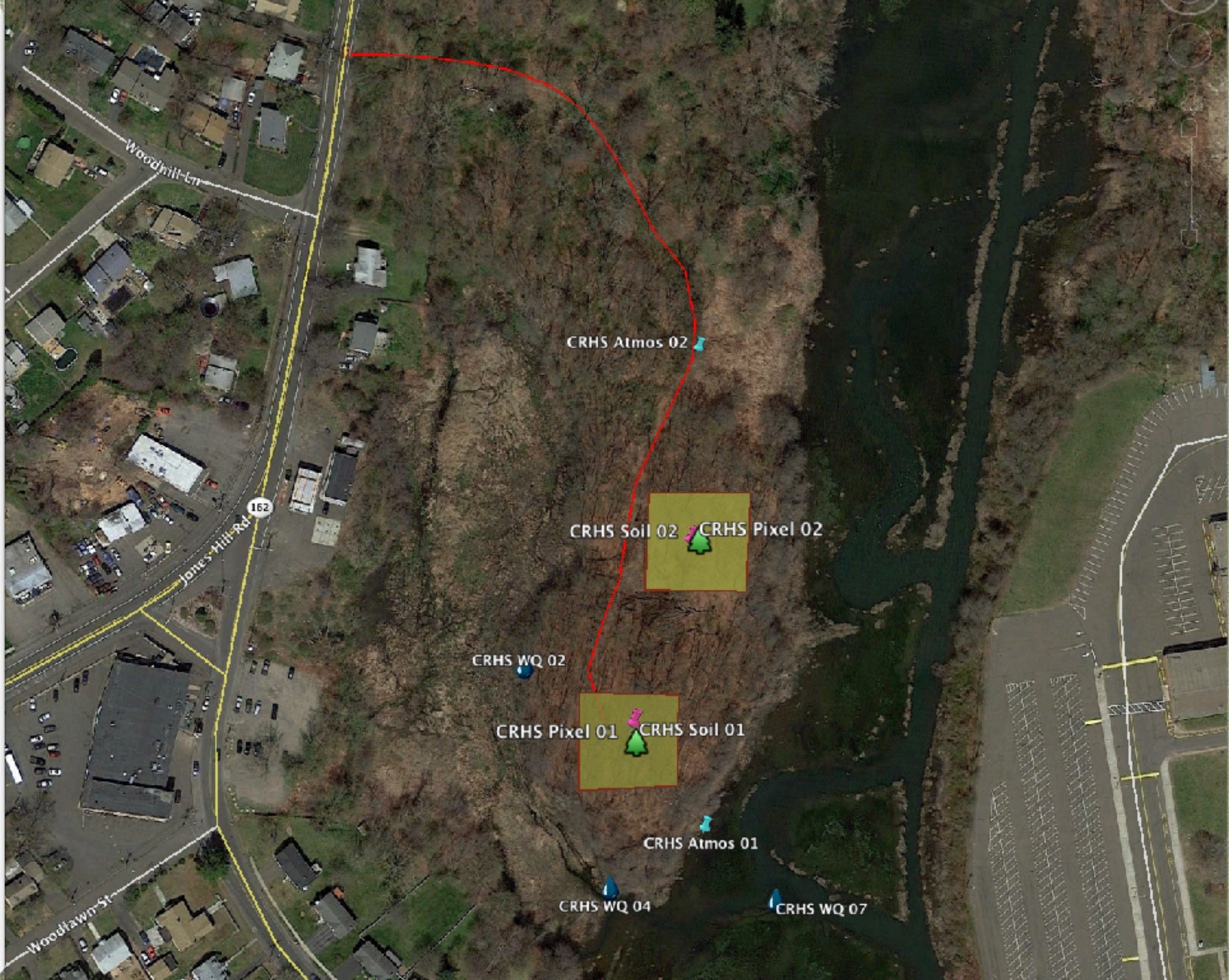




CRHS Atmos 02

CRHS Soil 02 CRHS Pixel 02

CRHS WQ 02

CRHS Pixel 01 CRHS Soil 01

CRHS Atmos 01

CRHS WQ 04

CRHS WQ 07

GLOBE Data Entry Site Names (for 21st Annual Meeting activities):

