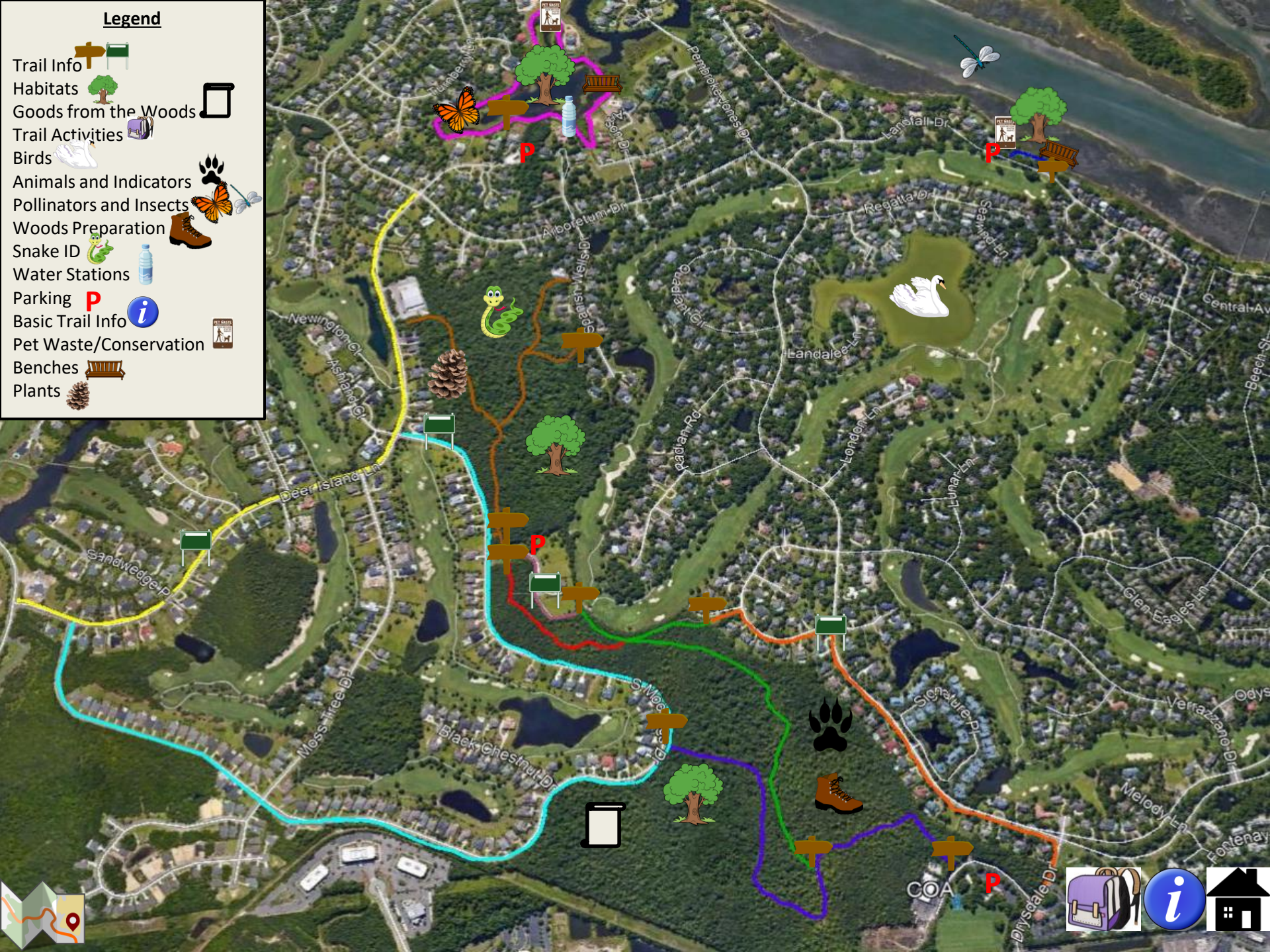

Legend
Trail Info
Habitats
Goods from the Woods
Trail Activities
Birds
Animals and Indicators
Pollinators and Insects
Woods Preparation
Snake ID
Water Stations
Parking
Basic Trail Info
Pet Waste/Conservation
Benches
Plants
Pembroke Jones Dr
Landfall Dr
Regatta Dr
Arboretum Dr
Spanish Wells Dr
Quadrant Cir
Newington Ct
Ashland Ct
Landalee Ln
Radian Rd
London Ln
Lunar Ln
Central Av
Beech St
Deer Island Ln
Sandwedge Pl
Glen Eagles Ln
Signature Pl
Verrazzano Dr
Moss Tree Dr
Black Chestnut Dr
Melody Ln
Fontenay
Drysdale Dr
COA

Deer Island Lane

Directions
Sidewalk runs the entire length of Newington Court. Sidewalk begins at the intersection of Newington Court and South Moorings Dr and continues to the golf course and the Verrazzano Trail Entrance.
Legend
Newington Court Sidewalk (Light Pink)
Newington Court Trail (Red)
South Moorings (Light Blue)
Spanish Wells Trail (Brown)
S Moorings Dr
Newington Ct
Google Earth
© 2018 Google
Newington Court Sidewalk
N
200 ft

