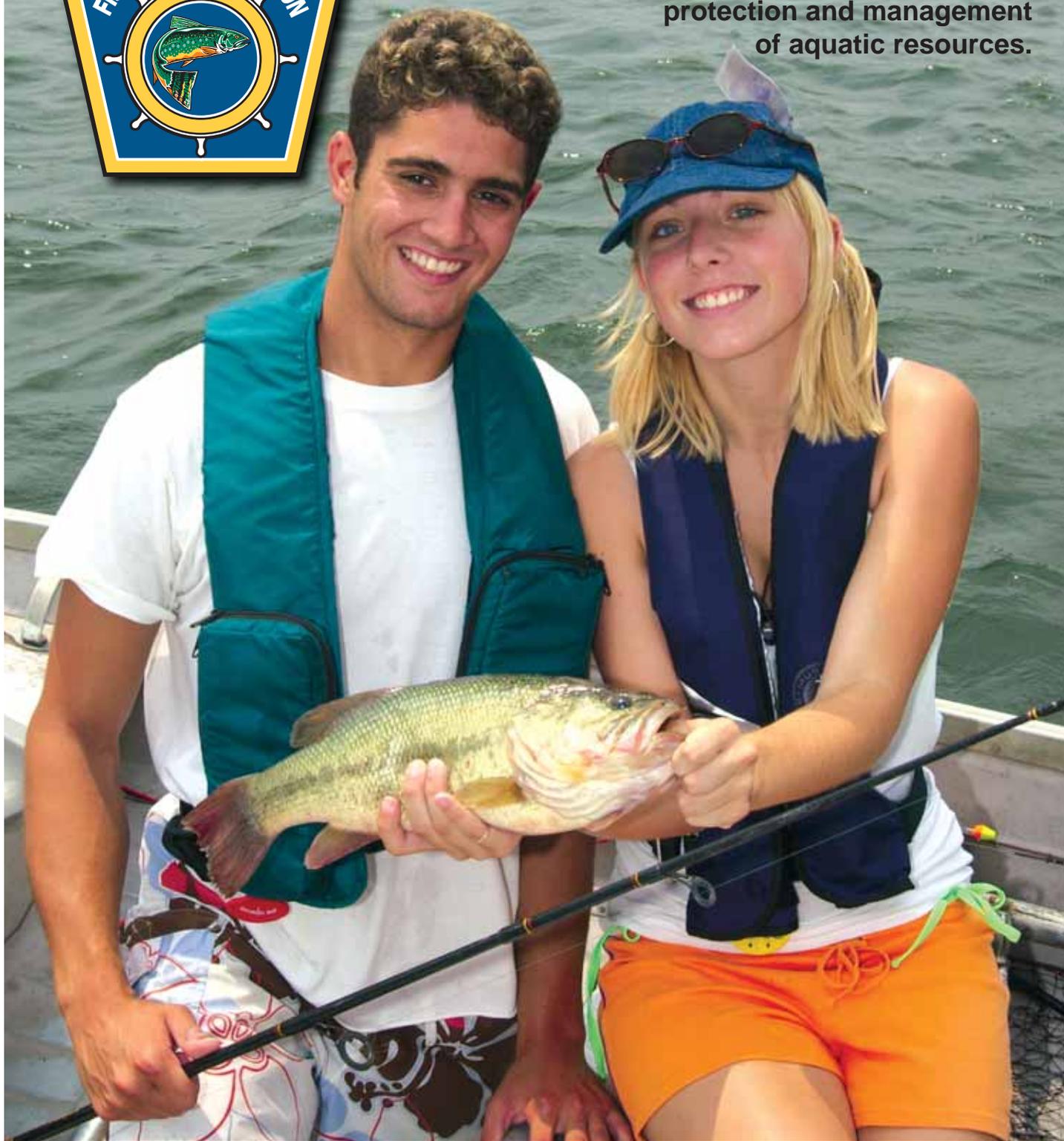
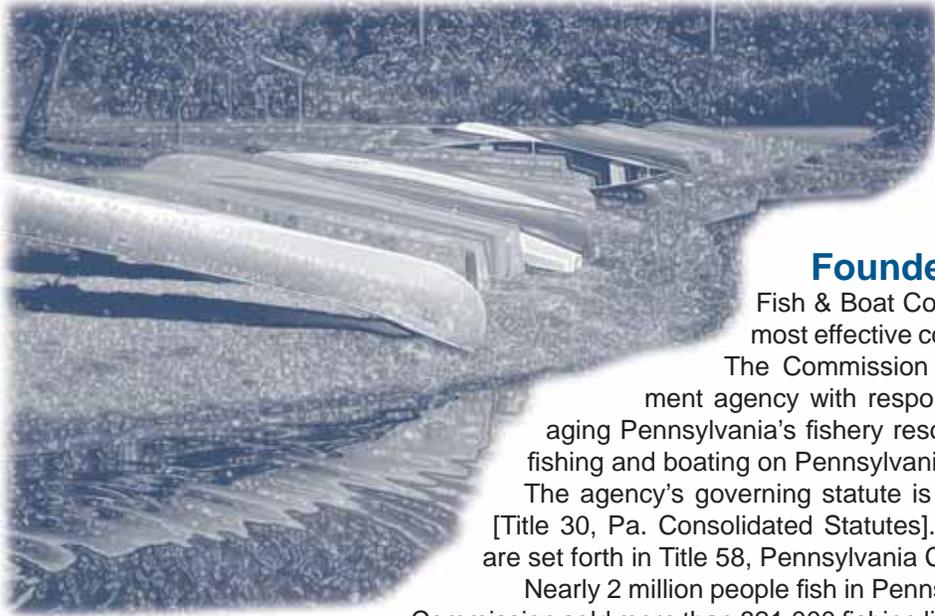


2005 ANNUAL REPORT



**Our mission:
To provide fishing and boating
opportunities through the
protection and management
of aquatic resources.**





Introduction and Background

Founded in 1866

the Pennsylvania Fish & Boat Commission is one of the oldest and most effective conservation agencies in the nation.

The Commission is an independent state government agency with responsibilities for protecting and managing Pennsylvania's fishery resources and regulating recreational fishing and boating on Pennsylvania waters.

The agency's governing statute is the Fish and Boat Code of 1980 [Title 30, Pa. Consolidated Statutes]. Fishing and boating regulations are set forth in Title 58, Pennsylvania Code.

Nearly 2 million people fish in Pennsylvania in each year. In 2005, the Commission sold more than 821,000 fishing licenses and 500,000 trout stamps.¹

Fishing has a tremendous impact on Pennsylvania's economy, generating an economic impact of over \$1.65 billion. More than 2.5 million people boat on Pennsylvania waters each year. During 2005, 350,599 boats were registered in Pennsylvania. The Commission estimates that boating has a total economic impact of \$1.7 billion per year.

Members of the Commission are appointed by the Governor to eight-year terms with the advice and consent of the majority of the Pennsylvania Senate. Eight commissioners are selected based on districts; two at-large (statewide) Commissioners represent boating interests. Day-to-day operations are overseen by the Executive Director.

Douglas J. Austen, Ph.D., is the Commission's ninth Executive Director. He is the Commission's chief executive officer and chief waterways conservation officer. In 2005, the Commission's complement was capped at 431 full-time employees. The wage (temporary and seasonal) complement averages about 150 employees during the peak stocking and recreational season.

The agency's mission is "To provide fishing and boating opportunities through the protection and management of aquatic resources."

To accomplish this mission, the Commission has established four agency-wide goals:

- **To protect, conserve and enhance all aquatic resources.**
- **To provide for the protection of aquatic resource users.**
- **To address the expectations of anglers and boaters.**
- **To advocate the wise, safe use of Pennsylvania's aquatic resources.**

To accomplish these goals, the Commission is organized into an Executive Office that coordinates the policy and programmatic direction of the agency as established by the commissioners, and five specialized bureaus that support those functions. The second half of this document reports on organizational unit-specific actions that support the Commission's mission and goals. Early in 2005, the Commission completed a strategic planning process that provides a road map to guide long-term work. The first half of this annual report focuses on efforts supporting prioritized objectives established for 2005. Because these are agency-wide objectives, the accomplishments detailed herein were spearheaded by the Executive Office and cross organizational unit lines. The various aspects of these efforts are captured in the broad descriptions for each initiative and are not duplicated in the individual unit reports.



¹License and trout stamp sales figures for 2005 cannot be finalized until all issuing agents have submitted reports.

Strategic Initiatives

Overview

At their January 2005 meeting, the Commissioners adopted a new strategic plan. The development process for the plan began in the fall of 2003 and continued throughout 2004, culminating in the public dissemination of the plan document in February 2005. The plan identifies six overriding strategies that are guiding short-term and longer-term actions by the Commission to fulfill its mission:

- **The Commission will position itself as an organization known for serving the fishing and boating public and the resources it protects.**
- **The Commission will invest in activities, resources and programs to increase boating and fishing participation in the Commonwealth**
- **The Commission will explore and implement methods to increase traditional and non-user fee-based sources of revenue.**
- **The Commission will enhance relationships, leading to partnership opportunities with stakeholder groups, corporations, natural resource agencies, non-government organizations and others.**
- **The Commission will develop the internal structure and processes needed to effectively protect and manage aquatic resources and fishing and boating activities.**
- **The Commission will develop a coordinated agency-wide approach to aquatic resource management, protection and conservation.**

During the first year of this long-range strategic plan, specific operational objectives were prioritized, and actions to achieve them were undertaken:

- **Develop specific marketing and public relations initiatives targeting key audiences.**
- **Develop and implement a Boating Access Improvement Program.**
- **Develop a systematic approach to improve streamside and shoreline angling opportunities.**
- **Reengineer trout fishing opportunities to improve the attractiveness to anglers.**
- **Increase revenue from “soft” sources (mitigation, habitat, grants).**

Strategic Initiatives

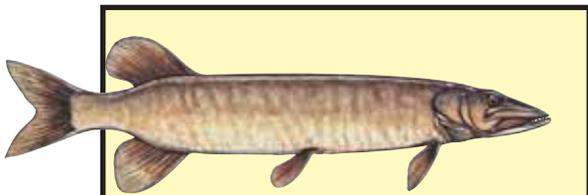
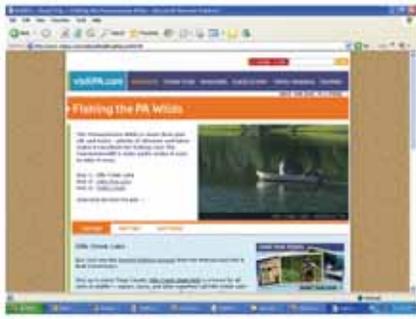
Targeted Marketing and Public Relations

In 2005, the Commission opted to create a new job function for the coordination and facilitation of marketing efforts and related initiatives. A recruitment and selection process was conducted in the first half of the year. In July, the agency's first-ever marketing development specialist began work.

