Appendix E

Soil Resources

Table E-1 Characteristics of Soils in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
Be	Bienville loamy fine sand	11.2	Bienville	95	0-5	Stream terraces on coastal plains	Severe	Fair	A, E, SD, OM
			Mollville	5	-	Depressions on stream terraces on coastal plains		Not rated	NR
BeB*	Bernaldo very fine sandy loam	66.7	Bernaldo	95	1-3	Stream terraces on coastal plains	Moderate	Good	A, OM
			Unnamed	5	-			Not rated	NR
BeD	Bernaldo very fine sandy loam	57.8	Bernaldo	90	5-8	Stream terraces on coastal plains	Moderate	Good	A, OM
			Unnamed	10	-			Not rated	NR
BtB	Betis loamy fine sand	104.6	Betis	95	1-5	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	5	-			Not rated	NR
BvB	Bienville loamy fine sand	80.4	Bienville	97	0-2	Stream terraces on coastal plains	Severe	Fair	A, E, SD, OM
			Mollville	1	-	Depressions		Not rated	NR
			Unnamed	2	-			Not rated	NR
BwB*	Bowie very fine sandy loam	77.1	Bowie	90	1-4	Interfluves on coastal plains	Moderate	Fair	A, OM
			Unnamed	10	-			Not rated	NR
CbE	Cuthbert fine sandy loam	23.5	Cuthbert	92	5-15	Interfluves on coastal plains	Moderate	Fair	A, C, OM
			Unnamed	8	-			Not rated	NR
Ce*	Cart-Erno complex	408.5	Cart	50	0-3	Mounds on stream terraces on coastal plains	Moderate	Fair	A, E, OM
			Erno	35	0-3	Stream terraces on coastal plains	Moderate	Good	A, E, OM
Ce	Cart-Erno complex	408.5	Unnamed	5	-			Not rated	
			Wrightsville	10	-	Depressions on stream terraces on coastal plains		Not rated	

Table E-1 Characteristics of Soils in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
CtE	Cuthbert gravelly fine sandy loam	1131.2	Cuthbert	95	5-15	Interfluves on coastal plains	Low	Poor	A, OM
			Unnamed	5	-			Not rated	NR
DaC	Darco loamy fine sand	558.6	Darco	92	1-8	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	8	-			Not rated	NR
DaE	Darco loamy fine sand	1631.7	Darco	92	8-15	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Naconiche	2	-	Floodplains		Not rated	NR
			Unnamed	6	-			Not rated	NR
Es	Estes clay, frequently flooded	1784.7	Estes	92	0-1	Floodplains on coastal plains	Moderate	Poor	A, C, OM
			Unnamed	8	-			Not rated	NR
Fu	Lilbert loamy fine sand	643.3	Lilbert	80	1-8	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	20	-			Not rated	
GaA	Gallime-Alazan complex	526.9	Alazan	35	0-2	Stream terraces on coastal plains	Moderate	Fair	A, OM
			Gallime	60	1-3	Stream terraces on coastal plains	Moderate	Good	A, OM
			Mollville	2	-	Depressions		Not rated	NR
			Unnamed	3	-			Not rated	NR
Iu*	Iulus fine sandy loam, occasionally flooded	268.1	Iulus	87	0-1	Floodplains on coastal plains	Moderate	Fair	A, E, SD, OM
			Mattex	6	-	Floodplains		Not rated	NR
			Unnamed	7	-			Not rated	NR
KfC	Kirvin fine sandy loam	96.8	Kirvin	92	2-5	Interfluves on coastal plains	Moderate	Poor	A, C, E, OM
			Unnamed	8	-			Not rated	NR

Table E-1 Characteristics of Soils in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
KfE	Kirvin fine sandy loam	1665.6	Kirvin	90	5-15	Interfluves on coastal plains	Moderate	Poor	A, C, OM, E
			Unnamed	10	-			Not rated	NR
KgC	Kirvin gravelly fine sandy loam	116.1	Kirvin	95	2-5	Interfluves on coastal plains	Low	Poor	A, OM
			Unnamed	5	-			Not rated	NR
KsC	Kirvin soils graded	239.3	Kirvin	97	2-8	Interfluves on coastal plains	Moderate	Poor	A, C, OM
			Unnamed	3	-			Not rated	NR
Lf	Laneville loam, frequently flooded	1349.6	Laneville	82	0-1	Floodplains on coastal plains	Moderate	Fair	A, E, OM
			Mattex	6	-	Floodplains		Not rated	NR
			Unnamed	12	-			Not rated	NR
LtB*	Latex very fine sandy loam	128.7	Latex	85	1-3	Marine terraces on coastal plains	Moderate	Fair	A, E, OM
			Unnamed	15	-			Not rated	NR
Lu	Briley loamy fine sand	215.9	Briley	95	2-5	Interfluves on coastal plains	Severe	Fair	A, E, OM
Lu	Briley loamy fine sand	215.9	Elrose	5	-	Interfluves on coastal plains		Not rated	
LyC	Lilbert loamy fine sand	31.7	Lilbert	92	2-5	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	8	-			Not rated	NR
MaE	Maben fine sandy loam	16.3	Maben	92	5-15	Interfluves on coastal plains		Poor	A, C, OM
			Unnamed	8	-			Not rated	NR
Me	Mattex clay loam, frequently flooded	63.4	Mattex	85	0-1	Floodplains on coastal plains	Low	Fair	A, OM
			Unnamed	15	-			Not rated	NR

