

Briefing Notes

Public Hearing

May 11, 2006

Barrow County Board of Commissioners Board Room #315

233 E. Broad St., Winder, Georgia

Barrow County Board of Commissioners

Barber Creek Water Reclamation Facility

Permit No. GA0038733

The following is taken from NPEDS Form 2A Application Overview for Barrow County, received in the Environmental Protection Division office on August 5, 2005.

1. The requested permit is for a system that will serve the City of Statham and The Georgia Club, with combined populations of 2,380.
2. The permit is for 0.5 MGD design flow rate and is for a new facility not yet constructed.
3. The permit is for a cold weather discharge.
4. The permit involves construction of a irrigation pond to which discharge will be 0.5 MGD on an intermittent basis.
5. The permit involves land application of 0.5 MGD of treated wastewater on an intermittent basis to a golf course.
6. The permit requests cold water discharge of 0.5 MGD for an estimated 61 days from November to April as needed into Barber Creek. The estimated days are November (8), December (21), January (16), February (8), March (8), and April (0).
7. The effluent is of a "Reuse Quality."
8. Construction is to begin on October 3, 2005, and be completed by October 4, 2006. The plant is expected to begin discharging on November 1, 2006.

The following is taken from the Fact Sheet produced by the EPD to accompany the draft permit.

1. The design capacity of the facility is 0.5 MGD for a new facility not yet constructed. In addition, the capacity is listed as 1.5 MGD for an expanded facility year-round flow capacity. This is the first mention of the additional 1.0 MGD capacity.
2. The creek is designated as a fishing creek.

The following is from the Waste Load Allocation Form, dated June 4, 2004.

The Waste Load Allocation is conditional on the removal of Statham's existing wastewater treatment facility discharging into a tributary to Barber Creek.

The following is taken from the Draft of Permit No. GA0038733.

1. "After issuance of the permit, the permittee may provide reuse water to designated users. The permittee may provide reuse quality water to additional designated users as long as prior written notice is provided to the EPD and a public notice is provided to the community...Any designated user receiving reuse water from the permittee must enter into an agreement with the permittee." The state has a model agreement. (From page 5 of 18.)
2. "The permittee shall perform a scan of the priority pollutants, measured at least to EPD detection limits, within 90 days of receiving EPD written approval of completion of the facility upgrade construction and written authorization to discharge at 1.5 MGD." (Page 9 of 18.)
3. "Upon the issuance of this permit, the permittee must conduct a watershed assessment and develop a watershed protection plan for all the watersheds that are contained within the permittee's assessment area...The permittee must develop this plan and the plan must receive EPD approval" before the facility can be operated at the 0.5 MGD discharge rate. (From page 10 of 18.)
4. If the permittee does not comply with, or is unable to comply, with the effluent limitations covered by the permit, the permittee must give the EPD a report of this fact within 24 hours from when the permittee becomes aware of the noncompliance. The permittee must give a written report telling the cause, the period of noncompliance, and the steps taken to minimize recurrence of the noncompliance. (From page 12 of 18.)
5. The permittee must give written notice to the EPD at least 10 days before any planned changes in the facility or any activity that may result in noncompliance with the permit. (Page 12 of 18.)
6. "Any diversion of wastewater from or bypassing of wastewater around the permitted treatment works is prohibited except if bypassing is unavoidable to prevent loss of life, personal injury or severe property damage, if there is no feasible alternative to bypassing, and if the permittee notifies the EPD at least 10 days before the date of the bypass." (Page 13 of 18.)
7. "The permittee must take all possible measures to prevent bypassing during routine maintenance..." The permittee shall "minimize discharge of pollutants from sewer overflows or bypasses and may be required by the EPD to submit a plan and schedule for reduce these." (Page 13 of 18.)
8. "Any unplanned bypass must be reported...The permittee may be liable for water quality violations that occur as a result bypassing the facility." (Page 13 of 18.)
9. "If the primary source of power is reduced or lost, the permittee shall use an alternative source of power if available to reduce or control discharge to maintain permit compliance." (Page 13 of 18.)
10. "The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge disposal which might adversely affect human health or the environment." (Page 13 of 18.)
11. "Whenever, because of an accident or otherwise, any toxic or taste or color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into such waters, or is so placed that it might flow, be washed, or fall into them, it shall be the duty of the person in charge of such substances at the time to forthwith notify EPD in person or by telephone of the location and nature of the danger, and it shall be such person's further duty to immediately take all reasonable and necessary steps to prevent injury to property and downstream users of said water." (Pages 13 and 14 of 18.)
12. Any noncompliance is grounds for "enforcement action, permit termination, revocation and reissuance, or modification, or denial of a permit renewal application." (Page 15 of 18.)

