The Upper Hudson River Dredging Project: 2015 Season

EPA Community Advisory Group
April 23, 2015

Dredging to Date

- Five seasons completed
- 2.5 million cubic yards removed
  - Completed 92 Certification Units
  - Removed 90% of target sediments
- 2.6 million tons of backfill/cap placed
- Areas completed:
  - Fort Edward to Thompson Island Pool (except CU 60)
  - Lock 6 (Fort Miller) to Lock 3 (Mechanicville)
  - Lock 2 (Mechanicville) to Green Island (except CU 99)
- Habitat restoration:
  - 35 acres SAV; 92% of program completed
  - 15 acres RFW; 75% of program completed
- Off-site disposal of 2.9 million tons dewatered sediment

Off-Season Activities Underway

- Maintenance and repair of processing facility equipment
  - Inspect all equipment; replace worn parts
  - Rebuild all pumps
  - Repair, replace worn piping
  - System testing

- Maintenance and repair of vessels
  - Repair all tugs
  - Inspect and repair deck and hopper barges

- Prepared and submitted 2015 Design and 2015 RAWP
  - Documents resubmitted to EPA addressing comments

- Site preparation activities and mobilization

2015 Dredging Plans

- Between Locks 2 and 3 in Mechanicville (CUs 94-96)
- South of Lock 1 in Waterford (2 sub-units in CU 99)
- Immediately north of Thompson Island Dam (CU 60)
- Between Thompson Island Dam and Fort Miller Dam (portions of CUs 64-65 and CU 66)
- Start of dredging in early May (depending on river conditions)
- Remaining volume: Estimated 250,000 cubic yards
- Habitat construction

2015 Contractors

- Mainstem Dredging, Backfilling and Capping:
  Cashman Dredging and Marine Construction Corp.

- Land-Locked Area (between dams):
  Great Lakes Dredge and Dock Co.

- Processing Facility: CB&I Environment and Infrastructure
  (formerly Shaw)

