Phosphorus Loss Assessment Tool Completion

Name of Facility: Stantonsburg Farm Facility Number: 40-041

Owner(s) Name: Stantonsburg Farm Inc. Phone No: 910-285-1005

Mailing Address: PO Box 1139 Wallace, NC 28466

Check the appropriate box below, and sign at the bottom:

No fields received a high or very high rating.

Yes, the fields listed below received a high or very high rating:

Field Number	Size (Acres)	Rating (High or Very High)

Please use as many additional attachment forms (PLAT-A-12-15-05) as needed for additional fields.

By completing the above section and any additional attachments and by signing this form, the facility owner and Technical Specialist acknowledge all application fields were evaluated using the Phosphorus Loss Assessment Tool. All necessary calculations were completed to conduct the Assessment. A copy will be kept on site with the Certified Animal Waste Management Plan. Any future modifications must be approved by a technical specialist and filed with the Soil and Water Conservation District prior to implementation. Waste plans with fields having a high or very high rating will have to be modified to address phosphorus loss by the next permit cycle beginning July, 2007.

Owner Name: Stantonsburg Farm Inc.

Owner Signature: _____ Date: _____

Technical Specialist Name: AJ Linton

Technical Specialist Signature: [signature] Date: 5-20-11

Affiliation: Murphy Family Ventures Phone No: 910-285-1357

Submit this form to:
NC Division of Water Quality
Aquifer Protection Section
Animal Feeding Operations Unit
1636 Mail Service Center
Raleigh, NC 27699-1636

NCANAT Version: 2.02

PLAT Results For: Greene 5/20/2011 8:10:16 AM

214-1

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	1
Soil Series:	WaB: Wagram loamy sand, 0 to 6 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.782 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	131
WV_Factor (USER)	1.31
Soil Test 28" - 32"	2
WV_Factor (USER)	1.16
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	3
LEACHATE P	=	1
SOURCE P	=	3
TOTAL P RATING	=	8 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:25:29 PM

214-2

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	2
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.03 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	398
WV_Factor (USER)	1.25
Soil Test 28" - 32"	5
WV_Factor (USER)	1.28
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	6
LEACHATE P	=	2
SOURCE P	=	3
TOTAL P RATING	=	11 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:26:06 PM

214-3

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	3
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.03 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	358
WV_Factor (USER)	1.25
Soil Test 28" - 32"	3
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	5
LEACHATE P	=	1
SOURCE P	=	3
TOTAL P RATING	=	9 (LOW)

RECEIVED / DENR / DWQ
Aquifer Protection Section
MAY 20 2011

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:26:17 PM

214-4

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	4
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.03 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	358
WV_Factor (USER)	1.25
Soil Test 28" - 32"	3
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	5
LEACHATE P	=	1
SOURCE P	=	3
TOTAL P RATING	=	9 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:03 PM

214-5

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	5
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.03 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	358
WV_Factor (USER)	1.25
Soil Test 28" - 32"	3
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	5
LEACHATE P	=	1
SOURCE P	=	3
TOTAL P RATING	=	9 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:11 PM

214-6

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	6
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.037 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	263
WV_Factor (USER)	1.3
Soil Test 28" - 32"	4
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	4
LEACHATE P	=	1
SOURCE P	=	4
TOTAL P RATING	=	9 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:18 PM

214-7

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	7
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.037 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	263
WV_Factor (USER)	1.3
Soil Test 28" - 32"	4
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	4
LEACHATE P	=	1
SOURCE P	=	4
TOTAL P RATING	=	9 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:25 PM

214-8

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	8
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.037 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	158
WV_Factor (USER)	1.24
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	3
LEACHATE P	=	0
SOURCE P	=	4
TOTAL P RATING	=	7 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:36 PM

214-9

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	9
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.602 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	363
WV_Factor (USER)	1.32
Soil Test 28" - 32"	10
WV_Factor (USER)	1.37
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	3
SOLUBLE P	=	21
LEACHATE P	=	3
SOURCE P	=	14
TOTAL P RATING	=	41 (MEDIUM)

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Aquifer Protection Section
MAY 20 2011

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:46 PM

214-10

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	10
Soil Series:	AuB: Autryville fine sand, 0 to 6 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.626 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	314
WV_Factor (USER)	1.21
Soil Test 28" - 32"	18
WV_Factor (USER)	1.43
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	3
SOLUBLE P	=	9
LEACHATE P	=	7
SOURCE P	=	3
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:40:52 PM

214-11

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	11
Soil Series:	AuB: Autryville fine sand, 0 to 6 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.626 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	314
WV_Factor (USER)	1.21
Soil Test 28" - 32"	18
WV_Factor (USER)	1.43
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	3
SOLUBLE P	=	9
LEACHATE P	=	7
SOURCE P	=	3
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:00 PM

