

Is the Verde River Protected by the Clean Water Act?

Clean Water Act jurisdiction, water quality standards & other legal miscellany.

Steve Pawlowski
Sierra Club Water Sentinels Program Coordinator

YES

Do you have any questions?



H.L. Mencken

For every complex problem
there is an answer that is
clear,
simple
and wrong.

Federal Water Pollution Control Act Amendments of 1972

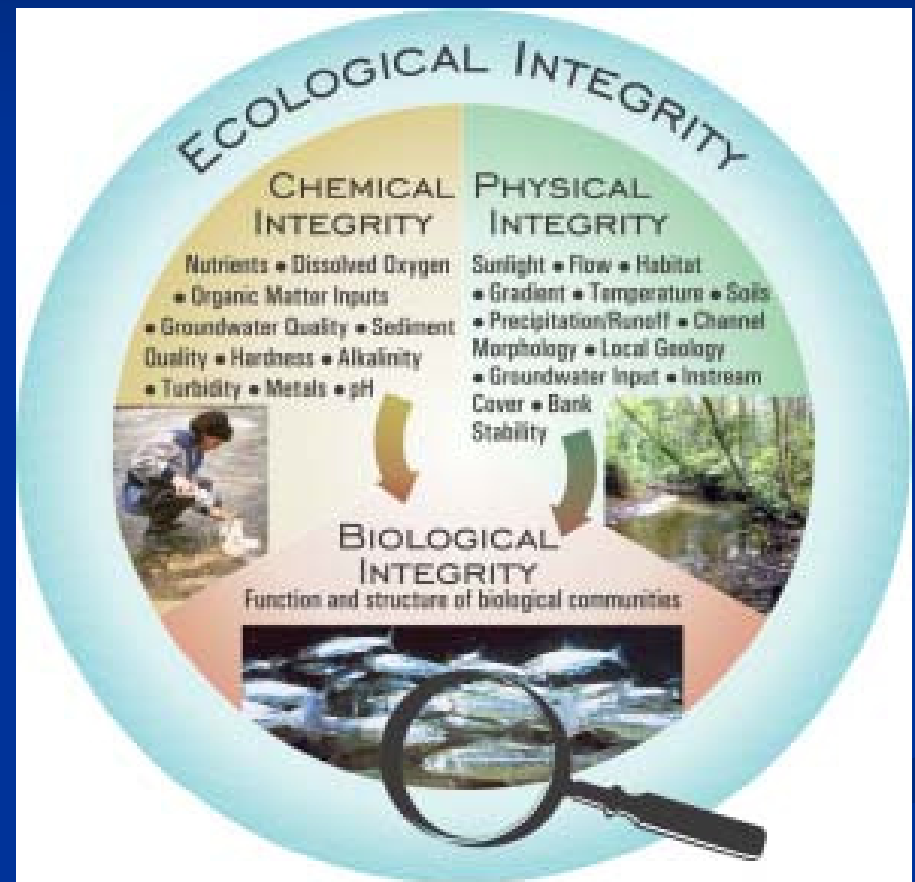
- More commonly known as the Clean Water Act.
- We've come a long way since the days when our waters were so polluted that rivers caught fire.



Primary Objective of the CWA

“...to restore and maintain the chemical, physical and biological integrity of the Nation’s waters.”

Section 101(a) of the CWA



Ambitious Clean Water Act Goals

To eliminate the discharge of pollutants into navigable waters *by 1985*.

(We haven't achieved this goal yet!)



CWA Prohibits the Discharge of Toxic Pollutants

“It is the national policy
that the discharge of
toxic pollutants in
toxic amounts be
prohibited.”

Section 101(a)(3)

(Still working on this
one, too.)



Interim Clean Water Act Goals

- To achieve, wherever attainable, a level of water quality which provides for the protection of fish, shellfish and wildlife and provides for recreation in and on the water (by 1983).

