

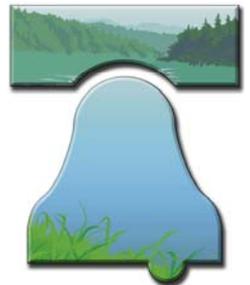
# Leaser Lake Fish Habitat Restoration Project



*Partnering to Provide Great Recreational  
Opportunities for the Residents of Lehigh County  
and Surrounding Communities*

**Leaser Lake Heritage Foundation, Inc.**

*Dedicated to the Restoration and Preservation of Leaser Lake*  
P.O. Box 202, New Tripoli, PA 18066 [www.leaserlakeheritage.org](http://www.leaserlakeheritage.org)



## Leaser Lake Heritage Foundation Board of Directors

### **George White - President**

George has a B.S. in Fisheries and Wildlife Management from Lake Superior State College in Sault Ste. Marie, MI. He is currently the sole proprietor of White Environmental Services, a consulting firm which specializes in Wetland Permitting, Environmental Impact Studies, Trail and Park Planning and Threatened & Endangered Species Studies. George lives in Lynn Township with his wife Wendy and their children Kelsey (12) and Drew (9). He is an avid outdoorsman who enjoys fishing, hiking, canoeing, and bird watching. George is also active in Cub Scout Pack 588, New Life Church and helps coach his children in several NYAA sports.

### **Carl Zvanut - Vice President**

Carl Zvanut has a BS from Lehigh University and a PhD from Cornell, both in Chemical Engineering and is a licensed Professional Engineer in the state of Pennsylvania. He is currently the Director of Research for the Merchant Gases Division of Air Products. His outdoor pursuits include hiking, fishing, sailing and canoeing. He is Vice President of the Leaser Lake Heritage Foundation and has been a member since the beginning.

### **Randy Metzger - Secretary**

Randy is a 1998 graduate of Mansfield University with dual Bachelors Degrees in Fisheries Biology and Environmental Science. He has worked as a biologist, lab chemist and is currently a 9<sup>th</sup> grade science teacher. He is chairman of the habitat restoration committee and has been with the Leaser Lake Heritage Foundation as a board member since its inception. Randy loves the outdoors and spends many hours in the field hunting and fishing. He is active in the Heidelberg Fish and Game Association and holds the position of Assistant Chief of a local fire department.

### **Janice Bortz - Treasurer**

Janice Bortz is a 1977 graduate of Northampton Community College and a 2008 graduate of Albright College earning a Bachelors Degree in Accounting. She has 14 years experience with local government services, employed the past 9 years as the secretary-treasurer for a second-class township in Lehigh County. She has served in volunteer capacities with the Great Valley Girl Scout Council, as a troop-leader and as president and vice-president of the local PTA. She has been with the Leaser Lake Heritage Foundation as a board member since its inception, serving as treasurer for the past 3 years.

### **Dave Hoch - Trustee**

A graduate of Northwestern High School in 1977, Dave received an Associates Degree in Business Administration from Lehigh Carbon Community College. He began working at New Tripoli Bank in 1982 and currently is Vice President of Retail Lending. Dave is also the Treasurer for the Heidelberg Game Protective Association and the Lehigh County 4-H Development Fund. He is life member of Ontelaunee R & G Club, as is his wife, LeAnn, and their three children, Dianna, Kaitlyn, and Andrew. All of them have a love for the outdoors. Dave is an avid hunter and fisherman. He grew up with Leaser Lake as a great place to spend a day fishing or canoeing. It was the place, as a Boy Scout, that he learned to canoe, and that experience took him on many trips down the Lehigh, Delaware, and Susquehanna Rivers, and one trip, a 50-miler on the Allagash River in Maine. Dave has been a member of the LLHF Board of Directors since the inception of the organization and was its initial Treasurer.

### **Marc Grammes - Trustee**

Marc is a 1983 Graduate of the United States Merchant Marine Academy at Kings Point, New York. He is a US Navy veteran, having served in the enlisted and officer ranks. Marc has over 25 years experience in the power plant industry, and holds a senior reactor operator certification at an 1100 MW nuclear power plant in upstate New York. He is currently a member of the operations staff at a 120 MW cogeneration facility in Northampton, Pa. He is a former Lehigh County Commissioner, and is a founding member of the Leaser Lake Heritage Foundation. He currently serves as a founding member of the Board of Directors of the Lehigh Valley Zoological Society. While a Commissioner he has served in an ex-officio capacity as a member of the Board of Directors of the Wildlands Conservancy, the Lehigh County Historical Society, and the Lehigh Gap Wildlife Refuge. He serves in advisory capacity to the Boards of Trustees of the Northern Lehigh Community Center and Northern Lehigh Future Focus. He is a past president of the Slatedale Athletic Association. He has been active in Scouting, having served as an assistant scoutmaster, Venture Crew Committee Chairman, and North Valley District Chairman. He and his wife Elizabeth have four children, and reside in the Village of Slatedale.

