Barton and Onion Creek Stakeholder Group
Meeting Summary
March 26, 2007

Welcome and Introductions – Kim Wilson, Special Assistant, Water Quality Division

Summary of 1st Meeting

- Summary from the January 16th meeting is posted on the website.
- TCEQ received petition from City of Austin and Barton Springs/Edwards Aquifer Conservation District requesting the TCEQ to initiate rulemaking to adopt new rules under 30 Texas Administrative Code Chapter 311 concerning water quality management in the Barton Creek and Onion Creek watersheds.
- TCEQ Commissioners denied the petition but directed the Executive Director to seek stakeholder input.
- The Water Quality Division wants to make sure that all viewpoints are heard.

Presentation by the City of Austin – Chris Herrington (see attached presentation)

Stakeholders split into two groups to discuss issues and options. The following is a summary of the brainstorming and feedback from each group discussion.

- Blue group

  <u>Discharge requirements</u>

  ✓ Phosphorous limits

  Use 0 (no discharge) as in TLAP

  - Limit based on what will result in "no trophic level increase" - on site by site basis
  - Would require consensus on what criteria constitute boundaries for trophic status change
  - Numeric targets (criteria) are a fundamental need to feed models
  - Target a response threshold or set "background concentration" as the permit limit? (No increase above background)
  - Like change in trophic levels, could use a significant change in DO, algae, chlorophyll A, nutrients, etc as the response indicator.
  - Does existing treatment technology weigh into criteria discussion? (might be a consideration for Commission)

- ✓ Nitrogen
  - Same strategies in general from background to some other response variable
  - Appropriateness of NH_3 versus TN in permit limits - Consensus that both are appropriate to have in permit since we have both algal growth and toxicity issues with these two constituents
  - Status quo is adequate for permit review process
- ✓ Method of Disinfection
  - UV disinfection avoids concerns about chlorination/chlorine/toxicity/potential for upsets
  - Is ozone a potential method?
  - May be some advantage of UV in terms of addressing emerging contaminants/pharmaceuticals
  - Dechlorination - currently only required at flow limits > 1mgd (needs revision with these intermittent low flow streams)
  - Is there a minimum discharge flow at which concerns about methods of disinfection go away?
- ✓ In-Stream Monitoring Requirements
  - Consensus that in-stream monitoring is appropriate for permits
  - Background (baseline)monitoring necessary to document any change
  - Access to stream may be an issue
  - How will data be used? (Currently monitoring data might be considered at permit renewal; remedies might be required)
  - Could response to monitoring data be required <u>prior</u> to permit renewal? (open permit mid-term) It would be very difficult for the agency to impose this (Easier in the context of an agreement between parties)
  - Biological monitoring results that show degradation should trigger intense investigation
  - Permit would not necessarily have to be opened; could be simple enforcement issue if some bright line (such as a criteria or instream response) is crossed.
  - Five year permit terms are probably not appropriate for these streams
- ✓ Other Permit Requirements
  - Flow limitations
  - All requirements in Bel Terra agreement for the watersheds
  - Paradigm problem: “disposing” of resource leads us in wrong direction. We should be considering how to best use/manage the resource - permits should be written with this in mind.

↗ <u>Authorization through a hybrid permit</u>

- When should discharge occur?
- Percent of effluent - might be possible. Would require for instream flow gauges appropriately sited
- Complexity of a minimum instream “dilution” flow approach may be overwhelming when you have multiple discharges - TMDL strategy might therefore be better - looking at assimilative capacity and ending discharges when it is used up

