

Operations Maintenance Facilities Stormwater Pollution Prevention Plan

For

City of Kelso

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1. Introduction

The City of Kelso (City) operates a municipal separate storm sewer system (MS4) which collects and conveys stormwater runoff from developed areas of the City to surface waters. Discharge of runoff from the MS4 is regulated by the Washington State Department of Ecology (Ecology), and the City is required to obtain a Western Washington Phase II Municipal Stormwater Permit (Permit) to operate the MS4.

Special Condition S5.C.7 of the 2019-2024 Permit requires a SWPPP for all heavy equipment maintenance or storage yards, and material storage facilities owned or operated by the City in areas subject to this Permit that are not required to have coverage under the *Industrial Stormwater General Permit* or another NPDES permit that authorizes stormwater discharges associated with the activity. The existing SWPPP shall be updated no later than December 31, 2022 under the 2019-2014 Permit. The contents of this document meet the requirements of Permit Special Condition S5.C.7.

1.1 Background

The City's Operations Maintenance Facility (facility) serves to store and maintain City and Cowlitz 2 Fire & Rescue vehicles and operations equipment. It is located at 2300 Parrot Way and is across from the Airport. There are three building structures at the facility including administration offices, vehicle storage, and vehicle maintenance areas. Activities at the facility include a vehicle wash rack, stockpiling of roadway construction materials and street sweeping debris, maintenance of vehicles, and storage of abandoned and impounded vehicles.

The City also stockpiles materials at two additional locations within city limits. Topsoil is stockpiled in right-of-way land immediately north of 607 North 3rd Avenue, between North 3rd Avenue and North Kelso Avenue. Water infrastructure construction debris and soil is stockpiled at City-owned parcel number 2408727 on Talley Way, south of 2510 Talley Way.

1.2 Regulatory Background

The City became a permittee under the Western Washington Phase II NPDES Municipal Stormwater Permit on February 16, 2007. The Permit requires that the City develop an operations and maintenance (O&M) program that includes items, such as a SWPPP. This SWPPP has been updated to comply with the 2019 Stormwater Management Manual for Western Washington (SWMMWW) and the 2019-2024 Permit.

The SWPPP elements required under Special Section S5.C.7 are as follows:

- i. A detailed description of the operational and structural BMPs in use at the facility and a schedule for implementation of additional BMPs when needed. BMPs selected must be consistent with the Stormwater Management Manual for Western Washington, or a Phase I program approved by Ecology. The SWPPP must be updated as needed to maintain relevancy with the facility. At minimum, annual inspections of the facility,

including visual observations of discharges, to evaluate the effectiveness of the BMPs, identify maintenance needs, and determine if additional or different BMPs are needed. The results of these inspections must be documented in an inspection report or check list.

- ii. An inventory of the materials and equipment stored on-site, and the activities conducted at the facility which may be exposed to precipitation or runoff and could result in stormwater pollution.
- iii. A site map showing the facility's stormwater drainage, discharge points, and areas of potential pollutant exposure.
- iv. A plan for preventing and responding to spills at the facility which could result in an illicit discharge.

1.3 Purpose

The Permit requires that a SWPPP be implemented at the facility and the stockpile sites. This SWPPP will be used by City personnel to address stormwater pollution. It is intended to outline Permit requirements for preventing pollution of stormwater at the facility and stockpile sites, the relevant site information, and the best management practices (BMPs) implemented at the facility and stockpile sites. This SWPPP also includes various forms needed to document Permit compliance. The methods outlined here are intended to meet the requirements of the Permit, ensure a properly functioning stormwater system, and prevent stormwater pollution.

1.4 SWPPP Format

The SWPPP is divided into six sections:

- Section 1 – Introduction
- Section 2 – Maintenance Facility Description and BMPs
 - Addresses basic information regarding the site layout, industrial activities, potential pollutants, outfall(s), receiving water, and monitoring program.
 - Identifies the site pollution prevention team and BMPs to be implemented, including preventive maintenance, employee education, inspection requirements and recordkeeping.
- Section 3 – North 3rd Avenue Stockpile Site Description and BMPs
 - Addresses basic information regarding the site layout, activities, potential pollutants, receiving water, and monitoring program.
 - Identifies the BMPs to be implemented for pollutant source control, employee education, inspection requirements and recordkeeping.
- Section 4 – Talley Way Stockpile Site Description and BMPs
 - Addresses basic information regarding the site layout, activities, potential

pollutants, and monitoring program.

- Identifies the BMPs to be implemented for pollutant source control, employee education, inspection requirements and recordkeeping.
- Section 5 – Spill Prevention and Response Plan
- Section 6 – References

1.5 Definitions

The following definitions are excerpted from the SWMMWW and the Permit, and are provided for the benefit of the site staff.

Best Management Practices (BMPs): The schedules of activities, prohibitions of practices, maintenance procedures, and structural and/or managerial practices, that when used singly or in combination, prevent or reduce the release of pollutants and other adverse impacts to waters of Washington State.

Erodible or Leachable Materials: Wastes, chemicals, or other substances that measurably alter the physical or chemical characteristics of runoff when exposed to rainfall. Examples include erodible soils that are stockpiled, uncovered process wastes, manure, fertilizers, oily substances, ashes, kiln dust, and garbage dumpster leakage.

Source Control BMPs: A structure or operation intended to prevent pollutants from coming into contact with stormwater through physical separation of areas or careful management of activities that are sources of pollutants. There are two types of source control BMPs. Structural Source Control BMPs are physical, structural, or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. Operational Source Control BMPs are non-structural practices that prevent or reduce pollutants from entering stormwater.

Operational Source Control BMPs: Operational BMPs are a type of Source Control BMP. They are schedules of activities, prohibition of practices, and other managerial practices to prevent or reduce pollutants from entering stormwater. Operational BMPs include formation of a pollution prevention team, good housekeeping, preventive maintenance procedures, spill prevention and clean-up, employee training, inspections of pollutant sources and BMPs, and record keeping. They can also include process changes, raw material/product changes, and recycling wastes.

Structural Source Control BMPs: Physical, structural, or mechanical devices or facilities that are intended to prevent pollutants from entering stormwater. Structural source control BMPs typically include:

- Enclosing and/or covering the pollutant source (building or other enclosure, a roof over storage and working areas, temporary tarp, etc.).
- Segregating the pollutant source to prevent run-on of stormwater, and to direct only contaminated stormwater to appropriate treatment BMPs.

2. Maintenance Facility

The following sections include descriptions of the City’s facilities and the BMPs utilized at the maintenance facility at 2300 Parrott Way.

2.1 Site Description

The facility serves to store and maintain City vehicles and operations equipment. It is located at 2300 Parrott Way, across from the Airport. At the facility there are three building structures: a vehicle maintenance building that houses administration offices, an open “water/sewer shed” where vehicles are stored and maintained, and an open storage shed where more vehicles and equipment are stored.

Activities at the facility include vehicle washing, stockpiling of roadway construction materials and street sweeping debris, maintenance of City and Cowlitz 2 Fire & Rescue vehicles, and storage of abandoned and impounded vehicles.

2.1.1 Stormwater System

The stormwater system at the facility includes an onsite catch basin, storm pipes, ditches, and overland flow. Most of the site has water flow overland to ditches along the roadways surrounding the site. A ditch on the north side of the maintenance building collects water from the downspouts of the maintenance building.

Floor drains in the maintenance building drain to sanitary sewer and do not enter the storm sewer system.

Water from the vehicle wash rack also drains to the sanitary sewer. The rack needs to have a cover installed so that stormwater does not discharge to the sanitary sewer.

2.1.2 Maintenance, Inspection and Revision Forms

A number of maintenance and inspection forms are included in the appendices. Appendix A consists of maintenance facility worksheets that describe the pollution prevention team, lists the stockpiled outdoor materials, lists the BMP identification and implementation, lists employee training and more. Appendix B includes inspection forms and Appendix G contains an inspection and maintenance schedule. Appendix H contains *Recommendations for Management of Street Wastes* from Ecology’s 2019 Stormwater Management Manual for Western Washington. Appendix I contains the Review and Revision Documentation form. This SWPPP and revision form are to be updated whenever there is a change in design, construction, operation, or

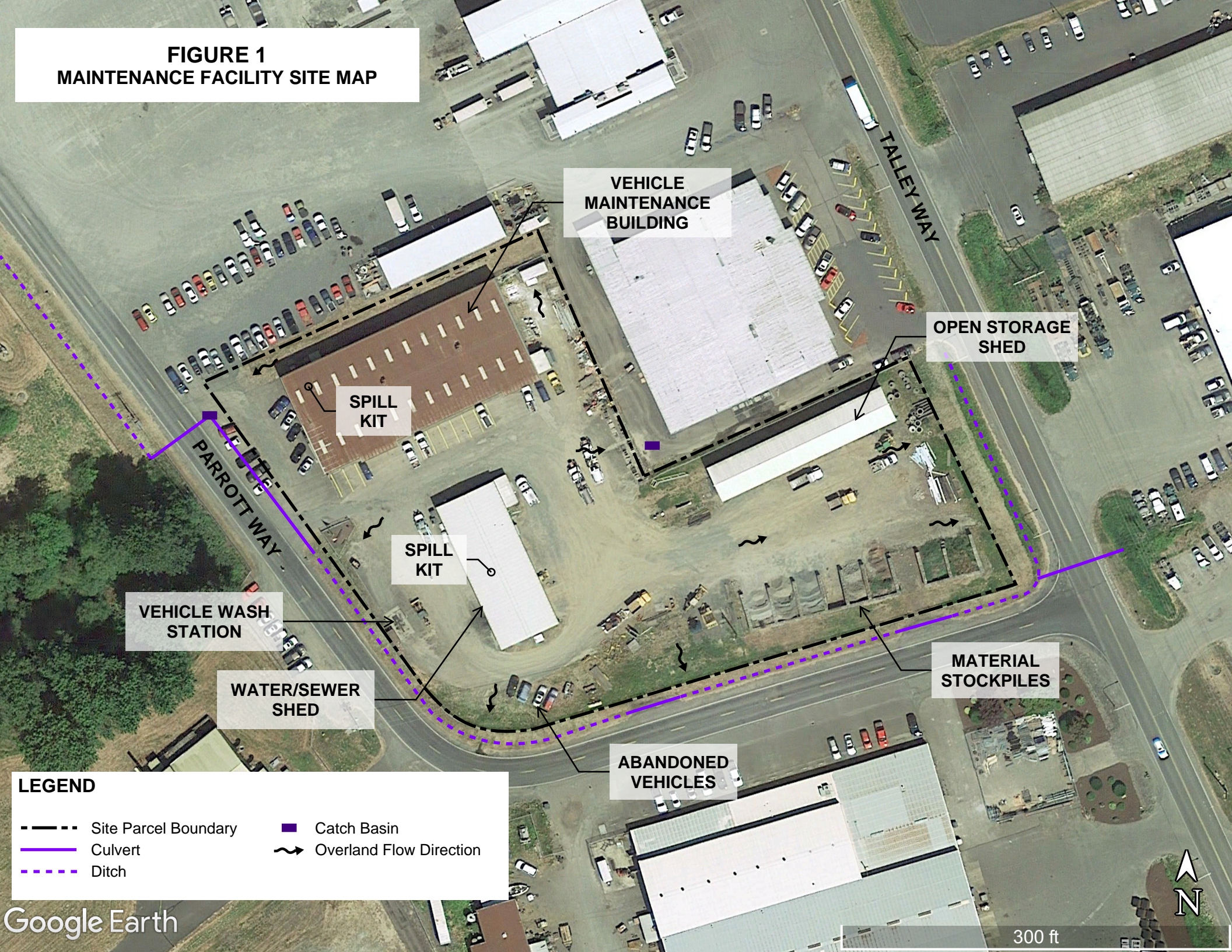
maintenance which cause(s) the SWPPP to be less effective in controlling the pollutants.

2.1.3 Site Maps

Figure 1 shows the overall layout of the facility, the drainage patterns, pollutant sources and spill kit locations.

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FIGURE 1
MAINTENANCE FACILITY SITE MAP



LEGEND

- - - Site Parcel Boundary
- Culvert
- - - Ditch
- Catch Basin
- ~ Overland Flow Direction



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2.1.4 Potential Pollutants

Activities with Pollution Potential

Activities at the facility with pollution potential include:

- Vehicle/equipment maintenance/cleaning areas
- Loading and unloading areas for liquid and solid material
- Outside storage of materials and equipment
- Storage and handling of vehicles
- Storage and handling of liquid-bearing containers and soiled rags
- Washing and steam cleaning of vehicle/equipment/building structures
- Solid and liquid wastes that are not properly stored while awaiting disposal or recycling

Potential Pollutants

Potential pollutants from the described activities at the facility above include:

- Dirt
- Oils and greases
- TSS
- Detergents
- Soaps
- BOD
- Solvents
- Degreasers
- Antifreeze
- Radiator flush
- Chromium
- Zinc
- Copper
- Lead
- Cadmium
- Brake fluid
- Soiled rags
- Oil filters
- Fuel and engine fluids
- Batteries
- Battery sludge
- Cleaning chemicals
- Waste materials
- Paints
- Soapy wastewater

2.1.5 Discharge Outfall(s)

Both the northwestern overland flow and the northern ditch discharge to the west via a culvert to the Parrott Way ditch. Southern and eastern overland flow discharges to a culvert on Talley Way.

