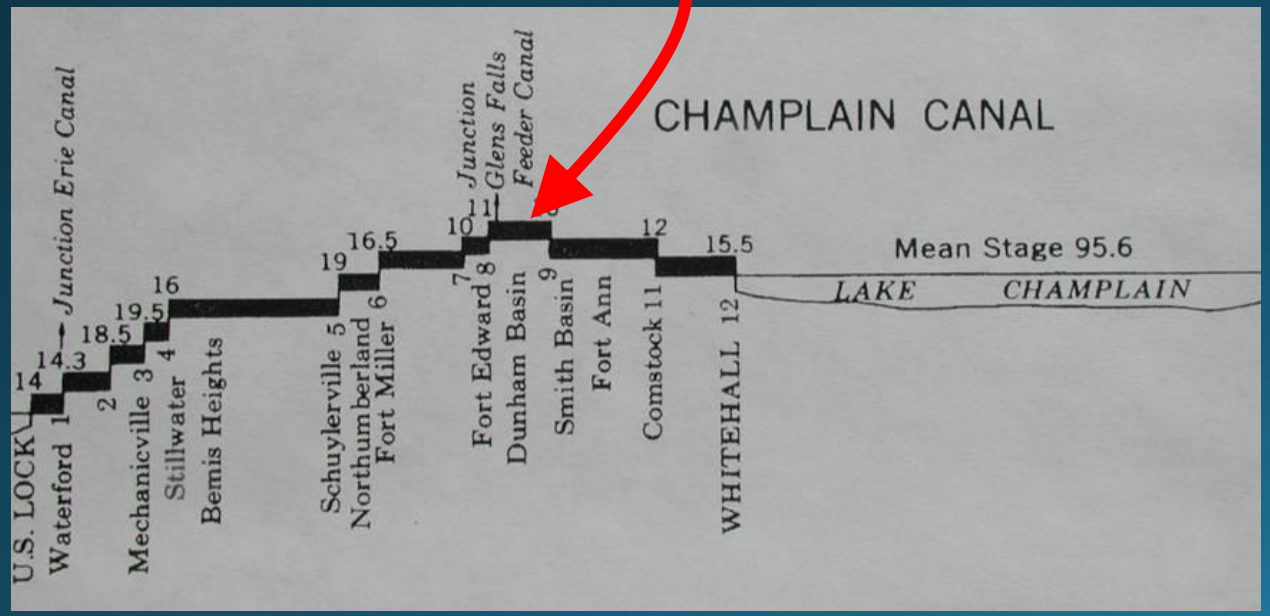
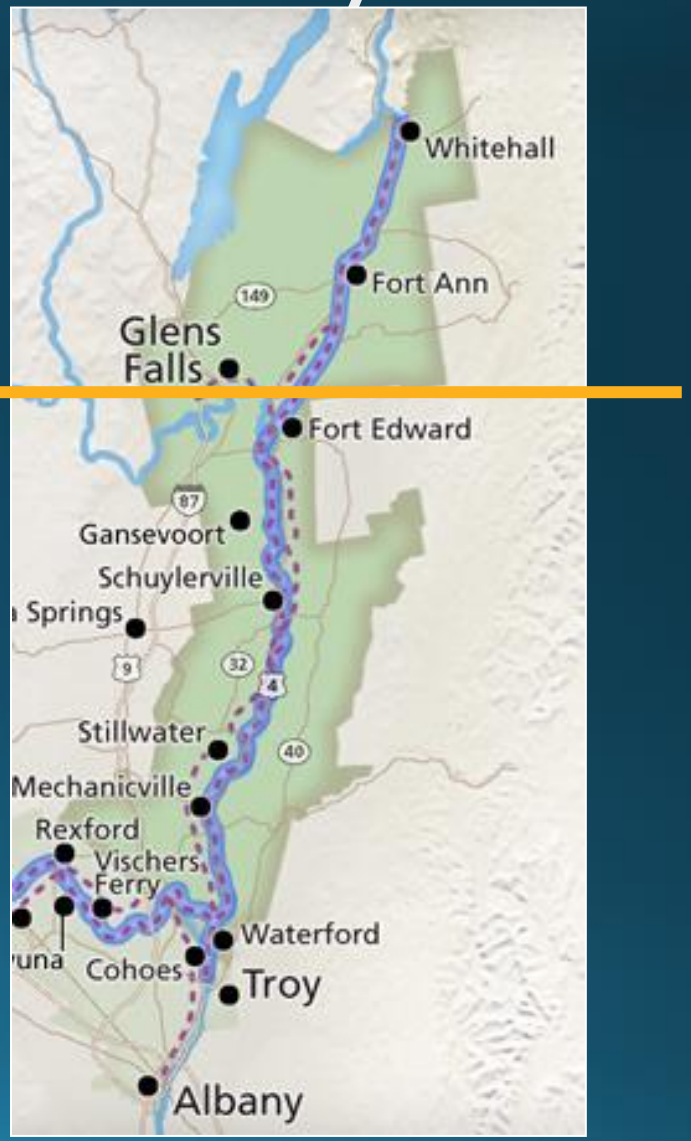
Champlain Canal AIS Barrier Feasibility Study

