Table 4. York County, Virginia Shoreline Attributes - Miles Surveyed and Inventory Dates - River System Summary

	Tatal Miles		FIELD SURVEY DATES
RIVER SYSTEM	Total Miles Surveyed	Original Survey Dates*	Inventory Updated - 2013
Back Creek	18.16	11/17/1998, 6/13/2005	using VBMP 2011 imagery/Bing high resolution oblique imagery
Back River		Remote coded	
	7.26		using VBMP 2011 imagery/Bing high resolution oblique imagery
Bay Tree Creek	5.42	8/20/2009	using VBMP 2011 imagery/Bing high resolution oblique imagery
Carter Creek	7.26	11/13/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
Chesapeake Bay	3.14	6/13/2005, 8/20/2009	using VBMP 2011 imagery/Bing high resolution oblique imagery
Chisman Creek	35.57	7/30/2009, 8/18/2009, 8/20/2009	using VBMP 2011 imagery/Bing high resolution oblique imagery
Felgates Creek	14.16	11/13/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
Indian Creek	5.09	11/13/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
King Creek	10.45	11/13/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
Poquoson River	34.64	7/23/2009, 7/28/2009, 7/30/2009, 8/18/2009	using VBMP 2011 imagery/Bing high resolution oblique imagery
Queen Creek	38.66	11/13/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
Skimino Creek	8.46	11/13/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
Wormley Creek	10.69	11/17/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
York River	24.54	11/13/1998, 11/17/1998	using VBMP 2011 imagery/Bing high resolution oblique imagery
Total	223.50		

<sup>\*</sup> Data was updated in the lab in 2009 using VBMP 2006/2007 imagery and VBMP 2009 Preliminary imagery. Note: Goodwin Islands are marsh islands and therefore are not included in the above table.

Table 5. York County, Virginia Shoreline Attributes - Riparian Land Use (miles) - River System Summary

	TOTAL*	AG	AGRICULTURE			BARE		СО	MMERC	CIAL	FOREST		GRASS	3	IN	DUSTRI	AL		PAVED	)	RESIDENTIAL			SC	RUB-SH	RUB
RIVER SYSTEM	MILES SURVEYED	no tree buffer	tree fringe	total	no tree buffer		total	no tree buffer		total	total	no tree buffer	tree fringe	total	no tree buffer		total	no tree buffer		total	no tree buffer	tree fringe	total		tree fringe	total
Back Creek	18.16	0.32	0.08	0.39	0.00	0.00	0.00	0.63	0.00	0.63	9.86	0.62	0.41	1 03	0.00	0.00	0.00	0.43	0.04	0.47	4.78	0.62	5.39	0.39	0.00	0.39
Back River	7.26	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	1.34	0.02	0.09		0.00		0.00		0.00		1.70	3.37	5.07	0.00		
Bay Tree Creek	5.42	0.00	0.00	0.00		0.00	0.00				2.13	0.00	0.00	0.00	0.00		0.00			2.65	0.57	0.07	0.64	0.00		
Carter Creek	7.26	0.00	0.00	0.00					0.00		6.23	0.02				0.00				0.62	0.00	0.36	0.36	0.04		
Chesapeake Bay	3.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.90	0.06	0.00	0.06	0.00	0.00	0.00	0.35	0.00	0.35	0.77	0.06	0.83	0.00	0.00	0.00
Chisman Creek	35.57	0.05	0.15	0.20	0.00	0.00	0.00	0.47	0.00	0.47	6.26	1.40	0.58	1.98	0.00	0.00	0.00	0.39	0.32	0.72	18.40	7.37	25.77	0.18	0.00	0.18
Felgates Creek	14.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.64	0.00	0.25	0.25	0.00	0.00	0.00	0.67	0.00	0.67	0.00	0.59	0.59	0.00	0.00	0.00
Indian Creek	5.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.83	0.23	0.00	0.23	0.00	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
King Creek	10.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.97	0.20	0.81	1.01	0.00	0.00	0.00	0.03	0.00	0.03	0.22	0.23	0.44	0.00	0.00	0.00
Poquoson River	34.64	0.05	0.57	0.63	0.00	0.00	0.00	0.00	0.05	0.05	6.32	1.56	1.23	2.80	0.00	0.00	0.00	0.16	0.09	0.25	12.68	11.44	24.12	0.46	0.00	0.46
Queen Creek	38.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.61	0.03	0.57	0.60	0.00	0.00	0.00	0.99	2.74	3.72	0.11	3.61	3.72	0.00	0.00	0.00
Skimino Creek	8.46	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	7.95	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.02	0.08	0.13	0.27	0.40	0.00	0.00	0.00
Wormley Creek	10.69	0.00	0.00	0.00	0.06	0.00	0.06	0.20	0.13	0.33	4.02	0.09	0.35	0.44	0.00	0.00	0.00	0.05	0.00	0.05	2.50	3.06	5.56	0.20	0.04	0.24
York River	24.54	0.00	0.00	0.00	0.39	0.06	0.45	0.51	0.13	0.65	10.24	3.98	1.29	5.27	0.67	0.00	0.67	3.83	1.00	4.83	1.89	0.20	2.08	0.27	0.08	0.35
Total	223.50	0.46	0.80	1.26	0.45	0.10	0.55	1.81	0.31	2.13	113.29	8.20	5.58	13.78	0.67	0.00	0.67	10.50	4.67	15.17	43.75	31.23	74.99	1.54	0.12	1.66

<sup>\*</sup>Total = does not include marsh island shoreline

Note: Goodwin Islands are marsh islands and therefore are not included in the above table.

