OVERVIEW OF THE PROPOSED 'WOTUS' RULE

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OVERVIEW

1. CONNECTIVITY OF WATERS

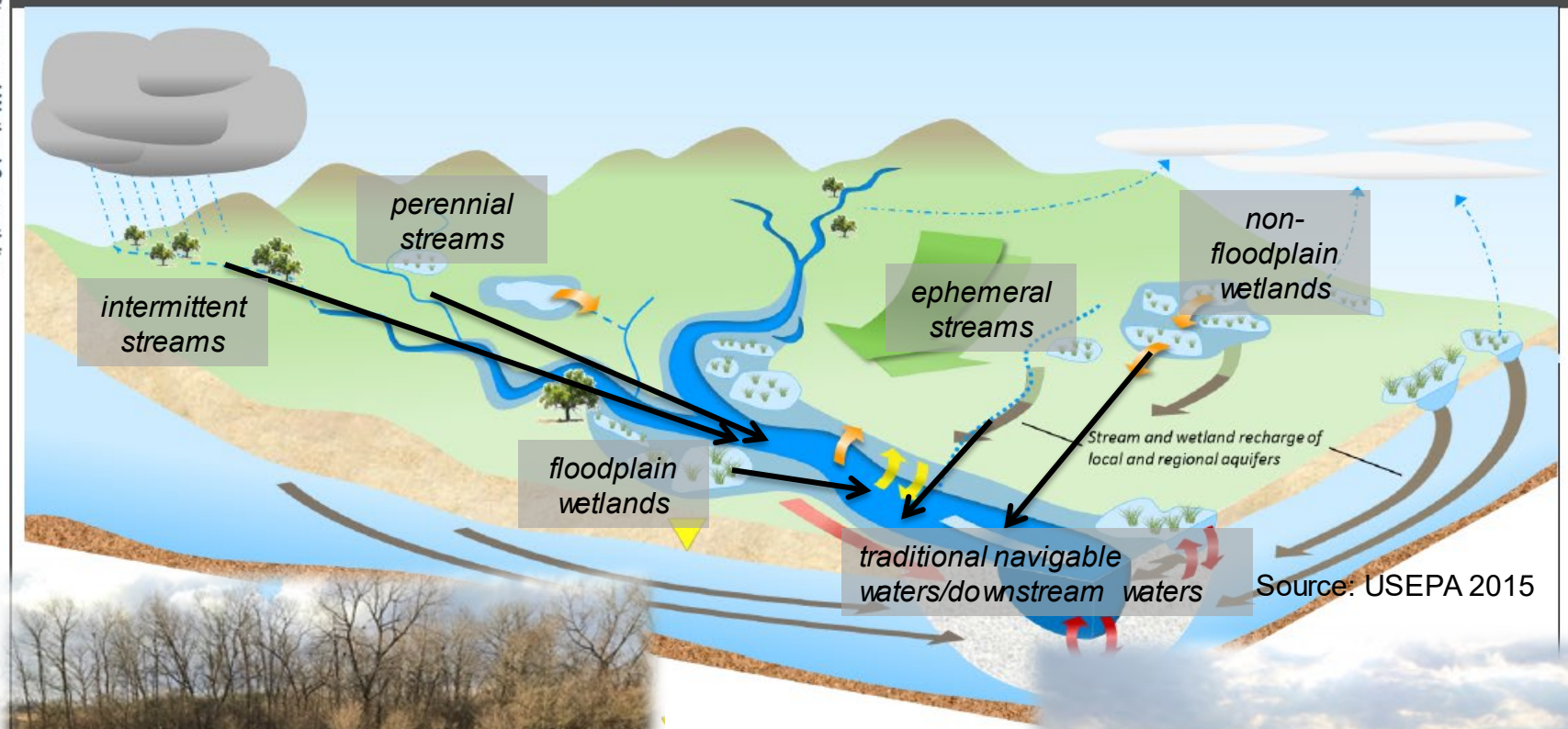
2. SCOPE OF REVISED DEFINITION

3. HOW THE NEW RULE IS INCONSISTENT WITH THE BEST AVAILABLE SCIENCE

4. IMPACTS OF THE NEW RULE

