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The BottomLands Waterfowl Conservation

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Mississippi Flyway Restoration Project Proposal

Abstract

This letter is a proposal from The BottomLands Waterfowl Conservation to request permission and permits from the US Army Corps of Engineers (USACE) to provide a waterfowl nesting box project on the land owned by the USACE along the waters of the Mississippi River. This proposal includes a report of declining waterfowl populations into recent years, and offers a sustainable solution to increase waterfowl populations in the state of Missouri by way of the Mississippi River. A detailed description of each nesting structure is provided with attention to species of waterfowl each structure is created to primarily serve. Each design proposition holds the information of materials used in the structure as well as visual representations of the design itself. Servicing and maintenance for the project have been formulated and are noted later on in the proposal. Funding for this project is included nearing the close of the proposal as a whole. It is important to remember this project is not only benefitting the conservation of waterfowl in the Missouri area, but the ultimate restoration of the Mississippi Flyway.

Introduction

The BottomLands Waterfowl Conservation was founded due to the fact that the Mississippi flyway has failed to generate the same level waterfowl production as it has in the past; numbers are below standard. Our nonprofit organization would like to be a contributor and efforts to restore waterfowl populations along the Mississippi River directly, and neighboring lands throughout Missouri.

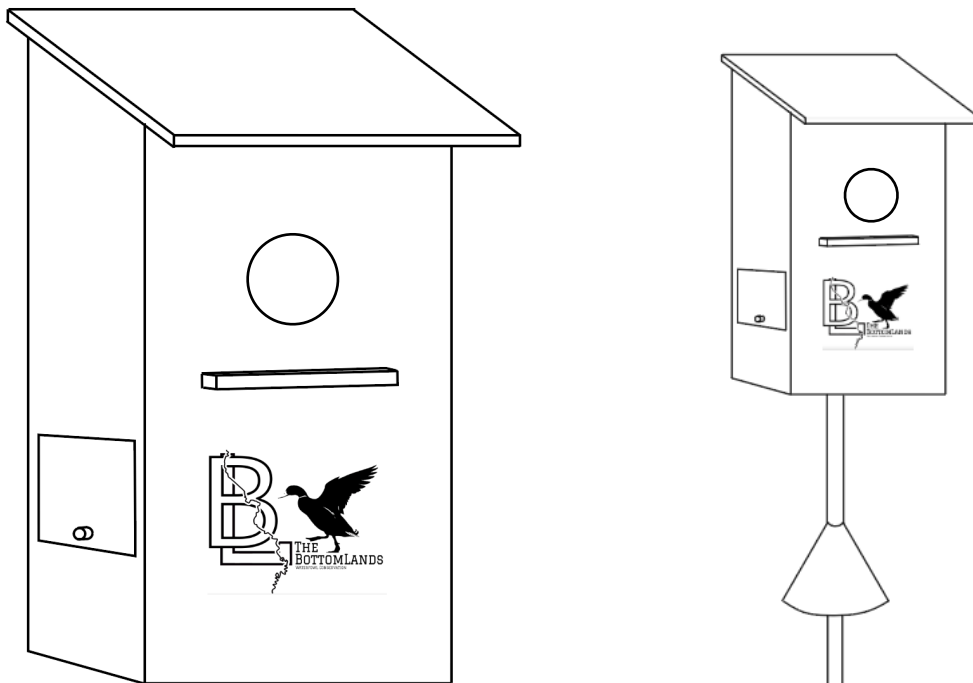
As recorded in the U.S. Fish & Wildlife Service's Mississippi Flyway data book *Waterfowl Harvest And Population Survey Data (preliminary 2022)*, the Mississippi Flyway has seen decreased numbers of duck populations in the past several years. With a total 5,912,146 recorded ducks observed in the Mississippi Flyway in the year 2022, the region suffers from a deficiency of nearly 45.6%, compared to 1964 when over 10 million ducks were observed.

In more recent statistics, numbers show that populations remain in an overall decline. Within the last 15 years, duck populations have dropped nearly 35% from 2010 to 2022. An estimated 4 million population loss in only 12 years is an unacceptable production loss. We, The BottomLands Waterfowl Conservation, feel confident that a partnership with the US Army Corps of Engineers will lead to a transformation in the sustainability of ducks within the Mississippi Flyway.

