### Preliminary Ecological Design

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# Sandy Creek Nature Center & Greenway

• Our Preliminary Ecological Design includes the area within the Sandy Creek Nature Center and the greenway between the North Oconee River, US 441 and the Athens perimeter loop.



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Soil Groups

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Bare Ground

Land Cover & Floodplain

#### **USA Flood Hazard Areas**



1% Annual Chance Flood Hazard

0.2% Annual Chance Flood Hazard

Regulatory Floodway

Special Floodway

Future Conditions 1% Annual Chance Flood Hazard

Area with Reduced Risk Due to Levee







#### Cover

1-25%

25-50%

50-75%

< 1%

> 75%



#### Tree Canopy/ Cover



#### Existing Roadway & Parking Lot Conditions

- The Nature Center has many areas that are covered with impervious paving. Including the parking lot, walking paths, and raodways.
- Many of the areas that are impervious are in low spots that collect runoff

#### Pervious Pavement Roadway & Parking Lot

- Our design replaces all the impervious paving with permeable paving that helps with infiltration into the aquifer.
- We want to slow the flow of water from the pavement by letting as much as possible infiltarate through the pavement.



### Existing Claypit Pond Conditions

- The Pond is filled with sediment from runoff and has a lot of invasive species surrounding it.
- The pond also has a high flood plane surrounding it during a heavy rain.
- There are nature observation decks that are in rough shape along the trails on the site.

#### Clay Pit Pond Restoration

- Our plan entails a total restoration of this wetland.
- We plan to include a walking observation deck that goes through the wetland to immerse the people visiting the site into nature.
- As part of our restoration, we will only plant native species to help control the floodplane.

#### Audubon Society Bird Blind

- The bird blind is in bad shape and hard to reach. It is also only accommodating of one to two people at a time.
- People must cross two bridges that are old and rickety to get to the blind.

#### Proposed Waterfowl Wildlife Area

- Our plan proposes people to be able to see the wildlife from the trail.
- We want to have native species planted around the pond to bring in more native wildlife into the site.

# Existing Riparian Buffer & River

- The North Oconee River has a huge flood plane on the site.
- There are many invasive plant species in this area as well.

#### Riparian Buffer & River Restoration

- Our Plan entails implementing a Riparian Buffer in the site along the North Oconee River.
- This will help control the flood plane as well as introduce more native species of groundcover back into the site.
- Our plan also includes restoring the river to help with controlling the flood plane.



### Open Space & Building on Greenway

- The site has an area between the river and the greenway that has an old building on it that is overgrown with invasive plants and grasses.
- This site is north right before the bridge that crosses over to the nature reserve.

#### Meadow Grass Garden

- In our plan we want to replace the overgrown area with native meadow grasses.
- This adds some beauty of native plantings along the green way as well as helps this area on the site set a tone for the nature reserve.

#### Existing Overflow Parking Lot

- The existing parking lot is just a grass lot field.
- This area is surrounded by trees and overgrown grasses.

#### Permeable Paver Overflow Parking Lot

- Our plan is to transform the existing parking lot by installing a permeable paver system.
- This system will allow water to infiltrate into the ground but will also keep the sediment in place by having unit pavers.