

Barton & Onion Creek Stakeholder Group

Meeting Summary

January 16, 2009

Welcome and Background on Purpose of the Group – Beth Seaton

- TCEQ received petition from City of Austin and Barton Springs/Edwards Aquifer Conservation District requesting to institute rulemaking to adopt new rules under 30 Texas Administrative Code Chapter 311 concerning water quality management in the Onion Creek and Barton Creek watersheds (see petition under handouts)
- TCEQ Commissioners denied the petition but directed the Executive Director to seek stakeholder input
- First meeting today, the next March 12, TCEQ, Building C, Room 131E
- Will report back to Commissioners in early June

Existing Studies – April Hoh (See bibliography under handouts- Note: Updated in response to comments)

Research in the Watershed:

USGS: TCEQ contract – April Hoh

- Current agreement between USGS and TCEQ is titled “Characterization of the Fate and Transport of Nutrients and Bacteria in the Barton Springs Segment of the Edwards Aquifer, Central Texas”
- Goal of the study is to better understand how nitrogen, phosphorous, and bacteria behave in the aquifer and the springs
- Sampling has begun on this project and will run through August 2011

USGS – TCEQ Contract – Barbara Mahler (See presentation under handouts entitled “Surface Water & Barton Springs”)

Barton Springs – Raymond Slade (See Presentation under handouts entitled “The Barton Springs Part of the Edwards Aquifer”)

Nutrient Conditions in Selected Streams of the Edwards Plateau – Jeff Mabe – USGS (See presentation under handouts entitled “Nutrient Conditions in Selected Streams of the Edwards Plateau of Central Texas”)

City of Austin/Water Quality Studies – Ed Peacock et al (See presentation and abstract under handouts entitled “City of Austin Water Quality Studies in Barton Springs Zone” and “Abstracts of Most Pertinent Studies”)

Barton Springs/Edwards Aquifer Conservation District (BSEACD) – John Dupnik (See presentation under handouts entitled “Wastewater Discharges to Barton/Onion Creek Watersheds”)

Issues Raised During the Meeting — Group Discussion

- Summary from BSEACD (see under handouts)
 - All existing developments successfully manage wastewater with alternative disposal methods (TLAP, 210)
 - Not intended to be an obstacle to development
 - Promotes reuse of water via a properly sited and designed Land Application System
 - §311 and §213 currently do not provide adequate protection.
 - Should be in §311 to protect both contributing-zone stream quality and downstream recharge water quality
 - Needed to prevent cumulative impacts in the aquifer from multiple discharges and to preserve pristine hill country streams

- Contributing Zone should be treated as an extension of the Recharge Zone for water quality protection.
- Needed to preserve recharge water quality, protect public supply wells, the Barton Springs pool, and the endangered species habitat
- Supported by the local political jurisdictions over essentially all of these watersheds (Travis Co., Hays Co., BSEACD, CoA, CoDS, others)
- Inconsistency in 311 vs 213 rules for discharges into Onion and Barton Creeks upstream of recharge zone
- Why is there a prohibition in the recharge zone but not the contributing zone? This is inconsistent – the same creek is handled legally differently
- Add TCEQ Segment 1430 (Barton Creek) to 311 rules
- Current TCEQ approach for evaluating permits doesn't address cumulative impact on receiving stream
- Procedures for anti-degradation reviews need to be more geographically specific for this sensitive watershed.
- Address all discharges including storm water – cumulative loadings
- Stringent regulations for daily maximum not the current 30-day average; need shortened duration for compliance averaging
- Total Nitrogen discharge limits, not ammonia limits only
- Define an “unacceptable” biological response due to Nitrogen and Phosphorus inputs
- If we have a new stringent nutrient limit-can a facility be engineered to meet those limits reliably?
- Is technology there? Expand technological to include operation
- Emerging contaminants issue – tie to “unacceptable” biological response
- Will we establish “special” standards for the Barton Springs Segment of the Edwards Aquifer watershed (BSSW)?
- Socio-economic factors to schools, water districts, City of Dripping Springs if development is limited.
- Does the addition of discharge flows benefit the creeks
- Get all science that is part of the stakeholder discussion included in the bibliography so that all stakeholders have the same information available for review.
- Current case-by-case review of permit process is resource intensive to stakeholders
- Cost of protesting permits, out-of-court settlements, and monitoring compliance is high.
- Need to consider the intermittent baseflow and stream uniqueness (ie: limestone stream bed)
- Historical (1986) permit maybe Randy Morine permit? It was denied, so why? Did conditions change?
- New water supplies to these areas increase potential for development and contamination. How can water resource issues be addressed holistically?
- Does a prohibition on discharge have an adverse impact on development?
- Nutrient spiraling effects – nutrient increase causes algae/plant growth which can cause pulses of nutrients as plants die and result in downstream effects.
- Increase plant productivity can cause trophic cascades and shifts in community composition.
- Hydrologic changes (ponds) may exacerbate nutrient spiraling and trophic changes
- Current oligotrophic state of the stream– adds conflict with current effluent limits
- Irrigated effluent may have 85% evapotranspiration- contrast with creeks having no vegetation so minimal attenuation of nutrients
- Urgency – 1 permit may have significant impact
 - We have enough data to make an informed decision
 - No need to wait for studies to finish
 - Should there be a moratorium until a decision is made?
- If we do initiate rulemaking and how would we deal with “grandfathering” existing permit?
- Claims of alternative science and studies were made during the Belterra hearing. Those studies need to be presented.
- If no scientific studies are submitted in contrast to body of evidence presented at 1-16 meeting, what would be the basis for not adopting watershed rules?
- Would we want higher requirements for TLAPs in the BBS?

