

**7-7: Transmission to On-Site Storage at the Piscataway Wastewater Treatment Plant**

**Discussion**

This alternative proposes the use of existing facilities at the Piscataway WWTP for peak flow storage. The alternative requires a new force main and additional gravity and pressure sewer pipeline to transmit excess peak wet weather flows to the Piscataway WWTP. **Figure ES-11** illustrates possible alignment for these pipelines. The treatment plant has four ponds that were previously used during a polishing and chlorination process. This alternative would convert pond 2-B to an on-site storage basin. The existing pond has a volume of 22 MG and is nearest to the treatment plant headworks. A portion of this pond can be converted to capture the additional peak wet weather flow, which will be conveyed to the WWTP. This option is a viable alternative only if the transmission capacity of the Broad Creek WWPS is enhanced to convey future wet weather flows.

**Figure ES-11**



Figure ES-12



Figure ES-13



Figure ES-14



### Odor Control

To mitigate potential odor concerns at the new on-site storage facility, a geosynthetic membrane floating cover/liner will be utilized. The on-site facility will have a storage capacity of approximately 4.2 MG, and cover approximately 70,500 square feet (see Figures ES-12, and 13). The on-site storage facility will operate similar to the function of a bladder, which will fill during peak wet weather flows and have the capacity to hold the wastewater. Once the storm passes, the facilities pumps would send the retained wastewater back into the system to be treated under the normal dry-weather process.

The geosynthetic membrane system (see ES-14 for example) will eliminate the escape of odors during this process. The result of this process will allow operational optimization at Piscataway WWTP to maximize the effluents water quality, while eliminating overflows at Broad Creek WWPS.