



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
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Suite 1152, East Tower
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Public hearing participants and
persons who commented on
Draft NPDES Permit No. GA0020770

JUL 20 2017

RE: Springfield Water Reclamation Facility
NPDES Permit No. GA0020770
(Effingham County)

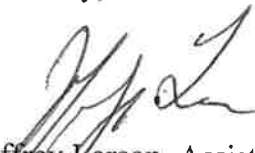
Dear Participant/Commenter:

Thank you for your comments regarding the permit reissuance for the City of Springfield Water Reclamation Facility. Attached is a summary of the comments submitted during the public participation process, and EPD's response to those comments. We have also included a Fact Sheet Addendum documenting the changes made to the draft permit.

After consideration of your comments, EPD has determined that the permit as drafted is protective of water quality standards and we have issued the permit.

If you have any questions, please contact Benoit Causse of my staff at 404-463-4958 or benoit.causse@dnr.ga.gov.

Sincerely,



Jeffrey Larson, Assistant Branch Chief
Watershed Protection Branch

JHL\bsc
Attachment: Response to comments
Fact Sheet Addendum

Response to Comments
 Springfield Water Reclamation Facility (WRF)
 NPDES Permit No. GA0020770

Public Comment	EPD Response
<p>Does the Springfield WRF have an industrial pretreatment program? If not, how will permitting, administration and monitoring of dischargers to the WRF be performed and who will be responsible for enforcement?</p>	<p>The City of Springfield does not have an approved pretreatment program. Industrial dischargers to the Springfield WRF must obtain a pretreatment permit from EPD. EPD staff will be responsible for compliance and enforcement of the permit.</p>
<p>What are the parameters for dry weather? Please clarify that the zero discharge is only a recommendation and not a requirement.</p>	<p>The zero discharge during dry weather (i.e., streamflow below 3cfs) in the permit is a requirement, not a recommendation. Any discharge during low streamflow conditions (i.e., streamflow below 3cfs) will be a permit violation.</p>
<p>What happens during a prolonged drought period?</p>	<p>The permit allows for the City to distribute reuse water to customers and to land apply reuse water to the sprayfields. The facility is also equipped with a pond that provide more than 30 days of storage at design flow conditions.</p>
<p>How often have the discharges to Ebenezer occurred in the past 3 years and how many gallons were discharged per occurrence. What has been the average Kg/day?</p>	<p>Operational Monitoring Reports (OMRs) and Discharge Monitoring Reports (DMRs) for Springfield WRF may be reviewed at the EPD Coastal District office.</p>

Public Comment	EPD Response
<p>It is stated that a Watershed Protection Plan (WPP) was approved in 2016. Is the WPP the guiding document for the action plan to restore Ebenezer Creek? How long have restoration activities been underway and how long do they continue until it is deemed unsuccessful?</p>	<p>The WPP describes watershed protection strategies that will be used by the permittee to restore and protect water quality and maintain the biological integrity of the waters within its watershed assessment area. This is accomplished primarily through the development and implementation of Best Management Practices (BMPs). An important element of the Protection Plan is measuring the effectiveness of the BMPs through a long-term monitoring program. The WPP is considered a “living document”, and should be modified periodically to reflect land use transformations, and changes in service area and jurisdictional boundaries. The WPP was approved in 2016. The permit includes requirements to submit an annual report to show progress toward water quality improvements. Ebenezer Creek is one of the watershed assessment monitoring sites. The WPP and its requirements will be in effect as long as NPDES Permit No. GA0020770 will be in effect</p>
<p>It is stated that the TMDL for the dissolved oxygen developed in 2000 was replaced by a 5R plan.</p>	<p>The statement in the fact sheet is incorrect and the fact sheet has been amended. The requirements in the TMDL for Ebenezer Creek still apply. The permit does not allow any discharge of oxygen demanding compounds during critical dry weather conditions.</p>
<p>The discharge into Ebenezer Creek should not have such an allowed swing in their pH levels. It is a unique and vastly important black water system, whose pH should be closer to 5. The permitted discharge should be closer to 7 to minimize damage to the system.</p>	<p>Optimum pH for wastewater treatment is within the range of 6.5-7.5. Lowering the pH below 7.5 may impact the treatment process. The maximum pH was decreased from 8.5 to 7.5 standard units. A 36-month schedule has been included to comply with the new limit.</p>

