



November 26, 2014

VIA EMAIL: [Michael J. Boots@ceq.eop.gov](mailto:Michael.J.Boots@ceq.eop.gov)

Michael J. Boots
Chair, White House Council on Environmental Quality
1600 Pennsylvania Avenue, NW
Washington, DC 20500

Dear Mr. Boots:

The Western Urban Water Coalition (“WUWC”) would like to thank you again for attending its Spring meeting last April. Since that meeting, the WUWC has been very active to promote its revised mission statement, which we presented to you at the meeting. As we explained, the current policy focus of the Coalition is to advance the interests of the large urban areas in the West to ensure a continuing supply of high quality drinking water in an era when climate change is threatening the resources upon which those supplies depend. Accordingly, WUWC members have been at the forefront of the effort to recognize the importance of climate change adaptation and long-term planning to achieve community resilience while at the same time ensuring environmentally responsible management actions. Attachment 1.

Since our meeting, we have taken several significant actions which we would like to call to your attention. As we described last April, extreme weather events are among some the greatest challenges that western communities confront, and WUWC members have been dealing with drought, flooding and fire all as a part of the changing climatological problems. Recognizing these threats, we have taken action to support improved initiatives to fight wildfires. We have written the relevant committees of both the House and Senate in support of new budget authority for wildfire suppression that would fund certain of these costs as natural disaster recoveries and have written the Office of Management and Budget in support of increased funding for the Western Watershed Enhancement Partnership that provides funding to local entities for wildfire protection activities. Attachment 2.

We also have commented on the various climate change adaptation strategies issued by EPA on both a national and regional level. Our comments supported these plans and called for prompt action for implementation. We were pleased to see those plans issued in final form on October 31, 2014. The WUWC hopes to engage further with EPA and other federal agencies regarding these plans.

Of course, making water available to urban centers in the West is central to our function, and we have joined with the Administration in defending the so-called “water transfer rule” under the Clean Water Act. As an intervenor in pending litigation in the Second Circuit and as an amicus in the Ninth Circuit, the WUWC is grateful for the Administration’s continued defense of the rule that upholds the principle that the mere act of transferring water from one location to another without the addition of any pollutant does not require the issuance of an NPDES permit. Such a

Michael J. Boots
November 25, 2014
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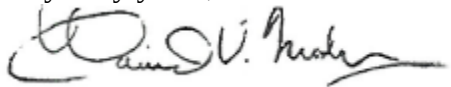
requirement would make many of our operations impracticable, with significant negative economic, environmental, and social consequences throughout the West.

We also are very active in the proposed rulemaking under the Clean Water Act to define the term “waters of the United States.” The WUWC is concerned that the proposed definition is too broad and would compromise the ability of its members to continue to meet the water supply needs of the largest western cities. Indeed, the proposed rule could make it very difficult and far too costly to pursue many of the important infrastructure improvement measures that are necessary to achieve climate change adaptation and resiliency measures due to increased permitting requirements and time frames.

We see the debate over the definition of this term as having very significant technical aspects, that lend themselves to scientific analysis and resolution. For that reason, we have submitted technical reports and recommendations in response to the proposed rule, which we attach to this letter. Attachment 3. We also have developed regulatory language, set forth in Attachment 4, that we believe would accomplish the purpose of the proposed rule in a manner that is supported by the best science and practical considerations.

We hope you find this update of WUWC activities helpful, and we look forward to continuing to work the CEQ and federal agencies. Please contact our national counsel, Don Baur and Paul Smyth of Perkins Coie, at DBaur@perkinscoie.com, (202) 654-6234 and PSmyth@perkinscoie.com, (202) 654-6251 if you have any questions.

Very truly yours,



David V. Modeer

Attachments

cc: Chitra Kumar
Deputy Associate Director for Water
White House Council on Environmental Quality
(Chitra_M_Kumar@ceq.eop.gov)

Mark Rupp
Deputy Associate Administrator Office of Intergovernmental Relations
Environmental Protection Agency
Rupp.Mark@epa.gov

Joel Scheraga
Senior Advisor for Climate Adaptation Office of Policy
Environmental Protection Agency
Scheraga.Joel@epa.gov

Attachment 1



The Crisis in Western Water – How the Federal Government is Indispensable to the Solution

The Western Urban Water Coalition (WUWC) is currently confronting the realities of a dramatically changed environment, which has presented major new challenges to water supply for the western United States. Many factors are contributing to these challenges, including growing demand, declining revenues, aging infrastructure and a more stringent regulatory landscape. However, by far the greatest threat is climate change and related natural conditions such as drought, fire, severe temperature fluctuations, rising sea levels, and more frequent heavy precipitation events. The concept that climate is stationary is outdated. The impact of climate change on western water resources cannot be underestimated -- declines in both water quality and quantity are a present reality and are expected to worsen. Immediate action must be taken to avert a future water supply crisis. WUWC members and other water supply entities can do very little to address the causes of climate change, and can respond only through adaptation of existing practices and the implementation of new measures, such as storage and conservation. While water utilities have been successful at adjusting to growing populations and demand, they are often frustrated in their response efforts by federal regulations that do not account for climate change and by the lack of a coordinated federal strategy. This paper provides an initial summary of key actions needed by the federal government to assist in mitigating those significant challenges, including ways to collaborate with entities such as WUWC to address current and future challenges.

WHO IS THE WESTERN URBAN WATER COALITION?

The Western Urban Water Coalition (WUWC) was created in June 1992 by leaders of several western municipal water suppliers to address the West's unique water issues. WUWC's goals and initiatives have evolved over time to address significant challenges created by climate change, fluctuations in weather patterns, rampant wildfires and drought, population growth, aging water infrastructure and increased regulatory oversight.

WUWC consists of the largest urban water utilities in the western United States, who serve over 35 million water consumers in 15 metropolitan areas across five states, some of which also operate wastewater and hydroelectric facilities. The membership of WUWC includes: *Arizona* – Central Arizona Project and City of Phoenix; *California* – East Bay Municipal Utility District, Eastern Municipal Water District, Los Angeles Department of Water and Power, Metropolitan Water District of Southern California, San Diego County Water Authority, City and County of San Francisco Public Utilities Commission and Santa Clara Valley Water District; *Colorado* – Aurora Water, Colorado Springs Utilities, and Denver Water; *Nevada* – Las Vegas Valley Water District, Southern Nevada Water Authority and Truckee Meadows Water Authority; and *Washington* – Seattle Public Utilities.

WUWC is committed to presenting a new and different perspective on the management of water resources in the modern West. WUWC seeks to articulate the needs and values of Western cities

to provide a reliable, high quality urban water supply for present and future generations, while preserving the unique environmental and recreational attributes of the West. WUWC is an active public and legislative advocate for progressive water and resource management. It encourages water sharing and transfers, supports an adequate supply of water for environmental and recreational purposes, advances multi-purpose storage opportunities, promotes water conservation, and advocates for effective and practicable approaches to the implementation of environmental protection programs in a time when water is becoming more scarce and critical to the West's sustainability. Many WUWC members are at the forefront of water reuse, conservation and optimization. WUWC members consistently seek water supplies from non-traditional sources.

ACTIONS TAKEN BY WUWC AND ITS MEMBERS TO ADDRESS WATER SUPPLY CHALLENGES

Some of WUWC's accomplishments to date include:

- a 21.6 % average reduction in per capita water use through conservation measures, in spite of a 56.1 % average growth in population for WUWC members;
- a total of \$45.1 billion in water infrastructure investments since 1990, including potable and non-potable water reuse projects, low-elevation water intakes to adapt to drought conditions and desalination projects;
- 1.9 million acre feet of water storage added by WUWC members to urban systems since 1990, including the Diamond Valley Reservoir serving Southern California and the Pueblo Reservoir contract serving the City of Colorado Springs;
- a total of \$13.1 billion in capital infrastructure improvements needed in the next 10 years for WUWC members;
- participation in and long-term funding commitments for Endangered Species Act (ESA) recovery programs, Habitat Conservation Plans (HCPs) and other species conservation and recovery efforts;
- proactive mitigation planning;
- investments in forest health;
- watershed and ecosystem protection management and efforts, including groundwater remediation;
- partnerships to advance water conservation, reuse and optimization;
- climate change modeling and response work;
- Actions to promote water conservation, including rate structures and infrastructure development, i.e. the Brock Reservoir for Colorado River;
- initiatives for water banking programs;
- consistent compliance with the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA);
- creative agricultural to urban transfer methods identified and employed;
- beneficial water supply legislation;
- participation in basin studies, watershed programs, state water supply plans;
- reductions in energy demand;
- responsible rate increases to meet infrastructure/supply demands; and

- many other actions to improve the delivery of high quality water in sufficient quantity to Western cities.

MAJOR CHALLENGES

WUWC members must address the challenges associated with climate change while simultaneously securing a sustainable water supply for a growing population and complying with increasingly stringent environmental and water quality regulations. The actions taken to date by WUWC to mitigate such challenges are a reflection of the group's commitment to proactively address water supply demands in the West. The successes achieved so far have created the momentum needed to confront future challenges. Moving forward, collaboration and support from Congress and the Administration are needed on the following issues in order to foster continued success.

Climate Variability, Fire, Drought, and Sea Level Rise

According to the Bureau of Reclamation, the United States' current 14-year drought period is the worst in the last one hundred years. Globally, the warmest 12 years in recorded history have all occurred in the last 15 years. Because heat drives the water cycle, the warming of the planet means fluctuations in water flows and quality, increased magnitude of droughts, and severe weather patterns. Increases in temperature are also resulting in more frequent and intense wildfires because longer drought periods promote drier, less healthy vegetation vulnerable to easy ignition and more rapid spread. These changes are already apparent in the western United States. Water providers, such as the WUWC members, are uniquely dependent upon weather patterns and significantly affected when such changes occur.

Western water providers dependent upon runoff from snowmelt to meet supply demands are being forced to rethink the way their systems operate; the runoff season is already beginning and ending earlier, while system yields can fluctuate dramatically. Each new flood event presents the potential for increased water pollution and habitat degradation, and demonstrates the vulnerability of existing infrastructure designed in reliance on historic hydrology, which is no longer a dependable predictor of the future. Both chemical and biological water quality issues are exacerbated by warming temperatures, with more frequent algae blooms and in-stream temperatures in excess of standards set to protect the aquatic life use. These circumstances make water treatment more difficult. Warming temperatures also mean increased sea level rise that affects WUWC members with operations in coastal areas.

Solutions

Water providers will need to determine how their water supply planning, infrastructure and operations can become more resilient to change. Assistance from the federal government in the form of research and shared resources is essential. Federal adaptation strategies and plans should be developed in close consultation with Western water providers. Federal regulatory programs should also be flexible enough to accommodate such strategies. Clear guidance on climate change hydrologic scenarios that can be applied to infrastructure and/or program development should also be made available. In addition, the federal permitting process for permits with

overlapping state and federal requirements should be streamlined and reviews of such permits expedited, especially during critical drought periods or when permits are needed to advance projects needed for the delivery of water. Finally, the federal government should partner with state and local governments to advance watershed health in forest areas by elevating the scope and speed for improving forest health, implementing measures to prevent forest fires and promote the coordinated rehabilitation of areas affected by fires. Federal agencies must foster these strategies with a sense of urgency, including through the timely and thoughtful revision of policies and regulations.

Environmental Regulation

Water agencies are subject to numerous federal and state environmental protection and water quality laws and regulations that affect their ability to build and maintain their systems; and to do so at a reasonable cost. Water quality laws, such as the Clean Water Act and Safe Drinking Water Act, provide important protections for the water supplies that our member agencies rely on to meet demands; however, because this regulatory regime was established over 40 years ago, in many instances it is outdated and cannot be successfully applied in the context of current on-the-ground realities. These mandates often fail to direct regulatory effort and financial resources at the real environmental problems. In addition, they fail any genuine cost/benefit test that supports a sustainable water supply or a healthy environment. In some cases, regulations impose obligations on our agencies that unnecessarily add to the cost of water service, and can even be technically or economically impossible to satisfy in the context of a changing climate.

Western Water providers must confront the difficult challenges presented by regulations that intersect at the nexus between water quantity and water quality, including the:

- establishment and implementation of water quality standards;
- development and implementation of total maximum daily loads (TMDLs);
- issuance of section 404 dredge and fill permits, and associated section 401 water quality certifications;
- conduct of anti-degradation reviews;
- preservation and restoration of ecosystem values; i.e. watershed quality, endangered species, etc.
- definition of the scope of federal jurisdiction;
- permitting of point sources, including attempts to require permits for water transfers;
- implementation of nonpoint source best management practices (BMPs); and
- impact of maximum containment levels, critical to protect a safe drinking water supply, on the operation of water treatment facilities.

For example, new drinking water standards may require retrofitting of entire water treatment plants to introduce a new technology. Effluent limitations, TMDL allocations and antidegradation requirements are often tied to water quality standards that may not reflect changes in baseline conditions associated with climate change; e.g. reductions in natural dilution flows in receiving rivers. Other environmental laws, such as the ESA and other species protection laws and the National Environmental Policy Act, also add significant costs due to inefficient procedures and unrealistic standards.

Solutions

The WUWC supports regulations to protect environmental values. However, all aspects of the water quality and quantity nexus must be adequately examined. Regulatory programs should be appropriately adjusted so as to accommodate both western water supply needs and realistic environmental objectives. Federal agencies should facilitate efforts by water providers to carry out effective adaptation strategies. To advance progressive goals for adaptation, water utilities need regulatory flexibility and streamlined procedures for complying with these laws. This will help avoid unnecessary costs and time delays. Collaboration and an open dialogue between federal regulators and water providers is needed to advance these goals and meet the ultimate objective of ensuring consumers have a clean and reliable water supply, as well as a healthy environment in which to live and recreate.

The Need for New and Optimized Existing Water System Infrastructure

At the dawn of the 21st century, much of our water infrastructure is nearing the end of its design life. An estimated 240,000 water main breaks occur each year in the United States. Assuming that each of those pipes would need to be replaced, the cost over the coming decades could reach more than \$1 trillion, according to the American Water Works Association. Capital investment needs for the nation's wastewater and stormwater systems are also estimated to total \$298 billion over the next 20 years. As water facilities grow older and new technologies, regulations and water quality standards require upgrades in equipment and treatment systems, public water agencies face an increasing financial burden. These system improvement costs are above and beyond routine maintenance and operational costs and often vastly exceed the costs of the original water supply.