Among the first initiatives undertaken by the marketing development specialist was coordination of the Commission's participation in a multi-agency kiosk project to be housed at one of the Commonwealth's largest outdoor retailers. Partners in this project include the Department of Community and Economic Development's Pennsylvania Travel & Tourism Office, the Department of Conservation and Natural Resources (DCNR), Cabela's, and the Pennsylvania Game Commission. When completed, the kiosk will provide an informational outlet to connect consumers shopping for outdoor gear with destinations throughout the Commonwealth that support related activities such as fishing and boating. The informational backbone developed for this “gateway” will be able to be replicated at other venues.



Maiden Creek, Berks County



To support efforts to provide the angling public with more and better information about muskellunge management and fishing opportunities, a special section was created on the Commission web site. Along with interactive geographic information system-driven maps showing the availability of muskellunge, an overview of muskellunge life history, stocking lists, management plans, regulatory information (seasons/sizes/creel limits) and articles on how to fish for muskellunge were posted. This template led to the creation of similar "information centers" for other warmwater/coolwater species.

The Commission ran a public relations-driven campaign to highlight Commonwealth fall fishing opportunities from September through November. The campaign highlighted autumn adult trout stockings, a series of fall family fishing instructional events, and the availability of limited-duration license types, including newly created one-day resident and non-resident permits. Tourist promotion agencies representing 38 of the state's 67 counties opted to provide information on local fall fishing opportunities on their web sites and email blasts, with links for more detailed information on the Commission's web site. The new contacts with tourism agencies also sparked the inclusion of fishing and boating information in several 2006 visitor's guides statewide. Through coordination with the Pennsylvania Travel & Tourism Office, three "fall fishing road trips" were featured on the state's official tourism web site. Web traffic to featured fall fishing pages on the Commission's web site reflected significant growth: Page visitation increased 40 percent over fall of 2004.

As measured by the sale of fishing licenses during the campaign period, the effort showed moderate success. As a whole, an increase in the price of fishing licenses in 2005 resulted in a net 9.4 percent decline in individual license units sold. However, sales of fishing licenses during the promotional period fared much better, with only a 3 percent decline as compared to the same quarter in 2004. The promotion was largely Internet-based, so perhaps the most intriguing measure is that of web-based fishing license sales during the quarter, sales of fishing licenses through "The Outdoor Shop" on the Commission's web site rose 15 percent over the same period in 2004.

In December, the Commission ran an email-based advertising campaign. Messages were sent to some 36,000 individuals who had previously purchased fishing licenses through the Commission web site. This direct email piece promoted the purchase of fishing licenses as a holiday gift, with a specific emphasis on purchasing gift licenses via the Commission web site. Internet sales of fishing licenses in December 2005 rose by 85 percent compared to December 2003. (Pennsylvania fishing licenses were not sold in December 2004.) Internet and agent-reported unit sales (all license and permit types) for December 2005 were up 5 percent, while total revenue for the period increased by \$96,625.

As part of efforts to measure the effect and perception of the December campaign, 400 individuals who were emailed the original message were invited to participate in a follow-up survey. The Commission is tabulating those results; however, the vast majority of respondents indicated favorable reaction and response to the initial email advertisement.

Another example of the application of marketing principles was spearheaded by the Bureau of Fisheries. As part of efforts to enhance Pennsylvania's muskellunge and tiger muskellunge fishing opportunities, Fisheries Management staff relied heavily on research and customer input. Staff convened a musky workgroup that met on two occasions. The workgroup solicited water-specific fishing-quality opinion information from musky anglers through a volunteer survey (available from the Commission's web site and by mail).

Concurrently, staff examined and summarized available biological information describing muskellunge and tiger muskellunge populations in Pennsylvania.

The workgroup included representatives of the musky fishing community including those associated with organized muskellunge fishing organizations. The group also included the broader angling community including black bass anglers. Formal opinion-gathering processes led to formulation of a goal statement and several draft objectives that identified specific prioritized needs including enhancing muskellunge and tiger muskellunge density and size-structure through alternative harvest restrictions, enhancements to the muskellunge culture and stocking programs, and habitat protection and enhancement measures.

Pennsylvania's fisheries received tremendous national exposure as the host of the world's most prestigious competitive fishing event. Pittsburgh's Three Rivers served as the site for the 35th CITGO Bassmaster Classic July 29-31. ESPN provided 14 hours of live national broadcast from tournament and associated events. The resurgence of the Three Rivers and quality of Pennsylvania's aquatic resources was also covered in great detail in print and broadcast media across the nation.



Pittsburgh's Three Rivers served as the site for the 35th CITGO Bassmaster Classic.

Strategic Initiatives

Boating Access Improvement

Pennsylvania provides nearly unlimited potential for recreational boaters. The Commonwealth has 83,000 miles of rivers and streams ranging from headwaters to major river systems. Also within the state's borders are 76 natural lakes that provide 5,266 flatwater acres. An additional 2,300 constructed impoundments provide another 200,000 acres of boatable waters. Lake Erie has over 63 shoreline miles and 735 square miles of water within Pennsylvania boundaries. The Delaware River provides 56 miles of tidal water within Pennsylvania, providing access to the Atlantic Ocean. However, to take advantage of the recreational boating opportunities this vast aquatic resource offers, users must be able to reach the water.

To facilitate access, the Commission, through state ownership, manages about 250 boating access areas and launch ramps that it has developed for free public use. The Commission also works with local governments at the county and municipal levels for the development and improvement of access sites. In 2004, the Commission began a specific effort to rehabilitate and improve many access areas, an endeavor that expanded in 2005.

Commission crews made improvements to existing boat access sites throughout the year, including:

- **Tacony Boat Launch, Philadelphia County.** Project entailed removing the existing deteriorating boat launch ramp and replacing it with a new cast-in-place concrete ramp.
- **Sunbury Access Area, Northumberland County.** Project included replacing the existing boat launch ramp with a cast-in-place concrete ramp, installing gabion baskets to stabilize the shoreline, paving the parking lot, and enhancing shoreline fishing opportunities.
- **Linden Access Area, Lycoming County.** Improvements to the facility included replacing the existing launch ramp with a cast-in-place concrete ramp, increasing the size of the turn-around lane, providing a concrete walkway to the dock, and resurfacing the parking lot.
- **Chillisquaque Access Area, Northumberland County.** Work included improvements to the existing launch ramp and paving the entrance road.
- **Wrightsville Access Area, York County.** The existing ramp was replaced with a cast-in-place concrete ramp and the parking lot was enlarged.
- **Point Marion Access Area, Fayette County.** The Point Marion project included replacing the existing ramp with a cast-in-place concrete ramp and installing a handicap walkway and boarding dock.
- **Newton-Hamilton Access Area, Mifflin County.** This site was repaved.
- **Walker Lake Access Area, Snyder County.** The project included constructing a new entrance road for the parking lot and paving.
- **Hoovers Island Access Area, Snyder County.** Work involved grading and placing stone on the parking lot.
- **Frankford Arsenal, Philadelphia County.** Lanes were widened around the launch ramp and the affected areas were paved.



Linden Access Area, Lycoming County. Improvements to the facility included replacing the existing launch ramp with a cast-in-place concrete ramp.



The Boating Facility Grant Program ensures that recreational boaters are provided with the highest-quality boating facilities on all navigable waterways of the state.



- **Walnut Creek Marina, Erie County.** This contracted project involved paving the marina entrance road.
- **Hallstead Access Area, Susquehanna County.** The parking lot was paved.

In January 2005, the Commission established the Boating Facility Grant Program to help ensure that Pennsylvania's recreational boaters are provided with the highest-quality boating facilities on all navigable waterways of the state. The program is designed for public entities that have or will have the capability to provide boat access facilities that are open and available for general public use. Applicants can seek grants for site acquisition; project design; and engineering, development, expansion, and rehabilitation of public recreational boat access facilities. Successful applicants must provide a 25 percent grant match and be willing to enter into a long-term agreement to keep the facility open to free public use for its useful life. Program grant funds are available in each annual state fiscal period as authorized and allocated by the Fish & Boat Commission. Boating Facility Grant Program funds are derived from boat registration fees, state fuel taxes collected on motorboat fuels, and in some cases, taxes on fishing equipment and motorboat fuel from the Federal Aid in Sport Fish Restoration Program.

In 2005, the Commission awarded more than \$1.6 million in grants to 21 municipalities to develop, improve, or rehabilitate public recreational boat launches. Those grants included:

- Schuylkill County Department of Recreation, Schuylkill County, Sweet Arrow Lake - **\$50,000.**
- Borough of Sharpsburg, Allegheny County, Allegheny River - **\$150,000.**
- Borough of Northumberland, Northumberland County, Susquehanna River - **\$35,000.**
- Cambria Somerset Authority, Cambria County, Hinckston Run Reservoir - **\$25,000.**
- City of Harrisburg, Dauphin County, Susquehanna River - **\$96,000.**
- Hunlock Township, Luzerne County, Susquehanna River - **\$30,000.**
- Harborcreek Township, Erie County, Lake Erie - **\$300,000.**
- Borough of Steelton, Dauphin County, Susquehanna River - **\$150,000.**
- Borough of Selinsgrove, Snyder County, Susquehanna River - **\$65,000.**
- Borough of Ohioville, Beaver County, Little Beaver Creek/Ohio River - **\$190,000.**
- Carbon County, Mauch Chunk Lake - **\$55,000.**
- City of Philadelphia, Philadelphia County, Delaware River - **\$125,000.**
- Union Township, Berks County, Schuylkill River - **\$75,000.**
- Borough of Penn Hills, Allegheny County, Allegheny River - **\$90,000.**
- Borough of Tamaqua, Schuylkill County, Upper Owl Creek Reservoir - **\$15,000.**
- East Pennsboro Township, Cumberland County, Conodoguinet Creek - **\$99,000.**
- Monroe Township, Snyder County, Susquehanna River - **\$145,000.**
- North Coventry Township, Chester County, Schuylkill River - **\$3,000.**
- Borough of Halifax, Dauphin County, Susquehanna River - **\$65,000.**
- East Coventry Township, Chester County, Schuylkill River - **\$25,000.**
- Middletown Township, Bucks County, Neshaminy Creek - **\$15,000.**

Strategic Initiatives

Improve Streamside and Shoreline Angling

In 2005, the Commission pursued improvements to streamside and shoreline angling on several fronts. Staff worked to develop the Erie Access Improvement Program and build partnerships to make the program work. The Commission also approved its first project grant under this program and is working on several other priority property acquisition projects in Erie County.