- Railyard: Finger Lakes Railway

- Ship waste to disposal facilities in Oklahoma and Ohio

- NYS Canal Corporation operates locks to support project

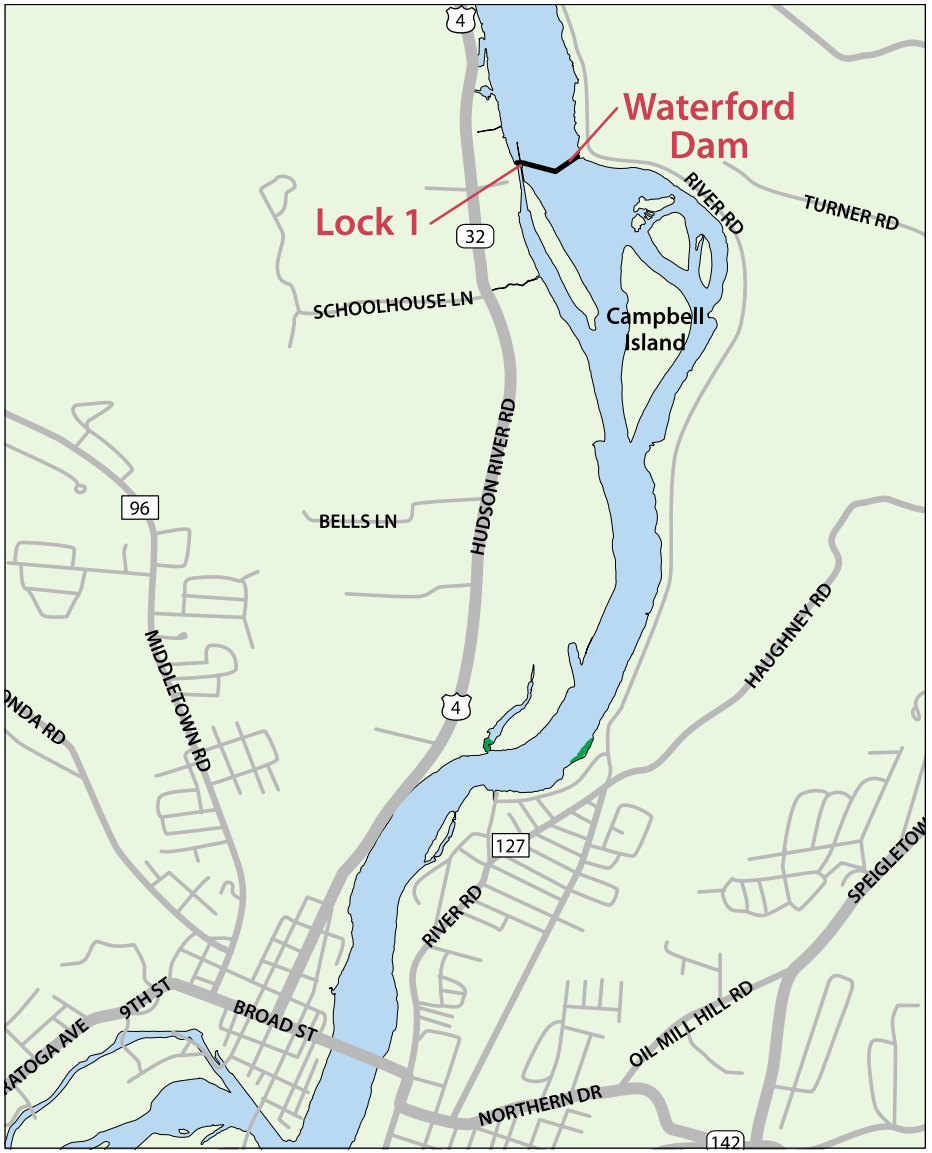
Planned Progression of Work

- Early May
  - Begin dredging near Waterford (CU 99)
  - Add dredge near Mechanicville (CUs 94-96)

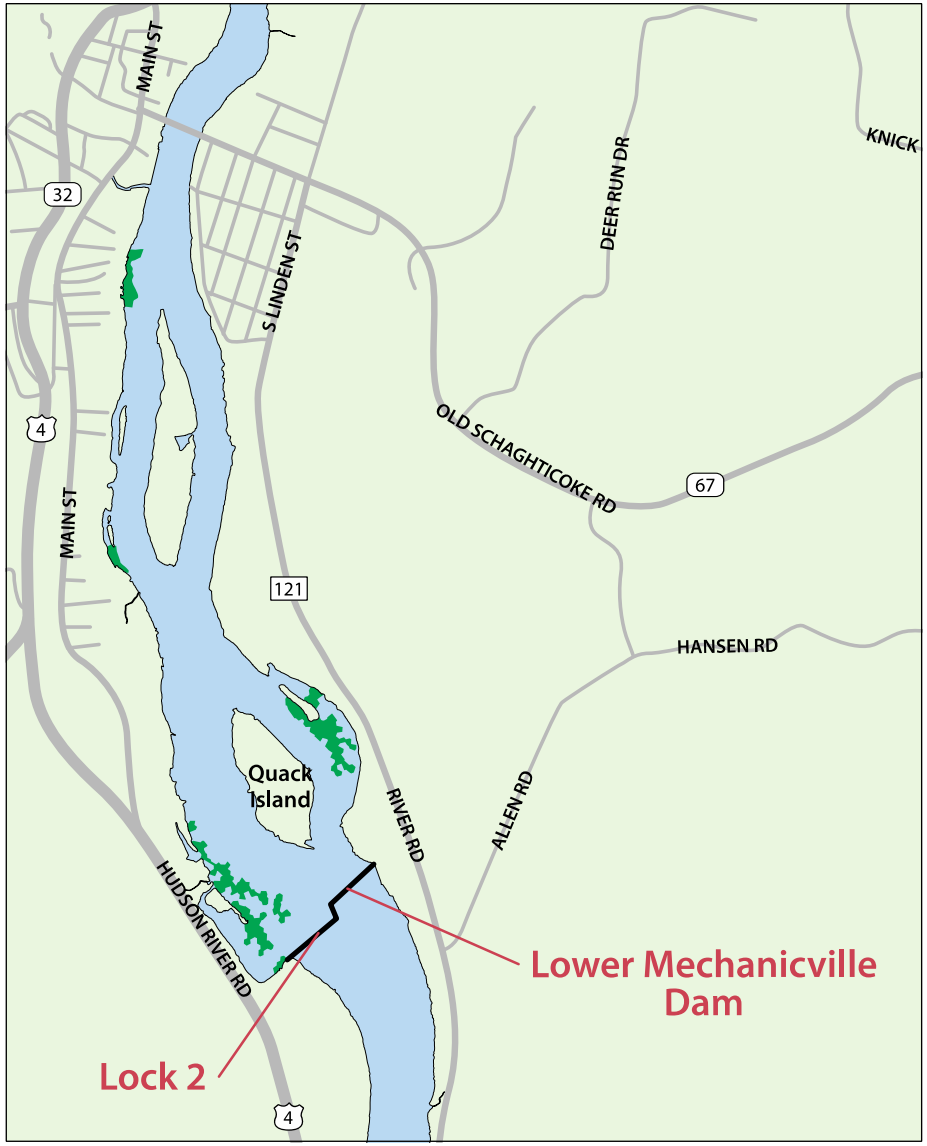
- River conditions permitting
  - Begin dredging north of TID East Branch (CU 60-2)
  - Begin dredging between Thompson Island Dam and Fort Miller Dam (portions of CUs 64-65 and CU 66)
  - Begin dredging north of TID West Branch (CU 60-1)

