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Strategic Plan for the U.S. Fish and Wildlife Service Fish and Aquatic Conservation
Program: FY2015-2019

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Message from the USFWS Director

Message from Assistant Director

I. Executive Summary

For over 140 years, the U.S. Fish and Wildlife Service has been a partner on the American landscape in the conservation and restoration of our nation's aquatic resources. Since its inception as the United States Commission on Fish and Fisheries, the Service has worked collaboratively with States, Tribes and other partners and stakeholders to achieve the goals of healthy, self-sustaining populations of fish and other aquatic species and the conservation or restoration of their habitats. The Service conducts this work to ensure the health of our nation's aquatic ecosystems and enable Americans to realize the ecological, recreational and economic benefits provided by these critically important resources.

But the Nation's rich and diverse fish and other aquatic resources are under constant threat. Loss and alteration of habitat, a growing number of invasive species, overharvest, as well as climate change, have increased the number of threatened and endangered freshwater species. The number of populations of fish, amphibian, crustacean, and mussel species listed as threatened or endangered under the Endangered Species Act now stands at over 300.¹ An even larger number are experiencing significant decline and are now considered imperiled.

The mission and profile of the Service's Fish and Aquatic Conservation Program (FAC) has evolved. Although originally begun in 1871 to restore fish stocks for commercial harvest, today's FAC program operates across the nation to advance fisheries and aquatic science and technology, recover species listed under the Endangered Species Act, fulfill our Federal trust and mitigation responsibilities, restore a wide-range of aquatic habitats within functional landscapes, maintain healthy aquatic populations, promote outdoor recreational opportunities, and address emerging challenges, such as climate change.

This work is carried out by a dedicated and highly skilled workforce of more than 700 employees nationwide. FAC staff maintains and operates 72 National Fish Hatcheries, a Historic National Fish Hatchery, 9 Fish Health Centers, 7 Fish Technology Centers, the Aquatic Animal Drug Approval Partnership, and 65 Fish and Wildlife Conservation Offices. Working in close collaboration with other federal agencies, our partners, and stakeholders, FAC staff also implements national programs to conserve, restore and enhance aquatic species and the habitats on which they depend, prevent and control the spread of aquatic invasive species, and connect the public to America's great outdoors.

This complex conservation portfolio reflects the challenge of managing aquatic species at a national scale in the 21st century. It underscores the need for a focused vision and for the development of a roadmap to make smart, well-informed decisions

¹ U.S. Fish and Wildlife Service ESA Species Database (http://ecos.fws.gov/tess_public/pub/boxScore.jsp)

that make the best use of limited resources to realize our long-term conservation goals.

This *Strategic Plan for the U.S. Fish and Wildlife Service Fish and Aquatic Conservation Program: FY2015-2019 (Plan)* is built around six core Goals: Conserve Fish and Other Aquatic Resources; Protect, Restore, and Enhance Aquatic Habitats; Manage Aquatic Invasive Species; Fulfill Tribal Trust and Subsistence Responsibilities; Promote Recreational Fishing, Other Public Uses and Enjoyment of Aquatic Resources, and Educate and Engage the Public and our Partners to Advance our Conservation Mission; and Secure and Maintain Staffing Levels, Technical Capabilities, and Natural and Physical Assets to Fully Meet Our Mission.

Each of these goals acknowledges the specific and very real challenges we face today in achieving our mission. Each goal also contains specific objectives and related strategies to overcome those challenges and achieve measurable conservation successes. The Plan builds upon prior FAC Strategic Plans, and the collaborative visioning effort that was conducted on behalf of the FAC program by the Sport Fishing and Boating Partnership Council, culminating in recommendations contained in their report -*Strategic Vision for Fish and Aquatic Resource Conservation in the Fish and Wildlife Service: A Partnership Perspective*, provided to the Service in July 2013.

The broad framework provided by this Plan will serve as a foundation for the development and implementation of annual operational plans by Headquarters staff and our eight Regional offices. The Plan will serve as FAC's overarching strategic direction for the next five years. But it is a living document, to be refined and further informed as new challenges, opportunities, and developments inevitably arise.

