



GREEN GROUND

Low Impact Development Program

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San Juan Islands Conservation District

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Managing Rainwater: Controlling runoff at the source is the key to success.

Site development and construction can cause large amounts of sediment to be transported to our local surface waters (streams, lakes, wetlands, ponds). Surface runoff from construction sites carry suspended solids that can pollute water and damage aquatic habitat. There are actions you can take to prevent stormwater damage...actions that are straight forward, eco-friendly, cost effective and are ultimately beneficial to the San Juan Islands and Puget Sound.

How Did We Get To This Point?

In the past stormwater management focused on controlling water quantity (usually flood control of large storm events). Now we know how important it is to manage the stormwater runoff from smaller storms as well. In fact, small amounts of runoff routinely disperse large amounts of soil and pollutants such as oil and grease, harmful bacteria and/or pathogens that live in the soil, and metals like lead, cadmium and copper.

In an effort to reduce the damaging effects of stormwater impacts, most efforts in the Puget Sound region are focusing on “low impact development” (LID), an approach that deals with stormwater where it starts (on-site, before it becomes “runoff”) by identifying natural systems already in place on the land. Using the LID approach also aids landowners in meeting current requirements for stormwater management (when developing land) in a more cost effective way than conventional approaches.

Low Impact Development - 101

Low Impact Development (LID) focuses on the “site development” phase of a land development project. This phase - when heavy equipment is brought onto the land, vegetation is removed and soil is disturbed - is the most critical time to use preventive measures to preserve soil structure and protect trees and other vegetation from construction impacts. Preventing or minimizing impacts is accomplished by the use of LID “best management practices” (BMPs). Low impact BMPs are practices designed to help rainwater infiltrate into the soil; to minimize soil compaction and disturbance; and to reuse and recycle the natural resources already on the land. LID BMPs are stormwater practices that mimic nature’s built-in soil absorption and water cleansing processes. Generally, several types of BMPs are required for sustainable and effective stormwater management.

BMP Guidance for Landowners

In San Juan County land development that disturbs soil -site development for home building, land clearing for a new farm, forestry, or any other soil disturbing activities require the landowner to implement certain stormwater management practices. The San Juan Islands Conservation District, as a non-regulatory and education based organization, informs landowners about low impact BMPs that meet the requirements of some of these stormwater management regulations. In fact, the Conservation District offers county landowners a comprehensive natural resource inventory and evaluation of their property that includes recommendations on LID practices and information about site planning through our Green Ground Program.

Minimum Requirements:

The stormwater management procedures are required by San Juan County for projects consisting of over 2,000 sq. ft. of new impervious area AND over 7,000 sq. ft. of land disturbing activities. Larger projects will require additional stormwater management applications. But, in all cases, using LID BMPs in your project will reduce or replace the need for flow control and runoff collection facilities.

The following are just a few suggested Low Impact Development Best Management Practices.

Retain Native Vegetation - Preserve as much plant cover as possible to intercept and transpire precipitation as well as reduce soil erosion. Trees and vegetation help to maintain permeable soils which store water and facilitate groundwater infiltration instead of runoff.

Location, Location, Location - Locate buildings and roads away from wetlands and soils that provide infiltration. Minimize impervious surfaces by utilizing smaller footprints for structures, shorter or shared roadways, green roofs/walls and pervious concrete or pavers.

Mark Clearing Limits - Prior to beginning any land disturbing activities, such as clearing and grading, clearing limits, sensitive areas and their buffers, and trees that are to be preserved within the construction area should be clearly marked, both in the field and on plans, to prevent damage and offsite impacts.

Establish Construction Access - Construction vehicle access and exit should be limited to one route (a closed circle), when possible, with easy entry/exit for large vehicles (over 12' wide) using drain rock and geo-textiles to prevent soil compaction.

Control Flow Rates - Properties and waterways downstream from development sites need to be protected from erosion due to increases in the surface runoff (from soil/vegetation clearing and compaction). Limit work following heavy rains while the soil is saturated with water.

Install Sediment Controls - The duff layer, native topsoil, and natural vegetation must be retained in an undisturbed state to the maximum extent practicable. Vegetated buffer strips, sediment barriers or filters, dikes, and other protective measures to trap sediment on-site must be constructed as one of the first steps in grading.

Utilize Topography - Use designs which incorporate the landscape of your site to best manage water flow. Know your soil drainage and avoid using solutions that rely on conveyance and pond systems.

Stabilize Soils - All exposed soils must be stabilized through effective measures that protect the soil from the erosive forces of rain, flowing water and wind. Suitable practices include seeding, sodding, mulching and covering.

Second in a 12-part series on Conservation and Stewardship in the San Juan Islands.

The San Juan Islands Conservation District is a non-regulatory, non-enforcement agency. We provide **FREE** technical assistance to landowners interested in the conservation of natural resources. For information about Conservation District services or to request a site visit, come by the San Juan Islands Conservation District office at 540 Guard Street #150 Friday Harbor, WA 98250 or phone us at 360-378-6621 or email us at info2007@sanjuanislandscd.org.

Please visit our website: www.sanjuanislandscd.org