214-12

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	12
Soil Series:	AuB: Autryville fine sand, 0 to 6 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.626 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	314
WV_Factor (USER)	1.21
Soil Test 28" - 32"	18
WV_Factor (USER)	1.43
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	3
SOLUBLE P	=	9
LEACHATE P	=	7
SOURCE P	=	3
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/20/2011 8:01:06 AM

Sub 1

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 1
Soil Series:	WaB: Wagram loamy sand, 0 to 6 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.782 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	131
WV_Factor (USER)	1.31
Soil Test 28" - 32"	2
WV_Factor (USER)	1.16
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	3
LEACHATE P	=	1
SOURCE P	=	3
TOTAL P RATING	=	8 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:07 PM

Sub 2

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 2
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.03 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	398
WV_Factor (USER)	1.25
Soil Test 28" - 32"	5
WV_Factor (USER)	1.28
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	6
LEACHATE P	=	2
SOURCE P	=	3
TOTAL P RATING	=	11 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:14 PM

Sub 3-5

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 3-5
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.03 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	358
WV_Factor (USER)	1.25
Soil Test 28" - 32"	3
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	5
LEACHATE P	=	1
SOURCE P	=	3
TOTAL P RATING	=	9 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:23 PM

Sub 6-8

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 6-7
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.037 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	263
WV_Factor (USER)	1.3
Soil Test 28" - 32"	4
WV_Factor (USER)	1.3
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	4
LEACHATE P	=	1
SOURCE P	=	4
TOTAL P RATING	=	9 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:31 PM

Sub 6-8

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 8
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Small Grain Overseed (Hay) :
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.037 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	158
WV_Factor (USER)	1.24
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	0
SOLUBLE P	=	3
LEACHATE P	=	0
SOURCE P	=	4
TOTAL P RATING	=	7 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:39 PM

INPUTS

Sub 9

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 9
Soil Series:	KaA: Kalmia loamy sand, 0 to 3 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.602 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	363
WV_Factor (USER)	1.32
Soil Test 28" - 32"	10
WV_Factor (USER)	1.37
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	3
SOLUBLE P	=	21
LEACHATE P	=	3
SOURCE P	=	14
TOTAL P RATING	=	41 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:48 PM

Sub 10-12

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	214
Field Number:	Sub 10-12
Soil Series:	AuB: Autryville fine sand, 0 to 6 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.626 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	314
WV_Factor (USER)	1.21
Soil Test 28" - 32"	18
WV_Factor (USER)	1.43
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	3
SOLUBLE P	=	9
LEACHATE P	=	7
SOURCE P	=	3
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:41:55 PM

INPUTS

13

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	13
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	122
WV_Factor (USER)	1.25
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	8
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:01 PM

INPUTS

14

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	14
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	138
WV_Factor (USER)	1.32
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	8
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:08 PM

Field 15

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	15
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	122
WV_Factor (USER)	1.25
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	8
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:14 PM

16

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	16
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	138
WV_Factor (USER)	1.32
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	8
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:20 PM

17

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	17
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	212
WV_Factor (USER)	1.27
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	13
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	28 (MEDIUM)

RECEIVED / DENR / DWQ
Aquifer Protection Section
MAY 20 2011

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:27 PM

INPUTS

17b

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	17b
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	212
WV_Factor (USER)	1.27
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	13
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	28 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:33 PM

INPUTS

18

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	18
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	193
WV_Factor (USER)	1.22
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	12
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	27 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:40 PM

19

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	19
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	212
WV_Factor (USER)	1.27
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	13
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	28 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:48 PM

INPUTS

20

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	20
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	193
WV_Factor (USER)	1.22
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	12
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	27 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:42:55 PM

INPUTS

21

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	21
Soil Series:	GoA: Goldsboro loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	107
WV_Factor (USER)	1.25
Artificial Drainage System:	NO
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	7
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:01 PM

INPUTS

~~Sub~~ 22

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	22
Soil Series:	GoA: Goldsboro loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	107
WV_Factor (USER)	1.25
Artificial Drainage System:	NO
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	7
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:08 PM

INPUTS

23

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	23
Soil Series:	GoA: Goldsboro loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	107
WV_Factor (USER)	1.25
Artificial Drainage System:	NO
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	7
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	22 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:24 PM

Sub 13,15

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	Sub 13,15
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	122
WV_Factor (USER)	1.25
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	8
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:29 PM

INPUTS

Sub 14, 16

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	Sub 14,16
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	138
WV_Factor (USER)	1.32
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	8
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	23 (LOW)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:35 PM

