



**Maintenance Dredging of the Federal Navigation Channel on the Cocheco River
Dover, NH**



Charter had two shuttle assemblies set up for transporting soils. Each barge carried five of the 25 cy inter-modal cans with sealed tops. The sequence of loading the cans with spoils and off loading the barge with the crane was critical to the stability of the assembly.

For the drilling and blasting operations, Charter drilled 20 holes per day. Blasting was conducted at high tide to help cushion the blowout effect of rock. Explosives were carried in magazine via small boat to the loading area. Vibration monitoring was also performed on shore.

Client: U.S. Army Corps of Engineers
Owner: City of Dover, NH
Value: \$2,171,877

The Cocheco River is 3 miles long and narrows to 40 ft width. The channel, last maintained by the government in 1905, was contaminated with Coal Tar, PAH, TPH and metals (chromium, lead, mercury and antimony). Charter removed 750 yds of rock and dredged approximately 24,700 yds of material.

MGP sediment dredging was performed off of a 30' x 80' x 7' sectional barge platform. A Komatsu PC-400 excavator, equipped with a long-reach boom and hydraulic clamshell bucket located at the bow of the barge, was used. The excavator, fitted with a GPS system called "Dredge Pack", provided the operator with readout information of exactly what he was digging, what was already dug and accounted for all tidal changes.

Charter developed its dredging and sediment removal operations to minimize the physical handling and transfer of dredged spoil, free product and contaminated water. Dredging was conducted using a hydraulic excavator operating from a shallow draft sectional barge. The excavator was fitted with a toothed-hydraulic clamshell bucket for soil and sediment removal, and with an open bucket for blast rock removal.



"This project had many unusual issues such as narrow channels, unpredictable tides, and freezing weather. Charter resolved all problems and completed the project on time."

"The contractor did a terrific job under difficult conditions. Their cooperation and efforts are to be applauded."

James A. Morocco
U.S. Army Corps of Engineers