



Department of
Environmental
Conservation

Lake Champlain Open-water Creel Survey Plan

2021-2023

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Andrew M. Cuomo, Governor | Basil Seggos, Commissioner

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Overview

Problem Statement

The information on open-water angler use characteristics on the New York side of Lake Champlain is outdated. The last open-water survey conducted by New York State Department of Environmental Conservation (NYSDEC) was in 1999. This survey predates significant changes to species composition, fisheries management practices and environmental disturbances in the lake, including the introduction of aquatic invasive species, increased sediment and phosphorus inputs, and habitat degradation (Marsden, 2012; Dudgeon, Arthington, Gessner, Kawabata, Knowler, Lévêque, and Sullivan 2006). Additionally, Lake Champlain began to receive national recognition for its black bass fishery in the early 2000s, increasing use for those species. NYSDEC does not have the necessary information base to understand angler use and expectations to help guide management actions.

Need

Current open-water catch rates, harvest rates, preferred target species and angler opinion information about the Lake Champlain open-water fishery is needed to inform management decisions and provide an information base to measure management actions against. This information will compliment an ice fishing creel survey to provide a more complete direct measure of the fishery (NYSDEC 2020). Together the surveys will provide a foundation for the development of future fishery management plans.

Goals and Objectives

The goal of the open-water creel survey is to characterize the present-day boating angler use and exploitation of all species of sport fish in the New York waters of Lake Champlain. Specific objectives include determining:

- angler catch and harvest rates for all species of sport fish
- preferred angler target species
- angler opinions on the quality of the fishery

Timeframe and Geographic Scope

Open-water creel surveys will be conducted during the open water seasons of 2021 and 2022 covering 13 access points on the New York shoreline of Lake Champlain (Figures 1-4). These access points will serve as a representative sample of New York's open-

water fishery. A two-year creel survey will provide a more accurate analysis of angler use and mitigate against significant unforeseen influences such as unusual weather patterns.

The open-water creel survey will be conducted from April 1 through October 31.

Survey Design – Methods

Open-water access point creel survey

The access point creel survey will be conducted as a two-day bus route survey (Pollock et al, 1994). A bus route was chosen over a traditional access design because the bus route is anticipated to be more precise (Jones and Robson 1991).

The primary sampling unit is the day, which is stratified by month and by weekend/holiday and weekday day type strata within each month.

Two clerks will conduct surveys 4 days per week, including both weekend days, and 2 randomly selected weekdays. The work week is characterized Thursday to Wednesday, following the DEC workweek. If a holiday falls on a weekday, only one other weekday and both weekend days will be surveyed that week.

Secondary sampling units include early (AM) and late (PM) time blocks and the access points. Time blocks, early (AM) and late (PM), of equal time duration are randomly selected for each survey day. Time blocks were set by using predicted daylight hours for Plattsburgh, NY for each month and dividing by two for two equal time blocks each day. Early (AM) surveys will begin at sunrise. Late (PM) surveys will conclude 30 minutes after sunset. Estimates of creel shift start and end times can be found in Table 2.

The survey will include 10 public boat access points and 3 private marinas (Table 1). Clerks will follow a bus route schedule, with equal time spent at each site (Table 3).

There will be two sections (North and South) and two survey areas within each section along the New York shore of Lake Champlain: North A, North B, South A, and South B (Figures 1-4). The direction of travel through the area, north or south, is also randomly selected.

Clerks will be assigned to the north or south section for the year. Each survey area will be completed in one survey day. On the next survey day, the other area will be

completed, so that both areas and both sections are completed in two days using the bus route design. This process will repeat for the entire survey length.

One state vehicle will be stored at Peru Dock at the DEC maintenance facility for use by the north section clerk. A second state vehicle will be stored at Crown Point Campground at the maintenance facility for use by the south section clerk. Clerks will report to the vehicle and then drive to the assigned starting access point to begin their bus route. The starting access point is randomly assigned per the survey schedule.

Clerks will intercept anglers as they leave the water and interview willing participants. Interviews will be conducted for completed trips using the survey form (Appendix 1). Clerks will interview as many anglers as possible in the time block. Clerks will record party size, total hours fished up to the time of the interview and catch and harvest information (Appendix 1). Interviews are a priority; measuring fish harvested is a secondary objective. If the angler allows, the clerk will measure total length on up to 5 of each species harvested (Appendix 2).

Not all anglers will agree to an interview; if an angler declines, the clerk will move on to the next angler. Anglers who have fished for less than half an hour will not be interviewed. If an angler is returning to the access point to temporarily leave, e.g. to get lunch or more bait, they will not be interviewed. If it appears there are too many boat anglers at an access point to interview all of them in the time block, the clerk will interview every second or every third angler, using their best judgement.

For anglers that were fishing in a group, clerks will ask if they combined their catch or if they separated it by angler. If the catch is combined, clerks will only interview one angler from the group. If the catch is separated, the clerk will interview each angler, assigning a new interview number to each angler.

Clerks will keep a tally of the number of anglers fishing by counting any anglers leaving the water (Appendix 3). They will also record the total number of anglers interviewed that day on the Angler Count form. In addition, clerks will count the cars in the parking lot at the beginning of their shift.

Catch Cards (Appendix 3) will be given to some anglers heading out on the water. Clerks will ask if the angler intends to return before the clerk's end time for the day; if they will not, the clerk will give them a catch card. Catch cards can be returned by the angler to a drop box located at the access site.

When the first access point time block ends, the clerk will drive to the next access point, traveling in the randomly assigned direction, continuing in this pattern until they've

reached the end of the survey area. If the starting point is in the middle of the survey area, the clerk will drive in the assigned direction until they reach the end of the area, then drive to the opposite end of the area and begin moving in the assigned direction again until all access points in the assigned area have been surveyed. In this way, each site is likely to be visited over all hours of angling by the end of the sampling season. The clerk will then return the vehicle to its storage location and end their shift.

Angler opinions

Anglers will be asked for their opinions about their overall satisfaction with the fishery of Lake Champlain (Appendix 1). They will also be asked for their opinion on the fishery of their targeted species. Clerks will further ask anglers to relate any comments or concerns they may have about the fishery of Lake Champlain.

