

2006 SPRING LAKE TROUT ASSESSMENT

INTRODUCTION

Lake trout were nearly extirpated in Lake Superior during the 1950s due to over-fishing and sea lamprey predation. Sea lamprey control, reduction of commercial fishing and establishment of refuges have contributed to the increase of lake trout abundance in Wisconsin waters. However, lake trout population characteristics are still important to determine the progress of rehabilitation. Biological data collected are required for critical management decisions such as setting the lake trout quota and recreational fishing regulations. The objective of the spring lake trout assessment is to monitor lake trout population dynamics such as abundance, diet, and sea lamprey wounding rates.

METHODS

Thirty-one stations were sampled in the Apostle Islands (WI-2) (Figure 1) with the R/V *Hack Noyes*. Each site was sampled with 2,700 ft of multifilament nylon gill net with 4.5-in stretch mesh. Nets were set for one night (24 hr) at each station.

Sixteen stations were sampled in western Wisconsin waters (WI-1) (Figure 1) with the R/V *Hack Noyes*. Each site was sampled with 900 ft of multifilament nylon gill net with 4.5-in stretch mesh. Nets were set for one night (24 hr) at each station.

All live fish were measured (total length), tagged (lake trout only), checked for sea lamprey marks and fin-clips, and then released. Dead fish were processed in the same manner except not tagged, stomach contents were collected and frozen, individual weights were taken when lake conditions permitted, scale samples were taken, and otoliths removed from wild lake trout. Although whitefish were not tagged they were processed similarly to lake trout.

Fish ages were estimated using scales and otoliths.

Following the protocol established by the Lake Superior Technical Committee, diet was analyzed by examination of stomach contents. Frequency of occurrence and percent composition by weight of food items were calculated from the stomach contents.

RESULTS/DISCUSSION

SEA LAMPREY WOUNDING

Sea lamprey wounding data are collected annually to monitor the effectiveness of control programs and follow trends. Sea lamprey wounding has been consistently lower in WI-2 than WI-1 (Table 1 and 2). Wounding rates decreased for all size categories but 1 in WI-2 from 2005 to 2006 (Table 2).

LAKE TROUT - CATCH STATISTICS

In 2006, 548 lake trout were captured within WI-2. Wild fish comprised 96% of the lake trout catch. Mean length of wild lake trout was 23.5 in (SD = 3.7)(Figure 2). Geometric mean catch-per-unit-effort (CPUE) of wild fish decreased 1% from 2005 to 2006 (Figure 3, Table 3). Mean length of hatchery-reared lake trout was 24.2 in (SD = 5.1)(Figure 2). Geometric mean CPUE of hatchery fish decreased 64% from 2005 to 2006 (Figure 3, Table 3).

In 2006, 112 lake trout were sampled within WI-1. Wild lake trout abundance has been gradually increasing and wild fish accounted for 64% of the catch. Mean length of wild fish was 24.1 in (SD = 3.3)(Figure 4). Geometric mean CPUE of wild fish decreased 20% from 2005 to 2006 (Figure 5, Table 4). Mean length of hatchery-reared lake trout was 24.1 in (SD = 4.0) (Figure 4). Geometric mean CPUE of hatchery fish decreased 37% from 2005 to 2006 (Figure 5, Table 4).

LAKE TROUT - MEAN LENGTH-AT-AGE

Mean age of lake trout captured in WI-1 was 7 (Range 3-12). Mean age of lake trout captured in WI-2 was 9 (Range 5-32). Mean length-at-age was calculated for wild lake trout sampled in WI-2 (Table 5).

LAKE TROUT - DIET ANALYSIS

In 2006, the stomach contents of 168 lake trout from WI-2 were examined (38 were empty). Excluding unknown fish species, rainbow smelt were present in more stomachs and generally constituted more of the lake trout's diet by weight (Table 6). Unlike mean length of coregonines consumed, mean length of smelt consumed did not increase consistently with increasing lake trout size (Table 7).

REHABILITATION PROGRESS

Wild lake trout abundance continues to increase within WI-2 and WI-1. Lake trout stocking is no longer necessary in WI-2 and the 1994 year class was the last to be stocked. This is a sign of continued progress in lake trout rehabilitation. Maintenance of the refuges in combination with sport and commercial regulations, and sea lamprey control, are needed for rehabilitation to continue. Lake trout will continue to be stocked in WI-1 until the stocking protocol established by the Lake Superior Technical Committee indicates otherwise.

SISCOWETS

Few siscowet (fat) lake trout were caught during the spring lean lake trout assessment (Table 8 and 9). Abundance has increased over the years, but sampling does not occur in siscowet

habitat, consequently trends may only be marginal indicators of abundance.

WHITEFISH CATCH STATISTICS

In 2006, 291 whitefish were captured in WI-2 (mean length = 19.0, SD = 1.3)(Figure 6). Geometric mean CPUE of whitefish decreased 70% from 2005 to 2006 (Figure 7). Unfortunately the spring whitefish catch is dependent on only a few stations each year. In 2006, catches were unusually low at those stations. If the CPUE remains low in consequent years, it would indicate that whitefish abundance throughout the Apostle Islands may be reduced.

In 2006, 51 whitefish were captured in WI-1 (mean length = 19.8, SD = 2.0)(Figure 6). Geometric mean CPUE of whitefish decreased 11% from 2005 to 2006 (Figure 7). Whitefish abundance in WI-1 has increased slowly since 1987 but has been much lower than in WI-2. The majority of whitefish captured in WI-1 are at sites in the eastern end of the management area.

Table 1. Sea lamprey wounds per 100 lake trout from spring assessment, 4.5-in nylon gill nets (sample size) in WI-1, 1987-2006.

