

# Collection Systems

## **Combined Sewers, Separate Sanitary Sewers and Stormwater Collection Systems. What is the difference and why should we care.**

### **Combined Sewers**

Combined sewers are designed to collect both sanitary sewage and stormwater runoff in a single-pipe system. These systems were designed to convey sewage and wastewater to a treatment plant during dry weather. Under wet weather conditions, these combined sewer systems could become overwhelmed and overflow during wet weather conditions when large amounts of stormwater would enter the system. Combination sewers are typically built with some allowance for higher flows that occur when excess water enters the collection system during storm events, but some rain events are so severe that the combination sewers are filled to capacity. We experienced this with the storms we experienced at the end of March this year. State and local authorities generally have not allowed the construction of new combined sewers since the first half of the 20th century. In the City of Auburn, a majority of Auburns Combined sewers are from Second street to Ensley and Indiana to Union Street.

### **Separate Sanitary Sewers**

The other major type of domestic sewer design is sanitary sewers (also known as separate sanitary sewers). Sanitary sewers are installed to collect wastewater only and do not provide widespread drainage for the large amounts of runoff from precipitation events.

Sanitary sewers, depending on when the system was installed, can range from Clay tile, Concrete, or PVC pipe. The problem with clay and concrete is with time they are not watertight due to cracks, faulty seals, improper connections and/or tree root infiltration. This damage can cause large amounts of infiltration and inflow (I/I) during wet weather. Large volumes of I/I can cause sanitary sewer overflows (SSOs) and/or operational problems at the wastewater treatment facility serving the collection system. In addition, sewage overflows can be caused by other problems such as blockages, equipment failures, broken pipes, or vandalism.

### **Separate Stormwater Collection Systems**

The City of Auburn is making every attempt to separate Sanitary Sewers and Stormwater collection systems. The latest project was on North Union Street. Currently, about 85% of the City of Auburns Stormwater Collection systems are separated from the sanitary sewer system. These Separated Stormwater Collection systems flow directly to a swale, ditch, stream, or Cedar creek, during a rain event or snow melt without being treated at the wastewater treatment plant. In Auburn we have many streams and Cedar Creek that the Separate Stormwater Collection Systems discharge to. This is why we need to be good stewards of our Community and our Environment by doing our part to prevent snow melt or a rain event runoff from carrying pollution into these collection systems and into our neighboring water bodies.

For additional information regarding local stormwater issues and how you can help prevent Stormwater Pollution, I encourage you to visit <https://ci.auburn.in.us/229/MS4-Stormwater> on the City of Auburns web site, or contact Drew Wallace, Program Coordinator at the City of Auburn Water Pollution Control, 2010 South Wayne St. Auburn IN 46706. (260-925-1714). Some information contained in this educational article was obtained from the USEPA storm water web site [www.epa.gov/npdes/stormwater](http://www.epa.gov/npdes/stormwater).