# Nearshore fish communities of the mid-Hudson River estuary, 1985-2005 

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#### Abstract

In the 2005, 221 seine hauls were completed in the young-of-the-year (YOY) striped bass survey in the Hudson River. A total of 7,727 YOY striped bass were captured, resulting in a geometric mean catch per unit effort (CPUE) of 10.26 fish/haul. The Hudson River index of YOY striped bass abundance, based on the geometric mean CPUE of the 6-week survey, was 8.48 fish/haul. This catch rate was lower than the average historical geometric mean CPUE of 13.87 fish/haul. YOY striped bass grew at an estimated $0.59 \mathrm{~mm} /$ day between mid-July and the beginning of September. Catches of American eel, bluefish, winter flounder, and tomcod were the lowest recorded within the historical records, while catches of YOY white perch and American shad were equivalent to historical lows. Silversides were the most abundant fish, followed by blueback herring and striped bass. Air and water temperatures during the survey were near the historical average. Salinity was below normal from weeks 7-9.


## Introduction

The striped bass (Morone saxatilis) is an anadromous species spawning in large river systems. Its native range extends from the St. Lawrence River, Nova Scotia, Canada to the St. Johns River, Florida (Scott and Scott 1988). Spawning occurs in the region above the salt wedge in the spring when river temperatures rise above $12{ }^{\circ} \mathrm{C}$. The semi-buoyant eggs and larvae drift down into the low salinity regions of the estuary. During the first summer of life, Hudson River striped bass reside in nearshore regions throughout the estuary and in coastal marine embayments (Boreman et al. 1988; McKown and Gelardi 2000). In the autumn, striped bass migrate to higher salinities in the lower estuary, the only known concentration area for overwintering YOY fish (Dovel 1992). Striped bass were introduced to the Pacific coast in the late 1800's, where several sustaining populations have become established. Striped bass have also been introduced as a sport fish into reservoirs throughout the southern United States (Smith 1985).

Historically, this species has supported important commercial and recreational fisheries along the east coast of North America (Merriman 1941; Boreman and Austin 1985). Catches in the coast-wide commercial fishery reached a peak in 1973 at 5.98 metric tons (mt), declining rapidly thereafter to below $2 \mathrm{mt} /$ year by the late 1970's (NMFS 1999). The Atlantic States Marine Fisheries Commission implemented a management strategy aimed at protecting the last successful year class (1982) in the Chesapeake Bay from harvest. Moratoria on commercial harvest of striped bass were issued for Maryland and Delaware waters. Following a strong recruitment event into the Chesapeake Bay population in 1989, a limited fishery was reestablished. Continued improvement in recruitment to the Chesapeake Bay population has allowed increases in harvest levels in recent years (Richards and Rago 1999). The commercial fishery in the Hudson River was closed, and recreational harvest restricted in 1976 due to concerns over high levels of poly-chlorinated biphenols (PCBs) in fish flesh. The commercial fishery within the Hudson River, remains closed (NMFS 1999). Since the late 1970's improvements in water quality in the Delaware River have allowed the increased production of striped bass in that system (Weisberg et al. 1996). Recent estimates indicate that Chesapeake Bay populations contribute $75 \%$ of the coast-wide stock, with the Hudson River and Delaware

Bay contributing 15 and $10 \%$ respectively (K. McKown, NYS DEC, personal communication).
Indices of the abundance of early life stages of striped bass, to monitor annual recruitment patterns, have been developed for several east coast populations, including the main tributaries to the Chesapeake Bay and the Hudson River (Goodyear 1985; McKown 1991; Heimbuch et al. 1992). The use of these indices as predictors of future population size is based on the assumption that recruitment level is determined prior to the life-stage surveyed (Bradford 1992). Goodyear (1985) validated the Maryland Department of Natural Resources YOY index based on its relationship to fishery harvests when those year-classes entered the fishery. Based on this result, a number of studies have been conducted to determine the factors regulating survival during the larval phase in the Chesapeake Bay population (Uphoff 1989; Secor and Houde 1995; McGovern and Olney 1996). The index of YOY abundance in the Hudson River population was correlated with the abundance of age- 1 fish, indicating its utility in predicting recruitment (McKown 1991). A more recent analysis, which incorporates a longer time series, found that the abundance of age- 1 fish was more closely related to the severity of winter than to the abundance of YOY fish in the previous summer (Hurst and Conover 1998). Mortality of over-wintering YOY striped bass in the Hudson River and Miramichi populations has been shown to be size-selective against smaller fish (Bradford and Chaput 1997; Hurst and Conover 1998). These analyses suggest that the first winter of life may play an important role in the recruitment dynamics of these northern populations.

Here we present the results of the 2005 young-of-the-year survey for the Hudson River population of striped bass and compare the results to previous years. We also include catch data on all species captured during the survey, and detailed catch data, including size-distributions, for a number of resource species.

## Methods

The survey is conducted between mid-July and early November in the HaverstrawTappan Zee region of the Hudson River (river miles 23-42; Figure 1). Within this stretch of river, 25 sites are sampled bi-weekly, 9 times. The 25 sites sampled during each bi-weekly
survey, are chosen from 36 potential fixed stations based on prevailing conditions (wind direction, speed and tide stage). Prior to 1985, stations were sampled 6 times between late August and early November. A subset of data from 1985 to 2005, covering the same period, is used to compare with data from 1980 to 1984.

Fish collections are made with a 200 foot x 10 foot ( 12 foot depth in the bag) beach seine with $1 / 4$ inch square mesh in the wings and $3 / 16$ inch square mesh in the bag ( $61 \mathrm{~m} \times 3 \mathrm{~m}$ with 6 mm wing mesh and 5 mm bag mesh), set by boat. The performance of the sampling gear and representation of the catch was rated for each set of the gear. Following each collection, measurements of air temperature, water temperature, dissolved oxygen, and salinity were made in the immediate vicinity of the gear set, using a YSI Model 85 probe. Environmental parameters such as wind direction and speed, tidal stage, wave height, cloud cover, and precipitation were recorded. The types of any aquatic vegetation in the vicinity of the sampling site were recorded and the spatial coverage of vegetation at the site was estimated. While some sites were generally sampled at a particular tidal stage or time of day, due to accessibility, others were sampled at all tidal stages and times of day.

All fish captured were sorted by species (where feasible young-of-the-year fish were counted separately from older fish) counted and returned to the water. In the case of extremely high catch rates, a volumetric sub-sampling procedure was used to estimate catches of individual species. Young-of-the-year and older blue crabs were the only invertebrates counted. The occurrence of shrimp and gelatinous zooplankton captured in each set of the net was noted, with a visual estimate of abundance. Up to 50 YOY striped bass, and all older striped bass, were measured from each haul. In addition, up to 30 individuals each of bluefish, crevalle jack, weakfish, summer flounder, winter flounder, Atlantic tomcod, American eel, American shad, alewife, blueback herring, and Atlantic menhaden were measured (mm TL) from each collection. Atlantic silversides and YOY white perch were measured periodically throughout sampling. All measurements were made in the field and fish were returned to the water at the site of capture.

Scales were removed from above the lateral line between the first and second dorsal fins, from all striped bass larger than 110 mm TL. These scales were pressed into acetate at $180^{\circ} \mathrm{C}$ and $2000 \mathrm{lbs} . /$ foot $^{2}$. The age of all fish larger than 110 mm was determined by visual analysis of the acetate impression of multiple scales, under magnification.

All captured striped bass larger than 170 mm TL were tagged as part of the United States Fish and Wildlife Service coast-wide tagging program. Tags were individually numbered floy type tags with $6.5 \times 19.25 \mathrm{~mm}$ oval anchor and 91 mm streamer. A few scales were removed from the fish, half way between the pectoral and anal fin, an incision was made through the body wall, and the tag anchor was inserted into the body cavity.

## Results and Discussion

During the 2005 sampling season, 9 sampling trips were conducted between July 11th and November 9th. During this sampling, a total of 50,250 fish were collected. This was about 17,000 more fish than the previous year, and 14,000 more fish than 2003. Also, we caught 314 compared to 220 blue crabs in 2004. Of the 50,250 fish caught 7,727 were young-of-the-year striped bass and only 22 were older striped bass. In total, 221 beach seine samples were collected in 2005.

## Environmental conditions

Weekly average water temperatures increased in the first three weeks of the sampling season, with a high of $28.59^{\circ} \mathrm{C}$ on August 8 (Table 1; Figure 2). Water temperatures after the third week declined throughout the sampling season with a low of $11.33^{\circ} \mathrm{C}$ on November 9 (Table 1 ; Figure 2). Air temperatures also generally decreased during the sampling season, ranging from 30.29 to $9.29^{\circ} \mathrm{C}$. Both air and water temperatures followed the historical averages (Table 1; Figure 2). Salinity in the Lower Hudson River started out on July $11^{\text {th }}$ near the historic average of 5.4 ppt , with an average of 3.5 ppt . Salinity subsequently remained near the historic average for the first 6 weeks of sampling where it declined suddenly in week 7, where the lowest salinity of 0.8 ppt was recorded after a significant rainfall event. Salinity remained lower than historical averages through weeks 8 and week 9 (Table 1; Figure 2). The significant rainfall event also caused us to reschedule a sampling trip the week of October 3. Weekly average of dissolved oxygen levels ranged between 6.20 and $8.22 \mathrm{mg} / \mathrm{L}$ throughout the sampling season, and did not show any distinct seasonal pattern. Air temperatures in week one were not recorded
due to a broken thermometer. Also in week 8, a malfunctioning YSI meter allowed only a few measurements of water temperature and salinity before becoming inoperable. No dissolved oxygen readings were taken in week 8.

## Species composition

Thirty-seven different species of fish were captured in the Hudson River during the 2005 sampling season. Fish catches varied throughout the sampling period without a seasonal trend. Catches peaked in sampling week 3 (August 8) with 8,058 fish and week 5 (September 7) with 7,971 fish. The large catch from sampling week 3 was dominated by silversides and bay anchovies, while the catch from sampling week 5 was dominated by silversides and striped bass. The lowest catches were observed in sampling weeks 9 (November 9) and 1 (July 11) with 1,923 and 2,179 fish caught in those sampling weeks respectively. Silversides $(23,397)$, blueback herring (9,671 fish), and striped bass (7,749 fish) were the most abundant species in 2005. Catch composition during the 2005 sampling season is compared to historical catch composition in Tables 3, 4, and 5. Detailed catch information on selected species is presented below.

## Striped bass, Morone saxatilis

During the 2005 sampling season 7,727 YOY striped bass were captured in 221 hauls, with a mean CPUE of 34.96 and a geometric mean CPUE of 10.26 (Table 6). Between 1980 and 1985, catch data was collected in a period corresponding to the last 6 weeks of the 2005 sampling season. In order to compare 2005 catch data with results obtained previous to 1985 , the statistics on the final 6 weeks of catch data for 2005 is presented in Table 6 together with historical records. In the final six weeks, 5,181 YOY striped bass were captured in 148 hauls, resulting in a mean CPUE of 35.01 and a geometric mean CPUE of 8.48 (Figure 3). The 6-week geometric mean CPUE, used as the young-of-the-year striped bass index of relative abundance, was low in 2005 compared to previous years. It was much lower than the historical average of 13.87. The 20059 -sampling week geometric mean of 10.26 was also much lower than the historical average of 19.84 (Table 6).

Catch-per-unit-effort of YOY striped bass peaked during the fifth week of the survey at 86.4 fish/haul, where after the CPUE declined throughout the remaining sampling season. The
lowest catch rate of 4.44 fish/haul was reached during the final week of the survey. This year's catch rate peaked late in the sampling season (week 5). This is similar to 2001, 2002 and 2004, where catch rates peaked in week 4 and 5 respectively. In 2003 CPUE peaked as early as week 2. Catch patterns similar to that of 2001, 2002, 2004 and 2005 with peak catch rates in week 4 or 5 of the survey, were also observed in 1987, 1997, and 1999. The reason for the late peak in catch rate observed during some years is unknown. It has been hypothesized that YOY striped bass, recruiting to the western Long Island bays early in the summer migrate back to the Hudson River nursery area later in the year. However, when comparing catch records in the western Long Island bays and the Hudson River, this hypothesis is not supported by observations. Only after 2001 have YOY striped bass been observed in sufficient numbers from the Western Long Island Beach Seine Survey to potentially affect the abundance of striped bass in the Hudson River survey. Furthermore, years of high abundance recorded in western Long Island bays does not correspond to the years in the Hudson River with peak catch rates occurring late in the year (Brischler, 2004).

Catch-per-unit-effort of YOY striped bass varied considerably across sites in 2005 (Table 7). The sites with the highest CPUE (>50 fish/haul) were on the most northerly station (7EW) and most southerly station (18E) on the East side of the river. Station 9W, had the lowest catch rates ( 5.2 fish/haul, Table 7). The distribution of catch among sites observed in 2005, was generally consistent with previous years. Annual catch-per-unit-effort data for the full 9-week survey and the 6 -week subset, are shown in Tables 8 and 9.

Total length measurements were made on 3,963 YOY striped bass during the 9 -week survey. Striped bass ranged in size from 22 to 163 mm . The bi-weekly size-frequency distributions of YOY striped bass are shown in Table 10. Mean bi-weekly lengths of YOY striped bass, captured during the 2005 sampling season are compared to previous years in Table 11. Mean lengths of measured fish increased through the first five sampling weeks, and were relatively stable thereafter (Figure 4). The apparent cessation of growth in YOY striped bass, based on observed fish lengths has been observed in most years of the study, and may in part be due to a size-dependent emigration from the nursery area to the lower estuarine wintering grounds. The alternative explanation is that growth ceases because of limited availability of food. Growth rate of YOY striped bass in the 2005 cohort, estimated from the regression of mean
total length against date, was $0.58 \mathrm{~mm} /$ day through the first 5 weeks of the survey. This is in the lower range of the mean growth rates observed. Annual cohort growth rates ranged from 0.45 $\mathrm{mm} /$ day in 1990 to $0.72 \mathrm{~mm} /$ day in 1995. In an analysis of historical data, Hurst (2000) found that body sizes of YOY striped bass in August and October were negatively related to density in the nursery area suggesting density dependent growth.

The age composition of striped bass captured between 1985 and 2005 is shown in Table 12. During the 9 -week survey, 22 striped bass aged 1 to 2 were captured and ranged in length from 117-200 mm TL (Table 13). Older striped bass were most abundant at site 7W where CPUE was 0.6 (Table 14). Four of the yearling striped bass, ranging in length from 170 to 200 mm , were tagged with internal anchor tags as part of the United States Fish and Wildlife Service coast-wide tagging program.

## White perch, Morone americana

In 2005, only 736 white perch were captured. White perch were classified as either young-of-the-year or older, based on observed size-distribution among the catch. Of the white perch captured, 419 were YOY and 317 were age- 1 or older. Young-of-the-year white perch were most abundant at sites 8E (Table 15). Catch-per-unit-effort of YOY white perch was highest in week 5 ( 7.48 fish per haul), and lowest in week 2 ( 0.04 fish per haul). Older white perch were most abundant at site 16 WN (Table 16). During the sampling season catch-per-uniteffort of older white perch was highest in week 2 ( 5.42 fish per haul) and lowest in weeks 6 and 7 which yielded one fish from 25 hauls (Table 16). Catches remained low within weeks 8 ( 0.25 fish per haul) and 9 (0.12 fish per haul) (Table 16).

Through the entire study period, the highest mean catch rates of YOY white perch were 75.75 fish per haul in 1988 and 37.89 fish per haul in 1986 (Figure 5). Catch rates of less than 2 fish per haul occurred in 1995 and 1997. In 2005, mean catch rates of YOY white perch were 1.89 fish per haul. This catch rate is equivalent to historically low catch rates found from 1990 to 1998. The reasons for the low catch rates are unknown. Catch rate has slightly decreased from last year and are much lower than the catch rates observed prior to 2004 (Figure 5). Catch rates of older white perch went down in 2005 to 1.43 fish per haul, the lowest observed catch per unit effort since 1985 (Figure 5).

## Atlantic tomcod, Microgadus tomcod

During the 2005 sampling season, zero Atlantic tomcod were captured. This is the first sampling season where no Atlantic tomcod have been caught (Figure 5). However, the CPUE was also low in 1991, 1993, 1994, 1995, 1999 and 2002. In those years, catch rates were as low as 0.019 fish per haul. High catches of 2.64 and 2.30 fish per haul were observed in 1988 and 1998 respectively (Figure 5).

## American eel, Anguilla rostrata

In 2005, a total of 22 American eel were captured during sampling. The highest catch rate ( 4 fish) were observed at site 12 W (Table 19). The catch rate of 0.1 eels per haul was the lowest recorded catch per unit effort within the historical records (Figure 6). The highest catches ( 0.78 fish per haul) occurred in 1988. American eel ranged in length from 83 to 690 mm TL, with an overall mean length of 268.27 mm . The bi-weekly size-frequency distributions of American eel are shown in Table 20.

## Bluefish, Pomatomus saltatrix

In 2005, 145 YOY bluefish were captured. They were caught during the first 6 weeks of the survey (Table 21). The bluefish spring-spawned cohort was present in the catches from week 1 to week 6, while the summer-spawned cohort was first observed in week 4 and was present in the catches until week 6 (Table 22). The highest Bluefish CPUE was 4.3 fish/haul at station 8E. The mean CPUE was 0.656 fish per haul in 2005 (Table 21), this was the lowest CPUE on record. Catch rates of YOY bluefish have been declining since 2001 (Figure 6). CPUE in 2001 (4.14 fish per haul) was the $4^{\text {th }}$ highest CPUE effort recorded, CPUE in 2002, 2003, and 2004 were $2.9,1$, and 0.79 fish per haul, respectively (Figure 6.) The highest bluefish abundances ever observed was in 1999 (Figure 6) with a CPUE of 13.76 fish per haul. Bluefish captured in 2005 ranged in length from 55 to 226 mm TL (Table 22). Based on the size-frequency distributions (Table 22), spring spawned bluefish were more abundant than the summer spawned bluefish. The spring cohort is spawned in the South Atlantic Bight in March-April, and the summer cohort is spawned in the Mid-Atlantic Bight in June-July (Munch and Conover 2000).

## Winter flounder, Pleuronectes americanus

In 2005, a total of three winter flounder were caught during week 1. All three winter flounder were caught in the south eastern region of our sampling area, stations 17 E and 16 E , (Table 23.) This was the lowest CPUE ( 0.01 fish per haul) on record for the history of this survey (Figure 6). The previous historical extreme low CPUE ( 0.17 fish per haul) was observed in 1999 (Figure 6). The highest catch rates recorded were observed in 1985 with a CPUE of 2.52 fish per haul (Figure 6.) The winter flounder lengths were 31, 50, and 95 mm TL. The bi-weekly size-frequencies are shown in Table 24.

## American shad, Alosa sapidissima

In 2005, 147 American shad were captured. American shad were most abundant at site 8E (Table 25). Weekly CPUE of American shad was highest ( 3.83 fish per haul) in week 2 of sampling, which yielded more than half of the total catch. Historically, peak CPUE of American shad occurred most commonly in weeks 1-2 or 8-9. The CPUE of American shad in 2005 (0.67 fish per haul) was the second lowest CPUE recorded for American shad (Figure 7). The highest catch rate ( 22.3 fish per haul) was observed in 1986 while the lowest catch rate ( 0.439 fish per haul) was recorded in 1998 (Figure 7). American shad ranged from 29-98 mm TL, with a mean length of 88.33 mm (Table 26).

## Alewife, Alosa pseudoharengus, and Blueback herring, Alosa aestivalis

During the 2005 sampling, 478 alewife and 9,671 blueback herring were captured (Table 27 and 29). Alewife ranged in length from 41-96 mm TL, with a mean of 55.92 mm (Table 28). Blueback herring measured $30-108 \mathrm{~mm}$ TL with a mean length of 65.43 mm TL (Table 30). The mean CPUE of alewife and blueback herring were 2.16 and 43.76 fish per haul respectively (Table 27 and 29). Catches of blueback herring were significantly higher than the previous 5 years where low abundance levels have been observed (Figure 7).

