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**Northeast Region Fisheries Program
Strategic Plan
Fiscal Years 2009-2013**



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**Northeast Region, U.S. Fish and Wildlife Service
Department of the Interior**

**Review Draft
July 1, 2008**

PREFACE

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2
3 Biological and social scientists, government agencies, conservation groups, and the American
4 public remain concerned about the decline of fish and other aquatic resources, and the economic
5 impact of these declines. They point with increasing urgency to actions that must be taken to
6 reverse these alarming trends.

7
8 Because of its authorities and responsibilities, the U.S. Fish and Wildlife Service (Service)
9 Northeast Region Fisheries Program (Fisheries Program) has an important role to play. At the
10 same time, continuing budget shortfalls limit the capacity of the Fisheries Program to respond to
11 the many needs. This strategic plan brings together changing national direction, institutional
12 knowledge, analysis of spatial information, and the perspectives of our state and tribal partners to
13 develop a strategic plan that allows us to prioritize our efforts during challenging times, while
14 inspiring our efforts into the future. As we implement this plan we will be building on a strong
15 foundation of active partnerships and past accomplishments, while recognizing that continued
16 communication, cooperation and expansion of partnerships will be essential for successful
17 implementation of this plan and fulfillment of Fisheries Program resource responsibilities and
18 obligations.

19
20 The approach we are taking was in part inspired by the lessons we learned from trying to
21 implement our 2004-2008 strategic plan, which was very broad. When we faced a challenging
22 budgetary environment, it did not help us set priorities. When decisions needed to be made that
23 affected partners, we lacked a strategic foundation for making such decisions. As a result,
24 programmatic decision-making was not transparent and not always supported by partners. In
25 this plan, we hope to rise above the shortcomings of the previous plan by addressing the
26 problem: *How should the Northeast Region Fisheries Program allocate limited resources across*
27 *the region to achieve its goals under a changing budget climate with at least the informed*
28 *consent of key partners?* We address this problem by using a transparent process to identify
29 priorities, and engaging our partners in priority-setting. We turned to structured decision making
30 as a tool in developing this strategic plan because of the transparency and scientific foundation
31 that it offers.

32
33 In spite of our best efforts to strategically plan for the long term, annual budget fluctuations will
34 occur. Therefore, in addition to improving our overall planning process, we will work with the
35 states and tribes to establish an information-exchange process to identify mid-course corrections
36 that help reduce negative impacts of shortfalls in Fisheries Program funding.

37
38 In this plan, we are re-committing to our obligations and, with our partners, identifying ways to
39 work together effectively and efficiently to maintain, restore, and recover aquatic resources of
40 the Northeast. We are striving to be more effective by designing and delivering programs that
41 are strategically focused, backed by sound science, and based on strong cooperative partnerships
42 that do not lose sight of important social values associated with natural resource management.
43

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32 Supplement: Northeast Region Aquatic Resources Value, Status and Trends – may be found
33 online at www.fws.gov/northeast/fisheries/reports/reports.html
34

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2
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7
8 This strategic plan, supporting information and updates may be found at
9 www.fws.gov/northeast/fisheries/reports/reports.html.

10
11
12 **Acknowledgments**

13 Sarah Morgan
14 Herb Bergquist

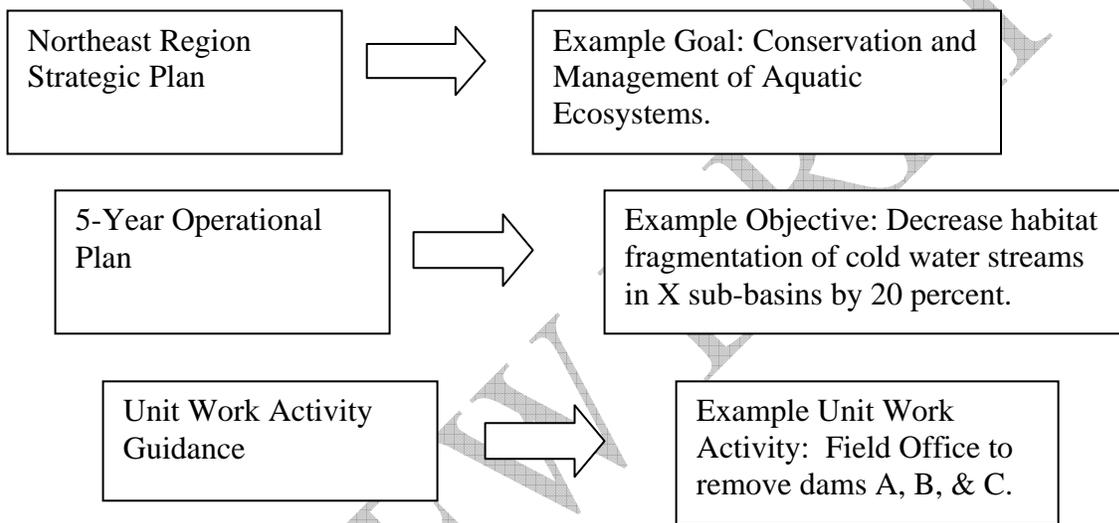
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16 Photos

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18 Other help from EA

REVIEW DRAFT

1 INTRODUCTION

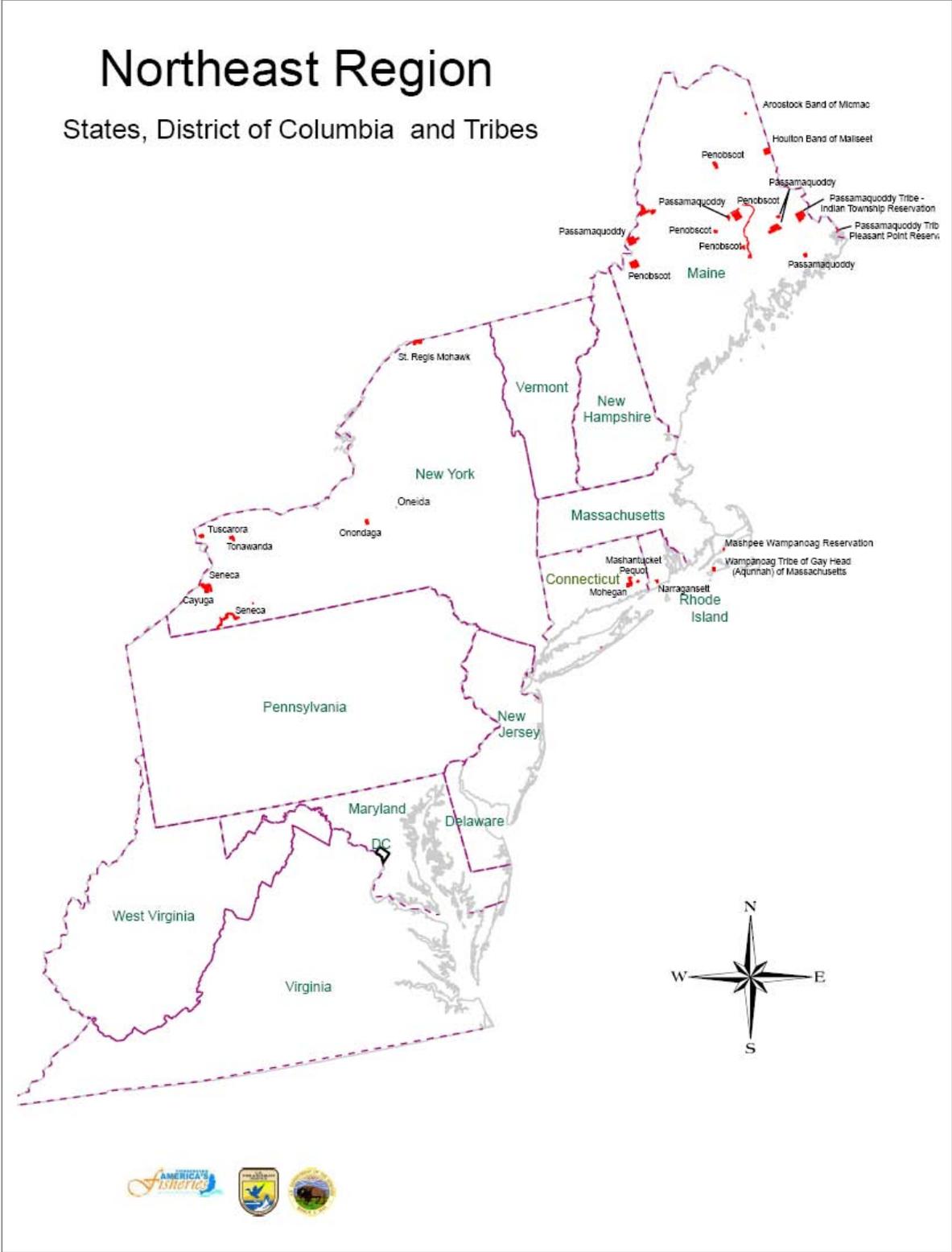
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3 The strategic planning process for the U.S. Fish and Wildlife Service Northeast Region Fisheries
4 Program (Fisheries Program) will result in three documents: a strategic plan, an operational plan,
5 and a set of work activity guides for field stations. This strategic plan describes the overall
6 planning context and approach, and characterizes the goals for the Fisheries Program for the next
7 five years. The second product, a five-year operational plan, will be strategically focused,
8 identifying objectives for each goal and the units (field stations and regional office) that will
9 contribute to achieving those objectives. The annual work activity guidance for each unit will
10 identify annual activities to achieve the five-year operational plan objectives. The diagram
11 below provides examples of the contents of these three products:



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21
22 **The Northeast Region**

23 The Northeast region includes many political subdivisions - 13 states, the District of Columbia,
24 and 17 federally-recognized tribes - and shares a lengthy border with Canada (Figure 1). The
25 Fisheries Program, under the authority of federal laws, executive orders, legislation, rules,
26 regulations, compacts, treaties, Memoranda of Understanding, and other authorities, works in
27 partnership with the Northeast states, District of Columbia, and tribes to maintain, restore and
28 recover aquatic habitats and species. We also are engaged in collaborative conservation with
29 numerous non-governmental organizations and stakeholders.

30 The region boasts a wide variety of aquatic habitats, from the lower Great Lakes and coastal
31 Atlantic Ocean, to the wetlands, salt lagoons, estuaries, and the grand rivers of New England and
32 the Mid-Atlantic, and the cold, clear mountain streams of Appalachia. The region is home to the
33 largest and most productive estuary in America - the Chesapeake Bay. This vast variety of
34 aquatic habitat types has resulted in a similar diversity of living resources. Coastal, estuarine,
35 and riverine migratory fish, highly valued resident sport fish, diverse freshwater mussel species,
36 and the habitats and food webs upon which they depend all are reflected in the scope of the



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Figure 1: Northeast Region States, District of Columbia and Tribes

1
2 Fisheries Program's activities in the Northeast. With the region's long history of
3 industrialization, resource extraction, water quality and river connectivity impacts, high energy
4 needs, and other human demands on the environment, the conservation of aquatic resources has
5 required extensive cooperative actions between the Fisheries Program, its partners, and others.
6

7 Along with its wealth of natural aquatic resources, the region's complex environment is heavily
8 influenced by human disturbances. While the 13 Northeast states comprise less than 7 percent of
9 the U. S. landmass, almost 25 percent of the nation's population resides here. Many of the over
10 10,000 dams in the region, including hydroelectric projects, block fish passage to river spawning
11 grounds. As with the rest of the nation, 40 to 60 percent of our historic wetlands have been lost
12 to development in the past 200 years. Because of the long history of industrialization, resource
13 extraction, water quality impacts, high energy needs, and other human demands on the
14 environment, fishery resources of the region require extensive cooperative management - and in
15 many cases - restoration and recovery.
16

17 Despite efforts by the Service and others to conserve fish and aquatic resources, a growing
18 number are declining at alarming rates. Nationally, dozens of aquatic species either have, or
19 need, special protection in some part of their natural or historic range. Many of these species,
20 including almost 40 percent of all listed freshwater mussels, reside in or share border rivers with
21 the region. Many anadromous fish species, which spawn in fresh water but spend most of their
22 lives at sea, occur in large rivers of the Northeast and require extensive cooperative programs for
23 restoration and management. These include the highly valued and historically important
24 American shad, river herrings, Atlantic salmon, sturgeons, and striped bass.
25

26 The reasons for declines in aquatic populations are linked largely to habitat loss or alteration -
27 including flow changes, dams and other watershed modifications, sedimentation and pollution -
28 and the impacts of harmful exotic or transplanted species. Clearly, the nation and the region are
29 at risk of losing our diverse aquatic resources and the critically important benefits they provide.
30 For additional detail on the value and status of Northeast region aquatic ecosystems and species
31 and trends in participation in fishing, please see the supplement.
32

33 COMMITMENT TO ACTION

34 **Mission, Vision, and Priorities**

35 The U.S. Fish and Wildlife Service (Service) is guided by its mission and vision.
36

37 ***Mission:** Working with others to conserve, protect and enhance fish, wildlife, and plants
38 and their habitats for the continuing benefit of the American people.*

