CITY OF MUKILTEO
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Stormwater Site Plan and Submittal Requirements Checklist

Project Name: _____

Construction Plan Reviewer: _____

Date: _____

Review #: 1 2 3 4 5

Cover Sheet

- ☐ Project name, address, and parcel number
- ☐ Applicant's name, address, and telephone number
- ☐ Engineering firm's name, address, and contact information
- ☐ Engineer's name, license number, and stamp
- ☐ Report date and revision dates

Table of Contents

- ☐ The page number for each section of the report is shown

Chapter 1 - Project Overview

- ☐ General Description for the project
- ☐ Watershed which the project is in
- ☐ Downstream condition (within ¼ of mile of project), pre- and post-project
- ☐ Existing natural drainage system (to and from adjacent properties, including bypass)
- ☐ Pre-developed and post-developed site conditions
- ☐ Site area and project site area is described
- ☐ Pre-project and post-project land cover type and area
- ☐ Pre-developed and post-developed stormwater runoff conditions
- ☐ Proposed conveyance, flow control, and runoff treatment
- ☐ Current assessed value and cost of proposed improvements (for redevelopment projects)
- ☐ Address any unique or difficult site parameters
- ☐ Vicinity map which clearly locates the property, identifies all roads bordering the site, shows the route of stormwater off-site to the local natural receiving water, and shows significant geographic features and sensitive/critical areas (streams, wetlands, lakes, steep slopes, etc.)

- ☐ References appropriate Sections/Chapters/Appendices of the document for detailed descriptions
- ☐ Identifies other permits required (e.g. NPDES Construction Permit, hydraulic permits, Army Corps 404 permits, wetlands, BNSF right-of-way, etc.)
- ☐ A soils map shows the soils within the project site as verified by field testing

Chapter 2 – Discussion of Minimum Requirements

- ☐ Requirements from basin plans, critical areas, plat/short plat approvals, conditional use permits, SEPA mitigations, Developer Agreements, Notice of Decision documents, or other binding documents that may apply to the project is discussed. The specific document and page numbers are referenced, including regional ponds
- ☐ Any engineering deviations and site specific conditions that affect design requirements are discussed. Assumptions used in the design are also discussed
- ☐ Which Minimum Requirements apply to the project are clearly shown using the decision path in Ecology Manual's Figure 2.4.1 for New Development and Figure 2.4.2 for Redevelopment Projects
- ☐ The minimum requirements that apply to the project are listed
- ☐ How the project satisfies each minimum requirement is discussed
- ☐ It cites whether the project is using the list approach, or the LID Performance Criteria (MR#5). If the list approach is used, the list is included and the specific infeasibility criteria that applies is included showing evidence that addresses the cited infeasibility criteria. (For example, if they are citing low infiltration rates as the infeasibility criteria, then a measured infiltration rate shall be given, using results from an on-site infiltration test)

Chapter 3 - Site and Basin Existing Condition Summary

- ☐ Site visit dates, observations and weather is included
- ☐ The results of a survey prepared by a registered land surveyor are summarized showing the following:
  - ☐ Existing public and private development, including utility infrastructure on and adjacent to the site
  - ☐ Minor hydrologic features, including seeps, springs, closed depression areas, drainage swales
  - ☐ Major hydrologic features with a streams, wetland, and water body survey and classification report
  - ☐ Locations of geologic sensitive or critical areas (i.e. vegetative buffers, wetlands, steep slopes, floodplains, geologic hazard areas, streams, creeks, ponds, ravines, springs, etc.)

- ☐ Topographic features that may act as natural stormwater storage, infiltration, or conveyance. Contour requirements for survey are shown in two-foot contours
- ☐ Land use and ground cover
- ☐ Natural and man-made drainage patterns
- ☐ Points of entry and exit for existing drainage to and from the site
- ☐ Any known historical drainage problems such as flooding, erosion, etc.
- ☐ Areas with high potential for erosion and sediment deposition
- ☐ Existing fuel tanks
- ☐ Groundwater wells on-site and within 100 feet of site
- ☐ Septic systems on-site and/or within 100 feet of the site
- ☐ Describe the 100-year flood hazard zone

☐ If any specific requirements are included in a basin plan for the area they have been identified

☐ References to relevant reports such as basin plans, flood studies, groundwater studies, wetland designations, sensitive area designations, environmental impact statements, environmental checklists, lake restoration plans, water quality reports, etc. have been included. Where such reports identify additional conditions for the project, state these conditions are stated and any proposed mitigation measures are described.

☐ The soils report is summarized and how this information was used to utilize areas most appropriate to evaporate, transpire, and infiltrate stormwater, and achieve the goal of minimizing pre-development natural hydrologic conditions on the site area explained. Information includes:

- ☐ How the project minimizes the development envelope
- ☐ How the project minimizes impervious surfaces
- ☐ How the project minimizes native vegetation loss on the site
- ☐ How the project preserves native soils
- ☐ Fulfilled the requirement for on-site stormwater management to the extent feasible, based on specific site conditions
- ☐ Underlying soils on the site from on-site exploration
- ☐ The results of saturated hydraulic conductivity (Ksat) testing, using small-scale Pilot Infiltration Tests (PIT). (Grain size analysis is not accepted)
- ☐ The results of testing for a hydraulic restriction layer and the elevation of the layer (groundwater, soil layer with less than 0.3 in/hr Ksat (as tested), bedrock, etc.)
- ☐ Presence of perched aquifers, aquitards and confined aquifers
- ☐ Discussion of critical areas or geologic hazards where present

Chapter 3—Off-Site Analysis

The **qualitative analysis** includes the following elements:

