Arizona's Surface Water Quality Standards

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What is a Triennial Review?

CWA requires states to:

- review and revise water quality standards (WQS),
- every three years,
- includes public participation.

What are Water Quality Standards?

Standards shall **Consist of:**

1. Designated uses
2. Criteria to protect those uses
3. Antidegradation policy

Designated Uses:

Standards shall:

- Protect at least:
  - Public water supplies,
  - Fish and wildlife,
  - Recreation,
  - Agriculture,
  - Industry, and
  - Navigation

(ADEQ has established specific designated uses to address AZ conditions)

Narrative Standards:

- "Free from" standards:
  - Describe desired goal
    - "…free from toxic pollutants…"
- Generalized categories
  - Broad category pollutants
  - New chemicals with little data
  - Pollutants not easily characterized

Numeric Standards

Three main types of numeric standards:

Human Health

Aquatic and Wildlife

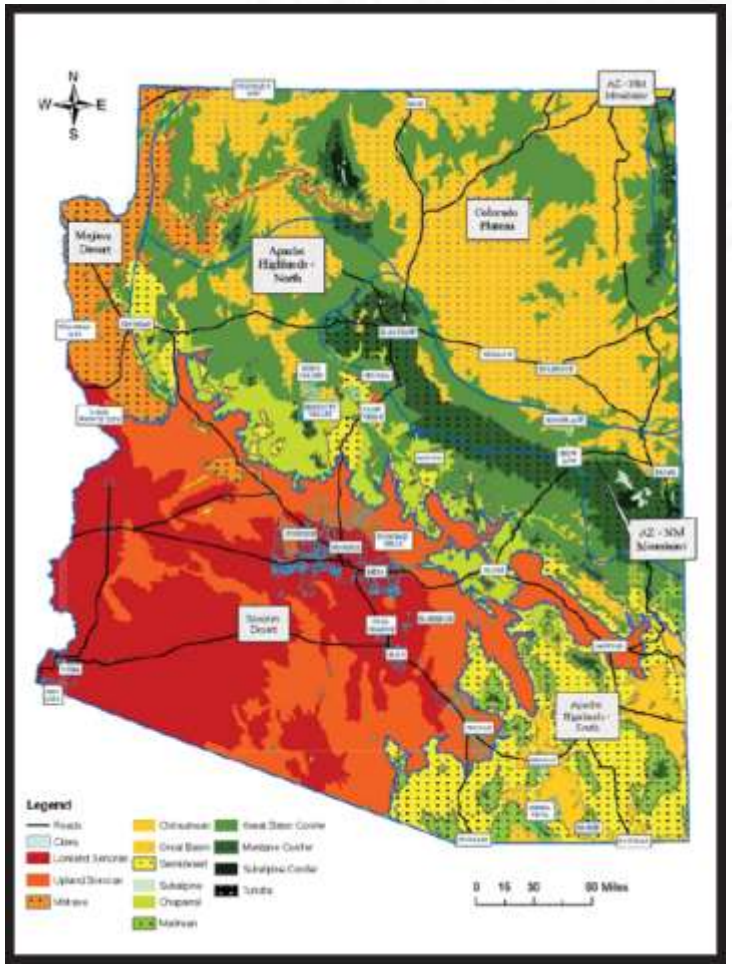
Agriculture

- Four human health designated uses
- Four aquatic and wildlife designated uses
- Two agricultural designated uses

EPA Recommended Criteria:

EPA recommended criteria:

- CWA Priority Pollutants
- 304(a) Criteria
- Drinking water MCLs
  - and
- Regulated pesticides and pollutants



EPA Recommended Criteria

States must explain and support decision not to protect a “de facto use” or adopt EPA criteria

