

Biological Data Use for Standards Development

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Water Quality Standards Group

Water Quality Standards – General

Title 30, Chapter 307, Texas Admin Code

- Specify “instream” goals: uses, criteria
- Texas had Water Quality Standards before 1967
- Required by U.S. Clean Water Act in 1972
- Reviewed/revised ~ every 3 years
- Adopted by state - EPA approval required
- Apply to state and federal activities

Water Quality Standards & Water Quality Management

- Water Quality Standards uses and criteria are implemented by TCEQ water quality management programs:
 - Wastewater permitting
 - TMDLs and Watershed Action Plans
 - Assessing standards compliance with instream monitoring data to identify impaired waters

Use-Attainability Analysis

- Used to re-evaluate designated or presumed uses
- Required by EPA regulation to:
 - Consider a less stringent site-specific use
 - Set a use that's less than fishable/swimmable
- Typically involves instream sampling studies in unimpacted reference areas
- Involves coordination with local stakeholders, state and federal agencies, regulated entities, and the public
- Results incorporated by revising Water Quality Standards

Use-Attainability Analysis

- Fish sampling – seine, electroshocking
- Benthic invertebrates – kicknet, dipnet
- Habitat survey
- Index of biotic integrity (IBI) - fish, invertebrates:
 - Applied to data to define aquatic-life categories:
 - Limited, intermediate, high, exceptional
 - Examples of IBI components (metrics):
 - No. of intolerant species, food chain diversity
 - No. of species, no. of individuals

Use-Attainability Analysis

- Two year study that includes
 - Three biological events – fish, invertebrates, and habitat
 - Two in the critical period
 - One in the index period
 - Ten 24-hour dissolved oxygen events with flow
 - Six in the critical period
 - Four in the index period

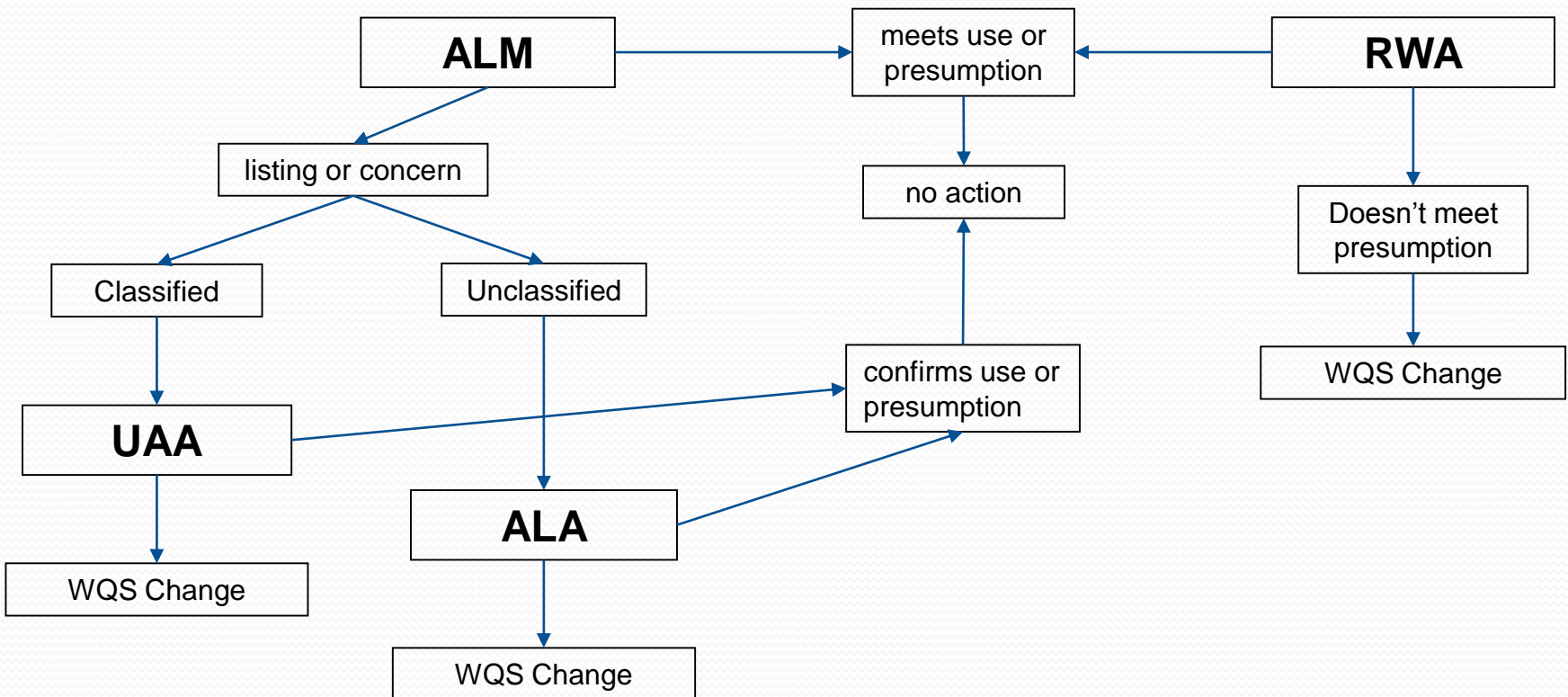
Data Requirements for a UAA

- Study data collected over two years
 - This accounts for variability between years
- Data collected in index and critical periods
 - This accounts for seasonal variability
- More data collected in the critical period
 - UAAs target the normal low flow conditions
- Ten 24-hour dissolved oxygen data collections
 - Provides enough data for an analysis similar to an assessment

Receiving Water Assessment

- Initiated when a new discharge is proposed to an unclassified water body
- Used to evaluate flow regime and uses on unknown unclassified water bodies
- One time event
- Fish sampling – seine, electroshocking
- Benthic invertebrates – kicknet, dipnet
- Habitat survey
- Flow measurements
- Results incorporated by revising Water Quality Standards

Paths to a WQS Change



Contact Information

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