2.1.6 Receiving Water

The stormwater flows through a series of ditches, culverts and stormwater pipes, and is conveyed to a Consolidated Diking District #3 slough near the Baker Way Pump Station. This pump station conveys stormwater into the Coweeman River. The receiving water is the Coweeman River near river mile 1.3.

2.2 Best Management Practices

BMPs are schedules of activities, prohibitions of practices, maintenance procedures, managerial practices, and/or structural features that prevent or reduce adverse impacts to waters of Washington State.

This section outlines BMPs used to address long-term management of stormwater at the facility.

2.2.1 BMP Selection Process

The selection of BMPs is based on land use and the pollutant generating sources. The SWMMWW describes various land uses and activities, and the potential pollutant generating sources associated with those activities. It also identifies source control treatment BMPs that apply to specific types of pollutant sources. BMPs have selected for the facility are based on the guidelines given in the SWMMWW.

2.2.2 BMPs

The following BMPs have been selected as applicable for the facility and are implemented to the maximum extent practical.

2.2.2.1 *General Site BMPs*

Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots (BMP S407)
Stabilizing roads, parking areas, and other on-site vehicle transportation routes immediately after grading reduces erosion caused by construction traffic or stormwater runoff. The facility roads and parking areas are stabilized using gravel base. Regularly inspect the stabilized areas and add more gravel base, as required, to maintain a stable driving surface and to stabilize any areas that have eroded.

Inlet Protection (BMP C220)

Fabric inserts are located inside the lid of the catch basins trap and retain sediment. Routinely inspect, clean, and replace the inserts as needed.

Vehicle Wash Rack (BMP S431)

A cover must be installed over the vehicle wash rack to prevent stormwater from entering the

sanitary sewer system.

Maintenance Building Floor Drains (BMP S431)

The maintenance building floor slopes to four floor drains. These floor drains appropriately discharge to the sanitary sewer system.

Maintenance and Repair of Vehicles and Equipment (BMP S414)

- Inspect all incoming vehicles, parts, and equipment stored temporarily outside for leaks.
- Use drip pans or containers under parts or vehicles that drip or that are likely to drip liquids, such as during dismantling of liquid containing parts or removal or transfer of liquids. Inspect drip pans regularly to prevent accumulation of stormwater or other liquids, and dispose of any accumulated liquid appropriately.
- Remove batteries and liquids from vehicles and equipment in designated areas designed to prevent stormwater contamination. Store cracked batteries in a covered non-leaking secondary containment system.
- Remove liquids from vehicles retired for scrap.
- Empty oil and fuel filters before disposal. Provide proper disposal of used oil and fuel.
- Do not pour/convey washwater, liquid waste, or other pollutants into storm drains or to surface water.

Recycling and Disposal of Vehicle and Equipment Waste Materials (BMP S414)

This information was obtained from Ecology's Hazardous Waste & Toxics Reduction program.

Antifreeze

Store separately for resale. Separate ethylene glycol from propylene glycol for off-site recycling. If not recyclable, send to Treatment, Storage, and Disposal Facility (TSDF) for disposal.

Batteries

INTACT: Accumulate under cover prior to sale, deliver to recycler, or return to manufacturer.

BROKEN: Accumulate acid from broken batteries in resistant containers with secondary containment. Send to TSDF for disposal.

Brake fluid

Accumulate in separate, marked, closed container. Do not mix with waste oil. Recycle.

Fuel

Store gasoline and diesel separately for use or resale. Mixtures of diesel, gasoline, oil, and other fluids may not be recyclable and may require expensive disposal.

Fuel filters

Drain fluids for use as product. With approval of local landfill operator, dispose to dumpster, if needed.

Oil filters

Puncture the filter dome and drain it for 24 hours. Put oil drained from filters into your "USED OIL ONLY" container. Keep drained filters in a separate container marked "USED OIL FILTERS ONLY."

Locate a scrap metal dealer who will pick up and recycle your filters. With approval of local landfill operator, dispose of drained filters to dumpster.

Paint

Accumulate oil-based and water-based paints separately for use or resale. If not recyclable, send accumulations to TSD for disposal.

Power steering fluid

Same as for used oils.

Shop towels/oily rags

Use cloth towels that can be laundered and reused. Accumulate used shop towels in a closed container. Sign up with an industrial laundry service that can recycle your towels.

Solvents

Consider using less hazardous solvents or switching to a spray cabinet that doesn't use solvent. Accumulate solvents separately. Consider purchasing your own solvent still and recycling solvent on site. Do not mix with used oil. Do not evaporate as a means of disposal.

Transmission oil, differential and rear end fluids

Accumulate in your "USED OIL ONLY" container. Arrange for pickup for off-site recycling.

Used oils; including, crankcase oil, transmission oil, power steering fluid and differential/rear end oil

Keep used oil in a separate container marked "USED OIL ONLY." Do not mix with brake fluid, or used antifreeze. Arrange for pickup for off-site recycling.

Windshield washer fluid

Accumulate separately for use or resale. Discharge to on-site sewage disposal, or, if acceptable by the local sewer authority, discharge to sanitary sewer.

Formation of a Pollution Prevention Team (BMP S453)

The stormwater manager and the operations superintendent are responsible for stormwater pollution control. They hold meetings a minimum of two times per year to review the overall operation of the BMPs. Responsibilities are established for inspections, operation and maintenance, and availability for emergency situations. Team members are trained in the operation, maintenance and inspections of BMPs, and reporting procedures.

The pollution prevention team (PPT) leader is the City’s stormwater manager. Every operational employee shall receive training in the site BMPs and goals of the maintenance plan, spill prevention and control, good housekeeping, and significant materials management practices.

Senior Engineer and Stormwater Manager, PPT Leader: Catherine Morey, P.E. Phone: (360) 423-6590 ext. 3323
Operations Superintendent: Randy Johnson Phone: (360) 957-3359

Good Housekeeping (BMP S454)

- Clean oils, debris, sludge, etc. from all stormwater facilities regularly, including catch basins, settling/detention basins, oil/water separators, boomed areas, and conveyance systems to prevent the contamination of stormwater.
- 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, oil/water separators, boomed areas, and conveyance systems, to prevent the contamination of stormwater.
- Promptly repair or replace all leaking connections, pipes, hoses, valves, containment systems, etc. which can contaminate stormwater.
- Use drip pans to collect leaks and spills from equipment, trucks, and other vehicles stored outside.
- Ensure that floor drains in the maintenance building continue to be connected to sanitary sewer.

The following are recommended additional good housekeeping BMPs:

- Continue the availability of the spill kits that are presently in place.
- Clean up pollutant liquid spills in impervious uncovered areas at the end of each working day.
- Use solid absorbents, e.g., clay (kitty litter) and peat absorbents and rags for cleanup of

liquid spills/leaks, where practicable.

Preventive Maintenance (BMP S454)

- Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water, or to storm drains that 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 the vehicle wash rack.
- Pressure wash impervious surfaces contaminated with oils, metals, sediment, etc. Collect the resulting washwater for proper disposal by plugging the catch basin and pumping or vactoring washwater for discharge to sanitary sewer.
- Do not pave over contaminated soil unless it has been determined that ground water has not been and will not be contaminated by the soil. Call Ecology for assistance.
- Construct impervious areas that are compatible with the materials handled. Portland cement concrete, asphalt, or equivalent material may be considered.
- Use drip pans to collect leaks and spills from industrial/commercial equipment, trucks and other vehicles which are stored outside.
- 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 per BMP S427.
- 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 roof or otherwise covered to prevent rainwater from entering or leaving the container.
- Where exposed to stormwater, use containers, piping, tubing, pumps, fittings, and valves that are appropriate for their intended use and for the contained liquid.

The following are recommended additional preventive maintenance BMPs:

- Where feasible, store potential stormwater pollutant materials inside a building or under a cover and/or containment.
- Minimize use of toxic cleaning solvents, such as chlorinated solvents, and other toxic

chemicals.

- Use environmentally safe raw materials, products, additives, etc. such as substitutes for zinc used in rubber production.
- Recycle waste materials such as solvents, coolants, oils, degreasers, and batteries to the maximum extent feasible.
- Empty drip pans immediately after a spill or leak is collected in an uncovered area.

Additional Maintenance Guidelines:

Weed control

- Weed and grasses control will consist of herbicide spraying and mechanical removal, such as weed eating. Typical weeds requiring control are white-tipped clover, dandelions, Scotch broom, and blackberries. Weed control by herbicide spraying is performed in areas not practical to mow.
- Weed control by herbicide spraying *is not* allowed in the ditches.
- Weed control by herbicide spraying *is* allowed in the following locations:
 - Next to building foundations
 - At fence lines
- The following herbicides will be used by the City and the application rate shall not be more than the manufacturer's recommendations:
 - Round-up (Glyphosate)
 - Crossbow (triclopyr + 2,4-D ester)
 - DuPont Oust
- Herbicides will be applied once a year in the spring and the conditions shall be early in the morning without wind or rain.

Spill Prevention and Cleanup (BMP S455)

- Immediately upon discovery, stop, contain, and clean up all spills.
- Keep spill containment and cleanup kits readily accessible. Location of spills kits are marked on Figure 1.
- If the spill has reached or may reach a sanitary or a storm sewer, ground water, or surface water notify Ecology and the local sewer authority immediately. Notification must comply with federal spill reporting requirements.
- Do not flush or otherwise direct absorbent materials or other spill cleanup materials to a storm drain. Collect the contaminated absorbent material as a solid and place in appropriate disposal containers.

The following is a recommended additional spill prevention and cleanup BMP:

Place and maintain emergency spill containment and cleanup kit(s) at outside areas where there is a potential for fluid spills. These kits should be appropriate for the materials being handled and the size of the potential spill. Locate spill kits within 25 feet of all fueling/fuel transfer areas, including on-board mobile fuel trucks.

Note: Ecology recommends that the kit(s) include salvage drums or containers, such as high-density polyethylene, polypropylene or polyethylene sheet-lined steel; polyethylene or equivalent disposal bags; an emergency response guidebook; safety gloves/clothes/equipment; shovels or other soil removal equipment; and oil containment booms and absorbent pads; all stored in an impervious container.

Employee Training (BMP S456)

Train all employees that work in pollutant source areas in identifying pollutant sources and in understanding pollutant control measures, spill response procedures, and environmentally acceptable material handling practices, particularly those practices related to vehicle/equipment liquids such as fuels, and vehicle/equipment cleaning. Use Ecology's "Guidance Manual for Preparing/Updating a Stormwater Pollution Prevention Plan for Industrial Facilities" (Publication Number 04-10-030) as a training reference.

Inspections (BMP S457)

A member of the Pollution Prevention Team will conduct visual inspections monthly to achieve the following:

- Verify that the descriptions of the pollutant sources identified in the stormwater pollution control program are accurate.
- Verify the performance of the stormwater operational and structural source controls and the treatment BMPs.
- Assess all BMPs that have been implemented for effectiveness and needed maintenance and locate areas where additional BMPs are needed.
- Reflect current conditions on the site.
- Include written observations of the presence of floating materials, suspended solids, oil and grease, discoloration, turbidity and odor in the stormwater discharges; in outside vehicle maintenance/repair; and liquid handling, and storage areas. In areas where acid or alkaline materials are handled or stored, use a simple litmus or pH paper to identify those types of stormwater contaminants where needed.
- Eliminate or obtain a permit for unpermitted non-stormwater discharges to storm drains or receiving waters such as process wastewater and vehicle/equipment washwater.
- Identify actions to address inspection deficiencies.

Additional Inspection Guidelines:

Perform an inspection of the stormwater system (ditches) annually in April and after significant storm events. A significant storm event is 2.54 inches in a 24-hour period.

Inspection reports are located in Appendix A.

Record Keeping (BMP S458)

Retain the following reports for five years:

- Visual inspection reports which should include: time and date of the inspection, locations inspected, statement on status of compliance with the permit, summary report of any remediation activities required, name, title, and signature of person conducting the inspection.
- Reports on spills of oil or hazardous substances in greater than Reportable Quantities (Code of Federal Regulations Title 40 Parts 302.4 and 117), including the following: antifreeze, oil, gasoline, or diesel fuel, that causes a violation of the State of Washington's Water Quality Standards, a film or sheen upon or discoloration of the waters of the State or adjoining shorelines, a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.
- To report a spill or to determine if a spill is a substance of a Reportable Quantity, call the Ecology regional office and ask for an oil spill operations or a hazardous waste specialist:

Southwest Region (360) 407-6300

In addition, call the Washington Emergency Management Division at 800-258-5990 AND the National Response Center at 800-424-8802.

Also, refer to Emergency Spill Response in Washington State, Publication #97-1165-CP.

The following is an additional recommended record keeping BMP:

Maintain records of all related pollutant control and pollutant generating activities such as training, materials purchased, material use and disposal, maintenance performed, etc..

2.2.2.2 Pollutant Source-Specific BMPs***BMPs for Dust Control at Unpaved Parking Lots (BMP S407)*****Description of Pollutant Sources:**

Dust can cause air and water pollution problems.

Pollutant Control Approach:

Minimize dust generation, and apply environmentally friendly and government approved dust

suppressant chemicals, if necessary.

Applicable Operational BMPs:

- Sprinkle or wet down soil or dust with water as long as it does not result in a wastewater discharge.
- Use only local and/or state government approved dust suppressant chemicals such as those listed in Ecology Publication #96-433, “Techniques for Dust Prevention and Suppression.”
- Protect inlets/catch basins during application of dust suppressants.
- Avoid excessive and repeated applications of dust suppressant chemicals. Time the application of dust suppressants to avoid or minimize their wash-off by rainfall or human activity such as irrigation.
- Apply stormwater containment to prevent the conveyance of stormwater TSS into storm drains or receiving waters.
- The use of motor oil for dust control is prohibited. Care should be taken when using lignin derivatives and other high BOD chemicals in excavations or areas easily accessible to surface water or ground water.
- Consult with the Ecology Regional Office on discharge Permit requirements if the dust suppression process results in a wastewater discharge to the ground, ground water, storm drain, or surface water.