The cost of expanding urban water systems has traditionally been funded with the revenues from tap fees and increased sales of the water delivered through the systems after construction. This method has allowed the capital costs to be repaid from the additional revenues generated by the investment in the new infrastructure. In contrast, upgrades or replacement of older, existing water systems do not generate new revenue sources, and the costs must be borne by the users of the existing system through rate increases. In addition to the financial challenge posed by water system expansions and replacement activities, water providers face regulatory requirements that can impede the accomplishment of system objectives in a timely and cost-effective manner.

Solutions

New mechanisms are needed to pay for the costs of new infrastructure to replace aging and deteriorating infrastructure. One such mechanism is the use of tax-exempt financing, such as municipal bonds, which help mitigate the financial impact of additional capital costs on existing customers. Other options include grants, no /low interest municipal bonds, expanded State Revolving Funds, and other innovative financing mechanisms, such as loan guarantees.

WUWC urges lawmakers to consider avenues to improve tax-exempt financing opportunities and to oppose any proposal to eliminate these critical financial tools. Lawmakers and regulators should also consider ways to streamline the process for upgrading and replacing infrastructure.

Water Reuse, Efficiency and Resource Optimization

While maintaining extensive water development, storage, conveyance, treatment, and delivery systems, water agencies in the West are also implementing effective conservation programs to preserve and extend limited supplies to both buffer the impacts of a variable climate and meet the demands of growing populations. WUWC members are undertaking water recycling, reuse and groundwater recharge programs designed to make the most efficient use of the water supplies available to them. WUWC members have also successfully implemented an ever-expanding array of other water conservation measures; from water pricing to lawn replacement, and low-flush toilets to gray-water irrigation systems, urban agencies in the West have been at the forefront of new conservation ideas. Indeed, the most readily available savings from the implementation of water conservation methods have already been achieved by WUWC members. However, programs that succeed in reducing per capita demands are a double-edged sword. Absent growth, these programs may have the consequence of reducing the overall volume of water sold by agencies, with the accompanying loss of revenues necessary to meet fixed costs and address the challenges described above.

Solutions

Financial, technical and regulatory support from the state and federal governments is essential to the success of conservation and efficiency programs, including groundwater reclamation, recycling and reuse projects. A simple, helpful action that the federal government could take would be to designate water conservation measures provided to customers by utilities as exempt from the definition of income for tax purposes.

CONCLUSION

WUWC is committed to confronting and mitigating the major new challenges presented by a changing environment. These challenges include climate change and its effects, increasing populations and demand, declining revenues, limited rate increases, aging infrastructure, and heightened regulation. WUWC has made significant strides in addressing these obstacles, but collaboration with lawmakers and regulators is necessary for continued success. In order to preserve safe and reliable water supplies for consumers, WUWC needs a coordinated federal climate change strategy that defers to local water resource management decision-making; provides regulatory flexibility that reflects the realities of climate change; bolsters technical and financial resources; and streamlines regulatory approval processes. To achieve the best result, WUWC needs Congress and the Administration to seriously consider the ramifications of the emerging climate change strategy upon western urban water agencies. The starting point for these efforts should be close collaboration between elected representatives, federal officials and water agencies in confronting these challenges. WUWC is prepared to fulfill its role in this effort.

Attachment 2



November 26, 2014

Shaun L. S. Donovan
Director
The Office of Management and Budget
725 17th Street, NW
Washington, D.C. 20503

Re: Budget Support for the Western Watershed Enhancement Partnership

Dear Mr. Donovan:

The Western Urban Water Coalition (WUWC) supports increased funding and support for the Western Watershed Enhancement Partnership (Partnership) as established by the Departments of the Interior and Agriculture. This program allows the federal agencies to partner with local entities to fund activities that reduce the risk of wildfires upon Western communities and their water supplies. Given the success of the Partnership in providing funding for local efforts to reduce wildfire risks, we support increasing the funding for the Partnership in the President's FY 2016 budget. This will enable the Departments and local entities to better protect natural resources and local water supplies.

Established in June 1992 to address the West's unique water issues, WUWC consists of the largest urban water utilities in the West, serving over 35 million western water consumers in 16 metropolitan areas in five states. The membership of the WUWC includes the following urban water utilities: Arizona – Central Arizona Project and City of Phoenix; California – East Bay Municipal Utility District, Eastern Municipal Water District, Los Angeles Department of Water and Power, The Metropolitan Water District of Southern California, San Diego County Water Authority, City and County of San Francisco Public Utilities Commission, and Santa Clara Valley Water District; Colorado – Aurora Water, Colorado Springs Utilities, and Denver Water; Nevada – Las Vegas Valley Water District, Southern Nevada Water Authority, and Truckee Meadows Water Authority; and Washington – Seattle Public Utilities.

Given that much of the water supply for WUWC members originates on federal lands, when these lands burn it impacts our municipal water supplies. WUWC members, therefore, have strong interest in: 1) the suppression of wildfires on federal lands, 2) the prevention of wildfires through hazardous fuel reduction programs and 3) the implementation of post-fire activities, including emergency stabilization of stream banks so as to reduce the risks to life, property, and critical natural and cultural resources. Such emergency stabilization treatments reduce the risk of damage caused by floods, landslides, debris flows, and erosion, each of which can severely impact source water supplies.

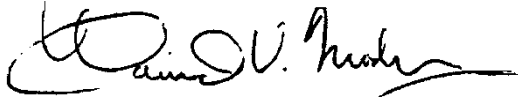
Mr. Shaun L.S. Donovan
November 26, 2014
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The need for increased funding for the Partnership is especially acute. Climate change is resulting in drier and hotter weather, more intense and frequent droughts, and low snowpack that, taken together, are increasing the vulnerability of forests, woodland, and rangeland to fire. This danger is particularly strong in the western U.S. where the National Climate Assessment predicts that over the next 50 years, the area burned by wildfires will double in the southern Rockies and increase by as much as 74 percent in California as wildfire seasons become longer and more damaging.¹ All Western U.S. forests are particularly vulnerable to increased wildfire outbreaks in the future due to drought.² Persistent drought and the accumulation of hazardous fuels has contributed to an increase in the number, size, and severity of such wildfires³.

In addition to these climate-induced factors, wildfire risk levels have increased as a result of population growth and home construction in the Wildland Urban Interface (WUI) and the Intermix.⁴ This rapid growth into wildland areas complicates landscape protection needs and creates additional sources of ignition.

Increasing funding for the Partnership would help federal land managers and local entities with the completion of planned hazardous fuel reduction activities, while addressing land stabilization needs. We strongly support increased funding for the Partnership.

Sincerely,



David Modeer
Chair
Western Urban Water Coalition

cc: Perkins Coie LLP
700 Thirteenth St. NW, Suite 600
Washington, D.C. 20005-3960

¹ National Climate Assessment, by the National Climate Assessment and Development Advisory Committee, Washington D.C., May 6, 2014

²*Id.*

³ Jennifer R. Marlon, et al., Long-term perspective on wildfires in the western USA, Proceedings of the National Academies of Science, published ahead of print February 14, 2012, www.pnas.org/lookup/suppl/doi:10.1073/pnas.1112839109/-

⁴ 2009 Interior and U.S. Department of Agriculture Quadrennial Fire and Fuels Review. Interface generally refers to areas with communities near wetlands, while Intermix has fewer houses and more vegetation.

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May 14, 2014

Senator Patty Murray
Chair
Senate Budget Committee
624 Dirksen Senate Office Building
Washington, DC 20510

Representative Paul Ryan
Chair
Committee on the Budget
House of Representatives
207 Cannon House Office Building
Washington, DC 20515

Representative Rob Bishop
Chair
House Natural Resource Subcommittee on Public Lands
and Environmental Regulation
1324 Longworth House Office Building
Washington, DC 20515

Representative Glenn Thompson
Chair
House Agriculture Subcommittee on
Conservation, Energy, and Forestry
1301 Longworth House Office Building
Washington, DC 20515

Re: S.1875: Wildfire Disaster Funding Act of 2013 and H.R. 3992: Wildfire Disaster Funding Act of 2014

Dear Chairpersons Murray, Ryan, Bishop and Thompson:

This letter provides the endorsement of the Western Urban Water Coalition (WUWC), for S 1875: Wildfire Disaster Funding Act of 2013, now pending in the Senate Budget Committee, and H.R. 3992: the Wildfire Disaster Funding Act of 2014, now pending in the House Committee on Budget, the House Natural Resource Subcommittee on Public Lands and Environmental Regulation, and the House Agriculture Subcommittee on Conservation, Energy, and Forestry. The bills would add new budget authority for wildfire suppression costs that exceed 70 percent of the 10-year suppression average spending and fund these costs as natural

disaster recoveries. The bills would assure that funds budgeted for prevention of future wildfires and for emergency stabilization of landscapes damaged by wildfire remain available to federal agencies for these purposes.

Under current law, federal land managing agencies pay wildfire suppression costs out of agency budgets for fire management. Increasing wildfire activity means that federal land managers quickly run through budgeted funds for wildfire suppression and are forced to utilize funds originally dedicated to hazardous fuel reduction and emergency stabilization treatments for wild fire suppression. This creates a vicious cycle in which money needed to prevent next year's wildfires is used to suppress this year's wildfires.

Established in June 1992 to address the West's unique water issues, WUWC consists of the largest urban water utilities in the West, serving over 35 million western water consumers in 16 metropolitan areas in five states. The membership of the WUWC includes the following urban water utilities: Arizona – Central Arizona Project and City of Phoenix; California – East Bay Municipal Utility District, Eastern Municipal Water District, Los Angeles Department of Water and Power, The Metropolitan Water District of Southern California, San Diego County Water Authority, City and County of San Francisco Public Utilities Commission, and Santa Clara Valley Water District; Colorado – Aurora Water, Colorado Springs Utilities, and Denver Water; Nevada – Las Vegas Valley Water District, Southern Nevada Water Authority, and Truckee Meadows Water Authority; and Washington – Seattle Public Utilities.

Given that much of the water supply for WUWC members originates on federal lands, when these lands burn it impacts municipal water supplies in the western U.S. WUWC members, therefore, have strong interest in 1) the suppression of wildfires on federal lands, 2) the prevention of wildfires through hazardous fuel reduction programs and 3) recovery from wildfires through activities such as emergency stabilization of stream banks both during and immediately following a wildfire, to reduce the risks to life, property, and critical natural and cultural resources. Emergency stabilization treatments reduce the risk of damage caused by floods, landslides, debris flows, and erosion, each of which can severely impact clean water supplies.

The need for S. 1875 and H.R. 3992 is especially acute. Climate change is resulting in drier and hotter weather, more intense and frequent droughts, and low snowpack that, taken together, are increasing the vulnerability of forests, woodland, and rangeland to fire. This danger is particularly acute in the western U.S., where the National Climate Assessment predicts that over the next 50 years, the area burned by wildfires will double in the southern Rockies and increase by as much as 74 percent in California as wildfire seasons become longer and more damaging.¹ All Western U.S. forests are particularly vulnerable to increased wildfire outbreaks

¹ National Climate Assessment, by the National Climate Assessment and Development Advisory Committee, Washington D.C., May 6, 2014
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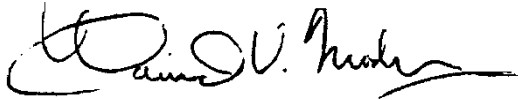
May 14, 2014
Page 3

in the future due to drought.² Persistent drought and accumulation of hazardous fuels has contributed to an increase in the number, size, and severity of large wildfires³.

In addition to these climate-induced factors, wildfire risk levels have increased as a result of population growth and home construction in the Wildland Urban Interface (WUI) and the Intermix.⁴ This rapid growth into wildland areas complicates landscape protection needs and creates additional sources of ignition.

The passage of S. 1875 and H.R. 3992 would assure funding for federal land managers to conduct planned hazardous fuel reduction activities and to address land stabilization needs, regardless of the need for wildfire suppression funding in any given year. We strongly support their passage.

Sincerely,

A handwritten signature in black ink, appearing to read "David Modeer", with a stylized flourish at the end.

David Modeer
Chair
Western Urban Water Coalition

cc: Perkins Coie LLP
700 Thirteenth St. NW, Suite 600
Washington, D.C. 20005-3960

²*Id.*.

³ Jennifer R. Marlon, et al., Long-term perspective on wildfires in the western USA, Proceedings of the National Academies of Science, published ahead of print February 14, 2012, www.pnas.org/lookup/suppl/doi:10.1073/pnas.1112839109/-

⁴ 2009 Interior and U.S. Department of Agriculture Quadrennial Fire and Fuels Review. Interface generally refers to areas with communities near wetlands, while Intermix has fewer houses and more vegetation.

Attachment 3



November 14, 2014

Delivered via e-mail and internet

<http://www.regulations.gov>

Water Docket
Environmental Protection Agency, Docket Center
EPA West, Room 3334
1301 Constitution Avenue NW
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OW-2011-0880

Re: Comments on the Proposed Rule to Clarify the Definition of “Waters of the United States” under the Clean Water Act

Dear Docket Administrator:

This letter provides comments on behalf of the Western Urban Water Coalition (WUWC) on the proposed rule (Proposed Rule) issued by the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) defining the scope of waters protected under the Clean Water Act (CWA). (See 79 Fed. Reg. 22187, April 21, 2014).

Created in June 1992 to address the West’s unique water issues, WUWC consists of the largest urban water utilities in the West, serving over 35 million western water consumers in 15 metropolitan areas in five states. The membership of WUWC includes the following urban water utilities: Arizona – Central Arizona Project and City of Phoenix; California – East Bay Municipal Utility District, Eastern Municipal Water District, Los Angeles Department of Water and Power, The Metropolitan Water District of Southern California, San Diego County Water Authority, San Francisco Public Utilities Commission, and Santa Clara Valley Water District; Colorado – Aurora Water, Colorado Springs Utilities, and Denver Water; Nevada – Las Vegas Valley Water District, Southern Nevada Water Authority, and Truckee Meadows Water Authority; and Washington – Seattle Public Utilities.

WUWC members have a strong interest in clean water for municipal water supplies and in the regulatory processes protecting water quality. In particular, WUWC members are concerned with the predictability and certainty of whether a water body is subject to the CWA and in reducing costs and delays in obtaining permits. The requirements for issuance of permits under sections 402 and 404 of the CWA are of great significance to WUWC members because, as

municipal water providers, WUWC members build reservoirs and other essential water supply related infrastructure, including long pipelines, as well as recharge and reuse facilities. In addition, many of our members are multi-service utilities and also provide stormwater and wastewater services to our customers. We have historically been, and will continue to be, ardent supporters of the goals of the CWA. We are the on-the-ground partners with EPA and the states in the implementation of both the CWA and the Safe Drinking Water Act (SDWA).

