



## Checklist 2: Category 2 Stormwater Site Plans

Per ECDC 18.30, Category 2 projects must comply with Minimum Requirements No. 1 through No. 9 and include projects that:

- i. Result in 5,000 square feet, or greater, of new plus replaced hard surface area, or
- ii. Convert 0.75 acres, or more, of vegetation to lawn or landscaped areas, or
- iii. Convert 2.5 acres, or more, of native vegetation to pasture.

Stormwater Site Plans shall be prepared in accordance with Chapter 3 of Volume I of the Department of Ecology's Stormwater Management Manual for Western Washington (SWMMWW), ECDC 18.30, and the requirements in the Edmonds Stormwater Addendum (Addendum). Because the SWMMWW does not include clear itemization of project submittal requirements, the City of Edmonds developed the following checklist to aid project proponents and plan reviewers in complying with the applicable SWMMWW requirements. In addition, City-specific requirements (i.e., requirements presented in ECDC 18.30 and the Addendum that are not included in the SWMMWW) are also included in the checklist. For clarity, the checklist headings and subheadings are generally organized according to the SWMMWW structure, though some requirements specific to ECDC 18.30 and the Addendum are included under the SWMMWW headings.

This checklist reflects most, but not necessarily all of the items that will be reviewed by the Engineering Division. It is intended to be used as an aid for developers and plan reviewers by providing a foundation for clear and consistent review of development work in the City of Edmonds. However, all items may not be applicable to every project, and all items of concern to this office may not be covered on this checklist. Last, the structure and organization of project submittals can vary depending on the project. The headings outlined below represent the City's preferred organization of submittal information, though variations are acceptable as long as all of the required information is provided in a clear submittal package.

**Applicant:**

**Application #:**

<b>Within each blank cell, enter comment codes as follows:</b>	
C = Complete	R = Revise (i.e., make corrections)
N/A = Not Applicable	M = Missing (i.e., please include)
IC = Incomplete	
<b>DRAWING REQUIREMENTS</b> (SWMMWW Volume I, Section 3.1.1 [survey requirements], 3.1.5, and 3.1.7)	
<b>General</b>	
1	Sheet size is 24 inches x 36 inches.
2	All drawings to scale, preferably at 1 inch = 20 feet, minimum font size 8 point.
3	All sheets have a north arrow, scale, a benchmark reference, datum, the section, township, and range. North arrow points to the top or to the left of the sheet.
4	Each set of drawings has a legend to define map symbols and line types.
5	All drawings are stamped, signed, and dated by a licensed professional engineer prior to review by the City.
6	Lot dimensions, areas, property lines, parcel numbers, ownership, easements, and tracts.
7	Existing features are ghosted or shaded.
8	Identifies all topographic features within project limits (and sufficient area beyond) to resolve questions of setback, slope, drainage, access onto abutting property, and road continuations.
9	Identifies all pertinent existing roads and adjoining developments.
10	Existing and proposed ditch flow lines, drainage structures with invert elevations, utility locations (e.g., water, sewer, gas, telephone, etc.), fences, structures, hard surfaces, curbing and approaches, pertinent trees and shrubbery, and other appurtenances which would affect the construction of the project are identified.
11	Identifies existing and proposed underground wells and underground storage tanks (including septic tanks) – on-site and on adjacent properties (of record and not of record) within specified setbacks.
12	Indicates direction of flow, size, and kind of each drainage channel (including natural drainage systems), pipe, structure, and on-site or off-site drainage courses.
13	Identifies locations of all stormwater facilities and include the following information: <ul style="list-style-type: none"> <li>• Overall dimensions and measurements</li> <li>• Placement on site</li> <li>• Location of inflow, bypass, and discharge systems</li> <li>• Dispersion flow paths</li> <li>• Drainage area</li> </ul>
14	Includes property lines, parcel numbers, and ownership.
15	Hydrologic features, including but not limited to seeps, springs, closed depression areas, streams, wetlands, and water bodies, wetland and buffer boundaries and classifications, etc., are identified.
16	Identifies flood hazard areas on or adjacent to the site.
17	Identifies geologic hazard areas and associated buffer requirements on or adjacent to the site.



