

Strategic Plan for Management of Trout Fisheries in Pennsylvania
2016 – 2017

Bureau of Fisheries
Pennsylvania Fish and Boat Commission



Goal of the Strategic Plan

The goal of this strategic plan is to insure that adequate protection is afforded to Pennsylvania's wild trout resources and that fisheries provided through the management of wild trout and stocking of adult and fingerling trout will continue to provide excellent angling opportunities in Pennsylvania.

The *Strategic Plan for Management of Trout Fisheries in Pennsylvania 2010-2014* identified 25 issues and 71 strategies to address those issues. The 2016-2017 version of the plan will focus on issues that weren't completed in the previous plan and add some new issues that need to be addressed to attain the goal of the plan. As this plan is primarily a continuation of the 2010-2014 plan, its implementation began in 2015. This plan identifies 22 issues as priorities. Addressing these issues will be the primary focus of PFBC trout management through 2017. Under each of the resource categories, measurable and time-bound strategies were developed.

MANAGEMENT OF WILD TROUT WATERS

Strategies:

The following strategies address the highest priority issues related to threats and opportunities that face the Commonwealth's wild trout resources. The strategies identified for each of the priority issues are designed to protect, conserve and enhance our wild trout resources while providing enhanced fishing opportunities for the anglers of the Commonwealth. Addressing these issues will be the primary focus of the PFBC's wild trout management program through 2017.

Issue 1: The PFBC has not assessed all of the streams throughout the Commonwealth. As a result, the total number of streams that support wild trout populations in Pennsylvania is unknown, which leads to inadequate protection of these streams. The PFBC does not currently have the ability to assess these most at-risk streams at a rate that outpaces the rate of degradation.

Strategies:

- Between 2015 and 2017, develop and annually update prioritized lists of unassessed streams that are likely to support wild trout and potential Class A streams that are the most at risk from the effects of human activities.
- Through 2017, PFBC staff will continue to work with Unassessed Waters Program partners to sample at least 1,500 priority unassessed waters and Class A re-inventories.

Issue 2: Maintaining free public access to Pennsylvania's wild trout fisheries is important to provide trout angling opportunities.

Strategies:

- Improve public access to at least eight wild trout streams between 2015 and 2017. Access improvements may include, but are not limited to improved parking areas, long-term access easements, and purchase of riparian lands. Highest priority will be placed on streams with high quality fisheries that can support the potential increased use resulting from improved access.
- Through 2017, work to develop a dedicated source of funding to be used to improve public access on waters throughout the Commonwealth.

Issue 3: The PFBC currently does not have a monitoring program to annually track the status and trends of wild trout populations across Pennsylvania. As a result, the rate of population loss or improvement, overall condition of populations, and status of wild trout resources as a whole is unknown.

Strategy:

- By 2017, work with the PA Cooperative Fish and Wildlife Research Unit to develop an appropriate monitoring design to assess status and trends of wild trout populations across Pennsylvania. The study design and sample site selection will include a review of long-term datasets collected by PFBC, PA DEP, and other agencies as well as those agencies' sampling designs and sampling schedules to allow interagency coordination, if feasible.

Issue 4: The expansion of wild trout populations is impeded in streams where habitat is the primary limiting factor. Furthermore, better knowledge of the effects of habitat manipulations on wild trout populations is needed.

Strategies

- Conduct at least 25 instream and/or riparian habitat enhancement projects on wild trout streams between 2015 and 2017.
- Continue to work with project partners to seek additional grant funding for habitat work on wild trout streams (e.g., Western PA Conservancy, Northcentral PA Conservancy, County Conservation Districts and other federal, state and local agencies and non-profit groups).
- By 2016, implement a grant program using Peach Bottom Settlement funds to improve wild trout habitat in York and Lancaster Counties.
- Implement recommendations of the Habitat Improvement Prioritization Workgroup and utilize findings to provide technical assistance to project partners in identifying and prioritizing projects that most effectively assist the PFBC in enhancing and restoring habitat in wild trout streams. Adaptively manage and update recommendations of the Habitat Improvement Prioritization Workgroup as needed.
- Through 2017, continue to monitor the response of wild trout populations and physical habitat conditions to various habitat treatments at select projects on wild trout streams.