In difficult economic times, public monies are in short supply, yet infrastructure demands are high for a variety of reasons, including aging systems, climate variability and population growth. All levels of government, but especially regulatory agencies, must understand how their actions impact the ability of water providers to balance competing needs. It is important that the agencies consider the scope of the Proposed Rule in the context of the full panoply of environmental and water supply challenges being faced by local communities in the West. This includes those challenges associated with climate change, most notably drought, forest fires, post fire floods, and the overall health of forested watersheds.

The West is, in fact, the region which will be the most directly and significantly affected by the outcome of this rulemaking process. It is within this geographic region that one frequently finds dry arroyos and washes that flow only in response to infrequent storm events, isolated ponds, intermittent and ephemeral streams with a tenuous connection to downstream navigable waters, effluent dominated and dependent water bodies, and extensive ditch and canal systems designed to meet both agricultural and municipal needs.

For these reasons, WUWC has been very active in legislative and regulatory initiatives to define jurisdictional waters. We have appeared before congressional committees and Members of Congress, met with federal agencies, and commented on guidance documents. Within the past twelve months, we submitted comments on November 6, 2013 on the draft *Connectivity Report*; on December 31, 2013, sent a letter to heads of EPA, the Corps and the Office of Management and Budget objecting to issuance of this Proposed Rule before scientific review is completed on the *Connectivity Report*; and on November 4, 2014, wrote the heads of EPA and the Corps seeking an extension of time to comment on the Proposed Rule until after the *Connectivity Report* is finalized in light of the peer review of EPA's Scientific Advisory Board dated October 17, 2014. Based on this extensive background, WUWC is greatly concerned not only with the expansion of CWA jurisdiction in the Proposed Rule but also the agencies' own recognition of the scientific uncertainty associated with the proposal.

BACKGROUND

The CWA provides federal jurisdiction over "waters of the United States" but does not define this term. Starting in the 1970s, EPA and the Corps adopted a broad interpretation covering any water body the use, degradation or destruction of which could affect interstate commerce. In 2001, the Supreme Court reined in this expansive view, holding that "isolated" waters are not subject to CWA jurisdiction solely on the grounds that they are used by migratory birds. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001)(SWANCC). In 2006, the Supreme Court issued its split decision in *Rapanos v. United States*, 547 U.S. 715 (2006), which held that a stream or wetland is subject to the CWA only when there is a "significant nexus" to a navigable water.

Following the *Rapanos* decision, there has been a great deal of uncertainty regarding the scope of federal permitting authority under the CWA. Landowners, developers, public agencies, and federal regulators have all struggled to determine what constitutes a “significant nexus,” especially in cases involving isolated wetlands, ephemeral streams and other small water bodies where the connection to a navigable water is far from apparent.

The Proposed Rule attempts to clarify how the agencies will identify waters protected by the CWA and implement the Supreme Court’s decisions concerning the extent of waters covered by the Act. The Proposed Rule sets forth the EPA’s and the Corps’ understanding of existing requirements of the CWA in light of *SWANCC* and *Rapanos*. Despite the agencies’ claims to the contrary, the Proposed Rule would expand federal jurisdiction beyond existing law and guidance.

GENERAL COMMENTS

1. The Proposed Rule Significantly Increases the Burden on the Regulated Community

The Proposed Rule represents a significant expansion of the historical scope of federal jurisdiction. Under the proposal, all tributary and adjacent waters would now be “jurisdictional by rule,” the definition of “tributary” and the scope of what is “adjacent” would both expand, a new concept of “neighboring waters” would be incorporated, and the significant nexus test would allow for a watershed scale determination of jurisdiction. Many of the dry arroyos, washes, ditches and ephemeral or intermittent water bodies so common in the arid West would become the subject of federal oversight.

This expansion of jurisdiction will significantly increase the burden on the regulated community, especially in the western U.S., as compared to the current rules and agency guidance for identifying waters subject to CWA protection. In the arid portions of the West, numerous ephemeral and intermittent drainages and wetlands exist that under the current agency guidance have been determined to be isolated or lacking a significant nexus to traditional navigable waters and thus are not subject to jurisdiction under Section 404 and other provisions of the CWA. The Proposed Rule is a marked departure from past practice because it would make ephemeral and intermittent tributaries jurisdictional and eliminate the concept of an isolated water or wetland, a concept that has been part of the agencies’ approach to determining geographic jurisdiction since the 2003 agency guidance following the *SWANCC* decision.

The importance of this change to municipal utilities lies primarily in its relationship to sections 404 and 402 of the CWA. If a water feature is determined, either per se or on a case-by-case basis, to be a “water of the U.S.”, the dredge and fill permit provisions of section 404 and the point source permit provisions of section 402 are potentially triggered by a variety of municipal undertakings. Invoking these provisions can, in turn, implicate the need for a section 401 water quality certification from the state and, more importantly, may necessitate a costly and time consuming review of the local initiative under the National Environmental Policy Act. Finally, the need for the issuance of federal approvals may, in turn, also trigger consultation requirements under the federal Endangered Species Act.

To meet water supply and wastewater treatment needs, as well as stormwater control requirements, Western municipal utilities must make substantial infrastructure investments, often requiring creative and innovative approaches. These investments will include new or expanded storage reservoirs; reuse facilities; desalinization plants; water collection, delivery and distribution pipelines; pump-back projects; groundwater recharge facilities; and reverse osmosis water treatment plants. Many of these facilities will, of necessity, be in somewhat close proximity to the types of “waters” discussed in the current rule proposal. It is essential that these critical activities, many of which may be undertaken in direct response to emergency conditions related to drought, fire, or post-fire damage, do not unnecessarily trigger a federal nexus and its concomitant lengthy and costly permitting procedures.

In addition, the Proposed Rule may result in new, indirect costs to municipal utilities through additional fees that may be assessed by state and federal agencies required to carry out the proposed revisions of the regulation. These indirect costs could include application fees, additional environmental compliance costs, wetlands mitigation and possible project redesign and relocation expenses.

2. Lack of Studies Focusing on Special Conditions in the Arid Western United States

The Proposed Rule states that it was written in reliance upon the scientific findings of the report entitled *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (September 2013 External Review Draft) (Draft *Connectivity Report*). We note that most of the studies used in the Draft *Connectivity Report* are based in the Midwest or the East Coast. There is very little discussion about the special conditions that characterize wetlands and ephemeral or intermittent streams in the arid Western United States.

On October 16, 2014, WUWC representatives met with EPA officials to discuss several of the issues of interest to WUWC regarding the Proposed Rule and the Draft *Connectivity Report*. In the meeting, EPA officials again made clear their reliance on the Draft *Connectivity Report* for the scientific information and conclusions needed to support the Proposed Rule’s assumption that ephemeral and intermittent tributaries are jurisdictional by rule. This issue is very important to WUWC and on which we strongly disagree with the Proposed Rule. After much discussion with the EPA officials, WUWC agreed to provide more information as to why ephemeral and intermittent drainages in the arid West should not be considered jurisdictional by rule and how the Proposed Rule’s assumption is not supported by the Draft *Connectivity Report*. WUWC has done additional work on this issue and now provides its own critique of the Proposed Rule and the Draft *Connectivity Report* in the attached comment paper prepared by ERO Resources Corporation for Perkins Coie, LLP, legal counsel to WUWC (Attachment 1). We request strong consideration of the attached study and its recommended changes for the Final Rule language that takes into account the special hydrogeological conditions that characterize the arid Western United States. In support of this Attachment, WUWC also submits a study prepared by SWCA Environmental Consultants dated November 12, 2014, critiquing the Draft *Connectivity Report* and analyzing past Corps’ jurisdictional determinations in the arid West that found no significant nexus with TNWs (Attachment 2).

In the arid West, the question of jurisdiction under the CWA typically does not focus on larger, higher-order drainages. The issue of questionable jurisdiction resides with the commonly occurring smaller lower-order dry ephemeral and intermittent drainages. No specific research has been conducted in support of the Proposed Rule's assumption that ephemeral and intermittent tributaries in the arid West should be jurisdictional by rule. Only a few of the 1,016 references in the Draft *Connectivity Report* include research with any applicability to low order headwater streams in the arid West. Of these studies, none make any specific attempt to view headwaters in the context of their importance, let alone relative importance, to downstream surface waters. Information applicable to smaller lower-order dry ephemeral and intermittent drainages such as that found in *Fluvial Processes in Dryland Rivers* (Graff 1988) were not presented and discussed in the Draft *Connectivity Report*. The *Graff* reference, focused specifically on dryland drainages, demonstrates that the use of an ordinary high water mark (OHWM) to determine that an ephemeral or intermittent channel in the arid West is a "tributary" and therefore has a significant nexus to a TNW, is not supported by observation, studies or the literature. Inclusion of this information could have provided the basis for the Draft *Connectivity Report* to disclose the differences for such systems in the arid West. This, in turn, could have informed the Proposed Rule and led to a regional approach for addressing ephemeral and intermittent channels in the arid West. As demonstrated in the attached reports, there is no scientific information presented in the Draft *Connectivity Report* that supports treating ephemeral and intermittent channels in the arid West as jurisdictional by rule. In fact, there are references (not included in the Draft *Connectivity Report*) that demonstrate the opposite. Ephemeral and intermittent channels in the arid West are so variable that a simple relationship between a morphologic variable such as an OHWM and significant nexus to a TNW is not reliable.

3. Insufficient Time Between the Final SAB Peer Review and the Close of the Comment Period on the Proposed Rule

While notice of the Draft *Connectivity Report* was published in the Federal Register on September 13, 2013 (78 Fed. Reg. 58536), the Peer Review was issued just a few weeks ago on October 17, 2014. EPA has not yet published its Final *Connectivity Report* in light of the Peer Review. Until the public understands how EPA will incorporate the Peer Review into the Final *Connectivity Report*, and how it impacts the agency proposal, it is difficult to comment on the Proposed Rule completely and effectively.

As a member of the SAB panel reviewing the Draft *Connectivity Report* commented:

The usual protocol in science is not to release a report before the review is complete, the purpose being to allow a frank and honest appraisal of the work before positions are 'hardened' and reputations are placed in jeopardy. The sequence employed by EPA suggests to the public that there is no critical input needed by the SAB - - just a few minor additions. If I believed this to be the case, I would be very dismayed.

Attachment to Letter to Dr. David Allen, Chair, EPA, Scientific Advisory Board from Dr. Amanda D. Rodewald, Chair, SAB Panel for Review of EPA Water Body Connectivity Report, dated September 2, 2014, at page 89.

On November 5, 2014, WUWC requested an extension of the public comment period on the Proposed Rule until at least 60 days after the issuance of the Final *Connectivity Report* in order to give stakeholders adequate time to consider and address the 58-page Peer Review and EPA's finalization of the *Connectivity Report* in public comments on the Proposed Rule.

Moreover, the Draft *Connectivity Report* does not necessarily correlate science with the legislative language, legislative intent, Supreme Court precedent or agency objectives under the CWA. To support the finding that all "tributaries," all "adjacent waters," and certain "other waters" have a "significant nexus" the Draft *Connectivity Report* evaluated scientific studies, many of which examined biological connections between bodies of water, or water retention, without examining impacts on the quality of navigable water.

4. Impacts on Western Water Rights

Western municipalities have acquired most, if not all, of their water portfolios under the prior appropriation system administered by their respective states. However, in order to put those waters to beneficial use, they must divert or store that water and subsequently deliver it through a complex set of collection and distribution infrastructure. Congress, through sections 101(g) and 510(2) of the CWA, has afforded an appropriate measure of deference to state water allocation decisions. Given the expansive reach of the Proposed Rule, including its determination as to what constitutes waters that are "jurisdictional by rule," infrastructure related activities of the municipal water providers could become subject to federal oversight. If the proposal had this outcome, it would effectively remove the concept of "navigable" from the Act contrary to the Supreme Court's admonition in *SWANCC* that this term must be accorded some effect. *SWANCC*, 531 U.S. at 172 ("We cannot agree that Congress' separate definitional use of the phrase 'waters of the United States' constitutes a basis for reading the term 'navigable waters' out of the statute.") Certainly in an area of traditional state primacy, such as the allocation and distribution of essential water supplies, the federal agencies should be reluctant to expand federal jurisdiction in the absence of a clear Congressional directive to do so. No such directive exists here.

5. Lack of a Proper Definition of "Significant"

The *Connectivity Report* did not expressly discuss the notion of significance, it being a legal term and not a scientific one in this context. Moreover, the definition provided in the Proposed Rule does not help as it equates "*significant*" with "*significantly affects*" the chemical, physical, or biological integrity of a jurisdictional water, never explaining what the root term "significant" means. The Proposed Rule goes on to say that "*for an effect to be significant, it must be more than speculative or insubstantial*", but it does not put forward any threshold for deciding what is *not* speculative or insubstantial. As the SAB Peer Review recommends, "EPA should recognize that there is a gradient of connectivity" in the context of how tributaries (perennial, intermittent, and ephemeral) affect downstream waters. EPA should identify how it will determine where along this gradient connectivity moves from insignificant to significant.

The definition of "significant nexus" is especially problematic when it comes to the "other waters" and the case-specific analyses needed to determine jurisdiction. The Proposed Rule would be less subject to litigation if the definition of "significant nexus" included a tangible

methodology to make the job of the Corps Districts more straightforward and transparent when it comes to deciding what is *not* speculative or insubstantial.

6. Unintended Consequences of the Proposed Rule

The “jurisdictional by rule” presumption for all tributaries will have substantial unintended consequences, particularly in the arid West. This will result in greater adverse effects on the resources associated with perennial drainages. The current regulations, policies, and practices provide incentives to project proponents to develop alternatives that avoid impacts on waters and wetlands with greater potential to provide significant resources and functions (i.e., those with perennial water sources).

In the arid West, current policy and practices steer many projects away from rivers and perennial streams toward non-jurisdictional ephemeral and intermittent drainages resulting in fewer projects in jurisdictional waters and wetlands and fewer impacts on the resources and functions associated with such jurisdictional waters and wetlands. As proposed, the rule would eliminate this incentive because all drainages that meet the definition of “tributary” would be jurisdictional by rule (including normally dry ephemeral drainages). In other words, under the proposed rule, there would no longer be an incentive for a project proponent to avoid perennial drainages because all tributaries would be jurisdictional by rule.

Before finalization of any final rule that eliminates the existing incentive to protect perennial drainages, EPA and the Corps should prepare the appropriate environmental analysis.

