

Stormwater Management for Small Projects:

A Primer For Landowners, Builders and Site Developers

A Starting Point: Stormwater management on undisturbed, undeveloped land is furnished -- built-it. Nature's stormwater processing system is the most efficient and effective there is. But, when land is cleared, graded, compacted and covered by a house, driveway or road this natural stormwater management system breaks down and no longer functions properly...hence the flooding, erosion and water quality problems so often encountered. To compensate for the "natural system breakdown" conventional stormwater management systems are designed to collect and convey stormwater off and away from the development site. There are several drawbacks to using this approach. Moving water offsite means it has to be dealt with at the end point where its conveyed to....so there's the time and expense of designing and installing both, the water transport component and the water treatment, holding and release component of a conventional stormwater collection facility (e.g. stormwater detention pond). Although convention persists, the new paradigm for stormwater management (Low Impact Development) uses nature as it's guide and works to keep stormwater on-site by mimicking natural stormwater processes, e.g., methods designed to allow stormwater dispersion and infiltration. The Low Impact Development (a.k.a. LID) view also involves rethinking site development and incorporating practices that serve the dual role in meeting the goals and needs of the landowner and mimicking nature in how stormwater is addressed. Current stormwater management requirements are based on a combination of conventional and LID strategies for addressing stormwater during development. The following explains the stormwater requirements necessary for "small projects" in San Juan County.

Stormwater Requirements For A "Small Project"?

The extent of what's required for stormwater management on your property is based on the size of the project. Stormwater management requirements for "small projects" can typically be performed by landowners without the assistance of an engineer. A "small project" is a project that involves more than 2,000 sq. ft. (but less than 5,000 sq. ft.) of new impervious area (defined below) OR more than 7,000 sq ft of land-disturbing activities (defined below)

Typically, landowners building a home that is categorized as a "large project" (defined below) will need to hire an engineer to design the required stormwater facilities necessary to address the impacts of this scale of land alteration.

There are 5 "Minimum Requirements" for Small Projects:

Minimum Requirement #1. *Preparation of a Stormwater Site Plan*

Requires the landowner to produce a plan that includes information on existing conditions on the property (soil type, vegetation cover, etc.); drawing of preliminary development layout; description of what practices will be used to control pollution generation during construction (primarily erosion and sediment); and discussion of the permanent Best Management Practices (BMPs) that will be installed for control of pollution from stormwater runoff after construction has been completed.

Minimum Requirement #2. *Construction Stormwater Pollution Prevention*

A report describing and/or confirming that construction stormwater pollution prevention will be performed under the twelve following prevention methods:

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| 1. Mark Clearing Limits | 7. Protect Drain Inlets |
| 2. Establish Site Access | 8. Stabilize Channels |
| 3. Control Flow Rates | 9. Control Pollutants |
| 4. Control Sediment | 10. Control De-Watering |
| 5. Stabilize Soils | 11. Maintain BMPs |
| 6. Protect Slopes | 12. Manage the Project |

Minimum Requirement #3 *Pollution Source Control*

Typically, in San Juan County this requirement applies primarily to commercial and industrial projects. Requires that all available and reasonable source control BMPs shall be applied to all projects in accordance with the Stormwater Management Manual for Western Washington. Prevention is still the best strategy. Source Control BMPs are practices installed that physically separate areas or land uses from contact with stormwater

Minimum Requirement #4 *Preserve Natural Drainage Systems*

Requires a description of how the project will maintain natural drainage patterns, and protect downstream receiving water and down-gradient properties from adverse impact.

Minimum Requirement #5 *On-Site Stormwater Management*

Requires a description of what practices will be used on-site to reduce the amount of hydrologic changes due to development. There are many inexpensive methods that can be applied, e.g., stormwater dispersion (letting water disperse over a broad, vegetated area), infiltration (maintaining soils and directing runoff to infiltrating soils), etc.

DEFINITIONS

Large Project – Project consisting of more than 5,000 sq. ft. of new impervious area, OR a project that converts more than $\frac{3}{4}$ acres of native vegetation to lawn or landscaped area, OR a project that converts more than 2.5 acres of native vegetation to pasture.

Impervious Surface – A hard surface area which either prevents or retards entry of water into the soil. 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, rooftops, walkways, patios, driveways, parking areas, gravel roads, and other surfaces which similarly impede the natural infiltration of stormwater.

Land Disturbing Activities – Any activity that results in a movement of earth or a change in the existing soil cover (both vegetative and nonvegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to clearing, grading, filling and excavation. Compaction that is associated with stabilization of structures and road construction are also considered a land disturbing activity.

STORMWATER SITE PLAN TRAINING!

The SJ Conservation District in partnership with the SJ County Public Works will offer a **free training seminar** on **“How To Prepare A Stormwater Site Plan”**. Anyone involved in residential development should attend (i.e., landowners, builders, architects, site developers, excavators). Where/When: **March 11, 2006, 10:00 a.m. to 2:00 p.m.**, location to be determined. For more information, call 378-6621.

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