

Pennsylvania Fish & Boat Commission



2017 Annual Report



The mission of the Pennsylvania Fish & Boat Commission is to protect, conserve and enhance the Commonwealth's aquatic resources, and provide fishing and boating opportunities.

www.fishandboat.com



Founded in 1866, the Pennsylvania Fish and Boat Commission (PFBC) is charged with protecting, conserving and enhancing the Commonwealth’s aquatic resources. This includes waterways, fish, reptile and amphibian communities and habitats of game and non-game species. From stocking fish and monitoring the health of waterways to patrolling lakes and restoring habitats, the Commission’s employees strive to protect, conserve, and manage the resource.

High-quality streams, clean water, and good habitat ensure that we can carry out the rest of the Commission’s mission, to provide recreational fishing and boating opportunities for both Pennsylvanians and out-of-state visitors.

The “Resource First” management philosophy ensures that staff will make scientifically informed decisions based on long-term conservation of aquatic resources. Resource First also sets the foundation for the agency’s strategic plan.

The PFBC is governed by a Board of Commissioners whose ten members are appointed by the Governor with the advice and consent of the majority of the Pennsylvania State Senate. Commissioners serve terms of four years. Eight Commissioners are selected based on districts, and two Commissioners, representing boating interests, have an at-large, statewide appointment. The Executive Director, who serves as chief executive officer and chief waterways conservation officer, leads agency operations. The PFBC staff includes about 368 full-time employees and 45 seasonal employees.

Pennsylvania Fish & Boat Commission’s Board of Commissioners



Rocco S. Ali,
North Apollo



William C. Brock,
St. Marys



G. Warren Elliott,
Chambersburg



Norman R. Gavlick,
Kingston



Eric C. Hussar,
Lewisburg



Richard S. Kauffman,
Leesport



Richard Lewis,
Gettysburg



Leonard L. Lichvar,
Boswell



Edward P.
Mascharka III,
Erie



Robert B.J. Small,
Mechanicsburg



An Appreciation Award was presented to PFBC’s former Commissioner William J. Sabatose for his extraordinary leadership, wisdom and dedication while acting as the longest-serving Commissioner from December 9, 1987 to July 17, 2017. Pictured are (left to right) President Rocco S. Ali, Commissioner William J. Sabatose, Fay Sabatose and PFBC Executive Director John A. Arway.

Executive Director’s Message

As a Pitt graduate, I fondly remember the glory days of the heated rivalry with Penn State. Then, I moved to Happy Valley after graduate school and took a job as a semi-skilled laborer working for the Pennsylvania Fish Commission’s Fisheries Environmental Services Section. I wouldn’t have imagined that I would spend the next 38 years of my professional career working with the talented people from various Penn State departments and the Pennsylvania Cooperative Fish and Wildlife Research Unit.

Even more ironic is the fact that the PFBC is helping to forge new connections between the two universities by replicating the marketing efforts we commenced with Penn State at Beaver Stadium to now include interacting with Pitt fans outside of Heinz Field on fall football Saturdays. As President Herbert Hoover once said, “All men are equal in the eyes of fish.”

In 2017, the PFBC’s partnership with Penn State reached a new level when we received the final copy of a business analysis of our agency conducted by a team from Penn State College of Agricultural Sciences and Smeal College of Business. Led by Dr. Judd Michael, a group of MBA students examined opportunities for expense reduction and revenue generation in the form of a business plan to help structure our next agency strategic plan. The executive summary of the report follows, and the full analysis is available at www.fishandboat.com.

In a message to the General Assembly last September entitled *Fiscal Responsibility for Pennsylvania Anglers and Boaters*, I noted that the PFBC is a government business funded primarily by sales of fishing licenses and boat registrations. The majority of government agencies receive general fund appropriations of tax revenues to support public service programs. The PFBC generates revenues through customer sales like a for-profit business, but the PFBC must also follow the rules of government for managing operations. Most importantly, the agency receives legislative approval to increase fees charged for the goods (hatchery fish) and services (public safety, aquatic resource protection and conservation) provided to meet angler and boater customer expectations. The agency’s spending and earning model is really a mix of business and government principles.

As emphasized in the introduction to the Penn State report, “An overarching goal is to help the agency identify ways to minimize costs and increase revenues by applying concepts that might seem foreign to a state agency but which are . . . necessary to improve the responsiveness of PFBC on behalf of its customers.” The business analysis provides a solid blueprint for our Board of Commissioners, staff and me as we plan for how to best serve our customers.

Just like I always looked forward to the Pitt vs. Penn State game, I welcome the challenge of working with the rest of the team here at the PFBC to continue to protect, conserve and enhance aquatic resources, and provide fishing and boating opportunities while adhering to sound, sustainable business practices.

Your Director,

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- Executive Summary -

PA Fish and Boat Commission Business Planning

July 1, 2017

The Pennsylvania Fish and Boat Commission (PFBC) contracted with Penn State to analyze PFBC operations, the competitive environment for its products and services, and trends impacting its ability to meet current and future objectives. We were asked to write a “business plan” document that could help leadership prepare for the next strategic planning cycle.

We observed that the agency is well run with a dedicated staff who have expertise in their focal areas and care about their constituents. However, staff are oftentimes limited in their abilities to achieve objectives due to availability of funds. The agency faces more than \$100 million in infrastructure needs while encountering financial headwinds in the form of increasing mandated expenditures and declining revenue streams. Leadership currently maintains a reserve fund of monies but that balance is in danger of being depleted.

Threats facing the agency include changing demographics and leisure time activities, current and future obligations being projected to overcome annual revenues, and general difficulty in being able to “change” the organization due to external stakeholders. Taken together all these trends form a significant hurdle that hinder PFBC from achieving long term economic sustainability.

We examined opportunities for expense reduction within the agency and found the following:

- Most of the easily-achieved expense reduction opportunities have already been identified and many have been put in place.
- External forces such as stakeholders constrain PFBC’s ability to go after larger cost-reduction strategies.
- Internal factors like mandated and fixed expenses also constrain the ability to significantly cut costs.
- Specific options for cutting expenses that should be considered include:
 - Cutting back on fish production appears to be possible and warranted as a cost reduction measure
 - Conducting cost-benefit analyses of fish species is a tool to help guide possible cutbacks
 - Reducing number of hatcheries
 - Outsourcing of various functions
 - Improved production planning related to fish production and stocking
- We also looked for opportunities to **increase revenue** generation and suggest the following:
 - Increasing license fees for fishing and boating
 - New and revised licensing options
 - Capturing more revenue from unlicensed anglers and boaters
 - Obtaining revenue from a consumptive water use fee
 - Mandatory unpowered boat licenses
 - Negotiate reimbursement for services provided to other government agencies
 - Continue pursuing revenue from state sales tax on fishing and boating equipment
 - Improve marketing and communications as a tool to reduce “churn” of anglers and attract new anglers and boaters

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The **marketing function** within the agency is one that needs more emphasis, and investment, since it should be seen as the main driver of increased revenues. We discuss Outreach and Marketing needs from multiple fronts, with an overall suggestion that increased investment will be necessary to counter trends that would otherwise reduce revenues. Marketing-related recommendations for the agency include improved branding guidelines and messaging, with more engagement opportunities for all PFBC communications, and an emphasis on female and youth anglers and those in urban areas. Proper use of social media could play a major role in marketing efforts.

A key suggestion is that the agency strive to build the PFBC “brand” as a provider of recreation opportunities and conservation benefits to the Commonwealth. We observed that PFBC is not currently recognized by many constituents as a vital manager of our aquatic resources or for the public services its people and programs provide.

E-commerce strategies should be more focused, with an emphasis on such areas as email reactivation campaigns, insight generation, and better on-line sales capabilities. Related areas of discussion include:

- Digital licenses that can be emailed to anglers
- Obtain more emails from customers and use those for strategic communications
- Improve cross-selling with the on-line platform
- Use search engine optimization techniques to create “buzz” around fishing and boating in Pennsylvania

Other **general suggestions** for the agency include:

- New methods of engaging channel members such as retailer partners
- Improved project management techniques
- Scaling Outreach and Marketing to reach under-served and non-traditional populations
- Take advantage of favorable trends such as more unpowered boating
- Simplify fishing regulations and communicate those to customers
- Manage stakeholder influence on the agency
- Improve data analysis capabilities, especially as it relates to knowledge about the customer
- Improve management of the organization with specific emphasis on business-related functions
- Clarify roles of the Commissioners and educate them about their governance functions

We also note that the agency’s reserve fund can be seen as a “strategic strength” and should be maintained as a type of rainy day fund for unforeseen needs. It would weaken the agency if leadership is forced to deplete the reserve fund; we fear this is possible without changes as suggested in the report.

The Fish and Boat Commission provides a plethora of opportunities and benefits to the Commonwealth and its citizens. The agency depends primarily on license and fee revenue to provide these “common goods”, many of which are not reimbursed or directly paid for. This business model has worked in the past but is at risk given the many factors impacting revenues and expenses. We urge the agency to make the difficult decisions and changes necessary in order to maintain its role as a conservation and recreation leader.

For more information about this report:

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Following the Strategic Plan

In 2017, the agency continued to implement goals of the 2015-17 strategic plan that follow the SMART format, meaning that they are Specific, Measurable, Action-oriented, Realistic and Time-bound. Those goals and the text of this report are organized within the following four major priority issue categories:

- **Funding:** Revenues are insufficient to support the Commission’s current levels of programs and services and meet increasing fixed, variable and mandatory personnel costs.

- **Conservation:** Current and increasing threats to our aquatic resources demand the Commission provide high quality services to insure essential resource management and protection and improved fishing.
- **Recreation:** Other leisure and recreational activities are competing with fishing and boating for people's time.
- **Internal Resources:** The Commission must consistently make investments in itself to maintain its infrastructure, staff, and programs and their respective relevance.

This annual report is organized under the headings of the strategic plan. For a complete copy of the strategic plan and for quarterly reports with more detail than the summary provided in this report, visit www.fishandboat.com.

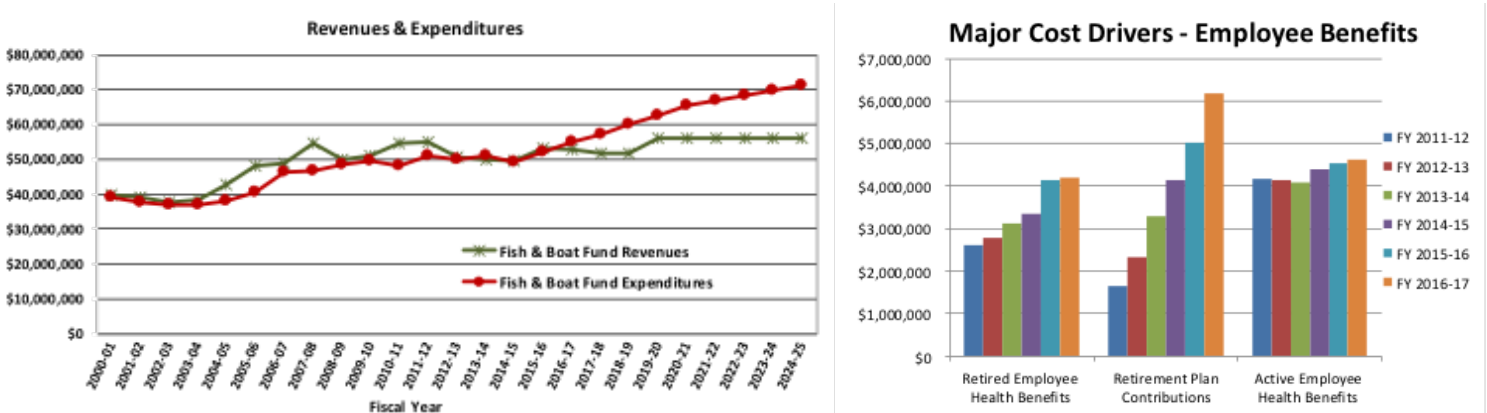
FUNDING

Goal 1A: Implement a Spending Reallocation Plan within which the Commission does not spend more than it generates in revenue each fiscal year and maintains agency administrative and support services necessary to deliver programs and services.

Fiscal Responsibility for Pennsylvania Anglers and Boaters

The agency is mindful of the responsibility of managing its angler and boater customers' hard-earned dollars wisely. Until 2017, the PFBC was able to balance its budget and not spend more than it earned. This fiscal management approach has allowed it to build a rainy day fund of uncommitted reserves to prepare for and meet foreseen rising pension and health care costs. The agency proudly leads the nation in how efficiently it operates. The Legislative Budget and Finance Committee found in 2014 that "of the states for which we have expenditure information, Pennsylvania's PFBC has the *lowest expenditures per license* (emphasis added)."

In order to meet the escalating costs of employee pensions, health care and general inflation faced by all Commonwealth agencies, the PFBC has cut spending in large part by reducing staff from a high of 432 to around 381. At the same time, the value of a fishing license adjusted for inflation has dropped to about \$16.25, while fish production costs have climbed dramatically. The true cost of today's fishing license adjusted for inflation would be \$37.18. At \$22.90, today's license value is a real bargain for Pennsylvania anglers.



Additional annual personnel and operating costs of \$6.2 million have caused expenditures to now exceed annual revenues. Absent a revenue increase, the PFBC will begin using an uncommitted reserve fund balance of about \$60 million to cover essential health care and pension obligations and maintain operations and services, which will deplete the reserve fund within five years if revenues do not increase.

In the analysis of the PFBC cited earlier, Penn State Smeal College of Business and College of Agricultural Sciences found "the agency's reserve fund should be seen as a 'strategic strength' and should be maintained as a type of rainy day fund for unforeseen needs. It would weaken the agency if the reserve fund were depleted to zero."

Facing escalating costs and declining revenues after 12 years without an increase in the price of a fishing license, the PFBC Board of Commissioners voted on September 25, 2017, to reduce spending by \$2 million in fiscal year 2018-19 if no additional revenues are received. The current plan for achieving the \$2 million reduction in operating expenses would involve closing two warmwater hatcheries and one trout hatchery in FY 2018-19. The plan would reduce the number of trout stocked in 2019 by 7.5 percent (approximately 220,000 trout) and result in severe reductions to the Cooperative Nursery Program. Barring a price increase, the agency must begin to take these steps to remain financially solvent and provide basic services to Pennsylvania's 1.1 million anglers and nearly 3 million boaters.