<b>Within each blank cell, enter comment codes as follows:</b>	
C = Complete	R = Revise (i.e., make corrections)
N/A = Not Applicable	M = Missing (i.e., please include)
IC = Incomplete	
<b>Construction SWPPP Drawings</b> (SWMMWW Volume I, Section 3.1.6 and Volume II, Chapter 3)	
33	Refer to Addendum Checklist 3: Construction SWPPP Drawings and Report.
<b>STORMWATER SITE PLAN REPORT</b> (SWMMWW Volume I, Section 3.1.5 and 3.1.7)	
<b>Cover Sheet</b>	
34	Project name.
35	Applicant's name, address, telephone number, and e-mail address.
36	Project engineer's name, address, telephone number, and e-mail address.
37	Date of submittal.
38	Contact's name, address telephone number, and e-mail address.
39	Contractor's name, address telephone number, and e-mail address, if known.
<b>Project Engineer's Certification</b>	
40	All plans and specifications, calculations, certifications, as-built drawings, and all other submittals which will become part of the permanent record of the project are dated and bear the project engineer's official seal and signature. Project engineer is a professional engineer licensed in the State of Washington in civil engineering.
<b>Table of Contents</b>	
41	Page numbers for each section of the report.
42	Page numbers of appendices.
43	All pages of the Stormwater Site Plan Report are numbered.
<b>Project Site Map(s)</b> (SWMMWW Volume I, Section 3.1.5 and 3.1.7)	
44	Topographic map at an appropriate scale.
45	Includes project boundaries, subbasin boundaries, and off-site areas tributary to the project are shown.
46	Identifies drainage features (such as channels, detention facilities, and floodways) and flow paths to receiving waters are shown.
47	Identifies areas contributing to flow control and/or runoff treatment facilities.
48	Identifies threshold discharge areas (TDAs) where applicable.



<p><b>Within each blank cell, enter comment codes as follows:</b></p> <p>C = Complete                      R = Revise (i.e., make corrections)</p> <p>N/A = Not Applicable            M = Missing (i.e., please include)</p> <p>IC = Incomplete</p>	
<p><b>Minimum Requirement No. 4, Off-Site Analysis</b> (Addendum Sections 5.4 and 6.2)</p>	
65	Off-site analysis and documentation in accordance with Addendum Section 6.2.
66	Describes where and how stormwater runoff will leave the site, including the drainage system between the site and the receiving surface waters. Provides information on pipe sizes, channel characteristics, and drainage structures. Describes emergency services located along the flow path (e.g., fire/police stations, hospitals). Describes environmentally sensitive areas, such as wetlands, etc.
67	Includes analysis of potential off-site impacts of stormwater discharges downstream from the site to the receiving water (or one-quarter mile, whichever is less).
68	Describes upstream drainage tributary to the project, to a point beyond any backwater effects caused by the project.
69	Documents field-inspection of all existing stormwater drainage systems downstream; describes any known historical drainage problems such as flooding, erosion, etc.; and includes determination of whether the capacity of the drainage system(s) is adequate to handle the existing flows, flows generated by the proposed project, and any overflow.
70	Existing and potential impacts analysis includes but is not limited to: <ul style="list-style-type: none"> <li>• Conveyance system capacity issues</li> <li>• Flooding or bank overtopping</li> <li>• Upland erosion impacts, including slope stability and landslide hazards</li> <li>• Stream channel erosion (at the outfall location and to the downstream limit of analysis)</li> <li>• Violations of surface water quality standards as identified in a Basin Plan or a TMDL/Water Cleanup Plan (e.g., for Lake Ballinger)</li> </ul>
71	For each existing or potential problem, documents: the magnitude of damage caused by the problem, the general frequency and duration, current mitigation of the problem (if any), the likely or possible cause of the problem, and whether the project is likely to aggravate the problem or create a new one.
72	Identifies whether the project is within any other critical areas or their buffers as defined in ECDC, and whether any additional requirements apply.
73	All areas pertinent to the analyses such as site boundaries, study area boundaries, streets and prominent features, downstream flow path, potential/existing problems, etc. are keyed to features shown on the project map/drawings.
74	Quantitative analysis provided (if required by the City). May include calculations and/or modeling analyses of on-site and off-site water quality, erosion, slope stability, and other impacts that may be caused or aggravated by a proposed project. Measures for preventing impacts and for not aggravating existing impacts are also identified.

