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A Review of the Draft Flow Alteration Guidance from the US Environmental Protection Agency and the United States Geologic Survey

Presentation to the
Texas Water Conservation Association

June 16, 2016

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Overview

- Policy/Legal Background
- Draft Guidance Summary
- The Clean Water Act and Flow Alteration
- Back to Eden
- Response to the Draft
- What's Next

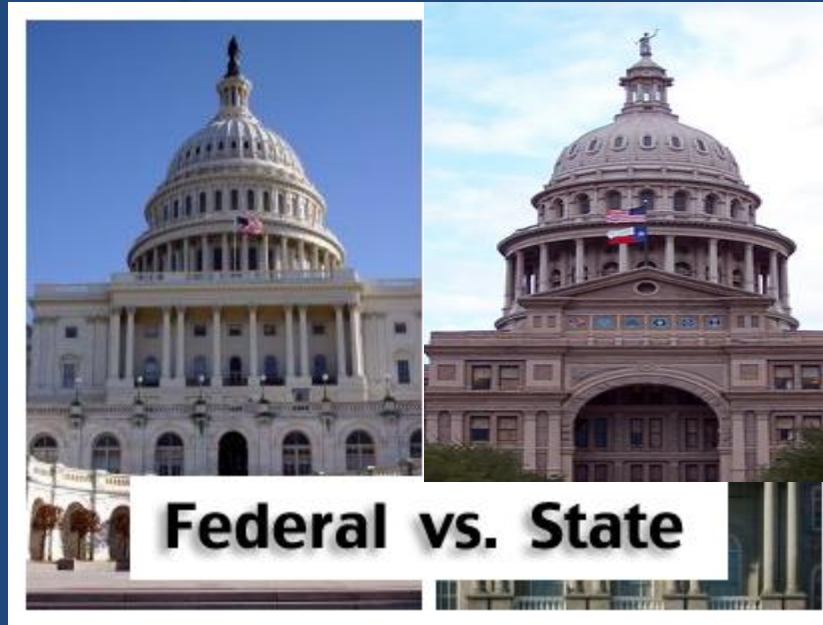


Policy/Legal Background

- State vs. Federal Responsibility
- Policy Impacts/Clean Water Act
 - Water Quality/Water Quantity Distinctions (and case law regarding same)
 - Implications of Flow Targets on State delegated programs (and Corps' 404 permitting)



Consequences/Examples



- “So what?” (in light of SB3/7Q2/harmonic mean)
 - Narrative Criteria
 - Flow Targets
 - Project Impacts



“But it’s just Guidance, right?”

Today is _____

Must Do

You must...

May Do

You may...





Draft Guidance Summary

- Developed by EPA/USGS as a source of information for states addressing:
 - Flow alteration affects aquatic life
 - The Clean Water Act (CWA) as a tool to support natural flow regimes.
 - A framework for quantifying and implementing flow regime targets.



Draft Guidance Summary

- A bleak picture emerges of how flow alteration from human activities threaten aquatic life resources:
 - Dams
 - Diversions
 - Discharges
 - Agriculture
 - Urbanization
- Of course, coupled with climate change, its all worse.



Draft Guidance Summary



- EPA/USGS propose that addressing flow conditions using the CWA can contribute to other hallmark programs of the CWA:
 - Water quality protection
 - Aquatic restoration efforts
 - Maintenance of designated uses
 - Antidegradation



Draft Guidance Summary

Focusing on the term “flow alteration”

- Based on an assumption that changes from the natural condition are negative.
- Examples from guidance include:
 - Dam “re-regulation”; operational
 - Effects on interbasin transfers
 - Groundwater use and the effect on groundwater contribution to streamflow
 - Discharges presented as negative flow augmentation, particularly during low flow conditions