## Atlantic menhaden, Brevoortia tyrannus

During the 2005 sampling, 1,280 Atlantic menhaden were captured with a mean CPUE of
5.79 fish per haul (Table 31, Figure 8). Measured Atlantic menhaden ranged from 24 to 133 mm TL with a mean of 83.27 mm TL (Table 32). High catches of Atlantic menhaden were caught in week 3 ( 619 fish) and week 7 ( 523 fish) (Table 31). Almost all of the Atlantic menhaden caught on the east side of the river in weeks 3 and 7 (Table 31.)

## Silverside species, Menidia sp.

During the 2005 sampling, 23,397 silversides were caught. The mean CPUE of 2005 was 105.87 fish per haul. This CPUE is higher than the previous two years and about the same as 2002 (Figure 8.) Atlantic silversides are the most common and were most abundant at site 17E, 11E, and 15 WS with catch rates higher than 300 fish per haul (Table 33). In 2005, 3637 silversides were measured and they ranged in length from 30 to 105 mm TL with a mean of 72 mm (Table 35). Annual catch rates of Atlantic silversides in the survey have been extremely variable, ranging from 7.9 fish per haul in 1989 to 191.9 fish per haul in 1994.

## Blue crab, Callinectes sapidus

During sampling in 2005, 314 blue crabs were captured. Of the total crabs captured 271 were YOY blue crabs while 43 were older blue crabs. YOY blue crabs were most abundant at sites 11 E and 17E while older blue crabs were most abundant at 12E and 18E (Tables 35 and 36). Catch rates peaked in weeks 6 and 4 for YOY and older blue crab respectively. Prior to 1998, no distinction was made between YOY and older crabs, so the time trend of catch rates is presented for the total numbers of blue crabs. Catch rate in 2005 was 1.42 crabs per haul, which is below the average of the 21 year time series. The 2005 catch rate was slightly higher than the catch rate of 0.90 crabs per haul recorded in the 2004 season and 0.779 crabs per haul recorded in the 2003 season (Figure 8).

## Conclusions

Catch composition during the 2005 Hudson River beach seine sampling season was generally consistent with previous years. The most abundant species were Silversides, blueback herring, and striped bass, although the abundance of striped bass was below those in recent years
with peak catches occurring in the fifth week of sampling. The 6 -week YOY striped bass index of relative abundance was 8.48 , which was lower than the historical average of 13.87 . Growth rates of YOY striped bass, based on length frequency progression, was $0.59 \mathrm{~mm} /$ day. Catches of American eel, bluefish, winter flounder, and tomcod were the lowest recorded within the historical records, while catches of YOY white perch and American shad were equivalent to historical lows. The Silverside spp. catch rate was above average and recovered from last 2 year's low catch level.

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| Dates | Air Temperature |  |  |  |  | H2O Temperature |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Week | Avg | Std | Min | Max | Avg | Std | Min | Max |
| Jul. 11 | 1 | ---------- | ----- | -------- | -------- | 27.00 | 1.14 | 25.00 | 29.70 |
| Jul. 25 | 2 | 30.29 | 4.69 | 23.00 | 37.00 | 27.44 | 1.07 | 24.00 | 28.90 |
| Aug. 8 | 3 | 29.18 | 2.79 | 26.00 | 36.00 | 28.59 | 0.84 | 27.50 | 30.10 |
| Aug. 22 | 4 | 30.42 | 2.93 | 24.00 | 35.00 | 28.21 | 2.47 | 26.10 | 38.80 |
| Sept. 7 | 5 | 27.30 | 4.78 | 18.40 | 36.10 | 26.22 | 1.05 | 24.70 | 28.10 |
| Sept. 19 | 6 | 25.18 | 3.56 | 18.00 | 30.10 | 25.91 | 1.11 | 24.00 | 27.40 |
| Oct. 19 | 7 | 18.90 | 4.00 | 10.40 | 24.70 | 15.96 | 0.49 | 15.00 | 16.80 |
| Oct. 27 | 8 | 9.50 | 1.59 | 7.00 | 12.00 | 12.03 | 0.66 | 10.10 | 12.70 |
| Nov. 9 | 9 | 9.12 | 1.72 | 6.0 | 11.0 | 11.33 | 0.32 | 11.0 | 11.7 |


| Dates | Week | Salinity |  |  |  | Dissolved Oxygen |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Avg | Std | Min | Max | Avg | Std | Min | Max |
| Jul. 11 | 1 | 3.52 | 1.09 | 2.1 | 5.9 | 7.20 | 1.42 | 4.7 | 10.9 |
| Jul. 25 | 2 | 4.90 | 1.85 | 2.80 | 9.40 | 8.16 | 1.59 | 6.00 | 12.00 |
| Aug. 8 | 3 | 6.11 | 1.52 | 4.60 | 10.00 | 7.12 | 1.18 | 4.98 | 10.09 |
| Aug. 22 | 4 | 7.94 | 0.45 | 5.50 | 12.50 | 8.08 | 1.38 | 6.50 | 13.23 |
| Sept. 7 | 5 | 6.84 | 1.93 | 4.60 | 11.10 | 6.20 | 1.25 | 4.90 | 11.18 |
| Sept. 19 | 6 | 7.66 | 1.36 | 5.20 | 10.00 | 7.29 | 3.93 | 4.74 | 24.80 |
| Oct. 19 | 7 | 0.16 | 0.08 | 0.01 | 0.30 | 7.80 | 1.77 | 6.65 | 16.13 |
| Oct. 27 | 8 | 0.78 | 0.53 | 0.2 | 1.7 | 8.22 | 0.57 | 7.30 | 9.29 |
| Nov. 9 | 9 | 1.03 | 0.76 | 0.2 | 2.2 | ----------- | --------- | ------- | -------- |


| Mean Air Temperature (deg. C) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Week | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| 1 | 28.7 | 27.9 | 30.4 | 28.7 | 23.6 | 27.4 | 27.4 | 22.2 | 28.4 | 24.6 | 27.9 | 24.1 | 24.0 | 30.1 | 28.2 | 28.2 |  | 31.3 | 27.9 | 26.5 |  |
| 2 | 29.3 | 26.8 | 31.4 | 28.0 | 33.0 | 25.3 | 22.8 | 23.1 | 27.6 | 27.7 | 30.3 | 27.0 | 28.2 | 27.6 | 26.1 | 31.7 | 26.9 | 33.9 | 25.0 | 26.5 | 30.3 |
| 3 |  | 24.2 | 28.2 | 31.1 | 24.5 | 22.5 | 22.6 | 23.2 | 24.0 | 23.6 | 26.8 | 26.2 | 29.3 | 26.4 | 27.0 | 26.5 | 28.4 | 31.2 | 30.7 | 23.9 | 29.2 |
| 4 | 25.0 | 24.1 | 22.1 | 20.5 | 24.7 | 23.4 | 20.6 | 19.0 | 25.4 | 20.0 | 24.4 | 27.1 | 24.7 | 27.1 | 25.1 | 25.1 | 25.2 | 27.9 | 15.0 | 22.2 | 30.1 |
| 5 | 21.4 | 23.0 | 24.8 | 21.7 | 19.7 | 27.4 | 16.4 | 21.0 | 20.8 | 20.2 | 20.2 | 16.2 | 20.8 | 23.4 | 22.2 | 20.3 | 24.5 | 28.2 | 22.6 | 21.2 | 27.3 |
| 6 | 17.6 | 23.0 | 22.1 | 24.1 | 22.0 | 20.8 | 16.9 | 10.8 | 13.2 | 16.5 | 16.8 | 17.9 | 18.5 | 25.8 | 20.2 | 20.6 | 18.0 | 21.7 | 13.8 | 20.6 | 25.2 |
| 7 | 18.9 | 20.0 | 15.7 | 15.2 | 18.3 | 19.9 | 9.2 | 10.2 | 13.9 | 12.6 | 15.6 | 18.9 | 23.2 | 14.7 | 15.5 | 13.7 | 12.2 | 15.6 | 15.1 | 14.8 | 18.9 |
| 8 | 13.3 | 16.7 | 13.4 | 13.5 | 14.1 | 15.8 | 4.6 | 9.9 | 13.0 | 12.9 | 11.8 | 13.1 | 14.3 | 14.4 | 12.9 | 13.0 | 20.0 | 8.2 | 11.2 | 14.6 | 9.5 |
| 9 | 13.1 | 4.4 | 11.0 | 11.5 | 13.8 | 12.5 | 8.2 | 5.6 | 7.1 | 16.2 | 3.6 | 9.1 | 14.4 | 9.2 | 12.2 | 6.1 | 9.9 | 7.5 | 3.8 | 10.3 | 9.1 |

Mean Water Temperature (deg. C)

| Week | 1985 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 1996 | 1997 | 1998 | 19 | 2000 | 2001 | 2002 | 2003 | 4 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 26.5 | 25.2 | 28.0 | 26.5 | 24.3 | 27.2 | 28.0 | 25.5 | 26.9 | 27.9 | 26.9 | 24.0 | 24.5 | 25.1 | 28.5 | 24.6 | 26.0 | 26.0 | 26.8 | 26.0 | 27.0 |
| 2 | 27.0 | 26.1 | 28.4 | 26.9 | 27.2 | 26.3 | 26.4 | 24.5 | 26.7 | 29.7 | 29.4 | 26.4 | 25.8 | 26.5 | 27.6 | 27.0 | 27.2 | 27.5 | 27.0 | 26.8 | 27.4 |
| 3 | 27.9 | 25.4 | 28.4 | 27.4 | 25.5 | 25.8 | 25.0 | 24.0 | 26.1 | 28.0 | 28.0 | 25.8 | 25.8 | 26.5 | 27.5 | 23.8 | 27.9 | 27.4 | 28.5 | 26.4 | 28.6 |
| 4 | 25.6 | 23.9 | 23.6 | 22.2 | 25.2 | 25.4 | 24.7 | 23.4 | 26.0 | 25.3 | 25.4 | 26.3 | 24.0 | 26.8 | 24.8 | 23.3 | 27.0 | 26.8 | 23.6 | 25.5 | 27.6 |
| 5 | 22.3 | 22.6 | 24.0 | 21.5 | 23.6 | 24.5 | 21.1 | 23.0 | 25.3 | 21.1 | 23.0 | 20.8 | 23.0 | 20.4 | 24.7 | 19.6 | 25.1 | 25.0 | 23.7 | 21.4 | 26.2 |
| 6 | 19.8 | 21.5 | 21.1 | 22.0 | 22.1 | 19.6 | 19.5 | 16.5 | 18.5 | 21.7 | 20.3 | 20.6 | 20.9 | 25.1 | 20.4 | 19.5 | 20.5 | 23.1 | 20.6 | 20.2 | 25.9 |
| 7 | 19.0 | 19.1 | 14.4 | 17.7 | 17.4 | 18.8 | 15.1 | 13.9 | 17.2 | 18.1 | 19.8 | 15.9 | 20.1 | 19.0 | 15.5 | 16.1 | 14.4 | 20.1 | 18.1 | 15.6 | 16.0 |
| 8 | 15.6 | 15.9 | 13.2 | 14.0 | 16.4 | 18.2 | 12.3 | 12.6 | 14.9 | 16.5 | 17.2 | 11.5 | 13.2 | 16.0 | 13.8 | 12.1 | 17.6 | 15.6 | 14.1 | 14.6 | 12.0 |
| 9 | 13.7 | 11.5 | 9.6 | 11.0 | 13.4 | 13.7 | 10.0 | 10.0 | 11.3 | 16.2 | 12.7 | 8.1 | 13.8 | 11.6 | 11.8 | 8.8 | 12.3 | 11.0 | 9.5 | 9.3 | 11.3 |

## Mean Salinity (ppt)

| Week | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 5.8 | 4.5 | 6.0 | 7.4 | 4.4 | 11.9 | 7.5 | 3.0 | 6.2 | 6.0 | 5.6 | 0.6 | 6.1 | 4.0 | 5.1 | 1.6 | 4.2 | 8.3 | 3.9 | 6.5 | 3.5 |
| 2 | 4.5 | 4.8 | 6.8 | 6.5 | 7.4 | 5.8 | 8.4 | 3.9 | 9.3 | 3.9 | 5.5 | 2.2 | 6.7 | 3.3 | 8.6 | 1.2 | 7.1 | 8.0 | 3.7 | 2.6 | 4.9 |
| 3 | 3.7 | 2.6 | 7.2 | 6.1 | 5.9 | 4.9 | 7.7 | 0.8 | 6.1 | 7.0 | 6.2 | 4.2 | 5.3 | 6.8 | 8.1 | 2.0 | 7.5 | 9.7 | 1.1 | 1.3 | 6.1 |
| 4 | 3.9 | 2.5 | 6.9 | 6.3 | 8.6 | 3.4 | 7.8 | 4.7 | 6.9 | 3.9 | 8.8 | 3.7 | 7.2 | 4.8 | 9.6 | 1.7 | 8.5 | 9.5 | 5.9 | 0.7 | 7.7 |
| 5 | 7.1 |  | 4.5 | 5.8 | 7.1 | 6.7 | 8.1 | 5.8 | 5.1 | 6.2 | 9.1 | 4.7 | 6.9 | 7.9 | 8.6 | 3.5 | 9.0 | 10.9 | 3.2 | 0.4 | 6.8 |
| 6 | 6.0 | 4.3 | 3.8 | 5.0 | 7.4 | 5.1 | 6.4 | 6.3 | 4.4 | 5.5 | 9.6 | 2.6 | 6.2 | 6.3 | 1.5 | 2.9 | 8.3 | 9.2 | 1.6 | 0.2 | 7.7 |
| 7 | 2.6 | 5.0 | 3.5 | 5.0 | 3.2 | 6.0 | 6.8 | 5.1 | 4.5 | 4.0 | 8.0 | 5.3 | 6.6 | 5.6 | 3.3 | 6.7 | 9.6 | 8.7 | 1.7 | 5.1 | 0.2 |
| 8 | 3.8 | 4.6 | 5.8 | 5.4 | 5.4 | 2.4 | 7.0 | 3.1 | 4.7 | 5.4 | 2.3 | 1.5 | 8.2 | 4.8 | 3.9 | 7.1 | 8.0 | 7.3 | 0.7 | 4.2 | 0.8 |
| 9 | 5.7 | 5.4 | 2.2 | 6.4 | 3.7 | 3.7 | 6.4 | 4.4 |  | 6.8 | 0.6 | 0.3 | 6.1 | 5.6 | 1.9 | 6.5 | 9.1 | 5.0 | 0.6 | 5.0 | 1.0 |

## Mean Dissolved Oxygen (mg/L)

| WEEK 19851986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 199 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 7.1 | 7.4 | 9.9 | 7.4 | 8.6 | 9.1 | 9.2 |  | 8.3 |  |  | 8.4 | 6.2 |  | 5.8 | 6.3 | 6.8 | 6.5 | 7.2 |
| 2 | 9.3 | 8.1 | 8.1 | 8.0 | 8.9 | 8.2 | 7.6 | 7.2 |  |  |  | 7.4 | 6.5 | 6.5 | 5.2 | 6.3 | 5.9 | 7.6 | 8.16 |
| 3 | 7.4 | 10.2 | 8.7 | 7.9 | 6.3 | 7.6 | 9.0 | 7.7 | 8.3 |  |  | 6.7 | 5.6 | 7.4 | 4.8 | 6.8 | 8.7 | 7.7 | 7.12 |
| 4 | 7.6 |  | 8.3 | 7.4 | 8.5 | 9.1 | 7.0 | 7.8 | 7.5 |  |  | 7.2 | 5.2 | 7.4 | 5.4 | 6.9 | 5.5 | 6.7 | 8.08 |
| 5 | 8.6 | 8.0 | 8.2 |  | 7.8 | 8.9 | 7.2 | 7.9 | 8.9 |  |  | 7.1 | 4.4 | 6.5 | 6.1 | 6.1 | 7.3 | 11.4 | 6.2 |
| 6 | 8.6 | 9.6 | 7.4 | 9.6 | 9.3 | 9.4 | 8.5 | 7.7 | 6.3 |  |  |  | 4.8 | 7.3 | 4.6 | 6.0 | 7.0 | 9.4 | 7.29 |
| 7 | 9.7 | 9.9 | 8.5 | 8.4 | 9.2 | 9.8 | 9.0 | 8.3 | 5.1 |  |  |  | 4.1 | 6.9 |  | 6.0 | 7.0 | 8.5 | 7.8 |
| 8 | 7.8 | 9.3 | 8.3 | 9.1 | 9.6 | 9.2 | 8.7 | 8.2 | 5.9 |  |  |  | 4.5 | 9.0 | 5.6 | 7.4 | 7.9 | 9.5 | 8.22 |
| 9 | 8.3 | 9.4 | 9.1 | 8.8 | 10.2 | 9.3 |  | 8.0 | 6.2 |  |  |  | 5.0 | 8.8 | 7.2 | 8.2 | 9.0 | 10.5 |  |


| Species | Age* | $\begin{gathered} \text { Jul } \\ 11 \end{gathered}$ | $\begin{aligned} & \text { Jul } \\ & 25 \end{aligned}$ | $\begin{gathered} \text { Aug } \\ 8 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Aug } \\ 22 \end{gathered}$ | Sep $7$ | $\begin{gathered} \text { Sep } \\ 19 \end{gathered}$ | $\begin{aligned} & \text { Oct } \\ & 19 \end{aligned}$ | Oct <br> 27 | $\begin{gathered} \text { Nov } \\ 9 \end{gathered}$ | Weeks $4-9$ | Weeks 1-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Diadromous |  |  |  |  |  |  |  |  |  |  |  |  |
| Alewife | 99 | 253 | 137 | 66 | 16 | 0 | 0 | 4 | 2 | 0 | 22 | 478 |
| American eel | 99 | 1 | 2 | 2 | 2 | 1 | 0 | 2 | 6 | 6 | 17 | 22 |
| American shad | 99 | 10 | 92 | 1 | 0 | 0 | 0 | 23 | 19 | 2 | 44 | 147 |
| Blueback herring | 99 | 4 | 73 | 135 | 2 | 0 | 2 | 3899 | 3838 | 1718 | 9459 | 9671 |
| Striped bass | 0 | 1213 | 805 | 528 | 820 | 2160 | 1780 | 159 | 151 | 111 | 5181 | 7727 |
| Striped bass | 1 | 1 | 6 | 0 | 0 | 4 | 3 | 7 | 1 | 0 | 15 | 22 |
| Estuarine |  |  |  |  |  |  |  |  |  |  |  |  |
| Fourspine stickleback | 99 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 4 | 4 |
| Hogchoker | 99 | 3 | 23 | 8 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 35 |
| Killifish spp. | 99 | 100 | 63 | 390 | 128 | 21 | 51 | 47 | 12 | 6 | 265 | 818 |
| Threespine stickleback | 99 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 7 | 8 |
| White perch | 0 | 9 | 1 | 33 | 74 | 187 | 22 | 7 | 46 | 40 | 376 | 419 |
| White perch | 1 | 104 | 130 | 16 | 12 | 44 | 1 | 1 | 6 | 3 | 67 | 317 |
| Freshwater |  |  |  |  |  |  |  |  |  |  |  |  |
| Bluegill | 99 | 0 | 0 | 3 | 5 | 1 | 0 | 4 | 6 | 0 | 16 | 19 |
| Carp | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 6 | 6 |
| Gizzard shad | 99 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 3 |
| Hickory shad | 99 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Pumpkinseed | 99 | 0 | 0 | 2 | 0 | 15 | 0 | 0 | 3 | 1 | 19 | 21 |
| Smallmouth bass | 99 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 3 |
| Spottail shiner | 99 | 5 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 4 | 10 |
| Tesselated darter | 99 | 0 | 0 | 1 | 4 | 1 | 0 | 1 | 1 | 0 | 7 | 8 |
| Yellow perch | 99 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 3 |
| Marine |  |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic menhaden | 0 | 4 | 123 | 619 | 6 | 2 | 2 | 523 | 1 | 0 | 534 | 1280 |
| Atlantic needlefish | 99 | 60 | 3 | 2 | 4 | 5 | 1 | 0 | 0 | 0 | 10 | 75 |
| Bay anchovy | 99 | 0 | 2080 | 1311 | 0 | 145 | 48 | 1875 | 1 | 0 | 2069 | 5460 |
| Bluefish | 0 | 14 | 32 | 21 | 39 | 23 | 16 | 0 | 0 | 0 | 78 | 145 |
| Naked Goby | 99 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 |
| Northern kingfish | 99 | 0 | 5 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 11 |
| Northern pipefish | 99 | 0 | 13 | 18 | 24 | 29 | 23 | 0 | 0 | 0 | 76 | 107 |
| Northern puffer | 99 | 0 | 2 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 7 |
| Northern stargazer | 99 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| Silverside spp. | 99 | 388 | 4109 | 4891 | 5479 | 5326 | 3032 | 99 | 40 | 33 | 14009 | 23397 |
| Spot | 99 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 3 | 6 |
| Striped mullet | 99 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| Striped searobin | 99 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 5 |
| Summer flounder | 99 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Tautog | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Weakfish | 99 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| White mullet | 99 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Winter flounder | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total Fish Catch |  | 2179 | 7706 | 8058 | 6622 | 7971 | 4985 | 6665 | 4141 | 1923 | 32307 | 50250 |
| Invertebrate |  |  |  |  |  |  |  |  |  |  |  |  |
| Blue crab | 0 | 3 | 2 | 1 | 20 | 25 | 69 | 68 | 19 | 64 | 265 | 271 |
| Blue crab | 1 | 1 | 6 | 6 | 12 | 4 | 9 | 4 | 0 | 1 | 30 | 43 |
| Total Invertebrate Catch |  | 4 | 8 | 7 | 32 | 29 | 78 | 72 | 19 | 65 | 295 | 314 |
| Number of seines ( n ) |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 148 | 221 |