Fiscal responsibility means maintaining a balanced budget and not spending more than it earns. Senate Bill 30 (described in more detail below) would allow the PFBC to generate sufficient revenue to immediately spend unrestricted reserves on over \$6.4 million of deferred critical needs and a prioritized list of \$110 million in deferred infrastructure projects.

Pennsylvania anglers significantly contribute \$1.2 billion to the \$46 billion in national fishing expenditures. Successful businesses require funding to sustain operations and to invest in new ideas to grow sales and participation. The same applies to successful government businesses like the PFBC, which reinvests license revenue locally.

Commonwealth Plan for Fishing and Boating in Pennsylvania

After the PFBC Board of Commissioners authorized up to \$2 million in cuts in fiscal year 2018-19 absent a revenue increase, several members of the General Assembly asked what the agency would do with its reserve funds if it received an increase this legislative session.

Stocking

The first action would be to continue to operate all PFBC hatcheries at current production levels, which would mean no reductions in trout, warmwater or coolwater fish stockings. However, if legislative action is not taken, the PFBC must begin cutting programs. The decision about which streams and lakes would or would not be stocked in the absence of a fee increase does not need to be made until July 1, 2018.

Law Enforcement

Next, the PFBC would implement a plan to restore law enforcement services. On multiple occasions, the agency has alerted legislators to vacant Waterways Conservation Officer (WCO) positions statewide that have occurred through attrition. Those numbers have risen to 18 total vacancies, which includes one lieutenant colonel, one investigator, five sergeants and 11 WCOs. With approximately 30 of the agency’s officers now eligible to retire (and nearly as many more in the next three years), that number will continue to grow, and customer service, public safety and resource protection will continue to diminish. As soon as revenue increases or the legislature grants approval to increase fees, the PFBC will request authorization from the Governor’s Office to expand its complement to run a new school of 20 officers to keep the fish in Pennsylvania waterways and recreational users safe.

2017 Bureau of Law Enforcement	
Citations	– 6,168
Crimes Codes	– 66
Warnings for Violations	– 34,379
On Board Safety	– 31,553
Special Activities	– 2,430
Snake Permits	– 1,437
Turtle Permits	– 31
Water Rescue Certificates	– 2,500
Pollutions Investigated	– 170
Boating Under the Influence	– 68
Lake Erie Commercial Permits	– 27

Initial Investments

The PFBC would immediately begin spending uncommitted reserves on prioritized deferred infrastructure and other critical needs upon approval of a fee increase. In the short-term, the agency will start addressing a backlog exceeding \$6 million and will begin to address other projects that total approximately \$110 million.

The following are the top 10 projects the PFBC has identified for initial attention: hatchery oxygen alarms; stocking truck tanks; watercraft (boats, engines); access upgrades (docks, signs, ADA); law enforcement radio upgrade; infrastructure (boiler and roof repairs); mowers, trap nets and transport trailers; law enforcement patrol vehicles; construction and fisheries pickups; and Muncy Access replacement.

The hatchery oxygen alarms are particularly timely given all of the recent attention on stocked trout. Hatcheries are complex systems with multiple variables necessary to raise fish, but oxygen is the limiting factor for life support. Oxygen alarms are the most important tool available to alert hatchery staff to a life-threatening event that could cause a fish kill.

Long-term Investments

The following major categories represent pressing needs toward which the PFBC could direct unrestricted revenues long-term. They are statewide, have broad public safety benefits and economic value, and form the cornerstone of fishing and boating opportunities throughout Pennsylvania.

The PFBC has prioritized capital investments in state fish hatcheries across Pennsylvania driven by the need to maintain fish production levels while meeting water quality standards. PFBC staff have also identified multiple opportunities to increase energy efficiency at the hatcheries, reducing long-term operational costs while minimizing the environmental footprint of the facilities. Additionally, an augmentation of grants and/or direct funding to 162 cooperative nurseries statewide could be matched with local contributions to help sustain this important public-private partnership.

Local fishing and boating clubs, municipalities and other partners offer access to about 600 specific sites or reaches of water, while the PFBC manages nearly another 300 fishing and boating access sites. Many of these access points have suffered from years of deferred maintenance or have been closed due to public safety concerns. For every \$1 million of investment, up to 20 access areas can be improved or added. The availability of angler and boater access has been identified as one of the major reasons why anglers and boaters begin fishing, return to fishing or keep fishing. Strategic investments include upgrades to multiple access areas on an individual waterway, dam rehabilitations and at targeted access sites that, in many cases, offer the only free, public connection to the water for anglers, boaters and emergency response personnel. PFBC grants to local partners have historically yielded \$1.40 in matching funds for each dollar of state or federal investment, more than doubling the number of projects that could be completed.

Over 50 Commonwealth-owned lakes managed by the PFBC provide excellent fishing and boating opportunities and are signature local and regional amenities. Since 2008, the PFBC has made or received commitments to address 24 dams at lakes that are classified as high-hazard, unsafe through a variety of funding sources including Growing Greener 2, H2O PA, Act 89 and the capital budget. The PFBC has prioritized additional high-hazard and low-hazard dams with significant recreational value that require repairs before they deteriorate to the point of being unsafe. These facilities require maintenance and rehabilitation to bring them up to current dam safety standards and would benefit from targeted capital investments.

Fish habitat is the natural infrastructure at the heart of the Commonwealth’s 86,000 miles of streams and rivers and nearly 4,000 lakes. The PFBC has identified prioritization criteria and specific watersheds in which to focus projects that will maximize ecological and recreational

benefits of stream and lake habitat projects. An investment of \$1 million a year could result in targeted small dam removals, instream, lake habitat and riparian buffer work in specific watersheds that have public safety, local and downstream water quality, fish passage, climate change mitigation, and recreational benefits. These projects can assist the Commonwealth in the challenges to reduce nutrients and sediment impacts to the Chesapeake Bay and Lake Erie.

Unrestricted Reserves to Advance Projects

Similar to the General Fund agencies, the PFBC is required to obtain legislative authorization (capital authorization) for all capital projects with an estimated cost of \$300,000 or more. With few exceptions, such as the Pennsylvania Department of Transportation (PennDOT) and Pennsylvania Turnpike Commission capital projects, the Commonwealth's Department of General Services (DGS) is vested with the authority to manage all capital projects. Generally speaking, once capital authorization is provided for a PFBC capital project and it decides to move forward with the project, the agency must advance 100% of the estimated cost of the project to DGS. DGS will bid, award contracts, and manage and oversee all such projects. With the exception of funding for a number of high-hazard unsafe dams, the PFBC has historically relied on the reserves in its Fish Fund, Boat Fund and Growing Greener 2 funds to provide the required money up front to pay for all capital projects.

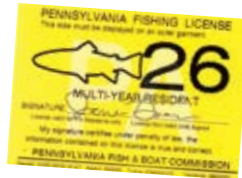
Act 52 contained \$114,135,000 in new capital authorizations for PFBC projects.

This is an excellent example of why the agency needs to maintain a solvent unrestricted reserve. In fact, in October 2017, the Commission needed to tap the reserve to advance over \$10 million to DGS for the Tamarack Lake project in Crawford County. The PFBC will be reimbursed over a number of years for a majority of the project through an H2O PA grant but needed to front the money to advance the project.

Goal 1B: Increase revenues.

Authority to Establish License and Permit Fees

In January 2017, Senator John Eichelberger reintroduced Senate Bill 1168 from the previous legislative session as Senate Bill 30, authorizing the PFBC to establish fees charged to anglers and boaters, namely fishing licenses and permits and boat registrations and titles. Senate Bill 30 passed the full Senate in March but had yet to receive a vote in the House Game and Fisheries Committee as of the printing of this report.



The current system of establishing the PFBC's fees by legislation results in large fee increases after long periods of time that drive angler participation down due to the size of the increases necessary to offset rising costs.

Under authority delegated by SB 30, fees would be established by regulation, offer the opportunity for public comment and be considered by the Board of Commissioners at two separate public meetings. The General Assembly may disapprove any fee change by concurrent resolution. The PFBC would use a deliberate, business approach to setting fees that accounts for inflation since the last license increase in 2005. This approach would anticipate changing demographics, account for sales data patterns and anticipate modest, incremental increases to keep up with rising costs—all while attempting to minimize the long-term impacts to customers.

In addition to the transparent process that includes public comment, existing checks and balances offer opportunities for monitoring the PFBC's responsible implementation of this authority. The PFBC is required to

2017 Fishing License & Permit Types	
December 1, 2016 - December 31, 2017	Units Sold
1-Day Labor Day Resident	543
1-Day Labor Day Tourist	150
1-Day Resident	3,823
1-Day Tourist	4,998
10-Year Non-Resident	10
10-Year Resident	514
3-Day Tourist	26,134
3-Year Non-Resident	415
3-Year Resident	11,148
3-Year Senior Resident	330
5-Year Non-Resident	78
5-Year Resident	2,970
5-Year Senior Resident	59
7-Day Tourist	7,794
PA Resident National Guard/Reserve	267
Senior Lifetime	15,493
Non-Resident	41,308
POW Resident Annual	1
POW Resident Lifetime	1
Reduced Disabled Veteran	385
Resident	652,546
Senior Resident	21,804
Voluntary Youth	9,469
3-Year Combination Lake Erie & Trout/Salmon Stamp Permit	1,957
3-Year Lake Erie Permit	163
3-Year Trout/Salmon Stamp Permit	6,955
5-Year Combination Lake Erie & Trout/Salmon Stamp Permit	605
5-Year Lake Erie Permit	22
5-Year Trout/Salmon Stamp Permit	1,805
10-Year Combination Lake Erie & Trout/Salmon Stamp Permit	121
10-Year Lake Erie Permit	6
10-Year Trout/Salmon Stamp Permit	264
Combination Lake Erie & Trout/Salmon Stamp Permit	72,730
Lake Erie Permit	21,637
Trout/Salmon Stamp Permit	455,364
3-Year Senior Trout/Salmon Stamp Permit	2,131
5-Year Senior Trout/Salmon Stamp Permit	1,307
10-Year Senior Trout/Salmon Stamp Permit	579
Total Licenses & Permits	1,365,886

submit an annual report to the House and Senate Game and Fisheries and Appropriations Committees. The Legislative Budget and Finance Committee (LBFC) conducts a performance audit of the PFBC every three years. Members of the Board of Commissioners are subject to Senate confirmation.

SB 30 includes a 3-year sunset provision, allowing the General Assembly to evaluate this new approach before extending the authority to the PFBC for additional years.

Representative Jeff Wheeland was joined by 13 co-sponsors in introducing House Bill 554 in February 2017 as an identical House version of SB 30.

License Increase Bills Introduced

In February 2017, Representative Bill Kortz and Senator Jim Brewster stepped forward to introduce House Bill 609 and Senate Bill 460 PFBC to keep up with inflation and continue to deliver the services expected by the Commonwealth's anglers by increasing the fees for certain licenses and permit fees for the first time since 2005. The increases would be in increments over a 6-year period of time.

One of the questions that arose throughout the debate on SB 30 was about what the agency would do with the authority to establish its own fees if it would receive such a delegation from the General Assembly. HB 609 and SB 460 represented the fee amounts that the PFBC identified would yield the \$6.2 million in additional revenue that it needed to meet rising personnel costs while meeting the expectations of anglers and boaters.

New 10-Year Fishing Licenses

Multi-year licenses (MYLs) have been a hit with anglers since the PFBC first started selling them in 2013 for 3-year and 5-year periods. Anglers like the convenience of not having to buy a license each year, and they like saving money by avoiding annual transaction and processing fees. A PFBC-funded study by Southwick Associates found that fewer than 50% of the anglers who purchased a MYL would not have purchased one every year for 3 or 5 years if they bought annual licenses. The study also found that MYL holders fished nearly twice as many days as they would have if they had bought annual licenses.

Beginning in 2017, anglers were given the option to choose from a new 10-year option for \$211.90, which includes a one-time fee of just \$1.90 and savings of more than \$17. Anglers can also purchase 10-year trout, Lake Erie, and combo permits and experience similar savings.

Rainbow Trout Chosen for 2018 License Button

Following the Brook Trout in 2016 and the Brown Trout in 2017, the PFBC selected a Rainbow Trout pattern for the 2018 fishing license buttons that went on sale on December 1, 2017. The buttons are available for \$5 each and can be purchased through the PFBC's online store (The Outdoor Shop), PFBC regional offices and the network of more than 900 license issuing agents.

Individuals must purchase an annual or multi-year resident, non-resident, senior resident or senior lifetime fishing license in order to purchase a license button. Children 15 and younger can also purchase a button if they first buy a voluntary youth license for \$1.

The buttons remained a popular item in 2017, with anglers purchasing over 20,000 of them.



Gone Fishing PA! Cabin Fever Kayak Package Giveaway

The PFBC partnered with Bass Pro Shops in Harrisburg to sponsor a kayak package giveaway during the winter months when many anglers are either getting ready for the upcoming fishing seasons or visiting sports and outdoors shows and making plans to get out and enjoy the outdoors more in the New Year. The grand prize in this unique giveaway was an Ascend FS12T fishing kayak, an advanced angler tackle bag, two mesh life jackets and a Fish Eagle Classic rod/reel combo. All of the prizes were donated by Bass Pro Shops. Michael Hebda, Pittsburgh, was the winner of the kayak.



Fish PA! Kayak Giveaway Highlighted at Penn State Blue-White Game

The PFBC again partnered with Bass Pro Shops to sponsor a unique giveaway that included a Penn State themed fishing kayak, camping equipment and a rod/reel combo. Entries were taken at the Penn State Blue/White football game on April 22, 2017, and online

during a 1-month period. Prizes were an Ascend 10T sit-on-top kayak, a camping package including a BPS Eclipse 6-person dome tent, two BPS Eclipse 20 Degree rectangular sleeping bags, a BPS two mantle propane lantern and a BPS Pro Qualifier Reel/Johnny Morris Carbon Lite spinning combo. Kayliegh Evans, Enola, was the winner of the kayak. Michael Swavola, Wayne, was the winner of the camping package. James Moore, Allison Park, was the winner of the rod/reel combo.

Catch the Value! Heat of the Summer Kayak Package Giveaway



The PFBC partnered with Cabela's to sponsor a kayak package giveaway during the heat of the summer. The grand prize was an Emotion Stealth Angler 11 fishing kayak, Cabela's Full Motion PFD and a Carlisle Day Tripper paddle. All prizes were donated by Cabela's. Entries were taken at the Overton's 400 race weekend at Pocono Raceway and online for a 6-week period. Curtis Bartholomew, Lake Ariel, was the winner of the kayak package.