### **Harry B. Burger - Trustee**

Raised on a family farm in the Perkiomen Valley, Harry and wife Shirley attended Schwenksville High School. He served in WWII and stayed in US Army Reserves for a total of 23 years. Retired with rank of Lt. Colonel Obtained Bachelors, Masters and Doctorate at Temple University, in the profession of public education. He served as a teacher, Supervising Principal, Assistant County Superintendent, and District Superintendent. He retired as Superintendent of School for Northwestern Lehigh School District. He also taught at Valley Forge Military Academy and also a couple of college courses. He is a member of the Union United Church of Christ, Neffs, PA. Harry is an avid outdoorsman with hunting and fishing top on the list.

## Habitat Management Project

In 2008 the Leaser Lake Heritage Foundation became a cooperating partner within the Pennsylvania Fish and Boat Commission's "Adopt A Lake" program. Since then our chairman of the Habitat Restoration Committee, Randy Metzger, has been working diligently with the Pennsylvania Fish and Boat Commission's Habitat Management Division to create a plan for the lake.

Habitat Management has come a long way since the early days of using old tires and wooden pallets to create fish structures on the lake bottom! Today there has been a concerted effort to design fish structures which are not only created to provide excellent fishing opportunities but work towards a better understanding of the fish's biological needs and address those needs in an environmentally friendly manner.

At Leaser Lake we have been given a rare opportunity. Due to dam complications in the past, and the subsequent complete draining of the lake for reconstruction we are provided the opportunity to see first hand how truly devoid the lake bottom is of the necessary habitat needed for fish to survive and thrive, creating unlimited recreational opportunities for anglers. When lakes are created, many times they are cleared of unnecessary obstructions for dam safety reasons or over time have accumulated siltation and have become lacking of the necessary structures fish need on a daily basis for all aspects of their life cycles from spawning to foraging for food. Leaser Lake unlike many lakes in the Commonwealth has a rather different look to it, one that makes the Pennsylvania Fish and Boat Commission (PFBC) very excited. It's numerous coves and the excessive amount of shoreline for its modest 117-acre size creates an environment with many opportunities while creating a very user-friendly location for anglers. Because of this, the PFBC has created their biggest project to date and has been showing a "full steam ahead" attitude towards this large-scale habitat project. Their dedication to this project shows in their contribution of \$36,640 in in-kind services toward the project, with an additional \$6,000 contribution towards materials over a two-year period. The importance of this timely project involves the draining of the impoundment which will allow us to gain access to the lake bottom with heavy equipment and install the structures. The time is now, and we cannot wait to get dirty and create some great fishing opportunities for the residents of this county and surrounding areas.

Included in this portfolio is information which explains the importance, construction, and cost-implications of the project we are hoping you will help fund. The tireless hours of volunteering are finally coming to fruition. Time is of the essence. The existing water pool is in its final stages of being drained, fish salvage operations are beginning, and construction of the dam and new fish habitat structures are about to begin. We have worked so hard to create a place close to home where people can be proud of what they have, what they've accomplished, and feel good they have created a recreational centerpiece to their community. Please join us in our quest to return Leaser Lake to the hidden treasure it once was in Northwestern Lehigh County.

## The Importance

Fisheries potential is directly related to the individual impoundment's production factors. These factors combine to provide the production and reproduction limits of all aquatic life within an impoundment. One aspect of these production factors, are the general types of habitat fish need to naturally propagate in the artificial environment of an impoundment. When created the impoundments are often defaced of trees and vegetation due to safety concerns and aging. In order to account for this loss of habitat quality, we must incorporate man-made structures, which are durable, simple to construct and have a relatively long life span when submerged.



Fish need different types of habitat structures for many reasons. Sometimes spawning and nesting structures are not present in a lake which requires appropriate substrate and often times overhead cover. Lack of spawning and nesting sites could directly affect natural reproduction cycles.

