

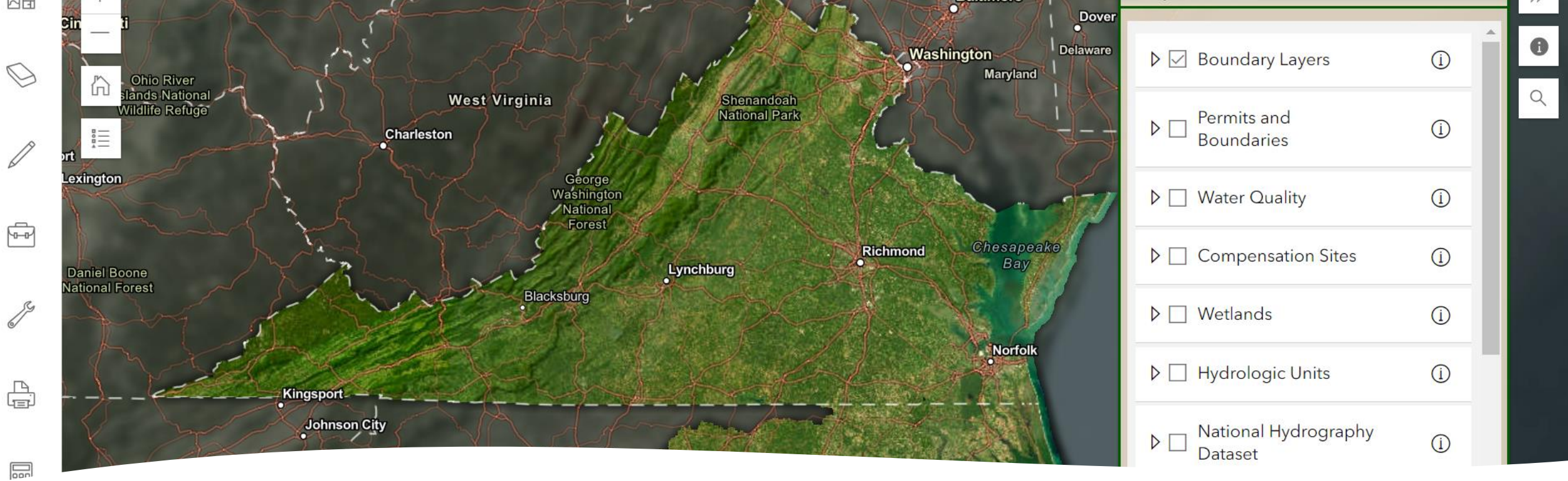
VA's Wetland Condition Assessment Tool (WETCAT)



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What is WetCAT?

- WetCAT is an online tool:
 - Geospatial layers used to investigate how land use changes affect wetlands and critical services they provide.
- Scores NWI wetlands based on adjacent landuse stressors for two ecosystem services: ability to provide habitat and improve WQ.
- Geoprocessing tools visualize impacts (downstream paths, watershed tool, Resource summary tool)