II. Introduction

The U.S. Fish and Wildlife Service's (Service) mission is "working with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people." Since 1871 the Service has helped create a healthy fish and wildlife legacy in the nation. Whether a citizen's interests are centered on conservation of these resources, casting a fishing line for smallmouth bass in their local river or lake, or ensuring that their economic or cultural stake in these resources is preserved, the Service contributes by fulfilling its responsibilities for fish, wildlife, and their habitats.

The Service's FAC Program builds on our 143-year stewardship tradition, the previous strategic plan for the Program², and the recent programmatic evaluation by the Sport Fishing and Boating Partnership Council³ to update the Program's strategic plan. This update is intended to better reflect and address today's conservation challenges. Most notably, these include: loss, fragmentation, and degradation of habitat; overharvest, introduction and establishment of invasive species; and climate change. Collectively, these conservation challenges not only continue to pose significant risks to the nation's freshwater aquatic and other natural resources but increasingly jeopardize the ecological, recreational and economic benefits they provide to the nation.

The plan identifies six critical goals, each representing a fundamental theme and functional component of the Program's work. All six goals are interdependent and necessary to accomplish our mission. For each goal, the plan begins with a description of the specific challenges making the goal necessary. Objectives and strategies are then presented to accomplish the goals. These objectives and strategies are intended to include sufficient detail to allow managers to design annual field operations throughout the Service's eight regions. This includes operations of the Service's 65 Fish and Wildlife Conservation Offices, 72 National Fish Hatcheries, 7 Fish Technology and 9 Fish Health Centers, and the Aquatic Animal Drug Approval Partnership. In addition, it includes core functions and activities administered by Service staff to assess and conserve aquatic species, protect, restore and enhance aquatic habitats across functional landscapes, and prevent and control invasive species.

The FAC Program values partner and stakeholder collaboration, stewardship, science-based decision making, transparency, efficiency, and adaptive management. Working together with other federal agencies and our partners, and relying on the experience,

² *Conserving America's Fisheries – Fisheries Program Vision of the Future*. 2004. U.S. Department of the Interior, Fish and Wildlife Service, <http://www.fws.gov/fisheries>.

³ *Programmatic Evaluation Activities of the U. S. Fish and Wildlife Service Fisheries Program*. 2010. Sport Fishing and Boating Partnership Council, <http://www.fws.gov/sfbpc/reports.html>.

expertise and dedication of the FAC Program's more than 700 employees, the plan provides a road map to a positive future for all Americans who care about or benefit because the nation's fish and other aquatic resources are well managed.

III. Mission

We work with our partners and engage the public, using a science-based approach, to conserve, restore and enhance fish and other aquatic resources for the continuing benefit of the American people.

As reflected in this mission statement, conservation is at the forefront of the reason we exist. From the very beginning of the Fish and Wildlife Service in 1871, this responsibility has been preeminent. In fact, our very first assignment was "...to ascertain whether any and what diminution in the number of food fishes of the coast and inland lakes has occurred." ⁴ But we are also acutely aware of the need to involve stakeholders and partners in our mission if we are going to succeed. And, perhaps most important, we recognize that we do this work for the American people— both the present generation who benefit today and future generations to whom we will pass the legacy of conserving America's aquatic resources.

IV. Vision

While our mission addresses the work we do every day, we also aspire to move in a positive direction in the future. Mindful of our commitment to work with others while recognizing there is a special need and role for national leadership:

The FAC Program will be a national leader in achieving sustainable populations of fish and other aquatic species and conserving and restoring their habitats for the benefit of current and future generations.

⁴ Spencer Fullerton Baird," Mark Madison, Eddies, Special Issue 2009, p 6.

V. Values

During discussions about the future of the FAC Program, the following core values emerged. These priorities underpin the goals, objectives and strategies of our strategic plan.

We value:

- Stewardship of our nation's diverse and abundant natural resources and our responsibility for managing these in trust for the American public;
- Integrity that is achieved through honesty and transparency, financial efficiency and effectiveness, and professional and ethical behavior;
- Excellence that comes from science-based management, delivering outstanding service, and the continuous improvement in our products and services;
- Teamwork and partnerships fostered by respecting the views of our stakeholders, and close collaboration and communication with all the people we work with;
- Innovation that proactively meets challenges, promotes a culture of finding solutions, and rewards responsible risk taking; and
- Professionalism through the development of employees, learning from the past to plan for the future, and cultivating a workforce that is matched to the needs of the future.