Table E-1 Characteristics of Soils in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
Mn	Mantachie clay loam	52.9	Mantachie	85	0-1	Floodplains on coastal plains		Fair	A
			Unnamed	15	-			Not rated	
Mo	Mattex-Owentown complex, frequently flooded	1032.5	Mattex	45	0-1	Floodplains on coastal plains	Low	Fair	A, OM
			Owentown	40	0-1	Floodplains on coastal plains	Moderate	Good	A, OM
			Unnamed	15	-			Not rated	NR
Mr	Marietta fine sandy loam	38.8	Mantachie	15	-	Floodplains on coastal plains		Not rated	
			Marietta	85	0-1	Floodplains on coastal plains		Fair	OM
MtC*	Meth fine sandy loam	92.1	Meth	90	2-5	Interfluves on coastal plains	Moderate	Poor	A, C, OM
			Unnamed	10	-			Not rated	NR
M-W	Miscellaneous water	21.2	Water	100	-			Not rated	NR
Na	Naconiche mucky sandy loam, frequently flooded	396.1	Naconiche	95	0-2	Floodplains on coastal plains	Moderate	Poor	A, SD
			Unnamed	5	-			Not rated	NR
Ow	Owentown fine sandy loam, occasionally flooded	576.2	Mattex	2	-	Floodplains		Not rated	NR
			Owentown	90	0-1	Floodplains on coastal plains	Moderate	Good	A, OM
			Unnamed	8	-			Not rated	NR

Table E-1 Characteristics of Soils in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
RzB	Rentzel loamy fine sand	986.5	Naconiche	2	-	Floodplains		Not rated	NR
			Rentzel	95	0-4	Interfluves on coastal plains	Severe	Fair	A, E, OM
			Unnamed	3	-			Not rated	NR
SaB	Sacul fine sandy loam	76.9	Sacul	92	1-3	Interfluves on coastal plains	Moderate	Poor	A, C, OM
SaB	Sacul fine sandy loam		Unnamed	8	-			Not rated	NR
SaF	Sacul fine sandy loam	110.6	Sacul	80	5-20	Interfluves on coastal plains	Moderate	Poor	A, C
SaF	Sacul fine sandy loam		Unnamed	20	-			Not rated	
StB*	Sawlit loam	93.5	Sawlit	95	0-2	Marine terraces on interfluves on coastal plains	Moderate	Fair	A, E, OM
StB	Sawlit loam		Unnamed	5	-			Not rated	NR
SwA	Sawlit-Sawtown complex	2409.6	Derly	2	-	Depressions		Not rated	NR
SwA*	Sawlit-Sawtown complex	2409.6	Sawlit	55	0-2	Marine terraces on interfluves on coastal plains	Moderate	Fair	A, E, OM
			Sawtown	40	0-2	Marine terraces on interfluves on coastal plains	Moderate	Fair	A, E, OM
			Unnamed	3	-			Not rated	NR
Te	Tenaha loamy fine sand	201.1	Tenaha	90	5-20	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM, D
			Unnamed	10	-			Not rated	

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MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
TeE	Tenaha loamy fine sand	126.1	Naconiche	2	-	Floodplains		Not rated	A, E, SD, OM
			Tenaha	90	8-15	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	8	-			Not rated	NR
Tn	Iuka fine sandy loam	1.8	Iuka	90	0-1	Floodplains on coastal plains	Moderate	Fair	A, OM, SD
			Mantachie	5	-	Floodplains on coastal plains		Not rated	
			Nahatche	5	-	Floodplains on coastal plains		Not rated	
TrD	Darco loamy fine sand	138	Darco	85	1-8	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	15	-			Not rated	
TrF	Darco loamy fine sandy	336.9	Darco	80	8-20	Interfluves on coastal plains	Severe	Fair	A, E, SD, OM
			Unnamed	20	-			Not rated	
UMX	Estes-Mantachie association	85.7	Estes	50	0-1	Floodplains on coastal plains	Moderate	Poor	A, C, OM
			Mantachie	20	0-1	Floodplains on coastal plains		Fair	A
			Unnamed	30	-			Not rated	
W	Water	73.4	Water	100	-			Not rated	NR
W	Water (greater than 40 acres in size)	1176.2	Water	100	-			Not rated	NR
WoB	Woden fine sandy loam	240.8	Derly	1	-	Depressions		Not rated	NR
			Unnamed	4	-			Not rated	NR
			Woden	95	1-3	Stream terraces on coastal plains	Moderate	Fair	A, OM, SD

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MUID[1]	Mapping Unit Name and Characteristics	Acres within Rusk Permit Area	Soil Component	Composition %	Slope %	Geomorphic Description	Wind Erosion[2]	Growth Media Suitability	Limiting Factors[3]
WtB	Woodtell loam	253.7	Unnamed	3	-			Not rated	NR
			Woodtell	97	1-3	Interfluves on coastal plains	Moderate	Poor	A, C, E, OM
WtE	Woodtell loam	505.9	Unnamed	3	-			Not rated	NR
			Woodtell	97	5-15	Interfluves on coastal plains	Moderate	Poor	A, C, E, OM

[1] Map Unit Identification.

