Nearshore fish communities of the mid-Hudson River estuary, 1985-2008

Keith J. Dunton
Michael G. Frisk
David O. Conover

School of Marine & Atmospheric Sciences
State University of New York
Stony Brook, New York 11794-5000

Jennifer O'Dwyer

NYS DEC
Bureau of Marine Resources
East Setauket, NY 11733

Participating Agencies:

NYS Department of Environmental Conservation

March 2009

Abstract

In 2008, 222 seine hauls were completed in the young-of-the-year (YOY) striped bass survey in the Hudson River. A total of 6,441 YOY striped bass were captured, resulting in a catch per unit effort (CPUE) of 29.01 fish per haul. The Hudson River index of YOY striped bass abundance, based on the geometric mean CPUE of the 6-week survey, was 13.86 fish per haul. This catch rate was significantly less than last year (35.02 fish per haul, which was the highest rate of the survey history) but close to the average historical geometric mean CPUE of 14.25 fish per haul. YOY striped bass grew at an estimated 0.65 mm per day, between mid-July and the beginning of September, which was equal to the historical average. Catches of Atlantic Menhaden, American shad, blueback herring, tomcod, American eel, and blue crabs remained close to their historical lows. Alewife and YOY white perch were above their historical averages. Silverside spp. was the most abundant fish, followed by YOY striped bass and YOY white perch. Air and water temperatures during the survey were near the historical average.

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). 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). Spawning occurs in the region above the salt wedge in the spring when river temperatures rise above 12 ^{o}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 over-wintering 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 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 re-established. Continued improvement in recruitment to the Chesapeake Bay population has allowed increases in harvest levels in recent years (Richards and Rago 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). 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 (NMFS 1999). An initiative to allow a

limited commercial harvest of striped bass as part of the American shad fishery has been discussed, but not implemented (DEC 1999).

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 is influenced by the severity of winter (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. We will provide the CPUE data for age-1 striped bass as to assist with determining overall recruitment trends.

Here we present the results of the 2008 young-of-the-year survey for the Hudson River population of striped bass and compare the results to previous years. Because of the advancement of ecosystem-based management, catch data for all species captured during the survey is included. Detailed catch data and size-distributions are included for a number of other commercially valuable species as well.

Methods

The survey is conducted between mid-July and early November in the Haverstraw-Tappan 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 2008, 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 m x 3 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, counted and returned to the water and where feasible young-of-the-year fish were counted separately from older fish. In the case of extremely high catch rates, a volumetric sub-sampling procedure was used to estimate catches of individual species. 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 ^{o}C and 2000 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 x 19.25 mm oval anchor and 91 mm streamer. 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 2008 sampling season, 222 beach seines were collected in 9 sampling trips conducted between July 15th and November 4th. During this sampling, a total of 38,041 fish were collected. This was well below the historical average of 53,577 and slightly more than half of the total catch of 2007 (73,572 fish; Figure 2). Striped bass experienced a decline as did many other species in 2008 (Figures 8, 9, 10, and 11). Of the 38,041 fish caught 6,441 were young-of-the-year striped bass and only 174 were older striped bass.

Environmental conditions

Weekly average water temperatures increased in the first two weeks of the sampling season with a high of 27.7 ºC on July 29 (Table 1; Figure 3). Water temperatures after the second week declined throughout the sampling season with a low of 13.73 ºC on November 4 (Table 1; Figure 3). Air temperatures also generally decreased during the sampling season, ranging from 30.91 to 13.99^{o}C. Both air and water temperatures followed the historical averages (Table 1; Figure 3). Salinity was lower than historical averages for all weeks except week 8 where the average salinity was 7.81 ppt and the historical average was 4.75 ppt (Table 1; Figure 3). Weekly average of dissolved oxygen levels ranged between 6.46 and 8.66 mg/L throughout the sampling season, and followed the historical average (Figure 3).

Species composition

Forty-eight different species of fish and two species of invertebrates were captured in the Hudson River during the 2008 sampling season. Fish catches varied throughout the sampling period without a seasonal trend. Catches peaked in sampling week 4 (August 27) with 16,298 fish and week 5 (September 11) with 4,322 fish. The large catch from sampling week 4 was dominated by Atlantic silversides (7,798), YOY white perch (3,784) and killifish spp. (1,967). Catches from sampling week 5 was dominated by silversides (2,320). The lowest catches were observed in sampling weeks 9 (November 4) and 8 (October 20) with 521 and 1,705 fish caught in those sampling weeks respectively. Silversides (16,543), YOY Striped bass (6,441), YOY white perch (6,135 fish), and killifish (3,009) were the most abundant species in 2008. These four species represented a total of 84.47% of the total catch. Catch composition during the 2008 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 2008 sampling season 6,441 YOY striped bass were captured in 222 hauls, with a mean CPUE of 29.01 and a geometric mean CPUE of 16.39 (Table 6). Between 1980 and 1985, catch data was collected in a period corresponding to the last 6 weeks of the 2008 sampling season. In order to compare 2008 catch data with results obtained previous to 1985, the statistics on the final 6 weeks of catch data for 2008 is presented in Table 6 together with historical records. In the final six weeks, 3,887 YOY striped bass were captured in 148 hauls, resulting in a mean CPUE of 26.26 and a geometric mean CPUE of 13.86 (Figure 4). The 6-week geometric mean CPUE, used as the young-of-the-year striped bass index of relative abundance, was lower than the historical average of 14.25. The 2008, 9-sampling week geometric mean of 16.39 was lower than the historical average of 19.90 (Table 6). These CPUE are much lower compared to last year's values which were one of the highest values within the last twenty nine years on record.

Catch-per-unit-effort of YOY striped bass peaked during week 4 of the survey at 50.58 fish per haul. The lowest catch rate of 6.44 fish per haul was reached during the final week of

the survey. In 2001, 2002, 2004, 2005, 2007 and 2008 catch rates peaked late in weeks 4 and 5. Catch patterns with similar 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 2008 (Table 7). The sites with the highest CPUE, 7EW and 8E captured 5.1 fish per haul and 1.9 fish per haul respectively. Station 16WS, had the lowest catch rate of 0.1 fish per haul (Table 7). This station was not regularly sampled, but rather used as an alternate when another site could not be sampled. The distribution of catch among sites observed in 2008 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 4,868 YOY striped bass during the 9-week survey. Striped bass ranged in size from 21 to 155 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 2008 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 5). 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 2008 cohort, estimated from the regression of mean total length against date, was 0.65 mm per day through the first 5 weeks of the survey (Figure 5). This is the average, of the mean growth rates observed over the last 23 years (Figure 6). Annual

cohort growth rates ranged from 0.46 mm per day in 1990 to 0.90 mm per day in 1999 (Figure 6). 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 2008 is shown in Table 12. During the 9-week survey, 172 striped bass aged 1 to 3 were captured and ranged in length from 109-401 mm TL (Table 13). Older striped bass were most abundant at sites 7EW and 9E where CPUE was 0.1 at both sites (Table 14). No striped bass were tagged with internal anchor tags as part of the United States Fish and Wildlife Service coast-wide tagging program this year (Table 12), but rather all older striped bass were kept for diet analysis for a project under the Hudson River Fisheries Unit looking at possible causes of shad decline. The age 1+ striped bass CPUE was one of the highest values in the past 29 years (Table 4). The historical average of age 1+ tagging is 54 fish per year (Figure 7).

White perch, *Morone americana*

In 2008, a total of 6,891 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, 6,135 were YOY and 756 were age-1 or older. Young-of-the-year white perch were most abundant at site 8E with a CPUE of 14.9 (Table 15). This was mainly due to an isolated catch of 2,789 fish in week 4. Catch-per-unit-effort of YOY white perch was highest in week 4 (157.67 fish per haul, mainly due to the catch at 8E), and lowest in week 1 (0.08 fish per haul). Older white perch were most abundant at site 16WN, with a CPUE 0.6 fish per haul (Table 16). During the sampling season catch-per-unit-effort of older white perch was highest in week 3 (9.64 fish per haul) and lowest in week 9 (0.32 fish per haul; Table 16), a trend that is also shown in the length frequency distribution (Table 17).

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 8). Catch rates of less than 2 fish per haul occurred in 1995, 1997 and 2007. In 2008, mean catch rates of YOY white perch were 27.74 fish per haul. This catch rate is significantly higher than the historic average of 13.66 fish per haul and is the third highest catch rate recorded for this survey (Figure 8). Catch rates of

older white perch decreased in 2008 to 3.4 fish per haul (Figure 8). This value is much lower than the historical average of 11.8 fish per haul (Figure 8).

Atlantic tomcod, *Microgadus tomcod*

During the 2008 sampling season, no Atlantic tomcod were captured. Catches over the last four consecutive years have been virtually zero and at historical lows. 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 2.29 fish per haul were observed in 1988 and 1998 respectively (Figure 8).

American eel, *Anguilla rostrata*

In 2008, a total of 39 American eel were captured during sampling (Table 19). The recorded catch rate of 0.18 eels per haul was well below the average of 0.32 (Figure 9). The last four years have been the lowest American eel catches on record (Figure 9.) The highest catch (0.78 fish per haul) occurred in 1988. American eel ranged in length from 115 to 760 mm TL, with an overall mean length of 289.24 mm. The bi-weekly size-frequency distributions of American eel are shown in Table 20.

Bluefish, *Pomatomus saltatrix*

In 2008, 337 YOY bluefish were captured. The bluefish spring-spawned cohort was present in the catches from week 1 to week 8, while relatively few summer-spawned bluefish were observed in weeks 4-7 (Table 22). The mean CPUE was 1.52 fish per haul in 2008 (Table 21, Figure 9), which was below the historical average of 2.66 fish per haul. Catch rates of YOY bluefish were lower than the previous year (Figure 9). The highest bluefish abundance ever observed was in 1999 (Figure 9) with a CPUE of 13.76 fish per haul. Bluefish captured in 2008 ranged in length from 46 to 255 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 2008, a total of 80 winter flounder were captured for a mean CPUE of 0.36 fish per haul (Table 23). This was significantly below the historical average of 0.65 fish per haul (Figure 9). The highest catch rate of winter flounder recorded was observed in 1985 with a CPUE of 2.5 fish per haul (Figure 9). The winter flounder lengths ranged from 35-156 mm TL, with a mean of 78.41 mm TL. The bi-weekly size-frequencies are shown in Table 24.

American shad, *Alosa sapidissima*

In 2008, 10 American shad were captured for a mean CPUE of 0.05 fish per haul (Table 25). This is the lowest CPUE on record for the history of this survey, while the CPUE of American shad in 1998 (0.44 fish per haul) was the second lowest CPUE recorded for American shad (Figure 10). The highest catch rate (22.3 fish per haul) was observed in 1986 (Figure 10), since then shad CPUE has continually declined. American shad ranged from 93-103 mm TL, with a mean length of 102 mm (Table 26).

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

During the 2008 sampling, 1,512 alewife and 276 blueback herring were captured (Table 27 and 29). Alewife ranged in length from 49-139 mm TL, with a mean of 77.2 mm (Table 28). Blueback herring measured 42-96 mm TL with a mean length of 70.6 mm TL (Table 30). Catches of blueback herring still remain to be one of the lowest CPUE's on record, yielding 1.25 fish per haul when compared to the historical average of 29.84 fish per haul (Figure 10). Catches of Alewife were the highest on record with a CPUE of 6.84 fish per haul, much higher than the average of 1.16 fish per haul (Figure 10).

Atlantic menhaden, *Brevoortia tyrannus*

During the 2008 sampling, 538 Atlantic menhaden were captured with a mean CPUE of 2.43 fish per haul (Table 31, Figure 11), the majority of which were captured in week 1 (Table 31). This is significantly lower than the historical average of 16.41 fish per haul and was close to record lows. The highest CPUE occurred in 1999 with a CPUE of 93.55 fish per haul, while the lowest CPUE occurred in 1993 with a CPUE of 0.08 fish per haul. Measured Atlantic menhaden

ranged from 43 to 350 mm TL with a mean of 72.26 mm TL (Table 32).

Silverside species, *Menidia sp.*

During the 2008 sampling, 16,543 silversides were captured for a mean CPUE of 74.52 fish per haul (Table 33). This is slightly below the historical average of 83.42 (Figure 11). Annual catch rates of Atlantic silversides in the survey have been extremely variable, ranging from 7.94 fish per haul in 1989 to 191.72 fish per haul in 1994 (Figure 11). In 2008, 3,431 silversides were measured and they ranged in length from 32 to 180 mm TL with a mean of 76.75 mm (Table 34).

Blue crab, *Callinectes sapidus*

During sampling in 2008, 475 blue crabs were captured. Of the total crabs captured 330 were YOY blue crabs (Table 35) while 145 were older blue crabs (Table 36). YOY blue crabs were most abundant at sites 18E and 21E, while older blue crabs were most abundant at 8W (Tables 35 and 36). Catch rates peaked in week 5 for both YOY (CPUE 4.12) and older blue crab (CPUE 3.36) (Table 35 and 36). Prior to 1998, no distinction was made between YOY and older crabs, so the temporal trend of catch rates is presented for the total numbers of blue crabs. Catch rate in 2008 for the total number of blue crabs captured was 2.15 crabs per haul, which is below the average of 4.31 crabs per haul within the 22 year time series (Figure 11).

Conclusions

Catch composition during the 2008 Hudson River beach seine sampling season was consistent with previous years. Silversides were the most abundant fish, followed by YOY striped bass and YOY white perch. The 6-week YOY striped bass index of relative abundance was 13.86, which was slightly lower than the historical average of 14.25. Growth rates of YOY striped bass, based on length frequency progression, was 0.65 mm per day. Catches of alewife and YOY white perch were above their historic averages. Silversides, YOY bluefish, winter flounder, menhaden and blue crabs were near their historical averages. White perch, Atlantic tomcod, American eel, American shad, and blueback herring were near historical lows.

Acknowledgments

This project was carried out under a cooperative agreement between the Marine Sciences Research Center of the State University of New York at Stony Brook (MSRC) and the New York State Department of Environmental Conservation (NYS DEC) governed under MOU #000098. Funding for this project was provided by the Environmental Protection Fund of the NYS DEC. Many people from MSRC provided assistance with field sampling including Tara Duffy, Lyndie Hice, Mark Fast, Chris Martinez, Jaime Romany, and Charles Peretti in addition to Robert Adams, Mark Dufour, Amanda Higgs, and Jennifer Ryan of the NYS DEC. Administrative support was provided by Chet Frost, John Graham and, Bill Wise. Technical support and data maintenance provided by Julia Socrates of the NYS DEC.

This is Special Report #07-01 of the Marine Sciences Research Center, State University of New York at Stony Brook. This report also serves as part of the Anadromous Fish Conservation Act P.L. 89-304 Project Completion Report for New York State, Project Number AFC-30.

Literature Cited

ASMFC, 2005. 2005 Stock Assessment Report for Atlantic Striped Bass. Striped Bass Technical Committee for the Atlantic Striped Bass Management Board.

Boreman, J. and H.M. Austin. 1985. Production and harvest of anadromous striped bass stocks along the Atlantic coast. Transactions of the American Fisheries Society 114:3-7.

Boreman, J., R.J. Klauda, D.S. Vaughan and R.L. Kendall. 1988. Distributions of early life stages of striped bass in the Hudson River Estuary, 1974-1979. In Science, law, and Hudson River power plants. Edited by Barnthouse, L.W. American Fisheries Scociety, Monograph 4. Bethesda, Maryland.

Bradford, M.J. 1992. Precision of recruitment predictions from early life stages of marine fishes. Fishery Bulletin 90:439-453.

Brischler, J. 2004. An Investigation of the movement and growth of the Hudson River year class. Astudy of the striped bass in the marine district of the New York State. Annual report for P.L. 89-304, Project AFC-27. Mimeo pp 69.

Buckel, J.A., D.O. Conover, N.D. Steinberg and K.A. McKown. 1999. Impact of age-0 bluefish (*Pomatomus saltatrix*) predation on age-0 fishes in the Hudson River estuary: evidence for density-dependent loss of juvenile striped bass (*Morone saxatilis*). Canadian Journal of Fisheries and Aquatic Sciences 56:275-287.

DEC, 1999. Department of Environmental Conservation. Report from the Hudson River Estuary Management Advisory Committee to John P. Cahill, Commissioner, New York State Department of Environmental Conservation on Reopening a Hudson River Striped Bass Commercial Fishery. 6p.

Dey, W.P. 1981. Mortality and growth of young-of-the-year striped bass in the Hudson River estuary. Transactions of the American Fisheries Society 110:151-157.

Dovel, W.L. 1992. Movements of immature striped bass in the Hudson estuary. In Estuarine research in the 1980's. Edited by Smith, C.L. State University of New York Press. Albany. pp 276-300.

Goodyear, C.P. 1985. Relationship between reported commercial landings and abundance of young striped bass in Chesapeake Bay, Maryland. Transactions of the American Fisheries Society 114:92-96.

Heimbuch, D.G., D.J. Dunning, and J.R. Young. 1992. Post-yolk-sac larvae abundance as an index of year class strength of striped bass in the Hudson River. In Estuarine Research in the 1980's. Edited by Smith, C.L. State Univ. New York Press. Albany, NY.

Hurst, T.P. 2000. Overwintering ecology of young-of-the-year striped bass (*Morone saxatilis*) in the Hudson River estuary. Marine Sciences Research Center. Stony Brook, State University of New York:181.

Hurst, T.P., and D.O. Conover. 1998. Winter mortality of young-of-the-year Hudson River striped bass (*Morone saxatilis*): size-dependent patterns and effects on recruitment. Canadian Journal of Fisheries and Aquatic Sciences 55:1122-1130.

Hurst, T.P. and D.O. Conover. 2001. Nearshore fish communities of the mid-Hudson River estuary, 1985-2000. Special Report #127 of the Marine Sciences Research Center, State University of New York at Stony Brook.

McGovern, J.C., and J.E. Olney. 1996. Factors affecting survival of early life stages and subsequent recruitment of striped bass on the Pamunkey River, Virginia. Canadian Journal of Fisheries and Aquatic Sciences 53:1713-1726.

Mckown, K.A., and R. Gelardi. 2000. An investigation of the 1998 Hudson River striped bass spawning success. New York State Department of Environmental Conservation.

McKown, K.A. 1991. Validation of the Hudson River young-of-the-year striped bass indices. Report to the Atlantic States Marine Fishery Commission.

Merriman, D. 1941. Studies on the striped bass (*Roccus saxatilis*) of the Atlantic Coast. U.S. Fish and Wildlife Service Fishery Bulletin 50:1-77.

Munch, S.B., and D.O. Conover. 2000. Recruitment dynamics of bluefish (*Pomatomus saltatrix*) from Cape Hatteras to Cape Cod, 1973-1995. ICES Journal of Marine Science 209:393-402.

NMFS, 1999. National Marine Fisheries Service with the U.S. Fish and Wildlife Service and the Atlantic States Marine Fisheries Commission. 1999. Striped bass studies. 1999 Biennial report to Congress.

Richards, R.A., and P.J. Rago. 1999. A case history of effective fishery management: Chesapeake Bay striped bass. North American Journal of Fisheries Management 19:356-375.

Scott, W.B., and M.G. Scott. 1988. Atlantic fishes of Canada. Canadian Bulletin of Fisheries and Aquatic Sciences 219.

Secor, D.H., E.D. Houde, and D.M. Monteleone. 1995. A mark-release experiment on larval srtiped bass *Morone saxatilis* in a Chesapeake Bay tributary. ICES Journal of Marine Sciences 52:87-101.

Smith, C.L. 1985. The Inland Fishes of New York State. New York State Department of Environmental Conservation. Albany.

Uphoff, J.H. 1989. Environmental effects on survival of eggs, larvae, and juvenile striped bass in the Choptank River, Maryland. Transactions of the American Fisheries Society 118:251-263.

TABLE 1 2008 HUDSON RIVER ENVIRONMENTAL DATA

		Air Temperature				H2O Temperature			
Dates	Week	Avg	Std	Min	Max	Avg	Std	Min	Max
Jul. 15	1	30.61	6.49	20	40	27.29	1.85	22.8	30.1
Jul. 29	2	30.91	4.97	21	39	27.70	1.43	22	30.1
Aug.12	3	25.31	6.09	14	33	26.01	1.72	21.3	29.8
Aug. 27	4	23.52	5.44	15	33	25.40	0.96	23.5	27.1
Sept. 11	5	21.00	4.31	15	26	24.28	0.96	21.8	26
Sept. 24	6	20.03	5.43	11	28.5	22.42	0.72	20.3	23.1
Oct. 07	7	13.99	5.41	5	22	18.93	1.29	15	20.9
Oct.20	8	15.30	1.49	12	19	16.01	1.39	13.2	17.9
Nov.4	9	15.44	2.97	11	20	13.73	0.45	12.8	14.7

		Salinity				Dissolved Oxygen			
Dates	Week	Avg	Std	Min	Max	Avg	Std	Min	Max
Jul. 15	1	4.75	1.02	3.2	6.5				
Jul. 29	2	2.57	1.25	0.8	4.4	6.46	1.32	5.44	10.62
Aug.12	3	2.76	0.65	1.1	3.7	6.86	1.72	1.66	11.7
Aug. 27	4	4.13	1.58	2.3	7.3	6.72	1.64	5.44	12.25
Sept. 11	5	4.06	1.62	2.2	10.68	6.57	0.52	6	7.83
Sept. 24	6	5.28	1.28	3.7	7.9	6.82	0.79	5.7	8.73
Oct. 07	7	4.48	1.18	2.9	6.8	7.47	0.73	6.31	9.26
Oct.20	8	7.81	1.88	5.8	12.4				
Nov.4	9	0.90	0.69	0.3	2.7	8.66	0.39	8.06	9.31

TABLE 2 HUDSON RIVER ENVIRONMENTAL DATA 1985 - 2008

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	2006	2007	2008
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	------	34.9	25.9	30.6
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	35.7	33.6	30.9
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	28.1	29.0	25.3
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	23.5	30.0	23.5
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	24.1	23.0	21.0
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	20.5	28.2	20.0
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	12.8	19.0	14.0
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	12.3	14.1	15.3
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	16.2	7.2	15.4

Mean Water 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	2006	2007	2008
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	27.9	26.6	27.3
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	30.1	27.5	27.7
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	26.3	26.8	26.0
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	24.3	26.7	25.4
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	23.5	24.9	24.3
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	21.1	23.2	22.4
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	16.7	22.5	18.9
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	12.9	19.3	16.0
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	11.2	13.3	13.7

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	2006	2007	2008
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	1.9	6.8	4.8
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	1.1	8.1	2.6
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	5.3	7.8	2.8
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	5.3	9.8	4.1
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	4.0	8.3	4.1
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	5.1	9.4	5.3
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	3.0	9.7	4.5
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	0.6	7.7	7.8
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	0.2	4.8	0.9

Mean Dissolved Oxygen (mg/L)

WEEK	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
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	6.7	5.9	
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	8.2	8.0	7.6	6.5
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	7.1	6.9	6.5	6.9
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	8.1	5.5	7.0	6.7
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	6.3	35.6	6.6
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	7.3	6.8	7.9	6.8
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	7.4	6.3	7.5
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	8.2	8.3	6.6	
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		8.9	7.9	8.7

TABLE 3 2008 HUDSON RIVER SPECIES COMPOSITION

Species	Age*	Jul 15	Jul 29	Aug 12	Aug 27	Sep 11	Sep 24	Oct 7	Oct 20	Nov 4	Weeks 4 - 9	Weeks 1 - 9
Diadromous												
Alewife	99	1	598	53	479	100	183	62	34	2	860	1512
American eel	99	2	4	5	6	5	3	4	7	3	28	39
American shad	99	0	0	0	4	0	0	0	5	1	10	10
Atlantic sturgeon	99	0	0	1		0	0	0	0	0	0	1
Blueback herring	99	0	0	32	42	41	17	15	18	111	244	276
Hickory shad	99	1	0	0	0	0	0	0	0	0	0	1
Striped bass	0	581	934	1039	1214	819	733	592	368	161	3887	6441
Striped bass	1	27	27	13	13	26	25	21	12	10	107	174
Estuarine												
Fourspine stickleback	99	0	2	0	0	14	11	34	14	6	79	81
Hogchoker	99	94	17	11	38	33	13	6	2		92	214
Killifish spp.	99	21	196	170	1967	85	86	312	123	49	2622	3009
Threespine stickleback	99	0	0	3	0	0	0	0	0	0	0	3
White perch	0	2	8	679	3784	535	367	527	220	13	5446	6135
White perch	1	54	134	241	121	99	46	18	35	8	327	756
Freshwater												
Bluegill	99	0	12	43	108	93	21	5	0	1	228	283
Brown bullead catfish	99	0	0	1	0	0	0	0	0	0	0	1
Carp	99	2	0	0	9	2	8	2	1	1	23	25
Gizzard shad	99	0	0	0	4	9	9	7	0	1	30	30
Golden Shiner	99	0	0	1	0	0	0	0	1	0	1	2
Pumpkinseed	99	5	4	2	0	0	0	0	6	3	9	20
Smallmouth bass	99	0	0	3	3	0	0	1	0	0	4	7
Spottail shiner	99	1	3	1	23	0	0	1	0	11	35	40
Tesselated darter	99	0	5	4	1	4	7	12	0	3	27	36
White catfish	99	0	0	0	0	0	1	0	0	0	1	1
White Crappie	99	0	0	0	0	0	1	0	0	0	1	1
Yellow perch	99	4	2	0	0	0	0	0	1	0	1	7
Marine												
Atlantic croaker	99	0	0	0	8	2	0	1	0	0	11	11
Atlantic menhaden	0	358	6	87	17	1	0	0	0	1	19	470
Atlantic menhaden	1	66	0	2	0	0	0	0	0	0	0	68
Atlantic needlefish	99	27	16	8	11	2	0	0	0	0	13	64
Bay anchovy	99	3	18	6	549	24	7	7	251	0	838	865
Black Seabass	99	1	0	0	0	0	0	0	0	0	0	1
Black Drum	99	0	0	1	0	0	0	0	0	0	0	1
Bluefish	0	109	75	49	61	28	8	6	1	0	104	337
Crevalle jack	99	1	0	1	4	3	0	0	0	0	7	9
Naked Goby	99	3	3	0	0	0	0	0	0	0	0	6
Northern kingfish	99	2	5	1	1	3	2	3	3	1	13	21
Northern pipefish	99	18	18	10	7	14	5	4	1	0	31	77
Northern puffer	99	30	31	10	18	31	36	45	30	2	162	233
Silver perch	99	0	1	0	1	0	0	0	0	0	1	2
Silverside spp.	99	272	1131	1237	7798	2320	1818	1275	565	127	13903	16543
Spot	99	29	3	0	0	0	0	0	0	0	0	32
Striped searobin	99	17	0	0	0	0	0	0	0	0	0	17
Summer flounder	99	4	0	2	2	4	4	4	2	0	16	22
Weakfish	99	0	0	0	0	1	0	0	0	0	1	1
White mullet	99	0	21	36	0	18	0	0	1	0	19	76
Winter flounder	0	35	3	3	5	6	10	7	4	6	38	79
Winter flounder	1	1	0	0	0	0	0	0	0	0	0	1
Total Fish Catch		1771	3277	3755	16298	4322	3421	2971	1705	521	29238	38041
Invertebrate												
Blue crab	0	5	12	13	24	103	99	42	25	7	300	330
Blue crab	1	5	7	10	26	84	9	1	0	3	123	145
Mud Crab	99	3	0	0	0	0	0	0	0	0	0	3
Total Invertebrate Catch		13	19	23	50	187	108	43	25	10	423	478
Number of seines (n)		24	25	25	24	25	25	25	24	25	148	222

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

TABLE 4 HUDSON RIVER TOTAL SPECIES CPUE 1980 - 2008, WEEKS 4 - 9

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	2006	2007	2008
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	0.1	0.2	5.9
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	0.1	0.1	0.2
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	0.0	0.0	0.1
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		0.0	0.0	
																														0.0
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	0.2	12.1	1.7
Shortnose sturgeon	99																												0.0	
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	8.3	81.5	26.3
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	0.2	0.9	0.7
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	0.0	0.0	0.5
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	0.1	0.2	0.6
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	3.3	0.3	17.8
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				0.1	
Threespine stickleback	99	0.1			0.0				0.3																0.0	0.2	0.0	0.0	0.0	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	2.9	2.4	37.0
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	8.0	4.8	2.2
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	0.0		1.6
Brown bullead catfish	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		0.0	0.0	0.0
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	0.0	0.1	0.2
Chain pickerel	99	0.0									0.0	0.0			0.0							0.0								
Fallfish	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	0.0	0.3	0.2
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				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				0.0
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		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	0.0	0.0	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	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	0.3	0.3	0.2
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	0.0	0.1	0.2
White catfish	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		0.0	0.0	0.0
White crappie	99																											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	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	1.8	0.6	2.0
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	0.3	0.5	0.8
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									0.0
Japanese shore crab	0																												0.0	
Marine																														
Atlantic croaker	99																								0.0	0.4		0.0	0.0	0.1
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	1.4	4.9	0.1
Atlantic menhaden	1	0.2		0.1																	0.0			8.1	0.1			1.3	17.5	0.0
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	0.0	0.6	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	38.4	41.1	5.7
Black Drum	99																												0.0	0.0
																														0.0
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	0.5	1.9	0.7
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								
Cornetfish, 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		0.0	0.1	0.0
Cunner	99									0.0																				
Grey snapper	99	0.0					0.0									0.0	0.0													
Houndfish	99										0.0																			
Inshore lizardfish	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	0.0	0.1	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	0.0	0.1	0.1
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	0.3	1.1	0.2
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		0.0	1.1
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										0.0	
Permit	99																			0.0										
Pigfish	99															0.0			0.0											
Pinfish	99															0.0													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			0.1	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	18.4	100.1	94.6
Smallmouth flounder	99												0.1		0.0				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	0.0	0.0	0.0
Spotfin butterflyfish	99																							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	0.0	0.3	0.4	0.2	0.0	0.1	0.0				0.0								0.0		0.0	0.1	0.0		0.0	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	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		0.0	0.1	0.1
Tautog	0							0.1	0.0	0.2		0.0		0.0					0.1	0.0			0.2				0.0		0.0	
Tautog	1							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				0.1	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		0.0	0.0	0.1
Windowpane flounder	99									0.0		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		0.1	1.0	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			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	99						0.0	0.0				0.0						0.0												
Painted turtle	99									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	148	147	148

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

TABLE 5 HUDSON RIVER TOTAL SPECIES CPUE 1985 - 2008, WEEKS 1 - 9

Species	Age*	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
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	0.1	0.7	6.8
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	0.1	0.1	0.2
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	0.1	2.1	0.0
Atlantic sturgeon	1																			0.0					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		0.0	0.0	1.2
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	0.4	8.8	
Shortnose sturgeon	99																							0.0	
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	10.1	82.1	29.0
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	0.3	0.7	0.8
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	0.0	0.0	0.4
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	0.2	1.0	1.0
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	2.7	0.4	13.6
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				0.0	
Threespine stickleback	99			0.2										0.0						0.0	0.1	0.0	0.0	0.0	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	3.6	1.7	27.8
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	9.5	5.4	3.4
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	0.0		1.3
Brown bullead catfish	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		0.0	0.0	0.0
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	0.0	0.1	0.1
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	0.0	0.2	0.1
Golden shiner	99		0.0			0.0	0.0	0.0			0.0		0.0			0.0		0.1		0.0	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			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		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	0.1	0.0	0.1
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	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	0.2	0.3	0.2
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	0.0	0.1	0.2
White catfish	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		0.0	0.0	0.0
White crappie	99																						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	0.0	0.0	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	1.3	0.5	1.5
Blue crab	1	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	0.5	0.7	0.7
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						0.0
Japanese shore crab	0																							0.1	
Marine																									
Atlantic croaker	99																			0.0	0.3		0.7	0.0	0.0
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	2.4	10.7	2.1
Atlantic menhaden	1															0.0	0.0		9.6	0.1			11.9	71.0	0.3
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	0.2	0.5	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	41.3	31.6	3.9
Black drum	99																							0.0	0.0
Black Seabass																									0.0
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	0.5	3.1	1.5
Bluefish	1	0.0			0.0		0.0					0.0							0.0						
Bonefish	99										0.0														
Butterfish	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		0.0	0.0	0.0
Cunner	99				0.0																				
Grey snapper	99	0.0		0.0							0.0	0.0									0.0				
Houndfish	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			0.0	0.0					
Naked Goby	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	0.0	0.0	0.1	0.0
Northern kingfish	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	0.0	0.4	0.1
Northern pipefish	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	0.3	2.3	0.3
Northern puffer	99	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0		0.0		0.0	0.0	0.1		0.1	0.0	0.0	0.0	0.0		0.0	1.1
Northern searobin	99	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										0.0	
Permit	99														0.0		0.0								
Pigfish	99										0.0			0.0											
Pinfish	99										0.0														
Scup	99															0.0								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			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	15.6	107.7	74.9
Smallmouth flounder	99	0.0						0.0		0.0				0.0	0.0									0.0	
Spanish mackerel	99					0.0	0.0	0.0		0.0	0.0														
Spot	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	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Spotfin butterflyfish	99																		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	0.1		
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	0.0	0.4	0.1
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	0.0	0.1	0.1
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		0.0	
Tautog	1		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																							
Weakfish	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		0.1	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	0.1	0.0	0.3
Windowpane flounder	99				0.0		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	0.0	0.9	0.4
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	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	221	221	222

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

TABLE 6 HUDSON RIVER YOY STRIPED BASS ABUNDANCE INDEX

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	0-209	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
2006	148	1232	8.32	15.08	0-128	28	3.82	3.02 - 4.78
2007	147	11986	81.54	245.66	0-2580	2	35.02	28.59 - 42.84
2008	148	3887	26.26	38.13	0-337	4	13.86	11.33 - 16.90

Historical Average = 14.25

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
2006	221	2232	10.10	16.47	0-128	35	4.84	4.02 - 5.79
2007	221	18145	82.10	206.90	0-2580	2	39.56	33.72 - 46.37
2008	221	6441	29.01	37.10	0-337	5	16.39	14.04 - 19.11

Historical Average = 19.90

TABLE 7 2008 HUDSON RIVER YOY STRIPED BASS CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	6	41	30	38	25	19	2	3	7	0.6	0.8
21E	23	19	12	47	49	35	27	7	5	8	0.9	0.9
17E	24	4		32	4	12	34	6	1	3	0.4	0.4
16E	25	9	17	25	25	7	6	4	7	3	0.4	0.5
12E	29	34	61	6		2	2			1	0.0	0.5
14E	29	12	45	14	15	8	13	6		1	0.3	0.5
19E	33	8	28	8	41	12	28	11	7	13	0.8	0.7
11E	34	17	33	12	12	48	88	42		16	1.4	1.2
9E	34		65	46	29	18	27	21	4	1	0.7	1.0
7EE	35	19	4	6		78	25	82	40	2	1.5	1.2
7EW	35	172	35	152	337	181	140	18	95	7	5.3	5.1
8E	35	5	56	66	117	59	58	41	27		2.0	1.9
4E	39	7	53	68	84	20	43	39	16	5	1.4	1.5
West												
15WS	27		9	29		9	9	19	6	1	0.3	0.4
16WN	27	10	4	22	18	14	8	9	9	8	0.4	0.5
16WS	27	3	2		3			5			0.1	0.1
14W	29	41	144	21	44	17	13	17	6	1	0.7	1.4
12W	30	6	118	80	96	15	21		15	1	1.0	1.6
11W	32	13	16	32	9	7	20	3	16	13	0.5	0.6
10W	35	16	19	24	26	24	13	22	15	2	0.7	0.7
9W	35	8	37	10	23	21	11	16	8	10	0.6	0.6
8W	36	46	29	83	17	55	26	72	1	20	1.3	1.6
7W	37	34	37	89	12	29	16	49	10	21	0.9	1.3
3W	39	59	31	28	69	45	18	45	30	5	1.4	1.5
4W	39	21	16	74	106	51	45	29	18	10	1.8	1.7
5W	39	12	22	35	40	27	23	27	29	2	1.0	1.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		581	934	1039	1214	819	733	592	368	161	3887	6441
C/E		24.21	37.36	41.56	50.58	32.76	29.32	23.68	15.33	6.44	26.26	29.01

TABLE 8

HUDSON RIVER YOY STRIPED BASS
CPUE BY STATION 1985 - 2008, WEEKS 1 - 9

STATION	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
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	5.4	0.5	0.77
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	5.8	0.4	0.94
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	6.9	0.1	0.43
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	3.4	0.5	0.46
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	7.3	0.5	0.48
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	6.5	0.7	0.51
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	9.8	0.9	0.70
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	1.3	1.5	1.21
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	13.8	0.6	0.95
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	13.0	12.2	1.15
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	38.7	8.7	5.12
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	16.6	1.1	1.93
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	9.8	1.6	1.51
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	5.0	2.5	0.37
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	3.9	2.7	0.46
16WS	3.0	16.3	20.0	149.5	25.3	82.4		6.0																0.06
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	7.8	1.0	1.37
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	18.7	0.7	1.59
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	5.8	0.7	0.58
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	6.1	0.6	0.73
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	9.7	0.9	0.65
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	15.6	1.1	1.57
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	22.9	1.2	1.34
3W		5.7																			22.6	6.1	1.7	1.49
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	9.4	1.6	1.67
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	4.0	1.1	0.98
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	10.1	82.10	29.0

TABLE 9 HUDSON RIVER YOY STRIPED BASS CPUE BY STATION 1980 - 2008, WEEKS 4 - 9

STATION	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	2006	2007	2008
East																													
18E	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	4.1	1.0	0.6
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	3.4	1.0	0.9
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	3.7	0.6	0.4
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	1.8	1.3	0.4
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	5.0	1.6	0.0
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	1.1	2.2	0.3
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	3.0	2.2	0.8
10E																											1.3		
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	6.5	2.6	1.4
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		1.6	0.7
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	6.6	18.7	1.5
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	30.1	13.4	5.3
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	10.9	2.1	2.0
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	5.1	3.4	1.4
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	0.0	4.1	0.3
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	2.2	4.3	0.4
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																0.1
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	3.9	2.2	0.7
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	8.4	1.4	1.0
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	3.1	1.3	0.5
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	3.0	1.0	0.7
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	3.3	1.5	0.6
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	7.6	1.8	1.3
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	8.1	1.8	0.9
3W	12.2	10.3	23.4	8.0			2.0																		11.2	30.2	3.8	4.3	1.4
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	7.0	2.8	1.8
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	2.9	1.9	1.0
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	8.27	81.5	26.3

