

STATE OF TEXAS

§
§
§
§

RESOLUTION # 063016-01

COUNTIES OF HAYS, TRAVIS
AND CALDWELL

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BARTON SPRINGS / EDWARDS AQUIFER CONSERVATION DISTRICT OPPOSING THE ISSUANCE BY TCEQ OF A PROPOSED PERMIT ALLOWING DIRECT DISCHARGE OF TREATED EFFLUENT FROM THE CITY OF DRIPPING SPRINGS INTO THE RECHARGE ZONE OF THE TRINITY AQUIFER AND THE CONTRIBUTING ZONE OF THE BARTON SPRINGS SEGMENT OF THE EDWARDS AQUIFER; AND DIRECTING THE DISTRICT’S STAFF TO PROVIDE COMMENT TO TCEQ AND INTERESTED PARTIES

WHEREAS, the Barton Springs/Edwards Aquifer Conservation District (the District) is a Groundwater Conservation District created by an act of the 70th Legislature and subject to various requirements of State Law governing groundwater districts, including Texas Water Code Chapter 36; and

WHEREAS, the District was established for the purpose of providing for the conservation, preservation, protection, recharging and prevention of waste of groundwater and of groundwater reservoirs in its jurisdictional area, including the Barton Springs segment of the Edwards Aquifer (Edwards), the underlying Trinity Aquifer (Trinity), and other aquifers (collectively referred to as (the “Aquifers”)); and

WHEREAS, the Barton Springs segment of the Edwards Aquifer is a unique underground system of water-bearing formations in Central Texas, wherein water enters the Edwards through the ground as surface stream inflow and rainfall infiltration, is rapidly transported in the subsurface by solution conduits and intrinsic permeability of the rock, and leaves the Edwards through well withdrawals and spring flow at Barton Springs and other natural outlets; and

WHEREAS, the Barton Springs segment of the Edwards Aquifer serves as either a sole source or primary source of drinking water for tens of thousands of people, is a vital resource to the general economy and welfare of the City of Austin and the State of Texas, and forms the only known habitat for the endangered Barton Springs salamander, *Eurycea sosorum*, and the Austin blind salamander, *Eurycea waterlooensis*; and

WHEREAS, the Trinity underlies the Edwards throughout the District, and increasingly, the Trinity, and more specifically the Middle Trinity Aquifer, is being used in parts of the District where firm yield from the Edwards Aquifer is unreliable or unavailable. The proposed discharge location is underlain by the Upper Glen Rose member of the Trinity; and

WHEREAS, Onion Creek, the receiving stream of the proposed discharge, is an important hydrologic link between the Edwards and the Trinity and has been shown to provide recharge to the Trinity upstream of the District's boundary and is the main contributor of recharge to the Edwards, contributing an estimated 45% of its total recharge; and

WHEREAS, the Texas Commission on Environmental Quality ("TCEQ") has designated the segment use for Onion Creek as "Aquifer Protection" and "Public Drinking Water Supply"; and

WHEREAS, the TCEQ mission statement provides that TCEQ strives to protect our state's natural resources consistent with sustainable economic development, and TCEQ's philosophy states that to accomplish its mission the agency will base decisions on the law, common sense, good science, and fiscal responsibility; and

WHEREAS, the City of Dripping Springs has applied to the TCEQ for a TPDES direct-discharge permit in the contributing zone of the Edwards and the recharge zone of the Trinity, seeking to discharge up to 995,000 gallons per day of treated municipal sewage into Onion Creek; and

WHEREAS, scientific analysis and modeling efforts have demonstrated that the proposed discharge of treated municipal sewage will increase nutrient loading and cause a change in trophic status. A change in trophic status without mitigating measures has previously been confirmed by the TCEQ to equate to degradation beyond a *de minimis* level, which would be in violation of the TCEQ's Antidegradation Policy; and

WHEREAS, recent gain-loss studies of Onion Creek in Hays County and analysis of hydrochemical data for groundwater and surface water chemistry in the vicinity of both the proposed discharge and the public water supply wells suggest that the quality of water in the Dripping Springs Water Supply Corporation's public water supply wells produced from the Middle Trinity Aquifer is influenced by surface water in Onion Creek; and

WHEREAS, the size of the proposed treatment facility is more than an order of magnitude larger than the current amount of effluent generated by the City of Dripping Springs, which will not just accommodate existing and planned growth, as is warranted, but could also cause increased levels of non-point source pollution in a stream where the ecological setting will have already been stressed by point source pollutants from the proposed direct discharge; and

WHEREAS, all other wastewater treatment facilities in the Onion Creek watershed use an alternative "no discharge" disposal method to dispose of treated effluent. This permit, if approved, may set a precedent for future permitted discharges and the resulting cumulative effect of the combined pollutant loading; and

WHEREAS, these and other concerns of the District have been articulated in the attached document titled "Summary of BSEACD Concerns about the TPDES Permit Application by the City of Dripping Springs"; and

