

# Water Quality Standards Proposed Rules

Oklahoma Water Resources Board

Public Hearing

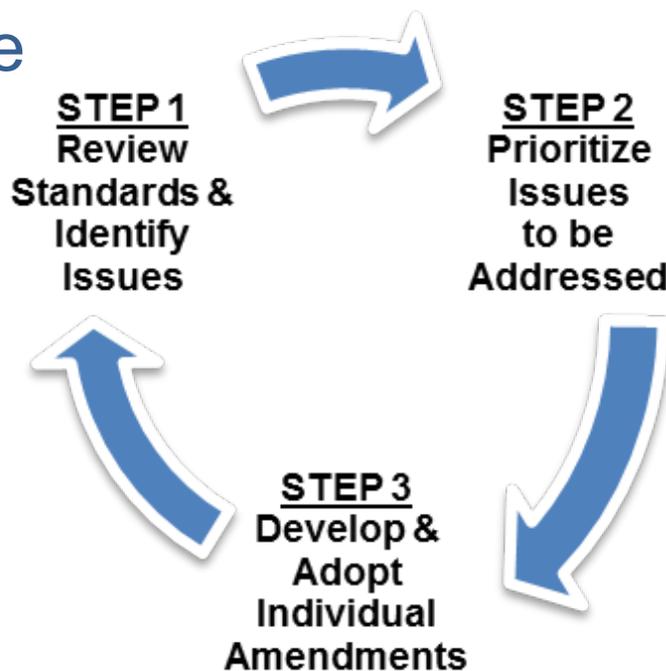
Item 4A4 & 4A5

January 15, 2019



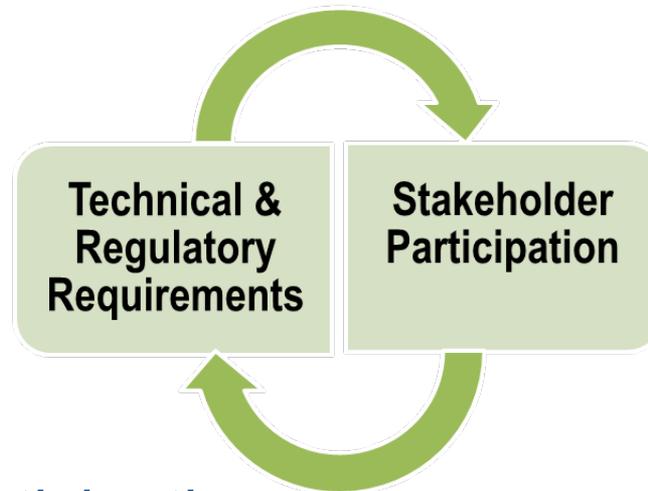
# WQS Triennial Review

- Clean Water Act requires states to review WQS & hold public hearings at least once every three years. This process is known as triennial review.
- Modify/adopt WQS, as appropriate
  - New scientific information
  - EPA recommendations
  - Stakeholder concerns



# WQS Rulemaking

1. Technical & regulatory work to develop proposed actions



2. Stakeholder Participation

- 3 Public Meetings
- 12 small group/individual meetings
- Numerous phone calls & email notices
- Formal notice of rulemaking - 845 postcards

# Outline of Proposed WQS Rules

- Chapter 45: Water Quality Standards
  - Selenium aquatic life criterion
  - Site specific criteria
  - WQS Variance
  - Appendix H revision
- Chapter 46: Water Quality Standards - Implementation Provisions
  - Selenium criterion implementation
  - Use Support Assessment Protocol

# Selenium Aquatic Life Criterion

- Naturally occurring mineral
  - Enters waters naturally via weathering
  - Enters waters via anthropogenic pathways
- Harmful to aquatic life
  - Toxic at higher concentrations
  - Bioaccumulates in food chain
  - Chronic exposure
    - Reproductive impairment
    - Adverse affects to growth
    - Juvenile mortality