6. Improper Interpretation of the *Rapanos* Plurality Decision

The Proposed Rule fails to adopt a narrow interpretation of *Rapanos* as is warranted where no opinion garners a majority of the Supreme Court, see *Marks v. United States*, 430 U.S. 188 (1977), and instead heads in the opposite direction, expanding the scope of federal oversight. Under *Marks*, when no opinion of the Court garners a majority, “the holding of the Court may be viewed as that position taken by those Members who *concurred in the judgments on the narrowest grounds*.” 430 U.S. at 193 (emphasis added). The Proposed Rule allows the agencies to assert jurisdiction over more water bodies than are covered by the *Rapanos* plurality, more than are covered by the Kennedy concurrence in *Rapanos*, and more than are covered by the existing regulations defining waters of the United States. This can hardly be said to be a “narrow” interpretation.

7. EPA’s Water Transfers Rule

The statement that “[t]he agencies propose . . . no change to the regulatory status of water transfers” appears multiple times in the Preamble. 79 Fed. Reg. at 22189; *see also id.* at 22193, 22199 and 22217. EPA’s Water Transfers Rule excludes any “activity that conveys or connects *waters of the United States* without subjecting the transferred water to intervening industrial, municipal, or commercial use” from the National Pollutant Discharge Elimination System (“NPDES”) created by CWA. 40 C.F.R. § 122.3(i) (“Water transfer means an activity that conveys or connects waters of the United States without subjecting the transferred water to intervening industrial, municipal, or commercial use . . .”). The Water Transfers Rule does not

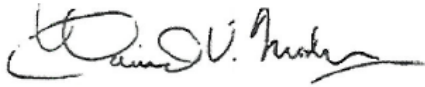
define “waters of the United States,” although EPA relied on one of the definitions the agencies propose to change in the Proposed Rule. See 40 C.F.R § 122.2. 73 Fed. Reg. 33,697, at 33,699, note 2 (June 13, 2008). In addition to the statements in the preamble, the final rule should expressly state in regulatory text that it does not change the regulatory status of water transfers.

8. Status of Previously Issued Jurisdictional Guidance

The Proposed Rule does not indicate whether it applies to approved jurisdictional determinations under existing rules and agency guidance. The Final Rule should grandfather existing jurisdictional determinations and state that the new regulation applies only to permit applications received after the effective date of the Proposed Rule. There is a strong reliance interest in the water industry on existing determinations that should not be upset by the Final Rule.

Thank you for the opportunity to comment on the Proposed Rule. If you have any questions regarding the comments in this letter, please contact our counsel, Donald C. Baur or Paul B. Smyth of Perkins Coie, LLP at (202) 654-6200.

Sincerely,

A handwritten signature in black ink, appearing to read "David Modeer", with a stylized flourish at the end.

David Modeer
Chair Western Urban Water Coalition

Attachment

cc: Perkins Coie LLP
700 Thirteenth St. NW, Suite 600
Washington, D.C. 20005-3960

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*Consultants in
Natural
Resources and
the Environment*

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**COMMENTS ON THE
U.S. ENVIRONMENTAL PROTECTION AGENCY'S
AND U.S. ARMY CORPS OF ENGINEERS'
PROPOSED RULE DEFINING
WATERS OF THE UNITED STATES**

Prepared for—

Western Urban Water Coalition

Prepared by—

ERO Resources Corporation
1842 Clarkson Street
Denver, Colorado 80218
(303) 830-1188

ERO Project #5952

November 2014



ERO Resources Corp.

1842 Clarkson St.

Denver, CO 80218

303.830.1188

www.eroresources.com

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APPENDICES

Appendix A Photo Log

COMMENTS ON THE U.S. ENVIRONMENTAL PROTECTION AGENCY’S AND U.S. ARMY CORPS OF ENGINEERS’ PROPOSED RULE DEFINING WATERS OF THE UNITED STATES

1.0 INTRODUCTION

The U.S. Army Corps of Engineers (Corps) and Environmental Protection Agency (EPA) (collectively referred to as the agencies) are requesting comments on their proposed rule defining waters of the United States (WUS) under the Clean Water Act (CWA) (79 Federal Register (Fed. Reg.) 22188 (April 21, 2014)). The proposed rule relies heavily on EPA’s draft report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (connectivity report). The proposed rule and connectivity report are lengthy technical documents. It can be challenging for much of the regulated public to determine exactly how the proposed rule would change current policies and practices for determining the jurisdictional status of waters and wetlands, and thus to provide meaningful and informed comments on how the rule will ultimately affect the regulated public.

These comments focus on how the proposed rule, if adopted, would affect the geographic scope of jurisdiction under the CWA in the western U.S., particularly the arid West. The proposed rule will have a disproportionate effect on waters in the arid western U.S. compared with moister regions of the country.

The Federal Register announcement would have benefitted from including text and a table comparing the current jurisdictional status of waters and wetlands and how this would, or would not, in the opinion of the agencies, change under the proposed rule. Without such a comparison, it will be challenging and confusing for the public to understand the consequences of the proposed rule. The statement in the proposed rule that “the scope of regulatory jurisdiction of the CWA in this proposed rule is narrower than that under the existing regulations,” lacks supporting documentation demonstrating how it would or would not affect current policies and practices for determining the jurisdictional status of waters and wetlands, and therefore provides little assurance to the regulated public. As discussed below, the proposed rule would, in fact, increase the scope of CWA jurisdiction compared with current policies and practices.

Additionally, the proposed rule offers little detail on how the rule would be implemented in the field. Without the detail, it is challenging to fully understand the consequences of the rule as

proposed. These comments point out many of the issues associated with the implementation of the proposal, as well as unintended consequences.

These comments were prepared by professionals with substantial experience in working with the determination of the jurisdictional status of WUS. The comments are in response to the proposed rule and the supporting connectivity report. The comments focus on the component of the proposed rule under which all waters that meet the proposed definition of “tributary” are WUS by rule, unless they meet specified exemptions. Under the proposed rule, tributaries are defined as waters physically characterized by the presence of a bed and banks and ordinary high water mark (OHWM), which contribute flow, either directly or through another water, to a WUS. The proposed rule defines tributaries to include ephemeral and intermittent drainages, including canals and ditches.

The comments also address the following:

- Ditches;
- “Neighboring”; and
- “Similarly situated.”

The comments also offer some proposed solutions.

2.0 TRIBUTARY

As explained below, the proposed rule would substantially change the current jurisdictional status of many ephemeral and intermittent drainages, particularly in the western U.S., despite the proposed rule’s claim that “the scope of regulatory jurisdiction of the CWA in this proposed rule is narrower than that under the existing regulations.”

2.1 Current Situation

Currently, the jurisdictional status of ephemeral and intermittent drainages is subject to tests for isolation (following the guidance from *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers*, 531 U.S. 159 (2001) (SWANCC), or a determination of a significant nexus to a traditionally navigable water (TNW) (following the guidance from consolidated cases *Rapanos v. United States* and *Carabell v. United States*, 547 U.S. 715 (2006) (*Rapanos*). At present, there is not a presumption that ephemeral and intermittent drainages are jurisdictional; rather, their jurisdictional status is determined individually. The specific facts are

reviewed for each drainage and based on these facts, the Corps makes a determination that the drainage is jurisdictional (i.e., has a significant nexus to a TNW) or is not jurisdictional (i.e., is isolated and/or lacks a significant nexus to a TNW). This allows a project proponent to provide information to the Corps to consider in determining the jurisdictional status of the water(s) and/or wetland(s) in question. This approach has been informed by and follows the U.S. Supreme Court opinions in *SWANCC* and *Rapanos* and is reflected in the Corps Approved Jurisdictional Determination (JD) Form as discussed below

(http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/app_b_approved_jd_form.pdf).

2.2 Proposed Rule

The proposed rule makes a presumption that all tributaries, including ephemeral and intermittent drainages, are jurisdictional by rule. This approach lumps together large rivers and perennial streams with minor, often dry, ephemeral and intermittent drainages. In doing so, the geographic scope of the proposed rule substantially expands the current scope of CWA jurisdiction. This is particularly true in the arid West where substantial portions of the landscape are comprised of ephemeral and intermittent drainages that are often dry for all or most of the year. Some of these western ephemeral and intermittent drainages are supplied seasonally by irrigation water surface runoff and or ground water discharges that exist due to infiltration of irrigation water to the ground water table.

2.3 Problems with the Proposed Rule

The proposed rule presumes that all ephemeral and intermittent drainages that have the presence of a bed and banks and a OHWM and that contribute flow, either directly or through another water, to a WUS are jurisdictional. The proposed rule does not recognize that there are differences among not only types of drainages, but individual drainages and their potential for affecting the chemical, physical, or biological integrity of a WUS. The proposed presumption of jurisdiction by rule for ephemeral and intermittent drainages runs counter to the guidance and process established by the *SWANCC* and *Rapanos* opinions. These problems with the proposed rule are discussed further below.

2.3.1 *Unintended Consequences*

The “jurisdictional by rule” presumption for all tributaries will have substantial unintended consequences, particularly in the arid West. Currently, when evaluating alternatives, many project proponents consider the ramifications of federal permitting as part of their project planning and alternatives evaluation and carefully weigh alternatives that do not require a federal action. Project proponents choose to avoid federal actions when they can because of the expense and time to process the reviews by multiple federal agencies triggered by a single federal nexus. The federal approval process also provides a forum for litigation and frequently undermines the predictability of the planning process. The only federal action for many proposed projects is authorization from the Corps for the discharge of dredged and fill material into a WUS.

In the arid West, the current Section 404 policies and practices steer many project proponents away from alternatives that involve rivers and perennial streams and toward alternatives that involve dry ephemeral and intermittent drainages that are isolated from and/or lack a significant nexus to a TNW because such drainages are nonjurisdictional and any discharge of dredged or fill material into them will not require a Section 404 permit. Avoidance of the need for a Section 404 permit is frequently a component for evaluating water supply project alternatives in the arid West (Dougherty et al. 2010). Currently, several proposed “off-channel” reservoirs in Colorado are located on ephemeral or intermittent drainages determined to be nonjurisdictional based on isolation. This same approach is also true for other types of projects in the arid West including pipelines, roads and drilling pads.

Because current policy and practices steer many projects away from rivers and perennial streams toward nonjurisdictional ephemeral and intermittent drainages, fewer projects are proposed in jurisdictional waters and wetlands and there are fewer impacts on the resources and functions associated with such jurisdictional waters and wetlands. The current regulations, policies, and practices work as they should to provide incentives to project proponents to develop alternatives that avoid impacts on these waters and wetlands with greater potential to provide significant resources and functions (i.e., those with perennial water sources). Projects can be permitted much more quickly and mitigation efforts, which add significantly to the financial burdens associated with these beneficial water and wastewater initiatives, can be minimized. As proposed, the rule would eliminate this incentive because all drainages that meet the definition of “tributary” would be jurisdictional by rule (including normally dry ephemeral drainages). In

other words, under the proposed rule, there would no longer be an incentive for a project proponent to avoid perennial drainages because all tributaries would be jurisdictional by rule. This will result in greater adverse effects on the resources associated with perennial drainages. The following discussion on isolation and *SWANCC*, and significant nexus and *Rapanos* provide context for the how the proposed rule's treatment of ephemeral and intermittent streams is contrary to current policy and practice and how the proposed rule would expand the geographic scope of CWA jurisdiction in the arid West.

2.3.2 Isolation and SWANCC

The Corp's current Approved JD Form addresses isolated waters and wetlands in several places (http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/app_b_approved_jd_form.pdf). Section III.B, titled Characteristics of Tributary (that is not a TNW) and its Adjacent Wetlands (if any), has a subsection on physical characteristics that includes a discontinuous OHWM with a footnote that explains that “[A] natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.” Section III.F, titled Non-Jurisdictional Waters, Including Wetlands, includes a block that reads “Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce,” and “Prior to the Jan 2001 Supreme Court decision in ‘*SWANCC*,’ the review area would have been regulated based solely on the “Migratory Bird Rule” (MBR).” The current approach allows for fact-specific interpretations of jurisdiction informed by and responsive to variations in drainages.

The Corps currently considers isolation when determining the jurisdictional status of “other waters,” including ephemeral and intermittent drainages. The process and information considered when determining isolation was informed by the *SWANCC* opinion. The determination of isolated waters is not included in the proposed rule and its exclusion from the proposed rule will significantly affect the jurisdictional status of ephemeral and intermittent drainages in the arid West.

The proposed rule states that “[A]s a result of the Supreme Court decisions in *SWANCC* and *Rapanos*, the scope of regulatory jurisdiction of the CWA in this proposed rule is narrower than that under existing regulations.” However, the proposed rule does not appear to preserve the findings of *SWANCC* that addressed the nonjurisdictional status of isolated waters and narrowed the scope of CWA jurisdiction. The proposed rule does not define isolation and does not provide criteria and guidance for a nonjurisdictional determination based on isolation. The proposed rule relies instead on the significant nexus analysis, and only in the case of “other waters,” not tributaries. Therefore, under the proposed rule, there would no longer be an opportunity for a project proponent to provide information to the Corps to consider when determining the jurisdictional status of an ephemeral or intermittent drainage.

Rapanos did not overturn or replace *SWANCC*. *Rapanos* and *SWANCC* address different jurisdictional issues and facts relative to the jurisdictional status of waters and wetlands. Guidance from the opinions works in tandem, as demonstrated by the Corps’ process for approved JDs (discussed above). Based on the opinions, a water can be determined nonjurisdictional because it is isolated, lacks a significant nexus, or both. The proposed rule needs to recognize the *SWANCC* and *Rapanos* opinions and preserve the ability to determine that a water or wetland is nonjurisdictional because it is isolated. As discussed below, determinations of nonjurisdiction for ephemeral and intermittent drainages based on isolation occur in the arid West (SWCA Environmental Consultants 2014a and Corps Approved JD Form). These nonjurisdictional determinations include:

- Ephemeral and intermittent drainages with substantial breaks in jurisdictional features where the break in jurisdictional features makes it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages with no breaks in jurisdictional features that contain no surface flow during most years due to dry conditions and/or human surface and shallow ground water diversions that reduce streamflow to zero.
- Erosional gullies that do not have jurisdictional features except where they transport irrigation runoff.
- Ephemeral and intermittent drainages where the channel ends in a fan or sheet flows over the landscape and makes it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages where the channel loses definition due to agricultural or other activities that make it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages where the channel loses surface or subsurface flow that make it unlikely that flows reach a WUS.

- Ephemeral and intermittent drainages where the channel ends in a closed basin and it is unlikely that flows reach a WUS.

Currently, the channel above these breaks in jurisdiction would be considered isolated and/or lack a significant nexus to a WUS, even if portions of the channel above the breaks in jurisdiction had a bed and banks or an OHWM. These situations occur with enough frequency in the arid West that elimination of the criteria for isolation associated with breaks in jurisdiction and making ephemeral and intermittent drainages jurisdictional by rule would substantially increase the scope of CWA jurisdiction in the arid West.

