



Lady Bird



About the **Lady Bird Tunnel Boring Machine (TBM)** and the **DC Water Clean Rivers project**

“Lady Bird” TBM

- The total length of the TBM is 442.9 feet (135m), which is the equivalent of one and one quarter football fields including end zones.
- The TBM weighs 1,323 Tons (the equivalent of approximately seven and one half Boeing 747s)
- This TBM was built specifically for this project in Schwanau, Germany at the Herrenknecht Factory.
- It cost \$30 million to build.
- The cutterhead diameter is 26 feet, 4 inches.
- At full production, the TBM is capable of tunneling up to 100 feet per day. It is expected to average 70 to 80 feet per day.
- It will move approximately 13 million cubic feet of soil for this project (485,000 cubic yards). That's enough material to fill the reflecting pool 14.5 times.
- To remove the dirt from Blue Plains, it will require three dump truck loads for every one (1) foot of tunnel advancement. Over the entire length of the tunnel, that is more than 72,500 truckloads.
- The tunnel boring machine is in pieces and will be lifted one piece at a time and lowered into the shaft. At the bottom, it will be assembled.
- The crawler crane needed to lift the heaviest pieces is a 660-ton capacity lattice boom crawler crane with jib extension.
- The TBM will initially launch with the first six (6) of nine (9) trailing gear gantries. In this configuration, the TBM has all the basic utilities needed to begin tunneling. The excavated dirt will be delivered to a muck box at the back of the TBM and lifted out with a crane. As the TBM advances forward, the remaining sections will be added in-line one at a time. After the entire TBM has exited the launch shaft, the shaft will be fitted with muck handling equipment and the full-scale tunneling operation can begin.

Clean Rivers Project

- The Clean Rivers Project will reduce combined sewer overflows (CSOs) to the District's waterways-- the Anacostia River, the Potomac River and Rock Creek.
- It will cost approximately \$2.6 billion and is scheduled for completion in 2025, though portions of the Anacostia River will have relief even sooner—in 2018.
- The Clean Rivers Project will reduce CSOs to the Anacostia River by 98 percent and to all three water bodies by 96 percent overall.
- DC Water is starting the project with the most impaired water body, the Anacostia River, a slow-moving and shallow water body. The 13-mile tunnel system for the Anacostia is broken into three segments and the Lady Bird TBM is making its way along the first segment, more than four miles along the Potomac and the Anacostia rivers at a depth of approximately 100 feet.
- The tunnel system ends at Blue Plains Advanced Wastewater Treatment Plant where the combined sewage will be treated before being discharged back to the Potomac River.
- Therefore, construction and tunneling are beginning at the end of the tunnels at Blue Plains and moving upstream. That way, the lower portion can be operational before the entire tunnel is built.



for more information visit:
dcwater.com/cleanrivers