



New Jersey Water Supply Authority
Dredging of the Delaware and Raritan Canal from Route 27 in Kingston to Amwell Road

Fact Sheet

In order to restore the flow capacity of the Delaware and Raritan Canal, the Authority must remove approximately 270,000 cubic yards of sediment which has accumulated within the 10.5 mile section of the Canal between Kingston at Lincoln Highway (Route 27) and Amwell Road, near Millstone Borough in Franklin Township, NJ. The Authority will also remove approximately 45,000 cubic yards of sediment from its sediment stockpile site located in Delaware Township, Hunterdon County, New Jersey.

As discussed at the first Public Open House meeting held on December 13, 2010, the Authority evaluated four technologies to remove these accumulated sediments from the Canal. These included mechanical excavation (in the dry), mechanical dredging (in the wet), hydraulic dredging (in the wet) with mechanical dewatering and hydraulic dredging (in the wet) with geobag dewatering. The evaluation was conducted to identify that dredging technology having the least environmental and social impacts on park users, the adjacent community, water users and the current rate structure of the Authority.

Based on the evaluation performed by the Authority's consultant, Urban Dredging Consultants, JV, the Authority's preferred alternative is hydraulic dredging (in the wet) with geobag dewatering. While the conceptual construction cost of this dredging technology is approximately 20% costlier than the least costly dredging technology (mechanical excavation (in the dry)), the preferred alternative will have the least environmental and social impacts on park users and the neighboring community as flow will be maintained within the Canal during dredging operations. Other benefits of the preferred alternative include:

- Required area for equipment access to the Canal will be minimized;
- Tree clearing along the Canal will be minimized;
- Wetland, wetland transition and flood hazard area disturbances will be minimized;
- Truck traffic on Canal Road will be minimized;
- Risks associated with the need to repair/reconstruct Canal Road/Canal towpath due to truck traffic will be negated;
- Trail closures along the Canal will be minimized; and,
- Species relocation and/or restocking will not be required.

Under the preferred alternative, dredging will proceed from Route 27 in Kingston, to Amwell Road. A small hydraulic dredge will pump the sediment slurry to the staging area(s), where the sediment will be discharged into geobags for dewatering. The elutriate water from this operation will be returned to the Canal following treatment. In order to convey the sediment slurry to the staging area(s), as the hydraulic dredge proceeds downstream, a series of booster pumps on floats will be introduced to the dredge pipeline. Following sediment dewatering operations, dewatered material will be trucked to an offsite facility where it will be beneficially reused.