CONNECTIVITY OF WATERS

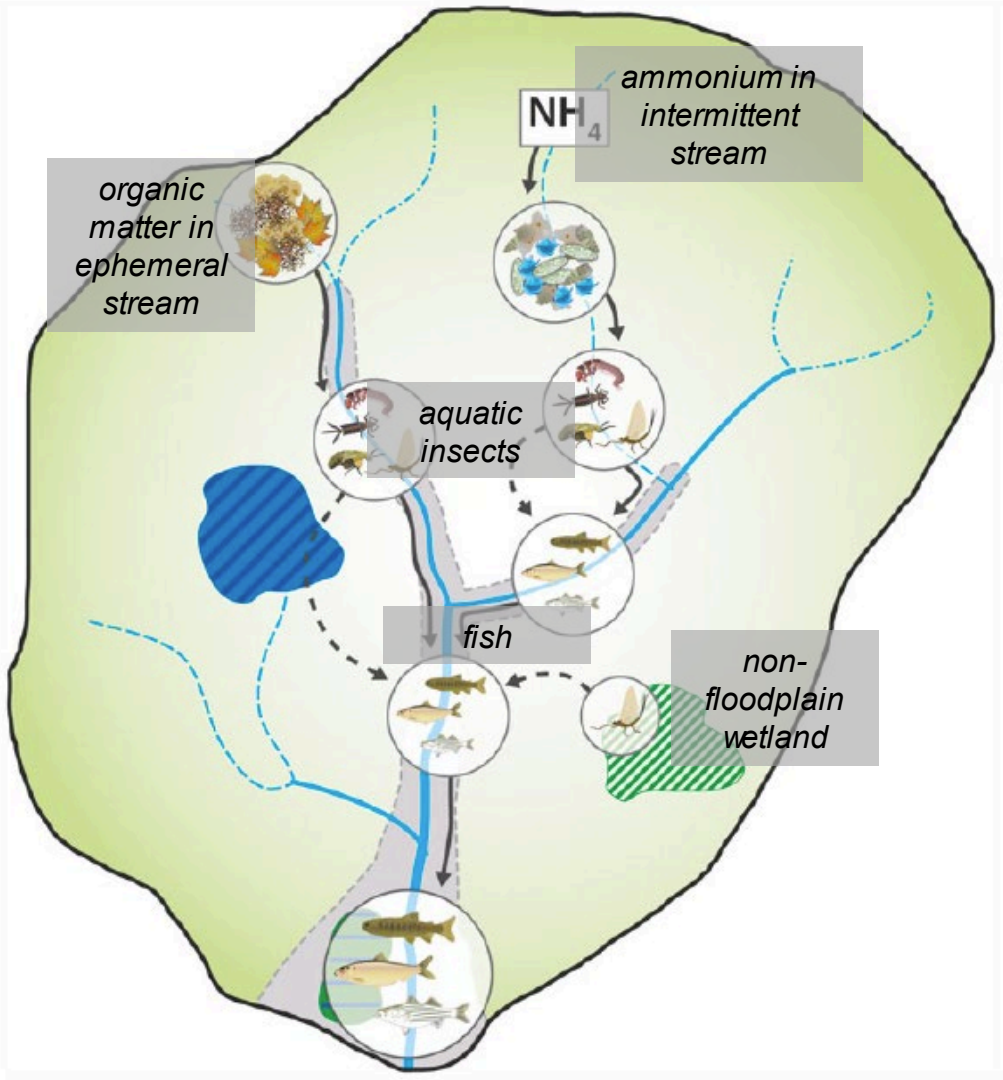
Figure 1-1A. Hydrologic flowpaths. Arrows are representative of surface-water and ground-water flows occurring throughout the watershed. Subsurface flows are shown within the cross section, and by faded arrows outside the cross section.