Cove River / GLOBE Data Entry Site Definitions / Login to use these for Site Data Entry

Cove River Atmosphere 01-on marsh top @ WQ 07

Latitude 41.259705, Longitude -72.961811, Elevation 2m

Cove River Atmos 02 - on trail amidst invasive knotweed

Latitude 41.261279, Longitude -72.961854, Elevation 3.5m

Cove River Salt Marsh WQ 07

Latitude 41.259494, Longitude -72.961477, Elevation 2m

Cove River Fresh/Salt confluence WQ 04

Latitude 41.259469, Longitude -72.962172, Elevation 2.5m

Cove River Forest 01

Latitude 41.260096, Longitude -72.962114, Elevation 4m

Cove River Forest 02

Latitude 41.260662, Longitude -72.961883, Elevation 4m

Cove River Soil Core - Pixel Center:SCS-01

Latitude 41.2601, Longitude -72.96214, Elevation 4m

Cove River Soils 02

Latitude 41.260677, Longitude -72.962134, Elevation 4m



Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Atmosphere 1

Location: *285 Platt Ave, West Haven, CT 06516*

Descriptions: Atmosphere Sites

Site is along the Trail at the location of the Invasive Asian Knotweed. The Site is protected from wind, and view of horizon is incomplete.

Activities/Protocols: Atmosphere

Clouds App, Charts, Kestrel/WeatherFlow; temp, humidity, winds, barometric pressure, dew point.

Procedures: *Use GLOBE Observer Clouds App and Data Entry App, Charts, etc. Cloud Cover, Cloud Types, Contrails, Weather meters for temp, humidity, pressure, dew point, winds.*

Timeline: *10:00am to 10:30am - may not take full 30 minutes.*

Rotation: *Atmosphere Team 1 will rotate to participate in Soil Protocols 1.*





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Atmosphere 2

Location: 285 Platt Ave, West Haven, CT 06516

Descriptions: Atmosphere Sites

Site is down near Hydrology Site for the Salt Marsh.
Observations are made out on the Marsh top.

Activities/Protocols: Atmosphere

Clouds App, Charts, Kestrel/WeatherFlow; temp, humidity, winds, barometric pressure, dew point.

Procedures: Use GLOBE Observer Clouds App and Data Entry App, Charts, etc. Cloud Cover, Cloud Types, Contrails, Weather meters for temp, humidity, pressure, dew point, winds.

Timeline: 10:00am to 10:30am - may not take full 30 minutes.

Rotation: Atmosphere Team 2 will rotate to participate in Soil Protocols 2.





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Hydrosphere 01

Location: 285 Platt Ave, West Haven, CT 06516

Descriptions: Hydrosphere Site - Salt Marsh

At the South end of the property on the east edge of the forest at the margin of the salt marsh.

Activities/Protocols: Hydrosphere

Water temperature, Dissolved Oxygen, pH, Conductivity, Salinity, Transparency.

Procedures: Hydrosphere

1. Power Up LabQuest and insert Temp/DO/pH Probes
2. Cast bucket ~3-5m from shore, draw in and set on ground.
3. Immediately insert Temp, DO, pH Probes
4. Wait 3 minutes and if readings are stable, record readings; if not, swirl probes and wait another minute - record readings.
5. Remove Probes and insert either Conductivity or Salinity.
6. Wait 3 minutes and record readings, swirl and wait if readings not stable; record readings | If readings are still drifting, make note "drifting".

Timeline: 10:00am to 11:00am & 11:00am to 12:00noon

Rotation: Hydrosphere 01 Team will rotate to Hydrosphere 02 @ 11:00am





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Hydrosphere 02

Location: 285 Platt Ave, West Haven, CT 06516

Descriptions: Hydrosphere Site - Fresh/Salt Confluence

At the confluence of the fresh water and salt marsh at the south end of the property.

