

The Upper Hudson River Dredging Project: 2014 Season



EPA Community Advisory Group
March 6, 2014



Dredging to Date

- > Four seasons completed
- > 1.9 million cubic yards removed
 - 70% of total sediments to be removed
- > 1.95 million tons of backfill/cap placed
- > Areas completed:
 - Thompson Island Pool
 - Fort Miller to south of Schuylerville
 - Green Island/Schaghticoke areas near eagle nests
- > Habitat restoration:
 - 20 acres SAV; 48% of program completed
 - 0.8 acres RFW; 3% of program completed
- > Off-site disposal of 2.2 million tons dewatered sediment



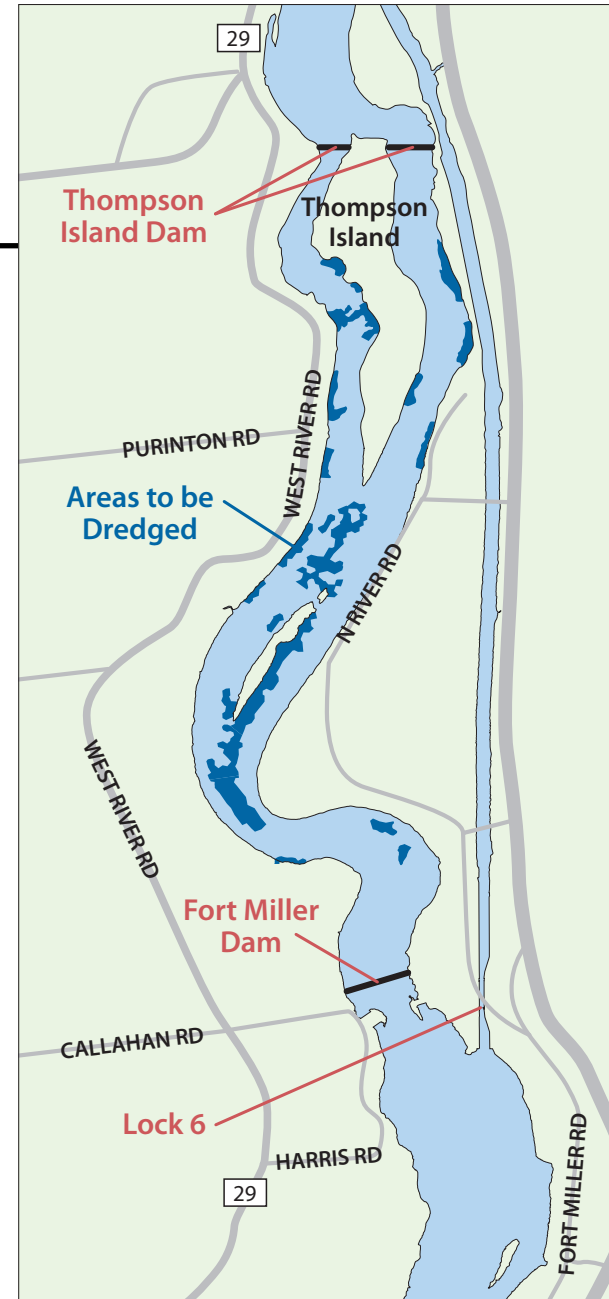
2014 Dredging Plans — Main Stem

- > Will begin south of Schuylerville and progress south
- > Start of activities in May (depending on NYSCC opening)
- > EPA target: 350,000 cubic yards
- > Dredge areas becoming more discrete
 - Shoreline/shallow smaller areas
 - Transport barges several miles and through several locks
- > Wide range of river conditions
- > On-going habitat restoration program



Land-Locked Area Between Dams

- > Dredging of 160,000 cubic yards in 29 acres
- > Backfill/capping following dredging
- > Habitat reconstruction (one season after dredging)



Approach for Land-Locked Area

- > Mechanical dredge with clamshell bucket mounted on flat deck barge
- > Dredged sediment loaded into hopper barges
- > Hopper barges pushed by tugboats to trans-load area on east shoreline south of Thompson Island Dam
- > Material off-loaded from barge in river and loaded into barge in NYSCC land-cut
- > Barges pushed by tugs to Fort Edward processing facility for rail transport