Safety

Clerks will report to the Lake Champlain Biologist when they have completed their workday and communicate any problems or questions to the biologist at this time.

In cases of extreme weather, a survey day may be cancelled and possibly rescheduled.

Modifications to the survey methodology may be made for the 2022 open-water creel survey if information collected during the 2021 open-water creel survey warrants it.

Data organization – Recording / Entry / Storage

All creel data will be entered on survey forms printed on write in the rain paper. Clerks will enter data into an Excel spreadsheet on a computer. They will routinely back up the data to the computer and a pen drive. They will also email the Excel file to the Biologist at the end of each day of data entry. The Biologist will maintain a master file on a computer and on the Shared (K:) drive in Ray Brook.

Quality Assurance / Quality Control (QAQC)

The biologist will ride along with each technician on their first surveys to introduce them to the locations, provide instruction on interviewing, and show them how to fill out the data forms. Training will be provided to each of the creel clerks upon hiring (Balk 2020).

Technicians will meet in-person or have a call with the biologist no more than 1 day after completing their first solo survey to resolve any issues and answer questions.

Technicians are expected to alert the biologist to any problems as they arise. The biologist will monitor data collected throughout the creel season to check for errors. A biologist will conduct unannounced site visits over the course of the creel to ensure clerks are performing their duties.

Two biologists will QAQC the data set before analysis begins.

All changes to the creel schedule or design will be documented.

Data Analysis

Characterize the present-day angler use and exploitation of all species in the Lake Champlain fishery by analyzing the following:

- Angler's preferred target species will be ranked
- Catch and harvest rates for each species per hour will be estimated for the survey period by month
- Ratings of the fishery from angler opinion data will be averaged for each target species
- All angler comments and concerns will be recorded and used to develop opinion questions for the 2022 survey

Clerks will record angler provided start time for each interview and end time as well as the time of the interview on the data form, later calculating hours fished.

For the access point creel survey, calculations for catch and harvest rates will follow formulas provided in Pollock et al. (1994) for an access point bus route creel survey. A standard spreadsheet with preset formulas will be used to analyze the data each year.

Effort will be expanded directly from angler interviews, using angler-supplied trip duration in the equation below.

$$E = T \sum_{i=1}^n (1 / w_i) \sum_{j=1}^m (e_{ji} / \pi_j)$$

E = estimated total party-hours of effort

T = total time to complete a full circuit of the route, including traveling and waiting

w_i = waiting time at the i th site ($i = 1, \dots, n$ sites)

e_{ji} = trip duration for the j th angler at the i th site

Catch is obtained by multiplying effort by the catch rate (catch per party-hour or angler-hour) obtained from the completed trip interviews.

$$E = T \sum_{i=1}^n (1 / w_i) \sum_{j=1}^m (C_{ji} / \pi_j)$$

E = estimated total party-hours of effort

T = total time to complete a full circuit of the route, including traveling and waiting

w_i = waiting time at the i th site ($i = 1, \dots, n$ sites)

C_{ji} = total catch during the j th angler's trip at the i th site

Reporting

Once the first year of data has been collected, a technical brief will be written summarizing the current creel data and documenting any changes for the coming year's surveys.

Following the conclusion of the 2-year survey, a comprehensive report will be written summarizing the creel data.

These reports will be submitted to Central Office for record keeping. They will also be presented at the next available Lake Champlain Fisheries Technical Committee meeting.

Literature Cited

Balk, N.B. 2020. Lake Champlain Creel Clerk Training. NYSDEC. Region 5 Fisheries.

Dudgeon, D., Arthington, A. H., Gessner, M. O., Kawabata, Z. I., Knowler, D. J., Lévêque, C., Sullivan, C. A. (2006). Freshwater biodiversity: importance, threats, status and conservation challenges. *Biological reviews*, 81(2), 163-182. <https://doi.org/10.1017/S1464793105006950>

Jones, C. M., & Robson, D. S. 1991. Improving precision in angler surveys: traditional access design versus bus route design. In *Creel and angler surveys in fisheries management*. American Fisheries Society Symposium (Vol. 12, pp. 177-188).

Marsden, J. E. 2012. This history and future of Lake Champlain's fishes and fisheries. *Journal of Great Lakes Research*. DOI: 10.1016/j.jglr.2011.09.007

NYSDEC. 2020. Lake Champlain Ice Fishing Creel Survey Plan. Region 5 Fisheries.

Pollock, K.M., Jones, C.M., Brown, T.L. 1994. Angler Survey Methods and their Applications in Fisheries Management. American Fisheries Society, Bethesda, Maryland, Special Publication Number 25.

Figure 1. Map showing north A access points on Lake Champlain.

