

# Arizona's Surface Water Quality Standards



# 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



## 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



## Three main types of numeric standards:

### Human Health



### Aquatic and Wildlife



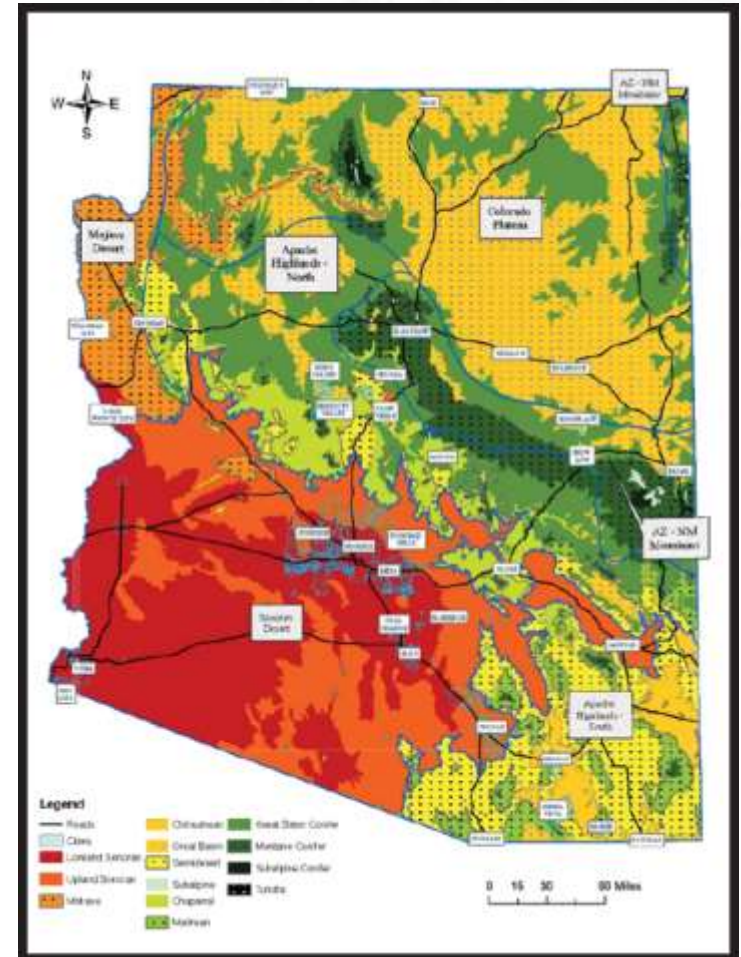
### Agriculture



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

## EPA recommended criteria:

- 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





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



# Data used for A&W standards:

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





- 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?



R18-11-112

# OUTSTANDING ARIZONA WATERS



# OUTSTANDING ARIZONA WATERS WORKGROUP SUMMARY



- Outstanding Arizona Waters (OAWs) were identified as a topic of interest at the initial stakeholder meeting.
- Workgroup members were chosen based on interest being indicated at the initial meeting, and on the goal of having a range of interests represented.
- Membership included representatives from:
  - Arizona Game and Fish
  - AZ Mining Association
  - Cienga Watershed Partnership
  - the Community Water Coalition
  - National Park Service
  - Pima County
  - Rosemont Mining Co, and
  - the Sierra Club

## Project Scope:

How can ADEQ define “good water quality” (R18-11-112(D)(3)) more clearly to avoid confusion in determining whether a water is eligible for OAW consideration?

Once a water has become an OAW what action should be undertaken to ensure that it is being maintained and protected as a Tier 3 water under R18-11-107(D)?

What actions should ADEQ take if data shows that water quality is degrading in or if impairment status is determined on a water that is listed as an OAW?

Should ADEQ consider modifying the flow-regime based OAW eligibility requirements in this rulemaking? If so, what changes are recommended by the workgroup, and why?

How can ADEQ define “good water quality” (R18-11-112(D)(3)) more clearly to avoid confusion in determining whether a water is eligible for OAW consideration?

■ **Discussion Points:**

- Should “good” water quality be a requirement at all?
- How much data is necessary to determine “good” water quality?
- Should stormwater exceedances prohibit water quality from being considered “good”?

■ **Non-consensus Recommendations Summary:**

- Strike requirement for good water quality
- Revise existing language to clarify that good water quality means that the uses for which it is being nominate are protected based on available information at the time of nomination
- Require nominated waters to be supported by sampling results in multiple locations and over all seasons and flow conditions that cover a range of parameters sufficient to ensure all applicable standards are being met
- If a water is designated based on data limited to certain flow conditions, Tier-3 antidegradation requirements should only apply at those same flow conditions

## Question #2:

Once a water has become an OAW what action should be undertaken to ensure that it is being maintained and protected as a Tier 3 water under R18-11-107(D)?

### **Potential solutions discussed (**non-consensus**; some solutions policy/procedure versus rule):**

- ADEQ requiring that nominees provide enough data with the nomination to establish baseline water quality by which anti-degradation requirements could be measured
- ADEQ assuming responsibility for establishing the water quality baseline either upon nomination, or after an OAW has been designated.
  - At a minimum, prioritize what data is needed to establish baseline to allow other entities to conduct monitoring adequate to establish baseline water quality.
- Discovery of sources of degradation should trigger additional monitoring by ADEQ.
- ADEQ should share best management practices recommendations with land managers/land owners.

