CHAPTER 10. PUBLIC UTILITIES

Water

The City of Raytown is served by two separate water service groups: Jackson County Water District #2 and the Raytown Water District. Jackson County Water District #2 generally serves the south half of the City with the north half being served by the Raytown Water Company (see Figure 7). The Raytown Water Company is privately owned. Both of these water service groups buy their water from other sources. The major suppliers of water for Raytown are the City of Kansas City, Missouri and the City of Independence. Both water service groups have their own water supply contracts, as well as different operations plan periods. They also have different use rates billed to the citizens and businesses of Raytown.

Sewer

The City of Raytown owns and maintains its sanitary sewerage collection system (See Figure 8). Wastewater treatment is provided by both the City of Kansas City, Missouri and the Little Blue Valley Sewer District. Generally, the City's sewer flows west of Blue Ridge Boulevard (approximately 20 percent) to Kansas City, Missouri, and east of Blue Ridge Boulevard (approximately 80 percent) to the Little Blue Valley Sewer District. Raytown has an intermunicipal agreement with Kansas City for sewage treatment costs based on the number of connections. In contrast, Raytown is billed for gallons discharged into the Little Blue Valley Sewer District, based on flow meter records.

According to citizen surveys, there appears to be little discontent with the sanitary sewer system. This was confirmed by checking with the Mid-America Regional Council Insurance Trust, which keeps records for the City on sanitary sewer backup claims. Only twenty-one addresses have filed claims against the City for sewer backup damage since 1986.