Verrazzano Sidewalk

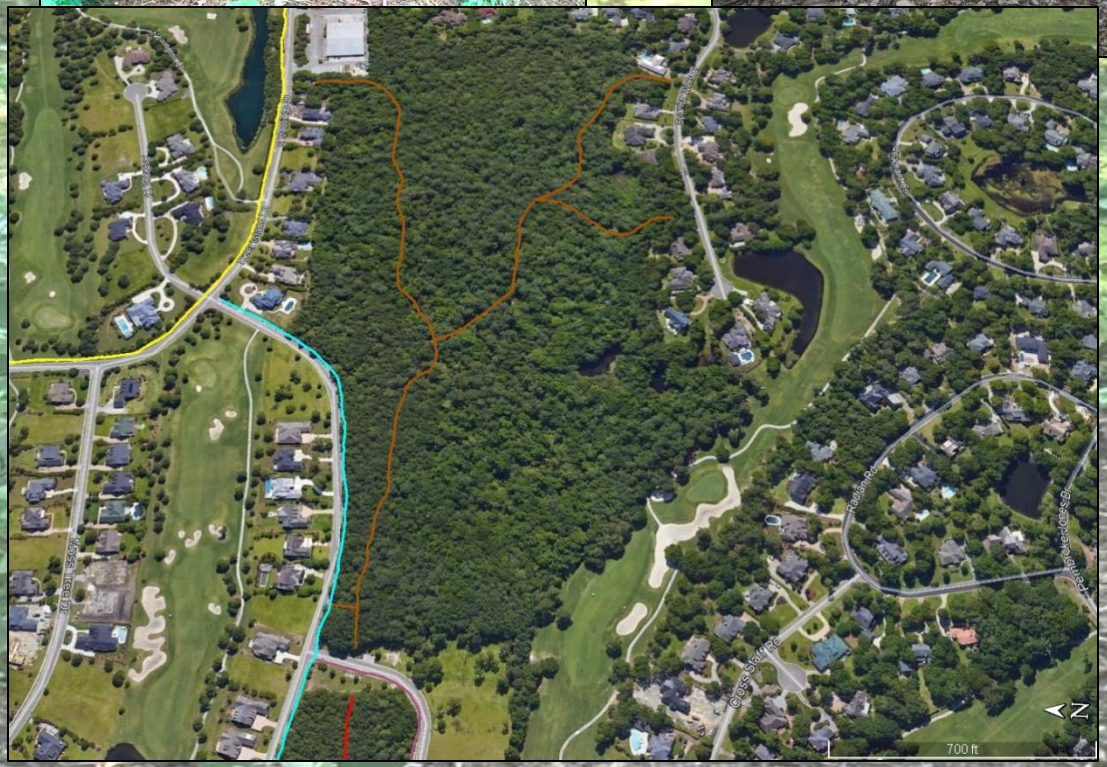
Directions

Sidewalk runs from the bridge entrance to the Verrazzano Trail and ends near the Drysdale Recreation Site and COA office.

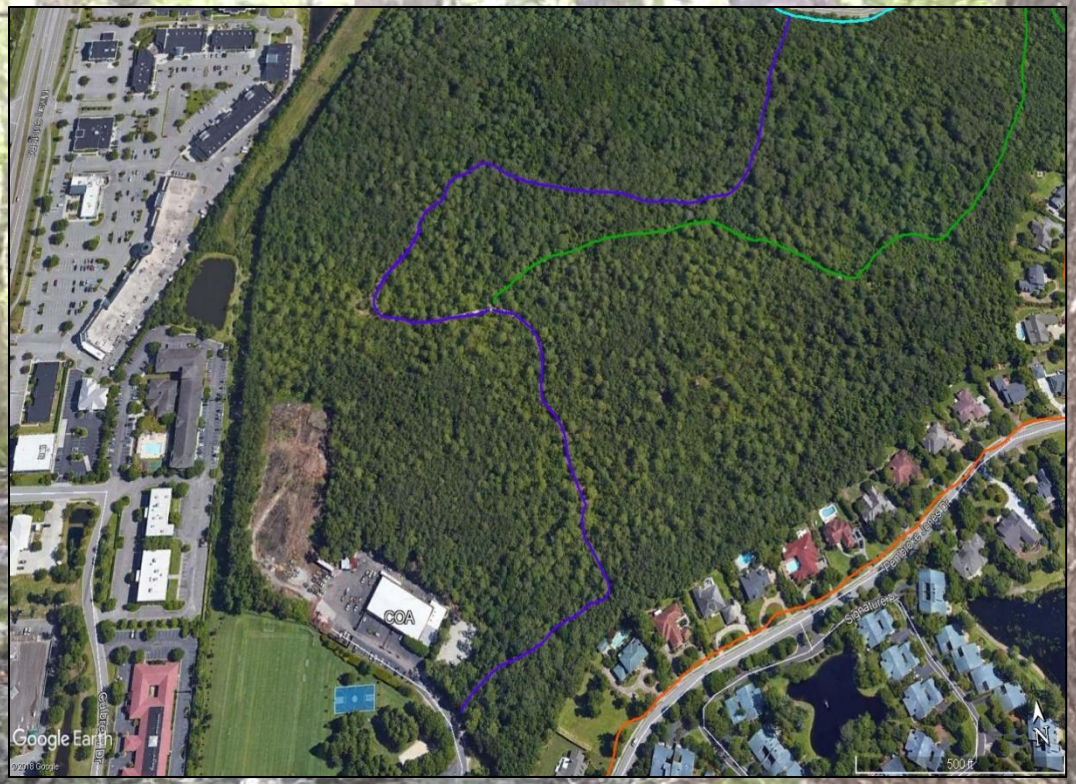
Legend
South Moorings (Light Blue)
Deer Island (Yellow)
Verrazzano Sidewalk (Orange)
Verrazzano Trail (Green)
Newington Court Trail (Red)
Newington Court Sidewalk (Light Pink)
Drysdale Trail (Purple)
Directions
Sidewalk runs the entire length of South Moorings Dr. Starting at the intersection with Deer Island Ln near Newington Court and ending at the other end of Deer Island Ln close to the Arboretum entrance.
Pelican Reach Pl
Sandwedge Pl
Moss Tree Dr
Black Chestnut Dr
South Moorings Dr
South Moorings Drive
Google Earth
© 2018 Google
900 ft

Directions

- Continue straight down the trail.
- At the first fork, take a left and continue down the path.
- At the next fork at the large tree, take a right.
- Continue down the path, at the next fork take a left and follow the path to the exit on Spanish Wells Dr.