- End season dredging near Quack Island (portions of CU 95)

South of Lock 1 in Waterford



Between Locks 2 and 3 in Mechanicville



Support Properties

- Rensselaer Barge Loading and Staging Area
- Lock 1 crew parking area (CU 99)

Rensselaer Barge Loading Area

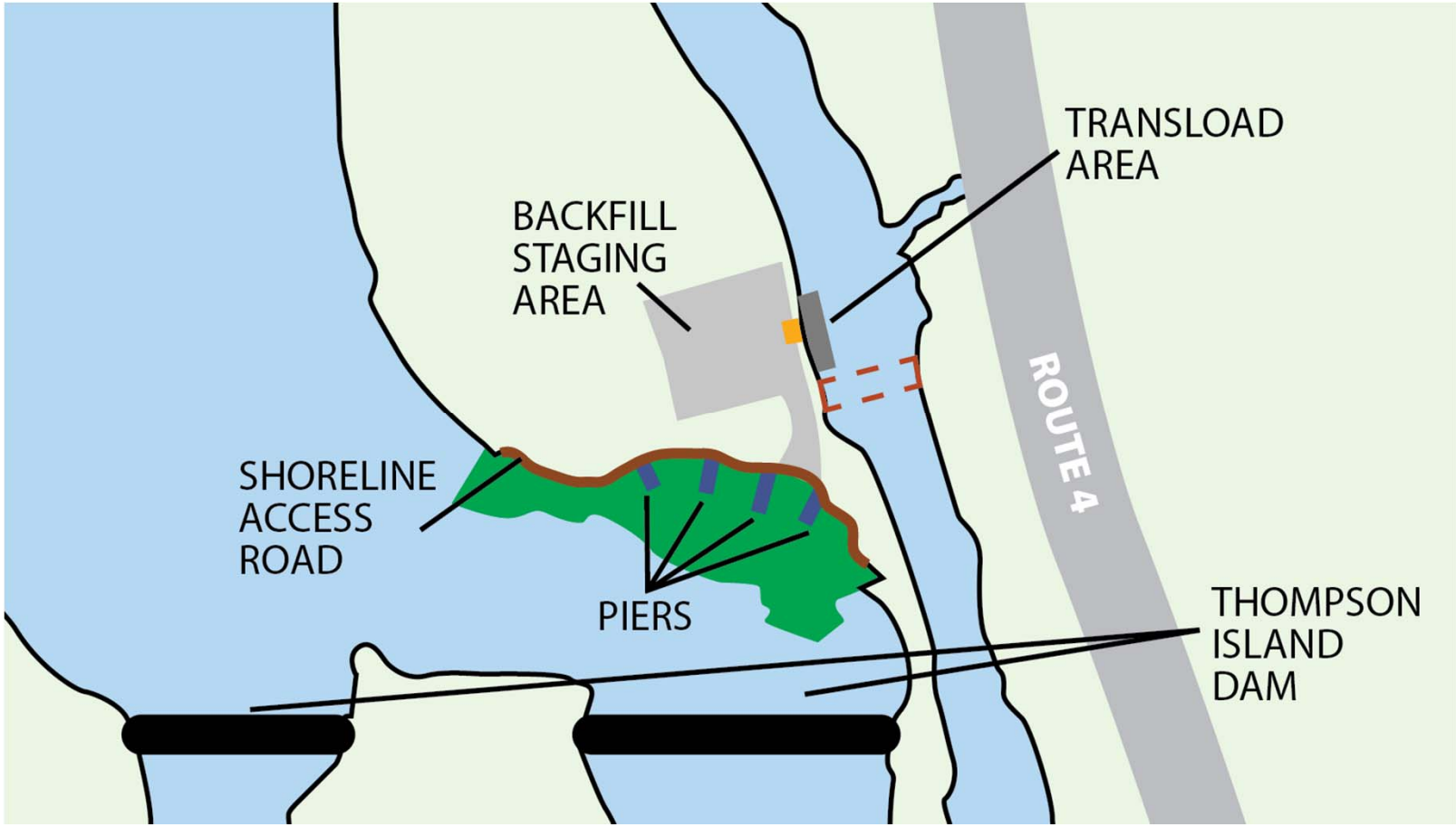
TID East Branch Challenges (CU 60-2)