Issue 5: Through their ability to impede fish movement and alter physical, chemical and biological processes in streams, manmade barriers remain a deterrent to fully functional wild trout streams.

Strategy:

- When deemed biologically appropriate, remove barriers and/or improve fish passage on five wild trout streams between 2015 and 2017.

Issue 6: Impairment of the natural flow regime through water withdrawals and reservoir operations threatens the quality of wild trout waters.

Strategies:

- Through 2017, assist the Pennsylvania Department of Environmental Protection and other governmental agencies with the development of policies and reservoir operation procedures that limit the alteration of natural flow regimes to levels that maintain critical species, habitats and ecological conditions.
- Continue to work closely with the New York Department of Environmental Conservation (NYDEC) and the Parties to the 1954 U. S Supreme Court Decree to achieve greatly improved operating rules to protect and improve the upper Delaware River trout fishery. Develop reservoir release recommendations in coordination with NYDEC Fisheries staff using an adaptive management approach to encompass the breadth of New York City reservoir storage levels and diversion rates by March 2017.
- Work closely with the Pennsylvania Department of Conservation and Natural Resources, DEP, utilities, the U. S. Army Corps of Engineers, and other reservoir owners to maintain and improve tailwater fisheries through flow and temperature management, and stocking strategies.

Issue 7: Criteria for inclusion of waters into special regulation programs for wild and stocked trout fisheries are lacking. The degree to which special regulation programs are meeting management objectives needs to be fully evaluated.

Strategies

- By 2016, develop specific criteria that trout waters must meet in order to be included in a special regulation program. At a minimum these objectives should include or consider the following:
 - Whether special regulations are necessary and supported biologically (e.g., to substantially improve the quality of the fishery or to protect recovering fish populations).
 - Whether harvest or tackle types are primary limiting factors to the quality of the fishery.
 - An evaluation of the potential impact on angler participation if angling regulation changes are implemented.
 - Whether there is social support by the primary users and major riparian landowners of the fishery for establishing or changing special regulations.

MANAGEMENT OF STREAMS WITH TROUT FISHERIES MAINTAINED BY STOCKING

Strategies:

The following strategies address the highest priority threats and opportunities to the provision of high quality trout angling opportunities on the Commonwealth's stocked trout streams. These priorities are designed to protect, conserve and enhance stocked trout waters while providing enhanced fishing opportunities for the anglers of the Commonwealth. General needs identified in other sections of the document related to special regulation criteria and protection of trout streams, such as water quality and water quantity protection, and the control of aquatic invasive species, will not be included in this section.

Issue 8: Fish culture practices and hatchery effluent management need to be continually adjusted to improve effluent water quality to ensure protection of aquatic resources downstream from PFBC trout hatcheries.

Strategies:

- Continue to evaluate and revise hatchery management practices to optimize fish production and continually improve aquatic habitats downstream of hatchery discharges.
- Beginning in the spring of 2016 a flocculation effluent treatment system will be on-line at the renovated Reynoldsdale State Fish Hatchery. Water treatment efficiency data from this system will be collected for at least three years to determine the feasibility of future systems to be implemented at other hatcheries pending funding availability.

Issue 9: Cooperative Nurseries provide considerable support to the PFBC's stocked trout program and the program must be maintained and improved.

Strategies:

- Evaluate production capacity at existing facilities and investigate requests to establish new nurseries. By 2016, the Cooperative Nursery Unit (CNU) will perform an analysis of existing cooperative nurseries and recommended production levels as stated in the Agency Strategic Plan.
- Between 2015 and 2017 provide technical assistance to all cooperative nurseries when discussing wastewater handling. Due to budget limitations there are no plans to increase funding to improve nursery effluent water quality.
- Between 2015 and 2017, update the Resource First Portal (RFP) database to more efficiently track cooperative nursery stockings.
- By 2017, determine the feasibility of posting cooperative nursery tentative stocking schedules on the PFBC website.