39 ***Vision:** We will continue to be a leader and trusted partner in fish and wildlife
40 conservation, known for our scientific excellence, stewardship of lands and natural
41 resources, dedicated professionals, and commitment to public service.*

1 The Fisheries Program nationally is further guided by its mission:

2 *Working with partners to restore and maintain fish and other aquatic resources at self-*
3 *sustaining levels and support federal mitigation programs for the benefit of the American*
4 *public.*

5 To help bring greater focus to the work of the Service, in 2007 the Service Directorate engaged
6 in a proactive effort to develop a vision for the future. This effort culminated in the following
7 conservation principles and priorities for meeting the conservation challenges of the coming
8 years:

9

10 **Service Priorities**

11 Our Conservation Principles -

12 Science – Our work is grounded in thorough, objective science.

13 Stewardship – Our ethic is to conserve natural resources for future generations.

14 Service – It is our privilege to serve the American people.

15 Professionalism – We hold ourselves to the highest ethical standards, strive for
16 excellence and respect others.

17 Partnerships – We emphasize creative, innovative partnerships.

18 People – Our employees are our most valued asset.

19 Legacy – We ensure the future of natural resource conservation by connecting people
20 with nature.

21

22 The highest priorities for the Service are:

23 National Wildlife Refuge System: Conserving our Lands and Resources

24 Landscape Conservation: Working with Others

25 Migratory Birds: Conservation and Management

26 Threatened and Endangered Species: Achieving Recovery and Preventing Extinction

27 Aquatic Species: National Fish Habitat Action Plan and Trust Species

28 Connecting People With Nature: Ensuring the Future of Conservation

29

30

31 **Regional Strategy**

32 We will continue to seek a shared conservation vision with our partners. We will strive to
33 complement and support state wildlife action plans. We will coordinate with other Service
34 programs and other partners to develop and implement a landscape approach to aquatic resource
35 conservation through strategic habitat conservation. We will seek opportunities to join forces
36 with Refuges and Ecological Services programs to achieve benefits for important aquatic
37 resources, particularly those within and adjacent to refuges. Within the context of this shared
38 vision we will strategically focus our efforts to achieve our goals, heeding the recommendation
39 of our state partners that we advance aquatic resource conservation in the Northeast region by
40 coordinating multi-state issues (e.g., fish passage and fish habitat), and providing technical and
41 other support in areas where individual states may not have adequate resources (fish passage,
42 fish health, conservation genetics, mussel conservation, aquatic invasive species, education and
43 outreach).

44

1 INVENTORY: Northeast Region Fisheries Program

2
3 **Who we are**

4 The Fisheries Program works with states, Native American tribes, and others to restore, recover
5 and maintain healthy populations of coastal and diadromous (migratory between salt and fresh
6 waters) fish, fish species that cross state or national boundaries, and endangered aquatic animals
7 and their habitats. In the Northeast region, 25 fishery management offices and national fish
8 hatcheries (Figure 2) work with states, tribes and others to restore, recover and maintain
9 populations of a variety of fish and other aquatic species, including Atlantic salmon, striped bass,
10 American shad, alewife, blueback herring, Atlantic and shortnose sturgeon, horseshoe crab,
11 American eel, lake trout, and listed mussels.

12
13 Through the successful National Fish Passage Program and our involvement in the National Fish
14 Habitat Action Plan (NFHAP), we retain a valued national perspective on aquatic species issues
15 and solutions. There are very significant benefits that accrue when partners from diverse
16 backgrounds across government, industry, academia, and non-governmental organizations come
17 together to solve mutual problems. The NFHAP capitalizes on the strengths of its partners to
18 foster geographically focused, locally driven, and scientifically based partnerships to protect,
19 restore, and enhance aquatic habitats and reverse the decline of fish and aquatic species.

20
21 Our Fish and Wildlife Conservation Offices help ensure cohesive, continuous, and prioritized
22 conservation across the areas that they serve. This approach has resulted in the successful
23 coordination role of the Eastern Brook Trout Joint Venture, the nation’s first recognized fish
24 habitat partnership under the NFHAP.

25
26 **Eastern Brook Trout Joint Venture** - In 2004, recognizing the need to address regional and
27 range-wide threats to brook trout, a group of public and private entities formed the Eastern Brook
28 Trout Joint Venture (EBTJV) with a mission to halt the decline of brook trout and restore
29 fishable populations. This unique partnership has grown and now includes state and federal
30 agencies, regional and local governments, businesses, conservation organizations, academia,
31 scientific societies, and private citizens. It is the nation’s first pilot project under the National
32 Fish Habitat Action Plan, and is a geographically focused, locally driven, and scientifically based
33 effort to protect, restore and enhance aquatic habitat throughout the range of the Eastern brook
34 trout.

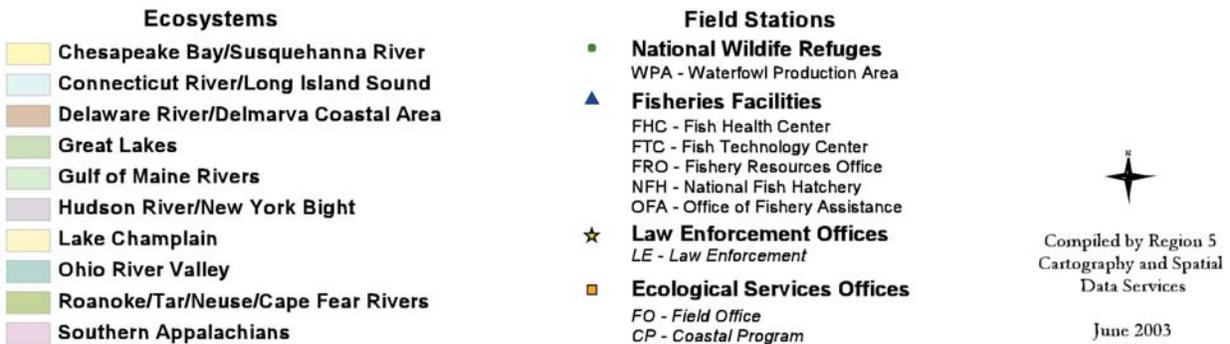
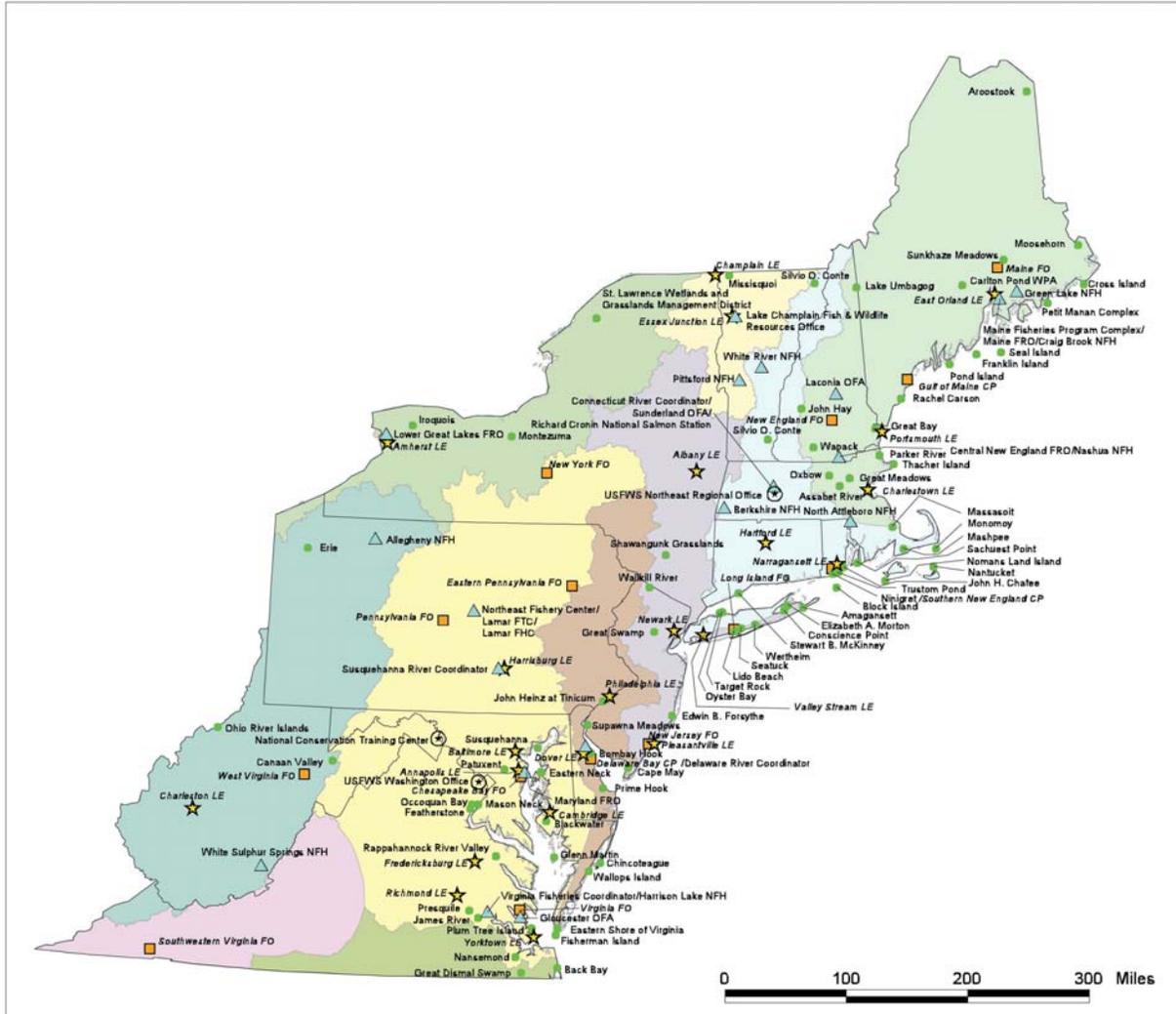
35
36 Our fish passage engineers provide technical assistance to the regional office, field offices, other
37 Service regions, the Washington office, federally recognized tribes, non-governmental
38 organizations, private energy developers, and other federal and state agencies in the design,
39 construction, and operation of safe and effective passage facilities for fish at hydroelectric
40 project dams and other barriers. We provide consultation for more than 250 sites a year, with
41 more than half being Federal Regulatory Energy Commission regulated hydroelectric projects.



U.S. Fish and Wildlife Service



Northeast Region Ecosystems and Field Stations



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Figure 2: Northeast Region Ecosystems and Field Stations

1
2 Our National Fish Hatcheries support recreational fisheries and regional economies by producing
3 landlocked salmon and lake trout for the Great Lakes and Lake Champlain, and providing virus-
4 free trout eggs to federal, state and tribal hatcheries throughout the Northeast under the Service's
5 National Broodstock Program. Our hatcheries are also instrumental in supporting conservation
6 by producing at-risk species for population restoration. We conduct production and research for
7 endangered Atlantic salmon and multiple threatened or endangered freshwater mussels.
8

9 **Freshwater mussel research and propagation at White Sulphur Springs National Fish**
10 **Hatchery** - The destruction of river habitats by dams, channelization, erosion, and pollution has
11 left many species of freshwater mussels on the brink of extinction. Mussels are important to
12 river ecosystems, filtering water and providing food for other wildlife. White Sulphur Springs is
13 one of only two national fish hatcheries in the U.S. with production capabilities for rearing and
14 providing refuge to endangered species of freshwater mussels. Ongoing research with Virginia
15 Polytechnic Institute is improving aquaculture technology for freshwater mussels so vital to our
16 nation's water quality.

17
18 Atlantic coastal fisheries contribute significantly to the recreational and commercial economy of
19 the Northeast. The Fisheries Program serves policy and technical roles on the Atlantic States
20 Marine Fisheries Commission, working collaboratively with states on management of
21 interjurisdictional species such as striped bass, American shad, Atlantic sturgeon, and American
22 eel. The Fisheries Program helps support these fisheries through fish culture, fish passage
23 improvement and dam removal, fish health monitoring and wild fish disease surveys,
24 conservation genetics, marking and tagging, monitoring and assessment, habitat assessment and
25 conservation, and aquatic invasive species prevention and management. The Fisheries Program
26 participates in the Northeast Regional Ocean Council, established in 2004 as a partnership of the
27 six New England states (Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut,
28 Vermont), National Oceanic and Atmospheric Administration, and the Department of the
29 Interior.
30

31 **Coastal striped bass database** - The Maryland Fishery Resources Office (MFRO), located in
32 Annapolis, coordinates fish tagging programs in cooperation with federal and state agencies
33 along the eastern seaboard. This cooperative tagging program has provided critical information
34 for striped bass conservation, and will likely be as important to sturgeon, shad, and horseshoe
35 crab conservation. Information from these tagging programs can be used to monitor the status of
36 stocks, restore fish populations, and set seasons on fish harvest.