Table 6. York County, Virginia Shoreline Attributes - Riparian Bank Condition - River System Summary

		BANK COVER								В	ANK HEIGHT	AND EROSI	ON STATUS	6 (miles o	of shore)					-
RIVER SYSTEM	TOTAL* MILES SURVEYED		(miles)			0-	5 FEET			5-	10 FEET			10-	-30 FEET		>30 FEET			
		bare	partial	full	erosional	stable	transitional	undercut	erosional	stable	transitional	undercut	erosional	stable	transitional	undercut	erosional	stable	transitional	undercut
Back Creek	18.16	0.33	0.23	17.61	0.12	17.71	0.31	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Back River	7.26	0.00	0.00	7.26	0.00	7.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay Tree Creek	5.42	0.00	0.00	5.42	0.31	5.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Carter Creek	7.26	0.00	0.00	7.26	0.00	7.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chesapeake Bay	3.14	0.00	0.00	3.14	0.40	2.62	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chisman Creek	35.57	0.37	0.95	34.25	1.05	34.22	0.00	0.05	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Felgates Creek	14.16	0.00	0.00	14.16	0.00	14.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
Indian Creek	5.09	0.00	0.00	5.09	0.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00
King Creek	10.45	0.00	0.25	10.20	0.16	6.93	0.00	0.00	0.00	0.09	0.06	0.00	0.09	3.05	0.07	0.00	0.00	0.00	0.00	0.00
Poquoson River	34.64	0.04	1.50	33.10	1.43	32.46	0.00	0.04	0.00	0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Queen Creek	38.66	0.03	0.04	38.59	0.00	28.77	0.00	0.00	0.06	6.14	0.00	0.00	0.00	3.69	0.00	0.00	0.00	0.00	0.00	0.00
Skimino Creek	8.46	0.00	0.00	8.46	0.00	8.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wormley Creek	10.69	0.06	0.71	9.92	0.08	2.29	0.05	0.00	0.11	4.22	0.17	0.00	0.05	3.72	0.00	0.00	0.00	0.00	0.00	0.00
York River	24.54	1.06	1.35	22.13	1.20	11.54	0.49	0.00	1.63	4.05	0.00	0.00	0.28	5.18	0.16	0.00	0.00	0.00	0.00	0.00
Total	223.50	1.89	5.03	216.57	4.74	183.74	0.97	0.10	1.80	15.48	0.23	0.00	0.42	15.77	0.23	0.00	0.00	0.00	0.00	0.00

<sup>\*</sup>Total = does not include marsh island shoreline

Note: Goodwin Islands are marsh islands and therefore are not included in the above table.

Table 7. York County, Virginia Shoreline Attributes - Natural Buffers, *Phragmites australis* and Marsh Survey Dates - River System Summary

