



DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A HAGOOD AVENUE
CHARLESTON, SOUTH CAROLINA 29403-5107

FINDING OF NO SIGNIFICANT IMPACT

GOODBYS REGIONAL WASTEWATER TREATMENT PLANT

ORANGEBURG COUNTY, SOUTH CAROLINA

June 2011

The National Environmental Policy Act (NEPA) requires the U.S. Army Corps of Engineers, Charleston District (The Corps) and USDA/Rural Development (hereafter referred to as the “Joint Agencies”) to evaluate the effect of proposed projects on both the environment and human health and welfare. This Finding of No Significant Impact (FONSI) summarizes the results of the Joint Agencies’ evaluation and documents the Joint Agencies’ conclusions.

The Joint Agencies’, working in cooperation with the Lake Marion Regional Water Agency, Santee-Cooper, and Orangeburg County, is proposing to construct a wastewater infrastructure project in eastern Orangeburg County in the vicinity of the Towns of Ellore and Santee and the community of Providence. An Environmental Assessment (EA) of the potential environmental effects of the proposed project was prepared for the Joint Agencies by Environmental Planning Strategies, Inc. in conjunction with Alliance Consulting Engineers, Inc. While the conclusions in this FONSI represent the conclusions of the Joint Agencies, this FONSI is being issued as a Corps of Engineers document. USDA/Rural Development will issue a FONSI as a separate document.

The Corps’ work on this project is being conducted under authority of the Water Resources Development Act (WRDA) of 1992 (Public Law 102-580), which authorized the Corps to provide assistance to non-Federal interests for water and wastewater related environmental infrastructure projects.

The proposed project consists of approximately 31 miles of wastewater transmission lines and a 1.5 million gallon per day (average daily flow) wastewater treatment plant constructed adjacent to Goodbys Creek near the intersection of U.S. Highway 301 (Hwy 301) and U.S. Highway 176 (Hwy 176). The wastewater lines will follow along U.S. 301 paralleling the existing water pipelines, along Woolbright Road from U.S. 301 to the WWTP, along U.S. 176 from the proposed WWTP to Exit 90 on I-95, from U.S. 176 to U.S. 15 across Providence Swamp to Exit 93 of I-95, and along Tee Vee Road (SC Highway 267) past the Town of Ellore to Little Poplar Creek on to the Calhoun County Line (see Figures 1 and 2). The wastewater treatment facility will serve the wastewater needs of the adjacent Matthews Industrial Park, the proposed Jafza International logistics/distribution center near Santee, expected residential development in unincorporated areas of southern Calhoun County, expected commercial development at the intersections of Hwy 176/I-95 and Hwy 15/I-95, and some of the wastewater needs for the Towns of Ellore and Santee. The treatment plant facility will use a membrane bioreactor treatment system to achieve tertiary treatment standards. A schematic of the treatment process is provided in Figure 3. The treated effluent will be disposed of utilizing drip disposal fields in the vicinity of the treatment plant.

Construction of the project will occur in phases. The treatment plant is expected to be constructed first with the initial wastewater flow coming from the Matthews Industrial Park. The wastewater line from the Jafza site is expected to be constructed in the second phase, the wastewater lines from the Hwy 176/I-95 and Hwy 15/I-95 interchanges are expected to be constructed in the third phase, and the wastewater line from southern Calhoun County is expected to be constructed in the fourth phase.

The Joint Agencies evaluated several alternatives before development of the proposed project. These alternatives included the following:

- **Septic Tanks** – This alternative would involve the construction of septic tank systems for the expected residential development in southern Calhoun County and for commercial and industrial tenants of the Matthews Industrial Park and the Jafza International logistics/distribution center. The use of septic tanks for commercial and industrial facilities is an impractical alternative. Potential commercial and industrial tenants of the industrial parks would likely reject tenancy in the park if they would have to rely on septic tank systems for their wastewater treatment needs. The use of septic tanks for individual residential sites is a viable option; however, centralized wastewater treatment is preferred for the larger, planned developments that are expected in southern Calhoun County.
- **Expansion of the Santee and Ellore Wastewater Treatment Plants** – This alternative would involve construction of the previously proposed wastewater treatment plant at the Matthews Industrial Park and expansion of the existing wastewater treatment plants in the Towns of Ellore and Santee. The Santee plant would be expanded to treat wastewater from the Jafza International site and the Ellore plant would be expanded to treat wastewater from the Calhoun County residential development.