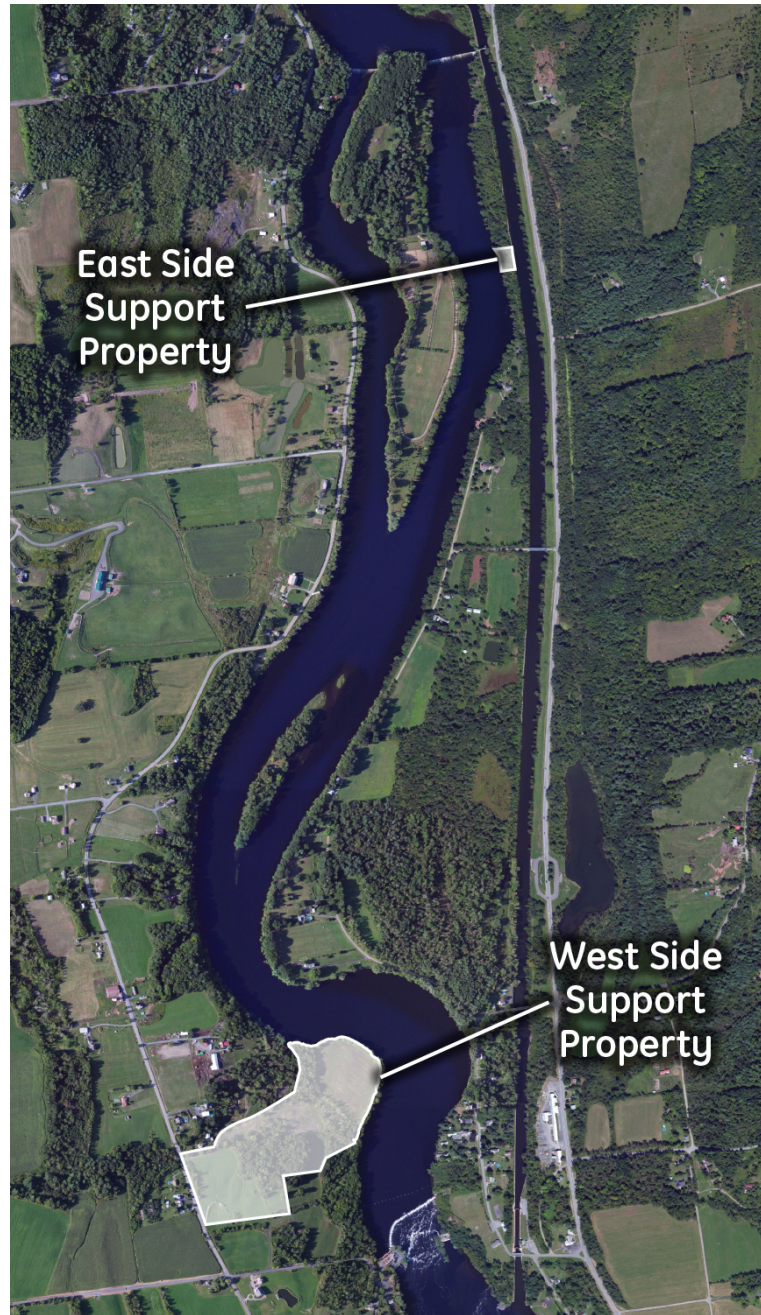


Approach to Backfilling/Capping

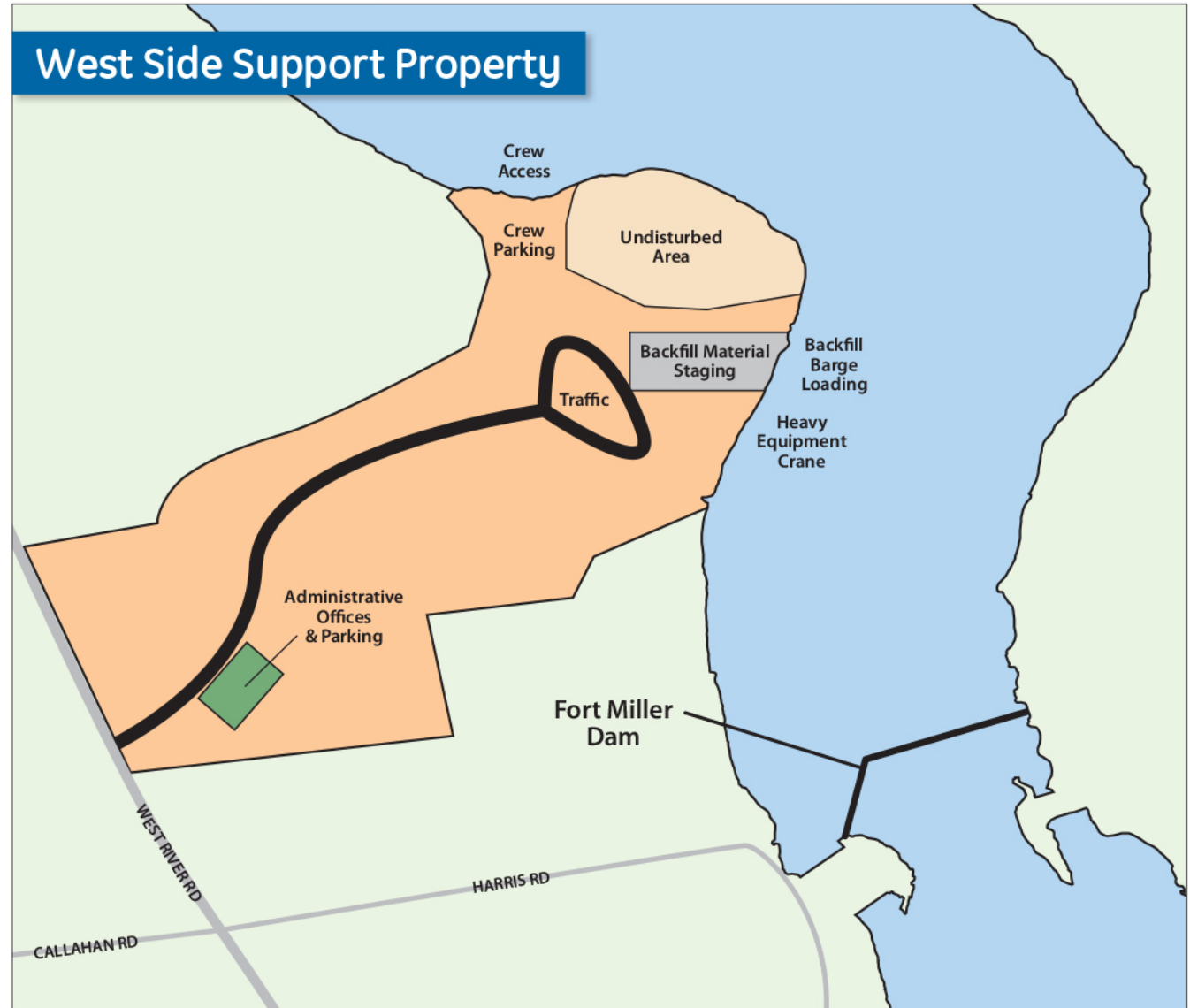
- > Backfill/capping material acquired from local sources
- > Material transported to west side support property via truck
 - Same approach used at other Barge Loading Areas
- > Material staged in piles until loaded onto hopper barges
- > Barges to be pushed by tugboats to dredged areas