TABLE 10

2008 HUDSON RIVER YOY STRIPED BASS
TOTAL LENGTH FREQUENCY

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/F	C/F
	Jul	Jul	Aug	Aug	Sep	Sep	Oct	Oct	Nov	Weeks	Weeks
TL (mm)	15	29	12	27	11	24	7	20	4	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	31	0	0	0	0	0	0	0	0	0	31
30-34	85	7	3	0	0	0	0	0	0	0	95
35-39	89	22	5	0	0	0	0	0	0	0	116
40-44	70	55	22	2	0	0	0	0	0	2	149
45-49	62	83	37	7	3	0	0	1	0	11	193
50-54	63	126	108	19	7	4	1	1	0	32	329
55-59	33	127	127	55	15	13	7	6	1	97	384
60-64	4	117	143	98	39	41	29	8	3	218	482
65-69	3	77	122	106	77	58	37	33	9	320	522
70-74	1	64	83	88	103	91	69	62	18	431	579
75-79	0	29	44	87	76	62	91	44	14	374	447
80-84	0	16	39	66	101	63	67	38	15	350	405
85-89	1	5	22	46	56	66	44	28	16	256	284
90-94	0	0	16	37	50	48	38	22	10	205	221
95-99	0	0	4	21	32	38	56	14	11	172	176
100-104	0	0	0	14	34	26	31	14	18	137	137
105-109	0	1	1	8	21	30	34	13	12	118	120
110-114	0	0	0	6	19	22	9	9	11	76	76
115-119	0	0	0	1	8	14	8	10	11	52	52
120-124	0	0	0	0	1	7	6	8	3	25	25
125-129	0	0	0	0	1	5	5	1	2	14	14
130-134	0	0	0	0	0	3	1	2	1	7	7
135-139	0	0	0	0	0	0	1	2	1	4	4
140-144	0	0	0	0	0	1	1	1	1	4	4
>144	0	0	0	0	0	1	4	3	1	9	9
# Measured	448	730	776	661	643	593	539	320	158	2914	4868
Mean	41.29	57.28	63.04	73.13	80.57	83.72	84.91	84.60	92.25	81.40	71.17
StdDev	9.45	11.08	11.61	13.29	14.40	16.55	16.27	17.91	18.15	16.42	19.84

TABLE 11

AVERAGE TOTAL LENGTH (mm) OF HUDSON RIVER
YOY STRIPED BASS, 1985 - 2008

YEAR		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 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
2006	Mean	42.16	50.34	60.49	68.46	78.57	77.89	82.72	83.29	93.11
	StdDev	9.62	11.20	11.68	10.66	13.56	12.42	15.14	17.69	15.05
2007	Mean	53.72	60.97	68.65	75.19	81.85	87.77	93.86	99.48	98.22
	StdDev	10.59	11.17	12.09	11.39	14.27	16.30	16.00	19.13	18.54
2008	Mean	41.29	57.28	63.04	73.13	80.57	83.72	84.91	84.60	92.25
	StdDev	9.45	11.08	11.61	13.29	14.40	16.55	16.27	17.91	18.15

TABLE 12 HUDSON RIVER STRIPED BASS AGE FREQUENCIES 1985 - 2008

AGE	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
0	984	1940	18649	15488	13397	12591	3275	5874	12587	9624	7457	4346	11452	6674	9981	4830	16103	4656	16116	3613	7727	2225	18145	6441
1	179	41	25	149	145	57	154	156	104	56	240	93	88	128	118	150	168	174	63	102	21	54	147	158
2	10	3	2	6	11	9	11	7	23	5	23	4	10	15	4	11	7	12	7	4	1	2	4	12
3	0	4	0	1	0	2	3	2	6	0	4	3	2	1	0	1	0	2	1	0	0	1	1	2
4	0	3	0	1	0	0	1	4	1	3	3	0	0	1	0	0	1	0	0	0	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	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	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	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	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	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	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	0	0	0
UNK																								2
Total	1174	1991	18678	15646	13555	12661	3444	6044	12721	9689	7730	4449	11552	6819	10106	4992	16279	4844	16187	3719	7749	2282	18297	6615

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	2006	2007	2008
0				0	0	0	0	0	1	0	4	0	0	0	13	0	0	0	0	0	0	0	2	0
1				50	41	27	80	83	43	13	68	40	29	46	57	33	63	97	28	20	4	8	82	0
2				4	11	8	10	6	21	4	18	3	9	14	3	6	6	12	7	4	0	2	3	0
3				1	0	2	2	2	5	0	3	2	1	1	0	1	0	2	1	0	0	1	1	0
4				1	0	0	1	4	1	3	2	0	0	1	0	0	1	0	0	0	0	0	0	0
5				0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	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	0	0	0
7				0	0	0	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	0	0	0
9				0	1	0	0	0	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	0	0	0
UNK				0	0	6	0	0	0	0	0	3	0	0	1	0	0	0	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	11	88	0

TABLE 13

2008 HUDSON RIVER OLDER STRIPED BASS
LENGTH FREQUENCY

TL	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F Weeks 1 - 9
<110	1	0	0	0	0	0	0	0	0	0	1
110-114	0	0	0	0	0	0	0	0	0	0	0
115-119	4	1	0	0	0	0	0	0	0	0	5
120-124	1	1	0	1	0	0	0	0	0	1	3
125-129	3	3	0	0	0	0	0	0	0	0	6
130-134	1	2	0	0	0	0	0	1	0	1	4
135-139	4	2	0	0	0	1	0	0	1	2	8
140-144	2	4	0	2	1	1	0	1	0	5	11
145-149	3	3	2	1	1	1	0	0	0	3	11
150-154	2	3	3	0	3	0	0	1	0	4	12
155-159	2	3	1	0	1	1	0	0	1	3	9
160-164	0	2	0	0	0	2	2	2	1	7	9
165-169	1	0	1	0	2	1	0	1	2	6	8
170-174	1	2	1	3	1	1	4	0	0	9	13
175-179	1	0	1	0	2	3	3	1	1	10	12
180-184	1	0	0	0	0	0	2	0	0	2	3
185-189	0	0	1	0	0	2	0	1	0	3	4
190-194	0	0	0	0	0	4	1	2	1	8	8
195-199	0	0	0	1	1	0	2	0	1	5	5
200-204	0	1	1	2	0	1	1	1	1	6	8
205-209	0	0	0	0	2	1	1	0	1	5	5
210-214	0	0	0	1	1	2	0	1	0	5	5
215-219	0	0	0	0	1	0	0	0	0	1	1
220-224	0	0	0	0	0	1	1	0	0	2	2
225-229	0	0	0	0	3	1	1	0	0	5	5
230-234	0	0	0	0	2	0	0	0	0	2	2
235-239	0	0	0	0	2	1	0	0	0	3	3
240-244	0	0	0	0	1	0	0	0	0	1	1
245-249	0	0	0	0	2	0	0	0	0	2	2
>249	0	0	2	2	0	1	3	0	0	6	8
# Measured	27	27	13	13	26	25	21	12	10	107	174
Mean	140.37	147.00	182.54	226.85	197.92	187.24	204.00	178.08	177.10	195.96	178.74
StdDev	19.93	17.96	47.85	169.97	36.44	30.90	55.33	21.70	23.16	68.49	60.93

TABLE 14 2008 HUDSON RIVER OLDER STRIPED BASS CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	1	0	1	2	0	1	0	0	0.0	0.0
21E	23	0	5	0	1	2	1	0	1	0	0.0	0.0
17E	24	0		2	6	3	3	1	0	1	0.1	0.1
16E	25	0	0	0	0	7	2	1	1	3	0.1	0.1
12E	29	0	0	0		0	0	0	0	0	0.0	0.0
14E	29	2	0	1	2	0	3	1		2	0.1	0.0
19E	33	2	0	0	0	0	1	1	0	1	0.0	0.0
11E	34	2	2	1	0	3	2	2	0	0	0.0	0.1
9E	34		5	6	1	0	5	2	0	0	0.1	0.1
7EE	35	6	1	0		0	0	0	2	0	0.0	0.0
7EW	35	5	3	1	0	1	0	6	3	1	0.1	0.1
8E	35	0	0	0	0	0	1	0	0	1	0.0	0.0
4E	39	1	4	0	0	0	0	0	1	0	0.0	0.0
West												
15WS	27		0	0	0	0	0	1	1	0	0.0	0.0
16WN	27	1	1	0	0	6	0	4	0	0	0.1	0.1
16WS	27	0	0		0			0			0.0	0.0
14W	29	0	1	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
11W	32	1	0	1	0	0	2	0	1	0	0.0	0.0
10W	35	0	0	0	1	0	2	1	0	0	0.0	0.0
9W	35	3	0	0	0	0	0	0	0	0	0.0	0.0
8W	36	0	0	0	1	0	0	0	0	0	0.0	0.0
7W	37	3	2	0	0	0	0	0	0	0	0.0	0.0
3W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
4W	39	1	1	0	0	0	1	0	0	1	0.0	0.0
5W	39	0	1	1	0	2	2	0	2	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		27	27	13	13	26	25	21	12	10	107	174
C/E		1.13	1.08	0.52	0.54	1.04	1.00	0.84	0.50	0.40	0.72	0.78

TABLE 15 2008 HUDSON RIVER YOY WHITE PERCH CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	1	0	0	0	0	0	0.0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
17E	24	0		1	0	0	0	0	0	0	0.0	0.0
16E	25	0	0	1	1	0	1	0	0	0	0.0	0.0
12E	29	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
19E	33	0	0	2	7	4	2	19	0	0	0.2	0.2
11E	34	0	0	0	29	0	0	6	0	0	0.2	0.2
9E	34		0	1	5	5	18	13	0	0	0.3	0.2
7EE	35	0	0	0		33	0	51	16	0	0.7	0.5
7EW	35	0	0	105	243	3	16	1	40	0	2.0	1.8
8E	35	0	0	100	2789	228	155	25	9	0	21.7	14.9
4E	39	0	0	3	46	3	41	44	6	4	1.0	0.7
West												
15WS	27		1	2	2	3	0	14	3	0	0.1	0.1
16WN	27	0	0	13	2	0	0	0	13	0	0.1	0.1
16WS	27	0	0		13			30			0.3	0.2
14W	29	0	1	148	193	121	61	80	12	1	3.2	2.8
12W	30	0	0	102	356	4	15		22	1	2.7	2.3
11W	32	0	0	2	0	0	0	0	0	1	0.0	0.0
10W	35	0	0	31	24	15	24	30	34	1	0.9	0.7
9W	35	0	0	0	0	0	0	0	0	0	0.0	0.0
8W	36	0	5	102	1	24	3	74	1	3	0.7	1.0
7W	37	0	0	57	6	31	17	131	34	0	1.5	1.2
3W	39	0	1	0	3	10	1	2	8	1	0.2	0.1
4W	39	0	0	0	33	4	3	0	5	0	0.3	0.2
5W	39	2	0	9	30	47	10	7	17	1	0.8	0.6
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		2	8	679	3784	535	367	527	220	13	5446	6135
C/E		0.08	0.32	27.16	157.67	21.40	14.68	21.08	9.17	0.52	36.80	27.64

TABLE 16 2008 HUDSON RIVER OLDER WHITE PERCH CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	6	0	1	0	0	1	0	0.0	0.0
21E	23	0	0	12	1	2	3	0	0	0	0.0	0.1
17E	24	0		7	0	16	7	2	0	0	0.2	0.1
16E	25	0	0	5	3	2	0	0	0	0	0.0	0.0
12E	29	0	1	3		0	0	0	0	0	0.0	0.0
14E	29	6	0	1	1	0	0	0		0	0.0	0.0
19E	33	7	0	8	3	1	8	5	0	0	0.1	0.1
11E	34	12	34	1	0	7	3	0	0	2	0.1	0.3
9E	34		0	3	5	0	0	2	0	0	0.0	0.0
7EE	35	2	17	13		0	0	0	0	0	0.0	0.1
7EW	35	5	10	13	0	5	0	0	0	1	0.0	0.2
8E	35	10	2	0	0	0	0	0	0	0	0.0	0.1
4E	39	0	4	21	5	1	2	3	2	4	0.1	0.2
West												
15WS	27		4	23	2	0	4	0	1	0	0.0	0.2
16WN	27	1	20	86	16	18	0	0	2	0	0.2	0.6
16WS	27	0	1		1			0			0.0	0.0
14W	29	0	1	1	8	0	1	3	0	0	0.1	0.1
12W	30	2	3	2	0	0	0		2	0	0.0	0.0
11W	32	0	2	8	4	2	0	0	4	0	0.1	0.1
10W	35	1	3	0	1	4	6	0	4	0	0.1	0.1
9W	35	0	0	1	0	0	0	1	0	0	0.0	0.0
8W	36	2	0	15	37	10	2	0	0	0	0.3	0.3
7W	37	5	13	3	22	13	9	2	2	0	0.3	0.3
3W	39	0	0	1	2	4	0	0	8	0	0.1	0.1
4W	39	1	9	0	8	2	0	0	5	1	0.1	0.1
5W	39	0	10	8	2	11	1	0	4	0	0.1	0.2
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		54	134	241	121	99	46	18	35	8	327	756
C/E		2.25	5.36	9.64	5.04	3.96	1.84	0.72	1.46	0.32	2.21	3.41

TABLE 17 2008 HUDSON RIVER WHITE PERCH SIZE DISTRIBUTION

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 20	0	0	0	0	0	0	0	0	0	0	0
20-24	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	1	0	0	0	0	1	1
35-39	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	1	0	0	1	1
45-49	0	1	2	1	0	0	1	0	0	2	5
50-54	0	0	14	0	0	1	0	0	0	1	15
55-59	0	0	34	4	2	1	0	0	0	7	41
60-64	0	0	69	24	3	2	0	2	0	31	100
65-69	0	0	87	38	14	3	3	4	0	62	149
70-74	0	0	36	89	47	24	21	11	0	192	228
75-79	0	0	3	88	57	53	40	24	2	264	267
80-84	0	0	1	28	52	49	100	55	2	286	287
85-89	0	0	0	0	35	45	53	55	3	191	191
90-94	0	0	0	0	8	16	40	31	3	98	98
95-99	2	0	0	0	1	4	28	11	2	46	48
100-104	3	1	0	0	0	0	6	8	1	15	19
105-109	1	1	0	0	0	0	1	0	0	1	3
110-114	2	2	1	0	0	0	1	0	0	1	6
115-119	7	3	3	2	2	0	0	0	0	4	17
120-124	3	5	6	2	1	0	0	0	0	3	17
125-129	3	9	4	5	2	3	2	1	0	13	29
130-134	3	5	2	5	8	3	0	0	0	16	26
135-139	0	2	6	11	2	4	0	1	0	18	26
140-144	1	5	4	2	5	9	1	1	0	18	28
145-149	3	3	2	5	10	2	0	7	0	24	32
150-154	2	2	4	4	3	3	0	4	2	16	24
155-159	1	8	9	5	5	2	1	3	0	16	34
160-164	1	5	7	9	4	1	2	2	1	19	32
165-169	3	11	13	3	14	0	2	0	1	20	47
170-174	2	8	15	6	6	4	3	3	0	22	47
175-179	3	16	11	10	8	4	0	3	0	25	55
180-184	1	9	11	9	7	2	1	2	2	23	44
185-189	3	6	8	9	8	1	3	2	0	23	40
190-194	1	7	14	4	3	6	0	2	2	17	39
195-199	4	6	17	1	1	0	0	2	0	4	31
200-204	3	4	14	3	2	2	0	1	0	8	29
205-209	1	3	8	3	4	0	2	0	0	9	21
210-214	0	5	5	3	2	0	0	1	0	6	16
215-219	1	5	4	0	2	1	0	0	0	3	13
220-224	1	1	3	2	1	0	2	0	0	5	10
225-229	0	3	2	4	2	0	1	0	0	7	12
230-234	0	1	3	0	0	1	0	0	0	1	5
235-239	0	1	2	1	0	0	0	0	0	1	4
240-244	0	0	1	0	1	0	0	1	0	2	3
>244	1	0	4	1	0	0	0	0	0	1	6
Measured	56	138	429	381	323	246	315	237	21	1523	2146
Mean	152.91	168.38	113.09	99.86	106.51	96.41	89.89	97.13	120.00	98.50	107.33
StDev	38.32	32.37	61.19	46.62	45.10	34.74	25.05	32.06	43.84	38.96	47.80

TABLE 19 2008 HUDSON RIVER AMERICAN EEL CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	1	0	1	1	0	0	0	0	0.0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
17E	24	0		0	0	0	0	1	0	0	0.0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0	0.0
12E	29	0	0	0		0	0	0	0	1	0.0	0.0
14E	29	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	0.0
11E	34	1	0	0	0	0	0	0	0	0	0.0	0.0
9E	34		0	0	0	0	0	0	0	0	0.0	0.0
7EE	35	0	0	0		0	0	1	0	0	0.0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0	0.0
8E	35	0	0	1	2	1	0	0	1	0	0.0	0.0
4E	39	0	0	0	0	0	0	0	1	0	0.0	0.0
West												
15WS	27		0	0	0	0	0	0	0	0	0.0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0	0.0
16WS	27	0	0		1			0			0.0	0.0
14W	29	0	0	1	0	0	1	1	1	0	0.0	0.0
12W	30	0	3	1	2	1	2		2	0	0.0	0.0
11W	32	0	0	0	0	0	0	0	0	1	0.0	0.0
10W	35	0	0	2	0	1	0	0	1	0	0.0	0.0
9W	35	1	0	0	0	0	0	0	0	1	0.0	0.0
8W	36	0	0	0	0	1	0	0	0	0	0.0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0	0.0
3W	39	0	0	0	0	0	0	1	0	0	0.0	0.0
4W	39	0	0	0	0	0	0	0	1	0	0.0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		2	4	5	6	5	3	4	7	3	28	39
C/E		0.08	0.16	0.20	0.25	0.20	0.12	0.16	0.29	0.12	0.19	0.18

TABLE 20 2008 HUDSON RIVER AMERICAN EEL LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F Weeks 1 - 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	0	0	0	0
100 - 119	0	0	0	0	1	0	0	1	0	2	2
120 - 139	1	0	0	0	1	0	0	2	0	3	4
140 - 159	0	1	2	1	1	3	0	0	1	6	9
160 - 179	0	1	0	0	0	0	0	2	1	3	4
180 - 199	0	1	1	0	0	0	0	1	0	1	3
200 - 219	0	0	0	1	0	0	0	0	0	1	1
220 - 239	0	0	0	0	0	0	0	0	0	0	0
240 - 259	0	0	0	0	1	0	1	0	0	2	2
260 - 279	0	0	0	0	0	0	0	1	0	1	1
280 - 299	0	0	0	0	0	0	0	0	0	0	0
300 - 319	0	0	0	1	0	0	0	0	0	1	1
320 - 339	0	0	1	0	0	0	0	0	0	0	1
340 - 359	0	0	0	0	0	0	0	0	1	1	1
360 - 379	0	0	0	0	0	0	0	0	0	0	0
380 - 399	0	0	0	0	0	0	0	0	0	0	0
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	1	0	0	0	0	1	1
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	0	0	0	0	0
540 - 559	1	0	0	1	0	0	0	0	0	1	2
560 - 579	0	0	0	0	0	0	0	0	0	0	0
580 - 599	0	0	0	0	0	0	1	0	0	1	1
600 - 619	0	0	1	0	0	0	0	0	0	0	1
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	0	0	0	0	0	0	0	0	0	0	0
680 - 699	0	0	0	1	0	0	0	0	0	1	1
> 699	0	1	0	0	0	0	2	0	0	2	3
Measured	2	4	5	5	5	3	4	7	3	27	38
Mean	340.00	312.25	286.20	381.00	222.00	150.33	584.50	165.29	223.33	282.63	289.24
StDev	296.98	299.18	193.70	233.60	152.22	8.50	237.69	48.52	110.15	206.59	209.57

TABLE 21 2008 HUDSON RIVER YOY BLUEFISH CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	1	1	0	0	0	0	0.0	0.0
21E	23	0	1	2	0	0	0	0	0	0	0.0	0.0
17E	24	23		2	2	7	0	0	0	0	0.1	0.2
16E	25	1	1	0	3	0	0	0	0	0	0.0	0.0
12E	29	5	1	0		0	0	0	0	0	0.0	0.0
14E	29	2	3	5	0	0	0	0		0	0.0	0.0
19E	33	1	1	0	10	1	0	0	0	0	0.1	0.1
11E	34	2	6	1	0	0	0	0	0	0	0.0	0.0
9E	34		5	3	1	0	0	1	0	0	0.0	0.0
7EE	35	1	2	0		0	0	1	0	0	0.0	0.0
7EW	35	1	0	3	3	1	0	2	0	0	0.0	0.0
8E	35	6	30	4	2	1	0	0	0	0	0.0	0.2
4E	39	8	13	4	0	1	3	0	0	0	0.0	0.1
West												
15WS	27		1	1	0	0	1	0	0	0	0.0	0.0
16WN	27	5	0	0	0	0	0	0	0	0	0.0	0.0
16WS	27	0	0		0			1			0.0	0.0
14W	29	1	1	0	4	0	1	0	0	0	0.0	0.0
12W	30	5	1	0	1	0	0		0	0	0.0	0.0
11W	32	3	5	5	3	5	1	0	0	0	0.1	0.1
10W	35	26	0	6	7	5	1	0	0	0	0.1	0.2
9W	35	2	0	4	6	0	0	0	1	0	0.0	0.1
8W	36	0	3	3	5	1	0	0	0	0	0.0	0.1
7W	37	0	0	1	10	0	0	0	0	0	0.1	0.0
3W	39	7	0	2	1	1	0	1	0	0	0.0	0.1
4W	39	6	1	0	0	2	0	0	0	0	0.0	0.0
5W	39	4	0	3	2	2	1	0	0	0	0.0	0.1
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		109	75	49	61	28	8	6	1	0	104	337
C/E		4.54	3.00	1.96	2.54	1.12	0.32	0.24	0.04	0.00	0.70	1.52

TABLE 22 2008 HUDSON RIVER BLUEFISH LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 65	0	0	1	1	1	0	1	0	0	3	4
65 - 69	0	6	0	0	0	0	0	0	0	0	6
70 - 74	1	0	0	0	0	1	0	0	0	1	2
75 - 79	0	0	1	0	0	0	0	0	0	0	1
80 - 84	2	0	1	1	0	0	0	0	0	1	4
85 - 89	1	1	4	1	0	0	0	0	0	1	7
90 - 94	13	0	5	0	0	0	0	0	0	0	18
95 - 99	9	2	2	0	0	0	0	0	0	0	13
100 - 104	7	1	4	1	1	0	0	0	0	2	14
105 - 109	6	2	1	5	2	0	0	0	0	7	16
110 - 114	6	3	1	6	0	1	0	0	0	7	17
115 - 119	2	7	0	5	1	1	0	0	0	7	16
120 - 124	7	10	4	3	2	0	0	0	0	5	26
125 - 129	3	10	0	1	4	0	0	0	0	5	18
130 - 134	5	7	1	4	5	1	0	0	0	10	23
135 - 139	5	3	3	3	2	0	0	0	0	5	16
140 - 144	7	2	6	2	2	0	0	0	0	4	19
145 - 149	14	4	1	3	2	1	0	0	0	6	25
150 - 154	4	5	6	3	0	0	0	0	0	3	18
155 - 159	6	1	2	1	1	0	0	0	0	2	11
160 - 164	4	1	1	0	0	2	0	0	0	2	8
165 - 169	3	0	1	3	4	0	0	0	0	7	11
170 - 174	3	1	0	5	0	0	0	0	0	5	9
175 - 179	0	0	1	3	0	0	0	0	0	3	4
180 - 184	1	1	2	4	0	0	0	0	0	4	8
185 - 189	0	1	1	2	0	0	0	0	0	2	4
190 - 194	0	1	0	1	0	0	0	0	0	1	2
195 - 199	0	0	0	1	0	0	0	0	0	1	1
200 - 204	0	0	0	0	0	0	0	0	0	0	0
205 - 209	0	0	0	0	0	0	2	0	0	2	2
210 - 214	0	1	0	1	1	0	2	0	0	4	5
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	1	0	0	1	1
235 - 239	0	0	0	0	0	0	0	0	0	0	0
240 - 244	0	0	0	0	0	1	0	0	0	1	1
245 - 249	0	0	0	0	0	0	0	0	0	0	0
250 - 254	0	0	0	0	0	0	0	0	0	0	0
255 - 259	0	0	0	0	0	0	0	1	0	1	1
260 - 264	0	0	0	0	0	0	0	0	0	0	0
265 - 269	0	0	0	0	0	0	0	0	0	0	0
>269	0	0	0	0	0	0	0	0	0	0	0
Measured	109	70	49	60	28	8	6	1	0	103	331
Mean	124.95	125.10	124.98	140.58	135.29	143.63	186.67	255.00	0.00	143.17	130.66
StDev	26.43	31.12	32.33	32.98	26.93	50.29	62.74	0.00	0.00	37.98	33.17

TABLE 23 2008 HUDSON RIVER WINTER FLOUNDER CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	9	1	1	1	0	2	2	0	0	0.0	0.1
21E	23	6	0	1	0	0	0	0	0	1	0.0	0.0
17E	24	6		0	1	0	1	0	0	4	0.0	0.1
16E	25	11	2	1	2	0	0	0	0	0	0.0	0.1
12E	29	1	0	0		2	2	3	1	0	0.1	0.0
14E	29	2	0	0	0	0	0	0		1	0.0	0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0	0.0
9E	34		0	0	0	0	0	0	0	0	0.0	0.0
7EE	35	0	0	0		0	0	0	1	0	0.0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0	0.0
8E	35	0	0	0	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	3	3	1	1	0	0.1	0.0
16WN	27	0	0	0	1	1	1	1	0	0	0.0	0.0
16WS	27	0	0		0			0			0.0	0.0
14W	29	1	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
11W	32	0	0	0	0	0	1	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	1	0	0.0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0	0.0
3W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		36	3	3	5	6	10	7	4	6	38	80
C/E		1.50	0.12	0.12	0.21	0.24	0.40	0.28	0.17	0.24	0.26	0.36

TABLE 24 2008 HUDSON RIVER WINTER FLOUNDER LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F 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	0	0	0	0	0	0	0	0	0	0	0
35 - 39	2	0	0	0	0	0	0	0	0	0	2
40 - 44	0	0	0	0	0	0	0	0	0	0	0
45 - 49	1	0	0	0	0	0	0	0	0	0	1
50 - 54	2	0	0	0	0	0	0	0	0	0	2
55 - 59	4	1	0	0	0	0	0	0	0	0	5
60 - 64	6	1	2	1	0	1	0	0	0	2	11
65 - 69	8	1	0	1	1	1	0	0	0	3	12
70 - 74	8	0	1	1	2	0	0	0	0	3	12
75 - 79	2	0	0	0	0	2	2	1	0	5	7
80 - 84	1	0	0	2	1	0	1	0	1	5	6
85 - 89	1	0	0	0	2	2	2	0	0	6	7
90 - 94	0	0	0	0	0	2	0	0	0	2	2
95 - 99	0	0	0	0	0	0	1	0	0	1	1
100 - 104	0	0	0	0	0	1	0	2	0	3	3
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	1	1	1
120 - 124	0	0	0	0	0	0	0	0	2	2	2
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	1	1	1
140 - 144	0	0	0	0	0	0	0	1	0	1	1
145 - 149	0	0	0	0	0	1	1	0	0	2	2
150 - 154	0	0	0	0	0	0	0	0	0	0	0
155 - 159	1	0	0	0	0	0	0	0	1	1	2
160 - 164	0	0	0	0	0	0	0	0	0	0	0
165 - 169	0	0	0	0	0	0	0	0	0	0	0
170 - 174	0	0	0	0	0	0	0	0	0	0	0
175 - 179	0	0	0	0	0	0	0	0	0	0	0
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
> 199	0	0	0	0	0	0	0	0	0	0	0
Measured	36	3	3	5	6	10	7	4	6	38	80
Mean	66.33	61.33	65.00	72.60	76.50	89.00	92.57	104.50	121.33	92.26	78.41
StDev	18.85	5.03	6.24	10.04	8.46	24.40	24.51	25.84	24.40	25.42	25.26

TABLE 25 2008 HUDSON RIVER AMERICAN SHAD CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
17E	24	0		0	0	0	0	0	0	0	0.0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0	0.0
12E	29	0	0	0		0	0	0	3	0	0.0	0.0
14E	29	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	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0	0.0
9E	34		0	0	0	0	0	0	0	0	0.0	0.0
7EE	35	0	0	0		0	0	0	0	0	0.0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0	0.0
8E	35	0	0	0	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	0	0	0.0	0.0
16WN	27	0	0	0	0	0	0	0	0	1	0.0	0.0
16WS	27	0	0		0			0			0.0	0.0
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
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	2	0	0	0	0	0	0.0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0	0.0
3W	39	0	0	0	0	0	0	0	2	0	0.0	0.0
4W	39	0	0	0	2	0	0	0	0	0	0.0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		0	0	0	4	0	0	0	5	1	10	10
C/E		0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.21	0.04	0.07	0.05

TABLE 26 2008 HUDSON RIVER AMERICAN SHAD LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F 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	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	0	0	0	0	0	0	0	0	0	0	0
45 - 49	0	0	0	0	0	0	0	0	0	0	0
50 - 54	0	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0	0
65 - 69	0	0	0	0	0	0	0	0	0	0	0
70 - 74	0	0	0	0	0	0	0	0	0	0	0
75 - 79	0	0	0	0	0	0	0	0	0	0	0
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	3	0	0	0	0	0	3	3
95 - 99	0	0	0	1	0	0	0	0	0	1	1
100 - 104	0	0	0	0	0	0	0	2	1	3	3
105 - 109	0	0	0	0	0	0	0	2	0	2	2
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	1	0	1	1
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	0	0	0	4	0	0	0	5	1	10	10
Mean				94.25				107.8	103	101.9	101.9
StDev				1.89				6.87		8.23	8.23

TABLE 27 2008 HUDSON RIVER ALEWIFE CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
17E	24	0		0	0	0	0	0	0	0	0.0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0	0.0
12E	29	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
19E	33	0	0	0	1	0	0	0	0	0	0.0	0.0
11E	34	1	0	0	29	23	0	0	0	0	0.4	0.2
9E	34		0	0	0	0	0	0	0	0	0.0	0.0
7EE	35	0	0	0		0	0	0	0	0	0.0	0.0
7EW	35	0	0	0	0	1	0	0	0	0	0.0	0.0
8E	35	0	598	53	333	26	162	56	0	0	3.9	5.5
4E	39	0	0	0	0	0	0	0	0	0	0.0	0.0
West												
15WS	27		0	0	0	0	0	0	0	0	0.0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0	0.0
16WS	27	0	0		0			0			0.0	0.0
14W	29	0	0	0	43	4	0	0	1	0	0.3	0.2
12W	30	0	0	0	6	0	0		3	0	0.1	0.0
11W	32	0	0	0	0	0	0	0	1	0	0.0	0.0
10W	35	0	0	0	16	16	17	6	2	1	0.4	0.3
9W	35	0	0	0	0	0	0	0	8	0	0.1	0.0
8W	36	0	0	0	19	0	0	0	5	1	0.2	0.1
7W	37	0	0	0	17	30	4	0	13	0	0.4	0.3
3W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
4W	39	0	0	0	1	0	0	0	1	0	0.0	0.0
5W	39	0	0	0	14	0	0	0	0	0	0.1	0.1
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		1	598	53	479	100	183	62	34	2	860	1512
C/E		0.04	23.92	2.12	19.96	4.00	7.32	2.48	1.42	0.08	5.81	6.81

TABLE 28 2008 HUDSON RIVER ALEWIFE LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F 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	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	0	0	0	0	0	0	0	0	0	0	0
45 - 49	0	0	0	1	0	0	0	0	0	1	1
50 - 54	0	0	0	0	0	0	0	0	0	0	0
55 - 59	1	3	0	0	0	0	0	0	0	0	4
60 - 64	0	13	0	0	1	0	0	0	0	1	14
65 - 69	0	11	7	6	2	1	0	0	0	9	27
70 - 74	0	3	12	36	19	12	2	4	1	74	89
75 - 79	0	0	7	50	39	18	10	4	0	121	128
80 - 84	0	0	3	22	30	13	17	9	1	92	95
85 - 89	0	0	0	8	7	4	4	4	0	27	27
90 - 94	0	0	0	0	2	2	1	4	0	9	9
95 - 99	0	0	0	0	0	0	1	1	0	2	2
100 - 104	0	0	0	0	0	0	0	4	0	4	4
105 - 109	0	0	0	0	0	1	1	2	0	4	4
110 - 114	0	0	0	0	0	0	0	2	0	2	2
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	1	1	0	0	0	0	0	1	2
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	1	30	30	124	100	51	36	34	2	347	408
Mean	58.00	64.40	74.53	76.10	77.73	78.06	81.56	87.88	77.50	78.59	77.20
StDev		3.84	12.59	7.88	5.07	6.44	6.36	11.19	7.78	7.97	9.03

TABLE 29 2008 HUDSON RIVER BLUEBACK HERRING CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
17E	24	0		0	0	0	0	0	0	0	0.0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0	0.0
12E	29	0	0	0		0	0	0	0	0	0.0	0.0
14E	29	0	0	0	0	0	0	0		21	0.1	0.1
19E	33	0	0	0	0	2	0	0	0	5	0.0	0.0
11E	34	0	0	1	0	23	0	0	0	0	0.2	0.1
9E	34		0	0	0	0	0	4	0	0	0.0	0.0
7EE	35	0	0	25		0	0	0	0	0	0.0	0.1
7EW	35	0	0	0	0	0	0	0	0	0	0.0	0.0
8E	35	0	0	2	0	1	13	10	0	0	0.2	0.1
4E	39	0	0	0	0	0	0	0	0	0	0.0	0.0
West												
15WS	27		0	0	0	0	0	0	0	0	0.0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0	0.0
16WS	27	0	0		0			0			0.0	0.0
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
11W	32	0	0	0	2	0	0	0	5	14	0.1	0.1
10W	35	0	0	0	36	7	4	1	0	8	0.4	0.3
9W	35	0	0	0	1	0	0	0	2	30	0.2	0.1
8W	36	0	0	4	0	0	0	0	1	0	0.0	0.0
7W	37	0	0	0	1	8	0	0	4	2	0.1	0.1
3W	39	0	0	0	0	0	0	0	5	30	0.2	0.2
4W	39	0	0	0	0	0	0	0	1	1	0.0	0.0
5W	39	0	0	0	2	0	0	0	0	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		0	0	32	42	41	17	15	18	111	244	276
C/E		0.00	0.00	1.28	1.75	1.64	0.68	0.60	0.75	4.44	1.65	1.24

TABLE 30 2008 HUDSON RIVER BLUEBACK HERRING LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 7	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F 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	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	0	0	0	1	0	0	0	0	0	1	1
45 - 49	0	0	0	0	1	1	0	0	1	3	3
50 - 54	0	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	10	10	10
60 - 64	0	0	1	1	0	0	0	0	33	34	35
65 - 69	0	0	6	6	5	2	1	1	31	46	52
70 - 74	0	0	18	19	18	7	3	2	25	74	92
75 - 79	0	0	6	6	11	6	2	3	7	35	41
80 - 84	0	0	1	3	6	1	8	5	2	25	26
85 - 89	0	0	0	0	0	0	1	5	2	8	8
90 - 94	0	0	0	0	0	0	0	1	0	1	1
95 - 99	0	0	0	0	0	0	0	1	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	0	0	32	36	41	17	15	18	111	238	270
Mean			71.81	70.94	72.93	71.35	77.93	81.06	66.47	70.43	70.60
StDev			3.67	6.64	6.31	7.52	5.43	7.23	6.53	7.94	7.57

TABLE 31 2008 HUDSON RIVER ATLANTIC MENHADEN CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0	0.0
17E	24	0		0	0	0	0	0	0	0	0.0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0	0.0
12E	29	0	0	0		0	0	0	0	0	0.0	0.0
14E	29	0	2	0	0	0	0	0		0	0.0	0.0
19E	33	0	0	17	0	0	0	0	0	0	0.0	0.1
11E	34	0	2	0	0	0	0	0	0	0	0.0	0.0
9E	34		0	1	0	0	0	0	0	0	0.0	0.0
7EE	35	59	0	30		0	0	0	0	0	0.0	0.4
7EW	35	0	0	0	0	0	0	0	0	0	0.0	0.0
8E	35	230	0	0	0	0	0	0	0	0	0.0	1.0
4E	39	0	0	0	0	0	0	0	0	0	0.0	0.0
West												
15WS	27		0	0	0	1	0	0	0	0	0.0	0.0
16WN	27	0	0	2	0	0	0	0	0	0	0.0	0.0
16WS	27	3	0		0			0			0.0	0.0
14W	29	56	0	2	0	0	0	0	0	0	0.0	0.3
12W	30	0	0	4	0	0	0		0	0	0.0	0.0
11W	32	0	1	0	17	0	0	0	0	0	0.1	0.1
10W	35	39	1	3	0	0	0	0	0	0	0.0	0.2
9W	35	0	0	0	0	0	0	0	0	1	0.0	0.0
8W	36	0	0	12	0	0	0	0	0	0	0.0	0.1
7W	37	0	0	18	0	0	0	0	0	0	0.0	0.1
3W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
5W	39	37	0	0	0	0	0	0	0	0	0.0	0.2
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		424	6	89	17	1	0	0	0	1	19	538
C/E		17.67	0.24	3.56	0.71	0.04	0.00	0.00	0.00	0.04	0.13	2.42

TABLE 32 2008 HUDSON RIVER ATLANTIC MENHADEN LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 7	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F 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	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	0	1	0	0	0	0	0	0	0	0	1
45 - 49	4	0	0	0	0	0	0	0	0	0	4
50 - 54	35	0	0	1	0	0	0	0	0	1	36
55 - 59	45	0	1	3	1	0	0	0	0	4	50
60 - 64	30	2	7	3	0	0	0	0	0	3	42
65 - 69	11	0	31	2	0	0	0	0	1	3	45
70 - 74	0	2	26	7	0	0	0	0	0	7	35
75 - 79	0	0	8	1	0	0	0	0	0	1	9
80 - 84	0	1	8	0	0	0	0	0	0	0	9
85 - 89	2	0	2	0	0	0	0	0	0	0	4
90 - 94	5	0	1	0	0	0	0	0	0	0	6
95 - 99	11	0	0	0	0	0	0	0	0	0	11
100 - 104	9	0	0	0	0	0	0	0	0	0	9
105 - 109	9	0	0	0	0	0	0	0	0	0	9
110 - 114	4	0	0	0	0	0	0	0	0	0	4
115 - 119	1	0	0	0	0	0	0	0	0	0	1
120 - 124	0	0	0	0	0	0	0	0	0	0	0
125 - 129	0	0	1	0	0	0	0	0	0	0	1
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	1	0	0	0	0	0	0	0	1
145 - 149	0	0	0	0	0	0	0	0	0	0	0
> 149	2	0	3	0	0	0	0	0	0	0	5
Measured	168	6	89	17	1	0	0	0	1	19	282
Mean	68.71	64.67	81.02	65.29	58.00				68.00	65.05	72.26
StDev	21.89	12.42	49.16	7.51	0.00				0.00	7.31	32.93