- Proximity to dam
- Below safety cable
- Access to land from East limited by Champlain Canal land-cut
- Dredging limited to reach from land

TID East Branch Approach

- No vessels in water
- Construct shoreline access road along edge of CU with clean fill
- Land-based, long-reach excavator to dredge sediments
- Construct finger piers perpendicular to shoreline to expand reach of excavator
- Sediments loaded into truck, transported along short access road to transload area on west shore of land-cut
- Sediments dumped into material transfer bin, then loaded into hopper barges in land-cut
    - Loaded barges pushed by tugs to Fort Edward processing facility for dewatering
- RFW planted along shoreline in non-flooded areas; seeding broadcast from non-flooded land areas

TID East Branch Approach



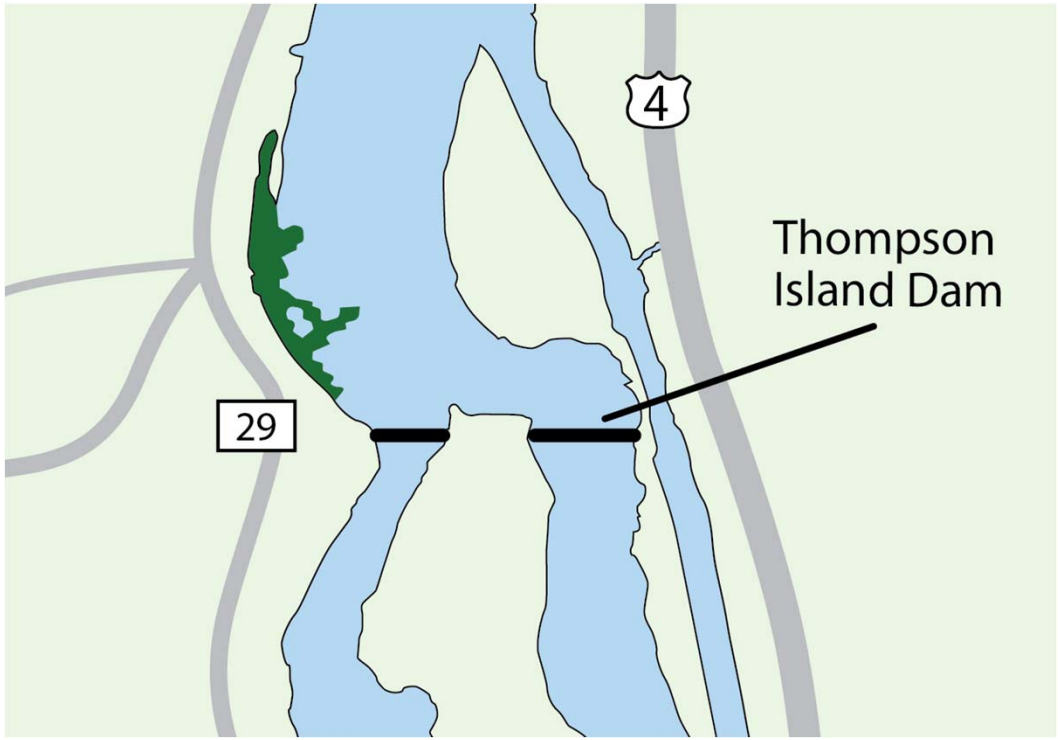
Off-Season Development of Staging Area

- Barge placed across Champlain Canal land-cut at end of 2014 season
  - Remove before lock system is opened for season
- Equipment moved to NYSCC-owned peninsula between land-cut and river
  - Site preparation activities underway
- Materials needed for roads, finger piers and backfill transported to staging area during March/April for use during dredging

