioswale)
Flow Spreader	Concentrated flow	Flow from spreader not uniformly distributed across entire swale width.	Flows are spread evenly over entire swale width.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 15 – FILTER STRIP			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash and debris accumulated on the filter strip site.	Filter strip site free of any trash or debris
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Grass Strip	Sediment accumulation	Sediment accumulation on grass exceeds 2 inches depth.	No sediment deposits in treatment area.
	Erosion/scouring	Eroded or scoured swale bottom due to channelization or high flows.	No eroded or scoured areas in bioswale. Cause of erosion or scour addressed.
	Grass too tall	Grass excessively tall (greater than 10 inches), grass is thin or nuisance weeds and other vegetation has taken over.	Grass is between 3 and 4 inches tall, thick and healthy. No clippings left in swale. No nuisance vegetation present.
	Vegetation ineffective	Grass has died out, become excessively tall (greater than 10 inches) or nuisance vegetation is taking over.	Grass is healthy, less than 9 inches high and no nuisance vegetation present.
Flow Spreader	Concentrated flow	Flow from spreader not uniformly distributed across entire swale width.	Flows are spread evenly over entire swale width.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than 1/2-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.

NO. 16 – WETPOND			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance Is Performed
Site	Trash and debris	Any trash and debris accumulated on the wetpond site.	Wetpond site free of any trash or debris.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Side Slopes of Dam, Berm, internal berm or Embankment	Rodent holes	Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents removed or destroyed and dam or berm repaired.
	Tree growth	Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm or embankment integrity, are not interfering with access or maintenance or leaves do not cause a plugging problem they do not need to be removed.	Trees do not hinder facility performance or maintenance activities.
	Erosion	Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.	Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.
Top or Side Slopes of Dam, Berm, internal berm or Embankment	Settlement	Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.	Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.
	Irregular surface on internal berm	Top of berm not uniform and level.	Top of berm graded to design elevation.
Pond Areas	Sediment accumulation (except first wetpool cell)	Accumulated sediment that exceeds 10% of the designed pond depth.	Sediment cleaned out to designed pond shape and depth.
	Sediment accumulation (first wetpool cell)	Sediment accumulations in pond bottom that exceeds the depth of sediment storage (1 foot) plus 6 inches.	Sediment storage contains no sediment.
	Liner damaged (If Applicable)	Liner is visible or pond does not hold water as designed.	Liner repaired or replaced.
	Water level (first wetpool cell)	First cell empty, doesn't hold water.	Water retained in first cell for most of the year.
	Algae mats (first wetpool cell)	Algae mats develop over more than 10% of the water surface should be removed.	Algae mats removed (usually in the late summer before Fall rains, especially in Sensitive Lake Protection Areas.)
Gravity Drain	Inoperable valve	Valve will not open and close.	Valve opens and closes normally.
	Valve won't seal	Valve does not seal completely.	Valve completely seals closed.
Emergency Overflow Spillway	Tree growth	Tree growth impedes flow or threatens stability of spillway.	Trees removed.

NO. 16 – WETPOND			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
	Rock missing	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.	Spillway restored to design standards.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than 1/2-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.

NO. 17 – WETVAULT			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Trash and debris accumulated on facility site.	Trash and debris removed from facility site.
Treatment Area	Trash and debris	Any trash and debris accumulated in vault (includes floatables and non-floatables).	No trash or debris in vault.
	Sediment accumulation	Sediment accumulation in vault bottom exceeds the depth of the sediment zone plus 6 inches.	No sediment in vault.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
Vault Structure	Damage to wall, frame, bottom, and/or top slab	Cracks wider than ½-inch, any evidence of soil entering the structure through cracks, vault does not retain water or qualified inspection personnel determines that the vault is not structurally sound.	Vault is sealed and structurally sound.
	Baffles damaged	Baffles corroding, cracking, warping and/or showing signs of failure or baffle cannot be removed.	Repair or replace baffles or walls to specifications.
	Ventilation	Ventilation area blocked or plugged.	No reduction of ventilation area exists.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Gravity Drain	Inoperable valve	Valve will not open and close.	Valve opens and closes normally.
	Valve won't seal	Valve does not seal completely.	Valve completely seals closed.
Access Manhole	Access cover/lid damaged or difficult to open	Access cover/lid cannot be easily opened by one person. Corrosion/deformation of cover/lid.	Access cover/lid can be opened by one person.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Access doors/plate has gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and covers access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.

NO. 18 – STORMWATER WETLAND			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance Is Performed
Site	Trash and debris	Trash and debris accumulated on facility site.	Trash and debris removed from facility site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Side Slopes of Dam, Berm, internal berm or Embankment	Rodent holes	Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents removed or destroyed and dam or berm repaired.
	Tree growth	Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.	Trees do not hinder facility performance or maintenance activities.
	Erosion	Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.	Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.
Top or Side Slopes of Dam, Berm, internal berm or Embankment	Settlement	Any part of a dam, berm or embankment that has settled 4 inches lower than the design elevation.	Top or side slope restored to design dimensions. If settlement is significant, a licensed civil engineer should be consulted to determine the cause of the settlement.
	Irregular surface on internal berm	Top of berm not uniform and level.	Top of berm graded flat to design elevation.
Pond Areas	Sediment accumulation (first cell/forebay)	Sediment accumulations in pond bottom that exceeds the depth of sediment storage (1 foot) plus 6 inches.	Sediment storage contains no sediment.
	Sediment accumulation (wetland cell)	Accumulated sediment that exceeds 10% of the designed pond depth.	Sediment cleaned out to designed pond shape and depth.
	Liner damaged (If Applicable)	Liner is visible or pond does not hold water as designed.	Liner repaired or replaced.
	Water level (first cell/forebay)	Cell does not hold 3 feet of water year round.	3 feet of water retained year round.
	Water level (wetland cell)	Cell does not retain water for at least 10 months of the year or wetland plants are not surviving.	Water retained at least 10 months of the year or wetland plants are surviving.
	Algae mats (first cell/forebay)	Algae mats develop over more than 10% of the water surface should be removed.	Algae mats removed (usually in the late summer before Fall rains, especially in Sensitive Lake Protection Areas.)
	Vegetation	Vegetation dead, dying, or overgrown (cattails) or not meeting original planting specifications.	Plants in wetland cell surviving and not interfering with wetland function.

NO. 18 – STORMWATER WETLAND			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Gravity Drain	Inoperable valve	Valve will not open and close.	Valve opens and closes normally.
	Valve won't seal	Valve does not seal completely.	Valve completely seals closed.
Emergency Overflow Spillway	Tree growth	Tree growth impedes flow or threatens stability of spillway.	Trees removed.
	Rock missing	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil at the top of out flow path of spillway. Rip-rap on inside slopes need not be replaced.	Spillway restored to design standards.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 19 – SAND FILTER POND			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Trash and debris accumulated on facility site.	Trash and debris removed from facility site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover (not in the treatment area)	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Pre-Treatment (if applicable)	Sediment accumulation	Sediment accumulations in pond bottom that exceeds the depth of sediment storage (1 foot) plus 6 inches.	Sediment storage contains no sediment.
	Liner damaged (If Applicable)	Liner is visible or pond does not hold water as designed.	Liner repaired or replaced.
	Water level	Cell empty, doesn't hold water.	Water retained in first cell for most of the year.
	Algae mats	Algae mats develop over more than 10% of the water surface should be removed.	Algae mats removed (usually in the late summer before Fall rains, especially in Sensitive Lake Protection Areas.)
Pond Area	Sediment accumulation	Sediment or crust depth exceeds ½-inch over 10 % of surface area of sand filter.	No sediment or crust deposit on sand filter that would impede permeability of the filter section.
	Grass (if applicable)	Grass becomes excessively tall (greater than 6 inches) or when nuisance weeds and other vegetation start to take over or thatch build up occurs.	Mow vegetation and/or remove nuisance vegetation.
Side Slopes of Pond	Rodent holes	Any evidence of rodent holes if facility is acting as a dam or berm, or any evidence of water piping through dam or berm via rodent holes.	Rodents removed or destroyed and dam or berm repaired.
	Tree growth	Tree growth threatens integrity of dams, berms or slopes, does not allow maintenance access, or interferes with maintenance activity. If trees are not a threat to dam, berm, or embankment integrity or not interfering with access or maintenance, they do not need to be removed.	Trees do not hinder facility performance or maintenance activities.
	Erosion	Eroded damage over 2 inches deep where cause of damage is still present or where there is potential for continued erosion. Any erosion observed on a compacted slope.	Slopes stabilized using appropriate erosion control measures. If erosion is occurring on compacted slope, a licensed civil engineer should be consulted to resolve source of erosion.

NO. 19 – SAND FILTER POND			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Sand Filter Media	Plugging	Drawdown of water through the sand filter media, takes longer than 24 hours, and/or flow through the overflow pipes occurs frequently. A sieve analysis of >4% -100 or >2% -200 requires replacing sand filter media.	Sand filter media surface is aerated and drawdown rate is normal.
	Prolonged flows	Sand is saturated for prolonged periods of time (several weeks) and does not dry out between storms due to continuous base flow or prolonged flows from detention facilities.	Excess flows bypassed or confined to small portion of filter media surface.
	Short circuiting	Flows become concentrated over one section of the sand filter rather than dispersed or drawdown rate of pool exceeds 12 inches per hour.	Flow and percolation of water through the sand filter is uniform and dispersed across the entire filter area and drawdown rate is normal.
	Media thickness	Sand thickness is less than 6 inches.	Rebuild sand thickness to a minimum of 6 inches and preferably to 18 inches.
Underdrains and Clean-Outs	Sediment/debris	Underdrains or clean-outs partially plugged or filled with sediment and/or debris. Junction box/cleanout wyes not watertight.	Underdrains and clean-outs free of sediment and debris and are watertight.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than 1/2-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than 1/4-inch wide at the joint of the inlet/outlet pipe.
Rock Pad	Missing or out of place	Only one layer of rock exists above native soil in area five square feet or larger, or any exposure of native soil.	Rock pad restored to design standards.
Flow spreader	Concentrated flow	Flow from spreader not uniformly distributed across sand filter.	Flows spread evenly over sand filter.

NO. 20 – SAND FILTER VAULT			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Trash and debris accumulated on facility site.	Trash and debris removed from facility site.
	Noxious weeds	Any noxious or nuisance vegetation which may constitute a hazard to County personnel or the public.	Noxious and nuisance vegetation removed according to applicable regulations. No danger of noxious vegetation where County personnel or the public might normally be.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oil, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Grass/groundcover	Grass or groundcover exceeds 18 inches in height.	Grass or groundcover mowed to a height no greater than 6 inches.
Pre-Treatment Chamber	Sediment accumulation	Sediment accumulation exceeds the depth of the sediment zone plus 6 inches.	Sediment storage contains no sediment.
Sand Filter Media	Sediment accumulation	Sediment depth exceeds ½-inch on sand filter media.	Sand filter freely drains at normal rate.
	Trash and debris	Trash and debris accumulated in vault (floatables and non-floatables).	No trash or debris in vault.
	Plugging	Drawdown of water through the sand filter media, takes longer than 24 hours, and/or flow through the overflow pipes occurs frequently. A sieve analysis of >4% -100 or >2% -200 requires replacing sand filter media.	Sand filter media drawdown rate is normal.
	Short circuiting	Seepage or flow occurs along the vault walls and corners. Sand eroding near inflow area. Cleanout wyes are not watertight.	Sand filter media section re-laid and compacted along perimeter of vault to form a semi-seal. Erosion protection added to dissipate force of incoming flow and curtail erosion.
Vault Structure	Damaged to walls, frame, bottom and/or top slab.	Cracks wider than ½-inch, any evidence of soil entering the structure through cracks or qualified inspection personnel determines that the vault is not structurally sound.	Vault replaced or repaired to provide complete sealing of the structure.
	Ventilation	Ventilation area blocked or plugged.	No reduction of ventilation area exists.
Underdrains and Cleanouts	Sediment/debris	Underdrains or clean-outs partially plugged, filled with sediment and/or debris or not watertight.	Underdrains and clean-outs free of sediment and debris and sealed.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.

NO. 20 – SAND FILTER VAULT			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can be opened as designed.
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and covers access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.

NO. 21 – STORMFILTER (CARTRIDGE TYPE)			
Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash or debris which impairs the function of the facility.	Trash and debris removed from facility.
	Contaminants and pollution	Any evidence of contaminants or pollution such as oils, gasoline, concrete slurries or paint.	Materials removed and disposed of according to applicable regulations. Source control BMPs implemented if appropriate. No contaminants present other than a surface oil film.
	Life cycle	System has not been inspected for three years.	Facility is re-inspected and any needed maintenance performed.
Vault Treatment Area	Sediment on vault floor	Greater than 2 inches of sediment.	Vault is free of sediment.
	Sediment on top of cartridges	Greater than ½ inch of sediment.	Vault is free of sediment.
	Multiple scum lines above top of cartridges	Thick or multiple scum lines above top of cartridges. Probably due to plugged canisters or underdrain manifold.	Cause of plugging corrected, canisters replaced if necessary.
Vault Structure	Damage to wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch and any evidence of soil particles entering the structure through the cracks, or qualified inspection personnel determines the vault is not structurally sound.	Vault replaced or repaired to design specifications.
	Baffles damaged	Baffles corroding, cracking warping, and/or showing signs of failure as determined by maintenance/inspection person.	Repair or replace baffles to specification.
Filter Media	Standing water in vault	9 inches or greater of static water in the vault for more than 24 hours following a rain event and/or overflow occurs frequently. Probably due to plugged filter media, underdrain or outlet pipe.	No standing water in vault 24 hours after a rain event.
	Short circuiting	Flows do not properly enter filter cartridges.	Flows go through filter media.
Underdrains and Clean-Outs	Sediment/debris	Underdrains or clean-outs partially plugged or filled with sediment and/or debris.	Underdrains and clean-outs free of sediment and debris.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can be opened as designed.

NO. 21 – STORMFILTER (CARTRIDGE TYPE)

Maintenance Component	Defect or Problem	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and cover access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.

