BERLIN FALLS PARK INTERPRETIVE PLAN

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Photographs by Ethan Holland, Frode Jacobsen, Maryland Herp Atlas, Nancy Powell, Jim Rapp, Dave Wilson.

CONTENTS

Introduction	1
Opportunity	2
Objectives	2
Methods	2
Map	3
Management	5
Wildlife/habitat	5
Hydrology	8
Interpretation	9
Play areas	11
Marketing	12
Compatible uses	13
Interpretation and restoration budget	15
Web resources	16
Funders	16
Providers	16

A pair of out-of-town visitors survey the ponds for ducks and turtles.

INTRODUCTION

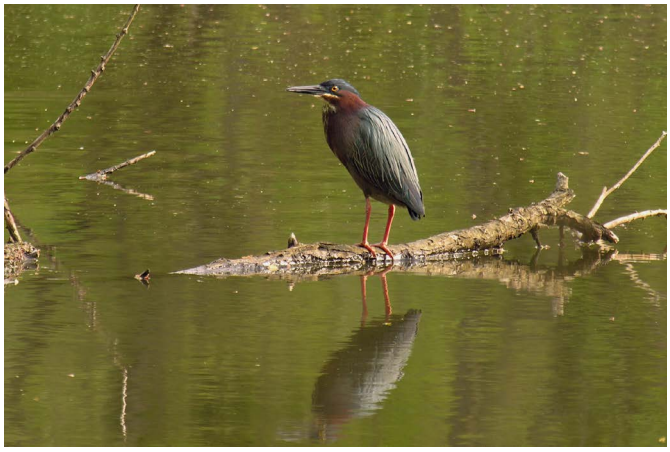
Owned and operated by Hudson Foods and later by the Tyson corporation, what is now Berlin Falls Park has undergone a unique transition. The 40-year old chicken processing plant was acquired for development by Berlin Properties North LLC in 2005 and purchased by the town of Berlin for a park in February 2016. Wastewater from the 64-acre plant formerly flowed into Kitts Branch which drained to Trappe Creek and ultimately out to Newport Bay behind South Point and Assateague. The closing of the plant has improved water quality in these bodies, albeit gradually.

After closing, the site quickly became a hot spot for birders who flocked to the ponds in winter, spring, and fall to see a variety of ducks, wading birds, and hard-to-find shorebirds. The 180 species seen at the site (ebird.org/ebird/hotspot/L467175) are testimony to the property's avian abundance. The shallowness of the ponds and location along the Atlantic migratory flyway make it an ideal spot for migratory birds. But beautiful residents, like green herons, wood ducks, indigo buntings, and blue grosbeaks, breed there too. With a little coaxing, blue birds and other iconic species could be added to that mix.

Research conducted during the Maryland Amphibian & Reptile Atlas shows the ponds to have an abundance of painted turtles which share the water bodies with red-bellied cooters and snapping turtles. The park is also famous for its pair of otters that feast on sunfish residing in the upper ponds.

Know the flow. *The ponds at Berlin Falls Park drain into Kitts Branch which flows to Trappe Creek and ultimately empties out to Newport Bay behind South Point and Assateague.*

Migratory birds are one of the park's biggest draws.



Green herons nest in the floating aquatic plants in the upper ponds at Berlin Falls Park.

OPPORTUNITY

Berlin Falls Park promises to bring a popular natural amenity to the town. The park enjoys the perfect combination of higher impact usage on its road-frontage end and more passive usage in its interior. The well-known birding hot spot, otter playground, and painted turtle haven boasts natural assets that can be stewarded, enhanced, and advertised. The park can serve as a hub for visiting birders, cyclists and outdoor enthusiasts to begin their exploration of Berlin and the surrounding region via road and rail, and return to Berlin to stay and play.

This proposal is designed to offer ways to keep and enhance these natural amenities and make them a central attraction for park visitors. The marketability of these features is limitless. At the same time, the sensitive nature of these natural assets render them susceptible to disturbances in hydrology and habitat type and quality. This plan aims to interpret these natural features and ensure they remain a central attraction to the park--both through habitat protection and enhancement and through advertising Berlin as a place to enjoy not just cultural, but natural gems.

