

Monthly Report: July 2014

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To:

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05 August 2014

By:

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Bill and Mary:

Please see the bulleted list below for the major actions and accomplishments associated with Cooperative Agreement Number W912HZ-14-2-0002 for the month of July, 2014. Please let me know if you would like me to elaborate on the details of any items I've listed below, or if there are any other items that interest you.

Sincerely,

Jamie

- Marsh vegetation samples from June have been identified, counted, weighed, and entered into an Excel spreadsheet.
 - Multivariate analysis will be conducted on these data so that pre-construction communities can be identified.
 - Results of this analysis (of June vegetation) will be used in conjunction with the satellite imagery taken during the same time; GIS analysis will be done by Dr. Christa Zweig, sub-contractor to this cooperative agreement.

- The barometric pressure sensor located at "Back 4" was damaged in May. Damage was sufficient to cause the plastic cap covering the sensor itself to break. We attempted to repair the unit in June by removing the spider web covering the sensor, then replacing the broken plastic end cap. Data downloaded in July indicate that something is wrong with the instrument (when compared to the other barometric pressure sensor, located at "Swamp 1"). Once retrieved from the field (during the August marsh vegetation sample), the faulty instrument will be sent back to the company for diagnosis and recalibration or replacement.
 - Barometric pressure is used to post-process the water level (i.e., stage) data at each area.

- Progress was made on the tidal freshwater forest areas. The updated coordinates (UTM) below are more accurate than those supplied in the June report. Water monitoring stations mentioned below have the same design and equipment as those on marsh sites.
 - The area farthest upstream is "Swamp 1" and has already been approved by USACE. This area is already established with corner markers. The area was outfitted with a water monitoring station on 08/01/2014.
 - UTM: 17S 485276 (east) N3566909 (north)

 - Swamp 2 is located on Georgia DNR land, but managed by USFWS. Written permission has been granted by the GA DNR for use of this area to do our monitoring. This area was already approved by USACE. Plot corner markers have been established. A water monitoring station was deployed on site on 08/01/2014.
 - UTM: 17S 485729 (east) 3564048 (north)

- Swamp 3 was moved based on reconnaissance results. The [previous] target area owned by the Georgia Ports Authority is actually upland, not wetland. Several areas were investigated, and we settled on an area owned by USFWS (Figs. 1 and 2). Plots corners were placed and a water monitoring station was deployed on site on 08/01/2014.
 - UTM: 17S 485865 (east) 3562174 (north)
 - Please provide input as to whether this area is acceptable by USACE for SHEP monitoring.
- Forest surveys will be conducted at some point prior to leaf-off.
- I attended an Ecological Flow workshop put on by The Nature Conservancy on July 23-24 in Augusta, Georgia. This workshop was organized to provide USACE guiding principles for magnitude, duration, and seasonality of flow rates delivered through Savannah River dams. I provided input as to estuarine marsh vegetation concerns related to discharge at Thurmond (and subsequently Clyo).
 - This workshop gave me great insights as to the need to relate my monitoring findings to flow rates at Clyo. I understand that discharge at Clyo can be seen 2 days later in the estuary; this is a key insight I gained during this workshop.