* $0=$ Young-of-the-year; $1=$ Older; $99=$ age unknown

| Species | Age $^{*}$ | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Diadromous |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alewife | 99 | 1.1 | 55.6 | 1.1 | 1.1 | 0.3 | 0.8 | 1.6 | 0.4 | 2.8 | 0.4 | 0.4 | 0.1 | 0.0 |  | 0.4 | 0.0 | 0.0 | 0.5 | 0.1 | 4.4 | 0.4 | 0.1 | 0.1 | 1.1 | 0.3 | 0.1 |
| American eel | 99 | 0.2 | 0.5 | 0.9 | 0.8 | 0.8 | 0.4 | 0.2 | 0.5 | 0.6 | 0.4 | 0.4 | 0.4 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.5 | 0.1 | 0.3 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 |
| American shad | 99 | 4.4 | 22.1 | 9.2 | 17.5 | 9.1 | 10.5 | 27.1 | 8.0 | 8.8 | 11.5 | 7.7 | 1.1 | 10.5 | 1.6 | 12.0 | 3.0 | 2.8 | 2.3 | 0.2 | 5.4 | 1.0 | 2.2 | 4.4 | 3.0 | 2.2 | 0.3 |
| Atlantic tomcod | 99 | 0.2 | 1.8 | 5.7 | 1.0 | 1.3 | 1.8 | 2.2 | 1.8 | 3.8 | 2.3 | 1.3 | 0.1 | 0.8 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 2.1 | 0.1 |  |
| Blueback herring | 99 | 27.7 | 0.2 | 19.9 | 38.1 | 12.6 | 40.8 | 7.7 | 44.7 | 33.6 | 46.8 | 196.6 | 53.6 | 155.6 | 16.1 | 9.1 | 156.7 | 3.0 | 26.4 | 0.1 | 98.4 | 2.1 | 1.9 | 12.1 | 6.5 | 1.4 | 63.9 |
| Striped bass | 0 | 23.9 | 21.4 | 30.5 | 48.0 | 37.1 | 3.8 | 6.1 | 60.7 | 52.3 | 41.9 | 38.0 | 6.9 | 17.3 | 26.5 | 28.5 | 27.4 | 14.7 | 50.3 | 22.9 | 52.5 | 7.8 | 91.2 | 21.5 | 35.0 | 14.3 | 35.0 |
| Striped bass | 1 | 1.4 | 0.4 | 0.8 | 0.2 | 0.5 | 0.6 | 0.3 | 0.1 | 0.8 | 0.6 | 0.4 | 0.7 | 0.8 | 0.6 | 0.2 | 1.0 | 0.4 | 0.6 | 0.9 | 0.5 | 0.7 | 0.6 | 1.1 | 0.3 | 0.2 | 0.1 |
| Striped bass (hatchery) | 0 |  |  |  | 0.1 | 0.3 | 1.1 | 1.7 | 0.5 | 0.4 | 0.6 |  |  | 0.3 | 0.5 | 0.1 | 1.4 |  |  |  |  |  |  |  |  |  |  |
| Striped bass (hatchery) | 1 |  |  |  |  |  | 0.0 | 0.0 | 0.0 | 0.0 |  |  |  |  | 0.0 |  | 0.0 | 0.0 |  |  |  |  |  |  |  |  |  |
| Estuarine |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fourspine stickleback | 99 | 0.2 | 0.5 | 0.6 | 0.7 | 0.4 | 1.8 | 1.2 | 2.6 | 1.2 | 0.1 | 0.2 | 0.1 | 0.0 |  | 0.0 |  | 0.0 | 0.3 | 0.2 |  |  |  |  | 0.3 |  | 0.0 |
| Hogchoker | 99 | 0.3 | 0.4 | 2.0 | 4.6 | 1.4 | 2.7 | 2.3 | 0.9 | 1.8 | 1.9 | 1.2 | 0.6 | 0.8 | 0.7 | 1.6 | 0.7 | 0.3 | 0.6 | 0.4 | 0.0 | 0.1 | 0.0 | 0.6 | 0.1 | 0.2 | 0.0 |
| Killifish spp. | 99 | 4.9 | 9.5 | 16.1 | 12.2 | 5.6 | 18.4 | 8.8 | 18.9 | 19.8 | 2.8 | 4.9 | 0.7 | 0.7 | 0.1 | 2.2 | 1.4 | 0.1 | 5.0 | 1.9 | 0.3 | 0.9 | 3.4 | 6.8 | 2.3 | 8.6 | 1.8 |
| Striped anchovy | 99 |  |  | 0.5 |  |  |  | 0.0 |  | 0.0 |  |  | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 |  |  |  |  |  | 0.0 | 0.0 |  |  |
| Threespine stickleback | 99 | 0.1 |  |  | 0.0 |  |  |  | 0.3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 | 0.2 | 0.0 |
| White perch | 0 | 54.4 | 50.9 | 107.1 | 40.8 | 28.0 | 11.0 | 40.5 | 11.4 | 80.3 | 33.2 | 7.0 | 2.0 | 3.8 | 2.3 | 6.4 | 2.3 | 2.4 | 1.9 | 4.1 | 20.8 | 3.1 | 25.9 | 7.8 | 19.2 | 1.8 | 2.5 |
| White perch | 1 | 3.6 | 13.1 | 70.1 | 45.4 | 41.3 | 11.3 | 12.9 | 8.0 | 12.3 | 9.8 | 7.8 | 6.5 | 4.6 | 6.7 | 4.2 | 3.7 | 4.4 | 6.9 | 10.2 | 2.5 | 5.0 | 3.0 | 11.2 | 5.8 | 1.5 | 0.5 |
| Freshwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Black crappie | 99 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |
| Bluegill | 99 | 0.1 |  | 0.0 | 0.1 | 0.4 | 0.1 | 0.6 | 0.4 | 0.2 | 0.2 | 0.1 | 0.0 |  | 0.0 | 0.1 | 0.1 | 0.0 | 0.2 |  | 0.0 | 0.3 | 0.0 | 0.7 | 0.0 | 0.0 | 0.1 |
| Brown bullead catish | 99 |  | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 |  |  | 0.1 | 0.0 |  |  | 0.0 | 0.1 |  |
| Carp | 99 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 |  | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| Chain pickerel | 99 | 0.0 |  |  |  |  |  |  |  |  | 0.0 | 0.0 |  |  | 0.0 |  |  |  |  |  |  | 0.0 |  |  |  |  |  |
| Fallifish | 99 |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gizzard shad | 99 | 0.0 | 0.1 |  | 0.1 | 0.1 | 0.0 |  | 0.3 | 0.0 | 0.0 | 0.0 | 0.1 |  |  | 0.0 | 0.1 |  | 0.2 |  | 0.1 | 0.2 |  | 0.1 | 0.1 | 0.1 | 0.0 |
| Golden shiner | 99 | 0.3 | 0.1 | 0.1 | 0.1 | 0.2 |  |  |  |  | 0.0 | 0.0 | 0.0 |  |  | 0.0 |  |  |  |  | 0.0 |  | 0.1 |  |  | 0.0 |  |
| Goldfish | 99 | 0.0 |  |  | 0.0 | 0.0 |  | 0.0 |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hickory shad | 99 |  |  |  |  |  |  | 0.0 |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.5 |  |
| Johnny darter | 99 | 0.0 |  |  | 0.5 | 0.2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Largemouth bass | 99 | 0.0 |  | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  | 0.0 | 0.0 |  |
| Longnose sucker | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |
| Pumpkinseed | 99 | 3.2 | 1.4 | 3.6 | 1.7 | 1.4 | 0.3 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 |  | 0.0 | 0.1 | 0.0 | 0.0 | 0.4 | 0.0 | 0.1 | 0.1 | 0.3 | 0.0 | 0.1 | 0.1 | 0.1 |
| Redbreast sunfish | 99 | 0.7 | 0.2 | 0.4 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |  |  |  |  |  |  | 0.6 |  |  |  | 0.0 |  | 0.0 |  |  |
| Redear sunfish | 99 |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Smallmouth bass | 99 |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  | 0.0 |  |  |  |  | 0.0 | 0.0 | 0.0 | 0.0 |
| Spottail shiner | 99 | 0.3 | 0.2 | 0.8 | 1.9 | 1.9 |  | 0.0 | 0.0 | 0.3 | 0.5 | 0.3 | 0.0 | 0.0 |  | 0.2 | 0.0 | 0.1 | 2.0 | 0.5 |  | 0.1 | 0.0 |  | 0.2 | 0.1 | 0.0 |
| Tesselated darter | 99 | 0.0 | 0.0 | 0.1 |  | 0.2 | 0.0 | 0.0 | 0.4 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.9 | 0.4 | 0.0 | 0.0 | 0.3 | 0.0 | 0.3 | 0.1 | 0.0 |
| White catish | 99 | 0.0 | 0.1 | 0.2 | 0.8 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 |  | 0.0 |  |
| White sucker | 99 | 0.1 | 0.3 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |  |  |  | 0.0 |  |  |  |  |  |
| Yellow perch | 99 | 0.2 | 0.1 | 0.2 | 0.1 | 0.0 |  |  | 0.0 |  | 0.0 | 0.0 |  |  |  |  |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Invertebrates |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blue crab | 0 |  | 0.0 | 0.2 |  |  | 0.1 |  |  | 2.1 |  | 0.0 | 0.3 |  | 0.5 | 0.3 | 0.4 | 0.2 | 12.5 | 30.1 | 17.4 | 0.2 | 2.5 | 1.5 | 0.3 | 0.4 | 1.8 |
| Blue crab | 1 |  | 0.0 | 0.2 | 0.0 |  | 0.1 |  |  | 0.0 |  |  | 0.0 |  | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 | 1.8 | 1.0 | 0.3 | 0.3 | 0.9 | 0.1 | 0.2 | 0.2 |
| Blue crab | 99 | 0.0 | 0.5 | 0.2 | 0.0 | 0.5 | 0.9 | 0.3 | 1.9 | 3.0 | 2.7 | 2.2 | 8.2 | 2.9 | 0.8 | 0.7 | 1.3 | 0.0 | 1.1 |  |  |  |  |  |  |  |  |
| Clam | 99 |  |  |  |  |  |  |  |  |  |  |  | 0.2 | 0.0 |  |  |  |  |  | 0.0 |  |  |  | 0.7 |  |  |  |
| Mudcrab | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  | 0.0 | 0.0 | 0.1 |  |  |  |  |  |  |
| Marine |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic croaker | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 | 0.4 |  |
| Atlantic menhaden | 0 |  | 0.0 | 0.6 |  | 0.2 |  |  |  |  |  | 0.0 |  |  |  |  |  |  | 0.0 |  | 12.3 | 50.8 | 0.2 | 0.9 | 2.3 | 63.6 | 3.6 |
| Atlantic menhaden | 1 | 0.2 |  | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  | 8.1 | 0.1 |  |  |
| Atlantic menhaden | 99 | 0.5 | 7.0 | 0.3 | 4.0 | 0.0 | 1.3 | 8.6 | 6.3 | 0.1 | 0.2 | 7.5 | 0.2 | 4.2 | 0.1 | 4.2 | 0.1 | 0.5 | 0.1 | 21.7 | 117.3 |  |  |  |  |  |  |
| Atlantic needlefish | 99 | 0.3 | 0.3 | 0.7 | 0.1 | 0.0 | 1.1 | 0.1 | 0.3 | 0.3 | 0.7 | 0.6 | 0.1 | 0.1 |  | 0.1 | 0.1 | 0.0 | 1.9 | 0.1 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.1 |
| Atlantic threadfin | 99 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bay anchovy | 99 | 5.2 | 2.0 | 7.2 | 51.3 | 111.6 | 26.8 | 0.9 | 53.6 | 33.5 | 94.7 | 6.5 | 11.2 | 35.0 | 6.7 | 40.7 | 75.6 | 31.3 | 35.0 | 32.5 | 6.4 | 15.5 | 2.3 | 16.3 | 15.4 | 1.1 | 14.0 |
| Bluefish | 0 | 2.2 | 2.7 | 3.0 | 2.5 | 1.2 | 2.4 | 2.2 | 0.9 | 3.6 | 1.3 | 1.5 | 0.6 | 0.7 | 0.7 | 0.8 | 1.5 | 0.4 | 1.3 | 1.2 | 15.0 | 0.2 | 4.8 | 2.2 | 0.6 | 0.3 | 0.5 |
| Bluefish | 1 |  |  |  | 0.0 |  |  |  |  |  |  | 0.0 |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |
| Butterfish | 99 | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  | 0.1 |  |  |  |  |  |  | 0.0 |  |  |  |  |  | 0.0 |  |  |  |
| Butterflyfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |
| Cornettish, bluespotted | 99 | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Crevalle jack | 99 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.2 | 0.1 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |  | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Cunner | 99 |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grey snapper | 99 | 0.0 |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  | 0.0 | 0.0 |  |  |  |  |  |  |  |  |  |  |
| Houndfish | 99 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inshore lizardish | 99 |  | 0.0 | 0.0 |  |  | 0.1 |  |  |  | 0.0 |  | 0.1 | 0.1 | 0.0 |  |  |  | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  |  |  |
| Lookdown | 99 | 0.0 |  | 0.0 |  |  | 0.0 |  |  |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  | 0.0 |  |  |  | 0.0 |  |  |
| Naked Goby | 99 |  |  |  |  |  | 0.0 | 0.1 | 0.3 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 |  | 0.1 | 0.1 | 0.2 | 0.0 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| Northern kingfish | 99 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.4 | 0.3 | 0.0 |  | 0.1 | 0.3 | 0.0 |  | 0.0 |
| Northern pipefish | 99 | 0.5 | 1.0 | 1.5 | 1.0 | 1.1 | 2.3 | 0.9 | 1.7 | 4.4 | 1.9 | 1.4 | 1.2 | 0.6 | 0.8 | 0.4 | 1.5 | 0.2 | 4.0 | 1.5 | 0.7 | 0.1 | 2.4 | 1.2 | 0.4 | 0.0 | 0.5 |
| Northern puffer | 99 |  | 0.0 | 0.0 | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |  | 0.0 |  | 0.0 |  | 0.0 | 0.0 | 0.0 |  | 0.1 |  |  |  | 0.0 |
| Northern searobin | 99 |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Northern sennet | 99 |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Northern stargazer | 99 |  |  |  |  |  |  |  |  | 0.0 |  |  | 0.0 |  | 0.0 |  |  |  | 0.1 |  | 0.0 |  |  | 0.0 |  |  | 0.0 |
| Northern tonguefish | 99 |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oyster toadfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |
| Permit | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |
| Pigfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  | 0.0 |  |  |  |  |  |  |  |  |
| Pinfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |
| Silver perch | 99 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.1 | 0.1 | 0.4 | 0.5 | 1.3 | 0.1 | 0.1 | 0.0 |  | 0.0 |  |  |  | 0.0 |  |
| Silverside spp. | 99 | 6.5 | 14.4 | 9.9 | 9.0 | 2.2 | 24.1 | 98.2 | 16.9 | 152.2 | 8.1 | 73.4 | 41.2 | 54.5 | 69.7 | 146.1 | 198.0 | 62.9 | 148.7 | 127.6 | 72.1 | 60.2 | 91.3 | 85.2 | 22.9 | 41.0 | 94.7 |
| Smallmouth flounder | 99 |  |  |  |  |  |  |  |  |  |  |  | 0.1 |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  |  |
| Spanish mackerel | 99 |  |  |  |  |  |  |  |  |  | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |
| Spot | 99 |  |  | 0.3 | 0.0 |  | 0.0 | 0.0 |  | 1.1 | 0.0 | 0.0 | 0.0 |  | 0.1 | 0.0 |  | 0.0 |  |  | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 |
| Spottin butterflyfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |
| Spottin mojarra | 99 |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  |
| Spotted hake | 99 |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  | 0.0 | 0.0 |  |  |  |  |  |  |  |
| Striped mullet | 99 | 0.0 | 0.0 | 0.3 | 0.4 | 0.2 | 0.0 | 0.1 | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  | 0.0 |  | 0.0 | 0.1 | 0.0 |  | 0.0 |
| Striped searobin | 99 | 0.0 |  | 0.1 | 0.0 | 0.0 | 0.1 |  |  |  | 0.0 |  | 0.1 | 0.0 | 0.1 |  | 0.0 |  | 0.4 | 0.2 | 0.0 |  |  | 0.0 |  |  | 0.0 |
| Summer flounder | 99 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 |  | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |  | 0.0 | 0.0 | 0.0 |  | 0.1 | 0.0 | 0.1 |  |
| Tautog | 0 |  |  |  |  |  |  | 0.1 | 0.0 | 0.2 |  | 0.0 |  | 0.0 |  |  |  |  | 0.1 | 0.0 |  |  | 0.2 |  |  |  | 0.0 |
| Tautog | 9 |  |  |  |  |  |  | 0.0 | 0.0 | 0.3 |  | 0.0 | 0.1 |  |  |  |  |  | 0.0 |  |  |  | 0.1 |  |  |  |  |
| Tautog | 99 | 0.0 | 0.3 | 0.1 |  | 0.0 | 0.0 |  |  | 0.1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Weakfish | 99 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.4 | 0.0 |  | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 |  | 0.0 |  |  | 0.1 | 0.0 |  |  |  | 0.0 | 0.0 |  |  |
| White mullet | 99 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |  | 0.1 | 0.1 | 0.1 | 0.0 |  | 0.1 | 0.0 |  |  | 0.0 | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 |  |
| Windowpane flounder | 99 |  |  |  |  |  |  |  |  | 0.0 |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |
| Winter flounder | 0 | 0.0 |  | 0.0 |  |  |  | 0.8 | 0.3 | 1.0 | 0.4 | 0.7 | 0.5 | 0.9 | 0.9 | 0.6 | 0.2 | 0.2 | 1.6 | 0.6 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 |  |
| Winter flounder | 1 |  |  | 0.0 |  |  |  |  |  |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Winter flounder | 99 | 0.0 | 0.3 | 0.9 | 0.3 | 0.2 | 2.7 | 0.0 |  | 0.0 |  | 0.0 | 0.0 |  |  |  | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  |  |
| Reptiles |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Diamondback terrapin Painted turtle | $\begin{aligned} & 99 \\ & 99 \end{aligned}$ |  |  |  |  |  | 0.0 | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |
| Number of samples ( n ) |  | 150 | 132 | 143 | 148 | 146 | 146 | 147 | 150 | 145 | 150 | 142 | 140 | 146 | 150 | 146 | 147 | 134 | 139 | 127 | 104 | 136 | 135 | 137 | 147 | 145 | 148 |


