

TPO News, Events and Opportunities



Upcoming Events

April 15 10:00

Regular Tree Peace Meeting at Middleton Park in front of the Community Center

April 21 9:00 - 1:00

Town of Oak Island
Budgeting session for Public Works, Stormwater. Police Department Training Room

April 22, 2:00 - 5:00

Earth Day at Middleton Park

Thank You Oak Island Elks Lodge!!

The good and faithful folks at the Oak Island Elks Lodge voted to renew their sponsorship for Tree Peace OKI at the Live Oak level of \$1,000.00.



Let us know if you know of any business owner [or individuals] that would like to sponsor the Town's tree planting effort. 100% of the sponsorship monies is given to the town Adopt-A-Tree program. Come to a meeting or email us for Tree Peace OKI Sponsorship Program application

The Geology of Barrier Island Trees

Barrier island maritime forests are rare, resilient ecosystems located between sea facing dunes, salt marshes, and back bay tidal marshes along the Atlantic coast. Maritime forests are dominated by salt-tolerant, wind-stunted species like live oak, yaupon holly, cabbage palmetto, loblolly pine, and red cedar. These maritime forests function as crucial, stable buffers against coastal erosion and storms, and provide vital habitats for various wildlife. Land development, rising sea levels, land subsidence, and climate change threaten maritime forests existence. Maritime forests are one of the most endangered habitat types in the US, primarily due to development.

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About Us

Tree Peace OKI is a 509 (c) (3) non profit incorporated in the State of North Carolina dedicated to promoting and educating about the value of trees to Oak Island, NC. We may endeavor to influence legislation for that purpose but we may not support any candidates or political parties.

Contact us

We meet the third Wednesday every month at 10:00 a.m. Message us on our Tree Peace OKI Facebook page.

Our Officers

Phil Dudley, President

Paula Byerly, Vice President

Eileen Soderberg, Treasurer

David Merkle, Secretary

Judy Reid, Events Coordinator

John Schweikart, Chief Information Officer

Ann White, Membership Chairperson

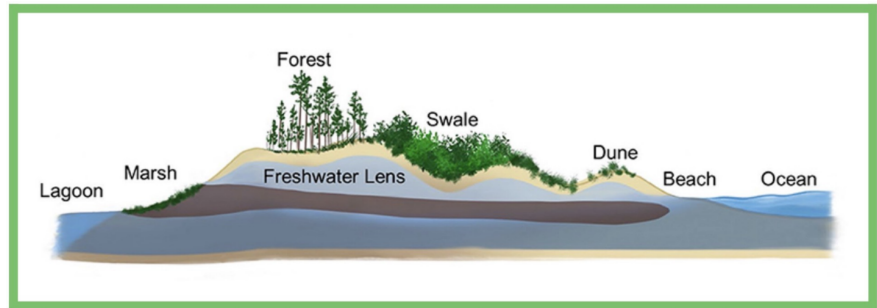
Join or Donate to Tree Peace OKI

at treepeaceoki.org

A one year membership is only \$20

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Diagram: Typical Cross-section profile of a barrier island with various ecosystems and geologic interfaces. The top of the freshwater lens is where you start to find the red-orange soil marker.



Barrier islands require an abundance of sand for building -like that provided by the Cape Fear River, and moderate wave energy for shaping the beach front and the inner island geomorphology. Barrier islands are not fixed structures; they are dynamic geologic systems that constantly move and shift, supporting important terrestrial habitats such as dunes, salt marshes, maritime forests, and tidal flats. Maritime forests are essential for storm protection not only for human structures but for the island itself. They conserve important nutrients in the soil and fresh ground water.

On Oak Island the red soil layer one sees when they dig a hole is 6"-18" below the surface depends on what part of the island you are on and its elevation above sea-level. The cause of the red-orange soil layer is the oxidation of iron found naturally in the soil in North Carolina. Red soil in maritime forests on barrier islands is caused primarily by the oxidation of iron rich minerals in the soil, often derived from older sediment deposits deposited over thousands of years. When these iron compounds, such as Hematite (Fe_2O_3) and Goethite (FeOOH), are exposed to air and moisture, they rust, turning the sand and clay into a reddish orange color. While barrier islands are mostly white to light brown sands, older, and in more stabilized parts of the island (i.e., where maritime forests thrive) they can accumulate these rich iron

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sediments overtime as ground water fluctuates. Red soil is low in nutrients and can occur in various climates. It is not unique to Oak Island.