TABLE 33 2008 HUDSON RIVER SILVERSIDE CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	79	0	52	16	46	0	1	1	9	0.5	0.9
21E	23	11	39	52	53	3	5	20	25	10	0.8	1.0
17E	24	8		30	8	0	32	0	1	1	0.3	0.4
16E	25	21	3	19	32	30	12	0	1	5	0.5	0.6
12E	29	7	6	20		163	30	0	2	8	1.4	1.1
14E	29	0	25	4	1	5	9	0		2	0.1	0.2
19E	33	2	16	4	5	70	16	19	76	1	1.3	0.9
11E	34	19	327	9	4891	91	52	281	36	30	36.4	25.8
9E	34		244	87	245	155	21	23	50	1	3.3	3.7
7EE	35	16	7	0		35	22	48	5	3	0.8	0.6
7EW	35	6	3	2	68	47	88	118	10	0	2.2	1.5
8E	35	7	42	10	117	30	326	281	26	22	5.4	3.9
4E	39	0	0	3	14	0	5	103	11	0	0.9	0.6
West												
15WS	27		53	276	55	969	810	69	64	22	13.4	10.4
16WN	27	7	18	15	74	43	5	12	47	7	1.3	1.0
16WS	27	10	13		47			11			0.4	0.4
14W	29	1	43	23	374	89	29	12	37	4	3.7	2.8
12W	30	11	155	598	1547	36	30		53	2	11.3	11.0
11W	32	0	15	2	0	0	30	0	1	0	0.2	0.2
10W	35	13	25	0	40	1	23	3	5	0	0.5	0.5
9W	35	11	2	11	0	203	33	1	1	0	1.6	1.2
8W	36	5	16	5	116	175	89	171	35	0	4.0	2.8
7W	37	8	0	0	7	64	107	52	16	0	1.7	1.1
3W	39	0	25	6	44	26	20	35	24	0	1.0	0.8
4W	39	28	23	8	35	12	5	9	18	0	0.5	0.6
5W	39	2	31	1	9	27	19	6	20	0	0.5	0.5
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		272	1131	1237	7798	2320	1818	1275	565	127	13903	16543
C/E		11.33	45.24	49.48	324.92	92.80	72.72	51.00	23.54	5.08	93.94	74.52

TABLE 34 2008 HUDSON RIVER ATLANTIC SILVERSIDE LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 7	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	1	0	0	0	1	1
25 - 29	0	0	0	0	0	0	0	0	0	0	0
30 - 34	6	0	0	0	0	0	0	0	0	0	6
35 - 39	23	4	3	1	0	0	0	0	0	1	31
40 - 44	31	1	2	0	1	0	0	0	1	2	36
45 - 49	13	9	2	0	0	0	0	0	0	0	24
50 - 54	32	52	3	1	3	1	6	4	3	18	105
55 - 59	53	99	25	3	5	15	12	10	9	54	231
60 - 64	44	135	70	22	7	21	12	24	6	92	341
65 - 69	15	80	84	40	27	10	9	16	14	116	295
70 - 74	2	39	73	110	74	34	13	8	12	251	365
75 - 79	1	13	38	114	107	70	11	8	5	315	367
80 - 84	1	2	16	102	163	131	48	27	3	474	493
85 - 89	0	0	5	51	100	124	94	43	8	420	425
90 - 94	1	0	1	11	52	75	91	65	12	306	308
95 - 99	1	0	0	0	11	28	55	73	9	176	177
100 - 104	0	0	0	1	3	10	24	55	20	113	113
105 - 109	0	0	0	0	0	1	12	48	15	76	76
110 - 114	0	0	0	0	1	0	0	17	8	26	26
115 - 119	0	0	0	0	0	0	0	8	1	9	9
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	1	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	1	0	1	1
Measured	223	434	322	456	554	521	387	407	127	2452	3431
Mean	52.84	60.91	67.38	76.20	80.22	82.17	86.35	91.14	85.94	82.97	76.75
StDev	10.73	6.96	8.02	7.42	7.96	10.16	11.35	15.43	19.02	12.19	15.18

TABLE 35 2008 HUDSON RIVER YOY BLUE CRAB CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	7	6	9	20	5	0	0	0	0.2	0.2
21E	23	0	0	0	3	44	5	2	0	0	0.4	0.2
17E	24	0		1	1	4	16	1	0	0	0.1	0.1
16E	25	0	3	0	0	0	2	0	0	0	0.0	0.0
12E	29	0	0	0		0	0	4	0	0	0.0	0.0
14E	29	0	0	0	0	3	0	0		0	0.0	0.0
19E	33	0	0	0	1	0	0	2	0	0	0.0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0	0.0
9E	34		0	0	0	0	0	1	0	0	0.0	0.0
7EE	35	0	0	0		0	0	1	1	0	0.0	0.0
7EW	35	0	0	0	0	0	1	0	1	0	0.0	0.0
8E	35	0	0	0	0	1	0	1	0	1	0.0	0.0
4E	39	0	0	0	0	0	0	4	1	0	0.0	0.0
West												
15WS	27		0	2	0	0	9	9	0	0	0.1	0.1
16WN	27	4	0	0	0	3	7	3	2	0	0.1	0.1
16WS	27	0	0		2			0			0.0	0.0
14W	29	0	0	2	3	21	11	0	0	1	0.2	0.2
12W	30	0	0	0	3	3	11		5	5	0.2	0.1
11W	32	0	0	1	0	0	24	0	5	0	0.2	0.1
10W	35	0	2	1	0	0	0	0	4	0	0.0	0.0
9W	35	0	0	0	0	0	0	2	0	0	0.0	0.0
8W	36	0	0	0	0	0	5	1	0	0	0.0	0.0
7W	37	0	0	0	0	0	0	2	0	0	0.0	0.0
3W	39	0	0	0	0	1	0	4	0	0	0.0	0.0
4W	39	0	0	0	0	3	2	4	3	0	0.1	0.1
5W	39	1	0	0	2	0	1	1	3	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		5	12	13	24	103	99	42	25	7	300	330
C/E		0.21	0.48	0.52	1.00	4.12	3.96	1.68	1.04	0.28	2.03	1.49

TABLE 36 2008 HUDSON RIVER OLDER BLUE CRAB CATCH BY STATION

Station	River Mile	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 07	Week 8 Oct 20	Week 9 Nov 4	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	4	0	0	0	0	0	0	0.0	0.0
21E	23	0	0	3	1	1	0	0	0	0	0.0	0.0
17E	24	0		2	0	0	0	0	0	0	0.0	0.0
16E	25	1	0	0	0	0	0	0	0	0	0.0	0.0
12E	29	3	1	1		0	0	0	0	0	0.0	0.0
14E	29	0	1	0	0	2	3	0		0	0.0	0.0
19E	33	0	0	0	0	0	1	0	0	1	0.0	0.0
11E	34	0	0	0	1	0	0	0	0	0	0.0	0.0
9E	34		0	0	0	0	0	0	0	0	0.0	0.0
7EE	35	0	0	0		0	1	0	0	0	0.0	0.0
7EW	35	0	0	0	2	0	1	0	0	1	0.0	0.0
8E	35	0	0	0	6	0	0	0	0	0	0.0	0.0
4E	39	0	0	0	6	0	0	0	0	0	0.0	0.0
West												
15WS	27		0	0	1	0	0	1	0	0	0.0	0.0
16WN	27	0	0	0	1	0	0	0	0	0	0.0	0.0
16WS	27	0	0		0			0			0.0	0.0
14W	29	0	0	0	2	0	0	0	0	0	0.0	0.0
12W	30	1	0	0	0	0	0		0	0	0.0	0.0
11W	32	0	0	0	0	13	1	0	0	0	0.1	0.1
10W	35	0	3	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	2	0	3	56	0	0	0	0	0.4	0.3
7W	37	0	0	0	0	5	1	0	0	1	0.0	0.0
3W	39	0	0	0	0	3	1	0	0	0	0.0	0.0
4W	39	0	0	0	2	0	0	0	0	0	0.0	0.0
5W	39	0	0	0	1	4	0	0	0	0	0.0	0.0
Effort		24	25	25	24	25	25	25	24	25	148	222
Catch		5	7	10	26	84	9	1	0	3	123	145
C/E		0.21	0.28	0.40	1.08	3.36	0.36	0.04	0.00	0.12	0.83	0.65

FIGURE 1 NYS DEC YOY STRIPED BASS SEINE STATIONS

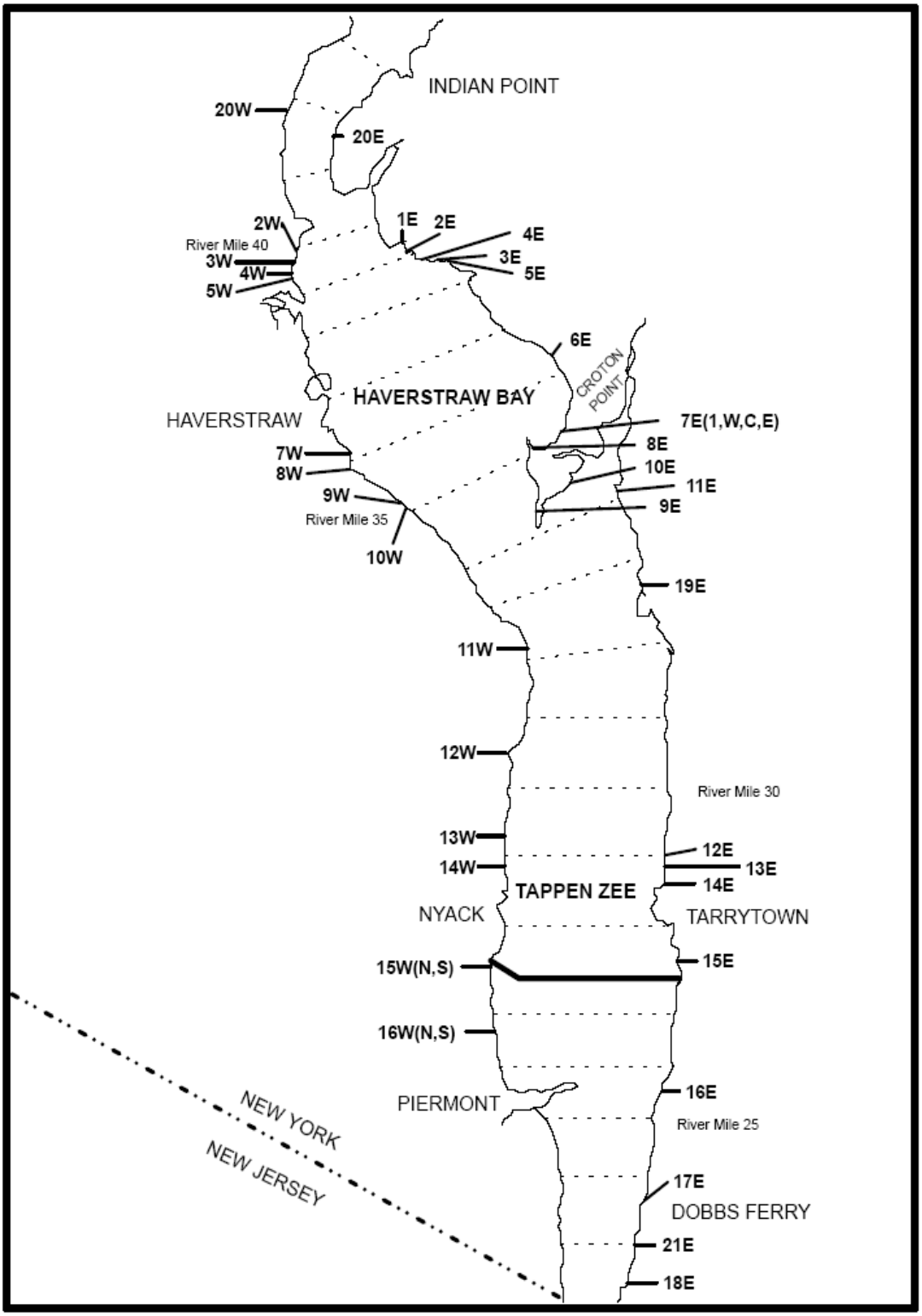


FIGURE 2

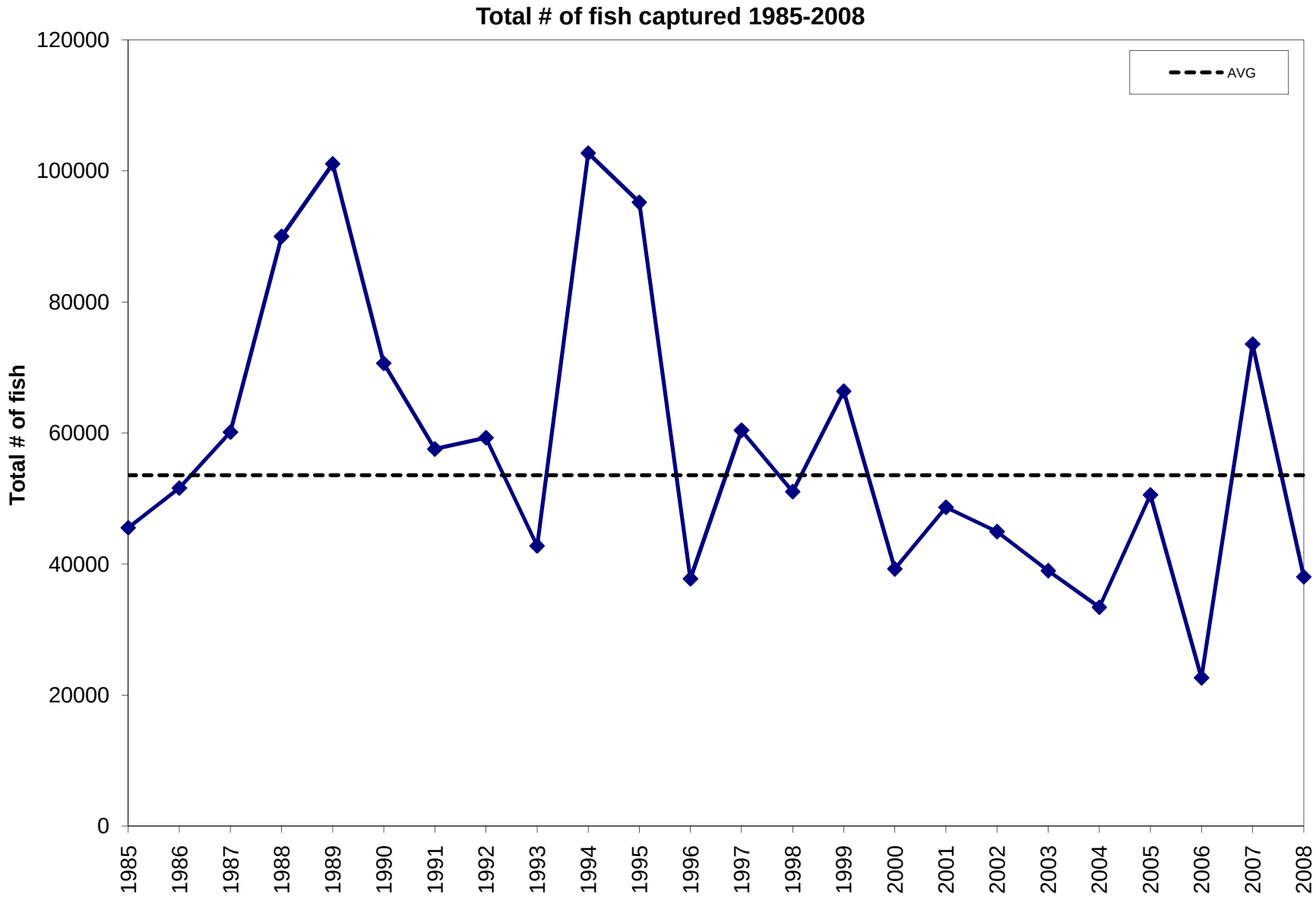
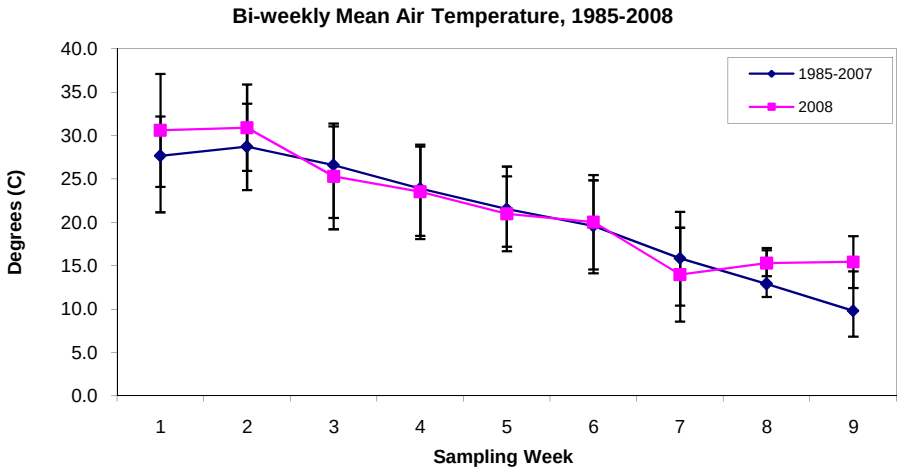
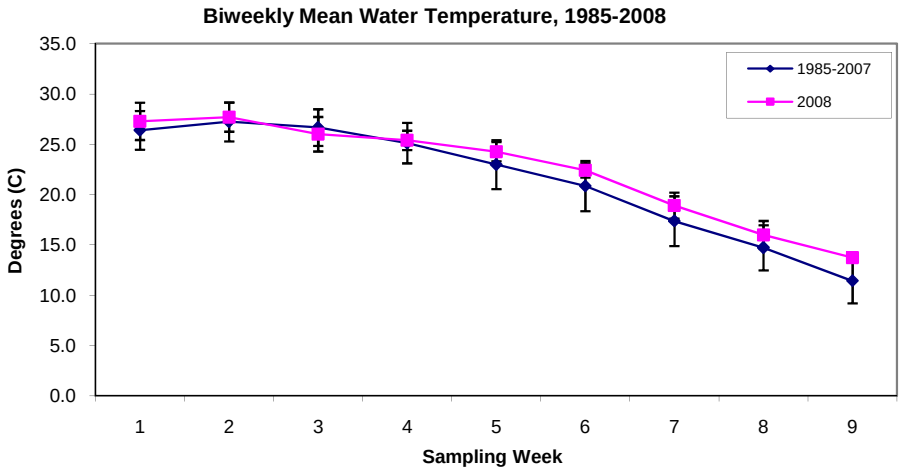
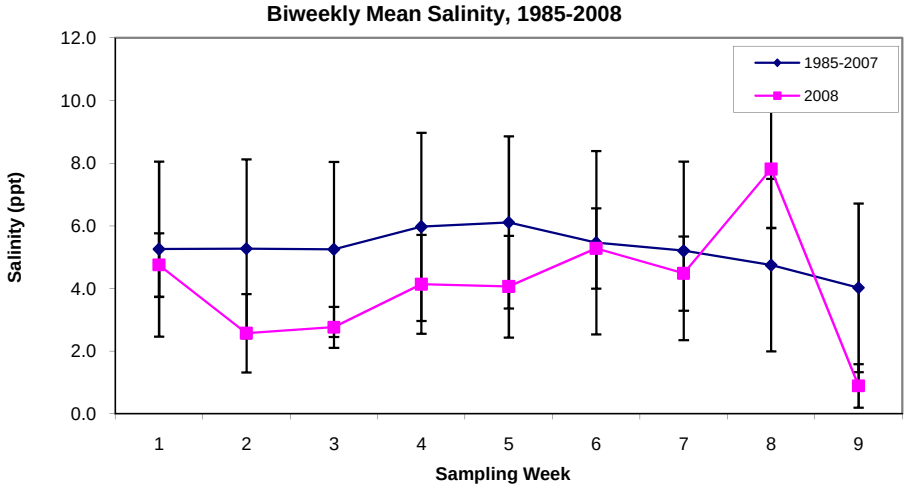

Total # of fish captured 1985-2008
Total # of fish
120000
100000
80000
60000
40000
20000
0
AVG
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

FIGURE 3


Bi-weekly Mean Air Temperature, 1985-2008
Degrees (C)
Sampling Week
1985-2007
2008


Biweekly Mean Water Temperature, 1985-2008
Degrees (C)
Sampling Week
1985-2007
2008


Biweekly Mean Salinity, 1985-2008
Salinity (ppt)
Sampling Week
1985-2007
2008

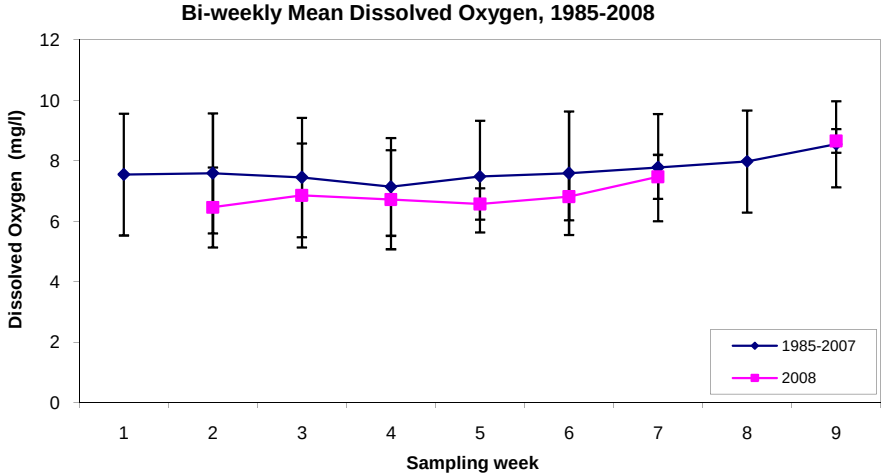

Bi-weekly Mean Dissolved Oxygen, 1985-2008
Dissolved Oxygen (mg/l)
Sampling week
1985-2007
2008

FIGURE 4

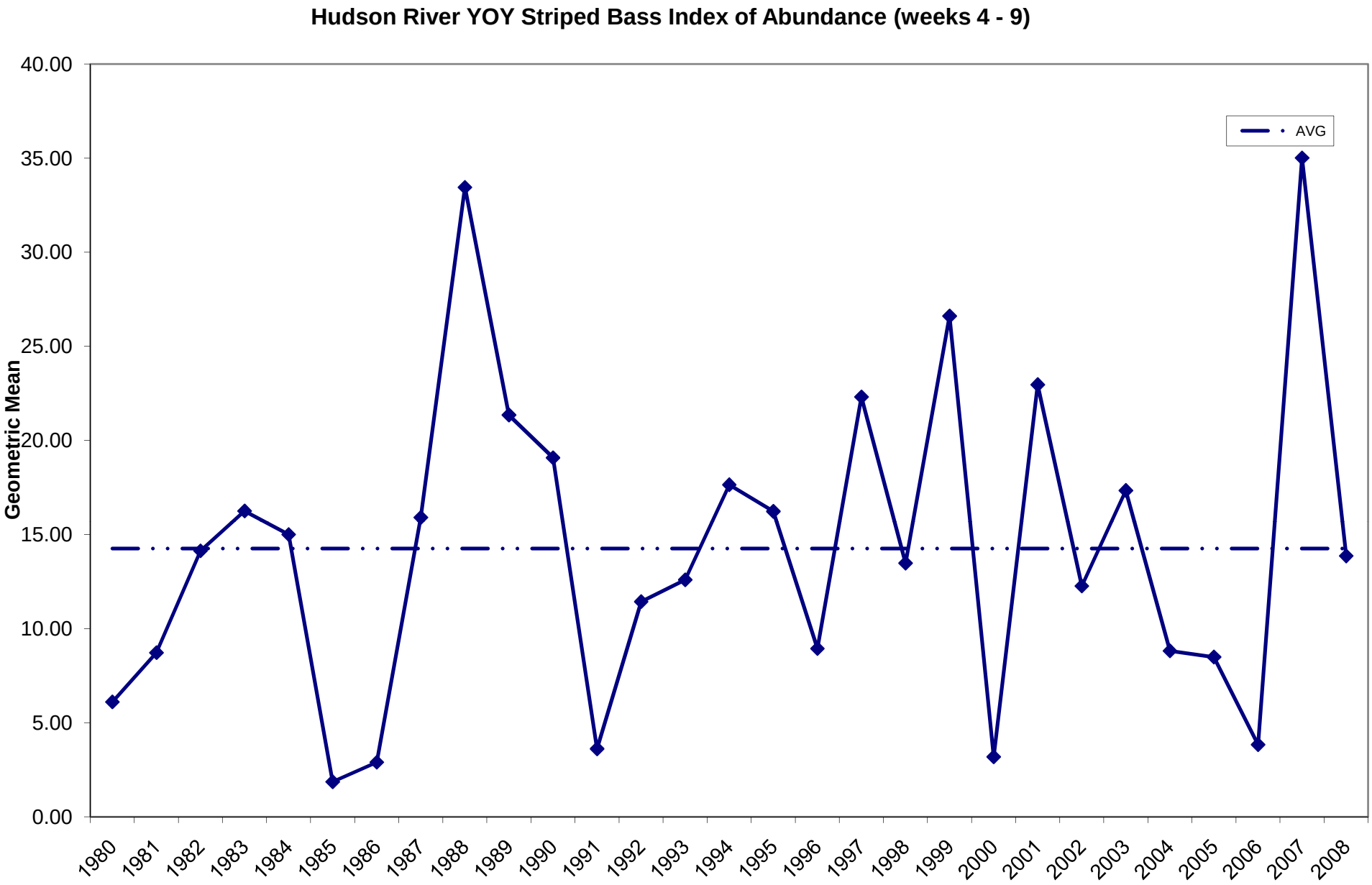

Hudson River YOY Striped Bass Index of Abundance (weeks 4 - 9)
Geometric Mean
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
AVG
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

FIGURE 5

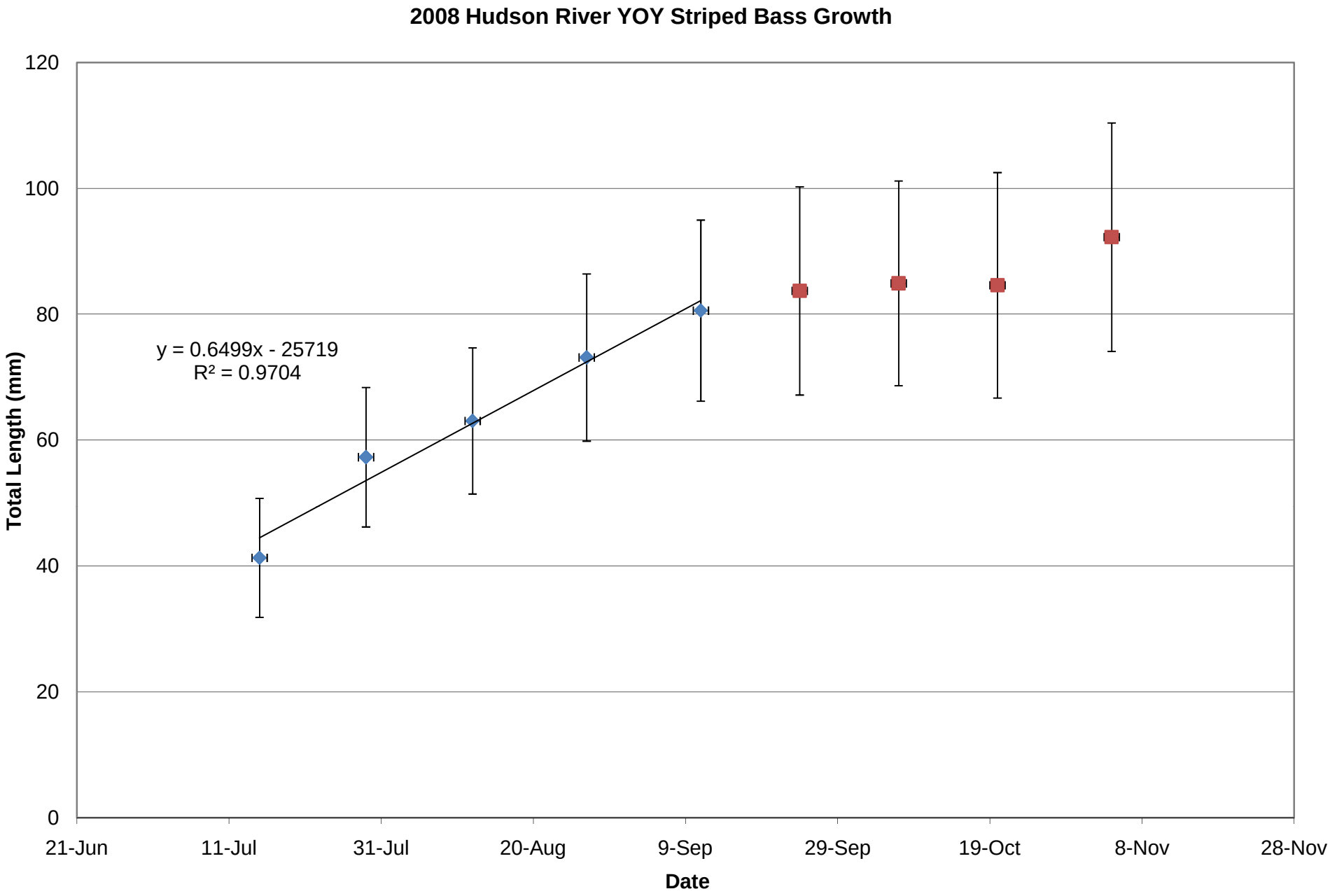

2008 Hudson River YOY Striped Bass Growth
120
100
80
60
40
20
0
Total Length (mm)
y = 0.6499x - 25719
R² = 0.9704
21-Jun
11-Jul
31-Jul
20-Aug
9-Sep
29-Sep
19-Oct
8-Nov
28-Nov
Date

FIGURE 6

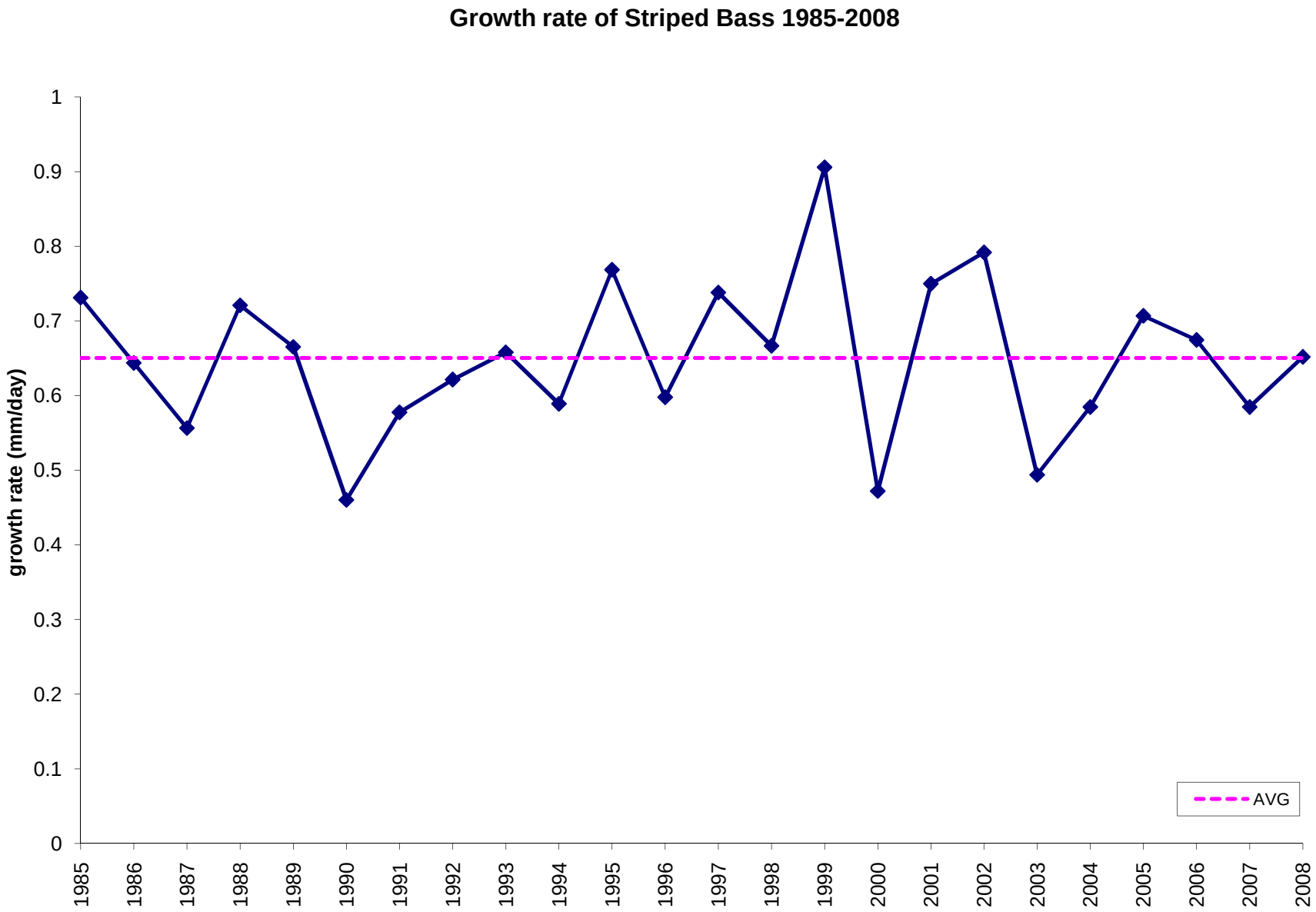

Growth rate of Striped Bass 1985-2008
growth rate (mm/day)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
AVG

Figure 7

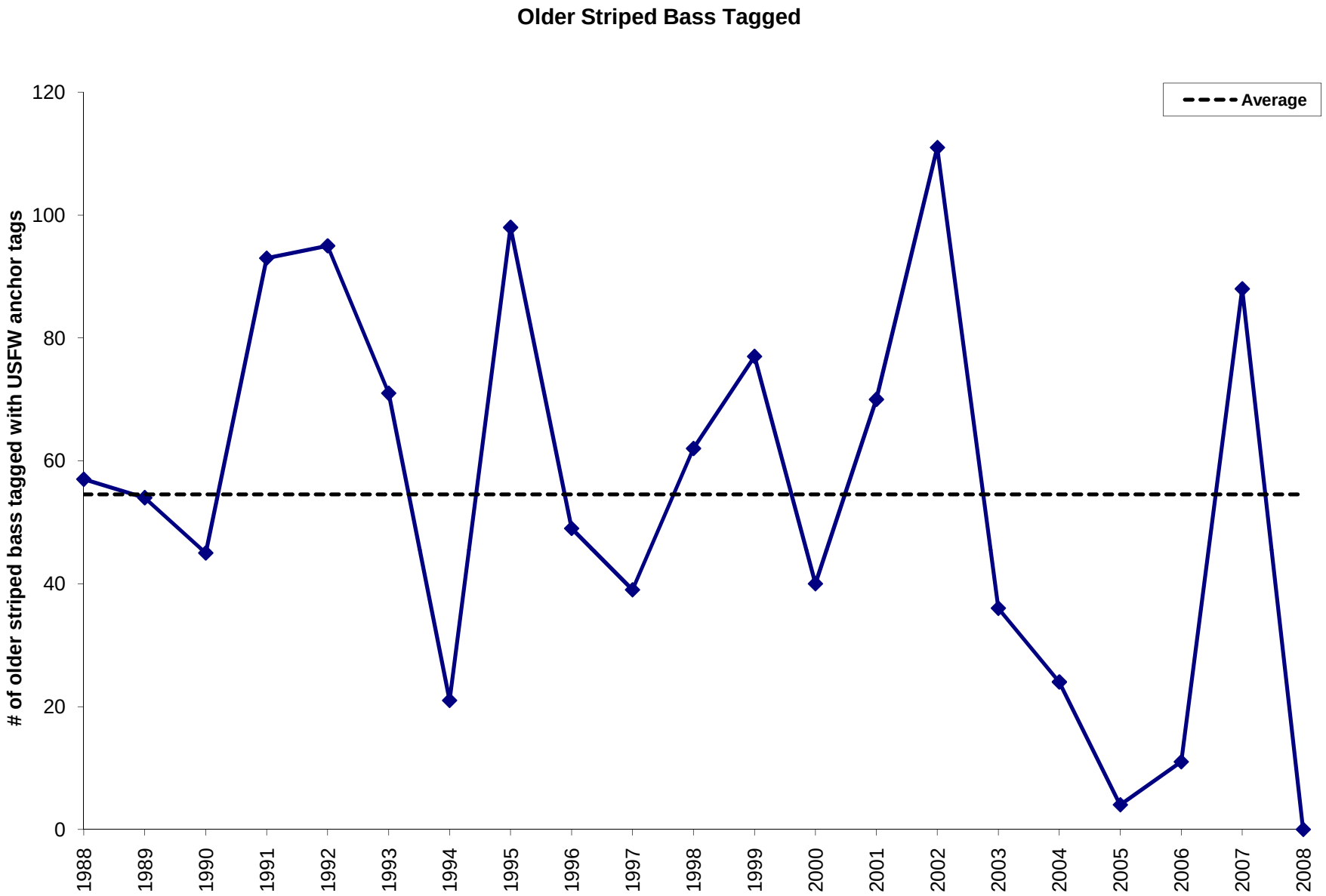
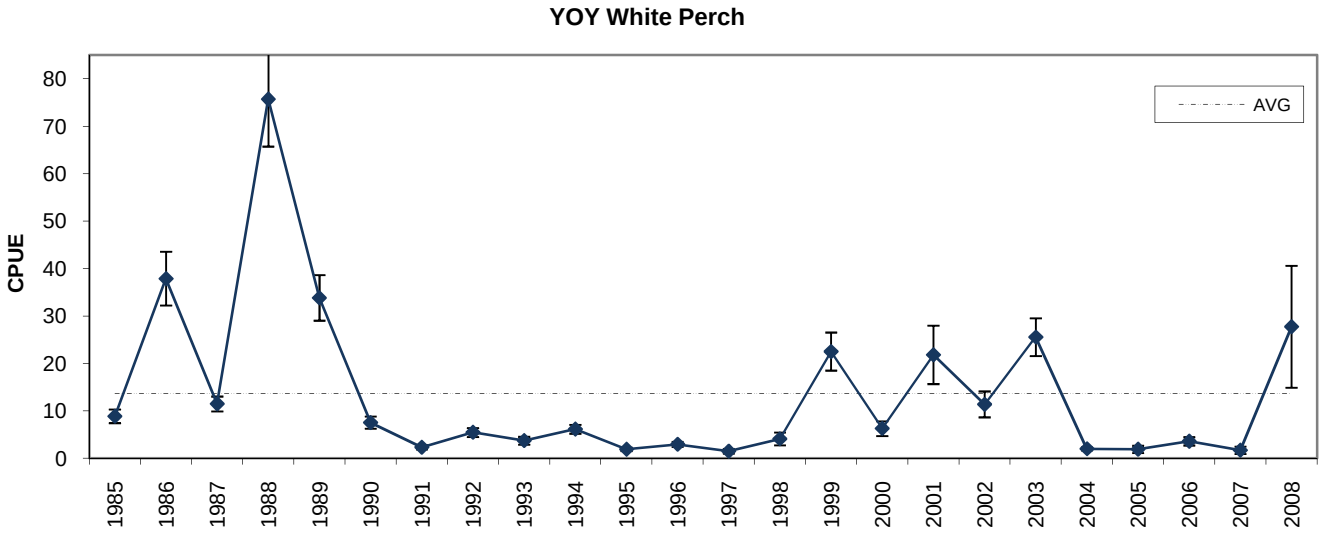
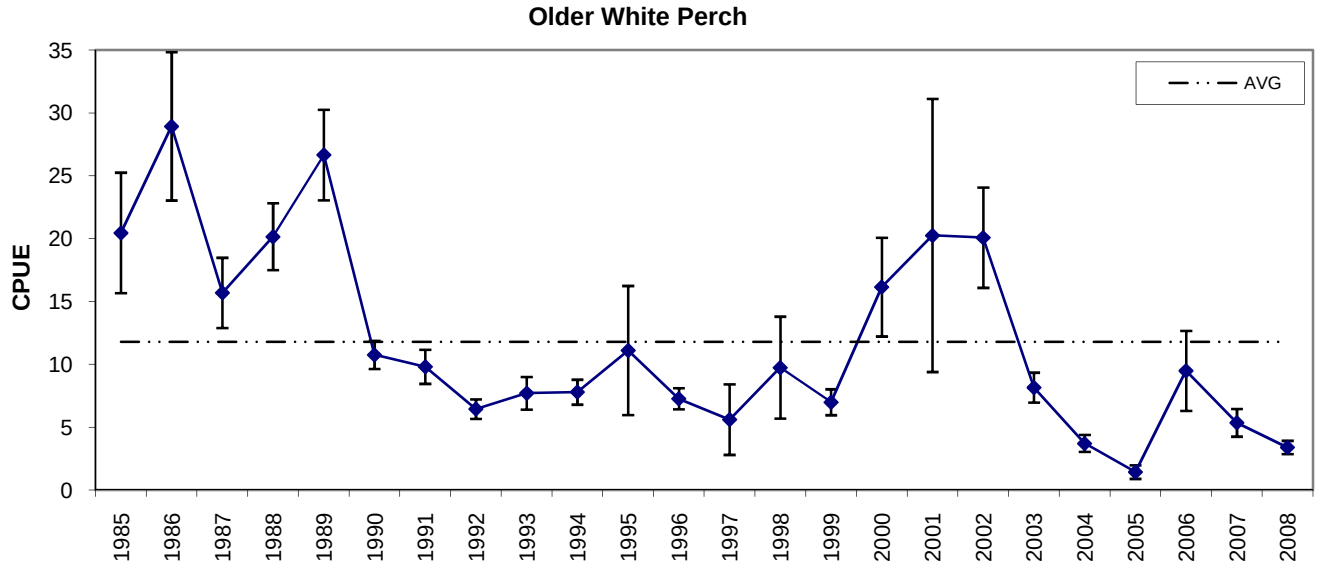