Spanish Wells (Brown)



Drysdale Trail (Purple)

Directions

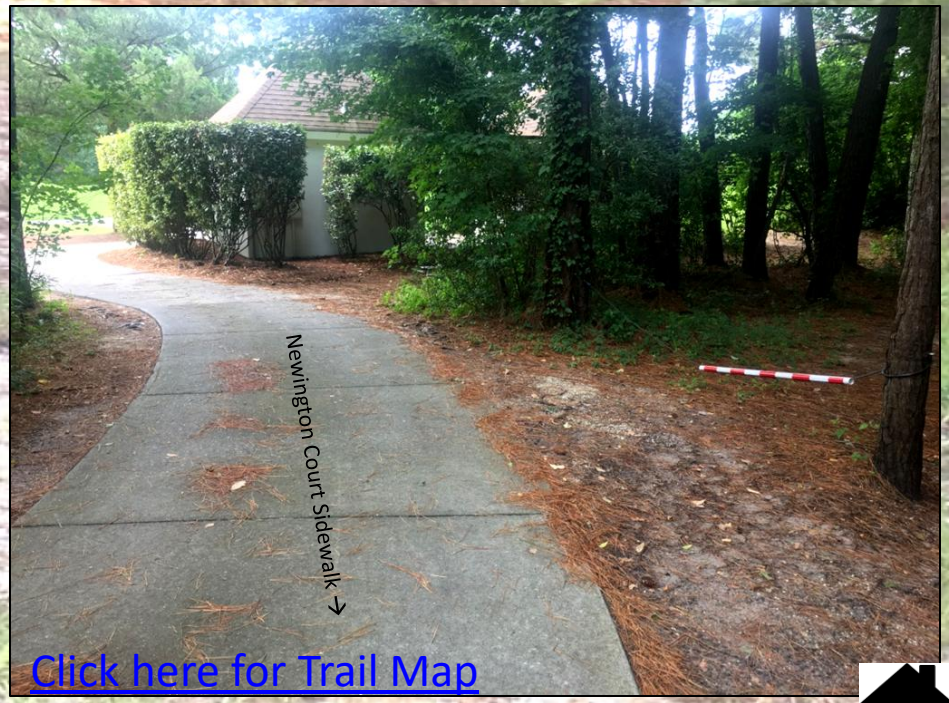
From entrance near COA and Recreation Site:

- Continue down the path.
- At fork in the road (0.23mi), right turn will lead to the Verrazzano Trail ending at Verrazzano Dr or Newington Court.
- Continuing straight will lead to South Moorings Dr. (0.61mi total)

Directions

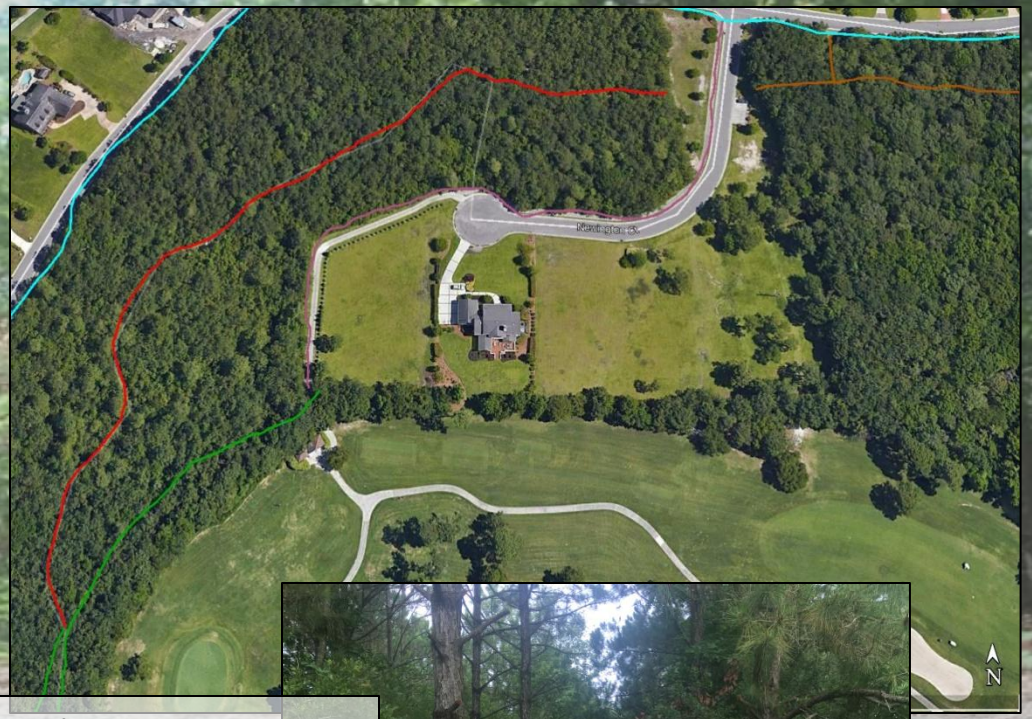
- At fork in the road on the Drysdale Trail, turn right
- Continue straight
- At the bridge, right turn will lead to the Verrazzano Sidewalk
- Continuing straight will lead to Newington Court
- At fork in the road past the bridge, left turn will lead to the Newington Court Trail
- Right turn will lead to end of the Verrazzano Trail, near the golf course at the end of the Newington Court Sidewalk

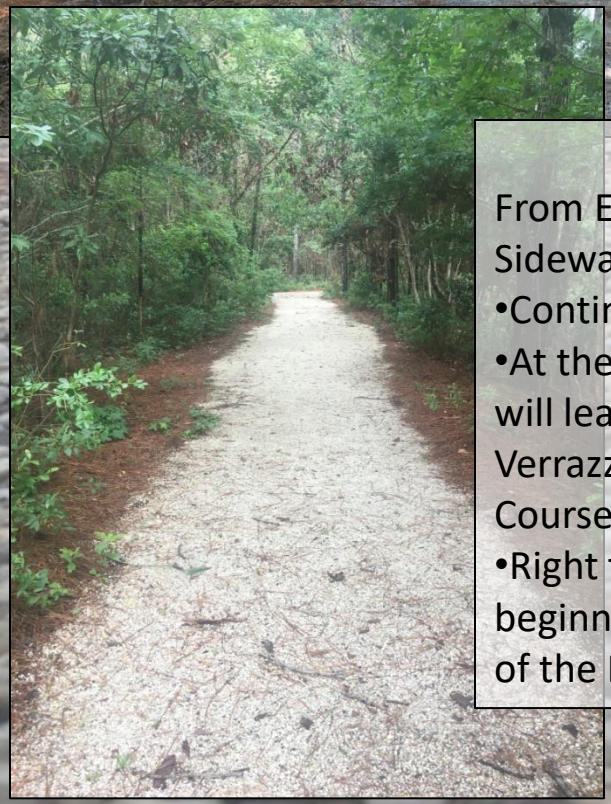
Verrazzano Trail (Green)