Sub 17,19

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	Sub 17,19
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	212
WV_Factor (USER)	1.27
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	13
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	28 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:41 PM

INPUTS

Sub 18, 20

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	Sub 18,20
Soil Series:	NoA: Norfolk loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	193
WV_Factor (USER)	1.22
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	12
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	27 (MEDIUM)

NCANAT Version: 2.02

PLAT Results For: Greene 5/17/2011 2:43:46 PM

Sub 21-23

INPUTS

Calendar Year:	2011
County:	Greene
Producer Identifier:	Stantonsburg 40-41
Tract Number:	2583
Field Number:	Sub 21-23
Soil Series:	GoA: Goldsboro loamy sand, 0 to 2 percent slopes
Crop:	Corn (Grain) : Conservation Tillage - minimum residue
Fertilizers:	Swine-Lagoon liquid
	Yearly Applied Amount: 5.1 ac in
	Lb P2O5: 53.4 lb
	Application Method: All other surface applications
Soil Loss:	0.433 t/ac/yr
Receiving Slope Distance	0-9 ft
Soil Test 0" - 4"	107
WV_Factor (USER)	1.25
Artificial Drainage System:	NO
Hydrologic Condition:	GOOD

OUTPUTS

PARTICULATE P	=	1
SOLUBLE P	=	7
LEACHATE P	=	0
SOURCE P	=	14
TOTAL P RATING	=	22 (LOW)

NCDA&CS Agronomic Division Phone: (919)733-2655 Web site: www.ncagr.gov/agronomi/ Report No: 39058

Soil Test Report

SERVING N.C. RESIDENTS FOR OVER 60 YEARS

Grower: **Murphy Brown LLC**
c/o Michael Norris
PO Box 856
Warsaw, NC 28398

Copies To:

Farm: 2568 S. B.

Greene County

Received: 04/18/2011 **Completed:** 04/28/2011 Links to Helpful Information

Agronomist Comments

3, 8

Field Information		Applied Lime			Recommendations												
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
SBF9#2					1st Crop:	Soybeans	0	0	0	10-30	0	20-25	2	0		$pH	3
					2nd Crop:	Corn Grain	0	120-160	0	10-30	0	20-25	$	0	.0	0	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.36	1.31	3.7	78.0	0.8	6.2	131	65	50.0	21.0	29	24	31	67	67	16	18				0.0

North Carolina
Tobacco Trust Fund Commission

Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
- Steve Troxler, Commissioner of Agriculture

NCDA&CS Agronomic Division Phone: (919)733-2655 Web site: www.ncagr.gov/agronomi/ Report No: 10931

Soil Test Report

SERVING N.C. RESIDENTS FOR OVER 60 YEARS

Grower: **Murphy Brown LLC**
Attn: Dave Nordin(David)
PO Box 856
Warsaw, NC 28398

Copies To:

Farm: 40-0041 STANTONSBURG

Received: 10/15/2009 **Completed:** 10/21/2009 Links to Helpful Information **Greene County**

Agronomist Comments

3, 8, 12

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P2O5*	*K2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB01					1st Crop:	Soybeans	0	0	0	0	0	0	0	0		$pH	3
Risers 10-12					2nd Crop:	Soybeans	0	0	0	0	0	0	0	0		$pH	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO3-N*	*NH4-N*	*Na*
MIN	0.71	1.21	5.2	75.0	1.3	6.5	314	184	40.0	16.0	36	24	24	100	100	32	37				0.8

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P2O5*	*K2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB02					1st Crop:	Soybeans	0	0	0	0	0	0	0	0		0	3
Riser 9					2nd Crop:	Soybeans	0	0	0	0	0	0	0	0		0	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO3-N*	*NH4-N*	*Na*
MIN	0.60	1.32	5.1	75.0	1.3	5.9	363	182	45.0	12.0	30	30	30	126	126	26	34				0.3

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P2O5*	*K2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB03					1st Crop:	Berm Hay/Pas,E	.5T	60-80	0	0	0	0	0	0		0	12
Risers 6-7					2nd Crop:	Small Grains	0	80-100	0	0	0	0	0	0	.0	0	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO3-N*	*NH4-N*	*Na*
MIN	0.56	1.30	6.3	86.0	0.9	6.4	263	107	56.0	21.0	48	38	31	120	120	41	27				0.1

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P2O5*	*K2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB04					1st Crop:	Berm Hay/Pas,E	.5T	60-80	0	0	0	0	$	0		0	12
Riser 8					2nd Crop:	Small Grains	0	80-100	0	0	0	0	2	0	.0	0	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO3-N*	*NH4-N*	*Na*
MIN	0.76	1.24	6.0	85.0	0.9	6.4	158	101	54.0	22.0	46	37	30	92	92	22	30				0.1