Older Striped Bass Tagged
Average
# of older striped bass tagged with USFW anchor tags
120
100
80
60
40
20
0
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

FIGURE 8


YOY White Perch
CPUE
AVG
0
10
20
30
40
50
60
70
80
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008


Older White Perch
CPUE
AVG
0
5
10
15
20
25
30
35
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

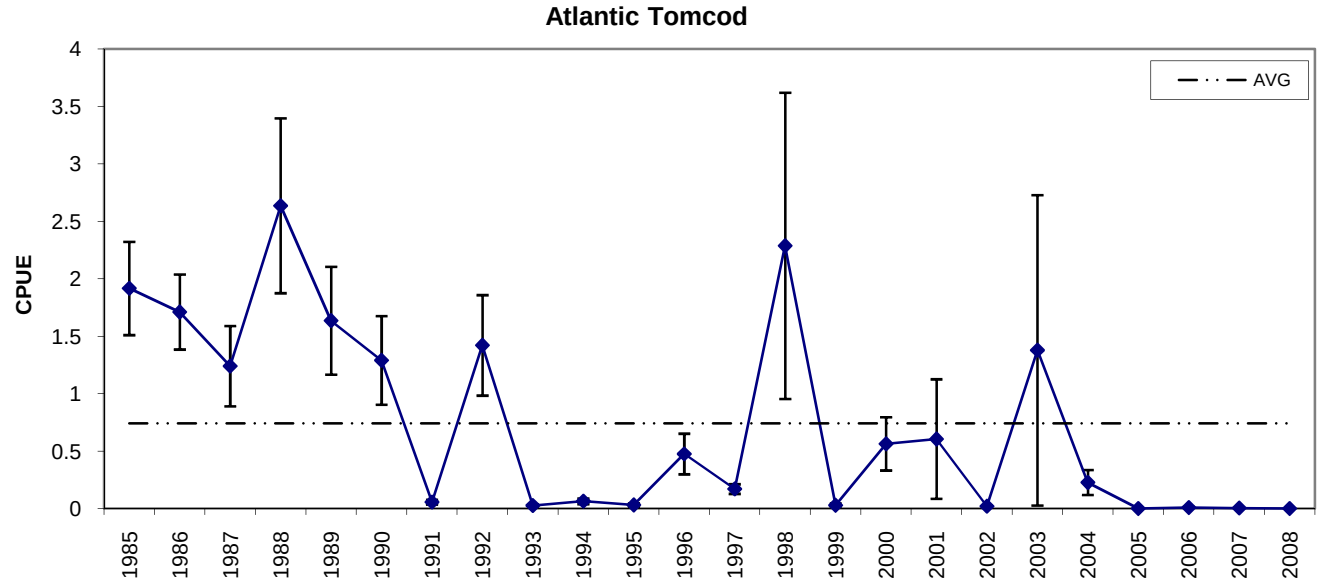
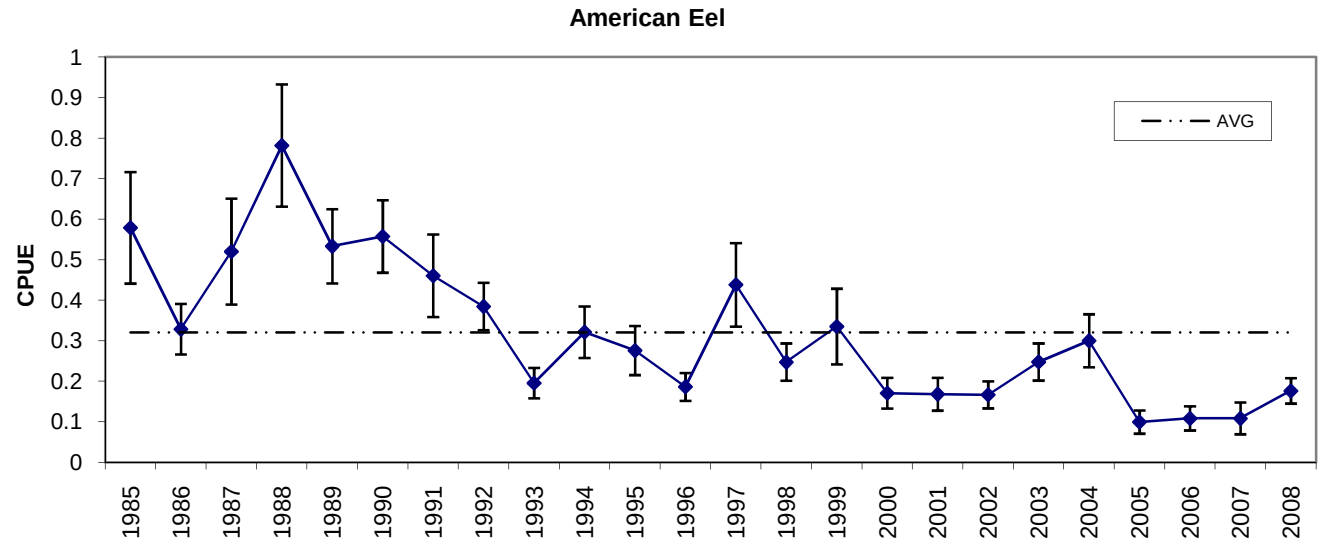
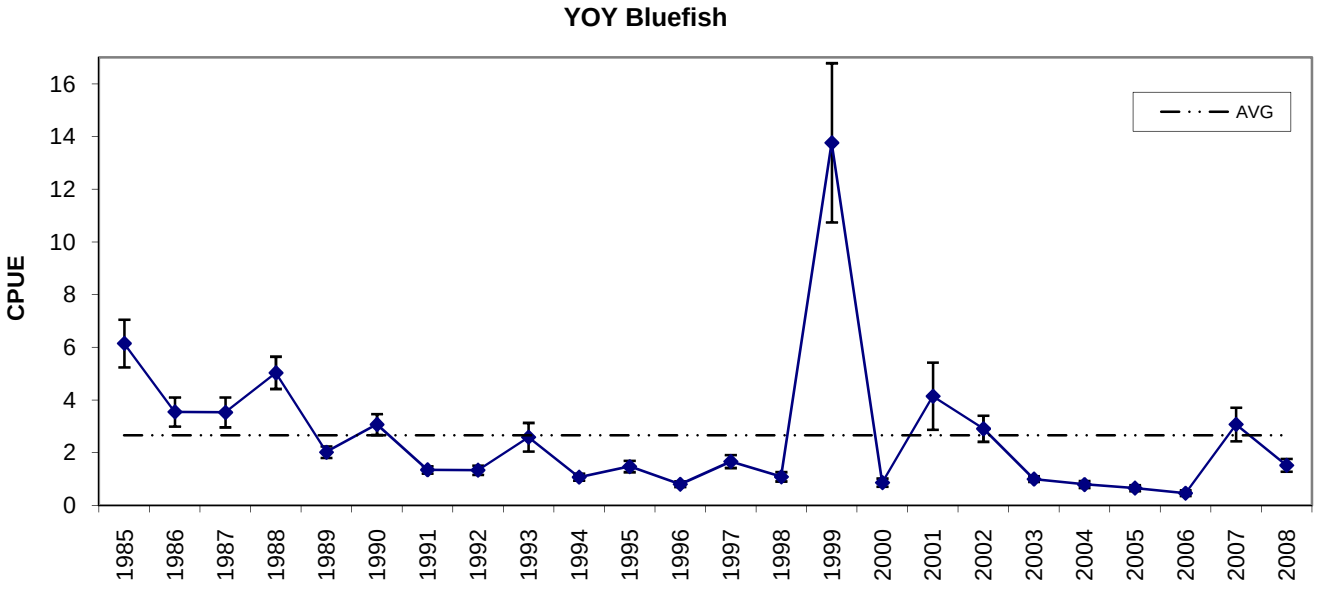

Atlantic Tomcod
CPUE
AVG
0
0.5
1
1.5
2
2.5
3
3.5
4
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

FIGURE 9


American Eel
CPUE
AVG
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008


YOY Bluefish
CPUE
AVG
0
2
4
6
8
10
12
14
16
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

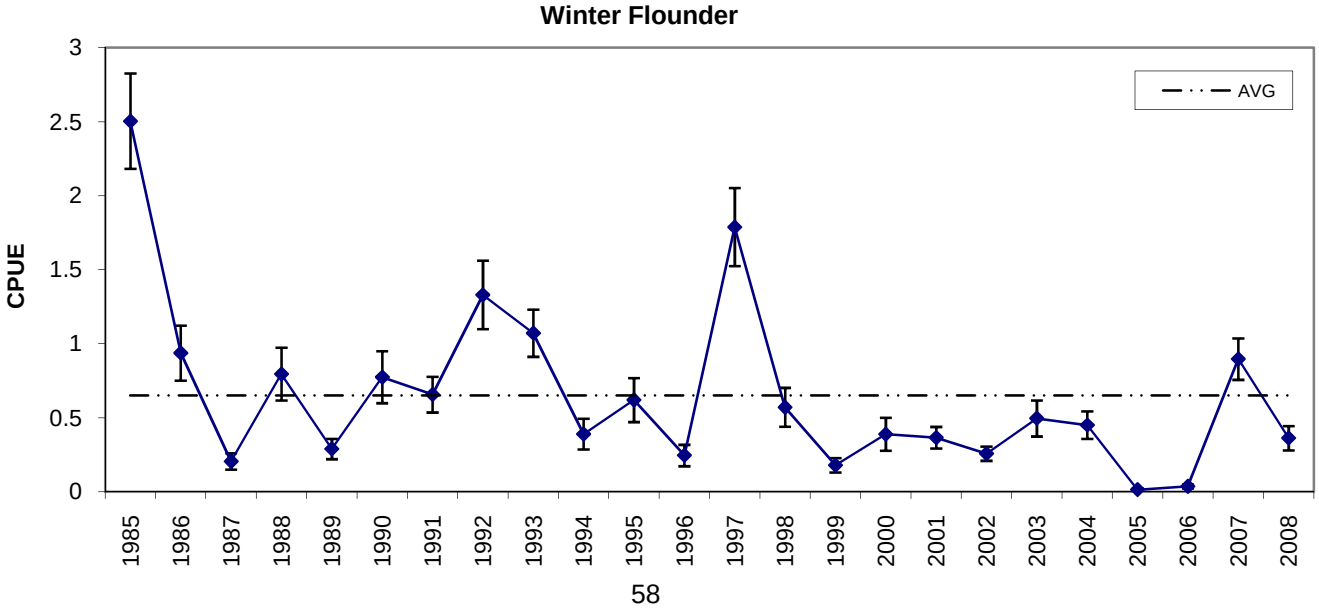
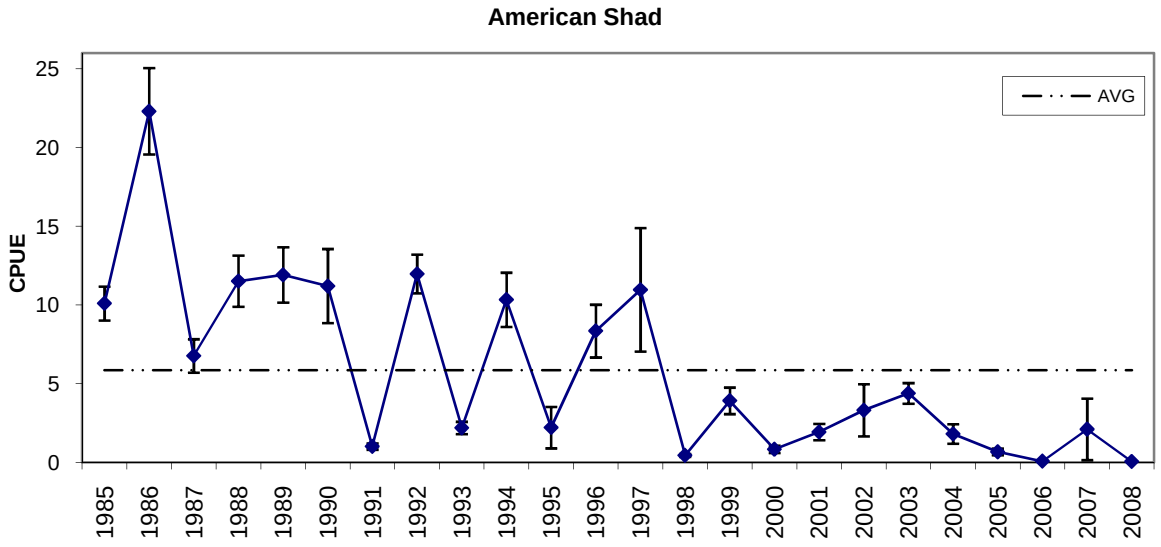
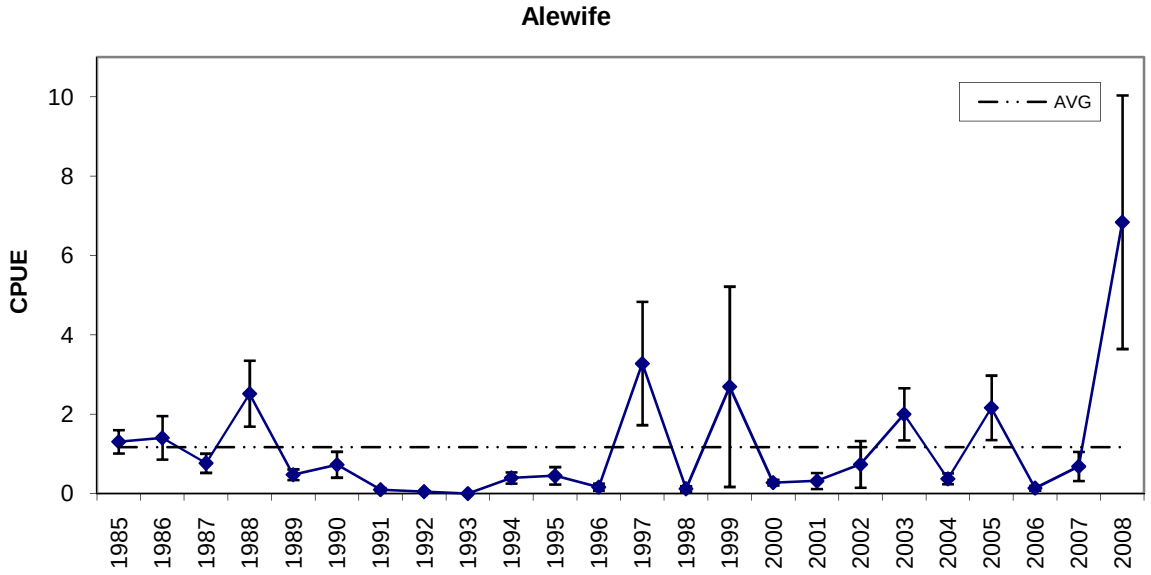

Winter Flounder
CPUE
AVG
0
0.5
1
1.5
2
2.5
3
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

FIGURE 10


American Shad
CPUE
AVG
0
5
10
15
20
25
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008


Alewife
CPUE
AVG
0
2
4
6
8
10
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

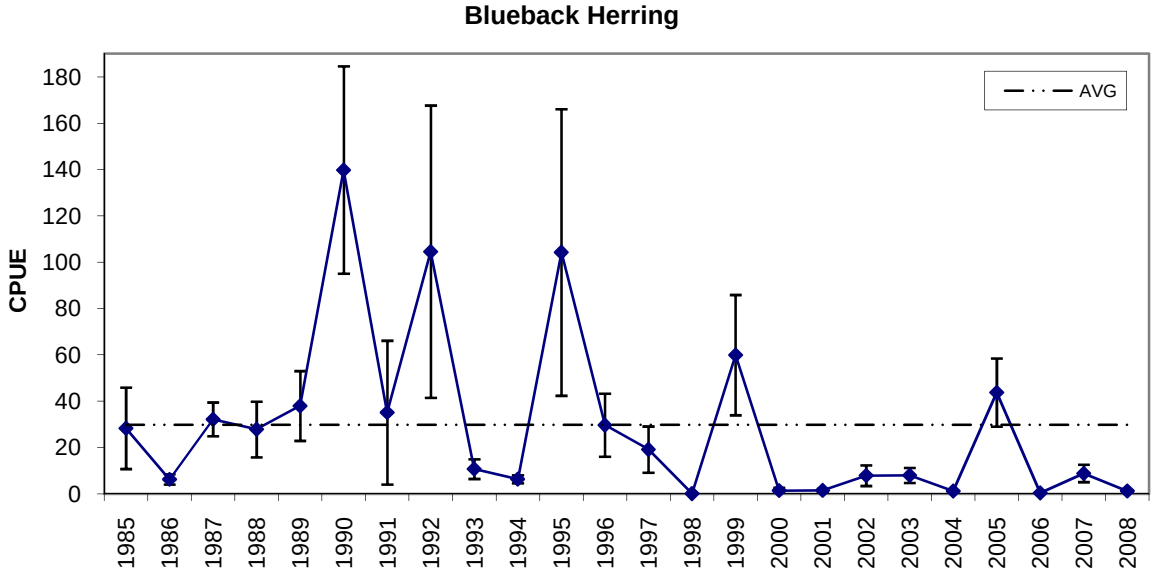
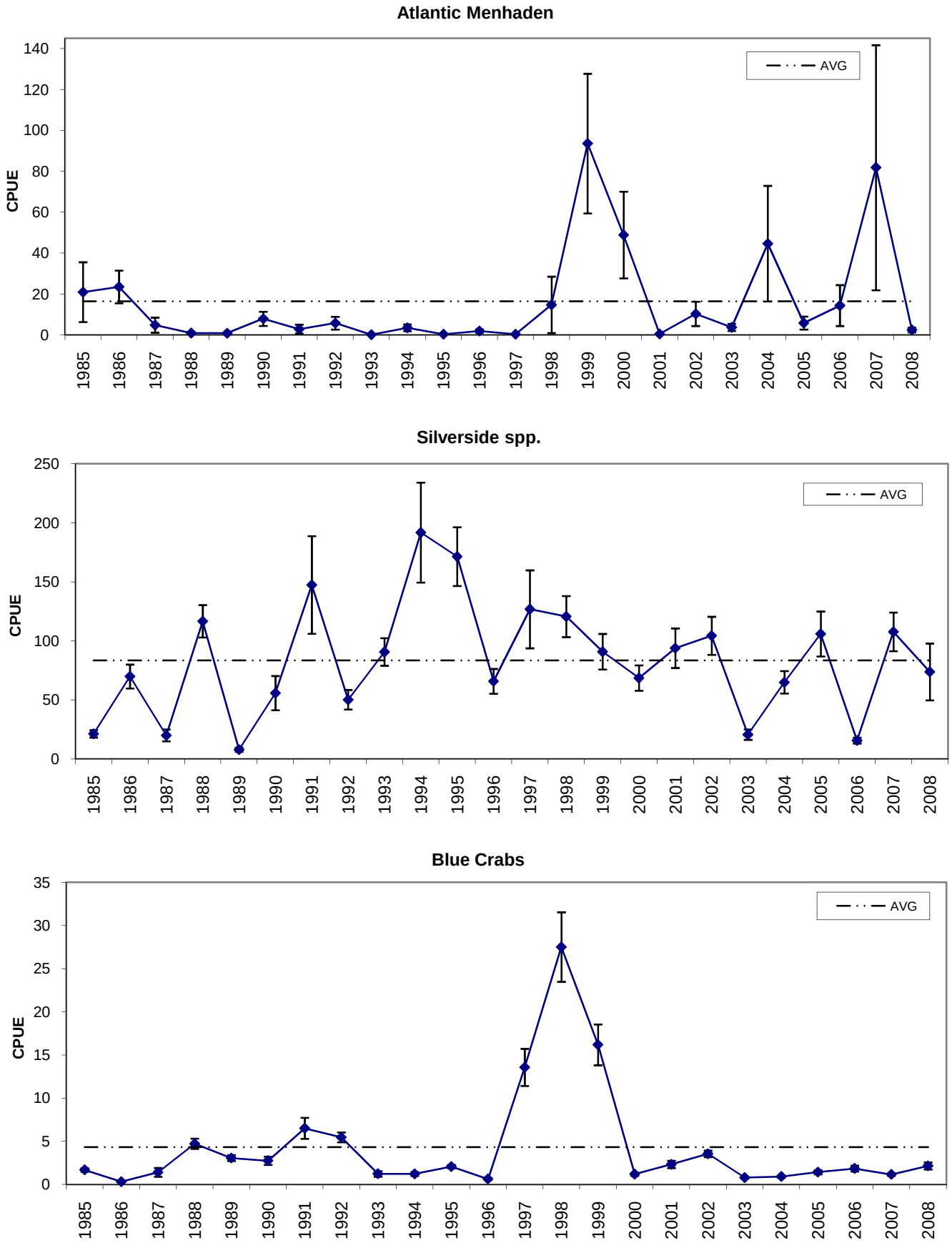

Blueback Herring
CPUE
AVG
0
20
40
60
80
100
120
140
160
180
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

FIGURE 11


Atlantic Menhaden
CPUE
AVG
0
20
40
60
80
100
120
140
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Silverside spp.
CPUE
AVG
0
50
100
150
200
250
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
Blue Crabs
CPUE
AVG
0
5
10
15
20
25
30
35
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008

Nearshore fish communities of the mid-Hudson River estuary, 1985-2009

Robert Adams
Kathryn Hattala
Andy Kahnle
Julia Socrates

NYS DEC
Bureau of Marine Resources
East Setauket, NY 11733

Participating Agencies:

NYS Department of
Environmental Conservation

May 2010

Abstract

In the 2009, 196 seine hauls were completed in the young-of-the-year (YOY) striped bass survey in the Hudson River. A total of 6,011 YOY striped bass were captured, resulting in a catch per unit effort (CPUE) of 30.67 fish per haul. The Hudson River index of YOY striped bass abundance, based on the geometric mean CPUE of the 6-week survey, was 9.73 fish per haul. This catch rate was less than both last year and the average historical geometric mean CPUE of 14.10 fish per haul. YOY striped bass grew an estimated 0.51 mm/day, between early-August and the middle of September. Catches of alewife and blue crabs were above historical averages; catch rates of older white perch, bluefish, and Atlantic menhaden were close to their historical averages; while, catches of American shad, blueback herring, Atlantic tomcod, silverside spp., American eel, and YOY white perch were all below historical averages. Silversides were the most abundant fish, followed by YOY striped bass and bay anchovy. Air and water temperatures during the sixth and seventh weeks of the survey were well below historical averages.

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). 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). Spawning occurs in the region above the salt wedge in the spring when river temperatures rise above 12 ^{o}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 over-wintering 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 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 re-established. Continued improvement in recruitment to the Chesapeake Bay population has allowed increases in harvest levels in recent years (Richards and Rago 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). 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 (NMFS 1999). An initiative to allow a

limited commercial harvest of striped bass as part of the American shad fishery has been discussed, but not implemented (DEC 1999).

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 is influenced by the severity of winter (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. We will provide the CPUE data for age-1 striped bass as to assist with determining overall recruitment trends.

Here we present the results of the 2006 young-of-the-year survey for the Hudson River population of striped bass and compare the results to previous years. Because of the advancement of ecosystem-based management, catch data for all species captured during the survey is included. Detailed catch data and size-distributions are included for a number of other commercially valuable species as well.

Methods

The survey is normally conducted between mid-July and early November; however, this season, sampling was delayed several weeks due to equipment issues. Sampling takes place in

the Haverstraw-Tappan Zee region of the Hudson River (river miles 23-42; Figure 1); where 25 sites are sampled bi-weekly, up to 9 times a year. 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 2009, 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 m x 3 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 Pro Plus 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, counted, and returned to the water. Where feasible, young-of-the-year fish were counted separately from older fish. In these cases, length limit tables, derived from observation and literature searches, were used to differentiate young-of-the-year from older fish. 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 shad, alewife, blueback herring, and Atlantic menhaden were measured (mm TL) from each collection. 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 ^{o}C and 2000 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.

Prior to 2008 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 x 19.25 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. In 2008 and 2009 striped bass longer than 150 mm TL were removed for gut content analysis.

Results and Discussion

During the 2009 sampling season, 196 beach seine hauls were made in the 8 sampling weeks between August 3rd and November 10th. A total of 33,385 fish were collected during the 2009 sampling season (Figure 2). This was lower than the historical average and 4,659 fish lower than last year. In 2009, the number of blue crabs increased to 1,943, compared to only 475 in 2008. Of the 33,385 fish caught, 6,048 were young-of-the-year striped bass and 115 were older striped bass.

Environmental conditions

In 2009, sampling week 2 had the highest weekly average water temperature of 27.4 ºC. (Table 1; Figure 3). Water temperatures after this week declined throughout the sampling season reaching a low of 12.3 ºC in the final sampling week (Table 1; Figure 3). Air temperatures also decreased during the sampling season, ranging from 27.5 in week 2 to 9.3ºC in week 7. With the exception of weeks 6 and 7, both air and water temperatures remained close to historical averages. Temperatures in those weeks were well below their historical averages (Table 1; Figure 3). Weekly salinities were lower than historical averages for all weeks except 5, 6 and 7, where they were very similar to the hisotical values (Table 1; Figure 3). Weekly averages of dissolved oxygen levels ranged between 7.5 and 9.8 mg/L throughout the sampling season and remained above the historical weekly averages after week 4 (Figure 3).

Species composition

Forty-eight different species of fish and two species of invertebrates were captured in the Hudson River during the 2009 sampling season. Fish catches varied throughout the sampling period with large decreases in catches in the last two weeks. Catches peaked in sampling week 5 (September 15 and 16) with 7,919 fish. The large catch from sampling week 5 was dominated by silverside spp. (3,277), YOY striped bass (1,410), killifish spp. (846), and blue crabs (779). The lowest catches were observed in sampling weeks 9 (November 9 and 10) and 8 (October 26 and 27) with 1,671 and 3,147 fish caught in those sampling weeks respectively. Silversides (9,201), YOY Striped bass (6,011), bay anchovy (4,850 fish), killifish (4,313), and Atlantic menhaden (2,527 fish) were the most abundant species in 2009. These five species represented a total of 80.6 % of the catch. Catch composition during the 2009 sampling season is found in Table 3 and compared to historical catch composition in Tables 4 and 5. Detailed catch information on selected species is presented below.

Striped bass, *Morone saxatilis*

During the 2009 sampling season 6,011 YOY striped bass were captured in 196 hauls, with a mean CPUE of 30.67 and a geometric mean CPUE of 12.78 fish per haul (Table 6). Between 1980 and 1985, catch data was collected in a period corresponding to the last six weeks of the 2009 sampling season. In order to compare 2009 catch data with results obtained previous to 1985, the statistics on the final six weeks of catch data for 2009 is presented in Table 6 together with historical records. In the final six weeks, 3,698 YOY striped bass were captured in 148 hauls, resulting in a mean CPUE of 24.99 and a geometric mean CPUE of 9.73 (Figure 4). The 6-week geometric mean CPUE, used as the young-of-the-year striped bass index of relative abundance, was lower than the historical average of 14.10. The 2009, 9-sampling week geometric mean of 12.78 fish per haul was lower than the historical average of 19.61 (Table 6). 2008 and 2009 catch rates are much lower than 2007 which had one of the highest CPUE values in the last nineteen years.

In 2009, catch-per-unit-effort of YOY striped bass peaked during week 5 of the survey at 56.40 fish per haul (Table 7). The lowest catch rate of 8.48 fish per haul was reached during week 8 of the survey. In 1987, 1997, 1999, 2001, 2002, 2004, 2005, 2007, 2008, and 2009 catch

rates peaked late in weeks 4 and 5. The reason for the late peak in catch rates 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 years in the Hudson River where peak catch rates occur late in the year (Brischler, 2004).

Catch-per-unit-effort of YOY striped bass varied considerably across sites in 2009 (Table 7). The sites with the highest CPUE, 8E and 7W captured 6.90 fish/haul and 3.07 fish/haul respectively. Station 18E, had the lowest catch rates of 0.15 fish/haul (Table 7). The distribution of catch among sites observed in 2009 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 3,149 YOY striped bass during the 9-week survey. Lengths ranged from 22 to 156 mm TL. 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 2009 sampling season are compared to previous years in Table 11. Mean lengths of measured fish increased through the first four sampling weeks (week 2 through 5), and were relatively stable thereafter (Figure 5). The apparent cessation of growth in YOY striped bass, based on observed fish lengths, has been observed in most years of the study. This may, in part, be due to a size-dependent emigration from the nursery area to the lower estuarine wintering grounds. However an alternative explanation is that growth ceases because of limited availability of food. The growth rate of YOY striped bass in the 2009 cohort, estimated from the regression of mean total length against date, was 0.51 mm/day from weeks 2 to 5 of the survey (Figure 5). This rate is below the mean growth rate observed over the last 25 years (Figure 6). Annual cohort growth rates ranged from 0.46 mm/day in 1990 to 0.90 mm/day in 1999 (Figure 6). 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. It is important to note that the lack of data for sampling week 1 of the 2009 season may have impacted the 2009 growth numbers.

The age composition of striped bass captured between 1985 and 2009 is shown in Table 12. During the 9-week survey, 91 striped bass aged 1 to 3 were captured and ranged in length from 114 to 357 mm TL (Table 13). Older striped bass were most abundant at sites 15WS and 9E where CPUE was 0.10 and 0.08 respectively (Table 14). No striped bass were tagged with internal anchor tags as part of the United States Fish and Wildlife Service coast-wide tagging program this year (Table 12), but rather all older striped bass were kept for diet analysis. The age 1 or older striped bass CPUE (0.59) was very close to the historical CPUE of 0.60 (Table 5). The historical average of age 1or older tagging is 52 fish per year (Figure 7.)

White perch, *Morone americana*

In 2009, 3,076 white perch were captured. Of these, 1,652 were YOY and 1,424 were age-1 or older. Young-of-the-year white perch were most abundant at site 8E with a CPUE of 2.80 (Table 15). Catch-per-unit-effort of YOY white perch was highest in week 5 (14.96 fish per haul) and lowest in week 9 (0.63 fish per haul). Older white perch were most abundant at site 16WN, with a CPUE 1.64 fish per haul (Table 16). During the sampling season, catch-per-unit-effort of older white perch was highest in week 2 (15.17 fish per haul) and lowest in week 8 (2.12 fish per haul; Table 16).

Through the 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 8). Catch rates of less than 2 fish per haul occurred in 1995 and 1997. In 2009, the catch rate of YOY white perch was 8.4 fish per haul. This is lower than the historical average of 13.5 fish per haul (Figure 8). Catch rates of older white perch increased in 2009 to 7.3 fish per haul (Figure 8), but this value remains lower than the historical average of 11.8 fish per haul (Figure 8).

Atlantic tomcod*, Microgadus tomcod*

During the 2009 sampling season, 19 Atlantic tomcod were captured (Table 18a,b; Figure 8). Catches over the past five years have been virtually zero and at historic lows. 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 8). 2009 Atlantic tomcod lengths ranged from 78 to 111 mm TL, with a mean of 91.7 mm TL.

American eel, *Anguilla rostrata*

In 2009, 49 American eel were captured during sampling (Table 19). The catch rate of 0.25 eels per haul was below the average of 0.32 (Figure 9). Although the CPUE numbers in 2009 are 2.5 times those in 2005, the values remain far below historical values from the late 1980's (figure 9.), where the highest catches (0.78 fish per haul) occurred in 1988. Lengths for American eels were not recorded in 2009.

Bluefish, *Pomatomus saltatrix*

In 2009, 494 YOY bluefish were captured. The bluefish spring-spawned cohort was present in the catches from week 2 to week 7, while summer-spawned bluefish were captured from weeks 3 through 8 (Table 22). The mean CPUE was 2.52 fish per haul in 2009 (Table 21, Figure 9), which was just below the historical average of 2.65 fish per haul. The highest bluefish abundance observed was in 1999 (Figure 9) with a CPUE of 13.76 fish per haul. Bluefish captured in 2009 ranged in length from 51 to 245 mm TL (Table 22). Based on the size-frequency distributions (Table 22), summer spawned bluefish were more abundant in 2009 than the spring spawned bluefish. The opposite was reported in 2008.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 2009, 85 winter flounder were captured for a mean CPUE of 0.43 fish per haul (Table 23). This was lower than the historical average of 0.66 fish per haul (Figure 9). The highest catch rates of winter flounder was the 2.52 fish per haul recorded in 1985 (Figure 9). The 2009 winter flounder lengths ranged from 50 to 226 mm TL, with a mean of 96.28 mm TL. The bi-weekly size-frequencies are shown in Table 24.

American shad, *Alosa sapidissima*

In 2009, 381 American shad were captured for a mean CPUE of 1.94 fish per haul (Table 25). This remains much lower than the historical average CPUE of 5.69. The highest catch rate (22.3 fish per haul) was observed in 1986 (Figure 10). Since then, shad CPUE has continually declined. American shad captured in 2009 ranged from 53 to 142 mm TL, with a mean length of 93.65 mm (Table 26).

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

During the 2009 sampling, 431 alewife and 84 blueback herring were captured (Table 27 and 29). Alewife ranged in length from 77 to 155 mm TL, with a mean of 103.10 mm (Table 28). Blueback herring measured 65 to 109 mm TL with a mean length of 85.25 mm (Table 30). In recent years, catches of blueback herring have been consistently low compared to the historical average of 28.66 fish per haul. 2009 was no different, yielding 0.43 fish per haul (Figure 10). Catches of Alewife were the fourth highest on record with a CPUE of 2.20 fish per haul. The historical average CPUE for alewife is 1.21 fish per haul (Figure 10).

Atlantic menhaden, *Brevoortia tyrannus*

During the 2009 sampling, 2,529 Atlantic menhaden were captured for a mean CPUE of 12.90 fish per haul (Table 31, Figure 11). The majority of these fish were captured in week 3 (Table 31). The resulting CPUE is lower than the historical average of 16.27 fish per haul. The highest CPUE occurred in 1999 (93.55 fish per haul), while the lowest CPUE occurred in 1993 (0.08 fish per haul). Measured Atlantic menhaden ranged from 34 to 164 mm TL with a mean of 82.15 mm (Table 32).

Silverside species, *Menidia sp.*

In 2009 sampling, 9,201 silversides were captured for a mean CPUE of 46.94 fish per haul (Table 33). This is well below the historical average of 81.96 (figure 11). 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 (Figure 11). Silversides were not measured in 2009.

Blue crab, *Callinectes sapidus*

During sampling in 2009, 1,937 blue crabs were captured. Of the total crabs captured 1,655 (Table 35) were young-of-the-year while 282 were older blue crabs (Table 36). YOY blue crabs were most abundant at sites 21E, 18E, and 17E, while older blue crabs were most abundant at 18E (Tables 35 and 36). Catch rates peaked in week 5 for YOY blue crabs (CPUE 29.52) and in week 2 for older blue crabs (CPUE 2.04) (Table 35 and 36). Prior to 1998, no distinction was made between YOY and older crabs, so the temporal trend of catch rates is presented for the total numbers of blue crabs. The catch rate in 2009 for the total number of blue crabs captured was 9.88 crabs per haul, which is almost double the average of 4.53 crabs per haul within the 30 year time series (Figure 11).

Conclusions

Catch composition during the 2009 Hudson River beach seine sampling season was generally consistent with previous years. Silversides were the most abundant fish, followed by striped bass, bay anchovy, killifish, and Atlantic menhaden. The 6-week YOY striped bass index of relative abundance was 9.73, which is well below the historical average of 14.10 fish per haul. Growth rates of YOY striped bass, based on length frequency regression, was 0.51 mm/day. Catch rates of Alewife and blue crabs were above their historical averages; catch rates of YOY white perch, bluefish, and Atlantic menhaden were at or near their historical averages; catch rates of older white perch, American eel, winter flounder, and silversides were below their historical average; and catch rates of Atlantic tomcod, American shad, and blueback herring remained at historically low levels.

Acknowledgments

This project was carried out by the Hudson River Fisheries Unit of the New York State Department of Environmental Conservation (NYS DEC). Many people from NYS DEC provided assistance with field sampling including Stephen Augello, Russell Berdan, Jessica Best, Henry DeBoer, Mark DuFour, Wes Eakin, Maura Grassi, Amanda Higgs, Scott Jamieson, and Kris McShane. In addition, volunteer support was provided by Ryan Burns. Administrative, moral, and scientific support was provided by Kathy Hattala and Andy Kahnle. Technical support and data maintenance was provided by Julia Socrates.

