

By observing trees and plants along the shoreline, you can read the story of tidal change. The effect is similar to a "ring around the bathtub." Imagine the lagoon as a bathtub filled with dirty water. When water leaves the bathtub, dirt remains on the bottom and sides of the tub creating a "ring." Similarly, the lagoon's water recedes during a low tide leaving silt and sediment along the shoreline and on nearby plants. Except for the hour before and after high tide, you can see the high-tide mark or "ring around the lagoon";

Tides dictate where you can paddle and where the fish will be hiding. For most of the year, the lagoon will have two low tides and two high tides every day (semidiurnal). Even though this lagoon is connected to the Chesapeake Bay by about 80 river-miles, the range between low and high tide is an amazing 3.6 feet!

4 Tides



Because wetlands are valuable for wildlife and humans, the Dutch Gap Conservation Area protects roughly 300 acres of wetlands.

For humans, wetlands help to lessen the impact of flooding by storing and slowly releasing water. Wetlands help to improve the water quality of the James River and even the Chesapeake Bay by trapping excess sediments. Wetlands provide a beautiful environment to explore by canoe and kayak.

Depending upon the time of year, you will see the hot dog-shaped fruit of cattail, the arrow-shaped leaves and round seedpods of arrow arum, the blue-flowered spike of pickerelweed, the arching seed-head of wild rice and the white flowers of duck potato.

This area of shallow water and emergent plants is called a "wetland." Wetlands are important for wildlife and humans. For wildlife, the wetland is a home and food source. Muskrats favor the roots of pickerelweed and use wetland plants for their lodge. Red-winged blackbirds nest among the cattails. Smaller fish and a variety of insects find refuge among the thick growth. During winter, waterfowl feed in the wetlands.

3 The Wetlands



2 The Graveyard

This evolution occurred from the combined effects of daily tides and became home to wildlife. The tides carried in and deposited silt on the wooden hulks. Wind, water and animals sowed the seeds in the birch, swamp rose, sycamore and alder are some of the plants that grow on the barge islands. Wildlife such as crapple, white-eyed vireos and kingfisher find refuge around and on the islands. The wooden barges, one tugboat with the letter "D" on the stack and piles of sand and gravel are signs left by the mining era.

As you approach it, observe the scattering of low islands. Paddle closer and you will discover that the islands are actually the hulks of sunken wooden barges.

Welcome to the Lagoon Water Trail. As you paddle, look for stories revealed in the landscape. You will learn the story of the Graveyard and understand how "islands" were formed, how a bottomland forest was changed into a lagoon and why wetlands are important. This guide will help you to read the landscape and discover the story of the Lagoon Water Trail.

Welcome

The Lagoon



It's hard to imagine that this body of water was land at one time. In fact, it was probably bottomland forest and swamp. How was it formed?

Around the early 1920's, the Richmond Sand & Gravel Company started mining this area. Other companies, such as Southern Material and Lonestar, continued mining until the early 1960's. Forty years of mining created a large pit. Then, some time during the mining operation a channel was cut to the old river channel so barges could enter the pit for easier loading of sand and gravel. The James River flooded the pit and created the lagoon.

5 Fresh or Salt Water?

You may think that the water is brackish or salty since it is connected to the Chesapeake Bay. Brackish refers to water that is somewhere between fresh and salt. But observing plants along the shoreline will reveal that the water here is fresh water.

Plants prefer certain growing conditions. Some plants grow in the sun and some grow in the shade. Some plants can live in salt water while other plants live in fresh or brackish water. The common plants you will see during your paddle are alder, river birch, sycamore, buttonbush, arrow arum, swamp rose and cattail. All these plants thrive in freshwater. They reveal that the water here is fresh.



6 The Channel

The old wooden barges were the vehicles that carried the mined sand and gravel out of the lagoon to various ports, but the river was the vehicle that deposited the sand and gravel. The irregular mounds on the channel's left shoreline reveal this story of deposition. They were formed from the excavated material when the channel was out. They are made of sand and gravel which the river deposited over thousands of years.

Paddle closer to find smooth, rounded rocks among the mounds. They are testament to the power of the James River. These smooth rocks were polished in the white-water sections of the James River. During major floods, these rocks were carried and deposited onto the bottomland forests. Many of these river rocks traveled 15 miles or more.