OBJECTIVES

This proposal seeks to:

- Offer ways to protect and enhance the park's natural habitats and the species that inhabit them.
- Draw out these natural features with an interpretive plan highlighting natural features such as plants and wildlife
- Make recommendations for green infrastructure and play/interpretive areas
- Recommend how to market natural features
- Suggest compatible uses

METHODS

Conservation Community Consulting, LLC made 14 site visits between November 2016 and June 2017 with representatives from USDA and town administration and public works departments to assess the site and devise a plan of action. With guidance from the town, Conservation Community Consulting, LLC used data or input from the Maryland Department of Natural Resources, Maryland Coastal Bays Program, USFWS, USDA's Natural Resources Conservation Service, Maryland Biodiversity Project, Cornell Lab of Ornithology, and Audubon Maryland–DC to help frame recommendations for wildlife enhancements at the park.

MAP

DRAFT HABITAT DEVELOPMENT PLAN
BERLIN FALLS PARK
BERLIN, MARYLAND
Legend
EXISTING FEATURES
Property Boundary
Railroad
Trail
Drainage
PROPOSED FEATURES
Trail
Emergent Wetlands
Hardwood Tree Planting
Shallow wetland plants
Hedgerow
Wetland restoration area
Island
Meadow
Mowed Grass
For turtles, birds, snakes and other wildlife
Mudflat
Scrub-shrub Wetland
Restored Forested Wetlands
Access Point
Basking Structures
Wildfowl Trail
Painted Turtle Trail
Otter Trail
Floating Wetland
Floating Wetland
WILDFOWL TRAIL .56 MILES
PAINTED TURTLE TRAIL .56 MILES
VIEWING BLIND
Interpretive sign: Birds
Restored Forested Wetlands
Interpretive sign: Turtles
Wood Duck Boxes

Location Map
OCEAN PINES
to SALISBURY
BERLIN
to OCEAN CITY
Interpretive Sign: Wetland
Managed Embankment
Retain existing plant beds
SPILLWAY "BERLIN FALLS"
OTTER TRAIL .43 MILES
3/4 Acre Nature-based Play Area
Stedding
Osprey Platform
Interpretive sign: Mammals
Permanent bird feeder
Interpretive sign: Amphibians
Bluebird boxes
Interpretive sign: Map of park
N
0
200
300
400
500
600 FT

MANAGEMENT

Wildlife/habitat

Remove invasive plants and plant native ones. A host of invasive plants including Japanese stiltgrass, Phragmites, Japanese honeysuckle, multiflora rose, Russian olive and privet are dominating sections of the site. Most of this is due to past disturbance and is typical of altered sites. Removal of invasives should wait until a planting plan has been put in place and planting is ready to begin. This can be phased in by area to avoid native plant removal that may result in erosion if soils are exposed. The Natural Resources Conservation Service can make very specific recommendations on what to remove, how to remove it, and what seasonal wildflowers, fruit-producing trees, and wetland plants to plant on all locations on the site. Pond-side invasive wetland plants and the park's westernmost berm will demand the most attention.

Invasive plants, like these, should be removed and replaced with native ones.

Nurture willow oaks. The wildlife friendly native willow oaks on the edge of the ponds should be left to proliferate on their western, northern, and eastern sides. Cutting them is providing sunlight for the highly invasive Japanese stilt grass and warming the water which is helping to produce algae. Cut outs for water access are still appropriate. Pond-side trees will serve the dual function of taking up nutrients and providing shade in the summer months which can improve water quality, limit invasive proliferation, and provide wildlife habitat for herons, turtles, frogs, and a variety of songbirds.

Willow oaks, left undisturbed, can shade and cool the pond, provide wildlife habitat and remove excess nutrients.

Create basking and perching platforms. The park has one of the largest painted turtle populations on the Lower Shore. They are a turtle that loves to bask on logs in open water, but few basking areas exist. The park could easily add a turtle "wow factor" by placing sturdy, non-mobile structures just off the shore to give park visitors a good look at the reptiles and to assist in their survivability. Natural perches can also be installed to attract red-bellied cooters, herons, egrets, cormorants, and other charismatic waterbirds. Infrastructure from the site or fill from other work there could be utilized to create these basking areas.

