

**CITY OF KIRKLAND**

123 FIFTH AVENUE • KIRKLAND, WASHINGTON 98033-6189 • (425) 587-3800

**DEPARTMENT OF PUBLIC WORKS  
PRE-APPROVED PLANS POLICY****Policy D-12: CONSTRUCTION STORM WATER POLLUTION PREVENTION PLAN**

The Construction Storm Water Pollution Prevention Plan (CSWPPP) contains two parts; the Erosion and Sediment Control (ESC) Plan and the Stormwater Pollution Prevention and Spill (SWPPS) Plan. All projects meeting the threshold for a stormwater review require an ESC Plan; the level of detail will vary based on the size and scope of the project. Only project sites one acre or larger require a SWPPS Plan and an ESC Plan. A condensed version of the ESC and SWPPS Plan elements are located in the tables below for your convenience. Refer to the 2009 KCSWDM (sections 2.3.1.3 & 2.3.1.4) for complete requirements.

**A. Erosion Sediment Control (ESC) Plan**

The ESC Plan includes both plan drawings and an ESC Report, which provides all supporting information and any additional direction necessary for implementing ESC measures and meeting ESC implementation requirements. The ESC Plan should be consistent with the information provided in the Drainage Report, if required. Information in the ESC Plan may need to be updated or revised during the life of the project by the ESC supervisor, or as directed by the COK inspector.

<b>ESC Plan Element</b>	<b>Information Required</b>
<b>General</b>	<ul style="list-style-type: none"> <li>• Provide details for all BMPs (from COK PW Pre-Approved Plans).</li> <li>• Include Erosion/Sedimentation Plan Notes (from COK PW Pre-Approved Plans).</li> <li>• Indicate the location of all soil pits and infiltration tests.</li> <li>• Identify areas with a high susceptibility to erosion.</li> <li>• Provide all details necessary to clearly illustrate the intent of the ESC design.</li> <li>• Include ESC measures for all on and offsite utility construction included in the project.</li> <li>• Specify the construction sequence. The construction sequence shall be specifically written for the proposed project.</li> <li>• Include an inspection and maintenance program for ESC measures, including designation of an ESC supervisor and identification of phone numbers for the 24-hour contact. This information must be provided at the pre-construction meeting.</li> <li>• Include the basis and calculations for selection and sizing of ESC measures.</li> </ul>
<b>Clearing Limits</b>	<ul style="list-style-type: none"> <li>• Delineate clearing limits, and provide details sufficient to install and maintain the clearing limits.</li> </ul>
<b>Soil Cover Measures</b>	<ul style="list-style-type: none"> <li>• Specify the type and location of temporary cover measures to be used onsite. If more than one type will be used onsite, indicate the areas where the different measures will be used, including steep cut and fill slopes. If the type of cover measures will vary depending on the time of year, soil type, gradient, or other factor, specify the conditions that control the use of the different measures.</li> <li>• Specify the type and location of permanent cover measures (this can be shown in the landscaping plan, if prepared).</li> <li>• Specify the approximate amount of cover measures necessary to cover all disturbed areas.</li> <li>• If netting, blankets, or plastic sheeting are specified, provide typical detail sufficient for installation and maintenance.</li> <li>• Specify the mulch types, seed mixes, fertilizers, and soil amendments to be used, as well as the application rate for each item.</li> <li>• For surface roughening, describe methods, equipment, and areas where surface roughening will be used.</li> </ul>
<b>Perimeter Protection</b>	<ul style="list-style-type: none"> <li>• Specify the location and type of perimeter protection to be used, and provide typical details sufficient to install and maintain the perimeter protection. Perimeter protection must be adequate to prevent or control runoff on all necessary property boundaries.</li> <li>• Indicate the location for all silt fencing, tree protection fencing, and clearing fencing.</li> </ul>