This report serves as part of the Anadromous Fish Conservation Act P.L. 89-304 Project Completion Report for New York State, Project Number AFC-33.

Literature Cited

ASMFC, 2005. 2005 Stock Assessment Report for Atlantic Striped Bass. Striped Bass Technical Committee for the Atlantic Striped Bass Management Board.

Boreman, J. and H.M. Austin. 1985. Production and harvest of anadromous striped bass stocks along the Atlantic coast. Transactions of the American Fisheries Society 114:3-7.

Boreman, J., R.J. Klauda, D.S. Vaughan and R.L. Kendall. 1988. Distributions of early life stages of striped bass in the Hudson River Estuary, 1974-1979. In Science, law, and Hudson River power plants. Edited by Barnthouse, L.W. American Fisheries Scociety, Monograph 4. Bethesda, Maryland.

Bradford, M.J. 1992. Precision of recruitment predictions from early life stages of marine fishes. Fishery Bulletin 90:439-453.

Brischler, J. 2004. An Investigation of the movement and growth of the Hudson River year class. Astudy of the striped bass in the marine district of the New York State. Annual report for P.L. 89-304, Project AFC-27. Mimeo pp 69.

Buckel, J.A., D.O. Conover, N.D. Steinberg and K.A. McKown. 1999. Impact of age-0 bluefish (*Pomatomus saltatrix*) predation on age-0 fishes in the Hudson River estuary: evidence for density-dependent loss of juvenile striped bass (*Morone saxatilis*). Canadian Journal of Fisheries and Aquatic Sciences 56:275-287.

DEC, 1999. Department of Environmental Conservation. Report from the Hudson River Estuary Management Advisory Committee to John P. Cahill, Commissioner, New York State Department of Environmental Conservation on Reopening a Hudson River Striped Bass Commercial Fishery. 6p.

Dey, W.P. 1981. Mortality and growth of young-of-the-year striped bass in the Hudson River estuary. Transactions of the American Fisheries Society 110:151-157.

Dovel, W.L. 1992. Movements of immature striped bass in the Hudson estuary. In Estuarine research in the 1980's. Edited by Smith, C.L. State University of New York Press. Albany. pp 276-300.

Goodyear, C.P. 1985. Relationship between reported commercial landings and abundance of young striped bass in Chesapeake Bay, Maryland. Transactions of the American Fisheries Society 114:92-96.

Heimbuch, D.G., D.J. Dunning, and J.R. Young. 1992. Post-yolk-sac larvae abundance as an index of year class strength of striped bass in the Hudson River. In Estuarine Research in the 1980's. Edited by Smith, C.L. State Univ. New York Press. Albany, NY.

Hurst, T.P. 2000. Overwintering ecology of young-of-the-year striped bass (*Morone saxatilis*) in the Hudson River estuary. Marine Sciences Research Center. Stony Brook, State University of New York:181.

Hurst, T.P., and D.O. Conover. 1998. Winter mortality of young-of-the-year Hudson River striped bass (*Morone saxatilis*): size-dependent patterns and effects on recruitment. Canadian Journal of Fisheries and Aquatic Sciences 55:1122-1130.

Hurst, T.P. and D.O. Conover. 2001. Nearshore fish communities of the mid-Hudson River estuary, 1985-2000. Special Report #127 of the Marine Sciences Research Center, State University of New York at Stony Brook.

McGovern, J.C., and J.E. Olney. 1996. Factors affecting survival of early life stages and subsequent recruitment of striped bass on the Pamunkey River, Virginia. Canadian Journal of Fisheries and Aquatic Sciences 53:1713-1726.

Mckown, K.A., and R. Gelardi. 2000. An investigation of the 1998 Hudson River striped bass spawning success. New York State Department of Environmental Conservation.

McKown, K.A. 1991. Validation of the Hudson River young-of-the-year striped bass indices. Report to the Atlantic States Marine Fishery Commission.

Merriman, D. 1941. Studies on the striped bass (*Roccus saxatilis*) of the Atlantic Coast. U.S. Fish and Wildlife Service Fishery Bulletin 50:1-77.

Munch, S.B., and D.O. Conover. 2000. Recruitment dynamics of bluefish (*Pomatomus saltatrix*) from Cape Hatteras to Cape Cod, 1973-1995. ICES Journal of Marine Science 209:393-402.

NMFS, 1999. National Marine Fisheries Service with the U.S. Fish and Wildlife Service and the Atlantic States Marine Fisheries Commission. 1999. Striped bass studies. 1999 Biennial report to Congress.

Richards, R.A., and P.J. Rago. 1999. A case history of effective fishery management: Chesapeake Bay striped bass. North American Journal of Fisheries Management 19:356-375.

Scott, W.B., and M.G. Scott. 1988. Atlantic fishes of Canada. Canadian Bulletin of Fisheries and Aquatic Sciences 219.

Secor, D.H., E.D. Houde, and D.M. Monteleone. 1995. A mark-release experiment on larval srtiped bass *Morone saxatilis* in a Chesapeake Bay tributary. ICES Journal of Marine Sciences 52:87-101.

Smith, C.L. 1985. The Inland Fishes of New York State. New York State Department of Environmental Conservation. Albany.

Uphoff, J.H. 1989. Environmental effects on survival of eggs, larvae, and juvenile striped bass in the Choptank River, Maryland. Transactions of the American Fisheries Society 118:251-263.

TABLE 1 2009 HUDSON RIVER ENVIRONMENTAL DATA

		Air Temperature				H2O Temperature			
Dates	Week	Avg	Std	Min	Max	Avg	Std	Min	Max
Aug 3-4	2	27.48	2.06	23	31	26.48	1.18	24.7	29.1
Aug 18-19	3	27.50	2.38	26	31	27.42	0.86	26.3	29.4
Sept 2-3	4	22.96	4.77	15	30	24.46	1.32	22.2	27
Sept 15-16	5	21.48	2.96	18	27	23.45	1.40	21.4	27.5
Sept 30 - Oct 1	6	13.26	2.10	8	16.5	19.09	1.65	15.9	21.7
Oct 14-15	7	9.28	5.09	4	19	16.28	1.65	13.2	18.9
Oct 26-27	8	13.65	2.91	8	18	14.95	0.59	14.2	16.8
Nov 9-10	9	14.48	2.49	11	20	12.31	0.54	10.8	13.4

		Salinity				Dissolved Oxygen			
Dates	Week	Avg	Std	Min	Max	Avg	Std	Min	Max
Aug 3-4	2	0.41	0.35	0.13	1.4	7.50	1.30	5.9	10.2
Aug 18-19	3	3.62	1.69	1.71	7.23	7.67	1.88	5.9	13.9
Sept 2-3	4	3.51	1.22	1.63	6.7	8.66	1.06	7.1	11.3
Sept 15-16	5	6.18	1.90	3.42	10.2	8.58	1.49	7.2	12.4
Sept 30 - Oct 1	6	5.73	1.43	0.72	8.04	8.88	0.60	7.7	10.1
Oct 14-15	7	5.03	2.57	2.3	10.75	8.46	0.63	7.3	10.1
Oct 26-27	8	2.76	1.13	1.17	4.94	8.98	0.78	8.2	12.1
Nov 9-10	9	1.39	1.12	0.29	3.7	9.77	0.38	9.1	10.7

TABLE 2

HUDSON RIVER ENVIRONMENTAL DATA 1985 - 2009

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	2006	2007	2008	2009
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		34.9	25.9	30.6	
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	35.7	33.6	30.9	27.5
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	28.1	29.0	25.3	27.5
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	23.5	30.0	23.5	23.0
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	24.1	23.0	21.0	21.5
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	20.5	28.2	20.0	13.3
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	12.8	19.0	14.0	9.3
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	12.3	14.1	15.3	13.6
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	16.2	7.2	15.4	14.5

Mean Water 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	2006	2007	2008	2009
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	27.9	26.6	27.3	
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	30.1	27.5	27.7	26.5
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	26.3	26.8	26.0	27.4
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	24.3	26.7	25.4	24.5
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	23.5	24.9	24.3	23.5
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	21.1	23.2	22.4	19.1
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	16.7	22.5	18.9	16.3
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	12.9	19.3	16.0	15.0
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	11.2	13.3	13.7	12.3

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	2006	2007	2008	2009
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	1.9	6.8	4.8	
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	1.1	8.1	2.6	0.4
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	5.3	7.8	2.8	3.6
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	5.3	9.8	4.1	3.5
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	4.0	8.3	4.1	6.2
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	5.1	9.4	5.3	5.7
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	3.0	9.7	4.5	5.0
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	0.6	7.7	7.8	2.8
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	0.2	4.8	0.9	1.4
avg	4.8	4.2	5.2	6.0	5.9	5.5	7.3	4.1	5.9	5.4	6.2	2.8	6.6	5.5	5.6	3.7	7.9	8.5	2.5	2.9	4.3	2.9	8.0	4.1	3.6

Mean Dissolved Oxygen (mg/L)

Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
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	6.7	5.9		
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	8.2	8.0	7.6	6.5	7.5
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	7.1	6.9	6.5	6.9	7.7
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	8.1	5.5	7.0	6.7	8.7
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	6.3	35.6	6.6	8.6
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	7.3	6.8	7.9	6.8	8.9
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	7.4	6.3	7.5	8.5
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	8.2	8.3	6.6		9.0
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		8.9	7.9	8.7	9.8

TABLE 3

2009 HUDSON RIVER SPECIES COMPOSITION

Species	Age*	Aug 3	Aug 18	Sept 2	Sept 15	Sept 30	Oct 14	Oct 26	Nov 9	Weeks 4 - 9	Weeks 1 - 9
Diadromous											
Alewife	99	7	128	84	29	58	124	1	0	296	431
American eel	99	8	7	3	4	4	5	7	11	34	49
American shad	99	31	131	103	26	48	24	13	5	219	381
Atlantic tomcod	99	14	1	4	0	0	0	0	0	4	19
Blueback herring	99	0	0	0	0	1	10	68	5	84	84
Striped bass	0	1015	1298	936	1410	549	350	212	241	3698	6011
Striped bass	1	21	10	16	14	22	16	8	8	84	115
Estuarine											
Fourspine stickleback	99	12	15	33	8	82	84	490	32	729	756
Hogchoker	99	21	15	23	27	12	12	0	1	75	111
Killifish spp	99	285	254	237	852	562	372	1501	250	3774	4313
Threespine stickleback	99	0	0	0	0	0	0	0	2	2	2
White perch	0	134	198	350	374	363	149	69	15	1320	1652
White perch	1	364	290	124	187	230	117	53	59	770	1424
Freshwater											
Bluegill	99	0	2	4	18	5	4	11	0	42	44
Brown Bullhead	99	2	6	4	2	0	3	6	1	16	24
Channel Catfish	99	0	2	2	3	2	1	0	0	8	10
Common Carp	99	2	9	1	20	3	5	0	0	29	40
Emerald Shiner	99	1	0	0	0	0	0	0	0	0	1
Freshwater Drum	99	0	3	0	0	1	0	0	1	2	5
Gizzard Shad	99	1	0	10	0	0	9	0	1	20	21
Goldfish	99	0	1	0	0	0	0	0	0	0	1
Green Sunfish	99	0	0	1	0	0	0	0	0	1	1
Largemouth Bass	99	5	5	4	8	0	0	0	0	12	22
Pumpkinseed	99	1	0	23	47	19	12	5	2	108	109
Redbreast Sunfish	99	4	0	1	0	1	0	0	0	2	6
Smallmouth Bass	99	2	2	3	0	2	1	0	1	7	11
Spottail Shiner	99	25	3	9	0	8	4	4	8	33	61
Sunfish Family	99	0	51	0	0	0	0	1	0	1	52
Tessellated Darter	99	6	1	10	2	0	4	3	16	35	42
White Catfish	99	1	1	0	0	0	0	0	0	0	2
White Sucker	99	0	0	0	0	0	0	3	0	3	3
Yellow Perch	99	0	1	0	0	1	0	1	0	2	3
Marine											
Atlantic menhaden	0	0	2033	9	398	13	64	10	0	494	2527
Atlantic menhaden	1	0	0	0	2	0	0	0	0	2	2
Atlantic needlefish	99	8	28	19	17	0	0	0	0	36	72
Bay anchovy	99	128	1051	98	246	231	3092	0	4	3671	4850
Bluefish	0	22	108	232	66	35	27	4	0	364	494
Crevalle jack	99	0	0	1	2	0	5	1	0	9	9
Inshore lizardfish	99	0	2	0	0	0	0	0	0	0	2
Lookdown	99	0	0	0	0	1	1	0	0	2	2
Naked Goby	99	0	3	5	12	4	0	0	1	22	25
Northern kingfish	99	0	1	2	4	0	1	0	0	7	8
Northern pipefish	99	0	0	0	11	49	39	33	1	133	133
Oyster toadfish	99	0	0	0	0	0	0	1	0	1	1
Silver perch	99	0	0	0	0	2	0	2	0	4	4
Silverside spp.	99	1050	395	1463	3277	1441	529	444	602	7756	9201
Spot	99	2	0	0	0	0	0	0	0	0	2
Striped searobin	99	0	0	0	4	0	0	0	0	4	4
Summer flounder	99	0	8	6	13	1	5	3	1	29	37
White mullet	99	38	14	23	25	16	0	4	1	69	121
Winter flounder	0	0	0	4	31	7	5	18	9	74	74
Winter flounder	1	10	0	0	0	0	0	0	1	1	11
		0	8	6	13	1	5	3	1		
Total Fish Catch		3220	6077	3847	7139	3773	5074	2976	1279	24088	33385
Invertebrate											
Blue crab	0	15	46	124	738	170	83	141	338	1594	1655
Blue crab	1	49	46	44	41	35	18	29	20	187	282
Mud Crab	99	0	3	2	1	2	1	1	0	7	10
Total Invertebrate Catch		64	95	170	780	207	102	171	358	1788	1947
Number of seines (n)		24	24	24	25	25	25	25	24	148	196

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

TABLE 4 HUDSON RIVER TOTAL SPECIES CPUE 1980 - 2009, WEEKS 4 - 9

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	2006	2007	2008	2009
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	0.1	0.2	5.9	2.0
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	0.1	0.1	0.2	0.2
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	0.0	0.0	0.1	1.5
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		0.0	0.0		0.0
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	0.2	12.1	1.7	0.6
Shortnose sturgeon	99																												0.0		
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	8.3	81.5	26.3	25.0
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	0.2	0.9	0.7	0.6
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	0.0	0.0	0.5	4.9
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	0.1	0.2	0.6	0.5
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	3.3	0.3	17.8	25.5
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				0.1		
Threespine stickleback	99	0.1			0.0				0.3																0.0	0.2	0.0	0.0	0.0	0.0	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	2.9	2.4	37.0	8.9
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	8.0	4.8	2.2	5.2
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	0.0		1.6	0.3
Brown bullead catfish	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		0.0	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	0.0	0.1	0.2	0.2
Chain pickerel	99	0.0									0.0	0.0			0.0							0.0									
Channel catfish	99																														0.1
Fallfish	99											0.0																			
Freshwater drum	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	0.0	0.3	0.2	0.1
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					0.0	
Goldfish	99	0.0			0.0	0.0		0.0		0.0				0.0																	0.0
Hickory shad	99							0.0			0.0															0.5				0.0	
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		0.0			0.1
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	0.0	0.0	0.1	0.7
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						0.0
Redear sunfish	99		0.0																												
Smallmouth bass	99											0.0							0.0					0.0	0.0	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	0.3	0.3	0.2	0.2
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	0.0	0.1	0.2	0.2
White catfish	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		0.0	0.0	0.0	
White crappie	99																											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									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	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	1.8	0.6	2.0	10.8
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	0.3	0.5	0.8	1.3
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									0.0	0.0
Japanese shore crab	0																												0.0		
Marine																															
Atlantic croaker	99																								0.0	0.4		0.0	0.0	0.1	
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	1.4	4.9	0.1	3.3
Atlantic menhaden	1	0.2		0.1																	0.0			8.1	0.1			1.3	17.5	0.0	0.0
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	0.0	0.1	0.0	0.6	0.1	0.2
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**	**38.4**	**41.1**	**5.7**	**24.8**
Black Drum	99																												0.0	0.0	
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	0.5	1.9	0.7	2.5
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									
Cornetfish, 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		0.0	0.1	0.0	0.1
Cunner	99									0.0																					
Grey snapper	99	0.0					0.0									0.0	0.0														
Houndfish	99										0.0																				
Inshore lizardfish	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						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	0.0	0.1	0.0	0.1
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	0.0	0.1	0.1	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	0.3	1.1	0.2	0.9
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		0.0	1.1	
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										0.0		0.0
Permit	99																			0.0											
Pigfish	99															0.0			0.0												
Pinfish	99															0.0													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			0.1	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	18.4	100.1	94.6	52.4
Smallmouth flounder	99												0.1		0.0				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	0.0	0.0	0.0	
Spotfin butterflyfish	99																							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	0.0	0.3	0.4	0.2	0.0	0.1	0.0				0.0								0.0		0.0	0.1	0.0		0.0	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	0.0	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		0.0	0.1	0.1	0.2
Tautog	0							0.1	0.0	0.2		0.0		0.0					0.1	0.0			0.2				0.0		0.0		
Tautog	1							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				0.1	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		0.0	0.0	0.1	0.5
Windowpane flounder	99									0.0		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		0.1	1.0	0.3	0.5
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				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	99						0.0	0.0				0.0						0.0													
Painted turtle	99									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	148	147	148	148

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

TABLE 5 HUDSON RIVER TOTAL SPECIES CPUE 1985 - 2009, WEEKS 1 - 9

Species	Age*	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Diadromous																										
Alewife	99	1.31	1.41	0.76	2.52	0.48	0.73	0.10	0.05		0.39	0.45	0.16	3.28	0.12	2.69	0.27	0.32	0.74	2.00	0.37	2.16	0.14	0.68	6.84	2.20
American eel	99	0.58	0.33	0.52	0.78	0.53	0.56	0.46	0.38	0.20	0.32	0.28	0.19	0.44	0.25	0.34	0.17	0.17	0.17	0.25	0.30	0.10	0.11	0.11	0.18	0.25
American shad	99	10.09	22.31	6.76	11.51	11.91	11.20	1.00	11.97	2.18	10.33	2.21	8.34	10.96	0.44	3.91	0.82	1.93	3.31	4.39	1.80	0.67	0.06	2.10	0.05	1.94
Atlantic sturgeon	1																			0.00					0.00	
Atlantic tomcod	99	1.92	1.71	1.24	2.64	1.64	1.29	0.06	1.42	0.03	0.06	0.03	0.48	0.17	2.29	0.03	0.56	0.61	0.02	1.38	0.23		0.01	0.00		0.10
Blueback herring	99	28.32	6.24	32.17	27.82	37.96	139.80	35.11	104.56	10.72	6.30	104.22	29.66	19.14	0.07	59.91	1.40	1.46	7.89	7.98	1.16	43.76	0.40	8.83	1.25	0.43
Shortnose sturgeon	99																							0.00		
Striped bass	0	4.56	8.74	82.88	70.40	59.54	58.02	15.23	26.58	55.94	43.55	33.74	21.30	59.03	33.71	57.69	22.89	77.42	22.17	72.59	16.42	34.96	10.07	82.10	29.01	30.67
Striped bass	1	0.90	0.23	0.13	0.72	0.71	0.35	0.79	0.77	0.60	0.29	1.24	0.52	0.52	0.73	0.73	0.76	0.85	0.90	0.31	0.48	0.10	0.26	0.69	0.78	0.59
Striped bass (hatchery)	0	0.89	1.17	0.58	0.28	0.40			0.19	0.34	0.08	0.93														
Striped bass (hatchery)	1	0.00	0.02	0.01	0.00		0.00			0.02	0.00	0.03	0.00													
Estuarine																										
Fourspine stickleback	99	1.25	0.89	1.97	1.11	0.21	0.16	0.18	0.10	0.01	0.00	0.00	0.06	0.25	0.15		0.00			0.23	0.05	0.02	0.01	0.01	0.37	3.86
Hogchoker	99	6.13	3.71	2.52	4.02	6.96	2.44	1.63	3.13	1.32	2.43	2.45	0.47	0.67	0.34	0.42	0.08	0.27	1.73	1.49	0.33	0.16	0.17	0.97	0.97	0.57
Killifish spp.	99	14.07	6.80	15.35	18.81	3.84	5.02	2.37	0.69	0.82	1.61	3.64	0.27	4.92	2.36	1.80	0.64	2.45	5.47	10.06	9.20	3.70	2.71	0.43	13.62	22.01
Rainbow smelt	99				0.00																					
Striped anchovy	99		0.02	0.02	0.01			0.02	0.14	0.01	0.01	0.01	0.02						0.06	0.00				0.05		
Threespine stickleback	99			0.21										0.01						0.02	0.13	0.04	0.00	0.00	0.01	0.01
White perch	0	8.87	37.89	11.47	75.75	33.82	7.53	2.33	5.46	3.72	6.14	1.92	2.95	1.48	4.10	22.51	6.27	21.82	11.38	25.56	2.00	1.90	3.59	1.70	27.76	8.43
White perch	1	20.46	28.94	15.69	20.16	26.66	10.76	9.81	6.45	7.71	7.80	11.11	7.27	5.61	9.74	6.99	16.15	20.26	20.09	8.16	3.71	1.43	9.49	5.36	3.42	7.27
Freshwater																										
Black crappie	99					0.01				0.00						0.01										
Bluegill	99	0.05	0.40	0.34	0.29	0.22	0.12	0.01	0.00	0.01	0.21	0.04	0.01	0.15	0.02	0.03	0.29	0.02	1.41	0.13	0.02	0.09	0.01		1.28	0.22
Brown bullead catfish	99	0.00	0.00	0.02	0.05	0.49	0.06	0.00	0.00		0.03		0.01	0.01		0.03	0.11	0.02	0.00	0.18	0.05		0.03	0.01	0.00	0.12
Carp	99	0.19	0.17	0.18	0.23	0.32	0.27		0.14	0.08	0.18	0.10	0.11	0.04	0.12	0.13	0.11	0.05	0.08	0.11	0.06	0.03	0.03	0.10	0.11	0.20
Chain pickerel	99					0.04	0.01	0.00		0.00							0.00									
Channel catfish	99																									0.05
Emerald shiner	99																									0.01
Fallfish	99						0.00																			
Freshwater drum	99																									0.03
Gizzard shad	99	0.00		0.18	0.00	0.02	0.03	0.07			0.01	0.07	0.00	0.11		0.09	0.33		0.13	0.10	0.07	0.01	0.01	0.21	0.14	0.11
Golden shiner	99		0.01			0.02	0.02	0.00			0.01		0.00			0.01		0.09		0.01	0.00				0.01	
Goldfish	99	0.00	0.00	0.01	0.01	0.00			0.00			0.00			0.01											0.01
Green sunfish	99																			0.04						0.01
Hickory shad	99		0.01			0.01															0.30	0.00			0.00	
Largemouth bass	99		0.03	0.04	0.01	0.03	0.02	0.01			0.02	0.01	0.00	0.03	0.02			0.01	0.01	0.05	0.04		0.00			0.11
Longnose sucker	99																				0.00					
Pumpkinseed	99	0.30	0.17	0.08	0.07	0.12	0.11	0.03		0.00	0.14	0.15	0.03	0.31	0.03	0.04	0.08	0.22	0.00	0.09	0.05	0.10	0.06	0.01	0.09	0.56
Redbreast sunfish	99	0.04	0.06	0.04	0.00	0.06	0.02	0.00	0.01		0.01	0.02		0.40			0.00	0.00	0.01	0.04						0.03
Smallmouth bass	99						0.00							0.01				0.00	0.00	0.00	0.01	0.01	0.03	0.01	0.03	0.06
Spottail shiner	99	0.00	0.04	0.04	0.29	1.32	0.37	0.14	0.02	0.01	0.22	0.07	0.24	1.86	0.60	0.05	0.24	0.09	0.00	0.59	0.10	0.05	0.22	0.29	0.19	0.31
Tesselated darter	99	0.01	0.04	0.28	0.12	0.24	0.23	0.05	0.08	0.18	0.18	0.02	0.15	3.51	0.78	0.01	0.16	0.39	0.08	0.50	0.46	0.04	0.01	0.12	0.16	0.21
White catfish	99	0.13	2.26	0.25	0.17	0.18	0.11	0.05	0.05	0.05	0.01	0.05	0.02	0.01	0.03	0.01	0.02		0.03	0.00	0.03		0.03	0.02	0.00	0.01
White crappie	99																						0.01		0.00	
White sucker	99		0.01	0.02	0.01	0.04		0.00	0.00		0.01	0.00	0.01		0.01		0.00	0.00								0.02
Yellow perch	99	0.02	0.01	0.01	0.00	0.01	0.02	0.00					0.01	0.05	0.02	0.01	0.01	0.01	0.01	0.10	0.05	0.01	0.01	0.04	0.03	0.02
Invertebrate																										
Blue crab	0	0.11			1.38		0.00	0.26		0.33	0.42	0.24	0.37	11.84	24.56	14.10	0.29	1.82	2.01	0.38	0.37	1.23	1.30	0.49	1.49	8.44
Blue crab	1	0.10			0.02			0.09		0.04	0.17	0.05	0.23	0.35	2.95	2.08	0.89	0.50	1.54	0.40	0.53	0.19	0.54	0.65	0.66	1.44
Blue crab	99	1.46	0.30	1.39	3.31	3.05	2.73	6.14	5.45	0.85	0.62	1.77	0.02	1.37												
Clam	99							0.11	0.00						0.03				1.13							
Marsh crab	99													0.01												
Mudcrab	99										0.00	0.02	0.01	0.03	0.01	0.06			0.02						0.01	0.05
Japanese shore crab	0																							0.13		
Marine																										
Atlantic croaker	99																			0.02	0.29		0.65	0.04	0.05	
Atlantic menhaden	0	0.01					0.02						0.00	0.02	0.01	9.54	48.83	0.47	0.73	3.57	44.62	5.79	2.42	10.74	2.13	12.89
Atlantic menhaden	1															0.02	0.03		9.57	0.09			11.93	71.04	0.31	0.01
Atlantic menhaden	99	20.92	23.48	4.78	0.85	0.82	7.84	2.83	5.74	0.08	3.48	0.32	1.88	0.27	14.69	83.99										
Atlantic needlefish	99	1.00	0.19	0.76	0.37	0.69	0.70	0.45	0.17	0.15	0.26	0.24	0.07	1.50	0.14	0.08	0.11	0.06	0.05	0.05	0.16	0.34	0.15	0.53	0.29	0.37
Atlantic threadfin	99					0.00																				
Bay anchovy	99	52.86	5.30	60.45	37.28	244.36	10.97	34.02	40.27	7.57	184.48	88.29	42.56	47.37	34.51	9.19	14.05	1.76	13.28	11.68	1.09	24.71	41.27	31.62	3.91	24.74
Black drum	99																							0.00	0.00	
Black Seabass																									0.00	
Bluefish	0	6.14	3.55	3.53	5.00	2.02	3.06	1.35	1.33	2.59	1.07	1.47	0.80	1.66	1.09	13.76	0.86	4.14	2.90	1.00	0.80	0.66	0.46	3.07	1.52	2.52
Bluefish	1	0.00			0.03		0.01					0.01							0.01							
Bonefish	99										0.00															
Butterfish	99					0.04				0.00	0.00		0.02						0.00							
Butterflyfish	99														0.01		0.00									
Crevalle jack	99	0.27	0.09	0.04	0.20	0.28	0.18	0.09	0.02	0.09	0.07	0.08	0.05	0.01	0.11	0.07	0.24	0.06	0.07	0.05	0.01		0.04	0.04	0.04	0.05
Cunner	99				0.00																					
Grey snapper	99	0.02		0.00							0.00	0.00									0.00					
Houndfish	99					0.00																				
Inshore lizardfish	99	0.05				0.00	0.08	0.14	0.09	0.07	0.02			0.06	0.11	0.03		0.04	0.08							0.01
Lookdown	99	0.02				0.04	0.00			0.00						0.01			0.00	0.00						0.01
Naked Goby	99	0.02	0.07	0.20	0.06	0.07	0.14	0.18	0.08	0.01	0.00	0.21		0.08	0.07	0.36	0.04	0.17	0.09	0.04	0.10	0.01	0.01	0.08	0.03	0.13
Northern kingfish	99	0.21	0.05	0.02	0.16	0.06	0.12	0.33	0.19	0.20	0.13	0.13	0.00	0.40	0.38	0.07	0.01	0.09	0.40	0.00	0.24	0.05	0.03	0.38	0.10	0.04
Northern pipefish	99	2.46	0.86	1.72	3.73	1.47	1.67	2.60	0.80	0.69	0.45	2.05	0.15	3.56	1.33	1.16	0.16	1.83	1.13	0.60	0.58	0.48	0.28	2.29	0.35	0.68
Northern puffer	99	0.01	0.00	0.02	0.01	0.00	0.01	0.11		0.03		0.03		0.03	0.02	0.08		0.06	0.03	0.00	0.00	0.03		0.01	1.05	
Northern searobin	99	0.00									0.00							0.01								
Northern sennet	99	0.00				0.00																				
Northern stargazer	99			0.00	0.01		0.03	0.01	0.02	0.03				0.15		0.02		0.00	0.11		0.00	0.00				
Northern tonguefish	99							0.01																		
Oyster toadfish	99													0.01										0.00		0.01
Permit	99														0.01		0.00									
Pigfish	99										0.02			0.01												
Pinfish	99										0.01															
Scup	99															0.02								0.01		
Silver perch	99	0.00			0.01			0.10	0.08	0.26	0.37	0.84	0.08	0.09	0.02	0.01	0.01				0.03				0.04	0.01	0.02
Silverside spp.	99	21.27	69.87	20.01	116.60	7.94	55.82	147.39	50.19	90.68	191.72	171.42	65.79	126.77	120.57	90.84	68.54	93.83	104.36	20.67	64.95	105.87	15.62	107.67	74.86	46.94
Smallmouth flounder	99	0.00						0.05		0.01				0.01	0.01									0.01		
Spanish mackerel	99					0.00	0.00	0.01		0.00	0.01															
Spot	99	0.56	3.17	0.26	0.79	0.01	1.71	0.02	0.01	0.96	0.28	0.03	0.38	0.01	0.15	0.21	0.08	0.01	0.26	0.04	0.01	0.03	0.05	0.00	0.14	0.01
Spotfin butterflyfish	99																		0.00							
Spotfin mojarra	99								0.00		0.00				0.01											
Spotted hake	99							0.00						0.01	0.01											
Striped mullet	99	0.03	0.30	0.02				0.00								0.02	0.01	0.00	0.08	0.03		0.00	0.06			
Striped searobin	99	0.06	0.10			0.00	0.05	0.38	0.02	0.08	0.00	0.00		0.70	0.53	0.09		0.00	0.06	0.05	0.06	0.02	0.00	0.42	0.08	0.02
Summer flounder	99	0.28	0.40	0.01	0.01	0.06	0.08	0.21	0.21	0.20	0.24	0.12	0.10		0.05	0.08	0.08	0.00	0.15	0.04	0.10	0.01	0.01	0.05	0.10	0.19
Tautog	0		0.05	0.01	0.19		0.04	0.01	0.00					0.13	0.01	0.01		0.12			0.01	0.00		0.03		
Tautog	1		0.03	0.01	0.26		0.00	0.12						0.02				0.07								
Tautog	99	0.01	0.00		0.04		0.00																			
Triggerfish	99	0.00																								
Weakfish	99	0.30	0.00		0.02	0.02	0.05	0.38	0.00	0.00	0.02		0.00	0.13	0.03	0.12	0.04	0.04	0.05	0.03	0.01	0.01		0.06	0.00	
White mullet	99	0.05	0.05	0.00	0.08	0.06	0.10	0.18	0.00	0.15	0.04	0.02		0.04	0.01	0.03	0.01	0.01	0.02	0.00	0.00	0.00	0.13	0.01	0.34	0.62
Windowpane flounder	99				0.00		0.01		0.01	0.00	0.00													0.00		
Winter flounder	0		0.93	0.20	0.73	0.28	0.76	0.65	1.33	1.07	0.38	0.61	0.24	1.78	0.55	0.17	0.39	0.36	0.24	0.49	0.44	0.01	0.04	0.89	0.36	0.38
Winter flounder	1					0.00	0.01		0.00	0.00	0.00	0.01	0.00		0.02			0.00	0.01	0.00	0.01			0.00	0.00	0.06
Winter flounder	99	2.50	0.00		0.07	0.01	0.00	0.00				0.00	0.00	0.01		0.01										
Reptiles																										
Diamondback terrapin	99	0.01	0.00			0.01	0.00						0.00													
Painted turtle	99				0.00						0.00					0.01										
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	221	221	222	196

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

TABLE 6 HUDSON RIVER YOY STRIPED BASS ABUNDANCE INDEX

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	0-209	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
2006	148	1232	8.32	15.08	0-128	28	3.82	3.02 - 4.78
2007	147	11986	81.54	245.66	0-2580	2	35.02	28.59 - 42.84
2008	148	3887	26.26	38.13	0-337	4	13.86	11.33 - 16.90
2009	148	3698	24.99	53.04	0-482	13	9.73	7.70 - 12.23

Historical Average = 14.10

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
2006	221	2232	10.10	16.47	0-128	35	4.84	4.02 - 5.79
2007	221	18145	82.10	206.90	0-2580	2	39.56	33.72 - 46.37
2008	221	6441	29.01	37.10	0-337	5	16.39	14.04 - 19.11
2009	196	6011	30.67	55.54	0-482	13	12.78	10.48 15.56

Historical Average = 19.61

TABLE 7 2009 HUDSON RIVER YOY STRIPED BASS CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East											
18E	23	11	3	2	5			1	8	0.108	0.153
21E	23	38	11	1	6	4		14	45	0.473	0.607
17E	24	72	15	4	26			2	4	0.243	0.628
16E	25	11	11		11	3	3		2	0.128	0.209
12E	29	8	12	2	2	6	0	0	1	0.074	0.158
14E	29	48	32		7	16	1	7	8	0.264	0.607
19E	33	21	33	16	22	22	14	18	8	0.676	0.786
11E	34	10	14		54	23	1	47	40	1.115	0.964
9E	34	50	65	53	112	10	9		14	1.338	1.597
7EE	35	52	30	12	174	7	13	1	1	1.405	1.480
7EW	35	20	72	2	211	26	8	4	10	1.764	1.801
8E	35	236	323	213	482	82	9	7		5.358	6.898
4E	39	26	23	31	16	5	21	13	6	0.622	0.719
West											
15WS	27	49		4	8	17	22	6	1	0.392	0.546
16WN	27	14	36	9	14	8	18	6	3	0.392	0.551
14W	29	79	92	110	27	18		3	8	1.122	1.719
12W	30	60	175	118	24	16	24	3		1.250	2.143
11W	32	9	50	29	17	14	19	7	9	0.642	0.786
10W	35	38	116	27	5	3	4	4	10	0.358	1.056
9W	35	70	13	16	31	29	16	25	14	0.885	1.092
8W	36	5	45	28	46	67	38	8		1.264	1.209
7W	37	48	93	196	88	126	41	8	3	3.122	3.077
3W	39		3	31	1	20	32	7	21	0.757	0.587
4W	39	7	9	19	9	15	37	12	14	0.716	0.622
5W	39	33	22	13	12	12	20	9	11	0.520	0.673
Effort		24	24	24	25	25	25	25	24	148	196
Catch		1015	1298	936	1410	549	350	212	241	3698	6011
C/E		42.29	54.08	39.00	56.40	21.96	14.00	8.48	10.04	24.99	30.67