All Levels



Level I



Model Development/Application



Level II



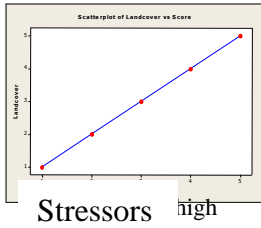
Model Calibration



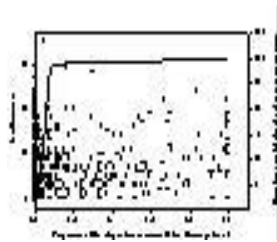
Level III

Model Validation

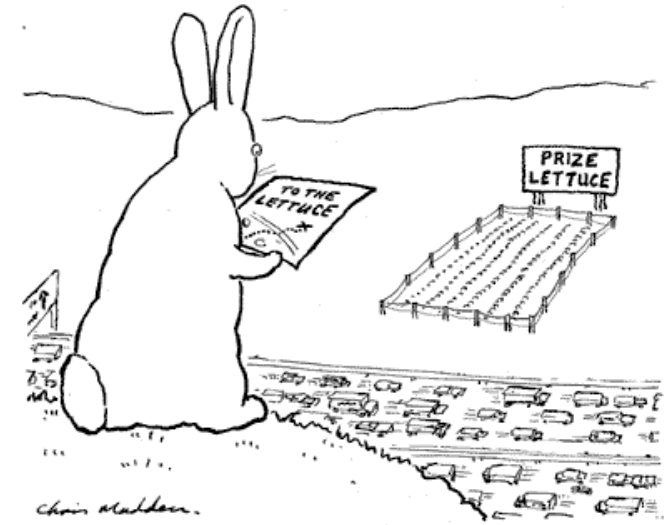
Landcover Score



Stressor



Service Endpoint



Choir Madder.
PETER RABBIT'S LAST ADVENTURE

Efforts to Automate FQA into WetCAT

- Floristic quality assessment (FQA) is an assessment tool that can be used for natural areas, such as long-term ecological monitoring and wetland floristic quality.
- FQA - Quantitative measure
- FQA allows for comparison of the floristic quality among many sites, and for assessing long-term plant community succession over time.
- DEQ convened botanical experts and wetland scientist from various regions of VA to develop C -values.
- Developed a protocol for incorporating the individual wetland species list and C-values into WetCAT as part of the wetlands spatial polygon layer.
- FQIA calculator is accessed - user will be asked to enter the coordinates of the site being evaluated and the species entered into the calculator will be attributed to the appropriate wetlands polygon.

How to use the FQA Calculator

Wetland Condition Assessment Tool (WetCAT)

Map Contents

- > Compensation Sites
- Wetlands
 - Floristic Quality Index
 - Tidal Marsh Community Type
 - Contractor
 - > Delineated Wetlands
 - Nontidal NWI Conditions
 - NWI Conditions Over Time (2001-2019)
 - NWI Habitat and WQ Conditions
 - All NWI Wetlands
- > Hydrologic Units

Mapscales 1:9028
200m
500ft

Click on drop down arrow

Wetland Condition Assessment Tool (WetCAT)



FQA Calculator

Expand for map click coordinates to copy and paste

Name:

E-Mail Address:

Date:

ID Number:

Click the button to get your coordinates.

Latitude:

Longitude:

Please enter data by choosing a Taxon from the list and clicking Save for each one. As a taxon name is entered the list will display only entries containing that letter string. When done entering data click Send Data

Current CVal =

To delete an entry click it to highlight and click the Delete Entry button.



Map Contents

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Mapscale 1:9028
200 m
500 ft

Wetland Condition Assessment Tool (WetCAT)



FQA Calculator

Expand for map click coordinates to copy and paste

Current map click location:

Latitude: 37.7680

Longitude: -76.6044

Location pin



Name:

Mail Address:

Date: 09/04/2024

ID Number:

Click the button to get your coordinates.

Get Location

Latitude:

Longitude:



Please enter data by choosing a Taxon from the list and clicking Save for each one.

As a taxon name is entered the list will display only entries containing that letter string.

When done entering data click Send Data

Select a taxon by scientific

Save

Select a taxon by common

Save

Current CVal =

To delete an entry click it to highlight and click the Delete Entry button.

>>



Click on location pin button



Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Current map click location:
Latitude: 37.7757
Longitude: -76.5919
Location pin

Name:
E-Mail Address:
Date: 09/04/2024
ID Number:

Click the button to get your coordinates.

Latitude:
Longitude:

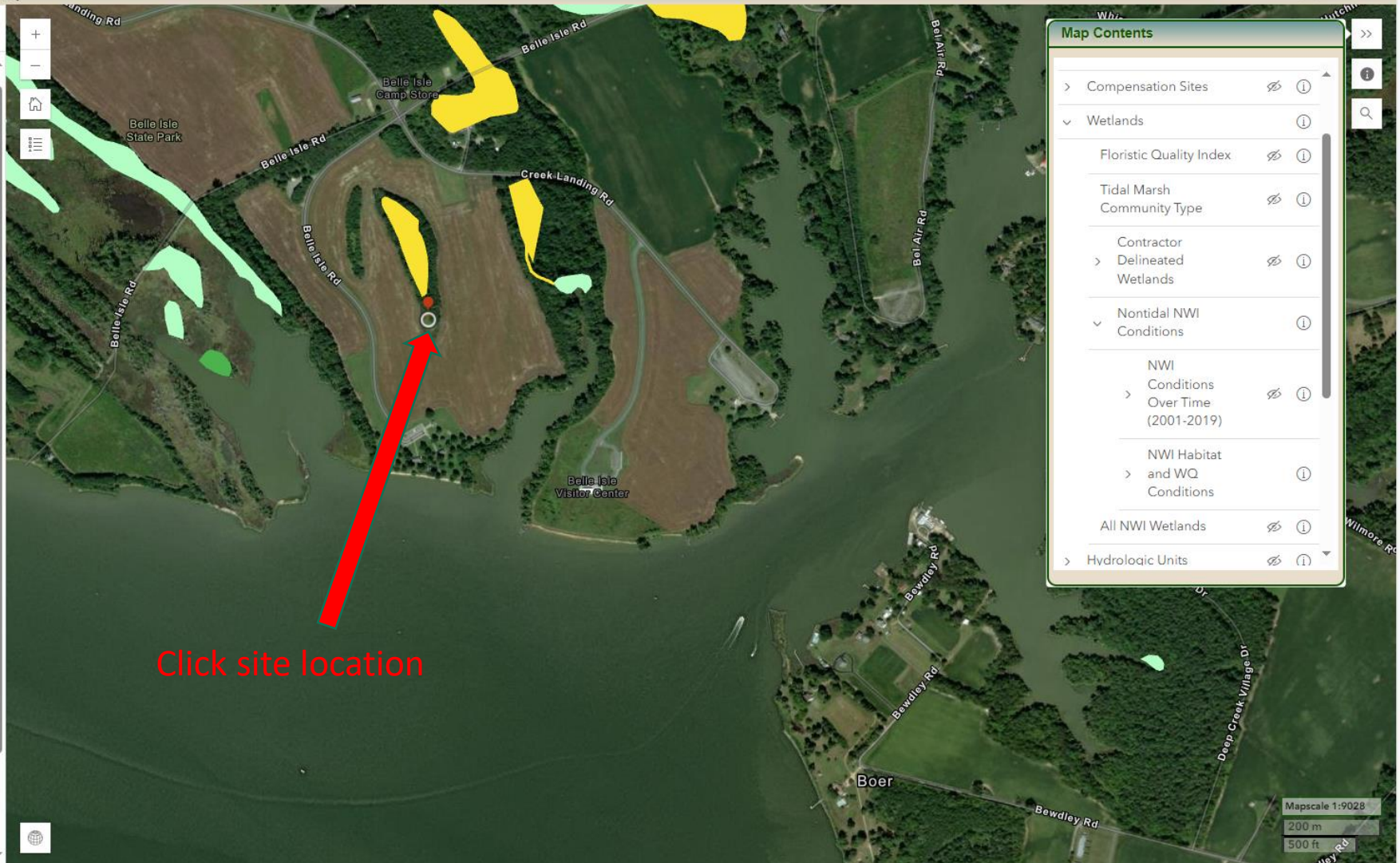
Please enter data by choosing a Taxon from the list and clicking Save for each one. As a taxon name is entered the list will display only entries containing that letter string. When done entering data click Send Data

Select a taxon by scientific name

Select a taxon by common name

Current CVal =

To delete an entry click it to highlight and click the Delete Entry button.



Map Contents

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Click site location

Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Current map click location:
Latitude: 37.7757
Longitude: -76.5919
Location pin

Name:
E-Mail Address:
Date: 09/04/2024
ID Number:

Click the button to get your coordinates.

Latitude:
Longitude:

Please enter data by choosing a Taxon from the list and clicking Save for each one.
As a taxon name is entered the list will display only entries containing that letter string.
When done entering data click Send Data

Select a taxon by scientific name:

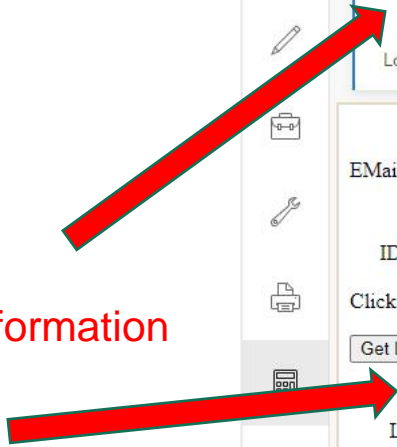
Select a taxon by common name:

Current CVal =

To delete an entry click it to highlight and click the Delete Entry button.



Copy / Paste lat / long information



Choose your species

Click on drop down arrow for species list



Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Click the button to get your coordinates.

Get Location

Latitude:

Longitude:

Please enter data by choosing a Taxon from the list and clicking Save for each one.
As a taxon name is entered the list will display only entries containing that letter string.
When done entering data click Send Data

Select a taxon by scientific ▼

- Abies balsamea
- Abies fraseri
- Abutilon theophrasti
- Acalypha deamii
- Acalypha gracilens
- Acalypha ostryifolia
- Acalypha rhomboidea
- Acalypha virginica
- Acanthospermum australe

Delete Entry

Clicking the Send Data button below will close the form and send the data to the server. Do not click Send Data unless you have completed the form.