Issue 10: The cost to operate the stocked trout program is significant and as such, the PFBC must investigate ways to optimize hatchery operations and program efficiency.

Strategies:

- Utilize the computerized trout production program to improve the efficiency of fish feed use. The computerized trout program continues to be used at seven of the eight trout hatcheries. Reynoldsdale will begin using this system upon completion of the hatchery renovations in early 2016. As new hatchery managers and foreman are hired, periodic training sessions pertaining to the operation of the computerized program will be provided.

- By 2017, purchase mechanical egg pickers and fish pumps to reduce labor costs associated with incubating trout eggs and moving fish between rearing units. Two fish pumps and three mechanical egg pickers are currently being used at various PFBC hatcheries. Additional units will be purchased as funds are available.
- Between 2015 and 2017 continue to analyze post-stocking data to determine the percentage of trips made with distribution trucks at full capacity and reconfigure stocking assignments and schedules to maximize full capacity truck trips.
- By 2016, implement stocked trout efficiency improvements, including removal of low use waters, and a review of angler use and associated return on investment on stream sections that receive fall trout stockings

Issue 11: Stocked trout angling opportunities are limited in streams where habitat is the primary limiting factor.

Strategies:

- Conduct at least 25 instream and/or riparian habitat enhancement projects on stocked trout streams between 2015 and 2017.
- Implement recommendations of the Habitat Improvement Prioritization Workgroup and utilize findings to provide technical assistance to project partners to identify and prioritize projects that most effectively assist the PFBC in enhancing and restoring habitat in stocked trout streams. Adaptively manage and update recommendations of the Habitat Improvement Prioritization Workgroup as needed.

Issue 12: The maintenance of free public access to Pennsylvania's stocked trout fisheries is important to maintain Pennsylvania's angling heritage.

Strategies:

- Improve public access to at least five stocked streams between 2015 and 2017. Access improvements may include, but are not limited to improved parking areas, long-term access easements, and purchase of riparian lands.
- Work with the PFBC access coordinator to create greater public awareness of the need to secure public access and be proactive in pursuing landowner easements along stocked trout streams.
- On all stocked trout streams with PFBC assisted habitat improvement projects, assure public access, parking, and signage that encourages use of the site and provides information on the benefits of the project.

Issue 13: Recent generations are increasingly disconnected from the Commonwealth's aquatic resources.

Strategies:

- Through 2017, work with Trout Unlimited to continue and expand the Trout in the Classroom program.
- Through 2017, continue to provide Mentored Youth Trout Days on all trout stocked waters

statewide.

- By 2016, develop a program to stock select waters with greater numbers of larger trout. Delayed Harvest areas regionally distributed across the state will be selected for stocking greater numbers of larger fish. Evaluate angler use, satisfaction and economic impact of this program.

Issue 14: Fingerling trout stocking may provide an opportunity to provide fisheries of high quality at lower costs than stocking with adult trout in some limited circumstances. Our knowledge of the success of fingerling trout stocking programs in streams to meet management objectives is inadequate.

Strategies:

- By 2017, evaluate all current fingerling stocking efforts on wadeable streams and provide recommendations on the continuation and possible expansion/reduction of these programs.
- Explore the possibility of improved survival of stocked fingerling trout by stocking advanced fall fingerlings in select tailwaters and productive coldwater streams.
- Continue to conduct water quality and habitat evaluations on additional waters with potential to be managed using stocked fingerlings. For those waters that meet adequate year-round water temperatures, physical habitat, and/or biological characteristics, attempt to establish new fingerling stocked fisheries where appropriate.

LAKES MANAGED FOR TROUT

Strategies:

The following strategies are designed to address the highest priority threats and opportunities to the Commonwealth's lakes as they pertain to the management of trout.

Issue 15: The maintenance of free public access to Pennsylvania's lakes is important to uphold Pennsylvania's angling heritage.

