

Wetlands & Massachusetts Fisheries

Did you know that many of the Commonwealth's most popular commercial and sport fishes rely to a great extent on valuable coastal and freshwater wetland habitats? Well, it's true! Many fish and shellfish at some point in their lives depend on wetlands for feeding, spawning and shelter. Herring, alewife, bluefish, largemouth bass, northern pike, shrimp and crabs are just a few of the species that take advantage of the unique habitat characteristics of wetlands to successfully fulfill their life needs.

Salt marshes are especially valuable to Massachusetts' fisheries because of the enormous volume of food they produce each year. Per acre, salt marsh plants turn more of the energy they receive from sunlight into plant matter through photosynthesis than our nation's best managed cornfields. Here's how it works: each winter, ice sheets and tides break up decaying marsh grass, algae, and seaweed into tiny fragmented material called detritus. Tidal action circulates this nutrient-rich detritus within the marsh and adjoining bay or estuary, fueling the growth of microscopic phytoplankton (single-celled plants suspended in the water). Phytoplankton, the foundation for the entire aquatic food chain, then nourishes foraging fishes such as killifish, mullet, menhaden, and alewife. These fish in turn are preyed upon by larger fish such as striped bass, bluefish and flounder which are then commercially harvested. It's no wonder salt marshes have been called the "farmlands of the aquatic environment!"

Salt marshes are also considered important nursery areas since they provide the essential requirements needed by growing larval and juvenile stages of many species, including shrimp, salmon, flounder, striped bass, mullet, red snapper, and shad. In fact, eighty percent of the important recreational and commercial species on the Atlantic coast in some way depend on coastal salt marshes and estuaries to complete their life cycles. Small fishes such as silversides and killifish, a major source of food for larger predatory fish, utilize the protective areas of low marsh grasses (accessible only at high tide) to lay their eggs. Other species, such as sea trout, menhaden and blue fish spend the early part of their lives shuttling between the salt marsh and adjacent ocean. These fish usually spawn in the ocean, move into the more protective and nourishing estuary as juveniles, and return again to the ocean as young adults.

Massachusetts' freshwater wetlands also provide sheltered spawning and nursery areas for many popular recreational fishes. Species such as largemouth bass, northern pike, chain pickerel, bullheads, pumpkinseed and bluegill leave the deeper, more open areas of lakes and ponds to spawn in the wetland shallows where rooted aquatic plants proliferate. Juvenile fish utilize these shallow, vegetated waters for refuge from larger aquatic predators and for the abundant food supply found there.

So the next time you're about to enjoy one of your favorite fish or shellfish dishes -- perhaps broiled bluefish, smoked native trout or fried scallops -- pause, and give thanks to the wetlands that helped bring this bounty to your table. Wetlands are protected under federal and state laws because of the important functions and values they provide, including water supply, flood control, and fisheries and wildlife habitat. Your Conservation Commission is the agency responsible for administering the Massachusetts Wetlands Protection Act in Westford. For more information, contact the Conservation Commission.