Verde River, AZ

The Wild River

By Will Jordan

The dreaded nightmare of a headwind had manifested itself with increasing intensity over the last half hour. Paddling fiercely, my canoe mate and I assailed one another with alternating barrages of words both disparaging and encouraging. Our mad dash for the east shoreline of Horseshoe Reservoir was the culmination of a multiday float on a unique river flowing through a vast swath of desert wilderness in central Arizona. Upon reaching the takeout and celebrating with an ice-cold, post-trip libation, I looked back across to the western horizon and reflected upon the incredible wilderness adventure we'd just completed.

The trip originated as many do, with idle chatter among a group of anglers about fisheries near and far, dream destinations.

Over the years, I'd heard this particular trip come up in such conversations many times, but there always seemed to be a sigh of resignation with it. Many anglers assume the Verde River's wilderness run is a bit out of reach, a little too remote, and far too much of an unknown. Personally, I never gave up on the hope of making this experience happen; I was just waiting for the right opportunity and the right situation.

Oddly enough, it was a particularly cold autumn day spent pheasant hunting on the eastern plains of Montana that provided the fertile grounds for the germination of this trip. Trailing our golden retrievers across the frigid prairie, we talked of the remote river and its appeal; perhaps thoughts of Arizona's warm Sonoran sun were what



An angler admires a feisty smallmouth bass that took a crayfish pattern in shallow water (above). While dense streamside vegetation and deep water can make for tough going, anglers should thoroughly work the river's large pools by foot at every opportunity (left).

made this outing sound so attractive that day. Whatever the cause, the idea struck: seven months later, the three of us found ourselves together again, paddling through the desert on the federally designated Wild and Scenic Verde River.

We timed our adventure carefully to coincide with optimal water conditions. On a desert free-stone river, there is a fine line between too much water and not enough. Of course, we were hoping to hit it just right—somewhere between the two extremes. We certainly wanted the good late-spring/early-summer smallmouth bass fishing associated with lower, warmer river conditions, but we simply had to go early enough in the season to have adequate flows for paddling. Veteran Verde River runners point out that the water is navigable by canoe and kayak in any month of the year, and

that may be, but after having completed this trip, I can say I wouldn't want any part of it at flows under about 50 cubic feet per second (cfs) on the Camp Verde water gauge. For the sake of the fishing, my hope was to push the venture as late into May as possible without having river levels drop below about 70 cfs.

Throughout the winter, we kept an eye on reports of above-average snowfall piling up in the Arizona high country and watched in disbelief as the subsequent runoff hit the Verde River watershed in a deluge in early spring. With little or no remaining snowpack to sustain the river, we were fortunate that rains helped to stabilize flows, keeping the Verde at navigable levels long enough for the water to warm and the bass to become active. All

“Fishable and Swimmable”



Maintain and protect water quality for aquatic life and wildlife



Important CWA Provisions

- Section 106: Water quality monitoring
- Section 303: Water quality standards
Total Maximum Daily Loads
- Section 305: Water quality assessment
- Section 319: Nonpoint source pollution
- Section 402: NPDES permit program
- Section 404: Dredge and fill permit program

Navigable Waters

The provisions of the Clean Water Act apply to -

“navigable waters”

What does “navigable water” mean?



Mississippi River

**“Navigable water” includes streams
navigable by canoes & kayaks**



Verde River

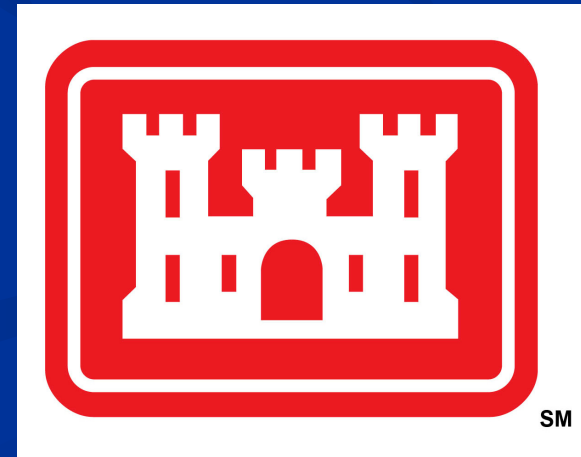
Congress defined “navigable waters” in the Clean Water Act

“The term, ‘navigable waters,’ means the waters of the United States, including the territorial seas.”