37
38 Native American tribal governments manage or influence some of the nation's most important
39 aquatic habitats, and the federal government serves as trustee of those resources for the tribes.
40 Therefore we work closely with Northeast tribal governments to fulfill federal trust
41 responsibilities to Native American peoples.
42

43 Aquatic invasive species threaten the diversity or abundance of native species and the ecological
44 stability of infested waters. Commercial, agricultural, aquacultural and recreational activities
45 dependent on those waters are thereby affected. With our Northeast and Canadian partners we
46 provide technical assistance and preventive actions to stop the spread of aquatic invasive species.

1
2 **Rapid response to aquatic invasive species in the Lake Champlain Basin** – The Lake
3 Champlain Fish and Wildlife Resources Office has led development of a rapid response plan to
4 ensure and facilitate the availability of appropriate protocols, trained personnel, equipment,
5 permits, and other resources to contain and potentially eradicate newly detected nonnative
6 aquatic invasive plant, animal, and pathogen introductions as they are reported or discovered in
7 the basin. The plan is an administrative blueprint for appropriate state, federal and provincial
8 agencies to work in partnership to facilitate rapid control and eradication of invasive species.

9
10 We are leaders in the development and application of state-of-the-art fishery science and
11 technology. Our Northeast Fishery Center in Lamar, Pennsylvania, combines both the Fish
12 Technology Center and Fish Health Center. Together they provide pathogen detection and
13 isolation and critical diagnostic and screening services. They also provide cutting-edge
14 technology and scientific information to Service and state fish hatcheries and fishery managers,
15 such as conducting genetics research critical to the recovery of endangered, threatened, and
16 declining fish populations.

17
18 The Fisheries Program has a key role in addressing the challenge of connecting people with
19 nature. We provide hands-on opportunities for school children to rear young Atlantic salmon,
20 provide training and materials to teachers, involve families in conducting instream habitat
21 surveys and planting riparian vegetation, conduct fishing derbies for children, host fishing events
22 for special needs groups of all ages, participate in events aimed at Native Americans, provide
23 outreach and education on aquatic environmental issues at community events and in classrooms,
24 receive visitors at and conduct tours of our facilities, participate in career days, conduct fishing
25 workshops for women, produce family-focused newsletters, and in many other ways engage
26 children and adults in activities related to aquatic life, streams, and watersheds.

27
28 **Connecting People with Nature through Creative Partnerships** - The Lower Great Lakes
29 Fishery Resources Office (LGLFRO) and the Friends of the LGLFRO held their sixth Fish and
30 Wildlife festival in June 2007 in Niagara Falls, NY. Thirty-one government and non-
31 government partners participated and over 3200 people attended. The festival emphasized
32 developing awareness and fostering stewardship among youth. Partners included several local
33 and regional businesses, New York state agencies, the cities of Niagara Falls and Amherst, NY,
34 Iroquois National Wildlife Refuge, the Niagara River Anglers Association, New York Power
35 Authority, Niagara Aquarium, and conservation groups. Events included a youth fishing contest,
36 presentation of live animals, and hands-on activities for children.

37
38 **Where we have been**

39 For the past three or four decades, the Fisheries Program was largely a hatchery-centric program.
40 In the Northeast region, National Fish Hatchery System (NFHS) hatcheries produced hundreds
41 of thousands of brook, rainbow, and brown trout for stocking waters on federal lands (National
42 Forests, federal dam impoundments, refuges, etc.) We also produced hundreds of thousands of
43 trout and trout eggs for state, tribal, and other waters at White Sulphur Springs National Fish
44 Hatchery, as part of the Service's National Broodstock Program.

1 In addition, five national fish hatcheries produced fish for single species restoration – Atlantic
2 salmon (Penobscot and other Maine rivers, Connecticut River basin, Merrimack River basin),
3 lake trout (Lake Erie), landlocked Atlantic salmon and lake trout (Lake Champlain), striped bass
4 (Atlantic coast), and American shad (Atlantic coast). The Fish Technology Center supported
5 walleye culture, American shad culture and transport, and Atlantic salmon culture. The Fish
6 Health Center primarily focused on hatchery fish health inspections.

7
8 Less emphasis was given to the other major Fisheries Program component, Fish and Wildlife
9 Management Assistance (FWMA), which primarily served a coordination role for fish
10 population restoration programs in partnership with states. It also conducted fish passage,
11 population and habitat assessment activities. Congressional appropriations and authorizing
12 legislation allowed the Service to improve its Fish and Wildlife Management Assistance
13 capabilities in several areas. For example, the Lower Great Lakes Fishery Resources Office
14 benefited from the Great Lakes Fish and Wildlife Restoration Act of 1990 and the Non-
15 indigenous Aquatic Nuisance Prevention and Control Act of 1990. The Lake Champlain Fish
16 and Wildlife Resources Office benefited from the Lake Champlain Special Designation Act of
17 1990. The Maine Fishery Resources Office benefited from funding resulting from the listing of
18 the Gulf of Maine Distinct Population Segment of Atlantic Salmon under the Endangered
19 Species Act in 2000. Stations involved in striped bass restoration benefited from the Atlantic
20 Striped Bass Conservation Act of 1984.

21
22 The Atlantic Coastal Fisheries Cooperative Management Act of 1993, as amended in 1996,
23 marked the beginning of an expanded role for Fish and Wildlife Management Assistance. It
24 clearly spelled out the role of the Service... "support and enhance state cooperation in the
25 collection, management, and analysis of fishery data, law enforcement, habitat conservation,
26 fishery research, including biological and socioeconomic, and fishery management planning."

27
28 As an agency, the Service has traditionally approached conservation with an emphasis on "more"
29 - more protection, more restoration, more management, and often a single species focus. We
30 would find opportunities in our programs, take action, and then report on completed projects
31 using standard measurements, such as numbers of fish, acres, river miles, and funds expended.

32 33 **Where we are going**

34 National Vision

35 The 2002 national Vision (USFWS 2002) heralded significant changes in direction for the
36 Fisheries Program. Developed in partnership with a steering committee of representatives from
37 the Service, partners and stakeholders convened by the Sport Fishing and Boating Partnership
38 Council, the national Vision charted a course that emphasized aquatic habitat conservation much
39 more strongly than previously, including calling for the National Fish Habitat Action Plan. Since
40 then, several other events have established the imperative for change.

41 42 Service Priorities

43 In 2007, the Service Directorate developed a vision for the future of the Service, culminating in
44 the set of principles and priorities shown in the Introduction.

1 Global Climate Change

2 The Director has stated that the warming of the earth could potentially have more far-reaching
3 impacts on wildlife and wildlife habitat than any challenge that has come before the Service.
4 The issues associated with climate change will require new technical tools and approaches, and
5 increased coordination and cooperative effort with scientists and managers. In light of this, the
6 Director has asked each regional director to spearhead a process to try and understand what
7 climate change may bring to that region, and to identify ways we might better prepare for
8 managing our valuable natural resources over the coming decades. The Fisheries Program will
9 be a key participant in this effort.

10
11 State Wildlife Action Plans and Related Activities

12 As a requirement to receive federal funds through the Service's State Wildlife Grants Program,
13 Congress charged each state and territory with the task of developing a comprehensive wildlife
14 conservation strategy. Also known as state wildlife action plans, the strategies were completed
15 in 2005 and 2006. They identify the species of greatest conservation need within each state, the
16 habitats in which they occur, the threats they face, and the conservation actions needed to
17 recover their populations and restore their habitats. To provide funds for regional-scale actions,
18 all states in the Northeast region contribute a percentage of their apportioned state wildlife grant
19 dollars to a pool of funds, from which regional conservation needs grants are awarded. In
20 addition, inspired by the development of state wildlife action plans, national foundations
21 provided funding in 2006 for projects to help work toward regional and national integration of
22 monitoring and evaluation, habitat classification and mapping, and identification of key
23 opportunities for partners. Additional projects likely will be funded in subsequent years. These
24 plans and related products represent a new milestone in conservation planning for the Northeast
25 region and the nation, and are key resources for the Fisheries Program to recognize and build
26 upon in designing its strategic plan. [Fold in Karen Terwilliger SWAP opportunities report when
27 available.]

28
29 Budget Context

30 For the past two decades, the Fisheries Program has received modest annual budget increases
31 that have not been sufficient to offset increased expenses. (NFHS funding has increased
32 modestly, while funding for FWMA, which is primarily responsible for habitat and population
33 assessment and management, has remained flat.) Expenses (fuel, utilities, supplies, etc.) have
34 increased as a result of inflation. Mandatory employee salary and benefit increases have
35 continued. As a result, the funds available for Fisheries Program operations and the buying
36 power of these funds have decreased. Without annual budget increases sufficient to offset
37 increased expenses, erosion of operating funds can only be expected to continue. At present,
38 funds for operations represent about 20 percent of the total budget. The optimal figure is about
39 30 to 35 percent of the total, based on national Service norms.

40
41 In the past, the Fisheries Program has attempted to manage the erosion of operating funds by not
42 filling vacant positions, reducing travel, reducing training, and managing with aging equipment
43 and facilities. These strategies work against maintaining a strong workforce and infrastructure,
44 and are not sustainable. Moreover, the Fisheries Program has done nearly all it can using these
45 strategies. Consistent with guidance from the Director to focus on doing fewer things well, the

1 Fisheries Program is focusing work on fewer priorities, giving up certain low-priority activities,
2 and complexing and co-locating facilities.

3 **Implications for the Fisheries Program**

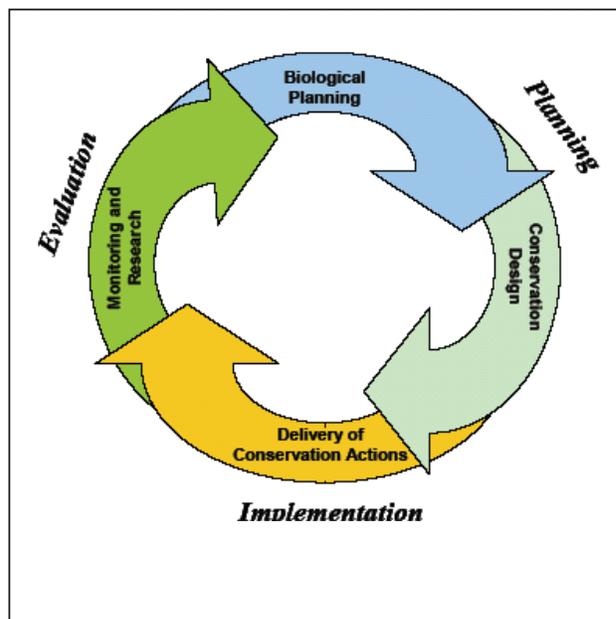
4 Because budget erosion is expected to continue, the Fisheries Program needs to focus
5 strategically. We need to become more focused within the Service priorities, as well as position
6 ourselves for future challenges such as global climate change. Moreover, given the current status
7 of aquatic resources and future challenges, we need more than ever to be effective. To be
8 effective, we must continue to work cooperatively with our partners.
9

10
11 To implement the Service priorities, we need to embrace new directions and new tools. We need
12 to continue to embrace the shift from a hatchery-centric program to landscape-level conservation
13 with an emphasis on fish habitat conservation. Activity-based conservation with an emphasis on
14 “more” will give way to the science of “how much more” and “where”, as we consider how best
15 to achieve our goals. We will need to address the challenge that this creates for the Fisheries
16 Program, where FWMA is being called upon to do more while its operational funding continues
17 to erode.

18 **STRATEGIC THINKING**

19 **Planning Processes**

20
21 In setting the Fisheries Program’s direction for the next five years and beyond, we endeavored to
22 follow established planning processes. We were guided by structured decision making, adaptive
23 management, ecosystem management, and strategic habitat conservation (Appendix I). While
24 these planning processes differ in emphasis, all have a similar conceptual underpinning and
25 similar sets of steps. The steps in strategic habitat conservation, common to all of these planning
26 processes, are shown in this diagram (National Ecological Assessment Team 2006):
27



1 Because these planning tools differ in emphasis, we highlighted certain tools for specific parts of
2 our planning process. This plan follows the general outline for strategic management that Meffe
3 et al. (2002) recommend for implementing ecosystem management. We used structured decision
4 making to help set our regional goals and establish priorities for our five-year operational plan
5 and annual station work activity guidance. We used a conservation planning approach, informed
6 by strategic habitat conservation, to integrate biological and geospatial information at a
7 landscape level to provide data for structured decision making.

8
9 The following sections more fully describe our methods for key planning elements: partner
10 engagement, structured decision making, and conservation planning.