NO. 22 – BAFFLE OIL/WATER SEPARATOR			
Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash or debris which impairs the function of the facility.	Trash and debris removed from facility.
	Contaminants and pollution	Floating oil in excess of 1 inch in first chamber, any oil in other chambers or other contaminants of any type in any chamber.	No contaminants present other than a surface oil film.
Vault Treatment Area	Sediment accumulation	Sediment accumulates exceeds 6 inches in the vault.	No sediment in the vault.
	Discharge water not clear	Inspection of discharge water shows obvious signs of poor water quality- effluent discharge from vault shows thick visible sheen.	Effluent discharge is clear.
	Trash or debris accumulation	Any trash and debris accumulation in vault (floatables and non-floatables).	Vault is clear of trash and debris.
	Oil accumulation	Oil accumulations that exceed 1 inch, at the surface of the water in the oil/water separator chamber.	No visible oil depth on water.
Vault Structure	Damage to Wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch or evidence of soil particles entering the structure through the cracks, or maintenance/inspection personnel determines that the vault is not structurally sound.	Vault replaced or repaired to design specifications.
	Baffles damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by maintenance inspection personnel.	Repair or replace baffles to specifications.
Gravity Drain	Inoperable valve	Valve will not open and close.	Valve opens and closes normally.
	Valve won't seal	Valve does not seal completely.	Valve completely seals closed.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can be opened as designed.
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and cover access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or cover/lid.	Lifting rings sufficient to lift or remove cover/lid.

NO. 23 – COALESCING PLATE OIL/WATER SEPARATOR			
Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Site	Trash and debris	Any trash or debris which impairs the function of the facility.	Trash and debris removed from facility.
	Contaminants and pollution	Floating oil in excess of 1 inch in first chamber, any oil in other chambers or other contaminants of any type in any chamber.	No contaminants present other than a surface oil film.
Vault Treatment Area	Sediment accumulation in the forebay	Sediment accumulation of 6 inches or greater in the forebay.	No sediment in the forebay.
	Discharge water not clear	Inspection of discharge water shows obvious signs of poor water quality - effluent discharge from vault shows thick visible sheen.	Repair function of plates so effluent is clear.
	Trash or debris accumulation	Trash and debris accumulation in vault (floatables and non-floatables).	Trash and debris removed from vault.
	Oil accumulation	Oil accumulation that exceeds 1 inch at the water surface in the in the coalescing plate chamber.	No visible oil depth on water and coalescing plates clear of oil.
Coalescing Plates	Damaged	Plate media broken, deformed, cracked and/or showing signs of failure.	Replace that portion of media pack or entire plate pack depending on severity of failure.
	Sediment accumulation	Any sediment accumulation which interferes with the operation of the coalescing plates.	No sediment accumulation interfering with the coalescing plates.
Vault Structure	Damage to Wall, Frame, Bottom, and/or Top Slab	Cracks wider than ½-inch and any evidence of soil particles entering the structure through the cracks, or maintenance inspection personnel determines that the vault is not structurally sound.	Vault replaced or repaired to design specifications.
	Baffles damaged	Baffles corroding, cracking, warping and/or showing signs of failure as determined by maintenance/inspection person.	Repair or replace baffles to specifications.
Ventilation Pipes	Plugged	Any obstruction to the ventilation pipes.	Ventilation pipes are clear.
Shutoff Valve	Damaged or inoperable	Shutoff valve cannot be opened or closed.	Shutoff valve operates normally.
Inlet/Outlet Pipe	Sediment accumulation	Sediment filling 20% or more of the pipe.	Inlet/outlet pipes clear of sediment.
	Trash and debris	Trash and debris accumulated in inlet/outlet pipes (includes floatables and non-floatables).	No trash or debris in pipes.
	Damaged	Cracks wider than ½-inch at the joint of the inlet/outlet pipes or any evidence of soil entering at the joints of the inlet/outlet pipes.	No cracks more than ¼-inch wide at the joint of the inlet/outlet pipe.
Access Manhole	Cover/lid not in place	Cover/lid is missing or only partially in place. Any open manhole requires immediate maintenance.	Manhole access covered.
	Locking mechanism not working	Mechanism cannot be opened by one maintenance person with proper tools. Bolts cannot be seated. Self-locking cover/lid does not work.	Mechanism opens with proper tools.
	Cover/lid difficult to remove	One maintenance person cannot remove cover/lid after applying 80 lbs of lift.	Cover/lid can be removed and reinstalled by one maintenance person.
	Ladder rungs unsafe	Missing rungs, misalignment, rust, or cracks.	Ladder meets design standards. Allows maintenance person safe access.

NO. 23 – COALESCING PLATE OIL/WATER SEPARATOR			
Maintenance Component	Defect	Condition When Maintenance is Needed	Results Expected When Maintenance is Performed
Large access doors/plate	Damaged or difficult to open	Large access doors or plates cannot be opened/removed using normal equipment.	Replace or repair access door so it can be opened as designed.
	Gaps, doesn't cover completely	Large access doors not flat and/or access opening not completely covered.	Doors close flat and cover access opening completely.
	Lifting Rings missing, rusted	Lifting rings not capable of lifting weight of door or plate.	Lifting rings sufficient to lift or remove door or plate.

NO. 24 – CATCH BASIN INSERT			
Maintenance Component	Defect or Problem	Conditions When Maintenance is Needed	Results Expected When Maintenance is Performed
Media Insert	Visible Oil	Visible oil sheen passing through media	Media inset replaced.
	Insert does not fit catch basin properly	Flow gets into catch basin without going through media.	All flow goes through media.
	Filter media plugged	Filter media plugged.	Flow through filter media is normal.
	Oil absorbent media saturated	Media oil saturated.	Oil absorbent media replaced.
	Water saturated	Catch basin insert is saturated with water, which no longer has the capacity to absorb.	Insert replaced.
	Service life exceeded	Regular interval replacement due to typical average life of media insert product, typically one month.	Media replaced at manufacturer's recommended interval.
	Seasonal maintenance	When storms occur and during the wet season.	Remove, clean and replace or install new insert after major storms, monthly during the wet season or at manufacturer's recommended interval.

APPENDIX C

**UNIVERSITY PLACE
STORMWATER BASIN EDUCATION MAP**

University Place Stormwater Basin Education Map

Where does the storm water on your street go?

We have all seen rainwater run into the storm drainage grates in the streets but have you ever wondered where the water ends up after it enters the City storm drainage system? Below are descriptions of the various drainage areas in the City. Use this map to find your neighborhood.

- 1. Day Island and Soundview drainage basins:** In these basins, the storm water is collected in both pipes and open ditches that drain directly to Puget Sound.
- 2. Morrison Pothole drainage area:** In this area, storm water drains to the Morrison Wetland located between Morrison road and 67th Avenue, immediately adjacent to the Adriana Wetland Park (on Morrison). In high storm events, this wetland overflows into the Day Island basin that drains into the Sound.
- 3. Crystal Springs Creek basin:** In this area, storm drainage drains directly to Crystal Creek at the north end of the City. This creek runs into Puget Sound at the Day Island lagoon.
- 4. Curtis Pothole:** This area in the center of the City drains to a depressed area near Curtis High School. From there the water ponds and eventually infiltrates into the groundwater.
- 5. Leach Creek basin:** Storm water in this area on the east side of the City drains directly into Leach Creek. Both Silver and Chum salmon use this creek for spawning. This creek ultimately runs into Chambers Creek near the Kobayashi park.
- 6. Chambers Creek basin:** Storm water in this basin drains to Chambers Creek either directly into the creek or through Peach Creek. Chambers Creek supports Silver, Chum and Chinook salmon and runs into the sound at Chambers Bay.
- 7. West Side basins:** Storm water in the southwest area of the City either infiltrates into the groundwater or drains directly to Puget Sound.
- 8. Flett Creek basin:** Water in this area drains to the south into Lakewood and ultimately runs into Flett Creek. This creek joins into Chambers Creek near the Kobayashi park.

APPENDIX D

**UNIVERSITY PLACE
ILLICIT DISCHARGE DETECTION &
ELIMINATION (IDDE) PROGRAM**

Illicit Discharge Detection and Elimination Component



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The City of University Place will implement the following Illicit Discharge Detection and Elimination program which meets the requirements of the Permit to actively seek and eliminate illicit discharges.

1.1 Introduction

The City's program to actively seek and eliminate illicit discharges to the MS4 is comprised of several programs participated in and implemented by the City. In general, illicit discharges to the MS4 are any discharges not composed entirely of storm water (for example: storm water containing pollutant or non-stormwater discharges) unless they are authorized under an NPDES Permit or specifically permitted by the City (see Section 3, Non-Stormwater Discharges). For the most part, the programs that the City implements to detect and eliminate illicit discharges are part of the City's Permit. Programs such as those that relate to the inspection and enforcement of municipal, industrial, commercial, residential, and construction activities all contribute to the identification of illicit discharges and their elimination. These programs are crucial components of an illicit discharge detection and elimination program because they are focused on the sources of illicit discharges. Often, when an illicit discharge is detected during one of these programs, it can be eliminated before it affects receiving water.

In a comprehensive approach to the problem of illicit discharges, the City also participates in and conducts programs to detect illicit discharge within the MS4 and at the receiving waters. The City participates in a regional receiving water monitoring program required by the Permit. The City will also participate in the MS4 Outfall Monitoring and Source Identification Monitoring programs implemented at the regional level and conduct a Dry Weather Monitoring program. Each of these programs is focused on the identification of non-storm water illicit discharges.

Also extremely important to the detection of illicit discharges are the municipal staff and public reporting hotlines. The programs are directly supported by a very informed and engaged public and city staff familiar with urban runoff discharges and they serve as the best source for the timely detection of illicit discharges.

Monitoring programs, inspections, public reporting and city staff reporting are good detectors of illicit discharges. However in some cases the sources of the discharges are not evident and, therefore, elimination can be difficult. The City implements investigational source identification procedures in conjunction with the monitoring and notification programs in order to track down the sources and eliminate the discharge.

In almost all cases of illicit discharges, elimination of the discharge requires some level of enforcement and/or abatement action. Specifications in the University Place Municipal Code grant the City the powers to enforce its regulations pertaining to illicit discharges. In addition, the Municipal Code provides the City the ability to require a responsible party to conduct abatement activities required to eliminate an illicit discharge or for the City to conduct those activities itself and recover the cost from the responsible party.

Of the greatest importance to the long-term elimination of illicit discharges in the City are those programs that it employs to prevent and avoid illicit discharges. City regulations and supporting

outreach materials prepared by the City prohibit illicit discharges and provide guidance to residences and businesses to avoid illicit discharge. Maintaining up-to-date measures to comply with the City's regulations and educating those that are regulated by the City will lead to compliance and reduce illicit discharges. The land development and redevelopment project planning and review program conducted by the City is another proactive program that the City implements to prevent and avoid illicit discharges. The program informs applicants of regulations and helps prevent illicit discharges in new projects through review and inspection during the planning and construction phases, respectively.

The programs conducted by the City as part of its illicit discharge detection and elimination effort are described in various sections within this document. The following sections discuss some of those programs that are not described within the other sections of this document.

1.2 Public Reporting of Illicit Discharges and Connections

The City will promote, publicize and facilitate the reporting of illicit dischargers or water quality impacts associated with discharges into or from MS4.

The City of University Place relies on the regional hotline, the local City departmental phone numbers, and the City's main number to receive storm water complaints from the public. Callers with emergencies are notified to call other appropriate numbers such as those for the police and fire dispatcher, or the call is forwarded.

Locally, University Place residents are encouraged to contact the City's main line to file complaints including storm water or illicit discharges. All City receptionists, including the receptionist for the City's main line, are trained to answer and forward illicit discharge or water quality related calls to the appropriate staff member using the Hotline Tracking Form and Mobilization Guide. Calls may also be received by other City departments including Public Works or Community Services.

The regional public hotline and local City department phone numbers are publicized in various periodicals, on various web sites (including City of University Place and Pierce County websites), and at local community events and meetings where literature is distributed. Most urban runoff related handouts and educational materials include the hotline number. In addition, public education stresses the importance of reporting and describes the critical role that the public plays in the identification and elimination of urban runoff pollution related problems.

1.3 Spill Reporting, Response, and Prevention

As required by the Permit, the City of University Place will prevent, respond to, contain and clean up sewage and other spills that may discharge into its MS4 from any source. The following section describes the City's approach to spill prevention, notification and response.

1.3.1 Spill Prevention

1.3.1.1 Pierce County Sanitary Sewers

The Pierce County's preventive and corrective sewer maintenance programs are conducted in accordance with the County's Sanitary Sewer Overflow Prevention Plan and consist of a variety of activities for the effective operation, maintenance, repair and replacement of sewer mains, manholes and pump stations. The plan provides for the routine monitoring, inspection, cleaning and related maintenance of the sanitary sewer collection system in order to reduce the potential of sanitary sewer overflows (SSO's) and other structural failures. Potential problems are noted and maintenance schedules adjusted accordingly. If necessary, repairs are initiated by Pierce County Public Works maintenance crews. Larger, more complex projects are referred for inclusion in the Capital Improvement Project process for planning, design and construction.

When system malfunctions do occur, such as SSO's, main stoppages, electrical outages, and mechanical breakdowns, the cause of the problem is investigated and analyzed to prevent its reoccurrence. Maintenance schedules are then adjusted as necessary. If appropriate, the infrastructure component is referred for repair or replacement by maintenance crews.

1.3.1.2 Private Sewer Laterals and Septic Systems

Pierce County requires that private sewer laterals and septic systems be designed and operate in accordance to industry standards. The County also requires the proper maintenance of these facilities in order to avoid spills, breakages, and failures.

Pierce County responds to all sewer spills to assess the risk to human health and the environment, and requires private sewer lateral and septic system failures and spills to be contained and cleaned by the responsible party. Private lateral spills and septic system failures that discharge into the City's MS4 are logged and reported by the County. In the event that a private sewer lateral spill or septic system failure poses a risk or the discharge has entered the MS4 or the receiving waters, Pierce County will initiate containment and clean-up procedures to minimize the impact.

1.3.1.3 Other Spills

The City of University Place prevents other spills containing or suspected to contain pollutants through the implementation of BMPs, secondary containment, and other mechanisms to prevent and avoid discharges to the receiving waters (through the MS4 or directly). Spills from private businesses and residents are reduced through required BMPs, education, and enforcement of relevant regulations for the storage and usage of hazardous materials. Other non-hazardous spills are investigated and enforcement action led by the City of University Place Public Works and Code Enforcement departments. Hazardous waste or materials spills are referred to Fire Department and/or the State of Washington's Department of Ecology Hazardous Materials Response team.

1.3.2 Spill Notification

The City operates a notification hotline under its Public Works Department to receive notification of spills during business hours. After hours and on weekends, these calls are answered through the University Place Fire Dispatch. Sanitary sewer spills are immediately reported to Pierce County Department of Environmental Health by the City's Public Works staff.

1.3.3 Spill Response

Responses to sewer spills are conducted in by Pierce County's Sewer Department accordance to the County's Sanitary Sewer Overflow Response Plan. The County has on-call Public Works duty personnel 24 hours a day, 7 days a week that respond upon notification through the dispatcher. Implementation of the spill response plan will prevent entry of spills into the MS4 and contamination of receiving waters to the maximum extent practicable.