The Erie Access Improvement Program provides resources including grants and technical assistance to implement acquisition and development projects that improve fishing access to the Lake Erie Watershed. Eligible project types include fee-simple acquisition of property, acquisition of easements, and site development. Program funding comes from the sale of the new Lake Erie fishing permits and \$6 of the fees from each combination trout/salmon/Lake Erie permit. In 2005, the first year of the new Erie Stamp permit requirement, about \$600,000 was collected. The fees are deposited into a restricted account in the Fish Fund for five years and are restricted in their use by Fish and Boat Code 30 Pa. C.S. §2907.2, which states that this restricted account “shall be used to provide public fishing access on or at Lake Erie and the watersheds of Lake Erie.”

Staff has been working with a wide variety of partners on potential property acquisition and development projects that will benefit anglers and boaters in the Lake Erie Watershed. The partners include, but are not limited to, state and local governments, conservancies, and sportsmen’s organizations. Other partners provide resources (financial, manpower, knowledge, contacts, etc.) that are essential to the successful implementation of the Commission’s Erie Access Improvement Program. Commitments have been made on the first properties to be secured under the Commission’s new Access Improvement Program, and we continue to refine the program parameters and build the partnerships necessary to ensure this program’s success.

The Commission continues to work with local partners including municipalities, local sportsmen’s organizations and local landowners to maintain and expand access to the Commonwealth’s waterways. The Commission, in partnership with DCNR and the Pennsylvania Environmental Council, also began working on a statewide fishing and boating access plan. It is anticipated that this plan will help direct future access planning, acquisition and development.

Through continuing Commission participation in litigation on the Little Juniata River, the anglers and boaters in the Commonwealth may also gain access to more Commonwealth waters if the decision favors the Commonwealth agencies that filed the case.

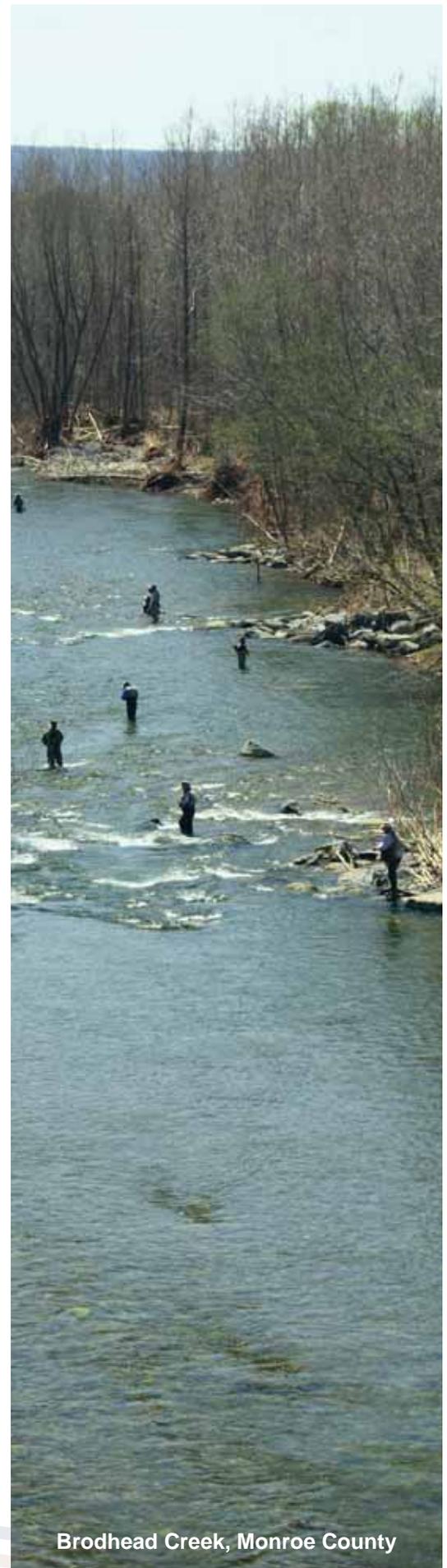
Strategic Initiatives

Reengineer Trout Fishing Opportunities

Efforts to reengineer trout fishing opportunities to improve their attractiveness to anglers took the form of regulatory, policy and operational action throughout 2005.

During the January 2005 Commission meeting, the former Selective-Harvest and All-Tackle, Selective-Harvest programs were dissolved. The waters included in these programs were moved to other regulation options for the remainder of the 2005 season. To date, the number of special regulations programs has been reduced from 12 to eight programs, or a 33 percent reduction in the number of different special regulations programs that apply to trout fishing in Pennsylvania beginning with the 2006 season. Staff is currently considering further reductions in the number of special

www.fish.state.pa.us



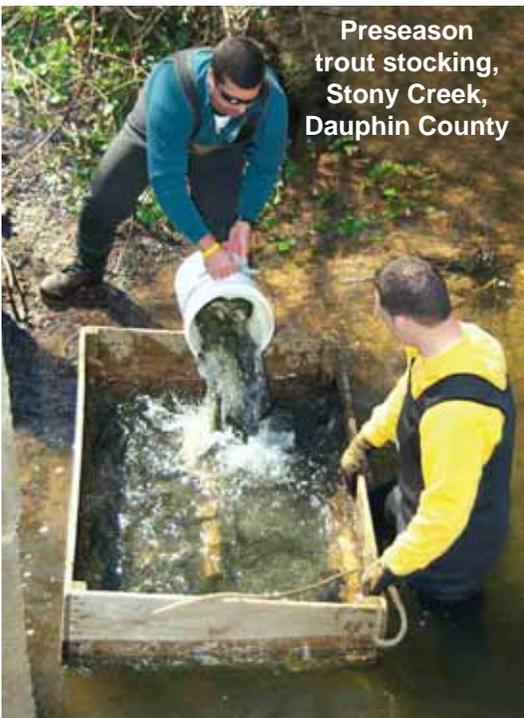
Brodhead Creek, Monroe County



Pleasant Stream, Lycoming County



Bushkill Creek, Monroe County



Preseason trout stocking, Stony Creek, Dauphin County

regulations programs through evaluation of the current Trophy Trout and All-Tackle, Trophy Trout programs.

Beginning with the 2006 season, the former Heritage Trout Angling and Delayed-Harvest, Fly-Fishing-Only programs will be dissolved. Waters formerly managed under these options will be placed under the new Catch-and-Release, Fly-Fishing-Only program. In addition, sections of Spring Creek and Valley Creek, previously managed under Miscellaneous Waters with Special Regulations, as well as sections of the Little Juniata River and Clarion River, which were formerly managed under the All-Tackle, Trophy Trout program, will be managed under the new Catch-and-Release, All-Tackle program. Other changes for 2006 include the removal of the barbless hook requirement from the special regulations programs where it applied. The Commission recommends that anglers consider the use of barbless hooks when they intend to release large numbers of trout.

In a move aimed to maximize use of stocked trout, in 2005 the Commission revised its policy on announcing which days certain waters will be stocked during the open season. While the Commission has long provided details like the date, time and location of preseason adult trout stockings (those that occur while the trout fishing season is closed), it had limited the information publicized on inseason trout stockings to a list showing which week waters would receive trout. As part of a continuing assessment of its trout fishing programs, the Commission believed that in certain instances, announcing certain stockings during the open season could increase trout fishing participation. Announcing inseason stocking details could also help address the perception that inseason stockings favored anglers who had more discretionary time during the business week. For several years, the Commission piloted programs of announced inseason stockings on weekends and during the week for certain waters in public ownership. Based on the positive public reaction and participation in those pilot efforts, the Commission decided to publicize a substantial number of inseason stockings in 2005 and beyond.

In March, the Commission took action to boost by 30 percent the average size of the trout stocked from state fish hatcheries. Starting in 2007, the average trout stocked by the Commonwealth will weigh just under two-thirds of a pound, up from the present average of 0.44 pounds. In addition to 3.2 million 11-inch trout, the Commission's new production plan calls for 30,000 trout averaging a whopping 2 pounds and 16 inches in length, along with 9,000 golden rainbow trout averaging 14 inches and 1.5 pounds. The Commission's system-wide production goal will remain at the present 1.9 million pounds of adult trout annually.

Angler surveys were conducted on 30 randomly selected streams stocked with trout. A total of 4,107 angler interviews were conducted in that study. The Commission is currently processing this data. The findings will be important in determining the stocked trout program's future direction.

The Commission conducted a radio tagging study on Wysox Creek and Tunkhannock Creek in northeastern Pennsylvania to investigate movement of stocked trout from the areas where they were stocked. That study documented that significant movement of preseason stocked trout had occurred on these streams with few left for opening day. Efforts are currently underway to further understand the cause of this problem and to take action with our stocked trout program to reduce the effects of trout movement on angling success.

Increase Revenue from “Soft” Sources

In recent years the Commission has been actively involved in securing non-traditional funding sources for many mission-directed goals. One of the most successful efforts has been the dam removal initiative. The Consultation and Grant Program for Fish Passage and Habitat Restoration advanced the completion of 11 dam removal projects resulting in the reopening and restoration of nearly 100 miles of stream habitat for migratory and riverine fishes. The program also obtained some \$750,000 of grant funding to support project design and implementation. More than 60 additional dam removal and several fishway projects are continuing and targeted for completion over the next two years.