7 Crusher Site

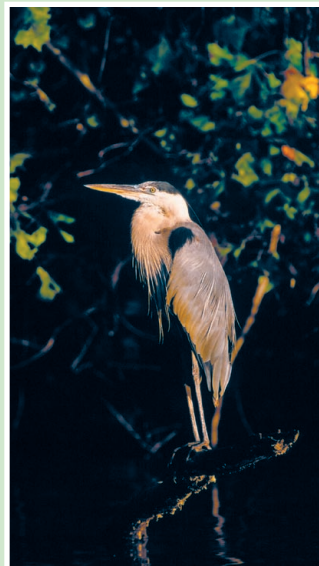
Another part of the mining story is found at the Crusher Site. A cement arch adorned and softened by vines is all that remains of the crusher site. Here, large rocks were pulverized into smaller sizes and loaded onto barges.

The sand and gravel are natural resources deposited by the James River that are harvested and converted into the highways and buildings for Tidal Virginia.

8 The Labyrinth

To the left of the crusher site is the entrance to the Labyrinth. It is a narrow passage created by the sunken hulks of wooden barges. Like the other barges in the tidal lagoon they are a testimony to the mining operations.

Since the late 1960's, the area has been left undisturbed. The sullen hulks of wooded barges have evolved into islands providing habitat for wildlife. River birch, sycamore and buttonbush occupy the barge decks. The "crew" is a variety of wildlife such as great blue herons, barred owls, eastern phoebes, cormorants, green frogs, dragonflies and raccoon. The mechanical sound of tug boats and dredging machines have been replaced by the honk of Canada geese, the rattle of kingfisher and the cry of osprey. Nature has reclaimed the area.



Dutch Gap Conservation Area, a Chesapeake Bay Gateway, is one of your entry points to enjoy and learn about the places and stories of the Chesapeake and its watershed. The 64,000 square-mile Bay watershed is a complex ecosystem. Home to over 15-million people, it has supported human occupation for 13,000 years. The Bay's natural abundance has fed multitudes, fueled rich economies and nurtured diverse cultures. Explore this and other places in the Gateway's Network to experience the Bay's stories, spirit and mystery. Learn about the Chesapeake Bay restoration effort and how you can contribute. Our well-being and the Bay's health are interdependent.

Visit www.baygateways.net for more information.

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If you would like to paddle the Lagoon Water Trail or have questions, call Chesterfield Parks and Recreation Department at 804-748-1623, Mondays - Fridays.

