

# Leaks push plant beyond capacity

South Beloit city residents and businesses are responsible for creating about 640,000 gallons of wastewater per day. On average, the city's wastewater treatment plant might need to process between 3.7 million gallons and 8 million gallons because of groundwater entering the system through old, cracked pipes.

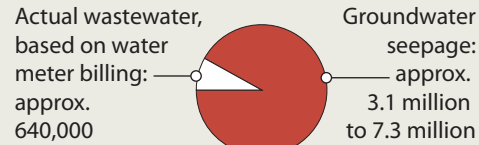
The plant is designed to treat up to 3 million gallons of wastewater per day but can handle up to 4.5 million gallons

before it begins to overflow onto ground surrounding the plant. In extreme situations, some sewage will be pumped into the Rock River before it hits the plant to prevent the sewage from backing up into people's homes. The practice is called "bypass pumping."

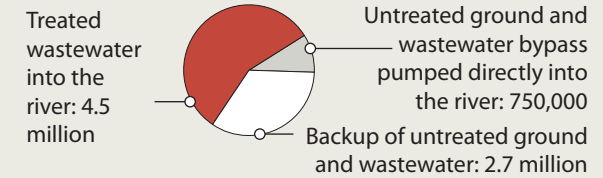
Since March 19, about 750,000 gallons of untreated wastewater a day have been pumped into the river because the plant is pushed beyond capacity.

## Wastewater treatment plant input, output

### INPUT TO PIPES, in gallons per day



### OUTPUT FROM PIPES, in gallons per day



## Aging sewer pipes

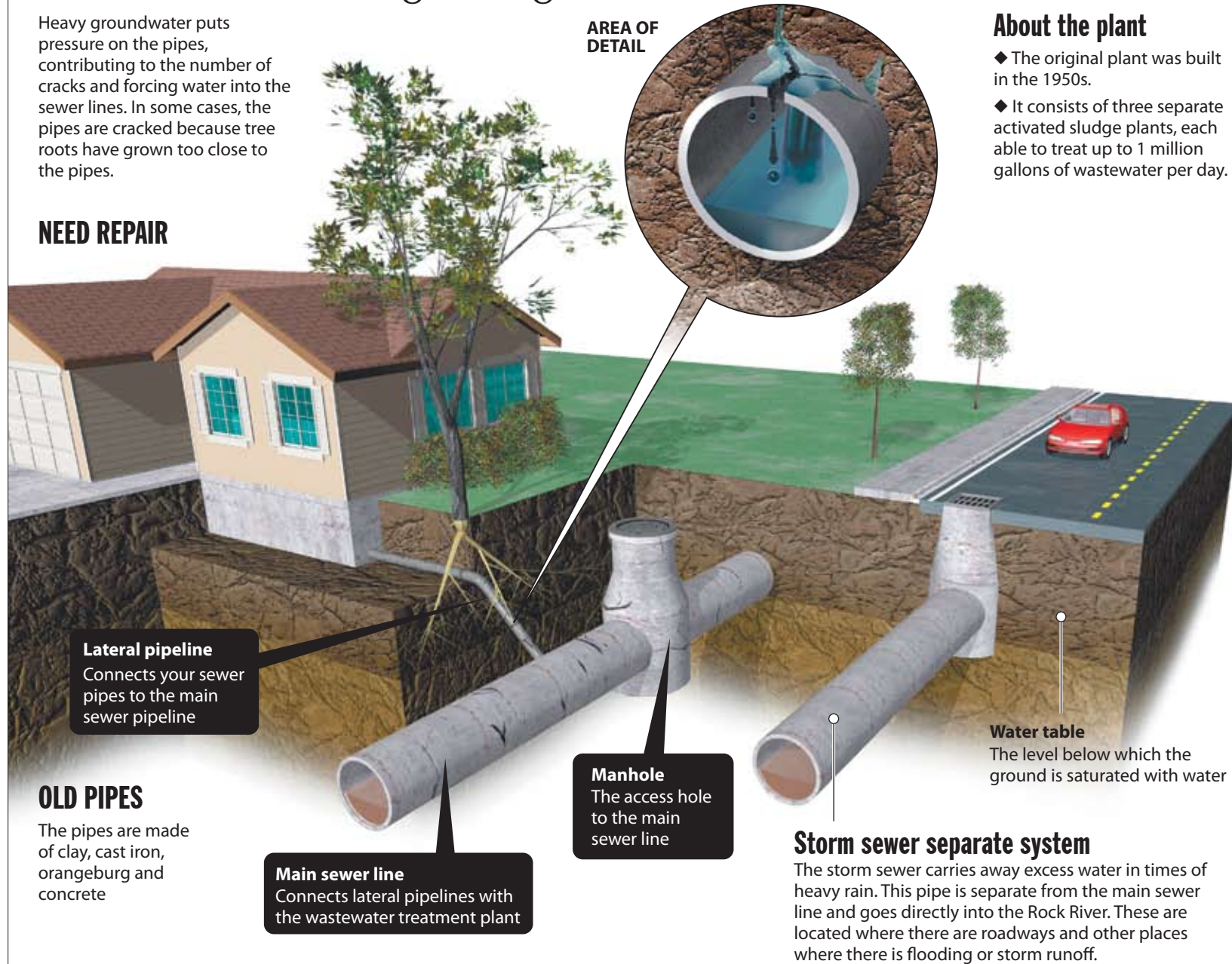
The pipes in most need of repair are in a neighborhood built between 1927 and 1935. It is next to the Rock River and on a floodplain, which makes the area subject to heavy groundwater saturation. Seventy-five percent to 83 percent of the leaks in the system are caused by the pipes in this area. They were designed to last about 50 years.



## Groundwater flowing through cracks

Heavy groundwater puts pressure on the pipes, contributing to the number of cracks and forcing water into the sewer lines. In some cases, the pipes are cracked because tree roots have grown too close to the pipes.

### NEED REPAIR



## About the plant

- ◆ The original plant was built in the 1950s.
- ◆ It consists of three separate activated sludge plants, each able to treat up to 1 million gallons of wastewater per day.

### OLD PIPES

The pipes are made of clay, cast iron, orangeburg and concrete

**Main sewer line**  
Connects lateral pipelines with the wastewater treatment plant