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<i>Fish Passage Name</i>	<i>Passage Type</i>	<i>Waterway</i>	<i>County</i>	<i>Watershed</i>	<i>Cost</i>
Bens Creek Intake Dam	Dam Removal	Bens Creek	Cambria	Ohio	\$40,000
Loydell Reservoir Dam	Dam Removal	South Fork Little Conemaugh Creek	Cambria	Ohio	\$40,000
Unnamed Dam	Dam Removal	Wallace Run	Centre	Susquehanna	\$15,000
Hoffman Dam	Dam Removal	Yellow Breeches Creek	Cumberland	Susquehanna	\$60,000
Siloam Dam	Dam Removal	Conococheague Creek	Franklin	Potomac	\$85,000
Cunningham Memorial Dam	Dam Removal	Wolf Creek	Mercer	Ohio	\$70,000
Goodrich Dam	Dam Removal	Perkiomen Creek	Montgomery	Delaware	\$110,000
Spring Dam	Dam Removal	Pennypack Creek	Montgomery	Delaware	\$120,000
Unnamed (Chester City) Dam	Dam Removal	Ridley Creek	Montgomery	Delaware	\$80,000
Lake Avon Dam	Dam Removal	Hess Run	Westmoreland	Ohio	\$45,000
Goldsboro Dam	Dam Removal	Fishing Creek	York	Susquehanna	\$50,000

The Commission has also been focusing attention on non-game species and their habitats. For some four years, the Commission has been receiving funds from the U.S. Fish & Wildlife Service through the State Wildlife Grants Program (SWG) and more recently through the Landowner Incentive Program (LIP). To help with these programs, and to assist with the diversity of additional needs, including the identification and acquisition of funding for these programs, the Commission developed the position of conservation coordinator. With this position, the Commission will expand its capacity to pursue these additional funds to protect and manage these important species and their habitats.

Through federal funding sources like the SWG and LIP programs, the Commission has been able to fund conservation efforts to an extent not previously available. Even though 80 percent of the Commonwealth’s fish and wildlife are considered non-game, only a small percentage of agency time and effort has historically been directed toward management of these species. In 2005, the Commission approved funding for 10 SWG projects totaling \$884,159. These projects were designed to study and manage rare or declining species and their habitats. Non-federal match for these projects totaling over \$330,000 was provided by partners. Conserving wildlife and their habitats will provide for a healthier environment for both wildlife and people.

In 2005, the Commission approved funding for 10 SWG projects totaling \$884,159. These projects were designed to study and manage rare or declining species and their habitats. Non-federal match for these projects totaling over \$330,000 was provided by partners.



Garter Snake



Eastern Hellbender



Marbled Salamander



Spotted Turtle



Smooth Earth Snake

Some of the State Wildlife Grants Program projects administered by the Commission are:

Inventory & Status of Pennsylvania's Amphibians and Reptiles

Based on recommendations from the Pennsylvania Biological Survey, Amphibian and Reptile Technical Committee and Commission staff, a list of 23 "at-risk" species has been developed for study. These species are considered of special concern because of one or more of the following factors: Changing habitat conditions, over-collection, and lack of information about their populations. The primary focus of this study will be seven species: The eastern hellbender, marbled salamander, spotted turtle, shorthead garter snake, smooth earth snake, mountain earth snake and Kirtlands snake.

These surveys will assess the present status of these species; determine habitat types and regions in the state used by these species; make recommendations for species conservation; and set priorities for future conservation-related research on amphibians and reptiles in Pennsylvania.

Distribution & Status of the Eastern Hellbender in Tributaries of the Susquehanna River West Branch

The hellbender (a large salamander) lives and reproduces in streams and rivers containing suitable habitat such as large, flat rock slabs. In Pennsylvania, the hellbender occurs in tributaries of the Susquehanna, Ohio and Allegheny rivers.

This project will help identify shallow and deepwater stream reaches in the project area where hellbender populations occur; assess habitats that support and sustain healthy hellbender populations, while considering a list of unoccupied stream reaches possessing habitat features potentially suitable for hellbenders; establish long-term monitoring of hellbender populations; and compile comprehensive, detailed and meaningful information useful in the development of a hellbender management and conservation plan for the Susquehanna River West Branch Watershed, and potentially for all of Pennsylvania.

Conservation of Rare Herpetofauna & Other High-Priority Species

The Commission develops recommendations for developers to avoid adverse effects on rare and endangered species. Project reviews and consultations will focus mainly on high-profile herpetofauna, including the bog turtle, eastern massasauga, red-bellied turtle, and timber rattlesnake.

An inventory of extant and historic occurrences, as well as conservation and management plans for the timber rattlesnake and other prioritized species of special concern, including high-priority species such as the bog turtle, will be developed. Records for special-concern species (rare, threatened, endangered and candidate species) will be collected and processed and conveyed to Pennsylvania Natural Diversity Inventory data management staff. Benefits of this study include development of conservation/management plans to guide Commission activities and justify approaches.

Massasauga Rattlesnake Management Project

The population of the Massasauga rattlesnake has been declining in Pennsylvania, and a comprehensive conservation and management plan is needed to stop, and ultimately reverse, this trend. These conservation efforts must address the current primary causes of decline (habitat loss and human persecution).

This project will develop and implement a pilot conservation plan focusing on Massasauga rattlesnake habitat restoration, alteration, and maintenance rooted in regionally specific natural history data garnered from a continuing telemetry project. The Western Pennsylvania Conservancy is currently conducting a range determination study and telemetry project. Information garnered from the telemetry study will be used to supplement the main objective of this proposal, devising a preliminary conservation plan and a pilot study focusing on habitat restoration. The results of this project will serve the overall purpose of helping to create a successful comprehensive conservation and management plan to maintain viable populations of this species.



Bog Turtle

Study of Important Mussel Species

Freshwater mussels are considered among the most imperiled aquatic organisms in North America, and their populations are threatened by degradation and loss of habitat as well as various types of pollution. These organisms serve as an indicator of water quality and habitat conditions in our rivers and lakes. Two of the highest-priority species that will be studied under this project will be the northern riffleshell and clubshell mussel.

This project will be responsible for compiling existing data and conducting new scientific surveys, data entry, and data analysis. With the existing and new data, management plans for mussels can be prepared and reviewed. These plans will provide recommendations on approaches for protecting these species and their habitats. This project will also make recommendations on development projects occurring statewide that may have the potential to adversely affect rare and endangered freshwater mussel species.

Freshwater Mussels on the Allegheny River

On the lower Allegheny River, mussel surveys will be conducted on Pools 6, 7 and 8. Information collected during these surveys will aid state and federal agencies with monitoring and restoration strategies of these unique organisms.

This project will improve the knowledge of regionally and globally imperiled freshwater mussels. Many freshwater mussels in the Allegheny River Watershed are federally endangered and/or species of concern in Pennsylvania. The information from this study will aid monitoring and restoration efforts for imperiled freshwater mussels in the Allegheny River Watershed. Associated habitat information will benefit the public as well as resource managers from various agencies. This study will provide maps of instream habitats, a comparison of sampling methods for mussels in large rivers, maps of rare and endangered mussels in the Allegheny River, and a comparison of the results of different sampling methods.



Timber Rattlesnake

Dam Removal on Pennypack Creek

The Fish & Boat Commission is coordinating the improvement of fish passage and stream habitat over the entire 22 miles of Pennypack Creek, and several of its tributaries, in southeast Pennsylvania. Pennypack Creek is a tributary of the Delaware River. The work on Pennypack Creek is a partnership with the Pennsylvania Department of Environmental Protection (DEP), DCNR, city of Philadelphia's Fairmount Park Commission, Montgomery County Department of Parks, Philadelphia Water Department, Aqua Pennsylvania, NOAA/Fish America Foundation, NOAA/American Rivers, Friends of Pennypack Park, Pennypack Ecological Restoration Trust, Southeast Montgomery County Chapter of Trout Unlimited, and others. This project will result in improvement of fish passage and stream habitat through the removal of Spring Dam and the Old Huntingdon Pike Bridge, both of which impair stream habitat and act as a barrier to fish migration.



The Fish & Boat Commission is coordinating the improvement of fish passage and stream habitat over the entire 22 miles of Pennypack Creek, and several of its tributaries, in southeast Pennsylvania.

The project will re-open more than 9 miles of spawning habitat by providing passage at two barriers to fish migration and by contributing to the restoration of “state endangered” hickory shad and other “priority” migratory species including American shad, blueback herring, alewife, and American eel as well as river game and non-game fishes—important natural and historic resources for the citizens of Philadelphia and the Commonwealth. This project will also protect public and private property by reducing the occurrence of flooding, stabilizing stream banks, restoring riparian vegetation, and removing owner liability. This project is an excellent example of how private, city, county, state, and federal interests can work collectively to develop and achieve a common goal.



American Eel

American Eel Inventory in the Delaware River Tributary Estuaries

Because of recent declines in the abundance of the American eel, the species is considered to be a federal candidate for threatened or endangered status. Little is known about population and habitat use, because the life history of this species is complicated. Eels spend part of their lives in the ocean and in fresh water. This project will document the presence or absence of early stage American eels in selected Pennsylvania named tributaries to the Delaware Estuary and will greatly expand our knowledge of American eel habits and abundance in Pennsylvania in these waters. Such information can be used as a baseline for determining American eel abundance, evaluating permit applications, prioritizing dam removal projects, and determining the need for fish passage facilities.

Determining Species Distinctiveness & Genetics

Genetic diversity is important at many levels, but especially for determining differences between species, and differences between populations of the same species. This project will address urgent conservation issues of rare fishes in Pennsylvania, and will address immediate issues of conservation concern for those species. This research will establish standards, communicate protocols, and recommend best management practices for use of molecular information involving issues of species status or the distinctiveness of Pennsylvania populations. Understanding basic methods of molecular study of Pennsylvania wildlife, and integrating those methods directly into strategies for management, protection, and conservation of special-concern species in the state, is an important first step in leveraging available technology to meet management objectives of both state and federal agencies. The results of this research will have immediate and lasting effects on comprehensive conservation planning by state agencies.

Organizational Unit Report

Executive Office

The Executive Office administers the operations and activities of the entire Commission. The Executive Director serves as the Commission’s chief waterways conservation officer and as an ex officio member on the Atlantic States Marine Fisheries Commission, the Environmental Quality Board, the Mid-Atlantic Fisheries Management Council and the Boating Advisory Board. The Executive Director is supported by a variety of staff including the chief counsel, legislative liaison, press secretary, director of policy, planning & operations, and Human Resources Office.

In 2005, the Commission made progress on both core funding and soft funding fronts. In 2004 and 2005, some of the core funding needs were addressed through Act 159 of 2004, which provided for increases in fishing license and boat registration fees, and Growing Greener II, which was



Douglas J. Austen, Ph.D.
Executive Director

approved in the spring of 2005. Growing Greener II provides \$27.5 million, which the Commission can use to address priority infrastructure needs. These resources have been allocated to address the Commission's most pressing hatchery upgrade needs. Water pollution control permit requirements are becoming more strict, and as stewards of the Commonwealth's aquatic resources, it is imperative that the agency be exemplary stewards and do what it can to meet evolving effluent standards. The Commission is committed to being the best it can be concerning hatchery effluent and to continuing to meet customer fish production expectations.