"Fall into Fishing" Kayak Giveaway

The PFBC partnered with Bass Pro Shops again to sponsor a special kayak giveaway during the fall months. The grand prizes were two Ascend FS10 sit in fishing kayaks. The Commission took entries at both Penn State and Pitt home football games. The winners were Sherry Eddy, Saxonburg, and Michael Sheerin, Matamoras.



Penn State and Pitt Games

Continuing the practice that began in 2016 at Penn State games, PFBC staff set up outside of Beaver Stadium for all Penn State and Heinz Field for all University of Pittsburgh 2017 home football games. Being there offered an opportunity for the PFBC to invite people to come and visit the agency at the football stadiums, which annually draws hundreds of thousands of fans in central and western Pennsylvania. It also gave the Commission the chance to speak with people and promote the good fishing and boating opportunities available during fall months in the Commonwealth. The PFBC sold fishing licenses, distributed promotional materials and answered questions from the public.



Earlier in the year, PFBC staff also interacted with tens of thousands of fans in the concourses of Penn State's Bryce Jordan Center during home basketball and hockey games.

CONSERVATION

First Wild Trout Summit Draws Packed House

Nearly 250 people turned out on August 26 to participate in the PFBC's first Wild Trout Summit, filling the main hall of the Central Pennsylvania Institute of Science and Technology in Pleasant Gap. This event was co-sponsored by Pennsylvania Council of Trout Unlimited and TCO Fly Shop.

The daylong program featured 11 presentations and 13 speakers covering the past, present and future in areas such as the history of wild trout management, the Unassessed Waters Initiative, special regulations for wild trout and how environmental permit review affects wild trout protection.

Presenters also discussed the potential impacts of climate change on wild trout, the PFBC's wild trout stream habitat improvement priorities, the Department of Conservation and Natural Resources (DCNR) Brook Trout Management Plan and Implications of Genetics on Wild Trout Management. New information on several Penn State University radio-tracking studies was also provided.

A moderated panel allowed attendees to pose questions to the presenters. A 10-question survey was provided to attendees and 109 (45%) completed it. Responses provided the PFBC with feedback on opinions and perspectives on select wild trout management topics. An enhanced interest in wild trout appears to have been sparked.



Unassessed Waters

Under the Unassessed Waters Initiative, the PFBC works with partner organizations to survey waters across Pennsylvania and evaluate the presence and quality of wild trout populations. Qualified colleges and universities, research entities, and conservation organizations examine waters that have not been previously inventoried for wild trout. These partner groups sample previously

unassessed waters using PFBC sampling protocols and are directed to work in watersheds determined to be high priority. The previously unassessed waters found to have wild trout are then proposed to the PFBC for official listing through an open, transparent process and subsequently referred to the Pennsylvania Department of Environmental Protection (DEP) for enhanced regulatory protection.

Based on results from about 977 waters surveyed under the Unassessed Waters Initiative, the Commission added 396 new waters to the list of wild trout streams, revised the section limits of 22 waters, removed three waters from the list and added 99 stream sections to its Class A Wild Trout streams list in 2017.

The PFBC welcomes legislators and industry representatives to join surveys in the field to see how the work is done. Knowing the locations of wild trout streams allows companies to proactively plan around and avoid conflicts with specific waters.

Upper West Branch Susquehanna River

In July, the Commission approved a proposal to place the upper reaches of the West Branch Susquehanna River under Catch and Release All Tackle regulations. The focus area of the upper West Branch is approximately 26.6 miles from the acid mine drainage treatment plant in Watkins downstream to the confluence with Cush Creek near Dowler Junction.

The change, requested by local anglers and watershed volunteers, will help protect the wild trout populations as the river continues to recover from acid mine drainage. This is a special opportunity to protect, improve and highlight the developing wild trout fishery in a region where many waterways have not supported fisheries for over a century due to pollution.



PFBC Partners with Geisinger to Provide Medication Take-Back Box

In January, the PFBC partnered with Geisinger Health System to open a medication take-back box in the lobby of the agency’s headquarters, further expanding Governor Tom Wolf’s initiative to combat the prescription drug addiction crisis in the Commonwealth.

To date, more than 500 drug take-back boxes have been opened across the Commonwealth, mainly in local police stations. Geisinger has installed take-back boxes in its own pharmacies and in Weis supermarkets and independent drug stores throughout central and northeast Pennsylvania.

Research beginning in 1999 first showed that chemicals found in medications were being absorbed by fish and were contributing factors to a number of fish health problems. Perhaps the most troubling condition is intersex fish. This is where male fish develop female egg cells in their testis.

In testimony before the Senate Environmental Resources and Energy Committee in February, Executive Director John Arway noted that, “The U.S. Geological Survey Fish Health Laboratory reported in 2013 that approximately 50 percent of male bass in the Delaware River had intersex condition, 10 percent in the Ohio River drainage were affected, and up to 100 percent of the males sampled in the Susquehanna River were found to have intersex. More recent samples in the Susquehanna River confirm that 90 to 100 percent of male Smallmouth Bass have intersex condition and that this condition is more severe than found in other drainages.”

These chemical contaminants—called endocrine disrupting compounds—can enter waterways from people illegally dumping chemicals or from flushing medications down the toilet.

The PFBC opened the medication take-back box as part of a program first started by Geisinger in 2012. “The goal of the medication take-back program is twofold—to decrease the abuse and unintentional overdose of prescription drugs by children and teenagers, and to decrease the potential negative impacts of medications on our environment,” said Skip Wieder, director of Geisinger’s Medication Disposal program.

The medication take-back boxes allow community members to return unused or expired prescriptions, including narcotics, for safe and eco-friendly disposal. The take-back boxes are easy to use and accept prescription and over-the-counter medications in solid, liquid, patch, cream, ointment and spray forms. Inhalers, needles, syringes and aerosols are not accepted.

The drug take-back program is administered by the state Department of Drug and Alcohol Programs and takes place in collaboration with local law enforcement officers, the Pennsylvania District Attorneys Association, the state Attorney General’s Bureau of Narcotics Investigation, the Pennsylvania National Guard Counter Drug Joint Task Force and the federal Drug Enforcement Administration.



Susquehanna Smallmouth Bass

In April, the PFBC continued its commitment to receiving public input and held three public meetings to collect comments on a proposal to remove the closed season on Smallmouth Bass and Largemouth Bass at the middle and lower Susquehanna and lower Juniata rivers. The PFBC accepted public comments during a 60-day period and held public meetings in Harrisburg, Columbia and Selinsgrove to discuss the proposal with anglers. Approximately half of the 179 comments received opposed any change to the current regulations. About 37 percent supported the proposal.

A closed season for Smallmouth Bass and Largemouth Bass from May 1 through June 16 has been in place since 2012 on approximately 98 miles of the Susquehanna River from Sunbury downstream to the Holtwood Dam and on 31.7 miles of the Juniata River from Port Royal downstream to the mouth. Anglers can target bass during the remainder of the year but only on a catch-and-immediate-release basis.

The PFBC proposed removing the spring closed season at its January meeting after fish surveys conducted from 2013-2016 revealed increasing numbers of adult Smallmouth Bass compared to severely reduced numbers collected from 2005-2012. The proposal called for lifting the ban for the 2018 season and adopting an adaptive management approach to set regulations moving forward.

The Board of Commissioners voted in July to keep the regulations in place for 12 more months, giving them time to review data from 2017 adult bass surveys, which were scheduled to begin in September. The board's action provides time for PFBC biologists to collect and evaluate another year of data, which hopefully will reinforce the encouraging trends the agency has seen the last few years in the Smallmouth Bass population. The board will revisit the proposal at its July 2018 quarterly business meeting and decide if the closed season on these sections of the rivers should be removed beginning in 2019.



Survey Shows Big Largemouth Bass in Lackawanna Lake

A 2017 survey of Lackawanna Lake, Lackawanna County, should have Largemouth Bass anglers excited. PFBC biologists sampled the lake this year and caught 125 Largemouth Bass ranging from 5 to 22.9 inches long in a single night of electrofishing. Catch per hour values far exceeded Big Bass Program guidelines.

The 2017 catch rates were very similar to those in 2010 and indicate that the lake continues to support an exceptional population of big Largemouth Bass.



Cambria County Reservoir Contains High Quality Panfish Populations

Surveys in April and May of Cambria County's Colver Reservoir found impressive levels of Yellow Perch and Bluegill, with almost 14 times as many Yellow Perch captured in 2017 compared to 2008 and almost twice as many Bluegills.

Even more impressive were the sizes of the fish captured. Yellow Perch averaged 10 to 11 inches and Bluegills averaged 8 to 9 inches. Although lower numbers of Black Crappies were captured, the sizes were also impressive. The majority of Black Crappies captured were between 11 and 12 inches in length.

LeTort Spring Run Sampling Finds Hundreds of Wild Brown Trout

Survey work on LeTort Spring Run in Carlisle, Cumberland County, demonstrated why the well-known limestone stream is classified as a Class A wild trout fishery.

The PFBC captured a total of 200 wild Brown Trout ranging from 3 to 19 inches in length at one survey site located in the upstream portion of the creek, which is managed with Catch-and-Release Fly-Fishing only regulations. Most of the adult trout captured in this specially regulated section were between 7 and 12 inches long. Additionally, surveys conducted at two locations in the downstream portion of the LeTort, managed with Commonwealth Inland Waters angling regulations, yielded 277 wild Brown Trout between 3 and 25 inches long, with 12 trout greater than 18 inches.

Habitat Management

The PFBC continued to work with partners and leverage available funding to make improvements to fish habitat in the Susquehanna River Watershed.

As part of the Trout Plan, the Commission committed to fund four projects through the York and Lancaster Counties Habitat Improvement Grant Program using Peach Bottom settlement funds. One project was completed in 2017 on Peters Creek, Lancaster County, improving the wild trout population as well as water quality flowing into the Susquehanna River.

The Susquehanna River benefited from two watershed projects that were funded through PFBC’s Save Our Susquehanna (S.O.S.) campaign funding. The first project was on Limestone Run, Montour County, where habitat devices were complemented by four acres of riparian buffer plantings. The second project was on Turtle Creek, Union County, where habitat devices, stable stream crossings, and livestock exclusion fencing were installed to reduce nutrients and sediments to the Susquehanna River.

The PFBC, the Northcentral Pennsylvania Conservancy, DEP, and many local partners continued to work together to provide technical assistance to landowners and watershed groups by planning, designing, and managing the construction of projects to stabilize stream channels, minimize sedimentation, and enhance local water quality. Using techniques that also create fish habitat, the partners restored the natural diversity and species richness in local, Pennsylvania streams.

Examples of projects from western Pennsylvania in 2017 included completion of the second of three phases on Fourmile Run in Westmoreland County, with the installation of 98 habitat devices improving 3,300 feet. Fourmile Run is managed as a stocked trout stream. Thorn Creek in Butler County benefited from its 8th annual project, with 20 habitat devices constructed improving 1,000 feet. Thorn Creek is managed as a stocked trout stream and now has a continuous 1-mile stretch of habitat improvements.

Black Bass Management Planning

In 2017, the PFBC analyzed the responses to a survey that was issued to nearly 4,500 randomly selected Pennsylvania licensed anglers in 2016. Twenty-four percent returned a completed survey by the end of the year. Of the 1,054 returned questionnaires, 673 respondents indicated that they were black bass (Largemouth Bass, Smallmouth Bass and Spotted Bass) anglers and had fished for black bass in the 5-year period extending from 2011-2015. Survey returns met sample size targets.

Black bass angler opinions, attitudes and catch preferences were used to identify preferred black bass fishing experiences that agency managers can target to enhance or deliver. Those experiences were identified through black bass angler responses to questions that addressed the following five survey goals:

- Assess angler preferences/opinions regarding black bass fishing
- Assess bass angler satisfaction with existing black bass rules and alternatives
- Characterize black bass angler annual catch/harvest, trips and destinations
- Characterize a quality Pennsylvania black bass fishing trip
- Understand black bass anglers and their views on bass tournaments and bass fishing guide service

Survey results suggest that delivery of enhanced black bass fishing experiences, desired by Pennsylvania anglers, is achievable. Delivery of a preferred black bass fishing experience will be best guided through understanding angler preferences and knowledge of harvest and angling impacts upon black bass abundance and size structure at current fishing and tournament effort levels. This understanding is essential to delivering black bass angling experiences that are preferred, within resource constraints. Staff will work to assemble data elements that support and address this accounting as the primary focus of the black bass management planning process.

Muskellunge and Walleye Management

At the Western Pennsylvania Muskie Max® fishing show in March, PFBC staff provided a presentation on past, present and future Muskellunge management and research projects and direction for changes in the culture of Muskellunge. The plan is to stock fewer fish of a much larger size in the spring based on research showing this is a more effective method of creating and sustaining hatchery-created Muskellunge fisheries. The past approach had been to stock more, smaller fish in the fall.

In 2017, additional effort was also placed on searching for young-of-year and age-one Walleyes to better evaluate the use of stocked Walleyes in producing a recreational fishery. The PFBC is continuing to do otolith marking to evaluate success of various sizes of Walleye fry and fingerling stockings.



The new 2017 “S.O.S.—Save Our Susquehanna” button was available for purchase beginning June 1. A fishing license is required to purchase the \$10 button, and all profits from the button sales go to fund the campaign.

The PFBC launched its campaign in 2015 and announced that a portion of license sales and proceeds from the button would be dedicated to funding water and soil conservation projects along the Susquehanna River, whose young Smallmouth Bass population has been plagued by illness and elevated mortality rates.

To date, more than \$96,000 has been donated.

New Wildlife Action Plan Approved by U.S. Fish and Wildlife Service

In February, the U.S. Fish and Wildlife Service (USFWS) approved an updated blueprint for continued management and protection of Pennsylvania's fish and wildlife species of greatest conservation need.

This revision updates the 2005 Pennsylvania Wildlife Action Plan that has guided management of the Commonwealth's troubled wildlife for the past 10 years. The approved 2015-2025 Pennsylvania Wildlife Action Plan ensures that the PFBC and the Pennsylvania Game Commission (PGC) remain eligible for federal funding through the State Wildlife Grant Program.

Using the best available science, the PFBC and PGC coordinated the congressionally-required 10-year update of the Commonwealth's existing wildlife action. Also contributing technical expertise to this reorganized and updated plan were federal and other state agencies, conservation organizations and several universities, including a small army of affiliated biologists and other professionals. Administered by both commissions, this plan is a road map for all Pennsylvanians interested in wildlife conservation.