* = NRCS-designated prime farmland soil

[2] Wind erosion hazard class based on Wind Erodibility Group Rating.

[3] Limiting Factors:

A = High Acidity

BR = Depth to Bedrock

C = Too Clayey

D = Droughty

E = Erosion

NR = Not Rated

OM = Low Organic Matter

S = Salinity

Slope = Slope

SD = Too Sandy

Source: USDA-NRCS 2009.

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
Be	Bienville loamy fine sand, 0 to 5 percent slopes (Bienville-95%)	H1	0	10	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	10	36	Fine sand/loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	36	84	Fine sand/loamy fine sand/fine sandy loam		4.5-6	0-0	0-0	Not severe
BeB	Bernaldo very fine sandy loam, 1 to 3 percent slopes (Bernaldo-95%)	H1	0	4	Very fine sandy loam	No	5.1-6.5	0-0	0-0	Severe
		H2	4	17	Fine sandy loam/loam/very fine sandy loam		5.1-6.5	0-0	0-0	Severe
		H3	17	49	Clay loam/loam/sandy clay loam		4.5-6.5	0-0	0-0	Severe
		H4	49	80	Fine sandy loam/loam/sandy clay loam		4.5-6.5	0-0	0-0	Severe
BeD	Bernaldo very fine sandy loam, 5 to 8 percent slopes (Bernaldo-90%)	H1	0	3	Very fine sandy loam	No	5.1-6.5	0-0	0-0	Severe
		H2	3	14	Fine sandy loam/loam/very fine sandy loam		5.1-6.5	0-0	0-0	Severe
		H3	14	62	Clay loam/loam/sandy clay loam		4.5-6.5	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
BeD	Bernaldo very fine sandy loam, 5 to 8 percent slopes (Bernaldo-90%)	H4	62	80	Fine sandy loam/loam/sandy clay loam	No	4.5-6.5	0-0	0-0	Severe
BtB	Betis loamy fine sand, 1 to 5 percent slopes (Betis-95%)	H1	0	9	Loamy fine sand	No	4.5-6	0-0	0-0	Not severe
		H2	9	49	Fine sand/loamy fine sand		4.5-6	0-0	0-0	Not severe
		H3	49	80	Fine sand/loamy fine sand		4.5-6	0-0	0-0	Not severe
BvB	Bienville loamy fine sand, 0 to 2 percent slopes (Bienville-97%)	H1	0	12	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	12	40	Fine sand/loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	40	80	Fine sand/fine sandy loam/loamy fine sand		4.5-6	0-0	0-0	Not severe
BwB	Bowie very fine sandy loam, 1 to 4 percent slopes (Bowie-90%)	H1	0	10	Very fine sandy loam	No	4.5-6.5	0-0	0-0	Severe
		H2	10	49	Clay loam/fine sandy loam/sandy clay loam		4.5-5.5	0-0	0-0	Severe
		H3	49	80	Clay loam/fine sandy loam/sandy clay loam		4.5-5.5	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
CbE	Cuthbert fine sandy loam, 5 to 15 percent slopes (Cuthbert-92%)	H1	0	8	Fine sandy loam	No	4.5-6.5	0-0	0-0	Not severe
		H2	8	19	Clay/sandy clay/sandy clay loam		3.6-5.5	0-0	0-0	Severe
		H3	19	36	Clay loam/fine sandy loam/sandy clay loam		3.6-5.5	0-0	0-0	Severe
		H4	36	60	Sandy clay loam		3.6-5	0-0	0-0	Severe
Ce	Cart-Erno complex (Cart-50%)	H1	0	4	Fine sandy loam	No	4.5-6.5	0-0	0-0	Severe
		H2	4	23	Fine sandy loam/loam/very fine sandy loam		4.5-6	0-0	0-0	Severe
		H3	23	42	Fine sandy loam/loam/very fine sandy loam		4.5-6	0-0	0-0	Severe
		H4	42	70	Fine sandy loam/loam/sandy clay loam		4.5-5.5	0-0	0-0	Severe
		H5	70	80	Clay loam/sandy clay/sandy clay loam		4.5-5.5	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
Ce	Cart-Erno complex (Erno-35%)	H1	0	13	Fine sandy loam	No	4.5-6.5	0-0	0-0	Severe
		H2	13	30	Clay loam/fine sandy loam/loam		4.5-6.5	0-0	0-0	Severe
		H3	30	70	Clay loam/fine sandy loam/loam		4.5-5.5	0-0	0-0	Severe
		H4	70	80	Clay/clay loam		4.5-5	0-0	0-2	Severe
CtE	Cuthbert gravelly fine sandy loam, 5 to 15 percent slopes (Cuthbert-95%)	H1	0	13	Gravelly fine sandy loam	No	4.5-6.5	0-0	0-0	Not severe
		H2	13	25	Clay/sandy clay/sandy clay loam		3.6-5.5	0-0	0-0	Severe
