

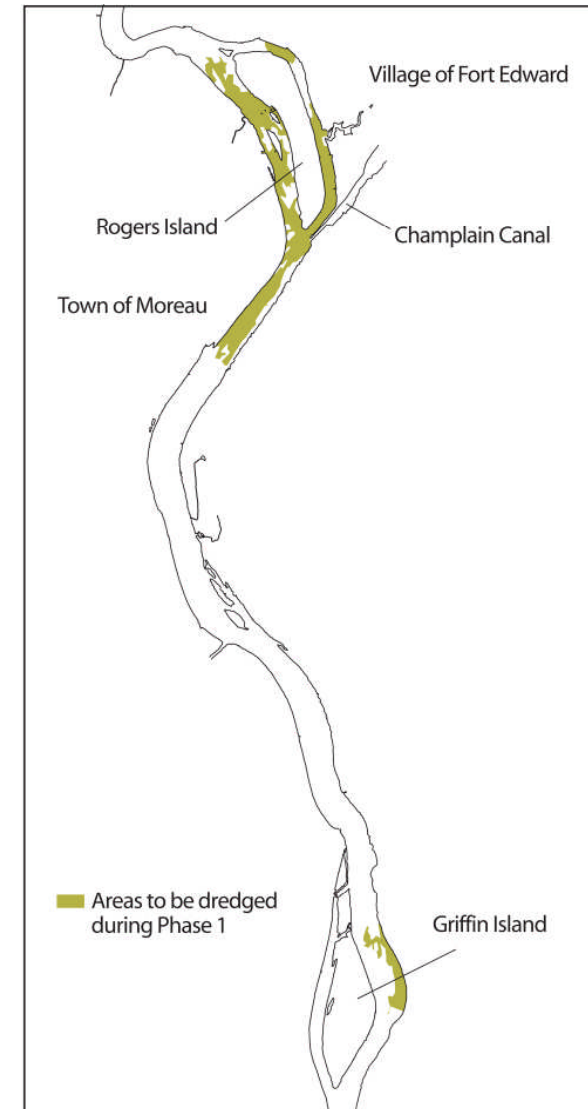
The Phase 1 Dredging Project: In-River Logistics

Fort Edward Firehouse
March 24, 2009



Phase 1 Overview

- > Dredging target: 265,000 cy from 94 acres around Rogers Island and Griffin Island
- > Dredging to start in May after NYSCC locks open
- > Dredging 24/6; 7th day reserved for maintenance/make-up
- > Project duration: May-November



In The River During Dredging

- > Cashman Dredging and Marine Contracting to perform dredging
- > Dredging in several areas at same time
- > Excavators to fill barges with sediment
- > Loaded barges to be pushed by tugs to support facilities
 - Transport through Lock 7 required
 - Average of 20 one-way lock trips daily



Removal of Sediment

- > Up to 9 dredges working at same time
- > Mechanical excavators with environmental clamshell buckets
- > Excavators mounted on deck barges (“flexifloats”)
 - Approx. 150 units to be used on project
 - Connected together to make different configurations
- > Dredges anchored in place with spuds until dredging completed in area
- > Equipment guided by global positioning systems (GPS)



Flexifloats



Flexifloats Assembled Together



Excavator on Flexifloats



Sediment Loaded to Barges

- > 195-feet-long, 35-feet-wide, 12-feet-deep hopper barges
 - Steel container within a container
- > 20 to be used on project
- > Mobilized from Louisiana
 - Traveling up East Coast on deck barge to NYC
 - Pushed by tugs to Albany
 - Temporarily staged in Troy until locks open in May
 - Pushed by tugs to Fort Edward
- > Moored alongside dredge to receive sediments
 - Up to 24 hours to load to capacity



Hopper Barges



Hopper Barges in Transit to Albany



Pushboats

- > Two sizes: 400HP and 600 HP
- > 17 to be used on project
- > Cabs can be raised so front of barge is visible to captain
- > Operated by qualified, experienced captains
- > Used to push sediment barges into Lock 7 to processing facility



400HP Pushboat

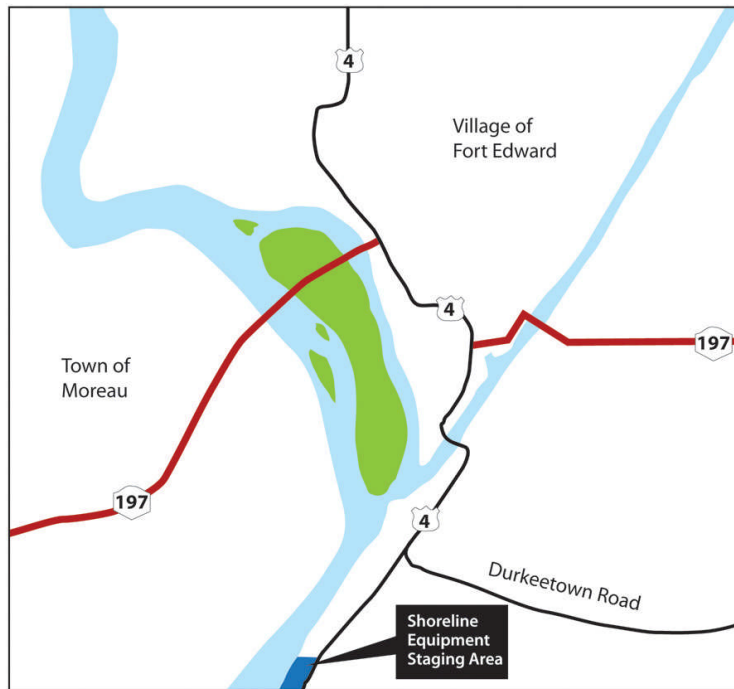


600HP Pushboat



Mobilization Underway

- > Equipment being staged at Route 4 equipment staging area (east shore) and work wharf at processing facility
- > Support marina (west shore) to handle river workers
- > Backfill and cap staging/loading area being developed



Pre-dredging Activities

- > Tree removal and trimming
- > Temporary mooring locations to be installed
- > Water flow control structure to be constructed
- > Docks installed at support marina
- > Vessels placed in river
- > Vessels transported from Troy after locks open
- > Test and calibrate equipment on land
- > Test and calibrate equipment in river
- > Debris removal
- > Begin dredging



Habitat Reconstruction

- > Work to be performed in 2010
- > AECOM to perform work with team of divers
 - Experts in water, natural resources and sediment management
- > Wetland areas to receive 8,700 plants in 0.8 acres; all areas to be seeded
- > SAV areas to receive 87,000 adult plants, 13,000 tubers over nearly 9 acres



Pre-planting Activities

- > Collection of SAV plant material from river in October
 - Collected upstream of GE plant sites
 - Will be used to grow aquatic plants
- > Plants now being grown in contractor's greenhouse