During 2005, the Office of Chief Counsel continued to provide advice and guidance to commissioners and agency staff on a variety of issues. The Office represented the Commission in litigation before Pennsylvania's courts and administrative tribunals, such as the Environmental Hearing Board and Board of Claims. The Office also assisted in drafting key legislation and regulations on a number of issues important to the Commission. On the regulatory front, the Office drafted or assisted with the drafting of regulations pertaining to a simplified trout management program and charter boat/fishing guide operations and proposed regulations regarding reptiles and amphibians. The office further provided support in the development and implementation of major grant programs, such as the State Wildlife Grants Program and the Boating Facility Grant Program, and in the continued success of grant programs, such as the Statewide Grant Program for Fish Passage and Habitat Restoration. The office drafted and assisted with the drafting of many real estate documents, contracts for the procurement of goods and services, interagency agreements, memoranda of understanding, and grant agreements.

The Commission took steps to enhance its use of geographic information systems for management and public informational purposes with the hiring of a GIS coordinator. A well-designed GIS has the capability of providing quick and easy access to large volumes of data. Strengthening GIS capabilities should improve data analysis, provide tools for better communication of information to the public, allow for better targeting and coordination of services, and improve policy formulation.

The Commission's web site (www.fish.state.pa.us) is administered by the Executive Office and continues to expand in popularity as a flagship information source. The web site had another year of increased usage in 2005. Page views totaled nearly 11 million, an increase of 28 percent from 2004. Feature pages for lakes owned by the Commonwealth of Pennsylvania and managed by the Commission were completed in 2005. Working closely with Fisheries staff, feature pages were also developed for bass, muskellunge, walleyes, several types of panfish and other warm/coolwater species. Some 4,100 email requests for additional information were submitted to the Commission webmaster and processed for response.

Organizational Unit Report

Bureau of Fisheries

The Bureau of Fisheries directs the research, management, production, protection, propagation and distribution of fish, fisheries, habitat, reptiles, amphibians and certain threatened and endangered/non-game species in the Commonwealth. The bureau also directs the operation of all state fish hatcheries operated by the Fish & Boat Commission. It also represents the Executive Director and the Commission at various partner meetings, including the Mid-Atlantic Fishery Management Council, Atlantic States Marine Fisheries Commission, and the In-stream Flow Council; develops and provides briefings and presentations; and relays policy statements. The bureau addresses many environmentally sensitive issues related to the major permitting and permit review functions of the Division of Environmental Services; serves as the Commission's Lake Erie manager on the

www.fish.state.pa.us



Growing Greener II provides \$27.5 million, which the Commission can use to address priority infrastructure needs. These resources have been allocated to address the Commission's most pressing hatchery upgrade needs.



www.fish.state.pa.us





Dave Jordan, foreman of the Huntsdale State Fish Hatchery, conducted a tour of the hatchery for members of the Governor's Youth Council. Here he explained how water is aerated as it runs through the raceways.



international and interstate Lake Erie Committee; and provides oversight of the infrastructure and renovations of the Pleasant Gap Complex, including the H.R. Stackhouse School of Conservation property.

The Fish & Boat Commission is committed to strengthening the agency's role as a leader in habitat protection and restoration of aquatic ecosystem functions. This increased agency-wide focus was initiated in response to the recognized need and increased public demand to conserve and improve aquatic habitat throughout Pennsylvania. It is also intended to fulfill objectives outlined in the National Fish Habitat Initiative (NFHI), specifically to "protect, restore, and enhance the nation's fish and aquatic communities through partnerships that foster fish habitat conservation and improve the quality of life for the American people." To this end, the Commission will be advancing organizational changes as well as directing additional resources to protect, restore, and enhance critical habitat for its trust species.

During the past year, elements from the Division of Environmental Services and the former Division of Research were combined to create the Fish Passage and Habitat Management Section. The newly established section includes the popular Adopt-a-Lake and Adopt-a-Stream programs as well as the Consultation and Grant Program for Fish Passage and Habitat Restoration. The reorganization has laid the foundation for the Commission to develop and advance a more aggressive habitat initiative using an ecosystem-based approach. The initiative will also advance provisions for public access to secure and create fishing and boating opportunities in the Commonwealth.

In 2005, the Adopt-a-Lake Program worked with 48 cooperators and completed 45 lake habitat enhancement projects including the installation of more than 1,000 habitat structures. The Adopt-a-Stream Program worked with 50 cooperators and completed 65 stream habitat enhancement projects including the installation of 175 habitat structures.

Fisheries Management Division biologists and technicians spent considerable field time in 2005 sampling various aspects of fisheries on 61 rivers, 39 warmwater streams, 129 transitional streams, 178 trout stream sections and 51 lakes. Documenting the quality and quantity of fish populations is important not only for developing and updating fisheries management plans (stocking, regulations, etc.) but also for establishing the basis for reviewing applications for various types of permits such as encroachment, water allocation and mining permits.

Sampling in 2005 included both young-of-year smallmouth bass sampling at 70 locations and adult smallmouth bass sampling at 30 sites statewide. Particular emphasis was placed on the Susquehanna River Watershed to determine the causes and extent of observed young-of-year smallmouth bass mortality. Six lakes were monitored to evaluate the effect of the Enhanced Panfish Regulation Program that was initiated in 1999. There are currently 18 lakes in this program.

Annual sampling to monitor the condition of the spawning striped bass populations in the lower Delaware River and Estuary continued. A total of 264 striped bass were collected ranging from 7 inches to 45 inches in total length. Although the total catch rate in 2005 was similar to the previous 10-year average, the catch of larger fish (20 inches and greater) was low. This was likely a result of poor sampling efficiency related to cool temperatures this spring.

Monitoring of American shad on the Lehigh River documented the passage of 675 shad at the Easton fishway and 324 shad at the Chain Dam fishway. Passage at Easton was the third lowest number recorded since 1995, and this is likely the result of a flood that occurred in early April. The flood delayed the fishway opening for several weeks. It is noteworthy that the passage at the next upstream fishway at the Chain Dam was 324 shad. This 48 percent passage efficiency is the highest documented since improvements were made to the Chain Dam fishway in 2001.

A total of 905 shad and over 6.2 million eggs were collected from the Delaware River in 2005. These eggs are used to supply the Van Dyke hatchery shad culture program. The Anadromous Fish Restoration Unit hatched, reared and stocked 5.2 million American shad fry into the Susquehanna, Delaware, Lehigh and Schuylkill rivers and their tributaries. In addition, 17 million hickory shad fry were cultured and released into Muddy Creek in Lancaster County, Ridley Creek in Delaware County, Pennypack Creek in Philadelphia County, and the Delaware River in Bucks County. American shad passage efforts on the Susquehanna River continued. A total of 68,926 American shad passed the fish lift at Conowingo Dam; 34,189 at Holtwood; 25,425 at Safe Harbor; and 1,772 passed the York Haven Dam fishway. At Holtwood Dam, an ultrasonic study was performed to evaluate the use of underwater sound in fish guidance. A radio telemetry study was conducted at York Haven Dam to evaluate fish passage efficiency.

Reorganized during 2005, the Fish Production organization now includes Northern Regional State Fish Hatcheries, Southern Regional State Fish Hatcheries, and Fish Production Services.

The Fish Culture Research Unit re-started the PCBs in fish feeds diet study that was previously terminated by the Hurricane Ivan flood. Annual monitoring of PCBs in hatchery trout continued. No hatchery trout exceeded the blanket statewide one meal per week consumption advisory.

The Fish Health Unit continued to provide high quality and timely fish diagnostic and disease treatment services for the state fish hatchery system. In addition, a fish kill involving young-of-year smallmouth bass occurred in the Susquehanna River Watershed during July and August 2005. Staff collected and analyzed samples and determined that the cause of death was *Columnaris* infection, likely triggered by environmental stress.

The Fish & Boat Commission operates 14 state fish hatcheries raising a variety of coldwater, coolwater and warmwater species. Discharge water is regulated under National Pollution Discharge Elimination System (NPDES) permits, which are administered by DEP and which regulate the amount of fish waste, therapeutic chemicals, and water flows that may be discharged. Permits are typically of a three- or five-year duration. In 2005, nine permits were open for renewal. Considerable effort was expended in applying for NPDES permit renewals and analyzing proposed draft permit conditions. The water quality lab processed over 3,800 hatchery discharge water samples to meet DEP permit requirements. As a result of increasingly restrictive permit limits, the Commission has made operational and infrastructure improvements at its hatcheries. Changes in feeding schedules, flow manipulation, and raceway cleaning have improved effluent water quality. Initial infrastructure improvements have also included the installation of rubber liners and flow baffles in settling ponds to concentrate solids better and remove them from effluent water. The addition of sludge storage tanks at several hatcheries allows farm field spreading of fish waste to occur at optimum times. In 2005, Growing Greener funds were appropriated and approved for use in making much-needed infrastructure upgrades at several hatcheries based on water quality improvement needs. The Commission will continue to seek new ways to improve the water quality of hatchery effluents.

The Cooperative Nursery Unit works with sportsmen's clubs and other volunteer fish growers to provide trout, steelhead, perch, bass, striped bass and walleyes for stocking into public waters. Over 170 sites were visited at least twice annually to provide technical guidance and support to the volunteers. Thirty small grants totaling \$60,000 were distributed to deserving nurseries to aid them in infrastructure development and upgrades. The summer and fall of 2005 were especially challenging because high water temperatures and a general lack of precipitation caused some fish kills and made trout rearing difficult at most of the nurseries.

The production and stocking of warmwater/coolwater fish in 2005 included more than 100 million fry, mostly walleyes, hickory shad, and Amer-



The production and stocking of warmwater/coolwater fish in 2005 included more than 100 million fry, mostly walleyes, hickory shad, and American shad; as well as more than 1.5 million fingerlings, mostly walleyes, striped bass, and muskellunge; more than one million steelhead yearling fingerlings; and more than 2,500 yearling muskellunge.



Preseason trout stocking,
Sherman Creek, Perry County

ican shad; as well as more than 1.5 million fingerlings, mostly walleyes, striped bass, and muskellunge; more than one million steelhead yearling fingerlings; and more than 2,500 yearling muskellunge.