Off-Season Development of Staging Area

TID West Branch Challenges (CU 60-1)

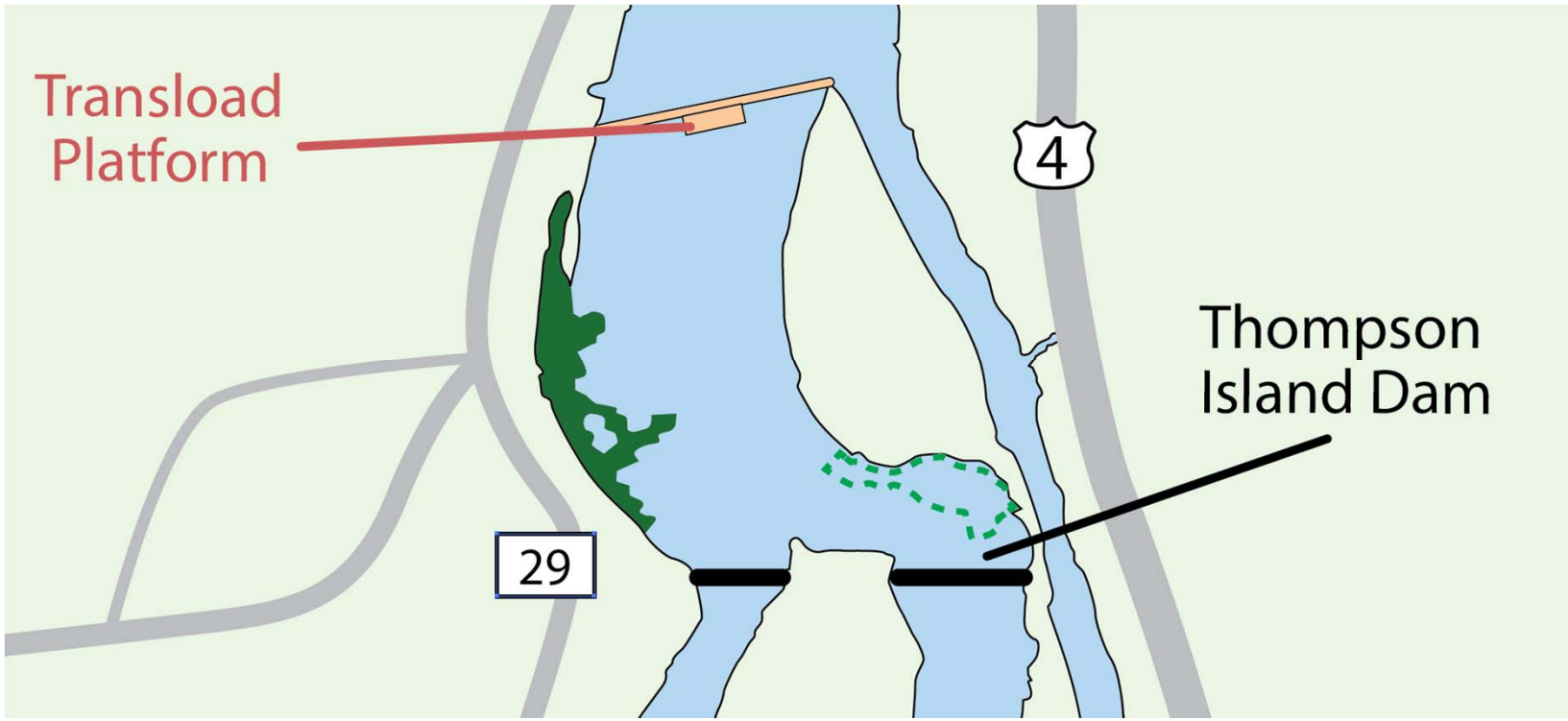
- Proximity to dam
- Below safety cable
- Very shallow; limited vessel access
- Rock piles scattered throughout river



TID West Branch Approach

- Dredge sediments and place material in mini-hopper barges
- Barges pushed by tugboats to transload platform at safety cable
- Excavator on transload platform to move sediments from mini-hopper barges to large barges on other side of safety cable
  - Loaded barges pushed by tugs to Fort Edward processing facility for dewatering
- Excavator to move backfill from barges north of safety cable to mini-hopper barges south of safety cable for placement in river
  - Material transported from Saratoga Barge Loading Area
- No SAV planting; RFW in shallow water only, tethered to shore

