Meeting Minutes
January 6, 2009

Surface Water Quality Standards Advisory Workgroup Meeting

9:30 – Welcome – Sidne Tiemann
Introduction of Chip Morris (facilitator), Kelly Keel (Water Quality Planning Division (WQPD) Director), Charles Maguire (WQPD, Assistant Director), Laurie Curra (Monitoring and Assessment Section, Section Manager, WQPD), and L'Oreal Stepney (Water Quality Division)
Introductory remarks by Kelly Keel and L'Oreal Stepney

9:40 – Introduction of Attendees (see sign-in sheet)

9:45 – Process Overview- STiemann
Review agenda and handouts
Public comments (due by January 23)
Revise draft rules
Proposal agenda
Rule-making – publish in the *Texas Register*
Public hearing
Adoption agenda
EPA Approval – Clean Water Act

<u>Recreation Uses and Criteria</u>

Lori Hamilton presented an overview of the history of recreational use categories and criteria from the 1970's to 2000. LHamilton presented slides detailing the proposed criteria for primary contract recreation (PCR), secondary contact recreation 1 (SCR1), secondary contact recreation 2 (SCR2), and noncontact recreation (NCR). It was noted that a change to the designated use for a classified segment and criterion would require a comprehensive recreational use attainability analysis (Comprehensive Recreational UAA) and rule change. LHamilton also presented slides explaining the assignment of uses to unclassified water bodies and Basic UAA survey requirements.

Myron Hess asked about the basis for the chosen numerical criteria for contact recreation. LHamilton explained that 206 cfu/100 ml for PCR and 630 cfu/100 ml for SCR1 are based on EPA guidance. For SCR2, the criterion is 5X 206 cfu/100 ml and noncontact recreation (NCR) is 10X 206 cfu/100 ml. MHess – so the criteria are not based on TCEQ data? Jim Davenport – affirmative; based on extrapolation. Paul Jensen asked if the TCEQ plans to encourage more data collection. JDavenport – affirmative. Rick Lowerre asked what the PCR criterion would be if it were based on 8 illnesses/1000 swimmers instead of 10 illnesses/1000 swimmers. LHamilton – 126 cfu/100 ml. Pat Radloff asked if the SCR standard could be applied to an individual unclassified water body before a site-specific revision was put in place in the rule. JDavenport – yes, application of the

standard could be similar to how we now assign (1) aquatic life uses and corresponding dissolved oxygen criteria based on stream type [like intermittent streams, for example], and (2) also water effect ratios.

Ceil Price commented that the criteria definitions need to retain the term "desirable" and not just "obtainable." CPrice also noted that incorporating commercial activities such as commercial fishing into recreational contact criteria may be troublesome (e.g., if a fisherman goes overboard).

Peggy Glass asked about the status of exemptions for high flow conditions. JDavenport responded that this is a difficult issue and a defensible resolution has not been identified.

MHess inquired if more than one site visit would be required for a UAA, especially for smaller, unclassified streams. LHamilton – more than one visit may be appropriate. Tiffany Morgan commented that it would be helpful to coordinate with the Clean Rivers Program (CRP) partners who are most familiar with the watersheds in their regions. A representative for the Port of Houston asked if there will be stipulations where no contact recreation will be allowed. JDavenport noted that this can be handled in the WQS with a footnote. Ken Kramer asked how to determine if criterion for SCR1 may have an impact on PCR in a downstream segment and if the overall affect of the proposed recreation revisions will be more or less protective of water quality in Texas. JDavenport responded that the proposed revisions will be more protective when added to the state's water quality (WQ) standards and WQ management programs and help focus on areas of actual impairment.

Randy Palacek noted that an intermediate, temporary criterion value when going from PCR to SCR may be appropriate for phased implementation during the Total Maximum Daily Load process while the standards are being updated and approved by the EPA. Dickie Clary stated that there needs to be a balance between all uses and questioned if the 206 criterion is actually supported by medical evidence. JDavenport responded that the 206 criterion is accepted by the EPA. Diane Evans noted that future studies will be needed. Paul Jensen commented that there is an epidemiological basis for the criteria (based on good weather conditions), but more work is needed toward a realistic, high flow condition criteria. DClary inquired as to who will do the Recreational UAAs. LHamilton responded that UAAs may be conducted by the TCEQ, regional staff, river authorities, and/or CRP partners.