| Species | Age* | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 200 | 2004 | 005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Diadromous |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alewife | 99 | 1.3 | 1.4 | 0.8 | 2.5 | 0.5 | 0.7 | 0.1 | 0.0 |  | 0.4 | 0.4 | 0.2 | 3.3 | 0.1 | 2.7 | 0.3 | 0.3 | 0.7 | 2.0 | 0.4 | 2.2 |
| American eel | 99 | 0.6 | 0.3 | 0.5 | 0.8 | 0.5 | 0.6 | 0.5 | 0.4 | 0.2 | 0.3 | 0.3 | 0.2 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 |
| American shad | 99 | 10.1 | 22.3 | 6.8 | 11.5 | 11.9 | 11.2 | 1.0 | 12.0 | 2.2 | 10.3 | 2.2 | 8.3 | 11.0 | 0.4 | 3.9 | 0.8 | 1.9 | 3.3 | 4.4 | 1.8 | 0.7 |
| Atlantic sturgeon | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |
| Atlantic tomcod | 99 | 1.9 | 1.7 | 1.2 | 2.6 | 1.6 | 1.3 | 0.1 | 1.4 | 0.0 | 0.1 | 0.0 | 0.5 | 0.2 | 2.3 | 0.0 | 0.6 | 0.6 | 0.0 | 1.4 | 0.2 |  |
| Blueback herring | 99 | 28.3 | 6.2 | 32.2 | 27.8 | 38.0 | 139.8 | 35.1 | 104.6 | 10.7 | 6.3 | 104.2 | 29.7 | 19.1 | 0.1 | 59.9 | 1.4 | 1.5 | 7.9 | 8.0 | 1.2 | 43.8 |
| Striped bass | 0 | 4.6 | 8.7 | 82.9 | 70.4 | 59.5 | 58.0 | 15.2 | 26.6 | 55.9 | 43.5 | 33.7 | 21.3 | 59.0 | 33.7 | 57.7 | 22.9 | 77.4 | 22.2 | 72.6 | 16.4 | 35.0 |
| Striped bass | 1 | 0.9 | 0.2 | 0.1 | 0.7 | 0.7 | 0.4 | 0.8 | 0.8 | 0.6 | 0.3 | 1.2 | 0.5 | 0.5 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 0.3 | 0.5 | 0.1 |
| Striped bass (hatchery) | 0 | 0.9 | 1.2 | 0.6 | 0.3 | 0.4 |  |  | 0.2 | 0.3 | 0.1 | 0.9 |  |  |  |  |  |  |  |  |  |  |
| Striped bass (hatchery) | 1 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  | 0.0 | 0.0 | 0.0 | 0.0 |  |  |  |  |  |  |  |  |  |
| Estuarine |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fourspine stickleback | 99 | 1.3 | 0.9 | 2.0 | 1.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.1 |  | 0.0 |  |  | 0.2 | 0.1 | 0.0 |
| Hogchoker | 99 | 6.1 | 3.7 | 2.5 | 4.0 | 7.0 | 2.4 | 1.6 | 3.1 | 1.3 | 2.4 | 2.5 | 0.5 | 0.7 | 0.3 | 0.4 | 0.1 | 0.3 | 1.7 | 1.5 | 0.3 | 0.2 |
| Killifish spp. | 99 | 14.1 | 6.8 | 15.3 | 18.8 | 3.8 | 5.0 | 2.4 | 0.7 | 0.8 | 1.6 | 3.6 | 0.3 | 4.9 | 2.4 | 1.8 | 0.6 | 2.4 | 5.5 | 10.1 | 9.2 | 3.7 |
| Rainbow smelt | 99 |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Striped anchovy | 99 |  | 0.0 | 0.0 | 0.0 |  |  | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |  |  |  |  |  | 0.1 | 0.0 |  |  |
| Threespine stickleback | 99 |  |  | 0.2 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  | 0.0 | 0.1 | 0.0 |
| White perch | 0 | 8.9 | 37.9 | 11.5 | 75.8 | 33.8 | 7.5 | 2.3 | 5.5 | 3.7 | 6.1 | 1.9 | 2.9 | 1.5 | 4.1 | 22.5 | 6.3 | 21.8 | 11.4 | 25.6 | 2.0 | 1.9 |
| White perch | 1 | 20.5 | 28.9 | 15.7 | 20.2 | 26.7 | 10.8 | 9.8 | 6.4 | 7.7 | 7.8 | 11.1 | 7.3 | 5.6 | 9.7 | 7.0 | 16.2 | 20.3 | 20.1 | 8.2 | 3.7 | 1.4 |
| Freshwater |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Black crappie | 99 |  |  |  |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  | 0.0 |  |  |  |  |  |  |
| Bluegill | 99 | 0.0 | 0.4 | 0.3 | 0.3 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.3 | 0.0 | 1.4 | 0.1 | 0.0 | 0.1 |
| Brown bullead catifish | 99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 | 0.1 | 0.0 | 0.0 |  | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | 0.1 |  |
| Carp | 99 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 |  | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| Chain pickerel | 99 |  |  |  |  | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  |  | 0.0 |  |  |  |  |  |
| Fallfish | 99 |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Gizzard shad | 99 | 0.0 |  | 0.2 | 0.0 | 0.0 | 0.0 | 0.1 |  |  | 0.0 | 0.1 | 0.0 | 0.1 |  | 0.1 | 0.3 |  | 0.1 | 0.1 | 0.1 | 0.0 |
| Golden shiner | 99 |  | 0.0 |  |  | 0.0 | 0.0 | 0.0 |  |  | 0.0 |  | 0.0 |  |  | 0.0 |  | 0.1 |  | 0.0 | 0.0 |  |
| Goldfish | 99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  | 0.0 |  |  |  |  |  |  |  |
| Green sunfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |
| Hickory shad | 99 |  | 0.0 |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.3 | 0.0 |
| Largemouth bass | 99 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Longnose sucker | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |
| Pumpkinseed | 99 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |  | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.1 |
| Red Finned Pickerel | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |
| Redbreast sunfish | 99 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.4 |  |  | 0.0 | 0.0 | 0.0 | 0.0 |  |  |
| Smallmouth bass | 99 |  |  |  |  |  | 0.0 |  |  |  |  |  |  | 0.0 |  |  |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Spottail shiner | 99 | 0.0 | 0.0 | 0.0 | 0.3 | 1.3 | 0.4 | 0.1 | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 1.9 | 0.6 | 0.1 | 0.2 | 0.1 | 0.0 | 0.6 | 0.1 | 0.0 |
| Tesselated darter | 99 | 0.0 | 0.0 | 0.3 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.2 | 3.5 | 0.8 | 0.0 | 0.2 | 0.4 | 0.1 | 0.5 | 0.5 | 0.0 |
| White catish | 99 | 0.1 | 2.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |  |
| White sucker | 99 |  | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 |  | 0.0 |  | 0.0 | 0.0 |  |  |  |  |
| Yellow perch | 99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  |  |  |  | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 |
| Invertebrate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Blue crab | 0 | 0.1 |  |  | 1.4 |  | 0.0 | 0.3 |  | 0.3 | 0.4 | 0.2 | 0.4 | 11.8 | 24.6 | 14.1 | 0.3 | 1.8 | 2.0 | 0.4 | 0.4 | 1.2 |
| Blue crab |  | 0.1 |  |  | 0.0 |  |  | 0.1 |  | 0.0 | 0.2 | 0.1 | 0.2 | 0.4 | 2.9 | 2.1 | 0.9 | 0.5 | 1.5 | 0.4 | 0.5 | 0.2 |
| Blue crab | 99 | 1.5 | 0.3 | 1.4 | 3.3 | 3.0 | 2.7 | 6.1 | 5.5 | 0.8 | 0.6 | 1.8 | 0.0 | 1.4 |  |  |  |  |  |  |  |  |
| Clam | 99 |  |  |  |  |  |  | 0.1 | 0.0 |  |  |  |  |  | 0.0 |  |  |  | 1.1 |  |  |  |
| Marsh crab | 99 |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |
| Mudcrab | 99 |  |  |  |  |  |  |  |  |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |  |  | 0.0 |  |  |  |
| Marine |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Atlantic croaker | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 | 0.3 |  |
| Atlantic menhaden | 0 | 0.0 |  |  |  |  | 0.0 |  |  |  |  |  | 0.0 | 0.0 | 0.0 | 9.5 | 48.8 | 0.5 | 0.7 | 3.6 | 44.6 | 5.8 |
| Atlantic menhaden | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 | 0.0 |  | 9.6 | 0.1 |  |  |
| Atlantic menhaden | 99 | 20.9 | 23.5 | 4.8 | 0.9 | 0.8 | 7.8 | 2.8 | 5.7 | 0.1 | 3.5 | 0.3 | 1.9 | 0.3 | 14.7 | 84.0 |  |  |  |  |  |  |
| Atlantic needlefish | 99 | 1.0 | 0.2 | 0.8 | 0.4 | 0.7 | 0.7 | 0.5 | 0.2 | 0.1 | 0.3 | 0.2 | 0.1 | 1.5 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 |
| Atlantic threadfin | 99 |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bay anchovy | 99 | 52.9 | 5.3 | 60.4 | 37.3 | 244.4 | 11.0 | 34.0 | 40.3 | 7.6 | 184.5 | 88.3 | 42.6 | 47.4 | 34.5 | 9.2 | 14.0 | 1.8 | 13.3 | 11.7 | 1.1 | 24.7 |
| Bluefish | 0 | 6.1 | 3.5 | 3.5 | 5.0 | 2.0 | 3.1 | 1.3 | 1.3 | 2.6 | 1.1 | 1.5 | 0.8 | 1.7 | 1.1 | 13.8 | 0.9 | 4.1 | 2.9 | 1.0 | 0.8 | 0.7 |
| Bluefish |  | 0.0 |  |  | 0.0 |  | 0.0 |  |  |  |  | 0.0 |  |  |  |  |  |  | 0.0 |  |  |  |
| Bonefish | 99 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |
| Butterish | 99 |  |  |  |  | 0.0 |  |  |  | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  | 0.0 |  |  |  |
| Butterflyfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  | 0.0 |  |  |  |  |  |
| Crevalle jack | 99 | 0.3 | 0.1 | 0.0 | 0.2 | 0.3 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 |  |
| Cunner | 99 |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grey snapper | 99 | 0.0 |  | 0.0 |  |  |  |  |  |  | 0.0 | 0.0 |  |  |  |  |  |  |  |  | 0.0 |  |
| Houndish | 99 |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Inshore lizardfish | 99 | 0.0 |  |  |  | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |  |  | 0.1 | 0.1 | 0.0 |  | 0.0 | 0.1 |  |  |  |
| Lookdown | 99 | 0.0 |  |  |  | 0.0 | 0.0 |  |  | 0.0 |  |  |  |  |  | 0.0 0.4 |  |  | 0.0 0.1 | 0.0 0.0 |  |  |
| Naked Goby Northern kingish | 99 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.2 |  | 0.1 | 0.1 | 0.4 | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 |  |
| Northern kingfish Northern pipefish | 99 | 0.2 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.4 | 0.4 | 0.1 | 0.0 | 0.1 | 0.4 | 0.0 | 0.2 | 0.0 |
| Northern pipefish Northern puffer | 99 | 2.5 | 0.9 | 1.7 | 3.7 | 1.5 | 1.7 | 2.6 | 0.8 | 0.7 | 0.5 | 2.1 | 0.2 | 3.6 | 1.3 | 1.2 | 0.2 | 1.8 | 1.1 | 0.6 | 0.6 | 0.5 |
| Northern puffer Northern searobin | 99 99 | 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |  | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.1 |  | 0.1 | 0.0 | 0.0 | 0.0 |  |
| Northern sennet | 99 | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Northern stargazer | 99 |  |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 |  |  |  | 0.1 |  | 0.0 |  | 0.0 | 0.1 |  | 0.0 | 0.0 |
| Northern tonguefish | 99 |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oyster toadfish | 99 |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |
| Permit | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  | 0.0 |  |  |  |  |  |
| Pigfish | 99 |  |  |  |  |  |  |  |  |  | 0.0 |  |  | 0.0 |  |  |  |  |  |  |  |  |
| Pinfish | 99 |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |
| Scup | 99 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.0 |  |  |  |  |  |  |
| Silver perch | 99 | 0.0 |  |  | 0.0 |  |  | 0.1 | 0.1 | 0.3 | 0.4 | 0.8 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |  |  |  | 0.0 |  |
| Silverside spp. | 99 | 21.3 | 69.9 | 20.0 | 116.6 | 7.9 | 55.8 | 147.4 | 50.2 | 90.7 | 191.7 | 171.4 | 65.8 | 126.8 | 120.6 | 90.8 | 68.5 | 93.8 | 104.4 | 20.7 | 65.0 | 105.9 |
| Smallmouth flounder | 99 | 0.0 |  |  |  |  |  | 0.0 |  | 0.0 |  |  |  | 0.0 | 0.0 |  |  |  |  |  |  |  |
| Spanish mackerel Spot | 99 |  |  |  |  | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.0 |  |  |  |  |  |  |  |  |  |  |  |
| Spot Spotin butterflyfish | 99 99 | 0.6 | 3.2 | 0.3 | 0.8 | 0.0 | 1.7 | 0.0 | 0.0 | 1.0 | 0.3 | 0.0 | 0.4 | 0.0 | 0.1 | 0.2 | 0.1 | 0.0 | $\begin{aligned} & 0.3 \\ & 0.0 \end{aligned}$ | 0.0 | 0.0 | 0.0 |
| Spotfin mojarra | 99 |  |  |  |  |  |  |  | 0.0 |  | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  |
| Spotted hake | 99 |  |  |  |  |  |  | 0.0 |  |  |  |  |  | 0.0 | 0.0 |  |  |  |  |  |  |  |
| Striped mullet | 99 | 0.0 | 0.3 | 0.0 |  |  |  | 0.0 |  |  |  |  |  |  |  | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |  | 0.0 |
| Striped searobin | 99 | 0.1 | 0.1 |  |  | 0.0 | 0.1 | 0.4 | 0.0 | 0.1 | 0.0 | 0.0 |  | 0.7 | 0.5 | 0.1 |  | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| Summer flounder | 99 | 0.3 | 0.4 | 0.0 | 0.0 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |  | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| Tautog | 0 |  | 0.0 | 0.0 | 0.2 |  | 0.0 | 0.0 | 0.0 |  |  |  |  | 0.1 | 0.0 | 0.0 |  | 0.1 |  |  | 0.0 | 0.0 |
| Tautog |  |  | 0.0 | 0.0 | 0.3 |  | 0.0 | 0.1 |  |  |  |  |  | 0.0 |  |  |  | 0.1 |  |  |  |  |
| Tautog | 99 | 0.0 | 0.0 |  | 0.0 |  | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Triggerfish | 99 | 0.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Weakish | 99 | 0.3 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |  | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| White mullet | 99 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Windowpane flounder Winter flounder | 99 |  |  |  | 0.0 |  | 0.0 |  | 0.0 | 0.0 | 0.0 |  |  |  |  |  |  |  |  |  |  |  |
| Winter flounder | 0 |  | 0.9 | 0.2 | 0.7 | 0.3 | 0.8 | 0.7 | 1.3 | 1.1 | 0.4 | 0.6 | 0.2 | 1.8 | 0.6 | 0.2 | 0.4 | 0.4 | 0.2 | 0.5 | 0.4 | 0.0 |
| Winter flounder | 1 |  |  |  |  | 0.0 | 0.0 |  | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  | 0.0 | 0.0 | 0.0 | 0.0 |  |
| Winter flounder | 99 | 2.5 | 0.0 |  | 0.1 | 0.0 | 0.0 | 0.0 |  |  |  | 0.0 | 0.0 | 0.0 |  | 0.0 |  |  |  |  |  |  |
| Reptiles |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Diamondback terrapin | 99 | 0.0 | 0.0 |  |  | 0.0 | 0.0 |  |  |  |  |  | 0.0 |  |  |  |  |  |  |  |  |  |
| Painted turtle | 99 |  |  |  | 0.0 |  |  |  |  |  | 0.0 |  |  |  |  | 0.0 |  |  |  |  |  |  |
| Number of samples ( n ) |  | 216 | 222 | 225 | 220 | 225 | 217 | 215 | 221 | 225 | 221 | 221 | 204 | 194 | 198 | 173 | 211 | 208 | 210 | 222 | 220 | 221 |
| * $0=$ Young-of-the-year, 1=OIder |  | r; 99=a | ge unkn |  |  |  |  |  |  | 19 |  |  |  |  |  |  |  |  |  |  |  |  |


| 6 week survey |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year | Hauls | Catch | CPUE | StDev | Range | Zeros | Index | Confidence Intervals |
| 1980 | 150 | 3586 | 23.91 | 57.47 | $0-547$ | 34 | 6.10 | $4.53-8.11$ |
| 1981 | 132 | 2830 | 21.44 | 42.37 | $0-346$ | 11 | 8.71 | $6.81-11.08$ |
| 1982 | 143 | 4362 | 30.50 | 48.02 | $0-285$ | 8 | 14.13 | $11.32-17.57$ |
| 1983 | 148 | 7108 | 48.03 | 110.69 | $0-1178$ | 8 | 16.25 | $12.56-20.93$ |
| 1984 | 146 | 5418 | 37.11 | 89.85 | $0-906$ | 6 | 15.00 | $12.03-18.65$ |
| 1985 | 146 | 562 | 3.85 | 5.72 | $0-31$ | 53 | 1.85 | $1.42-2.36$ |
| 1986 | 147 | 902 | 6.14 | 8.98 | $0-55$ | 35 | 2.89 | $2.26-3.64$ |
| 1987 | 150 | 9100 | 60.67 | 157.77 | $0-1333$ | 13 | 15.90 | $11.98-21.01$ |
| 1988 | 145 | 7584 | 52.30 | 45.10 | $0-205$ | 2 | 33.46 | $27.89-40.10$ |
| 1989 | 150 | 6291 | 41.94 | 57.84 | $0-537$ | 4 | 21.35 | $17.23-26.41$ |
| 1990 | 142 | 5392 | 37.97 | 43.50 | $0-240$ | 2 | 19.08 | $15.31-23.72$ |
| 1991 | 140 | 959 | 6.85 | 7.95 | $0-41$ | 30 | 3.60 | $2.84-4.52$ |
| 1992 | 146 | 2525 | 17.29 | 15.51 | $0-83$ | 5 | 11.43 | $9.62-13.55$ |
| 1993 | 150 | 3974 | 26.49 | 34.32 | $0-230$ | 7 | 12.59 | $10.08-15.67$ |
| 1994 | 146 | 4159 | 28.49 | 31.73 | $0-246$ | 4 | 17.64 | $14.74-21.09$ |
| 1995 | 147 | 4027 | 27.39 | 45.16 | $0-389$ | 2 | 16.23 | $13.72-19.16$ |
| 1996 | 134 | 1964 | 14.66 | 18.40 | $0-143$ | 6 | 8.93 | $7.41-10.72$ |
| 1997 | 139 | 6998 | 50.35 | 63.58 | $0-328$ | 6 | 22.31 | $17.42-28.50$ |
| 1998 | 127 | 2910 | 22.91 | 24.07 | $0-135$ | 5 | 13.47 | $10.95-16.53$ |
| 1999 | 104 | 5464 | 52.54 | 76.86 | $1-474$ | 0 | 26.61 | $21.11-33.49$ |
| 2000 | 136 | 1064 | 7.82 | 16.57 | $0-120$ | 31 | 3.18 | $2.45-4.06$ |
| 2001 | 135 | 12317 | 91.24 | 220.33 | $0-1711$ | 11 | 22.97 | $16.94-31.01$ |
| 2002 | 137 | 2949 | 21.53 | 26.74 | $0-203$ | 5 | 12.26 | $10.08-14.88$ |
| 2003 | 147 | 5141 | 34.97 | 39.16 | $0-20$ | 9 | 17.34 | $13.75-21.79$ |
| 2004 | 145 | 2078 | 14.33 | 16.47 | $0-121$ | 9 | 8.81 | $7.31-10.59$ |
| 2005 | 148 | 5181 | 35.01 | 90.24 | $0-797$ | 21 | 8.48 | $6.34-11.25$ |

