

11.0 Infrastructure and Utilities

11.1 Water

The City of Monroe delivers water to about 18,000 metered customers and has a contractual obligation to provide bulk delivery of water to two outlying private systems (Town & Country Water and Greater Ouachita Water Company) for a limited service area. The current water service area includes the area within the City limits and the service areas for the private systems. In 2007-2008, the water system was performing near its capacity and future growth in the City will require system upgrades to prevent periods of low pressure and/or rationing. In addition, the City has defined a Water Service Planning Area that covers most of the eastern half of Ouachita Parish and the City plans to provide water service to that area. A plan for upgrades has been prepared by CDM of Baton Rouge and much of the information below is derived from their report 'City of Monroe Water System Improvement Plan – January 2005'. In part, system upgrades will be funded through a rate increase and one half cent sales tax that was started in the 1990s to finance street improvements and was redirected in 2001 to fund needed infrastructure improvements.



Bayou DeSiard is a source of water for the City of Monroe

11.1.1 Source

Domestic water in the City of Monroe is from surface water sources rather than wells. There are a variety of interconnected sources such as Bayou DeSiard, Bayou Bartholomew, and Black Bayou. The Ouachita River provides an additional source of water, if needed, but requires different treatment to meet standards for potable water than the bayou water.

11.1.2 Treatment

Water is collected at two intakes, the Bayou DeSiard and the Ouachita River (backup source) and is pumped to the Water Treatment Plant on Grammont Street in the City of Monroe. The water is treated to remove any contaminants including microbial contaminants, inorganic contaminants, organic chemical contaminants, radioactive contaminants and pesticides and herbicides. The City has a Source Water Assessment Plan (SWAP) that is available to the public that delineates the water source area and discusses potential contaminants and the susceptibility to those contaminants. Water treatment is a process that requires frequent monitoring and adjustment to assure that the water is safe, clear and free of unpleasant tastes and odors and that meets Federal standards for drinking water. After treatment, water is stored in large storage tanks before being distributed to customers.



In general, the water pumping and treatment system is antiquated and in need of upgrades to meet demand. It was constructed in 1968 and was designed to treat 12 million gallons per day (mgd) but consistently treats an average of 16 mgd with peaks of around 19 mgd. Planned improvements will upgrade the treatment and pumping capacity to treat 24 mgd at an estimated project cost of \$51 million. The upgrade is designed to provide the projected treatment capacity needed to expand the existing service area to the entire Water Service Planning Area.



The Water Treatment Plant on Grammont Street

11.1.3 Distribution

The water distribution system includes a piping network that has been installed at various times dating back to the early 1900's. The distribution system is in need of upgrades to repair leaks, replace aging valves and hardware, create loops from dead end pipe sections, and increase the service area. Much of the piping is unlined cast and ductile iron and cases of "red water" have occurred when deposits of iron corrosion in the unlined pipes releases. In recent years, numerous upgrades to the distribution system have been made including the replacement of mains that are within roadway rights-of-way. These upgrades have occurred while roadway improvements were being made. However, service lines that supply water to individual customers have largely not been replaced and in the older sections of the City, these lines will be reaching the end of their useful life within the next 20 years. Operating pressures range from 83 pounds per square inch (psi) at the treatment plant to a low of 45 psi at the ends of the distribution system. The water supply for fire protection in the City of Monroe has been graded continuously, since 1971, as a Class 1 system. It has rated adequate in fire flow capacity, pressure, accessibility, operation, and reserve storage.

11.2 Sanitary Sewer

Nearly all buildings in the City of Monroe are tied into the sanitary sewer system – the only exceptions are minor undocumented historic buildings. There are no known septic tank/drain field systems in the City. The wastewater collection and treatment system in the City of Monroe has been undergoing numerous, ongoing upgrades in recent years. This is due, in part, to a consent decree from the US Environmental Protection Agency (EPA) that mandates upgrades to both the wastewater treatment plant and to the collection system. The wastewater collection system is being upgraded by areas. The Garden District upgrade near the river has been completed. Upgrades to the Wastewater Treatment Plant have also been completed in compliance with the EPA mandate.