Additional Recommended Operational BMPs for Dust Generating Areas:

- Prepare a dust control plan. Helpful references include: Control of Open Fugitive Dust Sources (EPA- 450/3-88-088), and Fugitive Dust Background Document and Technical Information Document for Best Available Control Measures (EPA-450/2-92-004)
- Limit exposure of soil (dust source) as much as feasible.
- Stabilize dust-generating soil by growing and maintaining vegetation, mulching, topsoiling, and/or applying stone, sand, or gravel.
- Apply windbreaks in the soil such as trees, board fences, tarp curtains, bales of hay, etc.. Cover dust-generating piles with wind-impervious fabric or equivalent material.

BMPs for Illicit Connections to Storm Drains (BMP S410)

Description of Pollutant Sources:

Illicit connections are unpermitted sanitary or process wastewater discharges to a storm drain or to a surface water, rather than to a sanitary sewer, industrial process wastewater or other appropriate treatment. They can also include cleaning solutions and washwaters.

Pollutant Control Approach:

Identify and eliminate unpermitted discharges.

Applicable Operational BMPs:

- Eliminate unpermitted wastewater discharges to storm drains, ground water, or surface water; and, convey unpermitted discharges to a sanitary sewer if allowed by the local sewer authority.
- Obtain appropriate permits for these discharges.

BMPs for Maintenance and Repair of Vehicles and Equipment (BMP S414)**Description of Pollutant Sources:**

Pollutant sources include parts/vehicle cleaning, spills/leaks of fuel and other liquids, replacement of liquids, outdoor storage of batteries/liquids/parts, and vehicle parking.

Pollutant Control Approach:

Control of leaks and spills of fluids using good housekeeping and cover and containment BMPs.

Applicable Operational BMPs:

- Inspect incoming vehicles, parts, and equipment stored temporarily outside for leaks.
- Use drip pans or containers under parts or vehicles that drip or that are likely to drip liquids, such as during dismantling of liquid containing parts or removal or transfer of liquids.
- Remove batteries and liquids from vehicles and equipment in designated areas designed to prevent stormwater contamination. Store cracked batteries in a covered non-leaking secondary containment system.
- Remove liquids from vehicles retired for scrap.
- Empty oil and fuel filters before disposal. Provide for proper disposal of waste oil and fuel.
- Do not pour/convey washwater, liquid waste, or other pollutants into storm drains or to surface water. Check with the local sanitary sewer authority for approval to convey water to a sanitary sewer.
- Do not connect maintenance and repair shop floor drains to storm drains or to surface water.

Applicable Structural Source Control BMPs:

- Conduct all maintenance and repair of vehicles and equipment inside a building, or other covered impervious containment area that is sloped to prevent run-on of uncontaminated

stormwater and runoff of contaminated stormwater.

- Park large mobile equipment in a designated contained area.

Applicable Treatment BMPs:

Contaminated stormwater runoff from vehicle staging and maintenance areas must be conveyed to a sanitary sewer, if allowed by the local sewer authority, or to an API or CP oil and water separator followed by a basic treatment BMP, applicable filter, or other equivalent oil treatment system.

Recommended Additional Operational BMPs:

- Store damaged vehicles inside a building or other covered containment, until all liquids are removed.
- Clean parts with aqueous detergent-based solutions or non-chlorinated solvents such as kerosene or high flash mineral spirits, and/or use wire brushing or sand blasting whenever practicable. Avoid using toxic liquid cleaners such as methylene chloride, 1,1,1-trichloroethane, trichloroethylene or similar chlorinated solvents. Choose cleaning agents that can be recycled.
- Inspect all BMPs regularly, particularly after a significant storm. Identify and correct deficiencies to ensure that the BMPs are functioning as intended.
- Avoid hosing down work areas. Use dry methods for cleaning leaked fluids.
- Recycle greases, used oil, oil filters, antifreeze, cleaning solutions, automotive batteries, hydraulic fluids, transmission fluids, and engine oils.
- Do not mix dissimilar or incompatible waste liquids stored for recycling.

BMPs for Maintenance of Roadside Ditches (BMP S416)

Description of Pollutant Sources:

Common road debris including eroded soil, oils, vegetative particles, and heavy metals can be sources of stormwater pollutants.

Pollutant Control Approach:

Maintain roadside ditches to preserve the condition and capacity for which they were originally constructed, and to minimize bare or thinly vegetated ground surfaces. Maintenance practices should provide for erosion and sediment control.

Applicable Operational BMPs:

- Inspect roadside ditches regularly, as needed, to identify sediment accumulations and localized erosion. Clean ditches on a regular basis, as needed. Ditches should be kept free of rubbish and debris.

- Vegetation in ditches often prevents erosion and cleanses runoff waters. Remove vegetation only when flow is blocked or excess sediments have accumulated. Conduct ditch maintenance (seeding, fertilizer application, harvesting) in late spring and/or early fall, where possible. This allows re-establishment of vegetative cover by the next wet season thereby minimizing erosion of the ditch as well as making the ditch effective as a biofilter.
- Establish grass vegetation from the edge of the pavement to the bottom of the ditch, if possible.
- Do not leave ditch cleanings on the roadway surfaces. Sweep, collect and dispose of dirt and debris that remains on the pavement at the completion of ditch cleaning operations.
- Roadside ditch cleanings, not contaminated by spills or other releases and not associated with a stormwater treatment system such as a bioswale, may be screened to remove litter and separated into soil and vegetative matter (leaves, grass, needles, branches, etc.). The soil fraction may be handled as ‘clean soils’ and the vegetative matter can be composted or disposed of in a municipal waste landfill.
- Roadside ditch cleanings contaminated by spills or other releases known or suspected to contain dangerous waste must be handled following the Dangerous Waste Regulations (Chapter 173-303 WAC) unless testing determines it is not dangerous waste.

BMPs for Parking and Storage of Vehicles and Equipment (BMP S421)

Description of Pollutant Sources:

Parking lots can be sources of toxic hydrocarbons and other organic compounds, including oils and greases, metals, and suspended solids caused by the parked vehicles.

Pollutant Control Approach:

If the parking lot is a **high-use site** as defined below, provide appropriate oil removal equipment for the contaminated stormwater runoff.

Applicable Operational BMPs:

Do not hose down the area to a storm drain or to a receiving water. Sweep parking lots, storage areas, and driveways, regularly to collect dirt, waste, and debris.

Applicable Treatment BMPs:

An oil removal system such as an API or CP oil and water separator, catch basin filter, or equivalent BMP, approved by the local jurisdiction, is applicable for parking lots meeting the threshold vehicle traffic intensity level of a *high-use site*.

Vehicle High-Use Sites

A high-use site at a commercial or industrial establishment has one of the following characteristics:

- Is subject to an expected average daily vehicle traffic (ADT) count equal to or greater than 100 vehicles per 1,000 square feet of gross building area; or
- Is subject to petroleum storage and transfer in excess of 1,500 gallons per year; or
- Is subject to storage of a fleet of 25 or more diesel vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.).

BMPs for Washing and Steam Cleaning Vehicles/ Equipment/ Building Structures (BMP S431)

Description of Pollutant Sources:

Vehicles, and large buildings may be commercially cleaned with low- or high-pressure water or steam. The cleaning can include hand washing, scrubbing, sanding, etc.. Washwater from cleaning activities can contain oil and grease, suspended solids, heavy metals, soluble organics, soaps, and detergents that can contaminate stormwater.

Pollutant Control Approach:

The preferred approach is to cover and/or contain the cleaning activity, or conduct the activity inside a building, to separate the uncontaminated stormwater from the pollutant sources. Washwater must be conveyed to a sanitary sewer after approval by the local sewer authority, temporarily stored before proper disposal, or recycled, with no discharge to the ground, to a storm drain, or to surface water.

Applicable Structural Source Control BMPs:

- At the vehicle wash rack that drains to the sanitary sewer, a cover or other device to keep stormwater from entering the sanitary sewer system must be installed and maintained.
- Conduct outside washing operations with the following features:
 - For equipment washing at the vehicle wash rack, convey the washwater to a sump (like a grit separator) and then to a sanitary sewer (if allowed by the local Sewer Authority), or other appropriate wastewater treatment or recycle system. An NPDES permit may be required for any washwater discharge to a storm drain or receiving water after treatment. Contact the Ecology regional office for NPDES Permit requirements.
 - Collect the washwater from building structures and convey it to appropriate treatment such as a sanitary sewer system if it contains oils, soaps, or detergents, where feasible. If the washwater does not contain oils, soaps, or detergents then it could drain to soils that have sufficient natural attenuation capacity for dust and sediment.

Recommended Additional BMPs:

- The vehicle wash area should be well marked.
- Minimize the use of water and detergents in washing operations when practicable.

- Use phosphate-free biodegradable detergents when practicable. Consider recycling the washwater. Because soluble/emulsifiable detergents can be used in the wash medium, the selection of soaps and detergents and treatment BMPs should be considered carefully. Oil/water separators are ineffective in removing emulsified or water-soluble detergents.

BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products (BMP S429)

Description of Pollutant Sources:

Solid raw materials, by-products, or products such as gravel, sand, salts, topsoil, compost, logs, sawdust, wood chips, lumber and other building materials, concrete, and metal products sometimes are typically stored outside in large piles, stacks, etc. at commercial or industrial establishments. Contact of outside bulk materials with stormwater can cause leachate, and erosion of the stored materials. Contaminants include TSS, BOD, organics, and dissolved salts (sodium, calcium, and magnesium chloride, etc.).

Pollutant Control Approach:

Provide impervious containment with berms, dikes, etc. and/or cover to prevent run-on and discharge of leachate pollutant(s) and TSS.

Applicable Operational BMP:

Do not hose down the contained stockpile area to a storm drain or a conveyance to a storm drain or to a receiving water.

Applicable Structural Source Control BMP Options:

Choose one or more of the source control BMP options listed below for stockpiles greater than 5 cubic yards of erodible or water-soluble materials such as soil, road deicing salts, compost, unwashed sand and gravel, sawdust, etc. Also included are outside storage areas for solid materials such as logs, bark, lumber, metal products, etc.

- Pave the area and install a stormwater drainage system. Place curbs or berms along the perimeter of the area to prevent the run-on of uncontaminated stormwater and to collect and convey runoff to treatment. Slope the paved area in a manner that minimizes the contact between stormwater (e.g., pooling) and leachable materials in compost, logs, bark, wood chips, etc.
- Place temporary plastic sheeting.
- For large stockpiles that cannot be covered, implement containment practices at the perimeter of the site and at any catch basins as needed to prevent erosion and discharge of the stockpiled material offsite or to a storm drain. Ensure that contaminated stormwater is not discharged directly to catch basins without conveying through a treatment BMP.

Applicable Treatment BMP:

Convey contaminated stormwater from the stockpile area to a wet pond, wet vault, settling basin, media filter, or other appropriate treatment system.

Recommended Additional Operational BMPs:

Maintain drainage areas in and around storage of solid materials with a minimum slope of 1.5 percent to prevent pooling and minimize leachate formation. Areas should be sloped to drain stormwater to the perimeter where it can be collected, or to internal drainage “alleyways” where material is not stockpiled.

Additional Guidelines:

See Appendix B for recommendations for management of street wastes, from the SWMMWW.

3. North 3rd Avenue Stockpile Site

The following sections include descriptions of the City’s North 3rd Avenue stockpile site and the BMPs utilized at the site.

3.1 Site Description

The City utilizes right-of-way land immediately north of 607 North 3rd Avenue, between North 3rd Avenue and North Kelso Avenue, to stockpile topsoil. The site is located in a neighborhood zoned for residential single-family homes with lot sizes up to 5,000 square feet. The site consists entirely of vegetation and pervious surface. The site contains slopes of up to 10 percent from the southwest to northeast direction; The site has slopes as steep as 30 percent on the northwest side of the site, parallel to North Kelso Avenue.

The total site area is approximately 15,000 square feet; The area used for soil stockpiling is approximately 2,000 square feet. The largest amount of soil stockpiled at any given time is approximately 500 cubic yards.

3.1.1 Stormwater System

There is no stormwater system on site. Stormwater from the site flows overland to catch basins on North Kelso Avenue

3.1.2 Maintenance, Inspection and Revision Forms

A number of maintenance and inspection forms are included in the appendices. Appendix C consists of worksheets that describe the pollution prevention team, lists the stockpiled outdoor materials, lists the BMP identification and implementation, lists employee training and more. Appendix D includes inspection forms and Appendix G contains an inspection and maintenance schedule. Appendix I contains the Review and Revision Documentation form. This SWPPP and revision form are to be updated whenever there is a change in design, construction, operation, or maintenance which cause(s) the SWPPP to be less effective in controlling the pollutants.

3.1.3 Site Maps

Figure 2 shows the overall layout of the site, the soil stockpile locations, and the drainage patterns.

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FIGURE 2
North 3rd Avenue Stockpile Site Map



LEGEND

- Site Boundary
- Catch Basin
- ~ Overland Flow Direction

TOPSOIL STOCKPILE

TOPSOIL STOCKPILE

N KELSO AVENUE

N 3RD AVENUE

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3.1.4 Potential Pollutants

The loading and unloading of topsoil are the only activities taking place on site with pollution potential. The pollutant associated with these activities is TSS.

