# U.S. Army Corps of Engineers
# Fiscal Year 2017
# Handshake Program Application

**Please review instructions before completing application!**

Corps Lake/River Project Name: **Raystown Lake Project**
District / Division:**Baltimore District / North Atlantic Division**
Handshake Proposal Title: **Raystown Lake Cooperative Striped Bass Nursery**
Corps POC Name:**Tara Whitsel**
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**A. Checklist:**

1. Will the Handshake funds be spent on Corps facilities and resources that are being fully maintained by the Corps? ☒ **Yes** ☐ **No**
2. Will the Challenge Partnership agreement be with a non-federal public or private entity(ies)? ☒ **Yes** ☐ **No**
3. Is the proposed activity within current authorities and contained in the annual or 5-year work plan in the approved lake project OMP? ☒ **Yes** ☐ **No**
4. Have all of the NEPA requirements been considered for this project? ☒ **Yes** ☐ **No**
5. Did you participate in a Handshake Webinar in 2016 or review a 2016 Handshake Webinar on the Gateway? ☒ **Yes** ☐ **No**

**B. Handshake Funding Request (maximum $20,000): $9,000**

**C. Pollinator Habitat Bonus:** Challenge Partnerships that are focused on improving pollinator habitat will be eligible to compete for an additional $5000**.** The application must clearly demonstrate the intent of creating pollinator habitat as the primary project scope.

☐ This application qualifies for the Pollinator Habitat Bonus funding.

**D. Incentive Points Category:** Check the appropriate box if your application qualifies to receive bonus points on the evaluation score. The first category is for projects that are working to address invasive species management. The application must clearly identify how invasives are being addressed and managed. The second category is for Lake or River Projects that have never been chosen as Handshake recipients.

☐ Invasive Species Management (100 points).

☐ This Lake/River Project has never received Handshake funding (200 points).

**E. <u>Describe your partnership and the proposed Handshake Partnership Project</u>:**

Project applications will be evaluated on the categories below. Please complete each section as appropriate.

**Summary Statement:**

Every fisherman has their story - whether it is entirely true or not. These fishing tales turn into a memory made between a father and son, sisters, or perhaps two grumpy old men. To make these memories, each fisherman has that one species of fish that drives them to spend hours on a boat; because surely that next cast will result in the big catch they have been waiting for. For many Raystown Lake fisherman, that fish is the striped bass.

The striped bass fishery at Raystown Lake is well known for its exciting recreational opportunities, its economic impact and of course its tourist promotional value. What is not so well known is that the fishery's existence relies soley on the stocking of the species. For over 20 years, various groups have been augmenting state stockings in an attempt to sustain the fishery. As the cost to purchase fish has skyrocketed due to a decrease in availability, a new avenue has been explored to maintain America's past time. The Raystown Lake Cooperative Striped Bass Nursery Project seeks to implement a long-term, cost effective solution to maintaining a first class striped bass fishery in Raystown Lake through the development of an in-house striper nursery.

**Longevity / O&M description:**

The Raystown Lake Cooperative Striped Bass Nursery is a project being planned, constructed, and implemented with long term sustainabiltiy in the forefront of the process. The accomplishment of a sustainable nursery with minimal long term operations and maintenance to the U.S. Army Corps of Engineers (Corps) will be achieved through the implementation of three key factors: (1) facility (2) equipment and material selection (3) transfer of knowledge. In terms of facility, the Corps at Raystown Lake has committed to the nursery being housed in a Corps operated maintenance building. This facility provides the maximum amount of space that is necessary for the spawning and rearing process. Additionally, the space allows for multiple methods of spawning stripers and raising fry to reduce the chance of loss or failure. The PSBA has already provided the labor to install electrical and plumbing utilities, a partition to separate a portion of the building to provide the required space for the nursery, and installed insulation to reduce heat loss. Additionally, the PSBA has already purchased the basic equipment necessary in terms of tanks and water purifiers. The PSBA supports energy conservation by purchasing energy efficient pumps and water heating systems when appropriate. In addition, they are implementing gravity fed water systems to reduce electrical consumption, which benefit developing fry according to academic studies. It is our goal to utilize handshake funding to procure additional pieces of equipment, including additional tanks, filters, and heaters necessary to continue the spawning process. Finally, the Corps and partners recognize that the transfer of knowledge is essential. The cooperative nursery will only be successful if there is a transfer of information from the individuals responsible today, to the individuals responsible in the future. The PSBA is working with the youth of their club, along with local Juniata College stakeholders, to involve new individuals in the process.