11 Partner Engagement

12 All the planning processes referenced emphasize the importance of obtaining the perspectives of
13 key partners and stakeholders. At various points in our planning process, we received input
14 from within the Fisheries Program, other Service programs (Ecological Services, Refuges, Law
15 Enforcement, Migratory Birds and State Programs) and states and tribes. Specifically:

- 16 ■ In April 2003, while developing our 2004-2008 strategic plan, we conducted a structured
17 session to obtain input from other Service programs, states, tribes, other federal agencies
18 and non-governmental organization partners on Fisheries Program priorities. We used
19 that feedback in the current planning process.
- 20 ■ In 2006, in response to a request from us, states and tribes in the Northeast region and
21 other Service programs identified the basins, activities, and species that are their highest
22 priority for Fisheries Program efforts.
- 23 ■ In 2007, we met with individual states to discuss our planning process, their 2006
24 feedback, and their wildlife action plans, and invited tribes to meet with us. We also
25 exchanged information with other Service programs.
- 26 ■ We distributed drafts of this strategic plan to states, tribes, other federal agencies, non-
27 governmental organizations and other Service programs for their review, and made
28 revisions in response to their comments.

29
30 The input that we received has been and will be used in several stages of the planning process.

31 Structured Decision Making (SDM)

32 In support of the Service conservation principle calling for thorough, objective science, we used
33 SDM to engage the Fisheries Program's regional and field staff in decision-making on Fisheries
34 Program priorities. SDM offers a scientifically sound, transparent decision-making process that
35 we can explain to and document for the states and other partners. The first three steps of SDM
36 are relevant to this strategic plan; later steps will be implemented subsequently as the operational
37 plan is developed. The following describes our approach to implementing the first three steps:

- 38 ■ Engaging relevant stakeholders in the decision process
39
40 As a result of our engagement with state partners, we have considerable data on their
41 viewpoints with respect to priority activities for the Fisheries Program. We will incorporate
42 this information into the analyses during the SDM process. We also will check back with
43 them to request feedback on the outcome of the process.
44

- 1
2 ▪ Identifying the problem to be addressed

3 The Fisheries Program has identified the problem to be addressed as: *How should the*
4 *Northeast Region Fisheries Program allocate limited resources across the region to achieve its goals*
5 *under a changing budget climate with at least the informed consent of key partners?* We defined
6 “informed consent” as “the grudging willingness to (grudgingly) go along with a course of
7 action that one is actually still opposed to.” (modified from Bleiker, see literature cited). We
8 will work with our partners to gain consensus, but if that is not possible, we need to have at
9 least their informed consent. By “across the region”, we mean among our various programs;
10 we intend to allocate sufficient resources to each program that progress can be measured.
11 This problem statement was designed to help address the shortcomings of the 2004-2008
12 strategic plan, by including the need for informed consent of key partners.

- 13
14 ▪ Specifying objectives and tradeoffs that capture the values of stakeholders

15 We began by identifying the six Fisheries Program goals that are included in this strategic
16 plan (see Regional Goals below). The focus areas and goals from the national Vision served
17 as a starting point. These focus areas and goals were modified and condensed into the six
18 goals. Modifications were based on the Service priorities, Fisheries Program staff’s
19 knowledge of Northeast region-specific issues and stakeholder values, and the need for the
20 goals to set the stage for identifying SDM objectives. We gave considerable thought to
21 whether the goals represent fundamental objectives, or means objectives (objectives to
22 achieve a fundamental objective) in the SDM sense. This was particularly an issue because
23 several of the goals may be viewed as means to achieving the goal of conservation and
24 management of aquatic species. However, based on the legal and policy context, we believe
25 our six goals are fundamental for the Fisheries Program, meaning that each is a goal in itself
26 beyond what it may contribute to achieving other goals.

27
28 Translating our six goals into SDM objectives and making trade-offs will be described in the
29 operational plan. Completing these and the remaining SDM steps will require that we take into
30 account conservation planning, geospatial information, current and projected budgets, our
31 current infrastructure, personnel strengths, and the five criteria from the national Vision.
32 Training, attrition, targeted hiring, and other options will provide opportunities for change over
33 the projected 5 years of implementation. As the operational plan is developed, the need to
34 modify this strategic plan may emerge; any modifications will be accessible via the Internet [re-
35 state website address].

36 37 Conservation Planning

38 As a first step in bringing conservation planning and a landscape perspective into our strategic
39 planning, we identified species of conservation and management concern, which is similar to the
40 first step of strategic habitat conservation. Species of conservation and management concern are
41 species that the Fisheries Program will strive to bring to or maintain at self-sustaining levels.
42 These species represent the Fisheries Program’s priority species for management action. As
43 described in Appendix II, species of conservation and management concern include three
44 categories of species: federally endangered, threatened or candidate fish and mussels species,
45 interjurisdictional fish species, and special species. Partner priorities were considered in
46 selecting species of conservation and management concern, particularly those identified as
47 species of greatest conservation need in state wildlife action plans. However, to ensure that the

1 Fisheries Program maintain strategic focus, it was necessary to strictly adhere to the definitions
 2 of the three categories identified in Appendix II. All of the Fisheries Program species of
 3 conservation and management concern were identified as species of greatest conservation need
 4 in one or more state wildlife action plans except black sea bass, scup, summer flounder,
 5 orangefoot pimpleback, ring pink, and Eastern pearlshell in Maine.

6
 7 The Fisheries Program then assigned scores to the species of conservation and management
 8 concern as a way of assigning relative priority. Scoring utilized the five criteria in the national
 9 Vision. The species scoring process and resulting scores are described in Appendix III.

10
 11 As we develop the operational plan, we intend to use the distribution and scoring of species of
 12 conservation and management concern to help identify geographic areas which offer a strong
 13 federal connection and the best opportunity for our efforts to benefit a large number of these
 14 species and the ecosystems upon which they depend. This information will be used in the SDM
 15 analysis.

16
 17 **Regional Goals**

18 Our regional goals are described below. They are designed to support the Service’s mission and
 19 vision, the national Fisheries Program mission, and the Service priorities. Table 1 summarizes
 20 how the regional goals implement the Service priorities.

21

Service Priority or Conservation Principle	Supporting Strategic Plan Goal(s)
Science	6. Science and Management Excellence
Stewardship	1. Conservation and Management of Aquatic Species 2. Conservation and Management of Aquatic Ecosystems 4. Connecting People with Nature
Service	All six goals contribute to serving the American people, especially 3. Recreational Fishing, 4. Connecting People with Nature, and 5. Maintaining the Trust
Professionalism	6. Science and Management Excellence
Partnerships	All six goals will be implemented using creating, innovative partnerships
People	6. Science and Management Excellence
Legacy	4. Connecting People with Nature
National Wildlife Refuges	2. Conservation and Management of Aquatic Ecosystems
Landscape Conservation	2. Conservation and Management of Aquatic Ecosystems 6. Science and Management Excellence
Migratory Birds	1. Conservation and Management of Aquatic Species 2. Conservation and Management of Aquatic Ecosystems
Threatened and Endangered Species	1. Conservation and Management of Aquatic Species
Aquatic Species	1. Conservation and Management of Aquatic Species
Connecting People with Nature	4. Connecting People with Nature

22
 23 Table 1: Summary of how regional goals implement Service priorities and conservation
 24 principles.

1
2 For each goal we identify general categories of activities that we plan to implement. The
3 specific activities that we will conduct and their locations will be identified in the operational
4 plan.

5
6 **1. Conservation and Management of Aquatic Species:** Maintain, restore, and recover
7 populations of species of conservation and management concern to self-sustaining levels.

8
9 Populations of many aquatic species in the Northeast are in serious decline or not meeting
10 management goals. Of 347 populations of fish species of conservation and management concern
11 in the Fisheries information system database, 14 percent are self-sustaining; the remainder are
12 depleted or unknown. Only 20 percent have current, adequate population status assessments.
13 Additional information on the status of aquatic species may be found in the supplement. The
14 Fisheries Program will give higher priority to species of conservation and management concern
15 that received higher scores, particularly where these priorities are shared with states. We will
16 pursue this goal through the following general categories of activities benefiting species of
17 conservation and management concern. These activities are not listed in priority order.

- 18
19 • Produce, rear, hold and provide refugia for recovery of listed fish and mussel species.
20 • Produce, rear, hold and provide refugia for interjurisdictional fish populations and
21 associated recreational fisheries restoration.
22 • Support existing and potential Natural Resource Damage Assessment settlements (for
23 example, Southwest Virginia mussels, Hudson River).
24 • Assess and monitor fish populations in support of recovery and restoration programs.
25 • Provide technical expertise and services for fish health, conservation genetics, fisheries
26 restoration, data management and analysis.
27 • Provide leadership on multi-state conservation programs and fish commissions.
28 • Support Refuges program in developing management and conservation plans, and in fish
29 population monitoring and assessment.
30 • Implement the Conservation and Management of Aquatic Ecosystems goal.

31
32 **2. Conservation and Management of Aquatic Ecosystems:** Maintain and restore the
33 ecological composition, structure and function of natural and modified aquatic ecosystems to
34 ensure the long-term sustainability of populations of species of conservation and management
35 concern.

36
37 In light of the continuing loss and degradation of aquatic ecosystems and impacts on fish
38 populations described in the supplement, the Fisheries Program, guided by Strategic Habitat
39 Conservation, will increase its emphasis on restoring aquatic ecosystems. The Fisheries Program
40 will work with its state, tribal, federal and non-governmental organization partners in strategic
41 pursuit of sustainable landscapes. We will continue to work hand-in-hand with the Service
42 Partners and Coastal programs. While maintaining a landscape-scale conservation vision, we
43 will focus our efforts on activities benefiting ecosystems upon which species of conservation and
44 management concern depend. We will pursue this goal through the following general categories
45 of activities (These activities are not listed in priority order.)
46

- 1 • Support National Fish Habitat Action Plan implementation; catalyze and coordinate fish
2 habitat partnerships.
- 3 • Select, fund and implement fish passage and habitat restoration projects under the
4 National Fish Habitat Action Plan.
- 5 • Provide fish passage engineering and technical expertise.
- 6 • Provide coordination for regional and national aquatic invasive species issues; provide
7 technical expertise; support prevention; assist with rapid response.
- 8 • Assess and monitor regional impacts of global climate change, and modify Fisheries
9 Program plans and activities in response.
- 10 • Reduce climate change impacts of Fisheries Program activities.
- 11 • Establish Environmental Management Systems at National Fish Hatcheries in addition to
12 those existing at North Attleboro and White River National Fish Hatcheries.
- 13 • Reduce environmental impacts of fish hatchery effluents through National Pollutant
14 Discharge Elimination System compliance.
- 15 • Work with Refuges and Ecological Services programs to improve fish habitat and water
16 quality on refuges and adjacent lands, and to monitor and evaluate watershed health.
- 17 • Cooperate with federal and state agencies and non-governmental organizations in
18 wetland, riparian and aquatic resource management, restoration, conservation, assessment and
19 evaluation to benefit species of conservation and management concern.
- 20 • Cooperate with federal and state agencies and non-governmental organizations to develop
21 and implement agreements for aquatic nuisance species assessment, control, monitoring and
22 vector management.
- 23 • Work cooperatively with sister agencies, universities, and non-governmental
24 organizations to assemble and implement existing restoration plans and monitoring efforts.
- 25 • Implement the Connecting People with Nature and Science and Management Excellence
26 goals.

27
28 Resources:

29 National Fish Habitat Action Plan. <http://www.fishhabitat.org/>

30 The Service's Climate Change page. <http://www.fws.gov/home/climatechange/>

31
32 **3. Recreational Fishing:** Provide fishing and other recreational opportunities for species
33 managed for recreation.

34
35 Support for recreational fishing and the benefits it provides the American people is a cornerstone
36 of the Service's history and responsibility. Recreational fishing is high in economic and social
37 value but experiencing declining participation, as described in the supplement. In light of this,
38 the Fisheries Program will focus on maintaining or increasing economic and social values
39 resulting from fishing, while working to increase participation in fishing, in close cooperation
40 with state and other partners. We will pursue this goal through the following general categories
41 of activities benefiting species managed for recreation. (These activities are not listed in priority
42 order.)

- 43
44 • Provide fish for and/or otherwise support recreational fisheries for species of
45 conservation and management concern managed for recreation.

- 1 • Provide education and outreach, including fishing events, aimed at increasing
2 participation in angling; seek opportunities to partner with refuges.
- 3 • Produce disease-free rainbow trout eggs for the National Broodstock Program.
- 4 • Implement the Recreational Fisheries Executive Order.
- 5 • Implement the Conservation and Management of Aquatic Species, Conservation and
6 Management of Aquatic Ecosystems, Connecting People with Nature, and Science and
7 Management Excellence goals.

8
9 Resources:

10 Recreational Fisheries Executive Order: <http://www.fws.gov/sfbpc/executiveorder.html>

11
12 **4. Connecting People with Nature:** Increase public stewardship and public benefits of aquatic
13 resources.

14
15 The eroding connection between people and nature described in the supplement portends serious
16 negative impacts for aquatic resources and public health. To address this, the Fisheries Program
17 will work closely with state and other partners to increase public stewardship of aquatic
18 resources by increasing opportunities for the public to interact with fish and other aquatic
19 species, and their habitats. We also will work with our partners to encourage natural connections
20 by making recreational, educational, economic, health and social benefits of aquatic resources
21 more available to the public. We will pursue this goal through the following general categories
22 of activities. (These activities are not listed in priority order.)

