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Water Supply and Wastewater Utility Capacity

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Two tables are provided with information regarding water utility capacity. One addresses the remaining capacity of wastewater treatment facilities for domestic sewage, and focuses on facilities that serve the Highlands Region and have a capacity of 20,000 gallons per day or greater. The other addresses the remaining capacity of public community water supply systems serving the Highlands Region. The two tables will be linked in GIS to the Existing Areas Served for each facility, so that municipalities will be able to relate available capacity to service areas.

Highlands Public Community Water Supply Systems

The Highlands Council's Draft Utility Capacity Technical Report (January 2007) describes the method used to determine remaining capacity for these facilities. In summary, the method:

1. Identified facilities that serve any portion of the Highlands Region, regardless of whether the water treatment facility itself is located within the Region, and their water allocation permit limitations and bulk transfer contracts, in million gallons per month (MGM).
2. Determined the peak monthly demand for each facility for the years 2002-2004.
3. Compared the peak monthly demand to the monthly supply, and determine whether the system has remaining capacity or a deficit. Note that this value is for the entire system, including both Highlands Region and other service areas.
4. Identified the Existing Area Served, both within and outside of the Highlands Region, to determine what portion of the service area is within the Region.

Based on the analysis, only 11 of 61 facilities in the Highlands region have available capacity of greater than 31 MGM, or approximately 1 million gallons per day (MGD). The largest of these by far are the NJ American Water Company divisions (Elizabethtown and Short Hills), which have extensive service areas outside of the Highlands Region and rely primarily on surface water supplies and non-Highlands Region ground water. The remaining top facilities primarily serve the Highlands Region. It should be noted that the method provides conservative values for water availability,

because nearly all Highlands systems (notably excepting the NJ American Water Company systems) are dependent upon aquifers, which will not have the same immediate effects on stream flow as surface water intakes on streams. Further, the demand data used in this analysis are from 2002-2004, and more recent data may show different results. In most cases, demands will have increased over time. Therefore, the addition of further information will likely modify these results over time.

Highlands Domestic Sewerage Facilities

The Draft Utility Capacity Technical Report (January 2007) also describes the method used to determine remaining capacity for domestic sewerage facilities. In summary, the method:

1. Identified facilities that serve any portion of the Highlands Region, regardless of whether the treatment facility itself is located within the Region, and their permit or Wastewater Management Plan limitations for flow. The facilities were limited to those serving more than a single property, eliminating non-community, commercial and industrial systems.
2. Identified the Existing Area Served, both within and outside of the Highlands Region, to determine what portion of the service area is within the Region.
3. Determined the maximum three-month discharges for each facility for the years 2002-2004, and pro-rate that amount to the Highlands Region depending on Step 2. The process of pro-rating discharges is necessary in the absence of facility-specific information on wastewater flows from each portion of their service area. More detailed information could modify the results.
4. Compared the Highlands portion of the discharge flow against the Highlands portion of the permitted capacity and determine whether the facility is in deficit or has remaining capacity.

Based on this analysis, many of the Highlands facilities have at least some remaining capacity, with a total of 15.31 MGD for those facilities. Nine facilities show either no capacity or deficits. The facilities with remaining capacity mostly have less than 0.4 MGD remaining, but five facilities (Parsippany-Troy Hills, Hanover, Musconetcong, Morris-Butterworth and Phillipsburg) show greater than 1 MGD remaining capacity. However, Musconetcong is reported to have fully obligated its remaining capacity to address areas with failing septic systems, and data are lacking on obligations and commitments from most other facilities. Therefore, actual remaining capacity is likely to be less than in the table. Further, the discharge data used in this analysis are from 2002-2004, and more recent data may show different results.