## Goal 3: Restore migratory and diadromous fish population abundance and range and restore and protect the aquatic habitats on which they depend in North Carolina.

Southeastern river systems have been dramatically modified from historic conditions through the alterations of stream flows, changes in water quality, and the construction of dams along critical migratory routes. These modifications have altered aquatic biodiversity and fisheries resources of North Carolina's rivers. In addressing these and other factors affecting migratory fishery resources, we will work closely with our federal, state and private partners to implement relevant programs related to improving habitat quality and quantity. Our objectives defined below compliment those identified in the Service's Southeast Region Fisheries Plan, Aquatic Resources Strategic Plan, the Service's National Fish Passage Program, and the State/Federal Albemarle-Pamlico Comprehensive Conservation and Management Plan. With respect to migratory fish, our specific mandate is to protect and restore diadromous fisheries in North Carolina, which include American shad, Hickory shad, blueback herring, alewife, striped bass, Atlantic sturgeon, shortnose sturgeon, and American eel. Nearly all of these fish species provide commercial and recreational economic benefits. Other migratory fish include native riverine fishes that have become reduced in abundance and range. Our goal for these species is to restore their abundance and range and improve habitat to increase carrying capacity.

## Objective

Restore targeted migratory and diadromous fish range and improve fish stocks by removing or overcoming barriers to historic habitat.

<u>Performance Measures</u>: Number of stream/shoreline miles achieving watershed and landscape goals through voluntary partnerships (DOI Strategic Plan measure). Number of stream/shoreline miles restored or enhanced to achieve habitat conditions consistent with management plans, program objectives, and consistent with applicable substantive and procedural requirements of State and Federal law (DOI Strategic Plan measure).

**Strategy:** Work with partners to identify, prioritize and remove barriers to historic habitat. <u>Performance Measure</u>: Number of dams and other impediments to fish passage eliminated.

**Strategy**: Provide technical assistance to dam owners and others on the design of fish passage. Performance Measure: Number of fish passage recommendations provided.

**Strategy:** Work with the Federal Energy Regulatory Commission (FERC), private utilities, and the Corps of Engineers to negotiate fish passage and provide prescriptions.

**Strategy**: Develop and implement cooperative aquatic restoration efforts.

## Objective

Increase migratory and diadromous fish abundance by improving habitat quality.

**Strategy**: Identify and mitigate water quality problems affecting migratory and diadromous fish, particularly areas with known dissolved oxygen problems.

<u>Performance Measure</u>: Percent of stream miles with adequate water quality to support diadromous fish critical life stages.

**Strategy**: Identify and mitigate water flow problems affecting migratory and diadromous fish, particularly timing, magnitude, and duration of regulated flows.

<u>Performance Measure</u>: Percent of stream miles containing adequate flows to support diadromous fish critical life stages.

**Strategy**: Restore and protect lotic aquatic habitat through dam removal.

**Strategy**: Restore and protect riparian and wetland habitats for spawning and rearing, and wetlands with deep organic soils to improve water quality.

## Objective

Promote public and professional understanding of the commercial, recreational, economic, and ecological importance of migratory and diadromous fish and ways to benefit their habitat.

**Strategy**: Support research related to diadromous fish ecology, restoration and management. **Strategy**: Maintain relevant information on migratory and diadromous fishes on our web page. Develop or use currently available materials on migratory and diadromous fish and make all relevant promotional materials available in open electronic formats (html, pdf, jpg, etc).

**Strategy:** Provide information for professional meetings and seminars.

**Strategy**: Expand involvement in migratory and diadromous fish conservation efforts through the development of fact sheets or other promotional materials.