		H3	25	37	Clay loam/fine sandy loam/sandy clay loam		3.6-5.5	0-0	0-0	Severe
		H4	37	60	Sandy clay loam		3.6-5	0-0	0-0	Severe
DaC	Darco loamy fine sand, 1 to 8 percent slopes (Darco-92%)	H1	0	10	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	10	54	Fine sand/loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	54	80	Fine sandy loam/sandy clay loam		4.5-6.5	0-0	0-0	Not severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
DaE	Darco loamy fine sand, 8 to 15 percent slope (Darco-92%)	H1	0	4	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	4	55	Fine sand/loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	55	80	Fine sandy loam/sandy clay loam		4.5-6.5	0-0	0-0	Not severe
Es	Estes clay, frequently flooded (Estes-92%)	H1	0	9	Clay	Yes	3.6-6	1-5	0-2	Severe
		H2	9	60	Clay/silty clay		3.6-5.5	1-5	0-4	Severe
		H3	60	80	Clay loam/sandy clay loam/silty clay loam		3.6-6	1-5	0-4	Severe
Fu	Lilbert loamy fine sand, 1 to 8 percent slopes (Lilbert-80%)	H1	0	7	Loamy fine sand	No	4.5-6	0-0	0-0	Not severe
		H2	7	24	Loamy fine sand		4.5-6	0-0	0-0	Not severe
		H3	24	50	Fine sandy loam/sandy clay loam		3.6-5.5	0-0	0-0	Not severe
		H4	50	84	Clay loam/fine sandy loam/sandy clay loam		3.6-5.5	0-0	0-0	Not severe
GaA	Gallime-Alazan complex, 0 to 2 percent slopes (Alazan-35%)	H1	0	10	Loam	No	4.5-6	0-0	0-2	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
GaA	Gallime-Alazan complex, 0 to 2 percent slopes (Alazan-35%)	H2	10	80	Loam/sandy clay loam/fine sandy loam/loam/very fine sandy loam	No	4.5-6.5	0-0	0-2	Not severe
GaA	Gallime-Alazan complex, 0 to 2 percent slopes (Gallime-60%)	H1	0	8	Very fine sandy loam	No	5.1-6.5	0-0	0-0	Severe
		H2	8	29	Fine sandy loam/loam/very fine sandy loam		5.1-6.5	0-0	0-0	Severe
		H3	29	80	Clay loam/loam/sandy clay loam		4.5-6	0-0	0-0	Severe
Iu	Iulus fine sandy loam, occasionally flooded (Iulus-87%)	H1	0	7	Fine sandy loam	No	4.5-6	0-0	0-2	Severe
		H2	7	49	Fine sandy loam/loam		4.5-6	0-0	0-2	Severe
		H3	49	80	Fine sandy loam/loam/sandy clay loam		4.5-6	0-0	0-2	Severe
KfC	Kirvin fine sandy loam, 2 to 5 percent slopes (Kirvin-92%)	H1	0	5	Fine sandy loam	No	5.1-7.3	0-0	0-0	Severe
		H2	5	36	Clay/clay loam/sandy clay		3.6-5.5	0-0	0-0	Severe
		H3	36	48	Clay/clay loam/sandy clay loam		3.6-5	0-0	0-0	Severe
		H4	48	65	Sandy clay loam		3.6-5	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
KfE	Kirvin fine sandy loam, 5 to 15 percent slopes (Kirvin-90%)	H1	0	6	Fine sandy loam	No	5.1-7.3	0-0	0-0	Severe
		H2	6	38	Clay/clay loam/sandy clay		3.6-5.5	0-0	0-0	Severe
		H3	38	51	Clay/clay loam/sandy clay loam		3.6-5	0-0	0-0	Severe
		H4	51	80	Sandy clay loam		3.6-5	0-0	0-0	Severe
KgC	Kirvin gravelly fine sandy loam, 2 to 5 percent slopes (Kirvin-95%)	H1	0	16	Gravelly fine sandy loam	No	5.1-7.3	0-0	0-0	Not severe
		H2	16	31	Clay/clay loam/sandy clay		3.6-5.5	0-0	0-0	Severe
		H3	31	44	Clay/clay loam/sandy clay loam		3.6-5	0-0	0-0	Severe
		H4	44	62	Sandy clay loam		3.6-5	0-0	0-0	Severe
KsC	Kirvin soils graded, 2 to 8 percent slopes (Kirvin-97%)	H1	0	4	Clay loam	No	4.5-7.3	0-0	0-0	Severe
		H2	4	41	Clay/clay loam/sandy clay		3.6-5.5	0-0	0-0	Severe
		H3	41	80	Sandy clay loam		3.6-5	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
Lf	Laneville loam, frequently flooded (Laneville-82%)	H1	0	15	Loam	No	5.1-6.5	0-0	0-0	Severe
		H2	15	36	Clay loam/loam/silty clay loam		3.6-5.5	0-2	0-2	Severe
		H3	36	80	Clay/clay loam		3.6-6	0-4	0-4	Severe