Jay Bragg asked how the SCR criteria such as 630 cfu/100 ml would apply to WWTP discharges. L'Oreal Stepney responded that this issue would be addressed in an upcoming separate rulemaking meeting scheduled for January 23.

Debbie Magin asked for a clarification on the use of single sample vs. geometric mean. LHamilton responded that single sample results would still be used in some cases (e.g., the Beach Watch program) but as currently proposed they would not be used for assessment purposes. MHess stated that he did not think using only the geometric mean was an appropriate way to assess human health. MHess asked why single samples are

not appropriate for exposure, and JDavenport responded that single samples are difficult from a long-term data analysis perspective, but may be appropriate for a very short time scale. PJensen noted that there is no epidemiological basis for single samples.

Matt Romig asked who is responsible for swimmer notification and LHamilton responded that the General Land Office is responsible for the Texas Beach Watch Program, but there is no statewide notification policy for inland waters.

Michael Bloom asked about the technical basis for the new criteria numbers. He noted that current studies focus on the percent ingestion based on activity type and recommended that a group study be initiated for Texas.

LHamilton discussed the Buffalo/Whiteoak Bayou Recreational UAA conducted by Texas AgriLife contract. These water bodies are highly modified and channelized with public access and diverse recreational activities (e.g., canoeing, fishing, hiking, some swimming, etc.). Pat Radloff asked how wading by children was addressed. LHamilton stated that it was included in the UAA procedures. Ken Kramer noted that Whiteoak Bayou used to be a natural water body and that the TCEQ is allowing water bodies that were historically suitable for contact recreation to be degraded. KKramer asked if the Houston area bayou UAA was open to a public meeting and LHamilton answered in the negative. Charles Maguire noted the opportunities for stakeholder involvement in the Houston area. KKramer emphasized that public and private input should be encouraged. MBloom noted that UAAs should be included in the public process. The City of Houston noted that they are working closely with public and private interests and the TCEQ to protect and promote recreational opportunities on the area bayous.

MHess inquired as to the definition of "incidental swimming" and how frequency data will be evaluated by the TCEQ? LHamilton responded that still remains unresolved at this time. MBloom noted that the use of survey forms and photos for UAAs can be difficult and recommended a system used by the state of California that takes photos at 15-minute intervals to document uses. This type system can be cost-effective and very useful.

Permitting and Bacteria

Kent Trede presented an overview of the rulemaking process and noted that negotiations are on-going between the TCEQ and the EPA. In the interim, applications are screened for 303(d) listed waters for bacteria for all permitted facilities. KTrede also noted the date of the January 23 stakeholder meeting and deadlines for public comments. L'Oreal Stepney noted, based on an agreement with the EPA, that current permits will not be "re-opened" for review.

Nutrient Criteria Development

JDavenport noted that nutrient criteria development was initially mandated by the EPA in 1998 and that through the TCEQ nutrient criteria workgroup, the Nutrient Criteria

Development Plan was finalized in November 2006. The preliminary approach included reservoirs, streams, and estuaries with an emphasis on the main pool mean chlorophyll-*a*, historical conditions, and the relationship of chlorophyll-*a*, total phosphorus (TP) and total nitrogen (TN). JDavenport presented slides with an overview of the workgroup suggestions, proposed draft criteria, nutrient criteria assessment, and potential permitting impacts on the main pool of the reservoir. JDavenport also provided an overview of the revised Implementation Procedures (IPs) for nutrients including site-specific screening factors and "weight of evidence". PRadloff noted that many reservoirs in Texas are hyper-eutrophic. PRadloff does not agree with the use of normal distribution analysis, the use of median values, and the 99% confidence level. She also noted that the trophic condition of a water body may get worse before the nutrient screening process indicates that there is a problem. JDavenport welcomed the peer review from Texas Parks and Wildlife Department (TPWD) for the nutrient criteria process.