WHEREAS, the above notwithstanding, a TCEQ-issued draft TPDES permit that would allow such direct discharge is an action that could reasonably be considered inconsistent with its mission, stated philosophy, and the public interest.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Barton Springs/Edwards Aquifer Conservation District as the governing body of the District:

1. opposes approval by the TCEQ of the Dripping Springs TPDES direct discharge permit application as proposed;
2. more specifically expresses its current position on the application in the attached document titled "Summary of BSEACD Position on the TPDES Permit Application by the City of Dripping Springs";
3. directs its staff to provide public comment to TCEQ that provides the scientific and policy justifications for opposing the proposed application;
4. directs its staff to continue working with TCEQ, the City of Dripping Springs, and other affected parties to produce an outcome that provides the City of Dripping Springs with sufficient additional wastewater treatment capacity, as warranted, and that maintains and protects the water quality and existing uses of Onion Creek and the Aquifers; and
5. requests that the TCEQ and the City of Dripping Springs delay action to allow time to conduct the scientific investigations necessary to a) better understand the degree and magnitude of surface water influence from Onion Creek on the Middle Trinity Aquifer and the nearby public water supply wells and b) to better inform the preliminary decision on the application.

In Favor 4

Opposed 0

PASSED AND APPROVED THIS 30th DAY OF JUNE 2016.


Blayne Stansberry, President

ATTEST:


Blake Dorsett, Secretary

Summary of BSEACD Concerns on the TPDES Permit Application by the City of Dripping Springs

Approved by the Board of Directors on June 30, 2016

1. BSEACD is concerned that the application, *as proposed*, will lead to effluent that will substantially impair the water quality of Onion Creek for extended periods of time, degrading the ability of the water (a) to continue to be used as a source of drinking water, (b) to protect property values of downstream landowners, and (c) to support aquatic life.
2. This concern is exacerbated by the exclusion of appropriate measures to mitigate the proposed pollutant loading in the discharge to Onion Creek. The Hays County WCID No. 1 (Belterra) TPDES Permit was the product of a highly contentious contested-case in which a consortium of local government entities collectively negotiated a more protective permit. In that case, the Administrative Law Judge recommended and the TCEQ determined that the proposed discharge, without the additional conditions and limits, would allow degradation of Bear Creek beyond *de minimis* levels in violation of the TCEQ's Antidegradation Policy. The Belterra Permit and its conditions are substantially analogous to the proposed discharge and should serve as the baseline model for minimum permit conditions and effluent limits. Accordingly, a permit for the proposed discharge, as with the Belterra permit, should, at a minimum, include:
 - a. minimum creek-flow as a precondition to the direct discharge,
 - b. more stringent effluent standards that maintain the oligotrophic status on Onion Creek,
 - c. Membrane Bio Reactor (MBR) or comparable treatment technology,
 - d. Requirement to maximize reuse and the associated reduction in discharge volume.
3. In the development of HB 2046 in the 83rd legislative session (2013), a consensus of potentially affected parties defined a set of qualitative performance standards for wastewater management that should be achieved in those watersheds contributing recharge to the Trinity and the Edwards, in order to protect surface-water and groundwater quality and to allow for re-use as a viable new water supply. These standards are directly relevant to this matter and would represent a level of effluent that:
 - a. meets the primary and secondary drinking water standards promulgated by the TCEQ;
 - b. does not contribute to adverse toxic effects on aquatic life in the receiving water;
 - c. does not contribute to adverse toxic effects on human health resulting from the consumption of aquatic organisms or water from, or from water recreation in, the receiving water; and

- d. does not alter nutrient concentrations in the receiving water during non-storm conditions beyond *de minimis* levels;

In addition to the minimum Belterra conditions and limits, the proposed permit, if approved, should include measures to achieve these qualitative standards.

5. The proposed Total Phosphorus (TP) effluent limits are substantially higher than background concentrations in Onion Creek. Further, a Water Quality Analysis Simulation Program (WASP) model indicates the effluent quality *as proposed* will degrade the trophic classification of Onion Creek which could impair the ability of the stream to meet the water quality criteria for aquatic life and, therefore, will not meet the applicable water quality and anti-degradation standards. Again, this change in trophic status was judged by the ALJ in the Belterra contested-case to equate to degradation beyond *de minimis* levels, in violation of the TCEQ's Antidegradation Policy.
6. Recent scientific investigations jointly conducted by the BSEACD and the Hays Trinity GCD on Onion Creek in Hays County have produced new data and provide compelling evidence indicating that at least two segments of Onion Creek actively recharge the Trinity Aquifer; this includes the stream segment of Onion Creek immediately downstream of the proposed outfall location. While there is strong evidence of direct recharge from Onion Creek to the Trinity Aquifer, uncertainties remain as to how much, how quickly, and under what conditions the recharge occurs. Additional studies to provide better information on the extent and location of the Trinity groundwater that could be affected by impaired recharge quality are currently being planned. Those results will be critical to determining what public and private drinking water supplies would be potentially at risk of being adversely affected by the proposed discharge, the magnitude of risk, and whether the Segment Use of "Aquifer Protection" is being maintained.
7. Both the BSEACD and the Hays Trinity GCD have jurisdictional authority over and permitted production wells producing groundwater from the Trinity Aquifer. The BSEACD intends to work cooperatively with the Hays Trinity GCD in supporting these studies to gauge the potential impacts to the two Districts' shared aquifer, recognizing that the constituents of the Hays Trinity GCD are most directly and immediately affected. Preliminary decision-making on the draft permit's conditions should take into account these new, potentially critical considerations.
8. As a directly downstream GCD, BSEACD has concerns about the impacts on the Edwards Aquifer recharge in its jurisdiction, including the possible direct impacts from the direct discharge, as proposed. But it is as much or even more concerned about the cumulative