RECEIVED MAY 2010 Mike Jones

Field Information		Applied Lime			Recommendations													
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P2O5	K2O	Mg	S	Cu	Zn	B	Mn	See Note
STB05					1st Crop:	Berm Hay/Pas,E	.7T	60-80	0	0	0	0	0	0		0	12
Riser 2					2nd Crop:	Small Grains	0	80-100	0	0	0	0	0	0	.0	0	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO3-N	NH4-N	Na
MIN	0.51	1.25	7.0	84.0	1.1	6.3	398	229	49.0	19.0	40	33	26	205	205	51	47				0.4

Field Information		Applied Lime			Recommendations													
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P2O5	K2O	Mg	S	Cu	Zn	B	Mn	See Note
STB06					1st Crop:	Berm Hay/Pas,E	0	60-80	0	0	0	0	0	0		pH$	12
Risers 3-5					2nd Crop:	Small Grains	0	80-100	0	0	0	0	0	0	.0	$pH	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO3-N	NH4-N	Na
MIN	0.51	1.20	7.7	88.0	0.9	6.5	358	263	49.0	22.0	35	30	23	227	227	50	41				0.3

Field Information		Applied Lime			Recommendations													
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P2O5	K2O	Mg	S	Cu	Zn	B	Mn	See Note
STB07					1st Crop:	Corn Grain	0	120-160	0	0	0	0	2	0	.0	0	3
Risers 21-23					2nd Crop:	Corn Grain	0	120-160	0	0	0	0	$	0	.0	0	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO3-N	NH4-N	Na
MIN	0.36	1.25	4.5	82.0	0.8	6.2	107	161	46.0	17.0	23	28	28	68	68	23	30				0.2

Field Information		Applied Lime			Recommendations													
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P2O5	K2O	Mg	S	Cu	Zn	B	Mn	See Note
STB08					1st Crop:	Corn Grain	0	120-160	0	0	0	15-20	2	0	.0	0	3
Risers 18,20					2nd Crop:	Corn Grain	0	120-160	0	0	0	15-20	$	0	.0	0	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO3-N	NH4-N	Na
MIN	0.60	1.22	4.4	73.0	1.2	6.1	193	122	45.0	14.0	37	38	38	57	57	21	25				0.2

Field Information		Applied Lime			Recommendations													
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P2O5	K2O	Mg	S	Cu	Zn	B	Mn	See Note
STB09					1st Crop:	Corn Grain	0	120-160	0	0	0	0	0	0	.0	0	3
Risers 17,19					2nd Crop:	Corn Grain	0	120-160	0	0	0	0	0	0	.0	0	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO3-N	NH4-N	Na
MIN	0.46	1.27	4.4	77.0	1.0	5.9	212	86	50.0	17.0	36	40	40	79	79	36	26				0.1

Field Information		Applied Lime			Recommendations													
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*	
STB010					1st Crop:	Corn Grain	0	120-160	0	0-20	0	0	2	0	.0	0	3	
Risers 13,15					2nd Crop:	Corn Grain	0	120-160	0	0-20	0	0	$	0	.0	0	3	

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.71	1.25	4.4	73.0	1.2	6.0	122	78	50.0	13.0	31	36	36	56	56	13	26				0.3

Field Information		Applied Lime			Recommendations													
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*	
STB011					1st Crop:	Corn Grain	.4T	120-160	0	10-30	0	20-25	2	0	.0	0	3	
Risers 14,16					2nd Crop:	Corn Grain	0	120-160	0	10-30	0	20-25	$	0	.0	0	3	

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.51	1.32	3.1	65.0	1.1	5.7	138	62	41.0	13.0	19	28	28	60	60	25	21				0.1

North Carolina
Tobacco Trust Fund Commission

Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
- Steve Troxler, Commissioner of Agriculture

NCDA&CS Agronomic Division Phone: (919)733-2655 Web site: www.ncagr.gov/agronomi/

Report No: 24076

Soil Test Report

SERVING N.C. RESIDENTS FOR OVER 60 YEARS

Grower: Murphy Family Ventures LLC
PO Box 1139*
Wallace, NC 28466

Copies To:

Farm: STANTONSBURG 40-0041 Deep Samples

Received: 12/14/2010 Completed: 02/22/2011 Links to Helpful Information Greene County

Agronomist Comments

3, 8, 12

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB01					1st Crop:	Small Grains	1.5T	80-100	90-110	50-70	0	0	2	0	.0	10	3
					2nd Crop:	Soybeans	0	0	90-110	50-70	0	0	$	0		$	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.22	1.43	3.6	39.0	2.2	4.6	18	37	23.0	11.0	9	15	15	29	29	25	63				0.1

