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ETree

Everglades Tree Island Indicator Web Application

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1 - U.S. Geological Survey, 2 - Seminole Tribe of Florida, 3 - Miccosukee Tribe of Indians of Florida

April 2025

JEM

EVERGLADES DEPTH ESTIMATION NETWORK
EDEN

Project development

- USGS co-designed with the Miccosukee Tribe of Indians of Florida and Seminole Tribe of Florida
  - Craig van der Heiden, Kevin Cunniff, Marcel Bozas, and Jed Redwine
- Developed a dashboard mockup for the decision support tool
- Hosted meetings and workshop in fall 2022 to gather input from SFWMD, USACE, ENP, FWS, and other agencies and institutions

Available at https://sofia.usgs.gov/eden/etree

ETree Overview

Tree island: *"Spatially discrete patches of woody vegetation embedded in a wetland landscape of contrasting vegetation type"*

- RECOVER Tree Island task team

- Easy-to-use visualizations
- Data downloads
- Near-daily hydrologic indicators for 400 tree islands
- Historical hydrologic indicators for 400 tree islands

Everglades Tree Island Indicator (ETree)

About

Map Layers

Tree Islands Point Size

1 — 20

☑ Show Management Areas

Quick Actions

Filter Islands by File

Load a file

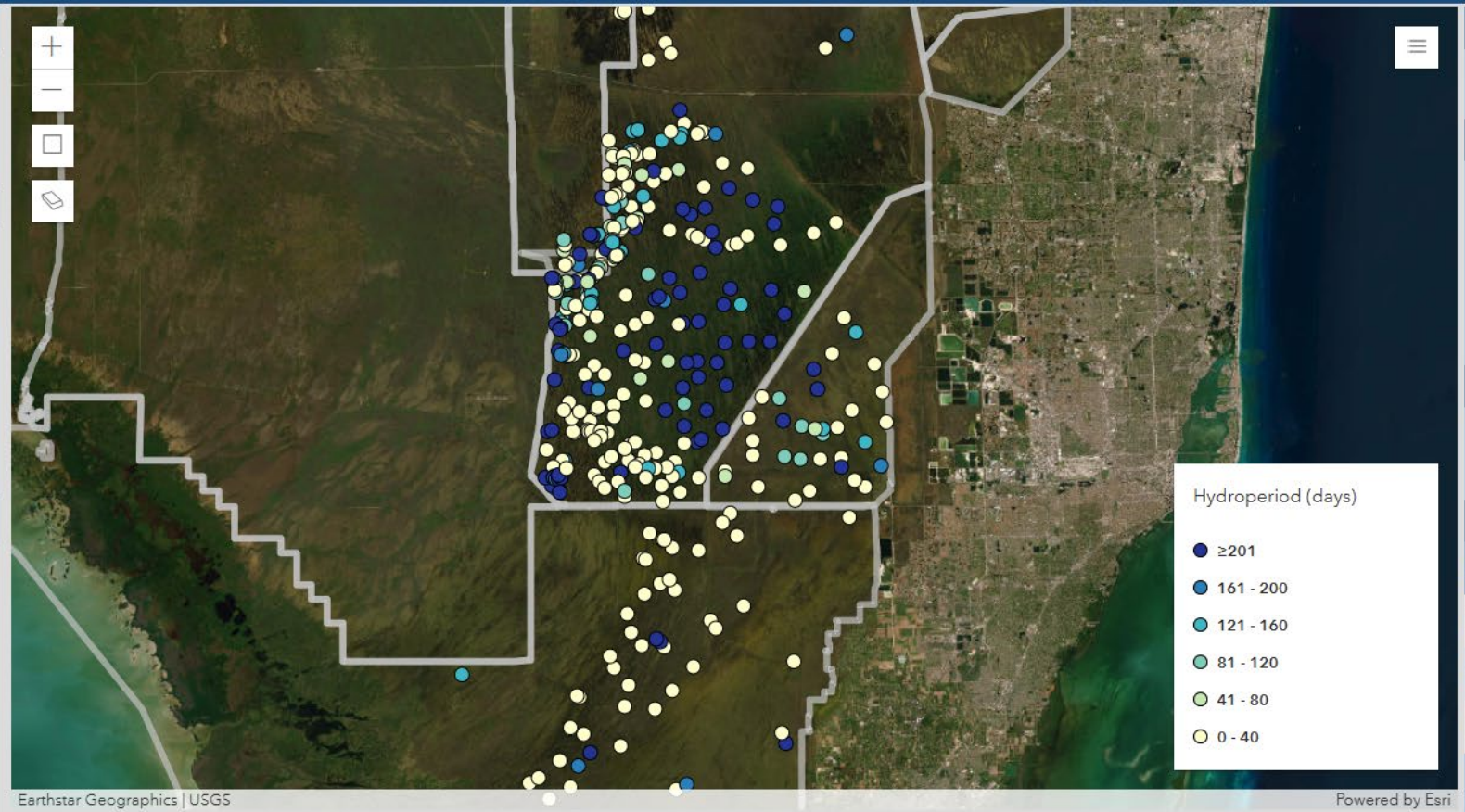
Save selected islands to file

Select All Islands

Clear Filter | Clear Selection

Tree Islands

Name
3A-1-1
3A-1-2
3A-1-3
3A_10_1
3A_10_2
3A_10_3
3A_10_4
3A_10_5
3A_11_1
3A_11_2
3A_11_3
3A_11_4
3A_11_5
3A_11_6



Select an island to view chart(s).