In order for the young of year fish to survive they need ample cover to provide an area to escape from predators. For these fish to survive to a juvenile stage, it is imperative they have sufficient cover. Second year juveniles require refuge not only from larger predatory fish but also predators outside of their aquatic habitat. These structures are important for their survival to adulthood. Some fish require different habitat types for foraging and ambush feeding. Whether it is an unsuspecting fish hiding in a dense weed bed, or a bluegill searching for an aquatic insect to eat along the rocky shore, habitat is important for all sizes of fish and also the other aquatic organisms living in the lake. And finally, believe it or not, fish need rest. Not necessarily sleeping but not accomplishing their "survival tasks." Depending on the species different fish have different resting requirements and you got it, they utilize different habitat structures to accomplish this important task.

Many people may ask, why would someone spend money to put stuff in a lake so fish might swim around it every once in a while? The key to this project and the answer to that very simple question is that we are looking to provide the fish with structures they need to survive and thrive. We will create structures which are missing in their current natural environment, and structures that will last a very long time, are safer, more secure, and will DEFINITELY create great fishing opportunities for all.

## Construction



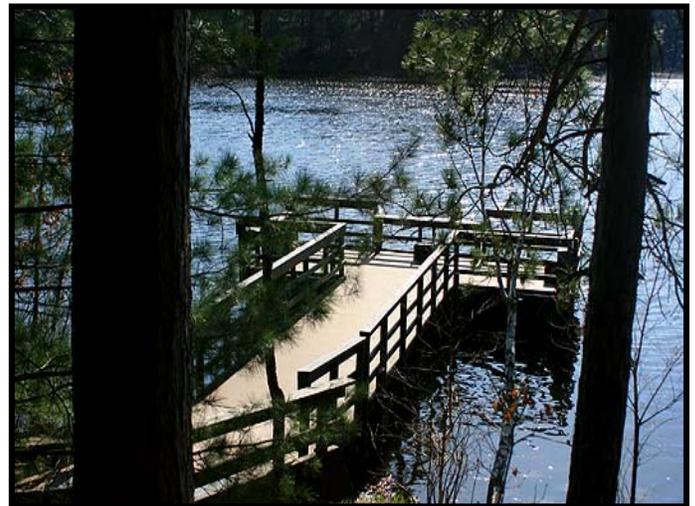
**ACQ Post Structures** are used to simulate either standing timber or old dock posts. They are exceptional cover for fish of all species and are environmentally friendly. They have been proven to provide exceptional fishing opportunities.



**Spider Hump Structures** provide overhead cover for juvenile fish. The structures resemble brush piles which over time deteriorate. Like many of the structures they provide cover in areas often void of any natural habitat.



**Porcupine Crib Structures** create ideal areas for young of year fish to congregate and survive predation. These structures will be built as a youth project involving many local groups. It will provide a great opportunity for community involvement.



The Pennsylvania Fish and Boat Commission has provided for the construction of a **handicapped fishing pier**. Large rock habitat structures will be placed around the pier to create great fishing for all.

## Cost Implications

The spreadsheet below summarizes the costs associated with this project. At a project cost of \$100,114, this project will become the largest project proposed and completed by the Pennsylvania Fish and Boat Commission to date. As you can see from the cost estimate, \$31,640 will be contributed by the PFBC through in-kind services ranging from equipment to expertise and manpower. The Leaser Lake Heritage Foundation has been tasked with raising an additional \$63,474 for the purchase of all the supplies, including rough cut lumber and aggregate for the project. Due to our involvement as a cooperating partner in the Adopt-a-Lake Program, we are entitled to \$6,000 in PFBC funds for purchase of materials. This will help to defer some of the cost of the project, but we are far from our goal.

Our mission is to raise these funds through partnerships with local charities, interested individuals and corporations. We feel there is a real need to keep this a community based project. It is our goal to not only obtain the money locally to support this project, but to also purchase as many of the materials as possible from local vendors, boosting our economy here in the area.

We hope you would like to become involved with this project because it has the ability to affect so many lives now and in the future. There are very few exceptional passive recreation facilities in our local area. To become involved with a project such as the restoration of Leaser Lake shows your community that you care. This project has been a true grass-roots effort from the beginning and like Frederick Leaser after whom the lake was named, we will overcome adversity and accomplish something which will take its place in history. Please partner with us in restoring this great jewel of Northwestern Lehigh County.