- Definition of term “de minimus” continues to be a problem
- Seasonal discharges
  - May work with DO because it’s temperature dependant. However, when it’s cold nutrients are worse - When it’s hot DO issues are worse.
  - City of Austin modeling work doesn’t indicate usefulness of seasonal approach
  - Different trophic levels in different seasons
- Land application Requirements
  - Surface/Subsurface Irrigation
    - Subsurface drip irrigation with minimum soil requirements at appropriate rates should be environmentally benign
    - Currently spray irrigation is occurring at unacceptably high rate
    - Chapter 222 for subsurface irrigation limits percolation beyond root zone
    - Questions about whether or not public use is allowed in irrigation area
  - Effluent Limitations
    - Need compliance monitoring with data made publicly available (EPA’s PCS database is the model?)
    - Needed but may not be as critical as prohibiting direct discharges
    - Local government entities should look into their policies of extending sewer service
    - Regionalization is the epitome of treating effluent as a problem instead of a resource; should be used where it is generated
    - In general, TLAP requirements should be looked at; region specific/reconsidered second in priority to prohibition of discharges
    - Recommendation in rule making for TLAP; 5 mg/l CBOD, 5 mg/l TSS, 2 mg/l NH_3-N, 1 mg/l TP - may not be best or most appropriate effluent set
    - Needs more study - example, phosphorous limits in TLAPs may not be as important when vegetation irrigation is occurring
    - Effluent needs to be high enough quality to encourage beneficial use
    - Daily water balance instead of monthly needed
  - Value of effluent to enhance stream flow & recharge
    - In these intermittent streams, maintaining natural hydrology and flow regimes will best preserve natural conditions and native fauna and should be the goal. The

existing uses of an intermittent stream are not necessarily enhanced by making a stream perennial.
    - Nutrient- poor streams would not benefit from nutrient-rich effluent

- Red Group

Discharge Requirements

✓ If discharge still allowed

- Incorporate trophic status into antidegradation requirements?
- Field-based standards for P,N and chlorophyll a?
- Permit by permit or via rule?
- Cumulative impacts from multiple dischargers
- Consider emerging contaminants
- Better definition of “de minimus”
- How should existing discharges be addressed?
- Fiscal comparison of discharge vs. TLAP should include value of downstream impacts.
- Include “Best Available Technology” in rule?
- Conduct field studies for a region or stream to collect site-specific nutrient data and flow data to assess dilution factor and permit effluent limits. Field studies could be done on subset of streams and should be redone at set time intervals (e.g. every 5 - 10 years).
- Can we have moratorium on wastewater discharges until we can establish permit limits?
- Conduct modeling runs using field data to establish permit limits
- Only takes one month to do the field studies - make that part of requirement for applicant to collect data to establish nutrient background
- Modeling and studies are burden on applicant
- See what Ohio or Iowa or the Chesapeake Bay areas are doing with discharge rules.
- B and O streams are not perennial, when a discharge causes a stream to be perennial, study effects on habitat and ecosystem response.

Hybrid of discharge/land application

- Continuous discharge = degradation
- Need hybrid or no discharge permit
- Quantify sediment - benthic response
- Explore different standard based on stream distance from the aquifer for aquifer protection

Land application

- Tighten limits for TLAP

    - If effluent quality is proposed at 5,5,2,1 for TLAP, then our permit could follow the procedures that we're currently following. But if they propose a less stringent effluent, then we would implement additional requirements.
    - Do more field studies for soil depth and subsoil karst development.
    - Look at soil depth requirement disparity between surface irrigation and SADDS.
    - Change rule to require soil moisture monitoring for all TLAP
    - Refine storage conditions
    - Setbacks for sensitive features
    - Identify what nutrients would leach below root zone.
    - Add flexibility to 210 authorizations to allow for wastewater irrigation in people's lawns.
    - Require irrigation system layout prior to permit drafting.
- Authorization through a "hybrid" permit
    - ✓ 210 Authorization
    - Nothing ties 210 to permit, so that information is not publicly available
    - Is there existing flexibility in 210 that we are not recognizing?
    - Require irrigation system layout prior to permit drafting
    - Some concern expressed that the stakeholders have not seen any competing science presented. They feel that scientific consensus exists.
    - ✓ Hybrid permit is TLAP permit with some authorization to discharge
    - Conditions based on dilution factor, or flow of creek, and saturated soil condition
    - Exploring whether discharge based on flow or saturated soil or flow **and** saturated soil
    - City of Austin still not convinced that the hybrid permit has no degradation
    - Account for nutrient loading prior to recharging Edwards aquifer recharge
    - How do we check dilution factor? At point of discharge? Downstream? What if no USGS gauge?

Other Issues

- Use and flexibility of 210 authorizations
- Is there flexibility in the 210 that we are not recognizing?
- If property is not owned, need to be able to do with TLAP
- Explore making soil data more accessible
- Self-report effluent quality