Activities/Protocols: Hydrosphere

Water temperature, Dissolved Oxygen, pH, Conductivity, Salinity, Transparency.

Procedures: Hydrosphere

1. Power Up LabQuest and insert Temp/DO/pH Probes
2. Cast bucket ~3-5m from shore, draw in and set on ground.
3. Immediately insert Temp, DO, pH Probes
4. Wait 3 minutes and if readings are stable, record readings; if not, swirl probes and wait another minute - record readings.
5. Remove Probes and insert either Conductivity or Salinity.
6. Wait 3 minutes and record readings, swirl and wait if readings not stable; record readings | If readings are still drifting, make note "drifting".

Timeline: 10:00am to 11:00am & 11:00am to 12:00noon

Rotation: Hydrosphere 02 Team will rotate to Hydrosphere 01 @ 11:00am





Field Sites: locations, descriptions, activities/protocols, procedures, timeline, rotation.

Cove River | Hydrosphere

Vernier LabQuest Base Unit & Probes:

LabQuest Base Unit:

This is a small Digital computer with ports for inserting a variety of probes.

LabQuest Main Screen

LabQuest immediately recognizes each Probe and should instantly show current readings.

Procedures: Hydrosphere

1. Power Up LabQuest and insert Temp/DO/pH Probes
2. Cast bucket ~3-5m from shore, draw in and set on ground.
3. Immediately insert Temp, DO, pH Probes
4. Wait 3 minutes and if readings are stable, record readings; if not, swirl probes and wait another minute - record readings.
5. Remove Probes and insert either Conductivity or Salinity.
6. Wait 3 minutes and record readings, swirl and wait if readings not stable; record readings | If readings are still drifting, make note "drifting".

Trouble Shooting: If the screen looks other than shown at right, press the "Home" button to return to current Probe Readings.





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Biometry 01

Location: 285 Platt Ave, West Haven, CT 06516

Descriptions: Biometry “Pixel” 1

30m x 30m Forest Canopy site; MUC 0231; Closed Canopy Deciduous/cold deciduous hardwood forest; temperate submontane. Located just south of the cluster of downed trees.

