

Crystal Lake Trap Net Survey (Survey #:321030)

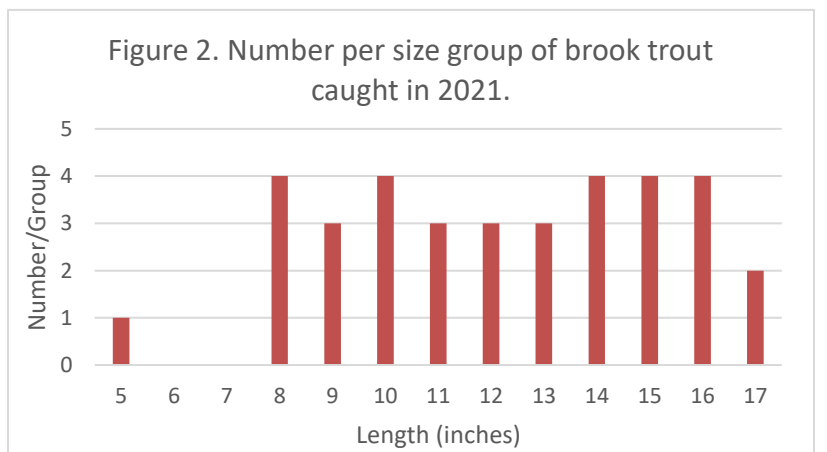
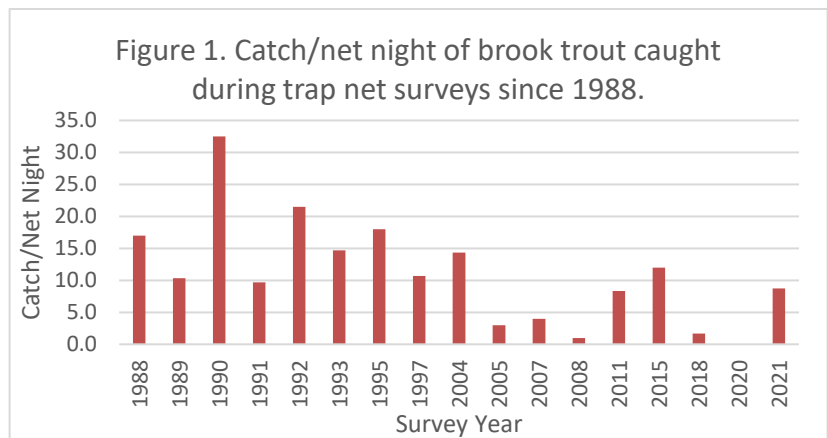
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2/18/21

Crystal Lake is located in the town of Fremont in northwest Sullivan County, New York. Public access is provided through the Crystal Lake Wild Forest, and a cartop boat launch is located on Crystal Lake Road on the southeast corner of the lake. A special fishing regulation exists for trout with an open season of April 1 through Sept 30, 10" minimum size, and a limit of three trout per day. Electric motors only are permitted, and the use and possession of baitfish is prohibited. Until 1975 the 39-acre lake held various warmwater fish species. During this year it was determined the lake would be reclaimed with hopes of establishing a quality brook trout fishery, and on 10/16/75 the lake was reclaimed with the use of rotenone. Two thousand brook trout fingerlings were stocked in the spring, and 309 adult brook trout were stocked during the fall of 1976. Balsam Lake (Ulster Co.) was the source of the trout used during both stockings. By 1981 golden shiner were documented in the lake and by 1982 alewife, brown bullhead and smallmouth bass were also found. The lake was again reclaimed on 9/17/87, with 1,800 fingerling brook trout from Balsam Lake stocked the following year. However, the presence of other fish species including golden shiner, brown bullhead and pumpkinseed were again discovered a few years later. Fall trap net surveys have been conducted periodically since 1977 specifically targeting brook trout including recent surveys in 2018 and 2020. This 2021 survey was conducted using similar methodology to determine if wild brook trout are still present and if natural recruitment is occurring. On 10/18/21, one trap net and three community fyke nets were set in Crystal Lake. Each net was fished overnight for an average soak time of 25.25 hours. Nets were set to coincide with traditional brook trout spawning times.

A total of 35 brook trout were caught during this survey with a catch/net night of 8.8 (Figure 1). All trout caught were present in one fyke net with no trout caught in the other nets. Lengths ranged from 5.6 to 17.6 inches with lengths evenly distributed within that range (Figure 2). Other species caught during this survey were 40 pumpkinseed, 15 brown bullhead and two golden shiner. These three species had previously been caught in Crystal Lake and no new species documented in 2021.

Results of this survey indicate multiple year classes of brook trout are present in Crystal Lake. This was a change from recent survey results from 2018 and 2020 which had low catch rates of brook trout. However, it's possible catch rates during trap netting in Crystal Lake vary widely due to several environmental factors, including



seasonal air and water temperatures, and brook trout spawning activity. It's recommended that fall trap netting be conducted on a two-to-five-year basis to determine if wild brook trout are still present and naturally reproducing. While this survey did not document any new fish species, it's also recommended that boat electrofishing, seining or other gear types be deployed to determine if new fish species have been introduced. No changes in management are proposed at this time.