Send Data

A satellite map of Belle Isle State Park showing wetland areas highlighted in yellow and green. The map includes labels for Belle Isle Rd, Belle Isle State Park, Belle Isle Camp Store, Belle Isle Visitor Center, and Creek Landing Rd. A red dot on the map indicates the current location.

Common Names Provided

Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Click the button to get your coordinates.

Get Location

Latitude:

Longitude:

Please enter data by choosing a Taxon from the list and clicking Save for each one.
As a taxon name is entered the list will display only entries containing that letter string.
When done entering data click Send Data

Select a taxon by scientifici

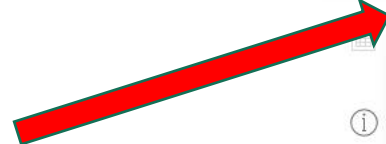
Save

Select a taxon by commo

- Balsam Fir, Northern Balsam
- Fraser Fir, Southern Balsam
- Velvetleaf
- Deam's Copperleaf, Big-seeded Copperleaf, Two-s...
- Slender Three-seeded Mercury, Short-stalk Copper...
- Hornbeam Copperleaf, Rough-pod Copperleaf
- Common Three-seeded Mercury, Common Coppe...
- Virginia Three-seeded Mercury, Virginia Copperleaf
- Paraguay Bur, Sheep Bur

Clicking the Send Data button below will close the form and send the data to the server. Do not click Send Data unless you have completed the form.

Send Data



You can also Click on the drop down arrow for common names

Provide Your Own

Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Click the button to get your coordinates.

Get Location

Latitude:

Longitude:

Please enter data by choosing a Taxon from the list and clicking Save for each one.
As a taxon name is entered the list will display only entries containing that letter string.
When done entering data click Send Data

- Zizania aquatica var. aquatica
- Zizaniopsis miliacea
- Zizia aptera
- Zizia aurea
- Zizia trifoliata

To delete an entry click it to highlight and click the Delete Entry button.

Clicking the Send Data button below will close the form and send the data to the server. Do not click Send Data unless you have completed the form.

Or just start typing a species name to self-populate the box

Save Your Work!

Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Click the button to get your coordinates.

Get Location

Latitude: 37.7757

Longitude: -76.5919

Please enter data by choosing a Taxon from the list and clicking Save for each one. As a taxon name is entered the list will display only entries containing that letter string. When done entering data click Send Data

Select a taxon by scientifici

Save

Select a taxon by commo

Save

Current CVal = 2

To delete an entry click it to highlight and click the Delete Entry button.

Acer rubrum - Red Maple - 2

Delete Entry

Clicking the Send Data button below will close the form and send the data to the server. Do not click Send Data unless you have completed the form.

Send Data

Click **Save** to add species with C value to site list and begin calculating the site CValue

Wetland Condition Assessment Tool (WetCAT)

FQA Calculator

Expand for map click coordinates to copy and paste

Get Location

Latitude:

Longitude:

Please enter data by choosing a Taxon from the list and clicking Save for each one.
As a taxon name is entered the list will display only entries containing that letter string.
When done entering data click Send Data

Select a taxon by scientifi

Save

Select a taxon by commo:

Save

Current CVal =

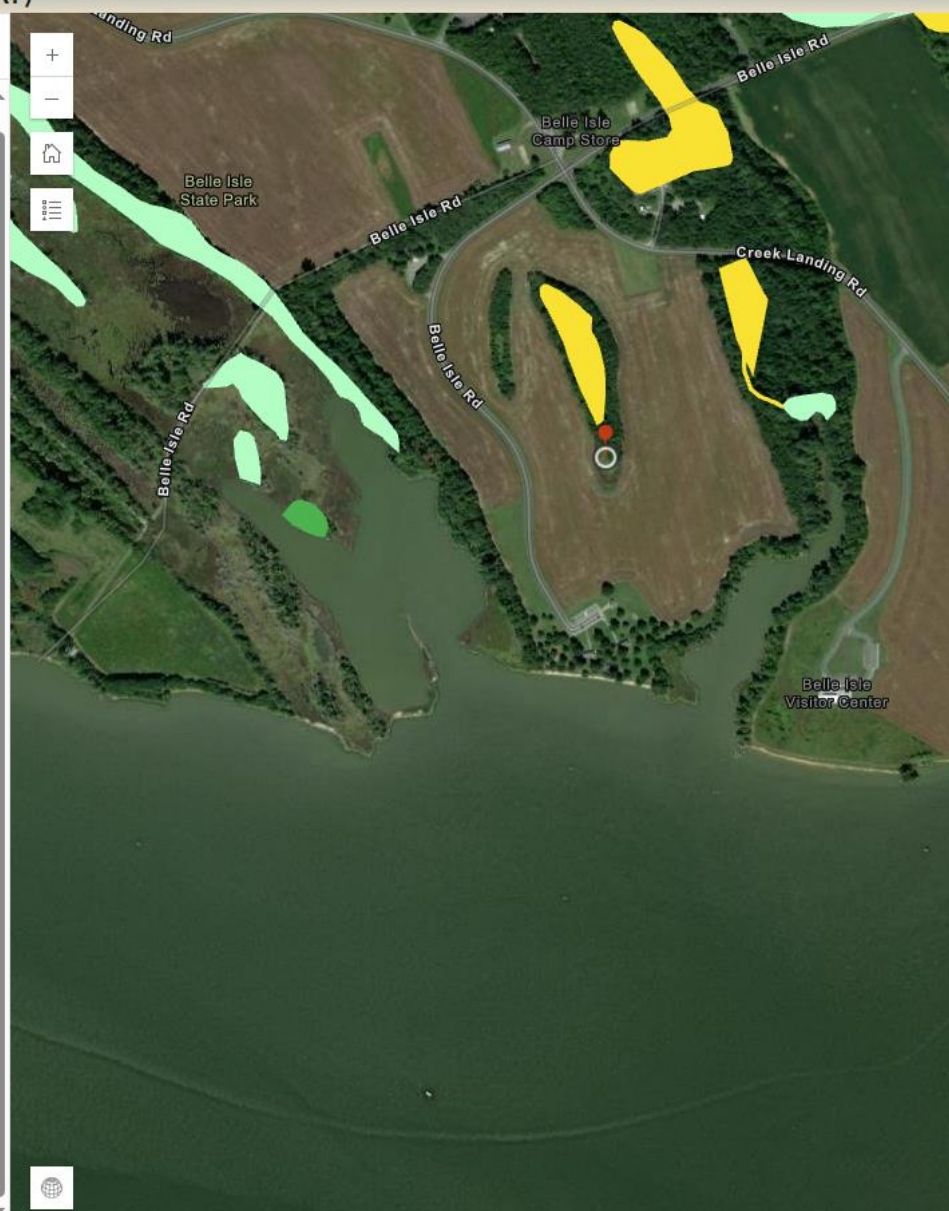
To delete an entry click it to highlight and click the Delete Entry button.

- Acer rubrum - Red Maple - 2
- Carpinus caroliniana - American Hornbeam, Ironwood - 5

Delete Entry

Clicking the Send Data button below will close the form and send the data to the server. Do not click Send Data unless you have completed the form.

Send Data



As species are added, a running average CValue is calculated for the site

FQA Index Layer

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Click on the **Floristic Quality Index** layer to bring up sites with CValues calculated

Mapscale 1:9028
200 m
500 ft

FQA Index Point Data

Wetland Condition Assessment Tool (WetCAT)

FQA Taxon Data

Zoom to

There are 15 plant species recorded at 37.772306, -76.588394 on 9/11/2023.

The average CValue is 2.1.

Scientific Name	Common Name(s)	C value
<i>Solidago altissima</i> ssp. <i>altissima</i>	Tall Goldenrod	3
<i>Symphotrichum pilosum</i> var. <i>pilosum</i>	Frost Aster, White Old-field Aster, Awl Aster	2