The Town of Santee's wastewater treatment plant uses an aerated lagoon treatment system with effluent disposal by spray irrigation onto two nearby golf courses. The plant treats wastewater to secondary treatment standards and has a permitted treatment capacity of 0.713 MGD. The plant does not have sufficient capacity to treat the expected 0.5 MGD flow from the Jafza International site and it has limited additional effluent disposal options.

The Town of Elloree's wastewater treatment plant also utilizes an aerated lagoon treatment system with effluent disposal by spray irrigation. The plant treats wastewater to secondary treatment standards and has a permitted treatment capacity of 0.28 MGD. The plant does not have sufficient capacity to treat the 0.5 MGD flow from the expected residential developments nearby in Calhoun County.

Assuming the Santee and Elloree plants would continue treating to secondary treatment standards, expansion of the plants would involve construction of additional treatment lagoons and acquisition of additional land for effluent disposal.

- **Construction of Wastewater Transmission Lines to Orangeburg DPW Wastewater Treatment Plant** – This alternative would involve the construction of gravity wastewater lines, a wastewater pump station, and a wastewater force main. The wastewater would be pumped to the existing City of Orangeburg Department of Public Utilities' (DPU) wastewater treatment plant along U.S. Highway 21 that discharges into the North Fork of the Edisto River. Although this is a technically feasible solution and the existing DPU treatment plant has the necessary capacity, this alternative would require crossing Four Hole Swamp with a wastewater line. This line would require an excavation through the swamp during construction and would result in a permanently cleared corridor through the swamp. This alternative is also more costly than the proposed alternative. For these reasons, this alternative was rejected.
- **Discharge of Treated Effluent to Surface Waters** – This alternative considers discharging the effluent to surface waters rather than to the Sanders Point Farm effluent discharge site. The adjacent surface waters available for effluent discharge from the Goodbys WWTP are Four Hole Swamp and Goodby's Creek. Both water bodies are listed on the SCDHEC 303 (d) list as impaired water bodies. Additionally, portions of the Four Hole Swamp are listed on the Nationwide River Inventory (NRI). For these reasons, this alternative was rejected.
- **Other Alternatives** – Other possible alternatives would consist of combinations of the above alternatives (e.g., expand the Elloree and Santee plants and construct a wastewater transmission line between Matthews Industrial Park and the Orangeburg DPU wastewater plant, etc.).
- **No Action** – This alternative would involve no planned additions to the wastewater system in this area of Orangeburg County. This alternative would eliminate the possibility of developing the Matthews Industrial Park and the Jafza International site as planned centers for commercial and industrial growth in the project area. However,

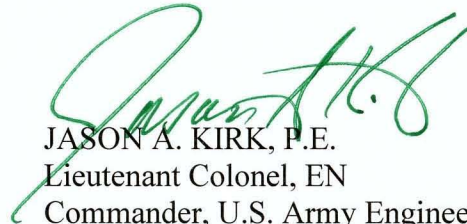
because of their locations along a 4-lane U.S. Highway (i.e., Hwy 301) and their proximity to Interstates 26 and 95, sporadic commercial and industrial growth will likely occur in the project area. These industries would likely not be centrally located at the Industrial Park site and would likely use septic systems, small wastewater treatment package plants, or wastewater storage that relies on pump and haul for disposal/treatment for their wastewater needs. This alternative would likely result in uncontrolled, sporadic growth; and many, potentially less reliable, wastewater treatment systems. For these reasons, the “no action” alternative was rejected.