Activities/Protocols: Canopy Cover & ground Cover

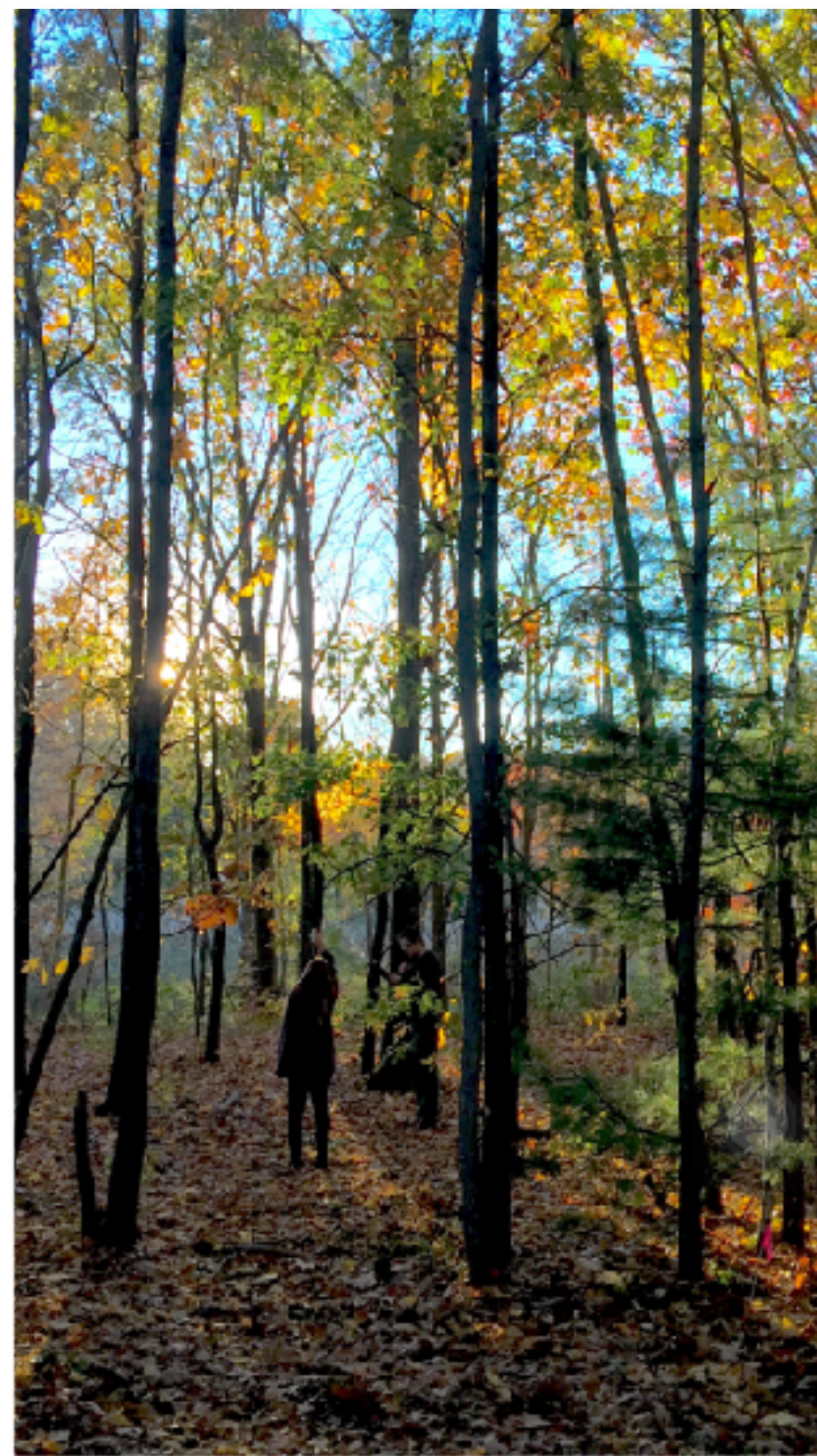
Follow Protocol guidelines, Use compass and 50m Tapes to set up 30m x 30m site; establish diagonals (42.42m) along which canopy and ground cover observations will be made using Densiometers. Use Clinometers to measure/calculate the height of the dominant/co-dominant trees, use Tree ID guides to identify species.

Equipment:

50m tapes, compass, flags, densiometers, clinometers, tree guides.

Timeline: 10:00am to 12:00noon

Rotation: Biometry Team will stay on site.





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Biometry 02

Location: 285 Platt Ave, West Haven, CT 06516

Descriptions: *Biometry “Pixel” 2*

30m x 30m Forest Canopy site; MUC 0231; Closed Canopy Deciduous/cold deciduous hardwood forest; temperate submontane. Located just north of the cluster of downed trees.

Activities/Protocols: *Canopy Cover & ground Cover*

Follow Protocol guidelines, Use compass and 50m Tapes to set up 30m x 30m site; establish diagonals (42.42m) along which canopy and ground cover observations will be made using Densiometers. Use Clinometers to measure/calculate the height of the dominant/co-dominant trees, use Tree ID guides to identify species.

Equipment:

50m tapes, compass, flags, densiometers, clinometers, tree guides.

Timeline: 10:00am to 12:00noon

Rotation: Biometry Team will stay on site.





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Soil 01

Location: 285 Platt Ave, West Haven, CT 06516

Descriptions: Soil Site 01

Located at the center of Biometry "pixel" 1 in the closed canopy forest.

Activities/Protocols/Equipment: Soil

Soil Characterization sheets, Auger, Meter sticks, Soil Color Guide, Soil Texture Guide, Soil Tins, 50m Tape Measures.

Procedures:

Auger Soil Core.

Follow Soil Characterization and Protocol Guidelines.