PJensen asked about the use of older data (e.g., prior to 1995). JDavenport noted that all data are useful and that no large shift in results was noted if older data were excluded from the analysis. DMagin asked if the median value was used for both chlorophyll-*a* and TP for assessment of standards attainment. JDavenport – affirmative. PJensen asked if a reservoir would be listed as impaired for TP values only. JDavenport – negative. PGlass emphasized that outliers should not be excluded since they can be indicative of ambient conditions (e.g., drought).

Chris Herrington – asked if the TCEQ will recalculate criteria or screening values based on new data since this could allow for a long-term increase in eutrophication. He noted that using only chlorophyll-*a* or TP may be preferable to using both. He also asked if the TCEQ has considered trophic status since some streams may change trophic status (e.g., oligotrophic → eutrophic) without measurable changes in nutrients. CHerrington asked if median values would capture an increased frequency in algae blooms.

Okla Thornton – how was the early data QA qualified? JDavenport – early datasets in the TCEQ's database were included in the current draft criteria analyses. OThornton stated that early datasets should be excluded.

PRadloff asked why there was no mention of Carlson's Index. JDavenport responded that it can be an appropriate tool for identifying trends. CHerrington asked if median values might miss eutrophic increases and algae blooms. JDavenport responded that they might, but so can mean values. Either way, it is important to look for increasing trends. Evan Hornig asked why a minimum of 5 ug/L chlorophyll-*a* was chosen. JDavenport and STiemann responded that the AWRL for chlorometric analysis is 5 and fluorometric is 3 ug/L. TMorgan commented that Brazos River Authority (BRA) prefers to use both chlorophyll-*a* and TP since some BRA lakes have high TP with low chlorophyll-*a*. Rick Lowerre asked how "adequate data" are defined. JDavenport and STiemann responded that a minimum of 30 data points for chlorophyll-*a* was normally used.

LHamilton presented the hand-out (yellow) on site-specific changes in Appendix A.

Recreational Uses

John Burch noted that they often deal with high, variable conductivity and asked if they could use E. coli and/or Enterococcus. LHamilton- Enterococcus is applicable if conductivity is greater than 9,000. JBurch asked if the conversion factor is OK to calculate conductivity. LHamilton – affirmative. [For inland salty segments with Enterococcus as the indicator, Enterococcus will apply at all times regardless of the conductivity values.]

New Segment – Black Cypress Bayou. LHamilton noted the work of Art Crowe and Charles Bayer. PJensen asked if Black Cypress had low DOs. LHamilton – yes, but the revised regression equation is then applicable. PRadloff noted that there is a typographical error for the equation between the report and the draft revision for Segment 0410.

TDS, Chloride, Sulfate

KKramer asked if this is a change in use or criteria. JDavenport responded that it is a change in criteria, not use. Mary Vann asked why Segment 0507 is footnoted (about a water transfer project) and other similar segments are not. LHamilton responded that it is because of a proposed water project and JDavenport emphasized that this is an area that may need more review. PRadloff noted that TDS, Cl, and SO_4 standards were presumptively changed for a permittee's economic benefit. PRadloff asked if there are additional cases. JDavenport – Lake Lavon and probably more in the future.

Dolan McKnight asked if anyone can demonstrate that raising the TDS criterion from 400 to 500 will impact the environment. If so, please contact him. RLowerre asked for the basis of pH standards changes in the Cypress Basin and if they are solely based on Art Crowe's study. JDavenport responded that they are also based on additional analyses of Surface Water Quality Monitoring pH data. MHess asked if this type of approach is standard procedure or if more rigorous procedures will be implemented in the future. JDavenport responded that the TCEQ is working on improving and defining future analytical methodologies.