[Click here for Trail Map]

Legend
Drysdale Trail (Purple)
Verrazzano Trail (Green)
Verrazzano Sidewalk (Orange)
Newington Court Trail (Red)
Newington Court Sidewalk (Light Pink)
South Moorings (Light Blue)
COA
Dresser Rd
Cross Staff Rd
S Moorings Dr
Directions
•At fork in the road on the Drysdale Trail (denoted by trail sign on map), turn right
•Continue straight
•At the bridge (0.43mi), right turn will lead to the Verrazzano Sidewalk
•Continuing straight will lead to Newington Court
•At fork in the road past the bridge (0.54mi), left turn will lead to the Newington Court Trail
•Right turn will lead to end of the Verrazzano Trail, near the golf course at the end of the Newington Court Sidewalk (0.64mi total)





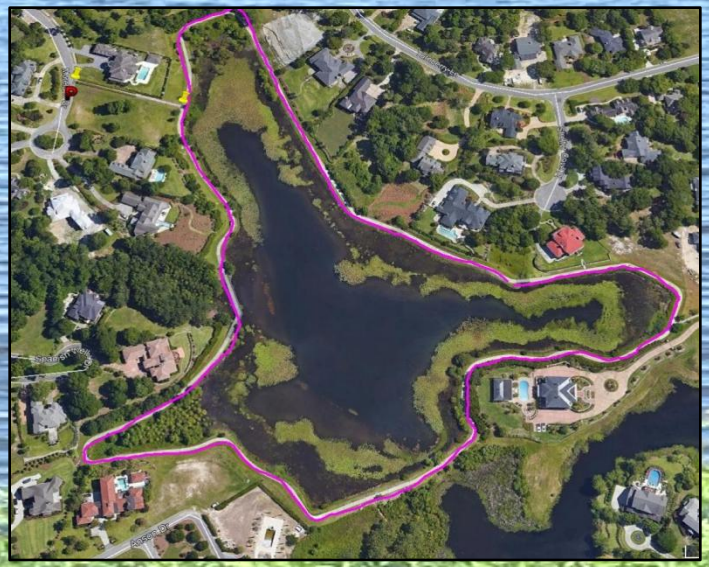
Directions

From Entrance on Newington Court Sidewalk:

- Continue straight
- At the fork in the road, a left turn will lead to the end of the Verrazzano Trail near the Golf Course
- Right turn will lead to the beginning of the Verrazzano Trail off of the Drysdale Trail

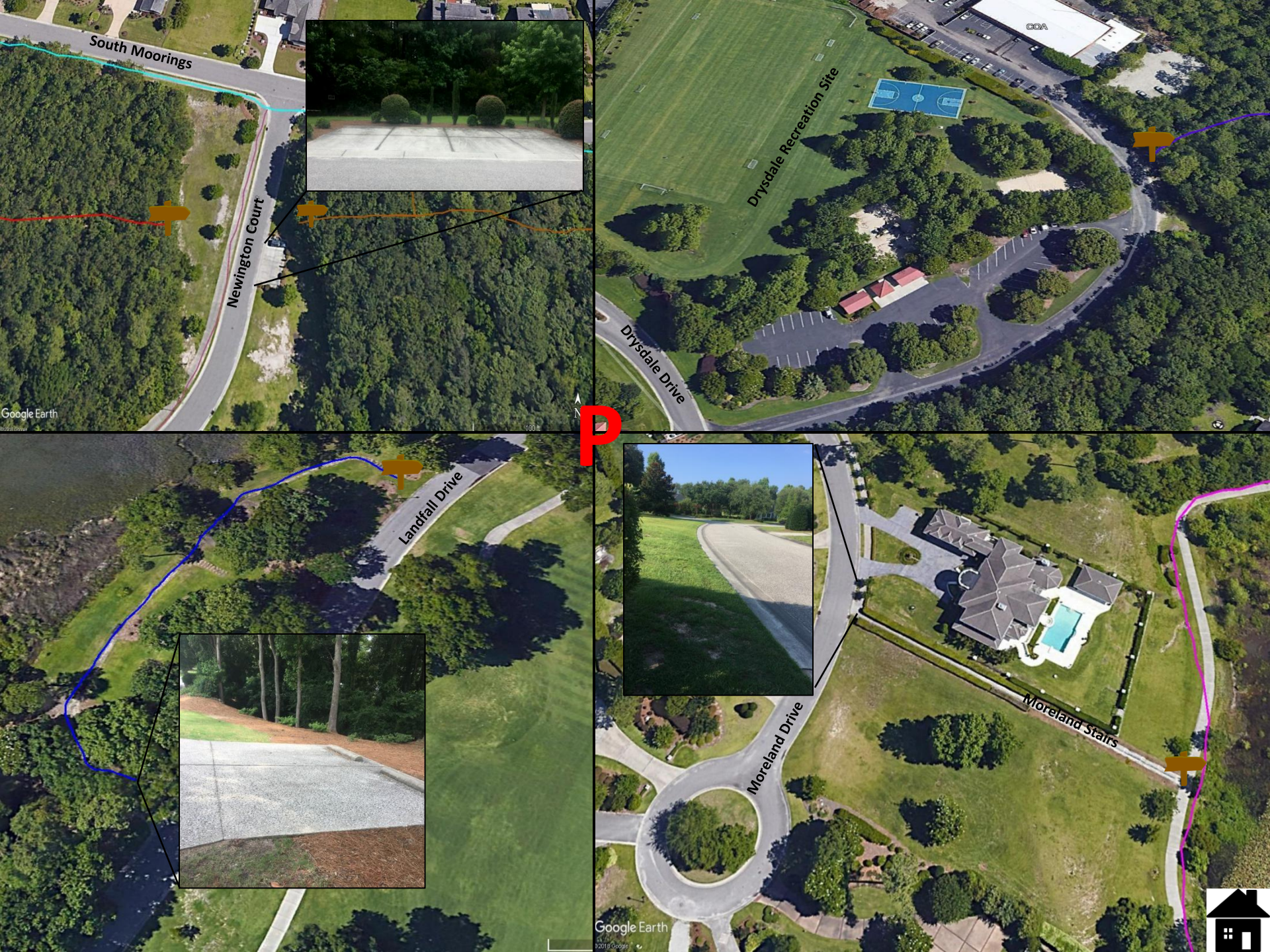
Newington Court Trail (Red)