Basking platforms can be installed both to help painted turtles get warm and to give park visitors great looks at them.

Consider floating wetland islands. Floating wetland islands can be used for the dual function of improving water quality and providing wildlife habitat. Anchored but floating on the water's surface, these islands use plants to reduce nitrogen, ammonia, phosphorous, solids, and pathogens. A number of companies and NGOs now both use and sell this innovative technology.

Floating wetland islands, like these at Trap Pond State Park in Delaware, can be used for the dual function of improving water quality and providing wildlife habitat.

Control Canada geese and white-tailed deer. Resident Canada geese can significantly impact water quality and are leading to the decline of the native migratory Canada geese. Every effort should be made to limit their numbers on the property in the summer months. White-tailed deer will also cause problems in the event the town removes invasive plants and plants native species. The town should consider controlling these species by limiting cut grass to paths (for geese) and by establishing late fall or winter deer hunting near the railroad tracks.

White-tailed deer can wreak havoc on plant and animal communities by browsing forest understory, spreading invasive plants, and altering ecosystems. Efforts should be made to control their numbers.

Install nest boxes for bluebirds and wood ducks. This may involve the use of volunteers and can be phased in over the next several years. Assistance can be provided by conservation partners, such as Scout Troops, USDA Natural Resource Conservation Service (Steve Strano), U.S. Fish & Wildlife (Dan Murphy), and Audubon Maryland–DC (Dave Curson). Scout Troops and grant funding can cover much of the costs of these boxes. The same boxes may also attract nesting screech owls, hooded mergansers, great-crested flycatchers, and tree swallows.

Bluebird boxes are inexpensive and easy to install.

Wood duck box creation and installation is a common Scout Troop project.

Hydrology

Devise a plan to manage pond hydrology. The shallowness of the big ponds is what draws ducks, wading birds, and rare shorebirds. The town should make sure the back of the large pond remains shallow and holds mud-flat habitat for part of the year. The two upper ponds are in better shape from a water quality standpoint and the town should consider leaving the planting platforms which allow for nutrient uptake, basking for turtles, and habitat for hard-to-see but colorful birds like green herons which breed there. The upper ponds also have a substantial sunfish population. Painted, red-bellied, and snapping turtles overwinter in the muddy bottom of the ponds so dredging work should be avoided in all ponds October 15–May 1. The Natural Resources Conservation Service can draw up specific engineering plans for pond maintenance.

Pond depth is extremely important to dabbling ducks that winter in the pond. If the water is too deep, they will abandon the site.

Improve degraded wetlands. In addition to the ponds, wetlands exist in the woods next to the railroad tracks, behind the top pond, and in the field on the southeast side of the property. These degraded sites are ready for restoration (p.3–4). The Natural Resources Conservation Service can draw up specific engineering plans for their improvement. When removing and replacing the infrastructure on the south side of the property, the town should also consider dual-function stormwater management to hold stormwater in a more natural, wildlife-friendly manner with larger, shallower plant-filled ponds.

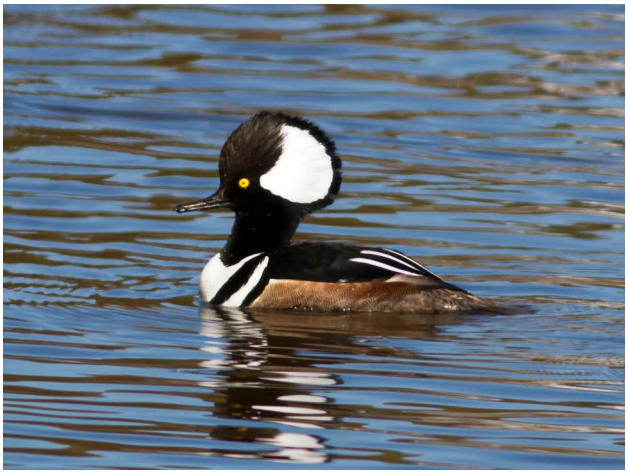
Wetlands behind the ponds and adjacent to the railroad tracks have been altered and degraded over several decades. They can be restored.