# Selenium Aquatic Life Criterion

## Proposed Selenium Chronic Criterion

### Current Selenium Criteria

- Developed in 1987

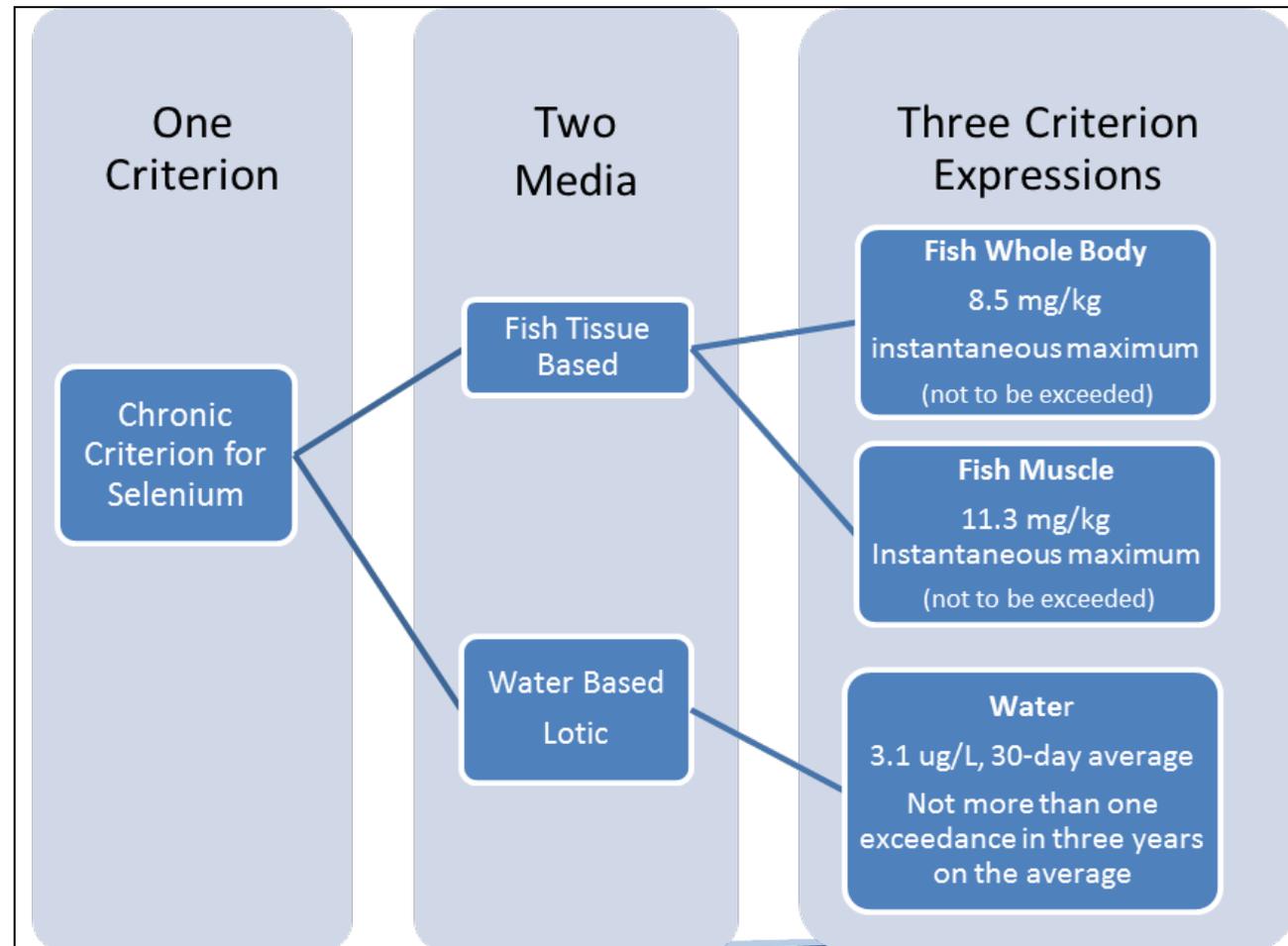
#### Water

Acute: 20 ug/L

Chronic: 5 ug/L

#### Fish Tissue

None



# Selenium Criterion - Implementation

- Wastewater permits key implementation program
  - Se water chemistry still 1<sup>st</sup> step in analysis
  - Fish tissue results used to confirm need for permit limit
  - Technical guidance in development
- Implementation in WQ assessments
  - Water chemistry & fish tissue data can be used independently
  - Fish tissue data required prior to TMDL development
- Areas with geology naturally high in Se excluded
  - Generally areas found in western Oklahoma
  - Retain current chronic criterion