LtB	Latex very fine sandy loam, 1 to 3 percent slopes (Latex-85%)	H1	0	9	Very fine sandy loam	No	4.5-6	0-0	0-0	Severe
		H2	9	46	Clay loam/loam/sandy clay loam		4.5-5.5	0-0	0-0	Severe
		H3	46	80	Clay/clay loam/silty clay		4.5-5	0-0	0-0	Severe
Lu	Briley loamy fine sand, 2 to 5 percent slopes (Briley-95%)	H1	0	6	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	6	22	Loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	22	60	Fine sandy loam/sandy clay loam		4.5-6	0-0	0-0	Not severe
LyC	Lilbert loamy fine sand, 2 to 5 percent slopes (Lilbert-92%)	H1	0	10	Loamy fine sand	No	4.5-6	0-0	0-0	Not severe
		H2	10	29	Loamy fine sand		4.5-6	0-0	0-0	Not severe
		H3	29	49	Fine sandy loam/sandy clay loam		3.6-5.5	0-0	0-0	Not severe
		H4	49	80	Clay loam/fine sandy loam/sandy clay loam		3.6-5.5	0-0	0-0	Not severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
MaE	Maben fine sandy loam, 5 to 15 percent slopes (Maben-92%)	H1	0	4	Fine sandy loam	No	5.6-6.5	0-0	0-0	Not severe
		H2	4	38	Clay/clay loam/silty clay		4.5-6	0-0	0-0	Not severe
		H3	38	60	Stratified loam to clay		4.5-6	0-0	0-0	Not severe
Me	Mattex clay loam, frequently flooded (Mattex-85%)	H1	0	13	Clay loam	Yes	4.5-6	0-0	0-2	Severe
		H2	13	44	Loam/sandy clay loam/very fine sandy loam		3.5-5.5	0-0	0-2	Severe
		H3	44	80	Clay/clay loam		4.5-6	0-0	0-2	Severe
Mn	Mantachie clay loam (Mantachie-85%)	H1	0	6	Clay loam	Yes	4.5-5.5	0-0	0-0	Not severe
		H2	6	60	Clay loam/loam/sandy clay loam		4.5-5.5	0-0	0-0	Not severe
Mo	Mattex-Owentown complex, frequently flooded (Mattex-45%)	H1	0	17	Loam	Yes	4.5-6	0-0	0-2	Severe
		H2	17	80	Loam/sandy clay loam/very fine sandy loam		3.5-5.5	0-0	0-2	Severe
Mo	Mattex-Owentown complex, frequently flooded (Owentown-40%)	H1	0	14	Loam	No	5.1-6	0-0	0-2	Severe
		H2	14	80	Fine sandy loam/loam		5.1-6	0-0	0-2	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
Mr	Marietta fine sandy loam (Marietta-85%)	H1	0	12	Fine sandy loam	No	5.6-7.8	0-0	0-0	Not severe
		H2	12	62	Loam/sandy clay loam/silty clay loam		5.6-7.8	0-0	0-0	Not severe
		H3	62	80	Loam/sandy clay/silty clay loam		5.6-7.8	0-0	0-0	Not severe
MtC	Meth fine sandy loam, 2 to 5 percent slopes (Meth-90%)	H1	0	12	Fine sandy loam	No	5.1-6.5	0-0	0-0	Severe
		H2	12	51	Clay/clay loam/sandy clay		4.5-6	0-0	0-0	Not severe
		H3	51	80	Fine sandy loam/sandy clay loam/sandy loam		4.5-6	0-0	0-0	Severe
Na	Naconiche mucky sandy loam, frequently flooded (Naconiche-95%)	H1	0	12	Mucky sandy loam	Yes	3.6-6	0-0	0-0	Not severe
		H2	12	29	Loamy fine sand/mucky fine sandy loam/sand		3.6-6	0-0	0-0	Not severe
		H3	29	80	Sand		3.6-6	0-0	0-0	Not severe
Ow	Owentown fine sandy loam, occasionally flooded (Owentown-90%)	H1	0	16	Fine sandy loam	No	5.1-6	0-0	0-2	Severe
		H2	16	80	Fine sandy loam/loam		5.1-6	0-0	0-2	Severe
RzB	Rentzel loamy fine sand, 0 to 4 percent slopes (Rentzel-95%)	H1	0	9	Loamy fine sand	No	5.1-6.5	0-0	0-0	Not severe
		H2	9	22	Loamy fine sand		5.1-6.5	0-0	0-0	Not severe
RzB	Rentzel loamy fine sand, 0 to 4 percent slopes (Rentzel-95%)	H3	22	80	Fine sandy loam/sandy clay loam	No	3.5-5.5	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
SaB	Sacul fine sandy loam, 1 to 3 percent slopes (Sacul-92%)	H1	0	8	Fine sandy loam	No	4.5-6	0-0	0-0	Not severe
		H2	8	53	Clay/clay loam/silty clay		3.6-5.5	0-0	0-0	Severe
		H3	53	80	Clay loam/loam/silty clay loam		3.6-5.5	0-0	0-0	Not severe
SaF	Sacul fine sandy loam, 5 to 20 percent slopes (Sacul-80%)	H1	0	5	Fine sandy loam	No	4.5-6	0-0	0-0	Not severe
		H2	5	15	Fine sandy loam/loamy fine sand/very fine sandy loam		4.5-6	0-0	0-0	Not severe