FIGURE 7
Water System

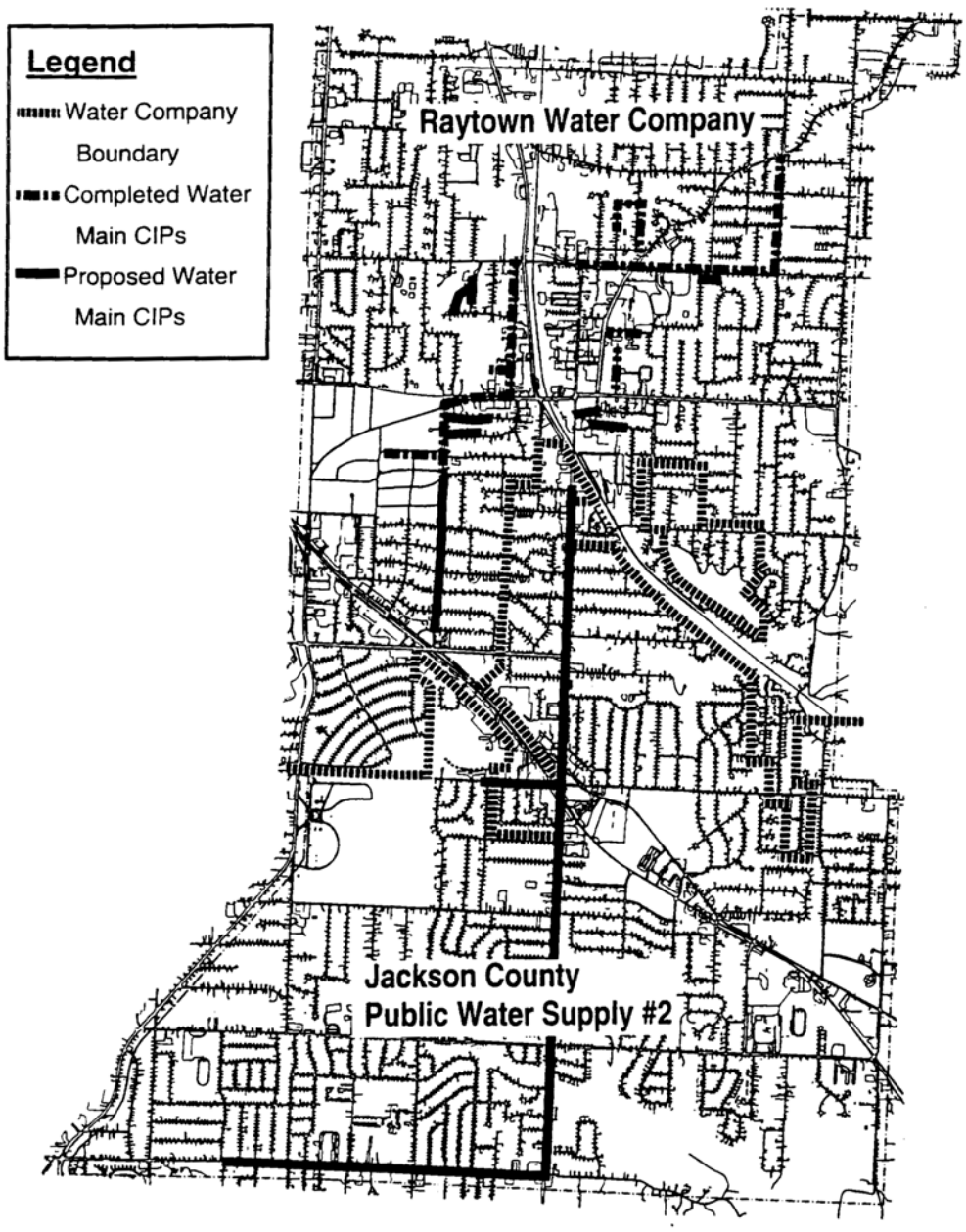