VI. Goals, Objectives, and Strategies

To implement our conservation mission and realize our vision for the future, the FAC Program will focus on the following six goals, each with its own objectives and strategies that are designed to be achievable and effective. These six goals are interdependent, and will provide a strong framework for us to work with our partners and engage the public, using a science-based approach, to conserve, restore and enhance fish and other aquatic resources for the continuing benefit of the American people.

Goal 1: Conserve Fish and Other Aquatic Resources

Conservation Challenge

America's aquatic ecosystems have historically sustained some of the most abundant and diverse communities of fish, mussels, plants, and invertebrates in the world. In the waters of the United States alone, over 1,000 native fish and mussel species have been documented. Many of these species, such as salmon, lake trout, and striped bass are important cultural, economic and recreational resources.

However, aquatic species represent some of the most imperiled organisms both nationally and globally. Currently, there are 155 fish and 88 mussel species listed under the Endangered Species Act in the United States.⁵ According to a recently published study by the U.S. Geological Survey, a total of 39 species and 18 subspecies of fish were declared extinct in North America between 1898 and 2006 and the rate of extinction is accelerating. Based on current population status and trends for fish species categorized as federally threatened and endangered, researchers estimate that an additional 53-86 species of freshwater fish may be extinct by 2050.⁶

The challenge of conserving our nation's fish and other aquatic resources is complex and involves managing the impacts of multiple threats, including non-native species, overharvest, loss of habitat (including degradation and fragmentation of physical habitat), and - more recently - water scarcity. Effectively conserving aquatic species is further confounded by the logistical difficulties inherent in scientifically monitoring river, lake, and ocean ecosystems.

Many larger, long-lived aquatic species also often take decades to recover from population declines, even when significant threats are ameliorated. As a result, to be successful, our work requires an ongoing, long-term commitment of resources and the understanding that species recovery can take years or even decades to be realized.

⁵ U.S. Fish and Wildlife Service ESA Species Database (http://ecos.fws.gov/tess_public/pub/boxScore.jsp)

⁶ Extinction Rates in North American Freshwater Fishes, 1900–2010; Noel M. Burkhead, U.S. Geological Survey; published in *BioScience*, Vol. 62, No. 9 (September 2012), pp. 798-808)

Because of the complexity of the challenge and the breadth of resources involved, solutions to conserving and, where needed, recovering populations of native aquatic species often involve multiple agencies, jurisdictions, organizations, and stakeholders. As a result, solutions require managing and balancing various, often conflicting, viewpoints on resource value and use. To be successful strategies must clearly define roles, responsibilities, and expectations of each agency or organization; make strong use of partnerships, collaboration and resource leveraging; contain measurable, time-bound goals; be adaptive; and be informed by current and standard data on population status and trends.

- Objective 1: Recover listed species such that protection under Endangered Species Act is no longer needed.
 - Prioritize list of Threatened and Endangered species for which FAC Program has a role.
 - Identify population objectives and recovery criteria for these Threatened and Endangered species.
 - Prioritize and implement recovery plan tasks that are most likely to produce measurable results in achieving population objectives.
 - Evaluate the effectiveness of our conservation actions and adapt as necessary.

- Objective 2: Restore declining populations to ensure that listing under the Endangered Species Act is unnecessary.
 - Prioritize list of declining species/populations for which FAC Program has a role.
 - Identify population objectives and restoration criteria for declining species.
 - Implement conservation actions that are most likely to produce measurable results in achieving population objectives and restoration criteria.
 - Evaluate effectiveness of our conservation actions and adapt as necessary.

- Objective 3: Prevent declines of other priority species by addressing threats early on.
 - Work within the Service and with partners to identify and prioritize a list of populations and species that are likely to decline, for which FAC Program has a role.
 - Identify threats that have caused significant species declines to guide efforts to minimize or eliminate impacts from such threats to other species.
 - Implement conservation actions that are most likely to eliminate or reduce impacts of these threats on priority species.
 - Evaluate effectiveness of our conservation actions and adapt as necessary.

Goal 2: Protect, Restore, and Enhance Aquatic Habitats

Conservation Challenge

The United States possesses abundant and diverse aquatic habitat within its ocean, lake, river, stream, pond, and wetland environments. These systems are host to complex communities of aquatic species dependent upon healthy, intact habitat conditions to maintain self-sustaining populations. In turn, many of these species support economically and recreationally valuable fisheries.

