District of Columbia Water and Sewer Authority (DC WASA)
Long-Term CSO Control Plan Tunnel Program

Overview

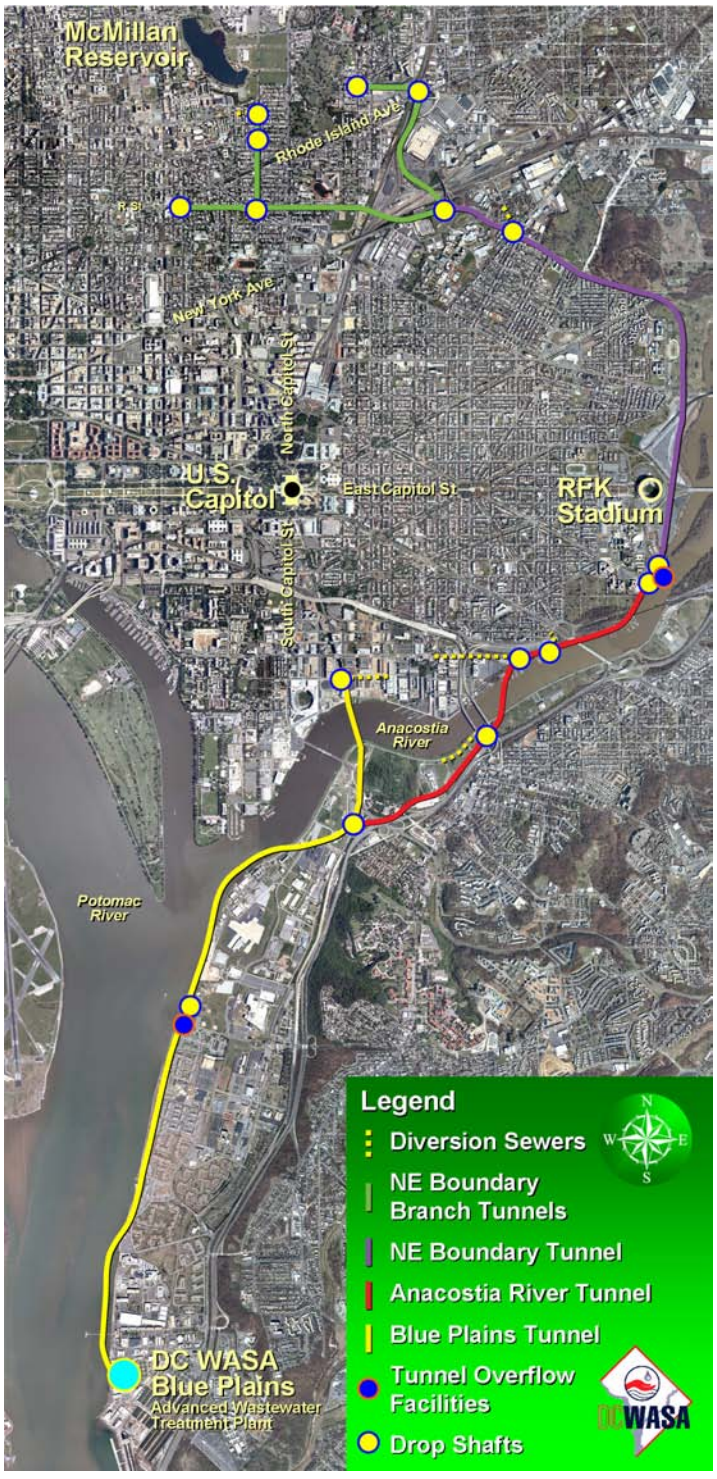
DC WASA operates a wastewater collection system comprised of separate and combined sewers. Approximately two-thirds of the District is served by separate systems, which consist of two independent piping systems: one system for sanitary wastewater (i.e., sewage from homes and businesses) and one system for storm water. The remaining one-third is served by a combined sewer system (CSS), which conveys both storm water and sanitary wastewater in one piping system.

During dry weather, sanitary wastewater collected in the CSS is conveyed to DC WASA's Blue Plains Advanced Wastewater Treatment Plant. During periods of heavy rainfall, the capacity of a combined sewer may be exceeded and the excess flow, which is a mixture of storm water and sanitary wastewater, is discharged directly to the Anacostia River, Rock Creek, the Potomac River, or their tributary waters. This excess flow is called Combined Sewer Overflow (CSO). Release of this excess flow is necessary to prevent flooding in homes, businesses, and streets. DC WASA's Long-Term Control Plan (LTCP) was implemented to prevent or mitigate wastewater discharge into the local waterways.

The tunnels system has been planned to capture, convey, and store combined sewer flows. The schedule for implementation of the LTCP is included in a federal consent decree among the U.S. Environmental Protection Agency, the District of Columbia, and DC WASA. The LTCP planning effort began in 1998 and design is now underway with an anticipated construction start in mid-2011 and completion by 2025. Major construction start dates are shown below.

Construction Dates

Contract Division	Description	Facilities	Approx. Start of Construction
A	Blue Plains Tunnel	23,600 LF, 23-ft dia. tunnel; 4 shafts; 1 diversion structure	May 2011 Design-Build with RFQ advertised approx. February 2010
H	Anacostia River Tunnel	12,500 LF, 23-ft dia. tunnel; 6 shafts	November 2013
J	NE Boundary Tunnel	17,500 LF, 23-ft dia. tunnel	January 2021
K	NE Boundary Branch Tunnels (3)	11,300 LF, 15 ft dia. tunnels 6 shafts 2 diversion structures	March 2018



The Blue Plains Tunnel, a 23,600-linear foot, 23-foot diameter tunnel, will be the first section to be constructed with an approximate start date of May 2011.