# Site-specific Criteria

- OK WQS include option to adopt site-specific criteria
- Site-specific criteria developed to protect beneficial uses at a particular site, while addressing the site's unique physical, chemical, or biological conditions
- Revision works to provide clarity & increase accessibility to developing site-specific criteria

# Use Support Assessment Protocol

- Beneficial Use Support Assessment Protocols
  - Located in Chapter 46
- Revisions needed for clarification & uniformity in WQ assessments
  - Minimum samples required for flowing waters
  - Minimum samples required to calculate measures of central tendency (e.g. means or medians)
  - Clarify use of data mean in nutrient threatened protocol
  - Address newly proposed selenium criterion

# WQS Variance - Temporary Standard

- Tool that guides progress toward attaining a beneficial use and criterion that is not currently being attained
  - Time-limited
  - Enforceable WQS for a specific pollutant
  - From a specific source or for a specific waterbody
  - Must reflect the highest attainable condition
- Variance is a water quality standard and requires review and approval by EPA



## Interim Requirements

- Improved Treatment
- Improved management practices
- Pilot New Tech.
- Other



**Leads to improved effluent quality**



..... **Leads to restored beneficial uses**



# WQS Variance

- OK WQS have long included option for variance
- However, it is ineffective tool
  - Limited to numeric toxic criteria only
  - May not exceed 3 years, no renewal allowed
  - Facility & receiving water specific only
- 2015 federal WQS regulations revised & improved variances procedures
- This revision is consistent with federal regulations & creates opportunity for variance to be an effective tool to improve water quality

# Human Health Criteria 2020

- Human health criteria protect the *Public & Private Drinking Water Supply* and *Fish Consumption* beneficial uses
- 28 years since the last comprehensive review regarding need for human health criteria
- Since 1991 the chemicals used across a range of industries/activities have diversified & increased
- Science supporting HHC development has evolved & improved

# Human Health Criteria 2020

- 71 Chemicals evaluated
  1. Was it measured in OK's waters
  2. Is it discharged into OK's waters
  3. Does it have likely potential to be discharged
  
- Evaluation Outcome
  - 38 Chemicals considered
  - 33 Chemicals discarded
  
- Work in 2019
  - Bioaccumulation factors
  - Continued stakeholder participation

# Significant Comments to Date

**Comment:** Lowering the selenium water criteria will impact dischargers

**Response:** Approximately 23 facilities currently have a Se permit limit. It is likely that as part of their next permit renewal these facilities will need to conduct Se monitoring & potentially a fish tissue study to determine if revised permit limits are needed.

Se is a bioaccumulative pollutant and the bioaccumulation through the aquatic food web depends on several factors specific to each waterbody. Thus, it is not a foregone conclusion that Se discharged via wastewater will result in detrimental impacts to fish. The fish tissue special study provides for regulatory flexibility and if the results are below the criterion will alleviate the need for a permit limit.

At this time it not possible to estimate the number of additional facilities that may receive a limit for the first time because that will only become known based on facility specific screening data at the time of permit renewal

# Significant Comments to Date

**Comment:** A fish tissue special study will be difficult to implement

**Response:** This is the first time water & tissue combined criterion elements are included in the WQS and the first time fish tissue is included as part of OPDES permits. OWRB staff expects to invest additional time to assist & cooperate with ODEQ staff on the development and review of fish tissue special studies. OWRB staff is developing a fish tissue monitoring technical guidance document that will support both stakeholders & sister agency staff in the development and review of fish tissue special studies.

# Significant Comments to Date

**Comment:** Revision to the WQS variance provision will reduce water quality protection and allow pollution

**Response:** A WQS variance does not reduce water protection or allow pollution. A WQS variance is a tool to guide and direct incremental improvements in water quality over time in situations where a waterbody's beneficial uses are not currently being met, but is attainable in the future. It provides a framework and a set period of time for parties to employ various implementation actions to improve water quality over time. A variance is only temporary the waterbody's original WQS remains the long-term goal for the waterbody.

The 2019 proposed rule only sets a framework to develop a variance in the future. It does not establish a variance for the Scenic Rivers or any other waterbody.

# Questions