Displayed Metric

Hydroperiod

Time Range

◉ Water Year

2010

2001 — 2024

○ Near Daily

Mon March 31, 2025

Elevation Options

◉ In situ

○ Lidar

Metrics By Region

Area	Mean	SD
ENP	33	77
WCA 3A	99	117
WCA 3B	65	86

Download Metrics Data

Download Metadata

ETree was developed in cooperation with:

Miccosukee Tribe of Indians of Florida

For any questions contact Saira Haider at shaider@usgs.gov

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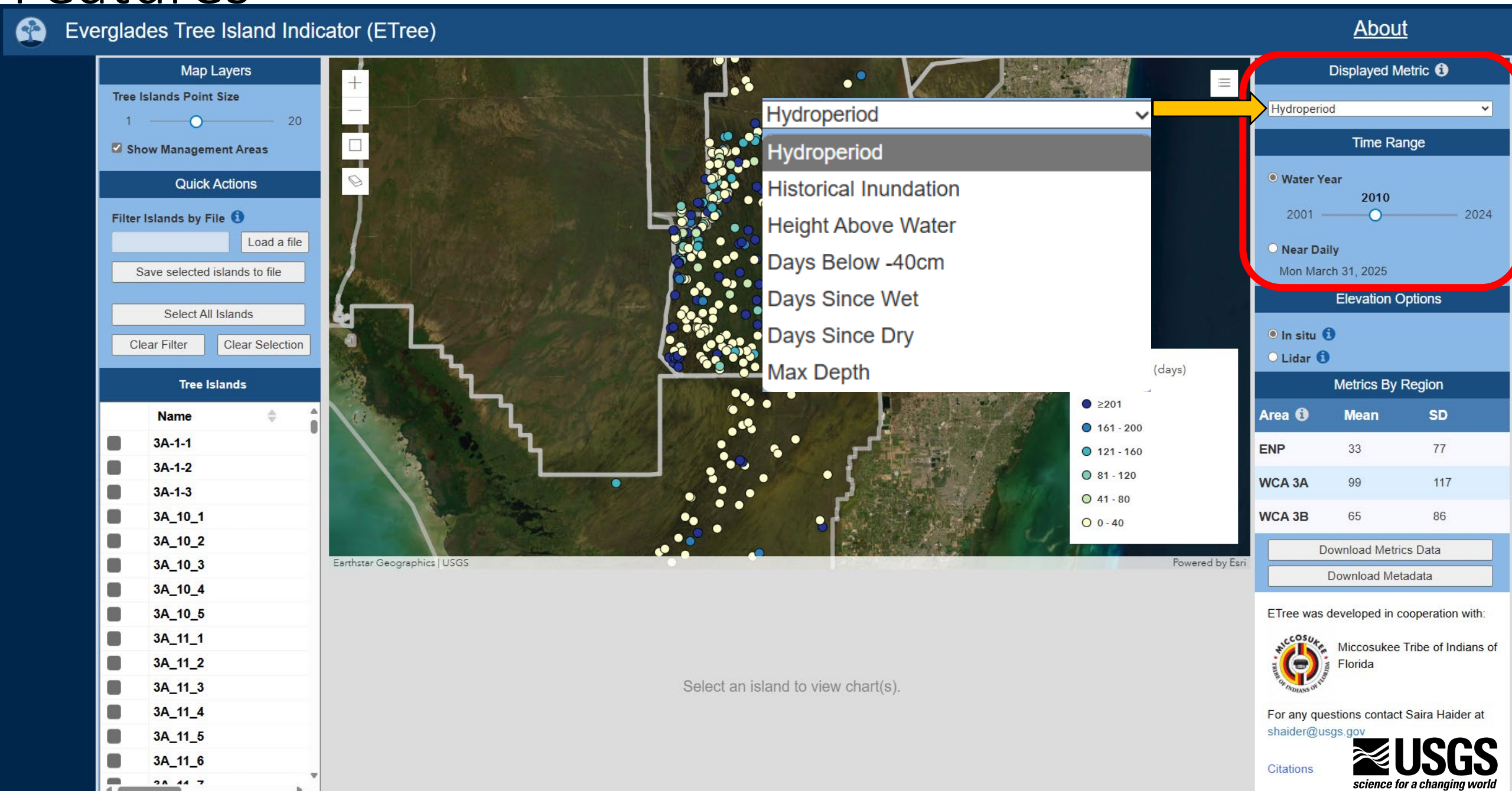
Features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3A_11_2
3A_11_3
3A_11_4
3A_11_5
3A_11_6
Hydroperiod
Hydroperiod
Historical Inundation
Height Above Water
Days Below -40cm
Days Since Wet
Days Since Dry
Max Depth
(days)
≥201
161 - 200
121 - 160
81 - 120
41 - 80
0 - 40
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Temporal Scales

- Near daily indicators
  - Updated along with EDEN surfaces on near daily time scale

- Historical indicators
  - Calculated over the Everglades water year (May 1st – April 30th) labeled by the end year
  - Date back to water year 2001