3.1.5 Receiving Water

The stormwater flows through stormwater pipes and is conveyed to Drainage Improvement District #1's Redpath Pump Station. This pump station conveys stormwater into the Cowlitz River. The receiving water is the Cowlitz River.

3.2 Best Management Practices

This section outlines BMPs used to address long-term management of stormwater at the North 3rd Avenue stockpile site.

3.2.1 BMP Selection Process

The selection of BMPs is based on land use and the pollutant generating sources. BMPs have selected for the site are based on the guidelines given in the SWMMWW.

3.2.2 BMPs

The following BMPs have been selected as applicable for the site and are implemented to the maximum extent practical.

3.2.2.1 *General Site BMPs*

Silt Fence (BMP C233)

Silt fence is installed downhill, where overland flow leaves the site, to provide stormwater treatment prior discharge. If the silt fence becomes damaged, it will be replaced.

Formation of a Pollution Prevention Team (BMP S453)

The stormwater manager and the operations superintendent are responsible for stormwater pollution control. They hold meetings a minimum of two times per year to review the overall operation of the BMPs. Responsibilities are established for inspections, operation and maintenance, and availability for emergency situations. Team members are trained in the operation, maintenance and inspections of BMPs, and reporting procedures.

The PPT leader is the City's stormwater manager. Every operational employee shall receive training in the site BMPs.

Senior Engineer and Stormwater Manager, PPT Leader: Catherine Morey, P.E.

Phone: (360) 423-6590 ext. 3323

Operations Superintendent: Randy Johnson

Phone: (360) 957-3359

Good Housekeeping (BMP S454)

Clean sediment from all stormwater facilities regularly, including catch basins, interceptor dikes, and silt fences, to prevent the contamination of stormwater.

Preventive Maintenance (BMP S454)

Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water, or to storm drains that discharge to surface water, or to the ground.

Employee Training (BMP S456)

Train all employees that work in pollutant source areas in identifying pollutant sources and in understanding pollutant control measures, spill response procedures, and environmentally acceptable material handling practices.

Inspections (BMP S457)

A member of the Pollution Prevention Team will conduct visual inspections quarterly to achieve the following:

- Verify that the descriptions of the pollutant sources identified in the stormwater pollution control program are accurate.
- Verify the performance of the stormwater operational and structural source controls and the treatment BMPs.
- Assess all BMPs that have been implemented for effectiveness and needed maintenance and locate areas where additional BMPs are needed.
- Reflect current conditions on the site.
- Include written observations of the presence of floating materials, suspended solids, oil and grease, discoloration, turbidity and odor in the stormwater discharges in storage areas.
- Identify actions to address inspection deficiencies.

Record Keeping (BMP S458)

Retain the following reports for five years:

- Visual inspection reports which should include: time and date of the inspection, locations inspected, statement on status of compliance with the permit, summary report of any remediation activities required, name, title, and signature of person conducting the inspection.

The following is an additional recommended record keeping BMP:

Maintain records of all related pollutant control and pollutant generating activities such as training, materials purchased, material use and disposal, maintenance performed, etc..

3.2.2.2 Pollutant Source-Specific BMPs

BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products (BMP S429)

Description of Pollutant Sources:

Solid raw materials, by-products, or products such as gravel, sand, salts, topsoil, compost, logs, sawdust, wood chips, lumber and other building materials, concrete, and metal products sometimes are typically stored outside in large piles, stacks, etc. at commercial or industrial establishments. Contact of outside bulk materials with stormwater can cause leachate, and erosion of the stored materials. Contaminants include TSS, BOD, organics, and dissolved salts (sodium, calcium, and magnesium chloride, etc.).

Pollutant Control Approach:

Provide impervious containment with berms, dikes, etc. and/or cover to prevent run-on and discharge of leachate pollutant(s) and TSS.

Applicable Operational BMP:

Do not hose down the contained stockpile area to a storm drain or a conveyance to a storm drain or to a receiving water.

Applicable Structural Source Control BMP Options:

Choose one or more of the source control BMP options listed below for stockpiles greater than 5 cubic yards of erodible or water-soluble materials such as soil, road deicing salts, compost, unwashed sand and gravel, sawdust, etc. Also included are outside storage areas for solid materials such as logs, bark, lumber, metal products, etc.

- Pave the area and install a stormwater drainage system. Place curbs or berms along the perimeter of the area to prevent the run-on of uncontaminated stormwater and to collect and convey runoff to treatment. Slope the paved area in a manner that minimizes the contact between stormwater (e.g., pooling) and leachable materials in compost, logs, bark, wood chips, etc.
- Place temporary plastic sheeting.
- For large stockpiles that cannot be covered, implement containment practices at the perimeter of the site and at any catch basins as needed to prevent erosion and discharge of the stockpiled material offsite or to a storm drain. Ensure that contaminated stormwater is not discharged directly to catch basins without conveying through a treatment BMP.

Topsoiling / Composting (BMP C125)

Stockpiling of topsoil shall occur in the following manner:

- Side slopes of the stockpile shall not exceed 2H:1V.
- Between October 1 and April 30:
 - An interceptor dike with gravel outlet and silt fence shall surround all topsoil.
 - Within 2 days complete erosion control seeding, or covering stockpiles with clear plastic, or other mulching materials.
- Between May 1 and September 30:
 - An interceptor dike with gravel outlet and silt fence shall surround all topsoil if the stockpile will remain in place for a longer period of time than active construction grading.
 - Within 7 days complete erosion control seeding, or covering stockpiles with clear plastic, or other mulching materials.

4. Talley Way Stockpile Site

The following sections include descriptions of the City's Talley Way stockpile site and the BMPs utilized at the site.

4.1 Site Description

The City uses a City-owned parcel number 2408727 on Talley Way to temporarily store construction excavation debris and soil. This land is immediately south of 2510 Talley Way, and is located in between Talley Way and the Consolidated Diking Improvement District No. 3's (CDID No. 3) dike. The site is located in an area zoned for light-industrial properties. The site contains slopes of up to 5 percent, with all sides of the site graded towards the center of the site.

The site consists of a drying pit, soil stockpiles, gravel roads, and some vegetation. The City places construction excavation debris from water infrastructure replacement projects into the drying pit to dry. Once water has infiltrated into the ground or evaporated, the dry debris is moved to a material stockpile. At the end of the summer, the material is sifted through separate the construction debris and the topsoil. The debris is brought to the dump and the topsoil is transported to the City's North 3rd Avenue stockpile site. It should be noted that sewer infrastructure excavation debris is never brought to the Talley Way site; The City transports all sewer debris to the Three Rivers Regional Wastewater Treatment Plant.

The total parcel area is approximately 115 acres. The total disturbed area is approximately 75,000 square feet; The area used for soil stockpiling is approximately 13,000 square feet. The largest amount of soil stockpiled at any given time is approximately 1,500 cubic yards.

4.1.1 Stormwater System

There is no stormwater system on site. Stormwater from the site flows towards the center of the site and infiltrates into the ground.

4.1.2 Maintenance, Inspection and Revision Forms

Appendix E consists of worksheets that describe the pollution prevention team, lists the stockpiled outdoor materials, lists the BMP identification and implementation, lists employee training and more. Appendix F includes inspection forms and Appendix G contains an inspection and maintenance schedule. Appendix I contains the Review and Revision Documentation form. This SWPPP and revision form are to be updated whenever there is a change in design, construction, operation, or maintenance which cause(s) the SWPPP to be less effective in controlling the pollutants.

4.1.3 Site Maps

Figure 3 shows the overall layout of the site, the soil stockpile locations, and the drainage patterns.

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FIGURE 3
Talley Way Stockpile Site Map



MATERIAL STOCKPILES

DRYING PIT

MATERIAL STOCKPILES

TALLEY WAY

CDID NO. 3 DIKE

LEGEND
- - - Disturbed Area Boundary
~ Overland Flow Direction



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4.1.4 Potential Pollutants

The loading and unloading of construction debris and soil are the only activities taking place on site with pollution potential. The pollutant associated with these activities is TSS.

4.2 Best Management Practices

This section outlines BMPs used to address long-term management of stormwater at the Talley Way stockpile site.

4.2.1 BMP Selection Process

The selection of BMPs is based on land use and the pollutant generating sources. BMPs have selected for the site are based on the guidelines given in the SWMMWW

4.2.2 BMPs

The following BMPs have been selected as applicable for the site and are implemented to the maximum extent practical.

4.2.2.1 General Site BMPs

Stabilized Construction Access (BMP C105)

Stabilized construction accesses are established to reduce the amount of sediment transported onto paved roads outside the site by vehicles or equipment.

Formation of a Pollution Prevention Team (BMP S453)

The stormwater manager and the operations superintendent are responsible for stormwater pollution control. They hold meetings a minimum of two times per year to review the overall operation of the BMPs. Responsibilities are established for inspections, operation and maintenance, and availability for emergency situations. Team members are trained in the operation, maintenance and inspections of BMPs, and reporting procedures.

The PPT leader is the City's stormwater manager. Every operational employee shall receive training in the site BMPs.

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Operations Superintendent: Randy Johnson
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Phone: (360) 957-3359

Preventive Maintenance (BMP S454)

Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water, or to storm drains that discharge to surface water, or to the ground.

Employee Training (BMP S456)

Train all employees that work in pollutant source areas in identifying pollutant sources and in understanding pollutant control measures, spill response procedures, and environmentally acceptable material handling practices.

Inspections (BMP S457)

A member of the Pollution Prevention Team will conduct visual inspections quarterly to achieve the following:

- Verify that the descriptions of the pollutant sources identified in the stormwater pollution control program are accurate.
- Verify the performance of the stormwater operational and structural source controls and the treatment BMPs.
- Assess all BMPs that have been implemented for effectiveness and needed maintenance and locate areas where additional BMPs are needed.
- Reflect current conditions on the site.
- Include written observations of the presence of floating materials, suspended solids, oil and grease, discoloration, turbidity and odor in the stormwater discharges in storage areas.
- Identify actions to address inspection deficiencies.

Record Keeping (BMP S458)

Retain the following reports for five years:

- Visual inspection reports which should include: time and date of the inspection, locations inspected, statement on status of compliance with the permit, summary report of any remediation activities required, name, title, and signature of person conducting the inspection.

The following is an additional recommended record keeping BMP:

Maintain records of all related pollutant control and pollutant generating activities such as training, materials purchased, material use and disposal, maintenance performed, etc..

4.2.2.2 Pollutant Source-Specific BMPs

BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products (BMP S429)

Description of Pollutant Sources:

Solid raw materials, by-products, or products such as gravel, sand, salts, topsoil, compost, logs,

sawdust, wood chips, lumber and other building materials, concrete, and metal products sometimes are typically stored outside in large piles, stacks, etc. at commercial or industrial establishments. Contact of outside bulk materials with stormwater can cause leachate, and erosion of the stored materials. Contaminants include TSS, BOD, organics, and dissolved salts (sodium, calcium, and magnesium chloride, etc.).

Pollutant Control Approach:

Provide impervious containment with berms, dikes, etc. and/or cover to prevent run-on and discharge of leachate pollutant(s) and TSS.

Applicable Operational BMP:

Do not hose down the contained stockpile area to a storm drain or a conveyance to a storm drain or to a receiving water.

Applicable Structural Source Control BMP Options:

Choose one or more of the source control BMP options listed below for stockpiles greater than 5 cubic yards of erodible or water-soluble materials such as soil, road deicing salts, compost, unwashed sand and gravel, sawdust, etc. Also included are outside storage areas for solid materials such as logs, bark, lumber, metal products, etc.

- Pave the area and install a stormwater drainage system. Place curbs or berms along the perimeter of the area to prevent the run-on of uncontaminated stormwater and to collect and convey runoff to treatment. Slope the paved area in a manner that minimizes the contact between stormwater (e.g., pooling) and leachable materials in compost, logs, bark, wood chips, etc.
- Place temporary plastic sheeting.
- For large stockpiles that cannot be covered, implement containment practices at the perimeter of the site and at any catch basins as needed to prevent erosion and discharge of the stockpiled material offsite or to a storm drain. Ensure that contaminated stormwater is not discharged directly to catch basins without conveying through a treatment BMP.

5. Spill Prevention and Response

The structural and operational BMPs listed in Section 2 are utilized to prevent spills. In the event of a spill, Public Works staff have been trained on spill response through Illicit Discharge Detection and Elimination training. Spill response basics are described below.

- i. For major spills that cannot be controlled or cleaned up using spill kits available on City vehicles or at the Facility, call 911 for assistance. For minor spills, respond as detailed below.
- ii. Notify the Public Works Superintendent or the Stormwater Manager for spills on

municipal streets and alleys for internal reporting, assistance, and/or direction for traffic safety, street surface damage, and/or cleanup assistance.

iii. When responding to liquid spills, the best practice to manage waste from cleanup activities is to first clean up the hotspot areas (those with free liquids on the surface) separately from residual stains. Sand or sorbents applied on residual stains can usually be characterized and managed separately.

- Absorb the hotspot area of free liquid with sorbent material, then place the material in a heavy-duty plastic bag and label on it the date, “City of Kelso”, spill source, and the phrase “Non-Regulated Material, Solid”, followed by the specific sorbent type then the spilled liquid type.