- i.e. pipeline setback from creeks?
 - i.e. self-recorded data
- Does discharge of highly treated effluent have valuable quality or quantity to aquifer?
 - Or to streams? If the flow is 100% discharge?
 - Consider recharge enhancement from effluent during floods (increase recharge by 50%)
- Watershed rules would simplify permit decisions – current rules may not be enough since permits are so complicated and controversial.
- Water conservation consequences of discharge vs land applied?
 - Trade off of reuse vs. fresh city water
- COA and BSEACD – spent public funds to protect salamander – these conservation measures and money could be wasted if salamander goes away
- Economic costs to pump wastewater to different watershed – impact to watersheds outside BSSW
- What are the limits of land application in the watershed or neighboring watersheds?
- Lack of science today on TLAP
- TLAP procedures don't consider subsurface migration pathways which may be important in Karst areas like the BSSW.
 - Water balance based on average monthly – change to actual daily values rather than monthly average
- Distinction between drip and surface irrigation in TLAP rules – drip doesn't allow for evapotranspiration – goes straight to subsurface
- Irrigation management plan is not developed until permit is granted
 - Needs to come up front
- TLAP maybe not protective enough in BSSW – specific permit/rule enhancements for this sensitive watershed.
- 210 as set up now-is trust me
- Chlorination – discharge problem – adds sulfates to stream chlorination problems too

Options

- Make stringent TLAP requirements for BSSW
- BSSW specific antidegradation requirements
- Pipe wastewater out of the BSSW
- Prohibition discharge in BSSW
- Rulemaking 311 or 213 – Petition proposed 311
- More flexibility for 210 authorization so reuse could be an option to either TLAP or discharge.
 - Currently must get permit before you can get 210 reuse authorization
 - Easier reuse onsite – change 210 rules to allow flexibility
- TLAP pond size takes care of 210 design on adequate basis to know when they need to discharge
- Flexibility to find new technology to address concerns
 - Forced loop to review rule for new technology that could address concerns
- Maintain status quo – individual review of permits
- Other sources in watershed besides wastewater – storm water, etc
- Treat to level (background) that won't cause problems – supported by science
- Combination of all options
- Treat to background – important to consider implementation because all are different –
- Consider all pollutants
- Moratorium on discharge until issue resolved pending a rule
- Base discharge timing on flow conditions
- Hybrid – reuse and discharge based on flow in receiving creek
- Hybrid with regulatory oversight for this watershed – increase compliance monitoring
- Adequate storage will allow for knowledge of when to discharge
- Irrigation plans – engineering that predicts what conditions are

- More stringent limits but above background
- Combine limits with flow conditions
- Treatment level with dilution level to reach background
- Need for 5/5/2/1 for effluent for TLAP? Or less stringent
- Why 5/5/2/1 on TLAP
 - Precedent for others
 - If discharge then level is more protective
- Map to pre-identify certain characteristics that would identify vulnerabilities or vulnerable areas
- Look at alternate forms of disinfection
- TLAP – don't know how dechlorination affects soils/highly linked to emerging conditions
- Require a non-chlorine disinfection alternative
- Change boundaries discharges in certain areas only spiraling

Requested any additional information to be considered within 2 weeks from January 16, 2009

Travis County sent one letter and the City of Leander sent one letter (See Handouts)