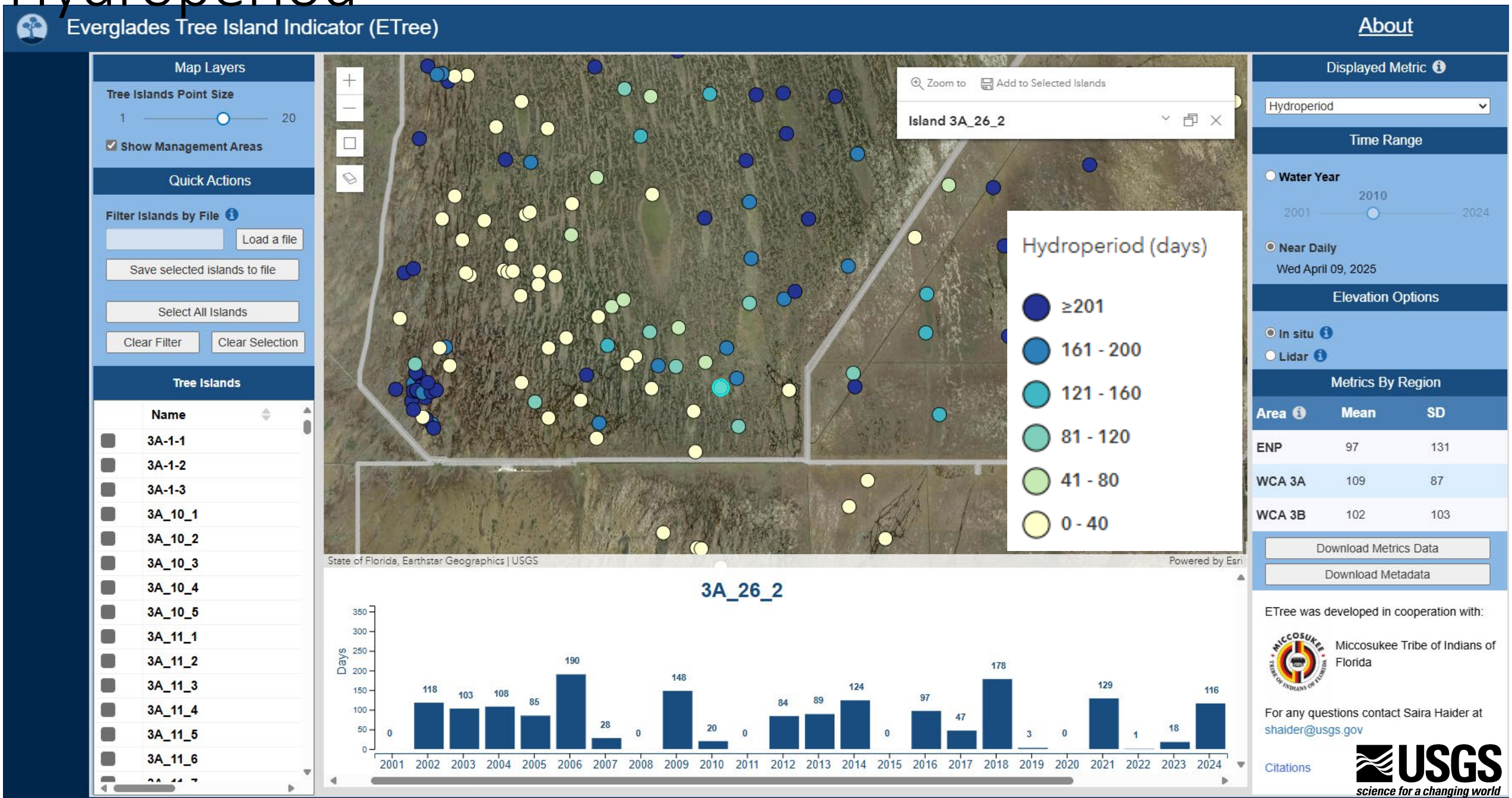
Near daily indicators

- **Hydroperiod**: Number of days over the past year that the tree island was covered by water
- **Days below -40 cm:** Number of days over the past year that water-levels were more than 40 cm below the elevation of the tree island head
- **Height above water**: Tree island height above water for the most recent date; negative values indicate water levels above the tree island
- **Maximum depth:** Maximum water depth over the tree island over the past year
- **Days since dry**: Number of days since the tree island was last dry, counting back up to 3 years
- **Days since wet**: Number of days since the tree island was last wet, counting back up to 3 years