Although our nation's water resources are vast and encompass some of the largest lake and river systems in the world, including a total of over 3.5 million miles of rivers and streams from coast-to-coast⁷ and one-fifth of the world's surface freshwater just in the Great Lakes⁸ alone, these same systems are becoming increasingly degraded and fragmented as a result of human activities. These activities include agriculture and land development, discharge of pollutants, construction of dams for flood control and hydropower generation, and the diversion of water resources for human consumptive and industrial purposes. For example, nationwide there are over 6 million known man-made barriers to aquatic species - including culverts dams, dikes, water diversion structures, and levees - that restrict or completely eliminate the

⁷ U.S. Environmental Protection Agency: Waters - River and Streams (<http://water.epa.gov/type/rsi/pdf>)

⁸ U.S. Environmental Protection Agency: Great Lakes Geography and Hydrology (<http://www.epa.gov/greatlakes/basicinfo.html>)

ability of fish and other organisms to move within and between rivers, streams, and adjoining wetlands.⁹

Habitat loss, fragmentation, and degradation are some of the primary factors in the decline of native species. Point and non-point sources of pollution are also degrading water quality and habitat, impacts that may be significantly amplified during storm events. While advances have been made in wastewater treatment, best-management practices for farming and land use, and removal of barriers to reconnect historic river corridors, aquatic species continue to be impacted by agricultural and industrial practices, some of which have been in place since the 19th century. Many of the same factors that have degraded aquatic habitats are also having parallel and equally serious impacts on terrestrial habitats, which can then contribute to the further degradation of downstream aquatic systems.

Compounding these challenges, growing urbanization is placing ever increasing demands on water use for human consumption, industrial use, sanitary management, and drainage/flood control. This problem is especially acute in the western and southwestern United States, where water supplies are already limited, and increased demand for water for human consumption often conflicts with natural resources.

Adequate resources to implement geographically broad, long-term strategies to remove barriers to fish passage, institute land and water best management practices, and protect, restore, and enhance aquatic habitats are lacking. Instead, managers have often resorted to local, smaller-scale habitat projects, selected on an opportunistic basis. But this fragmented approach may not produce lasting benefits. Success in conservation and recovery of aquatic species requires a more holistic approach that takes into account the aquatic and upland habitat requirements of these species throughout their life stages. This is especially true for highly migratory species, such as anadromous fish.

More work needs to be done to protect and restore functional landscapes. As a result, the Service is placing increased emphasis on working collaboratively with its network of Landscape Conservation Cooperatives and other Federal, State, Tribal and non-governmental partners to achieve key conservation outcomes for aquatic and terrestrial species. Although this Goal focuses primarily on aquatic species, some FAC offices also assist tribes and military facilities with integrated natural resource management of terrestrial habitats. By relying on and implementing the principles of Strategic Habitat Conservation at a landscape-scale - that transcend organizational,

⁹ U.S. Fish and Wildlife Service National Fish Passage Program FY2013 Annual Report

geographic and jurisdictional boundaries, we can help realize lasting benefits for America's fish and wildlife.

- Objective 1: Develop Landscape Scale Habitat Conservation Strategy.
 - Assess and classify fish and other priority aquatic species freshwater and near shore marine habitats.
 - Set habitat conservation targets for priority species in collaboration with internal and external stakeholders.
 - Develop landscape scale habitat conservation objectives and strategies to guide delivery of conservation actions, adaptive management, and progress measurement.

- Objective 2: Protect Restore, and Enhance Habitats Using Available FAC Tools.
 - Utilize the National Fish Habitat Action Plan and the Fish Habitat Partnerships to implement habitat conservation actions for high priority aquatic species.
 - Expand the National Fish Passage Program to achieve landscape-scale protection, restoration, and enhancement of river and floodplain connectivity for high priority aquatic species.
 - Develop Sikes Act Integrated Resource Management Plans to identify and deliver habitat conservation actions for high priority aquatic species on Department of Defense installations.
 - Enlist our national network of FAC field and regional offices to inform, coordinate and implement habitat conservation actions across Service programs, external landscape-scale partnerships, and with other local, State, Tribal and Federal agencies.