Since 2000, when enacting legislation established the State Wildlife Grant Program, Pennsylvania has received about \$29 million, matched by \$17 million in non-federal funding, and invested it in more than 100 projects with conservation partners. In recent years, the Commonwealth has received about \$1.5 million annually to protect and recover imperiled species.



P E N N S Y L V A N I A
W I L D L I F E A C T I O N P L A N

Pennsylvania Amphibian and Reptile Survey

The Pennsylvania Amphibian and Reptile Survey (PARS) is a modern-day, citizen science-driven herpetological atlas and database initiative, encompassing both historical and contemporary data compilation. The program is a joint project of The Mid-Atlantic Center for Herpetology and Conservation (MACHAC) and the PFBC and was launched in June 2013 with funding from the State Wildlife Grants Program of the USFWS.

From June 1, 2013, to December 31, 2016, PARS accumulated 117,935 records from various sources and has received approximately 60,000 amphibian and reptile observations submitted by 1,474 contributors, 49,332 of which were during the atlas period. Of the 49,332 submitted records, 46,378 were confirmed. An additional 1,527 records from approximately 1,431 members of the general public were submitted (and confirmed) to PARS via email observation forms that do not require contributors to register but are also used for the atlas effort, bringing the total atlas submissions to 50,859. Records from museums, PFBC files, academic institutions, Pennsylvania Natural Heritage files and consultant/contractor reports have added an additional 48,910 high-quality records with vouchers.



All records are processed through a tiered verification system that is more rigorous than those used by museums. PARS has been widely hailed as one of the most successful herpetological atlases undertaken by any state, and combines the historical methodology of logging observations in a block-and-quad system brought into the 21st century through the use of modern technology (e.g., smartphones, applications). In addition to requiring voucher photographs, recordings or specimens (via licenses or permits), PARS also collects point data, basic habitat and abiotic information, allowing for the use of high-quality data for environmental review and species conservation management. Pennsylvania is a large state with rugged terrain and very remote locations, thus acquisition, compilation and data analysis required for the PARS atlas is anticipated to require 10 years.

Ultimately, PARS will provide a robust baseline for long-term trends analysis of Pennsylvania amphibians and reptiles, particularly with potential declines on regional and global levels from habitat alteration, climate change and pathogens. PARS-Phase 1 ended in 2017. Building on progress from the first five years, PARS-Phase 2 was initiated in late 2017 and is expected to run from 2017 to 2021.

Hunter Station Mussel Relocation Project

The Hunter Station Bridge near Tionesta in Forest County is a 300-meter-long steel structure built in the early 1900s. The bridge spans the Allegheny River along with the largest known remaining populations of two protected freshwater mussel species, the Northern Riffleshell (*Epioblasma rangiana*) and the Clubshell (*Pleurobema clava*). PennDOT began planning for the bridge's replacement in 1993 and the project culminated with a bang when the bridge was imploded using explosives. However, several years of intensive work aimed at salvaging as many of the mussels from the work area as possible was completed to facilitate the recovery of these imperiled species. This effort included team members representing state and federal government agencies,

non-profit organizations and private industry from seven states. Illinois, Indiana, Kentucky, Ohio, New York, Pennsylvania and West Virginia, as well as the Seneca Indian Nation near Salamanca, New York. All mussels were relocated to waterways that were historically occupied by these species.

Approximately 131,500 mussels were collected from beneath the bridge. In Pennsylvania alone, the combined effort of individuals representing PennDOT, PFBC, USFWS, United States Forest Service, Western Pennsylvania Conservancy (WPC) and EnviroScience Inc., along with numerous volunteers, provided for the movement of approximately 40,000 mussels to the Clarion River, Conewango Creek, Dunkard Creek and Shenango River.

In some cases, these species have not been collected from the aforementioned waterways in more than 100 years and the reintroduction effort represents the first time they have been seen here since the turn of the 20th century. This is a momentous occasion for mussel recovery in the Commonwealth and was the first project of its kind undertaken by the agency. It would not have been possible without the collaboration of all parties and will serve as a model for mussel conservation efforts in the future. Commission biologist Jordan Allison received the “Governor’s Award for Excellence” and WPC contract malacologist Nevin Welte received the Commission’s “Conservation Service” award for their significant contributions to this nationally acclaimed freshwater mussel recovery effort. See page 25.

Dunkard Creek Pollution Re-assessment and Recovery Update

In September 2009, a significant number of fish (estimated 42,997), freshwater mussel species (estimated 15,382, including the state and federally endangered Snuffbox) and mudpuppies (estimated 6,447) were killed by a pollution event that spanned over 30 miles of Dunkard Creek in Pennsylvania and West Virginia. PFBC staff completed the biological damage assessment for the aquatic kill in the Pennsylvania portion of Dunkard Creek. Nearly six years after the pollution event, the PFBC and Consol/Murray Mines reached a \$2.5 million settlement for damages to natural resources.

The PFBC developed a restoration/recovery plan, and staff are currently assessing Dunkard Creek (sportfish, nongame fish and mussel surveys). In the fall of 2016, in an effort to re-assess Dunkard Creek after the devastating 2009 pollution event, staff conducted sampling on nongame fish, freshwater mussels and mudpuppies within Dunkard Creek. Nongame fish diversity has shown positive signs of recovery since the kill with over 30 species documented, although several large river forms were missing, including the Common Carp, Flathead Catfish and Quillback. Several species of small forage fish were missing from the fish community, namely the Gizzard Shad, Golden Shiner and River Shiner. Intensive mussel sampling found the aquatic invasive Asiatic Clam as abundant, but only one of 14 native species that formerly occurred here, the Pink Heelsplitter, was found and likely moved down one of the small tributaries of Dunkard Creek after the 2009 pollution event.

A freshwater mussel augmentation pilot study was initiated: 11 common mussel species native to the drainage, comprised of approximately 500 individual mussels, were moved from the Allegheny River to five different affected reaches of Dunkard Creek. These translocated mussels were re-assessed in the summer of 2017—high survivorship was found in all study plots (translocation successful).

In the fall of 2017, 4,000 juvenile Plain Pocketbook, which were propagated at the USFWS White Sulphur Springs National Fish Hatchery in West Virginia, were translocated to Dunkard Creek. The mudpuppy population was assessed in Dunkard Creek and was also sampled at two reference streams in November of 2016. Mudpuppies were not found in the affected reaches of Dunkard Creek, although they were found in the Pennsylvania Fork of Dunkard Creek and nearby Browns Creek. A report detailing this re-assessment of the aquatic nongame species as well as recommendations for recovery and monitoring is forthcoming.

The Fishes of Pennsylvania

This book is about the fishes of Pennsylvania and was authored by Dr. Jay Stauffer of Pennsylvania State University, Rob Criswell and PFBC Natural Diversity Section Biologist Doug Fischer. An account for each species that occurs in the state was included as well as characters for identification, range (including an up-to-date dot distribution map), biological and ecological information, and a conservation status summary and remarks. Chapters of the book include a history of ichthyology in Pennsylvania, a description of the waterways and fish fauna of the state, basic anatomy, the study of fishes (including collection techniques, characters and methodology for identification, and information on photography and videography), and conservation. The book’s foreword and a chapter on sport fishing opportunities in the Commonwealth were guest authored by PFBC Executive Director John A. Arway.



RECREATION

Family Fishing Catfish Festival and Mentored Youth Fishing

Families living in Pennsylvania’s largest urban areas enjoyed unique fishing opportunities on July 29 and July 30 at North Park Lake in Pittsburgh and on August 5 along the banks of the Schuylkill River in Philadelphia. These PFBC programs gave families and adult mentors the chance to target catfish. For the North Park event, Channel Catfish were purchased from a commercial hatchery and stocked prior to the event.



PFBC staff and partners provided families with hands-on instruction on the basic skills needed to catch catfish, as well as catfish biology and the care and preparation of the catch. Participants practiced their fishing skills. The events were open to anyone, but pre-registration was required. The PFBC waived the fishing license requirement for registered participants ages 16 and older.

Kids can never have enough opportunities to fish. The Commission is committed to providing families with many different opportunities to learn fishing skills and to participate in special events. This program is specifically designed to show kids who live in urban areas that there are good fishing opportunities close to their homes.

Catfish are an increasingly popular gamefish targeted by anglers because of their abundance, catchability and natural occurrence in many locations. Catfish are found in nearly all of Pennsylvania’s public impoundments and large rivers.

Voluntary Youth License Sales Grow the Next Generation of Anglers

Over 33,000 voluntary youth fishing licenses and mentored youth permits were issued in 2017. For every voluntary youth license sold, the PFBC receives approximately \$5 in federal revenue from the USFWS Sport Fish Restoration Act program, which provides funds to states based on a formula that includes the number of licenses a state sells. All revenues earned from voluntary youth fishing licenses are dedicated to youth fishing programs.

To date, the Commission has issued over 92,000 voluntary youth fishing licenses and mentored youth permits since 2014 as part of its effort to recruit the next generation of Pennsylvania anglers.

Mentored Youth Trout Fishing Days Offered to Anglers Again



The 2017 trout season opened March 25 for the Mentored Youth Trout Day in 18 southeastern counties including Adams, Berks, Bucks, Chester, Cumberland, Dauphin, Delaware, Franklin, Juniata, Lancaster, Lebanon, Lehigh, Montgomery, Northampton, Perry, Philadelphia, Schuylkill and York. A second statewide Mentored Youth Trout Day was held on April 8.

This was the fourth year for the popular program, giving kids and their adult mentors the chance to fish a week before the regional and statewide opening days. Again in 2017, only kids were allowed to keep up to two trout on the Mentored Youth Trout Fishing Days. Mentors were allowed to

fish, but they could not keep any trout.

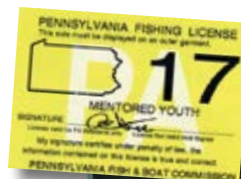
To participate in the program, adult anglers (16 years or older) must have a valid fishing license and trout permit and be accompanied by a youth. Youth anglers must obtain a free PFBC-issued permit or a voluntary youth fishing license (only \$2.90 including all fees). Both are available at www.GoneFishingPA.com or at any of the more than 900 licensing agents across the state.

Special Fishing Opportunities Offered on Labor Day



The PFBC again offered two special fishing opportunities to entice adults and kids to fish on Labor Day 2017.

The first was a \$1 license for adult residents and non-residents. The license—good for Labor Day only—provided an easy and affordable way for everyone to enjoy a special day with family and friends while fishing on the Commonwealth’s waters.



The second opportunity was the Mentored Youth Panfish Day. This program provided youth anglers who have obtained a free mentored youth permit or have purchased a voluntary youth license an opportunity to fish on 19 Panfish Enhancement lakes. The Panfish Enhancement lakes were chosen as mentored youth fishing opportunities, because the waters are managed to increase the number and size of fish. Panfish include Bluegills, Pumpkinseeds, Redear Sunfish, Black Crappies, White Crappies and Yellow Perch.

Waters Added to Popular Keystone Select Stocked Trout Waters Program

For the second consecutive year, the PFBC announced in September that it is adding more waters to the increasingly popular Keystone Select Stocked Trout Waters Program, bringing to 22 the total number of creeks holding the big 14- to 20-inch trophy trout.

The eight new waters, which will be stocked for the 2018 trout season, include:

- Armstrong County, Buffalo Creek, Section 03 (3.70 miles) – Little Buffalo Run downstream to 0.6 miles upstream of SR4035 (Craigsville)
- Berks County, Tulpehocken Creek, Section 06 (1.95 miles) – Outflow Blue Marsh Lake downstream to SR3008 Bridge (Rebers Road bridge)
- Fayette County, Meadow Run, Section 06 (2.20 miles) – Bridge on Dinner Bell Road (SR2011) downstream to the mouth
- Lebanon County, Quittapahilla Creek, Section 04 (1.10 miles) – Spruce Street Bridge (T-398) downstream to SR0934 bridge
- Lycoming County, Lycoming Creek, Section 04 (1.30 miles) – First overhead utility line upstream of Powys Curve downstream to bridge on old Route 15 (SR0015) near Haleeka
- Monroe County, McMichael Creek, Section 04 (1.44 miles) – 1.6 km downstream Beaver Valley Road (T-414) bridge downstream to 1.14 km downstream Turkey Hill Road (T-416) bridge
- Snyder County, Middle Creek, Section 04 (1.20 miles) – SR4007 bridge downstream to the downstream boundary of State Game Lands 188
- Tioga County, Pine Creek, Section 06 (1.06 miles) – Darling Run downstream to 150 m downstream of Owasee Slide Run



Earlier in the year, the PFBC added six other waters for the 2017 trout season:

- Berks County, Tulpehocken Creek, Section 7 (1.84 miles)
- Cambria County, Chest Creek, Section 3 (1.80 miles)
- Fulton County, Big Cove Creek, Section 3 (0.93 miles)
- Luzerne County, Harveys Creek, Section 4 (1.70 miles)
- McKean County, Kinzua Creek, Section 4 (2.29 miles)
- Venango County, Oil Creek, Section 7 (1.55 miles)

The PFBC was confident when it created the Keystone Select Stocked Trout Waters Program that anglers would enjoy the opportunities to catch trophy trout and would not mind driving the additional distances to these destination areas. The addition of the eight streams now makes it even easier for anglers to fish a Keystone Select Stocked Trout Waters stream within just a few hours of their home.

Under the program, approximately 6,500 large trout will be distributed among the 22 waters. The trout will be stocked at a rate of 175 to 225 per mile, which is comparable to the numbers of similarly sized fish in Pennsylvania’s best wild trout waters.

The waters are regulated under Delayed Harvest Artificial Lures Only (DHALO) regulations, which provides the opportunity to catch these fish multiple times. Under DHALO regulations, waters are open to fishing year-round, but anglers can harvest trout only between June 15 and Labor Day, and the trout have to be a minimum of 9 inches. For the rest of the year, these waters are managed on a catch and release only basis, and the creel limit is zero. Tackle is limited to artificial lures and flies.

The original eight waters added in 2016 were:

- Chester County, Middle Branch White Clay Creek, Section 3 (1.67 miles)
- Dauphin County, Wiconisco Creek, Section 3 (0.74 miles)
- Lackawanna/Wyoming Counties, South Branch Tunkhannock Creek, Section 4 (0.99 miles)
- Lawrence County, Neshannock Creek, Section 3 (2.67 miles)
- Lycoming County, Loyalsock Creek, Section 5 (1.49 miles)
- Potter County, First Fork Sinnemahoning Creek, Section 4 (1.67 miles)
- Somerset County, Laurel Hill Creek, Section 3 (2.33 miles)
- Westmoreland County, Loyalhanna Creek, Section 3 (1.67 miles)



Fish-For-Free Days

The popular annual Fish-For-Free Days were offered again in 2017 on May 28 and July 4. The Fish and Boat Code permits the PFBC to offer two free fishing days a year. Dates for 2017 were picked to coincide with Memorial Day and Independence Day weekends when families and friends were already together visiting popular outdoor spots across Pennsylvania.