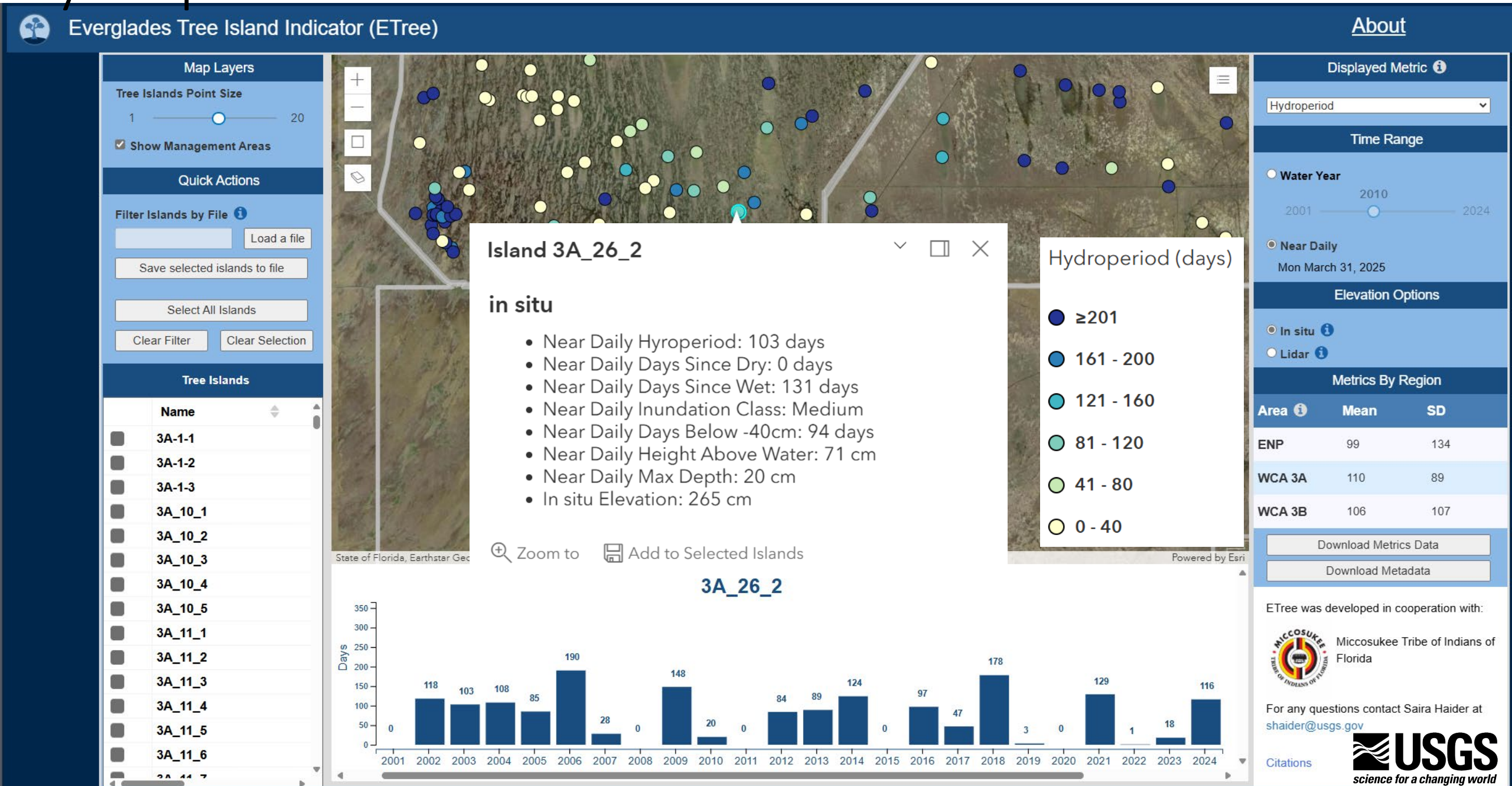
Historical indicators

- **Hydroperiod**: Number of days in the water year that the tree island was covered by water
- **Days below -40 cm:** Number of days in the water year that water-levels were more than 40 cm below the max elevation of the tree island head
- **Height above water**: Mean tree island height above water over the water year; negative values indicate water levels above the tree island
- **Maximum depth:** Maximum water depth over the tree island during the water year
- **Historical inundation:** Quantile classification of mean hydroperiod from 2000 – 2023, into 4 bins: rare (0 days), low (1 – 31 days), medium (32 – 135 days), high (136 – 200 days), or very high (201 – 365)