Responses to other spills are conducted by the Fire Department or qualified personnel in the Public Works Department, as appropriate to the situation.

1.4 Urban Runoff Monitoring

1.4.1 MS4 Outfall Monitoring

In accordance with the Permit Sections pertaining to Receiving Waters Monitoring and Reporting Program, the City of University Place developed a monitoring program to characterize pollutant discharges from MS4 outfalls in each watershed during wet and dry weather. The program includes a rationale and criteria for selection of outfalls to be monitored. The program also includes collection of samples for those pollutants causing or contributing to violations of water quality standards within the watershed. This monitoring program will be implemented within each watershed.

The monitoring design is based on a combination of both random and targeted sampling of MS4 outfalls that drain into receiving waters. Random sampling will be conducted to assess citywide conditions of MS4 outfall water quality. Targeted sampling will be conducted to assess the relative contribution of particular MS4 outfalls. The targeted approach focuses monitoring efforts on those MS4 outfalls that are most likely to contribute to receiving water problems. Both random and targeted sampling will be implemented during wet and dry weather periods.

1.4.2 Source Identification Monitoring

In accordance with the Permit, the City of University Place developed a monitoring program designed to identify sources of discharges of pollutants causing the priority water quality problems within each watershed. The monitoring program includes focused monitoring which moves upstream into each watershed as necessary to identify sources. The monitoring program uses source inventories and "Threat to Water Quality" analysis to guide monitoring efforts. This program will be implemented within each watershed.

The monitoring design is based on a combination of both specific activity sampling and targeted sampling of flows within MS4 conveyances. If adequate information already exists on pollutant sources within an MS4 drainage, sampling will focus on those sources or specific activities. However, if water quality problems are identified by other monitoring programs and insufficient information exists that indicate the specific sources of the problem; sampling will be conducted at these targeted locations.

1.4.3 Dry Weather Field Screening and Analytical Monitoring

This section incorporates and describes the City's Dry Weather Field Screening and Analytical Monitoring Program to be conducted in accordance with the requirements of Permit sections

At a minimum, the program includes the following:

- Selection of dry weather field screening and analytical monitoring stations

- A complete, updated MS4 map (including locations of the MS4, dry weather field screening and analytical monitoring sites, and watersheds)
- Dry weather field screening and analytical monitoring procedures

In accordance with the requirements of the Permit, the Dry weather monitoring program consists of (1) field observations; (2) field screening monitoring; and (3) analytical monitoring at selected stations. The program is designed to detect and eliminate illicit connections and illegal discharges to the MS4 using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations.

The Dry Weather Field Screening and Analytical Laboratory Monitoring program consists of annual and other routine inspections of the City's MS4 at established dry weather monitoring stations. Annual inspections consist of visual observations at each station, field screening for a specific set of analytes at stations which have flowing or ponded water. If any field screening or laboratory analysis result exceeds predetermined action levels follow-up testing will be conducted at that station within two business days. If follow-up sampling confirms the exceedance or if investigating personnel observes suspicious flow during the initial or follow-up site visit, City staff will conduct a source investigation.

1.4.4 Coastal Storm Drain Monitoring

The Coastal Storm Drain Monitoring (CSDM) Program is designed and implemented as part of the Receiving Waters Monitoring Program. Although this program is a component of the Receiving Water Monitoring Program, the results and frequent inspection of coastal storm drain outlets allow City staff frequent opportunity to inspect and observe a large portion of the City's MS4. The majority of the City's MS4 system drains directly to the Puget Sound. Therefore visiting and sampling all of the City's coastal storm drains on a periodic basis provides the City with frequent opportunity to detect illicit discharges. Any discharges suspected of containing harmful levels pollutants when observed during coastal monitoring will be investigated using the source investigation and follow-up procedures described in Section 1.5.

The CSDM program consists of monthly inspections of all the coastal storm drains outfalls which discharge into the Puget Sound. Visual observations are documented during each site visit. If water is flowing from the storm drain at the time of inspection the investigator will collect paired storm drain and receiving water samples for analysis.

If re-sampling exhibits continued exceedances of AB411 or Basin Plan standards in either the storm drain or receiving water, investigations of the sources of contamination commence within one business day. Investigations of the source of contamination occur immediately if evidence of abnormally high flows, sewage releases, restaurant discharges, or similar evidence is observed.

1.5 Follow-up and Enforcement

This section provides a description of the City's follow-up investigation and inspection procedures for dry weather monitoring results above the established regional action levels or other information which indicate potential for illicit discharges, illicit connections or other sources of non-storm water. This section also includes procedures for eliminating detected illicit discharges and connections, a description of enforcement mechanisms and how they are implemented.

1.5.1 Source Investigation

The City conducts source investigations when an illicit discharge is detected or suspected and the source of the illicit discharge is not readily identifiable. The purpose of source investigations is to locate the source of an illicit discharge so that all necessary measures to eliminate it can be implemented.

1.5.1.1 Initiation

Source investigations are initiated when appropriate information suggests a reasonable potential for the presence of an illicit discharge. Such instances may include the following:

- A public citizen or City staff reports the observation of a possible illicit discharge.
- Results from one of the Receiving Waters Monitoring programs indicate the possibility of an illicit discharge.
- Dry weather monitoring identifies pollutant levels that exceed the action level.
- Professional judgment by monitoring personnel determines that there is a reasonable potential for an illicit discharge to exist due to visual observations or measurements.

In accordance with the Permit, if dry weather field screening analytical results meet or exceed action criteria, the City will initiate source investigation within two business days of receipt of the monitoring results or provide a rationale for why the discharge does not pose a threat to water quality and does not need further investigation.

In some cases, just the existence of flows in a portion of the MS4 or the noticeable increase in dry weather flows at a certain location may trigger a source investigation. The City's monitoring personnel will use their judgment and experience in making such a decision based on site specific observations. Visually obvious illicit discharges (i.e. color, odor, or significant exceedances of field screening action levels) will be investigated immediately.

1.5.1.2 Source Investigation Procedures

The Dry Weather Monitoring personnel will typically conduct source investigations. In some cases City personnel may conduct a source investigation. When conducting a source investigation, the staff member should be equipped with the set of equipment listed in the Dry Weather Monitoring Program Field Manual that is included as part of the Dry Weather Monitoring Program.

Step 1 – Location of Observation: Source investigations begin at the location where the observations were made which initiated the investigation. If someone made the observations other than the person or persons conducting the investigation (the investigators) or if the observations were made more than several hours prior to the initiation of the source investigation, the source investigation should begin with a thorough visual inspection of the location. If flows exist, samples should be collected for field screening analysis as deemed appropriate by the investigators. If the illicit discharge is still occurring and it poses a substantial threat to human health or the environment actions should be taken immediately by the City to prevent or minimize the discharge from entering the receiving waters.

Step 2 – Source Tracking Determination: While at the observation location, the investigator should consult various resources such as MS4, drainage basin, and land use maps to determine the characteristics of the tributary areas and upstream sources. In some instances, the investigator may be able to identify probable sources of the illicit discharge based on the expected activities of upstream sites or the results of previous investigations. If this is the case, the investigator may choose to go directly to these potential sources to investigate if they are the source of the illicit discharge.

If visits to potential sources do not reveal the cause of the illicit discharge, if potential sources are too numerous, or if potential sources cannot be identified while at the observation location, the investigator should track the discharge upstream through the MS4.

If the discharge has ceased it may be impossible to track the source. In these circumstances, the

investigator should document that the discharge has ceased and cannot be tracked. A brief drive- or walk-through survey of the tributary area should be conducted and documented to verify that there is no obvious source. In some cases, although a discharge has ceased, the sources may still be identified by evidence of a discharge (wet pavement, discoloration, etc.) at the site or further upstream. For example, if a sediment laden discharge was reported, an upstream site may reveal signs of sediment discharge such as deposits along curbs or in inlets, signs of eroded slopes, or exposed soils lacking required BMPs.

Step 3 – Source Tracking: If source tracking is determined appropriate, the investigator should use MS4 maps, drainage basin maps and other resources to aid in the tracking. Any traceable characteristic of the illicit discharge (color, constituents, odor, quantity, etc.) should also be noted, as these will aid the investigator in making decisions during tracking and identifying sources. The City's strategy for source tracking is not necessarily to immediately find the discharge directly to its source, but instead, to follow the discharge upstream, thereby reducing the tributary area and potential sources. Once the set of possible sources has been reduced to a manageable set, the investigator may choose to end the source tracking and to continue the investigation by inspecting the various potential sources. However, if none of these can be identified as the source of the discharge, or if the investigator cannot identify any potential sources, tracking may be required to be conducted all the way up the drainage area.

In order to conduct source tracking, the investigator should work his or her way upstream along the main portion of the MS4, ruling out potential tributaries and narrowing the potential source area. When tributary pipes or inlets are encountered while working upstream along the MS4, the investigator should evaluate each for their potential to be the conveyor of the discharge. If the tributary pipe or inlet is dry and the discharge is still occurring along the mainline, it can automatically be eliminated as the source. If the pipe or inlet is the source of the flow in the main portion of the MS4, then the tracking should continue along that pipe or inlet. If the main portion of the MS4 and the tributary pipe or inlet both contain flow, more detailed observations must be made.

The investigator may be able to rule out one of the conveyances based on simple visual observations and the characteristics of the illicit discharge. Field screening sampling of the flows from the two conveyances may also be appropriate depending on the constituents in the illicit discharge.

Tracking along underground MS4 conveyances is more difficult because observations can only be made at the locations of manholes, outlets, and inlets. The MS4 map will prove the most useful for these investigations, although the underground portions of the MS4 in University Place is very limited. Tracking upstream along an underground conveyance usually consists of periodic observations at manholes and other access locations along the MS4. If the map indicates the confluence of two MS4 conveyances, or if an unmapped confluence is suspected, if possible, the investigator should make observations at the point of confluence. Otherwise, the investigator should make observations at the nearest access point upstream along each conveyance. When tracking along underground conveyances, the investigator should be aware that illicit connection or unmapped confluences may exist between observation points that could be the source of the discharge. The investigator should check surrounding inlets if such an instance is suspected.

If the source cannot be located and an illicit connection is suspected, the investigator should check the surrounding area and consult appropriate City personnel or City records for evidence of infrastructure construction or other activities that might have involved the installation of an illicit connection.

In the case of chronic illicit discharges for which a source cannot be identified, the City may choose to conduct dye testing, smoke testing, video monitoring, and/or underground visual inspections using closed circuit televising techniques.

Once the source of a discharge has been identified, if the discharge is still occurring, it must be

eliminated. Section 1.5.2 of this document describes the discharge elimination process.

Step 4 – Damage Assessment: After the discharge has been terminated, the investigator or Code Enforcement personnel should travel downstream from the discharge to assess the impacts that the discharge caused to downstream resources. Additional remediation may be required of the responsible party if downstream impacts are detected. Monitoring may also be necessary to ensure recovery of downstream areas. City staff may also want to consider the level of downstream impact caused by the illicit discharge, prior to deciding on which level of enforcement action is appropriate for the case.

Step 5 – Reporting and documentation: Thorough documentation of a source investigation will be conducted by the investigator. Documentation may include photographs, detailed notes on observations, discussions on decisions made, and other information relevant to the investigation. This information could be useful to future investigations, and possible future resolution of illicit discharges for which sources were unidentified. It is also important because this information supports any enforcement actions. Appendix 1-F is a Source Investigation Record Form which may aid in documenting the investigation. City staff will either use this form or an equivalent method when documenting a source investigation. All documentation and other information relevant to source investigations should be made available to Code Enforcement once the source is identified, if a citation or other enforcement action is to be considered.

1.5.2 Discharge Elimination

As required by the Permit, depending on the type of illicit discharge detected, the City will eliminate the discharge as soon as possible after detection by means of various procedures. As described in detail below, elimination measures will include an escalating series of enforcement actions for those illicit discharges that are not a serious threat to public health or the environment. Illicit discharges that pose a serious threat to public health or the environment will be eliminated immediately.

If the owner or manager of the property where the discharge originates is present at the time of investigation or inspection, the investigator will make their best effort to get the owner or manager to immediately terminate the discharge. The actions required of the responsible party to eliminate the illicit discharge will vary depending on type of illicit discharge. Clean up or remediation actions may also be required of the responsible party.

If the owner or manager is unwilling to cooperate, the investigator should immediately contact Code Enforcement personnel who will issue a citation to the discharger and an order to make the necessary alterations to terminate and clean up the discharge. Depending on the egregiousness of the discharge, the investigator may opt to have the Code Enforcement officer issue a citation even if the responsible party cooperates and terminates the discharge.

Regardless of whether or not a citation is issued, detection of an illicit discharge or illegal connection will be formally followed up with a Notice of Violation. A Notice of Violation is a form or letter that is used in the case of a violation of the City's Municipal Code. The City may also opt to issue a citation at the time the Notice of Violation is issued. By issuing these notices, the City requires the person responsible for the illicit discharge to conduct activities necessary to eliminate the illicit discharge at his or her own expense and prevent any further discharges from occurring in the future. The activities necessary for elimination and prevention will be described in the Notice. A deadline for correcting the infraction with the required activities will also be provided in the Notice.

A follow-up inspection may be conducted by City staff to ensure that abatement activities were successfully and adequately implemented. Follow-up investigations will be conducted by the City, if the City issued an order for a responsible party to cease and/or clean-up the discharge. In addition, if the source or activity causing the discharge is identified as possessing high potential for the occurrence of illicit discharges, periodic follow-up visits will be conducted to ensure that future discharges do not take place.

If the discharge poses a serious threat to public health or the environment, or the City determines that the individual responsible for the illicit discharge is incapable of performing such activities by the compliance date, or if the individual chooses not to perform the activities, the City may conduct the necessary activities and recover the resulting costs from the individual.

Illicit discharges that are the City's responsibility will be immediately eliminated by contacting the appropriate supervisor who oversees the activities that are causing the discharge. Action and communications will be documented through internal memorandums, emails, and work orders.

1.5.3 Enforce Ordinances

As required by the permit, the City will employ several enforcement mechanisms and penalties to ensure the compliance with its ordinances. The levels of enforcement and associated penalties are typically issued at the discretion of or the Code Enforcement officer with consideration of relevant circumstances regarding the violation.