		H3	15	35	Clay/clay loam/silty clay		3.6-5.5	0-0	0-0	Severe
		H4	35	70	Clay loam/loam/silty clay loam		3.6-5.5	0-0	0-0	Not severe
StB	Sawlit loam, 0 to 2 percent slopes (Sawlit-95%)	H1	0	9	Loam	No	4.5-6	0-0	0-0	Severe
		H2	9	21	Clay loam/loam/sandy clay loam		4.5-6	0-0	0-0	Severe
		H3	21	36	Clay loam/loam/sandy clay loam		4.5-6	0-0	0-0	Severe
		H4	36	80	Clay/clay loam		3.5-5.5	0-4	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
SwA	Sawlit-Sawtown complex, 0 to 2 percent slopes (Sawlit-55%)	H1	0	9	Loam	No	4.5-6	0-0	0-0	Severe
		H2	9	21	Clay loam/loam/sandy clay loam		4.5-6	0-0	0-0	Severe
		H3	21	36	Clay loam/loam/sandy clay loam		4.5-6	0-0	0-0	Severe
		H4	36	80	Clay/clay loam		3.5-5.5	0-4	0-0	Severe
SwA	Sawlit-Sawtown complex, 0 to 2 percent slopes (Sawtown-40%)	H1	0	9	Loam	No	4.5-6.5	0-0	0-0	Severe
		H2	9	23	Fine sandy loam/loam/very fine sandy loam		4.5-6	0-0	0-0	Severe
		H3	23	49	Clay loam/loam/sandy clay loam		3.6-6	0-0	0-0	Severe
		H4	49	80	Clay/clay loam		3.6-6.5	0-4	0-4	Severe
Te	Tenaha loamy fine sand, 5 to 20 percent slopes (Tenaha-90%)	H1	0	11	Loamy fine sand	No	4.5-6	0-0	0-0	Not severe
		H2	11	32	Loamy fine sand		4.5-6	0-0	0-0	Not severe
		H3	32	43	Clay loam/fine sandy loam/sandy clay loam		3.5-5.5	0-0	0-0	Severe
		H4	43	60	Sandy clay loam		3.5-5.5	0-0	0-0	Severe
TeE	Tenaha loamy fine sand, 5 to 15 percent slopes (Tenaha-90%)	H1	0	4	Loamy fine sand	No	4.5-6	0-0	0-0	Not severe
		H2	4	35	Loamy fine sand		4.5-6	0-0	0-0	Not severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
TeE	Tenaha loamy fine sand, 5 to 15 percent slopes (Tenaha-90%)	H3	35	44	Clay loam/fine sandy loam/sandy clay loam	No	3.5-5.5	0-0	0-0	Severe
		H4	44	65	Sandy clay loam		3.5-5.5	0-0	0-0	Severe
Tn	Iuka fine sandy loam (Iuka-90%)	H1	0	11	Fine sandy loam	No	5.1-6	0-0	0-0	Not severe
		H2	11	62	Fine sandy loam/loam/sandy loam		4.5-5.5	0-0	0-0	Not severe
		H3	62	80	Fine sandy loam/loam/sandy loam		4.5-5.5	0-0	0-0	Not severe
TrD	Darco loamy fine sand, 1 to 8 percent slopes (Darco-85%)	H1	0	5	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	5	53	Fine sand/loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	53	80	Fine sandy loam/sandy clay loam		4.5-6.5	0-0	0-0	Not severe
TrF	Darco loamy fine sandy, 8 to 20 percent slopes (Darco-80%)	H1	0	5	Loamy fine sand	No	4.5-6.5	0-0	0-0	Not severe
		H2	5	50	Fine sand/loamy fine sand		4.5-6.5	0-0	0-0	Not severe
		H3	50	65	Fine sandy loam/sandy clay loam		4.5-6.5	0-0	0-0	Not severe
		H4	65	80	Fine sandy loam/sandy clay loam		4.5-6.5	0-0	0-0	Not severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
UMX	Estes-Mantachie association (Estes-50%)	H1	0	4	Clay	Yes	3.6-6	1-5	0-2	Severe
		H2	4	24	Clay loam/silty clay/silty clay loam		3.6-5.5	1-5	0-4	Severe
		H3	24	60	Clay/silty clay		3.6-5.5	1-5	0-4	Severe
		H4	60	80	Clay loam/sandy clay loam/silty clay loam		3.6-6	1-5	0-4	Severe
UMX	Estes-Mantachie association (Mantachie-20%)	H1	0	6	Clay loam	Yes	4.5-5.5	0-0	0-0	Not severe
		H2	6	60	Clay loam/loam/sandy clay loam		4.5-5.5	0-0	0-0	Not severe
WoB	Woden fine sandy loam, 1 to 3 percent slopes (Woden-95%)	H1	0	11	Fine sandy loam	No	5.1-6.5	0-0	0-0	Not severe
		H2	11	80	Fine sandy loam/loam		5.1-6	0-0	0-0	Not severe
WtB	Woodtell loam, 1 to 3 percent slopes (Woodtell-97%)	H1	0	6	Loam	No	4.5-6.5	0-0	0-0	Severe
		H2	6	46	Clay/silty clay		4.5-5.5	0-0	0-0	Severe
		H3	46	52	Clay/clay loam/sandy clay loam		4.5-6	0-0	0-0	Severe
		H4	52	64	Sandy clay loam		4.5-7.3	0-0	0-0	Severe