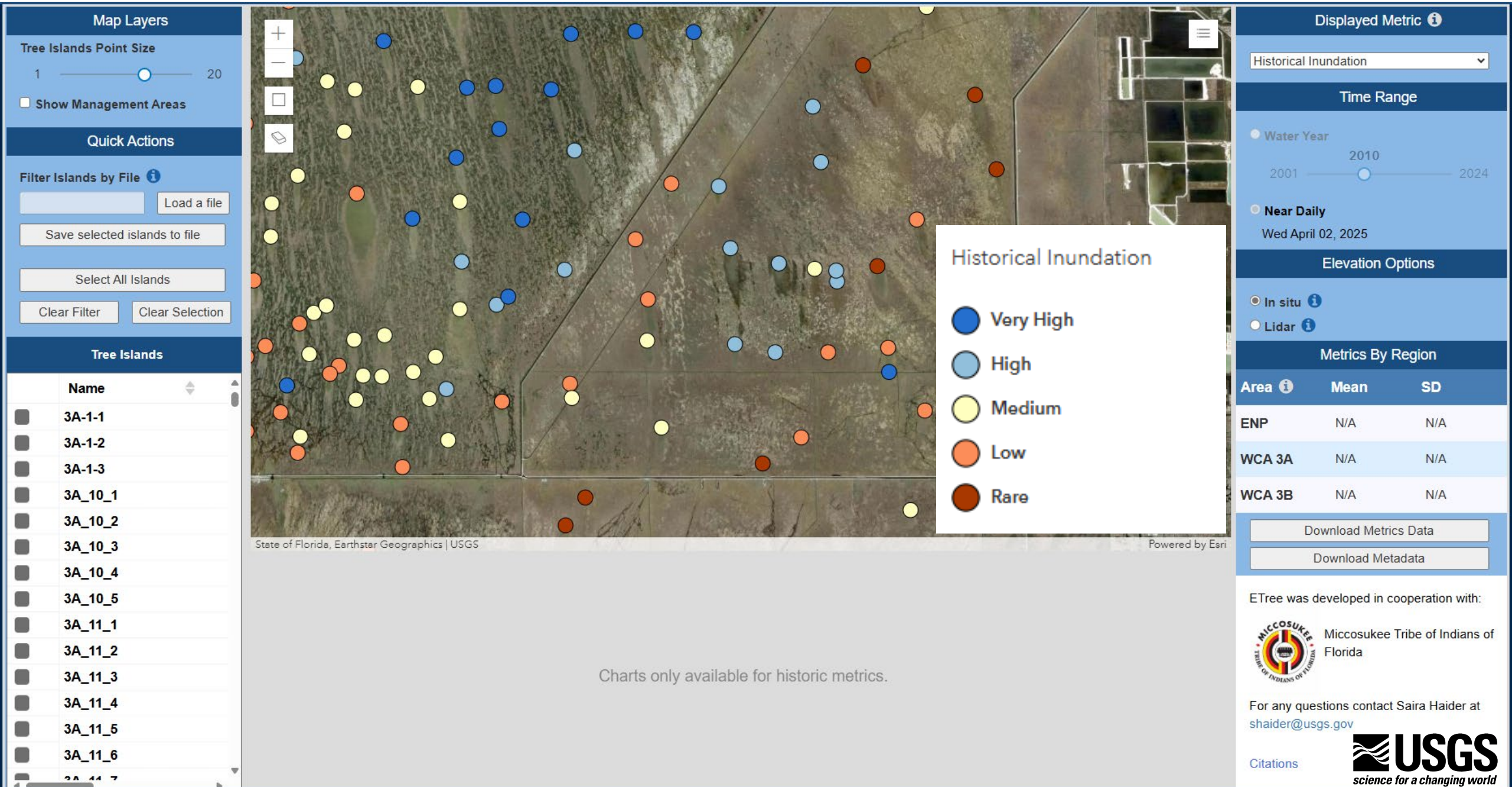
Hydroperiod



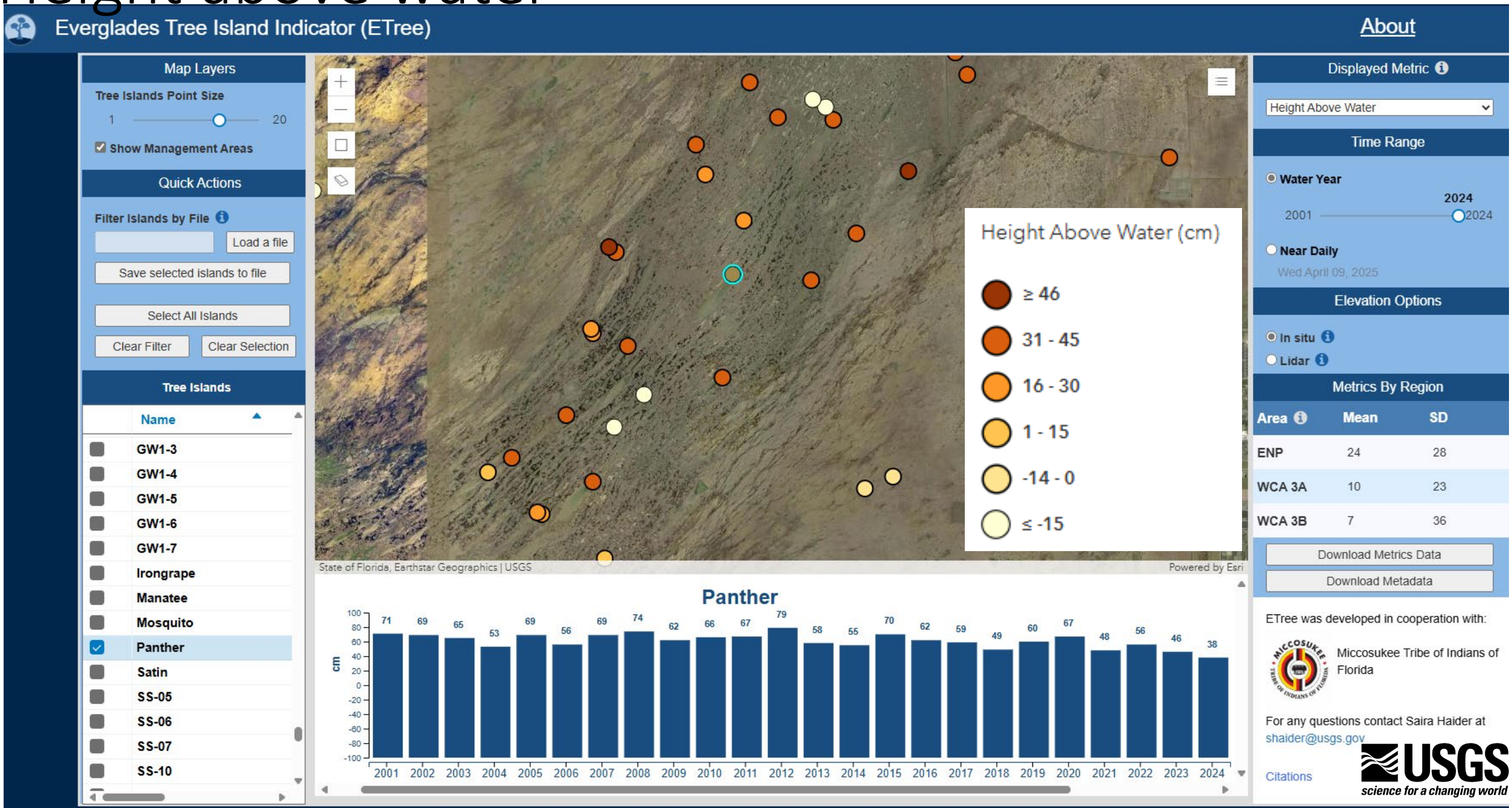
Hydroperiod



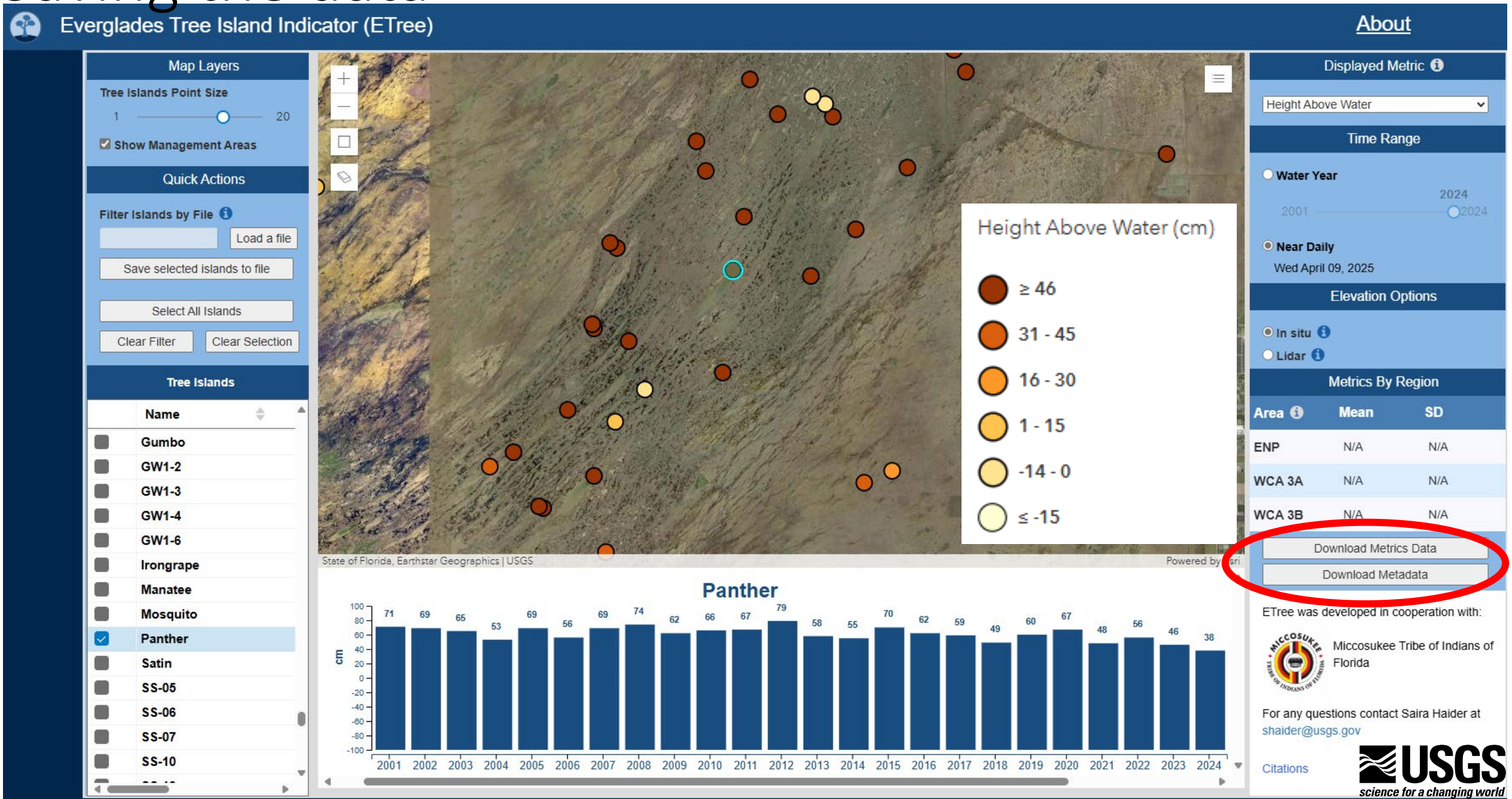
Historical Inundation



Height above water

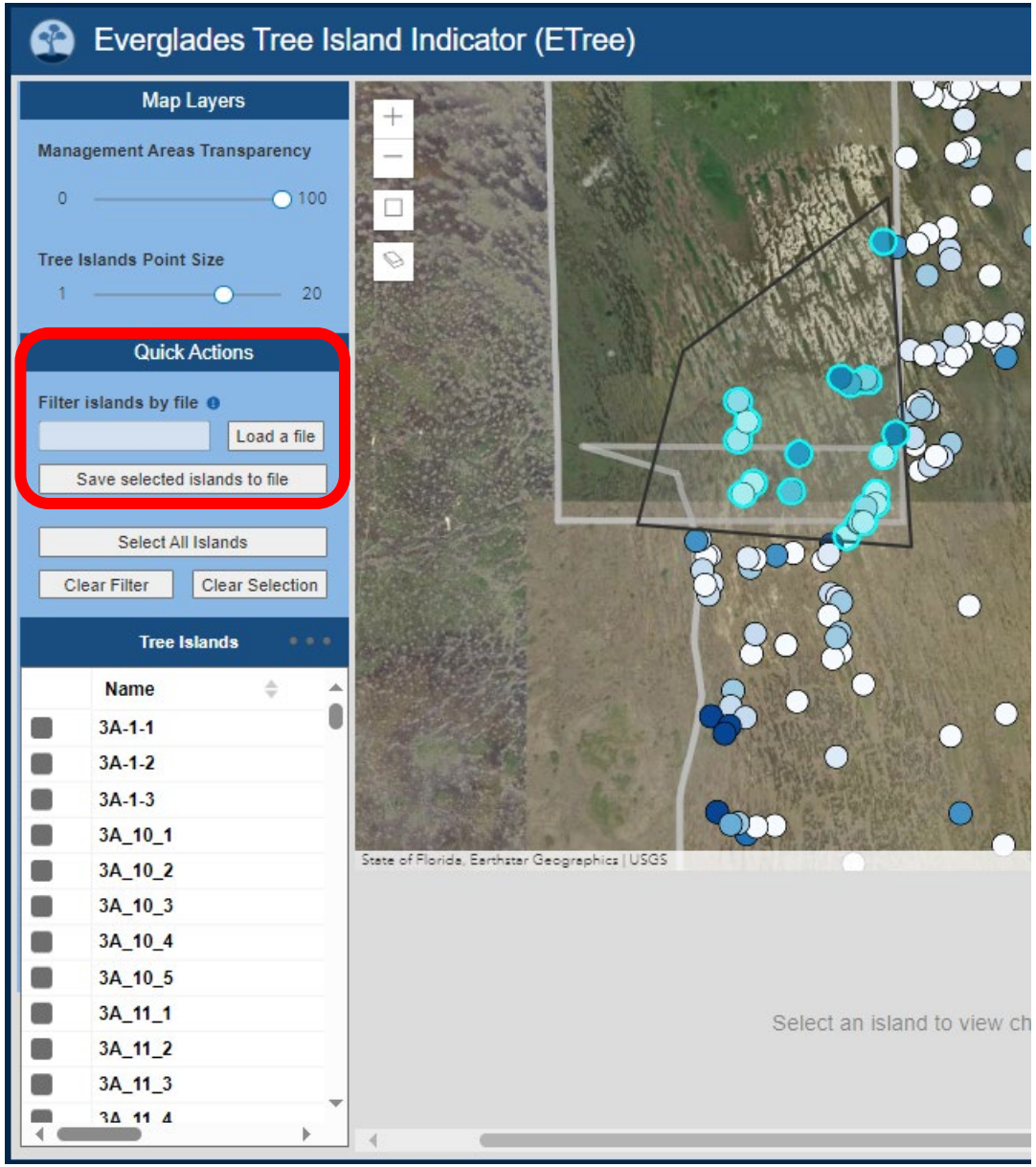


Saving the data



Filter file - Allows a previously saved set of tree islands to be uploaded