Section 502(7) of the Clean Water Act
33 U.S.C. 1362(7)

Congress did not define “waters of the United States”

Congress did not define
“waters of the United
States” in the Clean
Water Act. They left
the definition of
“WOTUS” to EPA &
the U.S. Army Corps of
Engineers.



Waters of the United States

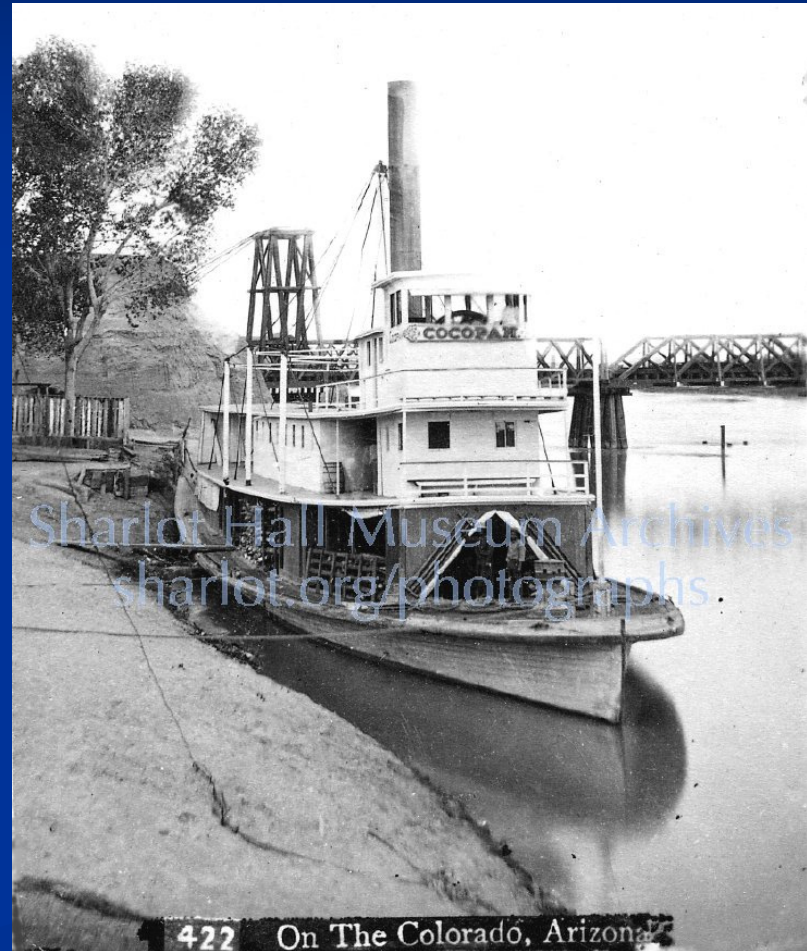
40 CFR 122.2

- Territorial seas;
- Waters subject to the ebb and flow of the tide;
- All interstate waters (including interstate wetlands);
- All other waters such as intrastate lakes, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds);
- Impoundments;
- Tributaries; and
- Adjacent wetlands.