Public Comment	EPD Response
<p>We understand that Springfield needs jobs, but assuming the liability from a company with a 10-page long list of chemicals that they could possibly discharge. A list of actual expected chemicals to be discharged needs to be published for the permitting process.</p>	<p>DRT America is classified under the Organics, Chemicals, Plastics, and Synthetic Fibers (OCPSF) point source category for which federal regulations have been promulgated in 40 CFR 414. EPA evaluated OCPSF facilities across the nation and established technology-based effluent limitations that must be included in the permit. The list of actual expected chemicals to be discharged was provided to EPD in the pretreatment permit application. Of the 45 OCPSF chemicals listed in the permit, only Toluene is expected to be present in the industry's effluent. Toluene is limited to a daily average of 28 µg/L and a daily maximum of 74 µg/L in the proposed industrial permit No. GAP050304. These limitations are more stringent than the instream water quality criteria of 5,980 µg/L and the maximum contaminant level (MCL) of 1,000 µg/L for drinking water.</p> <p>Toluene is not expected to be present in the Springfield WRF discharge to Ebenezer creek or in groundwater.</p>
<p>It is highly likely that added industrial input will create a toxicity issue on the sprayfield that lies directly adjacent to the Creek. With this added toxic effluent, we have extreme concern for not only the adjacent landowner's property, but for what that will mean for the toxicity within the creek.</p>	<p>The permit requires priority pollutant scans (PPS) and whole effluent toxicity (WET) tests to be conducted on the discharge to Ebenezer Creek.</p>

Public Comment	EPD Response
<p>Grab samples should happen daily and the mortality tests should be done quarterly.</p>	<p>The permit requires priority pollutant scans (PPS) and whole effluent toxicity (WET) tests to be conducted, starting 36 months after the effective date of the permit. The frequency is consistent with other NPDES facilities discharging more than 1.0 MGD and/or having industrial users. EPD may require more frequent monitoring, or monitoring of other pollutants not specified in the permit if the presence of pollutants of concern is suspected (Part I.C.5). The permit has been revised to include a requirement for the City to conduct one PPS and one WET test within 120 days of the effective date of pretreatment permit No. GAP050304.</p>
<p>Ebenezer creek is a nationally recognized Scenic River, one of only 4 designated in the state of Georgia, and is one of the most amazing resources Springfield currently has in its possession. It is already an economic driver to the area, with people flocking from hundreds of miles away to float its majestic waters. Tourism is a growing important industry in the area. We believe this currently flawed permit puts those jobs and those economic drivers at risk.</p>	<p>Noted</p>
<p>Without an automatic turnoff apparatus for rain events, the LAS will continue to be operated during rainfall. A half mile trigger is not adequate.</p>	<p>The center pivots are equipped with sensors for automatic shutoff during rain events. The permit has been revised to require daily rain monitoring at the land application site.</p>
<p>Located between my wetlands and the irrigation system is a down-elevation unlined borrow pit. In my written comments to EPD when the first permit was put to public comment, I requested the pit to be filled in and was assured by EPD that it would happen. Springfield filled in about half of the pit. The remaining pit has been a drip, drip, for eight years to my land. Did the half Springfield filled in use the same classification of soil modeled for percolation rates?</p>	<p>The type of soil that was used to partially fill this borrow pit is unknown. This pit is not part of the wastewater treatment process nor part of the sprayfield. The LAS is operated has a no discharge system. It is recommended that the commenter contact the City for more information about this borrow pit.</p>

