



North Carolina Department of Environment and Natural Resources

Division of Water Quality

Charles Wakild, P.E.

Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

August 3, 2012

MEMORANDUM

To: All Interested Parties

From: Jon Risgaard – Supervisor
Land Application Unit

Re: Public Information Fact Sheet for the Proposed Modification to Permit No. WQ0023896

On August 18, 2011, the Aquifer Protection Section's Land Application Unit received a permit application for a major modification to The University of North Carolina at Chapel Hill's (UNC-CH) Bingham Facility wastewater irrigation system (Permit No. WQ0023896) located in southwest Orange County. The major modification request proposes to:

- Decommission an existing 8-inch gravity sewer; the ultraviolet (UV) disinfection system; the secondary effluent storage basin pump station; the 75,843 gallon lined effluent storage lagoon; and the 2.12 acre irrigation area composed of one field with 16 nozzles.
- Refurbish an existing 171,500 gallon lined effluent storage lagoon into a 125,724 gallon clay lined secondary effluent storage basin.
- Reconstruct an existing animal wastewater treatment system storage basin and irrigation pump station, and incorporate them into the subject non-discharge permit.
- Construct and operate an 8-inch gravity sewer system, a liquid sodium hypochlorite disinfection system, a 525 gallon chlorine contact tank; a secondary effluent pump station and 5.72 acres of irrigation area.

The existing wastewater treatment and irrigation facility serves the Bingham Facility, which is a biomedical animal research center. The existing wastewater treatment system is for domestic waste only, and secondary treated effluent is spray irrigated. This permit was originally issued December 17, 2004 and the most recent permit issuance was for a modification issued on February 12, 2007. The current permit modification request has been reviewed by both the Aquifer Protection Section's Central and Raleigh Regional Staff, with additional information requested October 14, 2011. The subsequent additional information response was received November 14, 2011 and a draft permit was approved by the Division of Water Quality (DWQ) and UNC-CH on March 19, 2012.

AQUIFER PROTECTION SECTION
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It should be noted that the Bingham Facility also included an animal wastewater treatment and irrigation system that was deemed permitted under the Animal Waste Management System rules (15A NCAC 02T .1303(a)(1)). After several water quality violations, the deemed permit status for the animal wastewater treatment and irrigation system was revoked on February 1, 2010. These water quality violations also resulted in an enforcement case and penalty assessment that was settled on May 25, 2010. While this animal wastewater treatment and irrigation system is not part of Permit No. WQ0023896, two components of this system are being reconstructed and repurposed for inclusion in the subject permit, while the remaining animal wastewater treatment and irrigation system components are being decommissioned. Accordingly, since the Bingham Facility is converting to a dry-bedding system, only a small amount of animal waste resulting from wash-down water will now be included in the waste stream for Permit No. WQ0023896.

On September 29, 2011, DWQ received a public hearing request that express public concerns “regarding the proposed infrastructure’s impact on ground water, surface waters, the surrounding environment and public health...” Concerns specific to water quality included: the proposed increased spray irrigation area footprint; proposed average daily wastewater flows and annual irrigation limits; treated wastewater storage; disposal of domestic/animal waste; and potential impacts to Collins Creek, adjacent properties and groundwater supply wells. The request is a joint document from two non-profit citizen groups, Preserve Rural Orange and Haw River Assembly. The document was also endorsed by 56 neighbors and community members.

In response, the DWQ Director’s Office approved the request and appointed Jeff Manning, supervisor of the Basinwide Planning Unit, as the hearing officer. The public comment period will open on August 5th with public notification via the News & Observer and the DWQ website. The hearing has been scheduled for August 22, 2012, and the 30-day public comment period will close at the end of business on September 4, 2012.

For further information regarding the UNC-CH Bingham Facility and the public hearing process, please read the Fact Sheet presented on Pages 3 through 5.

UNC-CH Bingham Facility Public Hearing Fact Sheet

1. TYPES OF OPERATIONS COVERED

A. Activities Covered by this Permit:

On the basis of a Division of Water Quality review, the North Carolina Environmental Management Commission proposes to permit the requested modifications to the UNC-CH's Bingham Facility Wastewater Irrigation System (Permit No. WQ0023896).

B. Geographic Area Covered by this Permit:

The facility is located in southwest Orange County off Orange Chapel Clover Garden Church Road (SR 1956) in Bingham Township. Facility coordinates are 35.902532° N, -79.238067° W.

C. Types of Wastewater Produced:

The wastewater consists of 100% domestic waste comprised predominantly of wastewater generated by facility personnel. The facility is also being repurposed as a dry-bedding facility, therefore the system will not treat animal waste, save for wash-down water.

D. Description of Existing/Proposed Treatment & Disposal Facilities:

Existing facilities include: an 8,000 gallon baffled septic tank with an effluent filter; a 2,100 gallon septic tank effluent lift station with two 20 gallon per minute (GPM) 0.5 horsepower (hp) pumps and audible/visual high water alarms; a 4,000 gallon recirculation tank with two 55 GPM 0.5 hp pumps; two AdvanTex AX100 textile media packed bed filters; and a 60° v-trapezoidal flume with ultrasonic level sensing.

