

Quarterly Report

01 Jan – 30 March 2015

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Please see below for an executive summary, then details of major accomplishments, actions, and progress associated with the vegetation and salinity monitoring within the Savannah National Wildlife Refuge. This work is done under Cooperative Agreement Number W912HZ-14-2-0002 under the terms of the Piedmont South Atlantic Coast (PSAC) Cooperative Ecosystems Studies Unit (CESU). The Cooperative Agreement Title is "Identifying and Evaluating Impacts to Wetlands from the Savannah River Estuary".

Respectfully,

Jamie Duberstein
Clemson University

Executive Summary:

Within this quarter we completed the 2014 Annual Report, downloaded hourly salinity and water depth data from 12/01/2014 – 02/23/2015, and began monthly growth measurements of baldcypress trees in the three swamp monitoring areas. A summary of salinity conditions for Jan and Feb 2015 are provided in Table 1. Species codes and associated common names of marsh plants are provided in Table 2, and are necessary to interpret the standardized units (stems/m², grams/m²) of 2014 marsh data provided in Table 3. These standardized (per-area) data allow for more objective use outside analysis of community composition, which performs better using relativized data (i.e., Importance Values, provided in the 2014 Annual Report). These standardized values are computed based on extrapolation of each 2.7 ft² (0.25 m²) sample, without relativizing. Basically, everything was multiplied by four to represent a square meter.

January 2015

Marsh Vegetation

- All marsh vegetation data collected to date have been compiled into Excel spreadsheets.

Water Data

- Data were last downloaded on December 16th and 17th.
- Salinity data for 2014 have been averaged by month (and area).
- Water levels are nearly post-processed.

Forest monitoring

- Monthly growth measurements (tree bands) will begin next month, as will collection/weight of leaf litter.

Miscellaneous

- Our focus has been the 2014 annual report.
 - Salinity and water level data presented in the 2014 annual report will end on December 16th/17th due to download interval timing. If a more complete dataset is requested (e.g., through 31 Dec 2014) the delivery of the 2014 Annual Report will be delayed slightly, pending download and post-processing of data.

February 2015

Marsh Vegetation

- The next synoptic sample of marsh vegetation will be in June 2015.

Water Data

- Data were downloaded on February 23rd -25th.

Forest monitoring

- Monthly dendrometer band (growth) measurements began in February.
 - A few trees have shown minimal (< 1 mm) growth (tree band expansion), but not many.
- We installed a couple "bridges" to help us get to the forest inventory plots. These are simply boards that span really soupy areas, held in place by pvc poles that let the boards float during flood tides.

March 2015

Marsh Vegetation

- We've scheduled the June (1st of 2) marsh vegetation collection to begin 22 June. This is the "June sample", the synoptic sample that best reflects last year's and this spring's growing conditions.

Water Data

- 2015 salinity and water depth data from 01 January – 23 February have been downloaded, post-processed, and are in-hand.
- Monthly and annual (current 2015) average salinity conditions are listed in Table 1.

Forest monitoring

- Monthly measurements of baldcypress tree growth, determined via dendrometer band expansion, began February 2015 and were last taken 23 March.
 - Some trees have shown minimal (< 1 mm) growth. Growth rates will become more pronounced after leaf-out.

Table 1. January and February 2015 monthly and (current) annual average, maximum, and minimum aboveground and belowground salinity (practical salinity units = psu).

Area	Month	Aboveground Salinity (psu)			Belowground Salinity (psu)		
		Avg. (std. dev)	Max	Min	Avg. (std. dev)	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
	Annual	0.12 (0.01)	0.17	0.02	0.17 (0.00)	0.20	0.12
Back 2	January	0.09 (0.01)	0.23	0.00	0.24 (0.00)	0.37	0.15
	February	0.16 (0.01)	0.41	0.00	0.23 (0.00)	0.30	0.17
	Annual	0.13 (0.01)	0.41	0.00	0.24 (0.00)	0.37	0.15
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	0.75 (0.01)	1.01	0.33
	Annual	0.16 (0.02)	1.23	0.00	0.76 (0.01)	1.19	0.29
Back 3.5	January	0.17 (0.02)	1.36	0.00	2.09(0.00)	2.33	1.85
	February	0.28 (0.04)	2.17	0.00	2.11 (0.00)	2.25	1.92
	Annual	0.22 (0.02)	2.17	0.00	2.10 (0.00)	2.33	1.85
Back 4	January	0.47 (0.05)	5.01	0.00	3.13 (0.01)	3.63	2.75
	February	0.62 (0.07)	5.77	0.00	2.95 (0.01)	3.30	2.38
	Annual	0.54 (0.04)	5.77	0.00	3.05 (0.01)	3.63	2.38
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	0.23
	Annual	0.08 (0.01)	0.33	0.00	0.32 (0.00)	0.42	0.23
Front 2	January	0.21 (0.03)	2.55	0.00	0.80 (0.00)	1.07	0.59
	February	0.43 (0.06)	4.75	0.00	0.81 (0.01)	1.28	0.58
	Annual	0.31 (0.03)	4.75	0.00	0.81 (0.00)	1.28	0.58
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	0.53 (0.00)	0.65	0.37
	Annual	0.13 (0.01)	0.93	0.00	0.52 (0.00)	0.65	0.36
Middle 2	January	0.28 (0.05)	1.95	0.00	0.60 (0.01)	1.25	0.37
	February	0.47 (0.12)	3.19	0.00	1.00 (0.02)	2.08	0.46
	Annual	0.36 (0.06)	3.19	0.00	0.77 (0.01)	2.08	0.37
Middle 3	January	0.17 (0.05)	2.05	0.00	1.44 (0.01)	2.15	0.93
	February	0.24 (0.11)	2.34	0.00	1.80 (0.02)	3.40	1.23
	Annual	0.19 (0.05)	2.34	0.00	1.59 (0.01)	3.40	0.93
Middle 4	January	0.28 (0.05)	3.59	0.00	2.84 (0.01)	3.47	2.22
	February	0.30 (0.07)	5.55	0.00	2.78 (0.01)	3.19	2.39
	Annual	0.29 (0.04)	5.55	0.00	2.82 (0.01)	3.47	2.22
Middle 5	January	0.21 (0.02)	1.93	0.00	1.12 (0.01)	1.79	0.58
	February	0.33 (0.04)	2.36	0.00	1.23 (0.01)	1.80	0.84
	Annual	0.27 (0.02)	2.36	0.00	1.17 (0.01)	1.80	0.58
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
	Annual	0.04 (0.00)	0.06	0.01	0.07 (0.00)	0.08	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	0.15 (0.00)	0.16	0.13
	Annual	0.06 (0.00)	0.13	0.00	0.16 (0.00)	0.18	0.13
Swamp 3	January	0.03 (0.00)	0.20	0.00	0.14 (0.00)	0.29	0.07
	February	0.05 (0.01)	0.58	0.00	0.31 (0.01)	1.11	0.08
	Annual	0.04 (0.00)	0.58	0.00	0.24 (0.01)	1.11	0.07

Table 2. Species Codes for Savannah Refuge marsh plants.

Species code	Latin name	Common name
AGALINUS	<i>Agalinis purpurea</i> (L.) Pennell	purple false foxglove
AMARANTH	<i>Amaranthus cannabinus</i> (L.) J.D. Sauer	tidalmarsh amaranth
ARTHRA	<i>Arthraxon hispidus</i> (Thunb.) Makino	hairy jointgrass
ASTEREL	<i>Symphyotrichum elliotii</i> (Torr. & A. Gray) G.L. Nesom	Elliott's aster
ASTERTEN	<i>Symphyotrichum tenuifolium</i> (L.) G.L. Nesom	perennial saltmarsh aster
BIDLA	<i>Bidens laevis</i> (L.) Britton, Sterns & Poggenb.	bur marigold
BIDMIT	<i>Bidens mitis</i> (Michx.) Sherff	smallfruit beggarticks
CAREX	<i>Carex comosa</i> Boott	longhair sedge
CASSIA	<i>Chamaecrista fasciculata</i> var. <i>fasciculata</i> (Michx.) Greene	partridge pea
CICUTA	<i>Cicuta maculata</i> var. <i>maculata</i> L.	poison parsnip
CYPHAS	<i>Cyperus haspan</i> L.	haspan flatsedge
CYPER	<i>Cyperus erythrorhizos</i> Muhl.	redroot flatsedge
ELMO	<i>Eleocharis montevidensis</i> Kunth	sand spikerush
ELQU	<i>Eleocharis quadrangulata</i> (Michx.) Roem. & Schult.	squarestem spikerush
FUIRENA	<i>Fuirena scirpoidea</i> Michx.	southern umbrellasedge
GALIUM	<i>Galium tinctorium</i> L.	stiff marsh bedstraw
HYDROCOT	<i>Hydrocotyle umbellata</i> L.	manyflower marshpennywort
IRIS	<i>Iris hexagona</i> Walter	Dixie iris
JUMA	<i>Juncus marginatus</i> Rostk.	grassleaf rush
LEER	<i>Leersia</i> Sw.	cutgrass
LUDALAT	<i>Ludwigia alata</i> Elliott	winged primrose-willow
LUDALT	<i>Ludwigia alternifolia</i> L.	seedbox
LUDSPP	<i>Ludwigia</i> L.	primrose-willow
LUZIOLA	<i>Luziola</i> Juss.	luziola
MIKANIA	<i>Mikania scandens</i> (L.) Willd.	climbing hempvine
MURDANIA	<i>Murdannia keisak</i> (Hassk.) Hand.-Mazz.	Asian spiderwort
ONOCLEA	<i>Onoclea sensibilis</i> L.	sensitive fern
PANICUM	<i>Panicum</i> L.	panicum
PELTVIRG	<i>Peltandra virginica</i> (L.) Schott	green arrow arum
PHYLA	<i>Phyla lanceolata</i> (Michx.) Greene	lanceleaf frogfruit
PHYSO	<i>Physostegia leptophylla</i> Small	slenderleaf false dragonhead
PLUCHEA	<i>Pluchea odorata</i> (L.) Cass.	marsh fleabane
PONCO	<i>Pontederia cordata</i> L.	pickerelweed
POLYHYD	<i>Persicaria hydropiperoides</i> (Michx.) Small	swamp smartweed
POLYSAG	<i>Persicaria sagittata</i> (L.) H. Gross	arrowleaf tearthumb
PTILIMN	<i>Ptilimnium capillaceum</i> (Michx.) Raf.	herbwilliam
RHYMIC	<i>Rhynchospora microcephala</i> (Britton) Britton	smallhead beaksedge
RHYSPP	<i>Rhynchospora</i> Vahl	beaksedge
SAUCE	<i>Saururus cernuus</i> L.	lizard's tail
SAGLANCE	<i>Sagittaria lancifolia</i> L.	bulltongue arrowhead
SAGLAT	<i>Sagittaria latifolia</i> Willd.	broadleaf arrowhead
SACIN	<i>Sacciolepis indica</i> (L.) Chase	glenwoodgrass

Table 2. Species Codes for Savannah Refuge marsh plants.

Species code	Latin name	Common name
SCROB	<i>Bolboschoenus robustus</i> (Pursh) Soják	sturdy bulrush
SCVA	<i>Schoenoplectus tabernaemontani</i> (C.C. Gmel.) Palla	softstem bulrush
SOLIDAGO	<i>Solidago sempervirens</i> L.	seaside goldenrod
SPALT	<i>Spartina alterniflora</i> Loisel.	smooth cordgrass
SPCYN	<i>Spartina cynosuroides</i> (L.) Roth	big cordgrass
SPIRANTH	<i>Spiranthes</i> Rich.	ladies tresses
TYPHA	<i>Typha</i> L.	cattail
ZIZMI	<i>Zizaniopsis miliacea</i> (Michx.) Döll & Asch.	giant cutgrass
ZIZAQ	<i>Zizania aquatica</i> L.	annual wildrice

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B12A	ASTEREL	8	106.68	B14A	BIDLA	208	17.52
B12A	ASTEREL	28	6.44	B14A	ELMO	52	0.84
B12A	BIDLA	116	6.20	B14A	ELQU	4	0.08
B12A	CASSIA	4	0.04	B14A	GALIUM	52	1.88
B12A	CICUTA	80	5.16	B14A	MURDANIA	164	0.96
B12A	ELMO	640	13.04	B14A	POLYHYD	28	2.44
B12A	GALIUM	52	8.24	B14A	POLYSAG	4	0.20
B12A	HYDROCOT	56	0.96	B14A	SAGLANCE	8	0.40
B12A	IRIS	12	5.48	B14A	SCVA	4	0.40
B12A	LUDSPP	8	1.92	B14A	ZIZMI	4	7.44
B12A	LUZIOLA	12	0.04	B14B	ASTEREL	4	6.48
B12A	POLYHYD	24	2.28	B14B	ASTEREL	28	15.36
B12A	POLYSAG	4	0.44	B14B	BIDLA	4	0.04
B12A	RHYSPP	28	5.72	B14B	ELMO	1080	29.76
B12A	TYPHA	4	3.00	B14B	GALIUM	112	11.44
B12A	ZIZMI	44	88.00	B14B	JUMA	20	0.64
B12B	AGALINUS	4	2.96	B14B	LUDSPP	12	3.40
B12B	AGALINUS	4	0.04	B14B	POLYHYD	4	1.76
B12B	ASTEREL	8	0.64	B14B	UNGRASS	12	0.04
B12B	BIDLA	12	0.32	B14C	CASSIA	8	0.40
B12B	ELMO	1892	315.32	B14C	CICUTA	12	0.60
B12B	GALIUM	244	6.52	B14C	ELMO	900	16.24
B12B	HYDROCOT	8	0.04	B14C	GALIUM	16	1.04
B12B	LUDSPP	64	5.60	B14C	HYDROCOT	92	1.36
B12B	MURDANIA	16	0.04	B14C	IRIS	16	19.00
B12B	POLYHYD	16	1.80	B14C	MURDANIA	96	0.76
B12B	RHYSPP	12	1.28	B14C	PHYLA	4	0.04
B12B	UNBOLT	4	0.04	B14C	POLYSAG	8	0.04
B12B	ZIZMI	8	21.84	B14C	PTILIMN	52	0.88
B12C	BIDLA	12	1.36	B14C	RHYSPP	92	13.36
B12C	ELMO	640	17.00	B14C	UNAS	8	0.96
B12C	GALIUM	48	1.88	B14C	UNBOLT	8	0.04
B12C	IRIS	8	3.40	B14C	UNCAREX	4	5.88
B12C	LUDSPP	76	12.00	B14C	UNGRASS	4	0.04
B12C	MURDANIA	12	0.08	B15A	AGALINUS	96	3.08
B12C	POLYHYD	4	0.12	B15A	ASTEREL	4	1.80
B12C	RHYSPP	36	1.84	B15A	BIDMIT	4	0.04
B12C	SAGLANCE	20	3.68	B15A	CICUTA	100	6.60
B14A	AGALINUS	28	0.80	B15A	ELMO	1620	24.08
B14A	ASTEREL	8	1.08	B15A	GALIUM	12	1.40