Goal 3: Manage Aquatic Invasive Species

Conservation Challenge

Invasive species severely threaten the natural landscape of the United States. They are contributing to declines or extinctions of numerous native plants and animals,

impacting ecosystem function, and are causing billions of dollars annually in economic impacts. Aquatic invasive species are also a growing challenge nationwide to the conservation and recovery of native fish, mussels, and other aquatic organisms.

In the United States the threat of aquatic invasive species has steadily increased since the rapid growth of industry and transportation in the 19th century. This threat has accelerated over the past several decades spurred by significant increases in global trade, travel, and tourism. Managing the threat of aquatic species in the 21st Century must consider the reality that more countries are trading globally, with increased transportation volume and decreased transit times. The volume and number of potentially invasive non-native species sold over the Internet have drastically increased, along with an increased worldwide customer base.

In the past, managing aquatic invasive species has relied on a largely reactive approach, triggered in response to a detection of newly identified but already introduced non-native species. While examples of successful containment and control programs exist, such as the U.S. - Canada Sea Lamprey Management Program, eradication of aquatic invasive species is almost always impossible once a species is established, especially in large, complex watersheds.

More recently, federal management of aquatic invasive species has focused on individual species that have become particularly problematic in a specific region or watershed (e.g. Asian carp, zebra mussels, and quagga mussels). While it is important to address these problem species, these efforts cannot, and should not, take the place of a comprehensive national program to proactively identify highest risk species and prevent their introduction into the United States, as envisioned by the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 and subsequent laws.¹⁰

An increased and more effective focus on prevention will require the development and use of state-of-the-art science and tools to identify the organisms that pose the greatest risk as well as which introduction pathways are most important to manage. These tools can then be used to inform policies, develop intervention strategies, and improve multijurisdictional collaboration as well as outreach and partnerships with industries, stakeholders, and consumers. Broader understanding by all citizens of their role in management of aquatic invasive species is integral to future success.

- Objective 1: Prevent Introduction and Establishment of Invasive Species into and within the U.S.
 - Conduct risk assessments for potentially high-risk species and introduction pathways.

¹⁰ Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service (<https://www.fws.gov/laws/lawsdigest/NONINDI.HTML>)

- Utilize the Lacey Act and other regulatory and voluntary mechanisms to reduce the risk of introduction and establishment of invasive species found in the organisms in trade pathway.
- Work with entities responsible for key transportation pathways and vectors (i.e. boat ballast water) to reduce the risk of introduction and establishment of invasive species.

- Objective 2: Early detection and rapid response
 - Develop and provide the leadership for a comprehensive invasive species early detection program.
 - Implement a nationally coordinated rapid response program for high-risk taxa and pathways.

- Objective 3: Containment and Population Suppression of Established Populations
 - Prioritize invasive species for containment based on risk of spread and risk of harm.
 - Contain high priority aquatic invasive species populations.
 - Develop and implement mitigation plans to reduce high priority populations to acceptable target levels.
 - Monitor effectiveness of population control mechanisms.

Goal 4: Fulfill Tribal Trust and Subsistence Responsibilities

Conservation Challenge

The resource management programs operated by tribes are designed to address the spiritual, cultural, medicinal, subsistence, recreational and economic needs of their community. As each tribe is a self-governing entity, there are myriad different combinations of management activities being undertaken on or adjacent to tribal lands to achieve the needs of their respective communities. These can vary widely by geographic location, tribal history, and culture.

The goals of tribal governments with respect to managing and utilizing natural resources also may differ from those of Federal and State agencies and non-governmental organizations, as well as non-tribal citizens and stakeholders. This can lead to potential conflict around expectations for harvest and other natural resource uses as well as related management activities such as enforcement, particularly on lands or waters managed by multiple jurisdictions.

At present, the federal government recognizes over 550 tribal nations. The Fish and Wildlife Service has a unique set of responsibilities and opportunities to work with federally recognized tribes and Native Alaskans. For decades, the FAC Program has stocked fish on tribal lands and provided technical assistance for fish and wildlife resource management needs on tribal lands and on managing aquatic species for subsistence harvest. This includes co-management of salmon stocks in Alaska and the Pacific Northwest as well as lake trout and other species in the Great Lakes.

The Program pursues these collaborative efforts not just to fulfill its tribal trust responsibilities and to promote sustainable management of culturally, economically and recreationally important tribal fisheries and wildlife, but also to realize opportunities for resource conservation to benefit all Americans. Tribes manage aquatic and terrestrial resources on 56 million acres of land. An additional 44 million acres are designated as Alaska Native lands in the United States.¹¹ A significant portion of these lands contain valuable fish and wildlife habitats critical to the sustainability and well-being of tribal communities as well as nearby communities.