impacts on the Edwards arising from the precedent set by the permit for future permitted discharges combined with enabling increased development intensity in the contributing watersheds. Runoff from such areas provides its recharge and will be sources of increasing amounts of non-point source pollution and of erosion/sedimentation fostered by the proposed large-scale centralized WWTP. Such cumulative impacts would impair the buffering capacity of the contributing creeks and the Edwards Aquifer to withstand any adverse effects of direct discharges in the contributing zone.

9. While there is a demand for beneficial reuse of the effluent from the proposed plant under Chapter 210, the entire volume of effluent proposed in the application would be authorized for direct discharge, and any anticipated reuse would be entirely discretionary with no guarantee that the volume or frequency of discharge would be minimized or that the receiving stream conditions would be acceptable.

Summary of BSEACD Position on the TPDES Permit Application by the City of Dripping Springs

Approved by the Board of Directors on June 30, 2016

BSEACD's position, based on sound science and good public policy, is that:

1. The BSEACD is an affected party based on 1) the immediate risk of potential adverse impacts to the Trinity Aquifer that is shared by both the Hays Trinity GCD and the BSEACD, and 2) the long-term risk of potential adverse impacts to the Edwards and Trinity Aquifers from the cumulative increasing levels of non-point source pollutant loading and/or future point source wastewater discharges.
2. The proposed permit, if approved, should include conditions and limits that are equivalent to or more protective than the Belterra Permit including, at minimum: creek flow minimums, more stringent effluent limits, a reduced discharge volume, and/or other measures necessary to avoid degradation beyond a *de minimis* level.
3. Recognizing there is a growing demand for water supply and that high quality effluent can be as source of supply to accommodate that demand, the City of Dripping Springs should join ongoing efforts to maximize the beneficial reuse of treated effluent by advocating for 1) sensible reductions in TCEQ effluent storage and land application area requirements and 2) firm-demand types of beneficial reuse within the City and the ETJ;
4. On the basis of the consensus, qualitative wastewater-management standards previously established in developing HB 2046, a higher level of treatment of the wastewater to be discharged to Onion Creek should be required, including more effective nutrient removal, so that the effluent is treated to a standard that doesn't:
 - a. exceed the primary and secondary drinking-water standards established by TCEQ,
 - b. contribute to toxic effects on aquatic life in Onion Creek,
 - c. contribute to adverse toxic effects on human health from consuming water or aquatic organisms in the creek or from contact with the creek water, and
 - d. increase the nutrient concentrations in Onion Creek during non-storm conditions beyond *de minimis* levels;
5. There are other proven alternatives available to reduce the potential volume of water required to be directly discharged that should be assessed. For example, further evaluation of Direct Potable Reuse (DPR) through a system of decentralized advanced-level treatment plants should be undertaken by the City of Dripping Springs. This would not only reduce

risks of in-stream water quality impairment, but also provide a reliable new water supply for the City that could be scaled up with growing demand. As part of this evaluation, the efficacy of SWIFT funding to defray capital costs of DPR should be examined in coordination with the Regional Water Planning Groups. It also should be confirmed that DPR is a full-time alternative water supply not requiring alternative disposal methods, rather than an episodic Chapter 210 re-use strategy, which would require storage and alternative disposal under a TPDES/TLAP permit;

6. Beneficial impacts associated with the replacement of the existing system of “package sewage treatment plants” would be offset by impacts of the larger wastewater volumes and the increased development intensity that the relatively large-scale centralized regional plant, as proposed, would promote.
7. Current regional water supplies must be maintained at a quality protective of designated stream segment uses, including public water supply and aquifer protection, before advancing the benefits of the proposed effluent as an augmented downstream water supply;
8. Hays Trinity GCD and BSEACD should work collaboratively and expeditiously to determine the potential impacts of the direct discharge on public (including those of the City of Dripping Springs) and private drinking-water supply wells in the Trinity Aquifer. A draft TPDES permit should not be issued until the planned study is able to be completed to better inform the potential risk and likely magnitude of impacts to the Trinity Aquifer as an important source of water supply in the area.