Many ephemeral and intermittent drainages in the arid West have a discontinuous bed and banks and/or OHWMs (discontinuous features). These discontinuous features are the result of infrequent flow events and are an indicator that such drainages may not have sufficient or consistent flow to connect to a WUS or physically, chemically, or biologically affect the integrity of a WUS. The Corps recognizes this common situation in Section III.B of the Approved JD Form discussed above that states: “[W]here there is a break in the OHWM that is unrelated to the waterbody’s flow regime” (i.e., the Corps considers how flow regime relates to jurisdictional features in determining isolation). In many situations under current guidance and policy, the discontinuous nature of these features is substantial enough to “isolate” and render the drainages nonjurisdictional above these substantial breaks in jurisdictional features. Under the proposed rule, a water that otherwise qualifies as a tributary does not lose its status as a tributary if, for any length, there are one or more man-made breaks, or one or more natural breaks so long as a bed and bank and OHWM can be identified upstream of the break. As proposed, the rule would not consider any break in jurisdictional features, no matter how extensive, as justification to consider reaches above the break in features to be nonjurisdictional. This approach fails to consider the length of the break in relationship to flows that form the features to the overall drainage or the characteristics of the drainage.

For example, consider a 20-mile-long ephemeral drainage with an OHWM and bed and banks for its lower 5 miles with a 10-mile break in jurisdictional features, with the remaining upper 5 miles of drainage with intermittent indicators of an OHWM and a bed and banks. This drainage most certainly has a different probability of connection and physically, chemically, or biologically affecting the integrity of a WUS than the same length of an ephemeral drainage with

a 1/8-mile break in jurisdictional features. As proposed, the rule has no approach for making such distinctions in determining the jurisdictional status of ephemeral and intermittent drainages. Unfortunately, such examples are not the exception. Ephemeral and intermittent drainages with substantial breaks in jurisdictional features occur with enough frequency over the landscape of the arid West to render the proposed rule's approach arbitrary.

Substantial breaks in jurisdiction (discontinuous features) can also be indicative of an ephemeral or intermittent drainage with subsurface flow that occurs within the alluvium of the channel. The alluvial flow may be lost before reaching a WUS due to evaporation, consumptive use by riparian and wetland vegetation, diversions by shallow wells, and possibly infiltration to a suballuvial (deep ground water) aquifer. Dryland channels experience high rates of downstream transmission losses because of the porous nature of typical channel bed materials (Graf 1988). The discontinuous features may also be associated with channels with gradients that flatten and/or broaden.

The proposed rule states that “[N]on-jurisdictional geographic features (e.g., nonwetland swales, ephemeral upland ditches) may still serve as a confined surface hydrological connection between an adjacent wetland or water and a traditionally navigable water, interstate water or the territorial sea, provided there is an actual exchange of water between those waters, and the water is not lost to deep groundwater through infiltration (i.e., transmission losses).”

Although not explained in the proposed rule, in practice, the above criteria would only apply to ephemeral or intermittent drainages, ditches, canals, and wetlands because rivers and perennial streams would have defined perennial surface connections to a WUS. This approach to negating the effect of substantial breaks in jurisdiction of ephemeral and intermittent drainages has several problems. First, as discussed above, substantial breaks in jurisdiction (discontinuous features) can be indicative of an ephemeral or intermittent drainage with flows that tend to be lost from the channel alluvium and not reach a WUS. Loss of ground water from these drainages rarely produces a confined or defined connection to a WUS. More commonly in the arid West, the ground water in an ephemeral or intermittent drainage adds to the soil moisture in the immediate vicinity and/or evaporates or is transpired. The water is lost, but not to “deep ground water.” The proposed rule needs to define “deep ground water.” Throughout portions of the arid West, “deep ground water” means ground water that does not reach a river or stream or its associated

alluvial aquifer and is referred to as nontributary ground water. It would be very unusual in the arid West for the surface flows of ephemeral or intermittent drainages to contribute significant volumes of water to deep ground water.

Other sections of the proposed rule use shallow subsurface hydrologic connections to a jurisdictional water to indicate jurisdiction. The use of ground water to demonstrate a connection to a WUS has challenges in practice, including that it is not easy to clearly demonstrate or refute. If the proposed rule includes ground water as a potential connection to a WUS, it should define “shallow subsurface hydrologic connection” and “deep ground water” and at least acknowledge what typically occurs with ephemeral or intermittent drainages in the arid West. The following definitions are suggested.

Define “shallow ground water” as water within the saturated zone within unconsolidated surficial deposits, including alluvium and colluvium. For a stream, shallow subsurface ground water is subsurface water that is within the alluvium of the channel or within alluvium or colluvium that contributes ground water to the stream channel from the sides of the channel. A “shallow subsurface ground water connection” has continuous flow of shallow ground water from the water or wetland for which jurisdictional status is being determined to a WUS. The depth to ground water must be demonstrated to be shallow enough to support vegetation typically associated with shallow ground water levels in the region, including phreatophytes, throughout the entire distance from the water or wetland at question to the WUS. Demonstration of a shallow ground water connection includes one or both of the following:

- Presence of healthy riparian and/or wetland vegetation typically associated with shallow ground water in the region
- Ground water level measurements from monitoring wells located between the water or wetland at question and the stream channel that demonstrate a shallow subsurface ground water connection.

Define “deep ground water” as water within consolidated subsurface deposits (bedrock) that generally underlies unconsolidated deposits, and that can be a source of water to streams where bedrock crops out at the surface of a stream channel and/or banks. Streams may lose water to deep ground water underlying the channel alluvium by infiltration, although due to the typically low permeability of bedrock (and small fracture/fault widths), the volume is likely quite small.

2.3.3 Significant Nexus and Rapanos

As discussed above, the Corps currently assesses for isolation (following the guidance from the SWANCC opinion) or a significant nexus to a TNW (following the guidance from the *Rapanos* opinions) to determine the jurisdictional status of ephemeral and intermittent drainages (i.e., drainages without relatively permanent flow). Based on the *Rapanos* opinions, when determining the jurisdiction of tributaries, the Corps currently considers a relatively permanent water (RPW) (i.e., a tributary that is not a TNW and that typically flows year-round or has a continuous flow at least “seasonally”) that is tributary to a TNW to be jurisdictional. This presumption is not extended to non-RPWs like ephemeral and intermittent drainages. The non-RPWs are subject to a significant nexus analysis (SNA) to determine if the water and/or wetland in question have more than a speculative or insubstantial effect on the chemical, physical, and/or biological integrity of a TNW.

The current approach recognizes the wide range of types of non-RPWs and the broad continuum of potential effects the non-RPWs could have, or might not have, on the chemical, physical, and/or biological integrity of a TNW and, therefore, the need to evaluate non-RPWs individually based on specific facts associated with each non-RPW. As discussed below, the arid West provides excellent examples of just how varied drainages can be and how this wide variation in drainages translates to a broad continuum of potential connections and effects the drainages may or may not have on the chemical, physical, and/or biological integrity of a WUS. The continuum of potential connections and potential effects on the chemical, physical, and/or biological integrity of a WUS are driven by the magnitude, duration, frequency, predictability, and location in the watershed of flows in ephemeral and intermittent drainages.

Comments from the Science Advisory Board Panel (EPA SAB Panel) for the Review of EPA Water Body Connectivity Report expressed a similar concept of a gradient of connectivity and stated “... that the concept of a connectivity gradient applies to all waters, including tributaries and adjacent waters and wetlands, though most panelists agreed that certain types of water bodies typically fall at the higher end of the connectivity gradient” (EPA SAB Panel 2014). In commenting on significant nexus, the EPA SAB Panel states that “the relative strength of downstream effects should inform the conclusions about the significance of those effects for purposes of interpreting the Clean Water Act” (EPA SAB Panel 2014, Page 6).

Currently, the Corps considers various factors to determine if a drainage or wetland has a significant nexus to a TNW. Consideration of these factors is specific to the water and wetland and include: the strength (or lack thereof) of OHWM and bed and bank indicators, length of breaks in jurisdictional features and channel deformation, sporadic flow, flow loss from infiltration and evapotranspiration, distance to a TNW, impoundments, and potential to affect the chemical, physical, and/or biological integrity of a TNW.

The proposed rule takes a “one size fits all” approach to a very wide range of drainage types (except for the narrow range of drainages that qualify as exempt). Assuming that all tributaries, including ephemeral and intermittent drainages, are jurisdictional by rule is an oversimplification. While this approach may be expedient from the agencies’ perspective, it is not supported by the literature (discussed below in Sections 2.4.1 and 2.4.2), intuitively does not make sense, is contrary to the *Rapanos* opinions, and does not provide the regulated community an opportunity to demonstrate that an ephemeral or intermittent drainage lacks a significant nexus to a jurisdictional water.

The proposed presumption that all waters that meet the definition of tributary are jurisdictional by rule is only accurate over a portion of the spectrum of potential tributary types. The presumption is applicable at the wet end of the spectrum (e.g., rivers and perennial streams) and becomes increasingly less applicable as one moves toward the drier end of the tributary spectrum, particularly with smaller drainages in the arid West. At the drier portion of the tributary spectrum, the presumption of jurisdictional by rule is no longer accurate and becomes arbitrary.

2.4 Description of Ephemeral and Intermittent Drainages in the Arid West

The following description of ephemeral and intermittent drainages in the arid West is provided to demonstrate the physical, hydrological and ecological differences in these types of drainages in the arid West compared to more moist regions of the U.S. The discussion of current considerations provides context for the how the Corps has considered differences in the arid West in developing guidance for its Section 404 program.

2.4.1 Current Considerations

When considering how ephemeral and intermittent drainages in the arid West differ from drainages in other parts of the U.S., it is important to consider how they are currently addressed

in implementing the CWA. The Corps, through implementation of the Section 404 program, has provided substantial information on ephemeral and intermittent drainages and wetlands in the arid West. The Corps describes “arid West” for its *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* as encompassing a wide variety of landforms and ecosystems, but is differentiated from the surrounding areas by its predominately dry climate and long summer dry season. Annual average precipitation is mostly less than 15 inches and evapotranspiration exceeds precipitation across most of the region. Drainage basins often lack outlets and the water table is often perched. The episodic precipitation patterns often lead to a lack of base flow (unless ground water influences are present) and, as a result, decreased incision of arid West channel forms (Corps 2008).

For the purposes of these comments, the arid West is defined as the arid and semi-arid portions of the western United States that extend from south-central Texas west to southeastern California and north along the east side of the Sierra Nevada and Cascade Ranges to the Canadian Border in eastern Washington. The eastern boundary of this region extends from central North Dakota south through central South Dakota, Nebraska, western Kansas, and Oklahoma to south-central Texas. The arid and semi-arid areas of this region, which incorporates portions of 17 western states, is characterized generally by annual precipitation of less than 10 and 20 inches, respectively (Arid West Water Quality Research Project <http://cdm16658.contentdm.oclc.org/cdm/ref/collection/p267501ccp2/id/1699>). 1

The Corps has observed that ephemeral and intermittent channel forms dominate the arid West (Lichvar and McColley 2008). When considering the jurisdictional status of ephemeral and intermittent drainages and how they fit within the broad spectrum of tributary types, it is important to first consider how ephemeral and intermittent drainages are treated nationally under Section 404 of the CWA. The Corps currently recognizes the differences between an ephemeral stream and an intermittent stream. The Corps defines “ephemeral stream” as having “flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Ground water is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.” The Corps defines “intermittent stream” as having “flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow” (77

Fed. Reg. 10288-10289 (February 21, 2012)). Presently, some intermittent drainages with seasonal flows may be considered a RPW and thus jurisdictional (unlike ephemeral drainages).

Using the Corps' definitions, it is clear that ephemeral and intermittent drainages have different characteristics that can influence how they could potentially affect the chemical, physical, and/or biological integrity of a WUS. These differences can be readily seen by comparing Photos 1 through 8 with Photos 9 and 10 (Appendix A).

The proposed rule does not distinguish between ephemeral and intermittent drainages, which further underscores how the rule considers all tributaries to be the same and inappropriately biases dry intermittent and ephemeral drainages toward jurisdiction as "jurisdictional by rule." These differences are accentuated in the arid West where precipitation is limited and seasonal, and year-to-year ground water levels can vary considerably. It is also clear that the hydrology of ephemeral and intermittent drainages is very different from rivers and perennial streams. The Corps currently recognizes these differences in the Nationwide Permit (NWP) regulations. For example, for NWPs 29 Residential Development, 39 Commercial and Institutional Developments, and 42 Recreational Facilities, the Corps distinguishes between the impact threshold for loss of streambed for perennial streams and ephemeral or intermittent streams. For ephemeral or intermittent streambeds, the district engineer can waive the 300-linear-foot impact threshold. If the Corps believed that the resources of all tributaries were equal, the NWP-specific impact thresholds would not distinguish between perennial streams and ephemeral or intermittent streams.

Again, similar to what was previously described for the approved JD process, the Corps' NWP impact thresholds currently recognize the variability in drainage types and the variability in resources associated with the drainage types. As described below, ephemeral and intermittent drainages can differ significantly from each other physically, hydrologically, and ecologically. Because of this variability, it is important to have a process for determining the jurisdictional status of ephemeral and intermittent drainages that recognizes the variability between these drainage types, how they vary regionally, and how different they are from rivers and perennial streams.

It is also important to note that drainages in the arid West can have a mix of ephemeral and intermittent characteristics, which further add to their variability and the need for a case-by-case

assessment to determine their jurisdictional status. Many intermittent drainages have reaches with shallow ground water levels that seasonally contribute flow to only a reach of the drainage, which can then be separated by a dry ephemeral reach. In the arid West, it is not uncommon to have intermittent drainages with scattered reaches of seasonal or sometimes perennial pools of water and/or wetlands fed by ground water seeps separated by dry ephemeral reaches. As the lengths of dry ephemeral reaches increase between the intermittent reaches, the potential decreases for seasonal flows to connect with a WUS and/or for affecting the chemical, physical, or biological integrity of a WUS, as discussed above for discontinuous features.

2.4.2 *Physical Characteristics*

Several physical characteristics distinguish ephemeral and intermittent drainages in the arid West in addition to the Corps' definitions above. The most obvious visible difference that frequently distinguishes ephemeral drainages in the arid West is the lack of difference in vegetation associated with the drainage compared with the surrounding landscape (Photos 1, 3, 4, and 6, Appendix A). Vegetation in the arid West responds dramatically to moisture. However, because there is rarely reliable moisture associated with ephemeral drainages in the arid West, there are typically no or few differences in species composition or plant density associated with ephemeral drainages. Differences in plant species composition and density in the arid uplands and along ephemeral drainages are typically more a function of differences in geology, soil type, aspect, and elevation rather than the location of vegetation in relation to the ephemeral drainage.

