Update on Bruce Beach

Connecting the ‘Current’ Community to the ‘Remaining’ Natural Areas, the ‘Past’ Cultures & Our ‘Lost’ Heritage

Barbara Albrecht
Good Water Quality is the basis of health and well being

Northwest Florida is in the Coastal Plain & hosts these characteristics:

- Highly erodible sandy soils
- Annual rainfall ~ 65"
- Groundwater is close to the surface
- Stormwater issues are difficult + aged infrastructure
- Incompatible recreational activities
- Many migrants and year-round visitors pass through the area
Bruce Beach is a neglected gem which is returning to a healthy maritime forest
Bruce Beach has been identified as one of several catalytic projects – ‘the jewel of the community’
Who uses Bruce Beach?

An entire community connected to nature, including: Audubon, Native Plant Society, paddlers, artists, various schools, the community, visitors, etc.
Bruce beach provides a landscape level laboratory for hands-on training and the transfer of knowledge.

- Bruce Beach lends itself to exploration and further investigation in that the site has three distinctive water types (a man-made mitigation wetland, an underground creek which becomes daylighted within 300 meters of the bay, and the bayfront) and at least five upland habitat types. This waterfront park highlights the beauty and resulting conditions of sea-level rise and climate change on coastal systems and provides an opportunity to observe resiliency.
Bruce Beach Weekly Monitoring

1. Washerwoman Creek
2. Sandy Shoreline
3. Mitigated Wetland
   - Collect: Hydrographic Data
   - DO, pH, Conductivity, Salinity
   - Total Suspended Solids
   - Chlorophyll $a$
   - Dissolved inorganic nutrients
   - Total Bacteria
   - Enterococcus
Rainfall events over six months compared to Enterococcus levels

- Water Quality is impaired at Bruce Beach

- Water Borne Pathogens are above DOH thresholds more than 50% of the monitoring period

- Exposure may result in rashes, ear/nose/throat infections, diarrhea, antibiotic resistant infections, etc.

When the public is informed; the public can make informed decisions.
Total Bacteria
Bacterial Abundance and Production

Figure 1: Cell sizes of various microorganisms and their corresponding average abundances in typical aquatic ecosystems. “Bacteria” refers to the heterotrophic bacterial community [adapted from (Kirchman 2018)].
Various Departments within UWF & other schools have utilized Bruce Beach as a Living Laboratory for their student interests.
They include:

Dept of Chemistry;
Dept of Biology;
Center for Environmental Diagnostics and Bioremediation;
Dept of Archaeology
New Paddling Trails

OAR Festival
October 23, 2021 at Bayview Park

Join us for a day of outdoor fun with free kayaking and paddleboarding rentals and activities, a paddleboard race, food, and more.

<table>
<thead>
<tr>
<th>BAYVIEW OUTDOOR PURSUITS RENTAL PRICING</th>
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<tbody>
<tr>
<td><strong>Per Hour</strong></td>
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<tr>
<td>---</td>
</tr>
<tr>
<td>Single Kayak</td>
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<tr>
<td>Standup Kayak (Stand-Up)</td>
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<td>SUP</td>
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<tr>
<td>Pedal Boat</td>
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<td>Beach/near Dike</td>
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<tr>
<td>Canoe</td>
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#Equipment Pricing
What is the source of these Pathogens?
What is the source of these Pathogens?

Stormwater?
Sewer? Septic?
Aged Infrastructure?
And we went on a Three-hour Tour...
To look at the Coast from the Water
All this to see if the paddling trail would be safe for access & egress and assess the coastal condition.