<b>Within each blank cell, enter comment codes as follows:</b>	
C = Complete	R = Revise (i.e., make corrections)
N/A = Not Applicable	M = Missing (i.e., please include)
IC = Incomplete	
<b>Developed Site Hydrology</b> (SWMMWW Volume I, Section 3.1.5)	
<b>Summary Section</b>	
75	Provides a brief description of the development project (type, size, location), treatment, conveyance, and disposal/discharge (types, sizes, and locations).
76	Describes the permit for which the applicant is applying, address and legal description of property, parcel number, property zoning, etc.
77	Describes other permits required (HPA, USACE Section 404 Permit, wetlands, etc.) and presents status.
78	Includes tabulation of the following by threshold discharge area: <ul style="list-style-type: none"> <li>• Current and proposed hard surfaces</li> <li>• New and replaced pollution generating pervious, impervious, and hard surfaces</li> <li>• Effective impervious surfaces</li> <li>• Existing unmanaged hard surfaces that will remain after project completion</li> <li>• Disturbed pervious (such as landscaped areas)</li> <li>• Converted vegetation areas</li> <li>• Undisturbed areas</li> <li>• Additions of hard surfaces</li> </ul>
79	Describes environmentally sensitive areas, such as wetlands.
80	Describes proximity to structures, property lines, on-site structures, sewers, basements, bulkheads, and underground storage tanks.
81	Identifies which of the minimum requirements apply to the project, and how they are being addressed.
82	Includes justification for those minimum requirements that do not apply.
83	Developed threshold discharge areas and flow routing shown on the Site Map are cross-referenced to computer input screens and printouts or calculation sheets.
<b>Performance Standards and Goals</b>	
84	If treatment facilities are proposed, provides a listing of the water quality menus used. (Note that phosphorus treatment is required for projects that drain to Hall Creek or Lake Ballinger.)
85	If flow control facilities are proposed, provides confirmation of the flow control standard being achieved.
86	If on-site stormwater management BMPs are proposed, indicates whether the project used the mandatory list option, or the LID performance standard option, and completes documentation demonstrating compliance with either approach.
87	For projects that collect runoff from five or more parking spaces (but are not zoned SFR), indicates that floatable controls are installed in catch basins.
88	Describes the stormwater BMPs and conveyance systems.
89	Describes the detention system, outlet works, and spillways.

<b>Within each blank cell, enter comment codes as follows:</b>	
	C = Complete N/A = Not Applicable IC = Incomplete
	R = Revise (i.e., make corrections) M = Missing (i.e., please include)
90	Discusses vegetation establishment and management plan for conveyance and detention systems.
91	Includes complete engineering calculations for all facilities, including hydrologic modeling analyses and documentation (preferably in an appendix).
	<b>Low Impact Development Features</b>
92	For Minimum Requirement No. 5, includes project narrative describing how the project will fulfill the requirement for on-site management of stormwater to the extent feasible.
93	For Minimum Requirement No. 5, includes total area of vegetation retained.
94	For projects using the list option for Minimum Requirement No. 5, includes an explanation and documentation (including citation of site conditions is identified in a Soils Report) for any determination that an on-site stormwater management BMP was considered infeasible for the site. Information obtained and documented is used to substantiate any BMP infeasibility determinations. (See Addendum Appendix A: Infeasibility Criteria.)
95	For Minimum Requirement No. 5, includes areas of disturbed soils to be amended. (Note: All lawn and landscaped areas are to meet requirements of soil preservation and amendment [see Addendum Checklist 7: Post-Construction Soil Quality and Depth]. Use of compost is one way to meet the requirement).
96	For Minimum Requirement No. 5, describes retained trees and newly planted trees for which impervious reduction credits are claimed.
97	Documents that at least 25 percent of any existing hard surfaces that do not drain to an approved stormwater management facility and that will remain after the project use on-site stormwater management BMPs to manage those existing hard surfaces. (If the 25 percent minimum is met, projects are not required to evaluate BMPs in priority order or document infeasibility for these existing surfaces.)
98	Provides description/tabulation of managed and unmanaged surfaces. (Note that per Addendum Section 5.5, if a project cannot manage 100 percent of a given surface with the first feasible BMP, a second BMP may be required to manage the remaining unmanaged area. For example, where a roof surface drains to multiple downspouts around the perimeter of the structure, it is generally insufficient to only manage runoff that drains to a single downspout and to leave the remaining downspouts unmanaged.)
	<b>Flow Control, Water Quality Systems, and Conveyance</b>
99	Provides calculations for the project's stormwater storage, treatment, and conveyance system components. All relevant work/calculations meet requirements.
100	If hydrologic modeling is required, the project engineer uses an approved continuous simulation runoff model and documents modeling methods, assumptions, parameters, data sources (e.g., required Puget East long-term precipitation time series), and all other relevant information to the analysis. If model parameters are used that are outside the standards of practice, or if parameters are different than those standards, justification is provided for the parameters.