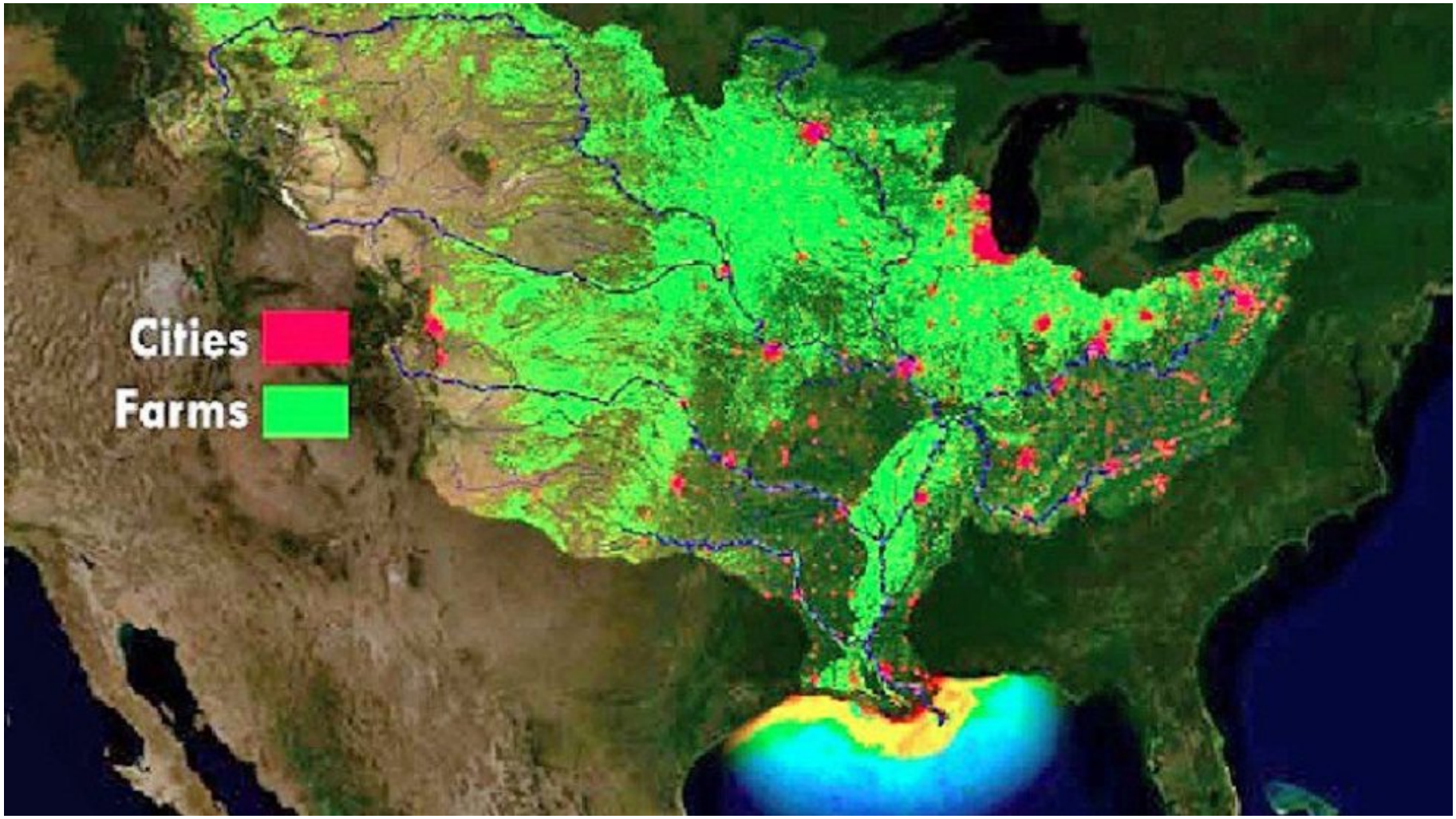
Source: USEPA 2015

←Non-floodplain wetland in Ohio prairie Source: S.M.P. Sullivan. Ephemeral stream in Colorado. Source: D.A. Allan. →