Wastewater Treatment Plant on Richwood Rd. #2



11.3 Storm Water Management

The storm water system collects rainwater and pipes it into the Ouachita River to prevent flooding in the City. There are no cross connections between the sanitary sewer system and the storm water sewer system or combined sewer overflows (CSOs) in the City. Storm water is collected through a series of roadside swales, gunite concrete ditches and catch basins and piped to the Ouachita River. This is complicated by the fact that the river is lined by levees that protect the City from floodwaters from the river. The storm water system is designed to allow storm water out of the City and into the river and conversely to prevent river floodwaters from backing up into the pipes and flooding the City. To accomplish this, most outfall pipes are equipped with special valves that remain open during normal condition allowing water to flow by gravity from the City and into the river. When the river level rises above the outfall points, the valves are closed and storm water from the City must then be pumped over the levees and into the river. The City has a total of 18 separate storm water pump stations to pump water over the levees. Five of those outfall points do not operate by gravity or have the special one-way valves; instead storm water must always be pumped over the levees.

The storm water system, with its reliance on pumping operated by electricity is in peril of failing in the event of a power outage. The City is aware of this and has taken measures to address the situation by installing generators at two of the pump stations and having a large diesel-operated pump on standby. This is adequate in most normal flood situations but the pumps will not be enough to handle a major storm event. To further address the concern, the City was having a study prepared to determine what upgrades should be done to prevent the possibility of flooding and have been in contact with the Federal Emergency Management Administration (FEMA) to get assistance with funding the improvements.



Storm water Pump Station atop the river levee

Most recently, in September 2008, numerous reports of flooding were reported after Hurricanes Gustav and Ike. Heavy rains and water flowing into the local waterways from the north contributed to the problems. The Ouachita crested below its flood stage of 40 feet. Flooding in residential areas after Gustav is included in Map 9-1 Environmental Considerations on page 103.

11.4 Natural Gas and Electric

Natural gas service in the City of Monroe is provided by Atmos Energy. Atmos has an extensive system of piping throughout the City and there are no areas without gas service. The gas pressure is adequate to allow for enough expansion that it will not preclude new development. Atmos has worked with the City to welcome new gas customers. When a new service is begun, Atmos will work with the applicant to spread out payments for infrastructure improvements so that these improvements will not dissuade a developer from applying for service.



Electricity is provided by Entergy Louisiana, a subsidiary of Entergy Corporation. Entergy is a conglomerate energy company that operates in five southern states. Entergy's electricity is obtained from a variety of sources including coal and nuclear. Entergy owns the infrastructure such as the poles, wires and transformers and they own the rights to easements. Entergy provides a range of options for new power service from underground to overhead. Entergy works with the State of Louisiana and the Federal government to provide reduced rates as part of an incentive program to attract and cultivate business and Entergy also has a program to match donation to provide assistance to customers who need financial assistance.

11.5 Solid Waste Disposal

The Department of Public Works provides sanitation services for residents of the City of Monroe. The department provides service in six categories:

- Trash pickup
- Garbage pickup
- Beautification
- Ditching and drainage
- Maintenance construction
- Cemeteries

The two most significant services the department provides directly to residents of the city are garbage and trash pickup.

Garbage

The department picks up 17,000 tons of garbage annually using 96-gallon containers and charging a rate of \$17 for residential and \$23 for business customers. Public Works does not pick up dumpsters or "roll-offs" – open topped trailer-style dumpsters. The department runs a seven-truck fleet daily service for garbage pickup. It uses a private landfill which charges the city \$22 per ton.

Trash

The Department of Public Works runs three dump body trucks and six shuttles covering the entire city every five to seven days. The department does not pick up building debris. There is about 23,000 tons of trash collected annually. The trash is deposited at a local private landfill which charges the city \$22 per ton.

11.6 Telecommunications

There are now a variety of providers of telecommunications services in Monroe ranging from land lines to cellular phone service. This is a dynamic market and new suppliers are being added at a rapid rate. Cellular coverage is reported to be good but variable depending on the individual provider. Wireless internet is also now available throughout the City and the Monroe Regional Airport began offering wireless internet service for travelers (WiFi) in 2007. Not all areas of the City are hard wired for cable television and DSL service but this is being steadily expanded.

11.7 Infrastructure and Utilities Findings

- The City of Monroe water system is performing near its capacity and future growth in the City will require system upgrades.



- The wastewater collection and treatment system in the City of Monroe is being upgraded by areas.
- The storm water system is vulnerable to failure in the event of a power outage. A study is being prepared to determine needed upgrades.
- Natural gas services are sufficient to accommodate new development.
- The City collects 17,000 tons of garbage and 23,000 tons of trash each year.
- Cellular telephone and wireless internet services are generally available in the City but there are some locations that do not have access to these services.