Location of Proposed Shoreline Support Properties



Conceptual Layout of West Side Support Property

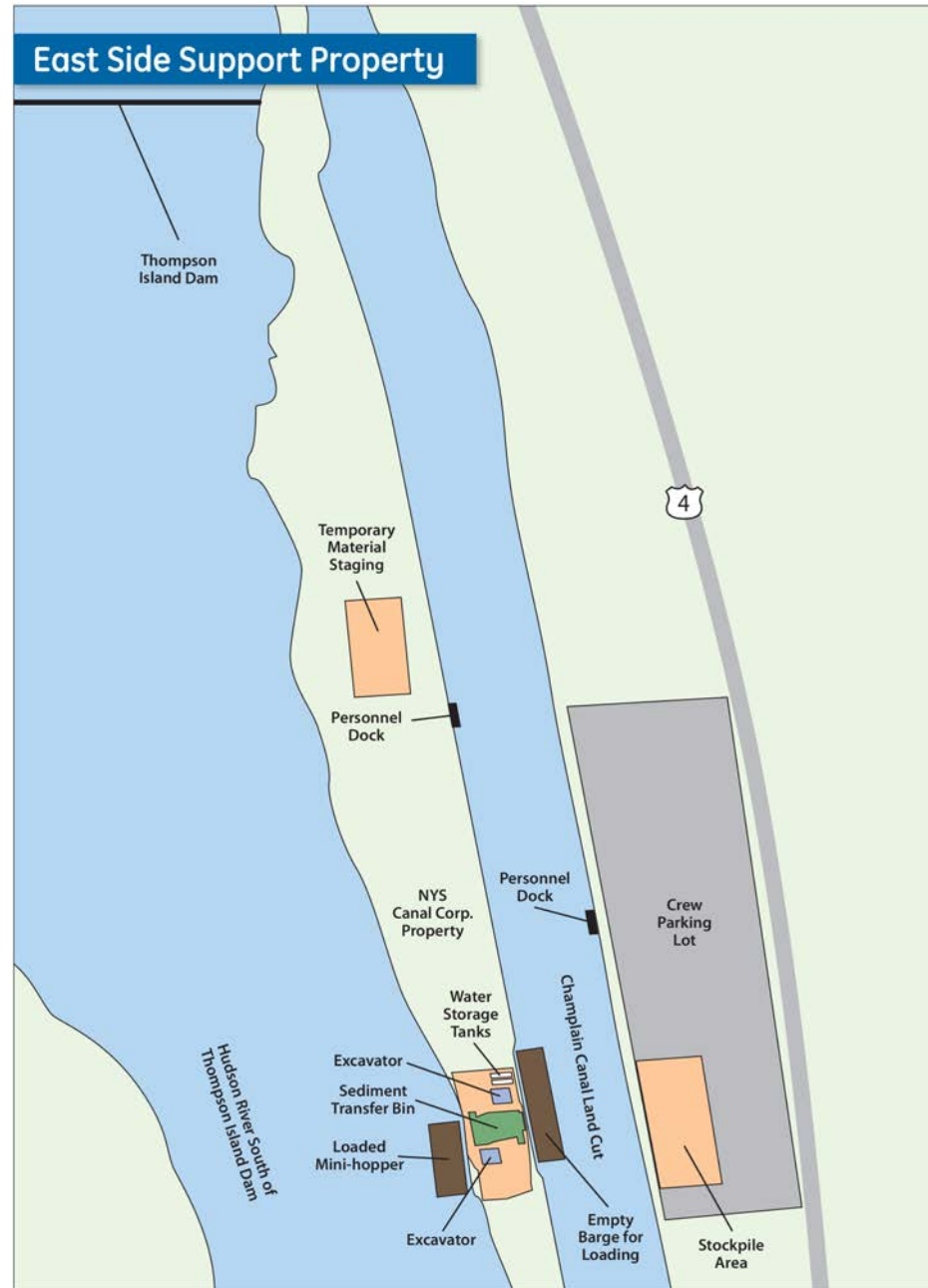


Specific location of equipment and staging areas to be refined in discussions with EPA and NYS Canal Corporation



Conceptual Layout of East Side Support Property

Specific location of equipment and staging areas to be refined in discussions with EPA and NYS Canal Corporation



Development of East Side Support Property

Anticipated Schedule: March/April

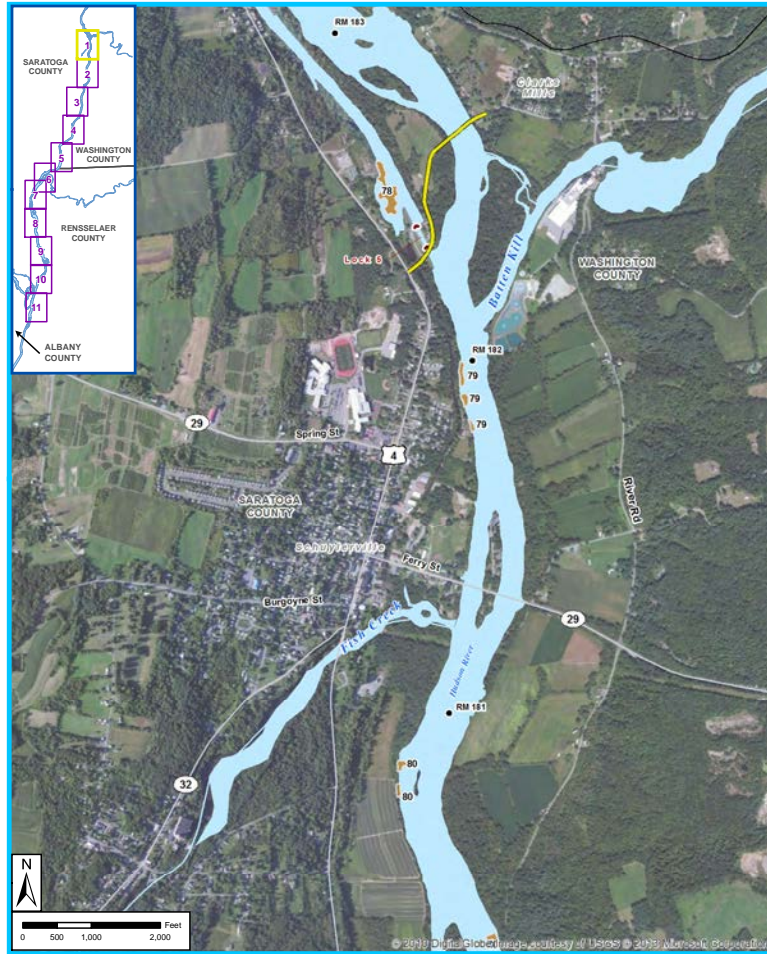
- > Site clearing and tree trimming
- > Development of temporary causeway across land-cut
- > Removal of existing rip-rap and excavation at land-cut shoreline
- > Additional site preparation and installation of concrete pad
 - Geomembrane liner installed to protect underlying soils
- > Construction of sediment transfer bin on concrete pad
- > Mobilization and assembly of excavators and other equipment
- > Removal of temporary causeway across land-cut (before Canal opens)