Target area of the canal





Round Goby threat to Lake Champlain Watershed

Invaders already in the canal system

Round goby

Asian clam

Fragile papershell

Quagga mussel

USACE scope of studies for Champlain Canal barrier feasibility study

- NYSCC, NYSDEC, USFWS, and LCBP partners agree on language for the Champlain Canal barrier feasibility study for hydrologic separation
- Not a rapid process but would address all species movement
- 2017 After many attempts (years) securing a local sponsor, NEIWPCC/LCBP serve as local sponsor and secure Section 542 USACE Assistance to initiate the Champlain Canal barrier feasibility study ~$550k

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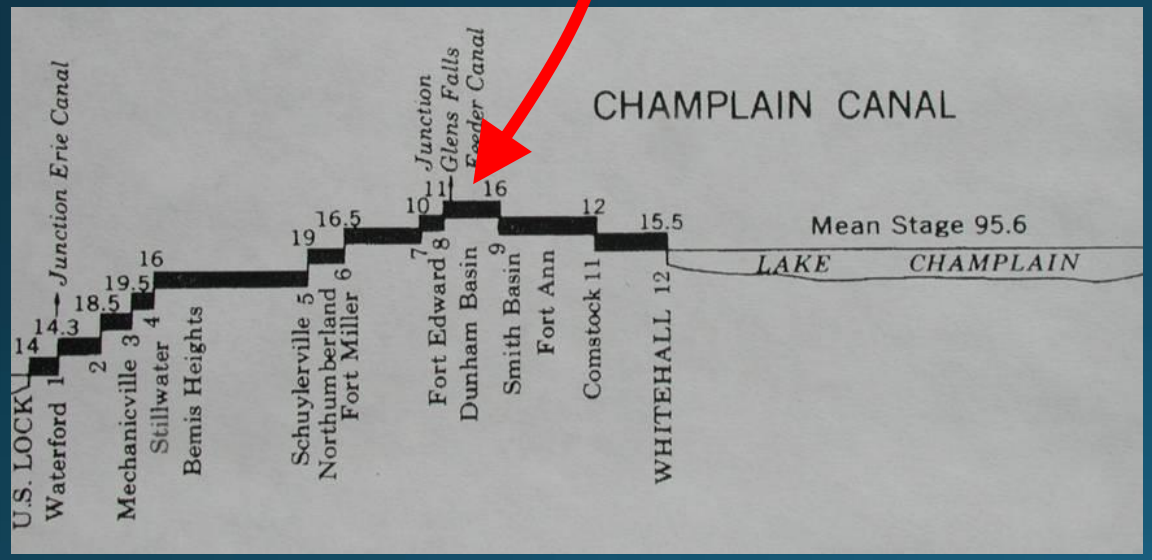


October 2018 site reconnaissance

- The team conducted a site visit on October 30, 2018 at the Lake Champlain Canal, focusing on the study area of Locks C8, C9, and the Feeder Canal from the Hudson River at Glens Falls, NY. Additional sites were visited in the vicinity of Lock C7 as it became apparent that the canal between Lock C8 and C7 might become part of the solution set.

USACE/HDR Stakeholder Project Team

Summary of Control Measures used in Alternatives

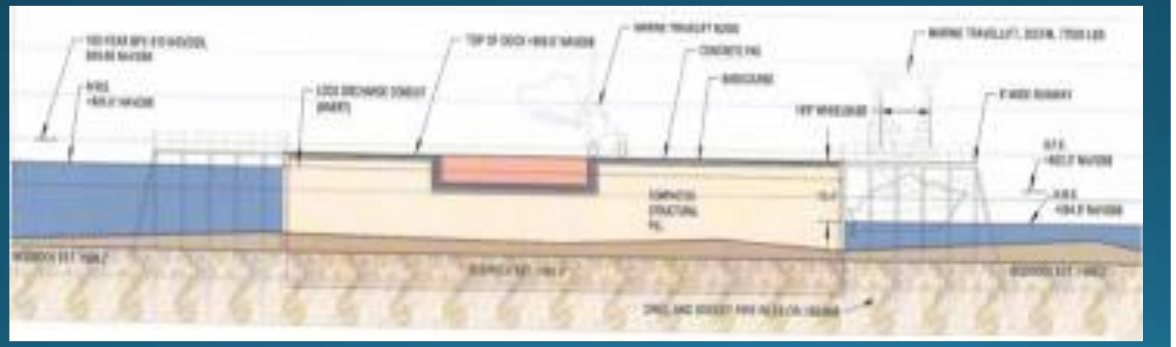
- Defined 10 possible Measures for controlling the spread of Aquatic Invasive Species (AIS)
- Developed 6 Alternatives using combinations of the 10 measures to reduce or eliminate cross-basin transfer of AIS (Hudson River and Lake Champlain basins)
- Deliberately made the range of alternatives broad so costs & benefits of large & small investments could be considered