INTERPRETATION

Begin design phase for outdoor interpretive panels that highlight natural features of the park. Conservation Community Consulting recommends six interpretive panels that cover birds, reptiles, amphibians, mammals, plants, and wetlands that the site is known for. See map on p.3 for siting and budget on p.15 for size and cost information.

Interpretive panels can detail one species and one habitat, or many species and many habitats, or a combination of both.

Panels come in a variety of shapes and sizes from wood to plastic to metal with different kinds of mounts.



Migratory birds, like this hooded merganser, are frequent fall, winter, and spring visitors. Interpretive panels would highlight this spectacle with the most common migratory visitors and their behavior.

Turtles could be big draws to the park. Painted turtles, red-bellied cooters, and snapping turtles, like this burly specimen, are relatively easy to see and make for good interpretive panel prose.

Bull frogs and northern green frogs call the ponds home. In the woods, Copes gray treefrogs, spring peepers, s. leopard frogs, and green treefrogs are also abundant. A panel explaining their habitat needs and behavior is a warranted addition.

A family of river otters lives in the park. The charismatic species could be described on interpretive panels.

Native swamp rose grows along the outside border of the ponds. The significance of this and other native plant species is an important lesson for budding naturalists.

Wetlands like this one behind the smaller pond near the entrance can be restored or improved. Interpretive panels can highlight this work.

Conduct environmental programs. The town should consider inviting or hiring NGOs or others to run environmental programs on the site covering wildlife, plant, and wetland ecology. Nearby businesses that benefit from the crowds could sponsor the programs.

Eastern gartersnakes are frequent visitors to the property. Regular programs sponsored by Berlin and conducted by local environmental NGOs would educate the public and coax people to the park.

PLAY AREAS

Develop nature-based play areas. Consider converting an existing structure on the property to a climbing wall. The tank near the entrance may be a viable option for such a wall should it prove structurally sound. This could be part of the development of nature-based play structures and areas that will complement the natural aspects of the park and help kids connect to nature and simple ecological concepts. Even skateboarding areas can be nature-oriented. This may involve the use of volunteers, and can be phased in over the next several years. Agency and competitive grant funding could cover much of the costs of these plans.

Nature-based play areas come in a variety of shapes and sizes.

MARKETING

Create and manage a Facebook page. Conservation Community Consulting created a Facebook page on which we post nature-based posts about the park 1–3 times per week. This should continue.

Create a web page. The park should have either its own web page or an easy-to-find page on the town's website.

Consider a name that reflects natural icons of the Eastern Shore. Given that wildlife is a big draw to the park, think about a park name that reflects its natural and popular features, e.g., Berlin Turtle Park, Painted Turtle Park in Berlin, Green Heron Park in Berlin, Otter Park, Berlin Bird Park, Berlin Nature Preserve, etc.

Host guided tours. Conservation Community Consulting (CCC) or other for-profit entities could create a guided tour schedule surrounding local businesses adjacent to the property. CCC has already held five guided tours there which brought more than 60 visitors to the town. Other groups, such as the Tri-County Bird Club and Maryland Ornithological Society can be invited by the Town of Berlin to use the park for guided walks.

Entrepreneurs could create a guided tour schedule at the park with local businesses as beginning and ending points. Conservation Community Consulting has already conducted "Beans, Birds, and Beer" tours there with Burley Oak Brewing and Urban Nectar.

Make the park available to groups. Advertise that the park is accessible to groups to hold events, fundraisers, walks, bike rides etc. In these cases, the given entities do the marketing for you. The town should make it clear that the park is available and make sure it has the facilities to accommodate them. This gets folks to the park who might otherwise never come. Once familiar, they return.

Improve signage. The park should have a clear entrance sign on Old Ocean City Blvd and signage that directs visitors, where to park, what they can do at the park, where the trails are, etc. Signage visible from US113 should also be explored.

COMPATIBLE USES

Limit motorized vehicle usage, especially in the woods. The wooded wetlands on the property have been highly degraded from motorized vehicle use. This has caused invasive plant proliferation, hydrology alterations, sediment fluxes to Trappe Creek and Newport Bay, and has created substantial mosquito breeding habitat. The damage in the wet grassy areas directly behind the asphalt area will also encourage mosquito breeding, but is less onerous environmentally than the wetland destruction in the woods. The wetland restoration plan on p.3–4 in this proposal is designed to address these issues by improving water quality and wildlife habitat.

Vehicle use should be prohibited in the woods to avoid scenes like this.

Explore bicycling trails in appropriate areas. Most walking trails on this property could also be used for bicycling. This should be appropriately signed and road-marked to avoid collisions. Bicycling should be avoided in the wet woods on the west side of the property.

Bicycling is an appropriate use on this property.

Maintain hiking trails. Trails around the ponds exist but could be maintained in a more formal manner with shell, stone, wood, or more mowing. New trails along the railroad tracks and behind the upper ponds could give visitors more options. Naming the trails is also an effective way for the town to market them, pay for them, and for visitors to navigate them. See p.3–4.

Promote sledding. Folks love sledding on the hill near the park entrance after snow events. This is a great wintertime attraction and should be advertised and promoted as a relatively safe and fun way to enjoy the park.

Build piers for fishing and wildlife viewing. The upper ponds are full of pumpkinseeds, a native species of sunfish. The fish can provide hours of entertainment with a rod, bobber, and worms. However access to the ponds is difficult. To facilitate this, Berlin should consider building piers and cutting access points to the ponds. Although it is unclear if substantial fish populations inhabit the lower pond, access and piers can make for great viewing of wildlife. See map on p.3–4.

INTERPRETATION AND RESTORATION BUDGET

This budget is a best guess based on our experience with a host of other similar projects and estimates from those who conduct this type of work. It does not include maintenance or potential sponsors of activities. This work lends itself well to grant funding and NRCS has already offered to do the design for the wetland restoration, meadow and tree planting, and basking platforms. The chart below includes what we have found to be reliable funders of these types of projects and whether they lend themselves to allowing for volunteer opportunities which we believe are important to have lasting stewardship of the park. Depending on their capabilities, Berlin Public Works may be able to do a substantial amount of the construction activities.

Project	Cost	Possible funding	Public Works assist?	Chance of Berlin having to fund	Volunteer help?
Restoration design	$30,000	NRCS	no	low	no
Wetland construction	$75,000	Chesapeake Bay Trust	yes	medium	no
Tree & meadow planting	$5,000	Chesapeake Bay Trust	yes	low	yes
Trails	$6,000	DNR, SHA	yes	high	yes
Nature playground	$75,000	POS local side, Humphreys Foundation	yes	high	no
Bird boxes/ platforms	$2,000	Scout Troops	yes	low	yes
Floating wetland islands	$25,000	Chesapeake Bay Trust	yes	medium	yes
Interpretive panel design (6@32X48)	$6,000	LESHC, MHAA, Humphreys Foundation	no	medium	no
Interpretive panel creation	$8,400	LESHC, MHAA, Humphreys Foundation	installation	medium	no
Marketing	$5,000	Worcester County, LESHC	no	medium	no
Pier creation (5)	$38,500	DNR	yes	high	no
Total	$275,900				

NRCS: Natural Resources Conservation Service
DNR: Department of Natural Resources
SHA: State Highway Administration
POS: Maryland Program Open Space
LESHC: Lower Eastern Shore Heritage Committee
MHAA: Maryland Heritage Area Authority

WEB RESOURCES

Funders

www.nrcs.usda.gov/wps/portal/nrcs/site/md/home

cbtrust.org/grants

roads.maryland.gov/Index.aspx?PageId=98

dnr2.maryland.gov/land/Pages/ProgramOpenSpace/home.aspx

www.mdot.maryland.gov/newMDOT/Planning/Bike/Cycle_Maryland.html

dnr.maryland.gov/ccs/Pages/funding/fundingopp.aspx

grants.maryland.gov/pages/foundationgrants.aspx

mht.maryland.gov/documents/PDF/grants/Grants_Funding_Sources.pdf

nonprofits.findthecompany.com/l/724300/Humphreys-Foundation-Inc

lowershoreheritage.org/index.php/LESHeritage/about_article/mini-grant-application

Providers

www.nrcs.usda.gov/wps/portal/nrcs/site/md/home

www.earthscapeplay.com

www.floatingwetlandsolutions.com

www.facebook.com/ConservationCommunityConsulting

www.facebook.com/Sun-Signs-268458329624

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