<b>Within each blank cell, enter comment codes as follows:</b>	
	C = Complete N/A = Not Applicable IC = Incomplete
	R = Revise (i.e., make corrections) M = Missing (i.e., please include)
101	If distributed bioretention areas and/or infiltration below pollution-generating hard surfaces are used to help meet treatment requirements, details to confirm accurate representation in the runoff model are provided.
102	Projects taking an impervious surface reduction credit for newly planted or retained trees provide those calculations.
103	Projects using full dispersion or downspout infiltration BMPs provide information to confirm conformance with design requirements that allow removal of the associated drainage areas from computer model input.
104	For Minimum Requirement No. 6, documents that the summation of volumes and the volume treated through a centralized, conventional treatment system must meet or exceed 91 percent of the total stormwater runoff file. This sum of volumes must include: Stormwater that has infiltrated through a bioretention area, and stormwater that has infiltrated below pollution-generating hard surfaces (e.g., permeable pavement) through adequate soils. Stormwater that passes through a properly sized treatment facility. Note that stormwater that is re-collected below a bioretention area and routed to a centralized treatment facility should not be counted twice. Subtraction of any stormwater that does not receive treatment due to bypass of, or overflow from a treatment facility or a bioretention area (if the overflow is not subsequently routed to a treatment facility).
105	Includes copies of all calculations for existing and proposed capacity of channels, culverts, drains, gutters, etc.
106	Describes capacities, design flows, and velocities in each pipe/reach.
107	Describes required materials or specifications for the design (e.g., rock lining for channels when velocity is exceeded, high density polyethylene pipe needed for steep slope).
	<b>Special Reports and Studies</b> (SWMMWW Volume I, Section 3.1.7)
108	Includes any special reports and studies conducted to prepare the Stormwater Site Plan (e.g., Soils Report).
	<b>Soils Report</b> (SWMMWW Volume I, Sections 3.1.1 and 3.3.5)
109	For all sites utilizing infiltration for stormwater management, a soils report is prepared that is stamped by a professional soil scientist certified by the Soil Science Society of America (or equivalent program), professional engineer licensed in the State of Washington in civil engineering, geologist, hydrogeologist, or licensed engineering geologist registered in the State of Washington.
110	Meets the specific infiltration rate (Ksat) testing and documentation requirements AND demonstrates compliance with applicable design requirements for all site-specific BMPs, e.g., testing for hydraulic restriction layers (see Addendum Checklist 4: Methods for Determining Infiltration Rates; Addendum Checklist 5: Field and Design Procedures for Bioretention, Permeable Pavement, Rain Gardens, and Downspout Infiltration Systems; and Addendum Checklist 6: Field and Design Procedures for Infiltration Trenches and Basins).

<p><b>Within each blank cell, enter comment codes as follows:</b></p> <p>C = Complete                      R = Revise (i.e., make corrections)</p> <p>N/A = Not Applicable            M = Missing (i.e., please include)</p> <p>IC = Incomplete</p>	
111	<p>Soils Report includes the following:</p> <ul style="list-style-type: none"> <li>• Topography within 500 feet of the proposed facility</li> <li>• Depth to hydraulic restriction layer</li> <li>• Detailed soil logs (see below)</li> <li>• Visual grain size analysis</li> <li>• Grain-size distribution (required if using the grain size analysis method to estimate infiltration rates)</li> <li>• Textural class</li> <li>• Percent clay content (include type of clay, if known)</li> <li>• Cation exchange capacity</li> <li>• Color/ mottling</li> <li>• Variations and nature of stratification</li> </ul>
112	<p>Detailed logs for each test pit or hole were prepared, along with a map showing the locations of the test pits or holes. Logs include:</p> <ul style="list-style-type: none"> <li>• Depth of log</li> <li>• Soil description</li> <li>• Depth to groundwater</li> <li>• Evidence of seasonal high groundwater elevation</li> <li>• Existing ground surface elevation</li> <li>• Proposed basin bottom elevation</li> <li>• Presence of stratification that may impact the infiltration design</li> </ul>
113	Includes a description of local site geology, including soil or rock units likely to be encountered at soil sampling depths.
114	Includes a detailed documentation of the design infiltration rate determination.
115	States whether location is suitable for infiltration and recommends a design infiltration rate.
116	If infiltration for treatment is proposed, includes the results of the soil suitability criteria (SSC) testing per the SWMMWW Volume III, Section 3.3.7 (summarized in Addendum Checklist 6: Procedures for Infiltration Basins and Trenches).
117	If on-site infiltration may result in shallow lateral flow (interflow), the conveyance and possible locations where that interflow may re-emerge were assessed by a professional engineer, geologist, hydrogeologist, or engineering geologist registered in the State of Washington.
<p><b>CONSTRUCTION SWPPP REPORT</b> (SWMMWW Volume I, Section 3.1.6 and Volume II, Chapter 3)</p>	
118	Refer to Addendum Checklist 3: Construction SWPPP Drawings and Report.

