



State of Louisiana

Department of Health and Hospitals
Office of Public Health - Drinking Water Revolving Loan Fund

December 19, 2014

FINDING OF NO SIGNIFICANT IMPACT

TO ALL INTERESTED AGENCIES AND PUBLIC GROUPS:

In accordance with the National Environmental Policy Act (NEPA), as administered by the Louisiana Department of Health and Hospitals (LDHH), Office of Public Health (OPH) in accordance with Act 39 of the 2006 Regular Session of the Louisiana Legislature in connection with the Drinking Water Revolving Loan Fund (DWRLF) program, an environmental review has been performed and a *Finding of No Significant Impact* determined for the proposed action as described below:

TOWN OF GREENWOOD WATER SYSTEM

CADDO PARISH, LOUISIANA

PWS Identification Number LA 1017014

Drinking Water Revolving Loan Fund (DWRLF) Project Number 1017014-01

BACKGROUND: The Town of Greenwood is located in the southwest corner of Caddo Parish approximately 14 miles southwest of Shreveport, LA. The planning area for the proposed improvements encompasses the water system's existing service area as shown on **Figure 1 Vicinity Map**. The latitude and longitude for the centermost point of the planning area is, respectively, 32°26'34" N and 93°58'22"W.

Greenwood is a publically-owned, community water system that obtains its water from three different sources; groundwater wells, surface water, and purchase water. The system currently serves a population of approximately 4,437, the current number of service connections is 1,740 residences and businesses. The groundwater supply facilities consist of five water well sites known as the Kimberly Road Facilities. These wells age ranging from 23 to 39 years, and are considered to be in moderate to poor condition. The groundwater treatment facility consist of two 150 gpm multi-media sand type pressure filters, two 66,000 gallon ground storage tanks (GST). The water is treated with potassium hydroxide and potassium permanganate to enhance oxidation and address taste and odor concerns and then chlorinated prior to distribution. The surface water treatment plant consists of a raw water intake structure on Caddo Lake, a raw water transmission main from the intake structure to the water plant, and a 600,000 gpd surface water treatment plant. The treatment plant includes an in-line static mixer where treatment chemicals are applied, two parallel flocculation basins with paddle type mixing equipment, two rectangular clarifiers, four parallel Greenleaf type rapid sand filters, two 70,000 gallon bolted steel clearwells, high service pumps/backwash pumping facilities and chemical feed equipment. At times when the groundwater and surface water treatment plants aren't able to keep up with

demand, the Town purchases water from the City of Shreveport municipal water system. It connects to Shreveport's water system at two locations one on West 70th Street, and the other on Santa Monica Drive in Timberline Subdivision. The Town limits its usage due to the high cost of purchasing water from Shreveport.

Historical water consumption records, which include residential and commercial demand, indicate that the average daily water consumption/demand is 536,877- gallons per day (gpd). From the System Improvement Plan the average daily (per capita) consumption is calculated to be 121 gal/day/person. Based on a 2-percent annual growth factor derived from census data and population trends, the estimated average daily demand needed to accommodate this growth at the end of the 20-year planning period is approximately 813,726-gpd for 6,726 people. The maximum daily demand is approximately twice the average daily usage which results in a projected maximum daily demand of 1,593,828-gpd.

PURPOSE AND NEED: As mentioned in the description above the groundwater wells are in moderate to poor condition and the capacity of the surface water treatment plant alone is not adequately to meet current demand. Due to the condition of the existing water treatment plants and the Town's estimated growth potential, it is evident that it is necessary to enhance water production capabilities, improve the distribution system, and enhance water quality to accommodate the future growth and more stringent regulatory requirements.

PROJECT DESCRIPTION: The Town of Greenwood proposes to expand and improve the existing surface water treatment plant as shown in Figure 2. The improvements include installing settling tube technology in the settling basins, improve the sludge collection system, construct a 3 million gallon raw water reservoir to enhance settling and provide a source of raw water in case of problems with the raw water intake structure. The major improvement will be the addition of 1.2 mgd membrane filtration system and associated structures. The improvements also include the addition of an 8" water main to the Timberline Booster Station. This alternative utilizes the best available technology in municipal water filtration to provide a source of water that is expected to meet regulatory compliance into the foreseeable future. The project also proposes to close the existing groundwater treatment facility. Which is another advantage, abandoning the groundwater facility eliminates the need to comply with the 40 CFR 141.2 groundwater rules reducing process complexity and operations and maintenance issues of running two water plants. All water improvements will be constructed on existing road right-of-ways or easements already secured by the water system.

DOCUMENTATION COORDINATION AND PUBLIC PARTICIPATION: Coordination with the appropriate governmental agencies has been made as indicated in the System Improvement Plan with Environmental Impacts Water System Improvements prepared for this proposed project. No adverse environmental comments were issued for the proposed project, and all comments have been addressed. A public hearing was held at 7:00 p.m. on July 21, 2014 at the Town of Greenwood's Town Hall, Town of Greenwood, Louisiana. The hearing was advertised on June 12, 2014 in the "The Times". Any and all comments offered were addressed. The proposed project will be reviewed by the Louisiana Department of Health and Hospitals to

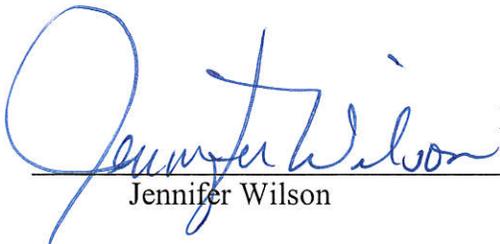
ensure that it complies with the State Sanitary Code for Water Supplies, Louisiana Administrative Code (LAC), Title 51, Chapter 12.

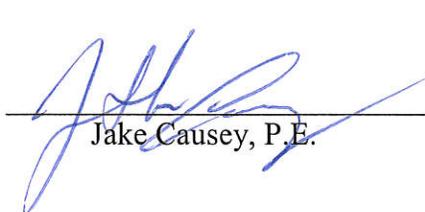
RECOMMENDATIONS: Based upon DWRLF's detailed review of the System Improvement Plan with Environmental Impacts Water System Improvements for the Town of Greenwood, April 2014, as revised, and DWRLF's preparation of an Environmental Assessment (EA), the proposed project is considered to be cost effective and environmentally sound. Therefore, a preliminary decision not to prepare an Environmental Impact Statement (EIS) has been made. Comments supporting or disagreeing with this decision may be submitted for consideration to the following address:

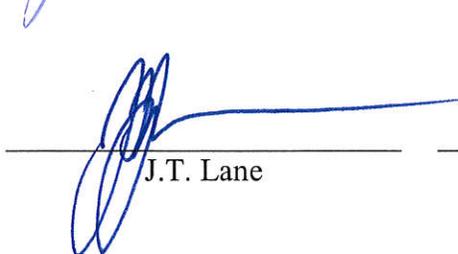
Brian Baker, P.E.
Drinking Water Revolving Loan Fund
Office of Public Health
Louisiana Department of Health and Hospitals
P.O. Box 4489
Baton Rouge, LA 70821-4489

After evaluating the comments received, DWRLF will make a final decision; however, no administrative action will be taken on this project for at least thirty (30) calendar days after release of this Finding of No Significant Impact.

Sincerely,


Jennifer Wilson
Drinking Water Revolving Loan Fund
Program Manager
Title
Date 12-19-14


Jake Causey, P.E.
Center for Environmental
Health Services
Chief Engineer
Title
Date 12/19/14


J.T. Lane
Assistant Secretary
Office of Public Health
Louisiana Department of Health and
Hospitals
Title
Date 12/23/14

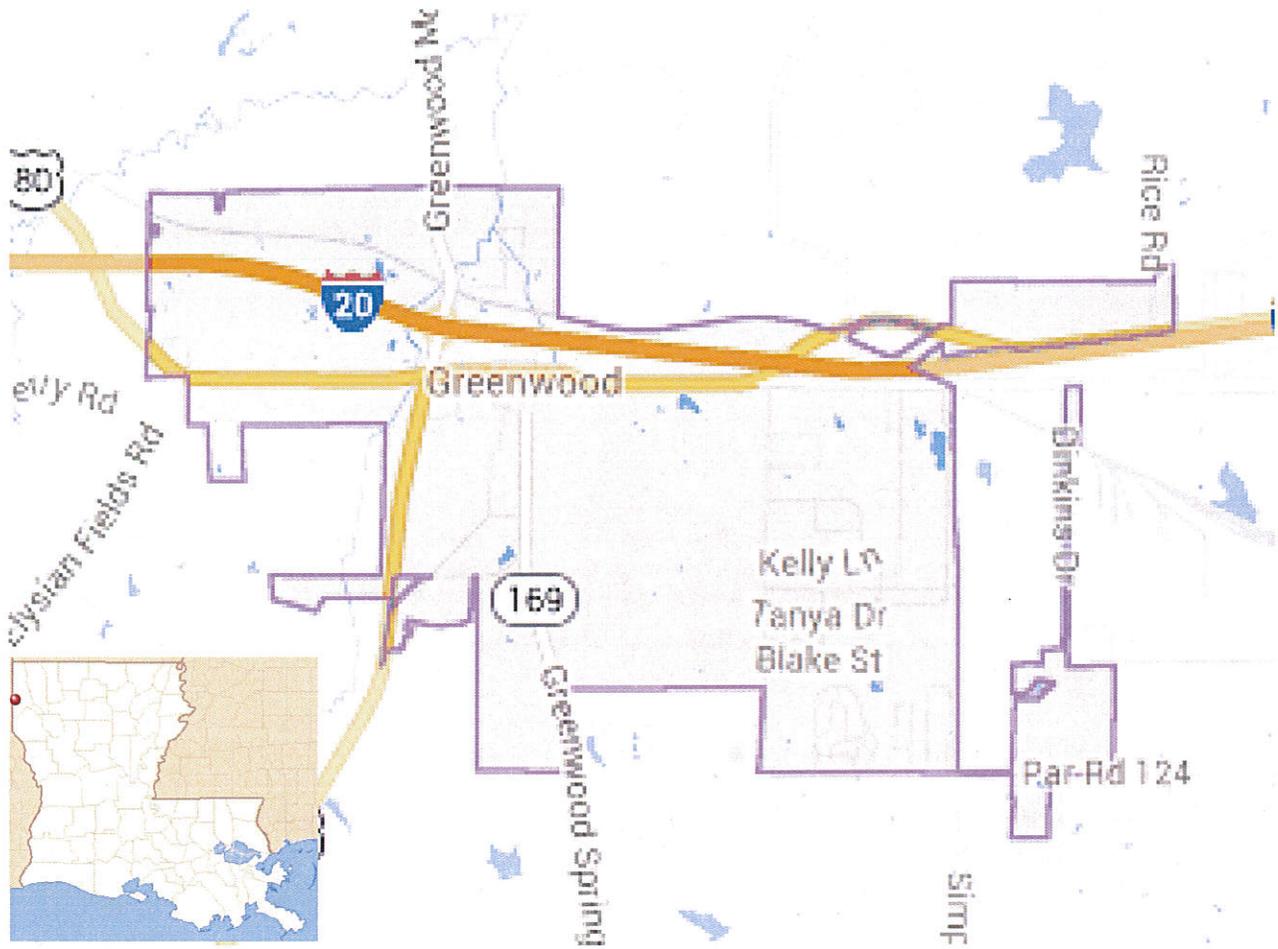


FIGURE 1
Project Area: Town of Greenwood

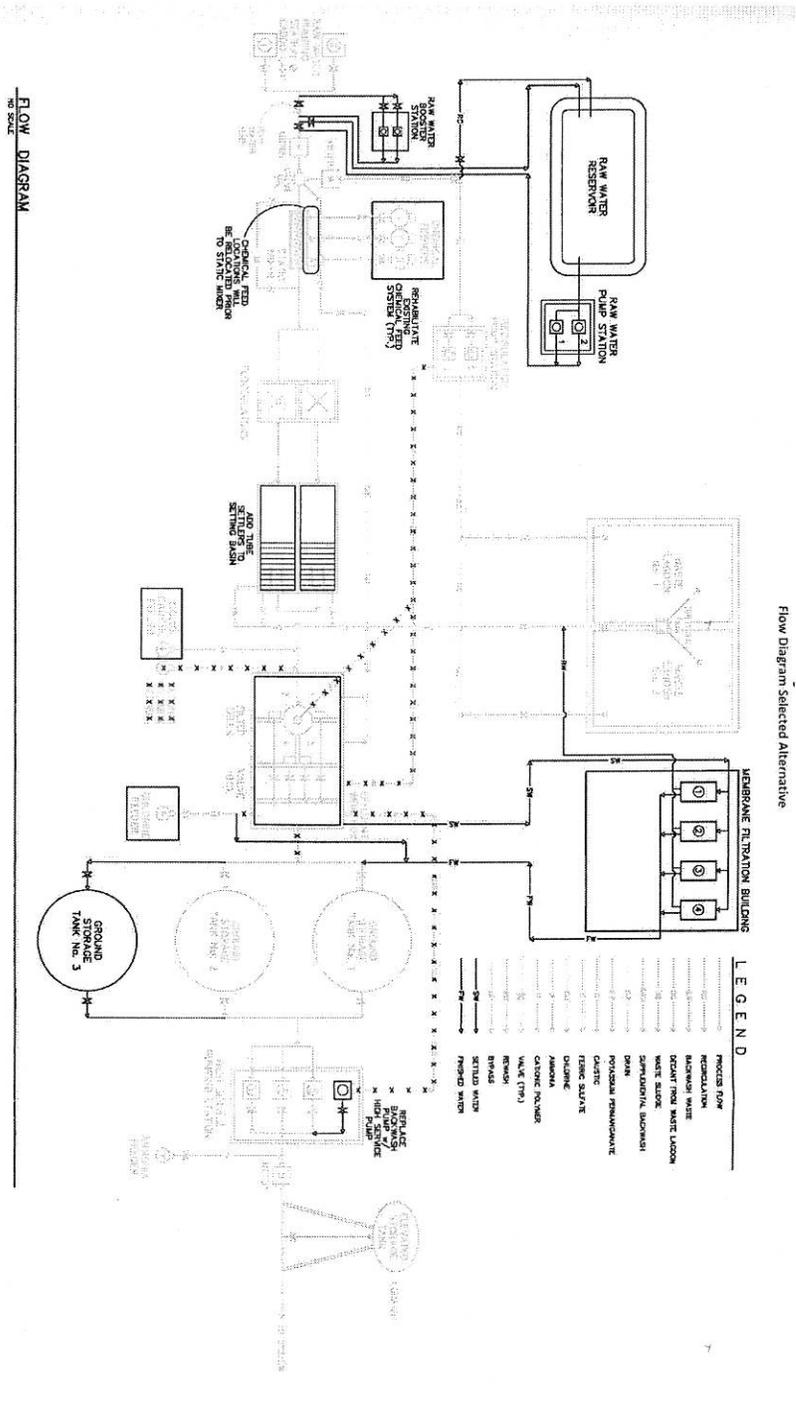


FIGURE 2



State of Louisiana
Department of Health and Hospitals
Office of Public Health – Drinking Water Revolving Loan Fund

ENVIRONMENTAL ASSESSMENT

For

TOWN OF GREENWOOD

CADDO PARISH, LOUISIANA

PWS Identification Number LA1017014

Drinking Water Revolving Loan Fund (DWRLF) Project Number 1017014-01

BACKGROUND: The Town of Greenwood is located in the southwest corner of Caddo Parish approximately 14 miles southwest of Shreveport, LA as shown in the attached **Figure 1 – Vicinity Map**. The water system is a publically-owned, community water system that obtains its water from three different sources; groundwater wells, surface water, and purchase water. The system currently serves a population of approximately 4,437, the current number of service connections is 1,740 residences and businesses. The groundwater supply facilities consist of five water well sites known as the Kimberly Road Facilities. These wells are all showing age ranging from 23 to 39 years, and are mostly considered to be in moderate to poor condition. The groundwater treatment facility consist of two 150 gpm multi-media sand type pressure filters, and two 66,000 gallon ground storage tanks (GST). The water is treated with potassium hydroxide and potassium permanganate to enhance oxidation and address taste and odor concerns and then chlorinated prior to distribution. The surface water treatment plant consists of a raw water intake structure on Caddo Lake, a raw water transmission main from the intake structure to the water plant, and a 600,000 gpd surface water treatment plant. The treatment plant includes an in-line static mixer where treatment chemicals are applied, two parallel flocculation basins with paddle type mixing equipment, two rectangular clarifiers, four parallel Greenleaf type rapid sand filters, two 70,000 gallon bolted steel clear-wells, high service pumps/backwash pumping facilities and chemical feed equipment. At times when the groundwater and surface water treatment plants aren't able to keep up with demand, the Town purchases water from the City of Shreveport municipal water system. It connects to Shreveport's water system at two locations one on West 70th Street, and the other on Santa Monica Drive in Timberline Subdivision. The Town limits its usage due to the high cost of purchasing water from Shreveport.

PURPOSE AND NEED: As mentioned in the description above the groundwater wells are in moderate to poor condition and the capacity of the surface water treatment plant alone is not adequately to meet current demand. Due to the condition of the existing water treatment plants and the Town's estimated growth potential, it is evident that it is necessary to enhance water production capabilities, improve the distribution system, and enhance water quality to accommodate the future growth and more stringent regulatory requirements.

ALTERNATIVES: The alternatives considered and analyzed for the Town include:

- A. *No Action Alternative*: The “No Action” alternative considers the future environment without implementing any of the proposed actions. The Kimberly Road water treatment plant is susceptible to frequent downtime due to the age and complexity of the system. During these times Greenwood relies on the surface water plant and the City of Shreveport water main connection to offset the required demand. Currently, the system has the capacity to meet average demands without purchasing water. Unreliable treatment facilities combined with maximum demands in will handicap the system’s ability to provide quality water. As the system ages, major infrastructure improvements will be required. This alternative was considered ‘not feasible’ as it does not address aid the Town’s ability to provide quality water to its customers in the future.
- B. *Consolidation*: This alternative considers consolidating the water system with nearby water systems to form a single water system. Currently the Town is connected on an emergency basis to the City of Shreveport and has potential of connecting to the Town of Blanchard, but the transmission line would have to be upgraded provide for the capacity required by the Town. Also, the general cost of the water is considerably higher than the existing user rates. Thus, the “Consolidation” alternative does not apply to this project.
- C. *Rehabilitate and expand the existing surface and groundwater treatment plants*: This alternative will include construction of a new 0.9 mgd membrane filtration system, raw water reservoir, improvements to the waste sludge and back wash water piping, rehab inadequate chemical feed facilities. The groundwater treatment plant located on Kimberly Road will also need to be rehabilitated. This will include, replacing chemical feed equipment, high service pumps, new pumping station between clarifier and pressure filters, replace existing piping, electrical and instrumentation, rework existing storage tanks, and make various site improvements to meet current regulatory requirements. This alternative has two disadvantages; relying on the groundwater source as a dependable source of water, and the operations and maintenance of running two distinctly different water plants.
- D. *Rehabilitate and expand the surface water treatment facility and abandon the Kimberly Road water treatment plant*. This alternative will be similar to alternative C in that it will include the installation of settling tube technology in the settling basins, improvements to the sludge collection system, a 3 million gallon raw water reservoir to enhance settling and provide a source of raw water in case of problems with the raw water intake structure. The major improvement will be the addition of 1.2 mgd membrane filtration system and associated structures. This alternative utilizes the best available technology in municipal water filtration to provide a source of water that is expected to meet regulatory compliance into the foreseeable future. Another advantage is abandoning the ground water treatment plant eliminates the need to comply with the 40 CFR 141.2 groundwater rules reducing process complexity and operations and maintenance issues of running two water plants. Alternative D is not the most economic but the benefits outweigh the minimal increase in the present value.

The Preferred Alternative is Alternative D – Rehabilitate and expand the surface water treatment facility and abandon the Kimberly Road water treatment plant. (as shown in Figure 2)

PROJECT DESCRIPTION: The scope of the project as described above, will address immediate and long term system needs. In addition to addressing water production problems, the selected plan will include distribution system improvements. Specifically, the Timberline Subdivision transmission main will be enlarged to meet current and future demands.

EXISTING ENVIRONMENTAL SETTINGS: The existing land use for the planning area is primarily residential. The climate for the planning area is humid and sub-tropical with an average high temperature during the summer months ranging from 59 to 92 degrees Fahrenheit and an average winter temperatures range from 38 to 73 degrees Fahrenheit. The average monthly precipitation for the planning area ranges from 3 to 5.5-inches, with a total annual average of 51-inches. The prevailing winds of the planning area are generally from the South-Southeast at an average speed of 5 miles per hour (mph). The topography of the area is gently sloping to level with broad ridges and mounds. There are two major types of soil in the Greenwood area. Each soil type is associated with different drainage. According to the USDA Natural Resources Conservation Service three major types of soils found in the area are Eastwood fine sandy loam, Metcall-Timpson complex and Guyton silt loam. This terrain is gently sloping to moderately steep, with moderately drained soils that have a loamy surface layer and a clayey subsoil.

ENVIRONMENTAL IMPACTS: Potential short-term and long-term primary and secondary environmental impacts that can be identified for the proposed project pertain to Storm Water, Soil Stability/erodibility, Wetlands, and Noise. The loan will be conditioned to read that any mitigation measures required by federal cross-cutting authorities must be adopted to ensure the action will not have any significant environmental impacts.

Storm Water: There will be no increase in storm water runoff as a result of this project. All drainage ditches and drainage ways will be graded back to their pre-construction conditions. The soil surrounding the new buildings and raw water lagoon will be seeded and graded to drain. No significant paving will be constructed; therefore no increase in storm water runoff should be observed. The Louisiana Department of Environmental Quality (LDEQ) has been notified of the project. The Town will provide LDEQ with a Storm water Management Plan outlining procedures to be implemented to ensure that storm water discharged from construction areas is managed in accordance with LDEQ's requirements. Additionally, if the project results in a discharge to waters of the state, a Louisiana Pollutant Discharge Elimination System permit would be required to be submitted. All of these requirements and recommendations will be adhered to during construction.

Soil Stability/Erodibility: The project will not involve a large amount of earthwork. Best management practices regarding erosion control measures will be implemented during

construction to minimize erosion and sediment transport. Area watercourses will not be adversely affected by siltation and sedimentation as a result of this project.

Wetlands: A small portion of this project will be built in jurisdictional waters of the United States, for both the water treatment plant site and a section of 8" water main along Greenwood Road. The Department of the Army, Vicksburg District Corps of Engineers authorized the proposed work under a Nationwide No.18 permit for minor discharges or fill material into all waters of the United States, provided the activity meets all of the following criteria;

- (a) The quantity of discharged material and the volume of area excavated do not exceed 25 cubic yards below the plane of the ordinary high water mark or the high tide line;
- (b) The discharge will not cause the loss of more than 1/10-acre of the waters of the United States; and
- (c) The discharge is not placed for the purpose of a stream diversion.

Floodplains: As required, Federal Emergency Management Agency (FEMA), LA Department of Transportation and Development (LDOTD), and the local Floodplain Administrator for Caddo Parish were contacted regarding the project. This project will have no impact on the floodplain.

Noise: This project will have no significant impact on existing noise levels in the area. The short term effects of noise during construction will be comparable to current traffic noise and this will be minimized by requiring that the project be constructed during normal working hours on weekdays only to the greatest extent possible.

CUMULATIVE IMPACTS: This project primarily involves improvements to the surface water treatment facility located along Hwy 169 and installation of water distribution system improvements along Greenwood Road. The plant site is located in a sparsely populated area and is not expected to adversely impact the surrounding area.

DOCUMENTATION COORDINATION AND PUBLIC PARTICIPATION: Coordination with the appropriate governmental agencies has been made with no adverse environmental comments on the proposed project. All comments offered have been addressed. The proposed project will be reviewed by the Louisiana Department of Health and Hospitals to ensure that it complies with the State Sanitary Code for Water Supplies, Louisiana Administrative Code (LAC), Title 51, Chapter 12. A public hearing was held at 7:00 p.m. on July 21, 2014 at the Town of Greenwood's Town Hall, Town of Greenwood, Louisiana.

RECOMMENDATIONS: Based upon DWRLF's detailed review of the Environmental Information Document for the Town of Greenwood's Water Improvements System Improvements., October 2014, and DWRLF's preparation of this Environmental Assessment (EA), the proposed project is considered to be cost effective and environmentally sound. Therefore, it is recommended that a *Finding of No Significant Impact* be issued.

LIST OF AGENCIES CONTACTED:

U.S. Department of the Interior - U.S. Fish and Wildlife Service
Louisiana Department of Wildlife and Fisheries – Natural Heritage Program
Louisiana Department of Culture, Recreation, and Tourism – State Historic Preservation Officer
U.S. Department of the Interior - National Park Service, Southeast Regional Office
U.S. Department of the Army, New Orleans, District, Corps of Engineers
U.S. Department of the Army, Vicksburg District, Corps of Engineers
U.S. Environmental Protection Agency Region 6 - Marine and Wetlands Section
U.S. Department of Agriculture - Natural Resources Conservation Service
U.S. Environmental Protection Agency Region 6 - Ground Water/UIC Section (Sole Source Aquifer Program)
U.S. Environmental Protection Agency Region 6 – Air Planning Section
U.S. Environmental Protection Agency Region 6 – Marine and Wetlands Section
Federal Emergency Management Agency Region 6
Louisiana Department of Transportation and Development – Floodplain Management Division
Caddo Parish– Local Floodplain Administrator
Louisiana Department of Environmental Quality – Business and Community Outreach and Incentive Division
Louisiana Department of Health and Hospitals
Louisiana Department of Natural Resources Office of Coastal Restoration
U.S. Department of Agriculture, Forest Service, Kisatchie National Forest
The Coordinating & Development Corporation

