

## Utilities: Water Availability and Supply Berkeley Township, Ocean County, NJ

### Background

Water supply and capacity documentation is to be provided as part of the Berkeley Township Action Plan. Items to be addressed in the documentation include (1) sources (2) supply capacity, (3) local water conservation and reuse measures, and (4) relationship to Transfer of Development Rights (TDR).

### Water Sources

The following table shows the Public Community Water Supply wells within Berkeley Township. According to the Berkeley Township Municipal Utilities Authority (BTMUA), residents and businesses in the central one-third portion of Bayville obtain water from privately operated wells. During the spring of 1993, the initial portion of the Authority water system reached its final stages of construction and was placed into operation. Over the last two years, approximately 77,000 linear feet of 6.8 and 12-inch diameter water mains have been installed to further safeguard the health of current and future residents of Berkeley Township.

Well ID	Well Owner	Name of Well	Location of Well	Completion Date	Aquifer Type
WSWL0000068522	Berkeley Twp MUA	Well 1	Station Rd	2/22/1992	Confined
WSWL0000068521	Berkeley Twp MUA	Well 2	Station Rd	3/3/1992	Confined
WSWL0000176648	Berkeley Twp MUA	Well 3	Station Rd	9/18/1999	Confined
WSWL0000068370	Berkeley Water Co (aka Aquaview Water Co)	Well 3	Rte 9 (Pinewald)	10/23/1961	Unconfined
WSWL0000068484	Berkeley Water Co	Well 4	Rte 9 & North Ash Ave	5/29/1986	Unconfined
WSWL0000068602	Berkeley Water Co	Well 5	Rte 9	5/21/1997	Unconfined
WSWL0000070829	Crystal Lake Health Care	Well 1	Lakeside Blvd	1928	Semi-Confined
WSWL0000068456	Crystal Lake Health Care	Well 2	Lakeside Blvd	03/1979	Unconfined
WSWL0000068361	Shore Water Co	Well 1	23rd St & Central Ave	6/22/1954	Unconfined
WSWL0000068411	Shore Water Co	Well 2	23rd Ave	02/1973	Confined
WSWL0000068491	Shore Water Co	Well 3	Barneгат Ave	1/7/1988	Confined
WSWL0000068468	United Water New Jersey	Well 33	Santiago Ave	10/15/1984	Unconfined
WSWL0000068496	United Water New Jersey	Well 34	Mule Rd, Holiday City	11/6/1987	Unconfined
WSWL0000068502	United Water New Jersey	Well 35	Mule Rd	6/8/1988	Unconfined

Source: NJ Department of Environmental Protection (NJDEP), i-MapNJ

According to Berkeley Township, water is provided to the retirement communities of Holiday City and Silver Ridge, and the Northern one-third of Bayville by the United Water Co.; South Seaside Park by the Shore Water Co.; the southern one-third of Bayville by the Aquaview

Water Co., and the Berkeley residents of Pelican Island by Seaside Heights Water Company. All named water companies are separate privately owned operations.

As stated in Berkeley Township's 1997 Master Plan, a Water Supply Master Plan was prepared in 1989 by Kupper Associates. This plan determined saturation development in the MUA's service area to be approximately 7,800 units. This estimate does not include any development in wetland areas shown on United States Geological Survey maps (USGS). *"Of the ultimate 7,800 units projected for the Berkeley Township MUA, it is estimated that Phase I would service approximately 2,800 existing and proposed units."* The 1989 Kupper Associates Plan projects 5,000 units for Phase II of the Plan. The Township's 1997 Master Plan concluded that development in Berkeley Township would be guided by market forces rather than large scale utility expansions into areas of the Township not being served.

As part of the Water 2000 Project, developed to ensure that every rural American home will have clean, safe drinking water, Berkeley Township obtained a \$1.2 million loan and a \$500,000 grant from the U.S. Department of Agriculture which was used to provide residents of the Pinewald Section with clean drinking water. According to Berkeley Township MUA, approximately 77,000 linear feet of 6.8- and 12-inch diameter water mains have been installed to this end.

#### Supply Capacity

There are seven Public Water Supply Systems providing service to Berkeley Township residents, at a rate of approximately 26.067 million gallons per day (MGD) at peak demand, as shown in the table below. According to the Department of Environmental Protection, Division of Water Supply, the Firm Capacity means adequate pumping equipment and/or treatment capacity to meet peak daily demand, when the largest pumping station or treatment unit is out of service. As indicated by the firm deficit/surplus values, Crystal Lake Health Care Water System is the only deficient system in firm capacity.

**Level of Service for Public Water Systems**

PWSID	Public Water System / Purveyor	Population Served <sup>1</sup>	Firm Capacity (MGD)	Supply Allocation Limit (MGD)	Total Peak Demand (MGD)	Firm Capacity Deficit/Surplus (MGD)
1505002	Aqua NJ Eastern Division (prev. Berkeley Water Co.)	12,000	1.620	1.548	1.357	+0.263
1505004	Berkeley Township MUA	8,960	1.512	2.097	1.332	+0.180
1505312	Crystal Lake Health Care	382	n/a	n/a	n/a	n/a
1521001	Ocean Gate Water Dept.	100	0.230	0.387	0.370	- 0.140
1526001	Seaside Heights Water Dept.	1	3.168	2.323	1.833	+1.335
1505003	Shore Water Company	4,800	0.634	0.435	0.348 (current)	+0.286 (current)
1507005	United Water Toms River	19,431	21.620	23.689	20.827	+0.793
<b>Total</b>		<b>45,674</b>	<b>28.784</b>	<b>30.479</b>	<b>25.719</b>	<b>2.431</b>

Source: Department of Environmental Protection (NJDEP), Division of Water Supply updated 9/11/2009

Note: To determine monthly and yearly capacities, MGM= (MGD x 31) and MGY= (MGM x 12).

<sup>1</sup> Office of Smart Growth letter to Berkeley Township, June 17, 2009

### **Water Conservation and Reuse Measures**

As per the Township's Planning and Implementation Agenda (PIA), Berkeley Township is to prepare a Natural Resource Inventory (NRI), Conservation Master Plan Element, Protection Plan for Stream Corridors, Total Maximum Daily Load (TMDL) Implementation Plan, and Septic Management Plan. While all of the above are related to and help sustain water availability and supply, the Conservation Master Plan Element specifically calls for the preservation, conservation and sustainable utilization of the Township's water and other natural resources.

### **Relationship to the Transfer of Development Rights (TDR)**

The Berkeley Township Development Transfer Element and Utility Service Plan, which are currently in draft form, address potable water, wastewater collection and treatment, stormwater management, transportation, public facilities and growth accommodation. The Utility Service Plan outlines need for and general location of infrastructure elements that are considered necessary to support the projected development of receiving zones as a result of transferred credits.

The Utility Service Plan aims to match the water demand estimate to the proposed development in the Town Center, Town Center 2, and Node C. However, until the Real Estate Market Analysis (REMA) and boundaries are finalized, exact water demand cannot be predicted. The proposed sending and receiving areas can be seen in the "Water Service Areas" map below, taken from the 2009 Utility Service Plan.

Berkeley Township  
Water Availability & Supply Documentation  
(Action Plan Item D2)