Public Comment	EPD Response
<p>Allowing the water parameters to be downgraded from a tertiary standard towards more of a secondary nature for three years is not acceptable.</p>	<p>A 36-month compliance schedule has been included in the permit to allow time for the City to evaluate the treatment process, secure funding, and make the necessary upgrades to meet the more stringent limits. The permit limits (concentrations and mass loadings) for the first 36 months are the same as the ones in the 2002 iteration of the permit.</p>
<p>What about wildlife eating plants sprayed with the wastewater? At what point my deer or turkey become uneatable for safety reasons? Can they be harvested for animal consumption to be used for human consumption?</p>	<p>EPD does not allow wastewater to be sprayed on crop destined for direct human consumption. However, indirect human consumption is not prohibited. For instance, hay can be harvested to feed livestock destined for human consumption (meat, milk). Deer or turkeys on the adjacent properties will not be sprayed with treated wastewater.</p>
<p>Just because the wastewater may meet the LAS permitted standards does not mean that when it eventually accumulates in my soils or wetlands, that the same standards will be met.</p>	<p>The treated wastewater applied on the sprayfield percolates through the soil matrix and eventually reaches groundwater. Groundwater leaving the application site must not exceed Maximum Contaminant Levels (MCLs) for drinking water. Groundwater will then naturally discharge to surface waters.</p>

Public Comment	EPD Response
<p>What modeling has been done – along the whole creek – to ward off conditions that convert the creek back to its prior eutrophic state?</p>	<p>Monitoring for Total Phosphorus, Ortho-Phosphate, Total Kjeldahl Nitrogen, Organic Nitrogen, and Nitrate-Nitrite monitoring has been included in the permit to quantify nutrient loading to the Creek and establish a future nutrient management plan. The permitted loading for ammonia was decreased from 3,459 Kg/year to 830 Kg/year to ensure nutrient loading to the creek is addressed.</p>
<p>Springfield's wastewater does not just hold nutrients/minerals. Pharmaceuticals entering the wastewater are neither sampled, nor given limits.</p>	<p>There are currently no State water quality standards for pharmaceutical chemicals in groundwater and surface water. The permit requires priority pollutants scans and whole effluent toxicity tests for the treated effluent discharged to Ebenezer Creek. If toxicity is exhibited or pollutants of concern are present, EPD may require additional monitoring or modify the permit to include a limit.</p>
<p>The proposed permit renewal states that the LAS is 2,000 feet from Ebenezer Creek. This is inaccurate. Using the County's GIS mapping, the imprint of the wheel path of the center pivot irrigation system to my wetland is 350 feet.</p>	<p>The approximate distance listed in the fact sheet is from the edge of the sprayfield to the creek bed, not the wetlands.</p>

Public Comment	EPD Response
<p>Dr. Jim Kennedy, State Geologist, told me that he had worked on the original modeling and submitted to the permitting division the fact that adjacent downhill properties would experience seepages/plumes from the spray water.</p> <p>The design of the sprayfield to utilize a sandhill because of its quickly percolating capabilities impacted my property, and may continue to do so with continued spraying.</p> <p>No modeling has been done on my property to evaluate the total impact of the LAS on my land or waters.</p> <p>My property has had ecological impacts due to the LAS.</p>	<p>The 2009 iteration of LAS Permit No. GA02-032 included requirements for the City to develop a plan to ensure that operation of the land application system does not substantially increase groundwater levels on adjacent properties. The City submitted a mounding analysis along with an operational plan in 2016. The mounding analysis determined that, among the onsite monitoring wells, the maximum LAS-induced groundwater mounding would occur at GWC-4. Accordingly, EPD included limitations in the permit to maintain a minimum depth to water in monitoring well GWC-4 of 36" and 54" during winter and summer months, respectively. Based on a comparison of historical application rates and groundwater levels, this strict standard will reduce mounding within the irrigation area and within the LAS buffer zone adjoining the adjacent downgradient properties. Although the permitted flow to the sprayfield is 0.542 MGD and the application rate is up to 2.5 in/week, the limiting parameter for the LAS operation will be the water table elevation.</p>
<p>When there are high flow conditions in Ebenezer Creek, what is to stop Springfield from doing direct discharge that adds to flooding on my property, and nearby neighbors from a higher creek than normal?</p>	<p>The permit allows the City to discharge up to 2.5 MGD (3.9 cfs) maximum. The average annual stream flow is 92 cfs. The USGS gauge recorded flows as high as 500 cfs during the period 1990-2016. The instream wastewater concentration (IWC) is 4% or less under these streamflow conditions.</p>
<p>I do not see any reference to Springfield being held to any direct discharge requirements except from the groundwater level in the midfield well on the LAS. EPD indicated the City would not be using the LAS when the river gage was at 3 cfs or above. Is that a permit requirement?</p>	<p>Although it is not a permit requirement, historical data shows that if streamflow is above 3cfs, the groundwater elevation in GWC-4 is likely to be above the elevations in Part I.B.4 of the permit, preventing the City from land applying.</p>