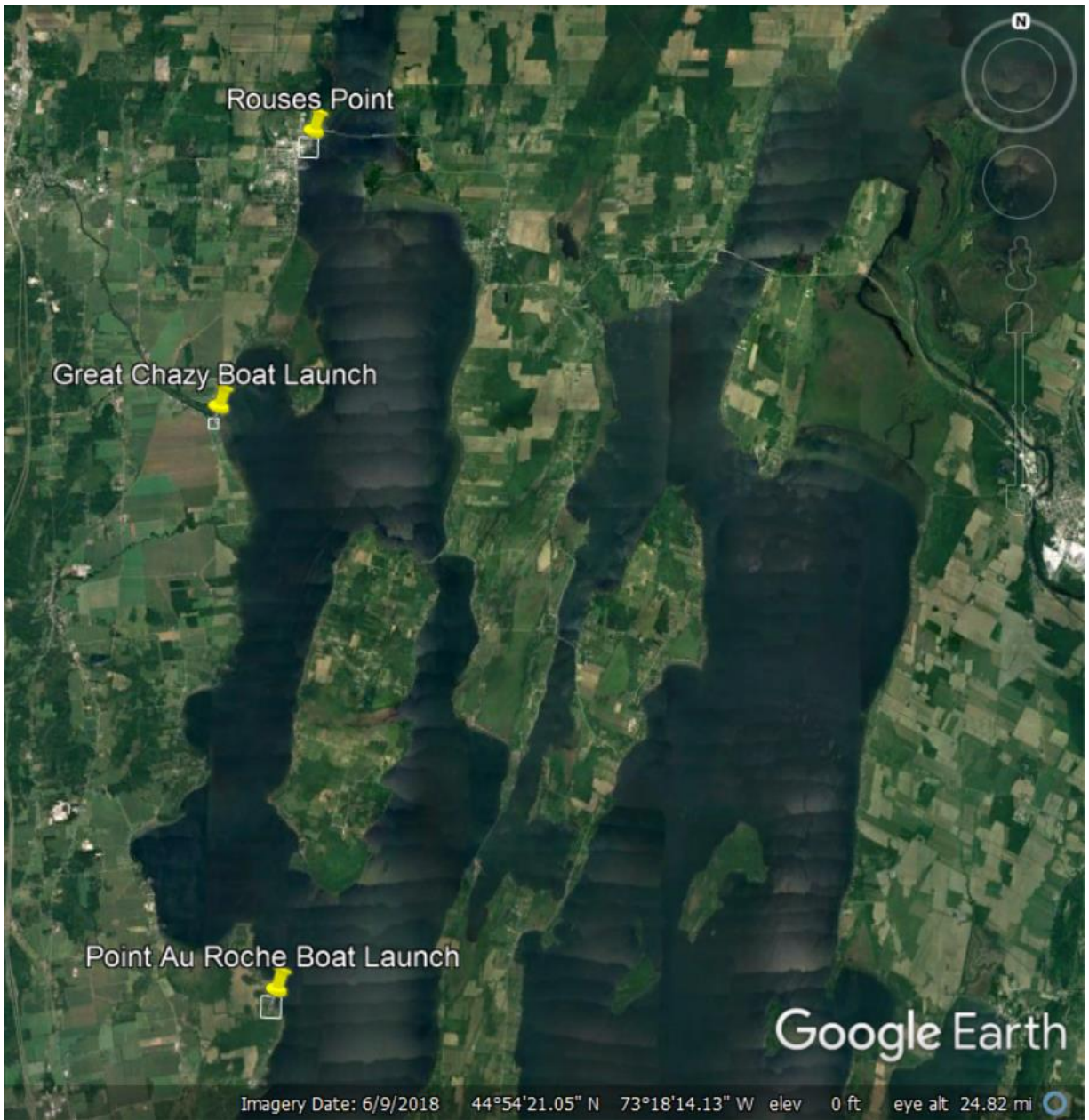


Figure 2. Map showing north B access points on Lake Champlain.

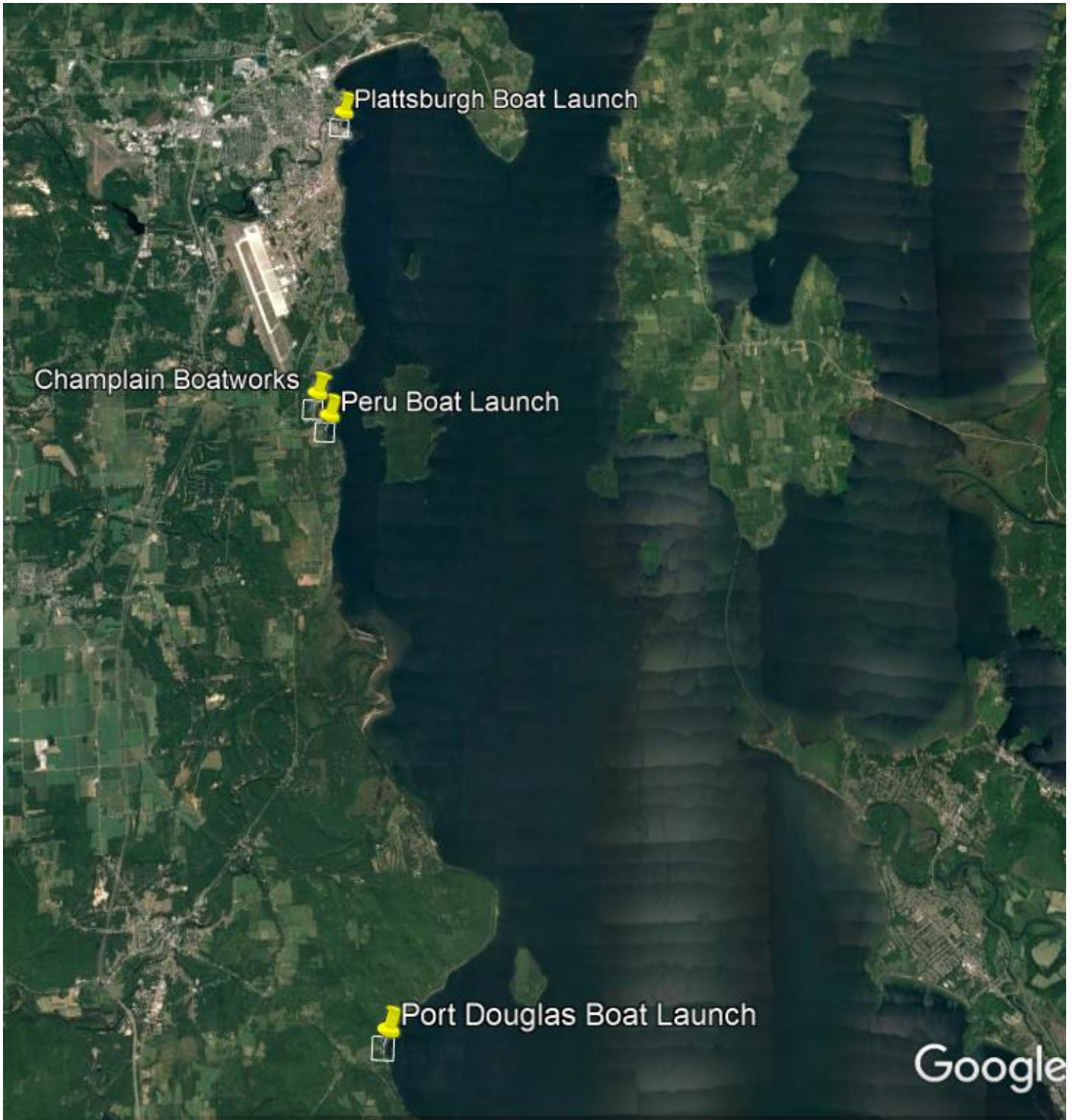


Figure 3. Map showing south A access points on Lake Champlain.