- **Physical connections**
  - Transport/exchange of non-living materials that do not chemically change en route from streams and wetlands to downstream waters
- **Chemical connections**
  - Transport/exchange of non-living materials that can chemically change en route to downstream waters
- **Biological/ecological connections**
  - Transport/exchange of living organisms (or their products) to downstream waters
- Connectivity not constant
  - Can vary over time



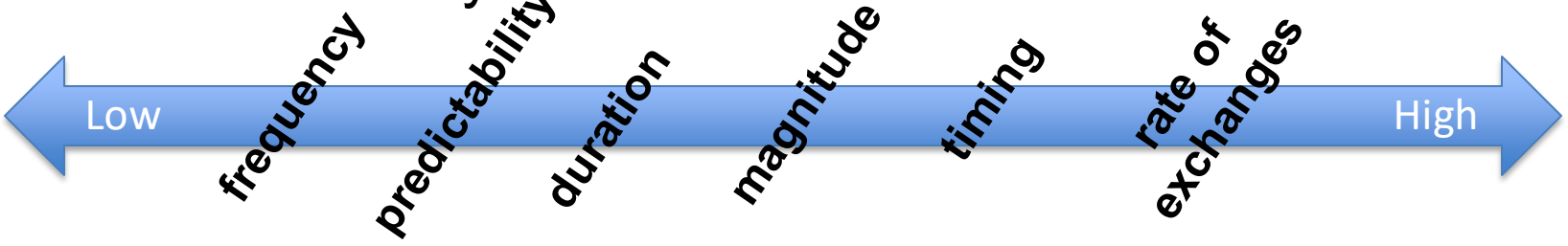
Source: USEPA 2015



Source: Institute for Global Environmental Strategies and MotherJones.com

WHY IS CONNECTIVITY CRITICAL?

- Key scientific concept at cornerstone of legislation and regulation
- Critical to water quality and ecosystem function
- All parts of a watershed are connected but not to the same degree
  - EPA's Science Advisory Board (SAB) recommended "Connectivity Gradient"

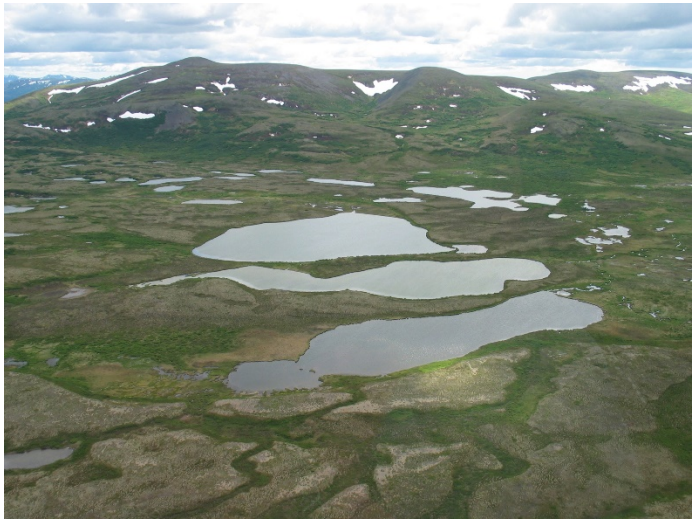


Degree and downstream effects of connections variable

SCOPE OF PROPOSED RULE

- EPA and US Army Corps Propose Rule to Revise the Definition of “Waters of the United States”
- Would revise both 2015 Clean Water Rule (CWR) and pre-2015 definitions of WOTUS.

Removes ephemeral streams and non-floodplain wetlands from protection, and opens the door for loss of protections for some floodplain wetlands and intermittent streams.