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB02					1st Crop:	Small Grains	1.3T	80-100	110-130	0	0	0	2	6	.0	10	3
					2nd Crop:	Soybeans	0	0	110-130	0	0	0	$	$		$	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.04	1.37	3.5	49.0	1.8	4.6	10	104	21.0	12.0	6	14	14	13	13	12	202				0.1

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB03					1st Crop:	Small Grains	1.9T	80-100	130-150	0	0	0	2	6	.0	10	3
					2nd Crop:	Berm Hay/Pas,M	0	180-220	130-150	0	0	0	$	$		$	12

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.13	1.30	5.3	62.0	2.0	4.9	4	162	31.0	16.0	3	4	11	8	8	12	253				0.2

Field Information		Applied Lime			Recommendations											
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB04					1st Crop:	Small Grains	2.4T	80-100	120-140	10-30	0	0	2	6	.0	10	3
					2nd Crop:	Berm Hay/Pas,M	0	180-220	120-140	70-90	0	0	$	$		$	12

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.04	1.39	4.6	46.0	2.5	4.7	6	65	25.0	14.0	2	4	11	7	7	11	145				0.1

Field Information		Applied Lime			Recommendations												
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P_2O_5	K_2O	Mg	S	Cu	Zn	B	Mn	See Note
STB05					1st Crop:	Small Grains	2.5T	80-100	120-140	0	0	0	2	6	.0	10	3
					2nd Crop:	Berm Hay/Pas,M	0	180-220	120-140	0	0	0	$	$		$	12

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO_3-N	NH_4-N	Na
MIN	0.13	1.28	5.6	52.0	2.7	4.9	5	146	26.0	13.0	4	5	12	11	11	14	250				0.1

Field Information		Applied Lime			Recommendations												
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P_2O_5	K_2O	Mg	S	Cu	Zn	B	Mn	See Note
STB06					1st Crop:	Small Grains	2.9T	80-100	130-150	0	0	0	2	6	.0	10	3
					2nd Crop:	Berm Hay/Pas,M	0	180-220	130-150	0	0	0	$	$		$	12

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO_3-N	NH_4-N	Na
MIN	0.04	1.30	5.8	48.0	3.0	4.5	3	163	21.0	13.0	3	4	11	9	9	16	331				0.4

Field Information		Applied Lime			Recommendations												
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P_2O_5	K_2O	Mg	S	Cu	Zn	B	Mn	See Note
STB07					1st Crop:	Corn Grain	2.9T	120-160	130-150	0	0	0	2	6	.0	10	3
					2nd Crop:	Corn Grain	0	120-160	130-150	0	0	0	$	$	.0	$	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO_3-N	NH_4-N	Na
MIN	0.18	1.27	6.7	43.0	3.8	4.2	2	113	24.0	11.0	4	19	19	20	20	16	359				0.2

Field Information		Applied Lime			Recommendations												
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P_2O_5	K_2O	Mg	S	Cu	Zn	B	Mn	See Note
STB08					1st Crop:	Corn Grain	2.9T	120-160	130-150	0	0	0	2	6	.0	10	3
					2nd Crop:	Corn Grain	0	120-160	130-150	0	0	0	$	$	.0	$	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO_3-N	NH_4-N	Na
MIN	0.04	1.31	7.5	47.0	4.0	4.5	2	95	27.0	13.0	5	20	20	16	16	18	402				0.2

Field Information		Applied Lime			Recommendations												
Sample No.	Last Crop	Mo	Yr	T/A	Crop or Year		Lime	N	P_2O_5	K_2O	Mg	S	Cu	Zn	B	Mn	See Note
STB09					1st Crop:	Corn Grain	1.7T	120-160	100-120	0	0	0	2	6	.0	10	3
					2nd Crop:	Corn Grain	0	120-160	100-120	0	0	0	$	$	.0	$	3

Test Results

Soil Class	HM%	W/V	CEC	BS%	Ac	pH	P-I	K-I	Ca%	Mg%	Mn-I	Mn-AI(1)	Mn-AI(2)	Zn-I	Zn-AI	Cu-I	S-I	SS-I	NO_3-N	NH_4-N	Na
MIN	0.04	1.27	5.0	50.0	2.5	4.8	12	145	24.0	11.0	7	21	21	17	17	16	256				0.2