Figure 4. Map showing south B access points on Lake Champlain.

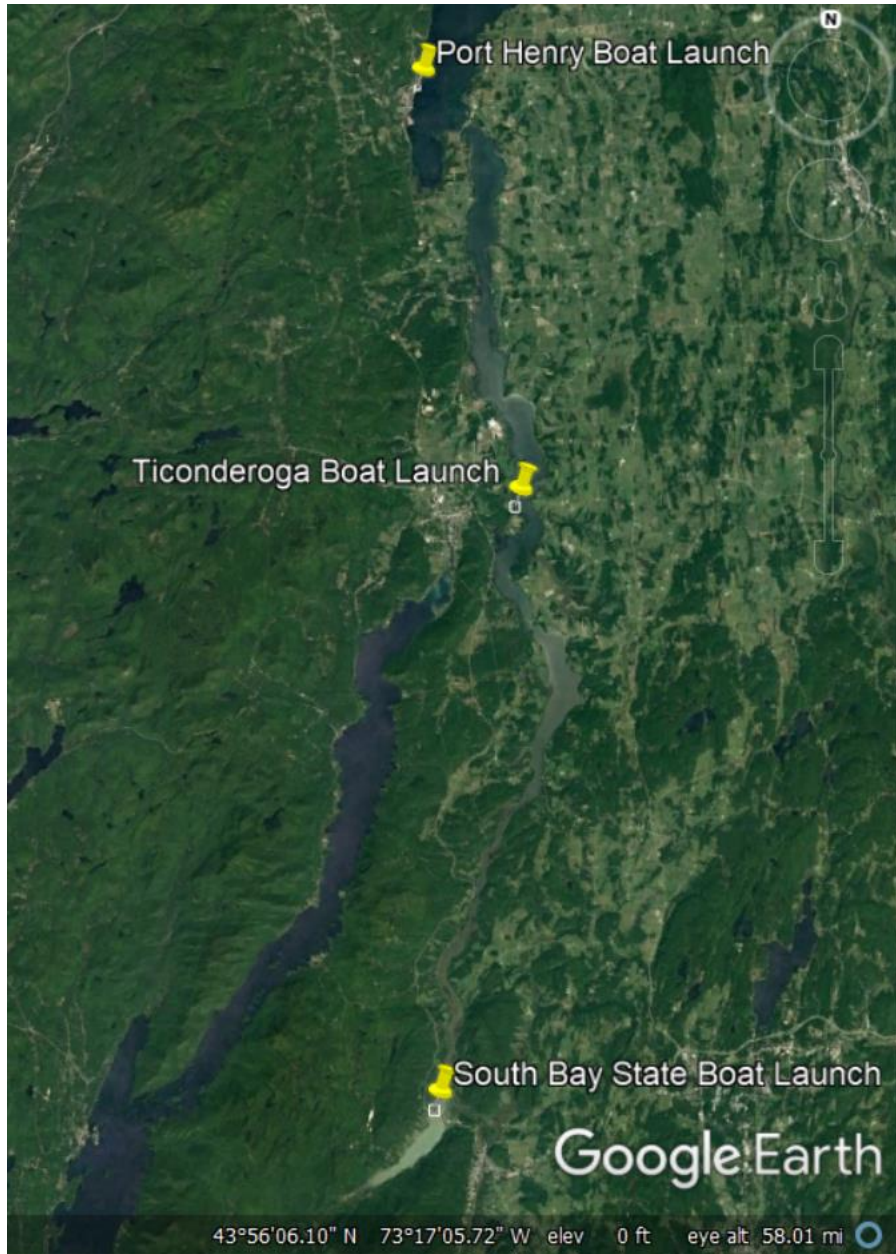


Table 1. Access points on the New York shore of Lake Champlain, listed north to south.

Access Point	Operating agency
Rouse's Point boat launch	Village of Rouses Point
Great Chazy boat launch	NYS Office of Parks, Recreation and Historic Preservation
Point Au Roche boat launch	NYS Office of Parks, Recreation and Historic Preservation
City of Plattsburgh boat launch	private – leased and operated by Plattsburgh Boat Basin
Champlain Boatworks (Snug Harbor Marina)	private
Peru Dock	NYS Department of Environmental Conservation
Port Douglas boat launch	NYS Department of Environmental Conservation
Willsboro Bay boat launch	NYS Department of Environmental Conservation
Safe Harbor, Willsboro Bay	private
Westport boat launch	NYS Department of Environmental Conservation
Port Henry boat launch	NYS Department of Environmental Conservation
Ticonderoga boat launch	NYS Department of Environmental Conservation
South Bay boat launch	NYS Department of Environmental Conservation

Table 2. Daylight hours and shift lengths for the Open-water access point creel survey period.

Month	Sunrise	Sunset	Time block	Start, End Times	Shift length (hours)	Time at point (minutes)
April	700	1923	AM PM	630-1315 1315-1945	6.5	80
May	551	1955	AM PM	545-1300 1300-2030	7.25	90
June	526	2021	AM PM	500-1300 1300-2100	8	100
July	529	2030	AM PM	515-1245 1245-2100	8	100
August	554	2009	AM PM	545-1315 1315-2045	7.5	95
September	623	1926	AM PM	615-1300 1300-2000	6.75	85
October	654	1835	AM PM	645-1245 1245-1900	6	75

Table 3. Access point creel survey 2021 schedule.