- 23
24 • Work with refuges, states, national organizations and other traditional and creative new
25 partners to provide targeted education and outreach aimed at connecting people with nature
26 through a variety of fish and wildlife-associated opportunities.
- 27 • Emphasize maintaining good natural connections in communities where they exist, and
28 using new approaches to engage nontraditional and underserved communities where natural
29 connections are weak. Identify and emulate Service facilities that have successfully reached
30 previously underserved communities.
- 31 • Identify education and outreach materials needed by state and other partners, produce and
32 distribute needed materials using multiple media, and work with partners to evaluate their
33 effectiveness.
- 34 • Encourage and welcome visitors and volunteers to National Fish Hatcheries and Fish and
35 Wildlife Conservation Offices.
- 36 • Develop one or more pilot hatchery outdoors education programs and curricula, and seek
37 funding under the Fish Hatchery System Volunteers Act of 2006.
- 38 • Promote the development of Friends groups and volunteers for National Fish Hatcheries
39 and Fishery Resource Offices.
- 40 • Support the Service's regional and national Connecting People with Nature initiatives.
- 41 • Implement the Conservation and Management of Aquatic Species, Conservation and
42 Management of Aquatic Ecosystems, Recreational Fishing, and Science and Management
43 Excellence goals.

44
45 Resources:

46 The Service's Children and Nature page. <http://www.fws.gov/children/>

1 Children and Nature Network. <http://www.childrenandnature.org>
2 Aquatic Resource Education Association <http://www.areanet.org>
3 National Fish Hatchery System Volunteer Act. .
4 http://www.fws.gov/pacific/Fisheries/pdf/Public%20Law%20109-360%20Hatchery%20volunteer%20act%2010_06.pdf
5
6 Recreational Boating and Fishing Foundation. <http://www.rbff.org/page.cfm?pageID=343>
7

8 **5. Maintaining the Trust:** Strengthen tribal capabilities for the protection, restoration and
9 management of aquatic resources to ensure mutual benefits while respecting sovereignty of
10 Native American governments.

11
12 Native American cultures are closely connected to fish and wildlife resources for sustenance,
13 cultural enrichment, and economic support. While tribal capabilities for the management of
14 these resources have been growing, federal agencies remain legally obligated to protect tribal
15 trust resources. The Service's 1994 Native American Policy articulates general principles that
16 guide the Service's government-to-government relationship with Native American governments
17 in the conservation of fish and wildlife resources. We will pursue this goal through the following
18 general categories of activities. (These activities are not listed in priority order.)
19

- 20 • Exchange technical expertise regarding matters of mutual interest, such as conservation
21 and recovery of listed species, diadromous fish, mussels, and other aquatic resources; where
22 requested, assist Native American governments in developing their own technical expertise in
23 aquatic species conservation and management.
- 24 • Create opportunities for Service employees to gain knowledge and understanding of
25 Native American religious, cultural and traditional values and practices, Native American
26 policies, and successful partnering with tribes.
- 27 • Encourage inclusion of Native American schools in educational outreach programs by
28 identifying schools within a defined radius of our National Fish Hatcheries, Fisheries Resources
29 Offices and Coordinators offices, cooperating with tribal governments and implementing, if
30 requested, fisheries educational opportunities.
- 31 • Involve and consult with affected Native American governments early in the process
32 prior to Service policy changes, decisions and activities.
- 33 • Implement the Conservation and Management of Aquatic Species, Conservation and
34 Management of Aquatic Ecosystems, Connecting People with Nature, and Science and
35 Management Excellence goals.

36
37 Resources:

38 Service Native American Policy. <http://www.fws.gov/northeast/nativeamerican/napolicy.pdf>
39 Working With Native American Tribes in the Northeast - Tribal Support.
40 <http://www.fws.gov/northeast/nativeamerican/tribsupp.html>
41

42 **6. Science and Management Excellence:** Manage the Fisheries Program to be results-oriented,
43 functionally integrated, accountable, and demonstrate leadership in science and management.
44

45 The Fisheries Program is faced with eroding budgets, yet ecological, social and political change
46 is upon us. We are called upon as never before to demonstrate excellence in science and

1 management. Achieving the other five goals that we have established will require excellence in
2 science and management (management both of natural resources and of the Fisheries Program
3 and its workforce). Moreover, excellence in science and management are key to earning and
4 maintaining the trust and support of our partners, stakeholders, and the American public.

5
6 Achieving excellence in science and management will require that we be accountable, by using
7 transparent planning and budgeting processes and linking our activities and expenditures to
8 defined, science-based resource outcomes. We also must maintain strategic focus and learn from
9 the results of our actions, by increasing our capability for and use of Strategic Habitat
10 Conservation. We will pursue this goal through the following general categories of activities.
11 (These activities are not listed in priority order.)

- 12
- 13 • Regularly exchange information with state partners to anticipate and reduce negative
14 impacts of budget shortfalls. Involve and consult with Fish and Wildlife Directors of affected
15 tribes to limit resource impacts of budget shortfalls.
- 16 • Work to increase engagement by states, tribes and stakeholders by providing increased
17 opportunities to review and provide input into strategic planning and its implementation.
- 18 • Provide an annual summary of our progress to the states, tribes, and stakeholders; utilize
19 the web and other forms of communication.
- 20 • Work with other Service programs to promote and use Strategic Habitat Conservation for
21 landscape-level conservation planning.
- 22 • Ensure that all Fisheries Program activities connect to performance outcomes, and that
23 our activities are supported by a written plan or agreement that specifically identifies a role for
24 the Fisheries Program.
- 25 • Measure and report Fisheries Program progress toward meeting fish and other aquatic
26 resource conservation goals and objectives.
- 27 • Participate in Service efforts to improve performance measures, such as the Chesapeake
28 Bay performance pilot, and implement recommendations.
- 29 • Coordinate with the Northeast Monitoring and Performance Reporting and National Fish
30 Habitat Action Plan monitoring and evaluation frameworks.
- 31 • Ensure that information disseminated by the Fisheries Program is scientifically sound by
32 complying with the Information Quality Act (IQA 2001) and Peer Review Policy (OMB 2004).
- 33 • Strategically position our workforce geographically to best interact with our partners.
- 34 • Emphasize creative and innovative partnerships necessary to carry out changes in
35 direction.
- 36 • Develop the knowledge, skills, and abilities required to support and implement changes
37 in strategy. These include: planning and implementing landscape-level conservation, including
38 Strategic Habitat Conservation; addressing issues related to climate change and/or sea-level rise;
39 using advanced accounting systems; connecting people with nature; demonstrating teamwork,
40 collaboration, negotiation, mediation, communication.
- 41 • Make certain that leaders at all levels have the capacity to lead through change by
42 adapting to new conditions and taking advantage of new opportunities presented by change; and
43 to communicate change within the Fisheries Program and with partners.
- 44 • Ensure that employees have access to state-of-the-art training to maintain the technical
45 skills needed to serve as conservation leaders and vehicles of technology transfer.

- 1 • Support the development and leadership of our workforce by supporting their
2 involvement in professional societies and contribution to peer-reviewed publications.
- 3 • Institutionalize the use of Structured Decision Making for Fisheries Program natural
4 resource decision-making at all levels by providing training and experiential opportunities to our
5 workforce.
- 6 • Build upon examples of entrepreneurial spirit by leveraging partners, engaging corporate
7 leadership and expanding our constituencies.

8
9 Resources:

10 Adaptive Management. <http://www.doi.gov/initiatives/AdaptiveManagement/index.html>

11 Strategic Habitat Conservation. <http://www.fws.gov/science/StrategicHabitatConservation.html>

12 13 PLAN EVALUATION

14
15 This strategic plan will be evaluated in two ways. First, we will evaluate the success of our
16 planning process. Specifically, did our planning process help the Fisheries Program achieve its
17 goals under a changing budget climate with at least the informed consent of key partners? This
18 will be evaluated by obtaining feedback from our partners prior to initiating the next strategic
19 plan, around 2012. We will ask them whether the processes that we used to develop and
20 implement this plan facilitated their informed consent.

21
22 Second, we will evaluate how well we have achieved our goals according to Department of the
23 Interior end outcomes, Service operations plan performance measures, and the objectives in our
24 Fisheries Program Operational Plan.

25
26 Our primary challenge in implementing the planning frameworks we have adopted is evaluating
27 the success of our actions. The established performance targets only measure part of what we
28 do. In addition, we are only part of the overall aquatic conservation picture in the Northeast—
29 our actions generally contribute to larger plans and programs, and it is usually difficult to
30 identify the results of our specific actions isolated from those of our partners.

31
32 Evaluating the success of aquatic conservation in the Northeast is challenging because there is
33 presently no overall aquatic conservation plan for the region whose success can be evaluated.
34 However, the Northeast states are working to develop a plan for monitoring and evaluating the
35 success of implementing the state wildlife action plans, and the Fisheries Program is committed
36 to coordinating with this effort. In addition, the National Fish Habitat Action Plan includes
37 tracking the status and trends of aquatic habitats. We also hope to be able to infer the
38 contribution of the Fisheries Program to improvements in aquatic species and their habitats.

39
40 While it is difficult to monitor program success at the regional level, the Fisheries Program will
41 be identifying finer-scale targets in the Operational plan. At this level we will coordinate with
42 appropriate states and other partners to measure our success.

43

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Glossary of Terms and Definitions

Aquatic Invasive Species

Aquatic organisms that are introduced into a non-native aquatic ecosystem and which cause, or are likely to cause, harm to the economy, environment or human health.

Candidate Species

Any species being considered by the Secretary for listing as an endangered or a threatened species, but not yet the subject of a proposed rule (50 C.F.R. 424.02).

Conservation

Management, restoration, and protection of self-sustaining and imperiled species populations (Fisheries Program Vision for the Future).

Depleted Population

A population whose abundance or other appropriate measure is below its management goals, or, in the absence of management goals, a population considered to be below historical levels. Does not include populations listed as candidate, threatened, or endangered under the *Endangered Species Act*.

Ecosystem

A geographic area including all the living organisms (people, plants, animals, and microorganisms), their physical surroundings (such as soil, water, and air), and the natural cycles that sustain them (<http://ecosystems.fws.gov/>). For purposes of the Fisheries Program, ecosystems are delineated along the 53 FWS ecosystem units.

Effluent

Water and associated suspended and dissolved materials included within the discharge stream (point-source or otherwise) from a facility using water (e.g., aquaculture facility/NFHS cultural station).

Environmental Management System

A set of processes and practices that enable a facility to reduce its environmental impacts and increase its operating efficiency.

Endangered Species

A species listed under the *Endangered Species Act* as being in danger of extinction throughout all or a significant portion of its range (50 C.F.R. 424.02).

Fish Passage

Presence of an unobstructed pathway allowing movement in and out of habitats previously unavailable or limited due to a barrier, for use in completing life history requirements.

1 **Fish Passage Barrier**

2 A manmade device or influence that prevents or inhibits fish or other aquatic species from
3 reaching historic habitats. Barrier includes, but is not restricted to, dams, culverts, inefficient
4 fishways, water diversions, ineffective screens, and inadequate flows (Service Manual, 710 FW
5 1).

6
7 **Fishery Management Plan**

8 A planning document for the conservation of one or more fisheries. See also 'Management
9 Plan.'

10
11 **FWMA (Fish and Wildlife Management Assistance)**

12 A programmatic organizational branch in the Washington Office that administers funds from
13 1331 (Anadromous Fish Management) and most of 1332 (Fish and Wildlife Assistance) of the
14 Service annual budget. These funds support activities at 64 fish and wildlife management
15 assistance offices (also sometimes known as Fishery Resources Offices, Fish and Wildlife
16 Resource Offices, etc.) throughout the nation. Most of these activities are part of the Fisheries
17 Program, though FWMA also includes wildlife management assistance on tribal lands.

18
19 **Goal**

20 A general description of what the group seeks to accomplish and for whom (Meffe et al. 2002).

21
22 **GPRA**

23 The Government Performance and Results Act of 1993, which requires federal agencies to
24 establish standards measuring their performance and effectiveness; and to develop strategic plans
25 describing overall goals and objectives, annual performance plans with quantifiable measures of
26 their progress, and reports describing their success in meeting standards and measures.

27
28 **Habitat Assessment**

29 Any one of many standard surveys to evaluate the chemical, physical, and/or biological
30 characteristics of a specified area of land and/or water as habitat for a population, species, or
31 community. Examples include baseline inventories, evaluations of management actions, and
32 monitoring of changes over time.

33
34 **Hatchery Propagation**

35 Includes natural or artificial matings, fertilization of sex cells, transfer of embryos, development
36 of offspring, and grow out of individuals of a species in a controlled environment.