**Partnership Value:**

The implementation of this project will be a collaborative effort between five partners, led by the PSBA. Each group committed to the implementation of this project brings a unique interest and skill that will result in success of the project.

PSBA was founded in 2005 with the main goal of preserving the landlocked striped bass fisheries of Pennsylvania, primarily Raystown Lake. From conservation, to community and social events, PSBA works to promote, protect, and preserve the quality of stripers in the fresh water lakes of Pennsylvania. PSBA brings a unique skill set and unquestionable passion to this project. Since the establishment of the organization, PSBA has augmented state stockings by placing over 1,127,905 striped bass fry or fingerlings into the lake at a cost of over $203,068 raised through club donations. PSBA began the initial phase of the nursey in 2015, by providing basic renovations to the maintenance building and by completing a "trial" in the spawing process. The club has already invested over $20,000 in equipment to sponsor the initial phase of this project. The goal of the trial was to demonstrate that the nursery can: (1) successfully maintain adult fish for a period of time in order to spawn and (2) determine if the striped bass in Raystown Lake are infact fertile. During the trial period, PSBA was able to successfully accomplish both goals. Going forward in this project, PSBA is committed to providing all of the

labor necessary to complete building renovations on the portion used to house the nursery. In addition, they are financially committed to the electrical expenses generated through use of the nursery. Finally, the PSBA will provide all of the labor to operate the nursery.

The project will strengthen our existing partnerships with the Friends of Raystown Lake (FRL) and the Huntingdon County Visitors Bureau (HCVB). Both of these dedicated partners recognize and embrace the importance and value in maintaining a sustainable fishery. Their continual support of projects at Raystown Lake is a testament to the working relationship established to enhance the recreational opportunities of the lake. For this project, both organizations will raise awareness of the nursery and recruit volunteer support.

The Pennsylvania Fish and Boat Commission (PAFBC) provided tremendous support during the trial phase of the nursery project. The PAFBC joined Corps and PSBA members on four different electroshocking attempts on Raystown Lake. The primary purpose of the attempts were to: (1) teach club members how to obtain brood stock from the waterbody and (2) use the brood stock obtained to assist in answering the question as to whether or not the striped bass contained within the lake were fertile for breeding purposes. PAFBC will continue their support of the nursery by providing guidance on striper biology, rearing, and supporting future attempts to obtain brood stock.

The Corps at Raystown Lake is committed to the nursery as we understand the pressure placed on the fishery and the desire of multiple organizations to maintain striped bass in the lake. Currently, the Corps has committed to providing water for the facility through an artersian well, use of the building, and staff labor to assist with public and educational tours of the facility. Through the Handshake Partnerhsip, the Raystown Lake staff will be able to provide the equipment and material support necessary to move from a trial phase to an operational phase. Handshake funds will be used to provide the additional tanks and water purifying systems in order to increase the number of methods by which spawning and rearing could occur.

**Recreational Benefit:**

"Even if you've been fishing for three hours and haven't gotten anything except poison ivy and sunburn, you're still better off than the worm" (~Author Unknown). According to The Outdoor Foundation (a not-for-profit established to inspire and grow future generations of outdoor enthusiasts), fishing (fresh/salt/fly) is the second most popular adult outdoor activity with 30.9 million people participating annually. The popularity of fishing at Raystown Lake helps to support this national statistic. Each year, Raystown Lake hosts over 125 fishing tournaments including regional and division championships. Looking specifically at the striper fishery, the current state record striped bass caught in 1996, weighing 53lbs and 12oz was reeled in from the beautiful waters of Raystown Lake; which has prompted many local guide service businesses to emerge.

Knowing these statistics, it is quite easy to understand the daily pressure that is placed on the fishery. With more than 1 million visitors annually to Raystown - "hooking" visitors with the lure of this particular fishery is a major recreational benefit and attraction to the project. In terms of ensuring distribution in use of the facilities, striper biology plays in our favor. In Raystown, striped bass utilize different zones of the lake depending on the season and water temperatures. This allows for variance in use of the project's facilities and local business amentities from the southern most points during the spring of the year, to the northern recreation areas during the summer and fall months.