Traditional navigable waters in AZ



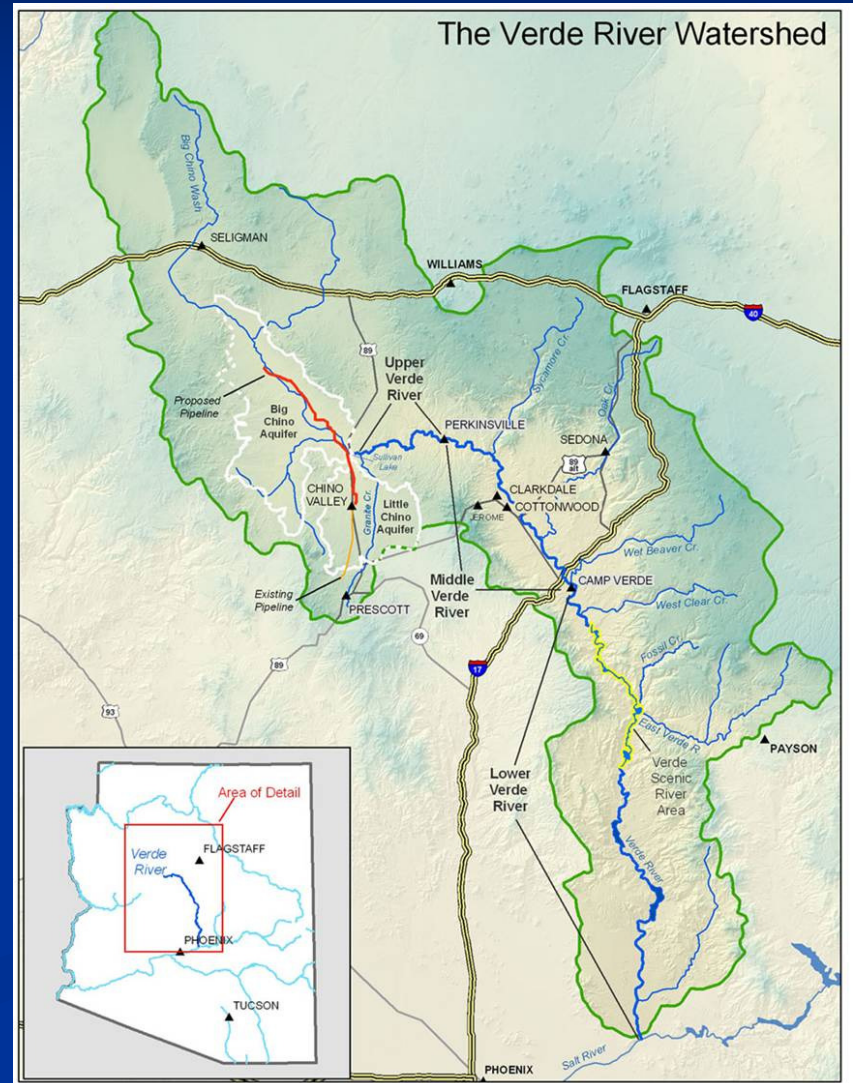
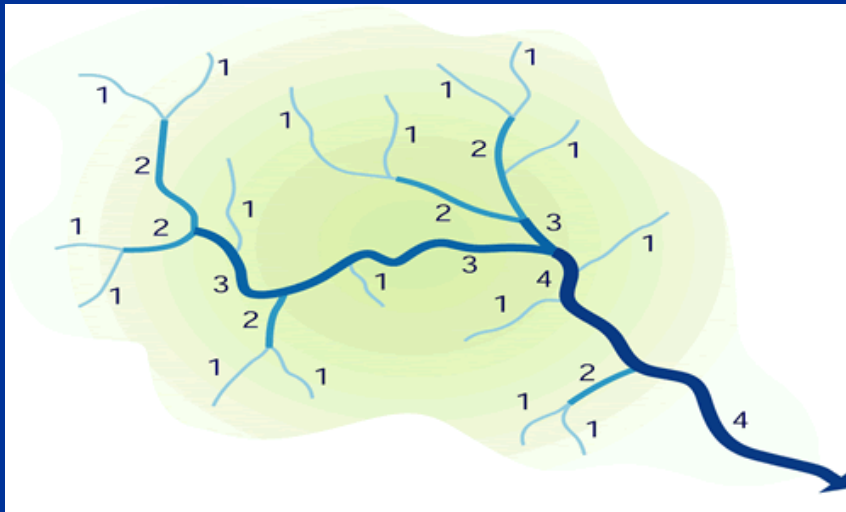
Colorado River



Impoundments of navigable waters



Tributaries



Wetlands adjacent to traditional navigable waters

- United States v. Riverside Bayview Homes (1985)
- 9-0 SCOTUS decision
- Court held that wetlands adjacent to traditional navigable waters were covered by the CWA.



Tavasci Marsh

The Supreme Court has created a
“navigable waters” controversy.