DC WASA's Long-Term CSO Control Plan Tunnel Program

Additional Information

Milestones Driven by Consent Decree

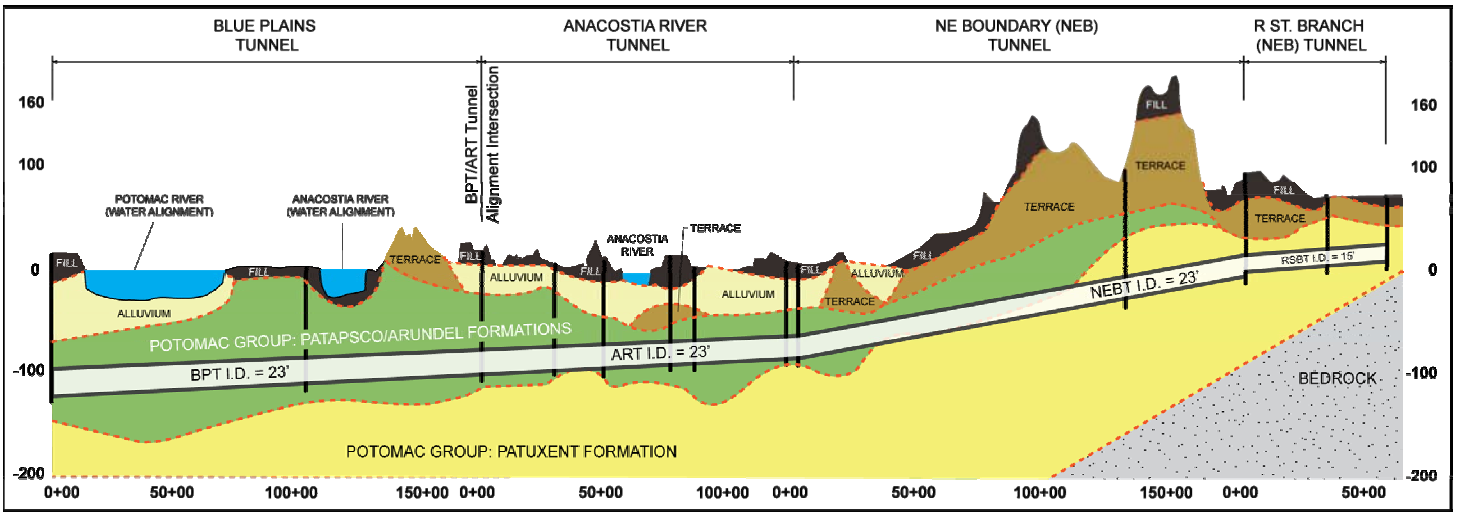
The consent decree schedule requires implementation of the LTCP over 20 years. Principal milestones included in the consent decree are summarized in the table below:

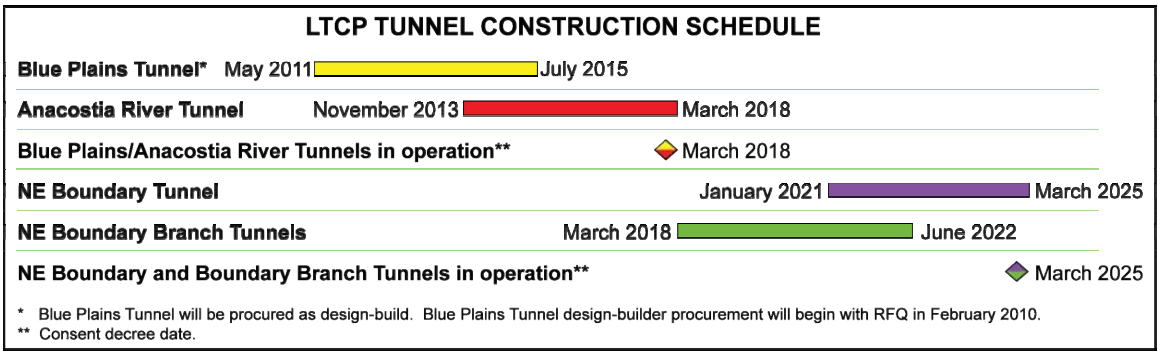
Principal Consent Decree Milestones for LTCP	
Consent Decree Effective	March 23, 2005
Complete Facility Plan	September 23, 2008 (Completed)
Start Design	March 23, 2009 (Completed)
Start Construction	March 23, 2012
Place in Operation	
• River Area Tunnels (Divisions A and H)	March 23, 2018
• Northeast Boundary Area Tunnels (Divisions J and K)	March 23, 2025

Geologic Conditions

Initial geotechnical investigations show that the tunnels will be located in the general geology identified in the profile below. Most of the tunnels are expected to be within the Potomac Group (undifferentiated) Patapsco/ Arundel Formation (green shaded areas). This formation is characterized as being primarily clayey and silty soils with sandy interbeds. It is anticipated that the northern end of the tunnels will cross into the Potomac Group Patuxent Formation (yellow shaded areas). This formation is characterized as being primarily sandy and silty sand with clayey and silty interbeds and basal gravely soils.

Current planning includes use of earth pressure balance (EPB) or slurry boring machines and precast concrete linings for the tunnels. Shaft construction methods being evaluated include slurry wall and ground freezing.





DC WASA will hold an industry outreach meeting in the fall of 2009 to provide contractors and engineering firms with more detailed information regarding procurement of the Blue Plains Tunnel.

Contact Information

For more information, interested parties may contact Ronald E. Bizzarri, Project Manager, at (202) 787-2014 or you can reach him by email at rbizzarri@dcwasa.com.

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