Today’s Meeting

• Provide brief overview of Water Quality Standards (WQS)

• Provide briefing on several actions planned for the 2015-16 Rulemaking
  – Aquatic Life Criteria Updates (today)
  – Appendix B Updates (today)
  – Appendix A Updates (October 1)
  – Sensitive Water Supply – Reuse (October 1)

• Opportunity for Public Solicitation of Revision Topics
Aquatic Life Criteria Updates
Aquatic Life Criteria Updates

- What are Aquatic Life Criteria (ALC)
  - ambient numeric water quality criteria for toxic pollutants
  - Established to protect the Fish & Wildlife Propagation beneficial use
  - Located in Appendix G of Oklahoma WQS
Aquatic Life Criteria Updates

- Numeric criteria are values not to be exceeded
- Estimates of concentrations of pollutants expected to protect aquatic life from both short and long-term adverse effects
  - Acute (mortality)
  - Chronic (reduced reproduction or growth)
Criteria Format - Magnitude, Duration, Frequency

- Criteria are expressed with 3 components
  - Magnitude - maximum concentration
  - Duration - averaging period
  - Frequency - average frequency of allowed excursions

- This approach allows criteria to be protective without being overprotective
Aquatic Life Criteria Updates

- Why update ALC
  - Current criteria adopted in 1988
  - Updated toxicological information directs need to update criteria
  - Updates are necessary to fully protect the Fish & Wildlife Propagation beneficial use
Aquatic Life Criteria Updates

- Criteria based solely on data & scientific determinations about the relationship between concentrations of a pollutant & its effects on aquatic life
- Revised Deletion Process for the Site-Specific Recalculation Procedure for ALC
Recalculation Procedure

- Edit (i.e. delete) species from original toxicity data set to better reflect the taxonomy of species that reside in the state
- Taxonomy has value in predicting sensitivity to a given toxic pollutant
- Deletion of nonresident tested species allowed only if they are not an appropriate surrogate for resident untested species
Toxicity Data Requirements

- **SALMONID**
- **2\textsuperscript{ND} FISH FAMILY**
- **3\textsuperscript{rd} CHORDATE FAMILY** (Fish or Amphibian)

- **PLANKTONIC CRUSTACEAN**
- **BENTHIC CRUSTACEAN**

- **AQUATIC INSECT**
- **3\textsuperscript{rd} PHYLUM** (e.g., Rotifera, Annelida, Mollusca)
- **4\textsuperscript{th} PHYLUM OR ANOTHER AQUATIC INSECT ORDER**
Acute ALC Calculations

Compile species data from 8 families

Calculate GMAVs

Rank GMAVs

FAV divided by 2 = **Acute Criterion**

Calculate FAV

Least squares regression based on 4 most sensitive GMAVs

GMAV (Genus Mean Acute Value)

FAV (Final Acute Value)
Chronic ALC Calculations

Calculate ACR
(Requires parallel acute & chronic toxicity testing)

Calculate Final ACR
(Geomean of all ACR)

FCV = FAV divided by Final ACR

FCV = Chronic Criterion

ACR (Acute to Chronic Ratio)
FCV (Final Chronic Value)
Aquatic Life Criteria Updates

- Recommend updates for 15 criteria
  - 9 metals
  - 4 organic chemicals
  - 2 corrections
Public Solicitation

• Part of the triennial revision is to more fully engage the public in the revision process
• Staff actively solicit public concerns with and needed revisions to the WQS through mail, meetings, and at each informal stakeholder meeting
• Topics may or may not be fully reviewed and added for the 2015 revision but will be considered for future interim revisions
<table>
<thead>
<tr>
<th>Preparatory Activities for Standards Revisions</th>
<th>Dates</th>
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<tr>
<td>Stakeholder meetings</td>
<td>August 26 &amp; October 1, 2015</td>
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<tr>
<td>Informal public meeting</td>
<td>October 27, 2015</td>
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<tr>
<td>Notice of Rulemaking Intent (NRI) submitted to Office of Administrative Rules</td>
<td>November 25, 2015</td>
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<td>NRI &amp; proposed text submitted to Governor &amp; Cabinet Secretary</td>
<td>November 25, 2015</td>
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<tr>
<td>NRI published in the Oklahoma Register &amp; draft text available for review</td>
<td>December 15, 2015</td>
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<tr>
<td>Rule Impact Statement (RIS) published on web page</td>
<td>December 15, 2015</td>
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<tr>
<td>Draft Proposed Rules for Public Inspection</td>
<td>December 15, 2015</td>
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<tr>
<td>Notice distribution to stakeholders</td>
<td>“On or around “ December 15, 2015</td>
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<tr>
<td>Formal Hearing at OWRB Board meeting to receive public comments</td>
<td>January 19 or February 16, 2016</td>
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<tr>
<td>Comment Responsiveness Summary prepared for Board</td>
<td>February – March, 2016</td>
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<tr>
<td>Final Proposed Rules Prepared for Board Vote</td>
<td>February – March 2016</td>
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<td>Board Action to Adopt revised OWQS</td>
<td>February or March 2016</td>
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<tr>
<td>Agency Rule Report submitted to Legislature and Governor</td>
<td>February or March 2016</td>
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<tr>
<td>Legislative review &amp; approval</td>
<td>Spring 2016</td>
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<td>Gubernatorial review</td>
<td>Spring 2016</td>
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<tr>
<td>Final State Rule Promulgated &amp; Published</td>
<td>September 2016</td>
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<tr>
<td>Attorney General Certification</td>
<td>September – November 2016</td>
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<tr>
<td>Submittal to EPA Region 6 (within 30 days of Attorney General Certification)</td>
<td>September – November 2016</td>
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<tr>
<td><strong>EPA Review &amp; Approval</strong>: 60-90 days</td>
<td><strong>November 2016 – January 2017</strong></td>
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IF YOU HAVE ANY QUESTIONS OR WOULD JUST LIKE TO DISCUSS WQS...

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