Two SCOTUS cases “muddy the jurisdictional waters”

- Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC) (2001)
- Rapanos v. United States (2006)

SWANCC

- In a 5-4 decision, the Supreme Court held that isolated wetlands within a state were not protected by the CWA if the only basis for jurisdiction was the use of the isolated wetland by migratory birds (and there was no other connection to interstate commerce).



Rapanos

- In a plurality opinion (4-1-4), four SC justices would protect only “relatively permanent” water bodies connected to traditional navigable waters under the CWA.
- Justice Kennedy (the swing vote) would require a “significant nexus” to a traditional navigable water to be protected under the CWA. This nexus would have to be determined on a case-by-case basis.

Does CWA apply to small headwater streams or non-navigable tributaries?



Fossil Creek



Granite Creek

Ephemeral washes & dry rivers?



Prairie potholes? Playas?



Prairie potholes in Minnesota



Wilcox Playa

Intermittent or seasonal streams?



Losing CWA protections in Arizona

ADEQ estimates 96% of streams in Arizona are intermittent or ephemeral. They could be at risk of losing Clean Water Act protections because they are not relatively permanent, not traditionally navigable and they often do not have a “significant nexus” to a traditionally navigable water.

Amending the CWA to Reduce Legal Uncertainty

- There have been efforts in Congress to amend the CWA to clarify its original legislative intent re: the scope of the CWA and to undo the legal uncertainty that has been caused by the SWANNC & Rapanos decisions:
 - Clean Water Restoration Act [S. 787]
 - America's Commitment to the Clean Water Act [H.R. 5508]

The Congressional Fix

- Removes the confusing term, “navigable water” from the CWA.
- Replaces “navigable water” with “waters of the United States” to restore the historically broad scope of the CWA to include waters protected before the SWANNC decision (for example – isolated wetlands, small headwater streams, intermittent waters)
- Adopts a statutory definition of “waters of the U.S.” based on the current EPA definition at 40 CFR Section 122.2

The Verde River is a “water of the United States”

The Verde River is “traditionally navigable.”



The Verde River is a relatively permanent “intrastate water”



Healthy Waters Start with
**WATER
QUALITY
STANDARDS**

Water quality standards set the goals to protect rivers, streams, lakes,
and wetlands in your community. You can play a role in this.
www.epa.gov/waterscience/standards



U.S. Environmental Protection Agency
Office of Water • Washington, DC
EPA-823-H-06-001
December 2006

CWA Requirements for WQS

- Protect public health or welfare;
- Enhance the quality of water;
- Take into consideration the use and value of the water for public water supplies, propagation of fish & wildlife, recreational purposes, and agricultural, industrial and other purposes.

Water Quality Standards

The Clean Water Act requires ADEQ to adopt water quality standards for the Verde River. Water quality standards must:

- Consist of designated uses and water quality criteria based on those uses;
- Be adopted with public participation;
- Are subject to EPA review (EPA reviews state-adopted standards for consistency with CWA requirements.)

Triennial Review

“The State water pollution control agency...shall from time to time (but at least once each three year period beginning with the date of the enactment of the Federal Water Pollution Control Act Amendments of 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards.”

Section 303(c)(1)

Standards for Toxic Pollutants

Whenever ADEQ goes through a triennial review, ADEQ must adopt criteria for all toxic pollutants listed pursuant to CWA 307(a)(1) *for which EPA has published national criteria recommendations.*

EPA has listed 126 priority pollutants listed under 307(a)(1).