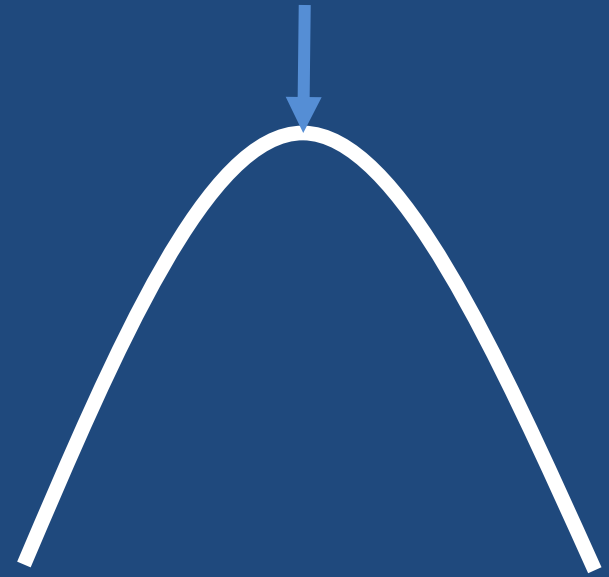


Draft Guidance Summary

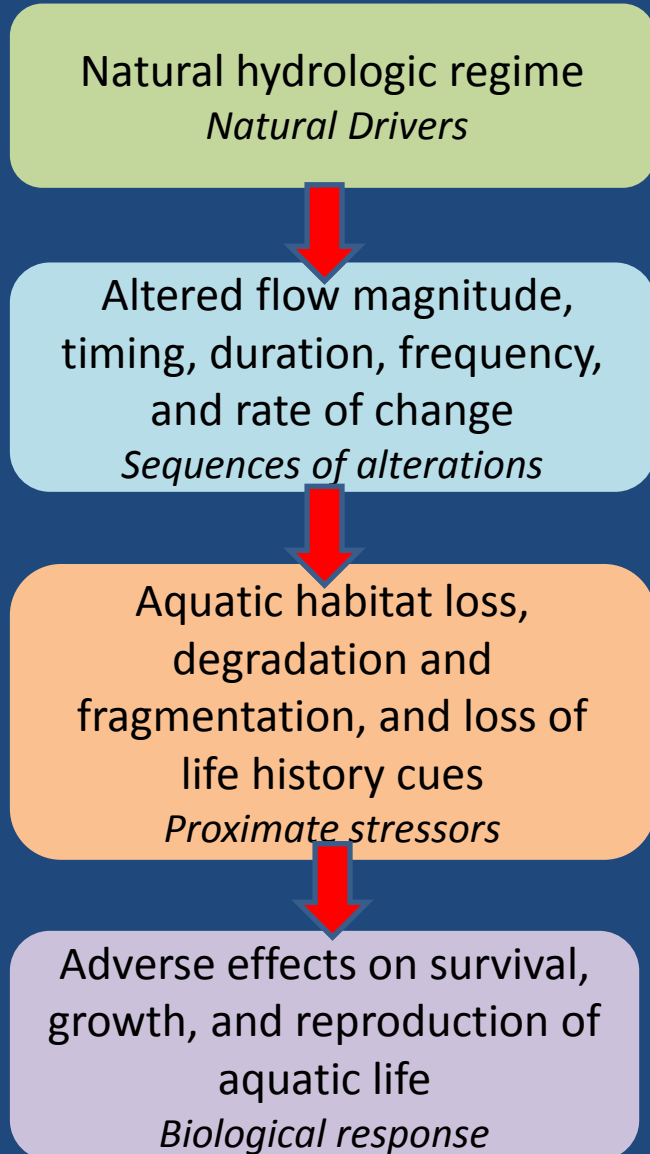
Guidance statement on discharges and artificial inputs:

“For example, the effects on streamflow are amplified when artificial discharges consist of water that is not part of the natural water budget of the stream..... In many arid environments, streamflow during dry seasons is composed almost entirely of treated effluent from wastewater treatment facilities. These inputs can cause a change in the stability of natural systems by artificially raising the water level during low-flow periods.”

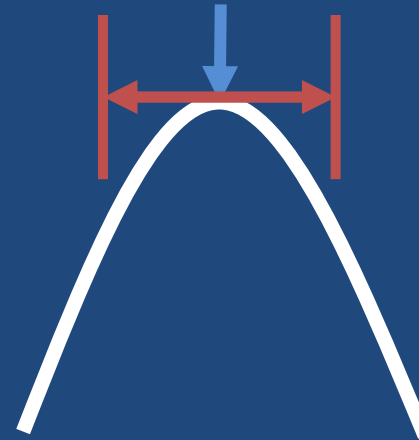
Natural = Optimal



Guidance: Conceptual Model of Biological Effects of Flow Alteration



Natural = Optimal



- Restoring natural vs. maintaining existing:
 - Change itself is not negative
 - Change is a component of the natural system
- The real question is “how much change is too much?”