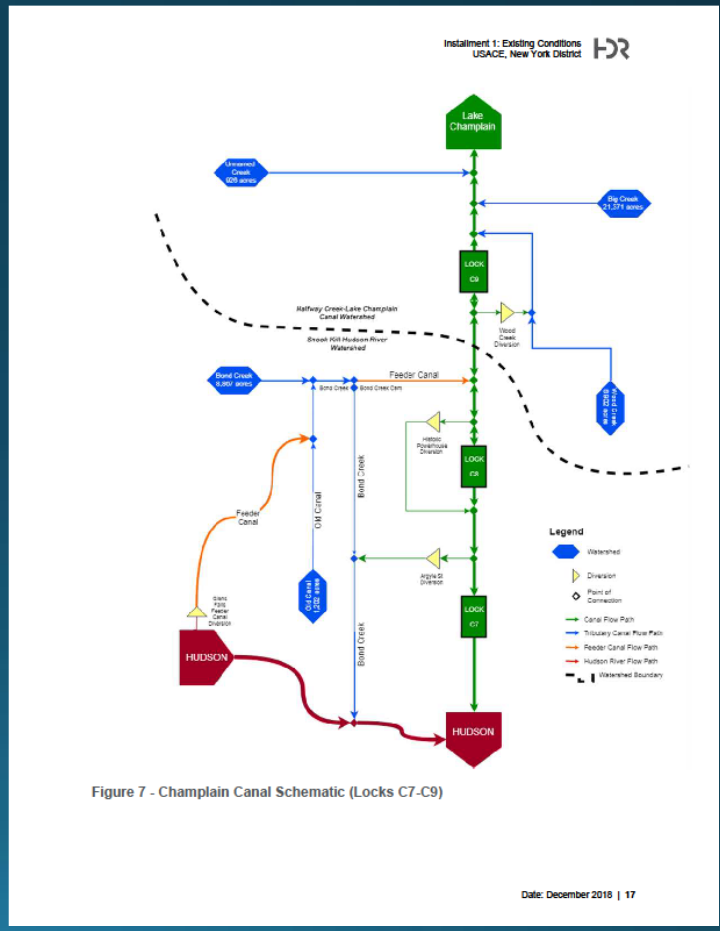
Control Measure	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6
1) Reverse Flow C9 → C8, Raise Weir	x	x	x	x	x	x
2) Back Pump		x	x			
3) Alternate Makeup Water			x			
4) Physical Barrier (Berm / Block Flow)		x				
5) Boat Lift and Cleaning Station		x		x	x	
6) Wedge Wire Intake Screen			x	x		
7) Modified Lock Passage Scheduling and Operations	x		x			
8) Water Filtration / Storage Tank Feed			x			
9) Repair Lock Seals	x	x	x	x	x	x
10) Chlorination Treatment Chamber						x

- Identify measures to form 6 alternatives
- Down select to 3 alternatives
- Evaluating value functions for cost/benefit analysis of 3 alternatives

Alternatives include constructing Berm and lifting boats south of Lock 9 and providing boat lifts at Lock 9

- Reverse flow at lock C9, back pump, build burm, raise weir, boat lift with cleaning station, repair lock seals
- Study is underway





Champlain Canal barrier implementation plan

- Phase I – completed with Leahy local match (LCBP/NEIWPCC local sponsor) for total cost of $610k through Section 542 Watershed Assistance USACE program (35% local match)

- Phase II – data, NEPA, full design may be achieved through Section 542, or other program – estimated cost $2M and two years

- Phase III – Implementation – pursue WRDA Sect. 5146 – full federal expense, no cost-share, appropriation of $40M+

WRDA Section 5146

LAKE CHAMPLAIN CANAL, VERMONT AND NEW YORK.

- *(a) Dispersal Barrier Project- The Secretary shall determine, at Federal expense, the feasibility of a dispersal barrier project at the Lake Champlain Canal, Vermont and New York, to prevent the spread of aquatic nuisance species.*
- *(b) Construction, Maintenance, and Operation- If the Secretary determines that the project described in subsection (a) is feasible, the Secretary shall construct, maintain, and operate a dispersal barrier at the Lake Champlain Canal at Federal expense.*

If congress wants to implement a Champlain Canal barrier:

- Send letters to USACE (Chief of Engineers Lt. General Scott Spellmon and the Assistant Secretary of the Army and copy the NY District Office) telling USACE

1) Lake Champlain barrier (hydrologic or physical) installation is desired

2) Request USACE implementation guidance -consider if the word "dispersal" barrier needs to be clarified in Section 5146 AND

3) ask if work conducted under 542 needs to be clarified as meeting intention of 5146 (a)

USACE will send the requests to their legislative drafting services and we can receive input for the FY22 water bill request

LCBP AIS RR Task Force

- Evaluating risk of round goby intro to Lake Champlain
- Conducing species evaluation questionnaire
- Contracting with USGS to do early detection monitoring
- LCBP supporting FTE to be housed in NYSDEC for outreach about AIS interbasin transfer and round goby introduction