37
38 **Imperiled Species**

39 Any species listed as threatened or endangered under the authority of the *Endangered Species*
40 *Act*, considered a candidate for listing, or its population is in a steep decline (Fisheries Program
41 Vision for the Future).

42
43 **In-stream**

44 The area within the confined width and depth of a flowing watercourse at or below bank-full
45 stage.

1 **Interjurisdictional Fisheries**

2 Freshwater, coastal, or marine fish populations managed by two or more states, nations, or tribal
3 governments because of their geographic distribution or migratory patterns (Fisheries Program
4 Vision for the Future). In addition, for Northeast Region Fisheries Program planning purposes,
5 interjurisdictional fisheries must be *under the jurisdiction of* and managed by two or more states,
6 nations, or tribal governments. The general standard for inclusion in this category is the
7 existence of an interagency management plan among two or more states, nations or tribal
8 governments or other similar formal agreement that specifically identifies the native species or
9 population of interest and identifies a role for the Service; and the Fisheries Program has or
10 intends to have a consistent commitment to species restoration as evidenced by approval by the
11 Northeast Region Fisheries Program (or higher level within the Service).

12
13 **Introduction**

14 The intentional or unintentional escape, release, dissemination, or placement of a species into an
15 ecosystem as a result of human activity (Executive Order 13112).

16
17 **Invasive**

18 Any non-native species whose introduction does or is likely to cause economic or environmental
19 harm or harm to human health (Fisheries Program Vision for the Future).

20
21 **Listed Species**

22 Any species of fish, wildlife, or plant which has been determined to be endangered or threatened
23 under section 4 of the *Endangered Species Act* (50 C.F.R. 402.02).

24
25 **Management Plan**

26 A broadly-used term to describe a planning document for the manipulation of natural resources
27 in order to achieve societal goals. Can be specific to a species, population, community,
28 watershed, ecosystem, or other location, or for activities including recovery, restoration, control,
29 or use. Generally describes the historic and current resource characteristics or functions and
30 outlines goals and objectives to establish or maintain those characteristics or functions at a
31 desired condition. It further describes specific actions and timetables by the participants to
32 achieve those goals and a format to report progress towards this accomplishment.

33
34 **Mitigation**

35 Activities contributing to preserving aquatic resources and offsetting aquatic and habitat resource
36 loss due to water projects developed by the federal government. Mitigation includes propagation
37 of native species to preserve them from potential extinction as well as propagation of non-native
38 species to fill vacant niches in severely altered habitat (e.g., reservoirs and tail waters) where
39 native species can no longer survive or reestablish self-sustaining populations.

40
41 **Native Species**

42 Any species within historic range, the area occupied at the time of European colonization of
43 North America (Fisheries Program Vision for the Future).

1 **NFHS (National Fish Hatchery System)**

2 National Fish Hatchery System stations include fish hatcheries, fish technology centers, fish
3 health centers and historic fish hatcheries that are managed by the Service.
4

5 **Objective**

6 A specific statement of what the group intends to accomplish, stated in ways that can be
7 measured and monitored. Several objectives may be written to address each goal (Meffe et al.
8 2002).
9

10 **Outcome:**

11 A description of the intended result, effect, or consequence that will occur from carrying out a
12 program or activity, e.g., the reduction in incidence of a disease in the United States over a
13 specified period of time. (DOI GPRA strategic plan FY2007-2012). “Biological outcome” is
14 used to refer to a population response

15 <http://www.fws.gov/science/StrategicHabitatConservation.html>
16

17 **Output:**

18 A quantitative expression of production from an activity measured over a specified period of
19 time e.g., the number of training sessions that are conducted within the course of a fiscal year.
20 (DOI GPRA strategic plan FY2007-2012)
21

22 **Outreach and Education Events**

23 A time-specific gathering of Fisheries Program staff and an audience of selected individuals,
24 organizations, or the general public for the purpose of providing the audience with information
25 on aquatic resource conservation, recreational fishing, and/or the functions of the Service.
26

27 **Partner**

28 Any individual, organization, or agency working with the another to meet common objectives by
29 contributing capital towards shared activities. “Capital” includes funds, people, equipment,
30 land/property access, and authority.
31

32 **Population**

33 A discrete group of individuals of a single species or lesser taxon that is defined by its
34 reproductive isolation and/or geographical distribution (e.g., management unit). Captive fish and
35 their progeny held in captivity do not constitute a discrete population.
36

37 **Population Assessment**

38 A broad category of biological surveys conducted to determine population characteristics of a
39 species. Examples include baseline inventories, evaluations of management actions, and
40 monitoring of changes over time of population parameters (e.g., abundance, distribution,
41 genetics, sex ratios, recruitment, and growth rate).
42

43 **Recovery**

44 Improvement in the status of listed species to the point at which listing is no longer appropriate
45 under the criteria set out in section 4(a)(1) of the *Endangered Species Act* (50 C.F.R. 402.02).
46

1 **Recovery Plan**

2 A planning document pursuant to the *Endangered Species Act* for the conservation and survival
3 of federally listed species (16 U.S.C. 1533(f)).
4

5 **Recreational**

6 An activity which provides or enhances public opportunities such as fishing, hunting, and
7 wildlife watching.
8

9 **Refugia**

10 Isolated areas or facilities in which imperiled wild or captive produced organisms can be held in
11 protection, preferably for short periods of time but possibly long-term.
12

13 **Research**

14 An activity that directly or indirectly supports gathering, analyzing, and disseminating scientific
15 information.
16

17 **Restoration (Habitat)**

18 The manipulation of the physical, chemical, or biological characteristics of a site with the goal of
19 returning natural/historic functions to a former or degraded habitat. Site-specific criteria for
20 achievement of restoration are defined in a plan or agreement. Habitat restoration is divided into
21 re-establishment and rehabilitation.
22

23 **Restoration (Population)**

24 The process of returning the quantity and/or quality of one or more depleted or extirpated
25 populations to some previous condition, often a baseline established to meet goals and objectives
26 in a plan or agreement.
27

28 **Riparian**

29 A landscape position - lands contiguous to perennial or intermittent streams, channels and rivers.
30 Riparian areas may include upland, wetland, and riparian plant communities (FWS FY 2003
31 Annual Performance Plan).
32

33 **Riverine**

34 Areas within the active channel of a river or stream.
35

36 **Self-sustaining**

37 Capable of maintaining itself independently. In general, a population may be considered self-
38 sustaining if: there is no augmentation of hatchery or out-of-basin fish; the genetic complement
39 is sufficient; and habitat requirements are met without further human intervention.
40

41 **Special Species**

42 Native species or populations of conservation concern that are not federally listed or
43 interjurisdictional, but for which an agency management plan, formal management agreement
44 between the agency and the Service, or Natural Resource Damage Assessment trustee
45 Memorandum of Agreement specifically identifies the species or population of concern and
46 identifies a role for the Service; or are a tribal trust resource on which we have been specifically
47 asked to assist; and the Fisheries Program Assistant Regional Director has or intends to have a

1 consistent commitment to species restoration as evidenced by approval by the Northeast Region
2 Fisheries Program (or higher level within the Service).

3
4 **Species of Conservation and Management Concern**

5 Northeast Region Fisheries Program designation comprising federally listed, interjurisdictional,
6 and special species.

7
8 **Species of Greatest Conservation Need**

9 State wildlife action plan designation for wildlife species that have low or declining populations
10 and are indicative of the diversity and health of wildlife of each state.

11
12 **Species of Management Concern**

13 Any species subject to management by the Department of the Interior due to statutory or
14 programmatic responsibility.

15
16 **Stabilized**

17 Species in the wild whose numbers have remained relatively constant and whose threats are
18 relatively constant. Stable does not mean secure.

19
20 **Stakeholder**

21 Any agency, group, or individual that can place a claim on the agency's attention, resources or
22 outputs, or who sees themselves as affected by agency actions or who can affect the agency's
23 future (Organization of Wildlife Planners; Developing Comprehensive Management Systems for
24 Wildlife Agencies Seminar; October 23-27, 1995; Stowe, Vermont).

25
26 **Sustainable**

27 A population whose abundance or other appropriate measure is at or above its management
28 goals, or, in the absence of management goals, a population indicated to be healthy by the best
29 available scientific or anecdotal evidence.

30
31 **Technical Assistance**

32 Expertise, information, or other help provided by the Service upon request by a partner or
33 stakeholder to facilitate the development, enhancement, and management of fish and wildlife
34 resources (e.g. direct on-site support, information transfer, and baseline inventories) (*adapted*
35 *from FWS FY 2003 Annual Performance Plan and FWS Native American Policy*). Record all
36 activities (including communications) related to one issue or project as one request for technical
37 assistance fulfilled. Technical assistance is not consultation. In the most general terms,
38 consultation is initiated by the Service and technical assistance is initiated by a partner or
39 stakeholder.

40
41 **Threatened Species**

42 Any species listed under the *Endangered Species Act* that is likely to become endangered within
43 the foreseeable future throughout all or a significant portion of its range (50 U.S.C. 1531 *et seq.*).
44

1 **Tribal Consultation**

2 A request by the Service for information or feedback from Native American governments
3 regarding the management of fish and wildlife resources for which trust responsibilities and
4 other fiduciary obligations are attached to the United States. Occurs when the Service initiates
5 discussions with tribal officials regarding a pending federal action (e.g. designation of critical
6 habitat, rule making, or listing species). Consultation could be legally mandated or could be a
7 voluntary effort by the Service to gain tribal perspective to an issue or action. All consultations
8 must comply with current federal Native American policies, including Secretarial Order Nos.
9 3206, 3175, and Executive Order 13175. Record all communications related to one issue or
10 action as one consultation. Consultation is not technical assistance. In the most general terms,
11 consultation is initiated by the Service and technical assistance is initiated by a partner or
12 stakeholder.

13
14 **Tribal Trust Responsibility**

15 The fiduciary obligations that attach to the U.S. as trustee of the assets and resources that the
16 U.S. holds in trust for Native American governments and their members, the treaty and statutory
17 obligations of the U.S. toward Native American governments and their members, and other legal
18 obligations that attach to the U.S. by virtue of the special relationship between the federal
19 government and Native American governments. The identification and quantification of trust
20 assets is recognized as an ongoing and evolving process (FWS Native American Policy 1994).

21
22 **Tribe**

23 Federally recognized tribes as regarded by federal law and formally identified by the Department
24 of the Interior.

25
26 **Watershed**

27 A standard eight digit USGS cataloging unit representing part or all of a surface drainage basin, a
28 combination of drainage basins, or a distinct hydrologic feature. The USGS divides the United
29 States into 2150 cataloging units, which are the fourth level of classification in the USGS
30 Hydrologic Unit system. For more information, see <http://water.usgs.gov/GIS/huc.html>.
31 Synonym: DOI Watershed Unit.

32
33 **Wetland**

34 Lands transitional between terrestrial and aquatic systems where the water table is usually at or
35 near the surface or the land is covered by shallow water. For purposes of this classification,
36 wetlands must have one or more of the following three attributes: (1) at least periodically the
37 land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric
38 soils; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at
39 some time during the growing season of each year (Cowardin et al. 1979). By definition
40 wetlands include areas meeting specific criteria included in the 1987 Corps of Engineers
41 Wetlands Delineation Manual, as well as in the USDA-NRCS's National Food Security Act
42 Manual (FWS FY 2003 Annual Performance Plan, <http://planning.fws.gov/Appendix.html#II>).