Table E-2 Characteristics of Soil Horizons in the Rusk Permit Area

MUID[1]	Mapping Unit Name and Characteristics	Horizon	Depth Below Ground Surface (inches)		Texture	Hydric	pH	SAR[2]	EC[2]	Water Erosion[3]
			Top	Bottom						
WtE	Woodtell loam, 5 to 15 percent slopes (Woodtell-97%)	H1	0	8	Loam	No	4.5-6	0-0	0-0	Severe
		H2	8	36	Clay/silty clay		3.6-5.5	0-2	0-0	Severe
		H3	36	51	Clay loam/loam/silty clay loam		3.6-6.5	0-4	0-2	Severe
		H4	51	64	Stratified fine sandy loam to silty clay loam		4.5-7.3	0-8	0-4	Severe

[1] Map Unit Identification.

[2] SAR = sodium adsorption ration.

EC = electrical conductivity.

[3] Water erosion hazard class determined from Soil Erodibility Factor (Kw).

Source: USDA-NRCS 2009.

Table E-3 Soil Crop Productivity (percent cover)

MUID[1]	Mapping Soil Unit and Characteristics	Coastal Bermudagrass	Tifton 85 Bermudagrass	Common Bermudagrass	Bahiagrass	Buffalo Grass	Little Bluestem	Big Bluestem	Indian Grass	Switchgrass	Green Sprangletop	Sideoats Grama	Silver Bluestem	Fall Panicum
Be	Bienville loamy fine sand, 0 to 5 percent slopes	95	90	95	75	75	90	90	90	90	80	70	70	70
BeB	Bernaldo very fine sandy loam, 1 to 3 percent slopes	100	100	100	95	95	100	100	90	90	100	75	100	95
BeD	Bernaldo very fine sandy loam, 5 to 8 percent slopes	90	90	90	85	85	85	95	95	95	95	90	85	70
BtB	Betis loamy fine sand, 1 to 5 percent slopes	80	80	75	60	60	75	75	75	75	65	55	55	55
BvB	Bienville loamy fine sand, 0 to 2 percent slopes	95	90	95	75	75	90	90	90	90	80	70	70	70
BwB	Bowie very fine sandy loam, 1 to 4 percent slopes	90	90	90	85	85	85	85	85	85	75	65	65	65
CbE	Cuthbert fine sandy loam, 5 to 15 percent slopes	65	65	65	60	60	60	60	60	60	50	40	40	40
Ce	Cart-Erno complex	100	100	100	95	95	95	95	95	95	85	75	75	75
CtE	Cuthbert gravelly fine sandy loam, 5 to 15 percent slopes	50	55	55	50	50	45	45	45	45	35	25	25	25

Table E-3 Soil Crop Productivity (percent cover)

MUID[1]	Mapping Soil Unit and Characteristics	Coastal Bermudagrass	Tifton 85 Bermudagrass	Common Bermudagrass	Bahiagrass	Buffalo Grass	Little Bluestem	Big Bluestem	Indian Grass	Switchgrass	Green Sprangletop	Sideoats Grama	Silver Bluestem	Fall Panicum
DaC	Darco loamy fine sand, 1 to 8 percent slopes	80	75	70	55	55	75	75	75	75	65	55	55	55
DaE	Darco loamy fine sand, 8 to 15 percent slope	75	75	70	50	50	70	70	70	70	60	50	50	50
Es	Estes clay, frequently flooded	45	40	40	40	40	40	40	40	40	30	20	20	20
Fu	Lilbert loamy fine sand, 1 to 8 percent slopes	80	75	80	65	65	80	80	80	80	70	60	60	60
GaA	Gallime-Alazan complex, 0 to 2 percent slopes	100	100	100	95	95	100	100	90	90	100	75	100	95
Iu	Iulus fine sandy loam, occasionally flooded	95	95	95	95	95	90	90	90	90	80	70	70	70
KfC	Kirvin fine sandy loam, 2 to 5 percent slopes	75	75	75	70	70	70	70	70	70	60	50	50	50
KfE	Kirvin fine sandy loam, 5 to 15 percent slopes	65	65	65	60	60	60	60	60	60	50	40	40	40
KgC	Kirvin gravelly fine sandy loam, 2 to 5 percent slopes	65	65	70	60	60	60	60	60	60	50	40	40	40
KsC	Kirvin soils graded, 2 to 8 percent slopes	60	65	65	60	60	55	55	55	55	45	35	35	35