East Side Support Property

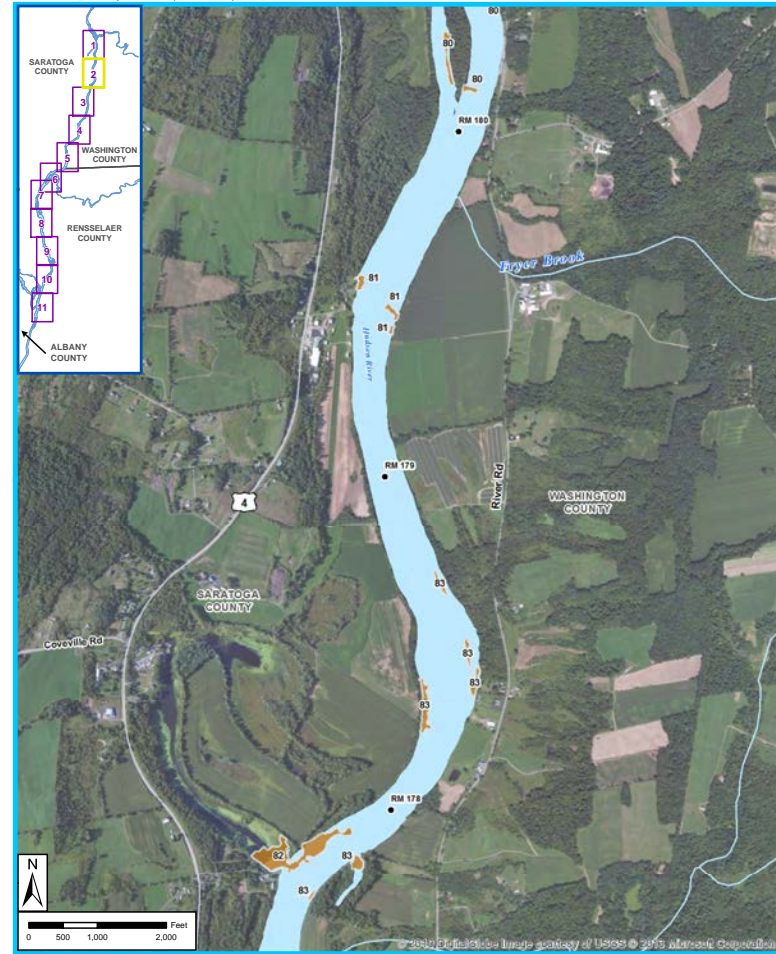


Main-Stem Dredge Areas



**Dredging Areas
Map 1**

- River Mileposts
- Lock/Dam
- Major Roads
- Stream/River
- Primary Railroads
- Hudson River
- Bridges
- Dredging Areas

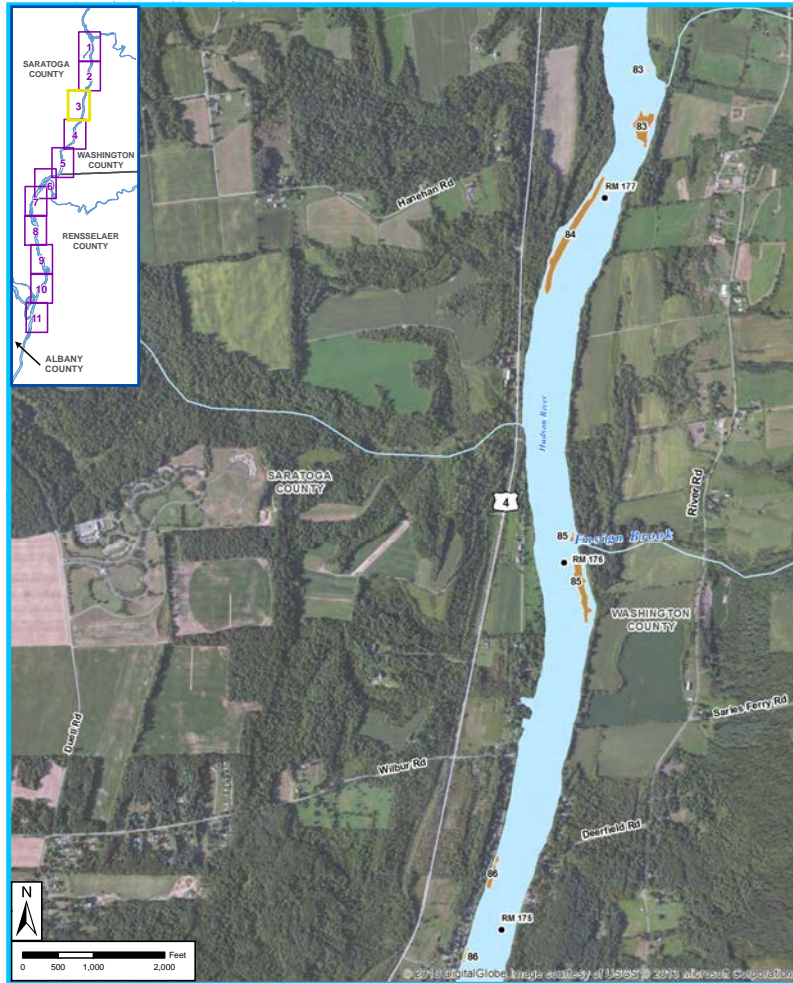


**Dredging Areas
Map 2**

- River Mileposts
- Lock/Dam
- Major Roads
- Stream/River
- Primary Railroads
- Hudson River
- Bridges
- Dredging Areas