Seagrasses

Scott Sullivan asked what is the purpose of the seagrass propagation zone. JDavenport responded to identify potential impacts (e.g., Texas Pollutant Elimination System wastewater discharges). SSullivan asked why current standards are not adequate. PRadloff stated that seagrass beds provide nursery habitat and this is only a portion of the seagrass protection effort. SSullivan stated that the working group needs to determine a more accurate method to detail seagrass locations. Mark Fisher stated the applicable portions of the IP will be discussed tomorrow. SSullivan emphasized that the proposed change may be unnecessary. PGlass noted that the standards need to be clear where seagrasses are located (not entire bays) and that TPWD seagrass maps should be available for all persons dealing with affected permits. Raul Cantu stated that maps are

only for one point in time. Seagrass conditions change and the maps should be updated regularly. RCantu also noted that Chapter 307 regulations include protection for both navigation and seagrasses and this issue needs to be addressed by a smaller workgroup. Linda Broach asked about seagrass protection for segments without designation. PR assured the group that TPWD will update the maps as new information becomes available. Diane Evans noted that Conn Brown Harbor was not designated for seagrass use, but was listed by TPWD. Gregg Easley noted that Conn Brown Harbor was eliminated since it was considered to be part of the classified segment 2483. Roger Schenk noted that Trinity and Galveston bays were not included and that seagrass information would be useful early in the permitting process.

Comal River and Upper San Marcos River Maximum Temperature

MHess asked if the proposed changes only apply to Landa and Spring lakes. LHamilton – affirmative, since ambient temperatures increase downstream of the springs, based on information from TPWD, Edwards Aquifer Authority, etc.

Aquatic Life Use and DO

RLowerre asked if streams that do not meet criteria would not be considered impaired if the site-specific regression equation for DO criteria for Black Cypress Bayou was used. Would this approach be used in other areas, and is written information available on how the regression equation was developed? [The Black Cypress Bayou report is publicly available at the TCEQ.] JDavenport noted that standards that are not exceeded by natural conditions are needed and this general approach is already used in some East Texas streams.

EHornig asked if the DO equations are replacing Table 4 (bedslope, DO, Q). EHornig noted that the ALU for the Little Wichita River remains high and the DO decreases to 3.0. LHamilton responded that this is correct, based on a UAA.

MHess noted his concern with no minimum DO for some areas. Robert Burgess responded that no practical minimum exists for pristine areas like the Laguna Madre where the minimum DO would be 0.1 or 0.2 mg/L. JDavenport stated that the footnote would be reworded for clarification, to more clearly note that the 24-average DO would continue to be applied. PJensen suggested that DO saturation might be more useful than concentration.

Appendix D

Mel Vargas asked if the TCEQ would look at tidal/nontidal boundary information if it were made available. STiemann – affirmative.

Randy Palachek asked if “flood control ditches” are defined. Vickie Reat responded.

BRA – 1242 – Thompsons Creek – not intermittent with pools. No pools.

1248 – Berry Creek – not perennial. Intermittent.

David Cowan had questions about how aquatic life uses were assigned to Dry Creek. STiemann said she would provide him the information.

Additional Comments

PGlass noted that the minimal ALU is not well-defined. She also asked about Sole-source drinking water supplies – how is this applied in permitting?

SSullivan noted that there is no guidance or implementation on maintaining navigation use.

Vickie Reat suggested adding a footnote for PCBs (arachlors, congeners, or both?); nickel and thallium (dissolved or total?) and tidal tributaries (Appendix E)

PRadloff asked for the reasoning behind changing the definition of a persistent substance from 96-hour to 60 days.

Tony Bennett noted that some TDS/Cl/SO4 criteria are above secondary drinking water standards.

DClary asked for an explanation of how site-specific uses are designated in the standards when wildlife sources of bacteria are incredibly high.

MHess asked what does pH "reasonable use" in 307.4 (m) mean.

MVargas asked if there would be a high flow exemption for bacteria standards or sampling.

PJensen asked about using velocity as a high flow indicator for bacteria exemption.

PGlass stated that runoff drives bacteria levels. Antecedent rainfall documentation.