Table E-3 Soil Crop Productivity (percent cover)

MUID[1]	Mapping Soil Unit and Characteristics	Coastal Bermudagrass	Tifton 85 Bermudagrass	Common Bermudagrass	Bahiagrass	Buffalo Grass	Little Bluestem	Big Bluestem	Indian Grass	Switchgrass	Green Sprangletop	Sideoats Grama	Silver Bluestem	Fall Panicum
Lf	Laneville loam, frequently flooded	90	90	90	90	90	85	85	85	85	75	65	65	65
LtB	Latex very fine sandy loam, 1 to 3 percent slopes	90	90	90	85	85	85	85	85	85	75	65	65	65
Lu	Briley loamy fine sand, 2 to 5 percent slopes	95	90	95	75	75	90	90	90	90	80	70	70	70
LyC	Lilbert loamy fine sand, 2 to 5 percent slopes	85	80	85	70	70	80	80	80	80	75	65	65	65
MaE	Maben fine sandy loam, 5 to 15 percent slopes	65	65	65	60	60	60	60	60	60	50	40	40	40
Me	Mattex clay loam, frequently flooded	60	55	60	60	60	55	55	55	55	45	25	25	25
Mn	Mantachie clay loam	50	45	45	50	50	45	45	45	45	35	15	15	15
Mo	Mattex-Owentown complex, frequently flooded	55	50	55	55	55	50	50	50	50	40	20	20	20
Mr	Marietta fine sandy loam	100	100	100	100	100	95	95	85	85	95	80	95	90
MtC	Meth fine sandy loam, 2 to 5 percent slopes	100	100	100	95	95	100	100	90	90	100	75	100	95

Table E-3 Soil Crop Productivity (percent cover)

MUID[1]	Mapping Soil Unit and Characteristics	Coastal Bermudagrass	Tifton 85 Bermudagrass	Common Bermudagrass	Bahiagrass	Buffalo Grass	Little Bluestem	Big Bluestem	Indian Grass	Switchgrass	Green Sprangletop	Sideoats Grama	Silver Bluestem	Fall Panicum
Na	Naconiche mucky sandy loam, frequently flooded	5	5	5	5	5	5	5	5	5	5	5	5	5
Nu	Nugent loam, frequently flooded	50	50	45	50	50	45	45	45	45	35	15	15	15
Ow	Owentown fine sandy loam, occasionally flooded	95	95	95	95	95	90	90	90	90	80	70	70	70
RzB	Rentzel loamy fine sand, 0 to 4 percent slopes	90	80	85	75	75	90	90	90	90	80	70	70	70
SaB	Sacul fine sandy loam, 1 to 3 percent slopes	90	95	95	85	85	85	85	85	85	75	65	65	65
SaF	Sacul fine sandy loam, 5 to 20 percent slopes	60	60	60	60	60	55	55	55	55	45	35	35	35
StB	Sawlit loam, 0 to 2 percent slopes	80	85	75	65	65	75	75	75	75	70	60	60	60
SwA	Sawlit-Sawtown complex, 0 to 2 percent slopes	80	85	75	65	65	75	75	75	75	70	60	60	60
Te	Tenaha loamy fine sand, 5 to 20 percent slopes	80	75	75	65	65	75	75	75	75	70	60	60	60

Table E-3 Soil Crop Productivity (percent cover)

MUID[1]	Mapping Soil Unit and Characteristics	Coastal Bermudagrass	Tifton 85 Bermudagrass	Common Bermudagrass	Bahiagrass	Buffalo Grass	Little Bluestem	Big Bluestem	Indian Grass	Switchgrass	Green Sprangletop	Sideoats Grama	Silver Bluestem	Fall Panicum
TeE	Tenaha loamy fine sand, 5 to 15 percent slopes	80	75	75	65	65	75	75	75	75	70	60	60	60
Tn	Iuka fine sandy loam	90	85	85	85	85	85	95	95	95	95	90	85	70
TrD	Darco loamy fine sand, 1 to 8 percent slopes	80	75	70	55	55	75	75	75	75	65	55	55	55
TrF	Darco loamy fine sandy, 8 to 20 percent slopes	75	75	70	50	50	70	70	70	70	60	50	50	50
UMX	Estes-Mantachie association	50	45	45	45	45	50	50	50	50	40	20	20	20
WoB	Woden fine sandy loam, 1 to 3 percent slopes	100	100	100	95	95	100	100	90	90	100	75	100	95
WtB	Woodtell loam, 1 to 3 percent slopes	85	90	80	70	70	80	80	80	80	75	65	65	65
WtE	Woodtell loam, 5 to 15 percent slopes	60	60	55	45	45	55	55	55	55	45	35	35	35

[1] MUID = map unit identification.

Source: Sabine 2009a.