



## The Compleat Wetlander: Distribution of Wetlands and Streams and Extent of State Dredge and Fill Permitting Programs in the United States

*By Jeanne Christie, Executive Director, ASWM*

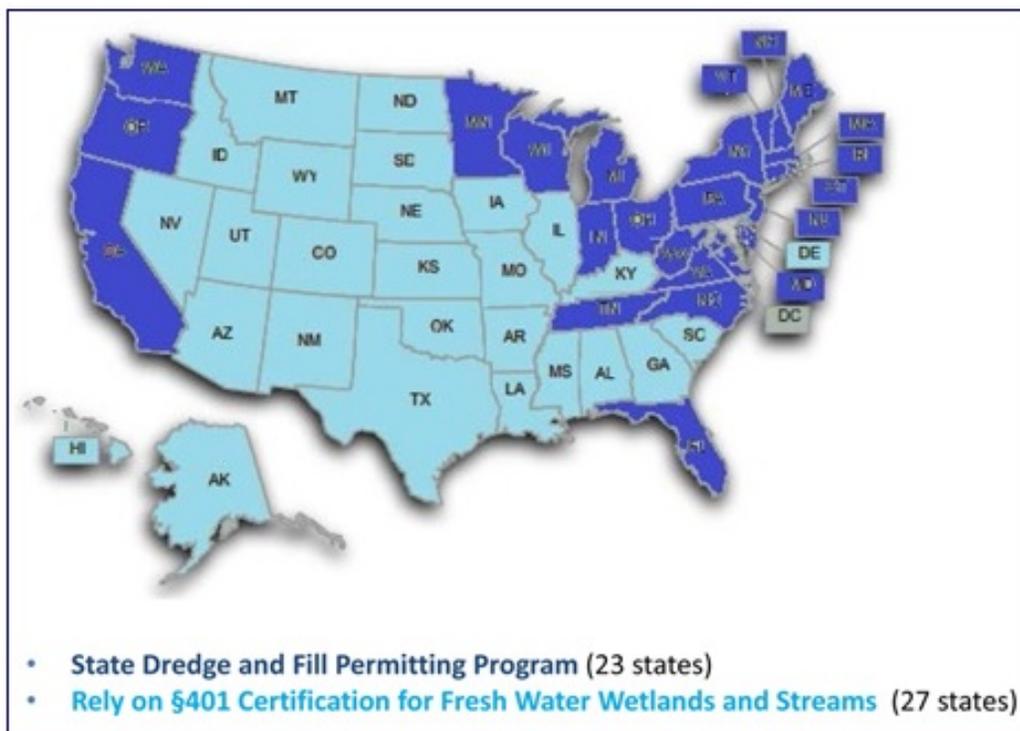
The U.S. Environmental Protection Agency (EPA) and Department of Army (Army) are proposing a rule to rescind the 2015 Clean Water Rule (identifying waters subject to Clean Water Act Jurisdiction) and re-codify the regulatory text that existed prior to 2015 defining "Waters of the United States" (WOTUS). The EPA and Army are following a two-step process to redefine Waters of the U.S. under the Clean Water Act. The first step currently underway is to rescind the 2015 rule and to adopt the definition of Waters of the U.S. that was in place previously--and that is currently being used as a result of the Sixth Circuit's stay on the 2015 rule pending court action. The next step planned will be to propose a new rule based in part on the Scalia plurality opinion in the 2006 Rapanos Supreme Court decision. The Scalia opinion could be interpreted to include only continuously flowing streams and adjacent wetlands.

Non-continuously flowing streams (intermittent streams) make up at least 60% of the stream miles in the U.S. Also, relatively few of the 100 million acres of wetlands in the lower 48 states are connected to continuously flowing waters. If a rule based primarily on the Scalia plurality opinion were implemented, responsibility for protecting the majority of the wetlands and streams in the U.S. would rest squarely with the states. While the majority of states have point source permitting programs in place for industrial and wastewater treatment discharges, a much smaller number have state programs in place to permit dredge and fill activity in freshwater wetlands, lakes, and streams. Thus, many states' water and wetland program staff are currently reviewing state statutes and regulations to determine if their state has programs in place to provide protection to waters that might, in the future, no longer be protected under the Clean Water Act.