As trees and scrubs shed leaves, branches, and roots, organic matter builds in the soil. The slow decay of thick, tough leaves continuously trickles nutrients into the soil. These changes brought about by arborescent cover allow other plants with high nutrient and soil water requirements and low salt-aerosol tolerance to survive and reproduce within these environments. Scrub and tree roots concentrated within the first foot or so of the soil and are the favorable location to collect nutrients.

Precipitation is the primary source of water for maritime scrub thickets and forests. Precipitation reaching the ground beneath arborescent vegetation infiltrates quickly through the coarse sands. Surficial roots absorb this moisture as they move into the soil, but deep roots that move into the island's freshwater lens supply most of the water to the maritime trees and other fauna. The height of the water table fluctuates over time -evidenced by the red-orange layer depth variation, depending on the amount of recent rainfall.

Oak Island is a barrier island due to the dredging of the Intracoastal Waterway (ICW). Oak island is more of a coastal headland or welded barriers than a barrier island but has many features of a barrier island especially at the western end with its limited maritime forest. Oak Island's marine forest stabilizes the barrier island against coastal erosion. It also provides important breeding and migration stopover points for various migratory birds like the eastern painted bunting. The maritime vegetation exposed to frequent on shore salt spray and ocean winds, especially during storms, have a distinct effect on barrier island vegetation. The effect of the salt spray on the maritime forest is the salts' pruning effect on the seaward side of the trees which shows a distinct tree-line slope down to the sea.

In closing, barrier islands -like Oak Island- are dynamic-ephemeral geomorphic features moving landward as sea level rises. Exposing the island features to storm water and wind, and day to day tidal processes, waves and eolian (wind) processes causes features to evolve and stabilize. There are features on the island that help stabilize the land and the most important are trees. Trees protect the land not only from storm water but also from eolian (wind) process.

Submitted by David Sonnenfeld

Thank you Volunteers

Thank you to Carolina Candelaria, Sue Dudley, Jim Reid, Eileen Soderberg, Chris Riegert, Phil Dudley and Judy Reid. For donating a few hours to weed, trim and freshen the mulch around the dozen or so trees planted in the right-of-way along East Oak Island Drive. It was a pleasant morning and the group was convivial.

Thanks to Jim Hunt for helping to remove and replace the tree in front of the Ocean Ed center that was struggling because it was planted too low. {That was a a Tree Peace OKI donated and planted tree... we are learning and correcting our mistakes. Trees need to be planted 10% above ground level.}



Wilson from *Home Improvement* photo-bombed our work day photo!

“Plant high, Never die; Plant low, Never grow”

NEW PLANT WATERING GUIDELINES

Large Trees / Shrubs (ball & burlap & palms) 5 Gallons - 3 Times a week through first growing season	15 Gallons/Week
30 Gallon Trees / Shrubs 4-5 Gallons - 3 times a week	10-15 Gallons/Week
15 Gallon Trees / Shrubs 3 Gallons - 3 times a week	9-10 Gallons/Week
3 Gallon & 7 Gallon Shrubs 1-2 Gallons - 3 times a week	5-6 Gallons/Week

- Consistent water through the first growing season is vital for the plant to get established
- These are only guidelines! This will vary depending on rainfall amounts and your soil
- Goal is cool, moist soil
- Too much water will kill a plant faster than not enough
- Fertilize palms in spring and fall seasons with palm fertilizer
- Fertilize shrubs and trees during spring with slow release fertilizer

- Always leave your plant 10% above ground level
- Dig hole no deeper than needed
- Dig hole wide to encourage lateral root growth
- Backfill good soil up to crown of root ball

It is still a good time to plant a tree on Oak Island.

Recognizing our Sponsors!

Live Oak Level Sponsors



Julian Creek Artworks



Oak Island NC



A multi-generation Oak Island family donated \$1,000.00 to continue our efforts to preserve and restore the tree canopy. Anonymously.

Magnolia Level Sponsors

Adam Powell, AAMS, Financial Advisor, EDWARD JONES

Yaupon Holly Level Sponsors

Pelican Pack and Ship

Francesca Slaughter, Realtor, Keller Williams Innovate

Paula@Coastal Beauty Salon / Spa

Crossroads - A Gathering Place