Water Quality Standards for Arizona

ADEQ has adopted water quality standards for the Verde River:

[http://www.azdeq.gov/
environ/water/standards/
download/SWQ_Standards-
1-09-unofficial.pdf](http://www.azdeq.gov/environ/water/standards/download/SWQ_Standards-1-09-unofficial.pdf)

TITLE 18. ENVIRONMENTAL QUALITY CHAPTER 11. DEPARTMENT OF ENVIRONMENTAL QUALITY WATER QUALITY STANDARDS

ARTICLE 1. WATER QUALITY STANDARDS FOR SURFACE WATERS

R18-11-101.	Definitions
R18-11-102.	Applicability
R18-11-103.	Repealed
R18-11-104.	Designated Uses
R18-11-105.	Net Ecological Benefit
R18-11-107.	Antidegradation
R18-11-107.01.	Antidegradation Criteria
R18-11-108.	Narrative Water Quality Standards
R18-11-108.01.	Narrative Biological Criteria for Wadeable, Perennial Streams
R18-11-108.02.	Narrative Bottom Deposit Criteria for Wadeable, Perennial Streams
R18-11-108.03.	Narrative Nutrient Criteria for Lakes and Reservoirs
R18-11-109.	Numeric Water Quality Standards
R18-11-110.	Salinity Standards for the Colorado River
R18-11-111.	Analytical Methods
R18-11-112.	Outstanding Arizona Waters
R18-11-113.	Effluent-Dependent Waters
R18-11-114.	Mixing Zones
R18-11-115.	Site-Specific Standards
R18-11-116.	Resource Management Agencies
R18-11-117.	Canals and Urban Park Lakes
R18-11-118.	Dams and Flood Control Structures
R18-11-119.	Natural Background
R18-11-120.	Enforcement
R18-11-121.	Schedules of Compliance
R18-11-122.	Variances
R18-11-123.	Discharge Prohibitions

Appendix A. Numeric Water Quality Standards

Table 1.	Water Quality Criteria By Designated Use
Table 2.	Dissolved Cadmium (A&Wc Acute)
Table 3.	Dissolved Cadmium (A&Wc Chronic)
Table 4.	Dissolved Cadmium (A&Ww and A&Wedw Acute)
Table 5.	Dissolved Cadmium (A&Ww and A&Wedw Chronic)
Table 6.	Dissolved Cadmium (A&W ephemeral - Acute)
Table 7.	Dissolved Chromium III (A&Wc, A&Ww and A&Wedw - Acute)
Table 8.	Dissolved Chromium III (A&Wc, A&Ww and A&Wedw - Chronic)

Verde River	Designated Uses					
Above Bartlett Lake	A&W_w	FBC	FC	AgI	AgL	
Below Bartlett Lake	A&W_w	FBC	FC	AgI	AgL	DWS

Numeric Water Quality Standards

■ Arsenic

- DWS: 10 $\mu\text{g/L}$
- FBC: 30 $\mu\text{g/L}$
- A&Ww: 150 $\mu\text{g/L}$ (chronic) (D)
340 $\mu\text{g/L}$ (acute) (D)

■ *E. coli* bacteria

- FBC: 126 cfu / 100ml (5-sample geometric mean)
235 cfu / 100 ml (single sample maximum)

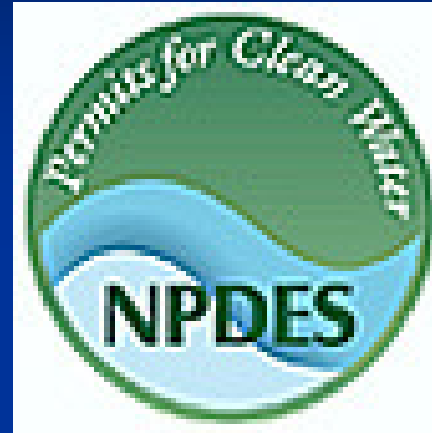
Narrative Water Quality Standards

A surface water shall not contain pollutants in amounts or combinations that:

- Settle to form bottom deposits that inhibit or prohibit the habitation, growth, or propagation of aquatic life...
- Are toxic to humans, animals, plants, or other organisms...
- Cause the growth of algae or aquatic plants that inhibit or prohibit the habitation, growth, propagation of other aquatic life or that impair recreational uses...

NPDES Permits

- Technology-based limits (e.g. secondary treatment for wastewater treatment plants), and
- Water quality-based effluent limits based on what is needed to achieve water quality standards of the Verde River.



What About Flow Protection?