1 of 2

Map Contents

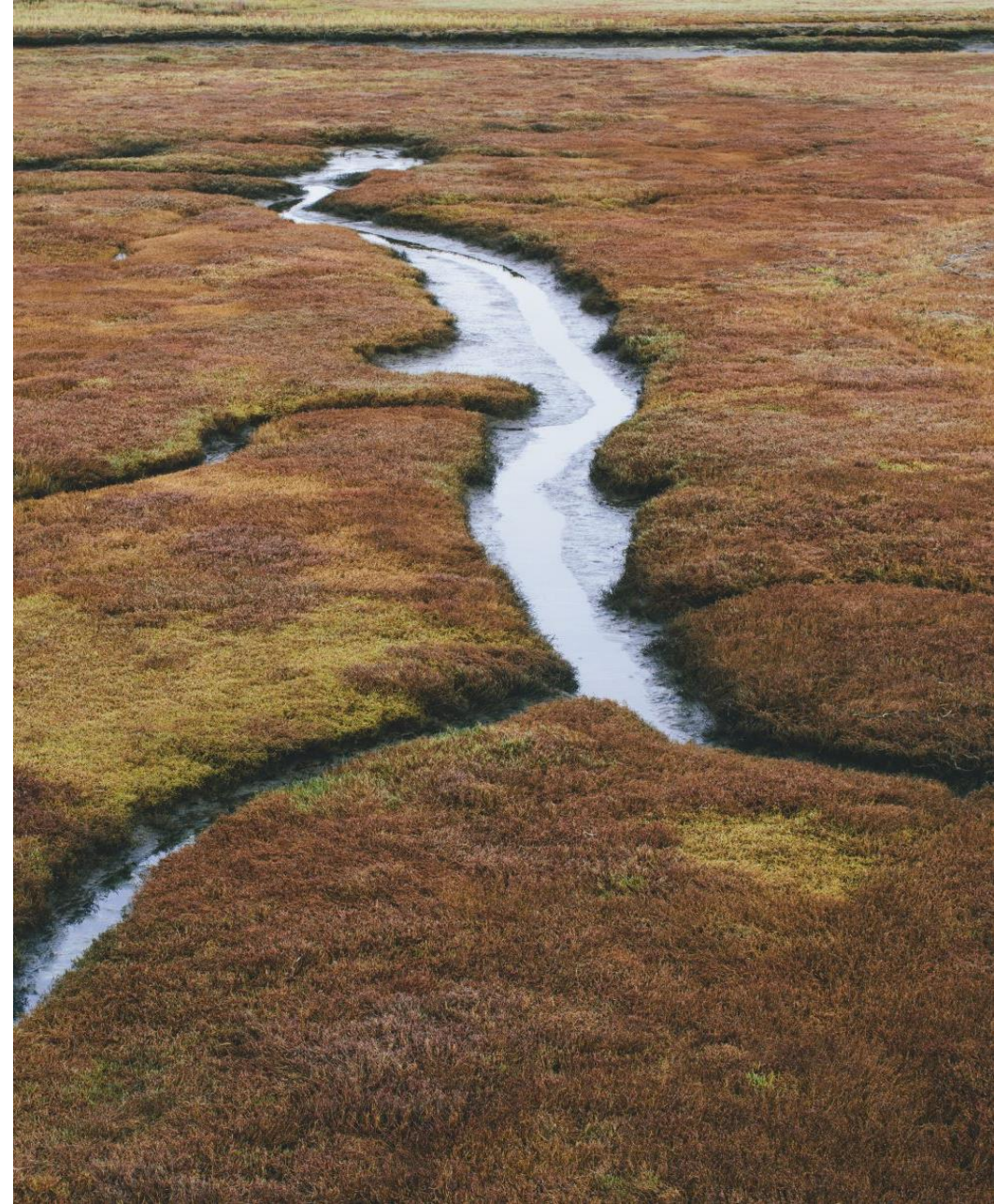
- > Compensation Sites
- Wetlands
 - Floristic Quality Index
 - Tidal Marsh Community Type
 - Contractor
 - > Delineated Wetlands
 - Nontidal NWI Conditions
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 - NWI Habitat and WQ Conditions
 - All NWI Wetlands
- > Hydrologic Units

Mapscale 1:9028
200 m
500 ft

Provides species cataloged and the average Cvalue for the site

Grant Updates

- Completion of wetland condition analysis in the APNEP region.
- Re-calibration of wetland stressors and landcover surrounding wetland polygons in the Piedmont and Ridge & Valley physiographic region (30 randomly field assessed in Piedmont and 15 sites in Ridge & Valley).
- Inclusion of environmental justice demographics layers in WetCAT. Included as part of the Interagency Review Team (IRT) Mitigation Banking Siting Criteria.
- Enhanced metrics for tracking WetCAT utilization through web and social media tracking (story boards)
- FQA incorporated into WetCAT.
- Project add-on: Discussion of the inclusion of at-risk wetlands in WetCAT due to the recent Supreme Court Sackett decision.



Any Questions?