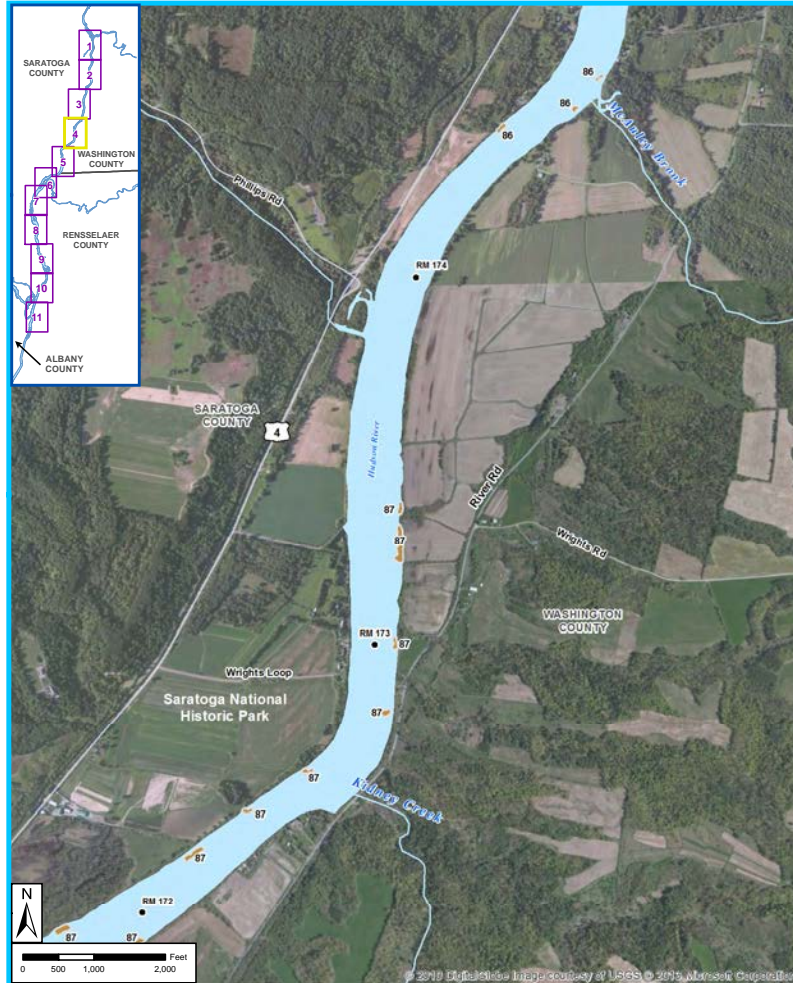


Main-Stem Dredge Areas



- River Mileposts
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**Dredging Areas
Map 3**

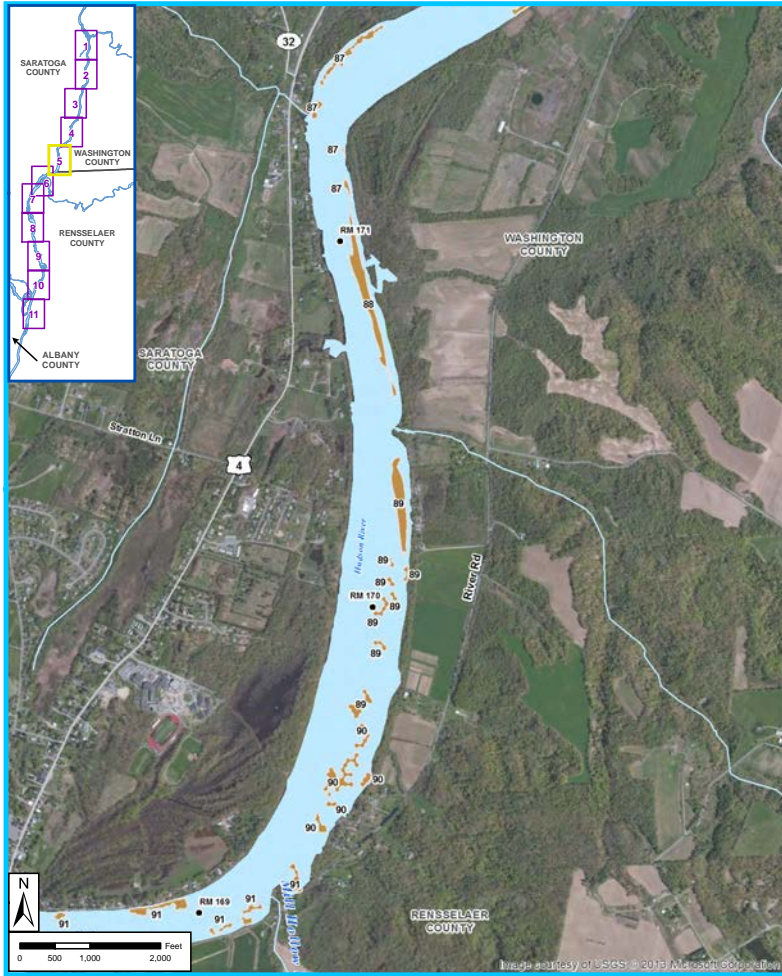


- River Mileposts
- Major Roads
- Primary Railroads
- Bridges
- Lock/Dam
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- Dredging Areas

