United States Senate
WASHINGTON, DC 20510

November 13, 2014

The Honorable Gina McCarthy
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator McCarthy,

We write to express concern with Environmental Protection Agency's (EPA) proposed rule regarding Clean Water Act (CWA) jurisdiction. We have previously written regarding the disproportionate impact of the proposal on the desert southwest as well as its negative impacts on small businesses. Today we raise questions surrounding the scientific basis for the agency's attempt to expand its regulatory authority under the CWA.

The proposed rule would expand the "waters of the United States" definition to include all tributaries with a perceived significant nexus "based on the chemical, physical, and biological interrelationship between a water, the tributary network, and traditional navigable waters, interstate waters, and the territorial seas" However, the proposed rule does not distinguish between features that are ephemeral, intermittent, or perennial.[1] Because 94% of the waterways in Arizona do not flow continuously for the entire year,[2] the treatment of ephemeral features is troubling.

The EPA presented the scientific evidence for this rule in a draft report[3] as well as listing additional studies in the Federal Register announcement of the rule[4]. Troublingly, the evidence presented in support of the contention that ephemeral features have strong physical, chemical, and biological interrelationships to jurisdictional waters is anything but settled. For example, gaps in the science can be illustrated with the 2004 study by Goodrich and others[5] that is cited as strong evidence of ephemeral tributary connectivity[6]. That study estimates the amount of water that infiltrates into the channel bed of a small ephemeral channel in the San Pedro River Basin, Arizona. Their estimates are then scaled up to the entire basin with "the very gross assumption that all the larger channels in the San Pedro behave similarly," resulting in a "very crude" estimate of ephemeral channel recharge.[7] Additionally, to the extent the study demonstrates a physical connection, there is no demonstration of chemical or biological connections. In

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[1] Definition of "Waters of the United States" Under the Clean Water Act, A proposed rule, 79 FR 22187, Supplementary Information III.F.3.b.

[2] Nadeau, T., Rains M.C., 2007, "Hydrological Connectivity between Headwater Streams and Downstream Waters: How Science can Inform Policy," *Journal of the American Water Resources Association* 41(1): 118-133.

[3] Environmental Protection Agency, Sept 2013, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence", EPA/600/R-11/098B.

[4] 79 FR 22187, 22226

[5] Goodrich, D. C., D. G. Williams, C. L. Unkrich, J. F. Hogan, R. L. Scott, K. R. Hultine, D. R. Pool, A. L. Coes, and S. Miller. 2004. Comparison of methods to estimate ephemeral channel recharge, Walnut
Gulch, San Pedro River basin, Arizona. Pages 77-99 in F. M. Phillips, J. F. Hogan, and B. Scanlon, editors. Recharge and Vadose Zone Processes: Alluvial Basins of the Southwestern United States. American Geophysical Union, Washington, DC..

[6] Environmental Protection Agency, Sept 2013, at page 4-64.

[7] Goodrich and others, 2004, page 96.

addition, the study does not purport to offer a proposed test for determining the presence of a "strong relationship" or what that would even constitute. When other studies cited as scientific evidence for declaring ephemeral features jurisdictional are similarly subjected to rigorous scrutiny, they lack both a test for "strong relationship" and evidence of chemical and biological connections. Without a means of proving or disproving a relationship, the presumption that ephemeral features hold a strong relationship to jurisdictional waters is subjective rather than scientific in nature.

Rigorously assessing the validity of the scientific evidence should be the role of EPA's Science Advisory Board (SAB). However, EPA's management of the rulemaking process has resulted in a lack of transparency for the scientific review process. Instead of peer-reviewing the scientific literature used for rule-making before using the data, EPA promulgated the rule, asked for public comment, *and then* asked the SAB to evaluate the validity of the scientific evidence. Unfortunately, the extent to which the SAB has weighed in, they failed to address the lack of evidence for biologic and chemical connections between ephemeral features and jurisdictional waters. The SAB acknowledged that "waterbodies differ in degree of connectivity that affects the extent of influence they exert on downstream waters," but then amazingly proceed to claim that essentially every waterway is strongly connected to jurisdictional water[8] and thus presumably jurisdictional in its own right. Rather than highlighting scientific gaps, SAB advocated expanding the definition of jurisdictional waters to tributaries without any indication of high water marks and even to groundwater. It is difficult to view these suggestions as credible.

We find insufficient evidence to support the categorical inclusion of all ephemeral features as jurisdictional "waters of the United States." In light of the gaps in the scientific evidence presented above, we are deeply concerned with the scientific review process associated with this rulemaking. We reiterate our call for the current proposal to be abandoned and a meaningful proposal be developed that limits federal jurisdiction and is supported by an open and transparent process that fairly weighs the scientific evidence available. We would appreciate a written response to our concerns detailed in this letter and ask that this matter be handled in strict accordance with agency rules, regulations, and ethical guidelines.

Sincerely,

JEFF FLAKE
United States Senator

JOHN McCAIN
United States Senator

[8] Science Advisory Board Draft Report to Assist Meeting Deliberations, September 17, 2014.