**Environmental Stewardship Value:**

The proposed project is well matched to the mission of the Corps Environmental Stewardship Program, which provides for sustainable lands and waters for future generations. As discussed, the primary purpose of this project is to provide for a sustainable striped bass fishery. PAFBC stocks approximately 100,000 fry annually. The state faces challenges with this requirement as the agency does not raise their own striped bass, they are dependant on other states' production and availability to meet this allotment. The PAFBC is excited about the opportunity to partner with the PSBA and others in the project for four main reasons. First, should the project become successful, the Cooperative nursery may be able to produce all the fish necessary to maintain the appropriate stocking level without the need to barter or trade fish with other states. Second, the nursery would have the

resources and equipment required to raise fish to a larger size. The fish that are currently stocked by the state are in the fry stage meaning one to two inches in size. Unforuntately, the quantity stocked for this size has to be high to account for significant mortality rates. Under optimal conditions, less than 20% of young-of-year striped bass will survive to age one. The ability to stock fish that are in the three to four inch range, would dramatically increase survival rates and ultimately improve the population of the fishery. Third, the fish that are being spawned are a true Chesapeake strain striped bass. Many of the fish produced today and available for stocking are either a hybrid species or a white bass species which are not desired for the Raystown fishery. Finally, by spawning and rearing striped bass on Raystown Lake, there is zero chance of introducing invasive species (inlcuding vegetation, mussels, and other pests) from out of state waters in the stocking process.

**Communication & Education Value:**

So many visitors choose to recreate on our public lands; however, they lack the understanding and knowledge of the management efforts behind the scenes. Implementation of this project allows for many opportunities to effectively promote awareness and understanding of the Corps missions and goals in environmental stewardship and sustainability that are specifically focused on fisheries management. First, the facility is located in the Seven Points Recreation Area which not only draws the highest visitation on Raystown Lake but includes Pennsylvania's largest marina. This will allow easy access to the facility to promote communication and education. Second, the PSBA, along with the Corps, the FRL, and the HCVB are committed in this project to engage visitors of all ages, backgrounds, and education levels in the principles of fisheries management.

This project has three main target groups. (1) The general public. They come here to camp, hike, boat, fish and generally want to learn more about what fish are even in the lake. Local coverage of the facility has already drawn community members out to Seven Points to learn more about the nursery. (2) Elementary through high school students along with non-profit organizations such as boy scout and girls scouts. Hands on involvement and opportunities to observe the fish rearing process are currently not available elsewhere in the Raystown Lake Region. With the success of Raystown Lake's 2016 STEM initiative, this provides another avenue in which local educators can involve students in science, technology, and math. (3) College students - A fundamental goal of the Raystown Lake Cooperative Striped Bass Nursery and of specific interest to the PSBA, is the involvement of Juniata College which has a 450-acre field station on Raystown Lake. The Corps and PSBA members recognize that future scientists must develop a passion through hands on expereince and learning. The PSBA is working with Juniata College faculty to incorporate the nursery as an extension of their curriculum and provide opportunities for research projects and individual studies.

**Innovativeness:**

The Raystown Lake Cooperative Striped Bass Nursery has been a project discussed for many years. It has faced a long road of overcoming old strenuous relationships and developing new vibrant partnerships between Federal, state, and non-profit agencies. And, it has faced the challenge of "inventing the wheel". There are nurseries all over the county for trout and for salmon, there are even nurseries for striped bass; just none in the nation based on a local "club-non profit" level. To meet this challenge, the right group of individuals armed with not only passion, but equipped with the necessary biological knowledge to successfully spawn and raise striped bass were required. The individuals involved in this project are led by a veterinarian, with a specialization in mammal reproduction. The Corps and its partners have developed a strong relationship with the Pamlico Aquaculture Field Laboratory (exclusive North Carolina State University field laboratory completely dedicated to research on aquaculture species). This laboratory is the sole world source of domesticated striped bass and serves as the primary source of brood stock in the National Program for Genetic Improvement and Selective Breeding for the Striped Bass Industry. The lab has already provided the Raystown nursery with equipment, eggs for the trial phase, and is committed to providing adult striped bass for spawning.

**Conclusion:**

The Raystown Lake Cooperative Striped Bass Nursery project thoughtfully invests financial resources in a committed and focused effort to maintain the striped bass fishery. This Handshake Funding will be an investment, not only in building strong partnerships, but in sustaining one of America's greatest outdoor pastimes. When this nursery is in full operation, the result will be the only known cooperative, non-profit run striped bass nursery in the nation.