Field Information		Applied Lime			Recommendations													
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P2O5*	*K2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB10					1st Crop:	Corn Grain	1.9T	120-160	120-140	20-40	0	0	2	6	.0	10	3
					2nd Crop:	Corn Grain	0	120-160	120-140	20-40	0	0	$	$	.0	$	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO3-N*	*NH4-N*	*Na*
MIN	0.13	1.38	4.5	40.0	2.7	4.5	5	58	25.0	10.0	6	21	21	12	12	11	189				0.1

Field Information		Applied Lime			Recommendations													
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P2O5*	*K2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
STB11					1st Crop:	Corn Grain	1.7T	120-160	130-150	10-30	0	0	2	6	.0	10	3
					2nd Crop:	Corn Grain	0	120-160	130-150	10-30	0	0	$	$	.0	$	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO3-N*	*NH4-N*	*Na*
MIN	0.13	1.31	4.4	45.0	2.4	4.4	2	68	26.0	12.0	4	19	19	12	12	14	217				0.2

North Carolina

Tobacco Trust Fund Commission

Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.
- Steve Troxler, Commissioner of Agriculture

NCDA&CS Agronomic Division Phone: (919)733-2655 Web site: www.ncagr.gov/agronomi/

Report No: 40290

Soil Test Report

SERVING N.C. RESIDENTS FOR OVER 60 YEARS

Grower: **Murphy Family Ventures LLC**
PO Box 1139*
Wallace, NC 28466

Copies To:

Deep Samples

Farm: 40-0041

Greene County

Received: 05/09/2011 Completed: 05/18/2011 Links to Helpful Information

Agronomist Comments

12,3,$

Field Information		Applied Lime			Recommendations												
Sample No.	*Last Crop*	*Mo*	*Yr*	*T/A*	*Crop or Year*		*Lime*	*N*	*P_2O_5*	*K_2O*	*Mg*	*S*	*Cu*	*Zn*	*B*	*Mn*	*See Note*
stb12					1st Crop:	Berm Hay/Pas,M	3T	180-220	130-150	10-30	0	0	0	0		$	12
					2nd Crop:	Small Grains	0	80-100	130-150	0	0	0	0	0	.0	10	3

Test Results

Soil Class	*HM%*	*W/V*	*CEC*	*BS%*	*Ac*	*pH*	*P-I*	*K-I*	*Ca%*	*Mg%*	*Mn-I*	*Mn-AI(1)*	*Mn-AI(2)*	*Zn-I*	*Zn-AI*	*Cu-I*	*S-I*	*SS-I*	*NO_3-N*	*NH_4-N*	*Na*
MIN	0.04	1.16	6.3	49.0	3.2	4.7	2	105	28.0	13.0	3	11	4	88	88	50	409				0.1

North Carolina
Tobacco Trust Fund Commission

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- Steve Troxler, Commissioner of Agriculture

STB07
RISERS 21-23
STB012
RISERS 18-20
STB011
RISERS 14,16
STB06
RISERS 3-5
STB05
RISER 2
STB010
RISERS 13,15
SBF9#2
RISER 1
STB03
RISERS 6,7
STB02
RISER 9
RISER 8
Sand Pit Rd
STB01
RISERS 10-12
©2011 Google
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Imagery Date: Feb 14, 2006
35°35'28.18" N 77°46'41.20" W elev 77 ft
Eye alt 4420 ft