DUTCH GAP



DUTCH GAP CONSERVATION AREA Lagoon Water Trail

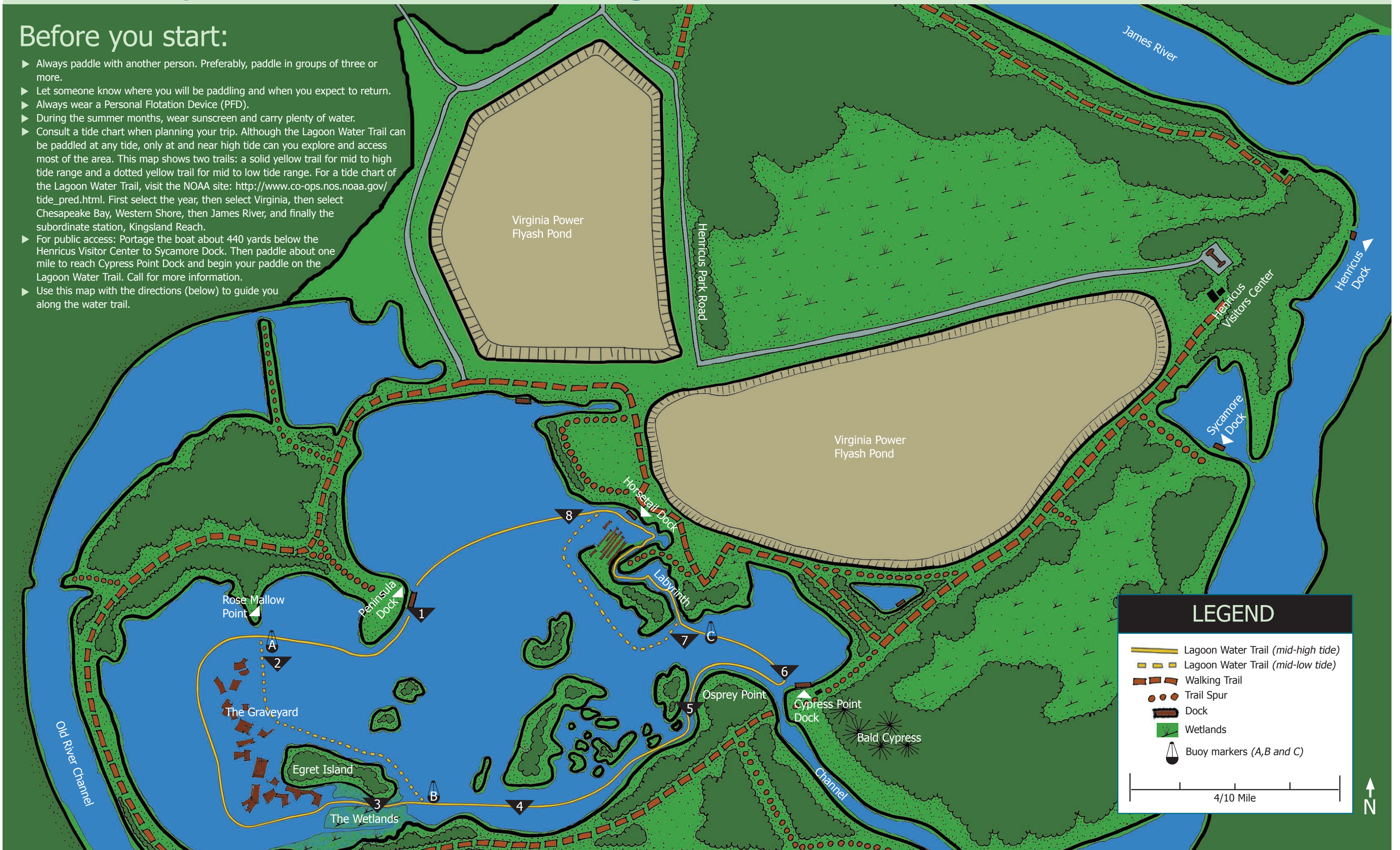


CHESAPEAKE BAY
GATEWAYS NETWORK

Dutch Gap Conservation Area - Lagoon Water Trail

Before you start:

- ▶ Always paddle with another person. Preferably, paddle in groups of three or more.
- ▶ Let someone know where you will be paddling and when you expect to return.
- ▶ Always wear a Personal Flotation Device (PFD).
- ▶ During the summer months, wear sunscreen and carry plenty of water.
- ▶ Consult a tide chart when planning your trip. Although the Lagoon Water Trail can be paddled at any tide, only at and near high tide can you explore and access most of the area. This map shows two trails: a solid yellow trail for mid to high tide range and a dotted yellow trail for mid to low tide range. For a tide chart of the Lagoon Water Trail, visit the NOAA site: http://www.co-ops.nos.noaa.gov/tide_pred.html. First select the year, then select Virginia, then select Chesapeake Bay, Western Shore, then James River, and finally the subordinate station, Kingsland Reach.
- ▶ For public access: Portage the boat about 440 yards below the Henricus Visitor Center to Sycamore Dock. Then paddle about one mile to reach Cypress Point Dock and begin your paddle on the Lagoon Water Trail. Call for more information.
- ▶ Use this map with the directions (below) to guide you along the water trail.



1 Launch your boat from the Peninsula and paddle right along the shoreline. Once you round the tip of the Peninsula, paddle to buoy A.

2 At buoy A (*high to mid-tide*): Paddle between Rose Mallow Point and the outer edge of the Graveyard. Then paddle behind the graveyard and continue to the Wetlands. At buoy A (*mid-tide to low tide*): Paddle along the border of the Graveyard and Egret Island.

3 Paddle through the Wetlands, to buoy B, then follow the right shoreline toward Osprey Point.

4 Continue to follow the right shoreline to Osprey Point.

5 Paddle around Osprey Point to the opening of the Channel.

6 Paddle to buoy C.

7 At buoy C (*high to mid-tide*): Enter the Labyrinth to the left of buoy C; then follow the left shoreline. At buoy C (*mid-tide to low tide*): Paddle along the right shore line of the Labyrinth toward Horsetail Dock.

8 Once out of the Labyrinth, paddle to Horsetail Dock then cross the open water back to the Peninsula, a distance of about 4/10 mile.