Example:

*12/31/2022
City of Kelso
Spill from 38-500*

Non-Regulated Material, Solid – Sorbent Pads and Hydraulic Oil

- Take the bagged material to the designated storage container for disposal and notify the Public Works Superintendent and the Stormwater Manager of the quantity of waste generated from the spill.
- Any remaining residual liquid that cannot be absorbed may need sand spread over for traction purposes. Place motorcycle-related warning signs, as needed, until the street sweeper is ready to sweep up the sand. This sand can be combined with normal street sweeping material.

iv. Further guidance can be found in the *BMPs for Spills of Oil and Hazardous Substances*.

6. References

Stormwater Management Manual for Western Washington. State of Washington Department of Ecology (Ecology), Publication 19-10-021, 2019.

“Western Washington Phase II Municipal Stormwater Permit”. State of Washington Department of Ecology (Ecology), 2019.

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Appendix A: Maintenance Facility Worksheets

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Pollution Prevention Team

Worksheet #1: Maintenance Facility

Last Updated: 8/31/2021

(1) Responsible Official: Catherine Morey

Title: Stormwater Manager

Team Leader: Catherine Morey

Office Phone: 360-423-6590

Responsibilities: Ensuring the Public Works Department is implementing and in compliance with the City's Stormwater general permit.

(2) Randy Johnson

Title: Public Works Superintendent

Office Phone: 360-957-3359

Responsibilities: Ensure overall implementation of the Stormwater Pollution Prevention Plan (SWPPP) for Municipal Operations for the operations center/maintenance facility.

(3)

Title: _____

Office Phone: _____

Responsibilities:

(4)

Title: _____

Office Phone: _____

Responsibilities:

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Material Inventory

Worksheet #2: Maintenance Facility
Last Updated 8/31/2021

List materials handled, treated, stored, or disposed of at the site that may potentially be exposed to precipitation or runoff.

Material	Purpose/Location	Quantity (Units)			Exposed Since Jan. 2007 (Yes/No)	Likelihood of contact with stormwater? / If BMPs implemented? If Yes, describe reason	Past Spill or Leak?	
		Used	Produced	Stored			Yes	No.
		(indicate per/wk. or yr.)						
Stockpiled pea gravel	Drainage / stockpile area			100 CY		No contact likely if BMPs described in text are implemented.		X
Stockpiled sand	Fill & drainage / stockpile area			150 CY		No contact likely if BMPs described in text are implemented.		X
Coarse gravel stockpile	Fill & drainage / stockpile area			100 CY		No contact likely if BMPs described in text are implemented.		X
Fine gravel stockpile	Fill & drainage / stockpile area			50 CY		No contact likely if BMPs described in text are implemented.		X
Street & culvert debris	Trash - one bay with full stockpile, one empty bay			150 CY		No contact likely if BMPs described in text are implemented.		X
Quarry spoils	Fill			20 CY		No contact likely if BMPs described in text are implemented.		X

Potential Pollutant Source Identification

Worksheet #3: Maintenance Facility

Last Updated 8/31/2021

List all potential stormwater pollutants from materials handled, treated, or stored on-site.

Potential Stormwater Pollutant	Stormwater Pollutant Source	Likelihood of pollutant being present in your stormwater discharge. If yes, explain
TSS	Street & culvert debris	No contact likely if BMPs described in text are implemented.

Identify Areas Associated with Pollutant Generating Activity

Worksheet #5: Maintenance Facility

Last Updated 8/31/2021

List areas and activities, not included on Worksheets 2, 2A, and 3, which may be sources of pollution. Discuss the potential of these areas and activities as potential pollutant sources and identify any pollutant that may be generated by that activity.

Potential Pollutant Generating Area or Activity	Potential Stormwater Pollutant from Area or Activity	Likelihood of being present in your stormwater discharge. If yes, describe reason.
Abandoned vehicle storage	Oil, grease, other vehicle fluids	Kelso Police Department inspects vehicles temporarily stored outside for leaks. If vehicle fluids are leaking, the KPD has been instructed to use good housekeeping and containment operational BMPs.

**Non-Stormwater Discharge
Dry Weather (July, August, September)
Assessment and Certification**

Worksheet #6: Maintenance Facility

Completed by: _____

Title: _____

Date: _____

The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as domestic wastewater, non-contact cooling water, or process wastewater (including *leachate*) to the *stormwater drainage system*.

Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

Date	Discharge Location (as indicated on the site map)	Method used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non- Stormwater Discharge	Identify Potential Significant Sources	Person who Conducted the Test

CERTIFICATION

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.***

A. Name and Title

B. Phone:

C. Signature

D. Date Signed

Additional BMP Identification

Worksheet #7A: Maintenance Facility

Last Updated 8/31/2021

Describe any treatment and innovative BMPs that are required to address existing and potential pollutant sources identified in Worksheet 3, 4, and 5. These are BMPs needed to prevent the discharge of significant amounts of pollutants despite implementation of operational and source control BMPs.

BMPs	Brief Description of Activities or Improvements
Treatment BMPs	<ul style="list-style-type: none">• Gravel base throughout site shall be added, as necessary, to maintain a stable driving surface and to stabilize any areas that have eroded.• Inlet protection shall be maintained at all on-site catch basins to trap and retain sediment.• Permanent stormwater treatment facilities should be designed for the site to provide DOE-approved treatment applicable to the site use.
Emerging technologies Flow Control BMPs (if applicable)	Not applicable.

BMP Implementation**Worksheet #8: Maintenance Facility**

Last Updated 8/31/2021

Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person(s) responsible for implementation.

BMPs (In need of implementation)	Description of Action(s) Required for Implementation	Schedule Milestone and Completion Date(s)	Person Responsible for Action
Catch Basin Inserts	1. Install inlet protection (catch basin filter) on all inlets located in areas where sediments may flow into the inlet (e.g. unpaved parking lot). If the inlet protection becomes full or damaged, it will be replaced.	Ongoing	Randy Johnson
Site Stabilization	1. Gravel base throughout site shall be added, as necessary, to maintain a stable driving surface and to stabilize any areas that have eroded.	Ongoing	Randy Johnson
Recycling/ Disposal of Vehicle Fluids/ Other Wastes	1. Recycle to the maximum extent practical all vehicle fluids and other wastes. Properly dispose of all materials that cannot be recycled. See text for further information.	Ongoing	Randy Johnson
Formation of a Pollution Prevention Team	1. Form a pollution prevention team, establish responsibilities for team members. See text for further information.	Complete	
Good Housekeeping	1. Clean up spills and leaks as soon as possible. 2. Sweep regularly. 3. Clean and/or BMP systems regularly. 4. See text for further information.	Ongoing	Randy Johnson
Preventive Maintenance	1. Prevent the discharge of unpermitted liquids or solids to ground or surface water. 2. See text for further information.	Ongoing	Randy Johnson

Spill Prevention and Cleanup	<ol style="list-style-type: none"> 1. Immediately upon discovery, stop, contain, and clean up all spills. 2. Have spill containment kits readily accessible at all areas that store pollutants. 	Ongoing	Randy Johnson
Employee Training	<ol style="list-style-type: none"> 1. Train all employees that work near pollutant sources about the applicable BMPs. 	Ongoing	Catherine Morey
Inspections	<ol style="list-style-type: none"> 1. Perform routine inspections at least quarterly. 2. Perform "Dry Weather" inspections. 	As stated	Catherine Morey
Record Keeping	<ol style="list-style-type: none"> 1. Keep records for at least 5 years – visual inspection reports and spill reports. 	Ongoing	Catherine Morey
BMPs for Dust Control at Unpaved Parking Lots	<ol style="list-style-type: none"> 1. Sprinkle or wet down dust generating areas with water as long as it does not result in wastewater discharge. 	As applicable	Randy Johnson
BMPs for Illicit Connections to Storm Drains	<ol style="list-style-type: none"> 1. Identify and eliminate unpermitted discharges to the storm system. 	Ongoing	Catherine Morey
BMPs for Maintenance and Repair of Vehicles and Equipment	<ol style="list-style-type: none"> 1. Recycle vehicle wastes to the maximum extent practical. 2. Do not allow washwater from vehicle maintenance to enter the storm drain system. 3. See text for further information. 	Ongoing	Randy Johnson
BMPs for Maintenance of Roadside Ditches	<ol style="list-style-type: none"> 1. Maintain ditches on site to prevent flooding issues. 2. See text for further information. 	Ongoing	Randy Johnson
BMPs for Parking and Storage of Vehicles and Equipment	<ol style="list-style-type: none"> 1. Sweep parking lots regularly to collect dirt, waste, and debris. Do not hose down into storm system. 2. See text for further information. 	Ongoing	Randy Johnson
BMPs for Washing and Steam Cleaning Vehicles/ Equipment/ Building Structures	<ol style="list-style-type: none"> 1. Conduct vehicle/equipment washing in designated areas designed to drain to the sanitary sewer. 2. Install cover over vehicle wash rack. 3. See text for further information. 	December 2024	Randy Johnson
BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products	<ol style="list-style-type: none"> 1. Provide impervious containment with berms, dikes, etc. and/or cover to prevent stormwater contamination. 2. See text for further information. 	As applicable	Randy Johnson

Employee Training**Worksheet #9: Maintenance Facility**

Last Updated 8/31/2021

Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.

Training Topics	Brief Description of Training Program/ Materials (e.g., film, newsletter course)	Schedule for Training (list dates)	Attendees
1.) STAFF WORKERS			
Spill Prevention and Response	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
Good Housekeeping	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
Material Management Practices	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
2.) PPT:			
SWPPP Implementation	Review SWPPP	Annually	PPT Members
Monitoring Procedures	Review SWPPP	Annually	PPT Members

**RECORD OF VISUAL INSPECTIONS
of STORMWATER DISCHARGES**

Worksheet #10: Maintenance Facility

Completed by *: _____

Title: _____

Date: _____

* Must be conducted by qualified person identified in the SWPPP.

List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.

Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each. Include floatables, oil sheen, discoloration, turbidity, odor, etc.	Recommended Action Steps

Certification (Other certification document may be used as required in Section S4 of the Permit)

Certification by Responsible Company official: I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations***

Name _____

Title _____

Signature _____

Date Signed _____

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Appendix B: Maintenance Facility Inspection Forms

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**Non-Stormwater Discharge
Dry Weather (July, August, September)
Assessment and Certification**

Worksheet #6: Maintenance Facility

Completed by: _____

Title: _____

Date: _____

The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as domestic wastewater, non-contact cooling water, or process wastewater (including *leachate*) to the *stormwater drainage system*.

Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

Date	Discharge Location (as indicated on the site map)	Method used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non- Stormwater Discharge	Identify Potential Significant Sources	Person who Conducted the Test

CERTIFICATION

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.***

A. Name and Title

B. Phone:

C. Signature

D. Date Signed

**RECORD OF VISUAL INSPECTIONS
of STORMWATER DISCHARGES**

Worksheet #10: Maintenance Facility

Completed by *: _____

Title: _____

Date: _____

* Must be conducted by qualified person identified in the SWPPP.

List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.

Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each. Include floatables, oil sheen, discoloration, turbidity, odor, etc.	Recommended Action Steps

Certification (Other certification document may be used as required in Section S4 of the Permit)

Certification by Responsible Company official: I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations***

Name _____

Title _____

Signature _____

Date Signed _____

Operations Maintenance Facility Ditch Inspection Checklist

Facility ID: _____

Location: One ditch to North of Maintenance Building

GPS Coordinates: _____

Inspector(s): _____

Date: _____

Time: _____

Time since last rain event: _____

A. Facility

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected					
<input type="checkbox"/>	Not Inspected					
Item		Comments				
1.	Maintenance access to ditches/ bioswales	0	1	2	3	N/A
2.	Sediment accumulation	0	1	2	3	N/A
3.	Evidence of erosion	0	1	2	3	N/A
4.	Evidence of oil/chemical accumulation	0	1	2	3	N/A
5.	Evidence of standing water:					
	a. Ponding					
	b. Noticeable odors					
	c. Water stains					
	d. Presence of algae or floating aquatic vegetation					
6.	Channel remains vegetated; no concrete, rip-rap, or other lining has been added	Yes	No			
7.	Grade ensures positive flow	Yes	No			
8.	Vegetation:					
	a. Plant composition consistent with approved plans	0	1	2	3	N/A
	b. Presence of invasive species/weeds	0	1	2	3	N/A
	c. Dead vegetation/exposed soil	0	1	2	3	N/A

B. Contributing Drainage Area

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected					
<input type="checkbox"/>	Not Inspected					
Item		Comments				
1.	Excessive trash/debris	0	1	2	3	N/A
2.	Bare/exposed soil	0	1	2	3	N/A
3.	Evidence of corrosion	0	1	2	3	N/A

C. Inlets

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected					
<input type="checkbox"/>	Not Inspected					
Item		Comments				
1.	Inlets provide stable conveyance into ditch/bioswale	0	1	2	3	N/A
2.	Excessive trash/debris/sediment accumulation at inlet	0	1	2	3	N/A
3.	Culvert ends structurally sound and unblocked	0	1	2	3	N/A
4.	Evidence of erosion at/around inlet	0	1	2	3	N/A

D. Outlets

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected					
<input type="checkbox"/>	Not Inspected					
Item		Comments				
1.	Outlets provide stable conveyance into ditch/bioswale	0	1	2	3	N/A
2.	Excessive trash/debris/sediment accumulation at outlet	0	1	2	3	N/A
3.	Culvert ends structurally sound and unblocked	0	1	2	3	N/A
4.	Evidence of erosion at/around outlet	0	1	2	3	N/A

E. Miscellaneous

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected					
<input type="checkbox"/>	Not Inspected					
Item		Comments				
1.	Complaints from local residents	0	1	2	3	N/A
2.	Mosquito and vector proliferation	0	1	2	3	N/A
3.	Drainage vault: structurally sound, sedimentation	0	1	2	3	N/A
4.	Encroachment on facility or easement by buildings or other structures	0	1	2	3	N/A

Inspector's Summary (include action items):

Maintenance Facility BMP Inspection Summary

Facility ID: _____

Location: 2300 Parrott Way

GPS Coordinates: _____

Inspector(s): _____

Date: _____

Time: _____

Time since last rain event: _____

BMPs

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected						
<input type="checkbox"/>	Not Inspected						
Item							Comments
1.	Site stabilization	0	1	2	3	N/A	
2.	Inlet protection	0	1	2	3	N/A	
3.	Vehicle wash rack cover	0	1	2	3	N/A	
4.	Stockpile containment	0	1	2	3	N/A	

Maintenance Needs:

Additional or Different BMPs Needed:

Appendix C: North 3rd Avenue Stockpile Site Worksheets

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Pollution Prevention Team

Worksheet #1: N 3rd Avenue Stockpile Site

Last Updated: 8/31/2021

(1) Responsible Official: Catherine Morey

Title: Stormwater Manager

Team Leader: Catherine Morey

Office Phone: 360-423-6590

Responsibilities: Ensuring the Public Works Department is implementing and in compliance with the City's Stormwater general permit.