Public Comment	EPD Response
<p>Has Springfield specified their need for the wastewater increase? Is Guyton to stay permanently on their system? Or is it industrial or residential development pushing the additional need for capacity?</p>	<p>The plant design flow was re-rated from 0.5 to 0.6 MGD (20% capacity increase). Since the facility is operated as a hydrograph-controlled release system, the <u>design</u> capacity differs from the <u>permitted</u> flow. The permitted discharge flow increase from 1.5 to 2.5 MGD is to give the City staff more operational flexibility. It is not an increase in the plant capacity.</p> <p>The rationale for the hydraulic capacity increase is the conservation of mass loadings. The permit includes more stringent limits to compensate for the higher flow rates.</p>
<p>The holding pond at the facility is in the flood zone.</p>	<p>The pond at the plant is located in the flood zone corridor. A review of the FEMA map indicates that the estimated flood elevation in the vicinity of the pond is less than 29.5 feet. Plans for the facility show that the elevation of the top of the pond berm is 34 feet; therefore the pond is protected from flooding (100-year flood).</p>
<p>Why are Priority Pollutants Scans (PPS) and Whole Effluent Toxicity (WET) tests required? The City is already permitted to discharge flows greater than 1.0 MGD and these tests were not required under the 2002 iteration of the permit.</p>	<p>The monitoring requirements in the previous iterations of the permit (and in the permit application) were based on the <u>design</u> flow of 0.6 MGD. Since the facility is operated as a hydrograph-controlled release system, the design flow differs from the permitted flow. The WET monitoring requirements in this iteration of the permit are based on the <u>permitted</u> flow (up to 2.5 MGD) to be consistent with the monitoring requirements for other NPDES facilities discharging flows greater than 1.0 MGD.</p> <p>Since the facility is proposing to accept pretreated wastewater from an industrial user (DRT America, Inc.), the permit also includes requirements to conduct PPS.</p>

Public Comment	EPD Response
<p>Remove the specific effluent sampling locations from the permit. The City will likely make modifications at the plant within the next 36 months and a permit modification will be required to change the sampling locations.</p>	<p>Sampling locations have been specified to clarify the various compliance points and avoid any misinterpretation of the monitoring requirements. This information will be useful for the operating staff and EPD compliance officers. Should the configuration of the plant be changed within the next 36 months, EPD will modify the permit to reflect the new conditions.</p>
<p>The City was told to conduct an extensive mounding analysis, and none of the results were used to establish permit limits. What was the purpose of the mounding analysis?</p>	<p>The analysis was necessary to develop appropriate operational changes. It was a requirement of LAS Permit No. GA02-037. Based on EPD review of the mounding study, EPD chose to restrict irrigation to maintain a minimum depth to water in monitoring well GWC-4 of 36" and 54" during winter and summer months, respectively. This stricter standard will reduce mounding within the irrigation area and within the LAS buffer zone adjoining the adjacent properties.</p>
<p>It would be to the City's benefit to get some assurance from EPD that if continuous monitoring in GWC-4 shows that higher water table levels do not lead to seepage onto adjacent properties, the elevations listed in the permit can be modified accordingly.</p>	<p>If the City can adequately demonstrate that higher water table levels do not lead to seepage onto adjacent properties, the City may request the levels to be re-evaluated.</p>