### Large Scale Lake Habitat Project Cost Estimate

#### Material Cost Estimate

<u>Item</u>	<u>Quantity</u>	<u>Unit Price</u>		<u>Cost</u>
R-7 (15"-30") Stone	780 Tons	\$25.00/ton	=	\$19,500.00
R-4 (6"-12") Stone	1080 Tons	\$20.00/ton	=	\$21,600.00
6" ACQ Posts	1140 Posts	\$18.31/post	=	\$20,874.00
Hemlock Posts	160 Posts	\$5.00/post	=	\$800.00
4'x225' jute mat	4 rolls	\$112.50/roll	=	\$450.00
2"x6"x8' Hemlock Boards	35 Boards	\$4.00/ board	=	\$140.00
10" Spikes	200 Spikes	\$0.55/spike	=	\$110.00
<b><u>Total Material Cost Estimate</u></b>				<b>\$63,474.00</b>

#### In-Kind Services (PFBC)

2 Skid steers for four weeks	=	\$8,000.00
1 Excavator for two weeks	=	\$2,700.00
3 Equipment Operators for four weeks	=	\$11,520.00
1 PFBC Habitat Manager and 2 Assist Managers for four weeks	=	\$9,420.00
<b><u>Total In-Kind Services</u></b>		<b>\$31,640.00</b>

#### Rental

Excavator with hydraulic thumb for two weeks (PFBC Contribution)	<b>\$5,000.00</b>
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#### Estimated Project Value

**\$100,114.00**

## Project Schedule

According to Gerry Woomer from PFBC Engineering Section, the final plans for the dam repairs are being completed by Schnabel Engineering and permit applications are pending. Mr. Woomer says that the project appears to be on schedule and on budget. As of now, the schedule for the restoration of Leaser Lake is:

Completion of Plans & Permits	Summer, 2009
Project goes out to Bid	Fall, 2009
Beginning of Construction	Winter, 2009
Fish Habitat Improvements	Spring – Fall, 2010
Completion of Construction	Winter, 2010
Completion of Lake Re-Filling	Fall, 2011

Based upon the current fisheries management plan, we anticipate that there will be a fishing moratorium for a period of time after the lake is filled to allow the fish population to rebound.

## How to Become Involved

Meetings of the Leaser Lake Heritage Foundation are held on the fourth Thursday of every other month at 7:00 pm in the Lynn Township Municipal Building on Route 143 just north of the Lake. Membership in the Leaser Lake Heritage Foundation is open to anyone interested in the restoration and preservation of Leaser Lake. Membership dues are as follows:

Students:	\$5 per year
Adults:	\$15 per year
Families:	\$25 per year
Lifetime:	\$150

For more information on the Leaser Lake Heritage Foundation and to download a Membership Application, visit our web site at [www.leaserlakeheritage.com](http://www.leaserlakeheritage.com).

## Contributions

The Leaser Lake Heritage Foundation, Inc. is a 501(c)3, non-profit organization, so all donations are tax deductible. Donations can be mailed to the Leaser Lake Heritage Foundation, P.O. Box 202, New Tripoli, PA 18066. Our non-profit tax ID number is available upon request.

## Guest Speakers Available

If your organization is interested in learning more about the restoration efforts at Leaser Lake, we may be able to provide a speaker for your next meeting. For more information, please contact George White at [gwhite@leaserlakeheritage.org](mailto:gwhite@leaserlakeheritage.org) or Randy Metzger at [rametzger@bmsd.org](mailto:rametzger@bmsd.org).

## **Leaser Lake Heritage Foundation Mission Statement**

*The Leaser Lake Heritage Foundation, Inc. is a non-profit organization established to promote the historical, agricultural, and conservation heritage of Leaser Lake and the surrounding parklands owned by the Commonwealth of Pennsylvania and the County of Lehigh. The Foundation shall endeavor to assist with improvements to the park, including infrastructure repair, in order to provide recreational opportunities to the citizens of the Commonwealth. Open space preservation shall be a top priority of the Foundation, as well as educating the public in the principles of conservation of natural resources. The historical significance of the property, named after Frederick Leaser, American patriot and local farmer who transported the Liberty Bell to safety from Philadelphia to Allentown during the Revolutionary War, shall be preserved and passed on to visitors. The agricultural significance of the region shall be promoted by the organization in literature and dedication of park property to recognize those who have contributed to and pioneered the concept of farmland preservation.*

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Leaser Lake Heritage Foundation  
P.O. Box 202  
New Tripoli, PA 18066

***TO:***

*Dedicated to the Restoration and Preservation of Leaser Lake*