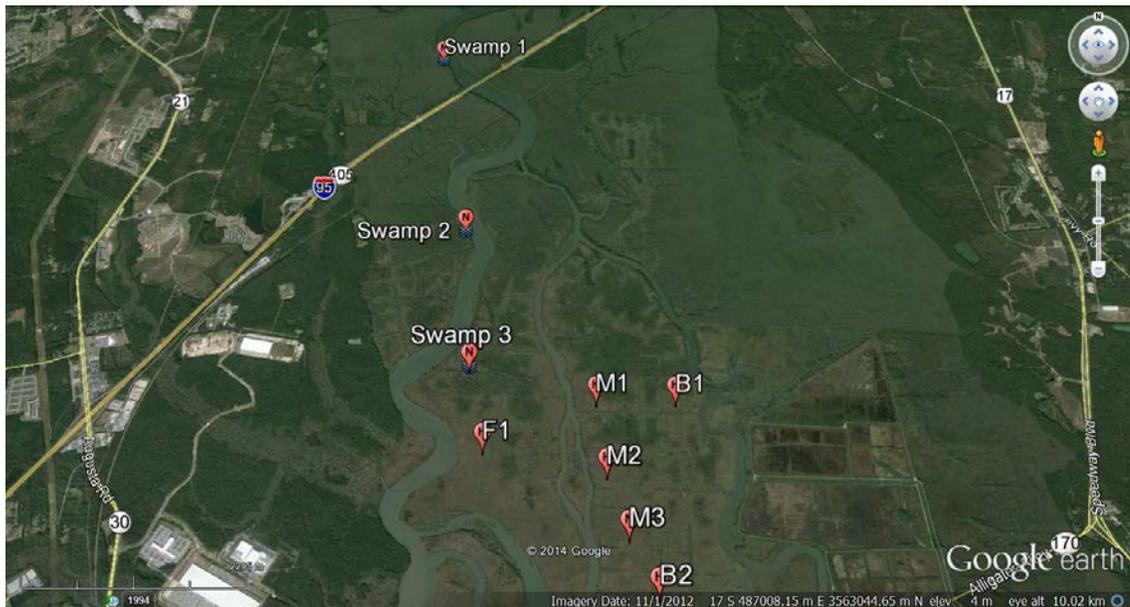


Figure 1. Locations of the three forested wetland monitoring areas (Swamp 1, 2, and 3) with respect to some marsh monitoring areas. Letters inside balloons indicate whether these are new (N) or historic (H) monitoring areas; there were no historic forested wetland monitoring areas.

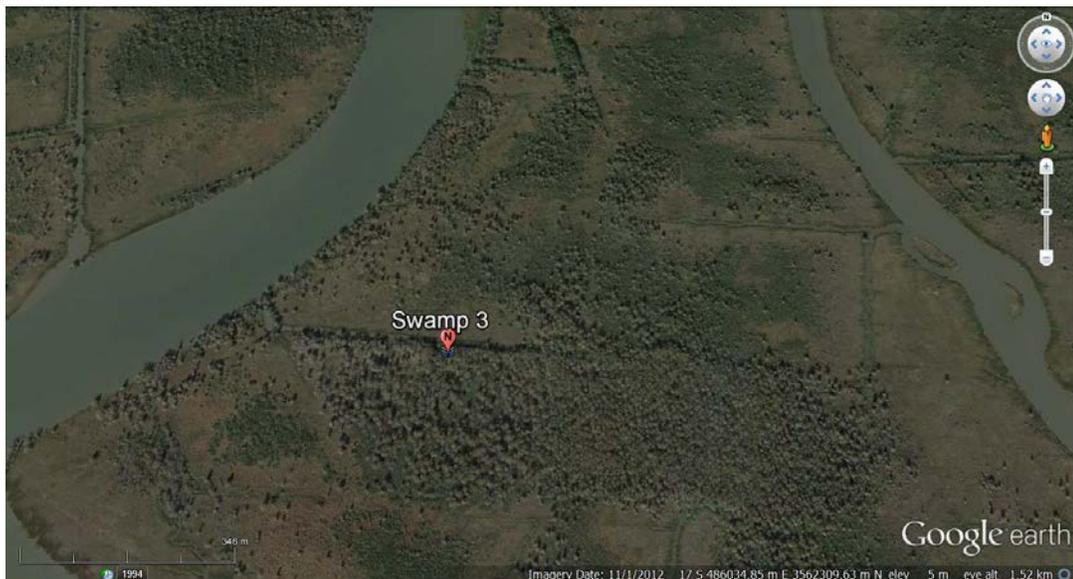


Figure 2. A closer look at Swamp 3