| Year | < 17" | 17-20.9" | 21-24.9" | 25-28.9" | 28.9"< | Total |
|------|-------------|-------------|--------------|--------------|-------------|--------------|
| 1987 | 0.0 - (6) | 8.7 - (208) | 18.8 - (335) | 31.4 - (105) | 66.7 - (9) | 18.1 - (663) |
| 1988 | 0.0 - (5) | 7.5 - (40) | 11.6 - (241) | 22.2 - (117) | 0.0 - (10) | 13.8 - (413) |
| 1989 | 0.0 - (4) | 3.2 - (62) | 12.4 - (209) | 16.4 - (152) | 31.6 - (19) | 13.2 - (446) |
| 1990 | 0.0 - (14) | 2.8 - (144) | 16.1 - (112) | 28.6 - (98) | 33.3 - (15) | 14.4 - (383) |
| 1991 | 0.0 - (11) | 6.7 - (102) | 15.0 - (140) | 19.8 - (86) | 11.1 - (9) | 13.2 - (348) |
| 1992 | 0.0 - (5) | 6.3 - (64) | 17.9 - (95) | 34.0 - (47) | 16.7 - (12) | 17.5 - (223) |
| 1993 | 0.0 - (22) | 0.0 - (98) | 14.4 - (187) | 23.0 - (148) | 29.2 - (41) | 14.7 - (496) |
| 1994 | 0.0 - (32) | 0.0 - (59) | 13.0 - (54) | 5.8 - (52) | 0.0 - (16) | 4.7 - (213) |
| 1995 | 0.0 - (6) | 1.0 - (101) | 6.3 - (126) | 14.1 - (85) | 14.8 - (27) | 7.2 - (345) |
| 1996 | No Sampling | | | | | |
| 1997 | 0.0 - (39) | 0.0 - (71) | 7.8 - (115) | 11.6 - (86) | 26.7 - (30) | 7.9 - (341) |
| 1998 | 0.0 - (32) | 1.4 - (69) | 2.9 - (69) | 7.3 - (55) | 41.2 - (17) | 5.8 - (242) |
| 1999 | 0.0 - (25) | 0.0 - (116) | 1.1 - (181) | 2.4 - (41) | 15.8 - (19) | 1.6 - (382) |
| 2000 | 9.1 - (11) | 1.5 - (65) | 5.3 - (169) | 16.7 - (36) | 100 - (16) | 11.1 - (297) |
| 2001 | No Sampling | | | | | |
| 2002 | 0.0 - (6) | 2.1 - (48) | 1.3 - (159) | 19.3 - (109) | 38.3 - (47) | 11.4 - (369) |
| 2003 | 0.0 - (4) | 0.0 - (21) | 4.5 - (66) | 4.3 - (47) | 21.7 - (23) | 6.2 - (161) |
| 2004 | 0.0 - (1) | 0.0 - (18) | 5.6 - (72) | 6.4 - (47) | 53.3 - (15) | 9.8 - (153) |
| 2005 | 0.0 - (0) | 2.8 - (36) | 6.9 - (101) | 26.9 - (41) | 44.4 - (18) | 13.8 - (196) |
| 2006 | 0.0 - (3) | 0.0 - (19) | 4.9 - (41) | 4.5 - (44) | 40.0 - (5) | 5.4 - (112) |

Table 2. Sea lamprey wounds per 100 lake trout from spring assessment, 4.5-in nylon gill nets (sample size) in WI-2, 1985-2006.

| Year | < 17" | 17-20.9" | 21-24.9" | 25-28.9" | 28.9"< | Total |
|------|-------------|-------------|--------------|--------------|--------------|---------------|
| 1985 | 1.9 - (52) | 3.2 - (318) | 6.7 - (556) | 7.9 - (241) | 12.5 - (32) | 6.0 - (1,199) |
| 1990 | 0.0 - (35) | 1.9 - (471) | 3.7 - (484) | 10.6 - (339) | 8.3 - (84) | 5.0 - (1,413) |
| 1991 | 1.7 - (58) | 1.8 - (391) | 4.5 - (584) | 6.7 - (374) | 11.3 - (106) | 4.7 - (1,513) |
| 1992 | 0.0 - (45) | 1.6 - (316) | 9.2 - (601) | 12.4 - (315) | 23.0 - (74) | 8.6 - (1,351) |
| 1993 | 0.0 - (59) | 1.0 - (302) | 5.6 - (393) | 6.0 - (318) | 10.5 - (105) | 4.7 - (1,177) |
| 1994 | 0.0 - (58) | 0.9 - (230) | 1.2 - (485) | 3.0 - (370) | 8.2 - (98) | 2.2 - (1,241) |
| 1995 | 0.0 - (30) | 0.7 - (426) | 1.9 - (643) | 7.2 - (375) | 8.7 - (127) | 3.3 - (1,601) |
| 1996 | No Sampling | | | | | |
| 1997 | 0.0 - (90) | 0.3 - (356) | 2.1 - (533) | 4.9 (347) | 5.1 - (158) | 2.5 - (1,484) |
| 1998 | 0.0 - (46) | 0.6 - (357) | 0.9 - (462) | 4.8 - (147) | 8.6 - (93) | 1.9 - (1,105) |
| 1999 | 0.0 - (37) | 0.8 - (479) | 1.0 - (707) | 2.9 - (138) | 10.1 - (99) | 1.7 - (1,460) |
| 2000 | 0.0 - (33) | 0.9 - (437) | 4.3 - (1036) | 15.4 - (247) | 31.8 - (107) | 6.5 - (1,860) |
| 2001 | No Sampling | | | | | |
| 2002 | 0.0 - (17) | 0.0 - (166) | 3.3 - (398) | 7.4 - (203) | 23.4 - (64) | 5.1 - (848) |
| 2003 | 0.0 - (8) | 0.0 - (62) | 2.5 - (244) | 5.1 - (98) | 12.5 - (40) | 3.5 - (452) |
| 2004 | 0.0 - (6) | 0.8 - (131) | 2.8 - (179) | 5.4 - (112) | 9.4 - (32) | 3.3 - (460) |
| 2005 | 0.0 - (15) | 3.4 - (147) | 2.9 - (279) | 6.9 - (117) | 23.7 - (55) | 5.5 - (613) |
| 2006 | 0.0 - (7) | 0.8 - (118) | 3.7 - (273) | 5.2 - (96) | 8.7 - (46) | 3.7 - (540) |

Table 3. Catch data for spring sampled lake trout in 4.5-in nylon gill nets from WI-2, 1981-2006. Nets were set for three nights from 1981-2000 and for one night since 2002.

| Year | Effort (Feet) | Sample Size | Wild Sample Size | Wild Geometric Mean CPUE | Wild Mean Length (in) | % Wild | Hatchery Geometric Mean CPUE |
|------|---------------|-------------|------------------|--------------------------|-----------------------|--------|------------------------------|
| 1981 | 63,300 | 763 | 227 | 5.1 | 23.9 | 29.9 | 11.1 |
| 1982 | 90,000 | 814 | 250 | 2.6 | 23.5 | 30.7 | 5.6 |
| 1983 | 17,400 | 139 | 43 | 2.5 | 24.1 | 30.9 | 5.5 |
| 1984 | 18,000 | 208 | 62 | 2.9 | 23.7 | 29.8 | 9.0 |
| 1985 | 78,300 | 1,303 | 459 | 3.5 | 23.2 | 35.2 | 6.9 |
| 1986 | 88,200 | 2,093 | 1,039 | 8.1 | 22.7 | 49.7 | 8.9 |
| 1987 | 83,700 | 1,730 | 1,047 | 7.0 | 22.2 | 60.5 | 6.9 |
| 1988 | 83,700 | 1,166 | 628 | 6.2 | 23.1 | 53.9 | 5.4 |
| 1989 | 83,700 | 1,728 | 954 | 8.9 | 23.6 | 55.2 | 6.6 |
| 1990 | 83,700 | 1,395 | 883 | 7.4 | 23.6 | 63.3 | 4.5 |
| 1991 | 83,700 | 1,487 | 1,031 | 8.5 | 23.5 | 69.3 | 4.9 |
| 1992 | 83,700 | 1,351 | 967 | 8.5 | 23.6 | 71.6 | 3.7 |
| 1993 | 83,700 | 1,176 | 893 | 9.5 | 24.0 | 75.9 | 3.4 |
| 1994 | 83,700 | 1,241 | 967 | 10.2 | 24.0 | 77.9 | 3.3 |
| 1995 | 83,700 | 1,601 | 1,132 | 12.1 | 23.8 | 70.7 | 3.4 |
| 1996 | | | | No Sampling | | | |
| 1997 | 83,700 | 1,484 | 1,032 | 11.2 | 24.4 | 69.5 | 4.0 |
| 1998 | 83,700 | 1,105 | 775 | 8.0 | 23.2 | 70.1 | 3.0 |
| 1999 | 83,700 | 1,460 | 926 | 11.2 | 22.9 | 63.4 | 4.8 |
| 2000 | 83,700 | 1,860 | 1,233 | 14.9 | 23.3 | 66.3 | 5.7 |
| 2001 | | | | No Sampling | | | |
| 2002 | 83,700 | 848 | 719 | 21.5 | 23.7 | 84.8 | 3.4 |
| 2003 | 81,000 | 452 | 414 | 12.4 | 24.0 | 91.6 | 0.9 |
| 2004 | 83,700 | 460 | 428 | 12.6 | 23.4 | 93.0 | 0.8 |
| 2005 | 83,700 | 613 | 556 | 16.7 | 23.4 | 90.7 | 1.1 |
| 2006 | 83,700 | 548 | 528 | 16.5 | 23.5 | 96.2 | 0.4 |

Table 4. Catch data for spring sampled lake trout in 4.5-in nylon gill nets from WI-1, 1987-2006. Nets were set for three nights from 1987-2000 and for one night since 2002.

| Year | Effort (Feet) | Sample Size | Wild Sample Size | Wild Geometric Mean CPUE | Wild Mean Length (in) | % Wild | Hatchery Geometric Mean CPUE | |
|------|---------------|-------------|------------------|--------------------------|-----------------------|--------|------------------------------|--|
| 1987 | 17,100 | 665 | 85 | 0.8 | 20.7 | 12.8 | 3.0 | |
| 1988 | 17,100 | 415 | 35 | 0.5 | 23.0 | 8.4 | 2.2 | |
| 1989 | 17,100 | 449 | 29 | 0.3 | 21.7 | 6.5 | 2.0 | |
| 1990 | 17,100 | 384 | 52 | 0.6 | 20.5 | 13.5 | 1.9 | |
| 1991 | 17,100 | 348 | 68 | 0.8 | 22.0 | 19.5 | 2.0 | |
| 1992 | 17,100 | 223 | 68 | 0.7 | 21.3 | 30.5 | 1.6 | |
| 1993 | 17,100 | 496 | 103 | 1.1 | 21.6 | 20.8 | 2.7 | |
| 1994 | 17,100 | 213 | 62 | 0.8 | 21.6 | 29.1 | 1.5 | |
| 1995 | 17,100 | 345 | 146 | 1.4 | 22.3 | 43.2 | 2.1 | |
| 1996 | | | | No Sampling | | | | |
| 1997 | 17,100 | 341 | 137 | 1.4 | 23.2 | 40.2 | 2.1 | |
| 1998 | 17,100 | 242 | 90 | 1.0 | 23.1 | 37.2 | 1.6 | |
| 1999 | 17,100 | 382 | 101 | 1.1 | 22.7 | 26.4 | 2.5 | |
| 2000 | 17,100 | 297 | 109 | 1.5 | 22.3 | 36.7 | 2.4 | |
| 2001 | | | | No Sampling | | | | |
| 2002 | 14,400 | 369 | 125 | 2.6 | 23.9 | 33.9 | 3.7 | |
| 2003 | 14,400 | 161 | 48 | 1.2 | 22.9 | 29.8 | 2.2 | |
| 2004 | 14,400 | 153 | 80 | 2.1 | 23.6 | 52.3 | 2.2 | |
| 2005 | 14,400 | 196 | 121 | 2.5 | 23.3 | 61.7 | 1.9 | |
| 2006 | 14,400 | 112 | 72 | 2.0 | 24.1 | 64.0 | 1.2 | |

Table 5. Mean length-at-age of wild lake trout sampled from WI-2, 2006.

| Age | Females | | Males | |
|-----|---------|-----|-------|-----|
| | Mean | # | Mean | # |
| 5 | 12.1 | 1 | | |
| 6 | 20.0 | 10 | 19.7 | 9 |
| 7 | 20.5 | 13 | 20.0 | 5 |
| 8 | 21.8 | 35 | 22.0 | 13 |
| 9 | 21.8 | 40 | 22.4 | 33 |
| 10 | 22.4 | 32 | 22.9 | 22 |
| 11 | 24.9 | 4 | 24.7 | 7 |
| 12 | 25.2 | 9 | 24.9 | 5 |
| 13 | 25.8 | 5 | 25.9 | 5 |
| 14 | 27.2 | 4 | 26.1 | 3 |
| 15 | | | 28.2 | 2 |
| 16 | 27.0 | 2 | 27.2 | 1 |
| 17 | 29.2 | 1 | | |
| 18 | | | | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | 31.0 | 1 |
| 22 | | | 27.3 | 1 |
| 23 | | | | |
| 24 | | | | |
| 25 | 35.6 | 1 | | |
| 30 | 34.1 | 1 | | |
| 31 | 35.6 | 1 | | |
| 32 | | | 30.7 | 1 |
| | | 159 | | 108 |

Table 6. Diet composition of lake trout captured from WI-2 in 2006 (percent frequency of occurrence (%FO) and percent composition by weight (%CW)).

