

9.0 SUMMARY OF RESULTS

This chapter provides a summary of the most relevant fish and fisheries resources within the Study Area. Important topics covered include commercial fisheries, recreational fishing, New Jersey Fisheries Independent Monitoring Data, EFH, and federally protected species.

9.1 COMMERCIAL FISHERIES

Fish and fisheries are among the most important and economically valuable natural resources to the State of New Jersey. In terms of economic value, the total value of commercial fisheries landed in New Jersey from 2003 through 2007 was nearly one billion dollars; however, the actual value to the region is likely far greater in terms of the jobs, goods, and services associated with these fisheries. In 2007, commercial fisheries in New Jersey ranked eighth in value and tenth in landings in the U.S.² The top five commercial species landed in New Jersey during this five year period were Atlantic surfclam, Atlantic sea scallop, ocean quahog, goosefish (monkfish), and summer flounder. Within the Study Area, the clam dredge, targeting Atlantic surfclam and ocean quahog, is the primary commercial fishing gear utilized in terms of value and landings (43%). The Atlantic surfclam is the primary landed commercial species, whereas the Atlantic sea scallop is the most economically valuable species.²

9.2 RECREATIONAL FISHING LOCATIONS

Recreational fishing within and adjacent to the Study Area is an important social and economic activity. The annual number of angler trips in New Jersey from 2003 through 2007 ranged from 6.5 million in 2004 to 7.4 million in 2007. According to NMFS (MRIP), the primary species landed from 2003 to 2007 was summer flounder. Summer flounder represented 40.8% of the total landings, while bluefish and black sea bass represented 18.9 and 18.2%, respectively.⁹ There are numerous fishing hotspots (143 – see **Figure 3-19**) with 57% of these located in the southern half of the Study Area. These areas consist of structural features, such as shoals, ridges, lumps, banks, ship wrecks, and reefs (artificial and natural: rocks). Each of these structural features provides prime fishing sites for anglers targeting specific species, such as Atlantic striped bass and bluefish around shoals; bluefish and flounder near ridges; and black sea bass and tautog around shipwrecks/reefs (Saltwater Directions 2003a, 2003b, 2003c). In addition, the New Jersey Artificial Reef Program is one of the largest on the East Coast consisting of over 1,000 reefs and 100 vessels dispersed among 15 ocean sites of which 9 sites are located within the Study Area (NJDEP 2008b). Organized fishing tournaments are popular public events that take place within or in the vicinity of the Study Area.^{12, 13, 14}

9.3 NEW JERSEY FISHERIES INDEPENDENT MONITORING DATA

The Study Area also provides important habitats to many juvenile fish and invertebrates having economic and ecological importance. Trends in these juvenile fish and invertebrate populations were analyzed by utilizing the ocean trawl data (New Jersey OSA survey program) from 2003 to 2008. New Jersey Fisheries independent monitoring program provided information on the spatial and temporal variability of the fish community in the Study Area (NJDEP 2009). Data was compiled and sorted into two separate groups according to landings (i.e., top 10 species numerically collected) and economic value (i.e., top 5 species [\$US]). According to the New Jersey OSA defined strata (areas 15 to 23: see **Figure 4-1**), it was demonstrated that the coastal fishery landings within the Study Area that the juvenile butterfish, scup, squid, and Atlantic herring were numerically abundant and the squid was most economically valuable. Numerically, scup was the dominant fishery in 2003, squid in 2004 and 2005, and butterfish from 2006 to 2008. Economically, squid was dominant from 2003 to 2008. Summer and fall were the most important seasons in terms of relative juvenile fish abundance, while winter and spring the least important. Summer was dominated numerically by butterfish, spring and fall by Atlantic herring and scup, and winter by Atlantic herring, with squid economically dominating both summer and fall. Juvenile butterfish abundance was widely distributed and numerically dominant in 56% of OSA defined areas. In summer, butterfish abundance was highest in areas 16 and 19 and scup and squid abundance highest in areas 17 and 23, respectively. Atlantic herring abundance was highest in area 22. Economically, the squid abundance was highest in all areas in the summer except areas 18 and 21, which were the most diverse areas within the

Study Area (NJDEP 2009). These numerically dominated species encompassed locations which contained a large number of recreational fishing hotspots within the Study Area (see **Figure 4-11**).

9.4 ESSENTIAL FISH HABITAT

Marine resources (fish and invertebrates) that are found within the Study Area are managed through an elaborate process that includes the State of New Jersey, FMCs, ASMFC, and NMFS. The MSFMCA, as amended by the SFA, requires the identification and description of EFH in the FMPs and the consideration of actions to ensure the conservation and enhancement of such habitat. The EFH regulatory guidelines (50 Code of Federal Regulations [CFR] 600.815) state that NMFS should periodically review and revise EFH, as warranted, based on available information.

On June 12, 2009, NMFS announced the availability of a final integrated environmental impact statement (EIS) and Amendment 1 to the 2006 Consolidated Atlantic HMS FMP pursuant to the National Environmental Protection Act (NEPA) that amended the existing EFH identifications and descriptions for 44 managed (NMFS 2009a). Currently, 14 managed HMS species occur within the Study Area. Updated EFH descriptions and maps for all 14 species are described in **Appendix A** and illustrated in **Figures A-25** through **A-38**.

In addition to the updated EFH for the Atlantic HMS managed by NMFS, both the NEFMC and the MAFMC are also in the process of proposing changes to the EFH components of the FMPs under their jurisdiction (NEFMC 2007; MAFMC 2010). Approval of the updated textual descriptions and geographical identifications of EFH may result in changes to the EFH designations for some of the current species and/or add new (i.e., juvenile Atlantic sea scallop) species in the Study Area.

9.5 FEDERAL PROTECTED SPECIES

Within or near the vicinity of the Study Area, there are various fish species found that are either protected by the federal government (e.g., USFWS and NMFS) and/or State of New Jersey.^{15,16} Although the endangered shortnose sturgeon is the only federally listed fish species that may be found in the vicinity of the Study Area (i.e., Delaware River), there are also no known shortnose sturgeon populations in the rivers between the Hudson and Delaware rivers (NMFS 1998). This species is not known to make coastal migrations (Dadswell et al. 1984). In addition, there are five species of concern and one candidate species found within or in the vicinity of the Study Area. The migratory Atlantic sturgeon, a candidate species, commonly aggregates in shallow (10 to 50 m [32.8 to 164.1 ft]) near shore areas within the Study Area (Stein et al. 2004; Atlantic Sturgeon Status Review Team 2007). NMFS is currently preparing a determination on whether listing the species or multiple DPSs of the Atlantic sturgeon as threatened or endangered is warranted (NMFS 2010b).