		INDICATES DATA ENTERED BY USER		INDICATES NO DATA INPUT REQUIRED										
OUNTY	FACILITY	[illegible]	Soil ID	Tract	Pull	Pull Ac	Plan Ac.	Crop	SOIL TYPE	P-Index	Thresh		DS P-I	W/V
reene	AWS400041	Stantonsburg	STB05	214	2	4.99	83.40	BH/SG	NoA	398	233	Y	5	1.25
reene	AWS400041	Stantonsburg	STB06	214	3	5.85	83.40	BHG/SG	NoA	358	233	Y	3	1.25
reene	AWS400041	Stantonsburg	STB06	214	4	5.04	83.40	BHG/SG	NoA	358	233	Y	3	1.25
reene	AWS400041	Stantonsburg	STB06	214	5	5.53	83.40	BHG/SG	NoA	358	233	Y	3	1.25
reene	AWS400041	Stantonsburg	STB03	214	6	3.69	83.40	BHG/SG	KaA	263	233	Y	4	1.30
reene	AWS400041	Stantonsburg	STB03	214	7	5.02	83.40	BHG/SG	KaA	263	233	Y	4	1.30
reene	AWS400041	Stantonsburg	STB04	214	8	5.27	83.40	BHG/SG	KaA	158	233			1.24
reene	AWS400041	Stantonsburg	STB02	214	9	6.87	83.40	CWB	KaA	363	233	Y	10	1.32
reene	AWS400041	Stantonsburg	STB01	214	10	4.33	83.40	CWB	AuA	314	117	Y	18	1.21
reene	AWS400041	Stantonsburg	STB01	214	11	5.64	83.40	CWB	AuA	314	117	Y	18	1.21
reene	AWS400041	Stantonsburg	STB01	214	12	5.6	83.40	CWB	AuA	314	117	Y	18	1.21
reene	AWS400041	Stantonsburg	STB05	214	Sub 2	4.11	83.40	BH/SG	NoA	398	233	Y	5	1.25
reene	AWS400041	Stantonsburg	STB06	214	Sub 3-5	1.38	83.40	BHG/SG	NoA	358	233	Y	3	1.20
reene	AWS400041	Stantonsburg	STB03	214	Sub 6-7	2.99	83.40	BHG/SG	KaA	263	233	Y	4	1.30
reene	AWS400041	Stantonsburg	STB04	214	Sub 8	1.83	83.40	BHG/SG	KaA	158	233			1.24
reene	AWS400041	Stantonsburg	STB02	214	Sub 9	8.43	83.40	CWB	KaA	363	233	Y	10	1.32
reene	AWS400041	Stantonsburg	STB01	214	Sub10-12	6.83	83.40	CWB	AuA	314	117	Y	18	1.21
reene	AWS400041	Stantonsburg Stb12	SBF9#2	214	1	4.38	83.40	CWB	WaA	131	117	Y	2	1.31
reene	AWS400041	Stantonsburg	STB010	2583	13	2.44	83.40	CWB	NoA	122	233			1.25
reene	AWS400041	Stantonsburg	STB011	2583	14	3.63	83.40	CWB	NoA	138	233			1.32
reene	AWS400041	Stantonsburg	STB010	2583	15	0.42	83.40	CWB	NoA	122	233			1.25
reene	AWS400041	Stantonsburg	STB011	2583	16	2.94	83.40	CWB	NoA	138	233			1.32
reene	AWS400041	Stantonsburg	STB09	2583	17	5.04	83.40	CWB	NoA	212	233			1.27
reene	AWS400041	Stantonsburg	STB09	2583	17b	2.39	83.40	CWB	NoA	212	233			1.27
reene	AWS400041	Stantonsburg	STB08	2583	18	3.53	83.40	CWB	NoA	193	233			1.22
reene	AWS400041	Stantonsburg	STB09	2583	19	5.45	83.40	CWB	NoA	212	233			1.27
reene	AWS400041	Stantonsburg	STB08	2583	20	3.58	83.40	CWB	NoA	193	233			1.22
reene	AWS400041	Stantonsburg	STB07	2583	21	3.3	83.40	CWB	GoA	107	217			1.25
reene	AWS400041	Stantonsburg	STB07	2583	22	3.78	83.40	CWB	GoA	107	217			1.25
reene	AWS400041	Stantonsburg	STB07	2583	23	4.37	83.40	CWB	GoA	107	217			1.25
reene	AWS400041	Stantonsburg Stb12	SBF9#2	214	Sub 1	2.72	83.40	CWB	WaA	131	117	Y	2	1.31
reene	AWS400041	Stantonsburg	STB010	2583	Sub 13,15	2.24	83.40	CWB	NoA	122	233			1.25
reene	AWS400041	Stantonsburg	STB011	2583	Sub 14,16	5.23	84.40	CWB	NoA	138	233			1.32
reene	AWS400041	Stantonsburg	STB09	2583	Sub 17,19	6.15	83.40	CWB	NoA	212	233			1.27
reene	AWS400041	Stantonsburg	STB08	2583	Sub 18,20	4.05	84.40	CWB	NoA	193	233			1.22
reene	AWS400041	Stantonsburg	STB07	2583	Sub 21-23	7.65	83.40	CWB	GoA	107	217			1.25
												Y		
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/V	Tillage	Tile	SLOPE %		KF	HYD. GRP		SLOPE											TOTAL P RATING
3	NT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.008	140	2	VL	1402VLB1	0.81	56.00	0.67	0.030	LOW
)	NT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.008	140	2	VL	1402VLB1	0.81	56.00	0.67	0.030	LOW
)	NT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.008	140	2	VL	1402VLB1	0.81	56.00	0.67	0.030	LOW
)	NT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.008	140	2	VL	1402VLB1	0.81	56.00	0.67	0.030	LOW
)	NT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.008	140	2	VL	1402VLB2	0.72	56.00	0.67	0.037	LOW
)	NT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.008	140	2	VL	1402VLB2	0.72	56.00	0.67	0.037	LOW
	NT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.008	140	2	VL	1402VLB2	0.72	56.00	0.67	0.037	LOW
7	CT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.094	140	6	L	1406LB2	1.00	56.00	0.67	0.602	MEDIUM
3	CT	N	3.0	320	0.10	A	0.08	0-9	0.26	0.094	140	6	L	1406LA3	1.00	56.00	0.67	0.626	LOW
3	CT	N	3.0	320	0.10	A	0.08	0-9	0.26	0.094	140	6	L	1406LA3	1.00	56.00	0.67	0.626	LOW
3	CT	N	3.0	320	0.10	A	0.08	0-9	0.26	0.094	140	6	L	1406LA3	1.00	56.00	0.67	0.626	LOW
3	NT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.008	140	2	VL	1402VLB1	0.81	56.00	0.67	0.030	LOW
)	NT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.008	140	2	VL	1402VLB1	0.81	56.00	0.67	0.030	LOW
5	NT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.008	140	2	VL	1402VLB2	0.72	56.00	0.67	0.037	LOW
	NT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.008	140	2	VL	1402VLB2	0.72	56.00	0.67	0.037	LOW
7	CT	N	2.0	320	0.15	B	0.10	0-9	0.2	0.094	140	6	L	1406LB2	1.00	56.00	0.67	0.602	MEDIUM
3	CT	N	3.0	320	0.10	A	0.08	0-9	0.26	0.094	140	6	L	1406LA3	1.00	56.00	0.67	0.626	LOW
6	CT	N	3.0	320	0.15	A	0.10	0-9	0.26	0.094	140	6	L	1406LA3	1.00	56.00	0.67	0.782	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
6	CT	N	3.0	320	0.15	A	0.10	0-9	0.26	0.094	140	6	L	1406LA3	1.00	56.00	0.67	0.782	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.66	0.433	LOW
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.66	0.433	MEDIUM
	CT	N	1.0	320	0.17	B	0.12	0-9	0.12	0.094	140	6	L	1406LB1	1.00	56.00	0.67	0.433	LOW
				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
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				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
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				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
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				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
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				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
				#N/A			#N/A	0-9	#N/A	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	
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Grower:	Stantonsburg Sow Farm	Designed By:	KBW
Address:	PO Box 856	Checked By:	DSE
	Warsaw, NC 28398	Date:	12/18/08
County:	Greene	Sheet 1 of 7	