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B15A	HYDROCOT	28	0.24	B22A	SCVA	40	10.80
B15A	IRIS	16	7.04	B22A	ZIZMI	12	593.84
B15A	JUMA	8	0.56	B22A	ZIZMI	40	165.52
B15A	LUDSPP	4	0.04	B22B	ASTEREL	36	29.64
B15A	MURDANIA	12	0.04	B22B	BIDLA	40	2.28
B15A	POLYHYD	8	0.28	B22B	ELMO	20	0.72
B15A	POLYSAG	12	0.48	B22B	LUDSPP	36	1.64
B15A	RHYSPP	28	3.56	B22B	POLYHYD	36	5.72
B15A	SAGLANCE	4	0.48	B22B	PONCO	12	3.92
B15A	ZIZMI	12	2.24	B22B	SCVA	216	49.48
B15A	ZIZMI	12	16.80	B22B	ZIZMI	12	7.00
B15B	ASTEREL	4	14.88	B22C	ELMO	12	0.16
B15B	ELMO	1720	41.12	B22C	SCVA	32	3.88
B15B	GALIUM	12	0.08	B22C	ZIZMI	4	151.76
B15B	HYDROCOT	100	1.32	B22C	ZIZMI	28	84.96
B15B	IRIS	4	5.48	B23A	ZIZMI	0	910.36
B15B	JUMA	36	2.64	B23A	ZIZMI	72	573.08
B15B	LUZIOLA	4	0.04	B23B	BIDLA	12	0.92
B15B	MURDANIA	8	0.08	B23B	ELMO	24	0.64
B15B	PHYLA	8	0.16	B23B	POLYHYD	44	5.84
B15B	POLYHYD	8	0.52	B23B	SCVA	8	7.12
B15B	RHYSPP	32	4.56	B23B	SCVA	92	9.96
B15B	SCVA	20	1.28	B23B	TYPHA	4	13.80
B15B	UNBOLT	24	0.28	B23B	TYPHA	4	23.84
B15B	UNSHGR	12	0.56	B23B	UNBI	16	2.24
B15C	AGALINUS	8	1.52	B23B	ZIZMI	0	132.04
B15C	ASTEREL	140	9.48	B23B	ZIZMI	44	114.44
B15C	BIDLA	72	3.76	B23C	POLYHYD	4	6.00
B15C	CICUTA	12	0.52	B23C	POLYHYD	40	7.84
B15C	ELMO	3168	116.16	B23C	SCVA	4	0.36
B15C	GALIUM	52	3.56	B23C	SCVA	4	0.96
B15C	HYDROCOT	12	0.20	B23C	UNBI	60	9.04
B15C	IRIS	8	6.36	B23C	ZIZMI	0	173.40
B15C	JUMA	64	5.48	B23C	ZIZMI	32	82.84
B15C	LUDALAT	8	0.04	B24A	ASTEREL	12	2.92
B15C	MURDANIA	64	0.52	B24A	BIDLA	68	5.08
B15C	RHYSPP	20	3.84	B24A	CICUTA	56	8.68
B15C	UNSHGR	12	3.36	B24A	POLYHYD	20	57.92
B15C	UNXYRIS	16	14.96	B24A	POLYHYD	68	11.08
B22A	POLYHYD	4	0.80	B24A	SCVA	12	33.52

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B24A	SCVA	172	31.36	B3.5 2B	POLYHYD	40	6.64
B24A	UNBI	24	4.28	B3.5 2B	SCVA	36	32.20
B24A	ZIZMI	4	51.24	B3.5 2B	SCVA	244	71.00
B24A	ZIZMI	12	101.84	B3.5 2B	ZIZMI	20	111.88
B24B	ASTEREL	28	18.80	B3.5 2C	POLYHYD	36	5.60
B24B	ELMO	144	2.52	B3.5 2C	SAGLANCE	20	11.92
B24B	HYDROCOT	4	0.04	B3.5 2C	SCVA	8	20.48
B24B	POLYHYD	8	12.40	B3.5 2C	SCVA	796	200.28
B24B	POLYHYD	24	1.04	B3.5 2C	TYPHA	4	20.36
B24B	SCVA	88	11.00	B3.5 3A	ASTERTEN	16	0.72
B24B	TYPHA	4	1.00	B3.5 3A	SCVA	28	55.08
B24B	ZIZMI	80	380.00	B3.5 3A	SCVA	376	66.44
B24C	POLYHYD	48	7.80	B3.5 3A	SPALT	24	265.56
B24C	SCVA	16	19.20	B3.5 3A	SPALT	56	31.96
B24C	SCVA	132	16.60	B3.5 3B	ASTERTEN	4	0.16
B24C	TYPHA	8	55.56	B3.5 3B	SAGLANCE	8	3.16
B24C	TYPHA	12	28.84	B3.5 3B	SCVA	56	65.60
B24C	ZIZMI	0	31.08	B3.5 3B	SCVA	404	64.60
B24C	ZIZMI	16	24.56	B3.5 3B	SPALT	12	23.64
B3.5 1A	SAGLANCE	12	3.92	B3.5 3B	SPALT	40	313.60
B3.5 1A	SCROB	4	1.16	B3.5 3C	ASTERTEN	8	81.20
B3.5 1A	SCVA	8	16.40	B3.5 3C	LUDSPP	4	0.20
B3.5 1A	SCVA	104	14.16	B3.5 3C	SCVA	60	89.88
B3.5 1A	SPALT	20	88.48	B3.5 3C	SCVA	180	71.48
B3.5 1A	SPALT	36	30.40	B32A	ELMO	16	0.52
B3.5 1B	ASTERTEN	12	2.92	B32A	SCVA	80	66.24
B3.5 1B	ASTERTEN	24	2.92	B32A	SCVA	196	32.88
B3.5 1B	SCVA	48	68.04	B32A	SPALT	8	6.16
B3.5 1B	SCVA	272	68.04	B32A	SPALT	40	75.12
B3.5 1C	ASTERTEN	20	1.52	B32A	ZIZMI	36	23.48
B3.5 1C	ELMO	52	1.36	B32A	ZIZMI	40	58.60
B3.5 1C	SAGLANCE	12	1.48	B32B	ASTERTEN	8	0.04
B3.5 1C	SCVA	12	24.36	B32B	ELMO	148	7.60
B3.5 1C	SCVA	576	73.68	B32B	SAGLANCE	20	1.32
B3.5 1C	ZIZMI	0	10.76	B32B	SCVA	44	85.84
B3.5 1C	ZIZMI	16	10.92	B32B	SCVA	332	51.24
B3.5 2A	ASTERTEN	4	0.08	B32C	ASTERTEN	12	1.16
B3.5 2A	BIDLA	52	13.28	B32C	BIDLA	20	2.32
B3.5 2A	POLYHYD	8	15.40	B32C	SAGLANCE	8	0.96
B3.5 2A	POLYHYD	40	9.88	B32C	SCVA	60	70.16

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B3.5 2A	SCVA	28	65.48	B32C	SCVA	356	71.16
B3.5 2A	SCVA	380	67.04	B32C	TYPHA	4	1.56
B3.5 2B	BIDLA	20	4.32	B32C	ZIZMI	0	157.36
B32C	ZIZMI	56	173.04	B42B	SCVA	52	67.68
B33A	ASTERTEN	4	1.12	B42B	SCVA	316	91.00
B33A	BIDLA	28	1.12	B42B	SPALT	16	198.88
B33A	ELMO	400	14.84	B42B	SPALT	36	37.88
B33A	LUDALAT	4	0.08	B42B	TYPHA	4	10.96
B33A	POLYHYD	28	28.84	B42B	TYPHA	8	112.00
B33A	POLYHYD	48	4.24	B42C	ASTERTEN	24	3.12
B33A	SCVA	20	65.80	B42C	SCROB	8	10.24
B33A	SCVA	140	38.04	B42C	SCVA	116	198.48
B33A	SPALT	12	23.48	B42C	SCVA	144	96.20
B33A	SPALT	16	79.04	B42C	SPALT	44	462.56
B33A	ZIZMI	4	57.20	B42C	SPALT	116	141.16
B33A	ZIZMI	12	28.36	B45A	SCVA	20	36.52
B33B	BIDLA	44	2.68	B45A	SCVA	220	116.44
B33B	POLYHYD	4	16.40	B45A	SPALT	24	60.20
B33B	POLYHYD	24	1.96	B45A	SPALT	36	61.52
B33B	SCVA	12	25.96	B45B	SCVA	32	51.80
B33B	SCVA	112	39.20	B45B	SCVA	200	75.04
B33B	ZIZMI	4	59.72	B45B	SPALT	8	83.76
B33B	ZIZMI	16	37.76	B45B	SPALT	12	24.88
B33C	SCVA	40	64.84	B45C	ASTERTEN	16	4.68
B33C	SCVA	360	63.52	B45C	SCROB	4	10.20
B33C	TYPHA	8	160.96	B45C	SCROB	8	3.44
B34A	SCVA	80	20.40	B45C	SCVA	40	25.72
B34A	ZIZMI	12	275.52	B45C	SCVA	256	56.12
B34A	ZIZMI	44	181.72	B45C	SPALT	52	339.64
B34B	BIDLA	4	0.40	B45C	SPALT	76	137.68
B34B	LUDALAT	8	0.92	B45C	TYPHA	8	105.68
B34B	POLYHYD	56	3.96	B45C	TYPHA	12	14.16
B34B	SCVA	88	108.48	B46A	ASTERTEN	12	2.88
B34B	SCVA	320	47.28	B46A	SCVA	120	88.20
B34B	ZIZMI	0	84.72	B46A	SCVA	412	114.32
B34B	ZIZMI	20	15.76	B46A	SPALT	24	132.96
B34C	SCVA	20	26.48	B46A	SPALT	52	85.08
B34C	SCVA	188	21.60	B46A	TYPHA	4	42.04
B34C	ZIZMI	12	247.00	B46B	SCVA	40	53.80
B34C	ZIZMI	48	66.32	B46B	SCVA	460	71.36

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B42A	SCVA	40	226.92	B46B	SPALT	8	54.64
B42A	SCVA	212	48.40	B46B	SPALT	16	19.64
B42A	SPALT	60	463.08	B46C	SCROB	4	11.92
B42A	SPALT	108	162.72	B46C	SCROB	24	4.80
B42B	SCROB	12	1.28	B46C	SCVA	112	113.16
B42B	SCROB	12	34.28	B46C	SCVA	436	140.24
B46C	SPALT	12	92.72	F12C	SCVA	156	73.72
B46C	TYPHA	8	14.24	F12C	SCVA	356	42.52
B46C	TYPHA	24	26.12	F12C	TYPHA	24	306.44
F11A	ASTEREL	12	17.28	F12C	TYPHA	28	29.44
F11A	BIDLA	16	0.72	F12C	UNGRASS	4	0.04
F11A	ELMO	132	4.52	F13A	ASTEREL	36	52.08
F11A	IRIS	8	2.32	F13A	BIDLA	16	2.00
F11A	POLYHYD	4	6.56	F13A	ELMO	128	4.60
F11A	POLYHYD	56	8.16	F13A	LUDSPP	8	0.72
F11A	SCVA	4	2.36	F13A	POLYHYD	36	4.40
F11A	SCVA	220	28.88	F13A	SCVA	80	35.44
F11A	UNBI	192	24.00	F13A	UNGRASS	4	0.20
F11A	ZIZMI	12	16.00	F13A	ZIZMI	60	111.28
F11B	ASTEREL	16	5.08	F13B	ASTEREL	12	174.32
F11B	BIDLA	24	2.04	F13B	ASTEREL	52	34.76
F11B	ELMO	2360	54.92	F13B	ELMO	1288	51.84
F11B	IRIS	8	8.56	F13B	IRIS	8	16.44
F11B	POLYHYD	28	15.48	F13B	LEER	12	4.52
F11B	POLYHYD	60	5.48	F13B	UNBI	12	2.56
F11B	RHYSPP	16	2.84	F13B	ZIZMI	20	323.36
F11B	SCVA	124	31.20	F13B	ZIZMI	56	106.64
F11C	ASTEREL	36	32.64	F13C	ASTEREL	28	13.12
F11C	BIDLA	4	0.04	F13C	BIDLA	12	0.64
F11C	ELMO	300	6.04	F13C	BIDMIT	8	0.04
F11C	IRIS	4	6.48	F13C	ELMO	1160	20.76
F11C	POLYHYD	8	11.40	F13C	LUDSPP	8	0.32
F11C	POLYHYD	32	4.32	F13C	POLYHYD	20	3.96
F11C	SAGLANCE	4	0.04	F13C	SAGLANCE	28	7.88
F11C	SCVA	136	17.12	F13C	ZIZMI	4	71.08
F11C	ZIZMI	12	20.52	F13C	ZIZMI	16	73.68
F12A	POLYHYD	20	21.84	F21A	PELTVIRG	8	4.28
F12A	POLYHYD	40	11.20	F21A	SCVA	52	14.16
F12A	SCVA	12	12.08	F21A	TYPHA	92	87.28
F12A	SCVA	60	13.08	F21B	PELTVIRG	12	9.76