1.6 Annual Reporting Requirements

The NPDES annual reports prepared by University Place for subsequent inclusion in the unified NPDES Annual Report will comply with the standard reporting requirements of the Permit. The City will be preparing a Dry Weather Field Screening and Analytical Monitoring Report that will address all the requirements pertaining to that program (as detailed in Appendix 1-E). The Illicit Discharge Detection and Elimination component includes additional reporting requirements. A summary of the reporting requirements for this component are provided below.

1.6.1 Dry Weather Monitoring and IDDE

- Correction of any inaccuracies in either the MS4 map or the Dry Weather Field Screening and Analytical Stations Map.
- Reporting of all dry weather field screening and analytical monitoring results. The data should be presented in tabular and graphical form. The reporting shall include station locations, all dry weather field screening and analytical monitoring results, identification of sites where results exceeded action levels, follow-up and elimination activities for potential illicit discharges and connections, the rationale for why follow-up investigations were not conducted (within two business days) at sites where field testing or analytical action levels were exceeded, any City or consultant program recommendations/changes resulting from the monitoring, and documentation that these recommendations/changes have been implemented. Dry weather field screening and analytical monitoring reporting shall comply with all monitoring and standard reporting requirements.
- Any dry weather field screening and analytical monitoring reports generated (by City or consultant), to be provided as an attachment to the annual report.
- A brief description of any other investigations and follow-up activities for illicit discharges and connections.
- The number and brief description of illicit discharges and connections identified.
- The number of illicit discharges and connections eliminated.

1.6.2 Spill Reporting

- Identification and description of all spills to the MS4 and response to the spills.
- A description of activities implemented to prevent sewage and other spills from entering the MS4.

- A description of the mechanism whereby notification of sewage spills from private laterals and septic systems is received.

1.6.3 Hotline Reporting

- Number of times the hotline was called, as compared to previous reporting periods, and a summary of the calls.
- A description of efforts to publicize and facilitate public reporting of illicit discharges.

1.6.4 Enforcement

- The number of violations and enforcement actions (including types) taken for illicit discharges and connections, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.

1.6.5 Notable Activities

- A description of notable activities conducted to manage illicit discharges and connections.

1.7 Illicit Discharge Detection and Elimination Component Effectiveness Assessment (Optional)

The City of University Place will assess the effectiveness of its Illicit Discharge Detection and Elimination Program. The effectiveness assessment will be based on the established regional effectiveness assessment guidelines.

1.8 Program Review and Modification

After each annual assessment of the Illicit Discharge and Elimination Component's effectiveness, any proposed or required modifications to the program will be placed in this section.

Appendix 1-A
Public Hotline Tracking Form and Mobilization Guide

City of University Place Hotline Tracking Form



4951 Grandview Dr W
University Place, WA 98467
PH: 253.460.6493 FAX: 253.460.6497

I. General Information Collection

Caller Name: _____ Date: _____

Caller Phone #: _____ Time: _____

Caller Address: _____ Received by: _____

_____ Referred from: _____

Nature of call: _____

Location: _____ Source: _____

Hazardous? Yes No Approximate Quantity: _____

II. Response (Check all that apply)

- | | | |
|---|-------------------------------|--------------------------|
| <input type="checkbox"/> No Response | Business Hours Phone | After Hours Phone |
| <input type="checkbox"/> Dispatch Public Works | 7:00 am-4:30 pm 253.460.6493- | Call out 253.208.7925 |
| <input type="checkbox"/> Dispatch Code Enforcement | 8- 5 pm 253.798.3133 | |
| <input type="checkbox"/> Dispatch Stormwater Enforce. | | |
| <input type="checkbox"/> Dispatch Eng. Inspection | | |
| <input type="checkbox"/> Dispatch Fire Department | | |
| <input type="checkbox"/> Contact CIP Programs | | |
| <input type="checkbox"/> Contact Facility Manager | | |
| <input type="checkbox"/> Contact Dept./Activity Mgr. | | |
| <input type="checkbox"/> Other: _____ | | |

III. Resolution

Describe:

Appendix 1-D
Dry Weather Monitoring Program

Dry Weather Field Screening and Analytical Monitoring Program



4951 Grandview Dr W
University Place, WA 98467
PH: 253.460.6493 FAX: 253.460.6497

1.0 Introduction

As required under our NPDES (Permit), the City of University Place (City) has reviewed and updated its existing Dry Weather Field Screening and Analytical Monitoring Program (Dry Weather Program). This program is a requirement and critical element of the Illicit Discharge Detection and Elimination component of the City's Stormwater Management Program.

In general the Dry Weather Program is required to consist of field observations, field screening and analytical monitoring at selected stations. The purpose of the program is to detect and eliminate illicit connections and illegal discharges to the MS4 using frequent, geographically widespread dry weather discharge monitoring and follow-up investigations.

- Select Dry Weather Field Screening and Analytical Monitoring Stations
- Complete MS4 Map
- Develop Dry Weather Field Screening and Analytical Monitoring Procedures
- Conduct Dry Weather Field Screening and Analytical Monitoring

This document describes the Dry Weather Program that the City of University Place has developed.

2.0 Dry Weather Monitoring Stations

As required, the City has selected dry weather analytical monitoring stations and alternate monitoring stations within its jurisdiction. The stations were selected based on historical dry weather sampling sites as well as attempts to cover key cross-drainage areas within sub-drainage basins. City staff also considered the following criteria and identified the most appropriate and effective locations for monitoring stations and alternative stations:

Drainage areas: The City delineated the drainage basins within the City of University Place based on the location of the City's storm drain system (including surface drainage, underground drainage, inlets, and outlets) and surface elevation. The City's natural drainage consists of several small drainage basins which discharge directly to the Puget Sound or Chambers Creek. In order to monitor the greatest possible area, monitoring stations were roughly located at the farthest downstream accessible point within each drainage basin and alternative stations were located farther upstream.

Land use: Stations were selected to represent the varying land uses throughout the City. The City of University Place primarily consists of residential and commercial land uses. These land uses have the potential to impact water quality, therefore monitoring stations were located downstream of each of these land uses.

Accessibility and Safety: The safety of monitoring personnel is a critical concern. All of the stations are considered to be reasonably safe for monitoring activities; however, if monitoring personnel determine any station to be unsafe or inaccessible upon inspection, an alternate station will be monitored. Certain sites may need to be monitored or sampled at low tide due to limited accessibility or for safety.

In general, the City has determined that the existing monitoring stations provide adequate coverage of the entire MS4 system and are located at accessible outfalls downstream of sources that could pose a high threat to water quality. In addition, alternate stations have been identified and will be sampled in place of selected stations that do not have flow or are unsafe to access. Alternate stations are generally

located further upstream of the primary monitoring stations. The selected stations provide equivalent coverage as described in section II.B.a.(1) of the monitoring program.

The selected monitoring stations will be field verified when dry weather monitoring is conducted each year and, if necessary, monitoring stations may be relocated. Any monitoring stations identified to exceed dry weather monitoring criteria for any constituents will continue to be monitored in subsequent years.

3.0 Storm Drain System Mapping

The City is required to develop and/or update a labeled map of its entire MS4 and corresponding drainage areas. As defined by the Permit, an MS4 consists of all conveyances within the City, including roads with drainage systems, streets, catch basins, curbs, gutters, ditches, natural drainage features, modified natural channels, man-made channels, and storm drains that are owned or operated by the City. Currently the City has up-to-date GIS data for the MS4 and corresponding drainage areas. Additionally, the City has created maps showing public roads, streets, drainage basins, channels, and storm drains.

Due to the transfer of data from hardcopy drawings, maps or other documents to GIS, its complexity and the many elements that make up the City's MS4, minor inaccuracies or gaps are anticipated to exist. In addition, the maps will be constantly changing as new improvements or developments are constructed. In order to maintain a complete and accurate map, the different mapped elements will be verified during monitoring activities, as well as other activities conducted by the City such as maintenance. The MS4 and Dry Weather Station Map in Figure 1 includes the most up to date and available information.

4.0 Dry Weather Analytical Monitoring Procedures

This section describes the City's procedures for conducting dry weather field screening and analytical monitoring and generally includes visual observations, field screening, and laboratory analysis. The following procedures meet the guidelines and criteria outlined in section II.B.3.c of the Monitoring Program. A separate field manual has been developed to provide more detailed guidance to the personnel conducting the monitoring and is included as Attachment 1.

4.1 Field Datasheet and Data Sharing Template

To simplify the submission, merging and analysis of dry weather data, the City developed a standardized field datasheet and a computer-based data sharing spreadsheet template which is used by all staff. The standardized field datasheet and data sharing spreadsheet are updated, as needed, on a yearly basis prior to the start of the dry weather monitoring period (May 1st).

The field datasheet allows for the documentation of a general site description, visual observations of atmospheric conditions and runoff characteristics, field screening analysis results, and comments. All data required to be collected is included in the datasheet. This field datasheet is used by all staff to document visual observations and field screening analysis. During annual field monitoring, the datasheet will be completed by City monitoring personnel as thoroughly as possible for each station. If a monitoring station is dry, this will be noted on the datasheet and general site and atmospheric observations will be documented.

City monitoring personnel will use the data sharing spreadsheet to keep track of dry weather visual observations, field screening results and laboratory analytical results.

4.2 Personnel Training

The City will adequately train field personnel to achieve consistent, accurate results from dry weather monitoring or will rely on a qualified environmental contractor. Field instruments should be calibrated

daily and the viability (including expiration dates) of test kit reagents should be checked regularly. Periodically, the City may submit sample splits to the laboratory for analysis of the accuracy of their field testing methods. Duplicate samples may be analyzed in the field to assess precision. Establishing a record keeping system to track specific field activities such as samples collected and submitted, calibration records, and reagent expiration dates will assist the City in maintaining a high level of quality control.

4.3 Sampling Frequency

Dry weather monitoring will be conducted at each identified station at least once between May 1st and September 30th of each year or as often as the City determines is necessary to comply with the requirements of the Permit.

Dry weather monitoring will not be conducted within 24 hours of the end of any rain event or if local hydrologic conditions indicate that storm flow is still occurring at a monitoring station after a rain event.

4.4 Qualitative Field Observations

Qualitative field observations must be made during each site visit whether or not ponded or flowing water is observed. Field observations consist of documentation of a general site description, atmospheric conditions, runoff characteristics and flow estimation. The site description will include information such as the location, date, time, sampler and land use characteristics. Atmospheric conditions which will be documented in the field include weather, tide, time since last rain, and rainfall amount. Runoff observations will provide an assessment of variables such as odor, water clarity, the presence of floatables, visible deposits/stains, and biological character. Evidence of present or past illicit connections and illegal discharges to the MS4 can often be ascertained by careful field observations.

Photographing of the site can document the site conditions for the record and future reference and should be conducted when deemed appropriate by the monitoring personnel.

Qualitative field observations will be recorded on the most current version of the City's standard Dry Weather Monitoring Field Datasheet. The datasheet will serve as a record of the field visit and must be completed for every site visit regardless of whether samples are collected. If one of the primary monitoring stations is dry, personnel conducting the monitoring will make and record all applicable observations and select another station from the list of alternate stations for monitoring.

Informal field observation of the monitoring stations may also be conducted and could be as often as every week. Informal field observations typically consist of a brief visual inspection whereas a formal field observation consists of completely documenting the observations on a monitoring form.

4.5 Field Screening Analysis

If flowing or ponded runoff is observed during formal field observations, and the flow or ponded runoff is sufficient to obtain a sample, a grab sample shall be collected for the purposes of conducting field screening analysis.

When a grab sample is taken for the purpose of field screening analysis, the sample will be analyzed onsite for the following constituents:

- a) Turbidity
- b) pH
- c) Temperature

If flowing or ponded runoff is observed during an *informal* field observation, the personnel conducting the

monitoring shall use his or her discretion as to whether or not to take a grab sample for laboratory testing. Ponded runoff should not typically be sampled if it is stagnant and shows no recent signs of a source or contribution. Factors that should be considered in making a determination about collecting a sample should include the present conditions and characteristics of the site and runoff, the occurrence of illicit connections or illegal discharges at that location in the past, the conditions and uses in the tributary area, and other relevant factors. If a grab sample is taken, the informal field observation is then considered a formal field observation and a monitoring form must be completed.

Additional constituents may also be analyzed to aid in the field screening effort. All results of the field screening analysis will be recorded on the monitoring form.

4.6 Analytical Laboratory Analysis

If warranted, grab samples will be collected for analytical laboratory analysis at monitoring stations where ponded or flowing water is observed. The grab samples will be collected and submitted to a qualified laboratory for analysis. Samples will be analyzed for the following constituents:

- a) Total hardness
- b) Oil and Grease
- c) Diazinon and Chlorpyrifos
- d) Cadmium (Dissolved)
- e) Lead (Dissolved)
- f) Zinc (Dissolved)
- g) Copper (Dissolved)
- h) Enterococcus bacteria
- i) Total Coliform bacteria
- j) Fecal Coliform bacteria

The personnel conducting the monitoring will use his or her discretion as to whether or not to take a grab sample at a particular site. Factors that should be considered in making a determination about collecting a sample should include the results of the field screening analysis, the present conditions and characteristics of the site and runoff, the historical occurrence of illicit connections or illegal discharges at that location, the conditions and uses in the tributary area, and other relevant factors. Unless a specific contaminant is expected, grab samples for analytical laboratory testing should be preceded by a field screening analysis.

A grab sample that is taken for the purpose of analytical laboratory analysis will be collected, stored, and otherwise handled in accordance with standard analytical procedures as described in the attached field manual and provided by the laboratory of use. A summary of laboratory sampling and analytical requirements for a range of water quality parameters is provided in Table 1.

Field personnel must also follow strict sampling and chain-of-custody protocols when conducting dry weather analytical monitoring. Chain-of-custody records will be maintained for all samples sent to the laboratory. Proper chain-of-custody records provide critical documentation in enforcement cases involving illegal discharges. Once results of these analyses are available they may be recorded on the monitoring form for that site or attached directly to the form.

All dry weather data, visual observations, field screening results and laboratory analytical results will be entered into a data sharing spreadsheet.

4.7 Investigation Action Criteria

As required by the Monitoring Program, exceedance action levels for field screened and laboratory

analyzed constituents were developed and continue to be evaluated and updated as needed by the appointed staff. An action level is a specific pollutant concentration that will trigger a source identification study when it is exceeded during dry weather monitoring.

Numeric Action Levels: The use of numeric action levels is the primary approach for interpreting pH, orthophosphate, nitrate, ammonia, MBAS, oil and grease, chlorpyrifos, and dissolved metal data results. Action levels for these constituents were determined based on best available data and staff experience and expertise. As new data becomes available the Workgroup will evaluate each of the constituent action levels and update as necessary.