USFWS assures protection of T&E species

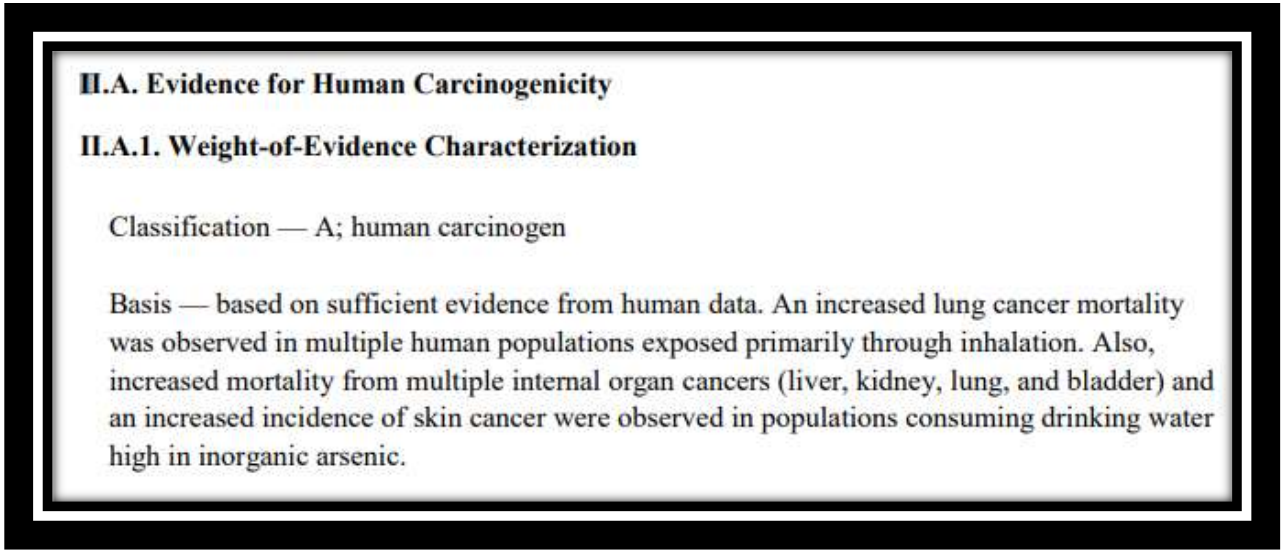
EPA may disapprove state standards and issue its own instead

Generic Human Health Equation

$$\frac{\text{Risk estimation x Body weight}}{\text{Consumption rate}}$$

Data used to calculate HH standards

- EPA databases
  - IRIS: Reference dose/cancer slope factor
  - Maximum Contaminant Levels (MCL)
- ATSDR
  - Minimal Risk Levels (MRL)



II.A. Evidence for Human Carcinogenicity

II.A.1. Weight-of-Evidence Characterization

Classification — A; human carcinogen

Basis — based on sufficient evidence from human data. An increased lung cancer mortality was observed in multiple human populations exposed primarily through inhalation. Also, increased mortality from multiple internal organ cancers (liver, kidney, lung, and bladder) and an increased incidence of skin cancer were observed in populations consuming drinking water high in inorganic arsenic.

Aquatic and Wildlife (A&W) Standards

$$\frac{\text{Toxicity}}{\text{Protectiveness}}$$

Data used for A&W standards:

- National Criteria Documents
- EPA's Ecotox database.
- Use specific species lists (where available)
  - Data sources often incomplete

Current Triennial Review Schedule

- May – Stakeholder comments/suggestions
- Mid May – Begin drafting standards package
- Mid July – Draft Standards and rules available for review
- August – Stakeholder Meetings
- September – File NPRM with Secretary of State
- November – Public Hearing
- April 2019 – Rules Effective

Questions?

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Appendix B Update

April 30, 2018

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Appendix B Update

- Appendix B Stakeholder Workgroup
- Technical corrections

APPENDIX B. SURFACE WATERS AND DESIGNATED USES

(Coordinates are from the North American Datum of 1983 (NAD83). All latitudes in Arizona are north and all logitudes are west, but the negative signs are not included in the Appendix B table. Some web-based mapping systems require a negative sign before the longitude values to indicate it is a west longitude.)

Watershed	Surface Waters	Segment Description and Location (Latitude and Longitudes are in NAD 83)	Lake Catgory	Aquatic and Wildlife				Human Health				Agricultural	
				A&Wc	A&Ww	A&We	A&Wedw	FBC	PBC	DWS	FC	AgI	AgL
BW	Alamo Lake	34°14'06"/113°35'00"	Deep		A&Ww			FBC			FC		AgL
BW	Big Sandy River	Headwaters to Alamo Lake			A&Ww			FBC			FC		AgL
BW	Bill Williams River	Alamo Lake to confluence with Colorado River			A&Ww			FBC			FC		AgL
BW	Blue Tank	34°40'14"/112°58'17"			A&Ww			FBC			FC		AgL
BW	Boulder Creek	Headwaters to confluence with unnamed tributary at 34°41'13"/113°03'37"		A&Wc				FBC			FC		AgL
BW	Boulder Creek	Below confluence with unnamed tributary to confluence with Burro Creek			A&Ww			FBC			FC		AgL
BW	Burro Creek (OAW)	Headwaters to confluence with Boulder Creek			A&Ww			FBC			FC		AgL
BW	Burro Creek	Below confluence with Boulder Creek to confluence with Big Sandy River			A&Ww			FBC			FC		AgL
BW	Carter Tank	34°52'27"/112°57'31"			A&Ww			FBC			FC		AgL
BW	Conger Creek	Headwaters to confluence with unnamed tributary 34°45'15"/113°05'46"		A&Wc				FBC			FC		AgL
BW	Conger Creek	Below confluence with unnamed tributary to confluence with Burro Creek			A&Ww			FBC			FC		AgL
BW	Copper Basin Wash	Headwaters to confluence with unnamed tributary 34°28'12"/112°35'33"		A&Wc				FBC			FC		AgL
BW	Copper Basin Wash	Below confluence with unnamed tributary to confluence with Skull Valley Wash				A&We			PBC				AgL
BW	Cottonwood Canyon	Headwaters to Bear Trap		A&Wc				FBC			FC		AgL