Clerk A: North

Date	Day	Day type	Shift	Section	Start point	Direction of travel from Start point
4/3/2021	Saturday	weekend	PM	north B	Champlain Boatworks	north
4/4/2021	Sunday	weekend	PM	north A	Rouses Point	north
4/5/2021	Monday	weekday	AM	north B	Peru Dock	south
4/7/2021	Wednesday	weekday	PM	north A	Rouses Point	south
4/10/2021	Saturday	weekend	AM	north A	Point Au Roche	north
4/11/2021	Sunday	weekend	AM	north B	Champlain Boatworks	south
4/12/2021	Monday	weekday	PM	north B	Peru Dock	north
4/13/2021	Tuesday	weekday	PM	north A	Point Au Roche	south
4/15/2021	Thursday	weekday	AM	north A	Point Au Roche	north
4/16/2021	Friday	weekday	AM	north B	Champlain Boatworks	north
4/17/2021	Saturday	weekend	PM	north A	Rouses Point	north
4/18/2021	Sunday	weekend	AM	north B	Champlain Boatworks	south
4/23/2021	Friday	weekday	AM	north A	Great Chazy	south
4/24/2021	Saturday	weekend	PM	north B	Plattsburgh boat launch	south
4/25/2021	Sunday	weekend	PM	north A	Great Chazy	north
4/27/2021	Tuesday	weekday	AM	north B	Plattsburgh boat launch	south
4/30/2021	Friday	weekday	AM	north A	Rouses Point	south
5/1/2021	Saturday	weekend	PM	north B	Peru Dock	south
5/2/2021	Sunday	weekend	PM	north A	Great Chazy	north
5/4/2021	Tuesday	weekday	PM	north B	Peru Dock	north
5/6/2021	Thursday	weekday	AM	north A	Rouses Point	north
5/8/2021	Saturday	weekend	AM	north B	Plattsburgh boat launch	north
5/9/2021	Sunday	weekend	AM	north B	Plattsburgh boat launch	south
5/11/2021	Tuesday	weekday	PM	north A	Rouses Point	north
5/13/2021	Thursday	weekday	AM	north A	Point Au Roche	south
5/14/2021	Friday	weekday	AM	north B	Plattsburgh boat launch	south
5/15/2021	Saturday	weekend	AM	north A	Point Au Roche	north
5/16/2021	Sunday	weekend	PM	north B	Peru Dock	south
5/21/2021	Friday	weekday	PM	north B	Peru Dock	north
5/22/2021	Saturday	weekend	AM	north A	Rouses Point	south
5/23/2021	Sunday	weekend	AM	north A	Point Au Roche	north
5/26/2021	Wednesday	weekday	PM	north B	Champlain Boatworks	north
5/28/2021	Friday	weekday	AM	north B	Peru Dock	south
5/29/2021	Saturday	weekend	PM	north A	Rouses Point	south
5/30/2021	Sunday	weekend	PM	north B	Champlain Boatworks	north
6/1/2021	Tuesday	weekday	AM	north A	Great Chazy	north
6/5/2021	Saturday	weekend	PM	north A	Great Chazy	north
6/6/2021	Sunday	weekend	AM	north B	Plattsburgh boat launch	north

6/7/2021	Monday	weekday	AM	north B	Champlain Boatworks	north
6/9/2021	Wednesday	weekday	PM	north A	Rouses Point	north
6/10/2021	Thursday	weekday	AM	north A	Point Au Roche	north
6/12/2021	Saturday	weekend	AM	north B	Peru Dock	north
6/13/2021	Sunday	weekend	PM	north A	Point Au Roche	south
6/14/2021	Monday	weekday	AM	north B	Champlain Boatworks	north
6/17/2021	Thursday	weekday	PM	north A	Rouses Point	south
6/19/2021	Saturday	weekend	PM	north B	Champlain Boatworks	south
6/20/2021	Sunday	weekend	PM	north B	Plattsburgh boat launch	south
6/21/2021	Monday	weekday	AM	north A	Point Au Roche	north
6/26/2021	Saturday	weekend	PM	north A	Point Au Roche	north
6/27/2021	Sunday	weekend	AM	north B	Peru Dock	north
6/28/2021	Monday	weekday	AM	north B	Champlain Boatworks	north
6/29/2021	Tuesday	weekday	AM	north A	Great Chazy	south
7/2/2021	Friday	weekday	PM	north B	Champlain Boatworks	north
7/3/2021	Saturday	weekend	PM	north A	Rouses Point	south
7/4/2021	Sunday	weekend	AM	north B	Champlain Boatworks	south
7/7/2021	Wednesday	weekday	AM	north A	Point Au Roche	north
7/10/2021	Saturday	weekend	AM	north A	Rouses Point	north
7/11/2021	Sunday	weekend	AM	north B	Champlain Boatworks	north
7/12/2021	Monday	weekday	PM	north B	Champlain Boatworks	south
7/13/2021	Tuesday	weekday	AM	north A	Great Chazy	south
7/17/2021	Saturday	weekend	AM	north B	Plattsburgh boat launch	north
7/18/2021	Sunday	weekend	AM	north A	Rouses Point	north
7/20/2021	Tuesday	weekday	PM	north A	Great Chazy	north
7/21/2021	Wednesday	weekday	AM	north B	Plattsburgh boat launch	south
7/22/2021	Thursday	weekday	PM	north A	Great Chazy	south
7/24/2021	Saturday	weekend	PM	north B	Peru Dock	north
7/25/2021	Sunday	weekend	PM	north B	Peru Dock	south
7/28/2021	Wednesday	weekday	PM	north A	Rouses Point	north
7/29/2021	Thursday	weekday	PM	north A	Point Au Roche	north
7/31/2021	Saturday	weekend	AM	north B	Plattsburgh boat launch	north
8/1/2021	Sunday	weekend	PM	north A	Great Chazy	north
8/4/2021	Wednesday	weekday	AM	north B	Plattsburgh boat launch	north
8/7/2021	Saturday	weekend	PM	north A	Rouses Point	north
8/8/2021	Sunday	weekend	AM	north B	Peru Dock	south
8/9/2021	Monday	weekday	PM	north B	Plattsburgh boat launch	north
8/11/2021	Wednesday	weekday	AM	north A	Rouses Point	north
8/14/2021	Saturday	weekend	PM	north B	Peru Dock	north
8/15/2021	Sunday	weekend	PM	north A	Rouses Point	south
8/17/2021	Tuesday	weekday	AM	north B	Champlain Boatworks	south
8/18/2021	Wednesday	weekday	PM	north A	Point Au Roche	north
8/21/2021	Saturday	weekend	PM	north A	Great Chazy	south
8/22/2021	Sunday	weekend	AM	north B	Peru Dock	south