9 week survey

| Year | Hauls | Catch | CPUE | StDev | Range | Zeros | Index | Confidence Intervals |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| 1985 | 216 | 984 | 4.56 | 6.60 | $0-32$ | 73 | 2.15 | $1.73-2.62$ |
| 1986 | 222 | 1940 | 8.74 | 11.30 | $0-57$ | 39 | 4.27 | $3.53-5.13$ |
| 1987 | 225 | 18649 | 82.88 | 184.57 | $0-1432$ | 13 | 25.12 | $20.09-31.34$ |
| 1988 | 220 | 15488 | 70.40 | 85.38 | $0-869$ | 2 | 42.16 | $36.33-48.89$ |
| 1989 | 225 | 13397 | 59.54 | 86.16 | $0-642$ | 4 | 28.42 | $23.79-33.92$ |
| 1990 | 217 | 12591 | 58.02 | 64.65 | $0-473$ | 2 | 29.80 | $24.90-35.63$ |
| 1991 | 215 | 3275 | 15.23 | 22.57 | $0-160$ | 32 | 6.56 | $5.35-7.99$ |
| 1992 | 221 | 5874 | 26.58 | 25.50 | $0-142$ | 5 | 16.93 | $14.67-19.52$ |
| 1993 | 225 | 12587 | 55.94 | 74.18 | $0-402$ | 7 | 23.32 | $19.13-28.38$ |
| 1994 | 221 | 9624 | 43.55 | 50.38 | $0-367$ | 4 | 25.71 | $22.10-29.89$ |
| 1995 | 221 | 7457 | 33.74 | 44.64 | $0-389$ | 2 | 20.23 | $17.59-23.25$ |
| 1996 | 204 | 4346 | 21.30 | 25.83 | $0-188$ | 6 | 12.76 | $10.94-14.85$ |
| 1997 | 194 | 11452 | 59.03 | 71.07 | $0-412$ | 7 | 27.93 | $22.80-34.17$ |
| 1998 | 198 | 6674 | 33.71 | 34.46 | $0-183$ | 5 | 19.26 | $16.25-22.79$ |
| 1999 | 173 | 9981 | 57.69 | 67.47 | $1-474$ | 0 | 33.80 | $28.63-39.88$ |
| 2000 | 211 | 4830 | 22.89 | 51.89 | $0-416$ | 31 | 7.19 | $5.75-8.94$ |
| 2001 | 208 | 16103 | 77.42 | 179.92 | $0-1711$ | 12 | 26.36 | $21.22-32.70$ |
| 2002 | 210 | 4656 | 22.17 | 25.60 | $0-203$ | 6 | 13.30 | $11.44-15.44$ |
| 2003 | 222 | 16116 | 72.59 | 99.03 | $0-626$ | 10 | 31.24 | $25.56-38.13$ |
| 2004 | 220 | 3613 | 16.42 | 18.48 | $0-121$ | 11 | 9.86 | $8.45-11.47$ |
| 2005 | 221 | 7727 | 34.96 | 80.27 | $0-797$ | 26 | 10.26 | $8.20-12.79$ |


| Station | River Mile | Week 1 <br> Jul <br> 11 | Week 2 Jul 25 | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | Week 8 Oct 27 | Week 9 Nov 9 | C/E Weeks 4-9 | $\begin{gathered} \text { C/E } \\ \text { Weeks } \\ 1-9 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 345 | 24 | 48 | 35 | 27 | 16 | 0 | 25 | 8 | 18.5 | 58.7 |
| 21E | 23 | 136 | 74 | 133 | 29 | 85 | 26 | 0 | 3 | 2 | 24.2 | 54.2 |
| 17E | 24 | 51 | 44 |  | 221 | 15 | 24 | 3 | 0 | 1 | 44.0 | 44.9 |
| 16E | 25 | 15 | 18 | 34 | 18 | 1 | 27 | 9 | 1 | 8 | 10.7 | 14.6 |
| 12E | 29 | 24 | 53 | 40 | 19 | 19 | 5 | 3 | 0 | 0 | 7.7 | 18.1 |
| 14E | 29 | 28 | 10 | 14 | 25 | 49 | 21 | 5 | 0 | 1 | 16.8 | 17.0 |
| 19E | 33 | 37 | 42 | 23 | 17 | 196 | 139 | 13 |  | 1 | 73.2 | 58.5 |
| 11E | 34 | 108 | 4 | 18 | 87 | 0 | 2 | 28 | 0 | 6 | 20.5 | 28.1 |
| 9E | 34 | 8 | 173 | 17 |  | 147 |  | 15 | 1 | 16 | 44.8 | 53.9 |
| 7EE | 35 | 14 | 75 | 9 | 47 | 172 | 363 | 8 | 0 | 1 | 98.5 | 76.6 |
| 7EW | 35 |  |  | 0 | 38 | 797 | 468 | 10 | 4 | 2 | 219.8 | 188.4 |
| 8E | 35 | 51 | 3 | 57 | 4 | 289 | 1 | 0 | 3 | 0 | 49.5 | 45.3 |
| 3E | 39 | 0 | 7 | 10 | 36 | 68 | 108 |  |  |  | 70.7 | 38.2 |
| 4E | 39 | 3 | 0 | 1 | 26 | 23 | 13 | 0 | 9 | 0 | 11.8 | 8.3 |
| West |  |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 237 | 60 | 19 | 32 | 27 | 1 | 1 | 3 | 0 | 10.7 | 42.2 |
| 16WN | 27 | 22 | 54 | 0 | 21 | 54 | 4 | 18 | 3 | 4 | 17.3 | 20.0 |
| 14W | 29 | 19 | 18 | 30 | 23 | 80 | 1 | 12 | 6 | 3 | 20.8 | 21.3 |
| 12W | 30 | 1 | 55 | 13 | 32 | 2 | 5 | 11 | 4 | 5 | 9.8 | 14.2 |
| 11W | 32 | 17 | 24 | 0 | 24 | 31 | 0 | 2 | 9 | 0 | 11.0 | 11.9 |
| 10W | 35 | 17 | 31 | 6 | 4 | 1 | 0 | 1 | 2 | 0 | 1.3 | 6.9 |
| 9W | 35 | 4 | 10 | 3 | 8 | 8 | 1 | 0 | 10 | 3 | 5.0 | 5.2 |
| 8W | 36 | 1 | 3 | 13 | 22 | 1 | 76 | 4 | 31 | 15 | 24.8 | 18.4 |
| 7W | 37 | 1 | 6 | 16 | 24 | 17 | 219 | 7 | 23 | 21 | 51.8 | 37.1 |
| 3W | 39 |  | 4 | 3 |  | 26 | 120 | 2 | 2 | 1 | 30.2 | 22.6 |
| 4W | 39 | 13 | 13 | 4 | 6 |  | 98 | 0 | 0 | 1 | 21.0 | 16.9 |
| 5W | 39 | 61 |  | 17 | 22 | 25 | 42 | 7 | 12 | 12 | 20.0 | 24.8 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 148 | 221 |
| Catch |  | 1213 | 805 | 528 | 820 | 2160 | 1780 | 159 | 151 | 111 | 5181 | 7727 |
| C/E |  | 50.54 | 33.54 | 21.12 | 34.17 | 86.40 | 71.20 | 6.36 | 6.29 | 4.44 | 35.01 | 34.96 |

TABLE 8

| STATION | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |


| East |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18E | 0.1 | 3.3 | 64.2 | 56.0 | 30.5 | 35.8 | 7.3 | 21.5 | 66.5 | 39.5 | 34.7 | 18.3 | 41.4 | 26.8 | 22.2 | 13.2 | 45.9 | 21.3 | 115.5 | 11.3 | 58.7 |
| 21E |  | 1.0 | 70.3 | 23.5 | 111.8 | 70.0 | 1.0 | 24.6 | 89.8 | 42.3 | 59.4 | 46.1 | 26.1 | 44.4 | 38.6 | 12.2 | 27.3 | 9.6 | 106.4 | 22.6 | 54.2 |
| 17E | 0.1 | 8.3 | 45.7 | 96.4 | 157.7 | 97.6 | 13.8 | 21.7 | 61.8 | 61.6 | 34.2 | 18.0 | 27.5 | 48.6 | 48.2 | 12.3 | 30.1 | 18.0 | 81.8 | 16.2 | 44.9 |
| 16E |  | 3.0 | 135.0 | 50.1 | 34.5 | 42.6 | 4.7 | 17.0 | 50.7 | 26.6 | 38.7 | 14.3 | 23.2 | 38.8 | 37.8 | 4.6 | 30.1 | 6.2 | 44.1 | 13.2 | 14.6 |
| 15E |  | 8.0 | 29.0 | 38.0 | 51.3 | 45.6 | 6.3 |  | 73.6 |  |  |  | 48.0 | 80.0 | 126.0 | 7.0 |  |  |  |  |  |
| 12E | 1.9 | 1.9 | 35.4 | 49.7 | 36.5 | 39.8 | 0.9 | 18.4 | 57.3 | 29.9 | 31.1 | 11.3 | 10.9 | 21.0 | 51.9 | 11.0 | 9.6 | 8.0 | 50.6 | 7.8 | 18.1 |
| 13E | 3.7 | 4.5 | 93.3 | 14.5 | 12.5 | 31.0 | 24.2 | 19.7 | 55.6 | 14.3 | 82.3 | 13.0 | 44.4 | 22.3 | 47.5 | 4.6 | 24.5 | 26.4 | 58.5 | 61.0 |  |
| 14E | 0.1 | 9.1 | 37.0 | 78.4 | 96.6 | 67.6 | 2.7 | 37.7 | 35.1 | 44.0 | 33.4 | 20.0 | 41.1 | 58.5 | 48.8 | 22.7 | 36.5 | 27.8 | 126.1 | 8.8 | 17.0 |
| 19E | 1.6 | 6.0 | 259.5 | 88.8 | 67.6 | 33.1 | 7.0 | 19.8 | 33.1 | 59.7 | 31.8 | 16.5 | 100.4 | 30.4 | 15.2 | 16.0 | 57.8 | 12.8 | 70.8 | 12.0 | 58.5 |
| 10E | 1.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11E | 6.0 | 9.8 | 319.9 | 128.3 | 45.3 | 28.0 | 36.0 | 37.3 | 73.3 | 51.0 | 129.4 | 29.3 | 124.8 | 69.6 | 79.5 | 79.1 | 159.2 | 25.8 | 115.6 | 23.0 | 28.1 |
| 9E | 1.0 | 6.0 | 47.4 | 37.0 | 42.9 | 57.3 | 17.0 | 35.5 | 73.0 | 55.8 | 14.8 | 23.2 | 54.1 | 40.7 | 92.5 | 18.2 | 50.3 | 15.9 | 124.2 | 24.1 | 53.9 |
| 7E1 |  | 10.0 | 54.0 |  | 1.0 | 17.5 |  |  |  | 149.0 |  |  |  |  |  |  |  |  |  |  |  |
| 7EC | 15.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7EE | 4.9 | 12.9 | 222.0 | 54.3 | 58.0 | 30.1 | 9.0 | 13.9 | 65.1 | 26.4 | 17.1 | 19.0 | 54.1 | 11.8 | 35.1 | 34.8 | 193.3 | 50.5 | 41.8 | 19.3 | 76.6 |
| 7EW | 5.7 | 10.8 | 358.7 | 66.3 | 99.7 | 52.5 | 7.9 | 26.5 | 57.3 | 28.1 | 42.7 | 12.3 | 31.6 | 27.7 | 35.6 | 51.7 | 231.0 | 21.3 | 39.5 | 15.1 | 188.4 |
| 8E | 1.2 | 5.0 |  | 29.0 |  | 15.3 | 7.0 |  | 85.3 | 90.0 | 13.3 | 34.7 | 122.4 | 54.0 | 85.3 | 131.1 | 266.3 | 51.9 | 168.0 | 14.8 | 45.3 |
| 6E | 1.3 | 1.8 | 38.9 | 51.8 | 31.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3E | 4.3 | 4.9 | 46.9 | 29.9 | 24.4 | 21.9 | 6.7 | 13.1 | 17.4 | 46.8 | 17.8 | 8.9 | 96.6 | 22.1 | 60.0 | 12.9 | 118.1 | 18.5 | 43.0 | 9.0 | 38.2 |
| 4E | 7.9 | 6.4 | 38.0 | 42.3 | 30.4 | 40.3 | 15.0 | 27.8 | 33.2 | 21.6 | 13.3 | 16.7 | 78.6 | 18.3 | 47.3 | 7.8 | 213.4 | 25.4 | 40.0 | 8.5 | 8.3 |
| 5E | 5.0 | 18.3 | 9.0 | 25.8 | 26.0 | 34.0 | 16.0 | 13.5 | 186.0 | 11.0 | 10.5 | 22.3 | 28.0 |  |  |  |  |  |  |  |  |
| 20E | 8.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| West |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15WN | 0.7 |  | 63.3 | 32.3 | 53.3 | 53.5 | 3.0 | 32.5 | 11.0 | 105.0 |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 3.9 | 7.1 | 145.8 | 109.8 | 63.0 | 159.6 | 45.8 | 32.4 | 80.6 | 57.9 | 22.8 | 8.1 | 153.8 | 56.6 | 149.0 | 13.9 | 48.3 | 17.0 | 98.1 | 3.8 | 42.2 |
| 16WN | 3.9 | 15.3 | 53.1 | 89.6 | 62.2 | 162.4 |  | 22.2 | 48.4 | 11.0 | 20.2 | 5.1 | 79.5 | 15.0 | 81.6 | 5.2 | 63.8 | 12.8 | 60.1 | 9.1 | 20.0 |
| 16WS | 3.0 | 16.3 | 20.0 | 149.5 | 25.3 | 82.4 |  | 6.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13W |  | 16.0 | 25.3 | 21.0 |  | 3.5 | 20.7 | 13.7 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14W | 4.4 | 10.0 | 93.0 | 65.1 | 55.6 | 64.9 | 40.6 | 20.0 | 76.9 | 24.4 | 26.6 | 12.2 | 36.9 | 29.2 | 54.2 | 19.8 | 70.8 | 19.3 | 75.2 | 10.2 | 21.3 |
| 12W | 3.0 | 3.4 | 46.4 | 36.7 | 36.6 | 83.1 | 15.8 | 22.4 | 53.3 | 41.8 | 21.7 | 14.6 | 26.2 | 25.0 | 100.5 | 7.8 | 37.0 | 17.9 | 35.4 | 8.3 | 14.2 |
| 11W | 2.6 | 4.9 | 18.7 | 42.8 | 11.2 | 7.0 | 11.6 | 11.9 | 28.7 | 39.9 | 31.1 | 37.4 | 4.0 | 22.0 | 78.6 | 20.4 | 39.2 | 16.9 | 35.7 | 18.2 | 11.9 |
| 10W | 4.0 | 2.8 | 24.3 | 37.1 | 41.5 | 47.9 | 14.0 | 25.6 | 55.1 | 29.0 | 18.3 | 18.2 | 53.4 | 16.3 | 33.6 | 18.3 | 34.6 | 21.7 | 61.8 | 29.1 | 6.9 |
| 9W | 5.1 | 6.4 | 25.4 | 96.5 | 37.4 | 39.5 | 6.6 | 21.1 | 20.9 | 32.3 | 20.3 | 12.3 | 41.3 | 30.1 | 26.6 | 11.2 | 20.0 | 12.8 | 44.6 | 14.9 | 5.2 |
| 8W | 8.4 | 15.8 | 35.6 | 127.8 | 137.9 | 95.3 | 26.1 | 69.0 | 87.3 | 83.2 | 34.5 | 34.1 | 42.9 | 28.6 | 44.7 | 6.0 | 34.2 | 29.7 | 77.1 | 41.4 | 18.4 |
| 7W | 10.6 | 15.7 | 65.7 | 114.1 | 56.6 | 71.0 | 20.9 | 59.5 | 43.2 | 74.2 | 35.6 | 54.3 | 68.3 | 14.3 | 45.8 | 17.5 | 52.0 | 37.6 | 121.1 | 32.0 | 37.1 |
| 3W |  | 5.7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 22.6 |
| 4W | 15.8 | 20.1 | 71.4 | 93.9 | 143.8 | 80.6 | 23.4 | 28.6 | 38.8 | 27.8 | 35.1 | 31.3 | 97.7 | 37.3 | 51.8 | 33.7 | 87.0 | 30.8 | 33.0 | 25.0 | 16.9 |
| 4WN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5W | 10.6 | 18.1 | 43.1 | 64.8 | 63.8 | 54.1 | 27.1 | 26.2 | 46.8 | 33.2 | 34.6 | 25.3 | 78.0 | 42.7 | 49.5 | 22.6 | 46.9 | 18.2 | 42.0 | 18.0 | 24.8 |
| 20W | 11.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Annual C/E | 4.6 | 8.7 | 82.9 | 70.4 | 59.5 | 58.0 | 15.2 | 26.6 | 55.9 | 43.5 | 33.7 | 21.3 | 59.0 | 33.7 | 58.0 | 22.9 | 77.4 | 22.2 | 72.6 | 16.4 | 35.0 |