**Dredging Areas
Map 4**

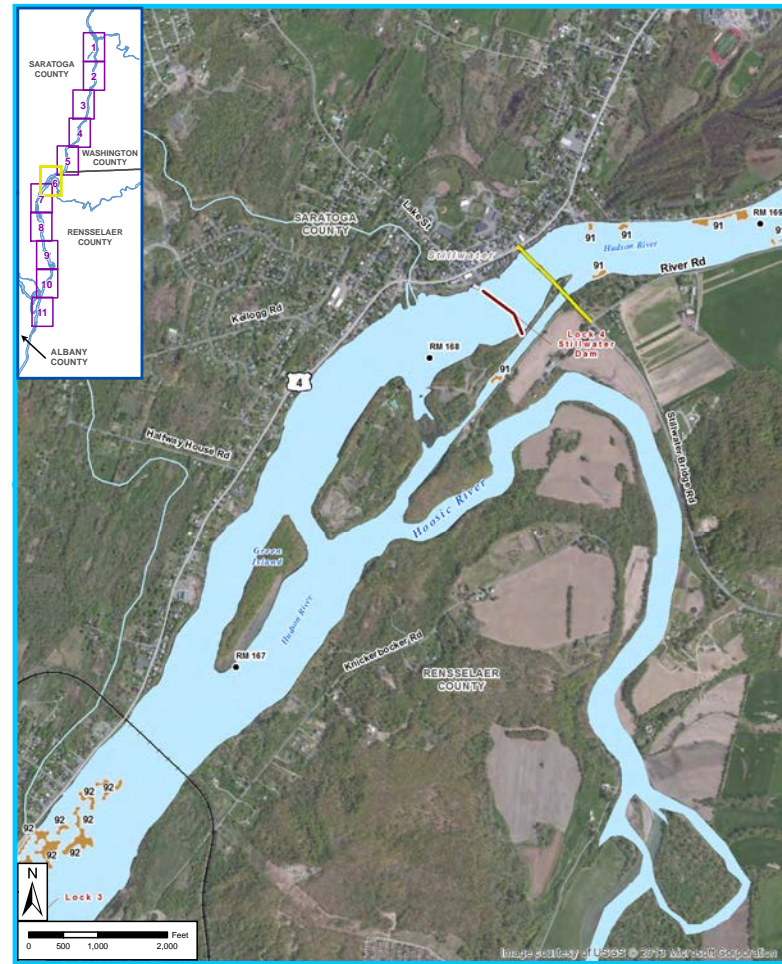


Main-Stem Dredge Areas



- River Mileposts
- Major Roads
- + Primary Railroads
- Lock/Dam
- Stream/River
- Hudson River
- Bridges
- Dredging Areas

**Dredging Areas
Map 5**

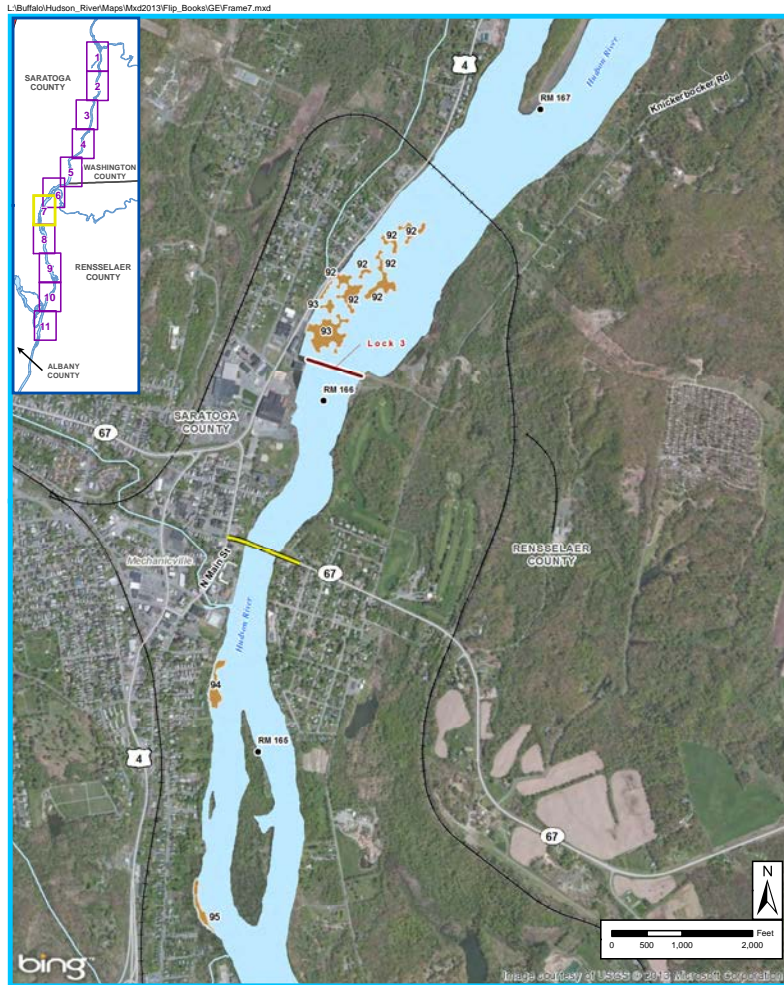


- River Mileposts
- Major Roads
- + Primary Railroads
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- Stream/River
- Hudson River
- Bridges
- Dredging Areas