Fish-For-Free Days allow anyone—residents and non-residents—to legally fish in Pennsylvania without a fishing license. From 12:01 a.m. to 11:59 p.m. on both days, no fishing license is needed to fish in Pennsylvania’s waterways. All other fishing regulations apply.

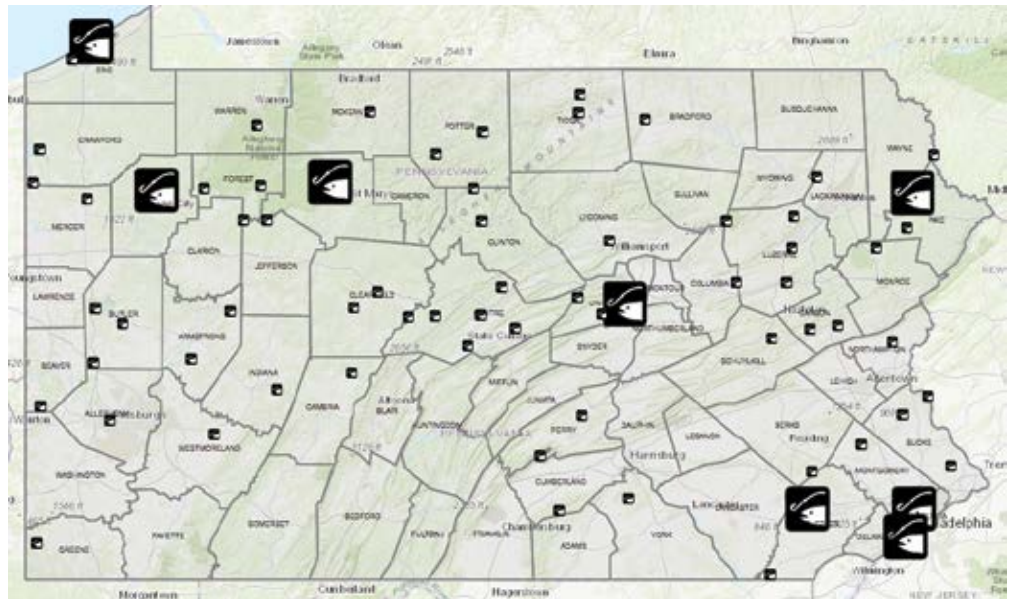
Fish-For-Free Days offer an easy, convenient way to introduce friends and family to the sport of fishing, or to reconnect with the sport for someone who has not fished in some time. Many families already spend the holiday weekends at lakes and parks throughout the state, and these special days allow them to try fishing at no cost.



Fishing Tackle Loaner Program

To make the fishing experience more convenient, interested anglers may borrow equipment from locations across Pennsylvania. The Commission’s Fishing Tackle Loaner Program (FTLP) provides partner organizations fishing rods, reels and equipped tackle boxes. The partners loan this equipment to individuals or groups, enabling them to enjoy fishing without having to buy gear themselves. The PFBC purchases the equipment directly from manufacturers at discount pricing.

At the end of 2017, there were 79 FTLP sites, located in 44 counties. Current partner organizations include community libraries, state, county and local parks. Organizations with an interest in becoming a FTLP site should send an e-mail to ra-be@pa.gov with FTLP in the subject line. A map of FTLP sites is available at www.fishandboat.com.



Hooked on Scouting

The PFBC began discussing partnership opportunities with the New Birth of Freedom Boy Scout Council early in 2017. The outcome was to collaborate on an initiative called “Hooked On Scouting.” This event was previously implemented in southeastern Pennsylvania with great success, and the PFBC partnered with New Birth of Freedom to pilot it in southcentral Pennsylvania.

“Hooked On Scouting” is a program designed to recruit new Boy Scouts. The Council works with local businesses for donations of fishing rods and then provides a fishing rod to each new scout in addition to an opportunity to fish at one of six or seven locations with the assistance of instructors.

The PFBC planned and conducted a Fishing Skills Instructor course for New Birth of Freedom Boy Scout Council staff members to be instructors at seven different fishing locations in September 2017. In addition to the instructor training, PFBC assisted the Council with planning efforts, publications and follow-up reporting of the event.

Based on the success of the 2017 pilot “Hooked On Scouting” event in southcentral Pennsylvania, the Council and PFBC plan to continue and possibly expand the program.

STREAM Girls Program

STREAM Girls is a National Trout Unlimited program that connects Girl Scouts to coldwater resources through study of the resources, the organisms within the resources and enjoyment of those resources (e.g., fly fishing).

STREAM is an acronym for Science, Technology, Recreation, Engineering, Art and Mathematics.

The program has been piloted in a few states. After successful implementation, National Trout Unlimited and the National Girl Scouts entered into an MOU for the program and a STREAM Girls patch. Since then, they have offered the programs in a few other states. The PFBC and the Pennsylvania Council of Trout Unlimited decided that it would be a unique and beneficial program to pilot in Pennsylvania.

The PFBC and Trout Unlimited approached the Girl Scouts In the Heart of PA Council. Their region covers from the Maryland border through central Pennsylvania into northeastern Pennsylvania. They are currently implementing a successful, pilot program involving a “STEM Mobile.” They agreed to the opportunity of running the first Pennsylvania STREAM Girls program.

The PFBC, Pennsylvania Trout Unlimited and the Girl Scouts In the Heart of PA are currently planning the pilot STREAM Girls weekend for 2018. Training of instructors will occur in the spring/early summer 2018. The event will occur at the end of July 2018.

Trout In the Classroom

The PFBC continues to grow new opportunities in the Trout In the Classroom (TIC) program. TIC is a joint interdisciplinary program that introduces coldwater conservation education in Pennsylvania schools by raising Brook Trout from eggs to fingerlings. It is a partnership between the PFBC, Pennsylvania Department of Education, Pennsylvania Council of Trout Unlimited, local Trout Unlimited chapters, schools and other local partners.

Each summer, the PFBC provides teachers with curriculum and training. TIC classrooms receive Brook Trout eggs from the PFBC’s Benner Spring State Fish Hatchery in the fall, and fingerlings are released in April or May. Teachers use curriculum and materials, as well as a 55-gallon aquarium, to teach about fish ecology and management, and the value of protecting, conserving, and managing coldwater resources. The program helps foster awareness of coldwater conservation in students in grades 3-12 and encourages participation in coldwater resource projects and recreation programs.

The program continues to grow. For the 2016-2017 TIC school year, there were 316 TIC classrooms, representing 199 school districts across Pennsylvania. Nearly 40 percent of all public school districts in Pennsylvania and more than 37,000 students participated in TIC. On average, each classroom started with 270 eggs and released 92 fingerlings ranging in size from 2- to 4-inches. In total, teachers received 73,000 viable eggs and released 25,000 fingerling Brook Trout. TIC subjects taught throughout the school year included fish ecology, habitat, watersheds, conservation, fish management and more. In 2015-2016, TIC teachers reported nearly 12,000 TIC teaching hours.

Water Rescue Training

The Commission certified 2,799 students through the Water Rescue Program, which meets or exceeds various levels (Awareness, Operations, Technician) of the National Fire Protection Association (NFPA) 1670 Standards. The Commission also conducted three Instructor Trainer Courses, which certify individuals to deliver the PFBC Water Rescue Curriculum, so they can provide training to Commonwealth first responders. The Commission has a trained in-state volunteer instructor corps of 171 individuals who provided more than 11,800 hours of training in 2017. The PFBC’s Water Rescue program is the largest of its kind in the United States.

The PFBC conducted seven Swiftwater Volunteer Service Recognition Inspections in partnership with the Pennsylvania State Fire Academy and Pennsylvania Department of Health for Team Typing, bringing the total number of credentialed swiftwater teams in the Commonwealth to 34.

The PFBC hosted the 2017 Helicopter Aquatic Rescue Team (HART) SAR Workshop, which was geared towards civilian and military organizations involved in joint helicopter search and rescue programs. The gathering was an opportunity for those seeking to develop inter-agency helicopter SAR partnerships. The workshop was held at the Keystone Conference Center within Fort Indiantown Gap and included keynote speakers such as TAG - General Carrelli, Pennsylvania Emergency Management Agency (PEMA) Director Flynn and PFBC Colonel Britcher. In attendance were operators and personnel from states including Texas, New York, New Jersey, Maryland, Connecticut, Idaho and more.

In August 2017, a full scale (FX) PA-HART hurricane exercise was conducted on the Susquehanna River at Fort Hunter near Harrisburg. The exercise consisted of an activation of the PFBC Swiftwater Emergency Response Team (SWERT), Special Medical Response Team (SMRT) and Volunteer Rescue Service Recognition (VRSR)



Swiftwater Teams to be moved to an area impacted by a significant hurricane. Assets and personnel were moved from the Pennsylvania Army National Guard flight facilities at Fort Indiantown Gap and Johnstown. Training involved the combination of HART, SWERT, SMRT, VRSR Swiftwater Teams, emergency medical and fire/rescue assets to search/rescue/triage/treat and evacuate severely injured victims from a mass casualty hurricane event.



The PFBC also participated in the International Association of Water Rescue Professionals Conference held in South Bend, IN, and presented information and instruction on the Commonwealth's Water Rescue Program.

Emergency Response

Through an Emergency Management Assistance Compact (EMAC), six members of the PFBC's Swiftwater Emergency Response Team deployed to Texas on August 31 to assist in rescue operations in the aftermath of Hurricane Harvey. The Type II six-member team consisted of PFBC WCOs and two volunteer instructors. They assisted local authorities with waterborne search and rescue operations before returning to the Commonwealth on September 8. The EMAC process allows states that have exhausted local resources to request assistance from other states. The PFBC seeks and receives reimbursement for expenses for any assets that are deployed. Through this process, affected states can get the help they need and responding states can help their neighbors in a time of crisis.

Operation Dry Water

Commission WCOs again participated in Operation Dry Water 2017 during the July 4th weekend. During this national campaign to remove impaired boat operators from the water, Pennsylvania officers interacted with 4,533 boaters. During these interactions, citations were issued for 311 boating infractions, with another 1,477 warnings for minor infractions.

As result of the initiative, 15 individuals were apprehended for Boating Under the Influence (BUI). Another 189 individuals were also cited for nonboating violations.

The 2018 Operation Dry Water heightened awareness and enforcement weekend will take place nationwide June 29-July 1, 2018.

Life Jackets Focus of National Safe Boating Week

The importance of flotation devices and other watercraft safety tips were again the focus of the 2017 National Safe Boating Week, May 20-26.

During National Safe Boating Week, and throughout the entire boating season, the Commission reminded boaters to practice safe and responsible boating, always wear your life jacket, and be alert while on the water. By practicing these simple steps, boaters can save their lives as well as those of the people boating with them.

People tend to think of boating accidents in terms of collisions. However, capsizing and falls overboard are the most common type of reportable boating accident in Pennsylvania. Accidents where fatalities occur usually are the ones where somebody falls overboard or is swamped in a small boat and drowns. Those are precisely the accidents where a life jacket can make all the difference.

Life jackets are more comfortable, convenient and lightweight than ever. They come in a variety of sizes and styles to fit every person and recreational opportunity. Inflatable life jackets are gaining in popularity, because they fit easily over clothing, can be worn as a vest or belt-pack, and can be another option in addition to more traditional buoyant life jackets.



Boating Advisory Board

The Boating Advisory Board (BAB) advises the Commission regarding matters relating to boating including recommendations with respect to proposed boating rules and regulations. The BAB's advice assists the Commission with establishing a boating program that ensures the safe and enjoyable operation of boats.

The BAB met in February to learn more about a proposal to allow wake surfing in or on the wake of a motorboat provided the boat's propulsion system is specifically designed for the activity that was subsequently approved by the Board of Commissioners in September.

Boating regulations had prohibited wake surfing behind boats using outboard motors, inboard/outboard motors or water jets. In late 2015, however, Volvo Penta asked the PFBC to allow boaters to use its new Forward Facing Drive for wake surfing.

Traditional motors have propellers that face away from the boat, creating a potentially dangerous situation if an individual is wake surfing and falls into the wake and the path of the blades. Newer motors, like Volvo's, have propellers mounted on the inside of the engine's mid-section and face the boat, effectively creating a safety barrier between the blades and the person who is wake surfing.

These motors are specifically designed to reduce the chances of an individual who is wake surfing from coming into direct contact with the propeller blades during a fall.

BAB Members

Loren W. Lustig, *Chairperson*
Biglerville

Mary Gibson, *Vice Chairperson*
Marysville

Scott Ballentyne
Fleetwood

John Mahn Jr.
Charlroi

Michael Murray
Philadelphia

National Safe Boating Week is scheduled each year as the first full week before Memorial Day weekend, which is often thought of as the unofficial start of warm weather and the boating season in Pennsylvania.

Boats must have a U.S. Coast Guard-approved wearable life jacket on board for each person. Children 12 years of age and younger must wear their life jackets while underway on any boat 20 feet or less in length and on all canoes and kayaks.

From November 1 through April 30, all boaters are required to wear a life jacket while underway or at anchor on boats less than 16 feet in length or on any canoe or kayak on all Pennsylvania waters. A disproportionate number of the fatalities occur during the months of November through April. During these cold weather months, boaters are especially at risk due to the water temperature and the risk of sudden cold water immersion.

Erie Access Improvements

The Steelhead fishery in Lake Erie and its tributaries is a popular destination for anglers and generates tremendous economic benefits to the region. Pennsylvania's Fishing and Boating Access Strategy ranks this watershed as the top priority for access improvement statewide.

In 2017, the Commission took the following actions to improve public access to this important fishery.