- ☐ Investigated the drainage system ¼ mile downstream from the project by a site visit, and has included the following items:
  - ☐ Problems reported or observed during the resource review
  - ☐ Existing/potential constrictions or capacity deficiencies in the drainage system
  - ☐ Existing/potential flooding problems
  - ☐ Existing/potential overtopping, scouring, bank sloughing, or sedimentation
  - ☐ Significant destruction of aquatic habitat (e.g., siltation, stream incision)
  - ☐ Existing public and private easements through the project site and their corresponding widths
  - ☐ Qualitative data on features such as land use, impervious surface, topography, soils, presence of streams, and wetlands
  - ☐ Information on pipe sizes, channel characteristics and drainage structures
  - ☐ Verification of tributary drainage areas
  - ☐ Date and weather at the time of the inspection
- ☐ The drainage system and its existing and predicted problems through observations, reports, and hydraulic modeling (as necessary) are described. All existing or potential problems as listed above (e.g. pooling water or erosion) are described. The following information is provided for each existing or potential problem:
  - ☐ Magnitude of or damage caused by the problem
  - ☐ General frequency and duration
  - ☐ Return frequency of storm or flow when the problem occurs (may require quantitative analysis)
  - ☐ Water elevation when the problem occurs
  - ☐ Names and concerns of the parties involved
  - ☐ Current mitigation of the problem
  - ☐ Possible cause of the problem
  - ☐ Whether the project is likely to aggravate the problem or create a new one
- ☐ Properly include off-site areas in drainage calculations

Chapter 4 — Permanent Stormwater Control Plan

Pre-Developed Site Hydrology

- ☐ A list has been provided for the assumptions and site parameters for the pre-developed condition
- ☐ A list of assumptions and site parameters for the pre-developed condition has been provided
- ☐ All sub-basins within, or flowing through, the site have been identified. Consistent labeling for all sub-basins throughout figures, calculations and text has been used

- ☐ For each sub-basin, current land use, acreage, hydrologic soil group and land use to be modeled under pre-developed conditions has been identified
- ☐ Summarized output data from the pre-developed condition
- ☐ Included completed hydrologic calculations in Appendix A of the report
- ☐ Provided model reports, showing all assumptions, comparing pre-and post- project runoff

Developed Site Hydrology

- ☐ Provided a list of assumptions and site parameters for the developed condition
- ☐ Identified all sub-basins within, or flowing through, the site. Used consistent labeling for all sub-basins throughout figures, calculations and text
- ☐ For each sub-basin, current land use, acreage, hydrologic soil group and land use to be modeled under developed conditions has been identified
- ☐ Summarized output data from the developed condition
- ☐ Included completed hydrologic calculations in Appendix A of the report

Performance Goals and Standards

- ☐ Indicated total acreage of hard and impervious surfaces, pollution-generating impervious and hard surfaces and pollution-generating pervious surfaces for each Threshold Discharge Area (TDA) (Lawn is a pollution generating pervious surface)
- ☐ Included applicable decision criteria and thresholds with treatment and flow control requirements clearly identified and supported

Flow Control ☐ Check Box if N/A

- ☐ Identified the sizing method used
- ☐ Summarized model results
- ☐ Described proposed flow control system and appurtenances, including size, type and characteristics of storage facility and control structure
- ☐ Provided a drawing of the flow control facility and its appurtenances
- ☐ Included Hydraulic Analysis Worksheet, calculations, and computer printouts (including stage storage tables) for the flow control system, and is included in Appendix B of the report

Water Quality ☐ Check Box if N/A

- ☐ Identified the sizing method used
- ☐ Summarized model results
- ☐ Identified treatment methods used, including size, type and characteristics of treatment facility and appurtenances
- ☐ Provided a drawing of the treatment facility and its appurtenances, including:
  - ☐ Dimensions

- ☐ Inlet/outlet sizes and elevations
- ☐ Location of the facility on the project site
- ☐ Appurtenances/fittings

☐ Calculations for the water quality design storm and facility sizing calculations is included in Appendix A of the report

☐ Where appropriate, included manufacturer's specifications in Appendix C of the report

Conveyance System Analysis and Design

☐ Illustrated the proposed conveyance system on a project site plan, per the specifications in the Development Standards Appendix C, Construction Plan Submittal Requirements

☐ Described capacities, design flows and velocities for each reach

☐ Included conveyance calculations in Appendix B of the report

Chapter 6—Operation and Maintenance Manual

The Operation and Maintenance Manual includes:

☐ A brief narrative description of the on-site storm system

☐ A site map, with the locations of the stormwater system, including treatment, detention, infiltration, and any other permanent BMPs prominently noted

☐ The person or organization responsible for ongoing maintenance of the on-site storm system, including the phone number and current responsible party

☐ Where the Operation and Maintenance manual is to be kept on site, with a note that it must be made available to the City for inspection

☐ A description of each flow control and treatment facility, including what it does and how it works, including any manufacturer's documentation

☐ A description of all maintenance tasks and the frequency of each task for each flow control and treatment facility, including the maintenance criteria in the Ecology Manual and any manufacturer's recommendations

☐ A sample maintenance activity log indicating emergency and routine actions to be taken

Required Stormwater Site Plan Appendices

☐ Appendix A — WWHM Report (or approved equivalent)

☐ Appendix B - Hydraulic Analysis

☐ Appendix C – Operations and Maintenance Manual

Required Stand Alone Documents in Support of the SSP

☐ Construction Stormwater Pollution Prevention Plan (SWPPP)

☐ Geotechnical reports for stormwater site planning

☐ Easement and Covenant Documents

☐ Critical areas analysis and delineation (in some instances)

☐ List any Other Supporting Documents _____

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Required Drawings

☐ Project drawings are provided as required in Appendix C – Construction Plans of the Standards