Strategy:

- Improve public access to at least four lakes between 2015 and 2017. Access improvements may include, but are not limited to improved parking areas, long-term access easements, and purchase of riparian lands. Ensure we include demographics in the analysis of future access priorities, with special consideration given to children, families, the disabled and veterans.

Issue 16: The cost to operate the stocked trout program on lakes is significant and as such the benefits of providing recreational angling opportunities with stocked trout should, at a minimum, equal the costs.

Strategy:

- By 2016, complete a study design for an angler survey that will provide a statewide assessment of spring angler use, catch, demographics of the angling public, angler opinions, and an economic assessment of trout angling at trout-stocked lakes.

Issue 17: PFBC's inland Lake Trout program is need of review and marketing.

Strategies:

- Review the stocking rates, size at stocking, timing of stocking, etc. for inland lakes that receive Lake Trout stockings to optimize the program and provide high angling quality.
- Market these unique fisheries to increase angler awareness and angler use.

TROUT MANAGEMENT IN LAKE ERIE

Strategies:

The following strategies are designed to address the highest priority threats and opportunities to Lake Erie as they pertain to the management of trout.

Issue 18: The PFBC does not have a long term source of disease free Brown Trout eggs or an isolated facility to raise fingerling Brown Trout for stocking in the Lake Erie basin. Addressing these issues is critical to the development of an expanded Lake Erie Brown Trout fishery within the guidelines of the Great Lakes Fish Health Advisory Committee.

Strategies:

- By 2016, develop an in-house source of IPN disease-free Brown Trout eggs. In 2012, Rome strain Brown Trout from the New York Department of Environmental Conservation were obtained and continue to be reared at the Reynoldsdale State Fish Hatchery as future disease free Brown Trout brood stock. Development of this line of brood fish will be continued.
- By 2017, develop an isolated rearing facility capable of raising 75,000 Brown Trout fingerlings for stocking into Lake Erie and its tributaries.
- By 2017, work to adhere to the Great Lakes Fish Disease Control Policy and Model Program supplied through the Great Lakes Fish Health Committee in all stocking efforts in Lake Erie and its tributaries.

Issue 19: The maintenance of public access to Pennsylvania's portion of Lake Erie is important to uphold Pennsylvania's angling heritage.

Strategy:

- Improve public access to at least 12 access points along Lake Erie and its tributaries. Access improvements may include, but are not limited to improved parking areas, long-term access easements, and purchase of riparian lands.

Issue 20: Steelhead and Brown Trout angling opportunities in Lake Erie tributary streams are limited in some stream sections because of suboptimal instream habitat and barriers to migration.

Strategies:

- Include Lake Erie tributaries in the statewide prioritization process for stream habitat work and implement fish passage and instream habitat projects as appropriate.

Issue 21: Lake Trout are an important component of the Lake Erie ecosystem and recreational fishery. As such, ongoing monitoring and management efforts are needed to properly manage this species and fishery.

Strategies:

- Continue PFBC's annually monitoring of the Lake Trout in Pennsylvania's portion of Lake Erie as part of the overall monitoring of Lake Trout as prescribed by the international Lake Erie Committee (LEC).
- Continue PFBC's participation in the Lake Erie Committee - Cold Water Task Group to ensure proper management of Lake Trout occurs throughout Lake Erie, including periodic updates of the LEC Lake Trout Management Plan.

Issue 22: Invasive species and disease pathogens such as didymo, Round Goby, Sea Lamprey, Zebra

Mussels, and VHS threaten our trout fisheries in the Lake Erie basin.

Strategy:

- Continue to work with the Great Lakes Fishery Commission to ensure the effective, ecologically sound suppression of the Sea Lamprey population in Lake Erie to allow for the restoration of Lake Trout and improved survival of other stocked salmonids.
- Continue to work with Great Lakes Fishery Commission and other partners on the suppression and management of other Invasive species and disease pathogens such as didymo, Round Goby, Zebra Mussels, and VHS.