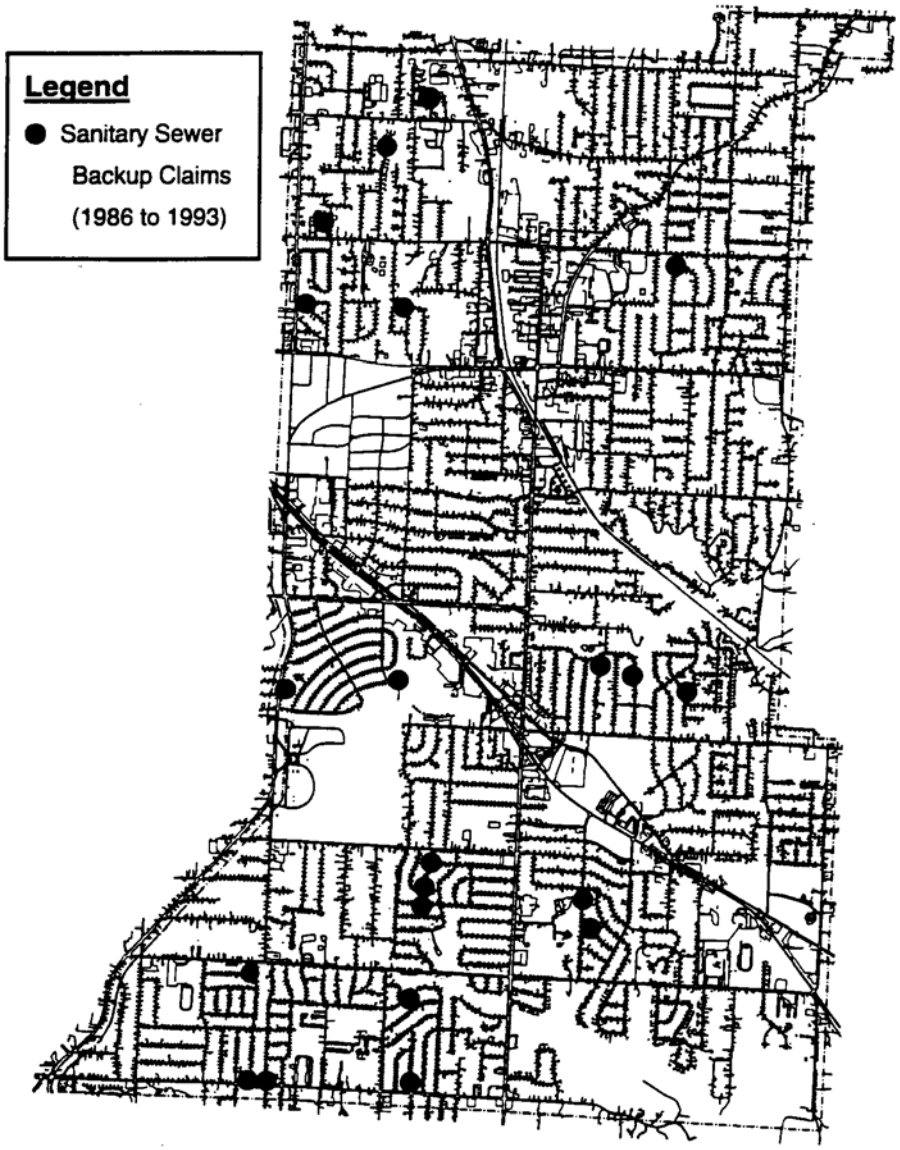