TABLE 9


| East | 13.5 | 30.8 | 24.2 | 36.7 | 23.1 | 0.2 | 2.6 | 27.8 | 68.3 | 36.0 | 15.0 | 2.6 | 17.3 | 39.0 | 23.4 | 31.2 | 12.0 | 31.7 | 7.8 | 23.7 | 3.2 | 41.0 | 7.4 | 74.2 | 12.3 | 18.5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 18E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 21E |  |  |  |  |  |  | 1.0 | 65.5 |  | 60.5 | 50.5 | 0.8 | 15.7 | 18.5 | 30.0 | 30.8 | 16.3 | 10.5 | 17.3 | 36.3 | 2.0 | 10.2 | 5.0 | 61.3 | 28.0 | 24.2 |
| 17E | 9.5 | 17.6 | 35.3 | 91.7 | 36.8 | 0.2 | 7.0 | 46.5 | 96.3 | 73.3 | 57.6 | 5.8 | 13.0 | 31.7 | 60.3 | 14.0 | 12.3 | 19.2 | 35.5 | 18.3 | 1.0 | 22.2 | 14.5 | 61.0 | 15.2 | 44.0 |
| 16E | 6.3 | 4.0 | 19.8 | 21.4 | 11.0 |  | 3.0 |  | 48.7 | 15.2 | 22.3 | 1.3 | 12.8 | 30.8 | 16.8 | 13.0 | 7.2 | 12.2 | 15.2 | 31.7 | 1.7 | 20.2 | 6.2 | 31.5 | 17.5 | 10.7 |
| 15E | 24.0 |  |  | 302.4 | 52.8 |  | 8.0 | 29.0 | 38.0 | 10.0 | 10.0 | 6.3 |  | 12.5 |  |  |  |  |  |  | 5.0 | 44.0 |  | 39.5 |  |  |
| 12E | 2.7 | 3.5 | 8.4 | 24.3 | 10.4 | 2.6 | 1.8 | 17.5 | 29.0 | 20.0 | 21.8 | 1.0 | 17.6 | 13.7 | 8.2 | 14.0 | 10.5 | 9.5 | 12.7 | 60.3 | 3.5 | 10.7 | 9.8 | 23.5 | 6.5 | 7.7 |
| 13E | 6.3 | 4.0 |  |  | 11.0 | 4.5 | 4.5 | 46.3 | 17.0 | 12.5 | 31.0 | 8.5 | 12.0 | 12.2 | 9.4 | 18.0 | 8.0 | 20.8 | 11.0 | 33.7 | 0.6 | 26.5 | 29.4 | 31.3 |  |  |
| 14E | 35.5 | 10.4 | 15.0 | 42.2 | 11.8 |  | 4.3 | 30.2 | 51.0 | 42.3 | 28.0 | 2.0 | 15.7 | 26.8 | 20.0 | 16.0 | 12.0 | 29.3 | 27.4 | 42.0 | 2.2 | 34.0 | 15.8 | 27.2 | 8.6 | 16.8 |
| 19E |  |  |  |  | 20.7 | 2.0 | 2.8 | 121.8 | 21.3 | 34.2 | 22.8 | 4.8 | 11.5 | 14.8 | 30.5 | 25.4 | 11.3 | 50.0 | 24.2 | 21.7 | 5.8 | 54.3 | 11.2 | 25.7 | 12.2 | 73.2 |
| 10E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 11E |  | 22.5 | 9.6 | 26.4 | 7.3 | 2.8 | 2.5 | 163.8 | 62.4 | 59.0 | 22.4 | 22.2 | 33.8 | 19.8 | 44.8 | 146.0 | 31.4 | 114.8 | 50.5 | 61.6 | 39.3 | 205.0 | 24.0 | 35.8 | 12.7 | 20.5 |
| 9E | 3.1 | 6.7 | 8.8 | 5.2 | 6.2 | 0.3 | 0.8 | 33.4 | 33.8 | 22.3 | 50.6 | 7.6 | 17.8 | 21.8 | 16.6 | 14.3 | 20.3 | 52.8 | 44.2 | 76.6 | 18.0 | 62.5 | 22.0 | 62.8 | 29.6 | 44.8 |
| 7E1 |  |  |  |  |  |  | 10.0 |  |  | 1.0 | 17.5 |  |  |  |  | 52.0 |  |  |  |  |  |  |  |  |  |  |
| 7EC |  |  | 94.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7EE |  | 22.0 | 88.5 | 48.2 | 146.0 | 0.7 | 6.6 | 274.7 | 41.5 | 50.3 | 28.8 | 6.8 | 6.8 | 90.0 | 16.8 | 16.0 | 12.5 | 61.7 | 10.0 | 30.2 | 8.2 | 286.8 | 63.2 | 35.2 | 11.5 | 98.5 |
| 7EW | 19.7 | 10.0 | 66.0 | 35.5 | 215.3 | 2.2 | 5.0 | 406.6 | 37.5 | 106.3 | 54.6 | 8.0 | 23.2 | 57.3 | 25.6 | 47.0 | 10.5 | 36.7 | 33.2 | 27.0 | 17.3 | 327.8 | 12.5 | 39.5 | 13.4 | 219.8 |
| 8E | 38.2 | 11.0 | 103.3 | 45.0 | 48.2 | 1.5 | 5.0 |  | 16.3 |  | 15.3 | 3.5 |  | 70.7 | 70.8 | 11.3 | 34.3 | 130.0 | 56.6 | 48.4 | 36.2 | 345.7 | 34.2 | 38.0 | 9.3 | 49.5 |
| 6E | 12.7 | 5.5 | 41.5 | 147.0 | 34.3 | 0.5 | 2.3 | 39.7 | 18.5 | 34.8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3E |  | 12.0 |  |  | 109.5 | 3.6 | 2.0 | 37.2 | 36.3 | 28.0 | 17.7 | 4.0 | 9.7 | 9.6 | 55.6 | 20.2 | 8.0 | 87.0 | 22.3 | 76.0 | 9.4 | 153.8 | 23.4 | 42.0 | 7.3 | 70.7 |
| 4E | 29.0 | 14.3 | 27.8 | 22.2 | 41.8 | 6.5 | 6.3 | 32.7 | 36.6 | 31.5 | 30.7 | 5.5 | 16.2 | 9.3 | 16.0 | 14.8 | 13.3 | 94.2 | 14.8 | 93.0 | 4.6 | 339.0 | 36.0 | 36.3 | 5.7 | 11.8 |
| 5E | 28.5 | 29.8 | 20.7 | 14.5 | 53.0 | 5.0 |  | 9.0 | 26.0 | 21.0 | 17.0 | 9.2 | 13.5 |  | 11.0 | 18.0 | 19.0 |  | 24.0 |  |  |  |  | 11.5 |  |  |
| 1E |  |  |  | 5.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| West |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15WN | 39.0 | 9.4 | 16.7 | 36.3 | 42.7 |  |  | 21.0 | 28.5 | 53.4 | 47.6 | 3.0 | 16.2 | 11.0 |  | 26.7 |  | 16.0 |  |  |  |  |  |  |  |  |
| 15WS | 20.4 | 10.2 | 8.4 | 82.8 | 26.2 | 2.4 | 5.5 | 9.8 | 67.7 | 22.0 | 77.5 | 15.6 | 17.4 | 56.4 | 55.0 | 16.3 | 6.5 | 78.3 | 22.5 | 176.8 | 3.2 | 56.6 | 27.0 | 48.3 | 4.4 | 10.7 |
| 16WN | 68.2 | 32.0 | 11.0 | 17.5 | 15.2 | 3.5 | 12.3 | 27.8 | 64.8 | 82.7 | 93.0 |  | 15.8 | 21.7 | 11.0 | 21.0 | 4.2 | 100.5 | 12.8 | 99.3 | 2.0 | 83.0 | 15.8 | 31.7 | 12.3 | 17.3 |
| 16WS | 59.3 | 29.2 | 8.5 | 49.7 | 11.0 | 2.6 | 15.2 | 3.7 | 50.7 | 32.8 | 44.0 |  | 6.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13W | 10.2 | 14.7 | 17.3 |  |  |  |  | 25.3 | 21.0 |  | 3.5 | 2.3 | 6.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 14W | 45.3 | 55.5 | 17.8 | 33.3 | 4.2 | 5.3 |  | 71.5 | 58.2 | 36.7 | 39.6 | 9.5 | 8.3 | 30.7 | 16.8 | 18.2 | 8.8 | 25.5 | 23.3 | 48.5 | 6.7 | 48.8 | 18.7 | 16.3 | 11.3 | 20.8 |
| 12W | 8.3 | 9.5 | 12.0 | 10.8 | 7.0 | 2.7 | 1.4 | 35.8 | 40.7 | 36.8 | 65.2 | 9.5 | 10.2 | 8.0 | 37.2 | 12.0 | 8.3 | 14.8 | 14.0 | 124.8 | 3.8 | 28.0 | 21.6 | 23.8 | 8.3 | 9.8 |
| 11W | 137.0 | 9.4 | 12.2 | 8.0 | 5.0 | 2.5 | 2.2 | 12.5 | 45.6 | 13.2 | 6.6 | 7.5 | 13.2 | 17.2 | 32.3 | 23.3 | 10.5 |  | 37.0 | 101.8 | 5.3 | 37.5 | 18.4 | 19.0 | 16.2 | 11.0 |
| 10W | 21.0 | 22.0 |  | 15.4 | 7.5 | 3.0 | 2.0 | 20.7 | 37.2 | 24.2 | 29.5 | 9.0 | 16.4 | 24.3 | 17.0 | 14.2 | 11.7 | 47.7 | 17.2 | 13.0 | 5.4 | 47.4 | 14.6 | 40.8 | 15.6 | 1.3 |
| 9W | 27.7 | 61.3 | 13.3 | 16.3 | 12.0 | 5.2 | 5.0 | 24.4 | 86.8 | 30.3 | 36.0 | 4.7 | 18.6 | 15.3 | 13.8 | 21.4 | 6.8 | 45.6 | 5.5 | 15.2 | 3.2 | 20.2 | 11.3 | 26.0 | 13.7 | 5.0 |
| 8W | 19.5 | 26.8 | 15.0 | 29.7 | 18.2 | 10.5 | 15.5 | 23.5 | 99.2 | 47.8 | 29.8 | 8.2 | 42.8 | 35.8 | 38.5 | 24.4 | 17.7 | 38.3 | 13.5 | 16.2 | 5.5 | 53.7 | 20.2 | 26.2 | 37.2 | 24.8 |
| 7W | 4.0 | 46.3 | 51.0 | 46.5 | 34.3 | 11.3 | 10.0 | 13.2 | 97.2 | 61.5 | 74.6 | 8.5 | 42.8 | 13.8 | 36.8 | 31.5 | 36.5 | 60.2 | 13.7 | 23.0 | 13.0 | 37.3 | 35.8 | 47.7 | 34.5 | 51.8 |
| 3W | 12.2 | 10.3 | 23.4 | 8.0 |  |  | 2.0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11.2 | 30.2 |
| 4W | 15.0 | 26.2 | 41.8 | 37.5 | 38.0 | 17.8 | 15.8 | 52.0 | 95.0 | 69.0 | 73.0 | 12.5 | 20.0 | 15.5 | 17.8 | 40.8 | 24.3 | 71.8 | 19.0 | 103.0 | 8.0 | 90.8 | 38.8 | 10.0 | 11.0 | 21.0 |
| 4WN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 17.0 |  |  |  |  |  |  |  |  |  |  |
| 5W | 7.8 | 20.4 | 38.6 | 44.0 | 39.8 | 8.3 | 15.0 | 27.3 | 39.4 | 33.0 | 40.6 | 9.5 | 19.0 | 14.2 | 14.8 | 35.2 | 17.5 | 69.8 | 39.0 | 72.0 | 4.3 | 35.8 | 20.5 | 21.0 | 8.5 | 20.0 |
| Annual C/E | 23.9 | 21.4 | 30.7 | 48.4 | 37.1 | 3.8 | 6.1 | 60.7 | 52.3 | 41.9 | 38.0 | 6.9 | 17.3 | 26.5 | 28.5 | 27.4 | 14.7 | 50.3 | 22.9 | 52.5 | 7.8 | 91.2 | 21.5 | 35.0 | 14.3 | 35.0 |


|  | Week 1 <br> Jul | Week 2 <br> Jul | Week 3 Aug | Week 4 Aug | Week 5 Sep | Week 6 Sep | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \end{gathered}$ | Week 9 Nov | C/F <br> Weeks | C/F <br> Weeks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TL (mm) | 11 | 25 | 8 | 22 | 7 | 19 | 19 | 27 | 9 | 4-9 | 1-9 |
| <10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10-14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15-19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20-24 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 25-29 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 |
| 30-34 | 86 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 107 |
| 35-39 | 134 | 46 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 181 |
| 40-44 | 105 | 78 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 191 |
| 45-49 | 72 | 100 | 35 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 209 |
| 50-54 | 66 | 119 | 57 | 12 | 7 | 1 | 1 | 2 | 2 | 25 | 267 |
| 55-59 | 27 | 98 | 91 | 47 | 16 | 2 | 0 | 1 | 1 | 67 | 283 |
| 60-64 | 20 | 78 | 82 | 91 | 52 | 9 | 2 | 7 | 5 | 166 | 346 |
| 65-69 | 6 | 37 | 65 | 118 | 61 | 38 | 4 | 18 | 8 | 247 | 355 |
| 70-74 | 0 | 29 | 46 | 118 | 103 | 65 | 14 | 27 | 12 | 339 | 414 |
| 75-79 | 0 | 3 | 29 | 103 | 86 | 91 | 19 | 21 | 14 | 334 | 366 |
| 80-84 | 0 | 0 | 14 | 65 | 126 | 103 | 26 | 21 | 16 | 357 | 371 |
| 85-89 | 0 | 0 | 7 | 31 | 80 | 84 | 22 | 11 | 14 | 242 | 249 |
| 90-94 | 1 | 0 | 3 | 15 | 57 | 68 | 19 | 10 | 14 | 183 | 187 |
| 95-99 | 0 | 0 | 0 | 8 | 37 | 52 | 8 | 12 | 9 | 126 | 126 |
| 100-104 | 0 | 0 | 0 | 0 | 30 | 26 | 8 | 5 | 3 | 72 | 72 |
| 105-109 | 0 | 0 | 0 | 1 | 28 | 25 | 5 | 9 | 3 | 71 | 71 |
| 110-114 | 0 | 0 | 0 | 0 | 15 | 7 | 10 | 3 | 2 | 37 | 37 |
| 115-119 | 0 | 0 | 0 | 0 | 8 | 7 | 5 | 0 | 3 | 23 | 23 |
| 120-124 | 0 | 0 | 0 | 1 | 9 | 6 | 1 | 3 | 1 | 21 | 21 |
| 125-129 | 0 | 0 | 0 | 0 | 2 | 2 | 6 | 0 | 1 | 11 | 11 |
| 130-134 | 0 | 0 | 0 | 0 | 2 | 1 | 4 | 1 | 0 | 8 | 8 |
| 135-139 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 3 | 3 |
| 140-144 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 4 | 4 |
| >144 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 4 | 4 |
| \# Measured | 573 | 610 | 438 | 612 | 721 | 588 | 159 | 151 | 111 | 2342 | 3963 |
| Mean | 40.89 | 51.78 | 61.75 | 71.38 | 82.00 | 85.25 | 92.11 | 82.35 | 85.71 | 80.93 | 68.53 |
| StdDev | 9.54 | 9.95 | 10.09 | 10.11 | 14.82 | 12.87 | 18.80 | 15.24 | 18.34 | 15.13 | 20.60 |


| YEAR |  | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | , 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1985 | Mean | 54.23 | 63.53 | 81.55 | 85.44 | 93.37 | 100.91 | 103.68 | 99.84 | 101.39 |
|  | StdDev | 7.53 | 11.04 | 12.03 | 12.06 | 13.26 | 11.64 | 16.35 | 12.45 | 16.08 |
| 1986 | Mean | 58.03 | 67.05 | 75.98 | 87.92 | 92.65 | 99.67 | 96.49 | 98.55 | 98.58 |
|  | StdDev | 7.14 | 10.68 | 13.39 | 12.47 | 12.23 | 14.77 | 13.24 | 21.18 | 16.78 |
| 1987 | Mean | 47.84 | 59.77 | 67.12 | 72.23 | 80.56 | 85.62 | 84.95 | 87.52 | 84.96 |
|  | StdDev | 9.51 | 9.56 | 10.40 | 10.59 | 10.70 | 12.04 | 13.37 | 13.59 | 15.29 |
| 1988 | Mean | 41.72 | 50.15 | 59.48 | 74.08 | 80.98 | 84.06 | 86.67 | 85.74 | 86.92 |
|  | StdDev | 10.65 | 15.40 | 14.60 | 15.61 | 16.32 | 15.80 | 15.77 | 18.42 | 16.43 |
| 1989 | Mean | 36.02 | 46.20 | 57.37 | 65.27 | 72.37 | 81.12 | 81.05 | 82.14 | 85.05 |
|  | StdDev | 9.35 | 9.64 | 10.85 | 11.32 | 11.02 | 12.16 | 12.43 | 12.61 | 14.17 |
| 1990 | Mean | 48.96 | 46.03 | 57.55 | 65.08 | 71.64 | 76.35 | 77.49 | 78.35 | 74.82 |
|  | StdDev | 23.58 | 15.72 | 14.98 | 13.46 | 13.95 | 13.87 | 13.96 | 14.34 | 16.01 |
| 1991 | Mean | 62.57 | 71.49 | 82.01 | 89.96 | 97.58 | 100.96 | 101.95 | 93.76 | 97.59 |
|  | StdDev | 15.53 | 14.33 | 15.01 | 18.51 | 18.52 | 22.94 | 27.32 | 27.56 | 22.76 |
| 1992 | Mean | 46.89 | 57.76 | 65.38 | 72.50 | 82.08 | 85.46 | 91.01 | 89.59 | 89.89 |
|  | StdDev | 10.82 | 12.46 | 12.31 | 12.61 | 12.12 | 14.47 | 15.23 | 15.26 | 15.57 |
| 1993 | Mean | 38.13 | 52.73 | 62.11 | 68.62 | 75.84 | 82.95 | 83.99 | 87.50 | 88.59 |
|  | StdDev | 8.13 | 11.67 | 12.30 | 13.09 | 12.86 | 14.55 | 12.90 | 15.29 | 19.19 |
| 1994 | Mean | 41.26 | 54.55 | 62.12 | 71.21 | 75.99 | 84.03 | 83.97 | 87.26 | 88.74 |
|  | StdDev | 8.77 | 10.84 | 11.79 | 13.68 | 14.37 | 15.55 | 13.17 | 14.14 | 13.32 |
| 1995 | Mean | 42.00 | 62.39 | 69.85 | 77.87 | 87.50 | 94.73 | 100.04 | 99.84 | 90.78 |
|  | StdDev | 8.94 | 11.21 | 11.39 | 11.81 | 13.15 | 16.24 | 17.97 | 20.31 | 20.11 |
| 1996 | Mean | 44.43 | 51.79 | 58.60 | 66.78 | 81.48 | 86.36 | 88.09 | 84.31 | 83.25 |
|  | StdDev | 12.02 | 12.45 | 13.49 | 12.25 | 17.56 | 19.53 | 16.02 | 17.03 | 16.46 |
| 1997 | Mean | 41.50 | 52.29 | 73.30 | 72.88 | 79.14 | 83.51 | 87.66 | 87.71 | 87.16 |
|  | StdDev | 9.19 | 11.10 | 10.00 | 12.99 | 13.48 | 13.61 | 13.61 | 12.23 | 15.10 |
| 1998 | Mean | 39.28 | 47.88 | 60.56 | 70.51 | 79.73 | 81.81 | 84.88 | 98.30 | 91.93 |
|  | StdDev | 11.93 | 12.68 | 11.81 | 14.20 | 11.85 | 15.03 | 13.15 | 15.23 | 15.21 |
| 1999 | Mean | 52.53 | 62.91 | 75.34 | 93.44 | 101.45 | 95.64 | 89.42 | 91.13 | 88.49 |
|  | StdDev | 11.43 | 10.90 | 14.86 | 20.11 | 18.39 | 22.37 | 21.01 | 24.39 | 23.93 |
| 2000 | Mean | 41.66 | 47.55 | 53.04 | 62.40 | 71.50 | 73.03 | 79.30 | 71.55 | 70.71 |
|  | StdDev | 9.93 | 10.77 | 11.76 | 13.27 | 14.35 | 15.40 | 17.53 | 8.06 | 4.92 |
| 2001 | Mean | 44.29 | 54.78 | 67.15 | 75.74 | 85.94 | 93.95 | 92.62 | 92.62 | 104.57 |
|  | StdDev | 10.00 | 13.21 | 12.80 | 12.65 | 13.10 | 15.92 | 16.49 | 17.59 | 10.80 |
| 2002 | Mean | 43.74 | 54.62 | 66.58 | 76.66 | 88.13 | 93.25 | 112.83 | 100.98 | 104.25 |
|  | StdDev | 12.56 | 15.14 | 17.68 | 19.61 | 17.46 | 18.38 | 22.27 | 21.38 | 21.12 |
| 2003 | Mean | 39.78 | 48.20 | 56.30 | 63.21 | 67.28 | 72.11 | 72.49 | 74.48 | 71.67 |
|  | StdDev | 10.79 | 12.24 | 12.26 | 11.12 | 11.21 | 12.73 | 13.99 | 14.94 | 14.08 |
| 2004 | Mean | 52.23 | 68.84 | 75.31 | 82.17 | 90.13 | 85.06 | 86.85 | 86.73 | 86.91 |
|  | StdDev | 13.47 | 15.97 | 18.56 | 15.36 | 17.83 | 16.61 | 18.42 | 17.24 | 16.78 |
| 2005 | Mean | 40.89 | 51.78 | 61.75 | 71.38 | 82.00 | 85.25 | 92.11 | 82.35 | 85.71 |
|  | StdDev | 9.54 | 9.95 | 10.09 | 10.11 | 14.82 | 12.87 | 18.80 | 15.24 | 18.34 |


| AGE | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 984 | 1940 | 18649 | 15488 | 13397 | 12591 | 3275 | 5874 | 12587 | 9624 | 7457 | 4346 | 11452 | 6674 | 9981 | 4830 | 16103 | 4656 | 16116 | 3613 | 7727 |
| 1 | 179 | 41 | 25 | 149 | 145 | 57 | 154 | 156 | 104 | 56 | 240 | 93 | 88 | 128 | 118 | 150 | 168 | 174 | 63 | 102 | 21 |
| 2 | 10 | 3 | 2 | 6 | 11 | 9 | 11 | 7 | 23 | 5 | 23 | 4 | 10 | 15 | 4 | 11 | 7 | 12 | 7 | 4 | 1 |
| 3 | 0 | 4 | 0 | 1 | 0 | 2 | 3 | 2 | 6 | 0 | 4 | 3 | 2 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 0 |
| 4 | 0 | 3 | 0 | 1 | 0 | 0 | 1 | 4 | 1 | 3 | 3 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1174 | 1991 | 18678 | 15646 | 13555 | 12661 | 3444 | 6044 | 12721 | 9689 | 7730 | 4449 | 11552 | 6819 | 10106 | 4992 | 16279 | 4844 | 16187 | 3719 | 7749 |

