

Chapter 5—Public Utilities

Introduction

The provision of utilities to businesses and residents in the city is one of the most critical services that a city can provide. Many judgements are made about a city based on how utility service provision is handled over both the long term and on a daily basis. The City of Union has been successfully providing water, sewer and storm water utility services to its residents in the past, but faces challenges as growth continues throughout the city and in newly annexed areas.

There is a strong correlation between future growth and the ability of utility systems to accommodate increased demands over time. As residential, commercial and industrial growth continue in Union and or as the city boundaries expand due to annexations, additional pressures will be placed on the existing utility infrastructure systems. A useful tool that many cities use to proactively prepare for future conditions is a utilities master plan. This type of plan assesses existing conditions, identifies inefficiencies and deficiencies, and develops improvement/implementation plans for both the water and sewer systems.

The following is a summary of the city's existing utility systems' issues, opportunities and planned improvements. Figures 5.1, 5.2, and 5.3, also outline utility system information.

Water Supply Facilities

Existing Conditions

- The city's well field currently has four (4) operating wells. The wells one (1) and four (4) are rated for 600 gallons per minute, and wells two (2) and three (3) are rated for 400 gallons per minute respectively. The city's water source is ground water drawn from wells.
- All potable water is chlorinated and fluoridated.
- There are two elevated water storage tanks in the city. One is located behind the City Building and has a capacity of 150,000 gallons with an overflow elevation of 1050; and the second is off Shaw Road and has a capacity of 500,000 gallons with an overflow elevation of 1100.
- There is an iron and manganese removal facility (only required for Wells 2, and 3) that is rated at 0.58 mgd.
- The City has a 12-inch water interconnect, near the intersections of Sweet Potato Ridge Road and S.R. 48, and a future 8" interconnection with the City of Englewood for emergency purposes. For example, if all four Union wells are lost simultaneously then this interconnect line could be used to access Englewood's water system. If Englewood lost their water supply, the interconnect could be switched, allowing Englewood access to Union's water supply.
- Have received approval from Ohio EPA for wellfield protection plan.

Opportunities

- A test well (Well 5) is drilled, tested and ready to replace an existing well or to enhance capacity when needed.
- There is an opportunity to develop a coordinated utilities master plan for newly annexed areas of the city in order to strategically use investment resources.

Planning Improvements

- Upgrading the iron removal system.

Sanitary Sewer

Existing Conditions

- The design capacity of the existing wastewater treatment plant is 1.0 million gallons per day.
- The average flow in 2002 it was .731 mgd, therefore the wastewater treatment plant has unused capacity.
- The city has in place an Infiltration / Inflow program to reduce the flow of groundwater into the sanitary sewer system.
- There is a lift station found to the northwest of the intersection of old Springfield Pike and Ballinger Road, that will serve land east of the Stillwater river.

Opportunities

- There is an opportunity to develop a coordinated utilities master plan for newly annexed areas of the city in order to strategically use investment resources.
- There is an opportunity to prepare a utilities plan for newly annexed areas east of the Stillwater River.

Planned Improvements

- The city has completed preliminary design of a wastewater treatment plant expansion that is capable of providing advanced levels of treatment. This is in anticipation of the Ohio EPA's revised requirements. The expansion could be underway quickly after Ohio EPA approval of the NPDES permit renewal.
- The Reinhart Road lift Station on Figure 5.2 is to be eliminated through the installation of new gravity sewer main north to Phillipsburg Union Road.

Storm Water Facilities

Existing Condition

- The storm water system has a user service fee in place for operation, maintenance and improvements to the storm water system.
- The City of Union has had a Storm Water Management Program since 1987.

Opportunities

- There is an opportunity to utilize storm water service fees for long term improvements.

Planned Improvements

- The city has prepared for compliance with the Phase II NPDES requirements, filed on March 10, 2003. The city has received its NPDES storm water permit for the storm water facility on April 1, 2003.
- The NPDES permit will increase the fees collected for storm water management.
- The Storm Water Management Program has six (6) minimum control measures.
 1. Public education/outreach
 2. Public participation/involvement
 3. Illicit discharge detention/elimination
 4. Construction site runoff control
 5. Post construction and redevelopment runoff control
 6. Pollution prevention/good housekeeping to protect Union's aquifer