ANAEROBIC WASTE LAGOON DESIGN

FARM INFORMATION

	Farm Population:	
Nursery:	----------	400 Hd.
Wean to Finish:	----------	0
Finishing:	----------	1000 Hd.
Farrow to weanling:	----------	3400 Hd.
Farrow to feeder:	----------	0
Farrow to finish:	----------	0
Boars:	----------	0
Storage Period:	----------	67 Days
25 Yr. / 24 Hr Storm Event	----------	6.8 In.
"Heavy Rain" Factor		
Rainfall in Excess of Evaporation	----------	7.0 In.
Additional Water Usage:	----------	0
Additional Drainage Area:	----------	0

LAGOON INFORMATION

Is Lagoon Designed as an Irregular Shape?	(Y/N) ----------	Y
Does Operator Want Emergency Spillway?	(Y/N) ----------	N
Was This Design Built Prior to Sept. 1996?	(Y/N) ----------	Y
Is Drain Tile Req'd to Lower SHWT?	(Y/N) ----------	N

Seasonal High Water Table Elev:	----------		0.00
Freeboard:	----------		1.0 Ft.
Emergency Spillway Flow Depth:			
Side Slopes:	----------		3 :1 (H:V)
			0.0
			0.0
Top of Dike Elevation:	----------	Depth	98.05 Ft.
Finished Bottom Elevation:	BOTTOM E	11.05 Ft.	87.00 Ft.
Start Pump Elevation:	----------	19.08 In.	96.46 Ft.
Stop Pump Elevation:	----------	34.2 In.	95.20 Ft.

LAGOON VOLUME	REQUIRED VOL.	DESIGN VOLUMES	% REQ'D.
Storm Stor =	136228 (Cu.Ft.)	137,580 (Cu.Ft.)	100.99%
Temporary =	287418 (Cu.Ft.)	289,137 (Cu.Ft.)	100.60%
Permanent =	1619200 (Cu.Ft.)	1,623,989 (Cu.Ft.)	100.30%
Total Volume =	2,042,846 (Cu.Ft.)	2,050,706 (Cu.Ft.)	100.38%

1/2 Treatment Volume =	809,600 (Cu.Ft.)	
1/2 Treatment Volume Elevation =	91.45 Ft.	79.25 In.
90 Temporary Storage Volume Elevation =	N/A Ft.	N/A In.

Min. