

The Surface Water Quality Monitoring Guidance Advisory Work Group Meeting
August 5, 2004

Handout 3, draft 1 (07/27/04)

The Texas Commission on Environmental Quality will hold the second meeting of the Surface Water Quality Monitoring Guidance Advisory Work Group on August 5, 2004. This group of external stakeholders will advise the agency on revisions to the guidance used to prepare the Texas Surface Water Quality Inventory and 303(d) List.

DATE: Thursday, August 5, 2004

TIME: 10 a.m. to 4 p.m.

LOCATION: TCEQ Central Office, Building B, Room 201A... same as last meeting

The following topics will be discussed briefly as a follow-up to the last meeting:

The timeline for this stakeholder process and the 2006 Texas Water Quality Inventory and 303(d) List

A review of the levels of support and concerns to be used in the assessment including a revision of the naming conventions proposed at the last meeting... Staff will recommend discontinuing the terminology “partially-supporting”, such that some water bodies, previously identified as partially-supporting the water quality standards, will now be identified as not supporting the standards. Currently, water bodies identified as partially supporting or not supporting are both listed on the 303(d) list. They are treated in the same manner for regulatory purposes.

No changes will be recommended for increasing and decreasing the minimum number of samples for assessment (ten), the minimum time period for monitoring (at least two years), and the seasonal requirements for 24-hour and biological sampling. While recognizing that increasing sample size and period of record will increase confidence in the assessment results, staff and stakeholders cautioned against changes in guidance and monitoring that would be more resource intensive.

Staff will recommend the use of the median for characterizing the mixed-surface layer (application of criteria in reservoirs). Staff will investigate the use of both the specific conductance (salinity) and the temperature to define the mixed surface layer for stratified coastal waters.

Compliance with water quality criteria below critical flows... The Texas Surface Water Quality Standards give direction in applying the water quality criteria under critical low-flow conditions. Current assessment practices are being reviewed for consistency with the standards. Field reports with the Flow Severity Code signifying “low flow” will not be construed as below the critical 7Q2.

Sample sites must be representative of conditions which characterize the water body.

Assessment staff will use judgement in determining if monitoring stations are geographically representative of the water body. Monitoring guidance will stress the importance of locating stations so that they are most useful for assessment.

TCEQ has initiated a study of water quality in the headwaters of reservoirs and the transition zone from stream to reservoir, with the objective of developing methods for the application of criteria to protect the aquatic life use and other uses.

The following topics will be discussed at the August 5 meeting in more detail:

Use of data generated from statistically-based (randomized) monitoring designs

A comparison of assessment outcomes using the bacterial indicators fecal coliform and E. coli (see Handout 1).

Use of the binomial method for determining compliance with the standards will be discussed. This statistically-based method considers the frequency of exceedances of the criteria, but not the magnitude of the exceedance. Current listing and delisting methodology considers only the probability of errors at listing, and not when delisting. Both of these limitations of the binomial method will be discussed and additional approaches to listing and delisting considered.

Evaluating compliance with the narrative criteria was discussed briefly in June and will be continued in this meeting. See the revised table (Handout 2), Assessment Methods for Narrative Criteria.

1. Fish advisories and fish tissue screening... Staff will discuss the current methodology for identifying specific pollutants that result in risk to human consumers of fish which is now based on the Texas Department of Health (TDH) consumption-risk analysis report used to generate a fish advisory or closure. Water bodies with fish advisories are listed on the 303(d) list; this approach allows us to target only the specific pollutants contributing to the risk in a TMDL. Staff will propose that surveys of contaminants in fish that use only a few indicator specimens can be used to identify “concerns” or “no concern” for the Fish Consumption Use. Concerns will be used to generate a target list of water bodies for TDH consumption-risk surveys.
2. There is much interest in the determination of use support (or non-support) of the narrative criteria protecting aquatic organisms from toxic sediment. The use of multiple lines of evidence will be discussed for establishing instream toxicity.
3. Staff have completed a statewide survey of instream color. Very few Texas streams are colored by wastewater. Quantitative measures of instream color, the few instances of colored wastewater, and the natural range of color were investigated.
4. TCEQ staff have identified radioactive materials as a potentially emerging issue. Some public water systems that use ground water, treat the water to meet other new criteria and concentrate radioactive materials in the process. As a first step, the drinking water program has provided maps that will be used to develop a targeted monitoring program.
5. The stakeholders and TCEQ staff have identified excessive sedimentation (suspended

sediment, silt) as a condition that should be studied and that quantitative measures for assessment should be developed.

The following topics have been suggested for future meetings. We will review this list and determine the scope of those discussions:

1. At the last meeting, stakeholders asked for discussion and a description of the agency processes for assigning water bodies to the five assessment categories. They requested information on the criteria or conditions that the agency employs to move water bodies from one category to another and to make decisions on when to schedule a TMDL. TCEQ staff are developing a draft document to distribute for comment in late August that will pull together the currently available methodology for 303(d) listing, the strategy for ranking waters for TMDL initiation, and internal documents on the assignment of categories.
2. Stakeholders have also requested a more complete explanation of how the assignment of water bodies to categories and the identification of concerns is used to plan monitoring. An overview of the recent use of assessment outcomes for scheduling monitoring will be presented with examples.
3. Listing water bodies with exceedances of the temperature criterion caused by thermal discharges.
4. Threatened/endangered species - role in the listing process.
5. A comparison of sediment screening levels used by TCEQ program.
6. How should exceedances of the pH criteria be listed? Should non-support of other parameters also be reviewed when pH is not supported?
7. How does listing for narrative criteria relate to a TMDL endpoint?
8. Data quality objectives and use of data generated by continuous monitoring stations for use in the assessment.
9. Determining the appropriate DO Criteria based on flow-status of streams; improving the flow-status questionnaire
10. Considerations related to flows sustained by wastewater
11. DO and other criteria attainment in isolated pools