REFERENCES:

1. Environmental Report for Water Facilities Improvements for the Town of Greenwood, October 2014, BALAR Associates, Inc.
2. Town of Greenwood Public Water Supply System Improvement Plan for Existing Water Supply and Distribution Facilities, April 2014, BALAR Associates, Inc.

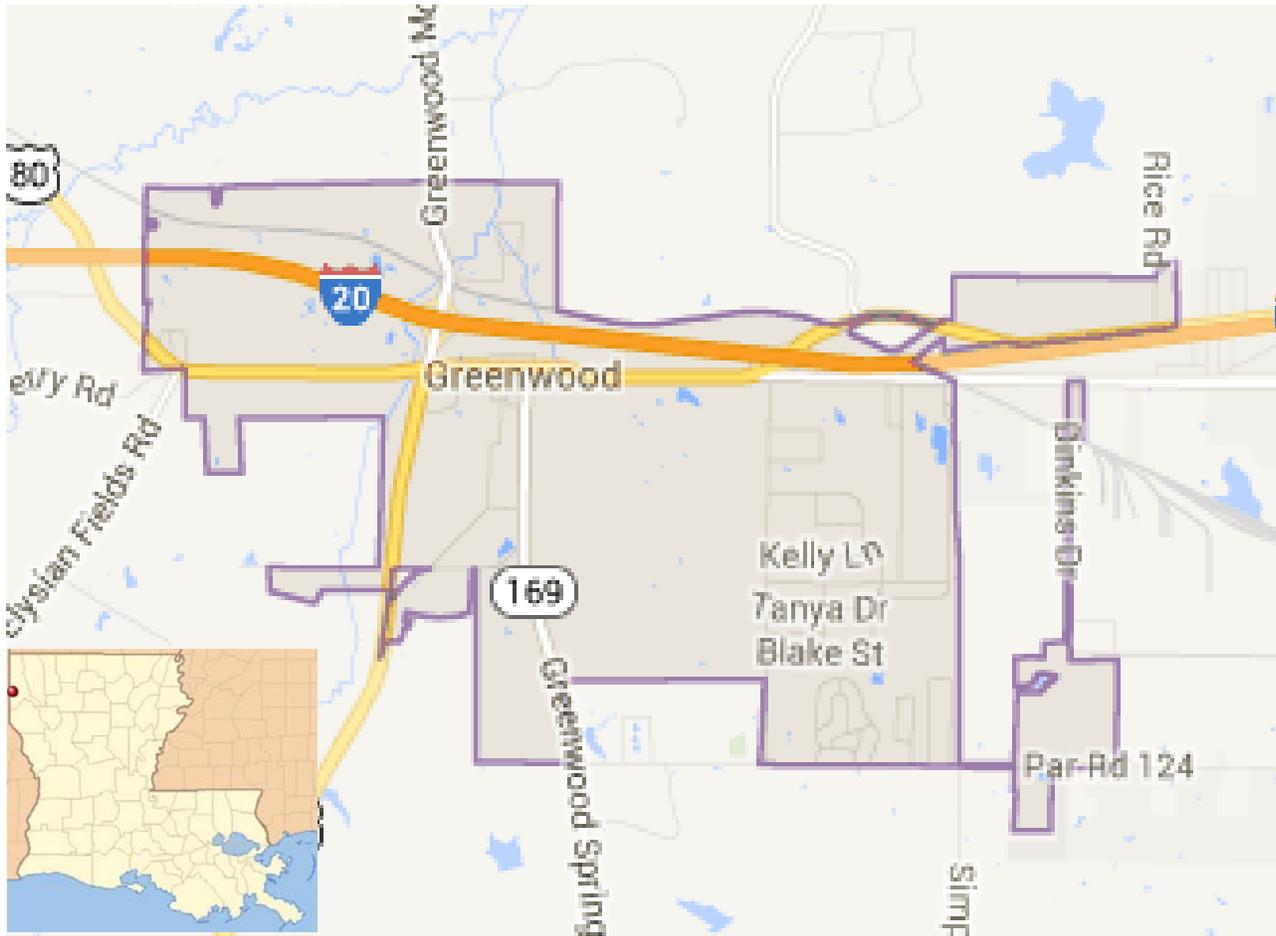
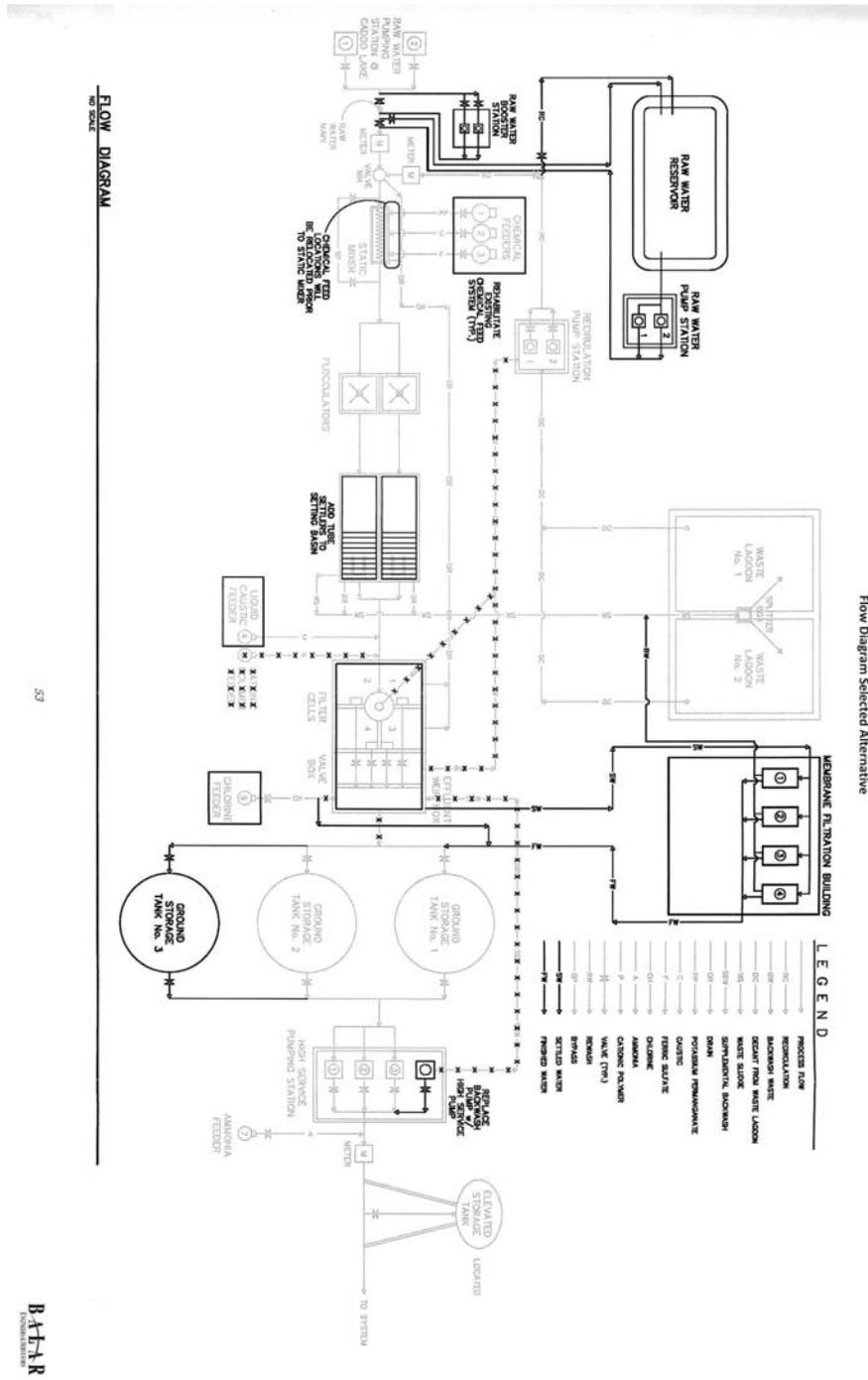


FIGURE 1
Project Area: Town of Greenwood



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FIGURE 2