**Dredging Areas
Map 6**

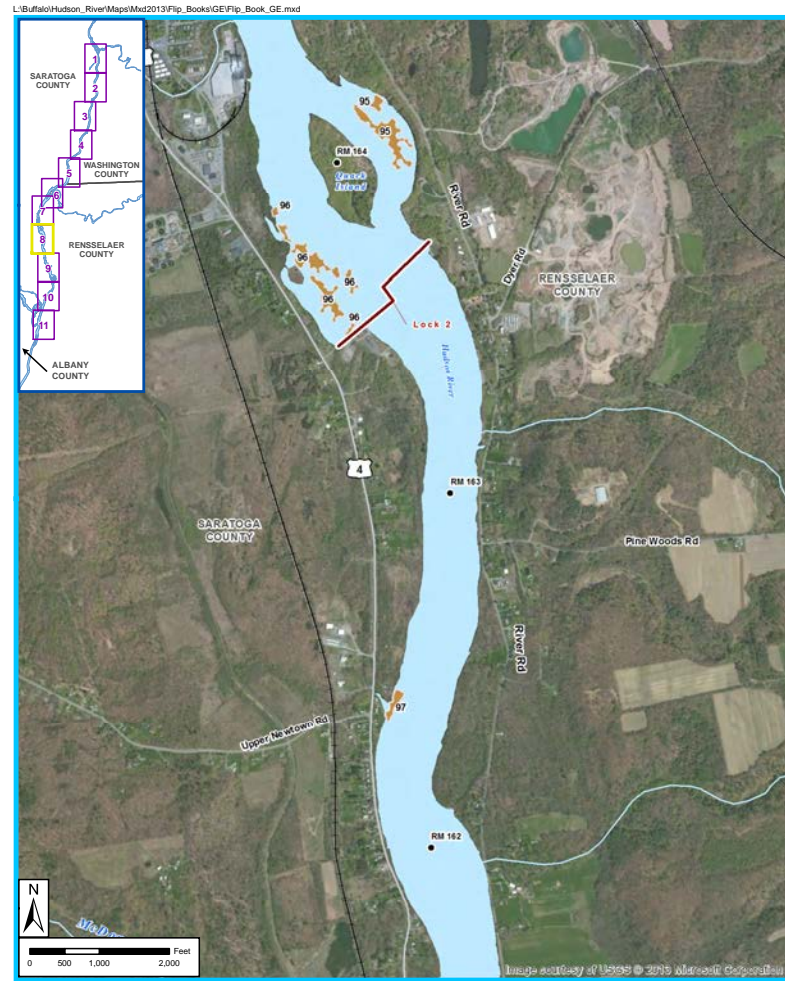


Main-Stem Dredge Areas



- River Mileposts
- Lock/Dam
- Major Roads
- Stream/River
- Primary Railroads
- Hudson River
- Dredging Areas

Dredging Areas
Map 7
Hudson River
PCRB SUPERFUND SITE



- River Mileposts
- Lock/Dam
- Major Roads
- Stream/River
- Primary Railroads
- Hudson River
- Dredging Areas

Dredging Areas
Map 8
Hudson River
PCRB SUPERFUND SITE



Main-Stem Operations

- > Cashman Dredging and Marine Contracting to perform dredging operations, backfilling and capping
- > Shaw Environmental and Infrastructure to operate processing facility
- > Finger Lakes Railway to operate rail yard
- > Ship to waste disposal facilities in Oklahoma and Ohio
- > NYS Canal Corporation operates locks to support project



Main Stem Support Properties

- > Saratoga Backfill Loading and Staging Area
- > Route 4 crew parking area
- > Route 4 support property
- > Moreau Backfill Loading and Staging Area closed



2014 Habitat Planting

- > RFW planting to take place in Thompson Island Pool, Northumberland Pool and Stillwater Pool
 - Targeted planting of approximately 18 acres of RFW
 - Approximately 185,000 plants
 - Approximately 10-12 weeks of planting

- > SAV planting to take place in Thompson Island Pool, Northumberland Pool and Stillwater Pool
 - Targeted planting of approximately 20 acres of SAV
 - Approximately 210,000 plants
 - Approximately 8-10 weeks of planting

- > Plants obtained from local sources and regional commercial sources



Cultural Resources Investigations of Remaining Dredge Areas

- > Terrestrial and underwater assessments substantially complete for all remaining dredge areas during 2013 field season
- > Two dredge areas (CUs 96 & 99) contain cultural resources that could be impacted; mitigation may be necessary if the resources cannot be avoided
- > Terrestrial assessments of the Fort Miller property completed during the 2013 field season
- > Land-locked dredge approach minimizes use of the Fort Miller property and avoids historic resources at site
- > Work performed by URS Corp., with EPA oversight



Questions