8/23/2021	Monday	weekday	PM	north A	Rouses Point	south
8/24/2021	Tuesday	weekday	PM	north B	Plattsburgh boat launch	north
8/28/2021	Saturday	weekend	AM	north B	Peru Dock	north
8/29/2021	Sunday	weekend	PM	north A	Great Chazy	south
8/31/2021	Tuesday	weekday	PM	north B	Plattsburgh boat launch	south
9/1/2021	Wednesday	weekday	PM	north A	Rouses Point	north
9/2/2021	Thursday	weekday	AM	north B	Peru Dock	north
9/3/2021	Friday	weekday	AM	north A	Point Au Roche	south
9/4/2021	Saturday	weekend	PM	north A	Point Au Roche	north
9/5/2021	Sunday	weekend	AM	north B	Plattsburgh boat launch	south
9/10/2021	Friday	weekday	PM	north B	Plattsburgh boat launch	north
9/11/2021	Saturday	weekend	PM	north A	Point Au Roche	north
9/12/2021	Sunday	weekend	PM	north A	Rouses Point	north
9/13/2021	Monday	weekday	AM	north B	Peru Dock	north
9/17/2021	Friday	weekday	PM	north A	Point Au Roche	north
9/18/2021	Saturday	weekend	AM	north B	Champlain Boatworks	south
9/19/2021	Sunday	weekend	PM	north A	Great Chazy	south
9/22/2021	Wednesday	weekday	PM	north B	Plattsburgh boat launch	south
9/23/2021	Thursday	weekday	AM	north A	Rouses Point	south
9/25/2021	Saturday	weekend	AM	north B	Plattsburgh boat launch	north
9/26/2021	Sunday	weekend	AM	north B	Plattsburgh boat launch	north
9/29/2021	Wednesday	weekday	AM	north A	Great Chazy	south
9/30/2021	Thursday	weekday	AM	north B	Champlain Boatworks	north
10/2/2021	Saturday	weekend	PM	north A	Great Chazy	south
10/3/2021	Sunday	weekend	PM	north B	Peru Dock	south
10/4/2021	Monday	weekday	PM	north A	Rouses Point	south
10/9/2021	Saturday	weekend	AM	north A	Point Au Roche	south
10/10/2021	Sunday	weekend	AM	north B	Peru Dock	south
10/12/2021	Tuesday	weekday	PM	north B	Plattsburgh boat launch	south
10/13/2021	Wednesday	weekday	PM	north A	Great Chazy	north
10/15/2021	Friday	weekday	PM	north A	Point Au Roche	south
10/16/2021	Saturday	weekend	PM	north B	Plattsburgh boat launch	south
10/17/2021	Sunday	weekend	PM	north B	Peru Dock	south
10/18/2021	Monday	weekday	AM	north A	Great Chazy	north
10/21/2021	Thursday	weekday	PM	north B	Peru Dock	north
10/23/2021	Saturday	weekend	AM	north A	Rouses Point	south
10/24/2021	Sunday	weekend	PM	north B	Plattsburgh boat launch	south
10/27/2021	Wednesday	weekday	PM	north A	Rouses Point	south
10/28/2021	Thursday	weekday	AM	north A	Great Chazy	south
10/29/2021	Friday	weekday	PM	north B	Peru Dock	south
10/30/2021	Saturday	weekend	AM	north A	Great Chazy	south
10/31/2021	Sunday	weekend	AM	north B	Champlain Boatworks	north

Clerk B: South

Date	Day	Day type	Shift	Section	Start point	Direction of travel from Start point
4/3/2021	Saturday	weekend	PM	south B	South Bay	north
4/4/2021	Sunday	weekend	PM	south A	Safe Harbor	north
4/5/2021	Monday	weekday	AM	south B	Port Henry	south
4/7/2021	Wednesday	weekday	PM	south A	Port Douglas	south
4/10/2021	Saturday	weekend	AM	south A	Port Douglas	north
4/11/2021	Sunday	weekend	AM	south B	Ticonderoga	south
4/12/2021	Monday	weekday	PM	south B	Westport	north
4/13/2021	Tuesday	weekday	PM	south A	Port Douglas	south
4/15/2021	Thursday	weekday	AM	south A	Safe Harbor	north
4/16/2021	Friday	weekday	AM	south B	South Bay	north
4/17/2021	Saturday	weekend	PM	south A	Port Douglas	north
4/18/2021	Sunday	weekend	AM	south B	South Bay	south
4/23/2021	Friday	weekday	AM	south A	Safe Harbor	south
4/24/2021	Saturday	weekend	PM	south B	Ticonderoga	south
4/25/2021	Sunday	weekend	PM	south A	Westport	north
4/27/2021	Tuesday	weekday	AM	south B	South Bay	south
4/30/2021	Friday	weekday	AM	south A	Willsboro	south
5/1/2021	Saturday	weekend	PM	south B	Port Henry	south
5/2/2021	Sunday	weekend	PM	south A	Willsboro	north
5/4/2021	Tuesday	weekday	PM	south B	South Bay	north
5/6/2021	Thursday	weekday	AM	south A	Port Douglas	north
5/8/2021	Saturday	weekend	AM	south B	Westport	north
5/9/2021	Sunday	weekend	AM	south B	Port Henry	south
5/11/2021	Tuesday	weekday	PM	south A	Port Douglas	north
5/13/2021	Thursday	weekday	AM	south A	Port Douglas	south
5/14/2021	Friday	weekday	AM	south B	Port Henry	south
5/15/2021	Saturday	weekend	AM	south A	Safe Harbor	north
5/16/2021	Sunday	weekend	PM	south B	South Bay	south
5/21/2021	Friday	weekday	PM	south B	South Bay	north
5/22/2021	Saturday	weekend	AM	south A	Willsboro	south
5/23/2021	Sunday	weekend	AM	south A	Westport	north
5/26/2021	Wednesday	weekday	PM	south B	Ticonderoga	north
5/28/2021	Friday	weekday	AM	south B	Ticonderoga	south
5/29/2021	Saturday	weekend	PM	south A	Safe Harbor	south
5/30/2021	Sunday	weekend	PM	south B	South Bay	north
6/1/2021	Tuesday	weekday	AM	south A	Willsboro	north
6/5/2021	Saturday	weekend	PM	south A	Willsboro	north
6/6/2021	Sunday	weekend	AM	south B	Port Henry	north
6/7/2021	Monday	weekday	AM	south B	Ticonderoga	north
6/9/2021	Wednesday	weekday	PM	south A	Willsboro	north