Stakeholder Workgroup

- Charter document
- Diverse representation (10 external members)
- Four topic questions:
  1. How can ADEQ improve stream reach descriptions, lake categories, or designated uses to be more accurate?
  2. Should ADEQ add “impaired” waters or AZPDES receiving waters?
  3. Should ADEQ add federally promulgated Fish Consumption designated uses to be consistent 40 CFR 131.31?
  4. How can ADEQ clarify the Tributary Rule?

Stakeholder Workgroup Results

Topic #1: How can ADEQ improve stream reach descriptions, lake categories, or designated uses to be more accurate?

- Consensus: Structure & scope of Appendix B does not warrant revisions

Stakeholder Workgroup Results

Topic #2: Should ADEQ add "impaired" waters or AZPDES receiving waters?

- Recommendations:
  1. Add waterbodies with AZPDES Individual Permits for clarity
  2. "Impaired" waters do not need to be listed in Appendix B unless there's a designated use besides those provided by Tributary rule

Stakeholder Workgroup Results

Topic #3: Should ADEQ add federally promulgated Fish Consumption designated uses to be consistent 40 CFR 131.31(b)?

Recommendations:

- Fish Consumption use has already been added to Appendix B waters where applicable & EPA regulation is obsolete.
- ADEQ should request that EPA initiate action to rescind that rule

Stakeholder Workgroup Results

Topic #4: How can ADEQ clarify the Tributary Rule?

Recommendation:

- Waterbodies should be listed when there are designated uses not covered by Tributary rule
- Tributary Rule language does not need modification at this time

Technical corrections

- Waterbody names & reach descriptions
- Additions
- Removals
- Designated uses
- GIS layers

R18-11-120

ENFORCEMENT

Enforcement (R18-11-120)

- This “enforcement” rule indicates how compliance will be shown for purposes of a compliance action.
- It has existed since before ADEQ had AZPDES primacy and was last amended in 2002 (see 8 A.A.R. 1264).
- The rule has not been used in a compliance action in recent history in the Water Quality Division.
- It’s unclear how, when, or whether this rule applies to facilities given the applicability of other programs to determine compliance with standards (e.g. AZPDES).

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R18-11-114

MIXING ZONES

Mixing Zones (R18-11-114)

- Stakeholders have requested a review of 114(H) Mixing Zone Requirements
  - Length of the mixing zone should be determined on site-specific conditions, not prescribed in rule
  - Examine use of zone of passage and zone of initial dilution- “rapid and complete” vs “incomplete mixing”
- ADEQ contractor is review our mixing zone rule, other states rules and EPA guidance

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R18-11-115 & Appendix C

SITE SPECIFIC STANDARDS

Site Specific Standards (R18-11-115 & App. C)

- Not approved by EPA from 2016 rulemaking:
  - R18-11-115(B)(5) – adaptive process language
  - Appendix C site specific standards for copper in:
    - Bright Angel Wash
    - Transept Canyon

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R18-11-122

VARIANCES

Variances (R18-11-122)

- In 2015 EPA promulgated a final rule: see 80 Fed. Reg. 51020, 51035 (Aug. 21, 2015) (link here)
- Time-limited, for specific pollutants, and applicable to a particular permittee or water body segment.
- Must be issued as a water quality standard
- States must submit supporting documentation:
  - why variance is needed,
  - how it represents the highest attainable condition,
  - justify term and requirements
- May not lower the quality of currently attaining waters

What do you think?

1. What are the **values**, the overarching benefit, that you want to see reflected in this rulemaking?

2. What **criteria** do you suggest to implement and realize those values?

OTHER TOPICS?

Please send additional topics and comments by:

May 17, 2018

to

WaterQualityStandards@azdeq.gov

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