



Natural Location of Drainage System (or NLDS)

SW-3

Spokane County Public Works/Water and Environment Programs

This brochure provides general information about special measures required for the Natural Location of Drainage Systems within the unincorporated areas of Spokane County.

What is a Natural Location of Drainage System?

Natural Location of Drainage System(s) or NLDS(s) includes channels, preexisting and established drainage systems, and natural features that may convey, store, or dispose of stormwater and groundwater that comes to the surface. The systems may be seasonal or storm dependent and do not necessarily experience a continuous flow of water. NLDS(s) include both Type A and B systems and are defined by the first documented topographic contours existing for the subject property, either from maps, photographs, site inspections, or other appropriated means.

The Spokane County Stormwater Utility Section maintains maps of the Type A and Type B Natural Location of Drainage Systems identified within the Spokane County Stormwater Service Area.



Type A drainageways are those predominant systems which are considered a significant part of a larger existing natural conveyance system. Type A drainageways shall be preserved for stormwater conveyance and shall be considered for use as regional facilities.

Type B drainageways are those systems which are generally less prominent, yet are deemed to perform important functions in the existing management of stormwater runoff and may be necessary for managing stormwater as part of the larger regional system.

Because every site is unique, a local jurisdiction representative shall make interpretations, as necessary, based on site visits and technical information submitted as to the exact location and type of NLDS on the project site. The representative may also require the project proponent to provide engineering information to assist in this determination.

Why is preservation of the NLDS(s) important?

Preserving the Natural Location of Drainage Systems in their "green" state provides a necessary means of water quality treatment, conveyance and/or disposal of stormwater runoff and enhances the ability to utilize predominant systems as regional facilities.

What happens when NLDS(s) are not protected?

On January 17, 2006, the Board of County Commissioners adopted the Comprehensive Stormwater Management Plan (CSWMP) along with individual stormwater plans for Glenrose, North Spokane, and West Plains and their associated Capital Improvement Plans. Each of the individual basin plans emphasizes protecting natural drainage features as the most cost effective means of handling stormwater over the long term. Natural drainageways must be preserved to serve as the regional stormwater system and to reduce the community's long term costs for stormwater management.

(Continued on back page)

Spokane County has learned that drainage problems in many areas occur as a result of destruction of the natural drainage systems. Problems occur when natural drainageways are ignored during the development and road-building process or when drainage is diverted from its natural path into roadside ditches or to cutoff easements.



There is also strong evidence that even if a stormwater route is maintained (i.e. a pipe picks up runoff on one end of a piece of property and simply passes it through to the other side), stormwater runoff still wants to follow the path of least resistance on the surface and subsurface. Many of the current basement flooding problems seem to point at the fact that although design engineers are sizing surface conveyance facilities to route stormwater through or around a piece of property, during a wet season, stormwater manages to find its "old" route despite the engineered facilities designed to carry the stormwater away from the area.

NPDES

In February 2007 the Washington State Department of Ecology issued Spokane County a National Pollutant Discharge Elimination System (NPDES) Phase II Stormwater Permit which allows discharge of stormwater to waters of the state. A requirement of the NPDES Phase II Permit is to practice Best Management Practices (BMPs) to protect water quality. The Stormwater Management Manual for Eastern Washington contains technical information and DOE approved BMPs. Preservation of Natural Drainage Systems is a core element of the manual and is encouraged for the reasons described in this document.



When one development is allowed to pipe versus use (and protect) the Natural Location of Drainage Systems, then subsequent developments want to hook into the systems of adjacent developments. In essence, this disjointed "system" becomes the de facto regional system, and the flooding problems blossom. This is not the type of system recommended by the approved basin plans. Working to make these drainage pieces into a well-functioning regional stormwater system will be much more expensive over the long term than protection, preservation and use of the natural location of drainage systems as development occurs.



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