Landfall Park
Overlook (Dark Blue)



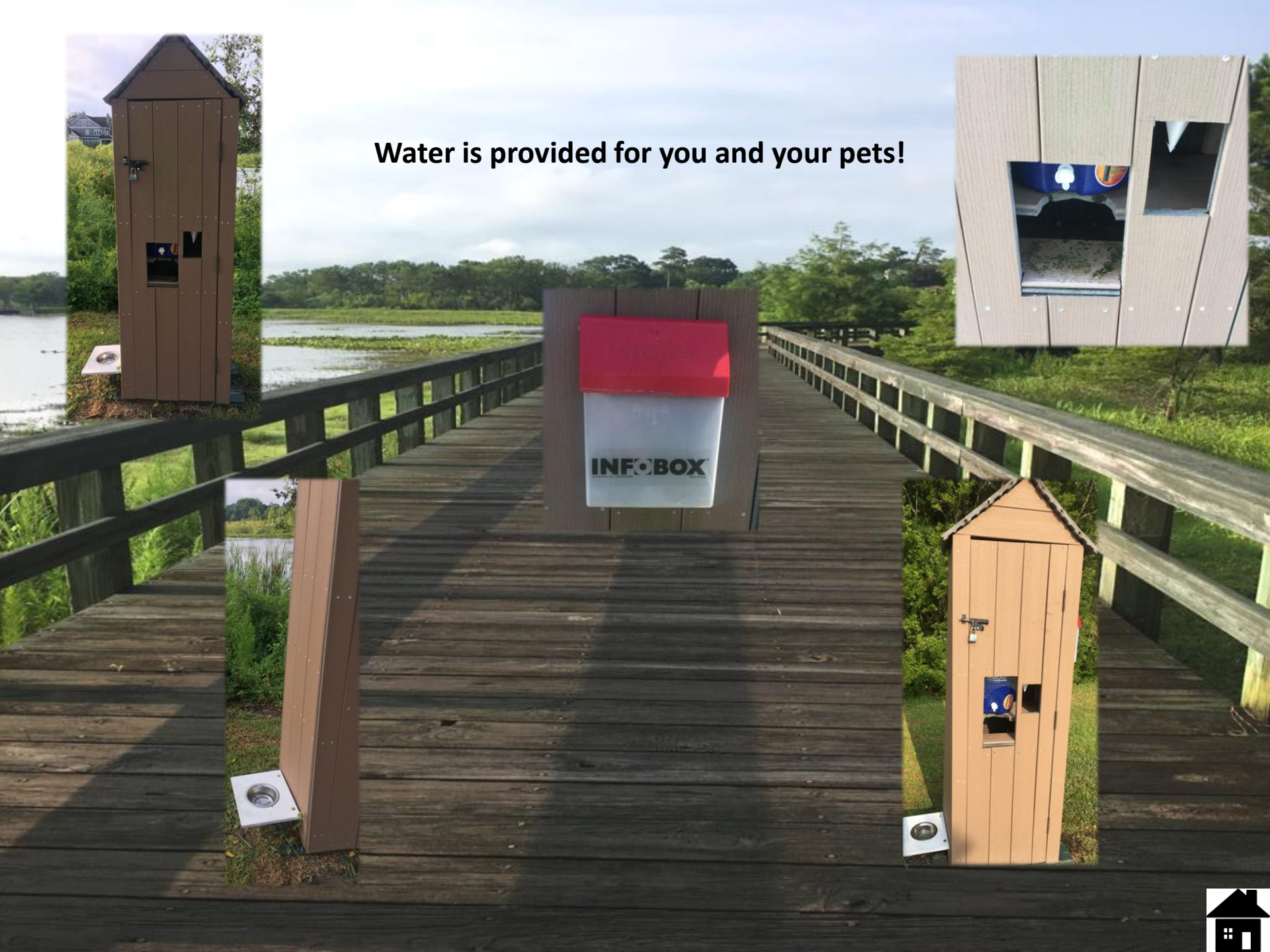
Landfall Lake
(Hot Pink)

History of Landfall Lake


South Moorings
Newington Court
Drysdale Recreation Site
Drysdale Drive
Landfall Drive
Moreland Drive
Moreland Stairs
P
Google Earth

Seating is provided! Come have a picnic or watch the boats go by!

Plenty of seating is provided for birding or just enjoying the view


Water is provided for you and your pets!
INFO BOX

Goods from the Woods

Historical

- Lumber
- Pitch
- Tar
- Turpentine
- Naval Stores- kept ships afloat and waterproof
- Habitat for now endangered species, such as the red cockaded woodpecker

Modern

- Spices and flavorings
- Medicine
- Coatings
- Wax- crayons and cosmetics
- Chewing gum
- Fruits and nuts
- Soap, shampoo, and detergents
- Paper and paper products (office supplies)
- Cigarette filters
- Biofuels
- Sun tan lotion
- Asphalt and concrete
- Instruments
- Rubber and Rubber Products

And the list goes on…

- Link to extensive list

We get more items from the woods now than ever before! This makes it more important to maintain these woods and use our resources sustainably.

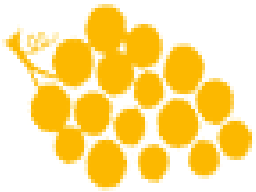
Conservation Area: An area of land managed so that its flora, fauna, and physical features and habitats are preserved. Commonly constructed within large urban developments to reduce the effect of fragmentation and habitat loss. By preserving large areas of natural habitat, more species are protected as they can remain in their home and not be forced to roam urban areas.