TABLE 8 HUDSON RIVER YOY STRIPED BASS CPUE BY STATION 1985 - 2009, WEEKS 1 - 9

STATION	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
East																									
18E	0.11	3.29	64.22	56.00	30.50	35.75	7.25	21.50	66.50	39.50	34.67	18.25	41.38	26.75	22.20	13.22	45.86	21.25	115.50	11.33	58.67	5.44	0.52	0.77	0.15
21E		1.00	70.33	23.50	111.75	70.00	1.00	24.56	89.78	42.33	59.44	46.11	26.13	44.44	38.60	12.22	27.33	9.63	106.44	22.56	54.22	5.78	0.44	0.94	0.61
17E	0.11	8.33	45.67	96.44	157.67	97.63	13.78	21.67	61.78	61.56	34.22	18.00	27.50	48.56	48.20	12.29	30.14	18.00	81.78	16.22	44.88	6.89	0.14	0.43	0.63
16E		3.00	135.00	50.11	34.50	42.57	4.67	17.00	50.67	26.56	38.67	14.33	23.22	38.78	37.80	4.56	30.13	6.22	44.11	13.22	14.56	3.44	0.45	0.46	0.21
15E		8.00	29.00	38.00	51.33	45.60	6.33		73.60				48.00	80.00	126.00	7.00									
12E	1.86	1.88	35.44	49.71	36.50	39.75	0.88	18.38	57.33	29.89	31.13	11.33	10.89	21.00	51.89	11.00	9.56	8.00	50.56	7.78	18.11	7.33	0.47	0.48	0.16
13E	3.67	4.50	93.29	14.50	12.50	31.00	24.20	19.67	55.56	14.33	82.33	13.00	44.43	22.33	47.50	4.57	24.50	26.43	58.50	61.00					
14E	0.11	9.11	37.00	78.38	96.57	67.63	2.67	37.67	35.13	44.00	33.44	20.00	41.11	58.50	48.78	22.71	36.50	27.75	126.13	8.75	17.00	6.50	0.73	0.51	0.61
19E	1.56	6.00	259.50	88.83	67.57	33.14	7.00	19.78	33.14	59.67	31.75	16.50	100.44	30.38	15.17	16.00	57.78	12.78	70.78	12.00	58.50	9.78	0.94	0.70	0.79
10E	1.00																								
11E	6.00	9.83	319.88	128.25	45.25	28.00	36.00	37.25	73.29	51.00	129.44	29.25	124.75	69.56	79.50	79.14	159.17	25.78	115.63	23.00	28.11	1.33	1.51	1.21	0.96
9E	1.00	6.00	47.38	37.00	42.89	57.25	17.00	35.50	73.00	55.75	14.78	23.22	54.11	40.67	92.50	18.17	50.29	15.88	124.22	24.13	53.86	13.75	0.62	0.95	1.60
7E1		10.00	54.00		1.00	17.50				149.00															
7EC	15.50																								
7EE	4.89	12.88	222.00	54.33	58.00	30.11	9.00	13.86	65.14	26.38	17.14	19.00	54.14	11.75	35.13	34.78	193.25	50.50	41.78	19.33	76.56	13.00	12.20	1.15	1.48
7EW	5.67	10.78	358.67	66.33	99.67	52.50	7.88	26.50	57.25	28.13	42.67	12.33	31.57	27.71	35.63	51.67	231.00	21.33	39.50	15.14	188.43	38.67	8.66	5.12	1.80
8E	1.20	5.00		29.00		15.33	7.00		85.25	90.00	13.33	34.67	122.43	54.00	85.25	131.13	266.33	51.86	168.00	14.80	45.33	16.57	1.09	1.93	6.90
6E	1.29	1.75	38.88	51.75	31.00																				
3E	4.25	4.88	46.89	29.86	24.44	21.89	6.67	13.11	17.38	46.75	17.78	8.86	96.57	22.14	60.00	12.86	118.14	18.50	43.00	9.00	38.17				
4E	7.89	6.44	38.00	42.25	30.44	40.33	15.00	27.78	33.22	21.56	13.25	16.71	78.57	18.29	47.33	7.75	213.43	25.44	40.00	8.50	8.33	9.78	1.57	1.51	0.72
5E	5.00	18.33	9.00	25.80	26.00	34.00	16.00	13.50	186.00	11.00	10.50	22.33	28.00												
20E	8.00																								
West																									
15WN	0.67		63.33	32.33	53.29	53.50	3.00	32.50	11.00	105.00															
15WS	3.88	7.11	145.75	109.78	63.00	159.60	45.75	32.43	80.63	57.89	22.75	8.11	153.83	56.57	149.00	13.86	48.29	17.00	98.14	3.75	42.22	5.00	2.49	0.37	0.55
16WN	3.86	15.33	53.13	89.63	62.22	162.38		22.22	48.44	11.00	20.20	5.11	79.50	15.00	81.57	5.22	63.78	12.75	60.11	9.11	20.00	3.89	2.74	0.46	0.55
16WS	3.00	16.25	20.00	149.50	25.33	82.38		6.00																0.06	
13W		16.00	25.25	21.00		3.50	20.67	13.67																	
14W	4.38	10.00	93.00	65.13	55.56	64.88	40.57	20.00	76.89	24.44	26.56	12.22	36.89	29.22	54.22	19.78	70.78	19.33	75.22	10.22	21.33	7.78	0.98	1.37	1.72
12W	3.00	3.38	46.44	36.67	36.56	83.13	15.78	22.44	53.33	41.78	21.67	14.56	26.22	25.00	100.50	7.78	37.00	17.88	35.44	8.33	14.22	18.67	0.69	1.59	2.14
11W	2.63	4.88	18.67	42.75	11.22	7.00	11.57	11.89	28.71	39.89	31.11	37.40	4.00	22.00	78.57	20.43	39.22	16.88	35.67	18.22	11.89	5.78	0.67	0.58	0.79
10W	4.00	2.78	24.33	37.11	41.50	47.86	14.00	25.63	55.11	29.00	18.33	18.22	53.38	16.25	33.63	18.25	34.63	21.71	61.75	29.13	6.89	6.11	0.61	0.73	1.06
9W	5.11	6.44	25.38	96.50	37.44	39.50	6.56	21.13	20.89	32.33	20.29	12.33	41.29	30.11	26.56	11.22	20.00	12.80	44.63	14.89	5.22	9.67	0.90	0.65	1.09
8W	8.40	15.78	35.56	127.75	137.89	95.25	26.13	69.00	87.33	83.22	34.50	34.11	42.86	28.56	44.71	6.00	34.17	29.67	77.13	41.38	18.44	15.56	1.14	1.57	1.21
7W	10.56	15.67	65.67	114.13	56.56	71.00	20.86	59.50	43.22	74.22	35.56	54.25	68.29	14.33	45.75	17.50	52.00	37.56	121.11	32.00	37.11	22.89	1.16	1.34	3.08
3W		5.67																			22.57	6.11	1.66	1.49	0.59
4W	15.78	20.11	71.38	93.88	143.78	80.63	23.43	28.56	38.78	27.78	35.11	31.33	97.71	37.29	51.75	33.71	87.00	30.78	33.00	25.00	16.88	9.44	1.61	1.67	0.62
4WN																									
5W	10.56	18.11	43.11	64.75	63.78	54.13	27.14	26.22	46.78	33.22	34.56	25.33	78.00	42.71	49.50	22.57	46.86	18.22	42.00	18.00	24.75	4.00	1.06	0.98	0.67
20W	11.00																								
Annual C/E	4.56	8.74	82.88	70.40	59.54	58.02	15.23	26.58	55.94	43.55	33.74	21.30	59.03	33.71	58.03	22.89	77.42	22.17	72.59	16.42	34.96	10.07	82.10	29.01	30.67

TABLE 9 HUDSON RIVER YOY STRIPED BASS CPUE BY STATION 1980 - 2009, WEEKS 4 - 9

STATION	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	2006	2007	2008	2009
East																														
18E	13.50	30.80	24.20	36.67	23.14	0.17	2.60	27.83	68.33	36.00	15.00	2.60	17.33	39.00	23.40	31.17	12.00	31.67	7.80	23.67	3.17	41.00	7.40	74.20	12.33	18.50	4.11	0.97	0.64	0.1081
21E							1.00	65.50		60.50	50.50	0.83	15.67	18.50	30.00	30.83	16.33	10.50	17.33	36.33	2.00	10.17	5.00	61.33	28.00	24.17	3.44	1.04	0.89	0.473
17E	9.50	17.60	35.33	91.67	36.83	0.17	7.00	46.50	96.33	73.33	57.60	5.83	13.00	31.67	60.33	14.00	12.33	19.17	35.50	18.33	1.00	22.17	14.50	61.00	15.17	44.00	3.67	0.57	0.41	0.2432
16E	6.25	4.00	19.80	21.40	11.00		3.00		48.67	15.20	22.25	1.33	12.83	30.83	16.83	13.00	7.17	12.17	15.17	31.67	1.67	20.20	6.17	31.50	17.50	10.67	1.78	1.28	0.35	0.1284
15E	24.00			302.40	52.75		8.00	29.00	38.00	10.00	10.00	6.33		12.50							5.00	44.00		39.50						
12E	2.67	3.50	8.40	24.25	10.40	2.60	1.80	17.50	29.00	20.00	21.80	1.00	17.60	13.67	8.17	14.00	10.50	9.50	12.67	60.33	3.50	10.67	9.75	23.50	6.50	7.67	5.00	1.65	0.03	0.0743
13E	6.33	4.00			11.00	4.50	4.50	46.25	17.00	12.50	31.00	8.50	12.00	12.17	9.40	18.00	8.00	20.80	11.00	33.67	0.60	26.50	29.40	31.33						
14E	35.50	10.40	15.00	42.17	11.83		4.33	30.20	51.00	42.25	28.00	2.00	15.67	26.83	20.00	16.00	12.00	29.33	27.40	42.00	2.20	34.00	15.80	27.20	8.60	16.83	1.13	2.20	0.29	0.2635
19E					20.67	2.00	2.80	121.80	21.25	34.20	22.80	4.80	11.50	14.80	30.50	25.40	11.33	50.00	24.17	21.67	5.80	54.33	11.17	25.67	12.17	73.20	3.00	2.16	0.76	0.6757
10E																											1.33			
11E		22.50	9.60	26.40	7.33	2.83	2.50	163.80	62.40	59.00	22.40	22.20	33.80	19.75	44.83	146.00	31.40	114.83	50.50	61.60	39.25	205.00	24.00	35.80	12.67	20.50	6.50	2.59	1.39	1.1149
9E	3.14	6.67	8.75	5.20	6.20	0.33	0.80	33.40	33.75	22.33	50.60	7.60	17.80	21.75	16.60	14.33	20.33	52.83	44.20	76.60	18.00	62.50	22.00	62.83	29.60	44.75		1.58	0.68	1.3378
7E1							10.00			1.00	17.50					52.00														
7EC			94.00																											
7EE		22.00	88.50	48.17	146.00	0.67	6.60	274.67	41.50	50.33	28.83	6.80	6.75	90.00	16.80	16.00	12.50	61.67	10.00	30.20	8.17	286.80	63.20	35.17	11.50	98.50	6.56	18.73	1.53	1.4054
7EW	19.67	10.00	66.00	35.50	215.33	2.17	5.00	406.60	37.50	106.33	54.60	8.00	23.20	57.33	25.60	47.00	10.50	36.67	33.20	27.00	17.33	327.83	12.50	39.50	13.40	219.83	30.11	13.44	5.26	1.7635
8E	38.17	11.00	103.33	45.00	48.17	1.50	5.00		16.33		15.33	3.50		70.67	70.80	11.33	34.33	130.00	56.60	48.40	36.20	345.67	34.20	38.00	9.29	49.50	10.86	2.12	2.04	5.3581
6E	12.67	5.50	41.50	147.00	34.33	0.50	2.33	39.67	18.50	34.80																				
3E		12.00			109.50	3.60	2.00	37.17	36.25	28.00	17.67	4.00	9.67	9.60	55.60	20.17	8.00	87.00	22.25	76.00	9.40	153.75	23.40	42.00	7.33	70.67				
4E	29.00	14.29	27.75	22.17	41.83	6.50	6.33	32.67	36.60	31.50	30.67	5.50	16.17	9.33	16.00	14.83	13.25	94.20	14.75	93.00	4.60	339.00	36.00	36.33	5.67	11.83	5.11	3.43	1.40	0.6216
5E	28.50	29.80	20.67	14.50	53.00	5.00		9.00	26.00	21.00	17.00	9.17	13.50		11.00	18.00	19.00		24.00					11.50						
1E				5.00																										
West																														
15WN	39.00	9.40	16.67	36.33	42.67			21.00	28.50	53.40	47.60	3.00	16.20	11.00		26.67		16.00												
15WS	20.40	10.20	8.40	82.83	26.20	2.40	5.50	9.80	67.67	22.00	77.50	15.60	17.40	56.40	55.00	16.33	6.50	78.33	22.50	176.75	3.20	56.60	27.00	48.25	4.40	10.67	0.00	4.08	0.30	0.3919
16WN	68.17	32.00	11.00	17.50	15.20	3.50	12.33	27.80	64.83	82.67	93.00		15.83	21.67	11.00	21.00	4.17	100.50	12.75	99.25	2.00	83.00	15.80	31.67	12.33	17.33	2.22	4.30	0.45	0.3919
16WS	59.25	29.20	8.50	49.67	11.00	2.60	15.20	3.67	50.67	32.83	44.00		6.00																0.05	
13W	10.17	14.67	17.25					25.25	21.00		3.50	2.33	6.00																	
14W	45.33	55.50	17.83	33.33	4.17	5.33		71.50	58.20	36.67	39.60	9.50	8.33	30.67	16.83	18.17	8.83	25.50	23.33	48.50	6.67	48.83	18.67	16.33	11.33	20.83	3.89	2.18	0.66	1.1216
12W	8.33	9.50	12.00	10.83	7.00	2.67	1.40	35.83	40.67	36.83	65.20	9.50	10.17	8.00	37.17	12.00	8.33	14.83	14.00	124.80	3.83	28.00	21.60	23.83	8.33	9.83	8.44	1.39	1.00	1.25
11W	137.00	9.40	12.17	8.00	5.00	2.50	2.20	12.50	45.60	13.17	6.60	7.50	13.17	17.20	32.33	23.33	10.50		37.00	101.75	5.25	37.50	18.40	19.00	16.17	11.00	3.11	1.31	0.46	0.6419
10W	21.00	22.00		15.40	7.50	3.00	2.00	20.67	37.17	24.17	29.50	9.00	16.40	24.33	17.00	14.17	11.67	47.67	17.20	13.00	5.40	47.40	14.60	40.80	15.60	1.33	3.00	1.01	0.69	0.3581
9W	27.67	61.33	13.33	16.33	12.00	5.17	5.00	24.40	86.80	30.33	36.00	4.67	18.60	15.33	13.83	21.40	6.83	45.60	5.50	15.17	3.17	20.20	11.25	26.00	13.67	5.00	3.33	1.52	0.60	0.8851
8W	19.50	26.83	15.00	29.67	18.17	10.50	15.50	23.50	99.20	47.83	29.80	8.20	42.80	35.83	38.50	24.40	17.67	38.33	13.50	16.20	5.50	53.67	20.17	26.20	37.20	24.83	7.56	1.77	1.29	1.2635
7W	4.00	46.25	51.00	46.50	34.33	11.33	10.00	13.17	97.20	61.50	74.60	8.50	42.80	13.83	36.83	31.50	36.50	60.17	13.67	23.00	13.00	37.25	35.83	47.67	34.50	51.83	8.11	1.80	0.93	3.1216
3W	12.17	10.33	23.40	8.00			2.00																		11.20	30.20	3.78	4.31	1.43	0.7568
4W	15.00	26.20	41.83	37.50	38.00	17.83	15.83	52.00	95.00	69.00	73.00	12.50	20.00	15.50	17.83	40.83	24.25	71.80	19.00	103.00	8.00	90.75	38.83	10.00	11.00	21.00	7.00	2.79	1.75	0.7162
4WN																17.00														
5W	7.83	20.40	38.60	44.00	39.83	8.33	15.00	27.33	39.40	33.00	40.60	9.50	19.00	14.17	14.83	35.17	17.50	69.75	39.00	72.00	4.25	35.75	20.50	21.00	8.50	20.00	2.89	1.90	1.00	0.52
Annual C/E	23.91	21.44	30.72	48.35	37.11	3.85	6.14	60.67	52.30	41.94	37.97	6.85	17.29	26.49	28.49	27.39	14.66	50.35	22.91	52.54	7.82	91.24	21.53	34.97	14.33	35.01	8.27	81.54	26.26	24.99

TABLE 10

2009 HUDSON RIVER YOY STRIPED BASS
TOTAL LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<10									0	0
10-14									0	0
15-19									0	0
20-24		1							0	1
25-29	2	2							0	4
30-34	8	4							0	12
35-39	8	6							0	14
40-44	43	9	6	1					7	59
45-49	70	16	7	3	1				11	97
50-54	113	14	15	12	3	1			31	158
55-59	106	55	21	10	8	4	3	2	48	209
60-64	127	85	39	17	5	3	4	9	77	289
65-69	85	93	50	33	29	10	7	12	141	319
70-74	64	79	65	49	34	23	16	18	205	348
75-79	37	61	64	66	54	34	13	20	251	349
80-84	12	55	65	81	60	59	21	19	305	372
85-89	2	33	26	67	45	50	33	17	238	273
90-94		9	23	53	35	43	20	25	199	208
95-99		1	9	31	33	37	13	22	145	146
100-104		1	2	10	18	20	12	24	86	87
105-109				7	10	24	16	20	77	77
110-114			1	4	12	7	14	10	48	48
115-119				3	4	3	6	7	23	23
120-124				3	2	2	5	4	16	16
125-129		1			4	1	6	4	15	16
130-134		1			3		8	2	13	14
135-139				1			2		3	3
140-144					2		1		3	3
>144				1	1	1		1	4	4
# Measured	677	526	393	452	363	322	200	216	1946	3149
Mean	58.65	68.35	73.19	81.57	85.61	88.07	93.94	91.24	84.05	75.97
StdDev	10.65	12.70	12.02	13.59	15.64	13.08	18.47	16.99	16.02	18.01

TABLE 11

AVERAGE TOTAL LENGTH (mm) OF HUDSON RIVER
YOY STRIPED BASS, 1985 - 2009

YEAR		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 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	57.91	66.74	75.98	87.30	92.65	99.67	96.49	98.55	98.58
	StdDev	7.17	10.73	13.39	12.37	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	101.14	101.95	93.76	97.59
	StdDev	15.53	14.33	15.01	18.51	18.52	23.41	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	61.72	71.21	75.84	84.03	83.97	87.26	88.74
	StdDev	8.77	10.84	11.63	13.68	14.37	15.55	13.17	14.14	13.32
1995	Mean	42.00	62.39	69.34	77.87	87.50	94.73	100.04	99.84	90.78
	StdDev	8.94	11.21	11.42	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	88.19	84.31	83.25
	StdDev	12.02	12.45	13.49	12.25	17.56	19.53	16.05	17.03	16.46
1997	Mean	41.50	51.05	73.30	72.81	79.83	83.71	87.66	87.71	87.06
	StdDev	9.19	10.89	10.00	12.98	13.26	13.69	13.61	12.23	15.18
1998	Mean	39.30	47.88	61.06	70.51	79.73	81.81	84.88	98.30	91.93
	StdDev	11.92	12.68	11.84	14.20	11.85	15.03	13.15	15.23	15.21
1999	Mean	52.53	63.02	75.34	93.44	101.76	95.64	89.42	91.13	90.19
	StdDev	11.43	11.13	14.86	20.11	17.74	22.37	21.01	24.39	24.54
2000	Mean	41.66	47.55	53.04	62.40	71.56	73.03	78.12	71.55	70.71
	StdDev	9.93	10.77	11.76	13.27	14.39	15.40	16.43	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	44.24	54.62	66.58	76.66	88.13	93.25	112.83	100.98	104.25
	StdDev	12.74	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	74.53	71.67
	StdDev	10.79	12.24	12.26	11.12	11.21	12.73	13.99	14.94	14.08
2004	Mean	52.22	68.84	75.31	82.17	90.13	85.06	86.85	86.73	86.91
	StdDev	13.52	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
2006	Mean	42.16	50.34	60.37	68.65	78.57	77.89	82.72	83.29	93.11
	StdDev	9.62	11.20	11.42	10.62	13.56	12.42	15.14	17.69	15.05
2007	Mean	53.72	60.97	68.65	75.19	81.85	87.77	93.86	99.48	98.22
	StdDev	10.59	11.17	12.09	11.39	14.27	16.30	16.00	19.13	18.54
2008	Mean	41.29	57.28	63.04	72.83	80.57	84.08	84.65	84.60	92.72
	StdDev	9.45	11.08	11.61	13.45	14.40	17.00	16.25	17.91	18.24
2009	Mean		58.65	68.35	73.19	81.57	85.61	88.07	93.94	91.24
	StdDev		10.65	12.70	12.02	13.59	15.64	13.08	18.47	16.99

TABLE 12 HUDSON RIVER STRIPED BASS AGE FREQUENCIES 1985 - 2009

AGE	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0	984	1940	18649	15488	13397	12591	3275	5874	12587	9624	7457	4346	11452	6674	9981	4830	16103	4656	16116	3613	7727	2225	18145	6441	6011
1	179	41	25	149	145	57	154	156	104	56	240	93	88	128	118	150	168	174	63	102	21	54	147	158	80
2	10	3	2	6	11	9	11	7	23	5	23	4	10	15	4	11	7	12	7	4	1	2	4	12	10
3		4		1		2	3	2	6		4	3	2	1		1		2	1			1	1	2	1
4		3		1			1	4	1	3	3			1			1								
5	1		2		1										1										
6				1		1				1					1										
7												1													
8						1					2	2			1										
9					1																				
10											1														
13								1																	
UNK																								2	24
Total	1174	1991	18678	15646	13555	12661	3444	6044	12721	9689	7730	4449	11552	6819	10106	4992	16279	4844	16187	3719	7749	2282	18297	6615	6126

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	2006	2007	2008	2009
0									1		4				13								2		
1				50	41	27	80	83	43	13	68	40	29	46	57	33	63	97	28	20	4	8	82		
2				4	11	8	10	6	21	4	18	3	9	14	3	6	6	12	7	4		2	3		
3				1		2	2	2	5		3	2	1	1		1		2	1			1	1		
4				1			1	4	1	3	2			1			1								
5					1										1										
6				1		1				1					1										
7																									
8						1					2	1			1										
9					1																				
10											1														
UNK						6						3			1										
Tagged	0	0	0	57	54	45	93	95	71	21	98	49	39	62	77	40	70	111	36	24	4	11	88	0	0

TABLE 13

2009 HUDSON RIVER OLDER STRIPED BASS
LENGTH FREQUENCY

TL	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<110									0	0
110-114	1								0	1
115-119	2								0	2
120-124	7								0	7
125-129	3	1							0	4
130-134	1								0	1
135-139	2								0	2
140-144		1							0	1
145-149	2		1						1	3
150-154				3	2		1		6	6
155-159	2		2	3	2			1	8	10
160-164		1		1		1			2	3
165-169		2		1	2			2	5	7
170-174			4	1	4	2	1		12	12
175-179		1		1	1	1	2		5	6
180-184			1		1	3		2	7	7
185-189		1		1	3		1	1	6	7
190-194				1			1		2	2
195-199			1	1	1				3	3
200-204			1		1	1			3	3
205-209									0	0
210-214									0	0
215-219									0	0
220-224			1						1	1
225-229									0	0
230-234							1		1	1
235-239									0	0
240-244									0	0
245-249									0	0
>249		1			2	3	1	1	7	8
# Measured	20	8	11	13	19	11	8	7	69	97
Mean	129.70	172.25	176.64	167.92	191.74	230.36	193.88	191.57	191.23	176.98
StdDev	13.07	37.97	21.54	16.00	54.93	111.16	33.94	48.38	58.66	56.48

TABLE 14 2009 HUDSON RIVER OLDER STRIPED BASS CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East											
18E	23	0	0	0	1	0	0	0	0	0.007	0.005
21E	23	1	0	2	1	1	0	0	1	0.034	0.031
17E	24	0	1	0	1	0	0	0	0	0.007	0.010
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	0	0	0	1	3	1	0	0.034	0.026
14E	29	2	1	0	0	3	0	2	0	0.034	0.041
19E	33	0	0	1	1	3	1	1	1	0.054	0.041
11E	34	1	0	0	3	4	1	0	4	0.081	0.066
9E	34	8	4	0	1	2	0	0	1	0.027	0.082
7EE	35	2	1	1	0	0	3	0	0	0.027	0.036
7EW	35	0	0	0	0	0	0	1	0	0.007	0.005
8E	35	1	0	0	0	0	2	0	0	0.014	0.015
4E	39	0	0	0	1	0	0	0	0	0.007	0.005
West											
15WS	27	1	0	6	2	6	4	0	0	0.122	0.097
16WN	27	0	0	2	0	0	2	0	0	0.027	0.020
14W	29	0	0	1	2	0	0	0	1	0.027	0.020
12W	30	0	1	0	0	0	0	0	0	0.000	0.005
11W	32	1	0	3	0	0	0	2	0	0.034	0.031
10W	35	0	0	0	0	0	0	0	0	0.000	0.000
9W	35	1	0	0	0	2	0	0	0	0.014	0.015
8W	36	0	1	0	0	0	0	0	0	0.000	0.005
7W	37	2	0	0	1	0	0	1	0	0.014	0.020
3W	39	0	1	0	0	0	0	0	0	0.000	0.005
4W	39	0	0	0	0	0	0	0	0	0.000	0.000
5W	39	0	0	0	0	0	0	0	0	0.000	0.000
Effort		24	24	24	25	25	25	25	24	148	196
Catch		20	10	16	14	22	16	8	8	84	114
C/E		0.833	0.417	0.667	0.560	0.880	0.640	0.320	0.333	0.568	0.582

TABLE 15 2009 HUDSON RIVER YOY WHITE PERCH CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East											
18E	23	0	0	0	0	0	0	0	0	0.000	0.000
21E	23	0	0	0	0	0	0	0	0	0.000	0.000
17E	24	0	0	0	0	0	0	0	0	0.000	0.000
16E	25	1	0	0	0	0	0	0	0	0.000	0.005
12E	29	0	0	0	0	0	0	0	0	0.000	0.000
14E	29	0	0	0	0	0	0	0	0	0.000	0.000
19E	33	3	0	0	0	1	0	0	0	0.007	0.020
11E	34	0	0	0	1	0	0	0	0	0.007	0.005
9E	34	0	3	0	0	0	0	0	0	0.000	0.015
7EE	35	0	0	1	5	5	0	0	0	0.074	0.056
7EW	35	0	8	0	27	4	0	1	0	0.216	0.204
8E	35	74	59	128	184	57	29	17	0	2.804	2.796
4E	39	1	0	1	0	2	15	12	1	0.209	0.163
West											
15WS	27	0	0	0	0	0	0	1	0	0.007	0.005
16WN	27	0	0	69	0	0	0	0	0	0.466	0.352
14W	29	10	12	11	23	36	2	7	0	0.534	0.515
12W	30	2	48	4	15	5	11	3	0	0.257	0.449
11W	32	1	0	0	0	0	0	0	4	0.027	0.026
10W	35	27	49	48	46	119	41	9	9	1.838	1.776
9W	35	0	0	0	0	1	1	0	1	0.020	0.015
8W	36	0	0	0	0	7	4	8	0	0.128	0.097
7W	37	7	14	29	67	82	30	1	0	1.412	1.173
3W	39	0	0	0	0	0	0	1	0	0.007	0.005
4W	39	5	0	5	0	0	1	2	0	0.054	0.066
5W	39	3	5	54	6	44	15	7	0	0.851	0.684
Effort		24	24	24	25	25	25	25	24	148	196
Catch		134	198	350	374	363	149	69	15	1320	1652
C/E		5.583	8.250	14.583	14.960	14.520	5.960	2.760	0.625	8.919	8.429

TABLE 16 2009 HUDSON RIVER OLDER WHITE PERCH CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East											
18E	23	0	0	0	3	0	1	6	0	0.068	0.051
21E	23	3	0	0	2	2	1	2	0	0.047	0.051
17E	24	6	0	3	0	17	2	4	1	0.182	0.168
16E	25	1	0	0	0	3	0	0	5	0.054	0.046
12E	29	2	0	1	2	2	0	1	1	0.047	0.046
14E	29	14	14	0	0	0	0	8	0	0.054	0.184
19E	33	23	22	16	0	1	3	0	4	0.162	0.352
11E	34	43	5	3	10	0	0	0	7	0.135	0.347
9E	34	16	35	13	1	0	0	0	18	0.216	0.423
7EE	35	0	4	5	0	13	0	0	5	0.155	0.138
7EW	35	13	25	15	1	11	0	11	1	0.264	0.393
8E	35	69	59	5	1	1	1	0	0	0.054	0.694
4E	39	34	3	6	0	16	10	10	3	0.304	0.418
West											
15WS	27	22	0	2	8	13	23	0	0	0.311	0.347
16WN	27	40	12	0	128	67	16	0	0	1.426	1.342
14W	29	12	14	2	1	3	4	4	1	0.101	0.209
12W	30	1	22	0	4	1	0	0	0	0.034	0.143
11W	32	1	0	0	1	0	11	0	4	0.108	0.087
10W	35	3	10	0	5	6	3	0	3	0.115	0.153
9W	35	5	0	1	0	6	3	0	3	0.088	0.092
8W	36	28	16	18	2	22	3	2	0	0.318	0.464
7W	37	23	25	5	11	15	7	3	0	0.277	0.454
3W	39	0	0	5	2	6	8	0	1	0.149	0.112
4W	39	0	4	9	1	10	9	1	2	0.216	0.184
5W	39	5	20	15	4	15	12	1	0	0.318	0.367
Effort		24	24	24	25	25	25	25	24	148	196
Catch		364	290	124	187	230	117	53	59	770	1424
C/E		15.167	12.083	5.167	7.480	9.200	4.680	2.120	2.458	5.203	7.265

TABLE 17 2009 HUDSON RIVER WHITE PERCH SIZE DISTRIBUTION

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
< 20									0	0
20-24		1							0	1
25-29	2	1	1						1	4
30-34	4	3							0	7
35-39	11	3	3	1		1			5	19
40-44	14	3	12	3		1			16	33
45-49	18	4	10	8	5	6	1	2	32	54
50-54	24	4	19	10	10	8	2	1	50	78
55-59	11	9	8	18	15	7	6	2	56	76
60-64	2	25	13	19	22	10	9		73	100
65-69		39	6	16	21	15	9	4	71	110
70-74		23	25	14	16	17	8		80	103
75-79		13	27	22	25	12	5	2	93	106
80-84	1	2	8	27	25	21	10		91	94
85-89			3	9	16	19	9	1	57	57
90-94	4	1	1	6	10	15	6	1	39	44
95-99	1	2		6	1	4	2	1	14	17
100-104	5		2	1	1	1	1	1	7	12
105-109	11	3	1	3	2				6	20
110-114	9	3	4	2	1	1	1		9	21
115-119	7	10	3	2	5	1			11	28
120-124	16	16	11	5	4	5	1	1	27	59
125-129	14	16	11	2	12	3	2		30	60
130-134	13	16	10	6	12	7	1		36	65
135-139	5	9	8	4	12	7	5	3	39	53
140-144	4	7	4	3	12	10	2	4	35	46
145-149	6	2	1	2	4	6	2	8	23	31
150-154	2	3	4	1	7	4	2	6	24	29
155-159	1	2	5	3	4	4	2	3	21	24
160-164	5	7	4	3	6	4	7	5	29	41
165-169	5	4	2	2	6	5	2	1	18	27
170-174	6	5	8	3	8	5	5	6	35	46
175-179	6	4	5	1	7	9	6	7	35	45
180-184	7	6	4	5	2	2	7	2	22	35
185-189	4	1	8	2	8	1	1	2	22	27
190-194	6	2	2	3	6	3	4	4	22	30
195-199	6	3	3	5	4	3	2	2	19	28
200-204	4	5	4	5	8	3		1	21	30
205-209	3	5	2	2	2	2		1	9	17
210-214	1	2	1	5	3	3	1	1	14	17
215-219	1	1			2	1			3	5
220-224	2		1		2				3	5
225-229		3	1	1					2	5
230-234		2			1	2			3	5
235-239									0	0
240-244	1	1		2		2			4	6
>244	1			3		1			4	5
Measured	243	271	245	235	307	231	121	72	1211	1725
Mean	111.21	108.58	103.17	101.79	111.65	110.57	113.82	145.42	110.04	109.98
StDev	56.49	50.34	50.07	52.40	48.79	49.76	48.31	43.46	50.50	51.34

TABLE 18A 2009 HUDSON RIVER ATLANTIC TOMCOD CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	0	0	0	0	0	0	0	0	0.000	0.000
21E	23	0	0	0	0	0	0	0	0	0.000	0.000
17E	24	0	0	0	0	0	0	0	0	0.000	0.000
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	0	0	0	0	0	0	0	0.000	0.000
14E	29	0	0	0	0	0	0	0	0	0.000	0.000
19E	33	1	0	0	0	0	0	0	0	0.000	0.005
11E	34	0	0	0	0	0	0	0	0	0.000	0.000
9E	34	0	0	0	0	0	0	0	0	0.000	0.000
7EE	35	0	0	0	0	0	0	0	0	0.000	0.000
7EW	35	0	0	0	0	0	0	0	0	0.000	0.000
8E	35	0	0	0	0	0	0	0	0	0.000	0.000
4E	39	0	0	0	0	0	0	0	0	0.000	0.000
West											
15WS	27	0	0	0	0	0	0	0	0	0.000	0.000
16WN	27	0	0	0	0	0	0	0	0	0.000	0.000
14W	29	1	0	0	0	0	0	0	0	0.000	0.005
12W	30	1	0	0	0	0	0	0	0	0.000	0.005
11W	32	0	0	0	0	0	0	0	0	0.000	0.000
10W	35	11	1	1	0	0	0	0	0	0.007	0.066
9W	35	0	0	0	0	0	0	0	0	0.000	0.000
8W	36	0	0	0	0	0	0	0	0	0.000	0.000
7W	37	0	0	0	0	0	0	0	0	0.000	0.000
3W	39	0	0	0	0	0	0	0	0	0.000	0.000
4W	39	0	0	0	0	0	0	0	0	0.000	0.000
5W	39	0	0	3	0	0	0	0	0	0.020	0.015
Effort		24	24	24	25	25	25	25	24	148	196
Catch		14	1	4	0	0	0	0	0	4	19
C/E		0.583	0.042	0.167	0.000	0.000	0.000	0.000	0.000	0.027	0.097

TABLE 18B 2009 HUDSON RIVER ATLANTIC TOMCOD LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<10									0	0
10-14									0	0
15-19									0	0
20-24									0	0
25-29									0	0
30-34									0	0
35-39									0	0
40-44									0	0
45-49									0	0
50-54									0	0
55-59									0	0
60-64									0	0
65-69									0	0
70-74									0	0
75-79	1								0	1
80-84	3		1						1	4
85-89	2	1							0	3
90-94	1		1						1	2
95-99	4		2						2	6
100-104									0	0
105-109									0	0
110-114	2								0	2
115-119									0	0
120-124									0	0
125-129									0	0
130-134									0	0
135-139									0	0
140-144									0	0
>144									0	0
Measured	13	1	4	0	0	0	0	0	4	18
Mean	92.0	88.0	91.5	0.0	0.0	0.0	0.0	0.0	91.5	91.7
StdDev	10.8		6.1	0.0	0.0	0.0	0.0	0.0	6.1	9.5

TABLE 19 2009 HUDSON RIVER AMERICAN EEL CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	0	0	0	1	0	0	0	0	0.007	0.005
21E	23	1	0	0	0	0	0	0	0	0.000	0.005
17E	24	0	1	0	0	0	0	1	0	0.007	0.010
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	0	0	0	0	0	0	1	0.007	0.005
14E	29	0	0	0	0	0	0	0	0	0.000	0.000
19E	33	0	0	0	0	0	0	0	0	0.000	0.000
11E	34	0	1	0	0	0	0	0	0	0.000	0.005
9E	34	0	0	0	0	0	0	0	0	0.000	0.000
7EE	35	1	0	0	0	0	0	0	0	0.000	0.005
7EW	35	0	0	0	0	1	0	0	0	0.007	0.005
8E	35	1	1	1	1	0	0	1	0	0.020	0.026
4E	39	3	0	0	0	0	2	0	7	0.061	0.061
West											
15WS	27	0	0	0	0	0	1	0	0	0.007	0.005
16WN	27	0	0	0	1	0	0	0	0	0.007	0.005
14W	29	0	0	0	0	0	0	1	0	0.007	0.005
12W	30	1	1	0	0	0	0	2	0	0.014	0.020
11W	32	0	2	0	0	1	2	1	1	0.034	0.036
10W	35	0	1	0	0	0	0	0	1	0.007	0.010
9W	35	0	0	0	0	0	0	0	0	0.000	0.000
8W	36	1	0	0	0	0	0	1	0	0.007	0.010
7W	37	0	0	1	1	0	0	0	0	0.014	0.010
3W	39	0	0	0	0	0	0	0	0	0.000	0.000
4W	39	0	0	0	0	0	0	0	0	0.000	0.000
5W	39	0	0	1	0	2	0	0	1	0.027	0.020
Effort		24	24	24	25	25	25	25	24	148	196
Catch		8	7	3	4	4	5	7	11	34	49
C/E		0.333	0.292	0.125	0.160	0.160	0.200	0.280	0.458	0.230	0.250

TABLE 20 2009 HUDSON RIVER AMERICAN EEL LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
< 60									0	0
60 - 79									0	0
80 - 99									0	0
100 - 119									0	0
120 - 139									0	0
140 - 159									0	0
160 - 179									0	0
180 - 199									0	0
200 - 219									0	0
220 - 239									0	0
240 - 259									0	0
260 - 279									0	0
280 - 299			**did not measure American eels in 2009**						0	0
300 - 319									0	0
320 - 339									0	0
340 - 359									0	0
360 - 379									0	0
380 - 399									0	0
400 - 419									0	0
420 - 439									0	0
440 - 459									0	0
460 - 479									0	0
480 - 499									0	0
500 - 519									0	0
520 - 539									0	0
540 - 559									0	0
560 - 579									0	0
580 - 599									0	0
600 - 619									0	0
620 - 639									0	0
640 - 659									0	0
660 - 679									0	0
680 - 699									0	0
> 699									0	0
Measured	0	0	0	0	0	0	0	0	0	0
Mean										
StDev										

TABLE 21 2009 HUDSON RIVER YOY BLUEFISH CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	0	3	1	0	0	1	0	0	0.014	0.026
21E	23	3	4	0	5	6	1	0	0	0.081	0.097
17E	24	3	7	0	0	0	1	0	0	0.007	0.056
16E	25	0	0	0	0	1	1	0	0	0.014	0.010
12E	29	0	5	0	0	4	6	0	0	0.068	0.077
14E	29	0	0	0	1	0	0	0	0	0.007	0.005
19E	33	11	2	2	0	0	0	0	0	0.014	0.077
11E	34	0	0	1	0	2	3	0	0	0.041	0.031
9E	34	0	5	2	3	1	1	0	0	0.047	0.061
7EE	35	0	2	2	1	0	0	0	0	0.020	0.026
7EW	35	0	1	4	0	0	1	0	0	0.034	0.031
8E	35	0	8	25	10	1	1	0	0	0.250	0.230
4E	39	0	2	3	0	0	1	0	0	0.027	0.031
West											
15WS	27	0	0	66	4	1	0	0	0	0.480	0.362
16WN	27	0	0	3	2	0	0	0	0	0.034	0.026
14W	29	1	0	3	1	1	0	0	0	0.034	0.031
12W	30	1	7	8	3	1	0	0	0	0.081	0.102
11W	32	1	21	0	3	7	2	0	0	0.081	0.173
10W	35	2	10	12	6	3	1	3	0	0.169	0.189
9W	35	0	0	35	2	1	2	0	0	0.270	0.204
8W	36	0	0	12	9	3	1	0	0	0.169	0.128
7W	37	0	6	18	4	2	1	0	0	0.169	0.158
3W	39	0	0	13	8	0	3	0	0	0.162	0.122
4W	39	0	14	13	0	0	0	0	0	0.088	0.138
5W	39	0	11	9	4	1	0	1	0	0.101	0.133
Effort		24	24	24	25	25	25	25	24	148	196
Catch		22	108	232	66	35	27	4	0	364	494
C/E		0.917	4.500	9.667	2.640	1.400	1.080	0.160	0.000	2.459	2.520

TABLE 22 2009 HUDSON RIVER BLUEFISH LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<65		7	1						1	8
65-69		7	2		2				4	11
70-74		10	1						1	11
75-79		10	10						10	20
80-84		6	16						16	22
85-89		2	26						26	28
90-94			30	7					37	37
95-99			21	7					28	28
100-104	1		15	2					17	18
105-109	1	1	10	4	1		1		16	18
110-114	5		10	7		1			18	23
115-119	3		9	3	3	2			17	20
120-124	4	3	4	7	4	4	1		20	27
125-129	6	5		1	2		1		4	15
130-134	1	8		4	1	4	1		10	19
135-139		11	1		4	4			9	20
140-144		9			2	5			7	16
145-149		9	2		1				3	12
150-154		8	2	1	1	1			5	13
155-159		5	8						8	13
160-164		1	3	2	1	1			7	8
165-169			3	1					4	4
170-174		1	3	2	1				6	7
175-179			6	2	2	1			11	11
180-184		1	5	6	2				13	14
185-189		1			2				2	3
190-194				3					3	3
195-199		1				1			1	2
200-204			1	2	1	2			6	6
205-209			1	2					3	3
210-214	1			2					2	3
215-219					1				1	1
220-224					1				1	1
225-229						1			1	1
230-234				1	1				2	2
235-239		1							0	1
240-244		1			1				1	2
245-249					1				1	1
250-254									0	0
255-259									0	0
260-264									0	0
265-269									0	0
>269									0	0
Measured	22	108	190	66	35	27	4	0	322	452
Mean	122.50	117.49	108.01	137.41	153.69	146.00	121.75		122.35	121.20
StDev	21.77	41.00	31.42	40.46	45.08	30.24	10.05		39.06	38.87