There are a number of benefits that can be derived from state-based dredge and fill permitting programs that have been documented by states. These include -- more effective overall water resources protection and management, the ability of permit applicants to meet locally with the permitting agency, the availability of localized expertise and regionalized approaches, integration of dredge and fill permitting with other state natural resources programs, incorporation of state-specific goals and policies into the permitting program, improved consistency and stability, and others.

To determine what action might be needed, states first need to assess their respective definitions of "Waters of the State." Then, they need to determine what activities are or are not regulated by the state in state waters and decide if action should be taken. If gaps exist for a state if federal jurisdiction is withdrawn, then a state may or may not undertake actions to protect those waters under state laws. State actions needed to provide levels of protection similar to what is currently protected by the federal Clean Water Act might include adoption of new statutes, creation of new or revised regulations, and/or new or increased funding to cover program costs.

In 2015, the Association of State Wetland Managers (ASWM) completed a comprehensive review of state wetland programs, including state dredge and fill permitting programs. Individual summaries of state wetland programs were completed for each state and [posted here](#). The information gathered was analyzed to develop “[A Status and Trends Report on State Wetland Programs in the United States](#)”, which included a nation-wide comparison of state dredge and fill permitting programs. Although dredge and fill permitting is frequently associated with wetlands, in many states there are more dredge and fill permits issued for streams. ASWM found that 23 states have dredge and fill permitting programs for freshwater wetlands and streams. The other 27 (located largely west of the Mississippi as well as the Southeast) rely on protecting wetlands and streams from alteration and destruction through Section 404 of the Clean Water Act<sup>1</sup>.



One interpretation of a Clean Water Rule based on the Scalia plurality opinion in *Rapanos* is that only perennial streams and a relatively small number of adjacent wetlands would be subject to federal protections conferred by the Clean Water Act. If so, how many miles of acres of wetlands and how many miles of non-perennial streams exist in the 27 states that lack a freshwater dredge and fill permitting program?

Wetlands are more frequent in areas with higher levels of precipitation and are not distributed evenly across the U.S. As part of gathering information on state wetland programs for ASWM’s report, states were queried on the number of acres of wetlands in each state. This information is included in each of the [state summaries](#).

<sup>1</sup>[“A Status and Trends Report on State Wetland Programs in the United States”](#).

In the 27 states without freshwater dredge and fill permitting programs<sup>2</sup>, there are an estimated 154,574,445 acres of wetlands. 100,000,000 acres of these acres are in Alaska. So the remaining 54,574,445 are in the 26 states in the lower 48, plus Hawaii with 51,000 acres of wetlands. The 23 states with dredge and fill programs contain 54,274,463. Thus, slightly more than *half the wetlands* in the lower 48 plus Hawaii are located in states that currently lack statewide freshwater dredge and fill permitting programs.



Figure 1. Wetlands identified on the National Wetlands Inventory map in May 2014.

Similar to wetlands, there are more perennial streams and rivers in areas where there is more annual precipitation. Areas of the U.S. that receive less rain have fewer perennial but more intermittent and ephemeral streams<sup>3</sup>. So, for example, in Vermont 90% of the stream miles are perennial streams, while in New Mexico 8% of the stream miles are perennial<sup>4</sup>. In 2006, EPA used the National Hydrographic Dataset (NHD) to estimate the number of perennial vs non-perennial stream miles by state excluding Alaska<sup>5</sup>.