| Length Class (in) | <15.7 | | | 15.7-23.5 | | | 23.6-31.4 | | | >31.4 | | |
|---------------------|----------------|------|------|----------------|------|------|----------------|------|------|----------------|------|------|
| No. examined | 3 | | | 106 | | | 73 | | | 7 | | |
| No. empty (%) | 1 (33) | | | 22 (21) | | | 13 (18) | | | 3 (43) | | |
| Food Item | Occur- ence | %FO | %CW |
| Coregonus Sp. | | 0.0 | | 1 | 0.9 | 7.2 | 4 | 5.5 | 6.0 | 2 | 28.6 | 64.3 |
| Rainbow Smelt | 1 | 33.3 | 53.5 | 22 | 20.8 | 41.8 | 5 | 11.0 | 10.3 | | | |
| Burbot | | 0.0 | | | 0.0 | 0.0 | 5 | 6.8 | 44.0 | 1 | 14.3 | 11.5 |
| Sculpins | | 0.0 | | 1 | 0.9 | 0.7 | 4 | 5.5 | 0.2 | | | |
| Sticklebacks | | 0.0 | | 2 | 1.9 | 0.2 | 3 | 4.1 | 0.3 | | | |
| Unidentified Fish | 2 | 66.7 | 46.5 | 60 | 56.6 | 48.8 | 47 | 64.4 | 33.7 | 3 | 42.9 | 24.2 |
| Salmonid | | 0.0 | | | 0.0 | 0.0 | 1 | 1.4 | 0.5 | | | |
| Mysis relicta | | 0.0 | | 6 | 5.7 | 0.1 | 6 | 8.2 | 0.2 | 1 | 14.3 | 0.0 |
| Amphipods | | 0.0 | | 6 | 5.7 | 0.0 | 3 | 4.1 | 0.1 | | | |
| Terrestrial Insects | | 0.0 | | 6 | 5.7 | 0.0 | 2 | 2.7 | 0.0 | | | |
| Other | | 0.0 | | 17 | 19.8 | 1.2 | 29 | 39.7 | 4.7 | 1 | 14.3 | 0.0 |

Table. 7 Mean length (in) of prey consumed by lake trout captured in WI-2, 2006.

| Food Item | Lake Trout Length Class | | | | | | | | | | | |
|-------------------|-------------------------|------|-----------|-----------|------|-----------|-----------|------|-----------|--------|------|-----------|
| | < 15.7" | | | 15.7-23.5 | | | 23.6-31.4 | | | > 31.4 | | |
| | N | Avg. | Std. Dev. | N | Avg. | Std. Dev. | N | Avg. | Std. Dev. | N | Avg. | Std. Dev. |
| Coregonus Sp. | | | | 1 | 8.5 | - | 3 | 7.0 | 0.4 | 2 | 14.7 | 1.5 |
| Rainbow Smelt | 2 | 4.1 | 0.5 | 40 | 4.7 | 1.0 | 23 | 4.3 | 1.2 | | | |
| Burbot | | | | | | | 10 | 10.1 | 1.8 | 1 | 11.0 | - |
| Sculpins | | | | 3 | 2.8 | 0.5 | 5 | 1.9 | 0.7 | | | |
| Sticklebacks | | | | 2 | 1.9 | 0.3 | 5 | 2.2 | 0.4 | | | |
| Salmonids | | | | | | | 1 | 4.7 | - | | | |
| Unidentified Fish | 1 | 2.6 | - | | | | | | | | | |

Table 8. Catch data of siscowet lake trout from WI-2, 1981-2006. Nets were set for three nights from 1981-2000 and for one night since 2002.

| Year | Effort (ft) | Sample Size | Fish/1000 ft | CPUE > 25" | Mean Length (in) |
|------|-------------|-------------|--------------|------------|------------------|
| 1981 | 63,300 | 1 | 0.16 | 0.16 | 25.2 |
| 1982 | 90,000 | 0 | 0.00 | 0.00 | -- |
| 1983 | 17,400 | 7 | 0.40 | 0.00 | 20.3 |
| 1984 | 18,000 | 20 | 1.10 | 0.14 | 20.5 |
| 1985 | 78,300 | 0 | 0.00 | 0.00 | -- |
| 1986 | 88,200 | 1 | 0.01 | 0.00 | 22.4 |
| 1987 | 83,700 | 9 | 0.11 | 0.00 | 21.5 |
| 1988 | 83,700 | 7 | 0.08 | 0.00 | 20.5 |
| 1989 | 83,700 | 17 | 0.20 | 0.00 | 21.5 |
| 1990 | 83,700 | 9 | 0.11 | 0.04 | 24.2 |
| 1991 | 83,700 | 29 | 0.50 | 0.04 | 21.9 |
| 1992 | 83,700 | 22 | 0.26 | 0.02 | 22.1 |
| 1993 | 83,700 | 40 | 0.48 | 0.04 | 21.7 |
| 1994 | 83,700 | 42 | 0.50 | 0.01 | 21.1 |
| 1995 | 83,700 | 30 | 0.36 | 0.06 | 22.3 |
| 1996 | | | No Sampling | | |
| 1997 | 83,700 | 30 | 0.36 | 0.13 | 22.5 |
| 1998 | 83,700 | 45 | 0.18 | 0.18 | 23.4 |
| 1999 | 83,700 | 41 | 0.50 | 0.07 | 21.4 |
| 2000 | 83,700 | 70 | 0.84 | 0.18 | 22.5 |
| 2001 | | | No Sampling | | |
| 2002 | 83,700 | 21 | 0.30 | -- | 22.7 |
| 2003 | 81,000 | 24 | 0.30 | 0.05 | 22.7 |
| 2004 | 83,700 | 9 | 0.11 | 0.04 | 23.0 |
| 2005 | 83,700 | 20 | 0.24 | 0.08 | 24.1 |
| 2006 | 83,700 | 20 | 0.24 | 0.03 | 22.4 |

Table 9. Catch data of siscowet lake trout from WI-1, 1987-2006. Nets were set for three nights from 1987-2000 and for one night since 2002.

| Year | Effort (feet) | Sample Size | Fish/1000 ft | CPUE > 25" | Mean Length (in) |
|------|---------------|-------------|--------------|------------|------------------|
| 1987 | 17,100 | 1 | 0.06 | 0.00 | 17.6 |
| 1988 | 17,100 | 1 | 0.06 | 0.00 | 20.0 |
| 1989 | 17,100 | 0 | 0.00 | 0.00 | -- |
| 1990 | 17,100 | 2 | 0.12 | 0.06 | 22.9 |
| 1991 | 17,100 | 6 | 0.35 | 0.06 | 20.6 |
| 1992 | 17,100 | 1 | 0.06 | 0.06 | 27.8 |
| 1993 | 17,100 | 16 | 0.94 | 0.00 | -- |
| 1994 | 17,100 | 1 | 0.06 | 0.00 | -- |
| 1995 | 17,100 | 1 | 0.06 | 0.00 | 20.7 |
| 1996 | | | No Sampling | | |
| 1997 | 17,100 | 8 | 0.47 | 0.23 | 25.5 |
| 1998 | 17,100 | 31 | 1.8 | 0.82 | 22.8 |
| 1999 | 17,100 | 14 | 0.82 | 0.11 | 20.8 |
| 2000 | 17,100 | 6 | 0.35 | 0.12 | 23.2 |
| 2001 | | | No Sampling | | |
| 2002 | 14,400 | 1 | 0.1 | 0.00 | 17.5 |
| 2003 | 14,400 | 8 | 0.55 | 0.35 | 26.2 |
| 2004 | 14,400 | 2 | 0.14 | 0.00 | 21.9 |
| 2005 | 14,400 | 3 | 0.21 | 0.00 | 18.3 |
| 2006 | 14,400 | 2 | 0.14 | 0.07 | 23.5 |