Timeline: 10:30am to noon

Rotation: *Soil Team will stay on site, but will start with in Atmosphere Protocol Team 1 @ 10:00am.*





Field Sites: *locations, descriptions, activities/protocols, procedures, timeline, rotation.*

Cove River | Soil 02

Location: *285 Platt Ave, West Haven, CT 06516*

Descriptions: Soil Site 02

Located at the center of Biometry "pixel" 2 in the closed canopy forest.

Activities/Protocols/Equipment: Soil

Soil Characterization sheets, Auger, Meter sticks, Soil Color Guide, Soil Texture Guide, Soil Tins, 50m Tape Measures.

Procedures:

Auger Soil Core.

Follow Soil Characterization and Protocol Guidelines.

Timeline: *10:30am to noon*

Rotation: *Soil Team will stay on site, but will start with in Atmosphere Protocol Team 2 @ 10:00am.*





21st Annual GLOBE Meeting

Field Sites: locations, descriptions, activities/protocols, procedures, timeline, rotation.

Cove River

Field Activities | Protocols, Equipment, Timeline and Rotation

Atmosphere: ClipBoards/Pencils (1ea.), Cloud Charts (5), Kestrel/WeatherFlow (1), GLOBE Observer and Data Entry Apps (√).

***Protocol Field Guide, Protocol Instructions, Data Sheets**

Hydrosphere 1: ClipBoards/Pencils (1ea.), Buckets (1), Vernier LabQuest (1), Probe/Temp (1), Probe/DO (1), Probe/pH (1), Probe/Conductivity (1), Salinity (1), Transparency Tube (1), Squirt Bottle (1), Towel (1), Calibration Thermometer (1), GLOBE Observer and Data Entry Apps (√).

***Protocol Field Guide, Protocol Instructions, Data Sheets**

Hydrosphere 2: ClipBoards/Pencils (1ea.), Buckets (1), Vernier LabQuest (1), Probe/Temp (1), Probe/DO (1), Probe/pH (1), Probe/Conductivity (1), Salinity (1), Squirt Bottle (1), Towel (1), GLOBE Observer and Data Entry Apps (√).

***Protocol Field Guide, Protocol Instructions, Data Sheets**

Biosphere 1: ClipBoards/Pencils (1ea.), 50m Tapes (6), Compass (1), MUC Guides (4), Tree ID (3), Clinometers (15), Sunto Clinometer (1), Densimeters (15), GLOBE Observer and Data Entry Apps (√).

***Protocol Field Guide, Protocol Instructions, Data Sheets**

Biosphere 2: ClipBoards/Pencils (1ea.), 50m Tapes (6), Compass (1), MUC Guides (4), Tree ID (3), Clinometers (15), Densimeters (15), GLOBE Observer and Data Entry Apps (√).