(2) Randy Johnson

Title: Public Works Superintendent

Office Phone: 360-957-3359

Responsibilities: Ensure overall implementation of the Stormwater Pollution Prevention Plan (SWPPP) for Municipal Operations for the North 3rd Avenue Stockpile Site.

(3)

Title: _____

Office Phone: _____

Responsibilities:

(4)

Title: _____

Office Phone: _____

Responsibilities:

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Potential Pollutant Source Identification

Worksheet #3: N 3rd Avenue Stockpile Site

Last Updated: 8/31/2021

List all potential stormwater pollutants from materials handled, treated, or stored on-site.

Potential Stormwater Pollutant	Stormwater Pollutant Source	Likelihood of pollutant being present in your stormwater discharge. If yes, explain
TSS	Topsoil	No contact likely if BMPs described in text are implemented.

Identify Areas Associated with Pollutant Generating Activity

Worksheet #5: N 3rd Avenue Stockpile Site

Last Updated: 8/31/2021

List areas and activities, not included on Worksheets 2 and 3, which may be sources of pollution. Discuss the potential of these areas and activities as potential pollutant sources and identify any pollutant that may be generated by that activity.

Potential Pollutant Generating Area or Activity	Potential Stormwater Pollutant from Area or Activity	Likelihood of being present in your stormwater discharge. If yes, describe reason.

**Non-Stormwater Discharge
Dry Weather (July, August, September)
Assessment and Certification**

Worksheet #6: N 3rd Avenue Stockpile Site

Completed by: _____

Title: _____

Date: _____

The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as domestic wastewater, non-contact cooling water, or process wastewater (including *leachate*) to the *stormwater drainage system*.

Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

Date	Discharge Location (as indicated on the site map)	Method used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non- Stormwater Discharge	Identify Potential Significant Sources	Person who Conducted the Test

CERTIFICATION

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.***

A. Name and Title

B. Phone:

C. Signature

D. Date Signed

BMP Implementation

Worksheet #8: N 3rd Avenue Stockpile Site

Last Updated: 8/31/2021

Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person(s) responsible for implementation.

BMPs (In need of implementation)	Description of Action(s) Required for Implementation	Schedule Milestone and Completion Date(s)	Person Responsible for Action
Silt Fence	1. Silt fence is installed downhill, where overland flow leaves the site, to provide stormwater treatment prior discharge. If the silt fence becomes damaged, it will be replaced.	Ongoing	Randy Johnson
Formation of a Pollution Prevention Team	1. Form a pollution prevention team, establish responsibilities for team members. See text for further information.	Complete	
Good Housekeeping	1. Clean sediment from all stormwater facilities.	Ongoing	Randy Johnson
Preventive Maintenance	1. Prevent the discharge of solids to ground or surface water.	Ongoing	Randy Johnson
Employee Training	1. Train all employees that work near pollutant sources about the applicable BMPs.	Ongoing	Catherine Morey
Inspections	1. Perform routine inspections at least quarterly. 2. Perform "Dry Weather" inspections.	As stated	Catherine Morey
Record Keeping	1. Keep records for at least 5 years – visual inspection reports and spill reports	Ongoing	Catherine Morey
BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products	1. Provide impervious containment with berms, dikes, etc. and/or cover to prevent stormwater contamination. 2. See text for further information.	As applicable	Randy Johnson
Topsoiling	1. Stockpile of topsoil shall not exceed 2H:1V. 2. An interceptor dike with gravel outlet and silt fence shall surround all topsoil. 3. See text for further information on erosion control requirements.	December 2023	Randy Johnson

Employee Training**Worksheet #9: N 3rd Avenue Stockpile Site**

Last Updated: 8/31/2021

Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.

Training Topics	Brief Description of Training Program/ Materials (e.g., film, newsletter course)	Schedule for Training (list dates)	Attendees
1.) STAFF WORKERS			
Spill Prevention and Response	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
Good Housekeeping	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
Material Management Practices	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
2.) PPT:			
SWPPP Implementation	Review SWPPP	Annually	PPT Members
Monitoring Procedures	Review SWPPP	Annually	PPT Members

**RECORD OF VISUAL INSPECTIONS
of STORMWATER DISCHARGES**

Worksheet #10: N 3rd Avenue Stockpile Site

Completed by *: _____

Title: _____

Date: _____

* Must be conducted by qualified person identified in the SWPPP.

List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.

Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each. Include floatables, oil sheen, discoloration, turbidity, odor, etc.	Recommended Action Steps

Certification (Other certification document may be used as required in Section S4 of the Permit)

Certification by Responsible Company official: I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations***

Name _____

Title _____

Signature _____

Date Signed _____

Appendix D: North 3rd Avenue Stockpile Site Inspection Forms

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**Non-Stormwater Discharge
Dry Weather (July, August, September)
Assessment and Certification**

Worksheet #6: N 3rd Avenue Stockpile Site

Completed by: _____

Title: _____

Date: _____

The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as domestic wastewater, non-contact cooling water, or process wastewater (including *leachate*) to the *stormwater drainage system*.

Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

Date	Discharge Location (as indicated on the site map)	Method used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non- Stormwater Discharge	Identify Potential Significant Sources	Person who Conducted the Test

CERTIFICATION

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.***

A. Name and Title

B. Phone:

C. Signature

D. Date Signed

**RECORD OF VISUAL INSPECTIONS
of STORMWATER DISCHARGES**

Worksheet #10: N 3rd Avenue Stockpile Site

Completed by *: _____

Title: _____

Date: _____

* Must be conducted by qualified person identified in the SWPPP.

List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.

Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each. Include floatables, oil sheen, discoloration, turbidity, odor, etc.	Recommended Action Steps

Certification (Other certification document may be used as required in Section S4 of the Permit)

Certification by Responsible Company official: I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations***

Name _____

Title _____

Signature _____

Date Signed _____

N 3rd Avenue Stockpile Site Inspection Summary

Facility ID: _____

Location: N 3rd Avenue Stockpile Site

Latitude, Longitude: 46° 8'57.05"N, 122°54'32.40"W

Inspector(s): _____

Date: _____

Time: _____

Time since last rain event: _____

BMPs

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected					
<input type="checkbox"/>	Not Inspected					
Item		Comments				
1.	Interceptor dike	0	1	2	3	N/A
2.	Silt fence	0	1	2	3	N/A
3.	Stockpile plastic cover	0	1	2	3	N/A

Maintenance Needs:

Additional or Different BMPs Needed:

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Appendix E: Talley Way Stockpile Site Worksheets

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Pollution Prevention Team

Worksheet #1: Talley Way Stockpile Site

Last Updated: 8/31/2021

(1) Responsible Official: Catherine Morey

Title: Stormwater Manager

Team Leader: Catherine Morey

Office Phone: 360-423-6590

Responsibilities: Ensuring the Public Works Department is implementing and in compliance with the City's Stormwater general permit.

(2) Randy Johnson

Title: Public Works Superintendent

Office Phone: 360-957-3359

Responsibilities: Ensure overall implementation of the Stormwater Pollution Prevention Plan (SWPPP) for Municipal Operations for the North 3rd Avenue Stockpile Site.

(3)

Title: _____

Office Phone: _____

Responsibilities:

(4)

Title: _____

Office Phone: _____

Responsibilities:

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Potential Pollutant Source Identification

Worksheet #3: Talley Way Stockpile Site

Last Updated: 8/31/2021

List all potential stormwater pollutants from materials handled, treated, or stored on-site.

Potential Stormwater Pollutant	Stormwater Pollutant Source	Likelihood of pollutant being present in your stormwater discharge. If yes, explain
TSS	Water construction debris/soil	No contact likely if BMPs described in text are implemented.

Identify Areas Associated with Pollutant Generating Activity

Worksheet #5: Talley Way Stockpile Site

Last Updated: 8/31/2021

List areas and activities, not included on Worksheets 2 and 3, which may be sources of pollution. Discuss the potential of these areas and activities as potential pollutant sources and identify any pollutant that may be generated by that activity.

Potential Pollutant Generating Area or Activity	Potential Stormwater Pollutant from Area or Activity	Likelihood of being present in your stormwater discharge. If yes, describe reason.

**Non-Stormwater Discharge
Dry Weather (July, August, September)
Assessment and Certification**

Worksheet #6: Talley Way Stockpile Site

Completed by: _____

Title: _____

Date: _____

The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as domestic wastewater, non-contact cooling water, or process wastewater (including *leachate*) to the *stormwater drainage system*.

Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

Date	Discharge Location (as indicated on the site map)	Method used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non- Stormwater Discharge	Identify Potential Significant Sources	Person who Conducted the Test

CERTIFICATION

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.***

A. Name and Title

B. Phone:

C. Signature

D. Date Signed

BMP Implementation

Worksheet #8: Talley Way Stockpile Site

Last Updated: 8/31/2021

Develop a plan for implementing each BMP. Describe the steps necessary to implement the BMP (i.e., any construction or design), the schedule for completing those steps (list dates) and the person(s) responsible for implementation.

BMPs (In need of implementation)	Description of Action(s) Required for Implementation	Schedule Milestone and Completion Date(s)	Person Responsible for Action
Stabilized Construction Entrance	1. Stabilized construction access rock shall be added, as necessary, to maintain a stable driving surface and to stabilize any areas that have eroded.	Ongoing	Randy Johnson
Formation of a Pollution Prevention Team	1. Form a pollution prevention team, establish responsibilities for team members. See text for further information.	Complete	
Good Housekeeping	1. Clean sediment from all stormwater facilities.	Ongoing	Randy Johnson
Preventive Maintenance	1. Prevent the discharge of solids to ground or surface water.	Ongoing	Randy Johnson
Employee Training	1. Train all employees that work near pollutant sources about the applicable BMPs.	Ongoing	Catherine Morey
Inspections	1. Perform routine inspections at least quarterly. 2. Perform "Dry Weather" inspections.	As stated	Catherine Morey
Record Keeping	1. Keep records for at least 5 years – visual inspection reports and spill reports	Ongoing	Catherine Morey
BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products	1. Provide impervious containment with berms, dikes, etc. and/or cover to prevent stormwater contamination. 2. See text for further information.	As applicable	Randy Johnson

Employee Training**Worksheet #9: Talley Way Stockpile Site**

Last Updated: 8/31/2021

Describe the annual training of employees on the SWPPP, addressing spill response, good housekeeping, and material management practices.

Training Topics	Brief Description of Training Program/ Materials (e.g., film, newsletter course)	Schedule for Training (list dates)	Attendees
1.) STAFF WORKERS			
Spill Prevention and Response	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
Good Housekeeping	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
Material Management Practices	Briefing on Stormwater Pollution Prevention Plan	Ongoing	Operations Field Staff
2.) PPT:			
SWPPP Implementation	Review SWPPP	Annually	PPT Members
Monitoring Procedures	Review SWPPP	Annually	PPT Members

**RECORD OF VISUAL INSPECTIONS
of STORMWATER DISCHARGES**

Worksheet #10: Talley Way Stockpile Site

Completed by *: _____

Title: _____

Date: _____

* Must be conducted by qualified person identified in the SWPPP.

List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.

Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each. Include floatables, oil sheen, discoloration, turbidity, odor, etc.	Recommended Action Steps

Certification (Other certification document may be used as required in Section S4 of the Permit)

Certification by Responsible Company official: I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations***

Name _____

Title _____

Signature _____

Date Signed _____

Appendix F: Talley Way Stockpile Site Inspection Forms

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**Non-Stormwater Discharge
Dry Weather (July, August, September)
Assessment and Certification**

Worksheet #6: Talley Way Stockpile Site

Completed by: _____

Title: _____

Date: _____

The dry season inspection shall determine the presence of unpermitted non-stormwater discharges such as domestic wastewater, non-contact cooling water, or process wastewater (including *leachate*) to the *stormwater drainage system*.

Tests may include: visual observations of flows, odors, and other abnormal conditions; dye tests, television line surveys; and/or analysis and validation of accurate piping schematics.

