



SAN JUAN COUNTY STORMWATER MANAGEMENT FOR DEVELOPMENT

REFERENCE: SAN JUAN COUNTY CODE SECTION 18.60.070 STORM DRAINAGE STANDARDS

ALL NEW DEVELOPMENT AND REDEVELOPMENT

For stormwater management for new and redevelopment, San Juan County references the Washington State Department of Ecology Stormwater Management Manual, for Western Washington 2005 edition. This provides guidance on the measures necessary to control the quantity and quality of stormwater produced by new development and redevelopment so they comply with water quality standards and contributes to the protection of beneficial uses of the receiving waters. The manual establishes minimum requirements for projects of all sizes, and provides guidance concerning how to prepare and implement stormwater site plans. The Minimum Requirements are satisfied by the application of Best Management Practices (BMPs).

The applicability of Minimum Requirements varies depending on the amount of new or redeveloped impervious area and land disturbance. The Minimum Requirements are:

- #1 Preparation of Stormwater Site Plan
- #2 Construction Stormwater Pollution Prevention
- #3 Source Control of Pollution
- #4 Preservation of Natural Drainage Systems and Outfalls
- #5 On-site Stormwater Management
- #6 Runoff Treatment
- #7 Flow Control
- #8 Wetlands Protection
- #9 Basin/Watershed Planning
- #10 Operation and Maintenance

1. New Impervious Areas on Site:

- a. Shall **not** be required to include all impervious areas in existence since September 1, 1991.
- b. Shall include all impervious areas in existence for less than 2 years; unless final site stabilization has been verified.
- c. Shall include all impervious areas associated with an active project and shall be considered as part of, and as a revision to, that active project.

2. Existing Impervious Areas on a Site:

- a. Shall include all existing impervious areas regardless of date of existence.
- b. Shall **not** include impervious areas that are part of an active project and which are considered New Impervious Areas.
- c. Shall **not** include impervious areas in existence for less than 2 years and which are considered New Impervious Areas; unless final site stabilization has been verified.

3. Land Disturbance associated with Project:

- a. All new areas cleared for construction and access.
- b. All new Landscaping.

Please refer to the following link to San Juan County Community Development and Planning website for additional information and sample plans.

http://www.sanjuanco.com/cdp/SW_management.aspx 7/23/09

MINIMUM REQUIREMENT FOR ALL PROJECTS

Projects consisting of **less than** 2,000 square feet of new impervious area **AND less than** 7,000 square feet of land-disturbing activities need only comply with Minimum Requirement #2. The applicant should prepare a written discussion of the 12 elements of the requirement.

Minimum Requirement #2 Construction Stormwater Pollution Prevention

Best Management Practices (BMPs) must be employed in order to control erosion and prevent sediment and other pollutants from leaving the project site during the construction phase.

Each proposed project or development must consider twelve “Elements” (or sets) of BMPs that can be applied for stormwater construction pollution prevention, and must employ BMPs for all Elements that are relevant to the project site. (For many projects, only some of the Elements will be relevant.) The 12 Elements are:

Mark Clearing Limits	Protect Drain Inlets
Establish Construction Access	Stabilize Channels and Outlets
Control Flow Rates	Control Pollutants
Install Sediment Controls	Control De-watering
Stabilize Soils	Maintain BMPs
Protect Slopes	Manage the Project

MINIMUM REQUIREMENTS FOR SMALL PROJECTS

Small projects are those consisting of **more than** 2,000 square feet (but less than 5,000 square feet) of new impervious area **OR more than** 7,000 square feet of land-disturbing activities. Small projects shall comply with Minimum Requirements #1 through #5. The five Minimum Requirements are:

- #1 Preparation of Stormwater Site Plans
- #2 Construction Stormwater Pollution Prevention
- #3 Source Control of Pollution
- #4 Preservation of Natural Drainage Systems and Outfalls
- #5 On-site Stormwater Management

Minimum Requirement #1 Preparation of Stormwater Site Plans

All small projects shall prepare a Stormwater Site Plan in accordance with the Stormwater Management Manual to be reviewed by the County. The level of detail needed for each step depends upon the project size.

- a. Collect and analyze information on existing conditions
- b. Prepare preliminary development layout
- c. Perform off-site analysis (at local government’s option)
- d. Determine applicable minimum requirements

- e. Prepare a permanent stormwater control plan
- f. Prepare a construction stormwater pollution prevention plan
- g. Complete the stormwater site plan
- h. Check compliance with all applicable minimum requirements

Minimum Requirement #2 Construction Stormwater Pollution Prevention

This Minimum Requirement is described under “All Projects”, above.

Minimum Requirement #3 Source Control of Pollution

All known, available and reasonable source control BMPs shall be applied to all projects in accordance with the Stormwater Management Manual. Prevention is still the best strategy. (This requirement applies primarily to commercial and industrial projects.)