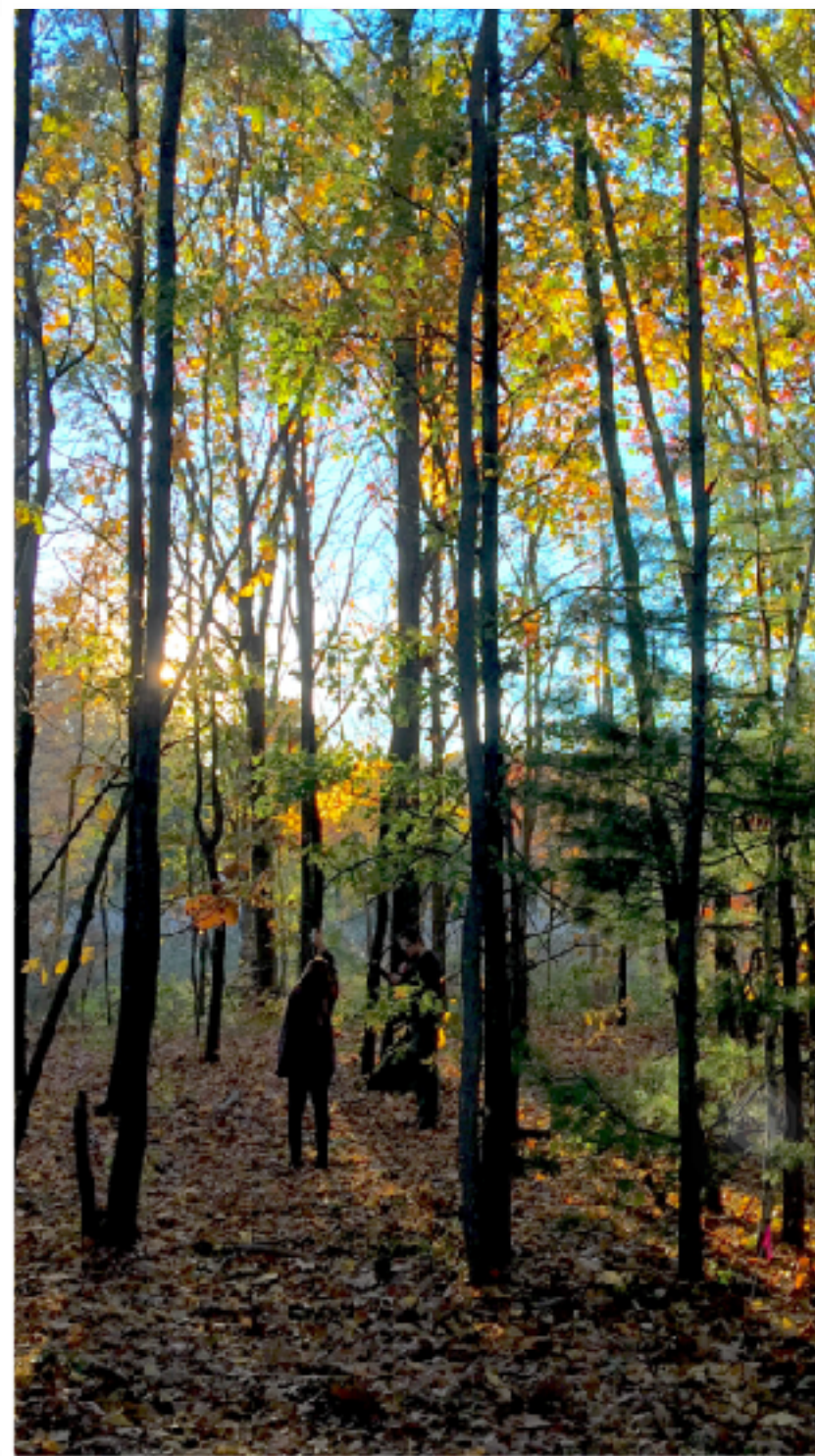
***Protocol Field Guide, Protocol Instructions, Data Sheets**

Soil 1: ClipBoards/Pencils (1ea.), Auger (1), Trowel (1), Meter Stick (1), Color Guide (2), Spoon (1), Soil Thermometer (2), Soil IR Gun (1), Squirt Bottles (1), Paper Plates & Napkins (plenty), GLOBE Observer and Data Entry Apps (√).

***Protocol Field Guide, Protocol Instructions, Data Sheets**

Soil 2: ClipBoards/Pencils (1ea.), Auger (1), Trowel (1), Meter Stick (1), Color Guide (2), Spoon (1), Soil Thermometer (2), Soil IR Gun (1), Squirt Bottles (1), Paper Plates & Napkins (plenty), GLOBE Observer and Data Entry Apps (√).

***Protocol Field Guide, Protocol Instructions, Data Sheets**





21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Entrance





21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Entrance - stream





21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Invasive Knotweed



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21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Biometry “pixel” 1



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21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Biometry “pixel” 2



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Southern Connecticut State University



21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Hydro Site Fresh Marsh



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Southern Connecticut State University



21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Hydro Site Fresh/Salt Marsh confluence



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Southern Connecticut State University



21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Hydro Site Salt Marsh



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Southern Connecticut State University



21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ μ UAS Launch Site





21st Annual GLOBE Meeting

Cove River Theta S 360° Panoramas

Cove River | @ Fox Den



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