Inspired by the dramatic decline in duck populations, we have created a solution. With the permission and support of the USACE, The BottomLands Waterfowl Conservation (TBWC) would like to place nesting boxes along the Mississippi River on USACE land. We utilize three designs for nesting shelters that each offer different purposes depending on species and habitat. Each box design will include: the structure itself built with untreated cedar/cypress/or pinewood, insulation implements, small holes for drainage and ventilation, a phone number for contact, and a TBWC logo.

Design & Methods

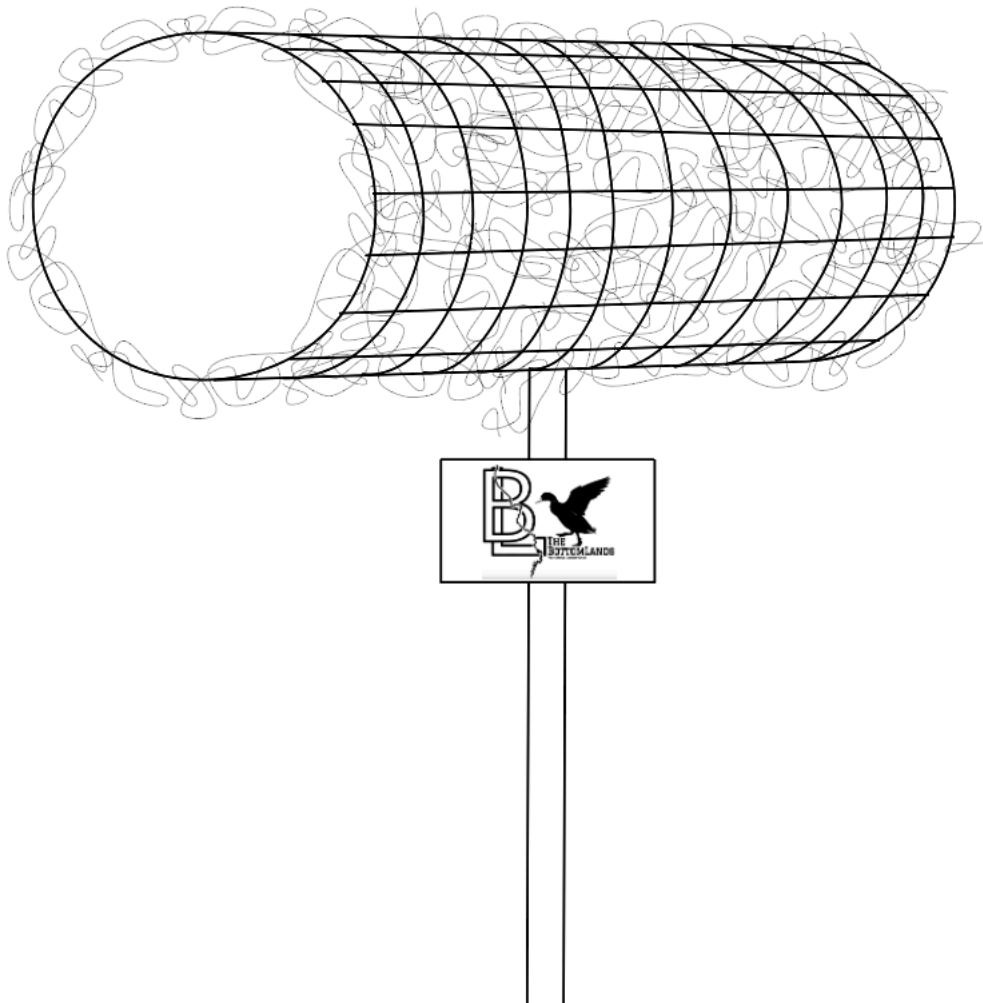
The first nesting design is a standard wood duck box. Designed specifically for cavity-nesting ducks, such as Wood ducks, Buffleheads, Goldeneyes, and Mergansers; This design allows for easy access into the structure for maintenance as well as protection from predators, creating a comfortable safe place for cavity-nesting ducks to rest and reproduce. The structure itself will be constructed from cypress wood; should cypress be unavailable, these boxes will be made using cedar or pinewood. The inside of these boxes will contain wood shavings or sawdust for insulation and reproduction purposes. These insulation implements will be replaced, at minimum, bi-annually by our team and volunteers.



