

US EPA ARCHIVE DOCUMENT

Western Ecology Division

Non-Navigable Streams & Wetlands

Research on Non-Navigable Streams and Wetlands is a Critical Need

In 2006, the US Supreme Court addressed jurisdiction of non-navigable waters and adjacent wetlands (NSW) under the Clean Water Act (CWA). The *Rapanos* decision resulted in two criteria for determining CWA jurisdiction of NSWs: their hydrological permanence and whether they have a “significant nexus” (contribute to the functional integrity of navigable waters).

In 2008, scientists from EPA’s Western Ecology Division (WED) and colleagues published a paper proposing an approach for examining some of the scientific issues raised by the *Rapanos* decision. WED’s NSW Project is using this approach to develop information and methods that could help assess hydrologic permanence and significant nexus.



An intermittent stream in John Day, Oregon



above: Project member Joe Ebersole investigating NSW contributions to critical cold water habitats for native fish in Oregon's upper Grande Ronde River.

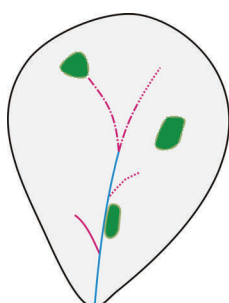
The Project’s research includes:

- Field testing of the Oregon Streamflow Duration Assessment Method. This method, which was jointly developed by EPA’s Region 10/Oregon Operations Office and Office of Wetlands, Oceans and Watersheds, and the Army Corps of Engineers (Portland District), assesses over 20 environmental factors in the field to distinguish between ephemeral, intermittent and perennial streams. In partnership with EPA’s Region 10/Oregon Operations Office, the NSW Project is conducting a two-year study to test and improve the method at over 170 sites across Oregon during wet and dry conditions.

(See: <http://yosemite.epa.gov/R10/ecocomm.nsf/wetlands/oregonstreamflow>)

- Development of a map of Hydrologic Landscape Regions (HLRs) for Oregon that will form part of a system for classifying the effects of NSWs on navigable waters. A classification system will provide context for considering the aggregate function of NSWs. The HLR maps could also inform a number of other applications that require a broadscale hydrologic perspective.
- Other components of the Project examine the connectivity, or “significant nexus,” of NSWs with respect to fish habitat, nitrogen removal, and water source.

Such information should help EPA staff identify waters subject to CWA regulatory jurisdiction in light of the *Rapanos* decision, and could inform future policies and legislation.



Figure, left, shows the following:

■	Navigable water
■	Non-navigable stream
■	Adjacent wetland
—	Perennial streamflow
---	Intermittent streamflow
.....	Ephemeral streamflow

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