Action levels for dissolved metals (Cd, Cu, Pb, and Zn) will vary depending on the total hardness of the water and based on Washington State Department of Ecology. Total hardness will be analyzed by the laboratory in order to calculate the action level for dissolved metals.

Statistical Confidence Interval: The identification of highly elevated concentrations using confidence intervals is the primary approach for interpreting total and fecal coliform bacteria, and enterococcus results.

As the City conducts the dry weather program a substantial amount of water quality data will be collected. This data may allow the determination of regional, jurisdictional-specific, or conveyance-specific background levels for subsequent dry weather monitoring seasons for many or all of the parameters. The various action levels and the usefulness of identifying outlier values with confidence intervals will be reevaluated after the each dry weather season.

Best Professional Judgment: The use of best professional judgment is the primary approach for interpreting turbidity, temperature, conductivity, and visual observations. As required by the Permit, obvious illicit discharges will be investigated immediately. These discharges could include abnormal color, clarity, odor, or flow volume.

Best professional judgment is also the secondary approach for interpreting the results of all other field and laboratory analyses. If results exceed certain action levels or are statistical outliers this may be due to natural or background factors. For example, conditions like highly elevated summertime water temperatures in exposed concrete conveyances, high ambient pH (>9.0) levels due to photosynthesis and CO₂ depletion, or elevated NO₃ or electrical conductivity readings in channels with high groundwater input are unrelated to illicit connections and illegal discharges. Field personnel will use best professional judgment to evaluate cases like this to determine whether or not source investigation is necessary.

If the results of field screening exceed the action levels or guidelines presented in Table 2, water quality personnel will initially confirm the results by resampling. A second water sample will be collected and analyzed between 4 and 24 hours after the initial sample was collected. Field personnel may opt to test only for the constituent that was in exceedance or screen for additional pollutants. Testing the sample for additional constituents would be warranted if field personnel think that the additional information would assist with the possible source investigation. In accordance with the Permit, if the resample confirms that the site is in exceedance of any of the action levels, within two business days of receiving the results, City personnel will either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation.

If any laboratory analytical result exceeds action levels, field personnel will initiate follow-up investigation within two business days. Depending on the analyte in exceedance and initial inspection of the site, field personnel may opt to initiate one of the several investigative actions:

- Confirm the initial result by collecting and sending a second sample to the laboratory for analysis.

Field personnel may also resample for other constituents to get a better understanding of the composition of the discharge.

- Commence source investigation as described in the Illicit Discharge Detection and Elimination Component (Chapter 1) of this document.
- If field personnel have reasons to believe that a source investigation is not warranted, field personnel will document the rationale for why the discharge does not pose a threat to water quality.

Monitoring personnel shall use their discretion to determine if a source investigation is necessary. The decision should be based on site-specific characteristics. Any decision not to initiate an investigation when an action level was exceeded should be thoroughly documented on the monitoring form.

Other relevant factors that should be considered when deciding to initiate a source investigation include the type of MS4 conveyance (i.e. storm drain, open concrete channel, natural channel, etc.), the status of downstream receiving waters, and weather conditions when the samples/measurements were collected. Qualitative observations (dead animals, strong odors, the presence of an oily sheen on the water surface, excessive floatables or trash, etc.) may indicate that serious water quality problems are present at a location even when field and analytical sampling results are below action levels or not immediately available. The City will maintain enough flexibility in its dry weather program to enable water quality personnel to respond decisively to water quality problems as indicated by all of the available qualitative and quantitative information.

Any dry weather monitoring stations identified to exceed dry weather monitoring action levels for any constituents will continue to be monitored in subsequent years.

4.8 Source Investigation and Elimination of Illicit Discharges and Connections

Procedures for source identification follow up investigations and elimination of detected illicit discharges and connections will be conducted as required by the Permit and Section 1.5 of this document.

5.0 Conduct Dry Weather Field Screening and Analytical Monitoring

Implementation of dry weather field screening and analytical monitoring under the requirements of this Permit are in effect. Dry weather monitoring will be conducted in accordance with the City's storm water conveyance system map and dry weather analytical and field screening monitoring procedures as described in this document. If monitoring indicates an illicit connection or illegal discharge, follow-up investigation and elimination activities will be conducted as required by the Permit and the Illicit Discharge Detection and Elimination Component (Section 1) of this document.

6.0 Quality Control and Annual Report

Quality Control

Upon completion of dry weather field work and receipt of laboratory results the data will be entered into a standardized spreadsheet. All data will be entered by the same person and peer reviewed by a different staff member. Quality control peer review will consist of scanning the data for obvious outliers and randomly checking at least 10 percent of the data for consistency with the field datasheets and laboratory data report. If significant errors are found a more detailed data review may be conducted. The quality control peer review will be conducted prior to any data analysis and prior to submission of the data to the Regional Monitoring Workgroup.

Annual Dry Weather Monitoring Report

As required by the Permit, the City will annually report all dry weather field screening and analytical

monitoring results in the City's NPDES Phase II update. The data will be presented in tabular and graphical form. NPDES report will comply with the standard reporting requirements outlined in Section 1.6 of this document or at a minimum shall include the following related to the Dry Weather Monitoring Program:

- Correction of any inaccuracies in either the MS4 map or the Dry Weather Field Screening and Analytical Stations Map.
- Reporting of all dry weather field screening and analytical monitoring results. The data should be presented in tabular and graphical form. The reporting shall include station locations, all dry weather field screening and analytical monitoring results, identification of sites where results exceeded action levels, follow-up and elimination activities for potential illicit discharges and connections, the rationale for why follow-up investigations were not conducted (within two business days) at sites where field testing or analytical action levels were exceeded, any City or consultant program recommendations/changes resulting from the monitoring, and documentation that these recommendations/changes have been implemented. Dry weather field screening and analytical monitoring reporting shall comply with all monitoring and standard reporting requirements.
- Any dry weather field screening and analytical monitoring reports generated (by City or consultant), to be provided as an attachment to the annual report.
- A brief description of any other investigations and follow-up activities for illicit discharges and connections.
- The number and brief description of illicit discharges and connections identified.
- The number of illicit discharges and connections eliminated.
- The number of violations and enforcement actions (including types) taken for illicit discharges and connections, including information on any necessary follow-up actions taken. The discussion should exhibit that compliance has been achieved, or describe actions that are being taken to achieve compliance.
- A description of notable activities conducted to manage illicit discharges and connections.

For ease of reading, the data and any follow-up sampling and/or investigation will be presented in the report by site. If relevant, historical data will also be analyzed and presented in conjunction with the current year's data so that any temporal

APPENDIX E

**UNIVERSITY PLACE
PUBLIC WORKS MAINTENANCE FACILITY
STORMWATER POLLUTION PREVENTION PLAN
(SWPPP)**

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

FACILITY NAME **City of University Place Public Works Maintenance Facility**

FACILITY LOCATION **4951 Grandview Dr W, University Place WA 98467**

MAILING ADDRESS **3751 BridgeCity Way W, Suite B1,
University Place WA 98467**

CONTACT NAME **Kevin Schmidt**

CONTACT PHONE **253-460-6493**

MAIN SITE ACTIVITIES **Maintenance facility Parks & Public Works
Vactor Decant**

**KEEP THIS SWPPP
ON SITE AT ALL
TIMES**

**THIS SWPPP IS TO BE MADE
AVAILABLE TO THE PUBLIC UPON
REQUEST**

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1 Introduction

This document presents the Stormwater Pollution Prevention Plan (SWPPP) for the City of University Place

This SWPPP was completed by the facility using a template provided by the City of University Place. The template was provided by the City of University Place. The SWPPP template is targeted to comply with the City of University Place's Phase 2 Municipal NPDES Permit

1.1 SWPPP Objective

The objective of this SWPPP, "to implement measures to prevent and control the contamination of discharges of stormwater to surface or ground water."

1.2 Recordkeeping

All records related to this SWPPP shall be maintained by the City of University Place for at least **five years**. All records related to this SWPPP shall be kept with the SWPPP, preferably in the same binder. Records to be retained include the SWPPP, prior versions of the SWPPP, related correspondence with the City or Ecology, and O&M inspections.

1.3 SWPPP Availability

All records related to this SWPPP shall be made available to the public at reasonable times during business hours. Members of the public who request SWPPP records in person shall be allowed to view documents on site. SWPPP records shall not be removed from the site.

All records related to the SWPPP shall be made available to the City of University Place, Washington State Department of Ecology or the Director of University Place Public Utilities (or the Director's designee, who may be an employee of SPU or another City department) upon request.

Please notify the City of University Place Stormwater Program Manager at (253) 460-6493 of any request for SWPPP records.

1.4 SWPPP Updates

Keep the SWPPP up to date. The SWPPP should be updated whenever changes occur that have the potential to affect how stormwater is managed on the site. Updates to the SWPPP may be handwritten. Examples of changes that may require an update to the SWPPP are:

- A change in facility operations (leased area increases or decreases, new operations, new materials, paving, etc.)
- New BMPs are implemented.
- Change in O&M procedures.
- Modification of the stormwater system.
- Pollution prevention team changes.
- Permit requirements change.

1.5 Cooperation with City of University Place Municipal NPDES Permit

The City of University Place is required by the Washington State Department of Ecology to be covered by the Phase I Municipal NPDES permit. The Phase I permit requires that all City lands be covered by SWPPPs, which resulted in this SWPPP template.

The NPDES permit also requires the City to develop an educational program, map stormwater conveyances, develop a program to detect and eliminate illicit discharges, and develop a City-wide Operations and Maintenance Plan. City staff may need your cooperation to comply with these and other requirements. Cooperation may mean reviewing educational materials or attending an educational meeting, allowing access to your site, or providing information about stormwater management. **Please cooperate with City staff in their efforts to prevent stormwater pollution and comply with the Phase I NPDES permit.**

1.7 Potential Pollutant Sources

This section identifies and describes the activities conducted on site that have the potential to contaminate stormwater. Please complete the following sections:

1.7.1 Waste Management

Waste management activities have the potential to contaminate stormwater through improper storage of wastes, or spills, leaks or drips from containers.

- No waste management activities are performed on site.
- Wastes are managed as follows:
 - Dumpster, located: east side of facility
 - Trash compactor, located: _____
 - Recycling Containers, located: _____
 - Used Oil Container, located: _____
 - Other, describe: Vactor/sweeper waste stored in decant area

1.7.2 Cleaning and Washing

If not conducted properly, cleaning and washing of vehicles, equipment, buildings, tools, or paved surfaces, can contaminate stormwater by washing contaminants such as oil and grease, soap, dirt or food scraps into the storm sewer or onto areas exposed to rain.

- No cleaning or washing activities are performed on site.
- Cleaning and washing is performed as follows:
 - Location of cleaning or washing activity: Vactor Decant station
 - Type(s) of materials cleaned or washed:

- Vehicles, describe: pickups, flatbeds, dump trucks
- Equipment, describe: sweepers, backhoes, skidsteer, vactor
- Buildings
- Paved areas
- Other: _____

Chemical(s) used in washing: Soaps or detergents: Abrasives:

- Soaps or detergents: Simple Green, car wash soap
- Abrasives: _____
- Acids: _____
- Solvents: _____
- Other: _____

1.7.3 Transfer of Liquids or Solids

Loading, unloading, or other transfer of liquid or solid materials has the potential to contaminate stormwater through spills, leaks, or drips of the transferred material or from the equipment performing the transfer.

No transfer of liquids or solids is performed on site.

Transfer of liquids is performed as follows:

Location(s) where transfer occurs:

Direct connection to aboveground storage tank

Direct connection to underground storage tank

Railroad yard

Loading dock

Permanent fueling station

Open area

Indoors

Other:

Type(s) of liquids transferred:

Fuels, oils, or greases: unleaded, diesel, lubricants

Paints: _____

Acids: _____

Pesticides, Herbicides, Fertilizers: _____

Cleaning products: soaps, detergents, solvents, etc.: _____

Other: Deicer station- salt brine

Type of transfer: _____

Bulk liquid

Mobile fueling

Liquid filled container: Small Containers, Drums, Totes

Bunker, Other, describe: _____

Transfer of solids is performed as follows:

Location(s) where transfer occurs:

- Railroad yard
- Loading dock
- Open area
- Indoors
- Other:

Type(s) of solids transferred:

- Shipping Containers:
- Equipment:
- Packaged goods:
- Bulk materials (aggregate, debris, etc.):
- Other:

Equipment involved in transfer:

- Top pick
- Forklift
- Crane
- Dump truck (end, side, bottom, etc.):
- Other:

1.7.4 Production and Application Activities

Outdoor production or application activities have the potential to contaminate stormwater from debris left behind during production, spills, leaks, or drips from products or equipment used during production, or leaching or erosion from materials involved. Application activities involve the application of product to an object such as painting, coating, spraying, or other treatment.

No outdoor production or application activities are performed on site.

Outdoor production and/or application is performed as follows:

Location(s) of production and/or application activities: _____

Description of production and/or application activities: _____

1.7.5 Storage and Stockpiling

Vehicle and Equipment Storage and Parking

Vehicles and heavy equipment contain hazardous liquids (fuel, hydraulic oils, antifreeze, etc.) or have other parts (tires, brake pads) that can contaminate stormwater. If vehicles or heavy equipment are stored, or parked outdoors on site, please complete the following:

- No vehicle or equipment storage or parking is performed on site.
- Vehicle and/or equipment storage and/or parking application is performed as follows:

Type and Number of vehicles and equipment used, parked, or stored on site

- Passenger vehicles: _____
- Utility trucks: 13
- Dump truck: 3
- Tractor trailer: _____
- Crane: _____
- Forklift: _____
- Earthmoving equipment (loader, dozer, scraper, excavator, backhoe, etc.): 3
- Other: Sideboom mower; snorkel lift

Location of parking or storage area List potential stormwater contaminants used in the operation or maintenance of heavy equipment on site:

- Petroleum products (fuel, oils, greases) – source of oil & grease and metals
- Acids – source of low pH
- Batteries – source of low pH, and heavy metals (lead, nickel, cadmium, etc.)
- Antifreeze
- Solvents
- Soaps or detergents – source of phosphorus
- Brake pads – source of suspended solids, metals (copper)
- Rubber tires – source of suspended solids, metals (zinc)
- Other: _____

Material Storage

Materials stored outside have the potential to contaminate stormwater through erosion of granular materials, spills or leaks from liquids or equipment containing liquids, dissolution of soluble materials. If materials are stored outside on site, please complete the following section:

No material storage is performed on site.

Material storage is performed as follows:

Location(s) of where materials are stored:

Surface of Storage Area: Paved, Compacted Gravel, Soil

Type(s) of Liquids Stored:

Fuels, oils, or greases

Paints

Acids

Pesticides, Herbicides, Fertilizers

Cleaning products: Soaps, detergents, solvents, etc.