Double click on spreadsheet to access data entry fields and to enter Partner names. You MUST enter partner names into the spreadsheet:

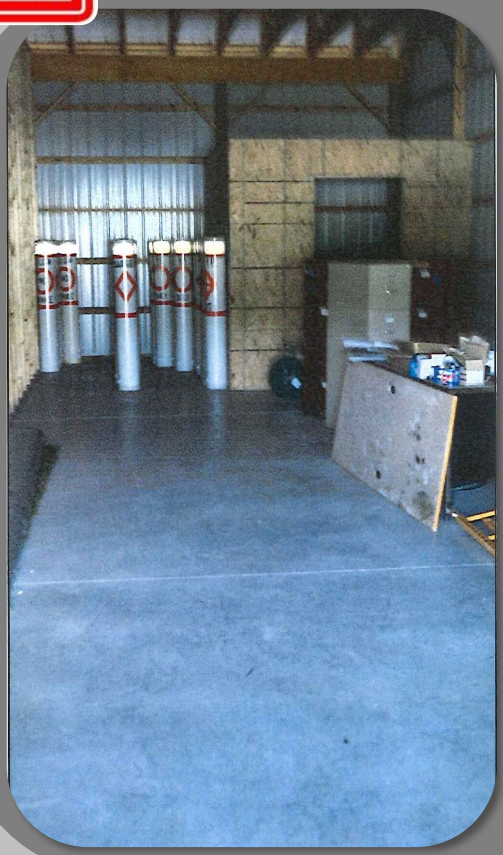
| | Local Corps Office | Handshake Funds | PSBA | FRL | HCVB | PAFBC |
|---|---|---|---|---|---|---|
| Salaries | $2,044 | N/A | $0 | $0 | $0 | $1,130 |
| Travel | $0 | N/A | $0 | $0 | $0 | $0 |
| Materials and Supplies | $0 | $9,000 | $2,500 | $0 | $0 | $0 |
| Equipment Use | $3,600 | $0 | $0 | $0 | $0 | $2,000 |
| Funds Contributed | N/A | N/A | $0 | $0 | $0 | $0 |
| Personal Property | N/A | N/A | $0 | $0 | $0 | $0 |
| Volunteer | N/A | N/A | $16,963 | $1,500 | $0 | $0 |
| In-Kind Services | N/A | N/A | $0 | $500 | $2,500 | $0 |
| Other (explain below) | $3,200 | $0 | $1,500 | $0 | $0 | $0 |
| **Total** | **$8,844** | **$9,000** | **$20,963** | **$2,000** | **$2,500** | **$3,130** |
| **Share of Total Cost** | 19.0% | 19.4% | 45.1% | 4.3% | 5.4% | 6.7% |
| | 38.4% | | | | | |

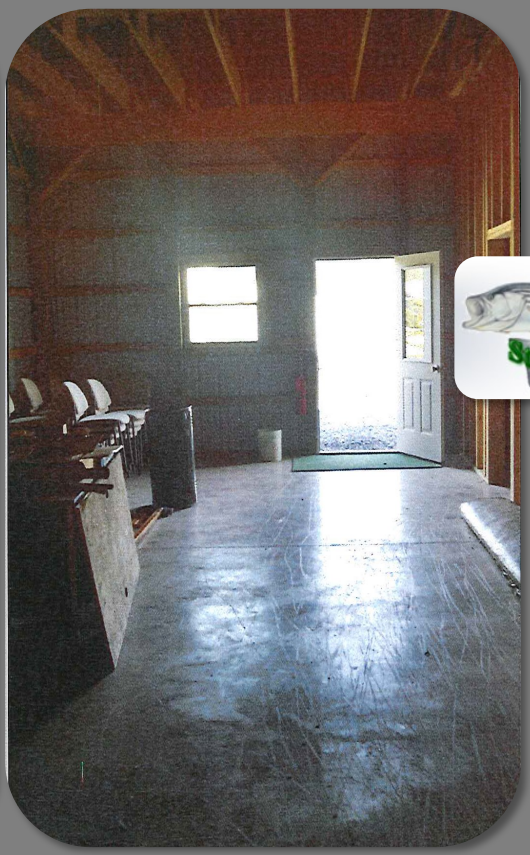
| | Partner 5 | Partner 6 | Partner 7 | Partner 8 | Partner 9 | Partner 10 |
|---|---|---|---|---|---|---|
| Salaries | $0 | $0 | $0 | $0 | $0 | $0 |
| Travel | $0 | $0 | $0 | $0 | $0 | $0 |
| Materials and Supplies | $0 | $0 | $0 | $0 | $0 | $0 |
| Equipment Use | $0 | $0 | $0 | $0 | $0 | $0 |
| Funds Contributed | $0 | $0 | $0 | $0 | $0 | $0 |
| Personal Property | $0 | $0 | $0 | $0 | $0 | $0 |
| Volunteer | $0 | $0 | $0 | $0 | $0 | $0 |
| In-Kind Services | $0 | $0 | $0 | $0 | $0 | $0 |
| Other (explain below) | $0 | $0 | $0 | $0 | $0 | $0 |
| **Total** | **$0** | **$0** | **$0** | **$0** | **$0** | **$0** |
| **Share of Total Cost** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0 |