- Approved the purchase of an easement of approximately 1,050 linear feet along Conneaut Creek in Spring Township, Crawford County, for \$20,000. The easement area is located off of Fisher Road.
- Approved the purchase of an easement of approximately 250 linear feet along Elk Creek in Fairview Township, Erie County, for \$3,750. The easement area is located off of Luther Road across the stream from Folly's End Campground.
- Authorized a \$154,903 grant from the Erie Access Improvement Program to McKean Township, Erie County, and the Lake Erie Region Conservancy to make improvements to their adjoining properties along Elk Creek in McKean and Fairview townships. These properties total approximately 88 acres and are located off of West and Peffer roads near the PFBC's Sterrettania access on Elk Creek. The grant is part of a multi-phase plan to create a year-round recreation area for local residents and visitors. The township plans to contribute \$25,000 to the project and has requested additional funding from DCNR and the Erie County Greenways Program.
- Approved the acquisition of 1,900 linear feet on Elk Creek as it flows across a parcel of property in McKean Township, Erie County, for \$26,000. The easement area is located off West Road immediately downstream of the PFBC's Rick Road Access. Elk Creek is a popular steelhead and trout fishery and the acquisition of the easement will provide additional trout and steelhead fishing opportunities.
- Approved a 10-year lease with Fairview Evergreen Nurseries at the PFBC's Fairview State Fish Hatchery in Erie County. The nursery has leased the property for 40 years for use with its nursery business. The nursery will pay \$4,650 the first year, with the annual amount increasing to a payment of \$4,925 in the final year.
- Approved the acquisition of an easement on a 0.4-acre parcel of land on Trout Run in Fairview Township, Erie County. This section of Trout Run is a critical steelhead brood collection location for the Lake Erie Steelhead Program and the acquisition of an easement is necessary to continue the program. The PFBC previously had agreements with the former owners of the property and wants to enter into a similar agreement with the current owners.

To date, the PFBC has acquired more than 21 miles of public fishing access in the Lake Erie Watershed through easements and land purchases under the Erie Access Improvement Program.

State Fish Hatchery Open Houses

An estimated 4,000 visitors attended the annual Linesville State Fish Hatchery Open House on April 2. This event is always popular, and attendance in 2017 was about 1,500 visitors more compared to previous years. Commission staff set trap nets for the annual Walleye spawn, explained the spawning process, and demonstrated how to fillet and cook fish. Children practiced their casting skills and created fish print t-shirts. Displays and exhibits were also set up inside the hatchery.

The PFBC celebrated 85 years of operation of the Huntsdale State Fish Hatchery with an Open House on October 22. The public event attracted approximately 500 visitors and featured a variety of hands-on activities including casting and fish print art opportunities, a

Boating Accidents

Each year, on average, 700 people die in boating-related accidents nationwide. Nearly 80 percent of the victims were not wearing a life jacket.

Last year in Pennsylvania, there were 69 recreational boating accidents that resulted in 15 fatalities. Only four of the 15 victims were wearing a life jacket at the time of the accident. Eight of the 15 victims were not wearing a life jacket but did have them onboard the boat. Alcohol or drugs was believed to have been a factor in three of the fatal accidents.



Elk Creek, Erie County



Huntsdale State Fish Hatchery Open House

spawning demonstration, tours of the visitor's center, "Touch-A-Truck" displays, various live reptiles and amphibians, and the opportunity to learn about PFBC habitat projects. The event culminated with a stocking of the Yellow Breeches Creek near the hatchery and the chance for attendees to go fishing.

The PFBC will continue to provide open house events at different hatcheries around the Commonwealth.

Fish Production

This was another productive year for PFBC hatcheries with more than 5 million adult and fingerling trout and approximately 50 million fry and fingerlings of other fish species being produced for the anglers of Pennsylvania. Without the help of volunteers who assist with fish stocking and the cooperative nurseries who raise almost 1 million trout and some of the warmwater/coolwater species, this would not have been possible.

The average size of PFBC adult trout this year was over 11 inches and greater than ½ pound, with many beautiful large trophy trout being stocked. These trophy fish ranged from 2- to 4-years-old. Due to an improved feed for the agency's brood fish, the trophy fish that were stocked had more vibrant colors, which many anglers noticed. It was especially evident in the Golden Rainbow Trout stocked in 2017.



One of many Golden Rainbow Trout stocked in 2017.

Large Fish Stocked

Trout were not the only large fish stocked, as the Commission's warmwater/coolwater hatcheries produced some record-size fish. The Union City State Fish Hatchery stocked the largest Northern Pike fingerlings ever produced by PFBC hatcheries, and Linesville State Fish Hatchery raised some very impressive Channel Catfish, which are being used in a study by PFBC Fisheries Management staff.

The Pleasant Mount State Fish Hatchery staff experimented with culturing large Walleye this season by utilizing a large pond and providing Fathead Minnows as a forage species for the Walleye. When fish were harvested, the average Walleye fingerling was 10 inches long and ready to be stocked.

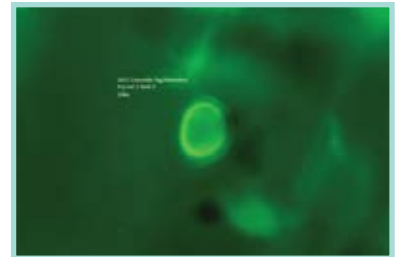
The steelhead stockings from a couple of years ago are doing well, because the adults are returning in high numbers to Lake Erie tributaries this year. Not only are many steelhead being caught, but Brown Trout are numerous and larger than in past years.

Quality Water and Quality Fish

The Division of Fish Production Services (FPS) continued to assist the PFBC's state fish hatcheries on topics such as National Pollutant Discharge Elimination System permit issues, flow data management, fish health and fish marking. FPS has been leading the effort on attempting to keep New Zealand Mudsnails (an invasive species) out of the PFBC hatcheries. The snails have become established in the Spring Creek watershed, and staff are installing electrical barriers to deter the snails from entering the hatchery rearing areas.

The PFBC purchased a new specialty microscope in 2017 to detect fluorescent marks in fish. This microscope was purchased with grant money and replaced an old unit that could no longer be repaired. The Commission analyzes marked otoliths of American Shad and Walleye that are used in studies to determine the success of stocking programs. The agency's water quality laboratory handled about 4,000 samples last year to maintain hatchery water quality effluent standards. Once again, the lab maintained its DEP Lab Accreditation, which permits it to analyze parameters for the hatchery discharge permits.

The Fish Health Unit (FHU) conducted inspections of all state fish hatcheries to help maintain high standards of fish health. The FHU has also been involved in research of Largemouth Bass Virus found in Smallmouth Bass in the Susquehanna River watershed.



Fluorescent mark in the otolith of a Walleye fry that was marked at the Linesville State Fish Hatchery.

Cooperative Nurseries

Statewide, 149 volunteer sponsoring organizations and educational institutions operate 163 cooperative nurseries that stock nearly 1 million trout each year. Sponsor organizations receive fingerling trout from the PFBC sometime after May, feed and care for them at their nursery, and stock them as adults the following spring. The PFBC's Cooperative Nursery Unit (CNU) supports these volunteers in a number of ways including coordinating requests and distribution of fingerlings from state fish hatcheries to local nurseries, conducting routine nursery inspections, responding to nursery emergencies to diagnose and treat sick fish, conducting regional training seminars, and providing technical guidance on a daily basis.

The cooperative nursery program is credited with supplying approximately 25 percent of the stocked trout in Pennsylvania. The majority of sponsors raise trout. However, five of them raise Walleyes, Muskellunge, Channel Catfish and Largemouth Bass. These

fish are raised in various fish culture setups including indoor tanks, recirculating aquaculture systems, earthen ponds and even an aquarium located at the Cabela's store in Hamburg.

In 2017, the PFBC regularly featured articles on the good work of cooperative nurseries in *Pennsylvania Angler & Boater* magazine including the following cooperative nurseries.

In 1974, the McSherrystown Fish and Game Sportsmen Club was approached by CNU with a proposal to open a trout lab in Adams County with Fairfield High School agriculture students. This was a "first ever" trout aquaculture pilot program designed to teach high school students how to raise trout fingerlings. Since the Commission supplied them their first fingerling trout in 1975, the Fairfield High School Cooperative Nursery has been stocking trout in the waters of Adams County.

Recently, the CNU assisted the PFBC's Division of Habitat Management and the Lycoming County Conservation District at the Lycoming Creek Anglers Club (LCAC) cooperative nursery. A new jack dam was installed at the nursery to replace the existing dam, and log vanes were installed downstream to prevent bank erosion. These new structures were installed due to historic flooding that occurred at the nursery in the fall of 2016, which damaged the existing jack dam and eroded the banks of Slacks Run, Lycoming County, which is the water source for the nursery. The LCAC also installed new water intake pipes at the jack dam, which will benefit the nursery by providing steady water flow through the raceways. The LCAC has been part of the Cooperative Nursery Program (CNP) since 1999.

In September 2017, the Butler Area School District (BASD) Fisheries Program Cooperative Nursery was approved into the CNP. While several schools are involved with CNP, this is the first cooperative nursery located in Butler County on record. With this nursery, all aspects of CNP will reach a new area of Pennsylvania along with aiding in educating students about fish culture and fisheries biology. The nursery is located at the Butler Intermediate High School and will be used as part of the science curriculum at the school. The nursery is comprised of one Mini Fish Farm recirculating aquaculture system, which utilizes a 400-gallon circular tank and the associated filtration and aeration equipment needed to raise approximately 200 Channel Catfish. These fish will be stocked into several Butler County lakes such as Glade Run Lake, Thorn Run Reservoir and Glade Dam Lake.

The CNU also approved the Shade Gap Rod and Gun Club cooperative nursery, Huntingdon County, in 2017. There are also four prospective nurseries in various stages of evaluation including Fox Chase Farms, Philadelphia County, Marianna Outdoorsmen Association, Washington County, Clyde Mine, Washington County, and Westminster College, Lawrence County. If approved, these nurseries will receive fingerlings from the PFBC and raise them to larger sizes to stock in Pennsylvania waters for fishing.

In Erie County, there are five sponsor organizations—3CU, Albion Sportsmen's Club, Presque Isle State Park, S.O.N.S. of Lake Erie and Wesleyville Conservation Club. These organizations sponsor a total of eight cooperative nurseries throughout Erie County, where steelhead and Brown Trout are raised and play a key role in PFBC's Lake Erie Steelhead and Brown Trout programs. As cooperative nurseries sponsors,



Brian McHail, Cooperative Nursery Unit Leader, working on a log vane.

these organizations raise steelhead and Brown Trout, which are provided to them as fingerlings by PFBC state fish hatcheries, with the understanding that they are responsible for the care of the fish on a daily basis.

Others highlighted in the Partner Profile section of 2017 issues of the *Pennsylvania Angler & Boater* magazine included the Marianna Outdoorsmen Association, the Spring Creek Chapter of Trout Unlimited, the Pennsylvania Steelhead Association and Gifford Pinchot State Park.

Since 1931, *Pennsylvania Angler & Boater* magazine has been "The Keystone State's Official Fishing and Boating Magazine." Anglers who purchase a Pennsylvania multi-year fishing license are eligible for a free subscription to the digital magazine and other rewards.

The *Pennsylvania League of Angling Youth*, or *PLAY*, started in 1981 as a way to get information about fish, fishing, conservation and safety in the hands of kids. *PLAY* newsletters are provided in the *Pennsylvania Angler & Boater* on a quarterly basis.



This map shows the location of each cooperative nursery in Erie County.

INTERNAL RESOURCES

PALS Upgrade

The current Pennsylvania Automated Licensing Service (PALS) has been used to sell fishing and hunting licenses to anglers and hunters for more than 11 years. While the system has worked for the past decade, it is extremely limited in its capabilities and what it offers anglers and boaters. The PFBC and the Pennsylvania Game Commission invested a significant amount of time in 2017 on a multi-year upgrade to the Commonwealth's current PALS system.

Once selected, the new vendor will upgrade and modernize the license sales process and provide better program and catalog management through the deployment of a modern, configurable and scalable electronic web-based Point of Sale (POS) license sales system. The new system will provide program management reports, financial processing, help desk support, agent supply, hardware support, training, system operations, mobile strategy, and application maintenance and support.

The Commissions will replace and upgrade the current electronic-based licensing system with one that uses industry best practices and contemporary and emerging technology. Pennsylvania is one of the top-tier fishing states in the country, but the current legacy licensing system is cumbersome, difficult to maintain and support. The new PALS system will be a user-friendly system that will streamline the license application and purchase process for customers, facilitate auditing and reporting for agents, and provide new and dynamic electronic functionality to assist Commission support staff in monitoring license administration. It will also enable the users to manage their accounts, sign-up for e-mails, search the PALS database for licenses and to replace lost or damaged licenses.

The data from the PALS system will enable the PFBC to monitor license sales, create strategic business plans based on trend analysis and develop marketing plans based on more accurate customer demographics. The goal is to have the new system fully operational by early 2019.

FishBoatPA Mobile App Popularity Grows

Almost 90,000 users have now downloaded the Commission's mobile smartphone application—FishBoatPA. The year 2017 again saw tremendous growth in the number of users and shows that the app has been a hit with anglers who, like much of the general public, are increasingly using smartphones. In this case, they can use the app to see which waters have been stocked with trout and driving directions using a phone's GPS coordinates.

The PFBC continues to find ways to improve the fishing and boating experience for anglers and boaters, and this app does just that, allowing customers to spend less time looking for information, so they can spend more time outdoors fishing and boating. The FishBoatPA app is available for free on both Google's Play Store and Apple's App Store.

On the PFBC website, the stocking page is by far the most visited. So when the FishBoatPA app opens, one of the first item anglers see is an "Upcoming Trout Stocking" link, which updates in real-time.

Users can sort stocking schedules by county. The app is tied directly into the PFBC's online stocking schedule, so anglers can see past and upcoming stockings and the species of trout placed in a water. GIS coordinates allow users to use mapping apps installed on their phones to get directions to their favorite stocking site.

The "Near Me" feature uses a phone's GIS coordinates to locate and display trout waters within 5, 15, 25 and 50 miles of the user.

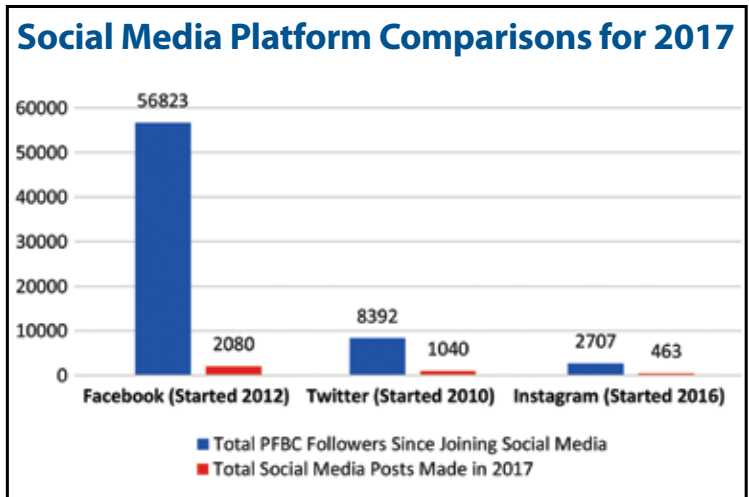
Another option is a "My Trophies" section where anglers can post pictures to share with others using the app. Users can add a title, fish weight and length, the date they landed the fish, and their comments, and like the type of lure they used. They can then share their trophies by email, text message or through social media sites like Facebook, Instagram, Pinterest and Twitter.