<p><b>Traffic Area Stabilization</b></p>	<ul style="list-style-type: none"> <li>• Specify the location of the construction entrance(s), and provide typical details sufficient to install and maintain the construction entrance (length, width, thickness, rock size, etc.).</li> <li>• Specify the construction roads and parking areas, and provide the measure(s) that will be used to create stabilized construction roads and parking areas. Provide sufficient detail to install and maintain.</li> <li>• If a wheel wash or tire bath system will be installed, provide location and typical details for installation and maintenance.</li> <li>• Provide a list of dust control procedures that will be used onsite and the location of potential application areas.</li> </ul>
<p><b>Sediment Retention</b></p>	<ul style="list-style-type: none"> <li>• Show the locations of all sediment ponds and traps</li> <li>• Provide dimensions for pond berm widths and all inside and outside pond slopes.</li> <li>• Indicate the trap/pond storage required and the depth, length, and width dimensions.</li> <li>• Provide typical section views through pond and outlet structures.</li> <li>• Include appropriate approval documentation from local sewer district if contaminated or chemically treated water will be discharged to the sanitary sewer.</li> <li>• Provide typical details of the control structure and dewatering mechanism.</li> <li>• Detail stabilization techniques for outlet/inlet protection.</li> <li>• Provide details sufficient to install cell dividers.</li> <li>• Specify mulch or recommended cover of berms and slopes.</li> <li>• Indicate the required depth gage with a prominent mark at 1-foot depth for sediment removal.</li> <li>• Indicate catch basins that are to be protected, and provide details of the catch basin protection sufficient to install and maintain.</li> </ul>
<p><b>Surface Water Control</b></p>	<ul style="list-style-type: none"> <li>• Locate all pipes, ditches, interceptor ditches, dikes, and swales that will be used to convey stormwater, and provide details sufficient to install and maintain all conveyances. Show grades, dimensions, location and direction of flow.</li> <li>• Indicate locations of outlet protection and provide details.</li> <li>• Indicate locations and outlets of any possible dewatering systems. Provide details of alternative discharge methods from dewatering systems if adequate infiltration rates cannot be achieved.</li> <li>• Indicate the location of any level spreaders and provide details sufficient to install and maintain.</li> <li>• Show all temporary pipe inverts.</li> <li>• Provide location and specifications for the interception of runoff from disturbed areas and the conveyance of the runoff to a non-erosive discharge point.</li> <li>• Provide locations of check dams and details.</li> <li>• Delineate drainage sub-basins before and after proposed construction, indicating flow direction to structural control measures with arrows. Use a bold dashed line showing developed condition.</li> <li>• Show all cut and fill slopes, indicating top/bottom of slope catch lines.</li> </ul>
<p><b>Critical/Sensitive Area Restrictions</b></p>	<ul style="list-style-type: none"> <li>• Delineate and label the following critical areas, and any applicable buffers, that are on or adjacent to the project site: flood, erosion, landslide, and steep slope hazard areas.</li> <li>• Label the location of drainage features that are on or adjacent to the project site such as streams, lakes, wetlands, roads, bogs, depressions, springs, seeps, swales, ditches, existing pipe, and seasonal water locations. Include any applicable buffers.</li> <li>• If construction creates disturbed areas within any of the above listed critical areas or associated buffers, specify the type, locations, and details of any measures or other provisions necessary to protect surface waters and steep slopes.</li> </ul>

**B. Storm Water Pollution Prevention and Spill (SWPPS) Plan – required for all project sites 1 acre or larger**

The SWPPS plan must be kept on site during all phases of construction and shall address the construction related pollution-generating activities outlined below. The plan must include a description of the methods the general contractor will use to ensure sub-contractors are aware of the SWPPS plan. A form or record must be provided that states all sub-contractors have read and agree to the SWPPS plan.

**A SWPPS plan consists of the following three elements:**

1. A **site plan** showing the location and description of BMPs required to prevent pollution and control spills from construction activities and from chemicals and other materials used and stored on the construction site.
2. A **pollution prevention report** listing the potential sources of pollution and identifying the operational, source control, and treatment BMPs necessary to prevent/mitigate pollution from these sources.
3. A **spill prevention and cleanup report** describing the procedures and BMPs for spill prevention and including provisions for cleanup of spills should they occur.

The table below provides more detail on the three elements listed above. The SWPPS plan should address all pollution generating activities typically associated with construction.