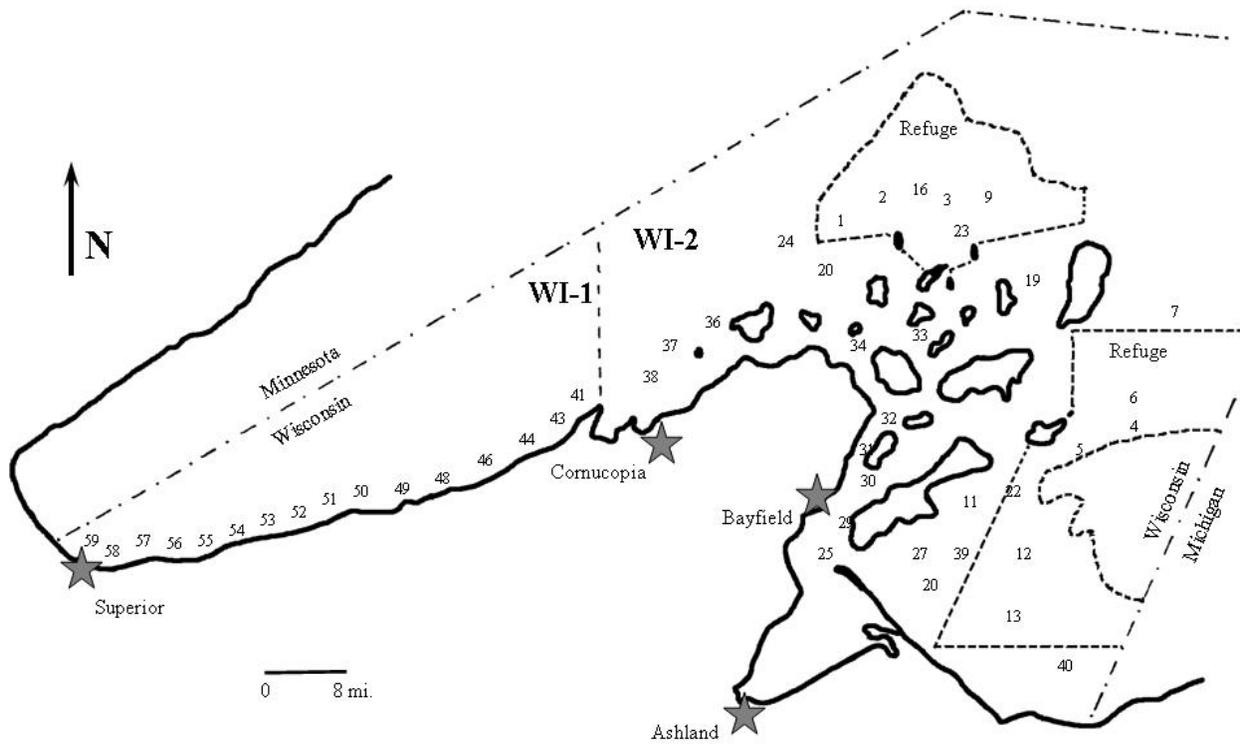


Figure 1. Gill net sites for spring lake trout assessment in the Wisconsin waters of Lake Superior, 2006. Wisconsin waters are divided into two management regions, WI-1 and WI-2.

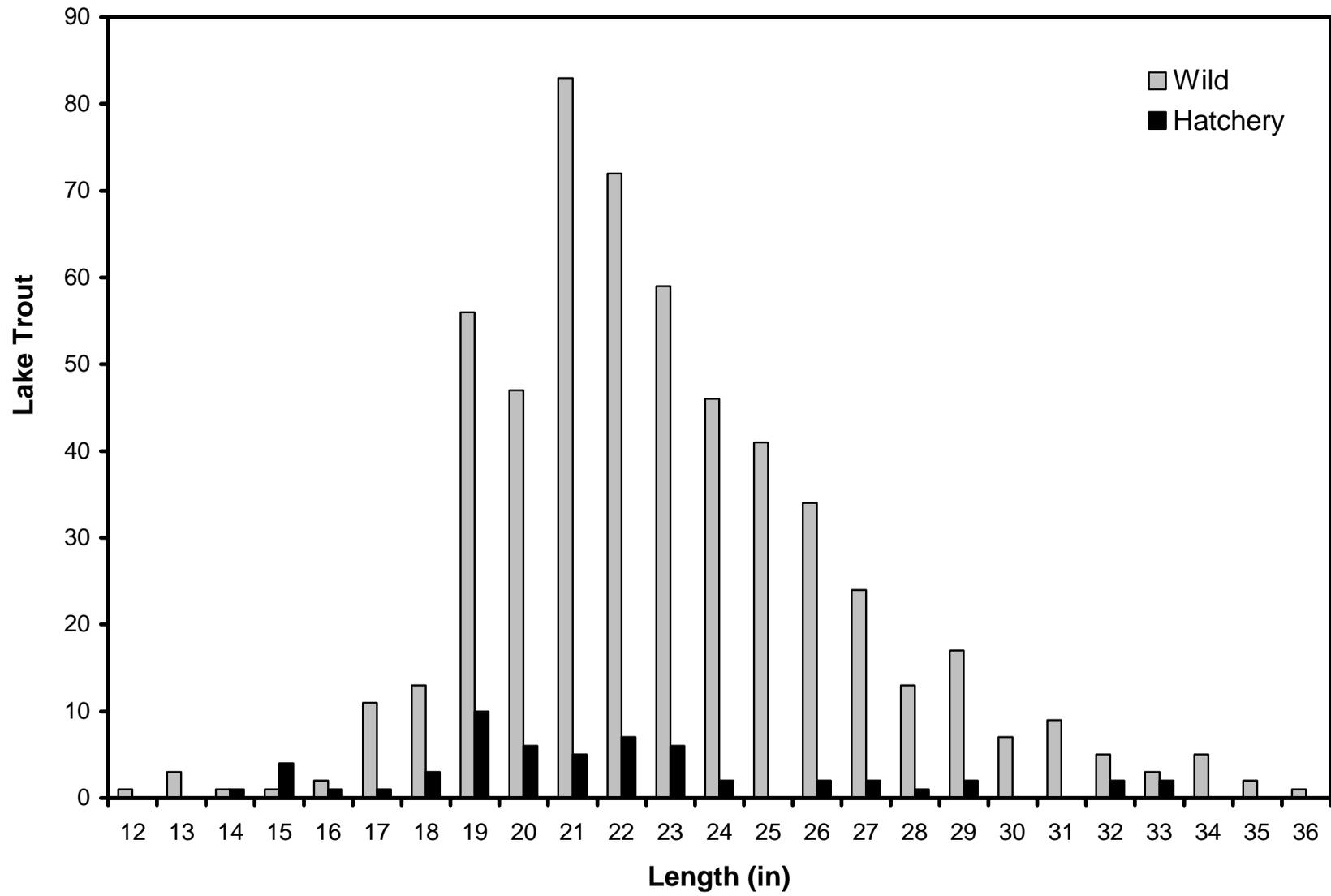


Figure 2. Length distribution of wild and hatchery lake trout caught in WI-2, 2006.