2005 Warmwater/Coolwater Fish Production & Stocking

<i>Species</i>	<i>Life stage</i>	<i># Requested</i>	<i># Stocked</i>
American Shad	Fry	3,890,510	5,165,515
Black Crappie	Fingerling	65,900	193,787
Bluegill	Fingerling	20,200	6,500
Chain Pickerel	Fingerling	4,750	4,750
Channel Catfish	Fingerling	242,350	209,327
Fathead Minnow	Adult	50,000	50,000
Golden Shiner	Fingerling	26,650	26,650
Hickory Shad	Fry	17,248,435	17,248,435
Lake Trout	Fingerling	129,000	111,453
Largemouth Bass	Fingerling	13,900	18,419
Largemouth Bass	Adult	40	40
Muskellunge	Fingerling	128,745	105,845
Muskellunge	Yearling	2,609	2,609
Northern Pike	Fingerling	6,530	6,530
Paddlefish	Fingerling	15,500	15,500
Steelhead	Yearling	1,042,000	1,056,946
Smallmouth Bass	Fingerling	3,700	448
Striped Bass	Fry	7,650,000	7,499,998
Striped Bass	Phase-1	415,000	195,010
Tiger Muskellunge	Fingerling	92,190	72,274
Walleye	Fry	90,621,550	73,389,545
Walleye	Phase-1	1,085,640	681,752
White Crappie	Fingerling	12,300	1,200
White X-Striped Bass	Fingerling	128,900	45,492
Yellow Perch	Fry	947,600	947,598

Trout stocked in 2005 included 4,174,579 adult trout at 2,017,092 pounds, and 2,612,146 fingerling trout at 63,144 pounds.

Calendar Year 2005 Trout Stocking Statistics

<i>Species</i>	<i>Live stage</i>	<i># Stocked</i>	<i>Pounds Stocked</i>
Brook	Adult	830,601	408,267
	Fingerling	755,850	17,132
Brown	Adult	1,638,102	743,284
	Fingerling	1,136,706	20,242
Rainbow	Adult	1,696,344	846,135
	Fingerling	719,590	25,770
Golden Rainbow	Adult	9,532	19,406
	Fingerling	0	0
Total*	Adult	4,174,579	2,017,092
	Fingerling	2,612,146	63,144

* Adult total includes 71,000 trout from the Allegheny National Fish Hatchery and 61,000 trout from the Wellsboro Research Lab.

* Fingerling total includes 100,000 trout from the Allegheny National Fish Hatchery.

Tellico Rainbow	Adult	109,800	55,275
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The Environmental Services Division staff deals with a wide variety of activities that involve predicting risks and assessing damages to our Commonwealth's aquatic resources and the fishing and boating opportunities that they provide. The division includes three sections—the Watershed Analysis Section, Aquatic Resources Section, and the Natural Diversity Section with a total of 18 professional, clerical and seasonal staff. In 2005, state and federal regulators looked to the Commission for specialized expertise to assist them with the review of 4,500 permit applications. Environmental Services staff assisted law enforcement agents in the investigation and prosecution of 15 water pollution and watershed disturbance cases.

The Environmental Services Division issued 122 permits for drawing down ponds and lakes, nine permits for using explosives in Commonwealth waters, 1,107 permits for applying aquatic herbicides, 214 permits for stocking grass carp, 1,081 permits for hunting timber rattlesnakes, and 397 permits for scientific data collection.

Organizational Unit Report

Bureau of Administration

The Bureau of Administration provides administrative support services for all Commission programs and operations including issuance of and accounting for fishing licenses, stamps and permits; purchasing and procurement of supplies, equipment and services; fixed asset accounting services; issuance of boat registrations and titles; fiscal planning, budget preparation and expenditure, and revenue review; vehicle fleet management; insurance; warehousing and inventory; surplus property management; issuance of special permits; mail and messenger services; federal grants administration; purchasing and travel card management; sale of surplus property; development and management of information systems; and forms and records retention.

License sales in 2005 fell by about 9.4 percent from 2004 levels. License and trout stamp sales figures for 2005 will not be finalized until the spring of 2006, when all license issuing agents have submitted final reports. Nevertheless, sales figures at the end of December totaled 821,523. That compares to 906,574 for the same period in 2004. Similarly, trout stamps also showed a net decrease. When this document was prepared, it appears that sales in every major license category except the 7-Day Tourist License decreased in 2005. However, as a result of the passage of Act 159 of 2004, which updated fishing license types and fees, revenue from license and stamp sales was up \$5,095,168 to \$23,761,720.

During 2005, Governor Rendell signed acts 21 and 54 of 2005 into law. Act 21 of 2005 provided for the creation of the Pennsylvania Resident National Guard and Armed Forces Reserve fishing license. Act 54 of 2005 introduced the new 1-Day Tourist License and provided for an important modification to the existing 1-Day Resident Fishing License whereby the license-buyer can determine the 24-hour period when the license is valid. Bureau staff designed, procured, and developed processes to administer both new license types. The passage of these acts also necessitated some changes in the Commission's Internet sales system, "The Outdoor Shop." This system had to be modified to accommodate the two new license types.

Act 159 of 2004 was also the driving force for the development of the Commission's new Charter Boat/Fishing Guide Permit Program. Bureau staff attended workshops hosted by the Bureau of Law Enforcement for the development of program regulations. Administration staff worked hard to develop the official program permit, and with the assistance of the Bureau of Boating & Education, the official program logo. Administration staff developed the appropriate administrative procedures and computer programs for handling applications and keeping records, and for the permit-



<i>Fishing Licenses</i>	<i>Units Sold</i>
Resident	717,830
Senior Resident	16,051
Senior Lifetime	8,385
1-Day Resident	3,604
PA Resident	6
National Guard/Reserve	
Non-Resident	39,291
1-Day Tourist	976
3-Day Tourist	28,960
7-Day Tourist	6,069
Lake Erie Permit	25,088
Combination Lake Erie & Trout/ Salmon Stamp Permit	65,313
Trout/Salmon Stamp	500,485
Total Licenses & Stamps:	1,412,058

<i>Boat Transactions</i>	<i>Totals</i>
Registration Renewal	151,731
Registration Transfer	15,058
Registration New	28,873
Registration Change	218
Registration Duplicate	4,091
Title New	19,586
Title Transfer	11,242
Title Correction	779
Title Duplicate	765
Total All Boat Transactions	232,343

The point-of-sale system will assist the Commission in marketing and accounting for products such as licenses and stamps.



ting functions of the program for implementation on January 1, 2006.

During 2005, the Fish & Boat Commission managed some 35 federally funded projects, which returned more than \$8.75 million in revenue to the Commission. Even though the majority of federal funds (\$7.2 million) was received from the U.S. Department of the Interior's Fish & Wildlife Service, other federal agencies provided financial support to the Commission. They include the U.S. Environmental Protection Agency; U.S. Department of Commerce, National Oceanic and Atmospheric Administration; National Marine Fisheries Service; U.S. Department of Transportation, Federal Highway Administration; and U.S. Department of Homeland Security, U.S. Coast Guard. The combined total of all federal revenue comprised about 22.5 percent of the Commission's revenue in the state fiscal year, which ended June 30, 2005. Since 1986, federal revenue has averaged nearly 20 percent of the Commission's total revenue.

Another exciting project that was started during the 2004 year and continued throughout 2005, with the business rules development, information gathering and request for proposal writing phases, was the process to implement a point-of-sale (POS) system that will drastically change the way the Commission sells fishing licenses and perhaps renews boat registrations. This large, complex project will change the way the Commission conducts business. The POS system will assist the Commission in marketing and accounting for products such as licenses and stamps. This project is being developed and implemented in partnership with the Pennsylvania Game Commission and is expected to be completed during 2007.

Bureau of Administration staff worked with Bureau of Fisheries staff to develop an improved system that will be used to capture information collected by permitted scientific collectors authorized to pursue scientific collections of aquatic and herpetological specimens, and to provide input and retrieval methodologies in a consistent geo-referenced database. Full implementation is scheduled for 2007. Administration staff also began exploring the use of computerized vessel registration (CVR) technology that will provide information about and help process boat ownership changes through the Commonwealth's network of boat dealers.

Bureau of Administration staff coordinated the information gathering and plan preparation processes for the development of an emergency preparedness, response, and action plan as part of the Continuity of Government (COG) initiative designed to aid all Commonwealth agencies. The COG plan focuses on disaster recovery steps to be taken by the Commission in the event of a natural or manmade disaster, which might affect Commission facilities and operations. The plan identifies core/essential business functions and provides strategies to ensure that these essential functions return to service as quickly and efficiently as possible in the event of a disaster.

Throughout 2005, bureau staff engaged in many smaller yet essential projects, which provided the Commission with desirable cost savings or program efficiencies. For example, bureau staff initiated and oversaw the refinancing of the bond for the Commission's headquarters facility, the migration from the use of Pennsylvania Turnpike credit cards to the EZ-Pass system for all Commission vehicles, the security enhancements to the on-line boat registration renewal feature of "The Outdoor Shop," the improvements in training for Commission VISA purchasing card users, the installation of state-of-the-art electronic cash registers and credit card processing equipment in the Commission headquarters building, the replacement of three outdated analog postage metering machines with two new digital machines, the elimination of renegotiation of terms and costs of various outsourcing contracts, and streamlining the Commission's annual budget preparation and fiscal reporting processes.

Bureau of Boating & Education

The Bureau of Boating & Education is responsible for the development and implementation of fisheries, boating and conservation education and information and public involvement programs geared to enhance fishing and boating opportunities, the aquatic environment, and recreational boating safety in the Commonwealth. It develops diverse educational media capabilities; designs and produces brochures, booklets, maps and pamphlets; provides color lithographic, duplicating and bindery services; and publishes the Commission's *Pennsylvania Angler & Boater* magazine in support of these activities. The bureau administers the agency's aids-to-navigation activities; the certification of passenger-for-hire boat operations; the operation of the North East and Walnut Creek marinas; and the planning and development of a comprehensive boating access and facilities program. The bureau director serves as the Commonwealth's boating law administrator.

In 2005, about 500 teachers participated in resource education workshops led by bureau staff. Most of these workshops were offered for graduate-level credit or for professional development hours. More than 1,000 classrooms received the Pennsylvania League of Angling Youth newsletter.