TABLE 23 2009 HUDSON RIVER WINTER FLOUNDER CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	3	0	1	2	0	0	6	1	0.068	0.066
21E	23	3	0	0	10	2	1	2	3	0.122	0.107
17E	24	1	0	0	11	3	1	6	3	0.162	0.128
16E	25	2	0	3	8	0	0	0	0	0.074	0.066
12E	29	0	0	0	0	1	0	0	3	0.027	0.020
14E	29	0	0	0	0	0	0	3	0	0.020	0.015
19E	33	0	0	0	0	0	0	0	0	0.000	0.000
11E	34	0	0	0	0	0	0	0	0	0.000	0.000
9E	34	0	0	0	0	0	0	0	0	0.000	0.000
7EE	35	0	0	0	0	0	0	0	0	0.000	0.000
7EW	35	0	0	0	0	0	0	0	0	0.000	0.000
8E	35	0	0	0	0	0	0	0	0	0.000	0.000
4E	39	0	0	0	0	0	0	0	0	0.000	0.000
West											
15WS	27	1	0	0	0	1	0	0	0	0.007	0.010
16WN	27	0	0	0	0	0	0	1	0	0.007	0.005
14W	29	0	0	0	0	0	0	0	0	0.000	0.000
12W	30	0	0	0	0	0	0	0	0	0.000	0.000
11W	32	0	0	0	0	0	3	0	0	0.020	0.015
10W	35	0	0	0	0	0	0	0	0	0.000	0.000
9W	35	0	0	0	0	0	0	0	0	0.000	0.000
8W	36	0	0	0	0	0	0	0	0	0.000	0.000
7W	37	0	0	0	0	0	0	0	0	0.000	0.000
3W	39	0	0	0	0	0	0	0	0	0.000	0.000
4W	39	0	0	0	0	0	0	0	0	0.000	0.000
5W	39	0	0	0	0	0	0	0	0	0.000	0.000
Effort		24	24	24	25	25	25	25	24	148	196
Catch		10	0	4	31	7	5	18	10	75	85
C/E		0.417	0.000	0.167	1.240	0.280	0.200	0.720	0.417	0.507	0.434

TABLE 24 2009 HUDSON RIVER WINTER FLOUNDER LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<25									0	0
25-29									0	0
30-34									0	0
35-39									0	0
40-44									0	0
45-49									0	0
50-54				2					2	2
55-59									0	0
60-64				6					6	6
65-69				5	1				6	6
70-74			1	4	1				6	6
75-79				4	4				8	8
80-84			2	2					4	4
85-89				4			3	1	8	8
90-94				2	1	2	4		9	9
95-99				1			1		2	2
100-104							7	4	11	11
105-109						1			1	1
110-114				1		1	1	1	4	4
115-119	1						1	3	4	5
120-124									0	0
125-129	4						3		3	7
130-134	2								0	2
135-139								1	1	1
140-144	1						1		1	2
145-149							1		1	1
150-154	1								0	1
155-159	1								0	1
160-164									0	0
165-169									0	0
170-174									0	0
175-179									0	0
180-184									0	0
185-189									0	0
190-194									0	0
195-199									0	0
>199						1			1	1
Measured	10	0	3	31	7	5	22	10	78	88
Mean	134.2		76.7	74.5	76.3	126.0	106.1	109.5	91.42	96.28
StDev	13.0		5.8	13.3	6.7	56.8	17.6	13.0	25.93	28.26

TABLE 25 2009 HUDSON RIVER AMERICAN SHAD CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	0	0	0	0	0	1	0	0	0.007	0.005
21E	23	0	0	0	0	0	1	0	0	0.007	0.005
17E	24	0	0	0	0	0	0	0	0	0.000	0.000
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	4	0	0	0	0	1	0	0.007	0.026
14E	29	0	1	0	0	0	0	0	0	0.000	0.005
19E	33	0	2	0	0	0	0	0	0	0.000	0.010
11E	34	1	0	25	0	0	1	0	0	0.176	0.138
9E	34	6	4	0	0	0	0	0	1	0.007	0.056
7EE	35	0	7	0	0	1	0	0	0	0.007	0.041
7EW	35	0	5	2	0	14	0	0	0	0.108	0.107
8E	35	1	1	18	0	8	6	5	0	0.250	0.199
4E	39	0	2	0	0	1	1	0	0	0.014	0.020
West											
15WS	27	2	0	0	0	0	0	0	0	0.000	0.010
16WN	27	0	0	0	1	0	2	0	0	0.020	0.015
14W	29	0	34	6	4	8	9	0	0	0.182	0.311
12W	30	0	53	2	1	6	1	0	0	0.068	0.321
11W	32	3	3	0	0	0	1	1	1	0.020	0.046
10W	35	0	4	8	1	8	0	2	1	0.135	0.122
9W	35	2	0	0	0	0	1	0	0	0.007	0.015
8W	36	5	0	0	0	0	0	0	0	0.000	0.026
7W	37	8	1	20	19	0	0	1	0	0.270	0.250
3W	39	0	4	11	0	0	0	2	2	0.101	0.097
4W	39	0	1	9	0	0	0	1	0	0.068	0.056
5W	39	3	5	2	0	2	0	0	0	0.027	0.061
Effort		24	24	24	25	25	25	25	24	148	196
Catch		31	131	103	26	48	24	13	5	219	381
C/E		1.292	5.458	4.292	1.040	1.920	0.960	0.520	0.208	1.480	1.944

TABLE 26 2009 HUDSON RIVER AMERICAN SHAD LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<25									0	0
25-29									0	0
30-34									0	0
35-39									0	0
40-44									0	0
45-49									0	0
50-54							1		1	1
55-59									0	0
60-64									0	0
65-69									0	0
70-74					1				1	1
75-79	2	4							0	6
80-84	10	14	2						2	26
85-89	10	41	24	2					26	77
90-94	6	27	40	6	8	1	1		56	89
95-99	4	13	22	15	18	3	1		59	76
100-104		4	12	2	15	7	4	4	44	48
105-109		1	2	1	5	8	5	1	22	23
110-114						4	1		5	5
115-119					1				1	1
120-124									0	0
125-129						1			1	1
130-134									0	0
135-139									0	0
140-144			1						1	1
145-149									0	0
>149									0	0
Measured	32	104	103	26	48	24	13	5	219	355
Mean	87.13	89.09	93.55	95.77	98.58	105.08	99.69	103.60	96.78	93.6535
StDev	5.61	5.54	7.10	4.12	6.25	7.35	14.74	1.67	8.16	8.29

TABLE 27 2009 HUDSON RIVER ALEWIFE CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	0	0	0	0	0	0	0	0	0.000	0.000
21E	23	0	0	0	0	0	0	0	0	0.000	0.000
17E	24	0	0	0	0	0	1	0	0	0.007	0.005
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	0	0	0	1	0	0	0	0.007	0.005
14E	29	0	0	0	0	0	0	0	1	0.007	0.005
19E	33	0	0	0	0	0	0	0	0	0.000	0.000
11E	34	0	0	0	0	0	0	0	0	0.000	0.000
9E	34	0	0	0	0	0	0	0	0	0.000	0.000
7EE	35	0	0	0	0	3	0	0	0	0.020	0.015
7EW	35	0	0	0	0	29	0	0	0	0.196	0.148
8E	35	1	67	43	4	22	119	0	0	1.270	1.306
4E	39	0	0	0	0	0	0	0	0	0.000	0.000
West											
15WS	27	0	0	0	0	0	0	0	0	0.000	0.000
16WN	27	0	0	0	0	0	0	0	0	0.000	0.000
14W	29	6	12	22	3	0	3	0	0	0.189	0.235
12W	30	0	30	3	6	3	1	0	0	0.088	0.219
11W	32	0	0	0	0	0	0	0	0	0.000	0.000
10W	35	0	17	9	1	0	0	0	0	0.068	0.138
9W	35	0	0	0	0	0	0	0	0	0.000	0.000
8W	36	0	0	0	0	0	0	0	0	0.000	0.000
7W	37	0	2	7	15	0	0	0	0	0.149	0.122
3W	39	0	0	0	0	0	0	0	0	0.000	0.000
4W	39	0	0	0	0	0	0	0	0	0.000	0.000
5W	39	0	0	0	0	0	0	0	0	0.000	0.000
Effort		24	24	24	25	25	25	25	24	148	196
Catch		7	128	84	29	58	124	0	1	296	431
C/E		0.292	5.333	3.500	1.160	2.320	4.960	0.000	0.042	2.000	2.199

TABLE 28 2009 HUDSON RIVER ALEWIFE LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<25									0	0
25-29									0	0
30-34									0	0
35-39									0	0
40-44									0	0
45-49									0	0
50-54									0	0
55-59									0	0
60-64									0	0
65-69									0	0
70-74									0	0
75-79		4	2						2	6
80-84		17	4						4	21
85-89		13	9	2	1				12	25
90-94		15	20	7	14	2			43	58
95-99	1	11	10	6	30	6			52	64
100-104	1	3	3	6	6	12			27	31
105-109	1	5	3	2	3	9			17	23
110-114	2	3	2	2	1	5		1	11	16
115-119	1	6	3	1					4	11
120-124			1	1					2	2
125-129		1	4						4	5
130-134		2	3	1					4	6
135-139		2	1			1			2	4
140-144	1	7	3						3	11
145-149		4	5						5	9
>149		2	2	1	3				6	8
Measured	7	95	75	29	58	35	0	1	198	300
Mean	112.86	102.36	105.08	102.38	99.83	104.69		112.00	103.11	103.10
StDev	15.8054	21.646	21.24	14.32	13.61	8.08			16.41	18.22

TABLE 29 2009 HUDSON RIVER BLUEBACK HERRING CATCH BY STATION

Table 29. Blueback herring catch by station, 2009

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East		0	0	0	0	0	0	0	0		
18E	23	0	0	0	0	0	0	0	0	0.000	0.000
21E	23	0	0	0	0	0	1	0	0	0.007	0.005
17E	24	0	0	0	0	0	0	0	1	0.007	0.005
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	0	0	0	0	0	0	0	0.000	0.000
14E	29	0	0	0	0	0	0	0	0	0.000	0.000
19E	33	0	0	0	0	0	0	0	2	0.014	0.010
11E	34	0	0	0	0	0	0	0	0	0.000	0.000
9E	34	0	0	0	0	0	0	0	1	0.007	0.005
7EE	35	0	0	0	0	0	0	0	0	0.000	0.000
7EW	35	0	0	0	0	0	0	0	0	0.000	0.000
8E	35	0	0	0	0	0	8	46	0	0.365	0.276
4E	39	0	0	0	0	0	0	0	0	0.000	0.000
West											
15WS	27	0	0	0	0	0	0	0	0	0.000	0.000
16WN	27	0	0	0	0	0	0	0	0	0.000	0.000
14W	29	0	0	0	0	0	0	0	0	0.000	0.000
12W	30	0	0	0	0	0	0	0	0	0.000	0.000
11W	32	0	0	0	0	0	0	1	1	0.014	0.010
10W	35	0	0	0	0	1	0	1	0	0.014	0.010
9W	35	0	0	0	0	0	0	0	0	0.000	0.000
8W	36	0	0	0	0	0	0	0	0	0.000	0.000
7W	37	0	0	0	0	0	0	0	0	0.000	0.000
3W	39	0	0	0	0	0	1	3	0	0.027	0.020
4W	39	0	0	0	0	0	0	14	0	0.095	0.071
5W	39	0	0	0	0	0	0	3	0	0.020	0.015
Effort		24	24	24	25	25	25	25	24	148	196
Catch		0	0	0	0	1	10	68	5	84	84
C/E		0.000	0.000	0.000	0.000	0.040	0.400	2.720	0.208	0.568	0.429

TABLE 30 2009 HUDSON RIVER BLUEBACK HERRING LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	N Weeks 1 - 9
<25									0	0
25-29									0	0
30-34									0	0
35-39									0	0
40-44									0	0
45-49									0	0
50-54									0	0
55-59									0	0
60-64									0	0
65-69					1		1		2	2
70-74							5	1	6	6
75-79							10	1	11	11
80-84							17	1	18	18
85-89							12		12	12
90-94						1	4	1	6	6
95-99						5	3		8	8
100-104						2	1		3	3
105-109						2		1	3	3
110-114									0	0
115-119									0	0
120-124									0	0
125-129									0	0
130-134									0	0
135-139									0	0
140-144									0	0
145-149									0	0
>149									0	0
Measured	0	0	0	0	1	10	53	5	69	69
Mean					65.00	99.50	82.83	86.40	85.25	85.25
StDev						3.69	7.18	14.81	9.73	9.73

TABLE 31 2009 HUDSON RIVER ATLANTIC MENHADEN CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	0	0	0	2	0	0	0	0	0.014	0.010
21E	23	0	1	0	0	0	0	0	0	0.000	0.005
17E	24	0	0	0	0	0	0	0	0	0.000	0.000
16E	25	0	0	0	0	0	0	0	0	0.000	0.000
12E	29	0	0	0	0	0	0	0	0	0.000	0.000
14E	29	0	0	0	0	3	0	0	0	0.020	0.015
19E	33	0	0	0	2	0	0	0	0	0.014	0.010
11E	34	0	0	0	0	0	0	0	0	0.000	0.000
9E	34	0	0	0	0	0	0	0	0	0.000	0.000
7EE	35	0	0	0	1	5	0	0	0	0.041	0.031
7EW	35	0	0	0	0	4	0	0	0	0.027	0.020
8E	35	0	1249	0	2	0	0	0	0	0.014	6.383
4E	39	0	1	0	0	0	0	0	0	0.000	0.005
West											
15WS	27	0	0	1	1	0	1	0	0	0.020	0.015
16WN	27	0	0	6	388	0	16	0	0	2.770	2.092
14W	29	0	0	0	2	1	0	0	0	0.020	0.015
12W	30	0	0	0	0	0	2	0	0	0.014	0.010
11W	32	0	781	1	2	0	4	0	0	0.047	4.020
10W	35	0	0	0	0	0	0	0	0	0.000	0.000
9W	35	0	1	0	0	0	0	0	0	0.000	0.005
8W	36	0	0	0	0	0	0	3	0	0.020	0.015
7W	37	0	0	0	0	0	0	0	0	0.000	0.000
3W	39	0	0	1	0	0	0	5	0	0.041	0.031
4W	39	0	0	0	0	0	8	2	0	0.068	0.051
5W	39	0	0	0	0	0	33	0	0	0.223	0.168
Effort		24	24	24	25	25	25	25	24	148	196
Catch		0	2033	9	400	13	64	10	0	496	2529
C/E		0.000	84.708	0.375	16.000	0.520	2.560	0.400	0.000	3.351	12.903

TABLE 32 2009 HUDSON RIVER ATLANTIC MENHADEN LENGTH FREQUENCY

TL (mm)	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	N Weeks 4 - 9	C/F Weeks 1 - 9
<25									0	0
25-29									0	0
30-34		1							0	1
35-39		17	2	3					5	22
40-44		12	1			1			2	14
45-49		7	2	5					7	14
50-54			1			1	3		5	5
55-59			2	2	1				5	5
60-64						4	1		5	5
65-69				3	1	6	3		13	13
70-74				1	4	4	1		10	10
75-79					2	4	2		8	8
80-84					1	3			4	4
85-89		1		1	2	2			5	6
90-94		10		1	1	1			3	13
95-99		11				2		1	3	14
100-104		5			1	10			11	16
105-109						14			14	14
110-114		1	1			6			7	8
115-119		2		1		1			2	4
120-124				4					4	4
125-129				5					5	5
130-134				7					7	7
135-139				3					3	3
140-144				5		1			6	6
145-149				1		1			2	2
>149									0	0
Measured	0	67	9	42	13	61	10	1	136	203
Mean		66.19	53.22	103.95	77.85	92.41	65.00	97.00	90.01	82.1478
StDev		28.91	22.80	39.12	11.54	21.44	9.30		30.52	31.96

TABLE 33 2009 HUDSON RIVER SILVERSIDE CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	90	9	73	119	59	7	26	5	1.953	1.980
21E	23	255	25	86	132	0	17	45	81	2.439	3.270
17E	24	65	2	0	385	0	15	86	113	4.047	3.398
16E	25	179	0	4	104	40	18	3	23	1.297	1.893
12E	29	5	48	99	387	10	10	9	5	3.514	2.923
14E	29	9	4	0	103	38	3	2	4	1.014	0.832
19E	33	123	38	127	120	42	71	73	39	3.189	3.230
11E	34	0	4	0	270	248	55	19	195	5.318	4.036
9E	34	3	35	5	193	2	44	0	66	2.095	1.776
7EE	35	24	8	0	0	1	1	3	2	0.047	0.199
7EW	35	21	0	5	128	1	13	57	13	1.466	1.214
8E	35	4	1	67	514	67	1	0	0	4.385	3.337
4E	39	0	1	7	9	5	50	17	0	0.595	0.454
West											
15WS	27	58	0	432	126	524	19	16	32	7.764	6.158
16WN	27	48	115	26	7	5	48	15	10	0.750	1.398
14W	29	116	23	260	90	164	64	17	5	4.054	3.770
12W	30	49	78	187	159	117	45	3	0	3.453	3.255
11W	32	1	1	9	40	6	1	5	8	0.466	0.362
10W	35	0	3	0	79	2	7	3	0	0.615	0.480
9W	35	0	0	23	0	15	10	11	0	0.399	0.301
8W	36	0	0	0	32	1	4	5	0	0.284	0.214
7W	37	0	0	53	240	24	9	4	1	2.236	1.689
3W	39	0	0	0	6	3	10	3	0	0.149	0.112
4W	39	0	0	0	1	9	3	8	0	0.142	0.107
5W	39	0	0	0	33	58	4	14	0	0.736	0.556
Effort		24	24	24	25	25	25	25	24	148	196
Catch		1050	395	1463	3277	1441	529	444	602	7756	9201
C/E		43.750	16.458	60.958	131.080	57.640	21.160	17.760	25.083	52.405	46.944

TABLE 34 2009 HUDSON RIVER ATLANTIC SILVERSIDE LENGTH FREQUENCY

TL (mm)	Week 1 Jul 15	Week 2 Jul 29	Week 3 Aug 12	Week 4 Aug 27	Week 5 Sep 11	Week 6 Sep 24	Week 7 Oct 7	Week 8 Oct 20	Week 9 Nov 4	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25										0	0
25 - 29										0	0
30 - 34										0	0
35 - 39										0	0
40 - 44										0	0
45 - 49										0	0
50 - 54										0	0
55 - 59										0	0
60 - 64										0	0
65 - 69										0	0
70 - 74										0	0
75 - 79				**did not measure silversides in 2009**						0	0
80 - 84										0	0
85 - 89										0	0
90 - 94										0	0
95 - 99										0	0
100 - 104										0	0
105 - 109										0	0
110 - 114										0	0
115 - 119										0	0
120 - 124										0	0
125 - 129										0	0
130 - 134										0	0
135 - 139										0	0
140 - 144										0	0
145 - 149										0	0
> 149										0	0
Measured	0	0	0	0	0	0	0	0	0	0	0
Mean	52.84	60.91	67.38	76.20	80.22	82.17	86.35	91.14	85.94	82.97	76.75
StDev	10.73	6.96	8.02	7.42	7.96	10.16	11.35	15.43	19.02	12.19	15.18

TABLE 35 2009 HUDSON RIVER YOY BLUE CRAB CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	5	5	19	117	13	4	21	146	2.162	1.684
21E	23	3	7	28	207	11	6	31	117	2.703	2.092
17E	24	2	8	14	185	15	3	10	1	1.541	1.214
16E	25	2	9	2	105	4	0	0	13	0.838	0.689
12E	29	0	0	1	2	2	0	0	0	0.034	0.026
14E	29	0	0	0	1	2	0	4	2	0.061	0.046
19E	33	1	0	1	1	1	1	0	0	0.027	0.026
11E	34	0	0	0	1	1	2	13	13	0.203	0.153
9E	34	0	0	0	1	3	0	0	0	0.027	0.020
7EE	35	0	0	0	4	4	1	0	2	0.074	0.056
7EW	35	0	0	0	36	35	1	2	2	0.514	0.388
8E	35	0	0	4	2	8	2	4	0	0.135	0.102
4E	39	0	0	8	13	15	17	18	3	0.500	0.378
West											
15WS	27	1	0	17	3	6	4	0	0	0.203	0.158
16WN	27	0	2	1	11	6	0	0	5	0.155	0.128
14W	29	0	0	0	6	1	0	0	2	0.061	0.046
12W	30	0	0	4	0	0	2	4	0	0.068	0.051
11W	32	0	14	2	31	12	9	2	8	0.432	0.398
10W	35	0	0	1	2	0	0	2	8	0.088	0.066
9W	35	1	0	2	0	1	0	4	2	0.061	0.051
8W	36	0	0	6	6	16	16	6	0	0.338	0.255
7W	37	0	0	0	0	3	6	0	0	0.061	0.046
3W	39	0	0	8	2	4	0	2	4	0.135	0.102
4W	39	0	1	4	1	0	4	7	8	0.162	0.128
5W	39	0	0	2	1	7	5	11	2	0.189	0.143
Effort		24	24	24	25	25	25	25	24	148	196
Catch		15	46	124	738	170	83	141	338	1594	1655
C/E		0.625	1.917	5.167	29.520	6.800	3.320	5.640	14.083	10.770	8.444

TABLE 36 2009 HUDSON RIVER OLDER BLUE CRAB CATCH BY STATION

Station	River Mile	Week 2 Aug 3	Week 3 Aug 18	Week 4 Sept 2	Week 5 Sept 15	Week 6 Sept 30	Week 7 Oct 14	Week 8 Oct 26	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
East											
18E	23	7	5	3	5	0	0	1	5	0.095	0.133
21E	23	8	4	3	5	1	0	4	0	0.088	0.128
17E	24	6	1	1	4	3	1	1	0	0.068	0.087
16E	25	11	5	2	5	0	0	0	0	0.047	0.117
12E	29	2	0	1	0	0	0	1	0	0.014	0.020
14E	29	0	1	0	1	0	0	2	0	0.020	0.020
19E	33	2	0	8	1	2	1	2	1	0.101	0.087
11E	34	0	4	2	1	0	0	0	0	0.020	0.036
9E	34	1	2	0	0	2	1	1	0	0.027	0.036
7EE	35	2	3	1	0	1	1	1	0	0.027	0.046
7EW	35	1	2	5	3	2	0	1	1	0.081	0.077
8E	35	0	0	1	0	1	0	1	0	0.020	0.015
4E	39	3	2	0	1	3	5	5	3	0.115	0.112
West											
15WS	27	0	0	5	1	2	0	0	0	0.054	0.041
16WN	27	0	2	2	4	3	0	0	0	0.061	0.056
14W	29	0	2	0	0	0	0	0	2	0.014	0.020
12W	30	0	1	1	1	4	0	0	0	0.041	0.036
11W	32	0	10	0	4	2	0	0	1	0.047	0.087
10W	35	1	0	0	0	0	1	2	3	0.041	0.036
9W	35	2	0	1	0	2	1	0	1	0.034	0.036
8W	36	0	0	1	4	0	2	2	0	0.061	0.046
7W	37	0	0	0	0	2	1	1	0	0.027	0.020
3W	39	0	0	2	0	1	1	3	0	0.047	0.036
4W	39	1	1	2	0	0	2	1	1	0.041	0.041
5W	39	2	1	3	1	4	1	0	2	0.074	0.071
Effort		24	24	24	25	25	25	25	24	148	196
Catch		49	46	44	41	35	18	29	20	187	282
C/E		2.042	1.917	1.833	1.640	1.400	0.720	1.160	0.833	1.264	1.439

FIGURE 1 NYS DEC YOY STRIPED BASS SEINE STATIONS

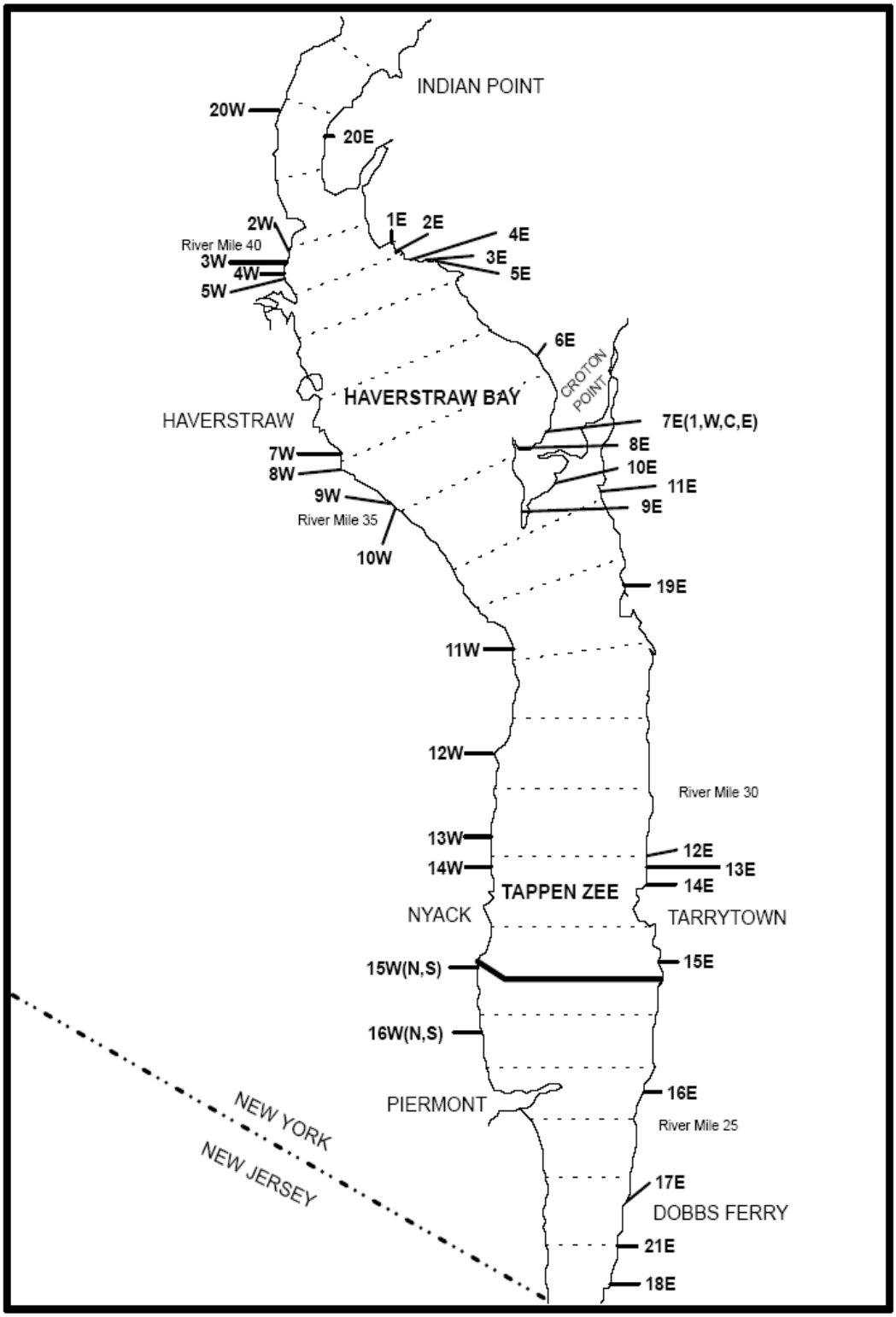


FIGURE 2

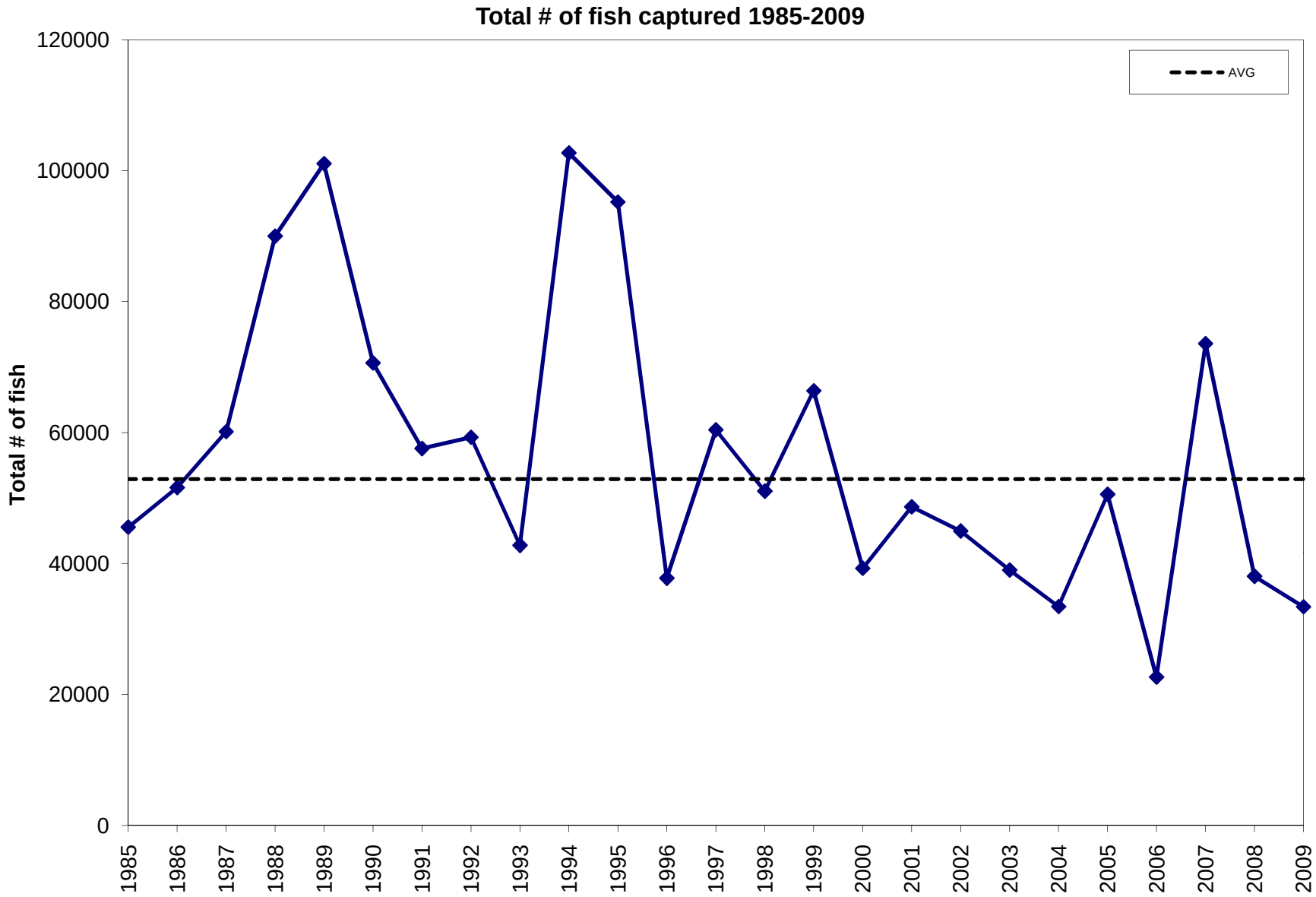
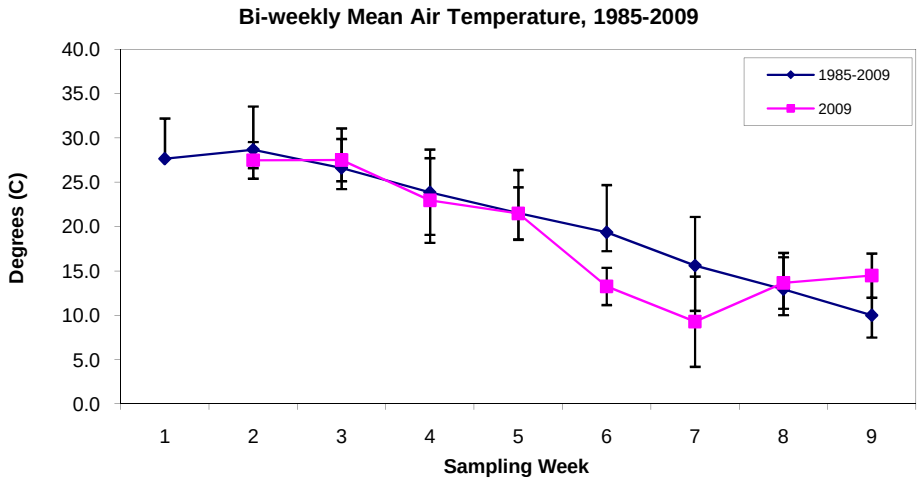
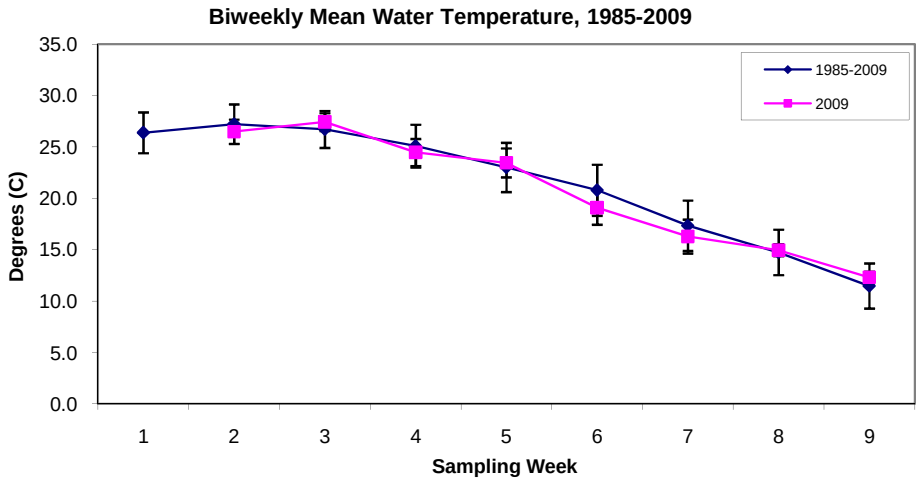
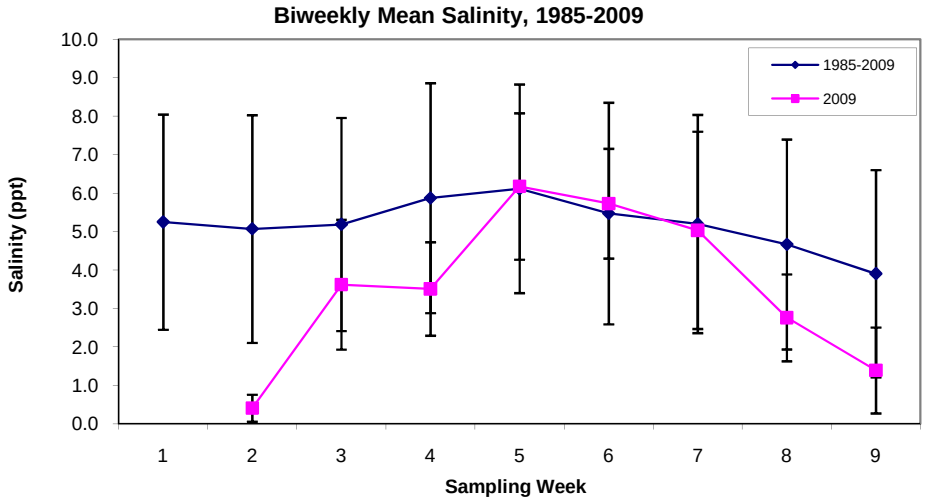

Total # of fish captured 1985-2009
Total # of fish
120000
100000
80000
60000
40000
20000
0
AVG
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

FIGURE 3


Bi-weekly Mean Air Temperature, 1985-2009
Degrees (C)
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
1985-2009
2009
1 2 3 4 5 6 7 8 9
Sampling Week


Biweekly Mean Water Temperature, 1985-2009
Degrees (C)
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
1985-2009
2009
1 2 3 4 5 6 7 8 9
Sampling Week


Biweekly Mean Salinity, 1985-2009
Salinity (ppt)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
1985-2009
2009
1 2 3 4 5 6 7 8 9
Sampling Week

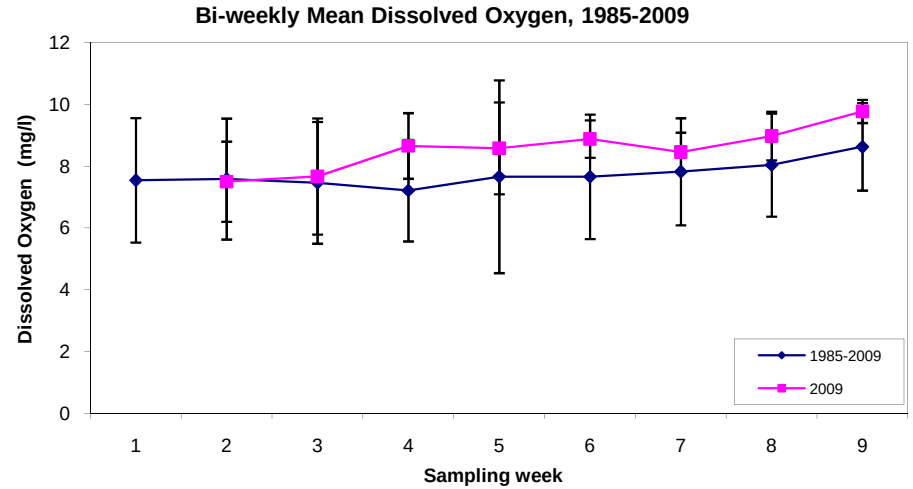

Bi-weekly Mean Dissolved Oxygen, 1985-2009
Dissolved Oxygen (mg/l)
12
10
8
6
4
2
0
1985-2009
2009
1 2 3 4 5 6 7 8 9
Sampling week