6/10/2021	Thursday	weekday	AM	south A	Westport	north
6/12/2021	Saturday	weekend	AM	south B	South Bay	north
6/13/2021	Sunday	weekend	PM	south A	Willsboro	south
6/14/2021	Monday	weekday	AM	south B	Ticonderoga	north
6/17/2021	Thursday	weekday	PM	south A	Safe Harbor	south
6/19/2021	Saturday	weekend	PM	south B	Ticonderoga	south
6/20/2021	Sunday	weekend	PM	south B	South Bay	south
6/21/2021	Monday	weekday	AM	south A	Westport	north
6/26/2021	Saturday	weekend	PM	south A	Safe Harbor	north
6/27/2021	Sunday	weekend	AM	south B	Port Henry	north
6/28/2021	Monday	weekday	AM	south B	Ticonderoga	north
6/29/2021	Tuesday	weekday	AM	south A	Willsboro	south
7/2/2021	Friday	weekday	PM	south B	Ticonderoga	north
7/3/2021	Saturday	weekend	PM	south A	Safe Harbor	south
7/4/2021	Sunday	weekend	AM	south B	South Bay	south
7/7/2021	Wednesday	weekday	AM	south A	Port Douglas	north
7/10/2021	Saturday	weekend	AM	south A	Port Douglas	north
7/11/2021	Sunday	weekend	AM	south B	South Bay	north
7/12/2021	Monday	weekday	PM	south B	Port Henry	south
7/13/2021	Tuesday	weekday	AM	south A	Westport	south
7/17/2021	Saturday	weekend	AM	south B	Port Henry	north
7/18/2021	Sunday	weekend	AM	south A	Westport	north
7/20/2021	Tuesday	weekday	PM	south A	Safe Harbor	north
7/21/2021	Wednesday	weekday	AM	south B	Ticonderoga	south
7/22/2021	Thursday	weekday	PM	south A	Port Douglas	south
7/24/2021	Saturday	weekend	PM	south B	South Bay	north
7/25/2021	Sunday	weekend	PM	south B	South Bay	south
7/28/2021	Wednesday	weekday	PM	south A	Willsboro	north
7/29/2021	Thursday	weekday	PM	south A	Port Douglas	north
7/31/2021	Saturday	weekend	AM	south B	Westport	north
8/1/2021	Sunday	weekend	PM	south A	Willsboro	north
8/4/2021	Wednesday	weekday	AM	south B	Ticonderoga	north
8/7/2021	Saturday	weekend	PM	south A	Westport	north
8/8/2021	Sunday	weekend	AM	south B	South Bay	south
8/9/2021	Monday	weekday	PM	south B	South Bay	north
8/11/2021	Wednesday	weekday	AM	south A	Willsboro	north
8/14/2021	Saturday	weekend	PM	south B	Port Henry	north
8/15/2021	Sunday	weekend	PM	south A	Safe Harbor	south
8/17/2021	Tuesday	weekday	AM	south B	Port Henry	south
8/18/2021	Wednesday	weekday	PM	south A	Safe Harbor	north
8/21/2021	Saturday	weekend	PM	south A	Safe Harbor	south
8/22/2021	Sunday	weekend	AM	south B	South Bay	south
8/23/2021	Monday	weekday	PM	south A	Port Douglas	south
8/24/2021	Tuesday	weekday	PM	south B	Port Henry	north

8/28/2021	Saturday	weekend	AM	south B	South Bay	north
8/29/2021	Sunday	weekend	PM	south A	Safe Harbor	south
8/31/2021	Tuesday	weekday	PM	south B	Ticonderoga	south
9/1/2021	Wednesday	weekday	PM	south A	Port Douglas	north
9/2/2021	Thursday	weekday	AM	south B	Ticonderoga	north
9/3/2021	Friday	weekday	AM	south A	Westport	south
9/4/2021	Saturday	weekend	PM	south A	Safe Harbor	north
9/5/2021	Sunday	weekend	AM	south B	Ticonderoga	south
9/10/2021	Friday	weekday	PM	south B	Port Henry	north
9/11/2021	Saturday	weekend	PM	south A	Willsboro	north
9/12/2021	Sunday	weekend	PM	south A	Westport	north
9/13/2021	Monday	weekday	AM	south B	Ticonderoga	north
9/17/2021	Friday	weekday	PM	south A	Port Douglas	north
9/18/2021	Saturday	weekend	AM	south B	Westport	south
9/19/2021	Sunday	weekend	PM	south A	Willsboro	south
9/22/2021	Wednesday	weekday	PM	south B	Port Henry	south
9/23/2021	Thursday	weekday	AM	south A	Westport	south
9/25/2021	Saturday	weekend	AM	south B	South Bay	north
9/26/2021	Sunday	weekend	AM	south B	Port Henry	north
9/29/2021	Wednesday	weekday	AM	south A	Willsboro	south
9/30/2021	Thursday	weekday	AM	south B	Port Henry	north
10/2/2021	Saturday	weekend	PM	south A	Safe Harbor	south
10/3/2021	Sunday	weekend	PM	south B	Port Henry	south
10/4/2021	Monday	weekday	PM	south A	Willsboro	south
10/9/2021	Saturday	weekend	AM	south A	Westport	south
10/10/2021	Sunday	weekend	AM	south B	South Bay	south
10/12/2021	Tuesday	weekday	PM	south B	Westport	south
10/13/2021	Wednesday	weekday	PM	south A	Willsboro	north
10/15/2021	Friday	weekday	PM	south A	Willsboro	south
10/16/2021	Saturday	weekend	PM	south B	Port Henry	south
10/17/2021	Sunday	weekend	PM	south B	Ticonderoga	south
10/18/2021	Monday	weekday	AM	south A	Safe Harbor	north
10/21/2021	Thursday	weekday	PM	south B	Port Henry	north
10/23/2021	Saturday	weekend	AM	south A	Willsboro	south
10/24/2021	Sunday	weekend	PM	south B	Westport	south
10/27/2021	Wednesday	weekday	PM	south A	Westport	south
10/28/2021	Thursday	weekday	AM	south A	Port Douglas	south
10/29/2021	Friday	weekday	PM	south B	Ticonderoga	south
10/30/2021	Saturday	weekend	AM	south A	Safe Harbor	south
10/31/2021	Sunday	weekend	AM	south B	South Bay	north

