

**WESTERN COALITION OF ARID STATES  
POSITION STATEMENT ON  
SALINITY WATER QUALITY REGULATION  
April 19, 2018**

**I. SALINITY WATER QUALITY REGULATION**

**II. BRIEF SUMMARY OF ISSUE**

WESTCAS supports the regulation of salinity (dissolved salts) in a manner that provides environmentally sound management of water resources and protection of public health. However, current regulatory policies jeopardize operations of municipalities and industries in the Arid West by frequently imposing unachievable requirements. The following factors contribute to this challenge:

- Unavailability of practical treatment of elevated dissolved salt concentrations: cost, lack of ability to dispose of residuals, water loss associated with treatment.
- Insufficient consideration of regional conditions such as dry stream beds, ephemeral streams, and intermittent streams.
- Aquatic life standards based on insufficient science.
- Insufficient consideration of impacts due to drought.
- Potential public safety impacts if use of salt for deicing is limited.
- Insufficient consideration of the relationship between elevated salt concentrations in water supplies and the resultant elevated salt concentrations in effluents.

**III. DESCRIPTION OF IMPACTS ON THE ARID WEST**

These regulatory programs disproportionately impact the Arid West due to natural conditions of geology and hydrology. These impacts are both programmatic and financial.

- Programmatic
  - Unreasonable expectations regarding the control of anthropogenic sources of dissolved salts such as home water softeners and road salts for deicing.
  - Hurdles to obtain permits and permit renewals that comply with standards. Exemptions to standards compliance based on an inability to achieve those standards vary from state to state. However, all include the increased burden during permit processing of reassessing the permittees' ability to comply and to identify of feasible alternatives.

- Hindrance of compliance with downstream water rights obligations due to a requirement to eliminate or reduce a discharge, or other management measures.
  - Limitations on water reuse and conservation programs.
  - Limitations on trans-basin diversions for water supply.
  - Limitations on the ability of water managers to use alternative water sources with higher salinity to supplement water supplies, especially during drought periods.
  - Limitations on desalination for the development of brackish surface or groundwater as a supply source.
- Financial
    - Expensive, on-going studies of receiving water quality and/or industrial contributions for municipal dischargers.
    - Adverse impacts on economic activity as permit limits affect industrial dischargers through the pretreatment program or preclude new industries.
    - Costly relocation of discharge locations to comply with standards.
    - Compliance costs (treatment, other compliance measures, enforcement-related costs when compliance cannot be achieved, etc.) that impact the rate payers of communities and, for some communities, may not be financially feasible. As an example, the long-term salinity management plan for the Central Valley in California has an estimated annualized cost of \$3.3 billion and is projected to take 30 years to implement.

#### **IV. PRIORITIES AND ACTION PLAN**

Recommendations are offered with respect to the types of water quality standards adopted and the procedures States or authorized tribes use to develop permit limits based on those standards

- Standards
  - Instead of establishing standards based on TDS or conductivity for the protection of aquatic life, establish numeric standards for the specific ions or ion combinations that are of concern.
  - Allow States and authorized Tribes to implement Iowa approach to chloride and sulfate standards, with appropriate revisions to reflect the most current research. Once the updates to the standards are complete, allow their use by all States until such time as EPA updates criteria documents.

- Establish standards for dissolved salts that are appropriate for conditions in the Arid West, including a policy to exempt discharges to ephemeral and intermittent streams, such as dry gulches and arroyos, from aquatic life based parameters because they do not maintain an aquatic habitat or sustain aquatic species.
- Do not establish TDS or conductivity water quality standards, except as necessary to protect potable water supplies, irrigation usage, and/or livestock watering.
  - TDS does not correlate well with aquatic life impacts. The TDS concentration that can cause 50% mortality to *Ceriodaphnia dubia* during a 48-hour test ranges from 390 milligrams per liter (mg/L) to 4,000 mg/L, depending upon the ionic composition of the dissolved salts<sup>1</sup>.
  - The draft field-based methods for derivation of conductivity criteria under consideration by EPA (USEPA 2017) contain significant technical flaws, as has been documented by numerous commenters.
- Provide an exemption from meeting dissolved salt standards established to protect aquatic life uses if the discharge is passing the Whole Effluent Toxicity (WET) test.
- Allow flexibility with respect to how standards are set for waters with naturally occurring high salinity.
- Provide exemptions from compliance with standards during times of drought, or establish alternative standards applicable during extended dry periods based on trigger criteria.
- Procedures for Developing Permits
  - Exempt municipal dischargers from numeric limits for dissolved salts in permits if the increase in the TDS concentration in the effluent, compared to the long-term average concentration in the drinking water supply, does not exceed a pre-determined amount.
  - Lower the barriers to obtaining and renewing a discharger-specific variance (temporary standard) approval for dissolved salts.
  - Allow consideration of net environmental benefit.
  - Increase flexibility. For example, regulate dissolved salts through a combination of a variance and a pollutant management plan rather than a numeric permit limit.

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<sup>1</sup> *Water Quality Standards Review: Chloride, Sulfate and Total Dissolved Solids*, Iowa Department of Natural Resources, Consultation Package, February 9, 2009.

- Allow application of alternative (longer) averaging periods when assessing compliance with effluent limitations for dissolved salts during extended dry periods.

To implement the recommendations, WESTCAS plans the following actions:

- Monitor the development of scientific research of the effects of dissolved salts on aquatic life.
- Look for options to communicate with the US Environmental Protection Agency on the treatment challenges, the need to base water quality standards on use impacts, and the need for practical interim options while scientific studies and treatment technologies are being developed.
- Monitor development of treatment technology.
- Coordinate with other organizations, including the National Association of Clean Water Agencies, on working to develop practical short- and long-term solutions.