The FAC Program remains committed to fulfilling its trust responsibilities, proactively engaging tribes at leadership levels, and building leadership-to-leadership trust. As part of this overall effort, we need to better ensure that our staff understands and is routinely trained in tribal culture and governance structure.

Ultimately, strategies to support the FAC Program and the Service in fulfilling its tribal trust obligations must go beyond simply elevating and communicating the need for a legally mandated level of engagement. They must include mechanisms to promote enhanced and ongoing communication, cooperation and trust with Tribes and to build increased awareness of tribal culture and governance throughout the FAC Program.

- Objective 1: Promote a full understanding of the scope and importance of the FAC Program's roles in meeting tribal trust fish and wildlife conservation obligations.
 - Ensure FAC Program staff are trained in tribal history and culture and versed in tribal trust obligations in coordination with the Service's Native American Liaisons.

¹¹ Sport Fishing and Boating Partnership Council - Strategic Vision for Fish and Aquatic Resource Conservation in the Fish and Wildlife Service: A Partnership Perspective (July 2013)

- Review existing policies, agreements, and treaties to compile a comprehensive list of Service responsibilities to Tribes and consult with Tribes and appropriate federal natural resource agencies to clarify respective roles, responsibilities, and obligations.
 - Routinely update Service leadership and staff regarding the nature of the Program's tribal trust fish and wildlife management responsibilities and relation to the Service's mission.
- Objective 2: Develop and maintain effective relationships between the Service and federally recognized Tribes.
 - Ensure effective coordination between the FAC Program and Tribes by convening regular meetings with consistent program representation at the appropriate levels with Tribes.
 - In cooperation with the Service's Native American Liaisons, facilitate and convene meetings of Service staff, Tribes, states, and other partners to address fish and wildlife management issues and resolve potential conflicts.
 - In cooperation with the Service's Native American Liaisons, facilitate regular, structured communication between executive Tribal and Service leadership.
- Objective 3: Deliver Tribal trust fish and wildlife conservation and manage subsistence uses of fishery resources.
 - Meet requested fish and wildlife management assistance needs of the tribes, consistent with available Service resources.
 - Continually improve and implement in-season monitoring of fish populations to inform management actions necessary to meet escapements and subsistence harvest goals.
 - Develop and implement communication strategies to ensure that subsistence fishers are aware of in-season harvest regulations and other actions needed to meet subsistence harvest goals.

Goal 5: Promote Recreational Fishing, Other Public Uses and Enjoyment of Aquatic Resources, and Educate and Engage the Public and our Partners to Advance our Conservation Mission.

Conservation Challenge

Recreational fishing is part of our national heritage and a very popular outdoor activity. It is also a major contributor to the nation's economy. The Service's most recent National Survey of Fishing, Hunting and Wildlife-Associated Recreation reported that in 2011 more than 33 million anglers generated nearly \$42 billion in expenditures.¹² The Service has a long tradition of fostering public uses and enjoyment of aquatic resources through its work to conserve these resources, to promote fishing and other aquatic outdoor recreational activities, and national education programs. A key factor in our continued success in carrying out these initiatives is our strong partnerships with federal, tribal, state, outdoor industry and non-profit organizations.

The opportunity for Americans to go fishing and participate in other aquatic outdoor recreational activities hinges on our ability to conserve aquatic ecosystems that support healthy, abundant and sustainable fisheries. By helping to maintain and increase the productivity of our nation's aquatic resources, our work to conserve fish species, protect, restore and enhance aquatic habitats, control invasive species, and fulfill tribal trust and subsistence responsibilities plays an integral role in promoting fishing and other recreational activities. In addition, the Service helps sustain recreational fisheries by providing hundreds of millions of dollars annually to state fish and wildlife agencies through our grant in aid programs, by producing and stocking fish to mitigate for the impacts of federal water projects, and by providing technical, scientific and management expertise to Federal agencies, Tribes, states, partners and stakeholders.