Appendices

Appendix 1. 2021 Lake Champlain Access Point Creel Survey form

Clerk: _____ Access Point: _____ Interview # _____

Date: ____/____/2021 (circle) Weekday / Weekend Time: _____ AM / PM # anglers in party: _____

1. Have you already been interviewed this season? Y / N

2. What time did you START fishing today? ____:____AM / PM Catch card given: Y / N

3. What time did you STOP fishing? ____:____AM / PM

4. What **species** were you fishing for today? **Number**

Target 1: _____ Caught: _____ Kept: _____

Target 2: _____ Caught: _____ Kept: _____

Other 1: _____ Caught: _____ Kept: _____

Other 2: _____ Caught: _____ Kept: _____

5. [If targeting bass] Are you fishing as part of a tournament? Y / N Name of tournament: _____

6. On a scale of 1 to 5, with 1 being the worst to 5 being the best, how would you rate your fishing experience today?

1 2 3 4 5

7. On a scale of 1 to 5, with 1 being the worst to 5 being the best, how would you rate your satisfaction with open-water fishing on Lake Champlain this year?

1 2 3 4 5

8. On a scale of 1 to 5, with 1 being the worst to 5 being the best, how would you rate your satisfaction with fishing in Lake Champlain this year for (target 1) _____?

1 2 3 4 5

9. On a scale of 1 to 5, with 1 being the worst to 5 being the best, how would you rate your satisfaction with fishing in Lake Champlain this year for (target 2) _____?

1 2 3 4 5

10. Do you have any comments or concerns about the fishery?

11. Can I measure the fish you kept? Y / N (record on separate Fish form)

Appendix 2. Open-water Fish form

Access Point: _____ Date: ____/____/2021 Interview #: _____

Fish #	Species	Length (mm)	Fin Clips
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

Appendix 3. Open-water Catch Card

2020 Lake Champlain Access Point Creel Survey – Catch Card

Clerk: _____ Interview #: _____ # anglers in party: _____

1. What time did you STOP fishing today? _____ AM / PM
2. What species were you targeting today? _____
3. What did you catch and keep today?

Species	# Released	# Kept	# Kept - lengths (inches)
Largemouth bass			
Smallmouth bass			
Landlocked Atlantic			
Lake Trout			
Rainbow Trout / Steelhead			
Brown Trout			
Walleye			
Northern Pike			
Yellow Perch			
Crappie			
Panfish: sunfish, bluegill (circle)			
Other:			

Angler opinion questions: [Circle angler's response]

4. On a scale of 1 to 5, with 1 being the worst and 5 being the best, how would you rate your fishing experience today? _____
5. Do you have any comments or concerns about the fishery?

Thank you for participating in the NYSDEC Lake Champlain Open-water Creel Survey for 2020. Please fill out this catch card when you finish fishing for the day. Please drop it at any drop box listed below or mail it to us by folding it in half, taping it closed and affixing postage.

- | | |
|----------------------------|----------------------------|
| Rouse's Point boat launch | Willsboro Bay boat launch |
| Great Chazy boat launch | Safe Harbor, Willsboro Bay |
| Point Au Roche boat launch | Westport boat launch |
| Plattsburgh boat launch | Bulwagga Bay Campground |
| Champlain Boatworks | Ticonderoga boat launch |
| Peru Dock | South Bay boat launch |
| Port Douglas boat launch | |
- List of drop box locations

NYS Dept. of Environmental Conservation
 Fisheries
 1115 NY-86
 RAY BROOK, NY 12977

Appendix 4. Open-water Angler Count form

North Clerk: _____

Section: A

Date: ____/____/2021 Weekday / Weekend

Ramp	Order driven (number 1, 2, 3...)	Count Time	Tally of number of anglers fishing	Trailer Count	Total number of anglers interviewed	Notes
Rouse's Point						
Great Chazy						
Point Au Roche						

End time: _____AM / PM

Comments:

North Clerk: _____

Section: B

Date: ____/____/2021 Weekday / Weekend

Ramp	Order driven (number 1, 2, 3...)	Count Time	Tally of number of anglers fishing	Trailer Count	Total number of anglers interviewed	Notes
Plattsburgh						
Champlain Boatworks						
Peru Dock						
Port Douglas						

End time: _____AM / PM

Comments:

South Clerk: _____

Section: A

Date: ____/____/2021 Weekday / Weekend

Ramp	Order driven (number 1, 2,3...)	Count Time	Tally of number of anglers fishing	Trailer Count	Total number of anglers interviewed	Notes
Willsboro Bay						
Safe Harbor, Willsboro Bay						
Westport						

End time: _____AM / PM

Comments:

South Clerk: _____

Section: B

Date: ____/____/2021 Weekday / Weekend

Ramp	Order driven (number 1, 2, 3...)	Count Time	Tally of number of anglers fishing	Trailer Count	Total number of anglers interviewed	Notes
Port Henry						
Ticonderoga						
South Bay						

End time: _____AM / PM

Comments: