

**Monthly Report: June 2015**

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**To:**

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27 June 2015

**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 months of May and June 2015. 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 status updates you'd like on unlisted topics.

Best Regards,

Jamie

### Marsh Vegetation

- A synoptic sample of marsh vegetation at all sample locations (n=108) within all marsh monitoring areas (n=12) was performed during the last week of June. Field sampling took two days: June 22<sup>nd</sup> and 23<sup>rd</sup>.
- Marsh vegetation samples were sorted by species and counted immediately following the field collection.
- Samples are now being dried so that dry mass can be measured.

### Water Data

- Data will be downloaded next in July. Our current records go from the beginning of the year until 22 April.
- A summary of salinity parameters, by area, is provided in Table 1.

### Forest monitoring

- Monthly measurements of baldcypress tree growth, determined via dendrometer band expansion, began February 2015.
- General trends up to 18 May include:
  - Swamp 1 has slower average growth measurements than Swamp 2, but a few trees show higher rates ~ 3.25 mm.
  - Swamp 2 has the highest growth rates so far. Several trees have 2 mm growth and several others are showing 1.00 - 1.25 mm growth.
  - Swamp 3 has the lowest growth rates. Most trees show little growth (<0.25 mm), while one tree shows 1 mm.
- Measurements were last taken 22 June 2015.

Table 1. Average, maximum, and minimum salinity (practical salinity units = psu) measured at (12) marsh monitoring areas and (3) tidal forest areas. Salinity values of zero were not included in this analysis because they indicate a dry well. Summaries are based on hourly measurements starting 01 January 2015 0:00 for all monitoring areas except Swamp 3; a faulty sensor led to data acquisition starting 13 January 2015 12:00 for Swamp 3. Averages herein reflect hourly measurement up until 22-23 April depending on the sensor.

Area	Month	Aboveground Salinity (psu)			Belowground Salinity (psu)		
		Avg. (std. err)	Max	Min	Avg (std. err)	Max	Min
Back 1	January	0.11 (0.01)	0.17	0.03	0.17 (0.00)	0.20	0.12
	February	0.13 (0.01)	0.17	0.02	0.17 (0.00)	0.19	0.15
	March	0.06 (0.00)	0.10	0.00	0.15 (0.00)	0.16	0.13
	April	0.07 (0.01)	0.19	0.00	0.13 (0.00)	0.15	0.11
	<b>Annual</b>	0.07 (0.01)	0.19	0.00	<b>0.16 (0.00)</b>	0.20	0.11
Back 2	January	0.09 (0.01)	0.23	0.00	0.24 (0.00)	0.37	0.15
	February	0.15 (0.01)	0.41	0.00	0.23 (0.00)	0.30	0.14
	March	0.10 (0.01)	0.27	0.00	0.19 (0.00)	0.23	0.12
	April	0.23 (0.02)	0.42	0.00	0.20 (0.00)	0.29	0.12
	<b>Annual</b>	0.13 (0.01)	0.42	0.00	<b>0.22 (0.00)</b>	0.37	0.12
Back 3	January	0.13 (0.02)	0.90	0.00	0.76 (0.01)	1.19	0.29
	February	0.17 (0.03)	1.23	0.00	0.77 (0.01)	1.01	0.33
	March	0.17 (0.02)	0.56	0.00	0.77 (0.01)	1.02	0.29
	April	0.23 (0.04)	1.47	0.00	0.52 (0.01)	0.95	0.26
	<b>Annual</b>	0.18 (0.02)	1.47	0.00	<b>0.72 (0.00)</b>	1.19	0.26
Back 3.5	January	0.17 (0.02)	1.36	0.00	2.09 (0.00)	2.33	1.85
	February	0.27 (0.03)	2.17	0.00	2.10 (0.00)	2.25	1.92
	March	0.19 (0.02)	1.28	0.00	2.06 (0.00)	2.34	1.75
	April	0.32 (0.04)	2.22	0.00	1.99 (0.01)	2.25	1.70
	<b>Annual</b>	0.23 (0.01)	2.22	0.00	<b>2.07 (0.00)</b>	2.34	1.70
Back 4	January	0.47 (0.05)	5.01	0.00	3.13 (0.01)	3.63	2.75
	February	0.58 (0.07)	5.77	0.00	2.95 (0.01)	3.30	0.03
	March	0.43 (0.05)	3.27	0.00	2.98 (0.01)	3.23	2.13
	April	0.48 (0.06)	4.29	0.00	2.76 (0.01)	2.97	2.40
	<b>Annual</b>	0.49 (0.03)	5.77	0.00	<b>2.97 (0.01)</b>	3.63	0.03

Table 1, continued.

Area	Month	Aboveground Salinity (psu)			Belowground Salinity (psu)		
		Avg. (std. err)	Max	Min	Avg (std. err)	Max	Min
Front 1	January	0.06 (0.01)	0.17	0.00	0.34 (0.00)	0.42	0.24
	February	0.11 (0.01)	0.33	0.00	0.30 (0.00)	0.36	0.18
	March	0.06 (0.00)	0.15	0.00	0.24 (0.00)	0.33	0.12
	April	0.08 (0.01)	0.48	0.00	0.20 (0.00)	0.28	0.12
	<b>Annual</b>	0.08 (0.01)	0.48	0.00	<b>0.27 (0.00)</b>	0.42	0.12
Front 2	January	0.21 (0.03)	2.55	0.00	0.80 (0.00)	1.07	0.59
	February	0.38 (0.06)	4.75	0.00	0.83 (0.01)	1.28	0.58
	March	0.09 (0.02)	1.33	0.00	0.56 (0.00)	0.87	0.37
	April	0.22 (0.03)	4.06	0.00	0.65 (0.01)	0.94	0.32
	<b>Annual</b>	0.22 (0.02)	4.75	0.00	<b>0.71 (0.00)</b>	1.28	0.32
Middle 1	January	0.11 (0.01)	0.50	0.00	0.51 (0.00)	0.60	0.36
	February	0.15 (0.02)	0.93	0.00	0.50 (0.00)	0.65	0.22
	March	0.15 (0.02)	0.72	0.00	0.40 (0.00)	0.57	0.24
	April	0.17 (0.02)	0.83	0.00	0.39 (0.00)	0.46	0.34
	<b>Annual</b>	0.14 (0.01)	0.93	0.00	<b>0.45 (0.00)</b>	0.65	0.22
Middle 2	January	0.28 (0.05)	1.95	0.00	0.60 (0.01)	1.25	0.37
	February	0.30 (0.08)	3.19	0.00	1.00 (0.02)	2.08	0.46
	March	0.24 (0.03)	0.96	0.00	0.71 (0.01)	1.08	0.31
	April	0.20 (0.04)	1.53	0.00	0.49 (0.00)	0.82	0.29
	<b>Annual</b>	0.24 (0.02)	3.19	0.00	<b>0.71 (0.01)</b>	2.08	0.29
Middle 3	January	0.17 (0.05)	2.05	0.00	1.44 (0.01)	2.15	0.93
	February	0.23 (0.11)	2.34	0.00	1.76 (0.02)	3.40	1.23
	March	0.11 (0.02)	1.13	0.00	1.05 (0.02)	1.64	0.30
	April	0.11 (0.03)	1.64	0.00	0.88 (0.01)	1.50	0.53
	<b>Annual</b>	0.13 (0.02)	2.34	0.00	<b>1.30 (0.01)</b>	3.40	0.30
Middle 4	January	0.28 (0.05)	3.59	0.00	2.84 (0.01)	3.47	2.22
	February	0.26 (0.06)	5.55	0.00	2.73 (0.01)	3.22	2.20
	March	0.11 (0.02)	1.30	0.00	2.74 (0.01)	3.35	2.16
	April	0.19 (0.04)	2.42	0.00	2.61 (0.01)	3.26	2.16
	<b>Annual</b>	0.21 (0.02)	5.55	0.00	<b>2.74 (0.01)</b>	3.47	2.16
Middle 5	January	0.21 (0.02)	1.93	0.00	1.12 (0.01)	1.79	0.58
	February	0.29 (0.03)	2.36	0.00	1.15 (0.01)	1.80	0.48
	March	0.13 (0.01)	1.18	0.00	0.63 (0.01)	1.01	0.36
	April	0.25 (0.03)	3.28	0.00	0.83 (0.01)	1.08	0.51
	<b>Annual</b>	0.22 (0.01)	3.28	0.00	<b>0.93 (0.01)</b>	1.80	0.36

Table 1, continued.

Area	Month	Aboveground Salinity (psu)			Belowground Salinity (psu)		
		Avg. (std. err)	Max	Min	Avg (std. err)	Max	Min
Swamp 1	January	0.04 (0.00)	0.06	0.01	0.07 (0.00)	0.08	0.06
	February	0.04 (0.00)	0.05	0.01	0.06 (0.00)	0.07	0.05
	March	0.04 (0.00)	0.05	0.00	0.07 (0.00)	0.07	0.05
	April	0.04 (0.00)	0.05	0.03	0.07 (0.00)	0.10	0.05
	<b>Annual</b>	0.04 (0.00)	0.06	0.01	<b>0.07 (0.00)</b>	0.10	0.05
Swamp 2	January	0.06 (0.00)	0.13	0.00	0.17 (0.00)	0.18	0.15
	February	0.06 (0.00)	0.10	0.00	0.14 (0.00)	0.16	0.09
	March	0.05 (0.00)	0.09	0.01	0.12 (0.00)	0.15	0.09
	April	0.06 (0.00)	0.10	0.00	0.13 (0.00)	0.16	0.06
	<b>Annual</b>	0.06 (0.00)	0.13	0.00	<b>0.14 (0.00)</b>	0.18	0.06
Swamp 3	January	0.03 (0.00)	0.20	0.00	0.14 (0.00)	0.29	0.07
	February	0.05 (0.00)	0.58	0.00	0.30 (0.01)	1.11	0.00
	March	0.02 (0.00)	0.15	0.00	0.18 (0.00)	0.22	0.14
	April	0.06 (0.01)	0.66	0.00	0.16 (0.00)	0.19	0.13
	<b>Annual</b>	0.04 (0.00)	0.66	0.00	<b>0.20 (0.00)</b>	1.11	0.00