											MARSH											PHRAGMITES <sup>3</sup>	
RIVER SYSTEM	BEACH (miles)	# Wetlan	and Polygons Marsh Type (acres)											Commu	nity Type <sup>1</sup>	(acres)						(percent of field checked	MARSH SURVEY DATES
	(mico)	total	field checked	embayed	extensive	fringe marsh island		total	otal I		III	IV	V	VI	VII	VIII <sup>2</sup>	IX	Χ	XI	XII	DNS**	marshes)	
Back Creek	0.17	126	97	9.53	155.87	29.39	0.18	194.98	168.93	0.00	0.18	0.00	0.00	0.00	0.00	1.33	0.00	0.00	0.00	12.29	12.24	70	6/22/2010, 7/29/2013
Back River	0.00	30	0	24.58	43.64	29.43	1.95	99.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	99.61	DNS	DNS
Bay Tree Creek	0.31	13	7	0.00	129.22	23.82	0.06	153.10	26.91	0.00	16.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	97.36	12.57	57	7/29/2013
Carter Creek	0.00	39	2	16.21	98.81	29.30	0.54	144.86	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	144.83	50	6/25/2010
Chesapeake Bay	1.42	29	25	2.82	68.27	25.87	0.00	96.95	76.86	0.00	0.00	0.00	0.00	0.00	0.00	4.57	0.00	0.00	0.00	15.24	0.28	24	7/29/2013
Chisman Creek	0.69	377	347	27.40	37.97	48.31	0.03	113.71	0.05	0.00	42.91	0.93	0.00	0.00	0.00	1.81	0.00	0.00	0.00	19.67	19.15	20	7/29/2013, 7/31/2013
Felgates Creek	0.05	44	0	142.10	53.86	9.55	0.01	205.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	205.52	DNS	DNS
Goodwin Islands	0.00	11	8	0.00	158.14	0.00	90.30	248.44	5.92	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	241.75	0.33	38	6/22/2010
Indian Creek	0.04	46	0	15.84	0.00	12.26	1.37	29.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	29.47	DNS	DNS
King Creek	0.28	38	18	95.50	84.47	16.31	2.05	198.33	6.66	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.28	175.36	72	6/23/2010
Poquoson River	0.36	318	198	32.86	47.69	45.82	0.45	126.82	14.39	0.00	1.06	0.13	0.00	0.00	0.00	0.70	0.00	0.00	0.00	32.64	77.90	17	7/31/2013
Queen Creek	0.12	75	32	83.90	520.03	82.59	0.27	686.77	487.12	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	8.80	190.79	19	6/23-24/2010
Skimino Creek	0.02	27	20	5.78	128.53	29.21	0.00	163.52	149.72	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	8.52	4.92	0	6/25/2010, 6/28/2010
Wormley Creek	0.08	82	72	7.86	0.00	10.53	0.00	18.39	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.34	4.29	21	6/21/2010
York River	7.80	110	72	65.00	115.17	60.17	1.93	242.27	119.26	0.47	0.00	1.78	8.02	0.00	0.00	5.28	0.00	0.00	0.00	27.80	79.67	43	6/21-25/2010
Total	11.34	1365	898	529.36	1641.68	452.57	99.13	2722.74	1069.42	0.47	60.83	2.88	8.02	0.00	0.00	14.27	0.00	0.00	0.00	480.69	1056.94		

<sup>\*\*</sup>DNS = Did Not Survey

<sup>1</sup>Community Type: I = Saltmarsh Cordgrass / low marsh

VII = Arrow Arum – Pickerel Weed II = Saltmeadow / high marsh VIII = Reed Grass (Phragmites australis)

III = Black Needlerush

IX = Yellow Pond Lily IV = Saltbush X = Saltwort

V = Big Cordgrass XI = Freshwater mix VI = Cattail XII = Brackish mix

<sup>&</sup>lt;sup>2</sup>Type VIII - Field checked marshes where *Phragmites australis* was estimated to cover >50% marsh area.

<sup>&</sup>lt;sup>3</sup>Phragmites - percent of field checked marshes where *Phragmites australis* is present in any amount.

Table 8. York County, Virginia Shoreline Attributes - Shoreline Features - River System Summary

			No.												Miles of	Miles of		
RIVER SYSTEM	TOTAL* MILES SURVEYED	No.	dilapidated	No.	No. ra	amps	No.	No. m	arinas	No.	No.	Miles of	Miles of	Miles of	dilapidated	marsh toe	Miles of	Miles of
		docks	docks	boathouses	private	public	groinfields	<50 slips	>50 slips	jetties	breakwater1	debris	unconventional	bulkhead	bulkhead	revetment	riprap	wharf
Back Creek	18.16	77	13	16	8	2	0	2	0	3	2	0.00	0.25	0.95	0.07	0.00	1.30	0.00
Back River	7.26	7	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bay Tree Creek	5.42	6	0	0	0	0	0	0	0	0	0	0.00	0.00	0.16	0.00	0.00	0.03	0.00
Carter Creek	7.26	2	0	0	2	0	0	0	0	0	0	0.00	0.00	0.02	0.00	0.00	0.09	0.00
Chesapeake Bay	3.14	2	1	1	3	0	1	0	0	0	3	0.00	0.00	0.04	0.00	0.00	0.36	0.00
Chisman Creek	35.57	315	11	79	30	0	3	7	0	0	6	0.28	0.96	4.26	0.11	0.34	4.52	0.00
Felgates Creek	14.16	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Indian Creek	5.09	1	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.10	0.00
King Creek	10.45	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00	0.00	0.01	0.00
Poquoson River	34.64	204	11	78	22	2	0	0	0	0	3	0.27	0.59	1.29	0.11	0.26	3.36	0.00
Queen Creek	38.66	19	0	2	3	0	0	0	1	0	0	0.00	0.00	0.02	0.05	0.00	0.33	0.00
Skimino Creek	8.46	3	0	1	0	1	0	0	0	0	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wormley Creek	10.69	62	2	34	6	0	1	1	1	0	0	0.00	0.00	0.86	0.00	0.00	0.76	0.00
York River	24.54	15	4	6	1	0	2	0	0	2	11	0.00	0.05	0.60	0.00	0.00	9.03	0.00
Total	223.50	713	42	217	75	5	7	10	2	5	26	0.55	1.85	8.20	0.34	0.60	19.89	0.00

<sup>\*</sup>Total = does not include marsh island shoreline

Note: Goodwin Islands are marsh islands and therefore are not included in the above table.

<sup>&</sup>lt;sup>1</sup> number of breakwater groups (one or more breakwaters within a group)