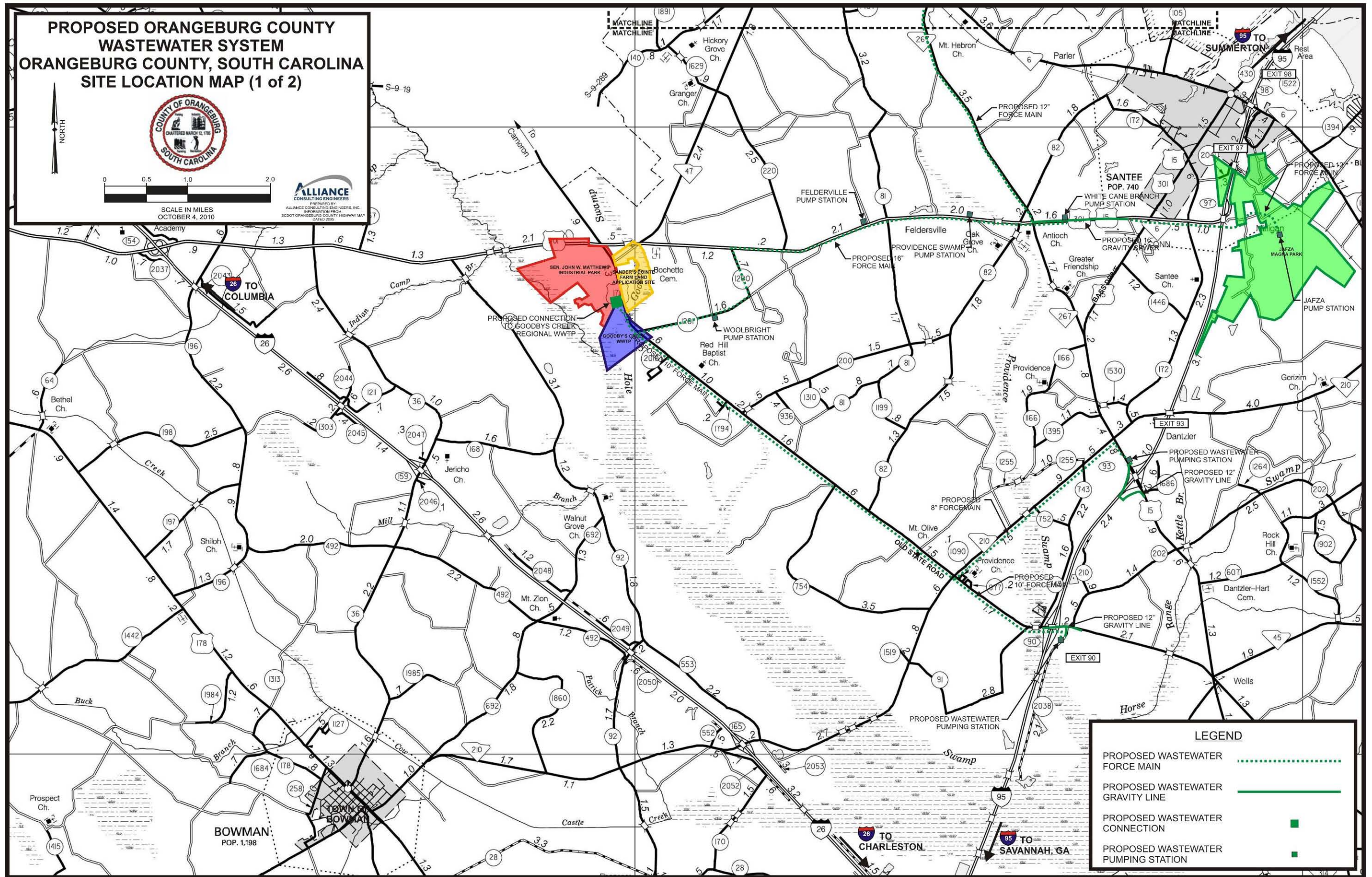
The Joint Agencies’ criteria for evaluating the effect of the proposed project included the following:

- Important Farmland – direct impacts are limited to four of the wastewater pumping station sites in which no practical alternative exists to avoid impacts to Important Farmland. To mitigate future impacts, a binding covenant, which will supplement the Orangeburg County Zoning and Development Ordinances, shall be utilized to mitigate any indirect impacts. Impacts are not anticipated to be significant as a result of implementing the proposed project and were determined to be acceptable.
- Formally Classified Lands – no significant impacts to formally classified lands are expected as a result of implementing the proposed project.
- Wetlands and Floodplains – no adverse impacts to floodplains or wetlands are expected.
- Water Quality – a short-term increase in turbidity where the wastewater lines cross streams/wetlands is the only expected adverse effects on water quality. These effects will be temporary and were determined to be acceptable.
- Cultural Resources – no effects on cultural resources are expected as a result of implementing the proposed project.
- Threatened and Endangered Species – no effects on threatened and endangered species are expected as a result of implementing the proposed project.
- Noise – a short term increase in noise is expected during construction; however, these impacts will be temporary. No additional effects are anticipated a result of implementing the proposed project.
- Air Quality – no effect on air quality is expected as a result of implementing the proposed project.
- Environmental Justice – no adverse effects on minority and low-income human populations are expected as a result of implementing the proposed project.
- Cumulative Impacts – no significant adverse cumulative impacts are expected as a result of implementing the proposed project.