Beds and banks and OHWMs can be difficult to discern, are often discontinuous, and can be almost meaningless (e.g., an OHWM a few inches deep and a bed and banks along a drainage a few feet wide). The Corps manual on delineating the OHWM in the arid West (Lichvar and McColley 2008) notes that in the arid West region of the U.S., waters are variable and include ephemeral/intermittent and perennial channel forms. The most problematic OHWM delineations are associated with the commonly occurring ephemeral/intermittent channel forms that dominate the arid West landscape. Other than the topographic feature of the drainage, there is frequently little to distinguish an ephemeral drainage from the surrounding landscape in the arid West, particularly erosional features.

Intermittent drainages in the arid West have ground water levels that are shallow enough to support vegetation (e.g., phreatophytes) that differs from and/or occurs more densely than the

surrounding landscape (Photos 9 and 10, Appendix A). However, other physical features can be similar to ephemeral drainages because ground water rarely contributes sufficient flow to form an OHWM and/or a bed and banks; therefore, as with ephemeral drainages, these features are still formed by infrequent precipitation events.

The concept of the OHWM determining if a stream is jurisdictional and the lateral limits of that jurisdiction is tied to the OHWM being formed by frequent flow events. This relationship has been determined on streams in the more humid regions of the U.S., but this relationship in the arid West is not supported by observations, studies and the literature. A simple relationship between a morphologic variable and discharge is successful only for streams with definable regular flows or some definable steady state; this is not the case for dryland streams (Graf 1988, p. 104). The OHWM for streams in regions outside of the arid West is associated with a bankfull flow typically considered to have a return interval of 1 to 2 years. In more humid regions of the country, streams will equal or exceed the mean annual flood once every 2.33 years. However, metrics like the mean annual flood and the return interval of bankfull flow have almost no practical or theoretical significance in dryland streams because of the extreme variability of flow in such streams (Graf 1988, p. 103). In arid areas channels may not have any flow for several years. Bankfull flows are difficult to determine in the field in dryland channels that are frequently incised, very broad or braided, or developed on bedrock. Bankfull flow in dry areas is not even the same within a single drainage basin. Extensive data collection show that the range of frequency of bankfull flows in dryland channels is from 1 to 32 years, a breadth too great to inspire confidence in the reliability of the measure (Graf 1988, p. 104).

The difficulty in transferring concepts of channel behavior from humid to dryland areas lies in the underlying assumptions of continuous system operation with well-defined feedback mechanisms, assumptions that are not met in the dryland process (Graf 1988, p. 197). Precipitation and runoff inputs to dryland channels are sporadic, so the difference between high and low flows is greater than in humid streams. These wide fluctuations prevent the development of a linkage between a particular flow magnitude and channel geometry related to bankfull conditions (Graf 1988, p. 296). The order of events of varying magnitudes may be more important in explaining the present observed geomorphic conditions than the exact nature of the flood frequency curve or the statistical properties of flood frequencies (Graf 1988, p. 104).

Clearly, the use of an OHWM (a morphologic variable or geomorphic condition) to determine that an ephemeral or intermittent channel in the arid West is a “tributary” and then making the assumption that the ephemeral or intermittent channel has a significant nexus to a TNW and is therefore jurisdictional, as the rule proposes, is not supported by observation, studies or the literature.

2.4.3 Hydrological Characteristics

The hydrology associated with ephemeral and intermittent drainages was previously described as part of the Corps’ definition of ephemeral and intermittent streams (Section 2.4.1). Hydrology differentiates ephemeral and intermittent drainages from rivers and perennial streams and determines the resources associated with these drainage types. In the arid West, infrequent and inconsistent precipitation events and lack of shallow ground water associated with ephemeral drainages typically do not support wetlands within or adjacent to the drainage.

The connectivity report, and by extension the proposed rule, fails to distinguish between ephemeral drainages and intermittent streams in the arid West where there is a substantial difference between these drainage types and their potential to affect the chemical, physical, or biological integrity of a WUS. Previously submitted comments on the connectivity report (WestLand Resources 2013; SWCA Environmental Consultants 2014a) have pointed out the generalized interpretation of key definitions the connectivity report uses to make broad conclusions about arid West hydrology. In reviewing the connectivity report and comments on the connectivity report (EPA SAB Panel 2014), it is clear that most of the discussion and information focused on “streams” and there was very little consideration given to the dry ephemeral drainages of the arid West. Research done in the arid West and cited by the connectivity report tends to focus on larger, higher-order drainages. The “jurisdictional by rule” presumption for all tributaries in the proposed rule is based on assumptions derived from the connectivity report that are not accurate for the arid West because of the assumption that tributaries of any size behave proportionally and, in a regional or larger context, are similar to large streams based on the data presented for those large streams. For the arid West, the question of jurisdiction under the CWA typically does not focus on larger, higher-order drainages. The issue of questionable jurisdiction resides with the commonly occurring smaller lower-order dry ephemeral and intermittent drainages.

In fact, a review of the literature cited in the connectivity report demonstrates that the few references of research applicable to the arid West suggest a non-linear, highly variable relationship. Only a few of the 1,016 references in the connectivity report include research with applicability to low order headwater streams in the arid West (SWCA 2014b). The studies that occur within or are applicable to the arid West tend to focus on aquifer recharge. The articles cited that are applicable to the arid West do not make any specific attempt to view headwaters in the context of their importance, let alone relative importance, to downstream surface waters. It was striking that the most categorically pertinent literature presented was on topics that do not have much applicability to determining the significance of small streams' downstream connectivity to larger tributaries. Collectively, the number of applicable research to validate a significant connection between all small arid headwaters and navigable or interstate waters is strikingly low. The available data and literature simply does not definitively conclude that streams on the scale we are concerned with exert a strong, let alone measureable influence on downstream tributaries (SWCA 2014b).

In other words, no specific research has been conducted in support of the proposed rule's assumption that ephemeral and intermittent channels in the arid West should be jurisdictional by rule. References such as *Fluvial Processes in Dryland Rivers* (Graf 1988), discussed in Section 2.4.2, were not included and discussed in the connectivity report. Presentation of this information could have provided the basis for the connectivity report to disclose the differences for such systems in the arid West which could have informed the proposed rule and led to a regional approach for addressing ephemeral and intermittent channels in the arid West.

Failing to include such references in the connectivity report is compounded by the SAB ignoring comments on ephemeral headwater streams in the arid West from members of the SAB panel for the Review of the EPA Water Body Connectivity Report. Panel members Dr. Josselyn and Dr. Murphy provided comment that it was scientifically unsupported to claim that all headwater streams, particularly in the arid West, had a significant nexus with downstream waters (individual comments from members of the SAB Panel for the Review of the EPA Water Body Connectivity Report attached to the September 2, 2014 Memorandum from Dr. Amanda D. Rodewald, to Dr. David Allen regarding Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States' under the Clean Water Act").

Dr. Murphy added a statement he believed necessary to inform the SAB of the gradient of variability of ephemeral streams in the arid West. Dr. Murphy noted that this variability occurs in the magnitude, duration, frequency and predictability of flow in ephemeral streams and creates a strong gradient in the effects of headwater ephemeral streams on downstream jurisdictional waters. For this reason, Dr. Murphy commented that inclusion by rule of all ephemeral tributaries, regardless of size or flow duration, is not scientifically justified.

2.4.4 Ecological Resources

Compared with rivers and perennial streams, the ecological resources associated with ephemeral and intermittent drainages are typically less well developed. The ecological resources associated with ephemeral and intermittent drainages can differ substantially due to the differences in hydrology (e.g., compare the ephemeral drainages in Photos 1 through 8 with the intermittent drainages in Photos 9 and 10, Appendix A). The aggregation of all tributaries as “jurisdictional by rule” does not consider the continuum of resources and functions provided, or not provided, by the wide variety of drainage types.

Unlike rivers and perennial streams, and in some instances intermittent drainages, the hydrology associated with ephemeral drainages in the arid West does not support resources along the drainage that substantially differ from the surrounding arid landscape (e.g., there are no aquatic habitats, wetlands, riparian areas, fish, or benthic invertebrates) (Photos 1 through 8, Appendix A). This brings into question if there is any difference between the ecological functions provided by dry ephemeral drainages compared with the surrounding arid upland landscape in which they occur. If there are no substantial differences between the dry ephemeral drainages and the surrounding uplands, then how do the ephemeral drainages provide any more of a significant nexus than the surrounding uplands when evaluating potential effects on the chemical, physical, or biological integrity of a WUS?

The seasonally shallow ground water levels associated with intermittent drainages differentiates them from ephemeral drainages. Ground water levels that seasonally contribute flow to intermittent drainages can support resources that are different from the surrounding arid landscape including wetlands, riparian areas, denser and/or different vegetation than the surrounding landscape that can provide cover for wildlife and seasonal habitat for amphibians, reptiles, and invertebrates; and a seasonal source of water for wildlife within an arid landscape.

As noted above, these resources may occur continuously throughout the drainage, or as a mosaic in response to scattered ground water seeps separated by dry ephemeral channels.

2.5 Proposed Solutions

2.5.1 Preferred Solution

Including ephemeral and intermittent drainages in the list of “other waters” in the proposed rule as presented below accounts for the differences in ephemeral and intermittent drainages and rivers and perennial drainages, fits within the structure of the proposed rule, and is consistent with the *Rapanos* opinions:

On a case-specific basis, other waters, including wetlands, ephemeral streams, and intermittent streams that are not relatively permanent waters, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, that are so inseparably bound up so as to function as a single hydrologic unit with located in the same region, have a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section. This proposed modification provides the agencies a process to determine jurisdiction, and provides the regulated public an opportunity to provide information to the agencies to consider regarding the jurisdictional status of an ephemeral or intermittent drainage. This approach would allow the agencies and regulated public to use the current process for determining a significant nexus on a case-by-case basis as is currently done so this approach would not require substantial new policies and procedures.

2.5.2 Alternative Solution

If the agencies are uncomfortable with the above-recommended modification, then the following regional modification is proposed:

Include ephemeral and intermittent drainages occurring within the Arid and Semi-arid West Region in the list of “other waters” that are only jurisdictional provided they have a significant nexus to a water identified in paragraphs (a)(1) through (3).

2.5.3 Discussion

The information in these and other comments submitted on the proposed rule and connectivity report support the substantial differences between intermittent and ephemeral drainages in the arid West relative to wetter portions of the U.S. and provides a reasonable basis

for the proposed modification. The proposed rule requests comments on how the agencies should categorize the remaining “other waters” using ecoregions and hydrologic-landscape regions (Page 22216). The above-proposed modification fits well with the agencies’ request and uses an ecoregion already defined by the Corps for use in implementing Section 404 of the CWA. In commenting on the definition of “tributary,” the EPA SAB Panel noted “... the need to allow for variation among regions (e.g., the arid west)” (EPA SAP Panel 2014).

The proposed rule should define the characteristics that distinguish non-jurisdictional areas and features (e.g., uplands, gullies, rills and vegetated swales) from jurisdictional areas and features. This guidance is particularly important in the arid West where the differences between an ephemeral drainage and gullies and rills can be minor.

The inclusion of ephemeral and intermittent drainages in the “other waters” category is not compatible with the proposed “similarly situated” approach to combining waters over a large single-entry watershed. As discussed below in the section Similarly Situated, there is simply too much variability within waters in the arid West, particularly ephemeral and intermittent drainages, to make such a sweeping generalization on which to base the jurisdictional status of the waters.

The proposed rule should also retain the concept of isolation and retain the current policies and practices used by the Corps to consider isolation when performing a JD.

3.0 DITCHES AND CANALS

Irrigation ditches and canals are common features throughout the western U.S. and their jurisdictional status is a concern to farmers, ranchers, irrigation companies, and water providers who must continually maintain, repair, and upgrade thousands of miles of ditches and canals throughout the western U.S. The proposed rule includes canals and ditches, not otherwise exempted, in the definition of “tributary.” The proposed rule would exempt “[d]itches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow” and “[d]itches that do not contribute flow either directly or through another water to a TNW, interstate water, the territorial seas or an impoundment of a jurisdictional water.”

It is unclear why ditches and canals that do not meet these exemptions would be considered jurisdictional given that other excluded waters and features include “artificially irrigated areas

that would revert to upland should application of irrigation water to that area cease” and “artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.” Irrigation ditches and canals are also artificially irrigated, would likely be dry or nearly always dry without the efforts by humans to supply a source of water to them, and were created by excavation for agricultural purposes. If they were not supplied water during their seasonal use, ditches and canals would not continue to have a bed, banks, and OHWM. Large ditches and canals that are lined with concrete or other materials or enclosed to prevent leakage do not have an OHWM throughout their length.

Similarly, canals used to convey municipal water supplies are common features throughout the western U.S. and water providers must continually maintain, repair, and upgrade thousands of miles of ditches and canals. The proposed rule does not specifically discuss or exempt canals used to convey municipal water supplies. However, similar to irrigation canals and ditches, municipal canals are artificial structures and parts of highly managed systems.

3.1 Current Situation

In the preamble to the Regulatory Programs of the Corps of Engineers; Final Rule it is stated that for clarification it should be noted that we generally do not consider the following waters to be Waters of the United States: non-tidal drainage and irrigation ditches excavated on dry land (33 CFR Section 328.3). Discharges not requiring permits include the construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of (but not construction) of drainage ditches (33 CFR Section 323.4 (3)).

3.2 Problems with the Proposed Rule

Similar to the proposed rule’s use of ephemeral and intermittent without distinguishing between the two terms, it is not clear if the proposed rule is using the terms “canal” and “ditch” interchangeably, or if exemption applies only to ditches since the exemption language uses the term “ditch” but not “canal.” For the purposes of these comments, it is assumed that the proposed rule uses “canal” and “ditch” interchangeably. It is also not clear if the proposed rule is distinguishing between drainage ditches (drains) and ditches used to deliver water. The way the proposed exemptions are written, they are potentially more applicable to drainage ditches. This may explain why the exemptions do not include the term “canal.” It is further reinforced that the

proposed rule may focus on drains and not irrigation canals by comments from the EPA SAB Panel on ditches that also focus on drains (EPA SAB Panel 2014). It is also unclear how the proposed rule would define or consider an otherwise dry natural tributary or gully used seasonally to convey water for irrigation (Appendix A, Photo 11).

Irrigation canals and ditches are artificial structures and parts of highly managed systems used to convey water for multiple purposes. Most canals and ditches convey water seasonally, many are lined with concrete or riprap, and vegetation along canals and ditches is frequently controlled (e.g., mowing and burning). As such, most canals and ditches are very different from natural tributaries and this difference should be recognized when determining jurisdiction.