Non-floodplain wetlands, Alaska. Source: M.C. Rains

PROPOSED RULE *NOT* SUPPORTED BY BEST AVAILABLE SCIENCE

Reliant on hydrological connectivity only, ignores other types of physical connectivity as well as biological, and chemical connectivity

Critical to consider *all three* given the intent of the CWA: "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters"

- Example 1: Definition of tributaries fails to include appropriate measures of physical connectivity.
  - Proposed rule relies on flow permanence, which is a flawed approach.
  - Multiple physical parameters indicate connectivity, such as bed, banks, and high-water marks, as in the current 2015 rule.
  - These features serve as indisputable indicators of the connectivity of all streams to downstream waters**, *including all intermittent and ephemeral streams*.**

- Example 2: Biological and chemical connectivity are completely ignored.
  - SAB noted importance of biological connectivity and provided numerous scientific studies as support.
  - Ignoring chemical and biological integrity goes against intent of CWA.
  - *Without biological connectivity, aquatic ecosystems would not function properly*.

Proposed rule misinterprets or ignores natural gradients and the importance of considering the cumulative effects of connectivity

- "This proposal is intended to establish categorical bright lines that provide clarity and predictability for regulators and the regulated community … " (84 Fed. Reg. 31).
- Goes against scientific evidence that connectivity and other landscape features occur along a gradient.
  - The SAB clearly articulated the importance of recognizing gradients of waterbody connectivity (vs. a binary property: connected, not connected).
  - ***Even low, or infrequent levels of connectivity can be important to downstream waters.***
- The proposed rule *removes all non-floodplain wetlands and ephemeral streams from protection*, irrespective of their degree of connectivity and the consequences of alterations of that connectivity to downstream water quality.

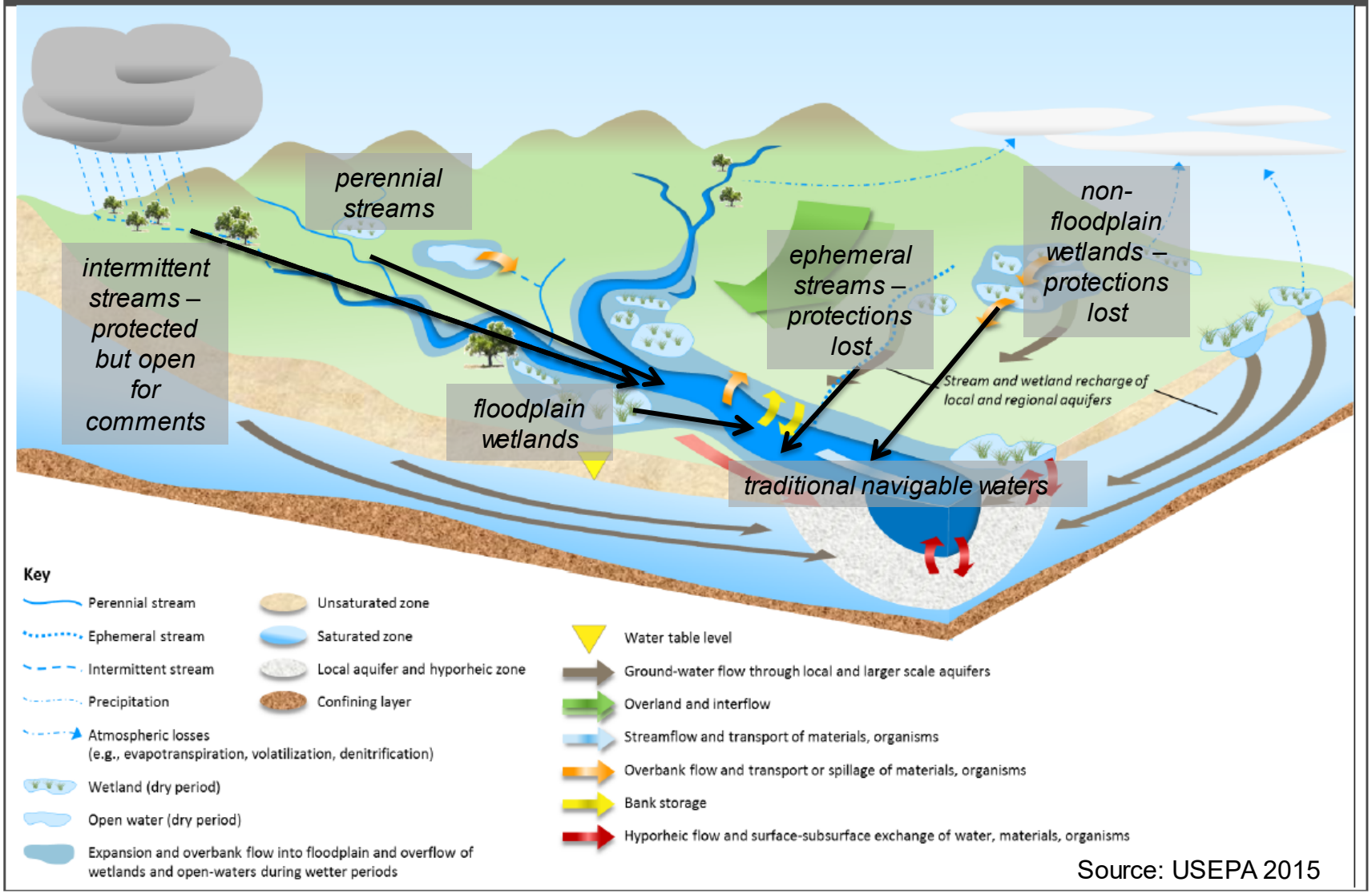
- Considering waterbodies in aggregate critical yet is not sufficiently addressed.