Other: salt brine

Liquids are stored in Small Containers, Drums, Totes, Aboveground Tanks,

Other, describe: _____

Type(s) of Solid Materials Stored:

Aggregates (sand, gravel, rock, broken concrete, broken asphalt, etc.)

Soil and compost

Wood Products (untreated lumber, logs, wood chips, wood waste, etc.)

Scrap metals

Building Materials (masonry products, metal framing, rebar, etc.)

Treated lumber

Other: _____

Type(s) of Equipment Stored:

Equipment with galvanized metal components

Equipment with fluid filled reservoirs

Equipment with greased joints or other moving parts

Other: _____

1.7.6 Dust Control and Soil and Sediment Control

Stormwater can be contaminated from dusts deposited on surfaces exposed to rain, or from erosion of exposed soils.

No dust generating activities are performed on site and no exposed soils are present.

Exposed soils are present on site as follows:

Location of exposed soils: Dirt spoils pile., Asphalt spoils pile, gravel pile

Reason soils remain exposed: space containment

Dust generating activities are performed on site as follows:

Location of dust-generating activity:

Type(s) of dust-generating activity:

Storage of materials (aggregate, sawdust, ash, etc.), describe: _____

Manufacturing process, describe: _____

Vehicle traffic

Soil disturbance/grading

Other: _____

1.7.7 Other Pollution-Generating Activities

This template does not capture all potential sources of stormwater pollution. Evaluate your site for any additional pollution generating activities not listed above and describe here.

No other pollution-generating activities are performed on site.

Other pollution-generating activities are performed as follows: _____

1.8 Stormwater Drainage System

The stormwater drainage system is shown on Figure 1 and consists of the following components:

Check all that apply

- Catch basins
- Floor drains
- Deck drains
- Roof drains
- Trench drains
- Culverts
- Subsurface Pipes
- Ditches
- French Drains
- Pump station
- Stormwater Treatment:
 - Oil/water separator
 - Catch basin inserts
 - Bioswale
 - Pond
 - Filtration System
 - Other: _____

Stormwater from the site discharges to: *Check all that apply*

- East Waterway
- Duwamish River/West Waterway
- Elliott Bay
- Shilshole Bay
- Lake Washington Ship Canal
- City of University Place Storm Sewer
- Sanitary Sewer
- Ground

2 Illicit Non-Stormwater Discharges

The City of University Place has adopted a policy prohibiting illicit connections, illicit discharges and illegal dumping. This site is required to comply with these prohibitions as follows.

2.1.1 Illicit Connections

Illicit connections are defined as “any man-made conveyance that is connected to a municipal separate storm sewer without a permit, excluding roof drains and other similar type connections. Examples include sanitary sewer connections, floor drains, channels, pipelines, conduits, inlets, or outlets that are connected directly to the municipal separate storm sewer system.”

The City of University Place’s BMP 1 – Eliminate Illicit Connections to Storm Drains, included in Appendix A, provides additional guidance on procedures for identifying and eliminating illicit connections.

If an illicit connection is detected, the Pollution Prevention Team shall take appropriate steps to redirect the connection to an appropriate discharge location.

2.1.2 Illicit Discharges

Illicit discharges are “any discharge to a municipal separate storm sewer that is not composed entirely of storm water, except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities.” Specifically, the City has fully prohibited the following discharges:

- i) Solid waste;
- ii) Human and animal waste;
- iii) Antifreeze, oil, gasoline, grease and all other automotive and petroleum products;
- iv) Flammable or explosive materials;
- v) Metals in excess of naturally occurring amounts, whether in liquid or solid form;
- vi) Chemicals not normally found in uncontaminated water;
- vii) Solvents and degreasers;
- viii) Painting products;
- ix) Drain cleaners;
- x) Commercial and household cleaning materials;
- xi) Pesticides, Herbicides and Fertilizers;
- xii) Acids and Alkalis;
- xiii) Ink;
- xiv) Steam-cleaning waste, laundry waste, soap, detergent; ammonia;
- xv) Chlorine
- xvi) Chlorinated swimming pool or hot tub water;
- xvii) Domestic or sanitary sewage;
- xviii) Animal carcasses;
- xix) Food and food waste;
- xx) Yard waste, dirt, sand and gravel.

In addition, the following discharges are conditionally prohibited, unless the stated conditions are met:

- i) Discharges from potable water sources, including water line flushing, hyper chlorinated water line flushing, fire hydrant system flushing, and pipeline hydrostatic test water, unless planned discharges are de-chlorinated to a concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the MS4.
- ii) Discharges from lawn watering and other irrigation runoff, unless minimized to the maximum extent practicable.
- iii) Dechlorinated swimming pool discharges, unless the discharges are dechlorinated to a concentration of 0.1 ppm or less, pH-adjusted and re-oxygenated if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments in the MS4. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.
- iv) Street and sidewalk wash water, water used to control dust, and routine external building wash down, unless they do not contain detergents and are minimized to the maximum extent practicable. At active construction sites, street sweeping shall be performed prior to washing the street.

If a prohibited discharge is observed, the Pollution Prevention Team shall take immediate action to stop the discharge. Depending on the nature of the illicit discharge, it may be necessary to reCity it as a spill, according to the Spill Plan (Appendix C).

2.1.3 *Illegal Dumping*

According to City policy, “it is prohibited to spill, dump, release, throw, deposit or place solid waste, litter, pet waste, yard waste, or hazardous materials on City property, without permission from the City.”

If illegal dumping is observed, the Pollution Prevention Team shall take immediate action to identify the responsible party and cleanup the dumped material.

3 Best Management Practices (BMPs)

Best Management Practices (BMPs) for managing stormwater quality are “a series of actions that are designed to prevent and reduce stormwater pollution” (City of University Place Source Control Technical Requirements Manual, 2008). **All City of University Place tenants must also implement BMPs required by the City of University Place (SMC 22.802.013).**

This section of the SWPPP identifies the BMPs required for the site. It also presents a plan and schedule for implementing the BMPs.

3.1.1 Pollution Prevention Team

The Pollution Prevention Team is responsible for implementing BMPs to control stormwater pollution at the site. Team members are responsible for inspections, operation and maintenance, operational source controls, employee and tenant training, emergency response and other activities necessary to implement the SWPPP.

The Pollution Prevention Team consists of:

Supervisor: Kevin Schmidt is responsible for :

- Supervising SWPPP Implementation,
- Planning Structural BMPs,
- Updating the SWPPP as necessary,
- Coordinating activities with City of University Place Environmental, Maintenance and Compliance staff, and
- Recordkeeping.

Maintenance: Vector Crew Lead is responsible for:

- Inspecting stormwater system and BMPs,
- Coordinating maintenance with outside contractor (if used), and
- Maintaining stormwater system and BMPs as necessary.

All Employees are responsible for:

- Good housekeeping,
- Promptly reCitying spills, drips and leaks,
- Appropriately storing materials and wastes, and
- Implementing other operational BMPs

3.1.2 Good Housekeeping

Good Housekeeping involves maintaining a clean and organized site to prevent contamination of stormwater from exposure to spilled liquids, dust, trash, or debris.

The following good housekeeping source controls from Ecology's 2005 Stormwater Management Manual for Western Washington (SWMMWW) will be implemented on the site:

- Promptly contain and clean up solid and liquid pollutant leaks and spills including oils, solvents, fuels, and dust from manufacturing operations on any exposed soil, vegetation, or paved area.
- Sweep paved material handling and storage areas regularly as needed, for the collection and disposal of dust and debris that could contaminate stormwater. Do not hose down pollutants from any area to the ground, storm drain, conveyance ditch, or receiving water unless necessary for dust control purposes to meet air quality regulations and unless the pollutants are conveyed to a treatment system approved by the local jurisdiction.
- Clean oils, debris, sludge, etc. from all BMP systems regularly, including catch basins, settling/detention basins, oil/water separators, boomed areas, and conveyance systems, to prevent the contamination of stormwater. Refer to Appendix IV-D R.3 for references [of the 2005 Stormwater Management Manual for Western Washington] to assist in determining if a waste must be handled as hazardous waste.
- Promptly repair or replace all substantially cracked or otherwise damaged paved secondary containment, high-intensity parking and any other drainage areas, which are subjected to pollutant material leaks or spills.
- Promptly repair or replace all leaking connections, pipes, hoses, valves, etc. which can contaminate stormwater.

Stormwater Management Manual for Western Washington, Ecology, 2005. Vol IV page 2-2.

3.1.3 Preventive Maintenance

Preventive Maintenance involves anticipating potential problems and performing regular maintenance to avoid contamination of stormwater. The following Preventive maintenance source controls from Ecology's 2005 SWMMWW will be implemented in the materials storage areas of the site:

- Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water, or to storm drains which discharge to surface water, or to the ground.
- Conduct all oily parts cleaning, steam cleaning, or pressure washing of equipment or containers inside a building, or on an impervious contained area, such as a concrete pad. Direct contaminated stormwater from such an area to a sanitary sewer where allowed by local sewer authority, or to other approved treatment.
- Use drip pans to collect leaks and spills from industrial/ commercial equipment such as cranes at ship/boat building and repair facilities, log stackers, industrial parts, trucks and other vehicles, which are stored outside.
- At industrial and commercial facilities, drain oil and fuel filters before disposal. Discard empty oil and fuel filters, oily rags and other oily solid waste into appropriately closed and properly labeled containers, and in compliance with the Uniform Fire Code.

- For the storage of liquids use containers, such as steel and plastic drums, that are rigid and durable, corrosion resistant to the weather and fluid content, non-absorbent, water tight, rodent-proof, and equipped with a close fitting cover.
- For the temporary storage of solid wastes contaminated with liquids or other potential pollutant materials use dumpsters, garbage cans, drums and comparable containers, which are durable, corrosion resistant, non-absorbent, non-leaking, and equipped with either a solid cover or screen cover to prevent littering. If covered with a screen, the container must be stored under a lean-to or equivalent structure.
- Where exposed to stormwater, use containers, piping, tubing, pumps, fittings, and valves that are appropriate for their intended use and for the contained liquid.

Stormwater Management Manual for Western Washington, Ecology, 2005. Vol IV page 2-3.

3.1.4 Employee and Tenant Training & Education

The City of University Place has developed an Education Program aimed at tenants and City employees, in accordance with Special Condition S6.E.1. The goal of the program is to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts. The Education Program includes specific training activities and educational materials oriented toward prevention of stormwater pollution and implementation of the SWPPP.

All City of University Place tenants shall participate in the education program and training opportunities to improve their understanding of stormwater impacts and ways to prevent stormwater pollution.

3.1.5 Spill Prevention, Reporting & Emergency Cleanup

A summary of basic spill response procedures is included in Appendix C.

3.1.6 Pesticide, Herbicide and Fertilizer Application

Landscape management (including control of weeds) has the potential to introduce chemical pollutants into stormwater. To reduce the potential for contaminating stormwater, this site uses the following landscape management practices:

Check one:

- There are no vegetated areas on site. No pesticides, herbicides or fertilizers are used.
- Vegetated areas are present on site. The City of University Place's organic landscaping approach has been adopted. No pesticides, herbicides or fertilizers are used.
- Vegetated areas are present on site. A site-specific landscape management approach has been developed using City of University Place BMP 20.

3.1.7 Activity-Specific BMPs

The following BMPs are applicable to the pollution generating activities performed on site. BMP descriptions were drawn from the City of University Place's Source Control Technical Requirements Manual (2008) and are included in Appendix A.

Some heavy industrial activities that are not typical for City properties (e.g., mining, logging, wood treating, storage of contaminated soils, etc.) have been removed from Table 1 to streamline BMP selection. Generally, these activities are not permitted on City property unless specifically authorized in the lease. If you are engaged in heavy industrial activities that are not covered by the BMP Selection Worksheet please contact your City Property Manager. These activities may require coverage under an Individual or General NPDES permit.

Complete the following worksheet (Table 1) by marking the activities performed at your site. Each activity corresponds to a BMP. BMP descriptions are included in Appendix A. The BMPs selected in Table 1 will be used to complete the Implementation Plan in Section 3.2.

Table 1. BMP Selection Worksheet

Activity – If these activities take place on your site, check the box in the left column. The required BMP is indicated in the right column. These BMPs must be implemented at your facility.		Required BMP
CLEANING AND WASHING		
<input type="checkbox"/>	Cleaning or washing of tools, engines, and manufacturing equipment • Applies to cleaning or washing, including pressure washing, parts or equipment outside or where the washwater can enter the outside drainage system.	BMP 7
<input type="checkbox"/>	Cleaning or washing of food service establishment equipment • Applies to vents, filters, pots and pans, grills, floor mats, and related items	BMP 8
<input checked="" type="checkbox"/>	Washing, pressure washing, and steam cleaning of vehicles, equipment, and building structures • Applies to cleaning and washing at all types of establishments, including fleet vehicle yards, car dealerships, car washes, and maintenance facilities.	BMP 9
TRANSFER OF LIQUID OR SOLID MATERIALS		
<input type="checkbox"/>	Loading and unloading of liquid or solid material • Applies to loading and unloading of liquid or solid materials at industrial, commercial, and transportation facilities.	BMP 11
<input checked="" type="checkbox"/>	Fueling at dedicated stations • Applies to gas stations, pumps at fleet vehicle yards or shops, and other privately owned pumps, including construction sites.	BMP 12
<input type="checkbox"/>	Automotive repair and maintenance • Applies to oil changes and other engine fluids at permanent or temporary sites.	BMP 13
<input type="checkbox"/>	Mobile fueling of vehicles and heavy equipment • Applies to fleet fueling, wet fueling, and wet hosing.	BMP 14
PRODUCTION AND APPLICATION ACTIVITIES		
<input type="checkbox"/>	Manufacturing and post-processing of metal products • Applies to machining, grinding, soldering, cutting, welding, quenching, rinsing, etc.	BMP 17
<input type="checkbox"/>	Painting, finishing, and coating of vehicles, boats, buildings, and equipment • Applies to surface preparation and the applications of paints, finishes, and/or coatings.	BMP 21
<input type="checkbox"/>	Outdoor manufacturing activities • Applies to manufacturing activities in outdoor areas.	BMP 23

Activity – If these activities take place on your site, check the box in the left column. The required BMP is indicated in the right column. These BMPs must be implemented at your facility.		Required BMP
STORAGE AND STOCKPILING		
<input checked="" type="checkbox"/>	Outdoor storage or transfer of solid raw materials, byproducts, or finished products • Includes sand, topsoil, lumber, and other products.	BMP 24
<input type="checkbox"/>	Temporary storage or processing of fruits or vegetables • Applies to storage of fruits and vegetables outdoors, processing activities at wineries, by fresh and frozen juice makers, and other food and beverage processing operations.	BMP 26
<input checked="" type="checkbox"/>	Outdoor portable container storage • Applies to containers that are located outside a building and used for temporary storage.	BMP 28
<input checked="" type="checkbox"/>	Storage of liquids in permanent aboveground tanks • Applies to all liquids in aboveground tanks.	BMP 29
<input checked="" type="checkbox"/>	Parking lot maintenance and storage of vehicles and equipment • Applies to public and commercial parking areas.	BMP 30
DUST CONTROL AND SOIL AND SEDIMENT CONTROL		
<input checked="" type="checkbox"/>	Dust control in disturbed land areas and on unpaved roadways and parking lots	BMP 31
<input type="checkbox"/>	Dust control at manufacturing sites • Applies to grain dust, sawdust, coal, gravel, crushed rock, cement, boiler fly ash and other airborne polluting materials.	BMP 32
<input type="checkbox"/>	Soil erosion and sediment control at industrial sites • Applies to industrial activities that take place on soil.	BMP 33
OTHER		
<input type="checkbox"/>	Boat building, mooring, maintenance, and repair • Applies to all types of maintenance, repair, and building operations at shipyards, ports, and marinas.	BMP 36
<input checked="" type="checkbox"/>	Maintenance and management of roof and building drains at manufacturing and commercial buildings	BMP 41
<input type="checkbox"/>	Maintenance and operation of railroad yards	BMP 42
<input type="checkbox"/>	Maintenance of public and private utility corridors and facilities • Applies to maintenance activities related to public and private utilities, including pipelines, pump stations, rights-of-way and transmission corridors.	BMP 43
<input type="checkbox"/>	Maintenance of roadside ditches	BMP 44

3.2 BMP Implementation Plan

The plan for implementing the BMPs listed above is shown in Table 2. Each BMP requires a series of actions. The BMP Implementation Plan in Table 2 describes how these actions will be performed on your site.