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
F12A	ZIZMI	20	455.56	F21B	SCVA	12	47.84
F12A	ZIZMI	60	124.08	F21B	SCVA	180	132.60
F12B	CICUTA	12	1.16	F21B	ZIZMI	4	3.00
F12B	SCVA	8	1.16	F21C	PELTVIRG	32	36.56
F12B	SCVA	8	2.80	F21C	SCVA	16	49.68
F12B	TYPHA	4	17.20	F21C	SCVA	236	81.52
F12B	ZIZMI	4	1016.00	F22A	PELTVIRG	20	30.72
F12B	ZIZMI	52	386.32	F22A	SCVA	40	92.20
F12C	ELMO	212	3.52	F22A	SCVA	476	178.36
F22B	ASTERTEN	60	7.28	M12C	SCVA	284	70.84
F22B	ELMO	108	3.48	M12C	TYPHA	8	14.32
F22B	PELTVIRG	84	19.48	M12C	TYPHA	12	34.20
F22B	SCVA	16	55.60	M15A	POLYHYD	4	0.52
F22B	SCVA	640	90.40	M15A	ZIZMI	0	53.88
F22B	TYPHA	16	91.16	M15A	ZIZMI	48	216.20
F22C	ASTERTEN	4	0.20	M15B	ELMO	52	1.44
F22C	ELMO	116	4.76	M15B	HYDROCOT	8	0.04
F22C	PELTVIRG	24	10.44	M15B	LUDSPP	4	0.04
F22C	POLYHYD	16	6.28	M15B	POLYHYD	8	2.60
F22C	SCVA	28	83.08	M15B	POLYHYD	20	3.44
F22C	SCVA	528	75.84	M15B	SCVA	20	18.00
F22C	UNFLAT	12	1.80	M15B	SCVA	256	52.36
F23A	ELMO	60	2.16	M15B	TYPHA	8	21.44
F23A	PELTVIRG	24	29.44	M15B	ZIZMI	0	22.36
F23A	SCVA	16	78.00	M15B	ZIZMI	24	27.32
F23A	SCVA	668	182.80	M15C	BIDLA	4	0.04
F23B	BIDLA	16	2.60	M15C	ELMO	160	4.20
F23B	PELTVIRG	64	38.76	M15C	GALIUM	12	1.40
F23B	POLYHYD	4	12.96	M15C	IRIS	4	9.20
F23B	POLYHYD	48	10.08	M15C	MURDANIA	4	0.04
F23B	SCVA	4	12.92	M15C	ZIZMI	4	79.40
F23B	SCVA	192	46.80	M15C	ZIZMI	76	116.44
F23C	IRIS	8	3.68	M16A	IRIS	12	19.72
F23C	PELTVIRG	48	58.12	M16A	PHYLA	8	0.88
F23C	POLYHYD	56	11.24	M16A	SAGLANCE	8	1.32
F23C	SCVA	24	73.52	M16A	UNPANIC	8	0.40
F23C	SCVA	268	75.44	M16A	ZIZMI	80	328.24
M12A	POLYHYD	8	2.28	M16B	BIDLA	52	3.00
M12A	SCVA	8	10.12	M16B	ELMO	1360	38.08
M12A	SCVA	152	25.36	M16B	HYDROCOT	4	0.04

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M12A	ZIZMI	4	54.16	M16B	IRIS	4	3.36
M12A	ZIZMI	356	112.00	M16B	JUMA	60	4.60
M12B	ELMO	180	3.32	M16B	MURDANIA	28	0.48
M12B	HYDROCOT	36	0.60	M16B	SCVA	92	117.72
M12B	SCVA	20	38.12	M16B	SCVA	312	53.76
M12B	SCVA	224	43.36	M16C	ELMO	44	0.84
M12B	TYPHA	8	3.48	M16C	HYDROCOT	120	1.24
M12B	ZIZMI	8	2.84	M16C	LUDSPP	4	0.04
M12C	CYPHAS	8	1.32	M16C	MURDANIA	4	0.04
M12C	ELMO	264	13.32	M16C	SCVA	8	7.32
M12C	HYDROCOT	56	0.84	M16C	SCVA	116	21.24
M12C	SCVA	68	62.56	M16C	TYPHA	4	9.40
M16C	TYPHA	64	102.04	M31A	SCVA	224	208.80
M23A	POLYHYD	8	2.76	M31A	SCVA	556	309.12
M23A	SCVA	4	9.40	M31A	ZIZMI	4	139.60
M23A	SCVA	216	42.04	M31A	ZIZMI	12	80.80
M23A	TYPHA	4	3.96	M31B	SCVA	452	82.96
M23A	TYPHA	8	127.52	M31B	TYPHA	8	28.80
M23A	ZIZMI	16	13.96	M31C	SCVA	36	54.80
M23B	SCVA	24	20.72	M31C	SCVA	328	53.04
M23B	SCVA	264	64.56	M31C	TYPHA	8	46.68
M23B	TYPHA	16	53.40	M31C	ZIZMI	8	13.56
M23B	TYPHA	52	78.40	M32A	SCVA	48	50.12
M23C	ELMO	112	6.40	M32A	SCVA	208	47.08
M23C	LUDSPP	68	5.84	M32A	TYPHA	24	142.08
M23C	SCVA	384	117.08	M32A	TYPHA	68	44.68
M23C	TYPHA	16	37.36	M32B	ELMO	440	14.84
M24A	SCVA	16	19.64	M32B	LUDSPP	16	1.52
M24A	SCVA	640	113.88	M32B	SCVA	52	45.64
M24B	ASTEREL	60	16.44	M32B	SCVA	472	55.24
M24B	ELMO	196	4.68	M32B	TYPHA	16	50.60
M24B	LUDSPP	20	1.36	M32B	TYPHA	24	81.16
M24B	POLYHYD	56	9.24	M32B	ZIZMI	4	0.04
M24B	SCVA	44	14.48	M32C	ASTEREL	8	44.24
M24B	SCVA	444	70.48	M32C	ASTEREL	40	23.64
M24C	SCVA	464	91.28	M32C	ELMO	1580	38.72
M24C	TYPHA	12	67.28	M32C	HYDROCOT	40	0.64
M24C	TYPHA	20	39.84	M32C	POLYHYD	4	0.16
M25A	BIDLA	12	0.28	M32C	POLYHYD	4	1.60
M25A	LUDSPP	8	0.64	M32C	SCVA	4	0.68

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M25A	POLYHYD	24	4.32	M32C	SCVA	8	16.72
M25A	SCVA	48	9.96	M32C	ZIZMI	16	148.76
M25A	TYPHA	8	143.28	M32C	ZIZMI	80	45.48
M25A	TYPHA	28	143.28	M33A	ELMO	220	3.92
M25A	ZIZMI	12	2.44	M33A	SAGLANCE	4	2.32
M25B	ELMO	92	1.48	M33A	SCVA	12	29.12
M25B	LUDSPP	12	0.48	M33A	SCVA	272	45.00
M25B	POLYHYD	20	0.72	M33A	TYPHA	8	23.68
M25B	SCVA	24	48.16	M33B	ELMO	52	2.08
M25B	SCVA	384	88.84	M33B	HYDROCOT	8	0.04
M25C	ELMO	40	0.80	M33B	SCVA	20	18.32
M25C	HYDROCOT	32	0.76	M33B	SCVA	540	61.88
M25C	POLYHYD	4	6.88	M33B	TYPHA	16	15.08
M25C	SCVA	20	51.00	M33B	ZIZMI	4	0.32
M25C	SCVA	144	33.48	M33C	ELMO	640	11.36
M33C	HYDROCOT	232	2.48	M52B	POLYHYD	12	4.48
M33C	SCVA	28	16.44	M52B	SCVA	8	34.52
M33C	SCVA	324	40.80	M52B	SCVA	496	95.00
M33C	TYPHA	4	0.56	M52C	PELTVIRG	36	26.36
M41A	SCVA	16	14.20	M52C	POLYHYD	128	29.48
M41A	SCVA	900	396.36	M52C	SCVA	128	167.56
M41A	TYPHA	8	26.60	M52C	SCVA	568	199.44
M41B	SCVA	8	25.04	M53A	PONCO	8	1.08
M41B	SCVA	316	69.48	M53A	SCVA	400	164.16
M41B	TYPHA	4	15.40	M53B	PELTVIRG	56	29.28
M41C	SAGLANCE	4	0.04	M53B	SCVA	44	73.16
M41C	SCVA	40	21.92	M53B	SCVA	824	190.28
M41C	SCVA	132	142.12	M53C	PELTVIRG	40	36.64
M41C	TYPHA	8	241.84	M53C	SCVA	48	23.84
M41C	TYPHA	12	17.44	M53C	SCVA	268	84.68
M42A	SCVA	8	23.72	M53C	TYPHA	4	2.28
M42A	SCVA	332	100.96	M53C	TYPHA	4	49.12
M42B	SCVA	12	45.44	M53C	ZIZMI	4	20.80
M42B	SCVA	116	69.08				
M42B	TYPHA	8	7.68				
M42B	TYPHA	20	199.68				
M42C	SCVA	252	71.40				
M42C	TYPHA	12	329.24				
M43A	SCVA	320	142.96				
M43B	SCVA	368	150.28				

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

April 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m²)	Biomass (g/m²)
M43B	TYPHA	4	9.36
M43B	TYPHA	8	26.16
M43C	SCVA	112	284.20
M43C	SCVA	472	124.80
M43C	TYPHA	4	190.28
M51A	SCROB	4	14.32
M51A	SCVA	4	2.88
M51A	TYPHA	4	21.32
M51A	TYPHA	76	255.24
M51B	PELTVIRG	12	27.52
M51B	SCVA	440	195.84
M51B	ZIZMI	8	4.80
M51C	SCVA	24	6.64
M51C	TYPHA	24	129.44
M52A	PELTVIRG	120	174.00
M52A	SCVA	16	39.84
M52A	SCVA	636	195.12
M52B	PELTVIRG	4	2.36

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B12A	ELMO	584	53.36	B14A	AGALINUS	184	105.92
B12A	GALIUM	16	5.84	B14A	BIDLA	120	54.24
B12A	LEER	32	8.24	B14A	BIDMIT	16	1.92
B12A	LUDSPP	36	29.68	B14A	CASSIA	8	2.92
B12A	MURDANIA	16	1.56	B14A	CYPHAS	12	2.16
B12A	ONOCLEA	28	10.08	B14A	ELMO	1448	74.24
B12A	PHYSO	36	16.08	B14A	ELQU	96	9.76
B12A	POLYHYD	72	32.16	B14A	FUIRENA	12	3.52
B12A	RHYMIC	12	4.60	B14A	IRIS	8	5.96
B12A	SAUCE	4	3.32	B14A	LEER	4	0.92
B12A	ZIZMI	48	50.60	B14A	MURDANIA	368	19.48
B12A	ZIZMI	24	31.12	B14A	PHYLA	64	15.72
B12B	AGALINUS	24	7.04	B14A	POLYHYD	48	19.28
B12B	ELMO	3760	139.36	B14A	POLYSAG	12	3.92
B12B	GALIUM	76	17.04	B14A	SAGLANCE	28	97.60
B12B	IRIS	20	13.92	B14A	SCVA	12	3.52
B12B	JUMA	4	0.72	B14A	UNFZSH	4	0.52
B12B	LEER	8	1.12	B14B	ASTEREL	84	244.56
B12B	LUDSPP	20	37.68	B14B	BIDLA	40	13.72
B12B	MURDANIA	84	5.76	B14B	ELMO	1440	95.68
B12B	POLYHYD	56	17.00	B14B	GALIUM	116	39.48
B12B	PONCO	20	27.72	B14B	LUDSPP	24	20.32
B12B	SAGLANCE	56	110.28	B14B	LUZIOLA	36	0.04
B12C	AGALINUS	8	6.36	B14B	MURDANIA	12	0.76
B12C	ASTEREL	16	3.36	B14B	PHYLA	36	4.04
B12C	ASTEREL	8	7.00	B14B	POLYSAG	12	1.44
B12C	CASSIA	4	0.32	B14B	SAGLANCE	36	134.84
B12C	CICUTA	8	5.08	B14B	SCVA	32	56.32
B12C	ELMO	508	38.48	B14B	ZIZMI	12	32.80
B12C	GALIUM	24	20.16	B14C	AGALINUS	4	0.80
B12C	HYDROCOT	16	1.08	B14C	ASTEREL	12	1.92
B12C	LEER	72	12.92	B14C	BIDLA	8	5.16
B12C	LUDSPP	64	100.20	B14C	BIDMIT	20	7.36
B12C	LUZIOLA	36	0.68	B14C	CASSIA	8	1.56
B12C	MURDANIA	8	0.04	B14C	ELMO	5200	227.04
B12C	RHYMIC	8	0.36	B14C	FUIRENA	76	25.56
B12C	SAGLANCE	20	149.76	B14C	GALIUM	28	9.44
B12C	SCVA	12	17.04	B14C	HYDROCOT	104	6.60
B12C	SCVA	8	4.88	B14C	IRIS	8	29.52
B12C	ZIZMI	20	56.88	B14C	JUMA	28	17.16

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B14C	LUDSPP	4	11.52	B15C	CICUTA	20	2.84
B14C	LUZIOLA	60	1.36	B15C	CYPHAS	16	5.08
B14C	MURDANIA	316	15.40	B15C	ELMO	3840	204.92
B14C	SPIRANTH	16	2.64	B15C	FUIRENA	164	55.68
B14C	UNLOBEL	8	1.84	B15C	GALIUM	48	16.96
B14C	XYRIS	16	5.24	B15C	HYDROCOT	8	0.04
B15A	BIDMIT	4	0.88	B15C	LUDSPP	8	20.84
B15A	ELMO	2104	95.52	B15C	LUZIOLA	260	5.44
B15A	GALIUM	20	4.16	B15C	MURDANIA	228	16.44
B15A	IRIS	4	12.20	B15C	UNLOBEL	8	1.56
B15A	LUDSPP	12	23.40	B15C	XYRIS	8	4.60
B15A	MURDANIA	28	1.68	B22A	ZIZMI	44	524.68
B15A	PHYLA	32	15.56	B22A	ZIZMI	4	271.84
B15A	POLYHYD	60	18.04	B22B	BIDLA	80	71.52
B15A	SAUCE	16	12.92	B22B	ELMO	168	10.60
B15A	SCVA	32	16.56	B22B	LUDSPP	48	11.04
B15A	UNPANIC	68	92.88	B22B	POLYHYD	100	41.88
B15A	UNPLUCH	4	2.24	B22B	SCVA	136	262.96
B15A	ZIZMI	8	35.24	B22B	SCVA	40	38.60
B15B	AGALINUS	148	64.32	B22B	ZIZMI	44	33.96
B15B	BIDMIT	60	14.12	B22C	ASTEREL	60	495.12
B15B	CASSIA	4	2.08	B22C	ELMO	12	0.48
B15B	CYPHAS	8	2.76	B22C	POLYHYD	12	7.96
B15B	ELMO	3248	122.60	B22C	RHYMIC	4	0.56
B15B	FUIRENA	28	4.92	B22C	SCVA	72	138.60
B15B	GALIUM	48	9.36	B22C	SCVA	24	15.12
B15B	HYDROCOT	24	0.44	B22C	ZIZMI	28	130.40
B15B	JUMA	8	2.00	B22C	ZIZMI	4	35.40
B15B	LUDSPP	4	2.84	B23A	PHYSO	24	28.72
B15B	LUZIOLA	188	3.88	B23A	POLYHYD	8	22.80
B15B	MURDANIA	192	11.80	B23A	ZIZMI	56	310.96
B15B	POLYHYD	16	1.56	B23A	ZIZMI	100	194.64
B15B	SAGLANCE	24	4.88	B23B	BIDLA	60	36.68
B15B	SCVA	12	6.28	B23B	ELMO	48	4.72
B15B	UNFZBLADE	44	4.68	B23B	MIKANIA	8	1.76
B15B	UNFZSH	4	1.84	B23B	POLYHYD	32	16.60
B15B	UNLOBEL	8	0.32	B23B	SCVA	280	350.84
B15B	XYRIS	4	5.20	B23B	SCVA	116	73.24
B15C	AGALINUS	16	7.08	B23B	TYPHA	24	280.72
B15C	BIDMIT	4	1.08	B23B	ZIZMI	8	31.88

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B23C	BIDLA	108	62.32	B3.5 1B	SAGLANCE	16	90.68
B23C	CYPHAS	20	67.48	B3.5 1B	SCVA	328	383.36
B23C	ELQU	224	53.16	B3.5 1B	SCVA	128	43.76
B23C	LEER	64	32.64	B3.5 1C	ELMO	420	40.16
B23C	MURDANIA	4	0.04	B3.5 1C	SAGLANCE	4	28.28
B23C	PHYSO	36	24.76	B3.5 1C	SCVA	404	459.88
B23C	POLYHYD	52	24.04	B3.5 1C	ZIZMI	20	144.60
B23C	SCVA	176	295.12	B3.5 2A	BIDLA	68	66.20
B23C	SCVA	64	50.72	B3.5 2A	ELMO	108	12.00
B23C	UNAS	20	52.16	B3.5 2A	POLYHYD	68	83.40
B23C	ZIZMI	4	52.68	B3.5 2A	SCVA	144	313.96
B24A	ASTEREL	20	139.84	B3.5 2A	SCVA	72	41.24
B24A	BIDLA	24	11.80	B3.5 2A	ZIZMI	20	91.88
B24A	ELMO	28	1.80	B3.5 2B	BIDLA	48	54.24
B24A	POLYHYD	28	12.36	B3.5 2B	POLYHYD	68	34.68
B24A	SCVA	88	134.76	B3.5 2B	SCVA	168	420.52
B24A	SCVA	8	39.40	B3.5 2B	SCVA	76	53.12
B24A	TYPHA	8	114.32	B3.5 2B	ZIZMI	12	42.16
B24A	TYPHA	16	74.68	B3.5 2C	POLYHYD	56	70.56
B24A	ZIZMI	36	127.16	B3.5 2C	SCVA	264	828.44
B24B	ASTEREL	28	59.20	B3.5 2C	SCVA	88	78.44
B24B	ELMO	680	25.04	B3.5 2C	UNAS	4	16.08
B24B	HYDROCOT	64	1.04	B3.5 2C	ZIZMI	8	36.00
B24B	IRIS	4	56.96	B3.5 3A	ASTERTEN	8	1.52
B24B	RHYMIC	16	6.05	B3.5 3A	SCVA	320	402.12
B24B	SCVA	32	47.12	B3.5 3A	SCVA	136	129.04
B24B	SCVA	12	10.56	B3.5 3A	ZIZMI	20	58.64
B24B	UNWHEAT	8	5.36	B3.5 3B	ELMO	148	14.04
B24B	ZIZMI	56	361.84	B3.5 3B	SAGLANCE	40	77.76
B24B	ZIZMI	40	239.68	B3.5 3B	SCVA	200	289.00
B24C	BIDLA	20	26.32	B3.5 3B	SCVA	112	119.68
B24C	POLYHYD	28	15.92	B3.5 3B	SPCYN	24	385.24
B24C	SCVA	56	87.24	B3.5 3B	SPCYN	12	24.64
B24C	SCVA	20	14.60	B3.5 3B	UNSPART	4	4.08
B24C	TYPHA	16	432.96	B3.5 3C	AMARANTH	44	7.52
B24C	TYPHA	8	120.36	B3.5 3C	SCVA	228	383.92
B24C	ZIZMI	28	85.16	B3.5 3C	SCVA	100	51.08
B3.5 1A	SCROB	8	23.60	B3.5 3C	ZIZMI	8	22.68
B3.5 1A	SCVA	224	360.28	B32A	ELMO	148	14.32
B3.5 1A	SCVA	48	61.68	B32A	SCVA	260	362.68

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B3.5 1A	SPCYN	32	210.60	B32A	SCVA	36	34.36
B3.5 1A	ZIZMI	4	76.24	B32A	SPCYN	20	493.04
B3.5 1B	ASTERTEN	8	1.92	B32A	ZIZMI	8	63.72
B32B	AMARANTH	4	1.84	B34B	ZIZMI	32	156.64
B32B	BIDLA	4	0.76	B34B	ZIZMI	0	62.32
B32B	ELMO	28	4.92	B34C	BIDLA	36	62.72
B32B	SAGLANCE	4	46.76	B34C	ELMO	16	2.24
B32B	SCVA	324	605.80	B34C	SCVA	196	341.72
B32B	SCVA	28	14.12	B34C	SCVA	20	10.44
B32B	ZIZMI	4	25.76	B34C	ZIZMI	12	148.72
B32C	AMARANTH	4	4.72	B42A	ASTERTEN	8	5.60
B32C	BIDLA	96	103.68	B42A	SCVA	144	436.16
B32C	SAGLANCE	16	132.92	B42A	SCVA	104	52.60
B32C	SCVA	212	322.00	B42A	SPALT	32	336.48
B32C	SCVA	92	44.88	B42A	SPALT	8	103.92
B32C	TYPHA	4	208.92	B42B	ASTERTEN	4	3.08
B33A	ASTEREL	140	329.36	B42B	SCROB	28	60.04
B33A	ELMO	352	33.80	B42B	SCVA	148	446.00
B33A	LUDALAT	8	1.64	B42B	SCVA	72	58.40
B33A	POLYHYD	16	11.16	B42B	SPALT	20	155.08
B33A	SAGLANCE	4	4.16	B42B	SPALT	4	18.64
B33A	SCVA	24	45.56	B42C	ASTERTEN	8	2.12
B33A	SCVA	16	21.88	B42C	SCROB	28	62.28
B33A	SPALT	16	27.48	B42C	SCVA	92	394.56
B33A	ZIZMI	20	50.28	B42C	SCVA	16	36.92
B33A	ZIZMI	4	26.04	B42C	SPALT	32	237.44
B33B	POLYHYD	16	2.80	B42C	SPALT	8	132.84
B33B	SCVA	132	241.32	B45A	ASTERTEN	16	6.72
B33B	SCVA	32	21.64	B45A	SCROB	20	60.08
B33B	TYPHA	16	12.28	B45A	SCVA	64	176.20
B33B	ZIZMI	52	156.24	B45A	SCVA	60	87.80
B33B	ZIZMI	0	57.80	B45A	SPALT	28	108.32
B33C	SCVA	400	631.76	B45A	SPALT	28	115.56
B33C	SCVA	92	48.64	B45B	ASTERTEN	12	4.48
B33C	TYPHA	16	203.44	B45B	SCVA	204	520.40
B34A	BIDLA	36	43.76	B45B	SCVA	144	85.68
B34A	POLYHYD	20	63.00	B45B	SPALT	8	68.76
B34A	SCVA	120	395.88	B45B	SPALT	4	17.60
B34A	SCVA	80	69.44	B45C	ASTERTEN	76	50.24
B34A	UNAS	8	8.20	B45C	SCROB	32	72.84

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B34A	ZIZMI	28	289.44	B45C	SCVA	212	504.72
B34A	ZIZMI	8	57.88	B45C	SCVA	128	104.16
B34B	ELMO	196	28.68	B45C	SPALT	28	334.60
B34B	POLYHYD	48	34.52	B45C	TYPHA	12	214.80
B34B	SCVA	156	261.68	B46A	SCROB	8	13.16
B34B	SCVA	68	31.04	B46A	SCVA	68	251.92
B46A	SCVA	36	32.20	F12B	ASTEREL	4	5.16
B46A	SPALT	8	74.12	F12B	POLYHYD	12	11.32
B46B	SCVA	72	186.60	F12B	SCVA	124	294.00
B46B	SCVA	48	97.52	F12B	SCVA	40	32.68
B46B	SPALT	56	422.64	F12B	ZIZMI	28	292.68
B46C	SCROB	24	74.44	F12C	ELMO	212	9.24
B46C	SCVA	152	296.04	F12C	SCVA	364	549.76
B46C	SCVA	84	42.88	F12C	SCVA	216	129.20
B46C	SPALT	52	683.08	F12C	ZIZMI	24	94.84
B46C	SPALT	8	21.40	F13A	ASTEREL	52	231.80
B46C	TYPHA	28	157.68	F13A	ELMO	96	8.64
F11A	ASTEREL	84	274.64	F13A	POLYHYD	20	3.96
F11A	ELMO	56	5.12	F13A	SCVA	188	369.24
F11A	PHYSO	64	24.56	F13A	ZIZMI	8	36.24
F11A	POLYHYD	16	14.68	F13B	ASTEREL	40	202.52
F11A	SCVA	156	422.48	F13B	ELMO	960	51.88
F11A	SCVA	68	47.12	F13B	LUDALAT	24	4.28
F11A	ZIZMI	8	28.00	F13B	MURDANIA	4	0.04
F11B	ASTEREL	24	128.04	F13B	POLYHYD	68	27.40
F11B	BIDLA	44	23.20	F13B	SAGLANCE	20	130.24
F11B	ELMO	412	25.40	F13B	TYPHA	4	54.08
F11B	IRIS	4	10.92	F13B	UNPLUCH	4	0.68
F11B	LEER	8	1.80	F13B	ZIZMI	40	134.72
F11B	POLYHYD	36	10.08	F13C	ASTEREL	12	22.20
F11B	SAGLANCE	4	24.40	F13C	BIDLA	64	38.44
F11B	SCVA	124	341.40	F13C	CYPHAS	8	1.76
F11B	SCVA	32	19.28	F13C	ELMO	1688	113.24
F11B	TYPHA	4	62.24	F13C	GALIUM	24	5.28
F11B	TYPHA	4	14.84	F13C	LUDSPP	8	11.24
F11B	ZIZMI	4	49.64	F13C	ONOCLEA	36	36.24
F11C	ELMO	160	11.24	F13C	PHYLA	4	1.88
F11C	IRIS	12	103.56	F13C	SCVA	12	29.68
F11C	MIKANIA	4	1.56	F13C	SCVA	20	20.72
F11C	POLYHYD	36	14.92	F13C	TYPHA	4	6.08

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
F11C	SCVA	112	112.52	F13C	TYPHA	4	7.96
F11C	SCVA	40	24.36	F13C	ZIZMI	12	127.20
F11C	ZIZMI	24	145.92	F21A	ELMO	8	0.04
F12A	CYPHAS	4	0.44	F21A	PELTVIRG	20	173.48
F12A	ELMO	92	5.56	F21A	RHYSPP	16	10.28
F12A	POLYHYD	8	5.88	F21A	SAGLANCE	8	17.80
F12A	SCVA	288	649.12	F21A	SCVA	28	48.04
F12A	SCVA	76	28.68	F21A	SCVA	8	9.52
F12B	ASTEREL	72	429.40	F21A	TYPHA	168	1117.12
F21A	TYPHA	16	68.12	M12A	SCVA	120	206.08
F21B	PELTVIRG	20	102.36	M12A	SCVA	64	69.88
F21B	SAGLANCE	12	11.92	M12A	ZIZMI	32	333.12
F21B	SCVA	104	568.12	M12B	BIDLA	16	14.56
F21B	SCVA	56	146.04	M12B	ELMO	336	19.24
F21C	PELTVIRG	16	101.92	M12B	HYDROCOT	8	0.24
F21C	SCVA	72	176.84	M12B	MURDANIA	120	12.72
F21C	SCVA	20	8.52	M12B	PHYLA	4	0.48
F21C	TYPHA	20	429.20	M12B	SCVA	180	177.48
F21C	TYPHA	4	126.96	M12B	TYPHA	4	62.20
F21C	ZIZMI	4	91.60	M12B	ZIZMI	44	97.32
F21C	ZIZMI	4	24.24	M12C	ELMO	1640	79.32
F22A	PELTVIRG	96	701.84	M12C	HYDROCOT	220	12.44
F22A	SCVA	120	328.16	M12C	JUMA	4	0.04
F22A	SCVA	88	76.60	M12C	LUDSPP	116	24.20
F22B	ELMO	4	0.04	M12C	MURDANIA	24	2.68
F22B	PELTVIRG	36	683.12	M12C	PHYLA	28	6.04
F22B	POLYHYD	20	135.48	M12C	PLUCHEA	4	2.24
F22B	SCVA	128	351.00	M12C	SCVA	188	227.84
F22B	SCVA	72	47.92	M12C	TYPHA	12	84.68
F22B	TYPHA	12	138.40	M12C	ZIZMI	4	0.04
F22C	ELMO	20	2.36	M15A	ZIZMI	52	517.60
F22C	PELTVIRG	16	279.24	M15A	ZIZMI	8	243.72
F22C	POLYHYD	36	46.80	M15B	BIDLA	12	8.64
F22C	SCVA	80	210.68	M15B	ELMO	68	4.20
F22C	SCVA	48	66.52	M15B	HYDROCOT	72	2.68
F23A	ELMO	8	0.56	M15B	LUZIOLA	52	1.40
F23A	PELTVIRG	8	125.88	M15B	MURDANIA	248	34.36
F23A	SAGLANCE	4	51.56	M15B	POLYHYD	8	3.36
F23A	SCVA	160	380.64	M15B	PONCO	16	8.52
F23A	SCVA	64	56.72	M15B	SCVA	140	139.08

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
F23B	BIDLA	32	76.04	M15B	ZIZMI	28	98.36
F23B	IRIS	4	6.16	M15C	AGALINUS	4	9.96
F23B	PELTVIRG	96	119.32	M15C	ARTHRA	8	0.48
F23B	POLYHYD	20	15.40	M15C	BIDLA	8	0.28
F23B	SCVA	180	431.32	M15C	ELMO	5764	266.32
F23B	SCVA	80	44.08	M15C	GALIUM	92	11.68
F23C	ELMO	36	3.56	M15C	HYDROCOT	268	17.40
F23C	IRIS	4	5.12	M15C	IRIS	4	4.60
F23C	PELTVIRG	100	346.24	M15C	JUMA	4	2.24
F23C	POLYHYD	24	33.56	M15C	LUZIOLA	1120	17.68
F23C	SCVA	88	167.44	M15C	MURDANIA	1808	67.60
F23C	SCVA	56	61.28	M15C	POLYHYD	4	0.52
M15C	RHYMIC	48	3.04	M23C	SCVA	32	22.20
M15C	SCVA	112	180.68	M23C	TYPHA	8	66.68
M15C	SCVA	12	7.48	M23C	ZIZMI	4	22.12
M15C	UNSHEATH	136	3.36	M24A	BIDLA	28	106.32
M15C	ZIZMI	12	57.08	M24A	ELMO	272	22.04
M16A	IRIS	8	30.88	M24A	POLYHYD	8	45.88
M16A	MURDANIA	8	0.72	M24A	SAGLANCE	32	47.84
M16A	PHYSO	24	15.08	M24A	SCVA	228	307.48
M16A	POLYHYD	32	58.72	M24A	SCVA	124	58.68
M16A	SAUCE	12	10.04	M24A	ZIZMI	28	66.80
M16A	UNPANIC	116	119.24	M24B	ASTEREL	8	20.92
M16A	ZIZMI	36	230.44	M24B	BIDLA	4	0.16
M16B	BIDLA	28	30.40	M24B	ELMO	588	52.88
M16B	ELMO	800	68.84	M24B	HYDROCOT	4	0.04
M16B	HYDROCOT	148	8.32	M24B	LUDSPP	12	3.76
M16B	LUDSPP	36	7.52	M24B	PHYSO	8	1.68
M16B	LUZIOLA	56	1.76	M24B	POLYHYD	28	18.56
M16B	MURDANIA	24	4.12	M24B	SCVA	348	604.12
M16B	POLYHYD	16	15.92	M24B	SCVA	100	53.72
M16B	SCVA	236	311.96	M24C	ELMO	76	4.12
M16B	TYPHA	4	20.68	M24C	POLYHYD	8	8.68
M16B	ZIZMI	16	17.84	M24C	SCVA	244	288.04
M16C	BIDLA	60	51.56	M24C	SCVA	60	41.00
M16C	ELMO	100	3.00	M24C	TYPHA	4	33.24
M16C	FUIRENA	4	0.44	M25A	BIDLA	16	8.32
M16C	HYDROCOT	64	3.68	M25A	ELMO	4	0.04
M16C	MURDANIA	52	8.32	M25A	LUDSPP	12	3.12
M16C	SCVA	144	256.00	M25A	POLYHYD	20	16.36

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M16C	TYPHA	16	93.24	M25A	SCVA	52	67.68
M23A	BIDLA	20	60.24	M25A	ZIZAQ	32	68.48
M23A	ELMO	88	7.68	M25A	ZIZAQ	24	46.28
M23A	POLYHYD	96	139.56	M25B	BIDLA	20	19.52
M23A	SCVA	152	161.28	M25B	ELMO	52	6.68
M23A	SCVA	36	30.36	M25B	HYDROCOT	16	0.92
M23A	TYPHA	12	290.76	M25B	LUDSPP	4	17.40
M23A	ZIZMI	24	40.36	M25B	SCVA	156	407.40
M23B	BIDLA	20	38.08	M25B	SCVA	60	38.68
M23B	ELMO	28	2.84	M25B	TYPHA	8	126.92
M23B	SCVA	204	390.68	M25C	BIDLA	20	2.56
M23B	SCVA	40	50.36	M25C	ELMO	488	39.12
M23B	TYPHA	36	315.04	M25C	SAGLANCE	8	38.36
M23B	TYPHA	4	6.96	M25C	SCVA	168	459.72
M23C	SCVA	164	110.04	M25C	SCVA	48	33.44
M31A	ASTERTEN	4	2.12	M33C	HYDROCOT	276	23.52
M31A	ELMO	20	2.24	M33C	LUDALAT	60	98.84
M31A	SCVA	92	386.48	M33C	SCVA	52	25.76
M31A	SCVA	80	243.52	M33C	TYPHA	40	188.00
M31A	ZIZMI	44	123.00	M33C	TYPHA	4	18.92
M31B	SCVA	268	278.68	M41A	SCVA	224	799.40
M31B	SCVA	92	36.52	M41A	SCVA	60	77.28
M31B	TYPHA	8	104.08	M41A	TYPHA	20	355.52
M31B	TYPHA	0	10.92	M41A	ZIZMI	8	226.04
M31B	ZIZMI	24	70.88	M41B	SCVA	248	741.80
M31B	ZIZMI	0	21.88	M41B	SCVA	60	39.08
M31C	ELMO	184	11.92	M41B	TYPHA	4	79.68
M31C	POLYHYD	16	5.32	M41C	SCVA	292	703.48
M31C	SCVA	340	397.28	M41C	TYPHA	4	25.20
M31C	SCVA	104	43.00	M41C	SCVA	356	437.32
M31C	TYPHA	4	173.52	M42A	SAGLANCE	4	1.04
M32A	SCVA	64	109.24	M42A	SCVA	184	627.84
M32A	SCVA	16	11.28	M42A	SCVA	44	84.72
M32A	TYPHA	100	739.20	M42A	TYPHA	4	138.88
M32B	ELMO	484	37.72	M42A	TYPHA	0	10.24
M32B	LUDSPP	12	7.04	M42B	SCVA	132	401.88
M32B	SAGLANCE	4	0.44	M42B	SCVA	32	81.48
M32B	SCVA	184	183.92	M42B	TYPHA	4	159.48
M32B	SCVA	120	32.64	M42B	TYPHA	8	534.24
M32B	TYPHA	20	210.72	M42C	SCVA	204	477.28

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

June 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M32B	TYPHA	0	12.08	M52C	TYPHA	8	91.88
M32C	ASTEREL	48	82.48	M53A	PELTVIRG	4	109.08
M32C	BIDLA	8	0.16	M53A	SCVA	372	820.96
M32C	ELMO	1800	109.40	M53A	SCVA	132	170.60
M32C	HYDROCOT	136	9.80	M53B	ELMO	4	0.32
M32C	IRIS	32	102.68	M53B	PELTVIRG	36	92.16
M32C	POLYHYD	12	1.56	M53B	SCVA	332	693.56
M32C	ZIZMI	60	77.76	M53B	SCVA	44	67.44
M32C	ZIZMI	48	49.80	M53C	ELMO	48	3.40
M33A	ELMO	248	14.40	M53C	PELTVIRG	16	44.28
M33A	SCVA	284	606.76	M53C	SCVA	152	332.00
M33A	SCVA	60	46.44	M53C	SCVA	64	24.84
M33B	ELMO	276	13.04	M53C	TYPHA	8	72.68
M33B	SCVA	292	380.24	M42C	SCVA	56	63.84
M33B	SCVA	52	42.48	M42C	TYPHA	20	830.36
M33B	TYPHA	8	127.40	M42C	TYPHA	4	73.76
M33B	TYPHA	8	22.64	M43A	SCVA	260	843.68
M33C	ELMO	428	23.36	M43A	SCVA	108	221.00
M51A	ZIZMI	16	208.84	M43A	ZIZMI	32	296.24
M51B	PELTVIRG	28	223.12	M43B	SCVA	276	797.12
M51B	SCVA	216	741.72	M43B	SCVA	116	99.52
M51B	SCVA	48	75.72	M43C	SCVA	132	669.28
M51C	PELTVIRG	4	21.52	M43C	SCVA	112	213.80
M51C	SAGLANCE	4	61.72	M43C	TYPHA	8	235.16
M51C	SCVA	40	107.52	M43C	TYPHA	8	253.40
M51C	TYPHA	36	1797.60	M51A	IRIS	4	2.64
M51C	TYPHA	20	955.32	M51A	PELTVIRG	8	35.68
M52A	PELTVIRG	4	10.88	M51A	PONCO	8	1.84
M52A	SCVA	180	529.88	M51A	SCROB	20	143.92
M52A	ZIZMI	8	70.08	M51A	SCVA	92	246.56
M52B	BIDLA	8	9.36	M51A	TYPHA	28	474.44
M52B	PELTVIRG	40	49.24				
M52B	SCVA	140	293.28				
M52B	SCVA	60	34.72				
M52B	ZIZMI	16	85.20				
M52B	ZIZMI	52	34.28				
M52C	PELTVIRG	24	119.88				
M52C	SCVA	128	364.92				
M52C	SCVA	56	28.24				
M52C	TYPHA	32	723.88				

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B12A	ASTEREL	68.00	82	B12C	ZIZMI	4	27.24
B12A	CASSIA	4.00	25	B14A	BIDLA	144	50.40
B12A	ELMO	272.00	28	B14A	BIDMIT	4	2.84
B12A	HYDROCOT	8.00	0	B14A	CYPHAS	4	0.72
B12A	LUDSPP	4.00	0	B14A	ELMO	324	11.64
B12A	MURDANIA	64.00	8	B14A	MURDANIA	8	0.24
B12A	ONOCLEA	4.00	1	B14A	POLYHYD	4	5.52
B12A	POLYHYD	120.00	95	B14A	PONCO	4	1.24
B12A	POLYSAG	8.00	5	B14A	SCVA	4	6.80
B12A	SCVA	4.00	12	B14A	ZIZMI	12	145.12
B12A	SCVA	36.00	205	B14B	ASTEREL	12	40.16
B12A	XYRIS	4.00	2	B14B	BIDLA	8	8.04
B12A	ZIZMI	40.00	214	B14B	ELMO	380	21.68
B12B	AGALINUS	4.00	2	B14B	GALIUM	116	21.16
B12B	ASTEREL	12.00	7	B14B	MURDANIA	116	12.36
B12B	BIDLA	20.00	17	B14B	SCVA	4	9.96
B12B	ELMO	2668.00	198	B14B	UNPRIM	32	53.72
B12B	GALIUM	108.00	85	B14B	ZIZAQ	28	99.84
B12B	HYDROCOT	4.00	0	B14B	ZIZMI	16	42.40
B12B	LEER	4.00	1	B14C	AGALINUS	8	27.24
B12B	LUDALAT	4.00	0	B14C	BIDLA	36	25.00
B12B	RHYMIC	16.00	8	B14C	ELMO	884	51.20
B12B	SCVA	4.00	0	B14C	ELQU	4	0.68
B12B	UNPRIM	32.00	123	B14C	GALIUM	32	10.28
B12B	ZIZMI	24.00	204	B14C	HYDROCOT	4	0.16
B12C	AGALINUS	8.00	15	B14C	LUDALAT	4	1.64
B12C	ASTEREL	8.00	22	B14C	MURDANIA	84	7.64
B12C	CASSIA	4.00	1	B14C	POLYHYD	20	9.76
B12C	ELMO	1804.00	123	B14C	SAGLANCE	8	5.92
B12C	GALIUM	32.00	10	B14C	SCVA	24	25.80
B12C	HABENARIA	4.00	6	B14C	SCVA	32	41.72
B12C	HYDROCOT	4.00	0	B14C	UNGR	12	0.08
B12C	LEER	100.00	18	B14C	UNPRIM	4	29.28
B12C	LUDALAT	4.00	3	B14C	ZIZMI	4	67.24
B12C	MURDANIA	52.00	4	B15A	AGALINUS	16	24.44
B12C	RHYMIC	76.00	7	B15A	CASSIA	8	98.44
B12C	SAGLANCE	20.00	104	B15A	CICUTA	16	4.32
B12C	SCVA	4.00	12	B15A	ELMO	3000	172.28
B12C	SCVA	4.00	5	B15A	GALIUM	140	54.24
B12C	UNPRIM	88.00	193	B15A	HYDROCOT	16	0.64

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B15A	LUDALAT	8.00	22	B22A	ZIZMI	20	390.84
B15A	MURDANIA	44.00	2	B22B	ASTEREL	20	15.00
B15A	PLUCHEA	8.00	60	B22B	BIDLA	68	131.28
B15A	POLYSAG	8.00	9	B22B	ELMO	16	1.32
B15A	UNPLUCH	8.00	12	B22B	POLYHYD	28	35.28
B15A	UNPRIM	4.00	42	B22B	PONCO	40	40.88
B15A	UNSAGLAT	8.00	7	B22B	PONCO	8	4.44
B15A	XYRIS	4.00	9	B22B	SCVA	32	43.88
B15A	ZIZMI	16.00	233	B22B	SCVA	36	36.16
B15B	AGALINUS	20.00	49	B22B	UNFZSH	16	25.36
B15B	CASSIA	8.00	58	B22B	ZIZMI	12	45.48
B15B	CYPHAS	16.00	6	B22C	BIDLA	44	148.56
B15B	ELMO	1128.00	105	B22C	ELMO	32	3.32
B15B	FUIRENA	44.00	24	B22C	SCVA	52	34.28
B15B	GALIUM	16.00	18	B22C	SCVA	76	76.52
B15B	HYDROCOT	4.00	0	B22C	ZIZMI	4	6.40
B15B	IRIS	8.00	31	B23A	POLYHYD	12	17.24
B15B	LEER	8.00	0	B23A	SCVA	16	77.56
B15B	MURDANIA	264.00	29	B23A	ZIZMI	68	1443.52
B15B	POLYHYD	4.00	0	B23A	ZIZMI	4	163.16
B15B	RHYMIC	60.00	55	B23B	BIDLA	168	276.84
B15B	SAGLAT	16.00	9	B23B	CYPHAS	24	14.12
B15B	SCVA	8.00	5	B23B	ELMO	32	2.84
B15B	UNFZSH	8.00	0	B23B	LUDSPP	12	2.04
B15B	UNGR	188.00	7	B23B	POLYHYD	48	37.24
B15C	AGALINUS	12.00	13	B23B	SCVA	76	80.64
B15C	ASTEREL	4.00	14	B23B	SCVA	32	38.00
B15C	BIDMIT	8.00	1	B23B	TYPHA	8	117.60
B15C	CYPER	4.00	6	B23B	VINE	8	5.12
B15C	ELMO	2620.00	177	B23B	ZIZMI	32	246.36
B15C	FUIRENA	8.00	6	B23C	AMARANTH	4	9.44
B15C	GALIUM	32.00	9	B23C	ASTERTEN	8	11.56
B15C	HYDROCOT	8.00	0	B23C	PHYSO	68	84.28
B15C	IRIS	4.00	7	B23C	POLYHYD	100	78.88
B15C	LOBELIA	8.00	2	B23C	PONCO	24	40.88
B15C	MURDANIA	224.00	19	B23C	PONCO	8	5.96
B15C	RHYMIC	76.00	16	B23C	SCVA	8	4.68
B15C	SAGLAT	20.00	19	B23C	UNAS	4	12.44
B15C	UNGR	40.00	0	B23C	ZIZMI	44	308.32
B15C	UNPRIM	56.00	41	B23C	ZIZMI	4	10.60

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B24A	CYPHAS	8.00	0	B3.5 2B	SCVA	92	65.16
B24A	POLYHYD	48.00	66	B3.5 2C	POLYHYD	64	121.44
B24A	SCVA	124.00	163	B3.5 2C	SAGLANCE	8	11.92
B24A	SCVA	12.00	12	B3.5 2C	SCVA	48	194.88
B24A	TYPHA	8.00	11	B3.5 2C	SCVA	56	285.76
B24A	ZIZMI	12.00	62	B3.5 2C	ZIZMI	20	75.20
B24B	ASTEREL	44.00	190	B3.5 3A	SCVA	72	276.72
B24B	ASTEREL	8.00	16	B3.5 3A	SCVA	60	227.76
B24B	ELMO	92.00	7	B3.5 3A	SPCYN	12	134.88
B24B	SCVA	24.00	40	B3.5 3A	SPCYN	16	120.12
B24B	SCVA	24.00	16	B3.5 3B	AMARANTH	8	30.96
B24B	UNGR	24.00	1	B3.5 3B	SAGLANCE	8	25.28
B24B	ZIZMI	20.00	508	B3.5 3B	SCVA	40	181.80
B24B	ZIZMI	28.00	67	B3.5 3B	SCVA	36	98.72
B24C	ASTEREL	20.00	147	B3.5 3B	SPCYN	4	128.60
B24C	BIDLA	4.00	0	B3.5 3B	TYPHA	8	127.20
B24C	POLYHYD	12.00	3	B3.5 3B	TYPHA	16	63.28
B24C	SCVA	32.00	95	B3.5 3C	AMARANTH	4	1.28
B24C	SCVA	28.00	35	B3.5 3C	SCVA	212	380.20
B24C	TYPHA	4.00	29	B3.5 3C	SCVA	120	130.72
B24C	TYPHA	20.00	415	B3.5 3C	ZIZMI	16	181.80
B24C	ZIZMI	8.00	86	B32A	ASTERTEN	4	0.36
B3.5 1A	SCVA	60.00	48	B32A	ELMO	64	8.40
B3.5 1A	SCVA	96.00	240	B32A	SCVA	48	155.00
B3.5 1A	SPALT	4.00	74	B32A	SCVA	32	89.64
B3.5 1A	SPALT	4.00	191	B32A	SPCYN	8	312.24
B3.5 1B	SCVA	60.00	104	B32A	TYPHA	8	55.96
B3.5 1B	SCVA	28.00	52	B32A	TYPHA	20	78.12
B3.5 1B	ZIZMI	20.00	202	B32A	ZIZMI	16	38.72
B3.5 1B	ZIZMI	12.00	10	B32B	BIDLA	12	48.80
B3.5 1C	ASTERTEN	12.00	5	B32B	SCVA	116	291.36
B3.5 1C	ELMO	108.00	15	B32B	SCVA	168	224.56
B3.5 1C	SCVA	92.00	264	B32B	ZIZMI	8	16.96
B3.5 1C	SCVA	44.00	96	B32C	BIDLA	48	323.24
B3.5 1C	ZIZMI	20.00	90	B32C	SCVA	152	212.72
B3.5 2A	ASTEREL	76.00	787	B32C	SCVA	144	147.64
B3.5 2A	SCVA	24.00	150	B32C	TYPHA	4	252.04
B3.5 2A	SCVA	64.00	131	B33A	ASTERTEN	8	1.04
B3.5 2A	TYPHA	8.00	178	B33A	ELMO	104	13.48
B3.5 2B	BIDLA	32.00	47	B33A	LUDALAT	8	30.76

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B3.5 2B	POLYHYD	76.00	119	B33A	SCVA	40	104.24
B3.5 2B	SAGLANCE	24.00	56	B33A	SCVA	32	91.56
B3.5 2B	SCVA	148.00	351	B33A	ZIZMI	24	186.84
B33A	ZIZMI	20.00	21	B42C	SCVA	8	28.00
B33B	BIDLA	52.00	172	B42C	SPALT	12	191.32
B33B	POLYHYD	16.00	19	B42C	TYPHA	8	311.76
B33B	SCVA	48.00	92	B45A	ASTERTEN	8	8.04
B33B	SCVA	28.00	77	B45A	SCROB	36	125.52
B33B	ZIZMI	8.00	47	B45A	SCVA	104	246.32
B33B	ZIZMI	4.00	2	B45A	SCVA	56	109.80
B33C	SCVA	104.00	111	B45A	SPALT	24	183.16
B33C	SCVA	84.00	166	B45B	ASTERTEN	76	121.12
B33C	TYPHA	4.00	5	B45B	SCVA	152	434.00
B34A	BIDLA	20.00	32	B45B	SCVA	88	191.80
B34A	POLYHYD	16.00	31	B45B	SPALT	4	55.76
B34A	SAGLANCE	4.00	10	B45C	SCROB	4	24.08
B34A	SCVA	96.00	146	B45C	SCROB	4	14.32
B34A	SCVA	156.00	177	B45C	SCVA	28	79.52
B34A	ZIZMI	28.00	431	B45C	SCVA	24	40.40
B34B	BIDLA	32.00	136	B45C	SPALT	48	1171.88
B34B	POLYHYD	12.00	13	B45C	SPALT	8	32.28
B34B	SCVA	76.00	160	B45C	TYPHA	48	765.00
B34B	SCVA	44.00	66	B46A	ASTERTEN	4	6.64
B34B	ZIZMI	20.00	112	B46A	SCROB	4	4.96
B34C	BIDLA	44.00	104	B46A	SCVA	196	258.08
B34C	ELMO	284.00	29	B46A	SCVA	72	119.40
B34C	POLYHYD	28.00	66	B46A	SPALT	8	24.16
B34C	SCVA	52.00	165	B46B	SCVA	108	140.60
B34C	SCVA	40.00	56	B46B	SCVA	96	120.92
B34C	TYPHA	8.00	158	B46B	SPALT	72	336.40
B34C	TYPHA	8.00	33	B46C	SCROB	8	23.04
B34C	ZIZMI	8.00	77	B46C	SCROB	4	10.72
B42A	ASTERTEN	4.00	0	B46C	SCVA	112	313.72
B42A	SCROB	4.00	19	B46C	SCVA	128	179.24
B42A	SCVA	72.00	199	B46C	SPALT	24	185.88
B42A	SCVA	48.00	155	B46C	SPALT	4	36.52
B42A	SPALT	16.00	345	B46C	TYPHA	48	242.16
B42A	SPALT	4.00	55	B46C	TYPHA	4	14.84
B42B	SCROB	8.00	29	F11A	LUDALAT	36	12.44
B42B	SCROB	4.00	10	F11A	POLYHYD	4	11.44

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B42B	SCVA	16.00	43	F11A	SCVA	32	56.60
B42B	SCVA	40.00	52	F11A	SCVA	48	52.28
B42B	SPALT	12.00	130	F11A	ZIZMI	12	218.44
B42B	SPALT	4.00	82	F11B	ASTEREL	28	265.08
B42B	TYPHA	16.00	169	F11B	BIDLA	40	15.72
B42C	SCVA	28.00	59	F11B	ELMO	224	8.92
F11B	IRIS	4.00	18	F13C	LUDALAT	4	25.88
F11B	LEER	28.00	9	F13C	ONOCLEA	32	6.68
F11B	LUDALAT	4.00	6	F13C	SAGLANCE	36	23.88
F11B	POLYHYD	12.00	13	F13C	TYPHA	16	236.04
F11B	SAGLANCE	4.00	2	F13C	ZIZMI	12	98.16
F11B	SCVA	24.00	64	F21A	RHYMIC	8	16.44
F11B	SCVA	76.00	92	F21A	SCVA	120	288.48
F11C	ELMO	76.00	4	F21A	SCVA	48	83.84
F11C	POLYHYD	12.00	6	F21A	TYPHA	16	348.84
F11C	SCVA	28.00	23	F21B	PELTVIRG	20	30.72
F11C	SCVA	12.00	14	F21B	SCVA	12	62.60
F11C	ZIZMI	12.00	100	F21B	SCVA	112	418.52
F12A	BIDLA	12.00	179	F21C	SCVA	48	213.64
F12A	POLYHYD	28.00	29	F21C	SCVA	64	108.84
F12A	SCVA	88.00	197	F21C	TYPHA	16	222.00
F12A	SCVA	56.00	86	F21C	TYPHA	4	89.56
F12A	ZIZMI	40.00	536	F22A	ELQU	68	32.04
F12B	ELMO	44.00	4	F22A	PELTVIRG	20	12.60
F12B	SCVA	4.00	0	F22A	SCVA	52	241.36
F12B	SCVA	24.00	40	F22A	SCVA	24	111.00
F12B	TYPHA	4.00	26	F22B	ELMO	120	10.40
F12B	TYPHA	4.00	37	F22B	PELTVIRG	52	79.20
F12B	ZIZMI	72.00	1426	F22B	POLYHYD	16	180.68
F12C	ELMO	520.00	30	F22B	SCVA	64	192.68
F12C	IRIS	8.00	3	F22B	SCVA	80	93.60
F12C	LUDALAT	4.00	10	F22C	ELMO	32	4.44
F12C	SCVA	132.00	165	F22C	PELTVIRG	32	24.36
F12C	SCVA	132.00	106	F22C	POLYHYD	32	407.16
F12C	TYPHA	8.00	43	F22C	SCVA	68	161.80
F12C	ZIZMI	12.00	101	F22C	SCVA	120	181.16
F13A	BIDLA	60.00	43	F23A	PELTVIRG	24	15.84
F13A	CICUTA	16.00	8	F23A	SAGLANCE	12	32.64
F13A	ELMO	40.00	3	F23A	SCVA	128	326.08
F13A	LEER	4.00	1	F23A	SCVA	64	101.12

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
F13A	LUDALAT	8.00	14	F23B	PELTVIRG	24	19.84
F13A	POLYHYD	32.00	42	F23B	POLYHYD	52	229.32
F13A	SCVA	40.00	84	F23B	SCVA	40	247.44
F13A	SCVA	12.00	30	F23B	SCVA	32	244.08
F13A	ZIZMI	24.00	224	F23C	ELMO	28	2.16
F13B	CICUTA	4.00	1	F23C	LUDALAT	4	0.08
F13B	POLYHYD	4.00	5	F23C	PELTVIRG	72	78.96
F13B	ZIZMI	36.00	524	F23C	POLYHYD	56	199.92
F13C	ELMO	276.00	14	F23C	SCVA	72	234.60
F23C	SCVA	68.00	142	M16B	ASTEREL	4	18.20
F23C	TYPHA	4.00	7	M16B	CICUTA	4	2.24
M12A	ELMO	88.00	13	M16B	ELMO	104	4.96
M12A	POLYHYD	8.00	7	M16B	IRIS	4	5.24
M12A	SCVA	64.00	90	M16B	MURDANIA	364	54.80
M12A	SCVA	72.00	157	M16B	PHYLA	36	22.24
M12A	TYPHA	4.00	85	M16B	POLYHYD	20	7.56
M12A	ZIZMI	60.00	451	M16B	SACIN	8	1.20
M12B	HYDROCOT	8.00	0	M16B	ZIZMI	32	176.44
M12B	SCVA	88.00	152	M16C	HYDROCOT	12	0.72
M12B	SCVA	32.00	72	M16C	SCVA	4	8.48
M12B	TYPHA	36.00	219	M16C	SCVA	16	37.88
M12B	TYPHA	12.00	28	M16C	TYPHA	4	40.52
M12B	UNPRIM	12.00	16	M16C	TYPHA	84	449.68
M12C	ASTEREL	4.00	2	M23A	BIDLA	36	55.08
M12C	CYPER	28.00	13	M23A	ELMO	44	3.24
M12C	ELMO	640.00	45	M23A	MIKANIA	4	16.72
M12C	HYDROCOT	28.00	2	M23A	POLYHYD	116	204.36
M12C	LUDSPP	8.00	1	M23A	SCVA	40	27.40
M12C	MURDANIA	128.00	36	M23A	SCVA	40	30.76
M12C	PHYSO	20.00	23	M23A	TYPHA	12	117.76
M12C	POLYHYD	16.00	19	M23A	ZIZMI	4	51.92
M12C	SCVA	120.00	176	M23B	SCVA	92	134.04
M12C	SCVA	108.00	208	M23B	SCVA	48	64.76
M12C	TYPHA	12.00	50	M23B	TYPHA	52	634.28
M12C	UNGR	84.00	4	M23C	SCVA	108	150.12
M15A	PONCO	24.00	31	M23C	SCVA	32	39.24
M15A	PONCO	4.00	8	M23C	TYPHA	40	467.24
M15A	ZIZMI	28.00	424	M23C	TYPHA	16	23.32
M15B	ELMO	40.00	2	M24A	ELMO	24	1.36
M15B	MURDANIA	68.00	8	M24A	POLYHYD	44	100.44

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M15B	RHYMIC	8.00	3	M24A	SCVA	32	41.00
M15B	SCVA	32.00	34	M24A	SCVA	88	249.76
M15B	SCVA	48.00	64	M24A	ZIZAQ	16	37.40
M15B	TYPHA	8.00	43	M24A	ZIZAQ	8	3.96
M15B	ZIZMI	12.00	74	M24B	BIDLA	8	3.28
M15C	ELMO	24.00	1	M24B	ELMO	240	13.60
M15C	POLYHYD	8.00	1	M24B	SCVA	52	92.04
M15C	ZIZMI	16.00	115	M24B	SCVA	112	149.92
M16A	TYPHA	4.00	47	M24B	UNPRIM	4	10.28
M16A	UNPANIC	4.00	4	M24C	ELMO	144	5.04
M16A	UNPANIC	64.00	56	M24C	SCVA	156	103.76
M16A	ZIZMI	20.00	406	M24C	SCVA	48	52.04
M24C	TYPHA	16.00	152	M32B	SCVA	88	148.04
M24C	TYPHA	4.00	22	M32B	SCVA	32	29.64
M24C	UNCURLY	4.00	5	M32B	TYPHA	28	363.36
M24C	UNPRIM	4.00	11	M32B	TYPHA	8	104.16
M25A	BIDLA	12.00	37	M32C	ELMO	304	19.24
M25A	POLYHYD	4.00	28	M32C	HYDROCOT	20	1.08
M25A	SCVA	56.00	222	M32C	POLYHYD	12	7.16
M25A	SCVA	36.00	80	M32C	RHYMIC	4	0.04
M25A	TYPHA	28.00	346	M32C	SCVA	20	35.68
M25A	TYPHA	36.00	83	M32C	SCVA	28	39.96
M25A	ZIZMI	16.00	33	M32C	TYPHA	16	192.56
M25A	ZIZMI	20.00	215	M32C	TYPHA	8	22.72
M25B	BIDLA	128.00	169	M32C	ZIZMI	16	68.16
M25B	ELMO	248.00	22	M33A	ELMO	284	30.08
M25B	LUDSPP	8.00	5	M33A	ELMO	52	4.04
M25B	POLYHYD	16.00	8	M33A	HYDROCOT	4	0.20
M25B	SCVA	140.00	171	M33A	SCVA	76	229.20
M25B	SCVA	188.00	411	M33A	SCVA	56	578.60
M25B	UNPRIM	12.00	23	M33B	ELMO	92	7.04
M25C	CYPHAS	16.00	2	M33B	HYDROCOT	44	2.24
M25C	ELMO	1040.00	67	M33B	SCVA	132	109.84
M25C	HYDROCOT	8.00	0	M33B	SCVA	116	128.84
M25C	PLUCHEA	28.00	32	M33B	TYPHA	32	114.04
M25C	SCVA	136.00	117	M33B	TYPHA	52	233.48
M25C	SCVA	128.00	189	M33C	ELMO	40	3.24
M25C	UNPRIM	4.00	12	M33C	HYDROCOT	120	7.64
M31A	ELMO	8.00	0	M33C	LUDALAT	44	153.60
M31A	SCVA	84.00	150	M33C	SCVA	108	239.96

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M31A	SCVA	124.00	287	M33C	SCVA	152	302.16
M31A	ZIZMI	48.00	112	M33C	TYPHA	20	123.44
M31B	SCVA	36.00	35	M41A	SCVA	4	1.12
M31B	SCVA	32.00	41	M41A	SCVA	20	71.64
M31B	TYPHA	12.00	177	M41A	ZIZMI	16	366.96
M31B	TYPHA	68.00	762	M41A	ZIZMI	12	22.80
M31C	ELMO	16.00	1	M41B	PELTVIRG	16	14.28
M31C	POLYHYD	20.00	18	M41B	SCVA	32	195.16
M31C	SCVA	324.00	469	M41B	SCVA	24	67.28
M31C	SCVA	220.00	245	M41B	ZIZMI	12	132.12
M32A	SCVA	20.00	33	M41C	SCVA	4	12.52
M32A	SCVA	20.00	22	M41C	SCVA	120	168.32
M32A	TYPHA	136.00	836	M41C	TYPHA	12	365.32
M32A	TYPHA	4.00	5	M41C	TYPHA	8	167.76
M32B	HYDROCOT	12.00	1	M42A	SCVA	112	278.16
M42A	SCVA	68.00	243	M53A	SCVA	132	190.32
M42A	TYPHA	8.00	13	M53A	SCVA	140	349.40
M42A	ZIZMI	4.00	5	M53A	ZIZMI	20	361.84
M42A	ZIZMI	24.00	528	M53B	PELTVIRG	20	9.12
M42B	SCVA	80.00	190	M53B	SCVA	124	302.40
M42B	SCVA	100.00	274	M53B	SCVA	228	295.52
M42B	TYPHA	8.00	544	M53C	ELMO	44	3.64
M42B	TYPHA	8.00	355	M53C	PELTVIRG	20	11.80
M42C	SCVA	100.00	289	M53C	SCVA	112	311.08
M42C	SCVA	84.00	232	M53C	SCVA	124	197.00
M42C	TYPHA	16.00	570	M53C	TYPHA	8	68.64
M42C	TYPHA	12.00	435				
M43A	SCVA	44.00	215				
M43A	SCVA	64.00	274				
M43A	TYPHA	20.00	247				
M43B	SCVA	104.00	305				
M43B	SCVA	180.00	474				
M43C	SCVA	16.00	7				
M43C	SCVA	120.00	336				
M43C	TYPHA	8.00	233				
M43C	TYPHA	12.00	441				
M51A	TYPHA	44.00	1313				
M51B	SCVA	104.00	222				
M51B	SCVA	48.00	83				
M51C	SCVA	12.00	36				

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

August 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m²)	Biomass (g/m²)
M51C	SCVA	20.00	39
M51C	TYPHA	12.00	733
M51C	TYPHA	8.00	165
M52A	PELTVIRG	8.00	6
M52A	SCVA	52.00	153
M52A	SCVA	84.00	226
M52A	ZIZMI	20.00	146
M52B	BIDLA	124.00	523
M52B	ELMO	4.00	0
M52B	PELTVIRG	32.00	16
M52B	SCVA	48.00	63
M52B	SCVA	32.00	43
M52C	BIDLA	8.00	50
M52C	PELTVIRG	36.00	15
M52C	POLYHYD	92.00	112
M52C	SCVA	12.00	23
M52C	SCVA	28.00	64
M52C	TYPHA	20.00	282

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B12A	LEER	4	0.16	B14B	SAGLANCE	8	33.88
B12A	LUDSPP	8	15.76	B14B	SCVA	8	5.36
B12A	POLYHYD	16	8.56	B14B	SCVA	56	99.72
B12A	ZIZMI	12	187.56	B14B	ZIZMI	8	5.60
B12A	ZIZMI	16	167.88	B14C	CASSIA	8	86.92
B12B	ELMO	712	53.24	B14C	ELMO	2940	161.76
B12B	GALIUM	16	2.72	B14C	ELQU	8	2.36
B12B	GALIUM	12	11.00	B14C	GALIUM	28	6.64
B12B	IRIS	4	2.12	B14C	HYDROCOT	20	0.76
B12B	LEER	4	4.00	B14C	JUMA	8	4.32
B12B	LUDSPP	4	83.84	B14C	LUDALAT	116	60.80
B12B	MURDANIA	16	4.28	B14C	LUDALT	4	0.44
B12B	SCVA	4	5.80	B14C	LUDALT	16	21.96
B12B	ZIZMI	20	146.20	B14C	LUDSPP	4	8.04
B12C	ELMO	376	29.32	B14C	MURDANIA	132	21.52
B12C	GALIUM	48	39.44	B14C	PTILIMN	32	35.56
B12C	LEER	48	11.08	B14C	RHYMIC	56	18.16
B12C	LUDALT	8	4.96	B14C	RHYSPP	4	0.04
B12C	LUDSPP	4	36.60	B14C	SAGLANCE	4	10.60
B12C	MURDANIA	4	0.24	B14C	UNGRASS	12	0.32
B12C	RHYMIC	12	1.92	B14C	UNVINE	4	3.04
B12C	SAGLANCE	4	16.76	B14C	XYRIS	4	16.92
B12C	SCVA	12	15.04	B15A	BIDLA	4	1.52
B12C	SCVA	4	0.40	B15A	ELMO	228	16.24
B12C	XYRIS	4	3.20	B15A	LUDSPP	16	272.84
B12C	ZIZMI	16	261.40	B15A	MURDANIA	4	0.28
B14A	ASTEREL	4	3.08	B15A	SCVA	4	1.08
B14A	BIDLA	36	87.96	B15A	UNHEART	4	1.48
B14A	BIDLA	8	6.60	B15A	ZIZMI	32	594.48
B14A	ELMO	32	2.92	B15B	BIDLA	4	3.72
B14A	MURDANIA	4	0.72	B15B	CYPHAS	20	10.16
B14A	ZIZMI	32	620.52	B15B	CYPHAS	56	17.60
B14B	AGALINUS	4	1.64	B15B	ELMO	1268	80.16
B14B	ASTEREL	16	82.28	B15B	ELMO	256	12.44
B14B	BIDLA	24	27.04	B15B	GALIUM	68	20.52
B14B	ELMO	1300	118.76	B15B	GALIUM	44	11.08
B14B	GALIUM	16	6.44	B15B	HABENARIA	8	1.76
B14B	LUDALT	8	4.08	B15B	HABENARIA	24	8.24
B14B	LUDSPP	24	205.60	B15B	HYDROCOT	4	0.04
B14B	MURDANIA	24	3.64	B15B	HYDROCOT	8	0.24

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B15B	IRIS	12	36.84	B22C	ZIZMI	8	363.24
B15B	LEER	4	0.04	B23A	ZIZMI	48	1003.08
B15B	LUDALT	16	64.48	B23B	BIDLA	96	210.48
B15B	MURDANIA	160	33.00	B23B	BIDLA	16	35.68
B15B	MURDANIA	8	1.76	B23B	POLYHYD	36	55.52
B15B	RHYMIC	24	5.60	B23B	POLYHYD	8	4.76
B15B	RHYSPP	4	1.40	B23B	SCVA	4	1.72
B15B	RHYSPP	12	5.08	B23B	SCVA	28	33.64
B15B	SCVA	40	65.56	B23B	TYPHA	8	65.36
B15B	SCVA	8	5.76	B23B	ZIZMI	48	459.96
B15B	SPEARHEAD	8	12.36	B23C	AMARANTH	4	20.04
B15B	UNGRASS	32	0.36	B23C	POLYHYD	56	204.20
B15B	UNGRASS	28	0.48	B23C	PONCO	4	8.84
B15B	UNLOBEL	4	0.32	B23C	TYPHA	4	59.24
B15B	XYRIS	8	5.56	B23C	ZIZMI	48	883.28
B15B	XYRIS	12	93.04	B24A	BIDLA	8	106.36
B15C	AGALINUS	4	3.88	B24A	BIDLA	12	64.72
B15C	ASTEREL	4	55.68	B24A	POLYHYD	20	30.24
B15C	ASTEREL	4	17.80	B24A	SCVA	16	25.16
B15C	CAREX	4	1.32	B24A	SCVA	28	98.40
B15C	CYPHAS	8	3.12	B24A	TYPHA	20	278.84
B15C	ELMO	508	48.72	B24A	TYPHA	12	127.28
B15C	ELMO	2688	195.56	B24B	ASTEREL	4	1.44
B15C	GALIUM	12	7.36	B24B	IRIS	4	8.56
B15C	JUMA	4	1.36	B24B	POLYHYD	4	1.52
B15C	LUDALT	44	83.68	B24B	SCVA	32	23.20
B15C	LUDALT	8	6.84	B24B	SCVA	64	86.76
B15C	MURDANIA	164	31.88	B24B	TYPHA	16	132.16
B15C	RHYMIC	40	13.48	B24B	TYPHA	32	465.96
B15C	SOLIDAGO	4	7.44	B24B	ZIZMI	28	290.44
B15C	UNGRASS	8	0.12	B24C	AGALINUS	12	37.68
B15C	UNGRASS	16	0.44	B24C	ELMO	56	3.84
B15C	UNKPANIC	20	4.16	B24C	IRIS	8	19.24
B15C	UNKPANIC	4	0.48	B24C	TYPHA	12	134.92
B15C	XYRIS	4	8.52	B24C	ZIZMI	40	676.24
B22A	ZIZMI	16	518.28	B3. 2A	SCVA	16	8.88
B22B	POLYHYD	4	4.44	B3. 2A	SPALT	4	54.08
B22B	ZIZMI	28	539.44	B3. 2A	ZIZMI	32	341.64
B22B	ZIZMI	4	117.56	B3.5 1A	SCVA	12	15.08
B22C	AMARANTH	4	61.08	B3.5 1A	SCVA	60	93.72

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B3.5 1A	SPALT	40	876.16	B32B	SCVA	12	3.88
B3.5 1B	ASTERTEN	28	15.96	B32B	SCVA	8	8.56
B3.5 1B	ELMO	4	0.12	B32B	ZIZMI	12	220.20
B3.5 1B	SCVA	44	70.60	B32C	AMARANTH	16	65.04
B3.5 1B	SCVA	48	235.96	B32C	BIDLA	8	26.44
B3.5 1C	ELMO	116	13.52	B32C	ELMO	12	0.52
B3.5 1C	ELMO	76	7.12	B32C	SCVA	12	14.64
B3.5 1C	SCVA	20	9.32	B32C	ZIZMI	16	207.32
B3.5 1C	SCVA	80	114.08	B32C	ZIZMI	4	37.44
B3.5 1C	TYPHA	16	907.80	B33A	ASTEREL	92	334.40
B3.5 1C	ZIZMI	32	112.96	B33A	ASTEREL	8	14.48
B3.5 2A	BIDLA	80	222.16	B33A	CYPHAS	4	0.92
B3.5 2A	ELMO	20	4.44	B33A	CYPHAS	4	1.28
B3.5 2A	POLYHYD	20	28.96	B33A	ELMO	88	7.84
B3.5 2A	SCVA	8	13.40	B33A	LUDALAT	8	2.64
B3.5 2A	SCVA	48	61.04	B33A	POLYHYD	8	23.40
B3.5 2A	ZIZMI	8	77.60	B33A	SCVA	32	58.36
B3.5 2B	BIDLA	28	567.56	B33A	SPALT	8	65.68
B3.5 2B	POLYHYD	12	19.12	B33A	ZIZMI	40	393.64
B3.5 2B	POLYHYD	4	12.12	B33B	BIDLA	64	420.04
B3.5 2B	SCVA	4	0.68	B33B	POLYHYD	8	7.36
B3.5 2B	SCVA	80	108.20	B33B	SCVA	96	177.08
B3.5 2C	BIDLA	68	125.20	B33B	SCVA	28	7.24
B3.5 2C	POLYHYD	16	55.96	B33B	ZIZMI	20	131.08
B3.5 2C	SCVA	44	25.48	B33C	SCVA	88	206.96
B3.5 2C	SCVA	24	55.08	B33C	SCVA	48	15.60
B3.5 2C	ZIZMI	16	127.36	B33C	TYPHA	16	241.08
B3.5 3A	SCVA	144	257.84	B33C	TYPHA	4	170.36
B3.5 3A	SCVA	60	122.40	B34A	BIDLA	28	41.80
B3.5 3A	SPALT	4	10.04	B34A	BIDLA	8	24.56
B3.5 3B	SCVA	16	21.36	B34A	POLYHYD	12	16.00
B3.5 3B	SCVA	148	189.64	B34A	POLYHYD	4	16.92
B3.5 3B	SPALT	12	340.48	B34A	SCVA	16	6.92
B3.5 3B	SPALT	4	209.08	B34A	SCVA	52	97.84
B3.5 3B	TYPHA	20	350.60	B34A	ZIZMI	32	556.20
B3.5 3C	AMARANTH	72	58.04	B34B	ASTERTEN	8	10.12
B3.5 3C	AMARANTH	32	16.32	B34B	BIDLA	8	13.40
B3.5 3C	ASTERTEN	52	22.16	B34B	ELMO	152	13.16
B3.5 3C	ELMO	456	31.72	B34B	LUDALAT	8	8.60
B3.5 3C	SCVA	48	14.52	B34B	POLYHYD	56	60.52