### **Recommendations Summary (ADEQ – no position papers submitted for this topic):**

- OAWs should be protected following the criteria provided in R18-11-107.01(C) (*Antidegradation*).
- ADEQ should establish a schedule for monitoring OAWs post-designation, perhaps with varying levels (eg. waters with known or suspected sources of degradation would be a higher priority for monitoring).



What actions should ADEQ take if data shows that water quality is degrading in or if impairment status is determined on a water that is listed as an OAW?

## ■ **Consensus Points:**

- If degradation is suspected in an OAW, ADEQ should prioritize monitoring
- If an OAW becomes impaired post designation it should be considered as a high priority for TMDL development or alternative restoration action

## ■ **Non-consensus Recommendations Summary**

- If water quality in an OAW is determined to be degraded based on reliable and sufficient sampling, declassification as an OAW should be an option
- ADEQ should not declassify a degraded OAW, for the following reasons:
  - Declassification would result in reduced antidegradation protection
  - Declassification would remove aforementioned monitoring, TMDL and restoration prioritization that an OAW would have
  - Depending on the pollutant causing impairment, the uses for which the water was nominated may not be impacted
  - Declassification of impairments could incentivize polluters to intentionally compromise water in an OAW
  - Automatic declassification of impaired water memorialized in rule could result in lack of public process, when initial listing *are* subject to public process

# Question #4:

Should ADEQ consider modifying the flow-regime based OAW eligibility requirements in this rulemaking? If so, what changes are recommended by the workgroup, and why?

## ■ Discussion Points:

- Form 1981 to 2002, flow regime was not used to determine OAW eligibility
- In 2002, rule amended to refer to “perennial” waters; also when “free flowing condition” and “good water quality” requirements were added
  - Modeled on similar Federal Wild and Scenic Rivers criteria
- In 2009, rule further amended to include intermittent waters

## ■ Non-Consensus Recommendations Summary:

- Remove flow regime from eligibility criteria entirely
  - Flow data not always available; concern that dewatering activities may be incentivized; impacts of drought and climate change on flow regime; exceptional rec or ecological significance requirements already ensure that current flow regime (whatever it may be) is sufficient to support those uses.
- Retain the current wording; no changes
- Revert to limiting eligibility to perennial waters
  - OAW classification results in stringent Tier 3 anti-degradation requirements and should be limited to narrow circumstances so as to not inappropriately restrict economic development and otherwise authorized land uses



R18-11-107; R18-11-113

# **ANTIDEGRADATION & EFFLUENT-DEPENDENT WATERS**

- Workgroup convened in November 2017 to address concerns raised by stakeholders and provide input to ADEQ
- 10 members (8 non- ADEQ)
- Five topic questions discussed to fulfill charter
  - “ADEQ requests this workgroup to provide technical recommendations that ensure that ADEQ’s Antidegradation Rule and Effluent Dependent Waters (EDW) definition and application is clear, concise and is adequate to protect against the degradation of surface water quality consistent with the Federal Clean Water Act.”

- Is the current Antidegradation Rule consistent with Federal Clean Water Act? If not, what changes should be made to correct the inconsistencies?
- Recommendation: The workgroup consensus is that Arizona Administrative Code Title 18, Chapter 11, Sections 107 and 107.01 are consistent with the Federal Clean Water Act and no changes are necessary.



- ADEQ is proposing that the Baseline Characterization section (R18-11-107.01 (B)(3)(c)) be renumbered to R18-11-107.01 (B)(2) with the subsequent sections being renumbered. Do work group members anticipate any adverse impacts or risks associated with this change?
- Recommendation: The workgroup consensus is that renumbering current Baseline Characterization language to 3(a) from 3(c) would be appropriate rather than renumbering it to (B)(2). Renumbering the section will allow for the rule to follow the process steps required under a Tier 2 Antidegradation Review.

- ADEQ is proposing that the temporary impacts to OAWs language found in R18-11-107.01 (C)(4) be moved to its own section (5) and clarify that the temporary impacts cannot be “regularly occurring”. Do work group members anticipate any adverse impacts or risks associated with this change?
- Recommendation: No consensus was reached by workgroup members regarding allowable temporary impacts outside of the 404/401 program. The group did agree that temporary impacts are “not regularly occurring”

- How can the definition of an “effluent dependent water” (EDW) (R18-11-101 (17)) be changed to provide greater clarity to its applicability?
- Recommendation: No consensus was reached by the group related to a specific language change. However, the majority of members suggested that the definition should be revised to describe how infrequent discharges may not create an effluent dependent water

- Does the definition of “wastewater” (R18-11-101 (48)) clearly limit the applicability of an effluent dependent water? If not, how should the definition be changed?
- The work group agreed that defining wastewater by what is not does not provide clarity. The group provided suggestions that ADEQ will consider:
  - Replace “Wastewater” with “Wastewater Effluent”
  - Define as “effluent from a sewage or industrial wastewater treatment facility and does not include:...”

## Suggestions and Questions





# 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](mailto:WaterQualityStandards@azdeq.gov)**