BMPs shall be implemented according to the following schedule:

- Non-structural BMPs shall be implemented **immediately**.
- Structural BMPs shall be implemented:
 - Within 6 months, if operational BMPs are not sufficient to prevent pollution from leaving site, or
 - as part of development or redevelopment of that Cityion of the site.

Complete Table 2 by:

- 1 *deleting or crossing out any BMPs that were not selected in Table 1,*
- 2 *entering name or title of person responsible for implementing and maintaining the BMP in the "Responsibility" column, and*
- 3 *entering the date and notes regarding when and how the BMP was implemented.*

Table 2 – BMP Implementation Plan

1. Delete or cross out BMP's not selected in Table 1.
2. Enter name or title of person responsible for implementing and maintaining the BMP in the "Responsibility" column.
3. Enter the date and notes regarding when and how the BMP was implemented

BMP	Action	Responsibility	Schedule / Notes
Pollution Prevention Team	Fulfill PPT responsibilities	Kevin Schmidt	
	Promptly contain and cleanup leaks and spills.		
	Sweep paved areas regularly as needed. Do not hose down pollutants.	Brett Gaiser	
Good Housekeeping	Clean BMP systems regularly.		
	Promptly repair damaged secondary containment, paving, and other areas potentially subject to leaks or spills.		
	Promptly repair or replace all leaking connections.		
	Prevent discharge of unpermitted liquid or solid wastes.	Kevin Schmidt	
	Conduct washing or cleaning of equipment inside or in a contained area.	Kevin Schmidt	
	Use drip pans.		
Preventive Maintenance	Drain oil and fuel filters before disposal.	N/A	
	For liquid storage, use rigid and durable containers appropriate for material stored.		
	For solid wastes, use durable, corrosion resistant containers appropriate for material stored.		
	Use containers, piping, tubing, pumps, fittings and valves appropriate for intended use and liquid contained.		
BMP 1 - Eliminate Illicit Connections to Storm Drains	Perform dry season inspection	Derek Snowden	
BMP 2 - Perform Routine Maintenance for Stormwater Drainage System	Clean catchbasins when more than half full or when sediment is within 18 inches of the bottom of outlet pipe.	Derek Snowden	
	Inspect and clean catch basin filter.	Derek Snowden	

Table 2 – BMP Implementation Plan

1. Delete or cross out BMP's not selected in Table 1.
2. Enter name or title of person responsible for implementing and maintaining the BMP in the "Responsibility" column.
3. Enter the date and notes regarding when and how the BMP was implemented

BMP	Action	Responsibility	Schedule / Notes
BMP 3 - Dispose of Fluids and Wastes Properly	Dispose of solid and liquid wastes and contaminated stormwater properly by 1) recycling, 2) disposing in a municipal solid waste facility, 3) disposing in a hazardous waste TSDF, or 4) discharging to sanitary sewer.		
	Store wastes in suitable containers.		
	Storage containers must have leak proof lids and be kept closed.		
BMP 4 - Proper Storage of Solid Wastes	Check containers for leaks.		
	Sweep waste area.		
	Drain dumpsters to sanitary sewer.		
	Use spill cleanup materials to clean up fats, oils and greases.		
	Do not overfill containers.		
	Clearly label all containers that contain potential pollutants		
	Use appropriate containers.		
	Use drip pans under containers, fittings, and valves.		
BMP 5 - Spill Prevention and Cleanup	Use ground cloths, tarps, or drip pans in areas where materials are mixed, carried, or applied.		
	Train employees on safe handling techniques		
	Develop and implement spill plan.		
	Place spill kits near areas with potential for spills.		
	Promptly report and respond to spills		
BMP 6 - Provide Oversight and Train Staff	Train all employees annually.		
	Document training.		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
BMP 7 - Cleaning or Washing of Tools, Engines and Manufacturing Equipment	Discharge all wastewater to sanitary sewer, process treatment system, or holding tank.		
	Never discharge wastewater to storm drains.		
	Conduct pressure washing in a designated area draining to a sump, sanitary sewer, or treatment system.		
	Wash pads that discharge to sanitary sewer must have less than 200 square feet of uncovered area.		
	Wipe off equipment before washing.		
	Do not pour cooking grease down the drain. Collect and dispose of grease properly.		
	Use a tub to contain wastewater.		
BMP 8 - Cleaning or Washing of Food Service Equipment	Discharge wastewater to sanitary, process treatment system, or holding tank.		
	Conduct washing indoors		B M
	If washing cannot be moved indoors, wastewater must be captured and discharged to sanitary, process treatment system, or holding tank and stormwater run-on prevented.		
	Do not discharge wash water or process water to roof drains or storm water system when washing roof equipment or hood vents.		nfa tio n Sc dul e-
	Conduct indoor washing in an area that drains to sanitary sewer and prevents wastewater from running outside.		
BMP 9 - Washing, Pressure Washing, and Steam Cleaning of Vehicles, Equipment, or Buildings	Conduct outdoor washing in designated wash area draining to sump then combined sewer, process treatment system, or other appropriate system.		
	Wash pads that discharge to sanitary sewer must have less than 200 square feet of uncovered area.		
	Clearly mark the washing area.		
	Wash building facades, fences, rooftops, and masonry according to requirements of Table 2 in BMP 11 (App. A)		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
	Frequently sweep surfaces in loading and unloading areas.		
	Use drip pans where spills may occur and when making or breaking connections.		
BMP 11 - Loading and Unloading of Liquid or Solid Material	Check loading and unloading equipment as needed.		
	If possible, prevent stormwater from entering loading area.		
	Place curbs at edge of loading area to direct stormwater to treatment system.		
	Pave and slope loading area to prevent the pooling of water.		
	Train employees on proper use of fuel dispensers.		
	Post signs related to the operation of fuel dispensers in accordance with University Place Fire Code.		
	Ensure that the person fueling stays at the pump.		
	Ensure that the automatic shutoff is functioning properly.		
BMP 12 - Fueling at Dedicated Stations	At least one designated, trained person is available on site or on-call to respond to spills. If fueling station is unattended, spill plan and spill kit must be visible to all customers.		
	Keep suitable spill cleanup materials on site.		
	Transfer fuel from delivery trucks in impervious, contained area. Or cover all nearby storm drains and use drip pans under hose connections.		
	Design fuel island according to BMP 12 (See Appendix A)		
	Have an employee supervise the fuel dock.		
	Use automatic shut-off nozzles and promote use of "whistles" and fuel/air separators on air vents.		
For fueling over water	Visually monitor liquid level during fueling.		
	Do not fill beyond 95% of tank capacity.		
	Spilled fuel should be conveyed to oil treatment facility, or sanitary sewer (if approved).		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
	Educate employees annually on need for careful handling of equipment fluids		
	Keep spill cleanup materials close at hand		
	Maintenance and repair activities must be located indoors		
	Drain all fluids from wrecked vehicles or equipment when they arrive.		
BMP 13 - Automotive (and Equipment) Repair and Maintenance	If work must be performed outdoors, use drips pans or other containment to capture all spills and drips.		
	Do not hose down maintenance area		
	Connect indoor floor drains to sanitary sewer.		
	If floatables present, use oil/water separator prior to discharge to sanitary.		
	If excessive stain or oil sheen is present, use absorbent pillows or booms around catch basins.		
	Ensure that all mobile fueling operations are approved by University Place Fire Department and comply with fire codes.		
	Train operator annually in spill prevention and cleanup		
	Develop written fueling plan.		
	Ensure operator is present during fueling.		
BMP 14 - Mobile Fueling of Vehicles and Heavy Equipment	Fuel at least 25 feet away from storm drain or cover drain		
	Use drip pan		
	Carefully handle hoses and nozzles to prevent drips		
	Do not allow vehicles to drive over hose		
	Use an adequate lighting system		
	Do not "top off" fuel tanks		
	Have a spill kit on fueling vehicle.		
	Immediately remove and dispose of contaminated soils.		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
BMP 17 - Manufacturing and Post Processing of Metal Products	Discharge process wastewater and stormwater runoff to sanitary sewer.		
	Cover activity.		
	Sweep activity area daily or more often as needed		
	Educate employees about controlling their work to minimize stormwater pollution. Document training		
	May need Industrial NPDES Permit.		
BMP 21 - Painting, Finishing, and Coating of Vehicles, Boats, Buildings and Equipment	Train employees in application and cleanup of paints and finishes. Keep records of training.		
	Use ground cloths or drop cloths underneath outdoor painting.		
	Use a storm drain cover, catch basin filter, or other similar device.		
	Do not conduct spraying, blasting or sanding over open water, or if wind may blow particles into water. Use curtain on windy days.		
	Enclose or contain spray gun and sandblasting work.		
	Wipe up spills with rags and absorbent materials.		
	Sweep rather than hose down debris.		
	Clean paintbrushes and tools covered with water-based paints in sink or portable containers. Discharge to sanitary sewer.		
	Collect solvents used to clean brushes and tools covered with non-water based paints or finishes. Recycle or dispose of used solvent appropriately.		Marilyn Guthrie is at the port of University Place hlepajfsieurtthjahoitlathloih latjohhoiathe ahthatoihh iahtatonahouitmatjahltoiantuo athoahtoaieththi
	Store paints, finishes and solvents inside or in covered secondary containment.		
	All containers must have tight fitting lids.		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
	Move activity indoors, if possible.		
BMP 23 - Outdoor Manufacturing Activities	Cover the activity and connect floor drains to sanitary sewer.		
	Sweep paved areas daily or more often as needed.		
	Modify activity to eliminate or minimize contamination of stormwater.		
	Isolate and segregate pollutants as feasible.		
BMP 24 - Outdoor Storage or Transfer of Solid Raw Materials, Byproducts, or Finished Products	Do not hose down the storage area.		
	Sweep paved storage areas daily.		
	Cover erodible & soluble materials. Cover metal products.		
	Pave area and install drainage system with perimeter curbs and slope to minimize pooling.		
	Educate employees on benefits of maintaining clean process area. Keep records of training.		
BMP 26 - Temporary Storage or Processing of Fruits and Vegetables	No water used to clean produce can enter storm drainage system.		
	Minimize use of water used to clean produce to avoid excess runoff.		
	Sweep paved storage areas daily or more often as needed.		
	Processing area must be enclosed in building or shed, or covered with provisions to prevent stormwater run-on.		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
	Where possible, store in a building or on paved surface under a roof.		
	Use tight-fitting lids.		
	Label all containers.		
	Place drip pans beneath spigots or taps.		
BMP 28 - Outdoor Portable Container Storage	Regularly inspect container storage area.		
	Secure drums.		
	Provide covered secondary containment for hazardous liquids.		
	Dangerous wastes that do not contain free liquids must be stored in a sloped area, protected from stormwater run-on		
	Comply with University Place Fire Code and Uniform Fire Code.		
	Keep containers inside a building unless impractical.		
	Locate and design tanks to prevent contamination (See BMP 29 in Appendix A). Tanks must be in impervious secondary containment.		
BMP 29 - Storage of Liquids in Permanent Aboveground Tanks	Inspect tank containment to identify problems. Document inspections.		
	Sweep and clean tank storage area regularly.		
	At petroleum tank farms, convey stormwater to oil-water separator, or other approved treatment prior to discharge to sanitary sewer.		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
	Sweep or vacuum parking lots.		
BMP 30 - Parking Lot Maintenance and Storage of Vehicles and Equipment	<p>Do not hose down the storage area.</p> <p>If parking lot must be washed, discharge wastewater to sanitary sewer (with prior approval from Industrial Waste Program)</p>		
BMP 31 - Dust control in Disturbed Land Areas and on Unpaved Roadways and Parking Lots	<p>Install oil removal system such as oil water separator, catch basin filter, or equivalent in high use areas.</p> <p>Regularly sweep street gutters, sidewalks, driveways, and other paved surfaces in immediate area of dust generating activities.</p> <p>Properly dispose of loose debris and garbage</p> <p>Install catch basin filters in surrounding catch basins.</p> <p>Never use oil for dust control.</p>		
BMP 32 - Dust Control at Manufacturing Sites	<p>Clean accumulated dust and residue from material handling equipment and vehicles each day, or more often as needed.</p> <p>Maintain onsite controls so that no vehicle track-out occurs.</p> <p>Regularly sweep areas using vacuum filter equipment.</p> <p>Maintain dust collection devices on a regular basis.</p> <p>Provide vegetated cover in erodible areas.</p>		
BMP 33 - Soil Erosion and Sediment Control at Industrial Sites	<p>Provide cover with clear plastic, jute, or synthetic fiber mats.</p> <p>Preserve natural vegetation.</p> <p>Use structural erosion control BMPs, such as check dams, gravel filter berms, vegetated swales, etc., as an alternative to the above.</p>		
BMP 36 - Boat Building, Mooring, Maintenance and Repair	<p>Collect bilge and ballast water for proper disposal. Do not discharge to land or water.</p> <p>Convey sanitary sewage to a pump-out station or other appropriate facility. Do not discharge sewage to water.</p>		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
	Spill kits must be located on all piers and docks. Spill kit for shipyards and boatyards must contain marine containment boom.		
	Immediately clean up any spills on dock, boat, or ship deck areas. Dispose of wastes properly.		
	Immediately repair or replace leaking connections, valves, pipes, hoses or equipment.		
	Move maintenance and repair activities onshore.		
	Perform paint and solvent mixing, fuel mixing, and similar handling of liquids onshore or in proper containment.		
	Properly dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers.		
- Continued -BMP 36 - Boat Building, Mooring, Maintenance and Repair	Store all batteries, motors, and other oily parts in a covered container with tight fitting lid. Store materials like paints, tools, equipment, ground cloths, indoors or under cover.		
	Collect spent abrasives regularly and contain and store them under cover until can be properly disposed.		
	Sweep and clean dock and yard areas weekly, or more often as needed.		
	Do not use soap or detergents when washing boats in the water. Brush the hull with water only.		
	Use fixed platforms with appropriate barriers when work is performed on a boat in the water.		
	Direct deck drainage to a sump for settling and/or additional treatment.		
	Do not dump waste down floor drains, sinks, or outdoor storm drain inlets that drain to surface water. Plug or block floor drains connected to surface water.		
	See BMP 36 in Appendix A for procedures for blasting and spray painting activities.		