Commission staff, volunteers or partners conducted more than 20 education programs during Fish-for-Free Days in 2005. In addition, Commission staff offered more than 18 Family Fishing Programs (FFP) in 2005. These programs are aimed at families with children, and participants 16 and older are not required to possess fishing licenses to participate. Commission partners and instructors trained by the Commission offered angler education programs in 2005, reaching more than 5,000 participants. The Philadelphia Department of Recreation taught basic fishing skills to nearly 1,000 participants at its residential camp in the Poconos. The department also reached similar numbers of participants with its fishing education program at its Torresdale facility.

In cooperation with the Pennsylvania Bass Federation and DCNR Bureau of State Parks, the Commission assisted with the Youth Bass Anglers Conservation Camp. This camp reached some 20 young people with week-long instruction in bass fishing skills and techniques, fish management and conservation.

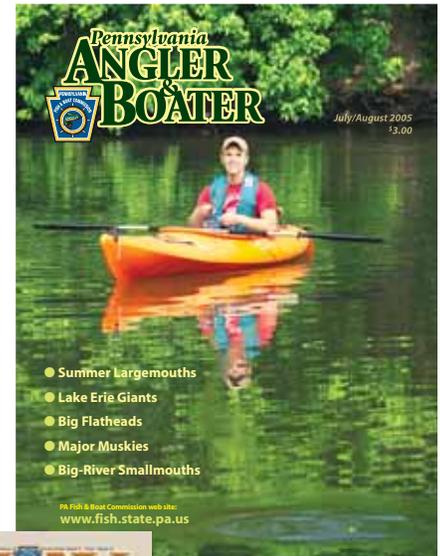
At the end of 2005, the Commission initiated a web-based survey of angler education programs. This survey gathered information on the types of programs provided and information on those providing instruction.

At the end of 2005, there were 25 fishing tackle loaner sites. These sites, most of which are located at state parks, offer fishing rods and reels and terminal tackle for loan. The loans are made to individual park visitors and to groups conducting fishing programs.

The bureau received more than 800 requests for the Commission to present educational programming. The Commission provided staff or volunteers for more than 600 of these requests. More than 1,000 requests for educational materials were processed in 2005.

Improving recreational boating safety is an important Commission function. In 2005, nine boating accidents resulted in the death of 12 people. Only 64 injuries to recreational boaters were reported during 2005, the second best year reported since 1988. A common measure of the boating safety program's success is the fatality rate per 100,000. Statistics show an impressive drop in the fatality rate from 1968 to the present, clearly illustrating the success of the Commission's boating law enforcement and boating education programs.

The Commission certified 12,842 students in National Association of State Boating Law Administrators approved boating courses in 2005,



Fish & Boat Commission Habitat Management staff worked with students to construct fish habitat improvement structures. The project took place during the most recent Youth Bass Anglers Conservation Camp.

The Commission designates official Pennsylvania water trails. The goal is to improve recreational opportunities on Commonwealth waterways by completing a statewide water-trail system.



In addition to water-trail guides (above), the Educational Media Services section provides other publications, creative services, and exhibits that work in concert with aquatic resources education and boating safety education to keep our constituents informed.

This section is also responsible for site administration and development of the product portion of the Commission's online store, "The Outdoor Shop."

of which 11,616 took Commission courses. Not everyone who takes a course applies for a boating safety education certificate. Many people are not required to have one and take a boating course for fun or enrichment. The agency and its volunteers taught 122 Pennsylvania Basic Boating Courses certifying 2,344 students who successfully completed the course. Volunteers and staff also taught 32 Commission Boating and Water Safety Awareness Courses, certifying an additional 1,552 students. Even more successful was the Commission's Boat Pennsylvania Internet and correspondence courses. In 2005, 11,517 individuals took one of these fine long-distance learning courses.

The Commission's unique and highly successful Water Rescue Program had another banner year in 2005. The Commission certified 1,193 students through 82 courses in the Water Rescue Program in 2005, the second best year on record. The Commission has a trained volunteer instructor corps of 150 individuals who provided more than 3,000 hours of training this past year.

The Commission designates official Pennsylvania water trails. The goal is to improve recreational opportunities on Commonwealth waterways by completing a statewide water-trail system. In 2005, three trails were completed, including the West Branch of the Susquehanna River, the Kiski-Conemaugh River, and the Clarion River.

The Commission operates an extensive Aids-to-Navigation Program. Efforts over the years have resulted in the location and permitting of all private aid/floating structures on state waters currently numbering 3,362 permitted structures. We have begun to gather latitude and longitude information for each aid. GPS units are now used to help accurately set and chart aids to navigation on Commonwealth waters.

The Educational Media Services section completed more than 455 work order requests that included print and online publications, graphic services, photography, editorial services, and exhibits. Intertwined with this production is the inventory replenishment of the Commission's suite of publications and products. These mainstay products include the *PA Fishing Summary*, *Boating Handbook*, maps, region guides, water-trail guides, educational and course publications, and the Commission's flagship publication, *Pennsylvania Angler & Boater* magazine.

This section serves as the Commission's liaison with the printing industry in developing product specifications, maintaining quality control standards, and administering contracts for printing.

Organizational Unit Report

Bureau of Law Enforcement

The Bureau of Law Enforcement directs the enforcement of Commonwealth fishing and boating laws and regulations and certain water pollution laws. Its corps of waterways conservation officers also provides conservation education programs, reviews permits for mine drainage and stream encroachments, administers the Commission's special activities permits, and participates in fish stocking operations. Officers worked agency displays at more than 20 outdoor sport shows held throughout the state. The bureau also operates the Commission's most active volunteer program, a force of more than 180 deputy waterways conservation officers.

The bureau operated during most of the year with a considerable number of vacant districts as a result of retirements and resignations. In addition, several officers were either activated for or continued to meet extended military obligations. Neighboring officers, deputies and regional office staff performed additional work to provide coverage in areas without an assigned district officer.

By December 31, 2005, conservation officers issued and the courts adjudicated 4,317 summary citations for fishing law violations and 3,846

summary citations for boating law violations. An additional 1,773 summary fish and boat law violation citations were filed with district courts in 2005 and are awaiting final resolution. Officers also issued 33,918 warnings for fishing and boating violations and conducted safety boardings on 31,767 recreational boats. The bureau issued 2,539 special activities permits for fishing tournaments and regattas.

Total boating-under-the-influence (BUI) arrests for 2005 were 57 with the earliest made May 27 and the latest, October 5. The Southcentral Region led the state in BUI arrests with a total of 17. Specialized BUI enforcement details were conducted throughout the state on waterways with the highest recreational boating use, including Presque Isle Bay, Three Rivers, Lake Wallenpaupack, Raystown Lake, Delaware River, Blue Marsh Lake, and several boating pools on the Susquehanna River. Some officers participated in Operation Nighthawk joint DUI/BUI enforcement details, coordinated by the state police.

The Northwest Region conducted specialized enforcement involving steelhead in Lake Erie and its tributaries during the final three months of 2005, using officers from all over the Commonwealth. Enforcement details focused on popular steelhead fishing locations such as Elk Creek, Walnut Creek, Twelvemile Creek, Sixteen-mile Creek, Twentymile Creek and the nursery waters of Trout Run. The most common violations were snag-fishing, littering, fishing in nursery waters or other prohibited areas, and the use of illegal devices. In addition to individual violators, the special patrols also deal with organized groups of poachers. The largest prosecution involved four individuals at Walnut Creek who were using large nets to remove steelhead from the stream under the cover of darkness. A state trooper stopped a car in early November and noticed large nets in the vehicle along with four soaking-wet individuals. The trooper contacted our local waterways conservation officer and a joint investigation uncovered 42 large steelhead in the vehicle's trunk. The entire specialized enforcement operation resulted in the issuance of 224 citations for violations and 577 warnings.

The Southwest Region coordinated a special detail in support of the 2005 Bassmasters Classic, held in Pittsburgh. Through assigning extra patrol boats and enforcement staff, the bureau was able to improve the safety of both participants and observers throughout the week-long, nationally televised event.

The bureau continued to replace aging patrol vehicles and boats within the limits of available funding. Several new law enforcement patrol boats were placed into service. All the officers received digital cameras and new float coats.

The size of the agency's deputy force continues to decline as attrition takes its toll and successful recruitment of new volunteers becomes increasingly difficult. The Bureau of Law Enforcement was not able to hold a basic Deputy Waterways Conservation Officer Training Class in 2005 because of an insufficient number of applicants.

Training is an integral part of operating a professional workforce, and the Bureau of Law Enforcement presented in-service update training to all salaried officers during 2005 at a statewide conference in January. Training presented to the veteran officers included Fish and Boat Code and regulation changes and updates, Act 120 legal updates regarding Title 18 (Crimes Code) and Title 75 (Vehicle Code), digital photography, a search and seizure case law update from the District Attorney's Association, policy changes, fisheries management issues, legislative issues, and in-the-pool water-safety training.

Annual recertification update training at regional levels continued throughout the year at each region for all WCOs and DWCOs regarding CPR, first aid, firearms day fire, and tactical and dim-light qualifications.



Waterways conservation officers and deputy waterways conservation officers are trained in a variety of law enforcement and life-saving skills.





The 17th Waterways Conservation Officer Class graduated from training in September 2005.



Commission work crews installed an experimental cross log vane on Walnut Creek, Erie County, at the popular "Manchester Hole." The purpose of the device is to create the hydrology necessary to maintain a deep pool that was excavated several years ago as steelhead trout-holding habitat.



For the Pleasant Gap State Fish Hatchery, bureau staff completed in-house design and advertised for bid the \$2.1 million wastewater upgrade project, with award and construction to begin in 2006.

Bureau firearms instructors convened for a training and skills assessment workshop in July. The instructors began implementation of a non-lethal firearms training course and relevant policies.

The 17th Waterways Conservation Officer Class graduated from training in September 2005. The six graduates received assignments in vacant law enforcement districts. By the end of the year, nine full-time law enforcement positions remained vacant.

The bureau began the process of selecting a new class of conservation officer trainees in the early part of 2005. The Civil Service Commission provided a job announcement for the position in July, and more than 660 individuals applied for the positions. By December 2005, the written testing was complete and a hiring list with the names of more than 440 individuals was provided to our agency. The Commission is currently considering hiring 14 applicants to become part of the 18th WCO Class. The final selection process will occur in the early part of 2006 with the class beginning training in July 2006.