43
44 **Wild Fish Health Survey**

45 A formalized national partnership of Service, state and tribal resource agencies to document the
46 national distribution of fish pathogens, including viruses, in free-ranging fish. Its use allows for

- 1 management decisions based on greater levels of science-based information and is publicly
- 2 available on the web.
- 3

REVIEW DRAFT

Literature Cited

- Atlantic Coastal Fisheries Cooperative Management Act of 1993, 16 U.S.C. §§ 5101-5108, December 20, 1993, as amended 1996. <http://www.asafc.org/legislation/ACFCMA.pdf>
- Atlantic Striped Bass Conservation Act (1984). Public Law 98-613 (98 Stat. 3187, 16 U.S.C. 5151-5158) http://www.access.gpo.gov/uscode/title16/chapter71a_.html
- Bleiker, Hans and Annemarie. Institute for Participatory Management and Planning. <http://www.consentbuilding.com/consent-building.html>
- Endangered Species Act listing of Gulf of Maine Population Segment of Atlantic Salmon (2000). 65 FR 69459. http://www.nero.noaa.gov/prot_res/altsalmon/fr_fr.pdf
- Great Lakes Fish and Wildlife Restoration Act (1990). Public Law 101-646 (16 U.S.C. 941). http://www.law.cornell.edu/uscode/html/uscode16/usc_sup_01_16_10_15B.html
- IQA 2001. Information Quality Act. Public Law 106-554. <http://www.fws.gov/informationquality/section515.html>
- Lake Champlain Special Designation Act (1990). Public Law 101-596 <http://www.lcbp.org/appenda.pdf>
- Meffe, Gary K., Larry A. Nielsen, Richard L. Knight, Dennis A. Schenborn. 2002. Ecosystem Management: Adaptive, Community-Based Conservation. Island Press, 2002.
- National Ecological Assessment Team. 2006. Strategic Habitat Conservation. <http://www.fws.gov/science/StrategicHabitatConservation.html>
- NOAA (National Oceanic and Atmospheric Administration). 2005. New priorities for the 21st century: NOAA's strategic plan. NOAA, Washington DC. http://www.ppi.noaa.gov/pdfs/STRATEGIC%20PLAN/Strategic_Plan_2006_FINAL_04282005.pdf
- Nonindigenous Aquatic Nuisance Prevention and Control Act (1990). Public Law 101-646 (104 Stat. 4761, 16 U.S.C. 4701), <http://www.anstaskforce.gov/Documents/nanpca90.pdf>
- OMB 2004. Office of Management and Budget. Final Information Quality Bulletin for Peer Review. <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-03.pdf>
- Public Law 109-360 – October 16, 2006. National Fish Hatchery System Volunteer Act of 2006. http://www.fws.gov/pacific/Fisheries/pdf/Public%20Law%20109-360%20Hatchery%20volunteer%20act%2010_06.pdf
- USFWS 1994. The Native American Policy of the U.S. Fish and Wildlife Service. <http://www.fws.gov/northeast/nativeamerican/napolicy.pdf>
- USFWS 2002. U.S. Fish and Wildlife Service, Department of the Interior. Fisheries Program Vision for the Future. December 2002. <http://www.fws.gov/fisheries/CAF/Vision.htm>

1 **Appendices**

2
3 I. Planning Resources

4 II. Selection of Species of Conservation and Management Concern

5 III. Scoring of Species of Conservation and Management Concern

6
7
8
9 **Appendix I: Planning Resources**

10
11 Federal resource managers recognize the need for strategic and decision-focused approaches to
12 management, and have embraced a suite of related tools intended to help management agencies
13 become more effective. DOI and FWS strongly encourage use of these planning tools.

14
15 *Structured Decision Making* provides an overall framework for making complex management
16 decisions in a structured, explicit, scientifically-sound way. *Adaptive management* is structured
17 decision making that focuses on resolving uncertainty through iterative action, evaluation, and
18 adaptation.

19 Sources: Adaptive Management: The U.S. Department of the Interior Technical Guide, 2007
20 <http://www.doi.gov/initiatives/AdaptiveManagement/index.html>

21
22 *Strategic Habitat Conservation* provides a scientific framework for determining “how much”
23 and “where” to act within the decision-making context.

24 Sources: National Ecological Assessment Team. 2006. Strategic Habitat Conservation.
25 <http://www.fws.gov/science/StrategicHabitatConservation.html>

26
27 *Ecosystem Management* emphasizes achieving balance among ecological, environmental, and
28 social influences. *Strategic Management* provides the map for accomplishing Ecosystem
29 Management, emphasizing the strategic progression from management goals to how they are
30 accomplished.

31 Source: Meffe, Gary K., Larry A. Nielsen, Richard L. Knight, Dennis A. Schenborn. 2002.
32 *Ecosystem Management: Adaptive, Community-Based Conservation*. Island Press, 2002.

1 **Appendix II: Species of Conservation and Management Concern**

2 The strategic planning process began with identification of species of conservation and
 3 management concern. There are three categories of species of conservation and management
 4 concern: federally listed species; interjurisdictional fisheries; and special species, shown below.
 5 Species with an asterisk (*) are only considered species of conservation and management
 6 concern in certain jurisdictions. All species of conservation and management concern are also
 7 species of greatest conservation need in one or more state wildlife action plans except those
 8 noted with two asterisks (**). The counts of species of conservation and management concern
 9 for 8-digit hydrologic unit codes are shown in Figure II.1.

10
 11 Federally Listed Species: Threatened, endangered, or FWS candidate fish or mussel species.
 12

Atlantic salmon (Gulf of Maine)	Cumberland bean	Oyster mussel
Blackside dace	Cumberland combshell	Pink mucket
Duskytail darter	Cumberland monkeyface	Purple bean
Maryland darter	Dromedary pearlymussel	Rayed bean
Roanoke logperch	Dwarf wedgemussel	Ring pink**
Shortnose sturgeon	Fanshell	Rough pigtoe
Slender chub	Fine-rayed pigtoe	Rough rabbits foot
Spotfin chub	Fluted kidneyshell	Sheepnose
Yellowfin madtom	Green blossom pearlymussel	Shiny pigtoe
Appalachian monkeyface	James spinymussel	Slabside pearlymussel
Birdwing pearlymussel	Little-winged pearlymussel	Spectaclecase
Clubshell	Northern riffleshell	Tan riffleshell
Cracking pearlymussel	Orangefoot pimpleback**	

Interjurisdictional Fisheries: Freshwater, coastal, or marine fish populations under the jurisdiction of and managed by two or more states, nations, or tribal governments because of their geographic distribution or migratory patterns. Interjurisdictional fisheries must be *under the jurisdiction of* and managed by two or more states, nations, or tribal governments. The general standard for inclusion in this category is the existence of an interagency management plan among two or more states, nations or tribal governments or other similar formal agreement that specifically identifies the native species or population of interest and identifies a role for the Service; and the Fisheries Program has or intends to have a consistent commitment to species restoration as evidenced by approval by the Northeast Region Fisheries Program (or higher level within the Service).

Alewife	Atlantic sturgeon	Shortnose sturgeon
American eel	Black sea bass**	Spiny dogfish
American shad	Blueback herring	Striped bass
Atlantic menhaden	Hickory shad	Summer flounder**
Atlantic salmon	Lake sturgeon*	Tautog
Atlantic salmon (Gulf of Maine)	Lake trout*	Weakfish
Atlantic salmon, landlocked*	Scup**	Winter flounder

Special Species: Native species or populations of conservation concern that are not federally listed or interjurisdictional, but for which an agency management plan, formal management agreement between the agency and the Service, or Natural Resource Damage Assessment trustee Memorandum of Agreement specifically identifies the species or population of concern and identifies a role for the Service; or are a tribal trust resource on which we have been specifically asked to assist; and the Fisheries Program Assistant Regional Director has or intends to have a consistent commitment to species restoration as evidenced by approval by the Northeast Region Fisheries Program (or higher level within the Service).

Brook trout	Horseshoe crab	Eastern pearlshell in Maine**
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Species of Conservation and Management Concern

Counts for Watersheds

Mussels

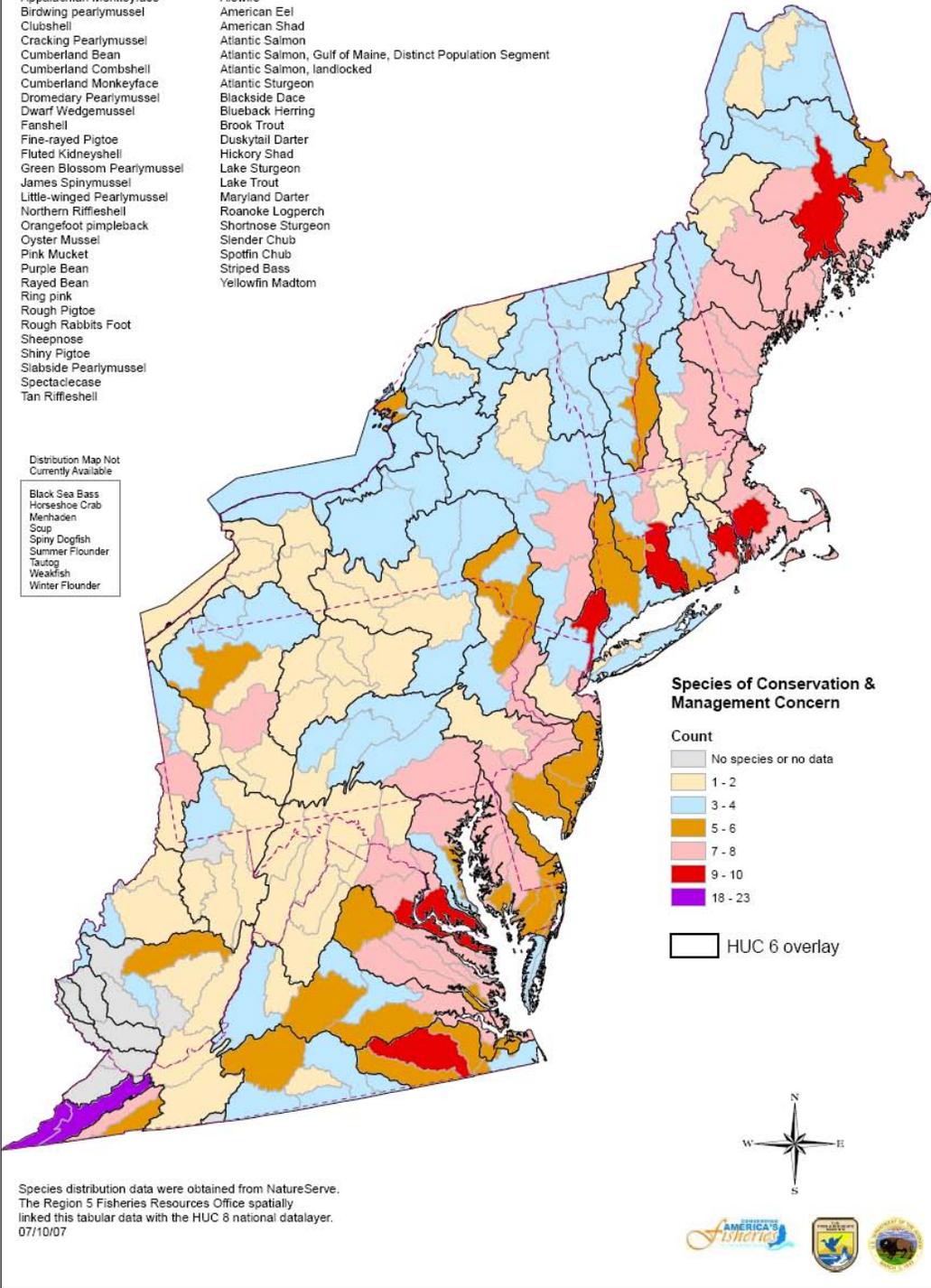
- Appalachian Monkeyface
- Birdwing pearl mussel
- Clubshell
- Cracking Pearly mussel
- Cumberland Bean
- Cumberland Combshell
- Cumberland Monkeyface
- Dromedary Pearly mussel
- Dwarf Wedgemussel
- Fanshell
- Fine-rayed Pigtoe
- Fluted Kidneyshell
- Green Blossom Pearly mussel
- James Spiny mussel
- Little-winged Pearly mussel
- Northern Riffleshell
- Orangefoot pimpleback
- Oyster Mussel
- Pink Mucket
- Purple Bean
- Rayed Bean
- Ring pink
- Rough Pigtoe
- Rough Rabbits Foot
- Sheepnose
- Shiny Pigtoe
- Slabside Pearly mussel
- Spectaclecase
- Tan Riffleshell

Fish

- Alewife
- American Eel
- American Shad
- Atlantic Salmon
- Atlantic Salmon, Gulf of Maine, Distinct Population Segment
- Atlantic Salmon, landlocked
- Atlantic Sturgeon
- Blackside Dace
- Blueback Herring
- Brook Trout
- Duskytail Darter
- Hickory Shad
- Lake Sturgeon
- Lake Trout
- Maryland Darter
- Roanoke Logperch
- Shortnose Sturgeon
- Slender Chub
- Spottin Chub
- Striped Bass
- Yellowfin Madtom

Distribution Map Not
Currently Available

- Black Sea Bass
- Horseshoe Crab
- Menhaden
- Soup
- Spiry Dogfish
- Summer Flounder
- Tautog
- Weakfish
- Winter Flounder



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3
4

Figure II.1. Distribution of Counts of Species of Conservation and Management Concern for 8-digit Hydrologic Unit Codes.

1 **Appendix III. Scoring of Species of Conservation and Management Concern**

2
3 To help bring focus to its strategic plan, the Northeast Region Fisheries Program identified
4 species of conservation and management concern, species or populations thereof that the
5 Fisheries Program will target to achieve or maintain self-sustaining levels. These species and the
6 criteria used to identify them are described in Appendix II. Then, the Fisheries Program
7 assigned scores to the species of conservation and management concern as a way of assigning
8 relative priority. Ranking factors for scoring (Table III.1), scores assigned to species of
9 conservation and management concern (Table III.2), and the distribution of summed scores for
10 watersheds (Figure III.1) are shown.

11
12 Scoring utilized the five criteria in the national Vision. These criteria were established to guide
13 national Fisheries Program priorities, and continue to be strongly supported by partners. The
14 Fisheries Program weighted the criteria, with “strength of federal authority and responsibility”
15 assigned a weight of 40%. The remaining criteria were weighted proportionately according to the
16 priorities identified in the 2003 Northeast Region Group Solutions workshop, in which a
17 structured process was used to elicit feedback from state, tribal, federal and non-governmental
18 organization partners. The criteria served as a tool for the Fisheries Program to assign a score to
19 each species of conservation and management concern.

