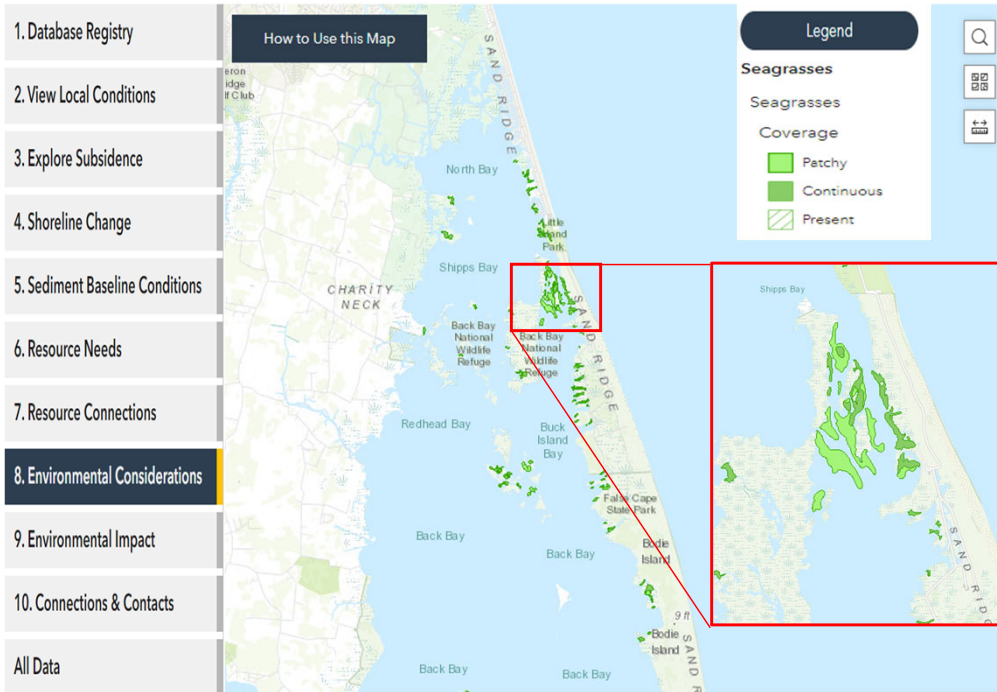


## Why is NIOT necessary?

Natural Infrastructure Opportunities Tool (NIOT) focuses on identifying natural infrastructure and beneficial-use (BU) opportunities through map-based visualizations of environmental, geomorphic, and sediment conditions. NIOT utilizes USACE projects and offers an interface for users to add their resource needs and resource availability. This fact sheet will help explain the usage of NIOT in natural infrastructure and BU projects and inspire innovative opportunities.

## How can NIOT be used in a beach nourishment project?

NIOT offers map-based data layers showing environmental considerations such as seagrass coverage and essential fish habitat that projects should consider during the planning and permitting stages.



For example, the **Sandbridge Beach nourishment project** was crucial in lessening storm-damage risk to a section of Virginia Beach's infrastructure while also creating coastal habitat. The initial fill occurred in 2003, and subsequent renourishments in 2007, 2013, and 2019.

**Tab 8: Environmental Considerations:** Includes a seagrass coverage layer showing patchy and continuous seagrass areas. NIOT offers data layers to help define locations of potential projects and impacts to surrounding vegetation (i.e. seagrass).

## How can NIOT support project managers and stakeholders?

NIOT has potential to assist in mitigation strategies by offering map-visualizations of Essential Fish Habitat. This data layer can provide project managers and stakeholders a list of 40+ different fish and shark species in the area.

