



Urban Design + Planning

Bucks County Waterfront Revitalization Plan

Existing Conditions Memorandum

To: Bob White, Director
Redevelopment Authority of the County of Bucks
From: Jane Dembner, HNTB

Date: June 25, 2004

Subject: Summary of Existing Conditions—Water and Wastewater Service (Revised)

This technical memorandum provides an overview of the existing water and wastewater infrastructure in the Bucks County Waterfront Revitalization study area. This is one of several background memos supporting the Bucks County Waterfront Revitalization Plan. The purpose of the study is to provide for improved access to the riverfront and to promote targeted economic development in the study area. The study area includes portions of the following municipalities: Bensalem Township, Bristol Borough, Bristol Township, Falls Township, Morrisville Borough, and Tullytown Borough.

Background

The six jurisdictions in the Bucks County Waterfront Study Area are served by a number of water and wastewater facilities. This memorandum describes those facilities, their capacities, and any issues that might present problems for future development. It should be noted that the data on water is from 1994, and data on wastewater treatment demand and capacity are from 1998, the most recent information and studies available. Updated information will be necessary for future decision-making.

Water Supply

The study area draws its water from by eight systems, as described in Table 1, while their capacities are shown in Table 2. Of the systems with demand and capacity data, it appears that Bristol Borough may have a need for additional water capacity. In the future, it is recommended that the County confirm and/or update these findings.

Table 1: Study Area Water Sources

Supplier	Study Area Municipality Served
Bensalem Township Water and Sewer Dept.	Bensalem
Bucks County Water and Sewer Authority (BCWSA)	Bensalem
Pennsylvania American Water Company	Falls
Morrisville Borough Water Authority	Morrisville, Falls
Bristol Borough Water and Sewer Authority	Bensalem, Bristol Borough, Bristol Township
Bristol Township Water Dept.	Bristol Township, Middletown
Falls Township Water Authority	Falls, Bristol Township
Lower Bucks County Joint Municipal Authority	Bristol Township, Falls, Middletown, Tullytown

Source: Bucks County Water Supply Systems Update and Inventory, 1994

Table 2: Study Area Water Supply Capacities (1993)

System	Population Served	Average Daily Use (MGD)	System Capacity (MGD)
Bensalem Township	1,000	7.1	*
BCWSA	125,500	17.5	*
PA-American	27,736	2.8	3.4
Morrisville	17,900	1.8	1.8
Bristol Borough	30,000	7.6	7.3
Bristol Township	882	0.3	*
Falls	22,100	2.2	*
Lower Bucks	66,101	8.6	16.5

Source: *Bucks County Water Supply Systems Update and Inventory, 1994*

* This supplier purchases nearly all of its water from other sources.

Wastewater Treatment

The Study Area is served by six wastewater treatment facilities, listed in Table 3. The last two facilities (M-21 and M-22) are pipelines to the Philadelphia Water Department's Sewage Treatment Plant. The Bucks County Water and Sewer Authority has signed a service agreement with Philadelphia, permitting them to send wastewater into Philadelphia for treatment.

Table 3: Study Area Wastewater Treatment Facilities

Supplier	Study Area Municipality Served
Morrisville Borough Authority (M1)	Morrisville
Lower Bucks County Joint Municipal Authority (M2)	Bristol Township, Falls, Tullytown
Bristol Borough Water and Sewer Authority (M3)	Bristol Borough, Bristol Township, Falls
Bristol Township Sewage Treatment Plant (M4)	Bristol Township
BCWSA Neshaminy Interceptor (Philadelphia Sewage Treatment Plant—M-21)	Bensalem, Bristol Township, Falls
BCWSA Poquessing Interceptor (Philadelphia Sewage Treatment Plant—M-22)	Bensalem

Source: *Bucks County Wastewater Facilities Inventory, 1999*

Although no specific data are available at this time, there appears to be adequate capacity in the M-21 and M-22 facilities to support future development in the study area. However, the representatives of the Philadelphia plant feel that Bucks County municipalities (especially Bensalem) have exceeded the volume limits set forth in the existing treatment agreement. Bensalem needs additional treatment capacity allocation to continue to develop. Philadelphia would strongly prefer that Bensalem revert to the existing limits—a preference that would affect the possibility of future development. This issue needs to be resolved through a renegotiation of the service agreement.

As Table 4 shows, the majority of treatment facilities within the study area have sufficient capacity for existing and future development. The exception is the M2 facility serving Bristol Township, Falls, and Tullytown. This facility has adequate capacity to meet average daily demand, but falls short of capacity during peak periods. There is no indication that these facilities have the capability of transferring excess demand to adjacent facilities. Thus the treatment capacity at the M-2 facility may present problems for future development. In the future, it is recommended that the County confirm and/or update these findings.

Existing Conditions Memo—Water and Wastewater Facilities
June 25, 2004

Table 4: Study Area Wastewater Treatment Facility Capacities

Facility	Population	DUs	Design Flow (MGD)		Actual Flow (MGD)	
	Served	Served	Average	Peak	Average	Peak
M1	20,000	n/a	7.1	n/a	3.9	5.2
M2	74,827	25,151	10.0	15.0	7.8	16.29
M3	12,000	4,286	2.70	6.80	1.77	2.71
M4	20,000	n/a	2.50	5.80	1.55	2.64
M21	n/a	n/a	n/a	n/a	19.20	27.30
M22	n/a	n/a	n/a	n/a	19.20	27.30

Source: Bucks County Wastewater Facilities Inventory, 1999