Although the Service already works with a wide array of federal, tribal, state, outdoor industry, and non-profit organizations to promote fishing and other aquatic outdoor recreational activities, we also need to take better advantage of our own facilities and lands and enlist the help of new communication tools and programmatic initiatives to reach out to the public, especially youth, to increase participation in these activities. Fortunately, fishing is a very popular activity that can help promote and sustain a lifelong interest in stewardship of the natural environment.

Finally, we need to educate and engage the public and our partners in advancing our conservation mission. By taking steps to educate the public on the nation's rich and diverse aquatic resources, their cultural, economic and recreational benefits, and today's conservation challenges, we can inform and build broad-based support for the

¹² U.S. Fish & Wildlife Service 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation(February 2014)

efforts that we, and our partners, are undertaking to conserve these resources for current and future generations.

A key educational component of a successful and forward-looking national aquatic conservation strategy must include the engagement of America's youth in the enjoyment, understanding, and stewardship of our rivers, lakes, and oceans. Children in the United States are becoming increasingly disconnected from the natural world, spending greater amounts of time indoors, involved with sedentary activities. They need to have opportunities to get outside and explore, learn about, and develop an appreciation for the value of our aquatic resources.

Addressing these challenges, however, goes well beyond the resources of any one agency or organization. Communicating the value of the FAC Program's work in the context of this strategic plan is a crucial first step to maintaining trust and establishing and building support for our conservation initiatives among our partners. But this Plan also provides a unique opportunity to do much more. Working together, we can use the Plan to identify common objectives across agency and organizational missions and then enlist our unique perspective, tools and resources to realize our shared conservation vision for the future.

- Objective 1: Work with Tribes, states, partners and other stakeholders to maintain healthy, abundant and sustainable fishery resources
 - Leverage other FAC initiatives to conserve fish species, protect, restore and enhance aquatic habitats, control invasive species, and fulfill tribal trust and subsistence responsibilities to help maintain and increase the productivity of our nation's fishery resources
 - Fulfill the Service's responsibilities to mitigate the impacts of Federal water projects by identifying appropriate waters for stocking native and non-native mitigation fish and securing permanent funding to provide full reimbursement for Service mitigation programs.
 - Provide technical, scientific and management expertise to Federal agencies, Tribes, states, partners, and stakeholders to assist in maintaining and sustainably managing recreational, commercial, and tribal fisheries.

- Objective 2: Promote recreational fishing and other public uses and enjoyment of aquatic resources
 - Use traditional, web-based, and social marketing tools to promote opportunities for, and communicate access to, fishing and other aquatic recreational activities
 - Utilize educational programs and events at Service facilities and lands (e.g. the National Fish Hatchery System, Fish and Wildlife Conservation Offices, and National Wildlife Refuges) to promote fishing and other aquatic recreational activities.
 - Work with other federal, tribal, state, outdoor industry, and non-governmental organizations to promote fishing and other aquatic recreational activities on state and federal lands.

- Objective 3: Educate and engage the public and our partners in advancing our conservation mission
 - Conduct FAC outreach campaigns to educate and mobilize the public in support of program priorities
 - Work with other federal, tribal, state, local governmental, outdoor industry, and non-profit organizations to develop and implement a comprehensive and unified national outreach and education strategy.
 - Collaborate with Tribes, states and other key partners and stakeholders, such as the Sport Fishing and Boating Partnership Council and the American Fisheries Society, to realize a shared conservation vision for the future.

Goal 6: Secure and Maintain Staffing Levels, Technical Capabilities, and Natural and Physical Assets to Fully Meet Our Mission

Conservation Challenge

The strength of the Service's FAC Program lies in its national network of world-class facilities and employees, who are focused on working collaboratively with our partners to conserve aquatic species and their habitats. While the Service has had a significant national presence in managing the aquatic resources of the United States for over 140 years, its mission has evolved. Today it includes increased focus on the recovery and restoration of endangered, threatened and imperiled native aquatic species; fulfilling federal mitigation responsibilities on a user-pay basis; as well as habitat restoration, prevention and control of invasive species, and research and monitoring of aquatic animal health to address emerging conservation needs of the Nation.

As a result, the overall portfolio of activities and assets of today's Fish and Aquatic Conservation Program is much broader and more complex. The availability of resources to support this increased volume and complexity of work, however, has not kept pace with demands. The lack of adequate resources has contributed to the deterioration of mission-critical assets and a growing backlog of maintenance and infrastructure needs. As more resources are diverted to address or repair deteriorated infrastructure, often under emergency situations, core conservation activities suffer and our mission is compromised.