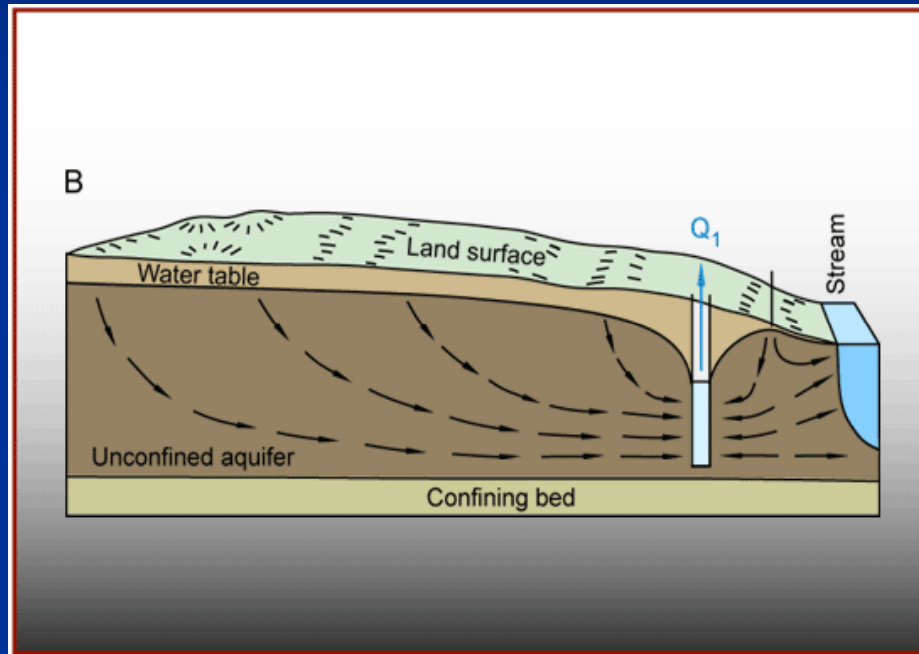
“...the authority of each State to allocate quantities of water shall not be superseded, abrogated or otherwise impaired by this Act...nothing in this Act shall be construed to supersede or abrogate rights to quantities of water which have been established by any State.”

Section 101(g)



Water Sentinel sampling on the Upper Verde River

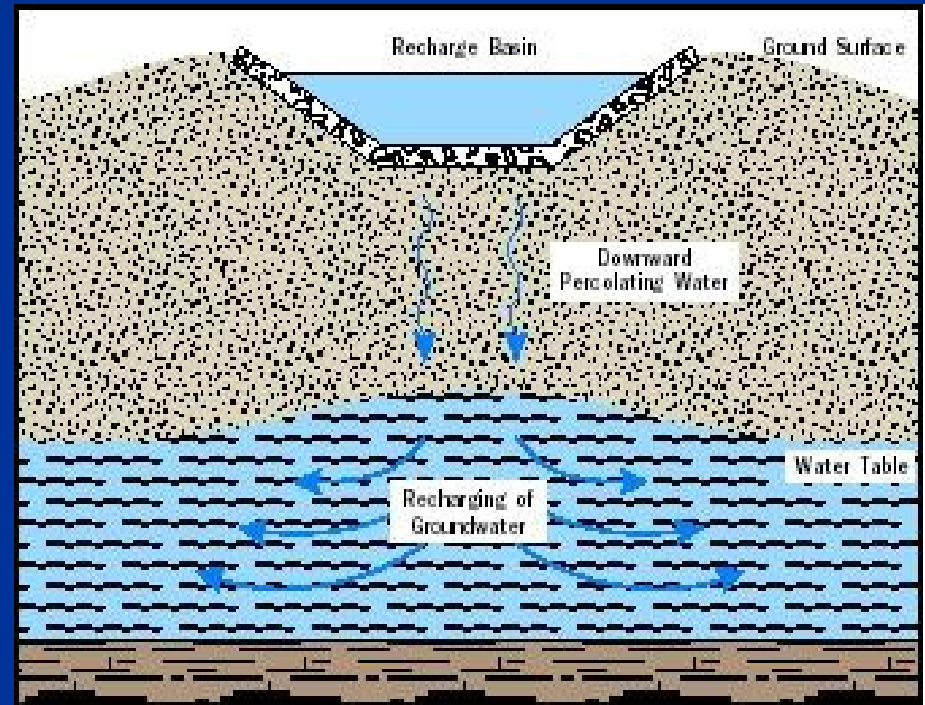
Can Clean Water Act be used to regulate ground water withdrawal?