Minimum Requirement #4 Preservation of Natural Drainage Systems and Outfalls

Maintain natural drainage patterns, and protect downstream receiving waters and down-gradient properties from adverse impact. Discharges from the project site shall occur at the natural location, and all outfalls require energy dissipation.

Minimum Requirement #5 On-site Stormwater Management

Use inexpensive BMPs (stormwater dispersion, infiltration, and retention) on-site to reduce the amount of hydrologic change. (This requirement applies primarily to residential projects.)

MINIMUM REQUIREMENTS FOR LARGE PROJECTS

Large projects are those consisting of **more than** 5,000 square feet of new impervious area **OR** a project that converts **more than** ¼ acres of native vegetation to lawn or landscaped areas, **OR** a project that converts more than 2.5 acres of native vegetation to pasture. A large project shall comply with Minimum Requirements #1 through #10. The ten Minimum Requirements are:

- #1 Preparation of Stormwater Site Plans
- #2 Construction Stormwater Pollution Prevention
- #3 Source Control of Pollution
- #4 Preservation of Natural Drainage Systems and Outfalls
- #5 On-site Stormwater Management
- #6 Runoff Treatment
- #7 Flow Control
- #8 Wetlands Protection
- #9 Basin/Watershed Planning
- #10 Operation and Maintenance

Minimum Requirement #6 Runoff Treatment

Projects whose runoff from pollution-generating surfaces exceeds the thresholds below must, in addition to Minimum Requirement #5, apply water quality treatment BMPs in order to reduce pollutant loads and concentrations in the stormwater runoff and meet state and federal water

quality laws. Several “menus” or sets of BMPs may be relevant: Basic Treatment, Enhanced Treatment, Phosphorus Treatment, and Oil Control.

The thresholds are runoff from:

5,000 square feet of pollution-generating impervious surfaces, **OR**
greater than ¾ acre of pollution-generating pervious surfaces.

Minimum Requirement #7 Flow Control

Projects whose runoff volume exceeds the thresholds below must provide flow control of stormwater runoff in order to reduce the adverse impacts of increased peak volumes and durations of stormwater runoff (from new impervious surfaces and vegetation removal) on stream channel erosion rates and on fish habitat and production.

The thresholds for flow control requirements are:

Greater than 3/4 acres conversion to lawn/landscape, **OR**
Greater than 2.5 acres conversion to pasture, **OR**
Greater than 10,000 square feet of effective impervious area, **OR**
Greater than 0.1 cubic feet per second increase in the 100-year flood frequency.

The Western Washington Design Storm and Hydrologic Runoff Model shall be used to estimate runoff. For determining the pre-development runoff rates, the pre-developed condition to be matched shall be a forested land cover. The preferred approach to stormwater management is, first, on-site full dispersion of the runoff, and second, infiltration, where the site can meet suitability requirements per the San Juan County Code and the Stormwater Management Plan.

Minimum Requirement #8 Wetlands Protection

Wetlands are extremely important natural resources, but they can be severely degraded by stormwater discharges due to pollutants in the runoff and disruption of natural hydrologic functions (i.e., changes in water levels and the frequency and duration of inundation). Projects that discharge runoff into a wetland, either directly or indirectly, and whose runoff exceeds the thresholds of Minimum Requirements #6 or #7, must apply additional BMPs. Discharges to wetlands must be controlled to maintain the hydrologic conditions, vegetation, and substrate characteristics necessary to support existing and designated uses. A wetland can be considered for stormwater treatment and/or hydrologic modification, but only in accordance with guidance in the Stormwater Management Manual.

Minimum Requirement #9 Basin/Watershed Planning

Watershed-based planning may be used as a means to develop and implement comprehensive water quality protection measures. A project may be required to apply additional BMPs, or required to meet more stringent minimum requirements in order to address overall pollution impacts. In addition, a project may be required to provide additional basin or watershed protection on the basis of conditions and responses that are identified at the watershed level in a Basin or Watershed Plan.

Minimum Requirement #10 Operation and Maintenance

Stormwater control facilities must be properly operated and adequately maintained for the life of the development. A responsible party must be identified, and a copy of the manual shall be retained at or near the site.

Ecology Construction Stormwater General Permit Coverage Determination

If applicants are disturbing more than 1 Acre during platting or construction, consultation should take place with Ecology to determine whether or not coverage should be obtained under the Construction Stormwater General Permit. Contact Andrew Craig in Ecology's Bellingham office for more information. Telephone number is 360.738.6250

Washington Department of Fish & Wildlife Hydraulics Projects Approval (HPA) Permits

Any projects proposing to tight line stormwater run-off to the shoreline need to contact WDFW to apply for an HPA permit. Telephone number is 425.775.1311

San Juan County Public Works recommends that applicants seek assistance from a stormwater design professional for Large Projects.

State law requires that engineering work be performed by or under the direction of a professional engineer licensed to practice in Washington State. This requirement applies to plans involving construction of treatment facilities or flow control facilities (detention ponds or infiltration basins), structural source control BMPs, or drainage conveyance systems.