Another prominent feature on the app home page is the link "Get a license today." This enables users to find an issuing agent near them and see pricing options for licenses.

The app also links to a "Fish ID" guide with color pictures, a "Learn" section with links to helpful information like tying knots and learning how to properly handle fish, and to PFBC rules and regulations.

Among the many features on social media were videos and photos from hatcheries showing how the PFBC spawns, rears and stocks various species of fish. The PFBC YouTube channel contains most of these videos, which include some on trout, steelhead, Muskellunge and Walleyes.

Social Media 2017 (1/1/17 to 12/15/17)	
Facebook	
Facebook Followers (68% Increase)	56,823
Posts	2,080
Engagement	8,238,971
Twitter	
Followers (23% increase)	8,392
Tweets	1,040
Engagement	9,736
Instagram	
Followers (93% increase)	2,707
Posts	463
Engagement	37,523



Note: The PFBC gained 17,551 Facebook followers between December 31, 2016 and December 31, 2017.

PFBC Welcomes New Deputy WCOs

On May 21, 18 officers from the 2017 Deputy Waterways Conservation Officer (DWCO) class graduated during a ceremony held at the PFBC's H.R. Stackhouse School of Fishery Conservation and Watercraft Safety in Bellefonte. DWCOs are volunteers who assist the Commission's WCOs in protecting Pennsylvania's aquatic resources and their users. The 2017 DWCO class completed 16 days of formal training. Graduating officers completed courses in constitutional law, fish identification, armed and unarmed self-defense, boat accident and pollution investigation response protocol, patrol boat/trailer use and maintenance, HazMat, CPR and first aid, and other topics. New DWCOs must complete at least 150 hours of field training with a WCO to complete the initial training.

With the addition of the new officers, the Commission now has a volunteer corps of 83 DWCOs. Anyone with an interest in learning more about what the position entails or would like to find out how to become a DWCO should contact the closest regional law enforcement office. Please see the back cover of this report for a list of regional offices and other PFBC facilities.

Staff Development

The PFBC continued to offer useful training opportunities to its staff. Some trainings were conducted in-house, and some used experts from outside the agency. Training topics included supervisory development, sexual harassment, labor relations, employee performance reviews, hiring process, State Employees Assistance Program (SEAP), drug free workplace, CPR, first aid and fitness for duty. Special training sessions were also dedicated to specific groups of staff including hatchery foremen and managers and law enforcement supervisors and managers.

The PFBC also worked to finalize an agency safety manual and update coinciding policies.

Hatchery Staff Training

Keeping PFBC hatchery staff well trained is a continuous effort, because many new people are becoming Fish Culturists as more seasoned staff retire. During 2017, 20 staff completed the final portions of the PFBC Fish Culture School. The courses consist of five segments: Introduction to Fish Culture, Fish Health, Water Quality, Warmwater/Coolwater Fish Culture and Trout Culture. Fish Culturists come from a variety of backgrounds and education, so the courses are essential to have everyone well trained in standard hatchery procedures. Staff especially enjoyed the Warmwater/Coolwater Fish Culture segment held at Linesville State Fish Hatchery, where they took part in hands-on labs in trap netting and electrofishing.



Staff conducting trap netting as part of the PFBC Fish Culture School.

Leadership Development

The Commission again took advantage of leadership development opportunities offered to state government employees by the Office of Administration (OA). Paul Urbanik from the Bureau of Engineering graduated from the Commonwealth's Leadership Development Program. Deb Stump from the Human Resources Office (mentee) and Michele Jacoby from the Bureau of Engineering (mentor) graduated from the Commonwealth's Mentoring Program.

Both of these programs require a commitment on the part of the employee and their supervisor to invest the necessary time and attention to get the most out of the training to help develop the staff member's skill set and prepare them for new challenges.



Pictured are (left to right) PFBC Board President Rocco S. Ali, Pat McClenahan, Daniel Donato and PFBC Executive Director John A. Arway.

Recognition and Awards

The Commission maintained its commitment to acknowledge the exemplary work done by its staff and volunteers. In addition to congratulating employees on years of service to the agency and offering anyone the opportunity to praise an employee through the Fishing Hole, the Commission formally recognized a number of individuals in 2017. The following are some of the people and programs who received commendation in the past year.

Wave of Excellence Award

The Wave of Excellence award is an opportunity for PFBC employees to nominate one of their own for extraordinary workplace contributions. This award is for employees who have gone above and beyond the call of duty in performing their work or who have provided extraordinary customer service for the good of the



Pictured are (left to right) President Rocco S. Ali, Scott Fedei, Pat McClenahan and PFBC Executive Director John A. Arway.

agency. Winners of the award in 2016 were Pat McClenahan, Electrician Foreman in the Bureau of Engineering, and Christopher “Scott” Fedei, Fish Culturist 2 at the Fairview State Fish Hatchery.

Resource First Award

Calling him a “staunch ambassador for Smallmouth Bass and Largemouth Bass in the Susquehanna River,” PFBC Executive Director John A. Arway presented Middletown resident Bob Clouser with the agency’s Resource First Award during the January quarterly business meeting.

Renowned worldwide for the development of innovative fly fishing patterns, most notably the Clouser Minnow, Bob has enabled countless anglers the opportunity to catch—and release—many trophy fish. With his many years of guide service and instructional presentations, he is a mentor to many and an inspiration, which sparks and keeps alive the future of fishing in Pennsylvania.

Reaching millions over the years, his creativity as an author and outdoor photographer continue to herald what is best about fishing and the need to maintain the recreational resource in balance with conservation ethics. As a result of Bob’s lifelong advocacy and enthusiasm for the Susquehanna River and quality angling experiences everywhere, he continues to be a leader in defending and protecting our aquatic resources.



Pictured are (left to right) PFBC Executive Director John A. Arway, Commissioner Leonard L. Lichvar, Bob Clouser and PFBC Board President Rocco S. Ali.

PFBC Biologist Earns Governor’s Award for Excellence

Jersey Shore native and PFBC biologist Jordan Allison received the Governor’s Award for Excellence for his work in protecting thousands of freshwater mussels as part of the Hunter Station bridge replacement project in Forest County. Allison was part of a team that included state and federal agencies and non-governmental organizations.

Over the last several years, the Hunter Station team relocated more than 130,000 mussels from the Allegheny River beneath the Hunter Station Bridge, of which the majority were federally threatened and endangered species. This project was unprecedented as it is the largest known relocation of protected mussel species not only in Pennsylvania but in North America. Approximately 35,000 of the mussels were moved to rivers and streams within the Commonwealth to give the species opportunities to reestablish populations in areas where they have not existed in over a century. See page 13 for more details.



Pictured are (left to right) President Rocco S. Ali, Jordan Allison, Nevin T. Welte and PFBC Executive Director John A. Arway.

Law Enforcement Awards

The 2016 North East Conservation Law Enforcement Chiefs Association (NECLECA) Officer of the Year Award was presented to WCO Corey Girt. Each year, NECLECA recognizes an outstanding officer from each member agency as that agencies officer of the year.

WCO Emmett Kyler received the 2016 Top Gun Award. This annual PFBC Bureau of Law Enforcement award recognizes an officer who apprehends the highest number of Boating Under the Influence (BUI) offenders.

The PFBC presented WCO Chad McKenrick, Northeast Region, with the Outstanding Service Award for superior performance or service above and beyond the normal call of duty for his actions on January 30, 2017, when he was the first person on the scene of an overturned vehicle along State Route 879, Clearfield County.



Pictured are (left to right) PFBC Board President Rocco S. Ali, Colonel Corey L. Britcher, WCO Girt and PFBC Executive Director John A. Arway.



Pictured are (left to right) PFBC Board President Rocco S. Ali, Colonel Corey L. Britcher, WCO Kyler and PFBC Executive Director John A. Arway.



Pictured are (left to right) PFBC Executive Director John A. Arway, WCO McKenrick and President Rocco S. Ali.

Pennsylvania Wilds Award

The Pennsylvania Wilds awarded the 2017 Individual Conservation Stewardship Award to Amidea Daniel, PFBC Youth and Women’s Program Coordinator, at their Annual Pennsylvania Wilds Dinner and Awards Banquet in April. The award recognizes those who have gone above and beyond to grow nature and heritage tourism. Daniel has worked for PFBC since 2008 as an outreach/education specialist and statewide coordinator for the award-winning Trout In the Classroom.



Pictured are (left to right) President Rocco S. Ali, Amidea Daniel and PFBC Executive Director John A. Arway.

S.O.N.S. of Lake Erie

The Pennsylvania Fish & Boat Commission Partnership Award was presented to the S.O.N.S. (Save Our Native Species) of Lake Erie for its continued partnership and dedication to the protection and management of the Lake Erie fishery.



Pictured are (left to right) PFBC Executive Director John A. Arway and S.O.N.S. President Jerry Skrypazak.

Centre Region Office

The PFBC welcomed the public for a special time capsule ceremony and open house at the agency’s new Centre Region Office (CRO) in Bellefonte, Centre County.

The Commission staff have reported to a variety of satellite offices throughout the Centre Region in the past, and the new building allows us to consolidate operations to be more effective and efficient in our use of angler and boater funds. This building demonstrates that the agency will continue to have a presence in the Centre Region for many years to come.

for many years to come.

The Commission thought it was fitting to commemorate the new building by placing a time capsule on the property, providing the agency’s future leaders with a glimpse into the past. The time capsule contains 46 items and is set to be opened in 100 years.

Rehabilitating this large, 104,000 square-foot warehouse into office, garage and storage space for our regional staff is estimated to have saved the Commission \$16- to 20-million over what would have been incurred to construct a new building. Most importantly, it brings employees into a modern facility that meets current safety and energy efficient standards. The CRO fulfills a long-time agency goal to consolidate and improve the office conditions for Commission staff in Centre County, offer enhanced public accessibility, and provide indoor and outdoor storage space for agency equipment and vehicles.



Making Dams Safe

With support from Act 89 of 2013, Capital Budget funding released by Governor Wolf, the H2O PA Program, Growing Greener 2, local contributions and other sources, the PFBC was hard at work in 2017 on dam projects across Pennsylvania. The following represent the status of various projects as of the end of 2017.

- Beechwood Lake Dam, Tioga County – PFBC, in partnership with Natural Resources Conservation Service (NRCS), continued to work on planning and study documents for the upcoming design phase.
- Belmont Lake Dam and Lower Woods Dam, Wayne County – Design agreement between DGS and the consultant engineer has been re-visited and completed. The consultant submitted the programming/schematic submission, and design work is again underway.
- Children’s Lake, Cumberland County – Reservoir was lowered when a sinkhole developed in the road embankment immediately downstream of the dam due to excessive seepage through the dam embankment. When remedial measures were being undertaken a section of the stone masonry dam face collapsed, and the planning and development of a complete dam rehabilitation project was undertaken.
- Colyer Lake, Centre County – Bridge replacement project at south access completed by PFBC design and construction staff.
- Donegal Lake Dam, Westmoreland County – In coordination with DEP and county conservation recommendations, maintenance staff seeded the reservoir area during the drawdown phase to promote vegetation growth and minimize sediment migration to downstream waterways until construction begins. Received authorization from DEP for the rehab project and awaiting project advertisement and bidding through DGS.
- Hankins Pond Dam, Wayne County – A dam breach design and analysis were completed in-house by PFBC engineering staff. Pending a permit from DEP, the breach project will be scheduled for late in 2018.

- Harris Pond Dam, Luzerne County – Engineering and maintenance staff completed repairs to a sinkhole in the dam.
- Kahle Lake, Clarion and Venango counties – PFBC staff reassessed and updated the existing dam and spillway Hydraulic and Hydrologic models and determined that the dam reservoir could be safely raised to within 3 feet of the normal pool elevation. Reservoir depth was increased in May 2017.
- Kyle Lake Dam, Jefferson County – In cooperation with the Jefferson County Conservation District, design permitting and construction of a new ADA compliant fishing pier and paving improvements were completed. Received the DEP Dam Safety Permit for construction and awaiting project advertisement and bidding through DGS. In coordination with DEP and county conservation recommendations, maintenance staff seeded the reservoir area during the drawdown phase to promote vegetation growth and minimize sediment migration to downstream waterways until construction begins.
- Meadow Grounds Lake Dam, Fulton County – Dam Safety Permit was submitted to DEP for approval. DEP conducted technical review and submitted questions and comments.
- Minsi Lake Dam, Northampton County – A successful fish salvage was conducted in May 2017. Received the DEP Dam Safety Permit for construction and awaiting project advertisement and bidding through DGS.
- Mountain Spring Lake Dam, Luzerne County – A breach project was completed by PFBC to remove an unsafe dam with minimal public use and limited access.
- Somerset Lake Dam, Somerset County – NPDES and HOP were received for the Somerset Lake Rehabilitation Project in 2017. A successful fish salvage was completed in October 2017. In coordination with DEP and county conservation recommendations, maintenance staff seeded the reservoir area during the drawdown phase to promote vegetation growth and minimize sediment migration to downstream waterways until construction begins.
- Tamarack A&B Dams, Crawford County – NRCS released federal interests in the property. Construction of the Tamarack Lake Rehabilitation project began in November 2017.
- White Oak Pond Dam & Miller Pond Dam, Wayne County – In coordination with DGS, a consultant was selected for design; the engineering firm is currently negotiating a contract with DGS.

Reopening of Glade Run Lake

In April, the PFBC joined the Glade Run Lake Conservancy in inviting the public to celebrate the reopening of the Butler County lake by participating in “Lake Week.”

Following rehabilitation of the dam and spillway, extensive habitat improvements and construction of a new handicapped accessible fishing pier, Glade Run Lake is refilled and ready to fish and boat again. The PFBC thanked the Conservancy, which led the effort to raise funds and install the habitat structures and new fishing pier.