The Clean Water Act and Flow Alteration

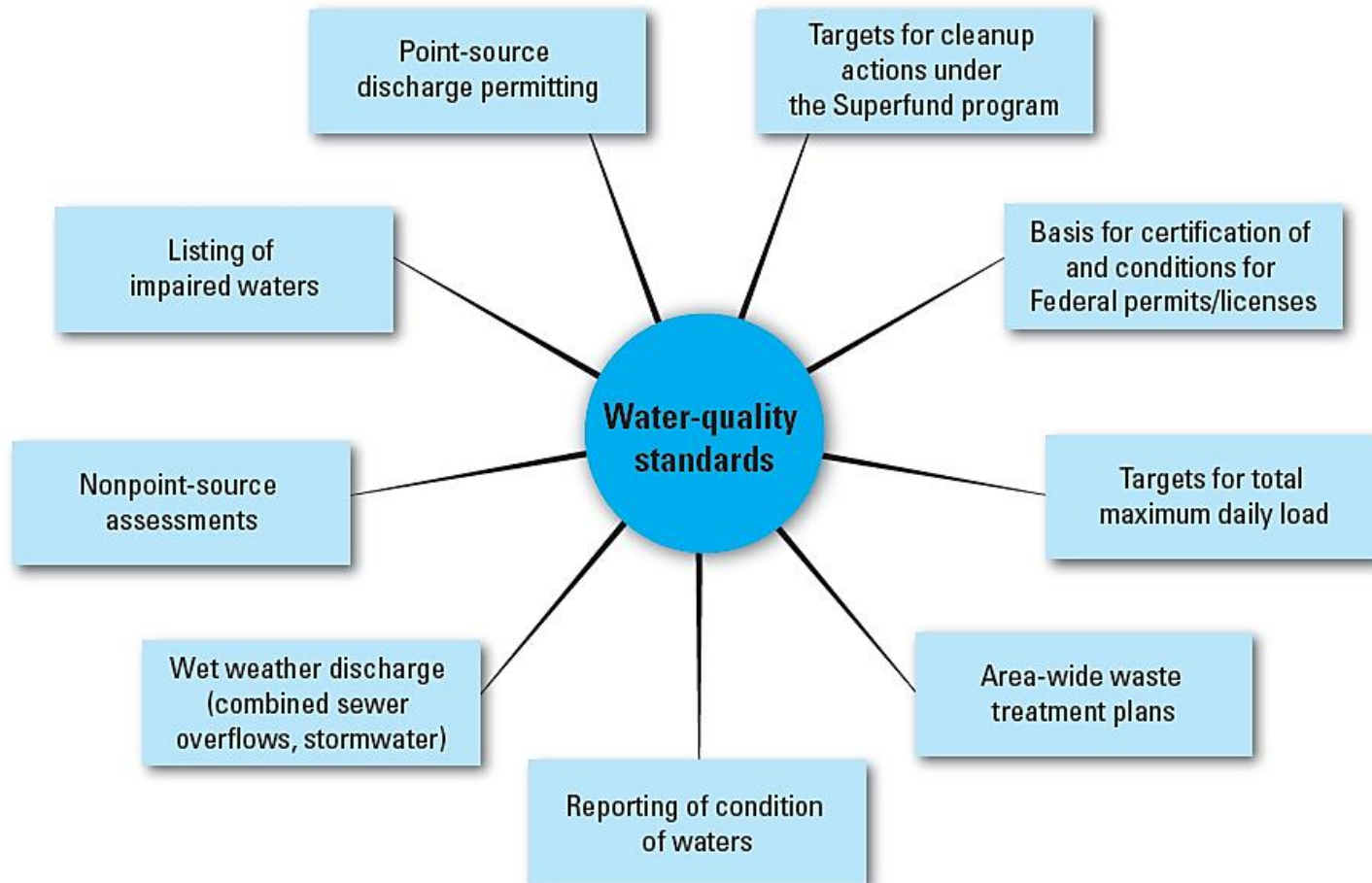
The CWA preamble:

“The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”
(Sec. 101(a))

- The CWA says nothing about flow or flow alteration.
- But others have weighed in:
 - National Research Council Report (2009)
 - CWA case law
 - The Supreme Court (WOTUS)



The Clean Water Act and Flow Alteration



Source: Draft Guidance Figure 9



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- Who could this guidance affect?
 - Water rights holders
 - Diversions
 - Dams/Reservoirs (operations/"too much flow")
 - Section 404 permits and Section 401 water quality certifications
 - Stormwater permittees
 - Municipal Separate Storm Sewer System permits
 - Multi-Sector and construction general permits
 - TPDES permits (dischargers)
 - Reuse projects



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- Potential issues include:
 - Inconsistency between State and Federal processes
 - SB 3 experience in Texas
 - The state of the science is highly uncertain
 - Typically defaults to historical statistics, particularly on hydrology
 - With an objective of minimizing flow alteration
 - Potential not only for “not enough flow”, but also “too much” flow
 - The TAP lawsuit:
 - Good example of how such goals can be appropriated to suggest linkages between water management and a federal “take” on endangered species.



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- What is the goal here?
 - Adoption of narrative flow criteria in water quality standards that:
 - Establish a clear link between flow and protection of uses.
 - Ensure flow is considered under other CWA programs (401, 404, etc.).
- What should the goal be?



Response to the Draft Guidance

- Combined TACWA/TWCA comment letter, prepared by Lloyd Gosselink Rochelle & Townsend, Carollo, and Alan Plummer Associates, addressing:
 - Conflicts with existing processes in Texas.
 - The failure to recognize the implications of the lack of data needed to make informed decisions.
 - The lack of a link between quality and flow within the CWA itself.



What's Next?

- Continue dialogue with TCEQ about the agency's reaction to the draft guidance and their response.
- Watch for signs of implementation in both state and federal regulatory actions:
 - Section 404 permits
 - Water rights permit amendments
 - Total Maximum Daily Load projects
 - Stormwater permits
 - TPDES permits
 - Reuse projects



QUESTIONS?