In practice, the proposed first exemption would not exempt most canals and ditches because very few ditches or canals meet all three criteria:

- Excavated wholly in uplands,
- Drain only uplands, and
- Have less than perennial flow.

Most irrigation canals begin with a diversion structure in a river or stream, and as such begin in lands that are not uplands, so the potential that they cross only uplands and that water enters the ditch or canal only over uplands via sheet flow to the ditch or canal is remote. It is also very unlikely that a ditch or canal would not contribute flow either directly or through another water to a WUS. Water flows downgradient, either as surface flow or ground water flow, and nearly always flows into a drainage, lake, or reservoir. Is the ditch or canal exempt only if that water is totally lost in route to application for irrigation, deep ground water, evaporation, or transpiration?

It is not clear if any portion of a ditch or canal that was excavated wholly in uplands or drains only uplands is not jurisdictional. Canals and ditches can be many miles long. It is unclear how the proposed rule would determine jurisdiction for a 20-mile-long canal that at mile 19 was constructed in a non-upland area, intercepts flow from a non-upland area, or flows perennially. Is the entire 20-mile canal jurisdictional or just the last mile? If the first 19 miles of the canal meet the exemption criteria and are up-gradient of the last mile determined to be jurisdictional, why would the entire canal be jurisdictional?

3.2.1 Unintended Consequences

No unintended consequences known, because the intent of the proposed rule regarding ditches and canals is not clear as discussed above.

3.3 Proposed Solutions

3.3.1 Preferred Solution

The proposed rule needs to be clear on canals and ditches used to convey irrigation water and/or water for municipal supply. If the agencies want to exempt most artificial canals and ditches, they should consider the function (water supply for various purposes) of these features rather than the characteristics. The following simple modifications to the proposed rule would exempt most artificial ditches and canals, would meet the language in the proposed rule that states that “the rule does not affect longstanding exemptions in the CWA for farming, silviculture, ranching and other activities,” yet would afford protection to our waters where needed.

Do not define artificial ditches and canals as tributaries, and exclude from “waters of the United States” the entirety of all ditches, canals or similar such man-made surface water transport facilities designed and used for agricultural, municipal, domestic or industrial purposes; provided, however, that (i) such structures are not built within a traditional navigable water or jurisdictional tributary thereof and (ii) any point source discharge of pollutants into such structures shall be required to obtain a section 402 discharge permit if water carried in or transported through such structure is determined to reach waters identified in paragraphs (1)-(5).

3.3.2 Alternative Solution

If the agencies are uncomfortable with the above-recommended modification, then the following modification is proposed:

Change the “and” in the first exemption in the proposed rule to “and/or,” “upland” should be defined, and it should be made clear that reaches of canals and ditches can be determined to be nonjurisdictional if they meet the exemptions (i.e., reaches of canals that meet exemption criteria and are up-gradient of a jurisdictional reach are nonjurisdictional).

3.3.3 Discussion

The proposed solutions more closely reflect the current situation presented above that exclude most artificial ditches and canals from jurisdiction.

4.0 NEIGHBORING

The proposed rule defines “neighboring” as “including waters located within the riparian area or floodplain of a water identified in paragraphs (a)(1) through (5), or waters with a confined surface or shallow subsurface hydrologic connection to such a jurisdictional water. The term riparian area means an area bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area. The term “floodplain” means “an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows.

4.1 Current Situation

Current policy and practices does not include the presence of wetlands or waters in floodplains or riparian areas associated with a TNW to automatically be neighboring or adjacent and thus jurisdictional.

4.2 Problems with the Proposed Rule

In order to determine if a water or wetland is “neighboring” under the proposed rule, one must be able to accurately define the limits of the “riparian area” and the “floodplain.” This will be challenging given the definitions provided in the proposed rule and that the proposed rule makes allowances for “neighboring” waters to also occur outside of the riparian area or floodplain.

The proposed rule does not define “present climatic conditions” and does not describe how a floodplain would be delineated. For example, in September of 2013 (assumed to be current climatic conditions) extensive severe flooding occurred along many rivers and streams along the Front Range of Colorado. Does that flood event define the floodplain for determining “neighboring”? Floodplains are typically defined by the frequency a flood is predicted to inundate up to a specific elevation (e.g., a 100-year floodplain). For many areas in the U.S., there is reliable information on the extent of floodplains (at least along major drainages). However, the proposed rule does not reference or recommend use of existing floodplain mapping

and flood hazard products produced by the Federal Emergency Management Agency. Since the proposed rule does not define moderate to high water flows, the flow levels are open to interpretation. Hydrologists typically define such flows by their predicted recurrence interval (e.g., a 10-year flood event). It is also noted that in many arid regions, geomorphologic floodplains do not exist along braided channels because extreme variability of discharges prevents the repetitive over-bank flows needed for floodplain construction (Graf 1988, p. 297). As currently proposed, it would be difficult for professionals, let alone the regulated public, to accurately delineate the floodplain to determine if a water or wetland is neighboring, and it is unlikely that professionals and agency personnel will be able to consistently apply and independently replicate floodplain delineations following the proposed definition.

Similarly, the term “riparian” would benefit from additional definition. The EPA SAB Panel also noted “...that the definition of riparian area in the proposed rule is problematic because it is based on hydrologic flows and not the host of other functions that riparian areas provide” (EPA SAB Panel 2014). Most riparian definitions incorporate soil, biotic, and hydrologic criteria that allow practitioners to determine the boundaries of the riparian area in a consistent manner (similar to how the Corps and EPA determine wetland boundaries). For example, the U.S. Forest Service (USFS) uses the following: “the edge of the riparian area corresponds to: 1) *substrate attributes* – the portion of the valley bottom influenced by fluvial processes under the current climatic regime, 2) *biotic attributes* – riparian vegetation characteristic of the region, and 3) *hydrologic attributes* – the area of the valley bottom flooded at the stage (water surface elevation) of the 100-year recurrence interval flow” (USFS 2014).

The proposed rule states “[I]t is the agencies’ intent that the definitions in this proposed rule provide as much clarity and regulatory certainty as possible.” Use of the terms “floodplain” and “riparian” in the proposed rule do not provide regulatory certainty and are not clarifying. Under the proposed rule, waters and wetlands occurring in a floodplain or riparian area of (a)(1) through (5) waters are assumed to have a confined surface or shallow subsurface connection to the jurisdictional water. This presumption (as noted by the underscored “or” in the definition above) may not always be true and should be a rebuttable presumption.

The proposed rule allows for neighboring waters and wetlands to occur outside of floodplains and riparian areas. Waters and wetlands determined to have a shallow subsurface hydrologic

connection or confined surface hydrologic connection to an (a)(1) through (a)(5) water would also be a WUS by rule as an adjacent water falling within the definition of “neighboring.” So it is the hydrologic connection of a water or wetland to an (a)(1) through (a)(5) water that is important to determining that the wetland or water is jurisdictional and not if the water or wetland is located in a floodplain or riparian area.

4.2.1 Unintended Consequences

Including the terms “riparian” and “floodplain” in the proposed rule will add unnecessary confusion to the rule. Regardless of whether a water or wetland occurs within or outside a riparian area or floodplain, it should not be jurisdictional unless it has a hydrologic connection to an (a)(1) through (a)(5) water. The terms do not add clarity to the proposed rule and are not needed. Additionally, the regulated public should be provided the opportunity to demonstrate that there is not a hydrologic connection to an (a)(1) through (a)(5) water.

The references to *riparian areas* and *floodplains* in the criteria for “neighboring” will likely have the additional unintended consequence of requiring fact-specific determinations to discern whether a given water feature is within one of those areas and thus jurisdictional by rule. The proposed rule is intended to reduce case-specific determinations and use of the terms riparian and floodplain, as defined, will likely needlessly increase case-specific determinations.

4.3 Proposed Solutions

4.3.1 Preferred Solution

The term neighboring, for purposes of the term “adjacent” in this section, includes waters located within the riparian area or floodplain of a water identified in paragraphs (s)(1) through (5) of this section, or waters with a shallow subsurface hydrologic connection or confined surface hydrologic connection to such a jurisdictional water identified in paragraphs (s)(1) through (5). The term riparian area means an area defined as 1) the portion of the valley bottom influenced by fluvial processes under the current climatic regime, 2) riparian vegetation characteristic of the region, and 3) the area of the valley bottom flooded at the stage (water surface elevation) of the 100-year recurrence interval flow. bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area. Riparian

areas are transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems.

4.3.2 *Alternative Solution*

If the agencies are uncomfortable with the above-recommended modification, then the following modification is proposed:

Adjacent waters and wetlands are those that have a shallow subsurface hydrologic connection or confined surface hydrologic connection to an (a)(1) through (a)(5) water. Adjacent waters and wetlands frequently occur in riparian areas, and such areas may warrant close scrutiny in the identification of such connection. “Riparian areas” are defined as 1) the portion of the valley bottom influenced by fluvial processes under the current climatic regime, 2) riparian vegetation characteristic of the region, and 3) the area of the valley bottom flooded at the stage (water surface elevation) of the 100-year recurrence interval flow.

4.3.3 *Discussion*

The proposed solutions allow the agencies and project proponent to determine adjacency based on site-specific information instead of assuming jurisdiction because of location in a riparian area or poorly defined floodplain.

5.0 SIMILARLY SITUATED

Under the proposed rule, the agencies would assess the combined effects of similarly situated “other waters” in the region on the chemical, physical, or biological integrity of (a)(1) through (a)(3) waters in conducting a SNA. The proposed rule presents factors that would be used by the agencies in determining when “other waters” should be considered either individually or as a single landscape unit for purposes of a SNA. Under the proposed rule, similarly situated waters may be identified as sufficiently close together when they are within a contiguous area of land with relatively homogeneous soils, vegetation, and landform. The agencies have chosen to use the single point of entry watershed as the appropriate scale for “region” when considering “similarly situated other waters.”

5.1 Current Situation

Current practices involving similarly situated waters and wetlands are currently considered in determining jurisdiction when such similarly situated waters and wetlands form a complex and they so intermixed that they clearly function as a unit.

5.2 Problems with the Proposed Rule

As previously discussed, there is substantial variability in the types of waters within a given watershed in the arid West and as the proposed rule acknowledges, “[I]n the arid West, the agencies recognize there may be situations where the single point of entry watershed is very large” Aggregating highly variable waters over a very large region and using the combined potential effects of these waters on the physical, chemical, or biological integrity of a TNW to determine that all of these “similarly situated waters,” individually or collectively, are jurisdictional is not an approach supported by the facts. There is simply too much variability within waters in the arid West, particularly ephemeral and intermittent drainages, as discussed above, to make such a sweeping generalization on which to base the jurisdictional status of the waters.

In the arid West, there can be substantial distance between “other waters” and a TNW and substantial time between precipitation and flow events. Within the watershed encompassing that distance, there can be numerous “other waters” with different relationships to the TNW including hydrology, landform, soils, vegetation, and distance to the TNW. It is not appropriate to assume that these “other waters” are similarly situated because it cannot be assumed that they perform similar functions and are located sufficiently close to a TNW to be evaluated as a single landscape unit. As an example from the Corps field guide to the identification of the OHWM in the arid West, “[E]xtreme weather events (e.g., summer thunderstorms) may produce locally intense precipitation over an entire watershed or perhaps just a portion of an entire watershed producing short-duration, potentially high-energy (depending on watershed size, relief, and soil conditions) flow in these areas and a complete lack of flow in others” (Lichvar and McColley 2008). These highly localized precipitation events are common in the arid West. When such events occur, the “other waters” in the entire watershed are not acting in a combined similar manner on a TNW (i.e., some drainages are conveying runoff that may reach a TNW, some drainages convey water for a short distance that does not reach a TNW, and other drainages remain dry).

Another issue with the proposed rule’s approach of assessing the combined effects of similarly situated “other waters” in the region is that the approach is performing a cumulative effects analysis on the entire watershed without knowing what the action or actions are that are to be considered when determining the combined effects. Effects and connections differ in their intensity, duration, frequency, magnitude, predictability, location in the watershed, and significance on the physical, chemical, or biological integrity of a TNW. The importance of considering the difference in effects is evident in comments from the EPA SAB Panel for the Review of EPA Water Body Connectivity Report which state: “[T]he descriptions in the preamble of the proposed rule of evidence of physical, hydrological, and biological connectivity would be more scientifically rigorous if they focused on the magnitude or impact of the connection instead of the presence/absence (binary) perspective” (EPA SAB Panel 2014).

As proposed, the rule would assume that if all of the combined similarly situated “other waters” could affect the physical, chemical, or biological integrity of a TNW, then individually, each water comprising the similarly situated waters affects the physical, chemical, or biological integrity of a TNW. This assumption is not logical and does not consider scale. All does not equal one. This is particularly true when considering the proposed large single-entry watershed size and the variability of “other waters” in the arid West. What proportion of other waters in the single-entry watershed would need to be adversely affected to create a significant impact on a TNW? What is the measure of significance when aggregating other waters and their effects on the physical, chemical, or biological integrity of a TNW? The proposed rule needs to clearly state these important criteria.

It makes sense for the agencies to evaluate effects on waters and wetlands on a watershed basis and to consider cumulative effects; however, the appropriate time to perform the assessment of these effects is the permitting process, not when determining the jurisdictional status of “other waters.” Otherwise, one has the problem of assuming that all of the waters will be impacted at some point in time, rather than evaluating the reasonably foreseeable future actions as part of the permitting or NEPA process. As part of the permitting process, the agencies have site-specific information on the water and/or wetland to be affected, the type of action and its potential effects, and knowledge of past, present, and future actions in the watershed to determine cumulative effects in the watershed. The proposed rule puts the “cart before the horse” by performing the effects analysis (combined effects of similarly situated

“other waters” on (a)(1) through (a)(3) waters) to determine jurisdiction before determining the effects of a specific proposed action as part of the permit application process.

The effect of the similarly situated component of the proposed rule is to inappropriately aggregate “other waters” and determine that an entire group of “other waters” in a watershed is jurisdictional, and by extension that any individual water of the aggregated “other waters” individually affects the physical, chemical, or biological integrity of a TNW.

5.2.1 Unintended Consequences

The agencies need to consider the unintended consequences of the proposed rule. If implemented as proposed, the determination of the jurisdictional status of an “other water” will potentially take on great regional significance as numerous concerned parties in a watershed will closely monitor the JDs of “other waters” that could result in an entire class of wetlands or waters being determined jurisdictional. The JD process, which in the past has typically been between a permit applicant and the Corps, will become a watershed-wide process with multiple parties entering into the jurisdictional debate in an effort to protect their interests. This will not simplify or streamline the JD process and is likely to increase delays, conflicts, confusion, and challenges. This is particularly likely to happen in the arid West due to the large size of the single-entry point watersheds, the variability of waters within the watersheds, and numerous dry drainages.