Public Comment	EPD Response
<p>The designated weekly loading limitations were inadvertently switched for Zones 2 and 3. Zone 2 loading should be 2.0 in/week and Zone 3 loading should be 2.5 in/week.</p>	<p>The application rates in the draft permit came from LAS Permit No. GA02-037. After verification, it appears that this permit had a typographical error. The permit has been revised to reflect the appropriate loading rates. Please note that this will slightly decrease the allowable flow to the sprayfield as follows:</p> $Q_{\text{field}} = \frac{A_{\text{site}} (\text{acres}) \times \text{WLR} (\text{in/week}) \times 43,560 (\text{ft}^2/\text{acre}) \times 7.48 (\text{gal}/\text{ft}^3)}{12 (\text{in}/\text{ft})}$ $= \frac{(39.14 + 8.47) \times 2.5 \times 43,560 \times 7.48}{12} + \frac{10.33 \times 2.0 \times 43,560 \times 7.48}{12}$ $= 3,792,780 \text{ gal/week (weekly maximum)}$ $= \underline{0.542 \text{ MGD (7-day average)}}$ <p>Although the permitted flow to the sprayfield is 0.542 MGD, the limiting parameter for the LAS operation will be the water table elevation.</p>
<p>The monitoring well list in Part I.B.4.3 does not include mid-gradient well GWC-4.</p>	<p>Well GWC-4 is exclusively used for water level monitoring (Refer to Part I.B.4.1). Wells listed in Part I.B.4.3 are used for groundwater quality monitoring.</p>



**City of Springfield
NPDES Permit No. GA0020770**

Were there any revisions between the draft and final permit? Yes No

If yes, specify:

Effluent Limitations and monitoring requirements:

- Part I.B.2.a: Added requirement for one priority pollutants scan and one whole effluent toxicity test within 120 days of the effective date of pretreatment permit GAP050304.
- Part I.B.2.b: Reduced maximum pH from 8.5 to 7.5 s.u. to minimize pH fluctuations in the Creek
- Part I.B.2.b: Changed sample type from composite to grab for priority pollutant scans.
- Part I.B.4.1: Corrected typographical error for application rate (page 15). Reduced permitted flow accordingly (from 0.545 to 0.542 MGD).

Boilerplate:

- Part I.B.4.1: Revised language to require rain monitoring at the land application site.
- Part I.A.7: Added the following sections to the boilerplate:

- o Monitoring Wells Requirements

The permittee, upon written notification by the EPD, may be required to install groundwater monitoring wells at the existing land treatment system. This requirement may apply if monitoring wells were not included in the original design of the facility and also, if the EPD determines the existing groundwater monitoring wells are not adequate.

- o Groundwater Requirements

If groundwater samples are above the primary maximum contaminant levels for drinking water and/or indicate contamination, the permittee shall immediately develop a plan which will ensure that the primary maximum contaminant levels for drinking water are not exceeded. The plan will be implemented by the permittee upon EPD approval.

- o No Point Source Discharge(s) of A Pollutant To Surface Waters Of The State

The land treatment system must be operated and maintained to ensure there is no point source discharge(s) of pollutants directly to surface waters of the State.

FACT SHEET – Addendum

The Fact Sheet is being amended to correct Section 3.4 as follows:

Ebenezer Creek:

EPA developed a TMDL for dissolved oxygen in Ebenezer Creek in 2000. The recommended load of oxygen demanding compounds for Springfield WRF is 0 Kg/day during dry weather. The permit does not allow any discharge of oxygen demanding compounds during critical dry weather conditions. Any expansion of a Savannah tributary discharge must follow the 5R tributary discharger strategy.