## Water Protection History

In 1961, the City of St. Joseph was mandated by the U.S. Government to construct and put in operation a wastewater treatment facility. Design work was completed early in 1964 and construction began soon thereafter.

The Primary Treatment Plant for the City of St. Joseph came on stream in November 1965. Prior to that time, the city had NO wastewater treatment of any kind and all sanitary/industrial waste was discharged directly to the Missouri River. In addition to the primary treatment plant, Whitehead Pumping Station and Force Main, the Intercepter Sewer along the Missouri River, and Brown's Branch Pumping Station and Force Main were constructed. Primary treatment mechanically removes 35% to 50% of the total conventional pollutants found in wastewater.

The secondary portion of the treatment plant came on line in April of 1979. Secondary treatment is biological (activated sludge) and removes 95% to 98% of the total conventional pollutants. South Saint Joseph Pumping Station and Force Main, Easton Road Pumping Station and Force Main, and Faraon Street Pumping Station and Force Main were included in the secondary treatment project.

In addition to the Wastewater Treatment Plant, the employees at Water Protection are responsible for the operation and maintenance of five (5) major lift stations: Whitehead, Faraon Street, South Saint Joseph, Browns Branch, and Easton Road Pumping Stations, eight (8) smaller pumping stations with two (2) additional stations being added by the end of 2002, and the sewage system at the airport consisting of six (6) lift stations, a three cell lagoon complex and an Emergency generator. Water Protection also maintains two (2) stormwater pumping stations at the Rosecrans Memorial Airport.

The Water Protection Laboratory samples the plant influent, plant effluent, Industrial waste, various processes during treatment, and special problems. Some of the tests made by the lab are as follows: Suspended Solids, Ph, Biochemical Oxygen Demand, Chemical Oxygen Demand, Amonionic Nitrogen, Sulfates, Fecal Coliform, Volitile Acids, Heavy Metals, and Fats. Oils, and Grease. These test results are used in reports to the Missouri Department of Natural Resources to determine compliance with our state operating permit.

The new Water Protection Laboratory facility has been in operation since May 28, 1997. They perform sampling and analysis on Significant Industrial Users. The Laboratory operates full-time week days and part-time on weekends and holidays. The technicians sample the plant influent, plant effluent, industrial waste, various processes during treatment, and special problems. Some of the tests made by the lab are as follows: suspended solids, pH, biochemical oxygen demand, chemical oxygen demand, ammonia nitrogen, sulfates, fecal coliform, volatile acids, heavy metals, and fats, oils, and grease. These test results are used daily for plant operation and in reports to the Missouri Department of Natural Resources to determine compliance with our state-operating permit and any additional charges are to be levied to industries contributing heavy amounts of waste to the system.

Water Protection has a Biosolids Land Application Program in operation which applies approximately 5,500 dry tons of biosolids per year on city owned and private farmland. The biosolids are pressed to 40% to 45% solids, hauled to and applied on farmland according to soil test and crop requirements. The biosolids application program is strictly regulated by the Missouri Department of Natural Resources and the Environmental Protection Agency.