5.3 Proposed Solutions

5.3.1 Preferred Solution

Define “similarly-situated as: wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., “sufficiently close together”) that they clearly function as a unit may be considered together when determining if there is a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section .

5.3.2 Alternative Solution

If the agencies are uncomfortable with the above-recommended modification, then the following regional modification is proposed:

When determining the jurisdictional status of “other waters” in the arid and semi-arid West, eliminate the single-entry watershed as the appropriate scale for consideration of

“similarly situated” when performing the SNA. Other wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., “sufficiently close together”) that they clearly function as a unit may be considered together for the SNA.

5.3.3 Discussion

To determine the jurisdictional status of “other waters,” it is not necessary to assess the combined effects of similarly situated waters over an entire watershed. As discussed above, this is particularly problematic in the arid West. When determining the jurisdictional status of a specific water or wetland, it makes sense to consider other wetlands and waters that are neighboring, adjacent, or so intermixed (i.e., “sufficiently close together”) that they clearly function as a unit for the SNA. The agencies can draw upon existing guidance on determining functional units and appropriate functional unit scale when assessing wetland functions (Berglund and McEldowny 2008; Johnson et al. 2013; and Smith and Ammann 1995). The proposed rule should focus on how to determine the jurisdictional status of an individual “other water” and not try to determine the jurisdictional status of all “similarly situated” waters or wetlands in the region. As explained above, assuming that all “similarly situated” waters or wetlands in a region are jurisdictional, or nonjurisdictional, is an oversimplification. While the approach stated in the proposed rule may be expedient from the agencies’ perspective, it is not supported by the connectivity report and other literature, is arbitrary, and is likely to have unintended consequences that will have the opposite effect of simplifying or expediting the JD process.

6.0 REFERENCES

- Berglund, J. and R. McEldowny. 2008. Montana Department of Transportation, Montana Wetland Assessment Method.
- Dougherty, S.T., S. Russo, and D. Freeman. 2010. A Successful Strategy for Environmental Permitting of an Aggressively Scheduled Major Water Project. Proceedings of the American Society of Civil Engineers, Pipeline 2010 Conference, Keystone, CO.
- EPA Science Advisory Board Panel for the Review of the EPA Water Body Connectivity Report (EPA SAB Panel). 2014. Memorandum from Dr. Amanda D. Rodewald to Dr. David Allen, Re: Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled “Definition of ‘Waters of the United States’ Under the Clean Water Act.” September 2.
- Graf, William L. 1988. Fluvial Processes in Dryland Rivers. The Blackburn Press, Caldwell, New Jersey. 346 p.

- Johnson, J.B., M. Beardsley, and J. Doran. 2013. Functional Assessment of Colorado Wetlands (FACWet) Method – Version 3.0. Available at: <http://rydberg.biology.colostate.edu/FACWet/>
- Lichvar, R.W. and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. A Delineation Manual. ERDC/CRREL TR-08-12.
- Smith, R.D. and A. Ammann. 1995. An approach for assessing wetland functions using hydrogeomorphic classification, reference wetlands and functional indices. Technical Report WRP-DE-9, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.
- SWCA Environmental Consultants. 2014a. *Technical Response to EPA’s Draft Report- Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (published September 2013)*. Submitted April 10.
- SWCA Environmental Consultants. 2014b. Comment on the “Draft EPA Report Connectivity of Streams and Wetlands to Downstream Waters: a Review and Synthesis of the Scientific Evidence.” Submitted November 14.
- U.S. Army Corps of Engineers (Corps). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- USDA Forest Service (USFS), National Riparian Technical Team. 2014. National Riparian Vegetation Monitoring Core Protocol: Conterminous U.S. Draft.
- WestLand Resources. 2013. *Technical Review of EPA 2013 Draft Science Report Connectivity of Streams and Wetlands to Downstream Waters Docket: EPA-HQ-2013-0582*. Submitted: November 6.

APPENDIX A

PHOTO LOG

APPENDIX A: EXAMPLES OF COMMON EPHEMERAL AND INTERMITTENT DRAINAGES IN THE ARID WEST



Photo 1 - Typical dry ephemeral drainage or wash in canyon country of the arid West.
Note that upland vegetation extends up to and through the wash.



Photo 2 - Typical dry ephemeral drainage or wash of the arid West.



Photo 3 - Typical dry ephemeral drainage or wash in canyon country of the arid West. Note that upland vegetation (Juniper) is growing in the drainage.



Photo 4 - Typical dry ephemeral drainage or wash of the arid West. Note that areas of upland vegetation extend up to and through the wash, but the wash would not be considered a vegetated swale.



Photo 5 - Typical dry ephemeral drainage or wash of the arid West in sagebrush country. Note that sagebrush and other upland vegetation extend up to and through the wash, but the wash would not be considered a vegetated swale.



Photo 6 - Many ephemeral drainages in the arid West, or reaches of ephemeral drainages, occur on bedrock.



Photo 7 - Many ephemeral drainages in the arid West are deeply incised with little opportunity to support riparian vegetation.



Photo 8 - Some ephemeral drainages in the arid West almost completely lack vegetation.



Photo 9 - Typical intermittent drainage in the arid West. Note the presence of wetland and riparian vegetation and phreatophytes (greasewood, cottonwoods, and salt cedar).



Photo 10 - Dry intermittent drainage with riparian vegetation.



Photo 11 - Ephemeral drainage fed by irrigation runoff. Note contrast to surrounding uplands.

Attachment 4

**PROPOSED “DEFINITION OF ‘WATERS OF THE UNITED STATES’
UNDER THE CLEAN WATER ACT” 40 CFR 230.3¹**

(s) For purposes of all sections of the Clean Water Act, 33 U.S.C. 1251 *et seq.* and its implementing regulations, subject to the exclusions in paragraph (t) of this section, the term “waters of the United States” means:

(1) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters, including interstate wetlands;

(3) The territorial seas;

(4) All impoundments of waters identified in paragraphs (s)(1) through (3) and (5) of this section;

(5) All tributaries of waters identified in paragraphs (s)(1) through (4) of this section;

(6) All ~~waters, including~~ wetlands, adjacent to a water identified in paragraphs (s)(1) through (5) of this section; and

(7) On a case-specific basis, other waters, including wetlands, ephemeral streams, and intermittent streams that are not relatively permanent waters, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, ~~located in the same region,~~ have a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section.²

(t) The following are not “waters of the United States” notwithstanding whether they meet the terms of paragraphs (s)(1) through (7) of this section—

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act.

(2) Water treatment systems, including treatment system ponds and lagoons, designed to assist with meeting the requirements of the Safe Drinking Water Act;

(3) Recharge or reuse pits, ponds, lagoons or similar such man-made features designed and used in conjunction with water supply projects;

(4) Ditches, canals or similar such man-made surface water transport facilities designed and used for agricultural, municipal, domestic or industrial purposes; provided, however, that (i) such structures are not built within a traditional navigable water or jurisdictional tributary thereof and (ii) any point source discharge of pollutants into such structures shall be required to obtain a section 402 discharge permit if water carried in or transported through such structure is determined to reach waters identified in paragraphs (1)-(5);³

(5) Stormwater treatment systems, including stormwater retention/detention ponds, designed to meet the requirements of the Clean Water Act;

~~(4)~~(6) To the extent not encompassed within subparagraph (5) above, structures constructed in response to emergency conditions created by natural disasters as so declared at a state or federal level.

¹ ~~Red Strike Through are Deletions~~
Blue Underlined are Additions

² Alternatively, include ephemeral and intermittent streams occurring within the Arid West Region in the list of “other waters” that are only jurisdictional provided they have a significant nexus to a water identified in paragraphs (s)(1) through (3). Add “Arid West Region”, “Ephemeral Stream”, and “Intermittent Stream” to definitions. The supporting information for this regionally-based change is presented in the attached report from ERO Resources Corp.

³ Alternatively, change the “and” in the first exemption to “and/or,” and it should be made clear that reaches of canals and ditches can be determined to be nonjurisdictional if they meet the exemptions (i.e., reaches of canals that meet exemption criteria and are up-gradient of a jurisdictional reach are nonjurisdictional).

including fires and floods, where such structures are necessary for the protection of the environment or public health and safety;

~~(2)(7)~~ Prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act the final authority regarding Clean Water Act jurisdiction remains with EPA.

~~(3) Ditches that are excavated wholly in uplands, drain only uplands, and have less than perennial flow;~~

~~(4) Ditches that do not contribute flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section;~~

~~(5)(8)~~ The following features:

(i) Artificially irrigated areas that would revert to upland should application of irrigation water to that area cease;

(ii) Artificial lakes or ponds created by excavating and/or diking dry land and used ~~exclusively~~ for such purposes as stock watering, irrigation, settling basins, or rice growing;

(iii) Artificial reflecting pools or swimming pools created by excavating and/or diking dry land;

(iv) ~~Small~~ Ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons;

(v) Water-filled depressions created incidental to construction or other earth moving activity;

(vi) Groundwater, including groundwater drained through subsurface drainage systems; and

(vii) Gullies and rills and non-wetland swales. A gully is an erosional feature cut by concentrated runoff but through which water commonly flows only during and immediately after heavy rains or during the melting of snow. A gully is sufficiently deep that it would not be obliterated by normal tillage operations and can range from 1- 2 feet to as much as 75- 100 feet in depth. A rill is an erosional feature only several inches deep that would be smoothed by ordinary farm tillage. A non-wetland swale is a long narrow slight depression that carries flows only during and immediately after heavy rains or during the melting of snow and does not meet the definition of a wetland.⁴

(u) Definitions—

(1) *Adjacent*. The term *adjacent* means bordering, contiguous or neighboring. Waters, including wetlands, separated from other waters of the United States by man-made dikes or barriers, natural river berms, beach dunes and the like are "adjacent waters."

(2) *Neighboring*. The term *neighboring*, for purposes of the term "adjacent" in this section, includes waters ~~located within the riparian area or floodplain of a water identified in paragraphs (s)(1) through (5) of this section, or waters~~ with a shallow subsurface hydrologic connection or confined surface hydrologic connection to ~~such a jurisdictional~~ water identified in paragraphs (s)(1) through (5).

(3) *Riparian area*. The term *riparian area* means an area defined as 1) the portion of the valley bottom influenced by fluvial processes under the current climatic regime, 2) riparian vegetation characteristic of the region, and 3) the area of the valley bottom flooded at the stage (water surface elevation) of the 100-year recurrence interval flow. ~~bordering a water where surface or subsurface hydrology directly influence the ecological processes and plant and animal community structure in that area.~~ Riparian areas are transitional areas between aquatic and terrestrial ecosystems that influence the exchange of energy and materials between those ecosystems.

⁴ Adapted from: G.A. Horton. 2002. Dictionary of Water Words. A Compilation of Technical Water, Water Quality, Environmental, Climatological, Natural Resource, and Water-Related Terms. Great Basin Research.

~~(4) — Floodplain. The term floodplain means an area bordering inland or coastal waters that was formed by sediment deposition from such water under present climatic conditions and is inundated during periods of moderate to high water flows.~~

~~(5)~~(4) Tributary. The term *tributary* means a relatively permanent water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (s)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, ~~for any length,~~ there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified in a relatively continuous reach of the stream upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes relatively permanent waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (t)(3) or (4) of this section.

~~(6)~~(5) Wetlands. The term *wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

(6) Significant nexus. The term *significant nexus* means that a water, including wetlands, either alone or in combination with other similarly situated waters in the region (i.e., the watershed that drains to the nearest water identified in paragraphs (s)(1) through (3) of this section), significantly affects the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section. For an effect to be significant, it must be more than speculative or insubstantial.

~~Other waters, including wetlands, are similarly situated when they perform similar functions and are located sufficiently close together or sufficiently close to a "water of the United States" so that they can be evaluated as a single landscape unit with regard to their effect on the chemical, physical, or biological integrity of a water identified in paragraphs (s)(1) through (3) of this section.~~

(7) Relatively Permanent Water. Perennial rivers and streams and intermittent streams with seasonal flow (i.e., with a predictable flow during wet seasons in most years).

(8) Intermittent Stream. A stream that flows during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

(9) Ephemeral Stream. A stream that flows only during, and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Ground water is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

(10) Stream Bed (bed). The substrate of the stream channel between the ordinary high water marks.

(11) Stream Bank (bank). The slope of land adjoining a stream.

(12) Shallow ground water connection. Water within the saturated zone within unconsolidated surficial deposits, including alluvium and colluvium. For a stream, shallow subsurface ground water is subsurface water that is within the alluvium of the channel or within alluvium or colluvium that contributes ground water to the stream channel from the sides of the channel. A "shallow subsurface ground water connection" has continuous flow of shallow ground water from the water or wetland for

which jurisdictional status is being determined to a WUS. The depth to ground water must be demonstrated to be shallow enough to support vegetation typically associated with shallow ground water levels in the region, including phreatophytes, throughout the entire distance from the water or wetland at question to the WUS.

(13) *Similarly-situated.* Wetlands and waters that are adjacent, bordering, contiguous, neighboring, or so intermixed (i.e., "sufficiently close together") that they clearly function as a unit may be considered together when determining if there is a significant nexus to a water identified in paragraphs (s)(1) through (3) of this section-

~~(14)~~ *Arid West.* For the purposes of these comments the arid West is defined as the arid and semi-arid portions of the western United States that extend from south-central Texas west to southeastern California and north along the east side of the Sierra Nevada and Cascade Ranges to the Canadian Border in eastern Washington. The eastern boundary of this region extends from central North Dakota south through central South Dakota, Nebraska, western Kansas, and Oklahoma to south-central Texas. The arid and semi-arid areas of this region, which incorporates portions of 17 western states, is characterized generally by annual precipitation of less than 10 and 20 inches, respectively (Arid West Water Quality Research Project <http://cdm16658.contentdm.oclc.org/cdm/ref/collection/p267501ccp2/id/1699>[cdm16658.contentdm.oclc.org]).

The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency propose to make identical changes as described in the preamble to the definition of "waters of the United States" at 33 CFR 328.3 and 40 CFR 110.1, 112.2, 116.3, 117.1, 122.2, 232.2, 300.5, part 300 App. E, 302.3 and 401.11. Read the full proposed rule at <http://www.gpo.gov/fdsys/pkg/FR-2014-04-21/pdf/2014-07142.pdf>.