TID West Branch Approach (CU 60-1)



Between Thompson Island Dam and Fort Miller Dam

> Approximately 60,000 cubic yards remaining

> Same approach as last year

- Material loaded into barges then pushed by tugboat to transload area south of TID east branch
- Sediment off-loaded from barge in river, placed in temporary staging bin and loaded into hopper barge in NYSCC land-cut
- Barges pushed by tugs to Fort Edward processing facility
- Backfill material transported to land-based support property via truck; loaded into barges for placement in river after dredging

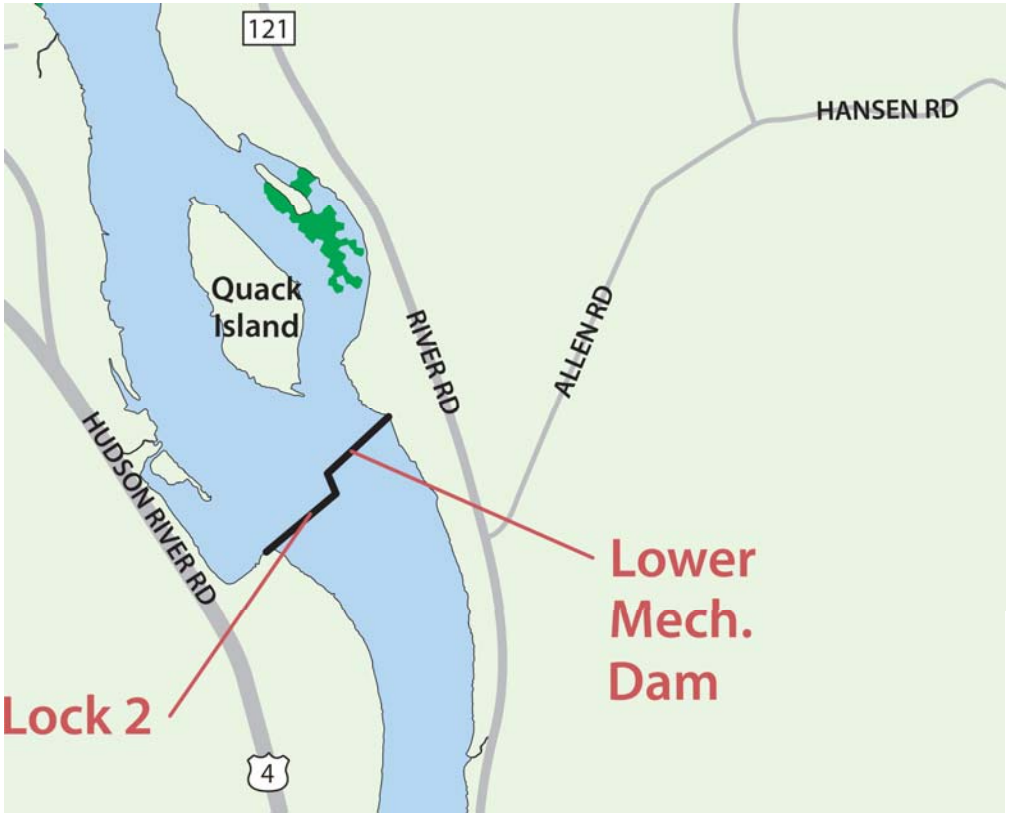
Between Thompson Island Dam and Fort Miller Dam

Isthmus Transload Area

Land-Locked Barge Loading Area

Quack Island Challenges (CU 95)