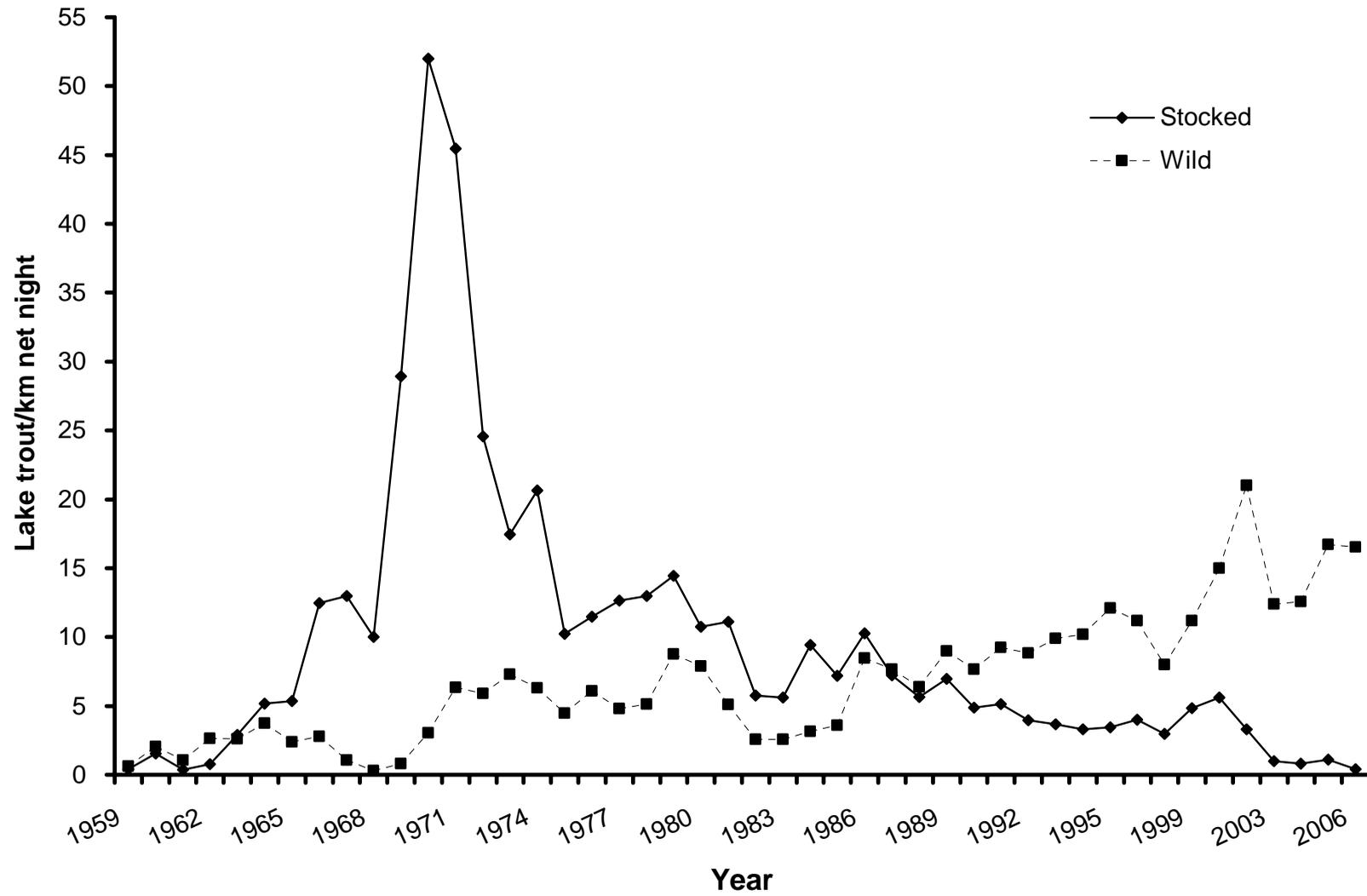


Figure 3. Geometric mean catch-per-unit-effort of wild and hatchery lake trout in WI-2, 1959-2006. Lake trout were not sampled in 1996 and 2001.