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B3.5 3C	SCVA	80	134.80	B34B	POLYHYD	28	26.44
B3.5 3C	ZIZMI	8	133.52	B34B	SCVA	28	43.20
B32B	BIDLA	12	48.12	B34B	ZIZMI	24	241.64
B34C	BIDLA	16	84.88	B46B	SPALT	28	210.24
B34C	ELMO	8	0.72	B46C	SCROB	4	16.32
B34C	SCVA	24	38.48	B46C	SCROB	8	33.76
B34C	SCVA	36	39.80	B46C	SCVA	56	23.16
B34C	ZIZMI	28	193.76	B46C	SCVA	36	70.32
B42A	ASTERTEN	8	29.56	B46C	SPALT	48	59.64
B42A	SCVA	8	11.08	B46C	SPALT	24	243.44
B42A	SCVA	24	37.08	B46C	TYPHA	20	61.72
B42A	SPALT	12	214.24	F11A	ASTEREL	12	5.76
B42A	SPALT	4	61.84	F11A	ELMO	16	2.00
B42B	ASTERTEN	12	26.68	F11A	SCVA	4	2.40
B42B	SCROB	8	5.68	F11A	SCVA	12	10.60
B42B	SCVA	8	8.52	F11A	ZIZMI	48	522.28
B42B	SCVA	16	30.84	F11B	ASTEREL	12	100.88
B42B	SPALT	40	387.80	F11B	BIDLA	16	44.44
B42C	ASTERTEN	52	86.72	F11B	BIDLA	4	1.24
B42C	ASTERTEN	4	3.44	F11B	CICUTA	8	4.16
B42C	SCROB	8	6.28	F11B	ELMO	360	28.64
B42C	SCVA	36	61.32	F11B	ELMO	72	3.76
B42C	SCVA	44	139.68	F11B	IRIS	4	1.64
B42C	SPALT	12	68.92	F11B	LEER	20	9.08
B42C	SPALT	4	33.00	F11B	MIKANIA	8	4.32
B42C	TYPHA	8	280.32	F11B	POLYHYD	4	0.40
B45A	ASTERTEN	24	23.84	F11B	SAGLANCE	8	5.36
B45A	SCROB	28	48.84	F11B	SCVA	24	17.16
B45A	SCVA	4	0.44	F11B	SCVA	88	129.36
B45A	SPALT	40	464.08	F11B	TYPHA	16	156.28
B45A	SPALT	60	235.76	F11B	TYPHA	4	41.32
B45B	ASTERTEN	24	19.00	F11B	ZIZMI	8	25.40
B45B	ASTERTEN	4	1.36	F11C	ELMO	88	7.36
B45B	SCVA	132	70.08	F11C	LUDALAT	4	0.24
B45B	SCVA	124	231.04	F11C	POLYHYD	40	41.32
B45B	SPALT	12	54.48	F11C	SCVA	36	19.72
B45B	SPALT	4	32.76	F11C	SCVA	96	175.92
B45C	SCVA	40	31.28	F11C	ZIZMI	24	439.04
B45C	SCVA	48	84.44	F12A	ELMO	64	8.80
B45C	TYPHA	24	345.00	F12A	ELMO	28	3.00

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
B45C	TYPHA	24	355.48	F12A	PLUCHEA	4	4.36
B46A	SCVA	168	284.08	F12A	POLYHYD	12	17.08
B46A	SCVA	52	48.40	F12A	POLYHYD	4	14.72
B46A	SPALT	20	351.56	F12A	SCVA	8	6.36
B46B	SCVA	80	23.52	F12A	SCVA	84	119.80
B46B	SCVA	96	93.56	F12A	ZIZMI	20	505.60
F12B	ELMO	208	11.44	F21C	SCVA	4	2.84
F12B	LUDALAT	4	1.72	F21C	SCVA	8	11.00
F12B	SCVA	28	25.64	F21C	TYPHA	8	39.76
F12B	SCVA	48	154.52	F21C	ZIZMI	28	197.28
F12B	TYPHA	8	169.32	F21C	ZIZMI	12	36.44
F12C	ELMO	200	14.24	F22A	PELTVIRG	12	4.76
F12C	LUDALAT	12	13.32	F22A	SCVA	40	4.24
F12C	POLYHYD	20	21.40	F22A	SCVA	68	112.00
F12C	SCVA	32	49.52	F22A	ZIZMI	24	272.48
F12C	SCVA	44	175.88	F22B	BIDLA	20	41.48
F12C	TYPHA	4	57.04	F22B	PELTVIRG	4	5.76
F12C	ZIZMI	48	736.36	F22B	POLYHYD	48	126.88
F13A	ASTEREL	16	82.48	F22B	SCVA	4	0.68
F13A	CYPHAS	4	12.28	F22B	TYPHA	8	65.80
F13A	ELMO	28	2.04	F22B	TYPHA	8	127.92
F13A	LEER	8	0.72	F22C	PELTVIRG	12	4.84
F13A	SCVA	8	9.88	F22C	POLYHYD	116	126.36
F13A	SCVA	8	12.88	F22C	SCVA	88	64.88
F13A	ZIZMI	16	233.08	F22C	SCVA	16	12.04
F13B	ELMO	172	14.04	F23A	PELTVIRG	24	18.36
F13B	LUDSPP	8	8.52	F23A	SCVA	44	33.96
F13B	POLYHYD	32	51.28	F23A	SCVA	48	90.00
F13B	ZIZMI	20	294.84	F23B	BIDLA	68	390.16
F13C	AGALINUS	4	0.72	F23B	SCVA	16	7.48
F13C	ASTEREL	16	132.36	F23B	SCVA	4	1.24
F13C	CYPHAS	4	1.44	F23C	BIDLA	4	13.84
F13C	ELMO	836	58.84	F23C	IRIS	4	3.00
F13C	GALIUM	56	52.24	F23C	POLYHYD	40	50.80
F13C	IRIS	4	3.44	F23C	SCVA	24	17.76
F13C	ONOCLEA	44	18.36	F23C	SCVA	32	104.96
F13C	PHYLA	4	1.48	F23C	ZIZMI	16	110.96
F13C	POLYHYD	4	6.72	F23C	ZIZMI	12	11.76
F13C	SAGLANCE	4	15.00	M12A	BIDLA	4	9.76
F13C	TYPHA	8	72.44	M12A	ELMO	4	0.16

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
F13C	ZIZMI	8	233.96	M12A	MURDANIA	96	36.04
F21A	PELTVIRG	4	1.52	M12A	SCVA	32	9.12
F21A	SCVA	12	7.04	M12A	SCVA	24	133.04
F21A	SPALT	12	151.12	M12A	TYPHA	4	94.76
F21A	TYPHA	4	3.68	M12A	ZIZMI	20	345.12
F21B	PELTVIRG	4	0.44	M12A	ZIZMI	4	7.80
F21B	SCVA	60	98.76	M12B	ELMO	40	3.32
F21B	TYPHA	8	75.52	M12B	MURDANIA	84	40.48
F21B	ZIZMI	4	16.76	M12B	SCVA	16	5.48
M12B	SCVA	56	52.72	M16C	TYPHA	12	43.68
M12B	TYPHA	16	163.56	M16C	ZIZAQ	8	767.40
M12B	ZIZMI	56	400.24	M23A	BIDLA	16	50.56
M12C	CYPHAS	4	4.00	M23A	BIDLA	12	2.88
M12C	ELMO	864	46.24	M23A	ELMO	4	0.40
M12C	large Cyperus	12	37.88	M23A	MIKANIA	4	6.48
M12C	MURDANIA	404	94.64	M23A	PLUCHEA	4	8.52
M12C	PHYLA	28	6.32	M23A	POLYHYD	16	40.84
M12C	PLUCHEA	16	11.08	M23A	POLYHYD	48	100.72
M12C	POLYHYD	28	20.88	M23A	SCVA	44	25.20
M12C	PTILIMN	4	0.36	M23A	SCVA	168	157.32
M12C	RHYMIC	36	6.56	M23A	TYPHA	4	44.68
M12C	SCVA	64	26.84	M23A	TYPHA	24	313.48
M12C	SCVA	68	159.64	M23A	unk opposite	4	0.56
M12C	TYPHA	4	24.84	M23A	ZIZMI	12	184.72
M12C	UNGRASS	80	1.44	M23B	ELMO	20	0.32
M15A	PELTVIRG	4	2.88	M23B	PLUCHEA	4	10.88
M15A	ZIZMI	40	479.96	M23B	SCVA	120	64.48
M15B	ELMO	4	0.36	M23B	SCVA	60	81.00
M15B	MURDANIA	4	0.60	M23B	TYPHA	4	18.52
M15B	MURDANIA	20	6.88	M23B	TYPHA	4	178.48
M15B	SCVA	4	4.04	M23C	ELMO	240	18.20
M15B	SCVA	16	24.96	M23C	SCVA	200	127.48
M15B	TYPHA	12	94.20	M23C	SCVA	116	44.20
M15B	ZIZMI	12	110.64	M24A	BIDLA	40	111.84
M15C	ASTEREL	4	48.52	M24A	ELMO	8	0.56
M15C	ELMO	128	6.44	M24A	SCVA	48	8.64
M15C	MURDANIA	28	6.12	M24A	SCVA	32	29.84
M15C	ZIZMI	16	260.96	M24A	ZIZAQ	40	431.72
M16A	ZIZMI	40	1006.16	M24A	ZIZAQ	4	45.04
M16B	ELMO	12	0.48	M24A	ZIZMI	4	27.60

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)	Site	Species Code	Density (Stems/m ²)	Biomass (g/m ²)
M16B	GALIUM	4	0.04	M24B	BIDLA	20	74.24
M16B	MIKANIA	16	11.00	M24B	ELMO	164	9.36
M16B	POLYHYD	16	8.44	M24B	HYDROCOT	12	0.32
M16B	SCVA	20	46.36	M24B	LUDSPP	16	1.28
M16B	SCVA	48	150.44	M24B	POLYHYD	8	3.72
M16B	ZIZMI	24	202.36	M24B	SCVA	120	74.48
M16C	ASTEREL	4	71.24	M24B	SCVA	200	187.12
M16C	BIDLA	16	44.48	M24C	BIDLA	4	1.84
M16C	ELMO	656	23.84	M24C	ELMO	180	10.72
M16C	MURDANIA	4	0.48	M24C	ELMO	132	6.72
M16C	SCVA	36	28.08	M24C	POLYHYD	4	0.52
M16C	SCVA	88	72.76	M24C	SCVA	124	58.96
M24C	SCVA	224	287.72	M32B	TYPHA	8	89.84
M24C	TYPHA	4	9.20	M32C	ASTEREL	28	85.64
M24C	TYPHA	8	32.96	M32C	ASTEREL	4	22.84
M25A	BIDLA	20	31.52	M32C	CICUTA	12	9.76
M25A	POLYHYD	4	11.00	M32C	CICUTA	12	19.04
M25A	SCVA	20	10.40	M32C	ELMO	500	41.24
M25A	SCVA	4	7.88	M32C	GALIUM	4	0.20
M25A	TYPHA	4	44.88	M32C	HYDROCOT	16	0.28
M25A	ZIZAQ	24	173.40	M32C	PHYLA	20	3.16
M25B	BIDLA	8	350.52	M32C	RHYMIC	16	1.48
M25B	POLYHYD	4	0.64	M32C	SCVA	24	114.44
M25B	SCVA	4	1.76	M32C	TYPHA	8	90.16
M25B	SCVA	16	10.40	M32C	TYPHA	4	106.80
M25B	TYPHA	4	34.20	M32C	ZIZMI	24	254.28
M25C	ELMO	68	3.00	M33A	ELMO	136	8.28
M25C	LUDSPP	4	11.96	M33A	SCVA	124	131.52
M25C	SAGLANCE	8	2.44	M33A	SCVA	76	170.40
M25C	SCVA	64	43.48	M33A	TYPHA	4	1.04
M25C	SCVA	4	7.28	M33A	TYPHA	4	32.64
M25C	TYPHA	8	81.84	M33B	ELMO	12	0.60
M31A	PLUCHEA	4	8.20	M33B	SCVA	104	179.12
M31A	SAGLANCE	4	0.72	M33B	SCVA	52	90.48
M31A	SCVA	68	67.24	M33B	TYPHA	4	32.24
M31A	SCVA	16	9.20	M33B	TYPHA	16	146.48
M31A	ZIZMI	12	96.84	M33C	ELMO	312	24.32
M31B	BIDLA	8	32.44	M33C	HYDROCOT	172	4.04
M31B	SCVA	12	11.68	M33C	MURDANIA	20	3.80
M31B	SCVA	4	3.20	M33C	POLYHYD	24	41.64

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density	Biomass	Site	Species Code	Density	Biomass
		(Stems/m ²)	(g/m ²)			(Stems/m ²)	(g/m ²)
M31B	TYPHA	12	333.96	M33C	POLYHYD	4	4.40
M31C	BIDLA	4	9.64	M33C	SCVA	92	132.64
M31C	ELMO	36	1.80	M33C	SCVA	116	179.64
M31C	POLYHYD	4	6.44	M33C	TYPHA	12	172.84
M31C	SCVA	24	12.84	M33C	TYPHA	12	64.72
M31C	SCVA	32	40.04	M41A	SCVA	76	68.96
M31C	TYPHA	4	12.96	M41A	SCVA	24	112.12
M31C	ZIZMI	16	140.12	M41A	ZIZMI	4	21.84
M32A	SCVA	40	14.04	M41A	ZIZMI	28	314.24
M32A	SCVA	72	65.68	M41B	PELTVIRG	16	19.84
M32A	TYPHA	28	161.04	M41B	SCVA	92	59.52
M32A	TYPHA	24	301.76	M41B	SCVA	124	241.96
M32B	SCVA	20	11.32	M41C	SCVA	32	17.24
M32B	SCVA	48	144.40	M41C	SCVA	112	246.00
M32B	TYPHA	4	27.08	M41C	TYPHA	32	521.76
M42A	SCVA	56	58.68	M53A	SCVA	20	11.24
M42A	SCVA	164	404.76	M53A	SCVA	8	5.72
M42B	SCVA	16	7.88	M53A	ZIZMI	12	145.52
M42B	SCVA	44	66.44	M53B	BIDLA	16	346.40
M42B	TYPHA	12	337.92	M53B	ELMO	16	1.88
M42B	TYPHA	28	773.68	M53B	PELTVIRG	16	21.20
M42C	SCVA	60	36.72	M53B	SCVA	28	18.12
M42C	SCVA	76	105.72	M53B	SCVA	12	49.56
M42C	TYPHA	8	562.44	M53C	PELTVIRG	12	2.52
M42C	TYPHA	12	225.28	M53C	SCVA	28	31.44
M43A	PELTVIRG	4	1.76	M53C	SCVA	32	87.68
M43A	SCVA	16	19.48	M53C	TYPHA	4	60.44
M43A	ZIZMI	8	259.32	M53C	ZIZMI	12	174.20
M43B	SCVA	160	112.28				
M43B	SCVA	4	3.48				
M43C	SCVA	12	21.16				
M43C	SCVA	88	72.92				
M43C	TYPHA	12	527.24				
M51A	TYPHA	36	691.92				
M51A	TYPHA	32	1872.36				
M51B	BIDLA	12	55.48				
M51B	BIDLA	12	46.32				
M51B	PELTVIRG	20	8.68				
M51B	SCVA	36	18.60				
M51B	SCVA	48	152.80				

Table 3. Density and Biomass for marsh species in Savannah Refuge monitoring areas.

October 2014 marsh vegetation survey

Site	Species Code	Density (Stems/m²)	Biomass (g/m²)
M51B	TYPHA	4	24.56
M51C	TYPHA	24	2127.08
M51C	TYPHA	12	635.92
M52A	SCVA	24	25.92
M52A	SCVA	32	134.64
M52A	ZIZMI	12	134.92
M52B	BIDLA	80	362.44
M52B	PELTVIRG	40	11.56
M52B	SCVA	32	19.12
M52B	SCVA	60	78.16
M52C	PELTVIRG	12	1.28
M52C	POLYHYD	20	98.44
M52C	POLYHYD	8	38.36
M52C	SCVA	48	39.28
M52C	SCVA	92	162.20
M52C	TYPHA	24	372.20
M52C	TYPHA	12	165.88
M53A	PELTVIRG	12	2.76