<b>Within each blank cell, enter comment codes as follows:</b>	
C = Complete	R = Revise (i.e., make corrections)
N/A = Not Applicable	M = Missing (i.e., please include)
IC = Incomplete	
<b>OPERATION AND MAINTENANCE MANUAL</b> (SWMMWW Volume I, Section 3.1.7)	
119	Prepared for each flow control and treatment facility, including any distributed bioretention facilities that are used to help meet flow control and/or treatment requirements.
120	A map of the project area is included in the manual.
121	Map provides the names of roads that the project connects to.
122	Brief description of the development project, including project type (plat, short plat, commercial center, industrial, etc.) and size (acres, number of lots, linear feet of road, square feet of building, etc.).
123	Describes the stormwater facility and conveyance systems, and how these systems are designed to manage the volume, rate, and quality of stormwater runoff from the project.
124	Identifies the party (or parties) responsible for maintenance and operation of all stormwater structures and BMPs requiring maintenance.
125	Includes detailed list of all stormwater structures and facilities requiring maintenance. For situations where there are split maintenance responsibilities (e.g., private/public), provide a breakdown of the entity responsible for each structure and facility.
126	Narrative description provided of the purpose, function, and maintenance requirements for all stormwater structures and BMPs requiring maintenance.
127	Detailed maintenance checklists for all stormwater structures and BMPs requiring maintenance. Include only those checklist items that are pertinent to the structures and BMPs proposed for the project.
128	Includes listing and location of plant species and their requirements for maintenance, newly planted and retained trees claimed as flow reduction credits.
129	Maintenance requirements address issues including, but not limited to, pest and disease management practices, pruning requirements, irrigation requirements, fertilization requirements, etc.
<b>ESTABLISHMENT OF MAINTENANCE COVENANT</b> (SWMMWW Volume I, Section 3.1.5 and 3.1.7)	
130	Covenant is included for each site/lot that contains stormwater management BMPs (flow control, runoff treatment, and on-site stormwater management BMPs) that will be maintained by a private entity.
131	For on-site stormwater management BMPs, design details, figures, and maintenance instructions for each BMP are attached.
132	A map showing the location of newly planted and retained trees claimed as flow reduction credits is attached.
133	The maintenance covenant is created on a City-approved form and all attachments meet the recording requirements of the Snohomish County Auditor.
134	The covenant is recorded at the Snohomish County Auditor's office and is tied to the parcel numbers that the project is built on.

<b>Within each blank cell, enter comment codes as follows:</b>	
	C = Complete
	R = Revise (i.e., make corrections)
	N/A = Not Applicable
	M = Missing (i.e., please include)
	IC = Incomplete
135	The covenant includes an 8.5-inch x 11-inch plan view showing the location of on-site stormwater management BMPs relative to structures and property lines, and maintenance instructions for each on-site stormwater management BMP.
136	Covenants are recorded prior to final construction approval for the proposed project.
137	Includes a legal description of the property.
138	Assessor parcel numbers.
139	Project name.
140	Project application/permit number.
141	Identifies parties responsible (including contact information) for maintenance and implementation of pollution source control measures.
142	Includes language stating that the covenant shall run with the land and be binding on all successors and assigns.
143	Requires that the responsible parties maintain the stormwater facilities in accordance with the project Operation and Maintenance Manual.
144	Requires that the responsible parties implement pollution source control measures in the Operation and Maintenance Manual.
145	Requires that the responsible parties keep and maintain a log of maintenance activity that indicates what actions were taken, and that the log be made available for inspection by the City.
146	Prohibits unauthorized modifications, unless approved by the City.
147	Provides for a City approval process and allows modification to the covenant, or to the Operation and Maintenance Manual.
148	Provides for a City process (remedies) for situations where the responsible party fails to perform the required maintenance or fails to implement the pollution source control measures.
149	Provides access authority to the City for purposes of inspection, maintenance, and repair.
150	Provides for reimbursement to the City by the responsible party in the event that the City incurs costs related to maintenance or repair.
151	Includes the location of the approved Stormwater Site Plan.
152	Includes the Operation and Maintenance Manual as an attachment.

Reviewer: \_\_\_\_\_

Review Date: \_\_\_\_\_

Reviewer Phone #: \_\_\_\_\_

Reviewer Comments: