

## **IX. UTILITY PLAN ELEMENT**

### **INTRODUCTION**

The City of Bayonne has a comprehensive utility infrastructure that is commensurate with its status as a fully developed urban center with a large residential, commercial and industrial base. The utility infrastructure consists of public water, sanitary sewer, stormwater, solid waste and recycling facilities. The majority of the City is served by utilities with the exception of outlying areas such as parts of Constable Hook and the “North 40” site consisting of land owned by the New Jersey Departments of Transportation and Environmental Protection.

Bayonne’s utility infrastructure is adequate to meet the needs of current and future residents, business and visitors. However, a significant portion of the City’s infrastructure is aging because it was constructed in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries. This results in constraints such as limited capacity and the need to rehabilitate older facilities. Areas of concern include stormwater management in low-lying sections of the City, pollution resulting from the combined sewer system and the need to rehabilitate the water distribution network. The Bayonne Municipal Utilities Authority (MUA), which is responsible for the public water and sewer systems, has been addressing these issues through a series of on-going improvement projects in its capital program. Another issue is the adequacy of the existing utility infrastructure to support large-scale redevelopment at MOTBY and the Texaco site in Bergen Point. The Local Redevelopment Authority (LRA) and the MUA are currently evaluating the utility systems in MOTBY and the Texaco site, respectively. Utility goals include the preservation of existing infrastructure, the replacement and improvement of substandard infrastructure and the provision of new infrastructure in targeted locations to support redevelopment.

The Utility Plan Element analyzes the present condition of the existing water supply, sewerage and wastewater treatment serving Bayonne, excluding MOTBY. Recommendations are made based upon the existing conditions and future needs of the City.

### **WASTEWATER AND STORMWATER SYSTEM**

#### **Wastewater**

Bayonne has a combined sanitary and stormwater sewage collection system. The current system serving the City is quite common in older urban cities in the northeast and Great Lakes regions. The main components of the system include 61 miles of combined flow interceptor sewers, three main pumping stations and four minor pumping stations. There are 31 combined sewer overflow discharge points

surrounding the peninsula of Bayonne. The wastewater flow is collected at the Oak Street pumping station and transported to the Passaic Valley Sewage Commission for treatment via a 36 inch force main. The collection system was built on a grid configuration coinciding with the overall land use pattern of the City. This combined system experiences periodic service problems in isolated areas throughout the City, due to backup of stormwater in low lying areas as a result of heavy rainstorms.

Because the problems associated with the combined sewer system are expected to continue into the future, it is anticipated that the needed funds for any overall modernization program will probably not be available. Any extensive future development, especially in the recently zoned W-D, Waterfront Development District, will require that the local system be upgraded. It is anticipated that potential developers would need to participate in bearing the cost of needed improvements.

In October of 1999, a major capital investment project to upgrade the City's aging sewer system was commenced by the Municipal Utilities Authority. The cost of the initial project is \$5 million dollars. Over the next 12 months, the Authority will utilize a low interest loan from the Department of Environmental Protection Agency to replace sewage pumps and controls and reline sections of the city's oldest brick-lined sewers. The project will also install back-up generators that will ensure the system can continue even in the event of a power failure.

### **Passaic Valley Sewerage Commission Service Area**

The Passaic Valley Sewerage Commission (PVSC) is the agency responsible for providing sewerage treatment services for all municipalities along the Passaic River south of Boonton.

Hudson County municipalities serviced by PVSC include Bayonne, East Newark, Harrison, Jersey City and Kearny. Sanitary waste from this area goes to a treatment plant located in Newark which provides both primary and secondary treatment of wastewater. The PVSC treatment plant currently uses an activated sludge process to treat wastewater and the remaining solids are used for landfill cover and strip mine reclamation.

A pipeline was constructed under Newark Bay in Jersey City to pump wastewater from Bayonne, Jersey City and Kearny to the PVSC treatment plant in Newark. A second pipeline has been constructed to transfer wastewater from Bayonne to the Newark Bay pipeline in Jersey City. The former Bayonne Treatment Plant at the foot of Oak Street is now utilized only as a pumping station. The City of Jersey City delivers up to 50 million gallons a day of wastewater through the Newark Bay pipeline, including flows from Bayonne.

### **Combined Sewer Overflow**

Combined sewer overflow (CSO) from combined stormwater and sanitary sewer lines is a major problem being addressed by the Bayonne Municipal Utilities Authority. The Sewage Infrastructure Improvement Act (SIIA), which became effective on August 3, 1988, helps fund any public agency operating a combined stormwater and sanitary sewer system by providing planning and design grants for abatement measures at combined sewer overflow point.

The Clean Water Act specifically requires the removal of solids and floatable material over half an inch in diameter and all floatables. To achieve this goal, a study of the entire system has been undertaken and a project to eliminate the discharge of solids and floatables is underway. The target completion date is June 1, 2001.