The refilled lake received hatchery trout, allowing young anglers and their mentors to participate in the statewide Mentored Youth Trout Day on April 8. Other events during Lake Week included a free public presentation at the Middlesex Township Fire Hall and a ribbon cutting ceremony at the lake, culminating with the statewide opening day of trout season on April 15.

The PFBC drained the 52-acre lake in 2011 after determining that the dam was unsafe and needed to be rebuilt. It is owned by the Commonwealth and managed by the PFBC.

The Rebirth of Aging Reservoirs

The following text appeared as an article by PFBC Lake Habitat Section Chief Ben Page in the July/August 2017 issue of *Pennsylvania Angler & Boater*. Given the volume of lake projects underway and scheduled to take place in the coming years, it is being reprinted here to both explain what has happened at some lakes already and what could be at other facilities while the lakes are drawn down for dam repairs.

Most of us have heard the saying “When life gives you lemons, you make lemonade.” When the PFBC needed to drain lakes for dam repairs, it left a sour taste in the mouths of many anglers and boaters. However, the drawdown of PFBC lakes provides a new beginning, a chance to hit the restart button on the fishery and a chance to improve the habitat for that fishery.

Why drain the lakes?

Twenty of PFBC’s 54 dams were deemed unsafe by the Pennsylvania Department of Environmental Protection’s Division of Dam Safety. The lakes have or are in the process of being drawn down, and the dams were or are being rehabilitated to meet current safety standards. Technically, since these are manmade water storage facilities, these lakes should be referred to as “reservoirs,” but they will be referred



The empty lakebed of Speedwell Forge Lake, Lancaster County, during full drawdown.

to as “lakes” to follow common terminology. Many of PFBC lakes were constructed 50- to 70-years ago. The dams that create the lakes were built within the standards and the technology of that time. With appropriate funding, PFBC is now able to rebuild or modify older dams to modern safety specifications.

Why build fish habitat?

After 50- to 70-years of aging, the lakes have lost most of their beneficial fish habitat due to sedimentation or decomposition. What was once complex woody and rock habitat has now become silted in, barren flats with little physical fish habitat. During the drawdown of each lake, PFBC habitat managers get the rare opportunity to walk the lake bottom. When it is refilled, the lake bottom will not be exposed again for another 50- to 70-years or longer. Where the substrate conditions are firm, heavy machinery can be used to build fish habitat structure determined by the habitat manager. The added structures in the lake serve many purposes for the fishery. The complex habitat types provide nursery habitat for the juvenile fish that will be stocked in the lake. The extensive amount of woody surface provided by the structures becomes covered in periphyton (algae) and colonized with aquatic macroinvertebrates (caddisflies, crayfish, midges). The structure areas become feeding grounds for forage and predator fish species in the lakes.



PFBC’s Division of Construction and Maintenance finishes a structure at Lake Nessmuk, Tioga County.

The drawdown also gives Mother Nature a chance to provide fish habitat to the lake bottom. In most cases, when a Pennsylvania lake is drawn down for more than one year, the lake bottom becomes reforested. Lakes with this type of submerged habitat typically see a boom in fish populations during the first 5- to 10-years after refill. This is known as the “new lake effect.” When a lake has been drawn down for a period of years and refilled, vegetation such as grasses, shrubs and even trees will die, decay and decompose thereby releasing nutrients into the water column. These nutrients help create a bump in fertility that jumpstarts the food chain and leads to rapid growth of the developing fish and aquatic community. Willow, sycamore and locust trees grow quickly in the moist and fertile substrate of the lake bed. When the lake is refilled, the submerged trees contribute to a healthy and productive fishery. Some lake users may consider the standing trees to be an eye sore, because the tree tops protrude from the water’s surface. However, the tree tops will not be there forever. The trees die when the lake is refilled and decompose into the lake. Winter temperatures also provide ice that shear off the tops of the trees, leaving nothing above the lake’s surface.

Recipe for success

Each of the lakes that received large scale lake habitat projects have benefited from a local conservancy group that joined together to raise awareness and funding to rebuild their local lake. Groups like the Leaser Lake Heritage Foundation and the Glade Run Lake Conservancy gained grassroots support from the local community as well as backing from legislators. Several groups leveraged grant funding from sources such as the Pennsylvania Lake Management Society, Reservoir Fisheries Habitat Partnership, Shell Appalachia and Growing Greener. The dam repairs and the fish habitat improvements would not have been possible without these partnerships with local conservancy groups. In many cases, local volunteers provided much needed people power to build many of the smaller structures in weather conditions varying from subzero in the middle of winter to sunny spring and summer days. The PFBC’s Division of Habitat Management relied heavily on the PFBC’s Division of Construction and Maintenance (DCM). The DCM heavy machinery and equipment operators are a critical part of “large scale” habitat projects in Pennsylvania lakes.

Fish habitat improvement maps

The PFBC wants anglers to have the best opportunities to catch fish on local waters. Commission staff have developed fish habitat improvement maps for 88 waters, and these maps are available on PFBC’s website at www.fishandboat.com/Resource/Habitat/Pages/LakeImprovementPlans.aspx. These maps provide the exact location of structures that were placed in each lake. With the right bait and a little luck, you can reel in the benefits of PFBC’s habitat improvement efforts.



**Fiscal Year 2016-2017 Report
as of November 30, 2017 (unaudited)**

EXPENDITURES

Fish Fund

Personnel	\$27,141,157
Operating	\$9,355,891
Fixed Assets	\$734,975
Grants	\$499,465
Fish Fund Total	\$37,731,488

Boat Fund

Personnel	\$10,391,682
Operating	\$3,280,836
Fixed Assets	\$1,397,513
Grants	\$1,443,346
Boat Fund Total	\$16,513,377

Fish Fund & Boat Fund Total

Personnel	\$37,532,839
Operating	\$12,636,727
Fixed Assets	\$2,132,488
Grants	\$1,942,811
Fish & Boat Fund Total	\$54,244,865

**Fiscal Year 2016-2017 Report
as of December 31, 2017 (unaudited)**

REVENUE

Fish Fund

Licenses & Fees	\$25,594,331
Fines & Penalties	\$350,811
Miscellaneous	\$2,667,011
Federal & State Grants	\$9,271,868
Fish Fund Total	\$37,884,021

Boat Fund

Licenses & Fees	\$8,136,328
Fines & Penalties	\$289,123
Miscellaneous ⁽¹⁾	\$3,260,667
Federal & State Grants	\$4,729,636
Boat Fund Total	\$16,415,754

Fish Fund & Boat Fund Total

Licenses & Fees	\$33,730,659
Fines & Penalties	\$639,934
Miscellaneous	\$5,927,678
Federal & State Grants	\$14,001,504
Fish & Boat Fund Total	\$54,299,775

**Trout Stocked and Distributed
to Cooperative Nurseries**

Trout Species	Lifestage	Amount
Brook Trout	Adult	542,926
	Fingerling	178,000
	Fingerling to Coops.	202,050
Brown Trout	Adult	915,474
	Fingerling	453,966
	Fingerling to Coops.	202,050
Rainbow Trout	Adult	1,915,116
	Fingerling	387,300
	Fingerling to Coops.	310,400
Golden Rainbow Trout	Adult	10,503
	Fingerling to Coops.	8,918
Total Trout Species		5,164,078

**2017 Cooperative Nursery
50 Year Award Certificates**

- Donegal Fish & Conservation Association
- Hopewell Fish & Game Association
- Waynesboro Fish & Game Protective Association

**Warmwater/Coolwater Fish
Production and Stocking**

Species	Lifestage	Amount
American Shad	Fry	4,583,489
Black Crappie	Fingerling	20,400
Bluegill	Fingerling	38,914
Brown Bullhead	Fingerling	27,600
Chain Pickerel	Fingerling	2,758
Channel Catfish	Fingerling	160,530
Channel Catfish	Yearling	2,600
Golden Shiner	Fingerling	15,800
Lake Trout	Yearling	57,087
Largemouth Bass	Fingerling	43,603
Muskellunge	Fingerling	255,417
Muskellunge	Yearling	1,465
Northern Pike	Fingerling	2,770
Rainbow Trout Steelhead	Yearling	950,353
Striped Bass	Fingerling	372,494
Striped Bass Hybrid	Fingerling	66,729
Tiger Muskellunge	Fingerling	31,238
Walleye	Fry	45,154,000
Walleye	Fingerling	765,792
White Crappie	Fingerling	900
Yellow Perch	Fingerling	22,200
Grand Total of all Species		52,576,139

⁽¹⁾ Fiscal year 2016-17 Boat Fund revenue adjusted by \$2,475,677 to reflect the advance receipt of fiscal year 2017-18 state liquid fuels taxes paid on boat fuel.

2017 Website Statistics

Top Ten Pages by Page View

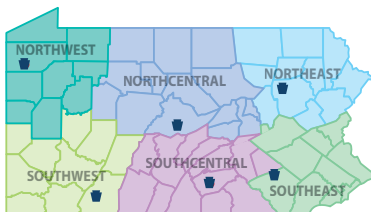
1. Home Page=78,692
2. Trout Stocking Schedules=72,510
3. Buy a License=30,212
4. Trout Season Overview=17,674
5. Best Fishing Waters=16,364
6. Register/Title a Boat=16,132
7. Gone Fishing PA=15,098
8. Trout - PA Fishes=13,533
9. Search=9,526
10. Summary Book - TOC=9,439

Total Web Page Visits

2,000,499

Web Page Visits by State

Pennsylvania=1,437,398
 New York=100,547
 District of Columbia=94,894
 New Jersey=72,578
 Ohio=38,820
 Michigan=33,338
 Maryland=24,214
 Virginia=18,399
 Texas=13,739
 California=12,690



Online Summary Book:
www.fishinpa.com

To purchase fishing licenses online:
www.GoneFishingPa.com



PFBC social media and mobile app:
www.fishandboat.com/socialmedia

FOR MORE INFORMATION:

HEADQUARTERS - HARRISBURG

1601 Elmerton Avenue
 P.O. Box 67000
 Harrisburg, PA 17106
 Phone: (717) 705-7800
 Hours: 8:00 a.m. – 4:00 p.m.
 Monday through Friday

WEBSITE:

www.fishandboat.com

CENTRE REGION OFFICE

595 East Rolling Ridge Drive
 Bellefonte, PA 16823
 Phone: (814) 359-5124
 Hours: 8:00 a.m. – 4:00 p.m.
 Monday through Friday

BOATING SAFETY

EDUCATION COURSES

Phone: (888) 723-4741

FISHING LICENSES:

Phone: (877) 707-4085

BOAT REGISTRATION/TITLING:

Phone: (866) 262-8734

PUBLICATIONS:

Phone: (717) 705-7835

REGION OFFICES: LAW ENFORCEMENT/EDUCATION

Contact **Law Enforcement** for information about regulations and fishing and boating opportunities. Contact **Education** for information about fishing and boating programs and boating safety education.

NORTHWEST REGION

11528 SH 98, Meadville, PA 16335
Law Enforcement: (814) 337-0444
Outreach & Education: (814) 336-2426
 Fax (814) 337-0579 Fax (814) 337-0579
 Counties: Butler, Clarion, Crawford, Erie, Forest, Lawrence, Mercer, Venango, Warren

SOUTHWEST REGION

236 Lake Road, Somerset, PA 15501
Law Enforcement: (814) 445-8974
Outreach & Education: (814) 443-9841
 Fax (814) 445-3497 Fax (814) 445-3497
 Counties: Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland

NORTHCENTRAL REGION

595 East Rolling Ridge Drive
 Bellefonte, PA 16823
Law Enforcement: (814) 359-5250
Outreach & Education: (814) 359-5127
 Fax (814) 359-5254 Fax (814) 359-5153
 Counties: Cameron, Centre, Clearfield, Clinton, Elk, Jefferson, Lycoming, McKean, Montour, Northumberland, Potter, Snyder, Tioga, Union

Office hours from 8:00 a.m. to 4:00 p.m., Monday through Friday

SOUTHCENTRAL REGION

1704 Pine Road, Newville, PA 17241
Law Enforcement: (717) 486-7087
Outreach & Education: (717) 486-7352
 Fax (717) 486-8227 Fax (717) 486-8227
 Counties: Adams, Bedford, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lebanon, Mifflin, Perry, York

NORTHEAST REGION

5566 Main Road, Sweet Valley, PA 18656
Law Enforcement: (570) 477-5717
Outreach & Education: (570) 477-2206
 Fax (570) 477-3221 Fax (570) 477-3221
 Counties: Bradford, Carbon, Columbia, Lackawanna, Luzerne, Monroe, Pike, Sullivan, Susquehanna, Wayne, Wyoming

SOUTHEAST REGION

P.O. Box 9, Elm, PA 17521
Law Enforcement: (717) 626-0228
Outreach & Education: (215) 968-3631
 Fax (717) 626-0486 Fax (215) 968-1610
 Counties: Berks, Bucks, Chester, Delaware, Lancaster, Lehigh, Montgomery, Northampton, Philadelphia, Schuylkill

STATE FISH HATCHERIES

BELLEFONTE*

1115 Spring Creek Road
 Bellefonte, PA 16823
 (814) 355-3371

CORRY*

13365 Route 6
 Corry, PA 16407
 (814) 664-2122

FAIRVIEW

2000 Lohrer Road
 Fairview, PA 16415
 (814) 474-1514

BENNER SPRING

1735 Shiloh Road
 State College, PA 16801
 (814) 355-4837

HUNTSDALE*

195 Lebo Road
 Carlisle, PA 17013
 (717) 486-3419

LINESVILLE*

13300 Hartstown Road
 Linesville, PA 16424
 (814) 683-4451

OSWAYO*

96 State Route 244 East
 Coudersport, PA 16915
 (814) 698-2102

PLEASANT GAP*

450 Robinson Lane
 Bellefonte, PA 16823
 (814) 359-5132

PLEASANT MOUNT*

229 Great Bend Turnpike
 Pleasant Mount, PA 18453
 (570) 448-2101

REYNOLDSDALE*

162 Fish Hatchery Road
 New Paris, PA 15554
 (814) 839-2211

TIONESTA*

172 Fish Hatchery Lane
 Tionesta, PA 16353
 (814) 755-3524

TYLERSVILLE

43 Hatchery Lane
 Loganton, PA 17747
 (570) 725-3965

UNION CITY

9450 Route 6
 Union City, PA 16438
 (814) 438-2222

** Includes visitor center. Visitors are welcome from 8:00 a.m. to 3:30 p.m. daily. Groups should make advance arrangements.*

www.fishandboat.com