Date	Discharge Location (as indicated on the site map)	Method used to Test or Evaluate Discharge	Describe Results from Test for Presence of Non- Stormwater Discharge	Identify Potential Significant Sources	Person who Conducted the Test

CERTIFICATION

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.***

A. Name and Title

B. Phone:

C. Signature

D. Date Signed

**RECORD OF VISUAL INSPECTIONS
of STORMWATER DISCHARGES**

Worksheet #10: Talley Way Stockpile Site

Completed by *: _____

Title: _____

Date: _____

* Must be conducted by qualified person identified in the SWPPP.

List observed pollutants in all discharges and carefully assess the pollutant sources and action steps needed to control the pollutants. Record pollutant sources/generating activities, BMP adequacy, site map, and other facility information on Worksheets 1-9, inclusive.

Date	Surface Discharge ID	Ground Discharge ID	List of observed pollutants and descriptions of intensities of each. Include floatables, oil sheen, discoloration, turbidity, odor, etc.	Recommended Action Steps

Certification (Other certification document may be used as required in Section S4 of the Permit)

Certification by Responsible Company official: I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information. ***Based on my inquiry of the person or persons who manage the systems or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations***

Name _____

Title _____

Signature _____

Date Signed _____

Talley Way Stockpile Site BMP Inspection Summary

Facility ID: _____

Location: Talley Way Stockpile Site

Latitude, Longitude: 46° 6'32.57"N, 122°53'20.33"W

Inspector(s): _____

Date: _____

Time: _____

Time since last rain event: _____

BMPs

0 = Good condition. Well maintained; No action required.

1 = Moderate condition. Adequately maintained; Routine maintenance needed.

2 = Degraded condition. Poorly maintained; Routine maintenance and repair needed.

3 = Serious condition. Immediate need for repair or replacement.

<input type="checkbox"/>	Inspected						
<input type="checkbox"/>	Not Inspected						
Item							Comments
1.	Stabilized construction entrance	0	1	2	3	N/A	
2.	Stockpile containment	0	1	2	3	N/A	

Maintenance Needs:

Additional or Different BMPs Needed:

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Appendix G: Inspection/Maintenance Schedule

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Operations Maintenance Facility Stormwater Pollution Plan
Inspection and Action Requirements Schedule

Requirement	For more Information see BMP	Timeline
Inspect, clean, and replace as needed catch basin inserts on site	Catch Basin Inserts	Ongoing
Inspect and stabilize site	Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	Ongoing
**No scheduled recurring actions	Recycling/Disposal of Vehicle Fluids/Other Wastes	Ongoing
Hold regular meetings	Formation of a Pollution Prevention Team	Annual
Clean oils, debris, sludge, etc. from all BMP systems	Good Housekeeping	Ongoing
Mechanical weed control	Preventive Maintenance	During dry season, every 2 weeks
Weed control by herbicide spraying	Preventive Maintenance	Once per year in the spring
Check contents of spill kits, maintain and replace pieces as necessary	Spill Prevention and Cleanup	Quarterly during inspections
**No scheduled recurring actions	Employee Training	New employees and after changes in procedures, techniques or requirements
Conduct visual inspections as described in text	Inspections	One dry weather inspection per year and quarterly during storm events
**No scheduled recurring actions	Record Keeping	Ongoing
**No scheduled recurring actions	BMPs for Dust Control at Unpaved Parking Lots	As Needed
**No scheduled recurring actions	BMPs for Illicit Connections to Storm Drains	Ongoing
**No scheduled recurring actions	BMPs for Maintenance and Repair of Vehicles and Equipment	Ongoing
Inspect, clean, and repair as needed ditches and culverts	BMPs for Maintenance of Roadside Ditches	As Needed
**No scheduled recurring actions	BMPs for Parking and Storage of Vehicles and Equipment	Ongoing
**No scheduled recurring actions	BMPs for Washing and Steam Cleaning Vehicles/ Equipment/ Building Structures	Ongoing
**No scheduled recurring actions	BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products	Ongoing

North 3rd Avenue Stockpile Site Stormwater Pollution Plan
 Inspection and Action Requirements Schedule

Requirement	For more Information see BMP	Timeline
Inspect, clean, and replace silt fence on site, as needed	Silt Fence; and Good Housekeeping	Ongoing
Inspect and replace plastic covering on site, as needed	BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products; and Topsoiling	Ongoing
Construct interceptor dike with gravel outlet around topsoil	Topsoiling / Composting	December 2023
**No scheduled recurring actions	Employee Training	New employees and after changes in procedures, techniques or requirements
Conduct visual inspections as described in text	Inspections	One dry weather inspection per year and quarterly during storm events
**No scheduled recurring actions	Record Keeping	Ongoing

Talley Way Stockpile Site Stormwater Pollution Plan
 Inspection and Action Requirements Schedule

Requirement	For more Information see BMP	Timeline
Inspect and stabilize site entrance	Stabilized Construction Entrance	Ongoing
Inspect and replace plastic covering on site, as needed	BMPs for Storage or Transfer (Outside) of Solid Raw Materials, By-Products, or Finished Products	Ongoing
**No scheduled recurring actions	Employee Training	New employees and after changes in procedures, techniques or requirements
Conduct visual inspections as described in text	Inspections	One dry weather inspection per year and quarterly during storm events
**No scheduled recurring actions	Record Keeping	Ongoing

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Appendix H: Recommendations for Management of Street Wastes

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Appendix IV-B: Management of Street Waste Solids and Liquids

Introduction

This appendix addresses street waste as defined in [chapter 173-350 WAC](#), Solid waste handling standards. [WAC 173-350](#) is the governing rule for management of typical street waste solids. Ecology adopted revisions to this rule that became effective September 1, 2018, in part to provide clarity on managing soils impacted by release of contaminants, such as street waste. Ecology has solid waste guidance to help ensure handlers of street waste manage it in accordance with [WAC 173-350](#). End users and other authorities may have their own requirements for street waste reuse and handling.

- Per [WAC 173-350](#):
 - **"Street waste"** means solids or dewatered materials collected from stormwater catch basins and similar stormwater treatment and conveyance structures, and materials collected during street and parking lot sweeping.

"Street waste," as defined here, does not include solids and liquids from street washing using detergents, cleaning of electrical vaults, vehicle wash sediment traps, restaurant grease traps, industrial process waste, sanitary sewage, mixed process, or combined sewage/stormwater wastes. Wastes from oil/water separators at sites that load fuel are not included as street waste. Street waste also does not include flood debris, landslide debris, and chip seal gravel.

Regulations for Street Waste Management

Street waste is solid waste. While street waste from routine road maintenance is likely not dangerous waste, it is presumed to be solid waste under [WAC 173-350](#). This Rule classifies Street Waste as a likely "contaminated soil," which is included in the definition of "solid waste." Since stormwater conveyance structures are places where contaminants from streets can accumulate at concentrations that could be harmful for indiscriminant placement, material from such structures is presumed to be "contaminated soil."

- Per [WAC 173-350](#):
 - **"Contaminated soil"** means soil containing one or more contaminants from a release and when moved from one location to another for placement on or into the ground:
 - a. Contains contaminants at concentrations that exceed a cleanup level under [chapter 173-340 WAC](#), Model Toxics Control Act—Cleanup, that would be established for existing land use at the location where soil is placed; or
 - b. Contains contaminants that affect pH, and pH of the soil is below 4.5 or above 9.5 or is not within natural background pH limits that exist at the location where soil is placed.

Unless excluded in [WAC 173-350-020](#), contaminated soil is solid waste and must be managed at a solid waste handling facility in conformance with this chapter or [chapter 173-351 WAC](#), Criteria for municipal solid waste landfills. Characterization of material may be required based on solid waste facility acceptance standards. Examples of potentially contaminated soil may include, but are not limited to, street waste, petroleum contaminated soil, engineered soil, and soil likely to have contaminants from a release associated with industrial or historical activities.

Based on test results, street waste to contain contaminants at concentrations that would require either disposal at a permitted solid waste disposal facility, or treatment at a permitted solid waste handling facility for use.

Owners/operators storing or treating street waste prior to disposal or use are typically subject to permitting under the section in [WAC 173-350](#) dealing with “piles used for storage and treatment,” since most storage and treatment takes place in outdoor piles. Indoor or other storage or treatment is subject to permitting under the section dealing with “transfer stations and drop boxes.” To obtain a permit, an owner/operator will need to meet design standards, operating requirements, including characterization procedures and concentration limits if propose to use materials, and record keeping and reporting.

Note: Decant facilities are not subject to solid waste permitting if they will not have intermediate storage or treatment of decanted solids between the decant part of a facility operating in conformance with water quality rules and placement into transfer vehicles going to permitted solid waste facilities.

Street waste solids may contain contaminants at levels too high to allow unrestricted use. Street waste will need to meet the definition in [WAC 173-350](#) for “clean soil” in order for its management or use outside of permitted solid waste handling facilities. “Clean soil” is tied to meeting contaminant concentrations so as not to create a cleanup site where placement of materials would occur.

- Per [WAC 173-350](#):
 - **"Clean soil"** means soil that does not contain contaminants from a release. It also includes soil that contains one or more contaminants from a release and when moved from one location to another for placement on or into the ground:
 - a. Does not contain contaminants at concentrations that exceed a cleanup level under [chapter 173-340 WAC](#), Model Toxics Control Act—Cleanup, that would be established for existing land use at the location where soil is placed; or
 - b. Contains contaminants that affect pH, but pH of the soil is between 4.5 and 9.5 or within natural background pH limits that exist at the location where soil is placed.

Examples of potentially clean soil may include, but are not limited to, soil from undeveloped lands unlikely to have impacts from release of contaminants associated with area-wide or local industrial or historical activities. This includes similar soils over which development may have occurred but land use is unlikely to have led to a release, such as use for residential housing, or over which development provided protection from impacts from a release, such as coverage by pavement. Soil with substances from natural background conditions, as natural background is defined in [WAC 173-350-100](#), is clean soil under this section.

Street waste that will go directly to a permitted landfill or transfer station is not subject to the standards of [WAC 173-350](#), though operators will need to adhere to receiving facility acceptance criteria. For street waste that will not go directly to a permitted landfill or transfer station, an operator needs to consult with their jurisdictional health department to see what solid waste regulations apply to street waste management. In Washington, [chapter 70.95 RCW](#), Solid waste management – Reduction and recycling, gives jurisdictional health departments primary authority over solid waste handling and permitting.

As stated earlier, guidance will be available soon with more specificity on how to manage “contaminated soil” under the recently revised [WAC 173-350](#).

Contaminants in Street Waste Solids

Street waste does not typically classify as dangerous waste. The owner of the stormwater facility and/or collector of street waste is considered the waste generator and responsible for deciding whether the waste designates as dangerous waste. However, sampling has historically shown that material from routine maintenance of roads and stormwater facilities does not classify as dangerous waste.

It is possible that street waste from spill sites has high enough concentration of contaminants to classify it as dangerous waste. Street waste suspected to be dangerous waste should not be collected with other street waste to avoid creating a larger volume of dangerous waste. Street waste with obvious contamination (unusual color, staining, corrosion, unusual odors, fumes, and oily sheen) should be left in place or segregated until tested. Base testing activities on probable contaminants. If collecting potentially dangerous waste because of emergency conditions, or if the waste becomes suspect after it is collected, an owner/operator should handle and store it separately until a determination as to proper disposal is made. Dangerous waste must be handled following [chapter 173-303 WAC](#), Dangerous waste regulations.

Test results from sampling street waste show that it contains contaminants including total petroleum hydrocarbons (TPH), carcinogenic polycyclic aromatic hydrocarbons (c-PAHs), and several metals. These contaminants can be at concentrations high enough to be harmful to human health and the environment unless managed appropriately. The following tables provide a summary of some past test results.

Table IV-B.1: Typical TPH Levels in Street Sweeping and Catch Basin Solids

Reference	Street Sweeping (mg/kg)	Catch Basin Solid (mg/kg)
Snohomish County (1) (Landau, 1995)	390 - 4300	
King County (1) (Herrera, 1995)		123 - 11049 (Median 1036)
Snohomish County & Selected Cities (1) (W&H Pacific, 1994)	163 - 1500 (Median 760)	163 -1562 (Median 760)

Table IV-B.1: Typical TPH Levels in Street Sweeping and Catch Basin Solids (continued)

Reference	Street Sweeping (mg/kg)	Catch Basin Solid (mg/kg)
City of Portland (2) (Bretsch, 2000)		MDL - 1830 (Median 208)
City of Seattle - Diesel Range (2) (Seattle Public Utilities and Herrera, 2009)	330 - 520	780 - 1700
City of Seattle - Motor Oil (2) (Seattle Public Utilities and Herrera, 2009)	2000 - 2800	3500 - 7000
Oregon (1) (Collins, 1998)	1600 - 2380	
Oregon (3) (Collins, 1998)	98 - 125	
(1) Method WTPH 418.1; does not incorporate new methods to reduce background interference due to vegetative material (2) Method NWTPH-Dx (3) Method WTPH - HCID		

Table IV-B.2: Typical c-PAH Values in Street Waste Solids and Related Materials

Sample Source	City of Everett					WSDOT	
	Street Sweepings	Soil	3-Way Topsoil	Vactor Solids	Leaf & Sand	Sweepings - Fresh	Sweepings - Weathered
Benzo(a)anthracene	0.1U	0.076U	0.074U	0.21	0.45	0.56	0.40
Chrysene	0.14	0.09	0.074U	0.32	0.53	0.35	0.35
Benzo(b)fluoranthene	0.11	0.076U	0.074U	0.27	0.52	0.43	0.51
Benzo(k)fluoranthene	0.13	0.076U	0.074U	0.25	0.38	0.39	0.40
Benzo(a)pyrene	0.13	0.076U	0.074U	0.26	0.5	0.41	0.33U
Indeno(1,2,3-cd)pyrene	0.1U	0.076U	0.074U	0.19	0.39	NR	NR

Table IV-B.2: Typical c-PAH Values in Street Waste Solids and Related Materials (continued)

Sample Source	City of Everett					WSDOT	
	Street Sweepings	Soil	3-Way Topsoil	Vactor Solids	Leaf & Sand	Sweepings - Fresh	Sweepings - Weathered
Dibenzo(a,h)-anthracene	0.1U	0.076U	0.074U	0.081	0.12	0.39	0.33U
Revised MTCA Benzo (a)pyrene [ND=PQL]	0.215	0.134	0.134	0.388	0.727	0.708	0.597
Benzo (a)pyrene [ND = 1/2 PQL]	0.185	0.069	0.067	0.388	0.727	0.708	0.366
Benzo (a)pyrene [See * below]	0.185	0.069	0	0.388	0.727	0.708	0.366
Benzo (a)pyrene [ND = 0]	0.155	0.001	0	0.388	0.727	0.708	0.135
* If the analyte was not detected for any PAH, then ND=0; If analyte was detected in at least 1 PAH, then ND=1/2PQL; If the average concentration (using ND=1/2 PQL) is greater than the maximum detected value, then ND=Maximum value.							