Tagged with USFWS Internal Anchor Tags

| AGE | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 |  |  |  | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 |  |  |  | 50 | 41 | 27 | 80 | 83 | 43 | 13 | 68 | 40 | 29 | 46 | 57 | 33 | 63 | 97 | 28 | 20 | 4 |
| 2 |  |  |  | 4 | 11 | 8 | 10 | 6 | 21 | 4 | 18 | 3 | 9 | 14 | 3 | 6 | 6 | 12 | 7 | 4 | 0 |
| 3 |  |  |  | 1 | 0 | 2 | 2 | 2 | 5 | 0 | 3 | 2 | 1 | 1 | 0 | 1 | 0 | 2 | 1 | 0 | 0 |
| 4 |  |  |  | 1 | 0 | 0 | 1 | 4 | 1 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 5 |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 |  |  |  | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 |  |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 |  |  |  | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNK |  |  |  | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tagged | 0 | 0 | 0 | 57 | 54 | 45 | 93 | 95 | 71 | 21 | 98 | 49 | 39 | 62 | 77 | 40 | 70 | 111 | 36 | 24 | 4 |


| TL | Week 1 Jul 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 Aug 8 | Week 4 <br> Aug <br> 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 Oct 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/F <br> Weeks <br> 4-9 | C/F <br> Weeks <br> 1-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110-114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115-119 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 120-124 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 125-129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130-134 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 135-139 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 |
| 140-144 | 0 | 2 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 4 | 6 |
| 145-149 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 150-154 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 155-159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 160-164 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 165-169 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 170-174 | 0 | 1 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 4 | 5 |
| 175-179 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| 180-184 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 185-189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 190-194 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 195-199 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 200-204 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 205-209 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 210-214 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 215-219 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 220-224 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 225-229 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 230-234 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 235-239 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 240-244 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 245-249 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| >249 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 1 | 6 | 0 | 0 | 4 | 3 | 7 | 1 | 0 | 15 | 22 |


| Station | River Mile | Week 1 Jul 11 | Week 2 Jul 25 | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug <br> 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 Oct 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/E Weeks 4-9 | C/E Weeks <br> 1-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.2 | 0.1 |
| 21E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 1 | 0 | 0 | 0 | 0.2 | 0.1 |
| 16E | 25 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0.3 | 0.3 |
| 12E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.0 | 0.0 |
| 11E | 34 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0.5 | 0.3 |
| 9E | 34 | 0 | 0 | 0 |  | 1 |  | 0 | 0 | 0 | 0.3 | 0.1 |
| 7EE | 35 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.1 |
| 7EW | 35 |  |  | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0.3 | 0.3 |
| 8E | 35 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.2 | 0.1 |
| 3E | 39 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.0 | 0.0 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.2 | 0.1 |
| 16WN | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0.3 | 0.2 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 9W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 8W | 36 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.1 |
| 7W | 37 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0.2 | 0.6 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.0 | 0.0 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4.9 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 148 | 221 |
| Catch |  | 1 | 6 | 0 | 0 | 4 | 3 | 7 | 1 | 0 | 15 | 22 |
| C/E |  | 0.04 | 0.25 | 0.00 | 0.00 | 0.16 | 0.12 | 0.28 | 0.04 | 0.00 | 0.10 | 0.10 |

TABLE 152005 HUDSON RIVER YOY WHITE PERCH CATCH BY STATION

| Station | River Mile | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \end{gathered}$ | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 1.0 |
| 21E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 12E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0.3 |
| 19E | 33 | 0 | 1 | 0 | 0 | 3 | 0 | 0 |  | 0 | 0.5 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9E | 34 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 0 | 0.0 |
| 7EE | 35 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 1.2 |
| 7EW | 35 |  |  | 0 | 1 | 11 | 0 | 0 | 0 | 0 | 1.7 |
| 8E | 35 | 0 | 0 | 3 | 0 | 156 | 0 | 0 | 0 | 0 | 17.7 |
| 3E | 39 | 0 | 0 | 0 | 3 | 3 | 0 |  |  |  | 1.0 |
| 4E | 39 | 0 | 0 | 0 | 22 | 1 | 3 | 0 | 5 | 0 | 3.4 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16WN | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0.3 |
| 14W | 29 | 0 | 0 | 30 | 29 | 10 | 0 | 1 | 0 | 1 | 7.9 |
| 12W | 30 | 0 | 0 | 0 | 8 | 2 | 0 | 2 | 5 | 0 | 1.9 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0.7 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9 W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 4 | 2.2 |
| 7W | 37 | 9 | 0 | 0 | 0 | 0 | 17 | 0 | 1 | 2 | 3.2 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 3 | 0 | 0.4 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 1 | 0 | 0 | 0 | 0.1 |
| 5 W | 39 | 0 |  | 0 | 0 | 1 | 0 | 0 | 15 | 18 | 4.3 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 9 | 1 | 33 | 74 | 187 | 22 | 7 | 46 | 40 | 419 |
| C/E |  | 0.38 | 0.04 | 1.32 | 3.08 | 7.48 | 0.88 | 0.28 | 1.92 | 1.60 | 1.90 |

## TABLE 162005 HUDSON RIVER OLDER WHITE PERCH CATCH BY STATION

| Station | River Mile | Week 1 Jul 11 | Week 2 <br> Jul 25 | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0.3 |
| 21E | 23 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 |
| 12E | 29 | 3 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.6 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0.1 |
| 19E | 33 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.1 |
| 11E | 34 | 19 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 3.2 |
| 9 E | 34 | 1 | 2 | 0 |  | 0 |  | 0 | 0 | 0 | 0.4 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 |
| 3E | 39 | 3 | 0 | 0 | 2 | 1 | 0 |  |  |  | 1.0 |
| 4E | 39 | 4 | 9 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1.7 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 |
| 16WN | 27 | 42 | 98 | 0 | 0 | 43 | 0 | 0 | 0 | 0 | 20.3 |
| 14W | 29 | 22 | 2 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 3.1 |
| 12W | 30 | 2 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9W | 35 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0.6 |
| 7W | 37 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 3 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.4 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 104 | 130 | 16 | 12 | 44 | 1 | 1 | 6 | 3 | 317 |
| C/E |  | 4.33 | 5.42 | 0.64 | 0.50 | 1.76 | 0.04 | 0.04 | 0.25 | 0.12 | 1.43 |

TABLE 172005 HUDSON RIVER ATLANTIC TOMCOD CATCH BY STATION

| Station | River Mile | Week Jul 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 21E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 12E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.0 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9 E | 34 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 0 | 0.0 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3E | 39 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.0 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16WN | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.0 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| C/E |  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

TABLE 182005 HUDSON RIVER ATLANTIC TOMCOD LENGTH FREQUENCY

| TL (mm) | Week 1 Jul 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug <br> 22 | Week 5 Sep 7 | Week 6 Sep 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \\ \hline \end{gathered}$ | Week 9 Nov 9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5-10 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 10-15 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 15-20 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 20-25 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 25-30 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 30-35 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 35-40 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 40-45 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 45-50 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 50-55 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 55-60 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 60-65 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 65-70 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 70-75 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 75-80 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 80-85 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 85-90 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 90-95 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 95-100 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 100-105 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 105-110 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 110-115 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 115-120 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 120-125 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 125-130 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 130-135 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 135-140 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| 140-145 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| >145 |  |  |  |  |  |  |  |  |  | 0 | 0 |
| Measured | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mean | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| StdDev | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |


| Station | River Mile | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 <br> Oct <br> 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 21E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 12E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |  | 0 | 0.1 |
| 11E | 34 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 9E | 34 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 0 | 0.0 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.1 |
| 3E | 39 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.0 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.1 |
| 16WN | 27 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.2 |
| 14W | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0.3 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0.6 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0.2 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0.2 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 0 | 1 | 0 |  | 0 | 0 | 0 | 0 | 0.1 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 1 | 2 | 2 | 2 | 1 | 0 | 2 | 6 | 6 | 22 |
| C/E |  | 0.04 | 0.08 | 0.08 | 0.08 | 0.04 | 0.00 | 0.08 | 0.25 | 0.24 | 0.10 |


| TL (mm) | Week 1 Jul 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug <br> 22 | Week 5 Sep 7 | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \\ \hline \end{gathered}$ | Week 9 Nov 9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <60 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60-79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80-99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 |
| 100-119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 120-139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 4 | 4 |
| 140-159 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 |
| 160-179 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 180-199 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 200-219 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 2 |
| 220-239 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 240-259 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 260-279 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 280-299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 300-319 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 320-339 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 340-359 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 360-379 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 380-399 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| 400-419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 420-439 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 440-459 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 460-479 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 480-499 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 500-519 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 520-539 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 540-559 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 560-579 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 580-599 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 600-619 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 620-639 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 640-659 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 660-679 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 680-699 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |
| > 699 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measured | 1 | 2 | 2 | 2 | 1 | 0 | 2 | 6 | 6 | 17 | 22 |
| Mean | 690.0 | 355.0 | 470.0 | 278.5 | 685.0 | 0 | 369.0 | 136.3 | 127.3 | 209.5 | 268.3 |
| StDev | 0.0 | 21.2 | 106.1 | 167.6 | 0.0 | 0 | 239.0 | 36.2 | 37.0 | 169.1 | 195.5 |


| Station | River Mile | Week 1 <br> Jul <br> 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 <br> Oct <br> 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 1 | 14 | 2 | 0 | 0 | 0 | 0 | 1.9 |
| 21E | 23 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 17E | 24 | 0 | 1 |  | 0 | 0 | 2 | 0 | 0 | 0 | 0.4 |
| 16E | 25 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 |
| 12E | 29 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.3 |
| 14E | 29 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.3 |
| 19E | 33 | 0 | 1 | 1 | 1 | 3 | 0 | 0 |  | 0 | 0.8 |
| 11E | 34 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0.4 |
| 9E | 34 | 0 | 1 | 1 |  | 1 |  | 0 | 0 | 0 | 0.4 |
| 7EE | 35 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0.3 |
| 7EW | 35 |  |  | 0 | 5 | 1 | 1 | 0 | 0 | 0 | 1.0 |
| 8E | 35 | 4 | 8 | 9 | 11 | 2 | 5 | 0 | 0 | 0 | 4.3 |
| 3E | 39 | 1 | 1 | 0 | 1 | 0 | 0 |  |  |  | 0.5 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 16WN | 27 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.2 |
| 14W | 29 | 1 | 1 | 2 | 4 | 5 | 2 | 0 | 0 | 0 | 1.7 |
| 12W | 30 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 11W | 32 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 10W | 35 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 9W | 35 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 8W | 36 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 |
| 7W | 37 | 0 | 5 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 1.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 3 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.4 |
| 5W | 39 | 0 |  | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 0.8 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 14 | 32 | 21 | 39 | 23 | 16 | 0 | 0 | 0 | 145 |
| C/E |  | 0.58 | 1.33 | 0.84 | 1.63 | 0.92 | 0.64 | 0.00 | 0.00 | 0.00 | 0.66 |


| TL (mm) | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | $\begin{gathered} \text { Week } 3 \\ \text { Aug } \\ 8 \end{gathered}$ | $\begin{gathered} \text { Week } 4 \\ \text { Aug } \\ 22 \end{gathered}$ | Week 5 Sep 7 | Week 6 Sep 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | Week 8 <br> Oct <br> 27 | $\begin{gathered} \text { Week } 9 \\ \text { Nov } \\ 9 \end{gathered}$ | C/F <br> Weeks 4-9 | C/F <br> Weeks 1-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| < 65 | 2 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 2 |
| 65-69 | 0 | 0 | 0 | 2 | 0 | 0 |  |  |  | 2 | 2 |
| 70-74 | 0 | 0 | 0 | 1 | 0 | 0 |  |  |  | 1 | 1 |
| 75-79 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 80-84 | 2 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 2 |
| 85-89 | 2 | 3 | 0 | 0 | 0 | 0 |  |  |  | 0 | 5 |
| 90-94 | 3 | 1 | 0 | 0 | 2 | 0 |  |  |  | 2 | 6 |
| 95-99 | 1 | 1 | 0 | 0 | 1 | 0 |  |  |  | 1 | 3 |
| 100-104 | 0 | 6 | 0 | 0 | 0 | 0 |  |  |  | 0 | 6 |
| 105-109 | 3 | 5 | 0 | 0 | 1 | 0 |  |  |  | 1 | 9 |
| 110-114 | 0 | 4 | 0 | 0 | 0 | 0 |  |  |  | 0 | 4 |
| 115-119 | 0 | 3 | 0 | 0 | 1 | 1 |  |  |  | 2 | 5 |
| 120-124 | 0 | 3 | 0 | 1 | 3 | 0 |  |  |  | 4 | 7 |
| 125-129 | 0 | 1 | 2 | 0 | 1 | 1 |  |  |  | 2 | 5 |
| 130-134 | 0 | 0 | 1 | 2 | 1 | 2 |  |  |  | 5 | 6 |
| 135-139 | 0 | 1 | 2 | 0 | 0 | 1 |  |  |  | 1 | 4 |
| 140-144 | 0 | 3 | 3 | 2 | 0 | 1 |  |  |  | 3 | 9 |
| 145-149 | 0 | 0 | 3 | 2 | 1 | 2 |  |  |  | 5 | 8 |
| 150-154 | 0 | 1 | 2 | 5 | 0 | 1 |  |  |  | 6 | 9 |
| 155-159 | 0 | 0 | 2 | 4 | 2 | 0 |  |  |  | 6 | 8 |
| 160-164 | 0 | 0 | 2 | 3 | 2 | 0 |  |  |  | 5 | 7 |
| 165-169 | 0 | 0 | 1 | 5 | 1 | 1 |  |  |  | 7 | 8 |
| 170-174 | 1 | 0 | 1 | 2 | 0 | 1 |  |  |  | 3 | 5 |
| 175-179 | 0 | 0 | 2 | 3 | 0 | 1 |  |  |  | 4 | 6 |
| 180-184 | 0 | 0 | 0 | 1 | 0 | 0 |  |  |  | 1 | 1 |
| 185-189 | 0 | 0 | 0 | 2 | 0 | 1 |  |  |  | 3 | 3 |
| 190-194 | 0 | 0 | 0 | 0 | 2 | 0 |  |  |  | 2 | 2 |
| 195-199 | 0 | 0 | 0 | 1 | 0 | 2 |  |  |  | 3 | 3 |
| 200-204 | 0 | 0 | 0 | 2 | 1 | 0 |  |  |  | 3 | 3 |
| 205-209 | 0 | 0 | 0 | 0 | 1 | 1 |  |  |  | 2 | 2 |
| 210-214 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 215-219 | 0 | 0 | 0 | 0 | 1 | 0 |  |  |  | 1 | 1 |
| 220-224 | 0 | 0 | 0 | 0 | 1 | 0 |  |  |  | 1 | 1 |
| 225-229 | 0 | 0 | 0 | 0 | 1 | 0 |  |  |  | 1 | 1 |
| 230-234 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 235-239 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 240-244 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 245-249 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 250-254 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 255-259 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 260-264 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| 265-269 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| >269 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |
| Measured | 14 | 32 | 21 | 38 | 23 | 16 | 0 | 0 | 0 | 77 | 144 |
| Mean | 94.0 | 112.6 | 150.0 | 155.5 | 154.8 | 157.9 |  |  |  | 155.8 | 139.4 |
| StDev | 27.9 | 16.6 | 15.1 | 31.8 | 43.2 | 27.9 |  |  |  | 34.5 | 36.3 |


| Station | River Mile | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | Week 8 Oct 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 21E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 17E | 24 | 2 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 |
| 16E | 25 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 12E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.0 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9E | 34 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 0 | 0.0 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3E | 39 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.0 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16WN | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.0 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| C/E |  | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |


| TL (mm) | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 3 \\ \text { Aug } \\ 8 \end{gathered}$ | $\begin{gathered} \text { Week } 4 \\ \text { Aug } \\ 22 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 5 \\ \text { Sep } \\ 7 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 9 \\ \text { Nov } \\ 9 \end{gathered}$ | C/F <br> Weeks $4-9$ | C/F <br> Weeks $1-9$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 25-29 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 30-34 | 1 |  |  |  |  |  |  |  |  | 0 | 1 |
| 35-39 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 40-44 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 45-49 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 50-54 | 1 |  |  |  |  |  |  |  |  | 0 | 1 |
| 55-59 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 60-64 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 65-69 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 70-74 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 75-79 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 80-84 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 85-89 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 90-94 | 1 |  |  |  |  |  |  |  |  | 0 | 1 |
| 95-99 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 100-104 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 105-109 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 110-114 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 115-119 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 120-124 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 125-129 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 130-134 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 135-139 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 140-144 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 145-149 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 150-154 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 155-159 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 160-164 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 165-169 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 170-174 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 175-179 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 180-184 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 185-189 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 190-194 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| 195-199 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| > 199 | 0 |  |  |  |  |  |  |  |  | 0 | 0 |
| Measured | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Mean | 58.67 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 58.67 |
| StDev | 32.87 | 0.0 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 32.87 |


| Station | River Mile | Week 1 <br> Jul <br> 11 | Week 2 Jul 25 | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug 22 | Week 5 Sep 7 | Week 6 <br> Sep <br> 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \end{gathered}$ | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 21E | 23 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0.2 |
| 12E | 29 | 1 | 11 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1.8 |
| 14E | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0.4 |
| 19E | 33 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.1 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.1 |
| 9E | 34 | 0 | 9 | 0 |  | 0 |  | 1 | 0 | 0 | 1.4 |
| 7EE | 35 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.1 |
| 8E | 35 | 0 | 35 | 1 | 0 | 0 | 0 | 12 | 0 | 0 | 5.3 |
| 3E | 39 | 0 | 10 | 0 | 0 | 0 | 0 |  |  |  | 1.7 |
| 4E | 39 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 16WN | 27 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.3 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.1 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 11 W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 10W | 35 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.8 |
| 9W | 35 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 1.3 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.1 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 1 | 0 | 0.1 |
| 4W | 39 | 3 | 4 | 0 | 0 |  | 0 | 1 | 0 | 0 | 1.0 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0.3 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 10 | 92 | 1 | 0 | 0 | 0 | 23 | 19 | 2 | 147 |
| C/E |  | 0.42 | 3.83 | 0.04 | 0.00 | 0.00 | 0.00 | 0.92 | 0.79 | 0.08 | 0.67 |


| TL (mm) | Week 1 <br> Jul <br> 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug <br> 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 <br> Oct <br> 27 | Week 9 <br> Nov <br> 9 | C/F <br> Weeks $4-9$ | C/F <br> Weeks $1-9$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 30-34 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 35-39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40-44 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 45-49 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 50-54 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 55-59 | 2 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 |
| 60-64 | 3 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| 65-69 | 1 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 70-74 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 75-79 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 80-84 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 6 | 1 | 18 | 18 |
| 85-89 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 4 | 0 | 13 | 14 |
| 90-94 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 | 6 |
| 95-99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 6 | 6 |
| 100-104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105-109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110-114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115-119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120-124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125-129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130-134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135-139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140-144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145-149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| > 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measured | 10 | 78 | 1 | 0 | 0 | 0 | 23 | 19 | 2 | 44 | 133 |
| Mean | 62.8 | 58.7 | 66.0 | 0.0 | 0.0 | 0.0 | 84.5 | 89.3 | 88.0 | 93.2 | 88.3 |
| StDev | 11.7 | 8.2 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 5.6 | 9.9 | 8.2 | 11.2 |