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Ranking Factor and Weight	Score	Scoring description
Strength of Federal authority and responsibility (40%)	20	Species is both protected under the ESA AND interjurisdictional
	13	Species is protected under the ESA OR interjurisdictional
	7	Programmatic responsibility defined under specific agreements, MOUs or management plans
	0	None
Likelihood that our efforts will produce measurable resource results (30%)	20	High likelihood; high resource result significance
	15	High likelihood; medium resource result significance
	10	High likelihood; low resource result significance OR Low-medium likelihood; high resource result significance
	5	Low-medium likelihood; low-medium resource result significance
	0	None
Extent to which our efforts complement others (15%)	20	Shared management goals; federal action required to achieve goals
	15	No shared management goals; federal action required for species conservation
	10	Shared management goals; federal action helpful but not required to achieve goals
	5	No shared management goals; federal action helpful but not required for species conservation
	0	None
Extent of partner support (8%)	20	Lots of partners investing lots of resources
	15	Lots of partners investing few resources
	10	Some partners investing lots of resources
	5	Some partners investing few resources
	0	None
Likelihood that our efforts will produce significant economic or social benefits (7%)	20	High likelihood; high significance
	15	High likelihood; low-medium significance
	10	Low-medium likelihood; high significance
	5	Low-medium likelihood; low-medium significance
	0	None

Table III.1. Ranking Factors, Weights (in parentheses)¹, Scores and Scoring Descriptions Applied to Species of Conservation and Management Concern

1. The Fisheries Program assigned “Strength of federal authority and responsibility” a weight of 40%. The remaining ranking factors were weighted proportionately according to the priorities identified in the 2003 Northeast Region Group Solutions workshop, in which a structured process was used to elicit feedback from state, tribal, federal and non-governmental organization partners.

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Common Name	Scientific name	Ranking Factor ¹					Sum ²
		1	2	3	4	5	
American Shad	<i>Alosa sapidissima</i>	5.2	3	6	1.4	1.6	17
Horseshoe Crab	<i>Limulus polyphemus</i>	5.2	3	6	1.1	0.8	16
Atlantic salmon, GOM DPS	<i>Salmo salar</i>	8	3	3	1.1	0.8	16
Summer flounder	<i>Paralichthys dentatus</i>	5.2	1.5	6	1.4	1.6	16
Lake Trout	<i>Salvelinus namaycush</i>	5.2	3	4.5	1.4	1.6	16
Brook Trout	<i>Salvelinus fontinalis</i>	5.2	1.5	6	1.4	1.6	16
Striped Bass	<i>Morone saxatilis</i>	5.2	1.5	6	1.4	1.6	16
Spiny Dogfish	<i>Squalus acanthias</i>	5.2	1.5	6	1.1	1.6	15
Lake Sturgeon	<i>Acipenser fulvescens</i>	5.2	3	4.5	1.4	1.2	15
Alewife	<i>Alosa pseudoharengus</i>	5.2	1.5	6	1.1	1.2	15
Atlantic Salmon, landlocked	<i>Salmo salar</i>	5.2	3	4.5	1.4	0.8	15
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	8	1.5	3	1.1	1.2	15
James Spiny mussel	<i>Pleurobema collina</i>	5.2	3	4.5	1.1	0.8	15
Dwarf Wedgemussel	<i>Alasmidonta heterodon</i>	5.2	3	4.5	0.4	1.2	14
Atlantic Salmon	<i>Salmo salar</i>	5.2	3	3	1.1	1.6	14
American Eel	<i>Anguilla rostrata</i>	5.2	3	3	1.1	1.2	13
Hickory Shad	<i>Alosa mediocris</i>	5.2	1.5	4.5	1.1	1.2	13
Blueback Herring	<i>Alosa aestivalis</i>	5.2	1.5	4.5	1.1	1.2	13
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	5.2	3	3	1.1	1.2	13
Atlantic Menhaden	<i>Brevoortia tyrannus</i>	5.2	1.5	4.5	1.4	0.8	13
Weakfish	<i>Cynoscion regalis</i>	5.2	1.5	4.5	0.4	1.6	13
Black sea bass	<i>Centropristis striata</i>	5.2	1.5	4.5	1.1	0.8	13
Scup	<i>Stenotomus chrysops</i>	5.2	1.5	4.5	1.1	0.8	13
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	5.2	3	3	1.1	0.8	13
Oyster Mussel	<i>Epioblasma capsaeformis</i>	5.2	3	3	1.1	0.8	13
Tautog	<i>Tautoga onitis</i>	5.2	1.5	4.5	1.1	0.8	13
Winter Flounder	<i>Pseudopleuronectes americanus</i>	5.2	1.5	4.5	1.1	0.8	13
Dromedary Pearlymussel	<i>Dromus dromus</i>	5.2	3	3	1.1	0.4	13
Purple Bean	<i>Villosa perpurpurea</i>	5.2	3	3	0.4	0.8	12
Rough Rabbits Foot	<i>Quadrula cylindrica strigillata</i>	5.2	3	3	0.4	0.8	12
Clubshell	<i>Pleurobema clava</i>	5.2	3	3	0.4	0.8	12
Little-winged Pearlymussel	<i>Pegias fabula</i>	5.2	3	3	0.4	0.8	12
Birdwing pearlymussel	<i>Lemiox rimosus</i>	5.2	3	3	0.4	0.4	12
Ring pink	<i>Obovaria retusa</i>	5.2	3	3	0.4	0.4	12
Orangefoot pimpleback	<i>Plethobasus cooperianus</i>	5.2	3	3	0.4	0.4	12
Cumberland Bean	<i>Villosa trabalis</i>	5.2	3	3	0.4	0.4	12
Rayed Bean*	<i>Villosa fabalis</i>	5.2	1.5	4.5	0.4	0.4	12
Cumberland Monkeyface	<i>Quadrula intermedia</i>	5.2	3	3	0.4	0.4	12
Rough Pigtoe	<i>Pleurobema plenum</i>	5.2	3	3	0.4	0.4	12
Pink Mucket	<i>Lampsilis abrupta</i>	5.2	3	3	0.4	0.4	12
Cracking Pearlymussel	<i>Hemistena lata</i>	5.2	3	3	0.4	0.4	12
Fine-rayed Pigtoe	<i>Fusconaia cuneolus</i>	5.2	3	3	0.4	0.4	12
Shiny Pigtoe	<i>Fusconaia cor</i>	5.2	3	3	0.4	0.4	12
Cumberland Combshell	<i>Epioblasma brevidens</i>	5.2	3	3	0.4	0.4	12
Fanshell	<i>Cyprogenia stegaria</i>	5.2	3	3	0.4	0.4	12

Table III.1. Ratings Assigned to Species of Conservation and Management Concern

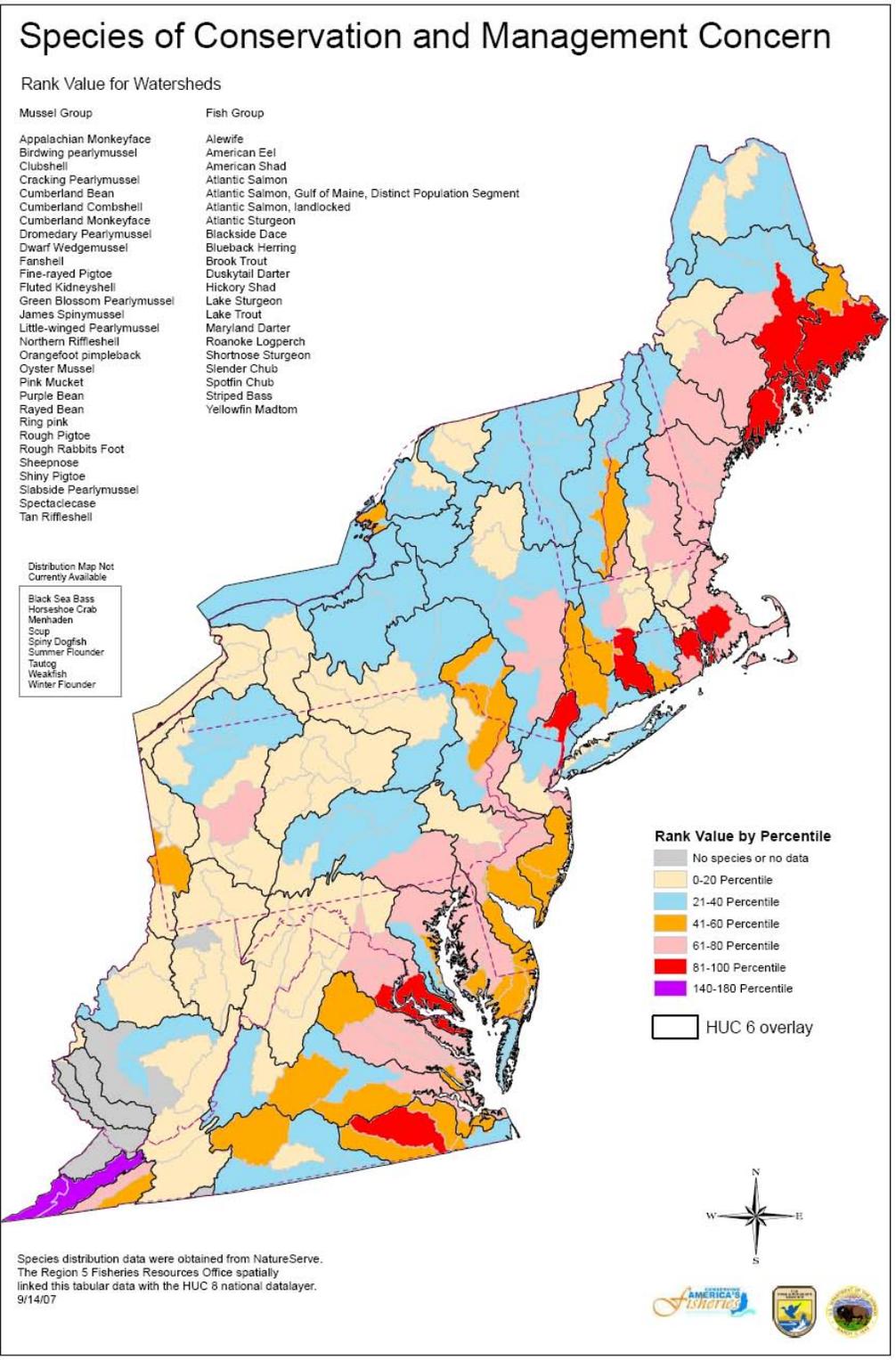
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Roanoke Logperch	<i>Percina rex</i>	5.2	3	3	0.4	0.4	12
Yellowfin Madtom	<i>Noturus flavipinnis</i>	5.2	3	3	0.4	0.4	12
Duskytail Darter	<i>Etheostoma percnum</i>	5.2	3	3	0.4	0.4	12
Slender Chub	<i>Erimystax cahni</i>	5.2	3	3	0.4	0.4	12
Spotfin Chub	<i>Erimonax monachus</i>	5.2	3	3	0.4	0.4	12
Fluted Kidneyshell	<i>Ptychobranchnus subtentum</i>	5.2	1.5	3	1.1	0.8	12
Tan Riffleshell	<i>Epioblasma florentina walkeri</i>	5.2	3	1.5	0.4	0.8	11
Appalachian Monkeyface	<i>Quadrula sparsa</i>	5.2	3	1.5	0.4	0.4	10
Sheepnose*	<i>Plethobasus cyphus</i>	5.2	1.5	3	0.4	0.4	10
Slabside Pearlymussel	<i>Lexingtonia dolabelloides</i>	5.2	1.5	3	0.4	0.4	10
Spectaclecase	<i>Cumberlandia monodonta</i>	5.2	1.5	3	0.4	0.4	10
Blackside Dace	<i>Phoxinus cumberlandensis</i>	5.2	1.5	3	0.4	0.4	10
Green Blossom Pearlymussel	<i>Epioblasma torulosa gubernaculum</i>	5.2	3	1.5	0.4	0	10
Maryland Darter	<i>Etheostoma sellare</i>	5.2	3	1.5	0	0	10
1. Ranking Factors and weights							
1--Strength of Federal authority and responsibility (40%)							
2--Likelihood that our effortw will produce measurable resource results (30%)							
3--Extent to which our efforts complement others (15%)							
4--Extent of partner support (8%)							
5--Likelihood that our efforts will produce significant economic or social benefits (7%)							
2. Sums are shown as integers.							

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3
4

Table III.1. Ratings Assigned to Species of Conservation and Management Concern (continued)

1
2



3
4
5
6

Figure III.1. Distribution of the Sum of Scores for All Species of Conservation and Management Concern that Occur in a Watershed