Existing facilities also include a well filter treatment system consisting of: a 3,240 gallon hydro-pneumatic storage tank; a 2,250 gallon manganese oxidation tank; a potassium permanganate tank; an 86 gallon diaphragm tank; three manganese filters; and a 4,000 gallon filter backwash tank with two 20 GPM 0.5 hp pumps.

Existing facilities to be decommissioned include approximately 320 linear feet of 8-inch gravity sewer; an ultraviolet (UV) disinfection system with two lamps; an 80 GPM floating transfer pump station; a 75,843 gallon lined effluent storage lagoon; and a 2.12 acre irrigation area composed of one field with 16 nozzles.

Existing facilities to be refurbished include the conversion of a 171,500 gallon lined effluent storage lagoon into a 125,724 gallon clay lined secondary effluent storage basin to be used as supplemental wet weather storage.

Existing facilities to be reconstruction include the conversion of: the existing animal wastewater treatment system storage basin into a 1,122,440 gallon clay lined wet weather storage basin; and the existing animal wastewater treatment system irrigation pump station into a 1,495 gallon domestic wastewater pump station with two 158 GPM submersible pumps and audible/visual high-water alarms.

Proposed facilities to be constructed include: approximately 540 linear feet of 8-inch gravity sewer; a liquid sodium hypochlorite disinfection system with a 55 gallon chemical storage tank and two 7.1 gallon per hour (GPH) positive displacement peristaltic chemical feed pumps; a 525 gallon chlorine contact tank; a secondary effluent pump station with two 80 GPM submersible pumps; and a 5.72 acre irrigation area composed of four fields with a total of 160 nozzles.

2. BASIS FOR ISSUING A STATE NON-DISCHARGE PERMIT

The Division of Water Quality has been delegated authority by the Environmental Management Commission to issue non-discharge permits in the state of North Carolina. This draft permit was developed based on an application for a major modification to the Wastewater Irrigation System Permit (WQ0023896), received from the University of North Carolina at Chapel Hill on August 18, 2011, and additional information received November 14, 2011.

3. THE ADMINISTRATIVE RECORD

The administrative record, including the original application, received additional information, Division of Water Quality review comments, and the draft permit are available for review and copying at the Archdale Building located at 512 N. Salisbury St., Raleigh, NC 27604; and at the Division of Water Quality's Raleigh Regional Office at 3800 Barrett Dr., Raleigh, NC 27609 between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday. Copies of the administrative record can be provided at a charge of 2 ½ cents per page with the first 100 copies free of charge.

4. PUBLIC COMMENT SCHEDULE.

Draft permit to public notice: August 5, 2012

Public Meeting date: August 22, 2012

Public comment period closes: September 4, 2012

5. EFFECTIVE DATE AND LENGTH OF THE PERMIT

The permit will be effective until September 30, 2015.

6. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

The Division of Water Quality Director, pursuant to General Statute 143-215. 4(b) (1) and (2) and Administrative Code 15A NCAC 02T .0108, has determined that it is in the public interest that a meeting be held to receive all pertinent public comment on whether to issue, deny, or modify the draft permit. All information received prior to the close of business on September 4, 2012, will be taken into consideration in finalizing the permit decision. The meeting will be held on August 22, 2012 at 7:00 p.m. at the White Cross Recreation Center located at 1800 White Cross Rd., Chapel Hill, NC 27516. Registration will begin at 6:30 p.m.

The meeting will be conducted in the following manner:

- A. Explanation of the NC Environmental Management Commission's Permitting Procedure and contents of the draft permit by the Division of Water Quality staff.
- B. Public Comment – The public meeting is a forum for the Division to obtain water quality information that was either overlooked or unavailable at the time the permit was drafted. INFORMATION PRESENTED SHOULD SPECIFICALLY ADDRESS ISSUES RELATED TO WATER QUALITY IMPACTS RESULTING FROM WASTE MANAGEMENT AT THIS FACILITY. Comments, statements, data and other information may be submitted in writing prior to or during the meeting, or may be presented orally at the meeting. Persons desiring to speak will indicate this intent at the time of registration at the meeting. So that all persons desiring to speak may do so, lengthy statements may be limited at the discretion of the meeting officer. Oral presentations that exceed three minutes must be accompanied by three written copies, which will be filed with the meeting clerk at the time of registration.

- C. Cross-examination of persons presenting testimony will not be allowed. However, the meeting officer may ask questions for clarification.
- D. The meeting record will be closed at the conclusion of the meeting.

7. COMMENT PERIOD

The comment period for the draft permit will conclude at the close of business on September 4, 2012. All comments received until this time will be considered in the formulation of final determinations with regard to this permit.

Interested persons are invited to submit written comments on the draft permit or on the Division of Water Quality's proposed determinations to the address below:

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Aquifer Protection Section
Land Application Unit
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Attn: Nathaniel Thornburg**

/NDT