Proposed rule does *not* appropriately recognize how watersheds function

- Trying to overly simplify a complex issue
- Ignores groundwater connectivity
- Proposed rule focuses on waterbody connections in isolation, and misses their functional importance
  - Key recommendation of the SAB was to view waterbodies as part of larger systems
- Rule overly reliant on using case law to delineate watersheds and landscapes instead of basing the Rule on a solid scientific understanding of how they function
  - Leads to unsupported calls to remove protections for critical components of watersheds, such as ephemeral streams, that can have important downstream effects

IMPACTS OF NEW RULE

Figure 1-1A. Hydrologic flowpaths. Arrows are representative of surface-water and ground-water flows occurring throughout the watershed. Subsurface flows are shown within the cross section, and by faded arrows outside the cross section.



Source: USEPA 2015

Stream and Wetland Connectivity: A Review and Synthesis 1-5 January 2015

The proposed rule leaves open the possibility that human activities can lead to removing waters from protection.

- Perennial streams that shift to ephemeral could lose protection.
- Certain wetlands may also become non-permanent in the future, losing protection.
- Ditches must also continue to meet definition of tributary even after human alterations.

Ephemeral stream flowing and dry (AZ). Source: M.T. Bogan.

IN A NUTSHELL

- Proposed rule *inconsistent* with current science & the intent of the CWA -

- Loss of protection for some of our Nation's most vulnerable waters
  - Headwater streams comprise 79% of our nation's stream networks; wetlands outside of floodplains comprise 6.59 million hectares in the conterminous U.S.
- Loss or impairment of ecological functions not only within headwater regions, but also in downstream rivers, lakes, and coastal areas.
- Loss of biodiversity
  - Loss or degradation of habitat for many endemic and threatened fish species as well as species supporting economically important fisheries.
- Headwater streams and wetlands are culturally important for many segments of U.S. society, with particularly high significance for many Native peoples.
- Human activities could lead to future loss of protections.

Impairment or loss of chemical, physical, and biological integrity of our Nation's waters - and thus loss of water quality - is assured under the proposed WOTUS rule, and would have severe and long-lasting negative consequences for environmental conditions throughout the U.S.