The following is from Comments of Barry Sulkin, environment consultant, Nashville. Sulkin worked for the Tennessee Department of Environment and Conservation from 1976-1990 and now has a private practice as an investigator and scientist. He has a M.S. from Vanderbilt University in Environmental Engineering and a B.A. from the University of Virginia in Environmental Science. Sulkin was recommended by Justine Thompson, executive director of Georgia Center for Law in the Public Interest.

1. Positive comments.
 - a. The limits on discharge on this are rather tight.
 - b. If they plan to only discharge in the winter months, they are avoiding a discharge during critical conditions of low flow and hot weather, when there would be less dilution.
2. Negative comments.
 - a. If this is a seasonal discharge (winter only) with land application (summer) it doesn't say so in the permit. It reads like a year-round discharge in several ways with only a slight mention of land application in the Fact Sheet's section 1e. Description of Wastewater Treatment Facilities. The Fact Sheet states that the 1.5 mgd is "year-round flow". Thus the permit and notice appear deficient.
 - b. This looks like a permit for both the 0.5 mgd plant and the expansion to 1.5 mgd all in one permit. If this is a small stream as the 7Q10 of 1.1 cfs (or about 0.7 mgd of water in the stream at low flow) indicates, it will be an effluent dominated stream, especially at expansion.
 - c. With this large of a discharge into such a small stream, the model they are using is very inadequate. It only looks at monthly average and vague, general impacts. They admit on the "Waste Load Allocation Form" that the model is not calibrated or verified and uses no field data. Thus it is rather baseless.
 - d. Also the model they use (which as I stated above is likely not appropriate) ignores sediment oxygen demand (SOD), which can be significant (Does this stream have any sediment in it?) and is set up with an output that shows "the more sewage the better."
 - e. It is stated in a couple of places that this Sewage Treatment Plant is replacing an existing one on a tributary to Barber Creek, which must be even smaller. What is the record for that plant?
 - f. I see no information about the existing condition of Barber Creek or an antidegradation analysis of any kind. This discharge, at least at the expansion, is likely to degrade at least some.
 - g. Permit requires no stream monitoring unless there is a disaster. This is much needed for such an effluent dominated situation and weak model with no field data or verification.

The following is taken from Draft Report Wastewater System Master Plan Prepared for Oconee County Board of Commissioners, March 2004, by Jordan, Jones & Goulding, Athens.

“For Oconee County the surface streams with large enough flows to receive treated discharges are considered to be the Apalachee, Middle Oconee, and Oconee Rivers. The other streams, such as Barber Creek and Calls Creek, are considered to be too small to receive a substantial quantity of treated flow.” (Page 3-5.)

The Apalachee runs parallel to Barber Creek and is approximately 4.5 miles from Barber Creek at the border of Barrow and Oconee counties, where it is proposed the Barrow plant will discharge into Barber Creek.

The following is taken from an article in the Gwinnett Daily Post, Jan. 1, 2006.

1. Construction began on the \$7.2 million plant on Wylie McGuire Road on Dec. 1, 2005.
2. It is being built on 37 acres of land and will come online with a capacity of 0.5 mgd.
3. Over time, that capacity will be increased to 1.5 mgd.
4. The plant will be serving part of Oconee County and a large part of Barrow, including Statham and part of Winder. It also will serve future development along Ga. 316.

The following is taken from The Watershed Group: Watershed Assessments, downloaded on April 29, 2006, from <http://watershed.bae.uga.edu/statham.html>. The report itself was produced in March of 2002. The Watershed Group is a unit of the Biological and Agricultural Engineering Department at the University of Georgia.