| | Partner 11 | Partner 12 | Partner 13 | Partner 14 | Partner 15 | Total |
|---|---|---|---|---|---|---|
| Salaries | $0 | $0 | $0 | $0 | $0 | $3,174 |
| Travel | $0 | $0 | $0 | $0 | $0 | $0 |
| Materials and Supplies | $0 | $0 | $0 | $0 | $0 | $11,500 |
| Equipment Use | $0 | $0 | $0 | $0 | $0 | $5,600 |
| Funds Contributed | $0 | $0 | $0 | $0 | $0 | $0 |
| Personal Property | $0 | $0 | $0 | $0 | $0 | $0 |
| Volunteer | $0 | $0 | $0 | $0 | $0 | $18,463 |
| In-Kind Services | $0 | $0 | $0 | $0 | $0 | $3,000 |
| Other (explain below) | $0 | $0 | $0 | $0 | $0 | $4,700 |
| **Total** | **$0** | **$0** | **$0** | **$0** | **$0** | $46,437 |
| **Share of Total Cost** | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 100% |

Explanations: 1. COE Other (water usage charged to leased facilities on RLP). 2. PSBA Other (electricity bill).

# The Raystown Lake Cooperative Striped Bass Nursery





**Photos Left:** The maintenance facility prior to it's use as a striped bass nursery.

Pennsylvania Striped Bass Association

*"Fishing is much more than fish. It is the great occasion when we may return to the fine simplicity of our forefathers".*
~Herbert Hoover

**Photos Below:** Members of the PSBA work to convert the storage facility into the spawning areas viewed below.

# The Raystown Lake Cooperative Striped Bass Nursery

**Photo Top:** Nelson Wert, of the PSBA, explains to a boy scout group the purpose of the nursery and how the facility will be used.

**Photo Middle:** Bob Henderson, an avid striper fisherman on Raystown Lake looks through the microscope to view recently hatched fry as part of the trial phase of the cooperative nursery.

**Article Bottom:** An excerpt from the Huntingdon Daily News recognizing the opening of the hatchery.

Pennsylvania Striped Bass Association

*"A bad day fishing is better than a good day of work". ~ Author Unknown*

# striped bass hatchery opens at lake

**By DYLAN MILLER**
**Daily News Staff Writer**

An open house was held at a new striped bass hatchery located at Seven Points Recreation Area at Raystown Lake to introduce the new facility and to thank those who made the project possible.

"The U.S. Army Corps of Engineers (USACE) supported us and supplied the building, while the Pennsylvania Fish and Boat Commission gave us the permits as well as support from local biologists who have worked with us and helped obtain brood stock. It's a volunteer project through the PA Striped Bass Club,"

**See Hatchery**
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Photo by DYLAN MILLER

**Pennsylvania Striped Bass Club volunteer Nelson Wert, left, shook hands with U.S. Army Corps of Engineers park ranger Tara Whitsel, right, and lead ranger Jude Harrington after presenting them with a plaque for their significant role in establishing a new striped bass hatchery at Raysto Lake.**

# The Raystown Lake Cooperative Striped Bass Nursery

**Photos:** Members of the PSBA stock striped bass they purchased to assist the Pennsylvania Fish and Boat Commission in efforts to maintain the fishery. Stocking methods include using vessels to ensure distribution throughout the waterbody.

Pennsylvania Striped Bass Association

*"The charm of fishing is that it is the pursuit of what is elusive but attainable, a perpetual series of occasions for hope".*

~ John Buchan

**Biggest PA catches in 2014** (not pictured)

Landlocked

1. 46 lb. 0 oz.—Beltzville Lake
2. 28 lb. 12 oz.—Raystown Lake
3. 18 lb. 10 oz.—Raystown Lake
4. 18 lb. 9 oz.—Blue Marsh Arthur
5. 16 lb. 8 oz.—Lake Wallenpaupack