SWPPS Element		Information Required
<b>Site Plan</b>		<ul style="list-style-type: none"> <li>• Identify existing and proposed roads, driveways, parking areas, buildings, drainage facilities, utility corridors not associated with roadways, relevant critical areas and associated buffers, and proposed final topography.</li> <li>• Identify locations where liquids will be stored and delineate secondary containment areas that will be provided.</li> <li>• Identify the locations where construction materials and wastes will be generated and stockpiled.</li> <li>• Identify the location of fueling for vehicles and equipment if stationary tanks will be used.</li> <li>• Delineate containment areas for fuel spills.</li> <li>• Show locations of lighting and signage for fueling during evening hours.</li> <li>• Delineate maintenance and repair areas and clearly note that drip pans or plastic shall be used beneath vehicles. Clearly note that signs must be posted stating no vehicle washing may occur in these areas.</li> <li>• Delineate truck washout areas and identify the location of slurry/washwater sumps and rinsing areas for tools.</li> <li>• Delineate where chemicals will be applied and identify where they will be stored.</li> <li>• Identify where the spill response materials will be stored.</li> </ul>
<b>Pollution Prevention Report</b>	General	<ul style="list-style-type: none"> <li>• List the possible sources of pollution and identify the BMPs to be used for each source to prevent pollution. Include any supporting information (site conditions, calculations, etc.) for the selection and sizing of pollution prevention BMPs.</li> <li>• Identify the personnel responsible for pollution prevention and list the responsibilities of each person identified. Include contact information for these personnel in the report and on the SWPPS site plan.</li> <li>• Describe procedures to be used for monitoring pollution prevention BMPs and for responding to a BMP that needs attention, including keeping records/reports of all inspections of BMPs.</li> </ul>
	Storage and Handling of Liquids	<ul style="list-style-type: none"> <li>• Identify liquids that will be handled or stored onsite, including but not limited to: petroleum products, fuel, solvents, detergents, paint, pesticides, concrete admixtures, and form oils.</li> <li>• Specify types and sizes of containers of liquids that will be stored/handled onsite. Describe the secondary containment methods adequately sized to provide containment for all liquids stored onsite.</li> </ul>

<b>Pollution Prevention Report (continued)</b>	Storage and Stockpiling of Construction Materials and Wastes	<ul style="list-style-type: none"> <li>Identify construction materials and wastes that may be generated or stockpiled onsite. Show the locations where these materials and wastes will be generated and stockpiled on the SWPPS site plan.</li> <li>Specify the type of cover measures to be used to keep rainwater from contacting construction materials and wastes that can contribute pollutants to storm, surface, and ground water.</li> <li>If wastes are kept in containers, describe how rainwater will be kept out of the containers.</li> </ul>
	Fueling	<ul style="list-style-type: none"> <li>Specify method of onsite fueling for construction equipment (i.e., stationary tanks, truck mounted tanks, wet hosing, etc.). If stationary tanks will be used, show their locations on the SWPPS site plan.</li> <li>Describe type and size of tanks.</li> <li>Describe containment methods for fuel spills.</li> <li>If fueling occurs during evening hours, describe lighting and signage plan.</li> </ul>
	Maintenance, Repairs, and Storage of Vehicles and Equipment	<ul style="list-style-type: none"> <li>Identify maintenance and repair areas. The use of drip pans or plastic beneath vehicles is required.</li> <li>Describe the method for collection, storage, and disposal of vehicle fluids.</li> <li>If an area is designated for vehicle maintenance, signs must be posted that state no vehicle washing may occur in the area.</li> </ul>
	Concrete Saw Cutting, Slurry, and Washwater Disposal	<ul style="list-style-type: none"> <li>Identify truck washout areas.</li> <li>Specify size of sumps needed to collect and contain slurry and washwater.</li> <li>Identify areas for rinsing hand tools including but not limited to screeds, shovels, rakes, floats, and trowels.</li> <li>Describe methods for collecting, treating, and disposal of waste water from exposed aggregate processes, concrete grinding and saw cutting, and new concrete washing and curing water.</li> </ul>
	Handling of pH Elevated Water	<ul style="list-style-type: none"> <li>New concrete vaults/structures may cause collected water to have an elevated pH. This water cannot be discharged to storm or surface water until neutralized.</li> <li>Provide details on treating/neutralizing water when pH is not within neutral parameters.</li> <li>Provide details on disposal of water with elevated pH or of the treated water.</li> <li>Provide details on the application of chemicals including pesticides and fertilizers. Provide a list of chemicals that may be used and the application rates. Describe where and how chemicals will be applied. Describe where and how chemicals will be stored.</li> </ul>
<b>Spill Prevention and Cleanup Report</b>		<ul style="list-style-type: none"> <li>List possible sources of a spill and identify the BMPs to be used for each source to prevent a spill.</li> <li>Identify personnel responsible for spill prevention and cleanup and clearly list the responsibilities of each person identified. Contact information for these personnel must be clearly identified in the report and on the SWPPS site plan.</li> <li>Describe the procedures to be used for monitoring spill prevention BMPs and for responding to a spill incident, including keeping records/reports of all inspections and spills.</li> <li>Identify where spill response materials will be stored. Make reference to the SWPPS site plan for location information.</li> <li>Identify disposal methods for contaminated water and soil after a spill.</li> </ul>