
UTILITIES PLAN ELEMENT

INTRODUCTION

In addition to the other services provided by the Borough, water and sewer are a critical component to meeting the needs of residents and businesses. In conjunction with the Land Use component of the Master Plan, water and sewer capacity determine where certain land uses can be located and where future development/redevelopment will most likely occur. In anticipation of future growth, the Borough must ensure that these utilities are improved over time to benefit the community's overall intent regarding all non-residential and residential development.

In addressing the above objective, the Utility Plan analyzes the current levels and future capacities of the existing water and sewer facilities. In addition, the Plan indicates the existing and the future general location of water and sewer facilities, including drainage and flood control facilities for storm water management. Currently these facilities are located throughout Highlands.

EXISTING UTILITIES AND INFRASTRUCTURE

This portion of the Utilities Plan identifies the existing municipal utility facilities which service Highlands Borough. Currently the Borough's water and sewer facilities are operated by three main entities: (1) NJ American Water and (2) the Township of Middletown Sewage Authority (TOMSA), which is part of the Bayshore wastewater management area. Municipalities that are a part of the TOMSA include: Middletown, Highlands, Atlantic Highlands, Gateway National Recreation Area, Coast Guard Station at Sandy Hook, Fort Hancock and several other buildings in the Recreation Area.

Water

New Jersey American Water Company (NJAWC)

The New Jersey American Water Company is a private utility that is responsible for providing water service to the Borough. The service area of the company extends throughout the Borough. The company owns and operates the existing plant located on Miller Street. The primary source of water for the Borough is the Swimming River Reservoir; secondary sources are the Glendola Reservoir and the NJWSA (Manasquan). NJAWC does not withdraw water from wells located within Highlands. Currently, all wells located within Highlands are no longer used and the diversion for

these wells has been reallocated. All of the wells have been sealed with the exception of one that is utilized for well level monitoring purposes.

The capacity of all combined treatment facilities serving the franchise area is 71.5 million gallons per day. The average residential demand is approximately 196 gallons per day, compared to 1,830 gallons per day for non-residential uses.

NJAWC reviews infrastructure data, i.e., main breaks, hydrant flow data, water quality complaints, etc. annually to identify network facilities that should be considered for replacement. At this time, no repairs or upgrades are planned within Highlands.

Sanitary Sewer

Sanitary wastewater generated in Highlands Borough is transported through the Borough's local sequential backed reaction system of gravity sewers, pumping stations and force mains to facilities owned and operated by TOMSA. Effluent is discharged under the authority of the Bayshore Regional Outfall Authority. The entire Borough is located within a sewer service area.

In 1995, the residential sanitary sewer flow was 0.161 million gallons per day (MGD) and 0.035 MGD for commercial, thus totaling 0.198 MGD. According to the Draft Monmouth County Wastewater Management Plan that is proposed for adoption in early 2004, Highlands flow estimates to the year 2022 are:

- Residential - 0.2000 MGD
- Commercial - 0.03 MGD
- Infiltration/flow - 0.0043 MGD

2022 estimates were based upon current zoning and population projections to 2022.

Flow and capacity for the entire TOMSA system are as follows:

2002: Reported - 7.14 MGD

2022: Estimate - 10.413 MGD

Final buildout based upon current zoning - 11.29 MGD

Design Capacity - 14 MGD

According to the draft Monmouth County Wastewater Management Plan, based upon projected wastewater flow, there is sufficient capacity for the system based upon current zoning.

Currently, the Borough is in the process of refurbishing the South Bay Avenue lift station. A contract for the work has been let and the job is partially completed.

Storm Water Management

Stormwater runoff is the water that "runs off" the land when it rains or snows. This water may go into the street, a nearby stream or a sewer. Stormwater runoff is referred to as a nonpoint source of pollution because it has the potential to pick up material from many different sources as it runs across land and reaches a waterway. Highlands Borough has a storm sewer system located throughout the Borough. However, no formal inventory or mapping has been completed of the storm sewer system nor does the Borough have a Stormwater Management Plan.

According to the NJDEP, stormwater/nonpoint pollution contributes to up to 60% of the existing water pollution problems. In an effort to reduce stormwater pollution, the State is in the process of creating a new Municipal Stormwater Regulation Program. The draft regulations of the program designate Highlands as a Tier A municipality. Nearly all municipalities in the coastal zone are proposed to be in Tier A. Under the new Municipal Stormwater Regulation Program, it is anticipated that Highlands will be required to implement a Stormwater Program. This includes various statewide requirements to address stormwater runoff such as public education, outfall mapping and ordinances, floatable and solids control, and good housekeeping of municipal maintenance yard operations. Examples of some anticipated requirements include: public meetings, distributing educational materials, street sweeping, catch basin cleaning, catch basin inserts and outfall and drain gates. However, additional measures may be required and optional measures may be recommended depending on federal and regional regulations and planning.

As a result of the new stormwater regulations, Highlands will most likely be required to apply for New Jersey Pollutant Discharge Elimination System (NJPDDES) permits for their stormwater systems 30 days after final publication of the rules. Currently, there is no anticipated funding for municipalities to implement this program.

During the Master Plan Visioning meetings, Borough Officials identified that the current stormwater management system has difficulty handling stormwater "running off" the hill in the Borough and

improvements should be investigated. This issue should be specifically addressed during the creation of a municipal stormwater plan/program.

RECOMMENDATIONS

1. In conjunction with redevelopment efforts, the Borough should seek to elevate new structures above the base flood elevation in the Borough to comply with Federal Emergency Management Agency (FEMA) standards.
2. Develop a 5-10 year Capital Improvement Plan to serve as a guide for the Borough's capital budget decisions regarding necessary capital improvements.
3. Continue to monitor the proposed Municipal Stormwater Regulation Program. Upon adoption of the Program, prepare a stormwater management plan, stormwater control ordinances, and a stormwater pollution prevention plan.
4. Work with the Township Engineer to investigate solutions to the identified stormwater management and sanitary sewer system infiltration problems.
5. Map the Borough's existing water and sewer infrastructure within a Geographic Information System (GIS).