1. Statham operates on wastewater treatment plant that holds an NPDES permit for 0.15 mgd.
2. Statham will seek a permit for 0.9 mgd for discharge when reuse on the golf course and lawns in the residential section of new developments in the city does not consume the reuse water.
3. Barber Creek is not designated as contaminated, based on Section 303(d) of the Federal Clean Water Act.
4. The Watershed Group gathered data from 10 monitoring sites, including two on Barber Creek just above the new plant and one on Barber Creek just below the new plant. The third is actually just after Barber Creek entered Oconee County, on Barber Creek Road. The first and second Barber Creek sites are before the tributary on which the existing plant resides joins with Barber Creek.
 - a. The downstream (Oconee) site generally was higher in biochemical oxygen demand, chemical oxygen demand, fecal coliform, fecal streptococcus, ammonia, nitrates, phosphate, total nitrogen, total phosphorus, total solids, total suspended solids, turbidity and volatile solids than were the other sites. This conclusion, however, is greatly influenced by the readings on a single date, 5/1/2002, designated as a wet day. The Watershed Group attributed the higher phosphate levels to the existing Statham plant.
 - b. Barber Creek at the first of the monitoring sites was 3 inches in debt on 6/10/2002, designated as a dry reading, and 5 inches on 6/24/2002, designated as a wet reading. At the second monitoring site, the stream was 10 inches in the dry reading but only 3 inches in

the wet reading! At the third site, in Oconee County, the creek was measured as 10 inches in the dry reading and 16 inches in the wet reading.

5. Four sites were assessed in terms of habitat. Two were on the northeast side of Statham on Bear Creek and Little Bear Creek. Two were on Barber Creek, one was above the old plant and one below. The latter was on Barber Creek Road in Oconee County. In terms of aquatic insects, the Little Barber Creek site was judged to be nonimpaired, the best rating. The two Barber Creek sites were rated as slightly impaired. The Bear Creek site was rated as moderately impaired. The team also created fish scores based on species richness, composition and abundance. The Barber Creek site in Oconee County scored as poor. The other three sites scored as fair. For all four sites, the team concluded that the "streams are physically too small to support a diverse population of fish species." (P. 8-3 of Watershed Assessment Management Monitoring Plan for the City of Statham, Georgia, 24 July 2002.) The drought at the time of the study only contributed to this.
6. In summary, the Watershed Group concluded:

“...that the current health of the watersheds associated with Statham is, for the most part, fair. It appears, however, that most of the sources of impairment are outside the city and are primarily due to agricultural land use, construction activities, and the nature of the streams themselves (small, first-order streams).” (P. 8-5 of Watershed Assessment Management Monitoring Plan for the City of Statham, Georgia, 24 July 2002.)

The following is from Guidelines for Water Reclamation and Urban Water Reuse, Department of Natural Resources, Environmental Protection Division, Water Protection Branch, Atlanta, Georgia 30334, Revised February 20, 2002, downloaded from <http://www.gaepd.org/> on 5/3/06.

DESIGN GUIDELINES FOR WATER RECLAMATION AND URBAN WATER REUSE

9.2 PROCEDURES

In order to fulfill the terms of the permit, the permittee must enact procedures which will accomplish the following:

- a. Individual applicants for reclaimed water service shall apply to the permittee by completing and signing an application. All applications for reclaimed water service shall describe the non-potable water uses requested by the applicant. Use of master meters to tie-on multiple customers is not recommended but may occur when allowed by the permittee in the written agreement.
- ...
- e. The customer shall have installed a permanent underground irrigation system.
- f. A public information program is required to inform designated users and the public of what reclaimed water is and to answer questions about connecting to the system. All designated users wishing to connect to the system must participate in the public information program and have their participation documented. This public information program may be in the form of a seminar, video, multimedia electronic presentation, or other appropriate media.
- g. As-built plans of the reclaimed water systems, showing valve locations, tap locations, and size of taps, shall be available to the permittee at all times.
- h. The customer shall not allow the reclaimed water to enter the dwelling unit(s).
- i. The customer shall sign a written user agreement with the permittee prior to being tied onto the reuse system. Irrigation shall occur only during periods approved in the written user agreement.
- j. The customer shall not allow reclaimed water to be used for consumption (human or animal), interconnecting with another water source, sprinkling of edible crops (gardens), body contact recreation, filling of swimming pools, or sharing a common reclaimed service between properties.