

City of Bainbridge Island
Surface & Stormwater Management (SSWM) Plan Worksheet



To be completed by the applicant and submitted with construction permit applications that require a Surface & Stormwater Management Plan (SSWMP) or Storm Water Pollution Prevention Plan (SWPPP). Submit this form at the time of initial construction permit application. Two copies are required.

Related Application or Building Permit Number:

Date: _____ Applicant's telephone #: _____

Applicant's name: _____

Applicant Signature: _____

Site address or location: _____

Project Name: _____

Background: This surface & storm water management plan is designed to address storm runoff from newly created impervious surfaces or newly disturbed clearings on your parcel. Impervious surface means a hard surface area which either prevents or retards the entry of water into the soil mantle (as under natural conditions prior to development), and/or a hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots, storage areas, sport courts, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of storm water.

Disturbed land includes any land where vegetation is cleared to make way for your project, including all areas graded for cut & fill, cleared for construction, cleared for landscaping, pastures, septic system etc. Construction site clearing, grading or excavating which results in disturbance of 1 acre or more is required by Washington State Department of Ecology to obtain an NPDES Construction Stormwater General Permit for stormwater discharges associated with construction activity. The permit can be found at the following web site. http://www.ecy.wa.gov/programs/wq/stormwater/construction/index.html#permit_factsheet

References:

- Bainbridge Island Municipal Code, Chapter 15.20, Surface and Storm Water Management
- Bainbridge Island Municipal Code, Chapter 15.21, Storm Water Facilities Maintenance Program
- Washington State Department of Ecology Storm Water Management Manual for the Puget Sound Basin

IS THIS PARCEL WATERFRONT PROPERTY? Yes No

IS A GEOTECHNICAL REPORT REQUIRED FOR BUILDING ON THIS PROPERTY?

Yes No

If "Yes", then prior to submission of this plan or building permit, your geotechnical engineer must give concurrence for the drainage plan or SWPPP confirming that your proposed plan handles stormwater in a manner that doesn't reduce the geotechnical stability of the property.

DOES AN ENGINEERED COMMUNITY/REGIONAL STORM WATER SYSTEM EXIST TO SERVE YOUR PARCEL? Yes No Don't Know

If yes, plat name and lot number: _____

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PROPOSED IMPERVIOUS SURFACES:

Fill in all applicable blanks below to list the square footage of all impervious areas proposed on your parcel. For buildings, measure out to the edge of the eaves. Don't include decks with slots.

Houses: _____ ft²
 Detached Garage: _____ ft²
 Outbuildings: _____ ft²
 Driveways: _____ ft²
 Sidewalks: _____ ft²
 Patios: _____ ft²
 Other: _____ ft²

Grand Total: _____ ft²

If your 'Grand Total' is less than 800 square feet, no plan is required.

If your 'Grand Total' is greater than 800 square feet, but less than 5,000 square feet, a drainage plan is required, and you may utilize this prescriptive worksheet.

If your 'Grand Total' is greater than 5,000 square feet, or if your new disturbed land is greater than 43,560 square feet, an engineered drainage plan is required and must be prepared by a professional Engineer, licensed by the State of Washington. (With an exception for waterfront properties discharging directly to the shoreline.)

Infiltration Type and Size:

Find your grand total in the chart at the right, choose your method, find your size and fill in preferred method below.

- Less Than 800 sq.ft. No Plan Required
- Waterfront Release: See Appendix
- Infiltration Bed: _____ sq.ft.
- Standard Trench: _____ lf.
- Wide Trench: _____ lf.
- 4' Chambers: _____ chambers