If permissible by the US Army Corps of Engineers, we would like to request that a portion of these boxes be mounted to healthy trees using four (4)-inch aluminum nails. Aluminum will not rust or corrode, thus will not damage the tree. Tree mounts provide a more natural look and are less susceptible to human interaction. If there are restrictions on how we

proceed with tree mounted boxes, we would gladly collaborate with the appropriate entities to ensure successful and safe installation

Our second design is a nesting tube. It is best suited for grasslands and marsh habitat, however it may also be used on shallow open water. The nesting tube allows for protection from the elements and from many predators. Nesting tubes are also important to increase survival rates during hunting season. These tubes will be made with gridded wire fencing material, and filled with grasses to allow for strong insulation and protection from the elements. The inside of the tube will include hay or straw, whichever is permitted. Nesting tubes are particularly well-suited for reproduction among Mallards. These tubes are also perfect for serving as escape holes during hunting seasons and will allow many species to take advantage of this benefit.

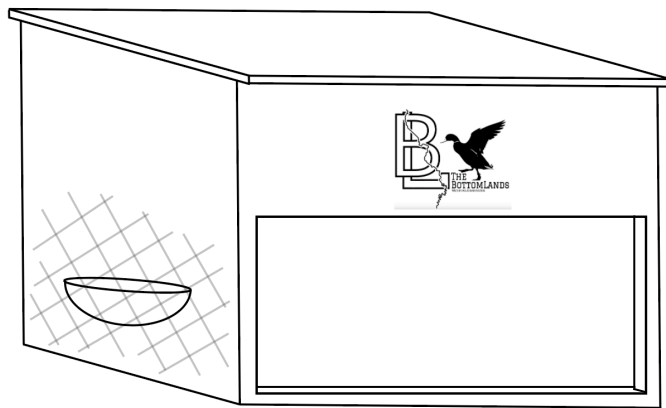


Our last and quite possibly most important design is the differential Mallard/puddle duck nesting home. There will be two different designs for this structure. Both designs will feature a spacious box with an interior stationary bowl to help with reproduction. All boxes will include implements of wood shavings, hay, or straw, whichever options be permitted; these implements will be replaced frequently by our team and volunteers. The top of these enclosures will open like a car trunk door for easy access and will have a locking mechanism so that predators or unauthorized users may not easily invade the enclosure.

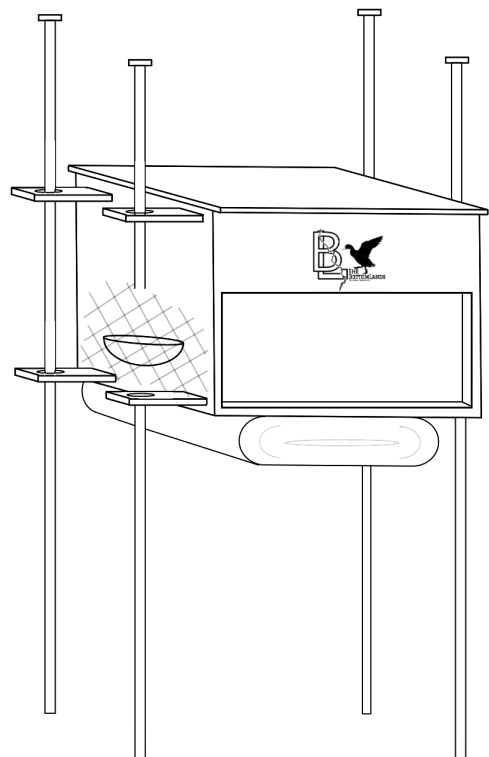
The basic design as seen in visual (A), is primarily constructed to lay on the ground. We have also designed a structure that allows access for ducks directly on the water. The complex design as seen in visual (B), is the differential nesting box which is specifically built for the Mississippi River. The Mississippi river and its water levels will rise and fall due to several factors (eg. snowmelt, rainfall, drought, flooding). This unique design allows for the structure to remain buoyant at water level preventing boxes from being flooded out, or being at a fixed suspension high off the water (which would otherwise result in being an obstruction to waterfowl hunters). This structure sits on flotation buoys and connects to a set of poles that act as rails, which will allow the nesting box to rise and fall with water levels, ensuring for a safe home even through minor flooding.