FIGURE 8
Sewer System

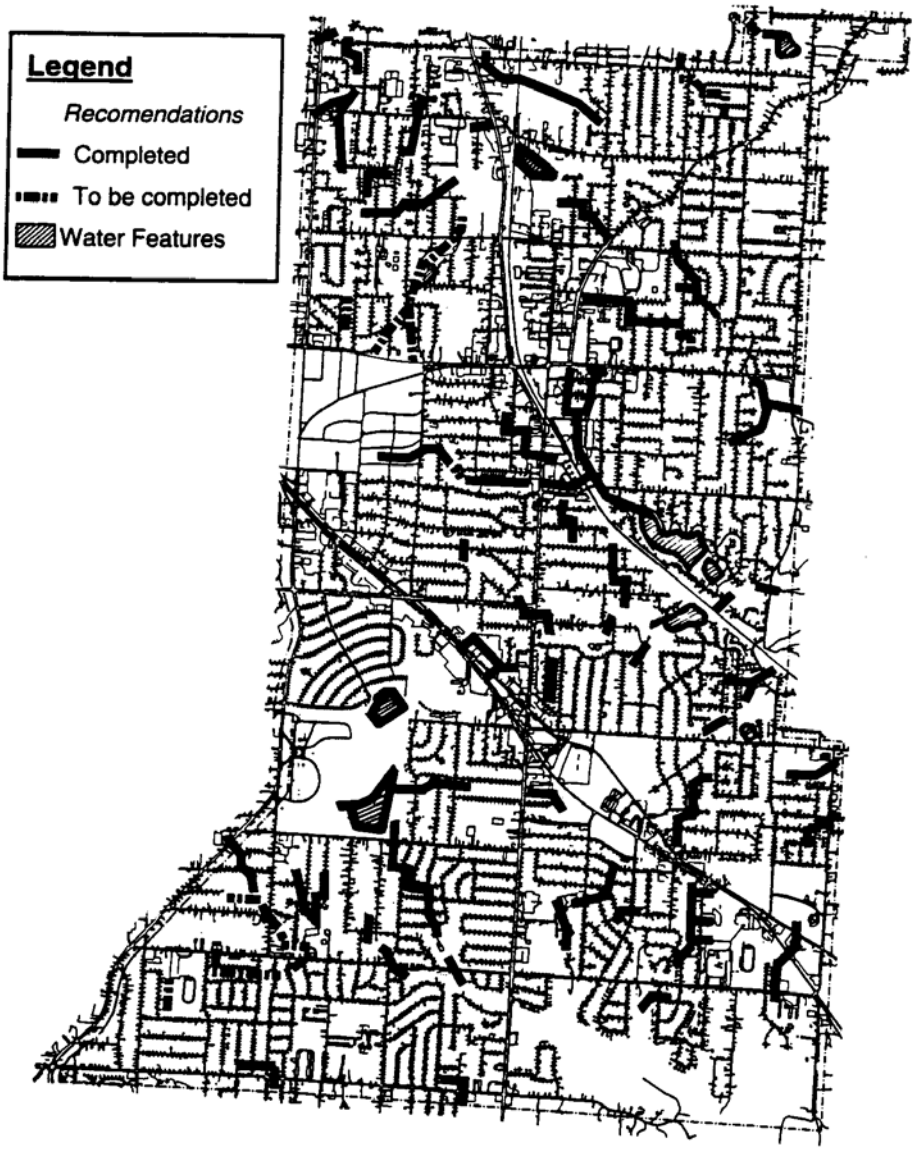


Storm Water

The City of Raytown owns and maintains its storm water system. Most of the system was built in conjunction with road construction. Since many of the roads in Raytown were built without curbs to collect and route storm water runoff to curb inlets and subsequently to buried storm sewer pipes, much of the runoff is carried in roadside ditches and driveway culverts. These unimproved road cross-section drainage systems can become unsightly when erosion occurs, when weeds grow, and when driveway culverts are not cleaned or repaired. These roadside ditches are usually not designed to carry runoff from larger storms, and consequently localized flooding problems can occur more frequently with unimproved roadway sections. In 1988, the City completed a Storm Drainage Plan that identified approximately $13,000,000 of desired improvements scattered throughout the City (see Figure 9). To date, $10,000,000 has been spent by the City on rebuilding and updating storm sewer systems.

The effect of land use on drainage and storm water collection demands is primarily related to the development type and quantity of impervious surfaces developed. As nearly 80 percent of the City is occupied by residential uses, they contribute significantly to the quantity of runoff in the City. Hydrologically unfavorable situations occur in Raytown when intensive runoff producing land uses are located near the upper end of the principle water sheds, thus effecting the downstream drainage systems. (Storm Drainage Plan, 1988).

FIGURE 9
Storm Water System



Planning Implications

There may be some economies of scale in trying to consolidate the two water service groups, as has been previously considered in order to try to minimize overhead costs and equalize billing rates. According to maintenance personnel, a consolidated service group may lead to a better preventive maintenance program implemented with computerized record keeping and report generation. Also, manhole and pipe line infiltration/inflow studies could be aggressively pursued to find and eliminate excessive groundwater and/or surface water, which has in the past increased the amount of wastewater, recorded by the Little Blue Valley Sewer District flow meters.

Although the City has been successful in budgeting several hundred thousand dollars per year to design and construct these improvements, it would be desirable to address these identified problem areas. Also, it may be advisable for Raytown to implement a plan to improve the City by decreasing the large number of inadequate roadside ditches with improved roadway cross sections including curbs, curb inlets, enclosed storm sewer pipes and sidewalks.

In Raytown, only isolated small pockets of residentially zoned land are undeveloped. As currently zoned for residential uses, new development will not generally adversely impact the present drainage system. Some land in Raytown zoned for non-residential uses, however, could potentially create a problem. Twenty acres of industrially zoned land located in the Park Lane Watershed, from 52nd Street south to 63rd Street, should not significantly accentuate existing drainage problems in the area. Although these drainage systems have severe hydraulic deficiencies, correction of these deficiencies or on-site storm water detention are viable options for the City, prior to construction on the site.

A portion of the City which could potentially experience and worsen storm water drainage conditions, is the development and redevelopment situated along M-350, from Raytown Road to Harris Street. The site is located at the upper boundaries of the White Oak Center and Woodson South Watersheds. Since both watersheds have severe problems, development on this property, as permitted by zoning, may impact existing residential properties downstream.

Existing geological conditions combined with past construction of sanitary sewers, makes it relatively impractical to economically deepen storm water drainage channels to increase capacity. Therefore, increased capacity can be practically realized only by increasing the width of channels and/or lining them with a smooth hard-surfaced material. Therefore, comparatively wide easements are needed for developing improvements to the major drainage system.

The existing storm water drainage plan recommends the acquisition of flow easements from 50 to 100 feet wide along natural channels and their overbank areas. Acquisition has been recommended for the lower reaches of Wildwood North Watershed between Lakewood Estates and 72nd Street, and in the White Oak West Watershed from 83rd Street westerly to Spring Valley School, to preserve the functional performance of the drainage system.