Infiltration Table

24-hour, 10-year return rainfall = 3.2 inches

Grand Total	INFILTRATION METHOD:			
<i>Impervious AREA in Square Feet</i>	<i>INFILTRATION BED in square feet</i>	<i>STANDARD (2')TRENCH in lineal feet</i>	<i>WIDE (3') TRENCH in lineal feet</i>	<i>4 Foot GRAVELLESS CHAMBERS Number of chambers</i>
0 - 100	29	8	6	1
101 - 200	58	15	12	3
201 - 300	87	22	18	3
301 - 400	116	29	24	4
401 - 500	144	36	29	5
501 - 600	173	44	35	6
601 - 700	202	51	41	7
701 - 800	231	58	47	9
801 - 900	260	65	52	10
901 - 1000	288	72	58	11
1001 - 1100	317	80	64	12
1101 - 1200	346	87	70	13
1201 - 1300	375	94	75	14
1301 - 1400	404	101	81	15
1401 - 1500	432	108	87	16
1501 - 1600	461	116	93	17
1601 - 1700	490	123	98	18
1701 - 1800	519	130	104	19
1801 - 1900	548	137	110	21
1901 - 2000	576	144	116	22
2001 - 2100	605	152	121	23
2101 - 2200	634	159	127	24
2201 - 2300	663	166	133	25
2301 - 2400	692	173	139	26
2401 - 2500	720	180	144	27
2501 - 2600	749	188	150	28
2601 - 2700	778	195	156	30
2701 - 2800	807	202	162	30
2801 - 2900	836	209	168	31
2901 - 3000	864	216	173	32
3001 - 3100	893	224	179	34
3101 - 3200	922	231	185	35
3201 - 3300	951	238	191	36
3301 - 3400	980	245	196	37
3401 - 3500	1008	252	202	38
3501 - 3600	1037	260	208	39
3601 - 3700	1066	267	214	40
3701 - 3800	1095	274	219	41
3801 - 3900	1124	281	225	42
3901 - 4000	1152	288	231	43
4001 - 4100	1181	296	237	44
4101 - 4200	1210	303	242	45
4201 - 4300	1239	310	248	46
4301 - 4400	1268	317	254	47
4401 - 4500	1296	324	260	49
4501 - 4600	1325	332	265	50
4601 - 4700	1354	339	271	51
4701 - 4800	1383	346	277	52
4801 - 4900	1412	353	283	53
4901 - 5000	1440	360	288	54
> 5000	Must have an engineered drainage plan.			

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Descriptions:

Drain rock: $\frac{3}{4}$ " to $1\frac{1}{2}$ " round washed rock.

Infiltration Bed:large, flat, level, usually rectangular, pit with a minimum 1 ft. deep bed of drain rock, with a large loop of perforated pipe in upper $\frac{1}{3}$ of rock, covered with filter fabric & 6" or more compact backfill. No infiltration credit is given for pit sidewalls.

Standard trench: ...uses 2-ft.-wide backhoe bucket; with trench deep enough for 1 ft. of drain rock under & 6" above the perforated pipe [the length of the trench]; entire trench & contents wrapped with filter fabric; with 6" or more compact backfill above. With 2 ft. across bottom of trench & 1 ft. sidewall credit up each side, for every lineal foot of trench you achieve 4 ft^2 of infiltration area.

Wide trench:same as standard trench but uses 3-ft.-wide excavator bucket. With 3 ft. across bottom of trench & 1 ft. sidewall credit up each side, for every lineal foot of trench you achieve 5 ft^2 of infiltration area.

Gravelless Chambers: Often called infiltrators. These molded 'half-pipe' black or yellow plastic chambers are completely open on the bottom and have louvers on the sides.

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Appendix

Waterfront Release

Applicability:

As long as provisions are made for preserving water quality, your release of stormwater to Puget Sound should have no significant impact on the shoreline.

You may collect all stormwater and route it to the beach area, with a few restrictions:

- The outfall must be above the ordinary high water mark per BIMC 16.12 and not release an erosive concentrated flow to the beach. This is normally achieved by either placing a quarry spall energy dispersion pad at the outfall, releasing into a rock pocket behind a bulkhead, or releasing behind or into a natural structure that resists erosion and assists dispersion, such as a root ball mass.
- All proposed releases to the shoreline shall be coordinated with the Washington State Department of Fish & Wildlife. Generally, if the pipe releasing stormwater to the beach area is larger than 8" diameter a shoreline permit is required. The Planning & Community Development (PCD) Department can assist you with shoreline permits.
- If any runoff is collected from a driving surface (all driveway and parking areas), it must be treated to remove petroleum products before it is released to the environment. Contact the City's Engineering Division for more information.
- If the discharge pipe traverses a steep bluff on its way to the beach, it must be a continuous pipe that is securely anchored to the surface of the bluff.