There are 31 combined sewer overflow discharge points surrounding the peninsula of Bayonne. A project is underway to construct facilities to control the overflow of solids and floatable materials into the surrounding waterways. There are no grants available for construction of the CSO improvements, which is estimated to cost over \$750,000 per outlet.

### **Stormwater**

According to the New Jersey Department of Environmental Protection (NJDEP), the New York Harbor is one of the top priority areas for compliance with the Clean Waters Act. The Clean Waters Act requires the NJDEP to develop a municipal stormwater discharge permitting program.

New York Harbor has been designated by the U.S. Environmental Protection Agency (EPA) as a participant in the National Estuary Program since 1988. This group is presently finalizing a Comprehensive Conservation Management Plan for the Harbor. The plan calls for significantly increased efforts to regulate stormwater discharges from municipalities in the Harbor. The Clean Water Act requires State's to set up a permitting program for stormwater discharge in municipalities with over 100,000 in population.

The NJDEP has established draft guidelines for regulating stormwater discharges into the Harbor called the Municipal Stormwater Pollution Prevention Program (MSPPP). Hudson County has twelve municipalities, seven of which have been identified as bordering segments of the Harbor which have been designated as potential toxic limited segments (Bayonne, East Newark, Harrison, Jersey City, Kearny, North Bergen and Secaucus). The draft MSPPP requires these municipalities to submit an application for stormwater discharges to surface waters. The principal component of this application is a sampling program for nickel, lead, copper, mercury and a limited number of conventional pollutants. Two samples at the outfalls are required. New projects that come online will have to comply with these regulations.

## **WATER**

As with the sewer system, the City's water distribution system is also designed on a grid configuration. A major change affecting the availability of Bayonne's water supply was the City's membership in the North Jersey Water Supply Commission. Where Bayonne was once a wholesale customer of this Commission, it is now a part owner, guaranteeing long term water supply for the City. The City currently averages roughly 9 million gallons of water usage daily out of a total daily allocation of 10 million gallons.

The North Jersey District Water Supply Commission (NJDWSC) receives its water supply from the 29.6 billion gallon Wanaque Reservoir and the 7 billion gallon Monksville Reservoir, which are both located in Passaic County. Additional water is pumped into the Wanaque Reservoir when needed from pumping stations located on the Ramapo River in Pompton Lakes, which can pump 150 million gallons per day and the Pompton/Passaic River confluence in Wayne, which can pump 250 million gallons per day. The average daily use for the NJDWSC water supply is 129.6 mgd. The NJDWSC recently expanded its water treatment to handle a peak capacity of 210 million gallons a day. The City therefore is ensured an adequate current and future water supply.

To ensure the safety of the consumer, the North Jersey District Water Supply Commission routinely monitors and tests the water at rivers, lakes and streams that supply its reservoirs. It also continually monitors the quality of water throughout its distribution system. The NJDWSC is in the process of building satellite feed stations in its distribution system that will effectively treat and reduce lead levels in drinking water at consumer taps. These stations are currently under construction.

The City has experienced numerous problems regarding its water distribution system. Older water mains were subject to vibrations of heavy traffic, often causing them to rupture. In response, the City implemented a program of water main rehabilitation. This included replacement of valves and cement lining of older water mains. The results have been quite successful. The Bayonne Municipal Utilities Authority reports that 60 to 65 percent of the grid distribution system has been completely rehabilitated. Planning for the remaining 35 percent of the system is underway and will probably be started in the year 2000. Fire flows in turn have consistently been rated highly by the National Board of Fire Underwriters. Rehabilitation work is also being performed on the North Arlington Aqueduct. When this work is completed, additional rehabilitation work will be identified and will require future funding.

The City of Bayonne and the Bayonne Municipal Utilities Authority are committed to providing water that meets or exceeds all Federal and State requirements for drinking water. In general, the water system is in good condition as a result of previous and ongoing rehabilitation and improvements to the system infrastructure.

## **RECOMMENDATIONS**

1. Preserve and maintain the existing utility infrastructure including public water, sanitary sewer and stormwater facilities.
2. Plan and implement new utility infrastructure to replace aging and obsolete systems and serve redevelopment areas such as the Texaco site.
3. Support the implementation of Bayonne's Environmental Performance Partnership Agreement with the New Jersey Department of Environmental Protection.
4. Address the existence of combined sewer outfalls and retrofit existing facilities where possible while providing new separated sanitary and stormwater facilities in areas of new development.
5. Preserve and protect the City's public water supply including storage areas, treatment facilities and the distribution system.
6. Recognize and address stormwater management in low-lying areas prone to flooding.
7. Encourage the development of high technology infrastructure including fiber optic lines, telecommunication facilities and adequate power supply.
8. Provide new utility infrastructure with activity at MOTBY.

