

How does liquid sludge get from Winthrop to Quincy for dewatering, drying and conversion to Class A biosolids?

The MWRA Deer Island Treatment Plant ("DITP") is located near Winthrop, Massachusetts, and the Biosolids Processing Facility ("BPF") is located in Quincy, a distance of approximately 7 miles.

In the early years of the BPF project, liquid sludge was loaded at DITP onto barges that NEFCO towed across Boston Harbor to Quincy. The barges served from 1991 through 2005. BPF wastewater, consisting principally of dewatering effluent (centrate) flowed through local sewers to an aging primary treatment plant at Nut Island, also in Quincy.

As MWRA's Boston Harbor Cleanup project progressed, underground sludge pipelines to the BPF were constructed in two phases. The sludge pipes were included in two wastewater tunnel projects.



Wastewater was routed from new headworks at Nut Island to a new pump station at DITP. The five-mile-long, deep rock Inter-Island Tunnel was constructed to carry this wastewater. When this tunnel was constructed, dual 14 inch pipes were cast into its concrete lining to convey liquid sludge in the reverse direction. This tunnel and the twin sludge pipelines were completed in 1998. The history of the MWRA sewer system can be found on the MWRA web site:

<http://www.mwra.state.ma.us/O3sewer/html/sewhist.htm>

The next phase of sludge piping was as part of the Braintree-Weymouth Interceptor project. This tunnel carries sewage towards Nut Island and ultimately to DITP. The project also extended the twin sludge pipelines to the Braintree-Weymouth pump station. The sludge pipelines branch off the Braintree-Weymouth pump station and pass under the Fore River to the Biosolids Processing Facility.

Since 2006, all sludge from DITP (approximately 1,000,000 gallons per day) has been pumped to the BPF, a distance of approximately seven miles. BPF wastewater also returns to DITP exclusively within regional conduits, avoiding local sewer regulations and fees.

Information about the Braintree Weymouth project is available on the MWRA website:

<http://www.mwra.state.ma.us/O3sewer/graphic/braintreeweyFS01.pdf>