Table IV-B.3: Typical Metals Concentrations in Catch Basin Sediments

PARAMETER	Ecology 1993	Thurston 1993	King County 1995	King county 1995	City of Seattle 2003 through 2011
Metals: Total (mg/kg)	(Min - Max)	(Min - Max)	(Min - Max)	Mean	Min - Max (Mean)
As	< 3 - 24	.39 - 5.4	4 -56	0.250	<5 - 50 (9.3)
Cd	0.5 - 2.0	< 0.22 - 4.9	0.2 - 5.0	0.5	
Cr	19 - 241	5.9 - 71	13 - 100	25.8	
Cu	18 - 560	25 - 110	12 - 730	29	9.1 - 3,280 (166)
Pb	24 - 194	42 - 640	4 - 850	80	3 - 3,690 (154)
Ni	33 - 86	23 - 51	14 - 41	23	

**Table IV-B.3: Typical Metals Concentrations in Catch Basin Sediments
(continued)**

PARAMETER	Ecology 1993	Thurston 1993	King County 1995	King county 1995	City of Seattle 2003 through 2011
Metals: Total (mg/kg)	(Min - Max)	(Min - Max)	(Min - Max)	Mean	Min - Max (Mean)
Zn	90 - 558	97 - 580	50 - 2000	130	44 - 4170 (479)
Hg	0.04 - 0.16	0.24 - 0.193			<0.03 - 3.8 (0.16)

**Table IV-B.4: Pollutants in Catch Basin Solids - Comparison to
Dangerous Waste Criteria**

PARAMETER	Range of Values in Catch Basin Waste	Range of Values in Catch Basin Waste	Dangerous Waste Criteria
METALS	Total Metals (mg/kg)	TCLP Metals (mg/kg)	TCLP values (mg/l)
As	<3 - 56	< 0.02 - 0.5	5.0
Cd	< 0.22 - 5	0.0002 - 0.03	1.0
Cr	5.9 - 241	0.0025 - 0.1	5.0
Cu	12 - 730	0.002 - 0.88	none
Pb	4 - 850	0.015 - 3.8	5.0
Ni	23 - 86	< 0.01 - 0.36	none
Zn	50 - 2,000	0.04 - 6.7	none
Hg	0.02 - 0.19	0.0001 - 0.0002	0.2

Data from [\(Thurston County, 1993\)](#), [\(Herrera, 1995\)](#) and [\(Serdar, 1993\)](#)

Street Waste Liquids

General Procedures:

Street waste collection should emphasize retention of solids in preference to liquids.

Street waste solids are the principal objective in street waste collection and are substantially easier to store and treat than liquids.

Street waste liquids require treatment before their discharge. Street waste liquids, which include eductor and street sweeping truck decant and drainage from piles and containers, usually contain high amounts of suspended and total solids and adsorbed metals. Treatment requirements depend on the discharge location.

The entity responsible for operation and maintenance of the system must approve discharges to sanitary sewer and storm sewer systems. Ecology will not generally require waste

discharge permits for discharge of stormwater decant to sanitary sewers or to stormwater treatment BMPs constructed and maintained in accordance with this manual.

Listed below is the required order of preference for disposal of liquid from collection of Street Wastes.

1. **Discharge of Street Waste liquids to a municipal sanitary sewer connected to a Public Owned Treatment Works (POTW).** Discharge to a municipal sanitary sewer requires the approval of the sewer authority. Approvals for discharge to a POTW will likely contain pretreatment, quantity, and location conditions to protect the POTW. Following the local sewer authority's conditions is a permit requirement.
2. **Discharge of Street Waste liquids may be allowed into a Basic or Enhanced Runoff Treatment BMP, if option 1 is not available.** Only discharge street waste liquid into the storm sewer system under the following conditions:
 - The preferred disposal option of discharge to sanitary sewer is not reasonably available.
 - The discharge is to a Basic or Enhanced Runoff Treatment BMP. If pretreatment does not remove visible sheen from oils, the Runoff Treatment BMP must be able to prevent the discharge of oils causing a visible sheen.
 - The discharge from the eductor truck is as near to the inlet of the Runoff Treatment BMP as practical, to minimize contamination or recontamination of the collection system.
 - The storm sewer system owner/operator has granted approval and has determined that the Runoff Treatment BMP will accommodate the increased loading. Part of the approval process may include pretreatment conditions to protect the Runoff Treatment BMP. Following local pretreatment conditions is a requirement of this permit.
 - Ecology must approve in advance flocculants for the pretreatment of street waste liquids. The liquids must be non-toxic under the circumstances of use.

The discharger shall determine if reasonable availability of sanitary sewer discharge exists, by evaluating such factors as distance, time of travel, load restrictions, and capacity of the Runoff Treatment BMP.

3. **Operators may return water removed from stormwater ponds, vaults, and oversized catch basins to the storm sewer system.** Stormwater ponds, vaults, and oversized catch basins contain substantial amounts of liquid, which hampers the collection of solids and poses problems in hauling the removed waste away from the site. Water removed from these facilities may be discharged back into the pond, vault, or catch basin provided:
 - Operators may discharge clear water removed from a stormwater treatment structure directly to a down gradient cell of a treatment pond or into the storm sewer system.
 - Turbid water may be discharged back into the structure it was removed from if the removed water has been stored in a clean container (eductor truck, Baker tank, or other appropriate container used specifically for handling stormwater or clean water); and

there will be no discharge from the treatment structure for at least 24 hours.

- The storm sewer system owner/operator must approve the discharge.

Table IV-B.5: Typical Street Waste Decant Values Compared to Surface Water Quality Criteria

PARAMETER	State Surface Water Quality Criteria		Range of Values Reported	
	Freshwater Acute (ug/l - dissolved metals)	Freshwater Chronic (ug/l - dissolved metals)	Total Metals (ug/l)	Dissolved Metals (ug/l)
Arsenic	360	190	100 - 43,000	60 - 100
Cadmium*	2.73	0.84	64 - 2,400	2 - 5
Chromium (total)			13 - 90,000	3 - 6
Chromium (III)*	435	141		
Chromium (VI)	0.5	10		
Copper*	13.04	8.92	81 - 200,000	3 - 66
Lead*	47.3	1.85	255 - 230,000	1 - 50
Nickel*	1114	124	40 - 330	20 - 80
Zinc*	90.1	82.3	401 - 440,000	1,900 - 61,000
Mercury	2.10	0.012	0.5 - 21.9	

*Hardness dependent; hardness assumed to be 75 mg/L

Table IV-B.6: Typical Values for Conventional Pollutants in Street Waste Decant

PARAMETER	Ecology 1993	(Min - Max)	King County 1995	(Min - Max)
Values as mg/l; except where stated	Mean		Mean	
pH	6.94	6.18 - 7.98	8	6.18 - 11.25
Conductivity (umhos/cm)	364	184 - 1,110	480	129 - 10,100
Hardness (mg/l CaCO ₃)	234	73 - 762		
Fecal Coliform (MPN/100 ml)	3,000			
BOD	151	28 - 1,250		

Table IV-B.6: Typical Values for Conventional Pollutants in Street Waste Decant (continued)

PARAMETER	Ecology 1993	(Min - Max)	King County 1995	(Min - Max)
Values as mg/l; except where stated	Mean		Mean	
COD	900	120 - 26,900		
Oil & Grease	11	7.0 - 40	471	15 - 6,242
TOC	136	49 - 7,880	3,670	203 - 30,185
Total Solids	1,930	586 - 70,400		
Total Dissolved Solids	212	95 - 550		
Total Suspended Solids	2,960	265 - 111,000		
Settleable Solids (ml/l/hr)	27	2 - 234	57	1 - 740
Turbidity (ntu)	1,000	55 - 52,000	4,673	43 - 78,000

Table IV-B.7: Street Waste Decant Values Following Settling

PARAMETER; Total Metals in mg/l	Portland - Inverness Site Min - Max	King County - Renton Min - Max	METRO Pretreatment Discharge Limits
Arsenic	0.0027 - 0.015	< MDL - 0.12	4
Cadmium	0.0009 - 0.0150	< MDL - 0.11	0.6
Chromium	0.0046 - 0.0980	0.017 - 0.189	5
Copper	0.015 - 0.8600	0.0501 - 0.408	8
Lead	0.050 - 6.60	0.152 - 2.83	4
Nickel	0.0052 - 0.10	0.056 - 0.187	5
Silver	0.0003 - 0.010	< MDL	3
Zinc	0.130 - 1.90	0.152 - 3.10	10
Settleable Solids; ml/L	No Data	0.02 - 2.0	7
Nonpolar FOG	5.7 - 25	5 - 22	100
Ph (std)	6.1 - 7.2	6.74 - 8.26	5.0 - 12.0
TSS	2.8 - 1310		
Recorded Total Monthly Flow; Gallons	Data not available	31,850 - 111,050	
Recorded Max. Daily	Data not available	4,500 - 18,600	25,000 GPD

**Table IV-B.7: Street Waste Decant Values Following Settling
(continued)**

PARAMETER; Total Metals in mg/l	Portland - Inverness Site Min - Max	King County - Renton Min - Max	METRO Pretreatment Discharge Limits
Flow; Gallons			
Calculated Average Daily Flow; GPD	Data not available	1,517 - 5,428	
1) Data from King County's Renton Facility (data from 1998 - 1999) and the City of Portland's Inverness Site (data from 1999 - 2001); detention times not provided			

Collection Site Assessment

Ecology suggests a collection site assessment to identify spills or locations that potentially contain dangerous wastes.

The collection site assessment will aid in determining if waste is a dangerous waste and in deciding what to test for if dangerous waste is suspected. The collection site assessment will also help determine if the waste meets the requirements of the receiving facility.

There are three steps to a collection site assessment:

1. A **historical review** of the site for spills, previous contamination and nearby cleanup sites or dangerous waste facilities.

The historical review will be easier if done on an area wide basis prior to scheduling any waste collection. The historical review should be more thorough for operators who have never collected waste at the site before. At a minimum, the historical review should include operator knowledge of the area's collection history or records from previous waste collections.

Private operators should ask the owner of the site for records of previous contamination and the timing of the most recent cleaning. Ecology's Hazardous Substance Information Office maintains a Toxic Release Inventory and a Facility/Site Database, tracking more than 15,000 sites.

Ecology's online Facility/Site Database is available at www.ecy.wa.gov/fs/.

The database allows anyone with web-access to search for facility information by address, facility name, town, zip code, and SIC code, etc. It lists why Ecology is tracking each one (NPDES, TSCA, RCRA, Clean Air Act, etc.), as well as who to call within Ecology to find out more about the given facility. EPA's toxic release website is http://i-aspub.epa.gov/triexplorer/tri_release.chemical

2. A **visual inspection** for potential contaminant sources such as a past fire, leaking tanks and electrical transformers, and surface stains.

Take a look at the area for contaminant sources prior to collection of the waste. If the inspection finds a potential contaminant source, delay the waste collection until the potential contaminant is assessed.

A second portion of the visual inspection is a good housekeeping assessment of the area. Locations with poor housekeeping commonly cut corners in less obvious places. Inspect these sites in greater detail for illegal dumping and other contamination spreading practices.

3. **Sweeping route, catch basin, waste, and container inspection** before and during collection.

The inspection of the waste and catch basin or vault is the last and perhaps most critical step in the collection site assessment.

For example, if the stormwater facility has an unusual color in or around it, then it is possible someone dumped something near it or into it. Some colors to be particularly wary of are yellow/green from antifreeze dumping and black and rainbow sheen from oil and/or grease dumping. In addition, if the inspector observes any staining or corrosion, then a solvent may have been dumped.

Fumes are also good indicators of potential contamination. Avoid deliberate smelling of catch basins for worker safety, but suspicious odors may be encountered from catch basins thought to be safe. Some suspicious odors are rotten eggs (hydrogen sulfide is present), gasoline or diesel fumes, or solvent odors. If unusual odors are noted, contact a dangerous waste inspector before cleaning the basin.

Finally, operator experience is the best guide to avoid collection of contaminated waste.

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Appendix I: Review and Revision Documentation Form

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