These structures will be surrounded and/or covered with grasses, to allow for a more natural enclosure.

Visual (A).



Visual (B).



Project Maintenance & Sustainability

Our organization will be responsible for maintenance, upkeep, and overall care for these nesting boxes. If granted permission from the USACE to place these boxes throughout the properties along the Mississippi River, we have a standard procedure for servicing the proposed nesting boxes.

All nesting boxes will be serviced at least twice annually; once in the Spring and again in the late Summer/early Fall, before the early wood duck & teal season begins. TBWC will also create extra service days after major flooding occurrences that impact the areas these structures will be placed. This servicing schedule will allow for adequate living conditions inside the structure.

Servicing will include: necessary repairs to the structures, and replacement of hay, straw, or wood shavings. Replacing these implements will help to prevent the cavities from developing mold growth and possible avian diseases, by-products of soilage. As a conservation organization, we will also provide debris/litter removal. It is just as important to us to keep the land clean, even if the debris is not by our doing. If the USACE requests that we notify the agency upon days of servicing or of any other information, we will happily accommodate this request.

Confirmed Data

Nesting homes are a proven solution to increase waterfowl populations. There are plentiful research projects proving that nesting boxes increase wood duck populations; however, for puddle ducks, there is very limited research. However, a study carried out by Delta Waterfowl has in fact published research on nesting structures for Mallards. In their article, *Hen Houses*, the organization supported the use of nesting homes. They came to the conclusion that nesting homes “consistently boost nest success to more than 60 percent... (and) can increase nest success up to 80 percent” (Delta Waterfowl). This statement should continue to be true to how waterfowl along the Mississippi River will react to TBWC nesting homes. With the addition of our nesting boxes we strongly believe Missouri will see an incredible influx of Mallards, Pintails, and other puddle ducks cruising on the river once again.

Funding

Funding for this project will be initially sustained by The BottomLands Waterfowl Conservation's own capital. Our organization is holding fundraising events specifically to champion this project. On June 8th, we are hosting a sporting clays event at the Blackhawk Valley Hunting Preserve in Old Monroe. We plan to use all funds raised from the event to purchase supplies to build a projected 100 nesting structures: 40 Mallard/puddle duck nesting homes, 35 nesting tubes, and 25 Wood duck boxes. Our overall purpose of this project is to educate future generations about waterfowl conservation and rebuild an abundant waterfowl population along the Mississippi Flyway so that the flyway will avoid irreversible damage.

Closing Statement

The BottomLands Waterfowl Conservation would like to request a grant of permits by the authority of the US Army Corps of Engineers, gaining permitted access to place waterfowl nesting structures, constructed by The BottomLands WC, on the USACE owned land along the Mississippi River. This grant would allow for the increase of waterfowl populations in the Missouri area, and thus playing a positive role in our mission to restore the Mississippi Flyway all together.

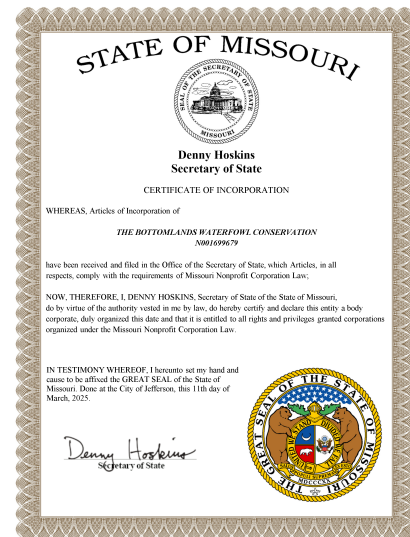
As the founder of this organization, my team and I would love to see your support and personally invite you to our sporting clays event on June 8th, 2025. Such attendance would be of incredible significance to our attendees and would help display the thoughtful partnership and alignment between The BottomLands WC and the US Army Corps of Engineers as we work toward serious improvements in waterfowl conservation.

Thank you for the time you have taken out of your day to review this proposal. It is not only appreciated by The BottomLands, but by myself, my team, and waterfowlers all throughout the Mississippi Flyway.



Christian Maldonado

“SAVE THE MISSISSIPPI”



To visit our website, scan the QR code, or type <https://thebottomlands.com> into the URL bar.