



# ENCHANTMENT AT HIGHTSTOWN - FISH SURVEY

HIGHTSTOWN, MERCER COUNTY, NJ

## Prepared For:

Enchantment at Hightstown  
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## Prepared By:

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Princeton Hydro, LLC (Princeton Hydro) is pleased to submit this proposal to Enchantment at Hightstown (Enchantment) to perform a fishery survey of the pond at the main entry of the of the condominium complex in Hightstown, Mercer County, New Jersey. The fish survey is being conducted as part of a request to stock the pond with more fish in an effort to mitigate the bullfrog population. In issuing a Fish Stocking permit, the New Jersey Department of Environmental Protection (NJDEP) typically stipulates knowing the current community composition of a water body. This will be accomplished by a fish survey to understand the fish community structure to all practical extents through active capture and the subsequent release of fish.

Princeton Hydro has conducted numerous fish surveys and salvage operations as part of various lake lowerings, as well as dredging and dam repair/removal projects. We are recognized by the NJDEP as a qualified contractor for the implementation of such work. We maintain in-house all of the equipment needed to conduct fish survey operations. The fish salvage operations proposed herein will be conducted by staff with fishery training who will be working under the direct supervision of Senior Aquatic Ecologist, Jack Szczepanski PhD.

The services that we will provide for this project are divided into the following inter-related tasks.

#### **Task 1 – Permit Acquisition**

There is one permit application related specifically to fish survey activities that will need to be filed before the survey can be conducted. Fish surveys require the active capture of fish which is a permitted activity requiring a Scientific Collecting permit. This permit is issued by the NJDEP's Bureau of Freshwater Fisheries under the applicant's (Princeton Hydro) burden of proof of qualification, applicability, and other parameters. The Bureau of Freshwater Fisheries typically requires that permit applications be submitted 60 days in advance of the scheduled work. The fee below includes the cost to prepare the permit application as well as the permit fees. The fish community survey can commence once the permits has been issued by NJDEP and have been received by Princeton Hydro.

**Task 1 Fee:   \$350.00**

#### **Task 2 – Fish Survey and Related Field Services**

Once permit is acquired, Princeton Hydro will initiate the fish survey. The fish survey operation will largely rely on the use of electrofishing gear. Electrofishing is a non-lethal method that temporarily stuns fish; facilitating their capture and removal from the lake for proper identification. Stunned fish will be collected using dip nets. The extent of the generated electrical field is small, with a radius of approximately 5 to 10 feet dependent on water quality conditions, which requires continuous generation of the electric field by the operator during the active salvage operation. Operation of the electrofishing equipment and capture of the fish stunned by this gear will require the use of boat, boat operator and electrofishing operator. All Princeton Hydro personnel assigned to this project will be degreed scientists with extensive field experience in the collection and transfer of fish. We propose to work from a 12' aluminum jon boat equipped with the appropriate electrofishing rig. The fish survey performed by Princeton Hydro will be conducted in a safe, efficient manner accounting for site specific conditions and conducted in accordance with the company's safety protocols, including the Electrofishing Safety Plan. It should be noted that other gear types and methods may be utilized, including seines, trap nets, gill nets, and/or minnow traps.

Collected fish will be placed in large temporary holding containers and carefully identified and later released back into the pond. There will be no directed effort to capture turtles or frogs, but if any are observed or captured incidentally, they too will be counted and reported. As a caveat, it is important to remember that the capture of all fish is impractical and impossible given time and budget constraints, and more importantly with regard to the safety of the workers. It is also not a requirement of the NJDEP permit. As such, all **reasonable efforts** will be made to get the best population estimate possible.

Additionally, in order to make recommendations on the feasibility and extent of possible future fish stocking, Princeton Hydro will perform basic bathymetric evaluation of the pond. This will be done by conducting a series of transects across and along the pond. Depth of the water to unconsolidated sediment and depth to consolidated bottom will be measured using a calibrated probe.

Given the size of this *pond*, it is anticipated that the *survey* will take as much as two (2) *separate* days. *The first day will be spent gathering a majority of the fish community data and setting out collection gear that is intended to soak overnight. The second day will be used to collect bathymetric data and any fish collected in traps through the night.* The fee quoted below covers all costs associated with labor, material, equipment, travel and expendables for up to two (2) days of field time.

**Task 2 Fixed Fee:     \$4,500**

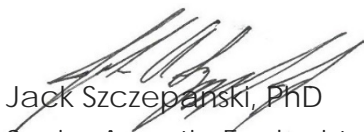
### **Task 3 – Reporting and Project Administration**

All results will be compiled into a final report. Report will include fish population data, basic bathymetric information with corresponding GIS map depicting depths at various points in the pond, and feasibility of future potential fish stocking with recommendations. This task also covers correspondence, logistics, planning, and addressing the final report results with Enchantment and the Board if needed.

**Task 3 Fixed Fee:     \$1,900**

Total Fee for this work as outlined above is a Fixed Fee of **\$6,750.00**. If you wish to proceed with the work outlined in this proposal please contact me and I will forward you a contractual agreement. A signed receipt of one copy of the contract will serve as our authorization to proceed. Should you require further information on any aspect of this proposal please do not hesitate to contact me at 908-237-3481.

Sincerely,



Jack Szczepanski, PhD  
Senior Aquatic Ecologist, Princeton Hydro, LLC

Cc:     file