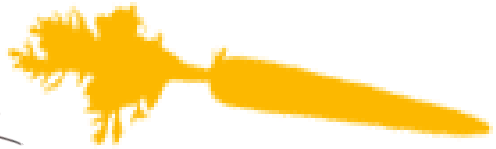
Landfall COA manages all local conservation areas in conjunction with the Northeast New Hanover Conservancy. Information about the nature trails and all maps and brochures found within this presentation can be acquired at the COA office.

http://www.landfall.org/facilities/

We need insects, bats, and birds because they supply one of our most basic needs, FOOD! We often view many of our pollinators, such as bees, beetles, flies, and bats as pests, but they play a crucial role in our environment. Without these pollinators many plants would go extinct. Planting a variety of native flowers and plants, following the directions when using pesticides, and removing nests and hives carefully and responsibly are simple ways to help maintain pollinator populations.

Bees play an especially important role in our environment, more information can be found here





FRUITS

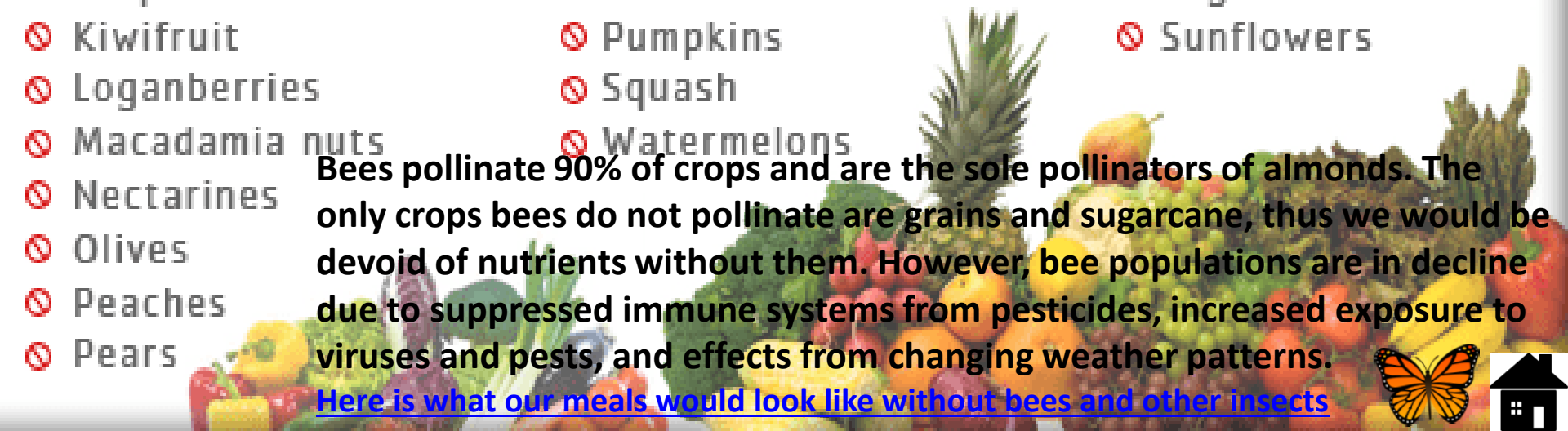
- Almonds
- Apples
- Apricots
- Avocadoes
- Blueberries
- Cherries
- Citrus
- Cranberries
- Grapes
- Kiwifruit
- Loganberries
- Macadamia nuts
- Nectarines
- Olives
- Peaches
- Pears

VEGETABLES

- Asparagus
- Broccoli
- Carrots
- Cauliflower
- Celery
- Cucumbers
- Cantaloupe
- Honeydew
- Onions
- Pumpkins
- Squash
- Watermelons

FIELD CROPS

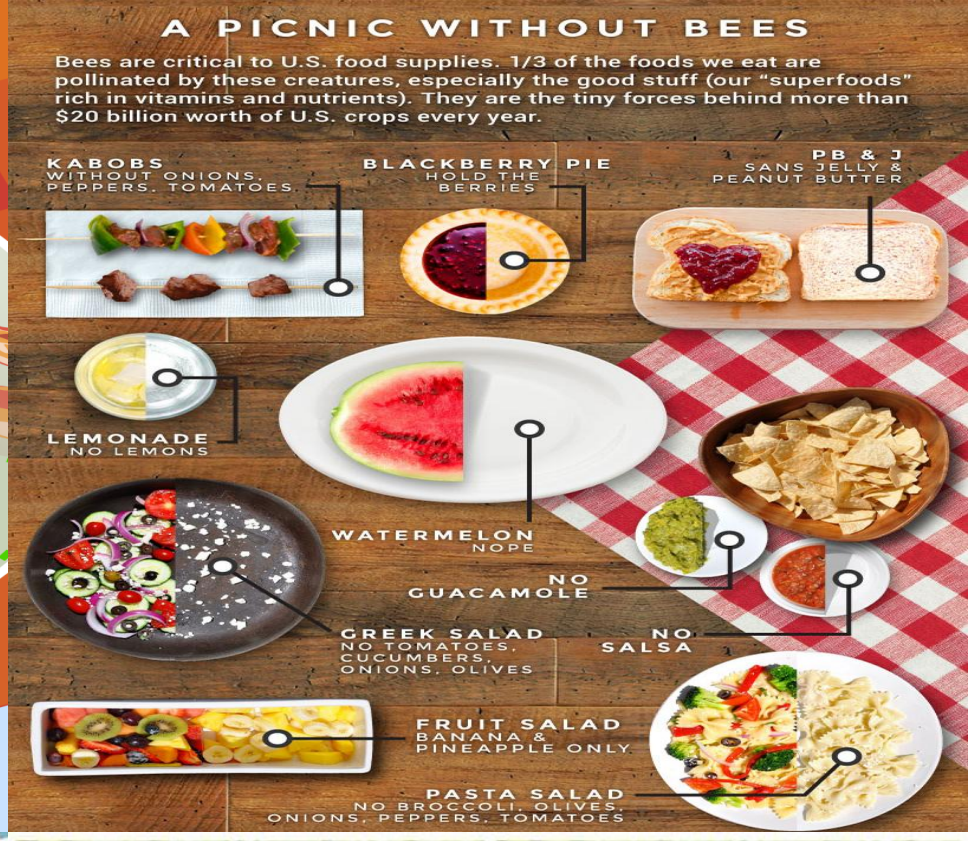
- Alfalfa Hay
- Alfalfa Seed
- Cotton Lint
- Cotton Seed
- Legume Seed
- Peanuts
- Rapeseed
- Soybeans
- Sugar Beets
- Sunflowers