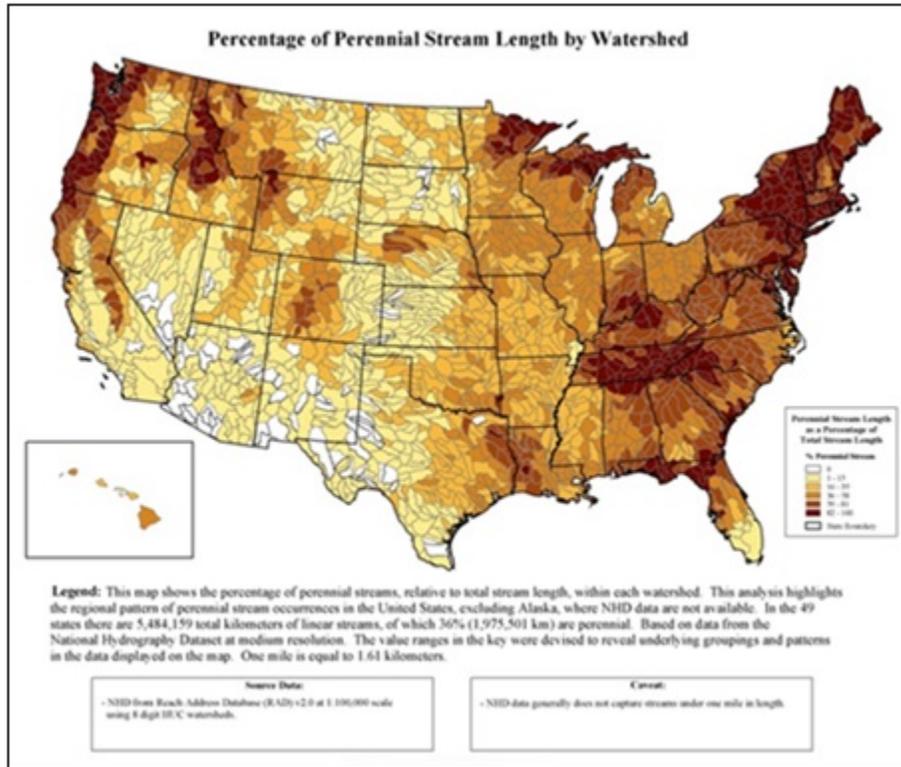
<sup>2</sup>Technically California should be included bringing the number to 28 states without a freshwater dredge and fill permitting program. However, the state is moving aggressively toward adoption of one. In anticipation of the adoption of a dredge and fill permitting program, CA is included with the states with dredge and fill permitting in this analysis.

<sup>3</sup>Intermittent and ephemeral streams only flow part of the year. Intermittent streams receive water from both groundwater and surface water runoff. Ephemeral streams receive water only from surface runoff.

<sup>4</sup>State-by-State NHD analyses of [Stream Categories and Drinking Water Data](#)

<sup>5</sup>The medium resolution (1:100,000) National Hydrographic Data Set was used for this estimate and does not include streams less than one mile in length. It also does not include most ephemeral streams so it is a conservative estimate of non-perennial stream miles. However, in conducting this analysis stream miles were aggregated by watershed and where watersheds cross state lines, portions of watersheds in other states were included. Individual states are likely to have more recent and accurate estimates of stream miles within their state borders.

Based on an analysis of this information, of the total estimated 3,053,584 stream miles in the U.S. (excluding Alaska), there are 2,374,298 stream miles in states without a dredge and fill program. That means that 78% of all non-perennial stream miles in the U.S., not including Alaska, are in states without state dredge and fill permitting programs<sup>6</sup>.



This is a conservative estimate of vulnerable waters. The 23 states that have dredge and fill permitting programs in place may currently require dredge and fill permits for only a portion of their state waters and rely on §401 certification (the authority for states to condition federal permits or licenses under the Clean Water Act) in other waters. For example, the state of New York regulates all tidal wetlands and freshwater wetlands 12.4 acres in size or larger. Washington issues Administrative Orders for isolated wetlands, but does not have the authority to issue permits for dredge and fill activities in streams.

Ideally, there should be time between when the rule is finalized and when it goes into effect so that the 27 states that lack a freshwater dredge and fill permitting program could take actions if they have the public support to do so, with the recognition that state legislation would likely be required in many, if not all, of these states. The other 23 states will need to analyze any new gaps in jurisdiction and determine if action is required when a final rule is published. Many state legislatures meet for short periods of time on an annual or biannual basis.

<sup>6</sup>Tables of States with and without [Freshwater Dredge and Fill Permitting Programs](#) with estimate of wetland acres and stream miles.

It is not clear at this time, what interest and/or capacity individual states will have to respond to potential changes in Clean Water Act jurisdiction with respect to dredge and fill permitting. What is clear is that most states will need to weigh the benefits, costs and challenges associated with implementing new or expanded dredge and fill permitting programs if the scope of the Clean Water Act is substantially reduced.