Table 2 – BMP Implementation Plan

BMP	Action	Responsibility	Schedule / Notes
BMP 41 - Maintenance and Management of Roof and Building Drains at Manufacturing and Commercial Buildings	If roof is potential pollutant source, sample and analyze runoff		
	If roof is source of pollutants, implement source controls.		
	Replace materials containing pollutants with more environmentally friendly alternatives.		
BMP 42 - Maintenance and Operation of Railroad Yards	Do not allow discharge from toilets to outside areas. Use pump out facilities.		
	Use drip pans at hose and pipe connections.		
	Do not discard debris or waste liquids along tracks.		
BMP 43 - Maintenance of Public and Private Utility Corridors and Facilities	Convey contaminated stormwater to sanitary sewer (if allowed) or an appropriate treatment system.		
	Do not hose down maintenance and repair areas.		
	Remove water or sediments from utility vaults according to requirements of BMP 43 (See Appendix A)		
BMP 44 - Maintenance of Roadside Ditches	Provide maintenance practices to prevent stormwater from accumulating and draining onto roadways.		
	Maintain ditches and culverts at an appropriate frequency.		
	Regularly inspect roadside ditches and culverts.		
	Clean ditches on a regular basis.		
	Keep ditches free of rubbish and debris.		
	Conduct ditch maintenance when most effective (usually late spring or early fall).		
	Do not apply fertilizer unless needed to maintain vegetative growth.		
	Do not leave material from ditch cleaning on the roadway.		
	Sweep and remove dirt and debris from roadway after ditch cleaning.		
	Segregate clean materials from contaminated materials. Reuse or dispose appropriately.		
	Remove vegetation only when flow is blocked		

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4 Operation and Maintenance

Regular operation and maintenance of stormwater facilities is key to controlling stormwater pollution. Generally, individual **tenants are responsible for maintenance of the stormwater system** for tenant-controlled areas (i.e., not common areas) within their leases. Please refer to your lease for specifics about who is responsible for maintaining the stormwater system.

The City of University Place requires that at a minimum all businesses perform the routine maintenance of the stormwater system. The City's requirements are documented in BMP 2 from the City of University Place Source Control Technical Manual (included in Appendix A). The tenant is responsible for keeping the SWPPP up to date with City of University Place requirements.

Proper operation and maintenance of the stormwater system and BMPs requires regular inspection. Inspections at this facility will be performed at least:

- Annually
- Quarterly
- Monthly
- Weekly
- Other: _____

Inspections will be documented on the form provided in Appendix B. Completed inspection forms will be maintained with this SWPPP.

APPENDIX A
Best Management Practices

APPENDIX B
O&M Inspection Reports

APPENDIX C Spill

Plan Summary

APPENDIX F

**UNIVERSITY PLACE
WATERSHED AND OUTFALL INVENTORY**



2012

**WATER SHED AND OUTFALL
INVENTORY**

The purpose of this document is to fulfill the City's NPDES PHASE II Stormwater permitting requirements pertaining to the evaluation of watersheds.

Data used to compile this guide:

City of University Place Comprehensive storm drainage map.

City of University Place storm drainage study conducted by Earth Tech.

Gathered field notes, and data.

The study area is bounded by the 1995 incorporated limits of the City of University Place.

University Place, with a population of approximately 36,000, is located directly south of the Tacoma Narrows bridge and is bordered by Puget Sound to the west. The 8.5-square-mile area is comprised largely of single-family residential neighborhoods, with commercial development existing in areas along Bridgeport Way, 67" Avenue and South Orchard Street. Little undeveloped land remains.

2.02 CLIMATE

University Place is located at the eastern edge of the Puget Sound Lowlands climatic region and experiences typical weather patterns brought about with the absorption of maritime influences by the Cascade Mountains. Summer temperatures in the 80s can be sustained, while winter temperatures usually are in the 40s. The recorded maximum and minimum temperatures for the area are 102 and -3°F, respectively. The average annual precipitation, as measured at the Chambers Creek Wastewater Treatment Plant, is 42 inches.

2.03 BASIN DESCRIPTIONS

For analysis purposes, the study area was divided into the 12 drainage basins. Surface water for all of University Place eventually drains into Puget Sound; primarily through Leach, Peach and Chambers Creeks to the south and Day, Crystal and Brookside Creeks to the north.

Crystal Springs Creek Basin

The Crystal Springs Creek watershed is an area in the north end of University Place which drains directly into Crystal Creek. The basin is segmented by an overpass of the creek on Grandview Drive. Catch basins on Grandview collect the majority of the surface water in this vicinity, routing it north to the North Day Island watershed. Two 36-inch culverts underneath the railroad tracks at the lower end of this basin route the creek into an outfall to the Day Island Lagoon.

Unnamed - City of Tacoma Basin

This watershed, also on the north border of University Place, all drains to the catch basins and 18-inch storm sewer existing along 10 Street West. The storm sewer flows by gravity to a low point in the street, near the corner of 19' and Crystal Springs Road, where a detention pond routes the water north into Tacoma.

North Day Island Basin

The North Day Island watershed is a large drainage basin comprising the northeast portion of University Place. Surface water drainage is conveyed largely through street storm sewers in this area, with numerous detention ponds and a pump station. The storm sewers range in size between 12-inch and 30-inch, with all runoff eventually being conveyed into a 24-inch storm sewer, which drains into a 36-inch storm sewer on Crystal Springs Road in the northwest corner of the basin. The water is eventually routed to Day Island Lagoon and Puget Sound through a 42-inch storm drain along 19' Street West. The watershed also contains a large pothole drainage area.



Unnamed (City of Tacoma)- See (North Day Island Watershed)

Day Island Lagoon Basin

The Day Island Lagoon watershed is a small basin bordering Puget Sound which drains to a 12-inch storm sewer along 94th Avenue West. Runoff is discharged to the Sound through a 24-inch culvert which runs underneath the railroad tracks.



Crystal Springs Creek Basin – See (Day Island Lagoon)

Day Island Waterway Basin

The Day Island Waterway watershed all drains northward by storm sewers, culverts and detention ponds to 24-inch storm sewer along 27' Street West. This storm sewer becomes 36 inches in diameter at the lower portion of the basin towards the northwest and parallels the north side of Day Island Bridge Road and discharges into the Puget Sound through a pair of 36-inch culverts underneath the railroad tracks. A small portion of the basin on the south side of Day Island Bridge Road drains to Puget Sound through a natural creek.



Curtis Pothole Basin

The Curtis Pothole watershed, encompassing the central area of University Place, generally drains by 12-inch storm sewer and culvert to an undeveloped depression in the topography towards the northwest portion of the basin near Curtis High School. Here, the runoff ponds and eventually infiltrates into the ground.

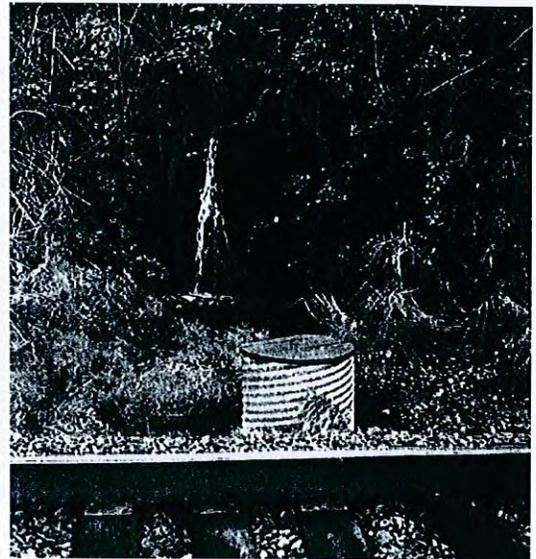
Soundview Basin

The Soundview watershed drains exclusively through street storm sewers ranging from 12-inch to 30-inch in size. Runoff water is eventually collected and routed to Brookside Creek at the merge of Brookside Way and Palisades Place, where the creek and intermittent 30-inch culverts channel flow underneath the railroad tracks and into Puget Sound.



Unnamed Basin

This unnamed basin represents the Sunset Beach area of University Place Area surface drains over the bank and is collected in a 36in vertical metal manhole structure. It then flows westward between two residential units to daylight at bulkhead in Puget Sound.



Unnamed (Glacier) Basin

This watershed, adjacent to Puget Sound and representing the southwest portion of University Place, includes Chambers Creek Properties and Chambers Bay Golf Course. This Basin area is a former gravel pit. The basin has no outfalls or flow to Chambers Bay. Through development of the site extensive storm drain system now exist. Three large retention ponds allow permeation of water into the ground.



Westside Sewer District Basin

The Westside Sewer District watershed drains through storm sewers to two main collectors. The northern and eastern portions of -the basin, in the Beckonridge and Park Ridge areas, drains to a 36-inch storm sewer which runs along Beckonridge Drive to Grandview Drive. The southwest portion of the basin, encompassing Bristonwood and Grandview Park, drains to a 30-inch storm sewer along Bristonwood Drive and 52 nd Street West and merges with the northern collector on Grandview Drive. A 36-inch storm sewer then proceeds westward and empties into Puget Sound through a culvert underneath the railroad tracks.

No picture pipe discharges below water line of Puget Sound.

Chambers Creek Basin

The Chambers Creek watershed represents the southern portion of University Place. The western part of this basin drains directly into Chambers Creek through a 36-inch storm sewer running south from 64' Street West. The eastern part of the basin discharges into Peach Creek in the Westhampton, University Woods, and

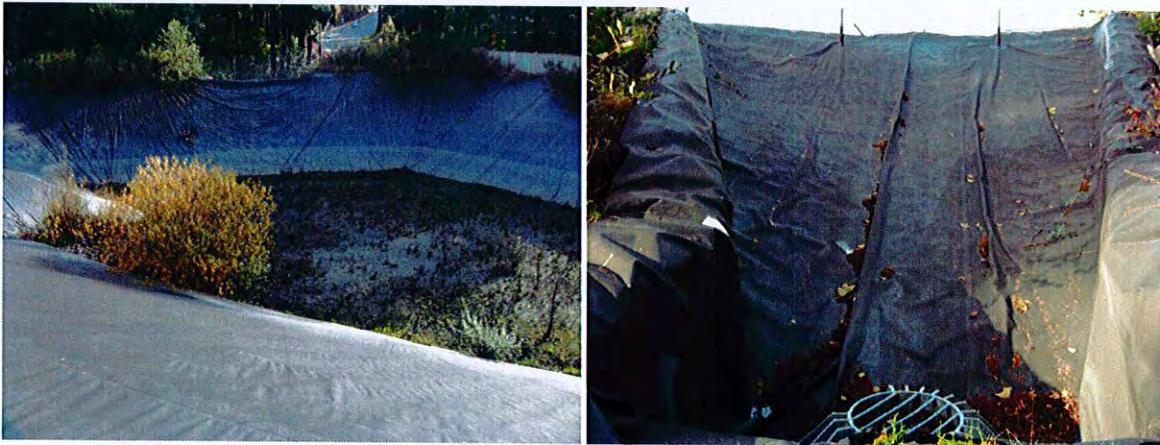
Chambers Point areas through culverts ranging in size from 12-inch to 21-inch. Peach Creek drains into Chambers Creek at the southern limit of University Place.

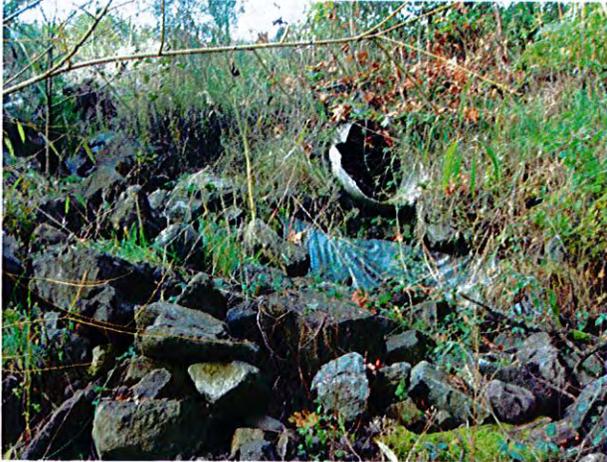




Leach Creek Basin

Surface water from the Leach Creek watershed discharges to Leach Creek in the Fir Crest and Trikalla areas as well as along Cirque Drive West and Bridgeport Way West. Storm sewers range in size between 12-inch and 36-inch with detention ponds in places. Eventually water discharges into Leach Creek via several outfalls.





A large capacity underground retention- filter vault was constructed in 2007 by the WSDOT As part of a wetland mitigation restoration project associated with the construction of the new Narrows Bridge. This system slows the discharge of water allowing it to filter through a conical structure then discharging to a wetland that eventually flows to Leach Creek.





Flett Creek Basin

A small portion of the Flett Creek watershed lies within the southeast corner of University Place. A 12-inch storm sewer running south along 54' Avenue drains the storm water to the south toward City of Lakewood discharging into Leach Creek.