| Station | River Mile | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \end{gathered}$ | Week 3 Aug 8 | Week 4 <br> Aug <br> 22 | Week 5 Sep 7 | Week 6 Sep 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \end{gathered}$ | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 21E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.1 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 12E | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0.4 |
| 19E | 33 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |  | 0 | 0.1 |
| 11E | 34 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 9E | 34 | 44 | 98 | 0 |  | 0 |  | 0 | 0 | 0 | 20.3 |
| 7EE | 35 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 129 | 24 | 56 | 12 | 0 | 0 | 0 | 0 | 0 | 24.6 |
| 3E | 39 | 5 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.8 |
| 4E | 39 | 7 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1.9 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 16WN | 27 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 14W | 29 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 |
| 12W | 30 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 11 W | 32 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.9 |
| 10W | 35 | 17 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2.3 |
| 9W | 35 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.1 |
| 8W | 36 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 |
| 7W | 37 | 9 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.0 |
| 5W | 39 | 5 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 253 | 137 | 66 | 16 | 0 | 0 | 4 | 2 | 0 | 478 |
| C/E |  | 10.54 | 5.71 | 2.64 | 0.67 | 0.00 | 0.00 | 0.16 | 0.08 | 0.00 | 2.16 |


| TL (mm) | Week 1 Jul 11 | Week 2 Jul 25 | Week 3 Aug 8 | Week 4 <br> Aug 22 | Week 5 Sep 7 | Week 6 <br> Sep 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | Week 8 <br> Oct <br> 27 | Week 9 Nov 9 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35-39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40-44 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 45-49 | 9 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| 50-54 | 51 | 20 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 77 |
| 55-59 | 48 | 2 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 66 |
| 60-64 | 12 | 2 | 18 | 9 | 0 | 0 | 0 | 0 | 0 | 9 | 41 |
| 65-69 | 3 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 5 | 9 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 3 |
| 75-79 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 2 |
| 80-84 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 85-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 |
| 95-99 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 100-104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 105-109 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 110-114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115-119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120-124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125-129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130-134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135-139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140-144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145-149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| > 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measured | 125 | 38 | 40 | 16 | 0 | 0 | 4 | 2 | 0 | 22 | 225 |
| Mean | 54.5 | 50.6 | 58.8 | 63.8 | 0.0 | 0.0 | 78.0 | 81.5 | 0.0 | 68.0 | 55.9 |
| StDev | 4.5 | 4.4 | 3.9 | 4.3 | 0.0 | 0.0 | 12.2 | 12.0 | 0.0 | 9.6 | 6.9 |


| Station | River Mile | Week 1 Jul 11 | Week 2 Jul 25 | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 8 | 0 | 0 | 0 | 2198 | 291 | 6 | 278.1 |
| 21E | 23 | 0 | 16 | 33 | 0 | 0 | 2 | 124 | 107 | 119 | 44.6 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 129 | 23 | 0 | 19.0 |
| 16E | 25 | 0 | 1 | 0 | 0 | 0 | 0 | 76 | 353 | 5 | 48.3 |
| 12E | 29 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 100 | 1 | 11.9 |
| 14E | 29 | 0 | 3 | 0 | 0 | 0 | 0 | 182 | 0 | 1560 | 193.9 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 6 | 0.8 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | 4.9 |
| 9 E | 34 | 0 | 1 | 0 |  | 0 |  | 9 | 7 | 2 | 2.7 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 186 | 0 | 0 | 20.7 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 360 | 0 | 6 | 52.3 |
| 8E | 35 | 0 | 4 | 93 | 2 | 0 | 0 | 77 | 0 | 0 | 19.6 |
| 3E | 39 | 0 | 1 | 0 | 0 | 0 | 0 |  |  |  | 0.2 |
| 4E | 39 | 0 | 1 | 1 | 0 | 0 | 0 | 45 | 403 | 0 | 50.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 3 | 2 | 0 | 0 | 0 | 0 | 12 | 17 | 0 | 3.8 |
| 16WN | 27 | 0 | 5 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 1.8 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0.7 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 0.9 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 46 | 116 | 1 | 18.1 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 240 | 0 | 30.9 |
| 9W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1674 | 2 | 186.6 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0.7 |
| 7W | 37 | 0 | 34 | 0 | 0 | 0 | 0 | 0 | 118 | 0 | 16.9 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 21 | 229 | 9 | 37.0 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 5 | 17 | 0 | 2.8 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 315 | 142 | 0 | 57.1 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 4 | 73 | 135 | 2 | 0 | 2 | 3899 | 3838 | 1718 | 9671 |
| C/E |  | 0.17 | 3.04 | 5.40 | 0.08 | 0.00 | 0.08 | 155.96 | 159.92 | 68.72 | 43.76 |


| TL (mm) | Week 1 <br> Jul <br> 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug 22 | Week 5 <br> Sep 7 | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \\ \hline \end{gathered}$ | Week 9 <br> Nov <br> 9 | Weeks $4-9$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-34 | 0 | 10 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 35-39 | 3 | 7 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 40-44 | 0 | 3 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 |
| 45-49 | 0 | 9 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 17 |
| 50-54 | 0 | 26 | 17 | 0 | 0 | 0 | 2 | 1 | 0 | 3 | 46 |
| 55-59 | 1 | 2 | 16 | 0 | 0 | 0 | 13 | 7 | 2 | 22 | 41 |
| 60-64 | 0 | 0 | 1 | 2 | 0 | 0 | 109 | 86 | 5 | 202 | 203 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 181 | 161 | 33 | 375 | 375 |
| 70-74 | 0 | 0 | 0 | 0 | 0 | 0 | 126 | 107 | 36 | 269 | 269 |
| 75-79 | 0 | 0 | 0 | 0 | 0 | 1 | 29 | 28 | 11 | 69 | 69 |
| 80-84 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 3 | 5 | 14 | 14 |
| 85-89 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 6 | 6 |
| 90-94 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 3 |
| 95-99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 100-104 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 105-109 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 110-114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115-119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120-124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125-129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130-134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135-139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140-144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145-149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| > 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measured | 4 | 57 | 69 | 2 | 0 | 2 | 469 | 395 | 99 | 967 | 1097 |
| Mean | 43 | 45.16 | 47.48 | 60.50 | 0.00 | 82.50 | 67.40 | 67.75 | 71.64 | 68.0 | 65.4 |
| StDev | 9.35 | 7.86 | 7.53 | 0.71 | 0.00 | 4.95 | 5.42 | 4.77 | 6.93 | 5.5 | 9.1 |


| Station | River Mile | Week 1 <br> Jul <br> 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug 22 | Week 5 Sep 7 | Week 6 <br> Sep <br> 19 | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \end{gathered}$ | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 336 | 0 | 0 | 37.3 |
| 21E | 23 | 0 | 0 | 26 | 0 | 0 | 0 | 55 | 0 | 0 | 9.0 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 15 | 1 | 0 | 2.0 |
| 16E | 25 | 0 | 0 | 0 | 6 | 0 | 0 | 105 | 0 | 0 | 12.3 |
| 12E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.0 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9E | 34 | 0 | 1 | 0 |  | 0 |  | 6 | 0 | 0 | 1.0 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.1 |
| 8E | 35 | 0 | 118 | 592 | 0 | 0 | 0 | 0 | 0 | 0 | 78.9 |
| 3E | 39 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.0 |
| 4E | 39 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0.2 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 4 | 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1.0 |
| 16WN | 27 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0.4 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 11 W | 32 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.1 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0.2 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.0 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 4 | 123 | 619 | 6 | 2 | 2 | 523 | 1 | 0 | 1280 |
| C/E |  | 0.17 | 5.13 | 24.76 | 0.25 | 0.08 | 0.08 | 20.92 | 0.04 | 0.00 | 5.79 |


| TL (mm) | Week 1 <br> Jul | Week 2 <br> Jul <br> 25 | Week 3 Aug 8 | Week 4 Aug 22 | Week 5 Sep | Week 6 Sep 19 | Week 7 Oct 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/F <br> Weeks <br> 4-9 | C/F <br> Weeks <br> 1-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 25-29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35-39 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 40-44 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 45-49 | 0 | 3 | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 9 |
| 50-54 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| 55-59 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 60-64 | 0 | 0 | 2 | 2 | 0 |  | 2 | 0 | 0 | 5 | 7 |
| 65-69 | 1 | 1 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 5 | 7 |
| 70-74 | 0 | 0 | 1 | 1 | 0 | 0 | 7 | 0 | 0 | 8 | 9 |
| 75-79 |  | 0 | 1 | 0 | 0 | 0 | 20 | 0 | 0 | 20 | 22 |
| 80-84 | 0 | 1 | 1 | 1 | 1 | 0 | 29 | 0 | 0 | 31 | 33 |
| 85-89 | 0 | 1 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 25 | 26 |
| 90-94 | 0 | 4 | 0 | 0 | 0 | 0 | 9 | 1 | 0 | 10 | 14 |
| 95-99 | 2 | 18 | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 6 | 27 |
| 100-104 | 0 | 5 | 3 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 13 |
| 105-109 | 0 | 0 | 6 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 9 |
| 110-114 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 115-119 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 120-124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125-129 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 130-134 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| 135-139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140-144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145-149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| > 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measured | 4 | 35 | 57 | 6 | 2 | 2 | 111 | 1 | 0 | 122 | 218 |
| Mean | 84.5 | 90.1 | 81.5 | 68.5 | 65.5 | 79.5 | 83.1 | 94.0 | 0.0 | 82.1 | 83.3 |
| StDev | 15.0 | 16.9 | 30.0 | 7.3 | 23.3 | 21.9 | 11.9 | 0.0 | 0.0 | 12.4 | 19.4 |


| Station | River Mile | Week 1 Jul 11 | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 <br> Aug 22 | Week 5 <br> Sep <br> 7 | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \end{gathered}$ | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 19 | 30 | 56 | 86 | 128 | 14 | 0 | 8 | 4 | 38.3 |
| 21E | 23 | 84 | 59 | 52 | 21 | 49 | 73 | 26 | 2 | 4 | 41.1 |
| 17E | 24 | 69 | 50 |  | 355 | 3103 | 73 | 10 | 9 | 3 | 459.0 |
| 16E | 25 | 1 | 37 | 8 | 12 | 104 | 18 | 3 | 14 | 3 | 22.2 |
| 12E | 29 | 10 | 63 | 182 | 33 | 17 | 278 | 3 | 2 | 0 | 65.3 |
| 14E | 29 | 38 | 36 | 18 | 129 | 79 | 195 | 8 | 0 | 12 | 57.2 |
| 19E | 33 | 11 | 103 | 94 | 20 | 16 | 151 | 1 |  | 3 | 49.9 |
| 11E | 34 | 44 | 695 | 1573 | 186 | 410 | 65 | 24 | 2 | 0 | 333.2 |
| 9E | 34 | 1 | 363 | 711 |  | 65 |  | 15 | 0 | 0 | 165.0 |
| 7EE | 35 | 5 | 431 | 121 | 182 | 341 | 189 | 0 | 0 | 0 | 141.0 |
| 7EW | 35 |  |  | 1 | 876 | 37 | 33 | 0 | 0 | 0 | 135.3 |
| 8E | 35 | 25 | 315 | 373 | 687 | 206 | 230 | 2 | 0 | 2 | 204.4 |
| 3E | 39 | 0 | 119 | 4 | 269 | 0 | 98 |  |  |  | 81.7 |
| 4E | 39 | 0 | 9 | 37 | 32 | 39 | 28 | 0 | 1 | 0 | 16.2 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 31 | 282 | 797 | 1003 | 62 | 836 | 2 | 1 | 0 | 334.9 |
| 16WN | 27 | 22 | 63 | 24 | 106 | 37 | 36 | 1 | 0 | 0 | 32.1 |
| 14W | 29 | 22 | 68 | 51 | 167 | 52 | 155 | 1 | 0 | 0 | 57.3 |
| 12W | 30 | 4 | 1016 | 414 | 451 | 58 | 154 | 0 | 1 | 1 | 233.2 |
| 11W | 32 | 0 | 4 | 0 | 180 | 43 | 0 | 0 | 0 | 0 | 25.2 |
| 10W | 35 | 1 | 29 | 15 | 99 | 10 | 74 | 0 | 0 | 0 | 25.3 |
| 9W | 35 | 0 | 14 | 76 | 63 | 141 | 0 | 3 | 0 | 0 | 33.0 |
| 8W | 36 | 0 | 11 | 39 | 136 | 99 | 19 | 0 | 0 | 0 | 33.8 |
| 7W | 37 | 0 | 116 | 178 | 131 | 157 | 198 | 0 | 0 | 1 | 86.8 |
| 3W | 39 |  | 109 | 17 |  | 44 | 51 | 0 | 0 | 0 | 31.6 |
| 4W | 39 | 0 | 87 | 7 | 85 |  | 22 | 0 | 0 | 0 | 25.1 |
| 5W | 39 | 1 |  | 43 | 170 | 29 | 42 | 0 | 0 | 0 | 35.6 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 388 | 4109 | 4891 | 5479 | 5326 | 3032 | 99 | 40 | 33 | 23397 |
| C/E |  | 16.17 | 171.21 | 195.64 | 228.29 | 213.04 | 121.28 | 3.96 | 1.67 | 1.32 | 105.87 |

## TABLE 342005 HUDSON RIVER ATLANTIC SILVERSIDE LENGTH FREQUENCY

| TL (mm) | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 3 \\ \text { Aug } \\ 8 \\ \hline \end{gathered}$ | Week 4 <br> Aug 22 | Week 5 Sep 7 | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \\ \hline \end{gathered}$ | Week 8 <br> Oct <br> 27 | $\begin{gathered} \text { Week } 9 \\ \text { Nov } \\ 9 \\ \hline \end{gathered}$ | C/F <br> Weeks <br> 4-9 | C/F <br> Weeks 1-9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25-29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30-34 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 35-39 | 17 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 19 |
| 40-44 | 40 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 44 |
| 45-49 | 28 | 4 | 3 | 0 | 1 | 0 | 1 | 0 | 2 | 4 | 39 |
| 50-54 | 54 | 20 | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 3 | 79 |
| 55-59 | 35 | 82 | 9 | 3 | 2 | 0 | 1 | 0 | 2 | 8 | 134 |
| 60-64 | 45 | 142 | 48 | 23 | 11 | 10 | 10 | 4 | 0 | 58 | 293 |
| 65-69 | 32 | 168 | 122 | 68 | 50 | 54 | 19 | 6 | 7 | 204 | 526 |
| 70-74 | 2 | 157 | 156 | 177 | 151 | 95 | 7 | 2 | 2 | 434 | 749 |
| 75-79 | 1 | 77 | 146 | 203 | 181 | 162 | 5 | 2 | 1 | 554 | 778 |
| 80-84 | 0 | 9 | 73 | 150 | 165 | 176 | 8 | 5 | 0 | 504 | 586 |
| 85-89 | 0 | 0 | 13 | 49 | 73 | 90 | 17 | 9 | 6 | 244 | 257 |
| 90-94 | 0 | 1 | 1 | 7 | 29 | 31 | 16 | 3 | 2 | 88 | 90 |
| 95-99 | 0 | 1 | 1 | 0 | 5 | 3 | 10 | 6 | 0 | 24 | 26 |
| 100-104 | 0 | 0 | 0 | 2 | 2 | 2 | 3 | 2 | 0 | 11 | 11 |
| 105-109 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 |
| 110-114 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 115-119 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120-124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 125-129 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130-134 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 135-139 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140-144 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 145-149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| > 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measured | 259 | 664 | 574 | 683 | 672 | 624 | 99 | 40 | 22 | 2140 | 3637 |
| Mean | 52.5521 | 66.488 | 72.2666 | 75.9268 | 77.7277 | 78.7612 | 79.2525 | 81.075 | 73.3182 | 77.5421 | 72.9117 |
| StDev | 9.64929 | 7.13371 | 6.74339 | 6.50427 | 7.15562 | 6.94988 | 13.6721 | 14.072 | 14.0319 | 7.71728 | 10.3844 |


| Station | River Mile | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 Aug 22 | Week 5 Sep 7 | Week 6 Sep 19 | Week 7 <br> Oct <br> 19 | Week 8 Oct 27 | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 1 | 0 | 0 | 0 | 0 | 11 | 0 | 4 | 8 | 2.7 |
| 21E | 23 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 2 | 8 | 2.1 |
| 17E | 24 | 0 | 0 |  | 12 | 0 | 10 | 1 | 0 | 0 | 2.9 |
| 16E | 25 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 10 | 1.8 |
| 12E | 29 | 1 | 0 | 0 | 4 | 0 | 2 | 8 | 0 | 0 | 1.7 |
| 14E | 29 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 0 | 0 | 0.7 |
| 19E | 33 | 0 | 0 | 0 | 2 | 2 | 0 | 14 |  | 3 | 2.6 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 2.9 |
| 9E | 34 | 0 | 0 | 0 |  | 0 |  | 0 | 0 | 0 | 0.0 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0.4 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 1 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 1.8 |
| 3E | 39 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 0.0 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 1 | 0.7 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 1 | 0.7 |
| 16WN | 27 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 |
| 14W | 29 | 0 | 0 | 0 | 0 | 5 | 7 | 10 | 1 | 0 | 2.6 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 1 | 18 | 2.8 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0.6 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0.7 |
| 9W | 35 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 2 | 1.1 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0.6 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0.4 |
| 3W | 39 |  | 0 | 0 |  | 0 | 3 | 0 | 0 | 2 | 0.7 |
| 4W | 39 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0.0 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0.5 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 3 | 2 | 1 | 20 | 25 | 69 | 68 | 19 | 64 | 271 |
| C/E |  | 0.13 | 0.08 | 0.04 | 0.83 | 1.00 | 2.76 | 2.72 | 0.79 | 2.56 | 1.23 |


| Station | River Mile | $\begin{gathered} \text { Week } 1 \\ \text { Jul } \\ 11 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 2 \\ \text { Jul } \\ 25 \\ \hline \end{gathered}$ | Week 3 <br> Aug <br> 8 | Week 4 Aug 22 | Week 5 Sep 7 | $\begin{gathered} \text { Week } 6 \\ \text { Sep } \\ 19 \\ \hline \end{gathered}$ | $\begin{gathered} \text { Week } 7 \\ \text { Oct } \\ 19 \end{gathered}$ | $\begin{gathered} \text { Week } 8 \\ \text { Oct } \\ 27 \end{gathered}$ | Week 9 Nov 9 | C/E |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| East |  |  |  |  |  |  |  |  |  |  |  |
| 18E | 23 | 0 | 2 | 2 | 0 | 0 | 4 | 0 | 0 | 0 | 0.9 |
| 21E | 23 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.1 |
| 17E | 24 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16E | 25 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0.6 |
| 12E | 29 | 1 | 0 | 1 | 11 | 0 | 1 | 0 | 0 | 0 | 1.6 |
| 14E | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 19E | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0.0 |
| 11E | 34 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0.4 |
| 9E | 34 | 0 | 1 | 0 |  | 0 |  | 0 | 0 | 0 | 0.1 |
| 7EE | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7EW | 35 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 8E | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3E | 39 | 0 | 0 | 0 | 0 | 1 | 0 |  |  |  | 0.2 |
| 4E | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| West |  |  |  |  |  |  |  |  |  |  |  |
| 15WS | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 16WN | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0.2 |
| 14W | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.1 |
| 12W | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 |
| 11W | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.1 |
| 10W | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 9W | 35 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.1 |
| 8W | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 7W | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 3W | 39 |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0.0 |
| 4W | 39 | 0 | 0 | 2 | 1 |  | 0 | 0 | 0 | 0 | 0.4 |
| 5W | 39 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Effort |  | 24 | 24 | 25 | 24 | 25 | 25 | 25 | 24 | 25 | 221 |
| Catch |  | 1 | 6 | 6 | 12 | 4 | 9 | 4 | 0 | 1 | 43 |
| C/E |  | 0.04 | 0.25 | 0.24 | 0.50 | 0.16 | 0.36 | 0.16 | 0.00 | 0.04 | 0.19 |



FIGURE 2

Bi-weekly Mean Air Temperature, 1985-2005


Biweekly Mean Water Temperature, 1985-2005


Biweekly Mean Salinity, 1985-2005


FIGURE 3

Hudson River YOY Striped Bass Index of Abundance (weeks 4-9)


FIGURE 4

2005 Hudson River YOY Striped Bass Growth


FIGURE 5




American Eel


YOY Bluefish


Winter Flounder


FIGURE 7


Alewife



Blueback Herring


FIGURE 8


Silverside spp.