A draft EA and FONSI were distributed in February 2011 for a 30 day comment period. No substantial adverse comments were received. Therefore, based upon the Environmental Assessment, the proposed project does not constitute an action significantly affecting the human environment. Accordingly, preparation of and Environmental Impact Statement is not warranted. The full Environmental Assessment can be downloaded from the internet (in PDF format) at <http://www.sac.usace.army.mil/?action=environmental.assessment> or a copy may be obtained by contacting either Mr. Alan Shirey (alan.d.shirey@usace.army.mil; (843) 329-8166) or Ms Michele Cardwell (1555 Richland Avenue East; Aiken, South Carolina 29801).

Date 30 JUN 2011


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Source: Alliance Consulting Engineers, Inc.

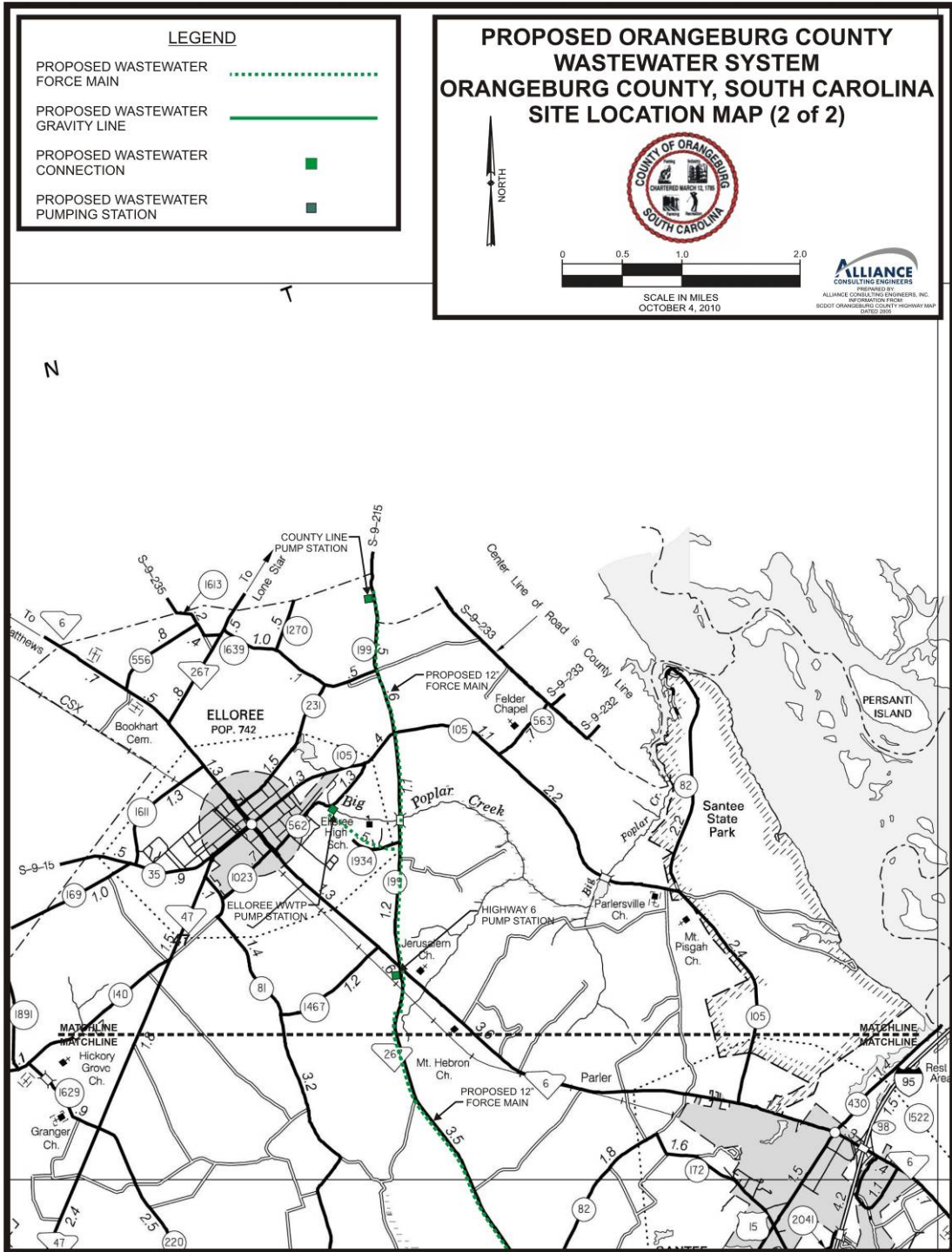
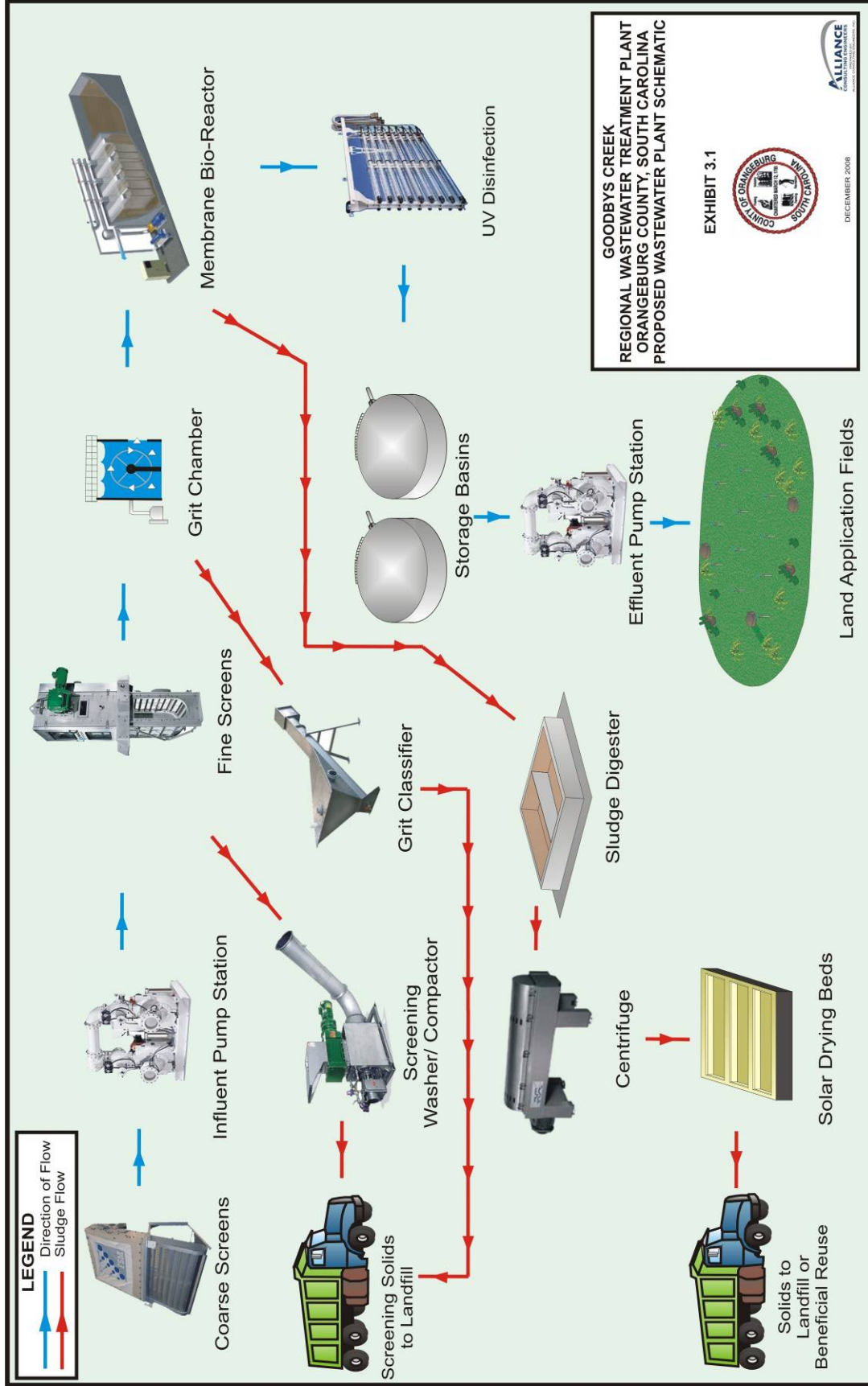


Figure 2 – Site Location Map of Goodbys Creek Regional Wastewater Project (2 of 2)



Source: Alliance Consulting Engineers, Inc.

Figure 3 – Flow Schematic of Wastewater Treatment Process