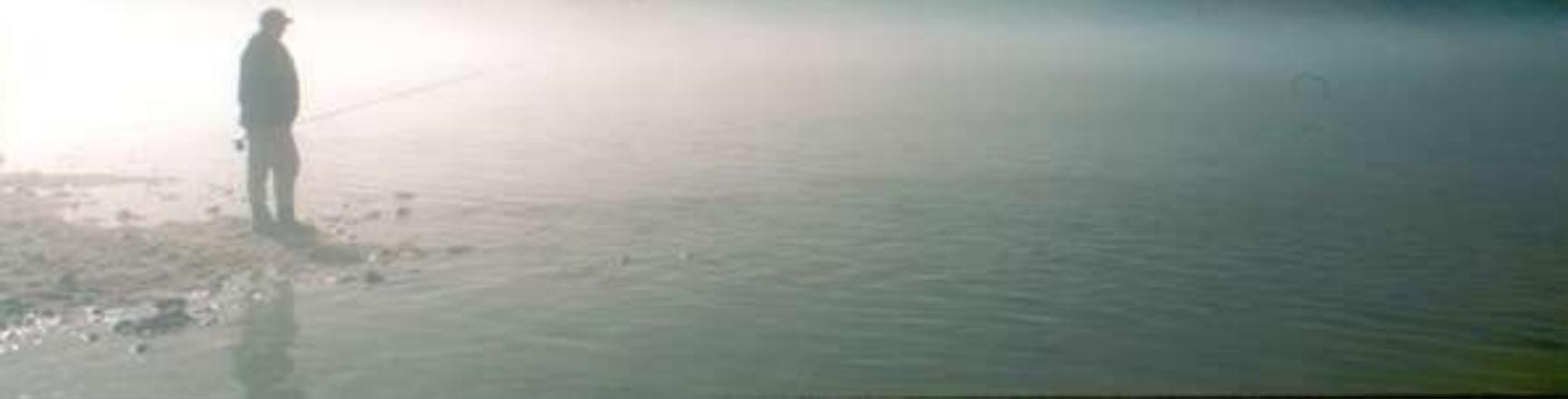


Arizona's Numeric Surface Water Quality Standards



- 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

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

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



Risk estimation x Body weight
Consumption rate



- 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.

Toxicity Protectiveness



Ammonia									
CU		C		WU		W		EDW	
Acu	Chr	Acu	Chr	Acu	Chr	Acu	Chr	Acu	Chr
M	M	S	L	M	M	L	L	L	L

2013 EPA criteria
document



Media	Fish Tissue		Water Column
Matrix	Egg/Ovary ¹	Fish Whole Body or Muscle ²	Monthly Average
Concentration	15.1 mg/Kg (dw ³)	8.5 mg/Kg whole body (dw ³)	Lentic: 1.5 µg/L (T)
		11.3 mg/Kg Filet (dw ³)	Lotic: 3.1 µg/L (T)
Duration	Instantaneous	Instantaneous	30 days
Frequency	Not to be exceeded	Not to be exceeded	Not more than once in three years on average

1. Egg/Ovary supersedes any whole-body, muscle, or water column element when fish egg/ovary concentrations are measured.
2. Fish whole-body or muscle tissue supersedes water column element when both fish tissue and water concentrations are measured.
3. Dry weight



2016 EPA criteria
document

Cadmium						
C		W		EDW		Eph
Acu	Chr	Acu	Chr	Acu	Chr	Acu
S+	L	L	M	L	M	M

2016 EPA criteria
document





Questions?



R18-11-109(F)

NUTRIENTS

- In 2016 TR ADEQ limited the applicability of the nutrient standards to the streams 10 listed waters and their perennial tributaries
 - 2016 Preamble Language
 - ADEQ proposes to limit the applicability of these standards to discharges that actually impact the surface water
 - Any tributary of a listed surface water would be included in the nutrient standard if the source discharging to the tributary has the reasonable potential to impact the listed surface water based on consideration of the factors listed

- 109(f) Nutrient criteria. The following are water quality standards for total phosphorus and total nitrogen (expressed in milligrams per liter (mg/L)) that apply to the surface waters listed below. A minimum of 10 samples, each taken at least 10 days apart in a consecutive 12-month period, are required to determine a 90th percentile. Not more than 10 percent of the samples may exceed the 90th percentile value listed below. The Director will apply these water quality standards for total phosphorus and total nitrogen to a surface water listed below, ~~and~~ The Director may apply these standards to any source discharging to a tributary (ephemeral, intermittent, effluent dependent water, or perennial) of the surface waters listed below, as necessary to protect nutrient water quality in the listed surface water based on the volume, frequency, magnitude and duration of the discharge, and distance to the downstream surface water listed below

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