NO

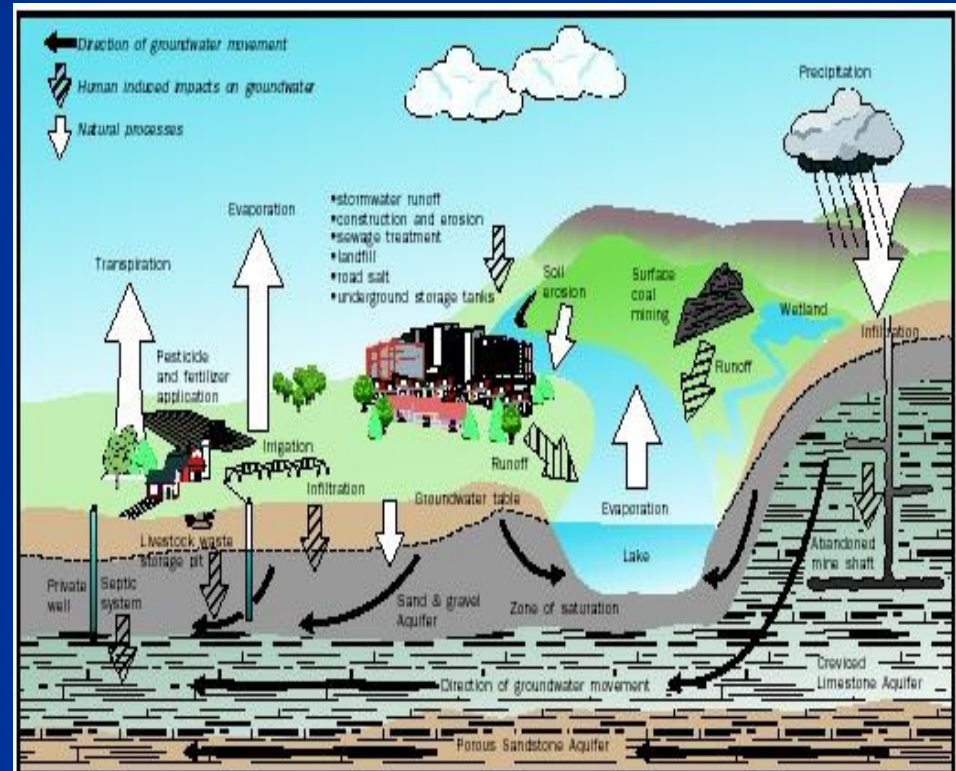
What about protection of groundwater under the CWA?

- Groundwater is protected for drinking water purposes under state law, not the CWA
- Arizona adopted aquifer water quality standards (AWQS) for groundwater.



Aquifer Protection Permit (APP)

- APP program regulates discharge of pollutants to groundwater.
- Technology-based requirements (BADCT)
- Comply with AWQS at a point of compliance in the aquifer.



Reclaimed Water Quality Standards

- Reclaimed Water Quality Standards A+, A, B+, B and C
- Apply to “direct reuse” of reclaimed water
- Would not be used to regulate groundwater recharge projects



Think before you
agree to **drink**

IS SEWAGE A SOURCE OF DRINKING WATER?

Direct Reuse

- Landscape irrigation - B
 - Golf courses, parks, schoolyards
- Food crop irrigation - A
- Snowmaking - A
- Landscape impoundments - B
- Recreational impoundments - A
- Dust control - B
- Toilet flushing - A

Reclaimed Water Quality Standards

Don't apply to ground water recharge projects

- (AWQS and APP apply)

■ Don't apply to discharges to “waters of the United States”

- (WQS and AZPDES permits apply)