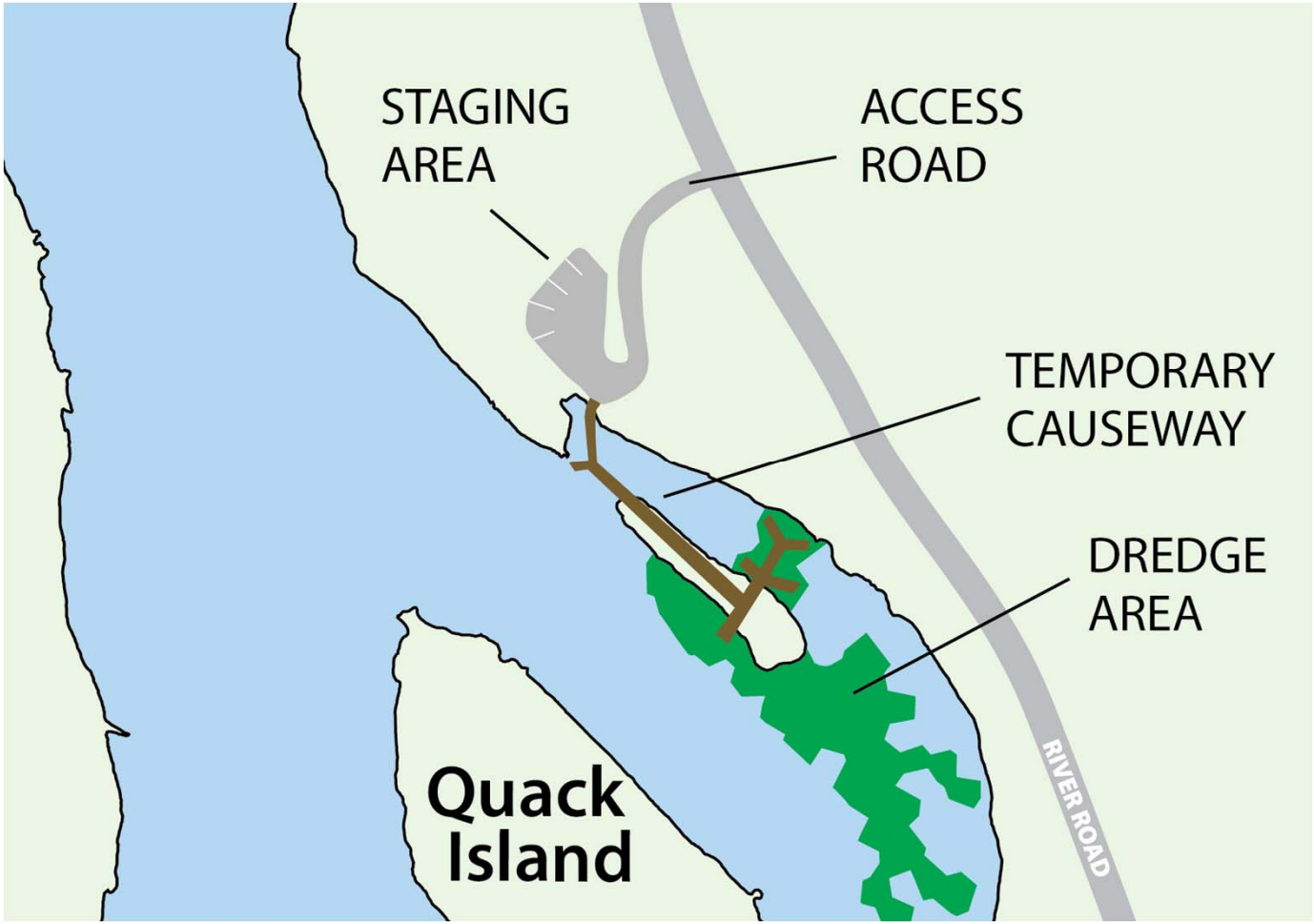
- Shallow bedrock to north
- No southern access due to proximity to dam and shallow areas
- Limited access from adjacent land due to steep slopes
- Eagle nest in vicinity



Approach to Dredging Quack Island Sub-Units

- Land-based staging area
- Build causeway to mudflat in dredge area
- Dredge area between land and mudflat from land (approx. 3,500 cubic yards)
- Float empty platforms into area between mudflat and Quack Island; load equipment onto platforms from land
    - Dredge area between mudflat and Quack Island from water
- Transload sediment from mini-hopper barges to large barges
- Transload backfill from large barges to mini-hopper barges
- Schedule will be adjusted based on eagle activity

Approach to Dredging Quack Island Sub-Units



2015 Habitat Planting (in 2014 Dredge Areas)

- RFW planting to take place in 13 CUs
  - Targeted planting of ~ 3 acres of RFW
  - ~ 32,000 planting units
  - ~ 3 acres to be seeded
  - ~ 2 weeks of planting

- SAV planting to take place in 5+ CUs
  - Targeted planting of ~ 3 acres of SAV
  - ~ 56,000 plants
  - ~ 3 weeks of planting

- Plants obtained from local sources and regional commercial sources

Facility Decommissioning

- GE submitted decommissioning plan to EPA
- Plan under review by EPA
- Phased approach
  - Begin decommissioning work as dredging activities wind down
- Complete decommissioning in 2016

Questions