Step 1: Select the tree islands of interest



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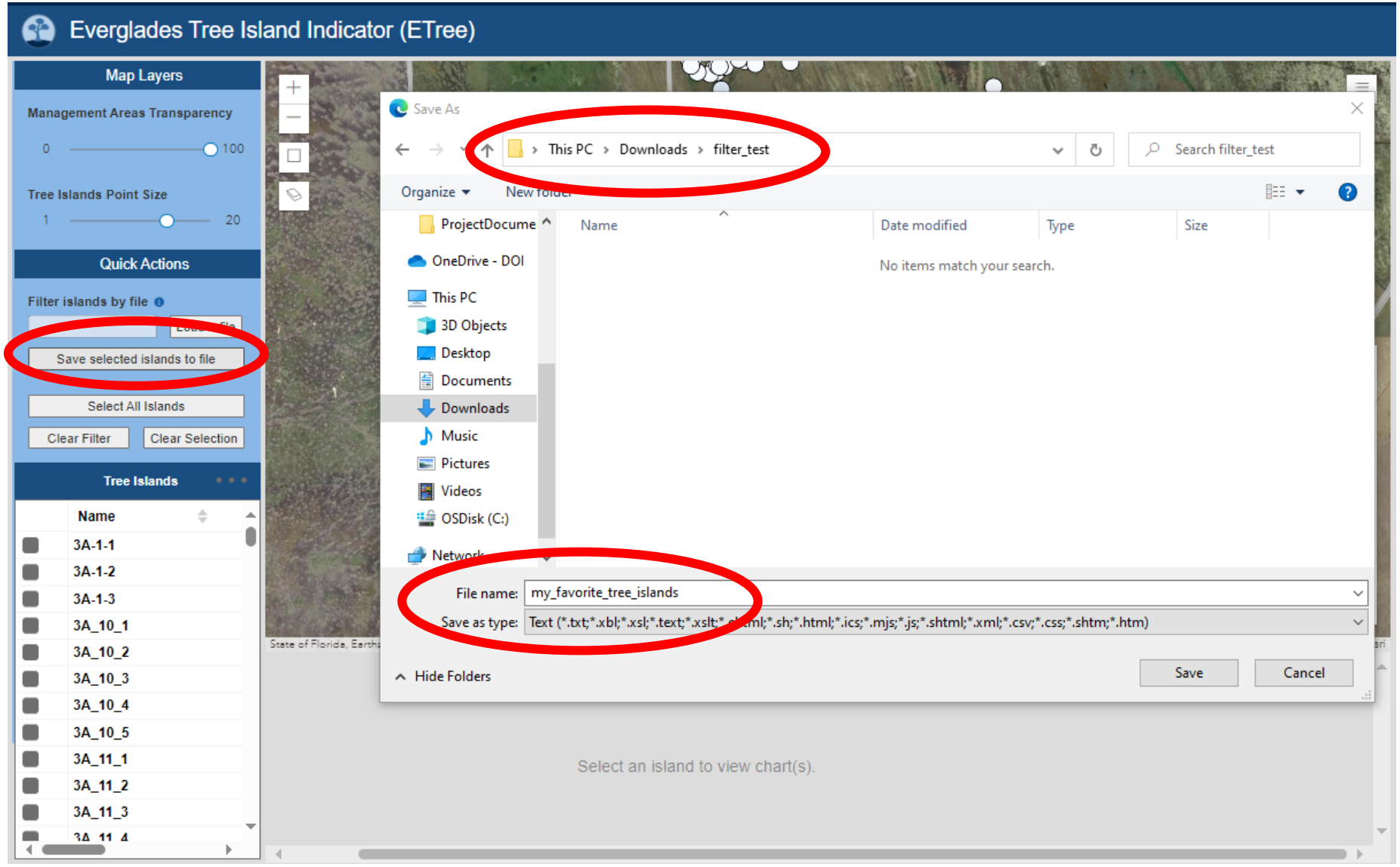
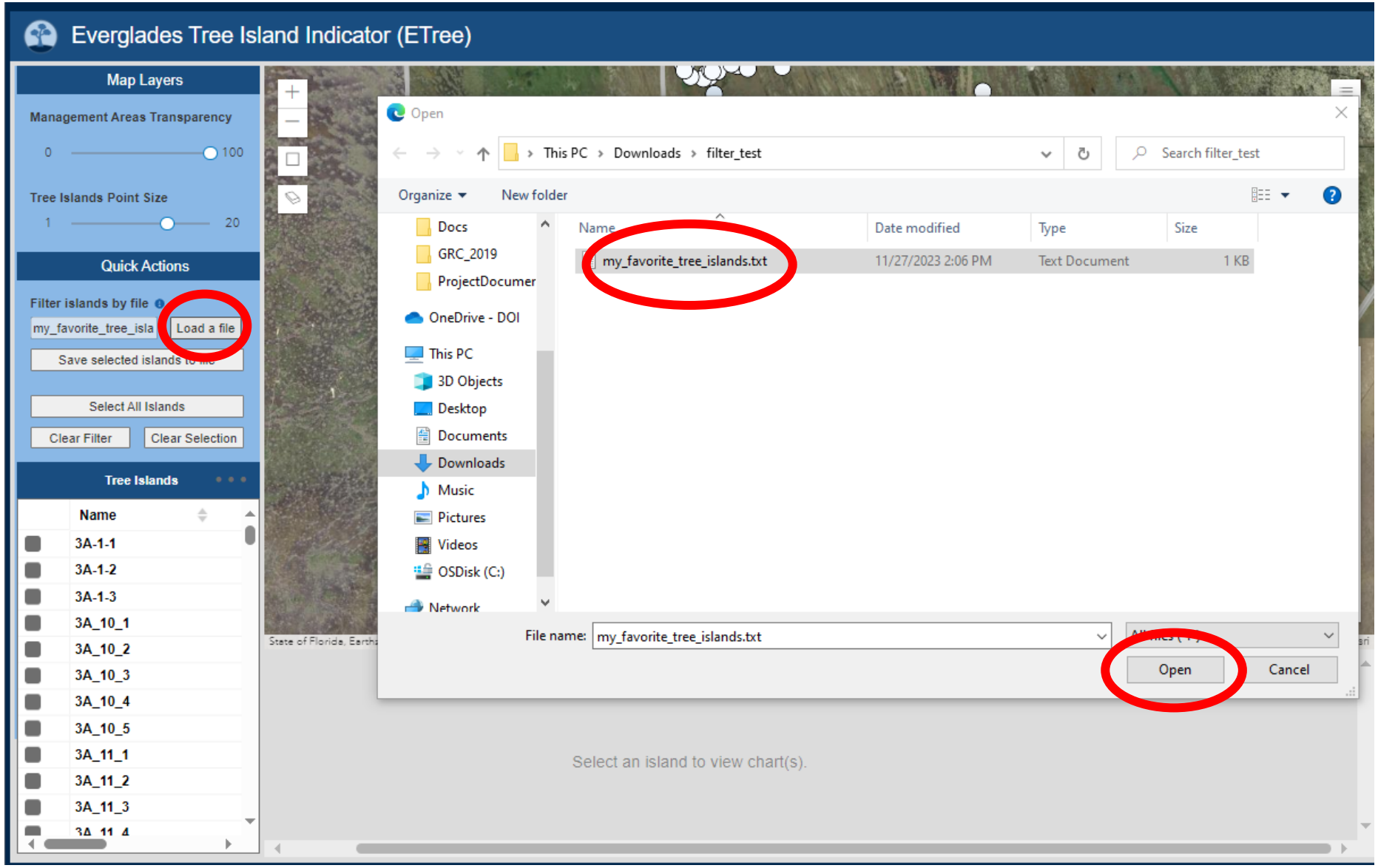
Step 2: Click “Save”, choose a location on your computer, and name the file.



Filter file - Allows a previously saved set of tree islands to be uploaded

Step 3: The next time you want to filter to your set of tree islands, click “Load” and navigate to your saved file.



Progress & Next Steps

- Participating in RECOVER tree island task force to develop a tree island performance indicator
- In coordination with the task force, collaborating with Mike Ross and Lael Licht (FIU) with the goal of integrating new indicator(s) or vegetation binning into ETree
- Challenges:
  - Elevation data
  - Any update to elevation data has to be available for all 400 tree islands

Thanks!

Questions?

shaider@usgs.gov

ETree website:

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