In addition, the American landscape has changed drastically over the past several decades. Water has, in many locations, become a scarce commodity, particularly in the Southwest. The Service is now faced with the challenge of proactively identifying and acquiring water assets to ensure the stability of the Program's aquatic species propagation and health facilities. The Service's NFHS facilities, in particular, are directly dependent on reliable sources of high-quality water to meet their responsibilities.

Fish and Aquatic Conservation Program staff face challenges as well. The Program's ability to meet its mission hinges directly on the abilities of and resources provided to our biologists, technicians, managers, and maintenance and administrative professionals, more than 700 in total. However, reductions in fiscal resources has meant that the program cannot fill critical staff vacancies at the field, regional, and national levels, despite increasing work volume and complexity, and has had to rely instead increasingly on temporary hires. In the near term this compromises the Program's ability to operate facilities, conduct field and laboratory activities, and build and support critical partnerships. Over time this attrition in workforce also jeopardizes our ability to maintain expertise and develop a workforce plan which cultivates management capacity from within our own ranks through career development.

- Objective 1: Cultivate and maintain a diverse workforce prepared for current and future challenges in fish and aquatic resource conservation.
 - Identify core capacities for each FAC Program field station and establish a staffing plan to meet the scientific and technological needs of all aspects of aquatic resource conservation.
 - Establish and adhere to a balanced ratio of staff to operating expenses to assure predictable levels of funding that meet staffing, operational, and asset management needs over time.
 - Provide employees with opportunities to acquire and maintain competencies in the expanding knowledge and technology fields needed to provide professional growth and enhance program performance.
 - Expand opportunities for staff to assume new or different responsibilities utilizing cross program expertise.

- Objective 2: Secure and maintain safe and adequate water supplies, infrastructure, and other assets.
 - Identify water resources critical to the function of FAC Program stations, and establish both quantity and quality of current sources and threats.
 - Maintain physical assets and equipment throughout the FAC Program at an acceptable condition level measured by Facility Condition Index.
 - Address new technological needs of physical infrastructure to respond to changing environmental and program needs in light of increased energy needs and costs, competing uses of water, and impacts of climate change.

- Objective 3: Develop and maintain scientific capacity and technological tools necessary for conservation and management efforts.
 - Identify and assess existing FAC Program scientific capacity relative to meeting current and future challenges in aquatic resource conservation.
 - In collaboration with partners, identify research needs to develop and share scientific and technological tools critical to support aquatic conservation.
 - Work to secure the necessary resources to enable Fish Technology Centers, Fish Health Centers, the Aquatic Animal Drug Approval Partnership, National Fish Hatcheries, and Fish and Wildlife Conservation Offices to fully address new and emerging scientific challenges of the Service and our partners.

VII. Conclusions and Next Steps

This *Strategic Plan for the U.S. Fish and Wildlife Service Fish and Aquatic Conservation Program: FY 2015-2019* provides a framework for guiding the FAC program's collaborative decision-making and aquatic conservation delivery over the next five years. Its purpose is to serve as a foundational tool for making well-informed decisions and implementing effective actions in a strategic and holistic manner, helping us to focus resources and capacity on the highest priorities of the Service and its many partners. However, we also view the Plan as a living document, one that embraces the principles of adaptive management and strategic habitat conservation and, as such, contains the flexibility needed to address emerging issues and embrace new opportunities, consistent with the Plan's broader long-term strategy and core goals.

Beginning in FY 2015, the Plan will serve as the foundation for the development and implementation of annual operational plans by FAC at the national and regional levels; and will be used to inform the development of annual and out-year budget initiatives and other proposals. It will also serve as a starting point for developing national-scale workforce management and capacity strategies to align staffing and assets to deliver and achieve the Service's aquatic conservation mission. This includes the development of workforce training, businesses practices and policies, decision support and priority-setting tools, as well as the establishment of relevant performance metrics.

Ultimately, however, the success of the Plan lies in the ability of the FAC Program to work collaboratively with our partners and stakeholders to realize the Plan's goals and achieve our shared vision for the future. We look forward to helping to lead that effort with our colleagues, partners, and stakeholders across the Nation to promote conservation and stewardship of America's aquatic resources for the benefit of future generations.