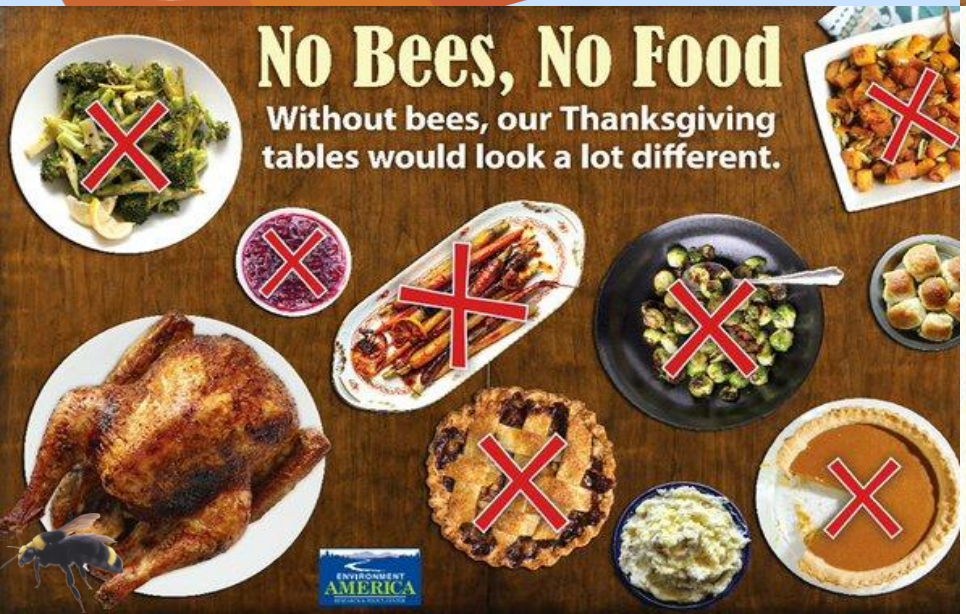


Bees pollinate 90% of crops and are the sole pollinators of almonds. The only crops bees do not pollinate are grains and sugarcane, thus we would be devoid of nutrients without them. However, bee populations are in decline due to suppressed immune systems from pesticides, increased exposure to viruses and pests, and effects from changing weather patterns.

Here is what our meals would look like without bees and other insects

This meal was brought to you by the following pollinators:
Beetles pollinate pomegranates.
Ants pollinate mangoes.
Butterflies pollinate some nuts (for muffins!).
Moths pollinate bananas.
Flies pollinate the cola nut.
Bees pollinate coffee, grapes, watermelon, melons, berries, kiwi, fruit for jelly, peaches for yogurt, cotton for the tablecloth!
**70% of the food you eat brought to you by pollinators.


A PICNIC WITHOUT BEES
Bees are critical to U.S. food supplies. 1/3 of the foods we eat are pollinated by these creatures, especially the good stuff (our "superfoods" rich in vitamins and nutrients). They are the tiny forces behind more than $20 billion worth of U.S. crops every year.
KABOBS
WITHOUT ONIONS, PEPPERS, TOMATOES
BLACKBERRY PIE
HOLD THE BERRIES
PB & J
SANS JELLY & PEANUT BUTTER
LEMONADE
NO LEMONS
WATERMELON
NOPE
NO GUACAMOLE
GREEK SALAD
NO TOMATOES, CUCUMBERS, ONIONS, OLIVES
NO SALSA
FRUIT SALAD
BANANA & PINEAPPLE ONLY
PASTA SALAD
NO BROCCOLI, OLIVES, ONIONS, PEPPERS, TOMATOES


No Bees, No Food
Without bees, our Thanksgiving tables would look a lot different.
ENVIRONMENT AMERICA

WITH BEES
WITHOUT BEES

Best Management Practices

Conserving Waterways One Step at a Time

Rain Garden

Best Management Practices (BMPs) are ways that we can help keep our waterways clean by reducing stormwater pollution. Stormwater is water that runs off of the roadways, into the storm drains, and ultimately the ocean. When pet waste, litter, or other chemicals enter the storm drain, they are left untreated and contaminate our rivers and oceans. This is because stormwater is not treated like wastewater is. It flows into the water ways as is. Here are several BMPs you can put in place to reduce stormwater pollution.

Click here to learn more about BMPs

Turn Downspout to grass

Rain Barrel

Wash car in grass

Recycle

Don't pour chemicals down storm drains

Pick up pet waste

Trail Options

- Adventure Trail

- Art Trail
- Birding Trail
- Seasonal Trails

Long Leaf Pine Forest

One of the most diverse and unique habitats that ranged 90million acres at its peak. Due to development and lack of fire regimes, long leaf pine forests have declined to just 4.4million acres. This habitat is home to unique and well known species such as Venus fly traps and the endangered red cockaded woodpecker. Longleaf pines have a strong historical connection to our area as they were commonly used for naval stores. Naval stores used the trees to produce tar and turpentine to keep ships waterproof and afloat.

Freshwater Lake/ Wetland

- Wetlands: areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season.
- Landfall Lake is a constructed wetland. These are typically built to compensate for potentially harmful environmental effects to nearby ecosystems as a result of developing a large area
- Because it primarily functions as a wetland, Landfall Lake has hydric soils, is periodically inundated with water, and has a large amount of aquatic vegetation.
- Wetlands provide many ecosystem services including filtering water, providing nursery habitat for fish and other organisms, and acting as a stop over point for migratory birds.
- Click here to learn more about Landfall Lake

Coastal Marsh

Coastal marshes are important habitats because they provide many benefits to us and other organisms. Marshes are a type of wetland and provide many of the same benefits including water filtration, nursery habitat, and stop over points for migratory birds. Additionally, marshes act as buffers that absorb wave energy, reducing the amount of damage caused by coastal storms and hurricanes. Not only do we rely on marshes for storm protection and water quality, marshes are a major habitat for fish and shellfish. Over 50% of shellfish species in the Southeastern U.S. rely on marshes, thus this is also where we acquire a large portion of our seafood.