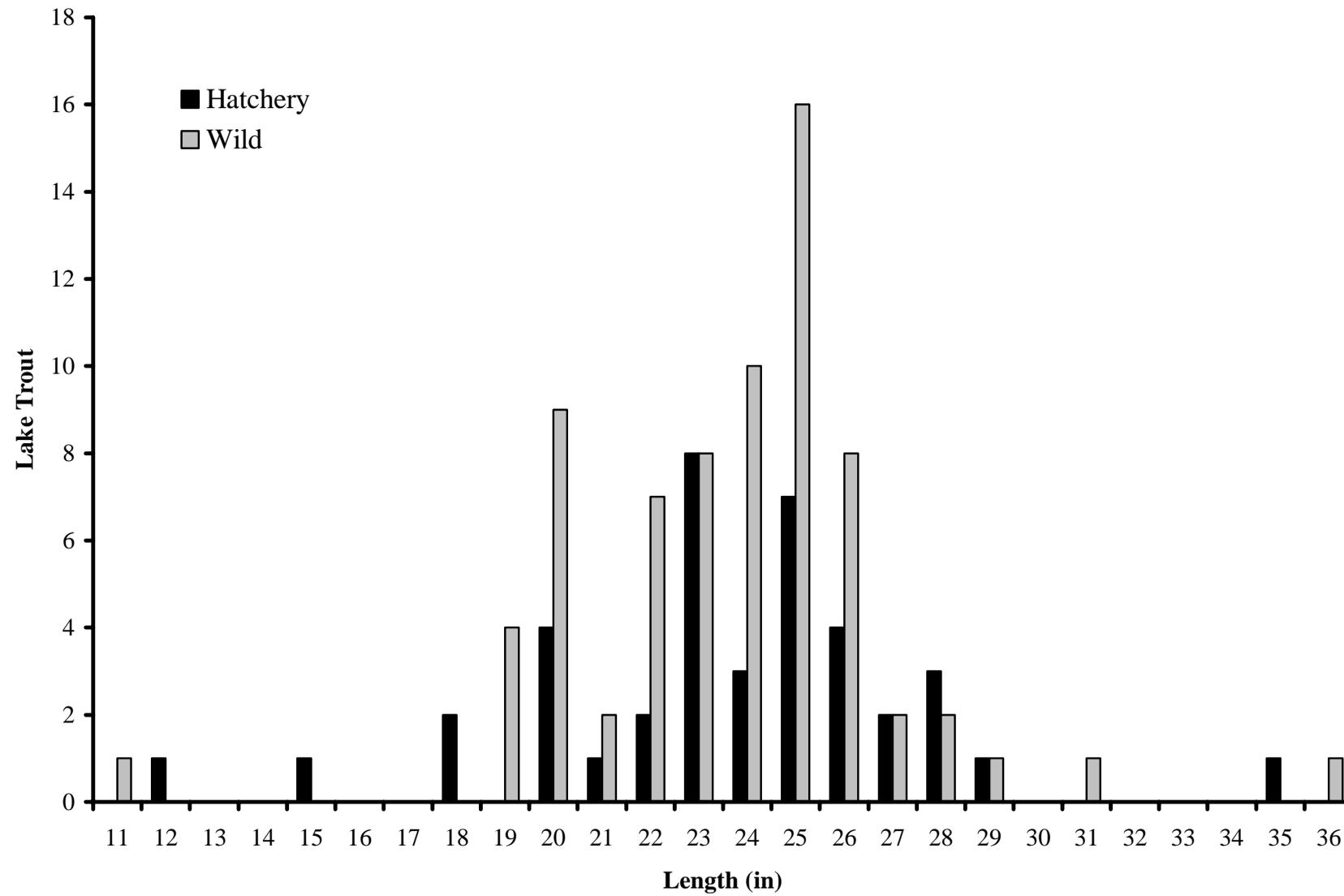


Figure 4. Length distribution of wild and hatchery lake trout caught in WI-1, 2006.

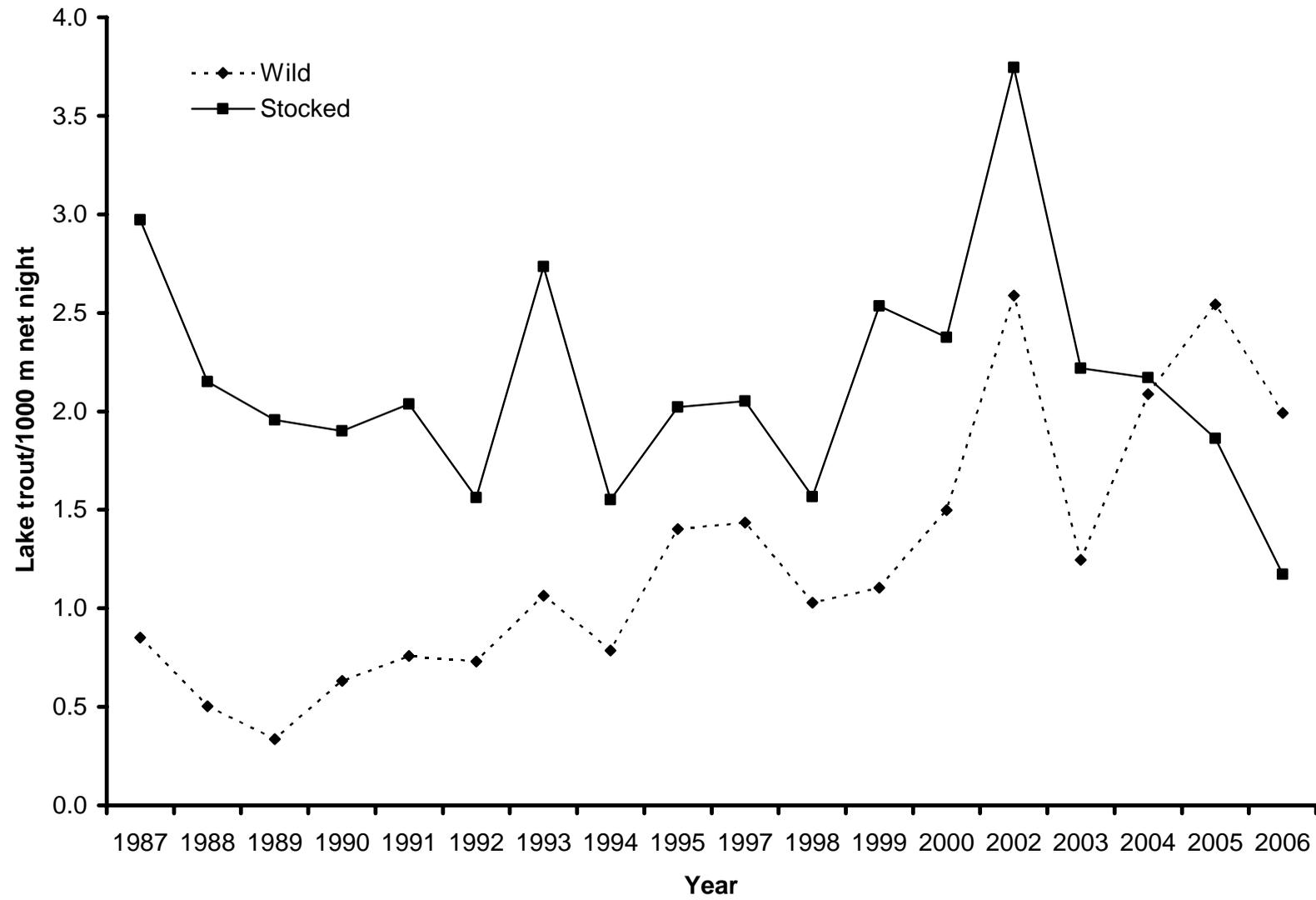


Figure 5. Geometric mean catch-per-unit-effort of wild and hatchery lake trout in WI-1, 1987-2006. Lake trout were not sampled in 1996 and 2001.