FIGURE 4

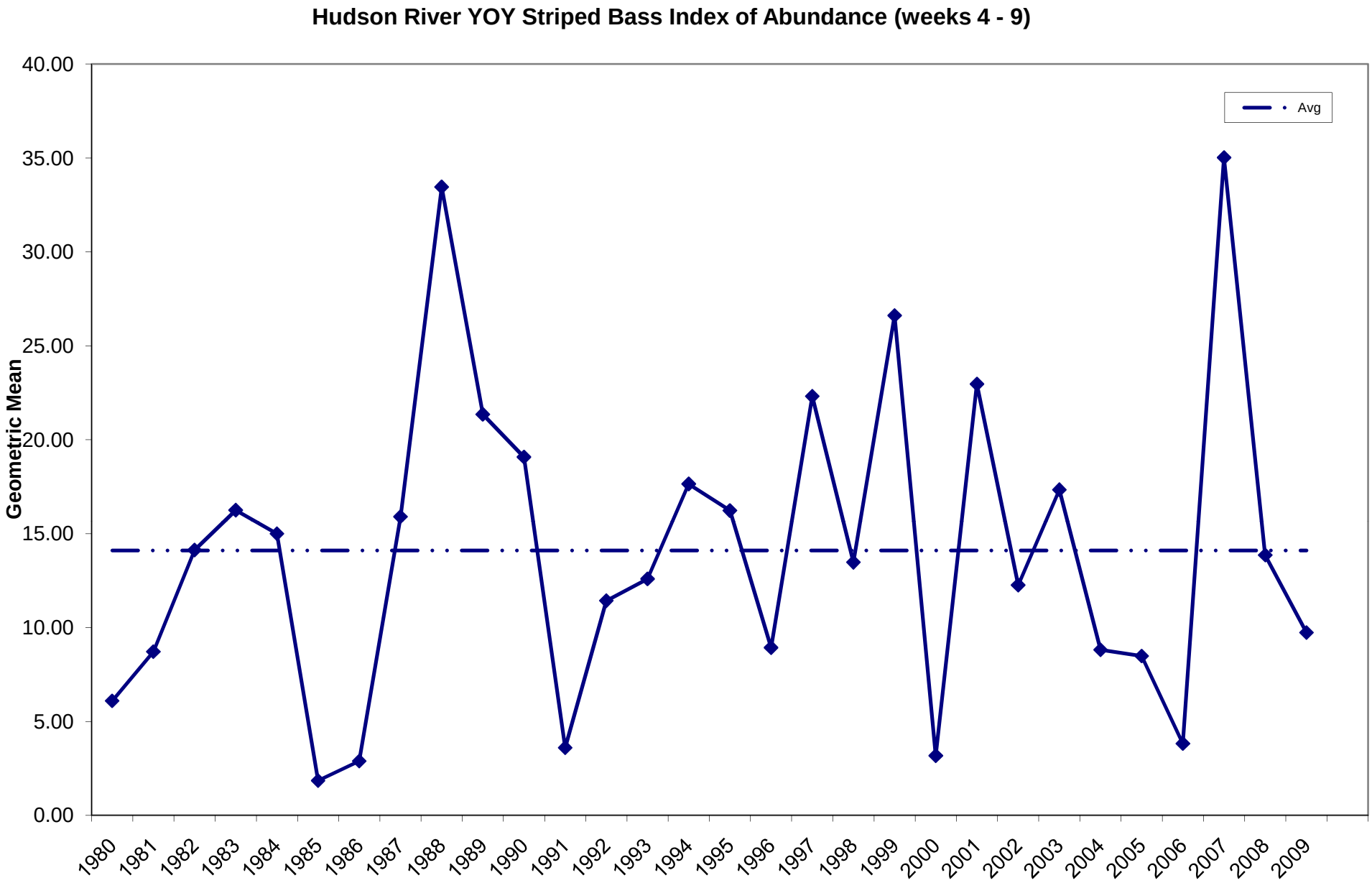

Hudson River YOY Striped Bass Index of Abundance (weeks 4 - 9)
Geometric Mean
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
Avg
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

FIGURE 5

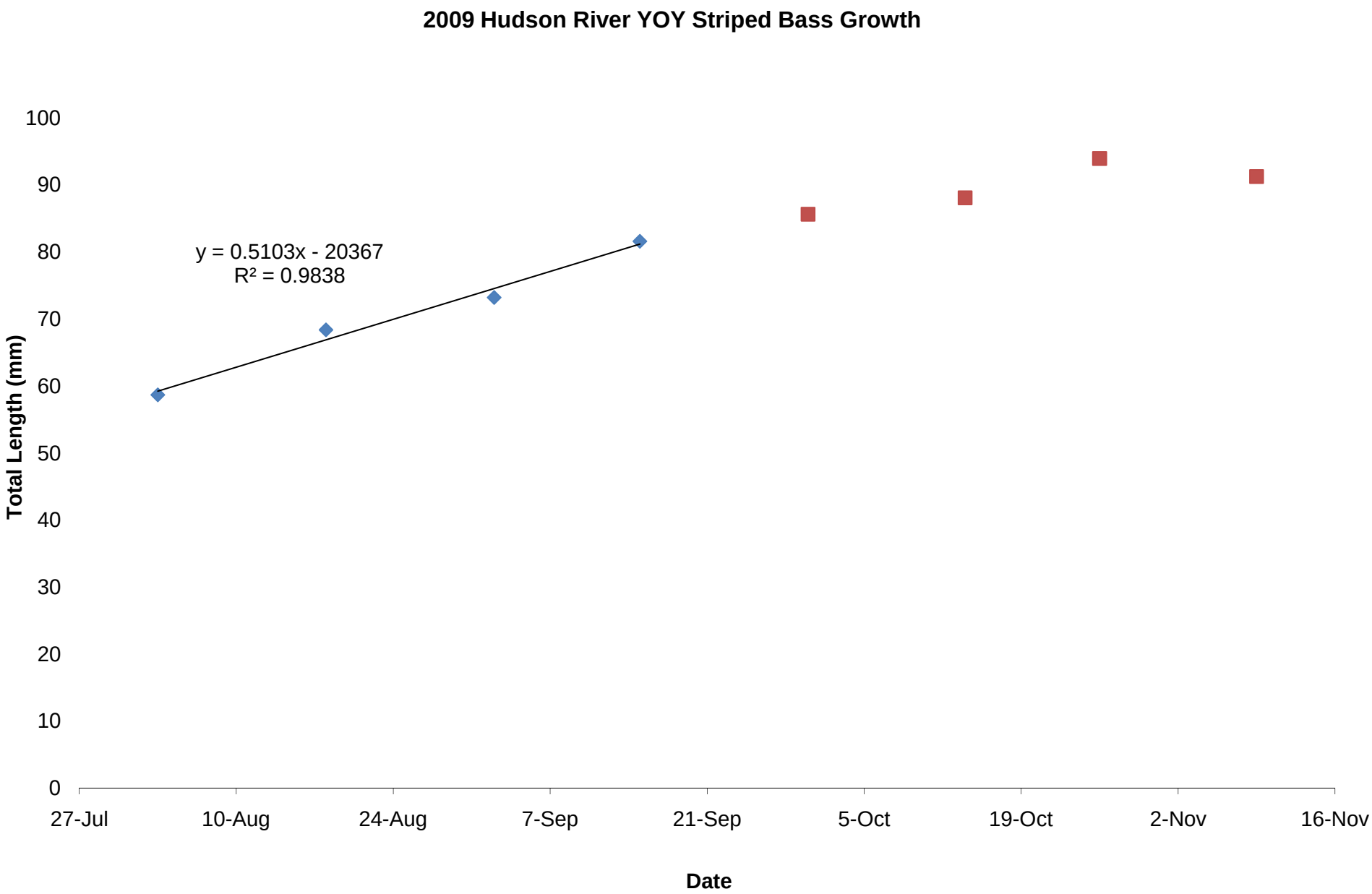

2009 Hudson River YOY Striped Bass Growth
y = 0.5103x - 20367
R² = 0.9838
Total Length (mm)
100
90
80
70
60
50
40
30
20
10
0
27-Jul
10-Aug
24-Aug
7-Sep
21-Sep
5-Oct
19-Oct
2-Nov
16-Nov
Date

FIGURE 6

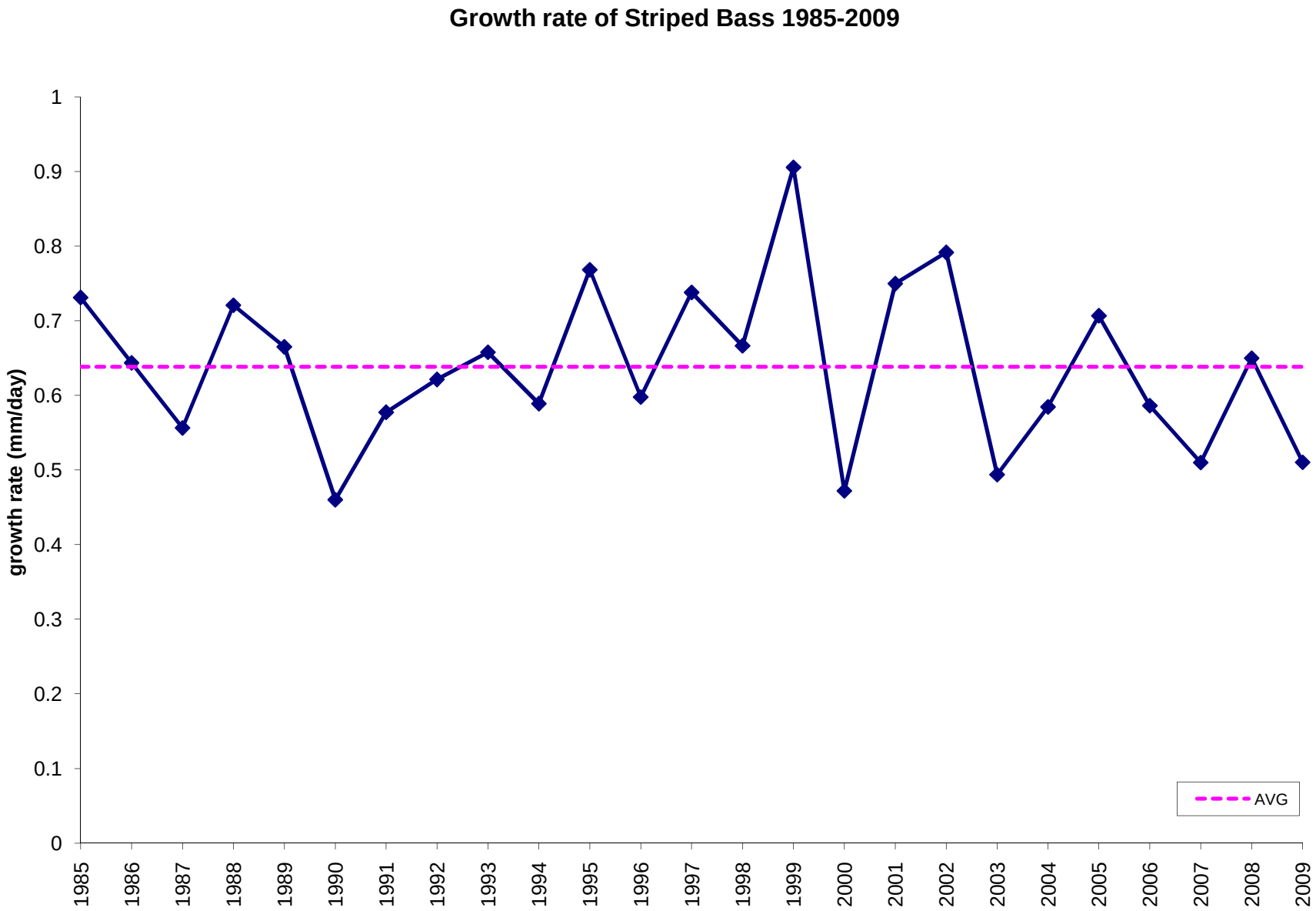

Growth rate of Striped Bass 1985-2009
growth rate (mm/day)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
AVG

Figure 7

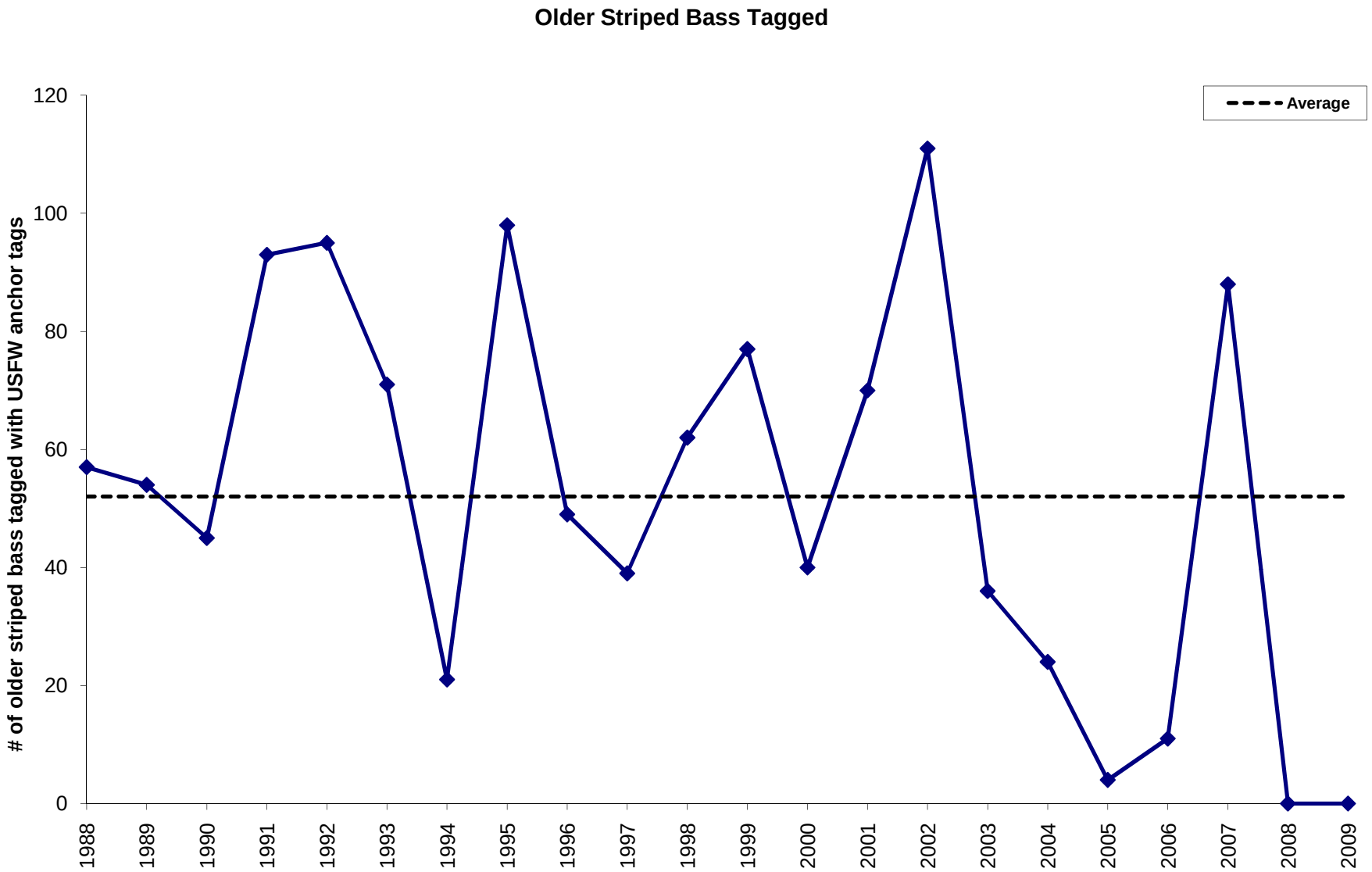
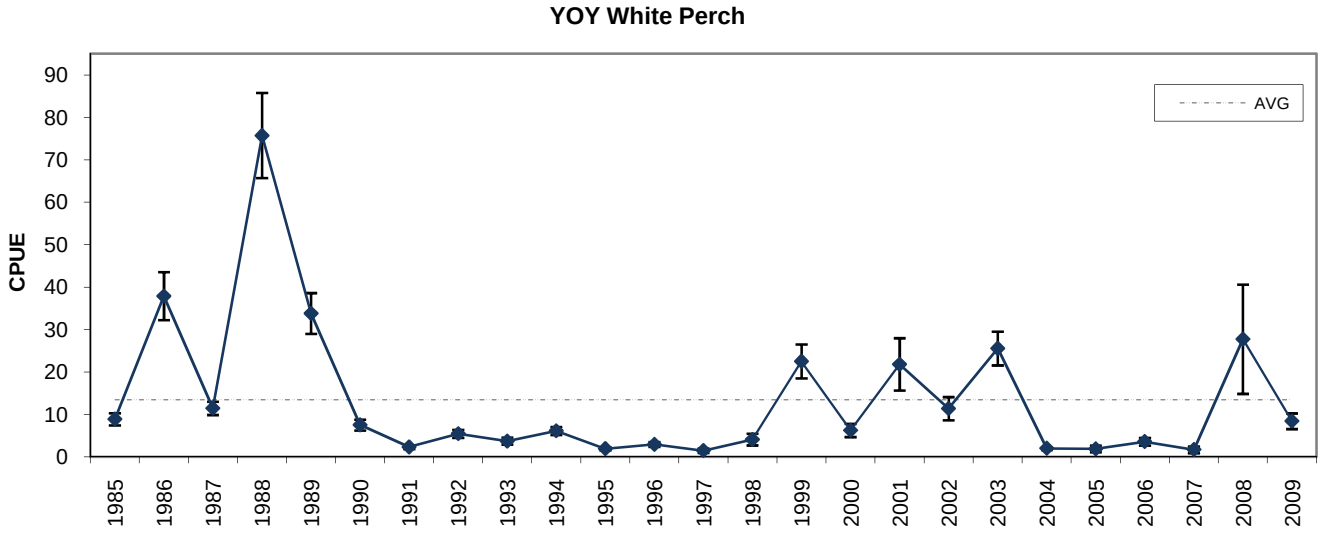
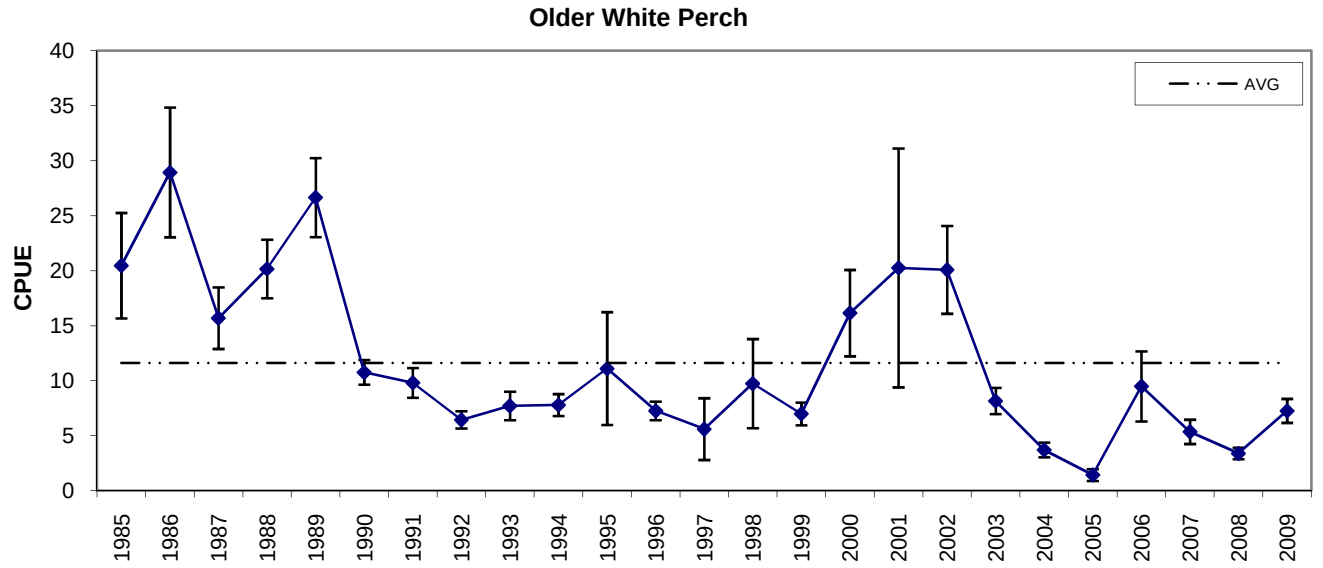

Older Striped Bass Tagged
# of older striped bass tagged with USFW anchor tags
120
100
80
60
40
20
0
Average
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

FIGURE 8


YOY White Perch
CPUE
AVG
90
80
70
60
50
40
30
20
10
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009


Older White Perch
CPUE
AVG
40
35
30
25
20
15
10
5
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

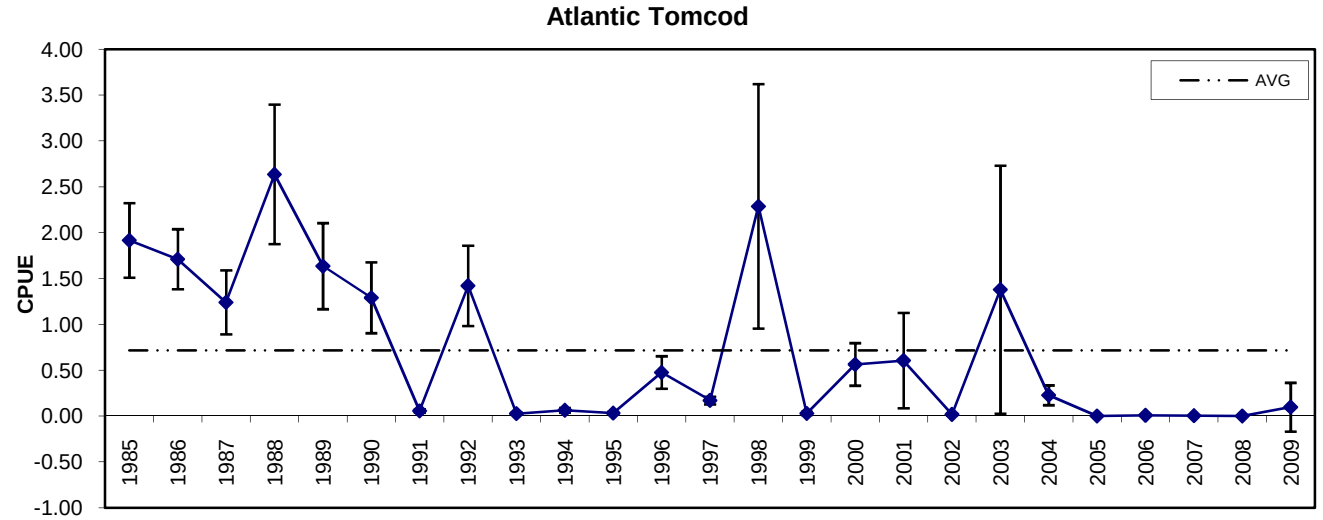

Atlantic Tomcod
CPUE
AVG
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

FIGURE 9

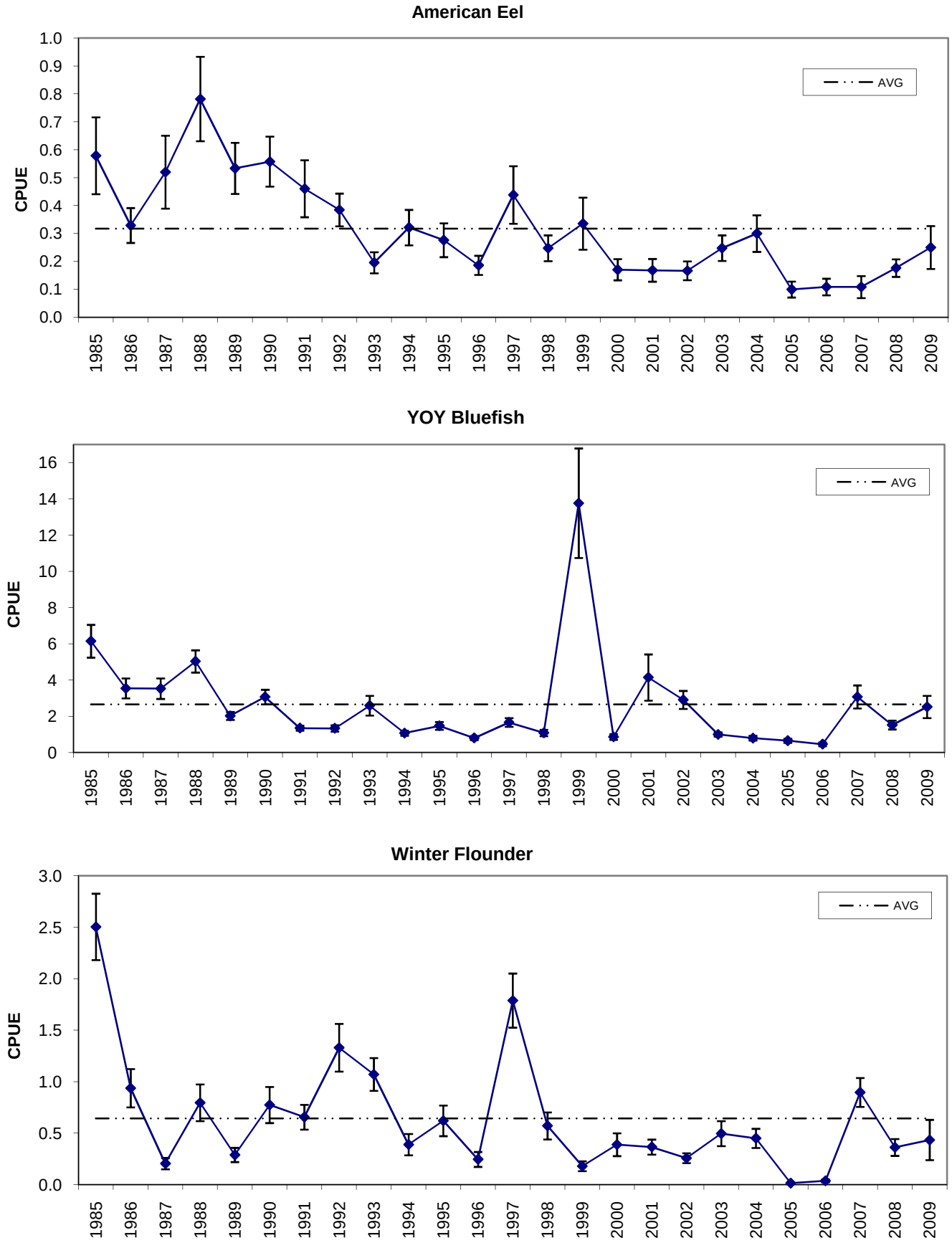
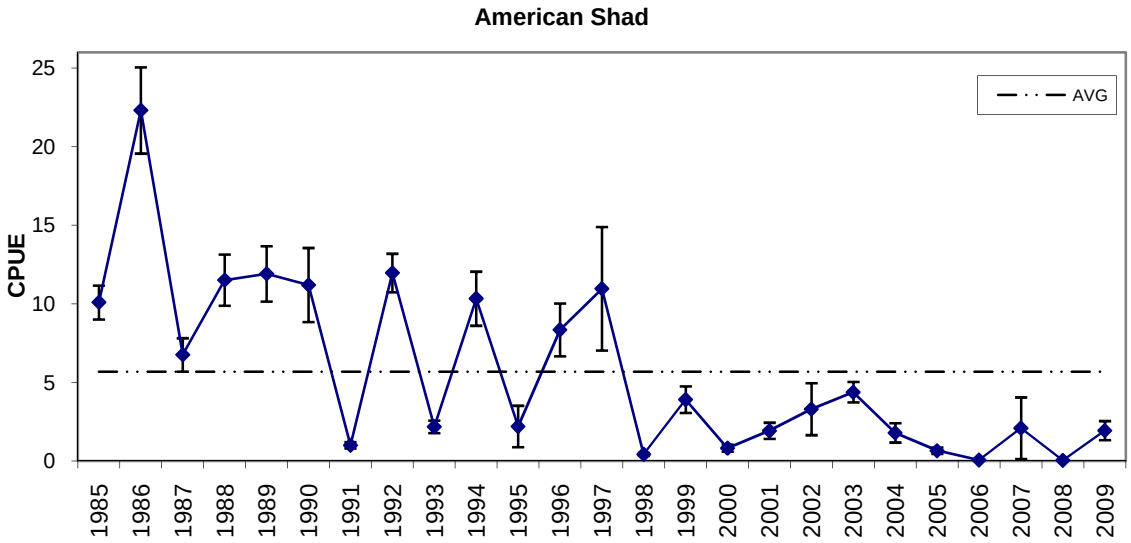
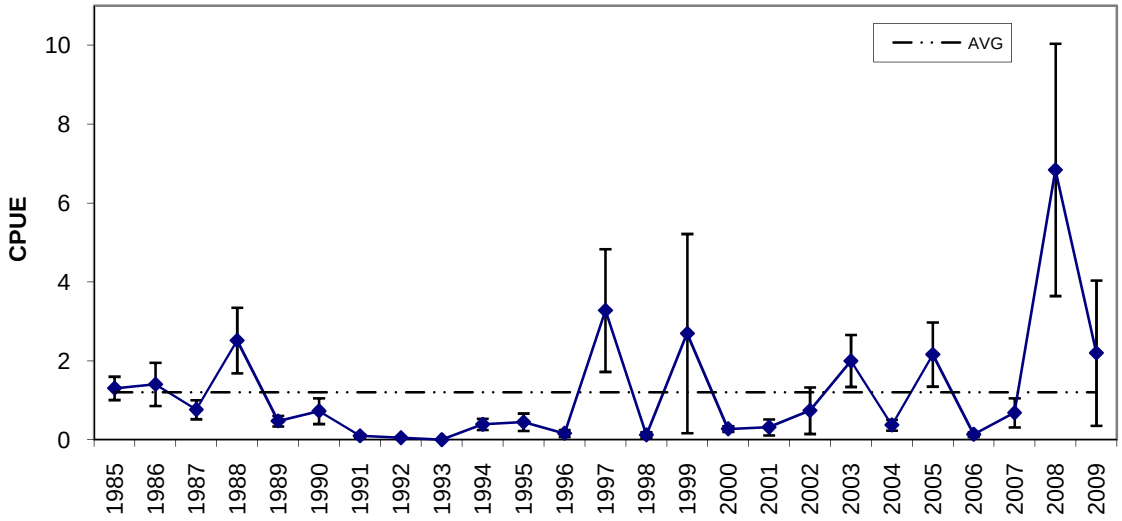

American Eel
CPUE
AVG
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009
YOY Bluefish
CPUE
AVG
16
14
12
10
8
6
4
2
0
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009
Winter Flounder
CPUE
AVG
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009

FIGURE 10


American Shad
CPUE
AVG
0
5
10
15
20
25
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009


Alewife
CPUE
AVG
0
2
4
6
8
10
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

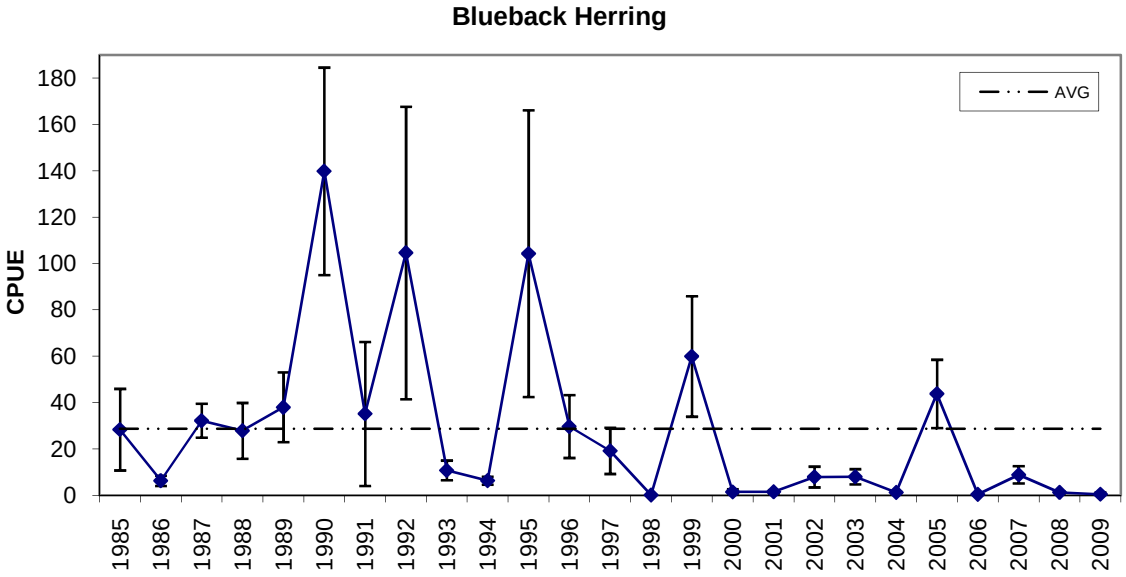
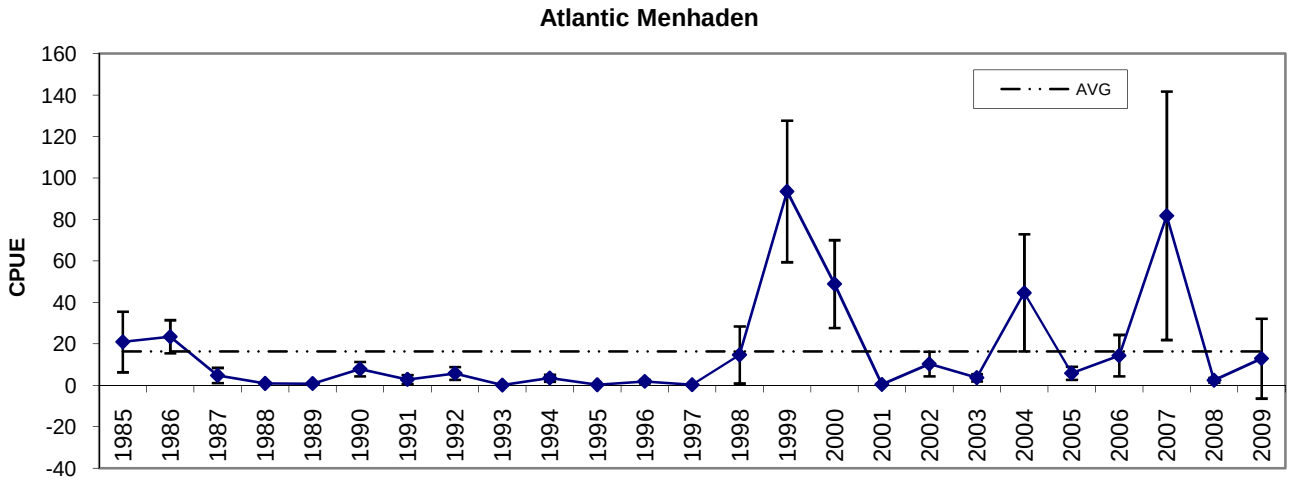
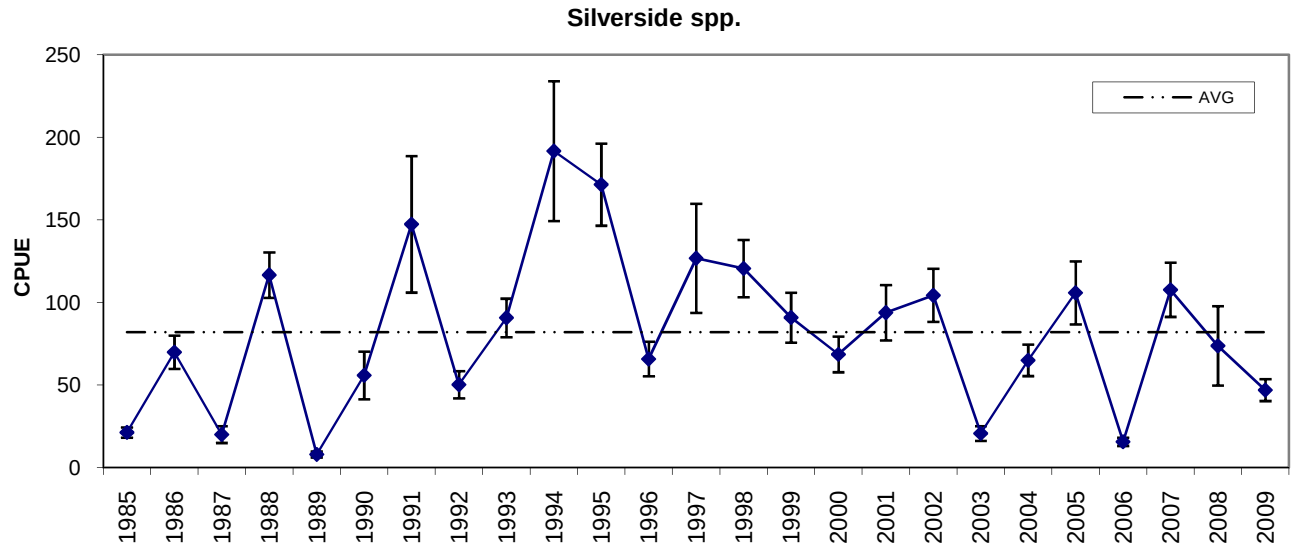
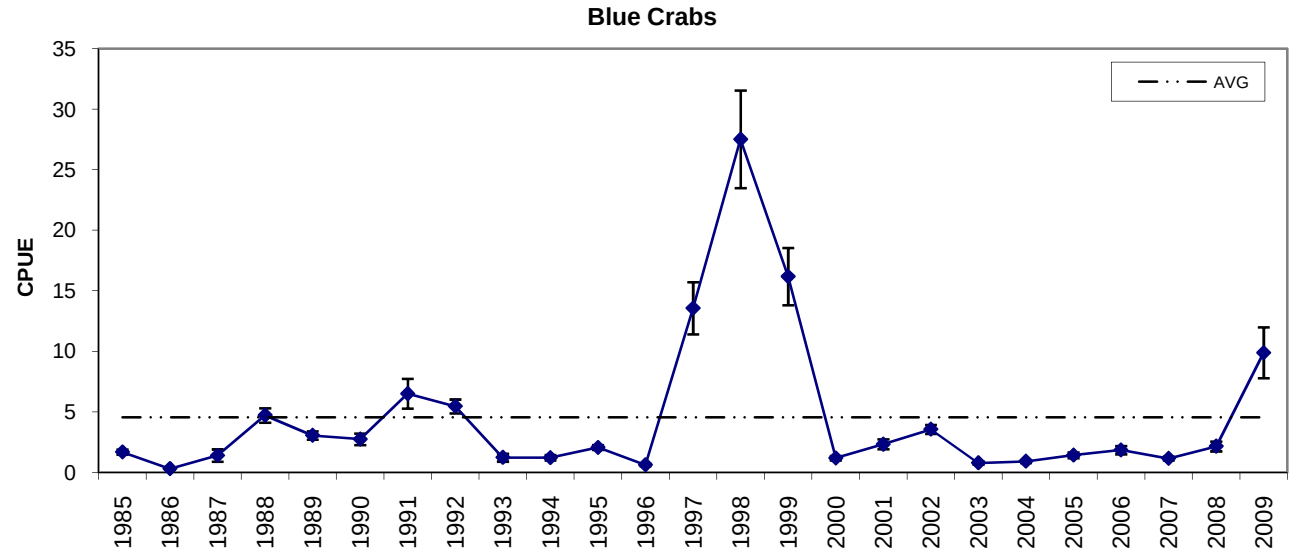

Blueback Herring
CPUE
AVG
0
20
40
60
80
100
120
140
160
180
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009

FIGURE 11


Atlantic Menhaden
CPUE
AVG
160
140
120
100
80
60
40
20
0
-20
-40
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009


Silverside spp.
CPUE
AVG
250
200
150
100
50
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009


Blue Crabs
CPUE
AVG
35
30
25
20
15
10
5
0
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009