Pocosin

- Pocosins are considered nontidal wetlands that are dominated by trees, shrubs, mosses, and lichens, which cover 30% or more of the area.
- Pocosins are rain dependent with a high water table and are not connected to streams or rivers. Like wetlands, pocosins have peaty soils, which, when wet, give them marshy or boggy qualities.

Water Penny

Stonefly

Caddisfly

Sow Bug

Macroinvertebrates: Organisms that lack a back bone and can be captured by a 500micron net or sieve. These include larger insects and arthropods, such as spiders, flies, and worms, as well as mollusks such as mussels, clams, and crayfish.

While some of these macroinvertebrates are considered pests or are only looked at as a food source, many of them provide large benefits to their environment. One of the main benefits of aquatic macroinvertebrates, is their ability to gauge water quality. Macroinvertebrates vary in levels of pollution tolerance, as some can handle a lot of pollution in the water, while others cannot handle any. This is due to special adaptations for dealing with low oxygen and high turbidity environments, which are common characteristics of polluted waters. These macroinvertebrates are broken down into three groups. Group 1 has no pollution tolerance and indicate healthy waterways, Group 2 are somewhat pollution tolerant and indicate a mild level of pollution, and Group 3 are pollution tolerant and indicate highly polluted waterways. Here are some of the most common insects found in each group:
[Click here to learn about what you can do to keep our waterways clean]

Group 1 Pollution Intolerant

Mayfly

Group 2 Somewhat Pollution Tolerant

Dragonfly

Scuds

Group 3 Pollution Tolerant

Midge

There is a large variety of wildlife to see within Landfall. While you may not see the animal itself, you can figure out what's around you by looking for their tracks. Here are some of the species we have seen on our adventures on the trails, see if you can match the animal to its tracks.

Answers

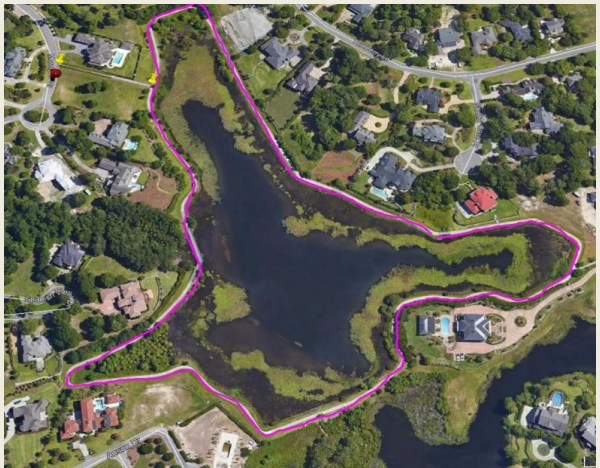
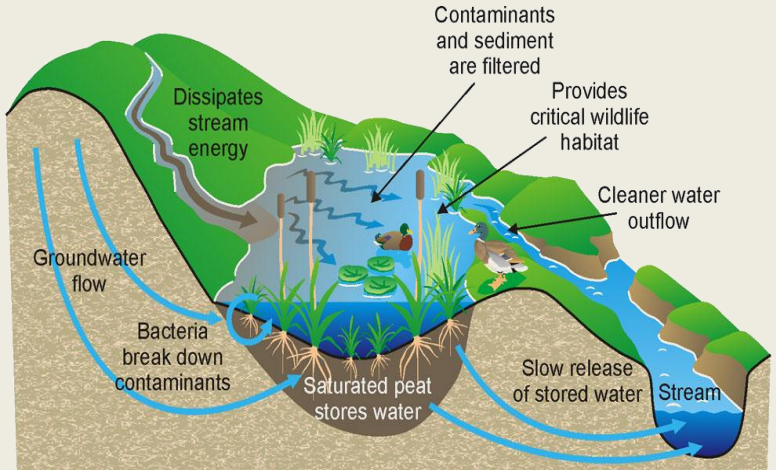
There is a large variety of wildlife to see within Landfall. While you may not see the animal itself, you can figure out what's around you by looking for their tracks. Here are some of the species we have seen on our adventures on the trails, see if you can match the animal to its tracks.

Wetlands: areas where water covers the soil, or is present at or near the surface of the soil for all or varying periods of time during the year, including the growing season.

Landfall Lake is a constructed wetland. These are typically built to compensate for developing on land that were previously wetlands to maintain the same amount of wetland area.

Landfall Lake, which has a .9 mile walkway, was first constructed in 1996 and was completed in 1999. It was part of the states' largest mitigation project of wetlands at the time, which also included 200 acres in Pender County that were turned into wetlands to compensate for the development of the Nicklaus Pines golf course. Shallow-water areas support bald cypress, black gum, and other wetland trees that in turn serve as a canopy for wetland shrubs and herbaceous plants. These naturalized plantings provide water filtration, storage for flood water, and have enabled the lake to become a haven for wildlife, including a diverse array of fish, frogs, turtles, and birds. As a naturalized habitat, it is a place where people can experience and enjoy nature. To maintain the lake, the COA works closely with the Northeast New Hanover Conservancy (NNHC), which has overseeing rights of the lake, to selectively prune and/or remove certain vegetative plants and trees every winter.

Landfall Maintenance also does routine inspections of the lake to ensure all systems are working and are compliant. Chemical treatments are prohibited in the area and dredging of the lake can and must be done when 25% of the original depth of the lake is filled with sediment. At this time, with the rate of collection of the sediment, it should be many years before dredging is necessary.

Quite often, the question arises as to whether the lake is silting up because of the increase in the vegetation in some areas. These areas have hydric soils and were designed and planted with aquatic vegetation and trees to filter stormwater. Filtration is a key factor, as the lake is the second to last pond in the storm system before entering the Intracoastal Waterway.

Landfall Lake Brochure