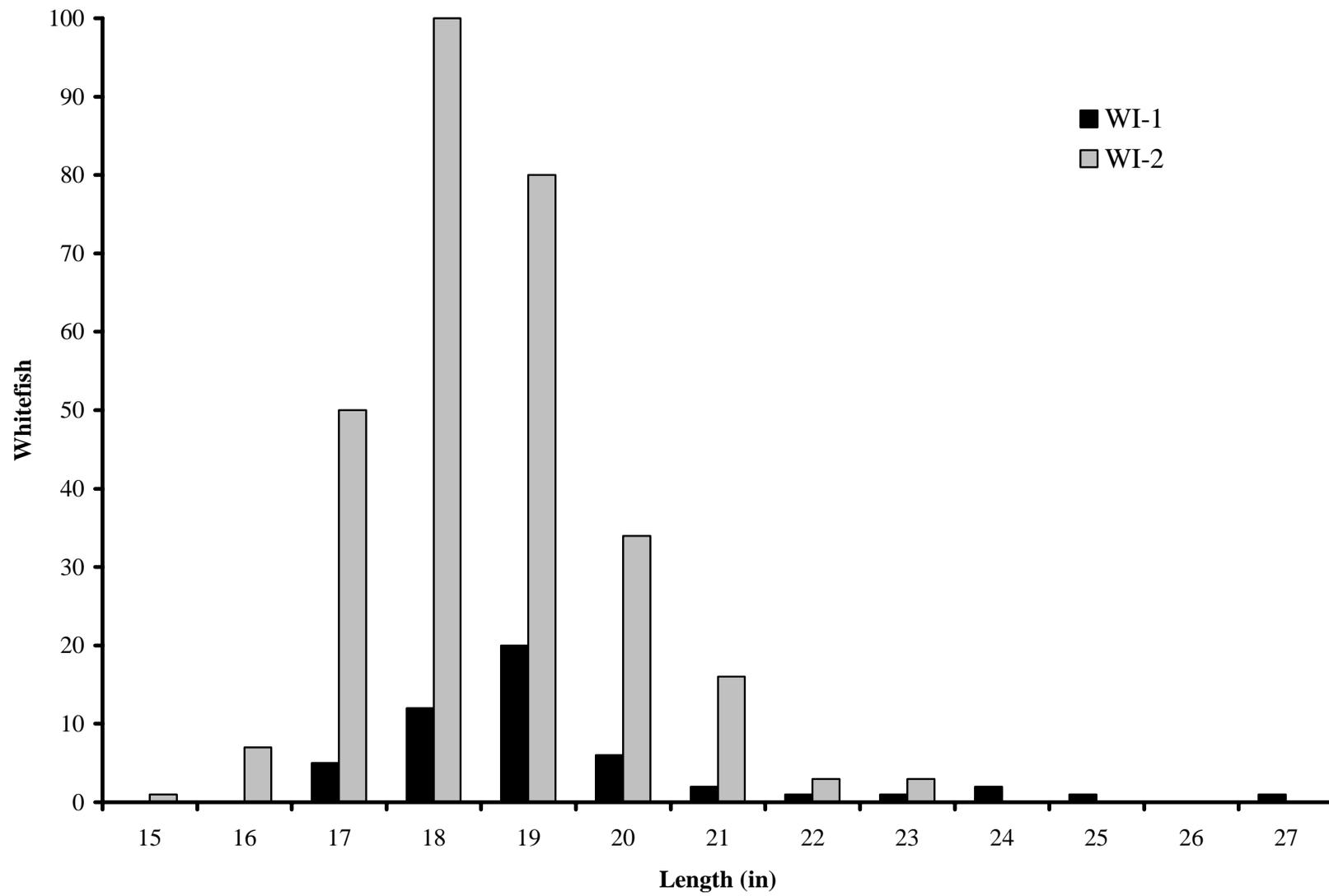


Figure 6. Length distribution of whitefish captured in Wisconsin waters of Lake Superior, 2006.

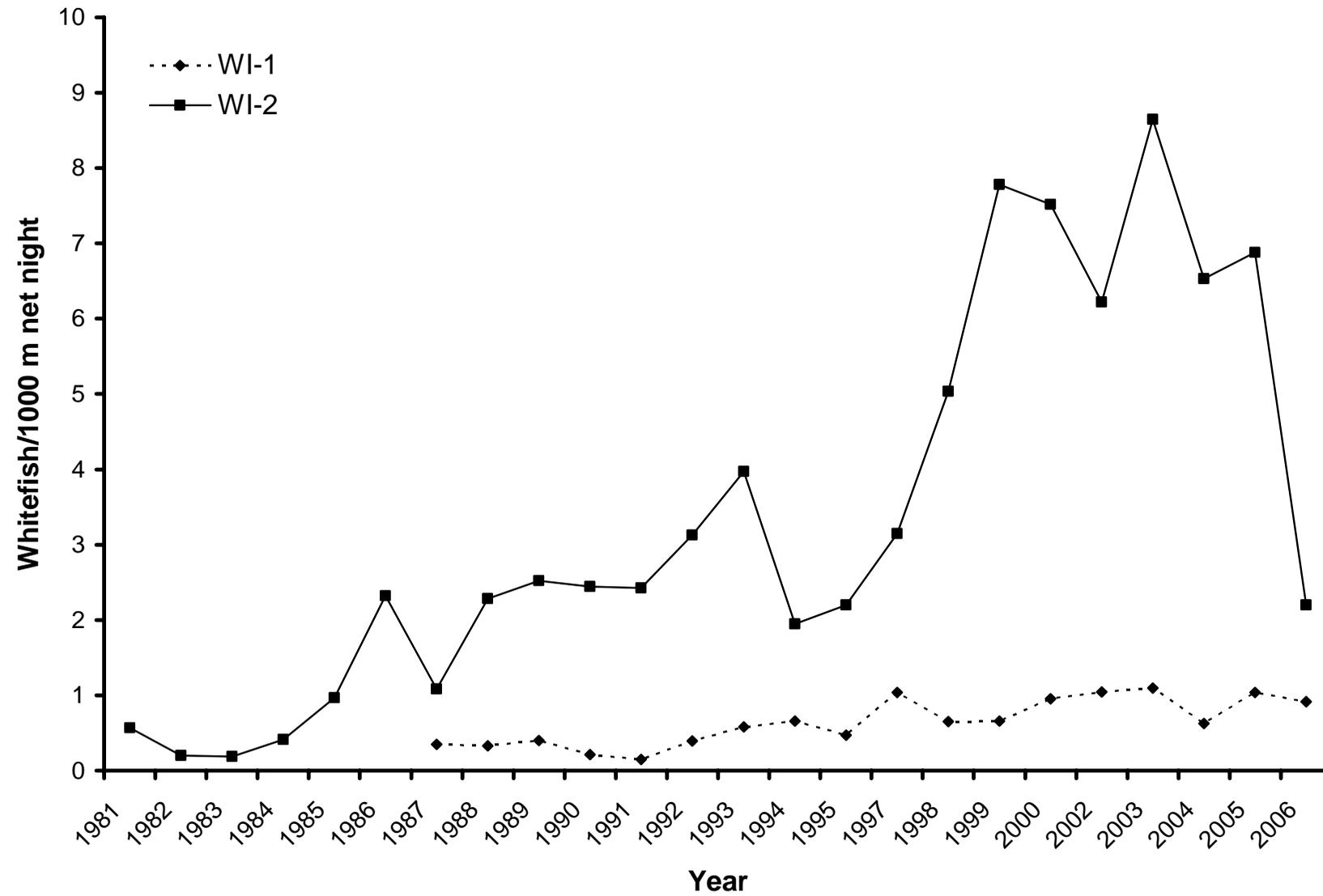


Figure 7. Geometric catch-per-unit-effort of whitefish in Wisconsin waters of Lake Superior, 1981-2006.