Organizational Unit Report

Bureau of Engineering & Development

The Bureau of Engineering & Development directs the planning, survey, design, construction and maintenance of fishing and boating facilities and property; plans and designs site-engineered structures including roadways and bridges, ponds, raceways and impoundments, wells and pumps, fishways, shoring, piling, docks, wharfs and boat launch ramps; plans and designs buildings for Commission use; plans, designs and inspects the construction, renovation and major maintenance of dams and impoundments; directs the acquisition, leasing and management of Commission-owned or controlled property; and constructs, renovates, and maintains buildings, structures, utilities, dams, impoundments, docks, wharfs, weirs, boat ramps, piers, access areas, roads, parking areas and other Commission facilities.

Commission work crews installed an experimental cross log vane on Walnut Creek, Erie County, at the popular "Manchester Hole." The purpose of the device is to create the hydrology necessary to maintain a deep pool that was excavated several years ago as steelhead trout-holding habitat. Logs were pinned in an upstream "V" shape to funnel the flow toward the middle of the device. The deposition in the pool was used to "fill in" above the logs to create a small ramp and to prevent water from flowing under the logs. This structure should create a small jump in the flow that will keep at least a large portion of the pool free of sediment, and dredging the pool should no longer be required.

The partial draining of Opossum Lake, a popular 59-acre fishing and boating impoundment near Carlisle, Cumberland County, took place in the fall of 2005. A routine assessment of the earthen embankment by maintenance staff revealed small seeps in the dam's spillway. The seeps were piping a clayish material, an early indication of erosion that if not addressed could potentially weaken the dam. After consultation with DEP dam safety officials, the decision was made to begin a controlled draw-down in the interest of public safety.

The bureau engaged in several significant improvements at Commission facilities:

- **An in-house design for the Tylersville State Fish Hatchery was completed and bid, and a \$1.7 million wastewater upgrade project was awarded. Construction will begin in 2006.**
- **For the Pleasant Gap State Fish Hatchery, bureau staff completed in-house design and advertised for bid the \$2.1 million wastewater upgrade project, with award and construction to begin in 2006. In ad-**

Fiscal 2004-2005 Year Report: Expenditures July 1, 2004 - June 30, 2005

dition, demolition of an aged feed storage building was completed.

- A design contract for Bellefonte State Fish Hatchery upgrades was awarded to a consultant.
- At the Benner Spring State Fish Hatchery, a contract was awarded to a consultant for hatchery upgrade designs. In addition, bureau crews reconstructed a flood-damaged berm to protect the facility from future flooding.
- Construction of an aerated sludge storage tank at the Huntsdale State Fish Hatchery was completed. A design contract was awarded to a consultant for a hatchery upgrade project.
- For the Reynoldsdale State Fish Hatchery, crews finished installation of various electrical upgrades.
- Development of a well to improve water supplies at the Corry State Fish Hatchery was completed.
- The Construction Section installed a new pipeline at the Linesville State Fish Hatchery from the ponds to Pymatuning Lake.
- The Construction Section completed repairs to ponds at the Pleasant Mount State Fish Hatchery caused by flood damage.
- The Construction Section crew replaced the roof on the hatch house at the Oswayo State Fish Hatchery, and installed replacement windows and painted the exterior of the Southeast Law Enforcement building.

Engineers conducted 40 dam safety inspections as part of the Commonwealth's dam safety program; engineers also conducted underwater inspections (by diving contractors) of the dam outlet structures of six dams. Currently there are 17 Commission dams on the DEP unsafe dam list. Bureau staff completed seven emergency action plans in 2005, making the total of 19 plans complete.

The Commission purchased a dredging barge this past year to enhance annual dredging operations. Construction crews used the dredging barge to clear Walnut Creek to allow safe boat passage from the marina to Lake Erie. Crews also used the machine this past year to dredge both the Walnut Creek and North East marinas. At the North East Marina in northern Erie County, crews transferred some 14,000 cubic yards of sand for beach replenishment.

Expenditures

	<i>Fish Fund</i>	
Personnel	19,988,097.00	70%
Operating	6,824,954.00	24%
Fixed Assets	902,277.00	3%
Grants	714,085.00	3%
Fish Total	28,429,413.00	100%

	<i>Boat Fund</i>	
Personnel	6,288,013.00	65%
Operating	2,172,093.00	22%
Fixed Assets	953,488.00	10%
Grants	326,037.00	3%
Boat Total	9,739,631.00	100%

	<i>Fish/Boat Total</i>	
Personnel	26,276,110.00	69%
Operating	8,997,047.00	24%
Fixed Assets	1,855,765.00	5%
Grants	1,040,122.00	3%
Fish/Boat Total	38,169,044.00	100%

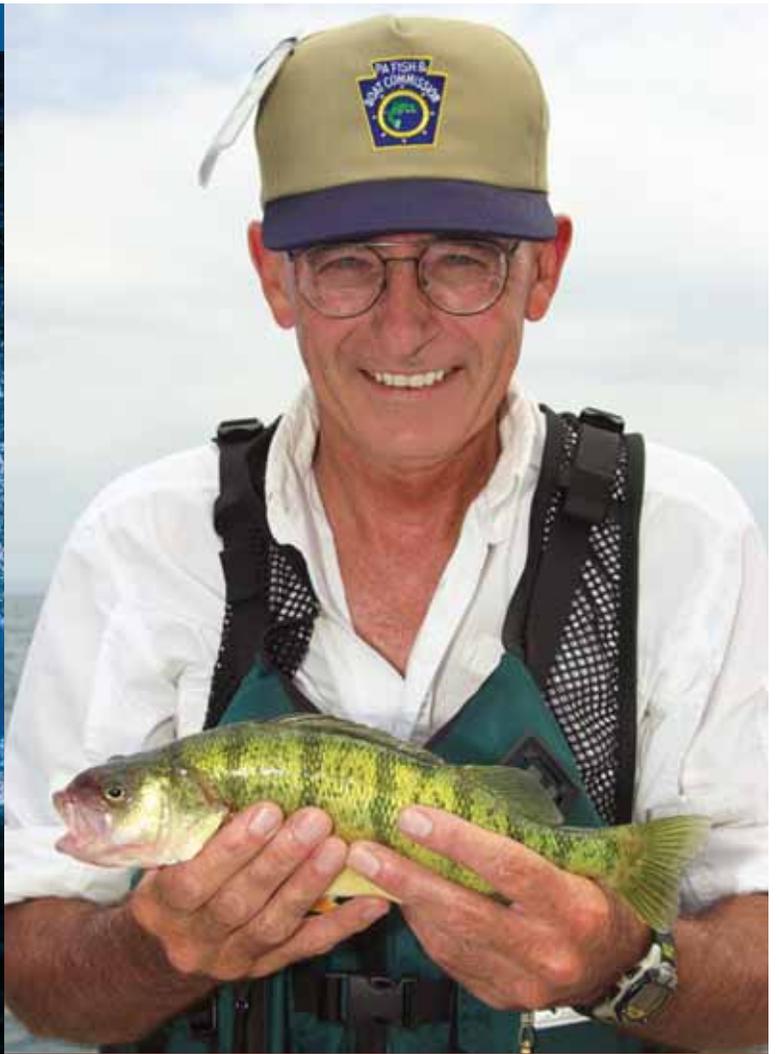
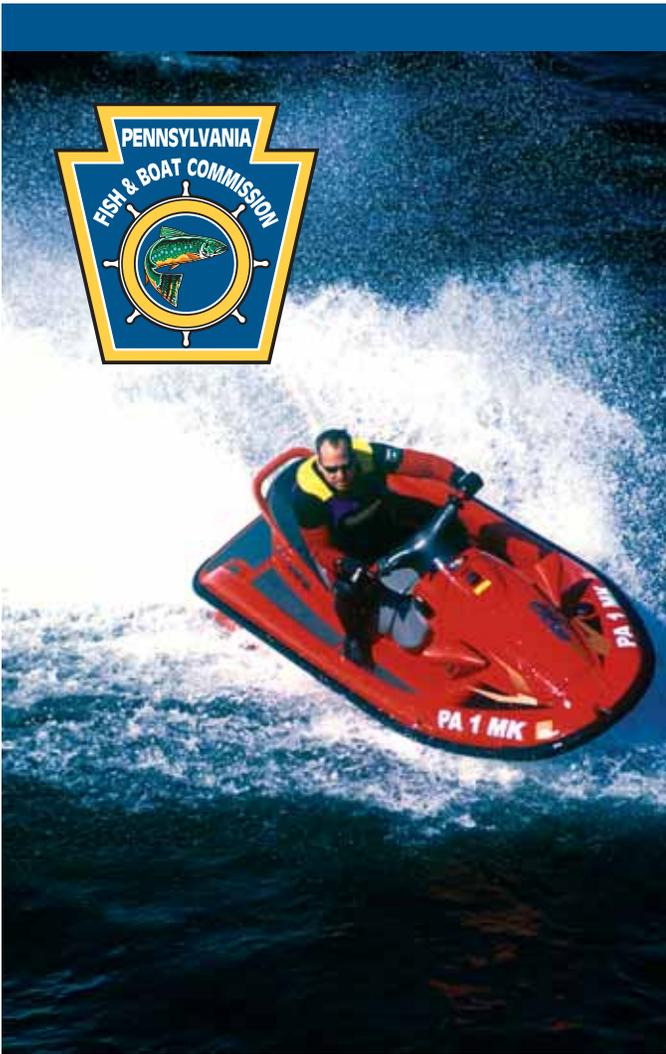
Fiscal 2004-2005 Year Report: Revenue July 1, 2004 - June 30, 2005

Revenue

	<i>Fish Total</i>	
Licenses & Fees	21,992,199.00	68%
Fines and Penalties	430,741.00	1%
Miscellaneous	2,138,676.00	7%
Augmentations	7,556,334.00	24%
Fish Total	32,117,950.00	100%

	<i>Boat Total</i>	
Licenses & Fees	6,552,099.00	59%
Fines and Penalties	220,519.00	2%
Miscellaneous	3,122,700.00	28%
Augmentations	1,252,371.00	11%
Boat Total	11,147,689.00	100%

	<i>Fish/Boat Total</i>	
Licenses & Fees	28,544,298.00	66%
Fines and Penalties	651,260.00	2%
Miscellaneous	5,261,376.00	12%
Augmentations	8,808,705.00	20%
Fish/Boat Total	43,265,639.00	100%



Pennsylvania Fish & Boat Commission
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January 2006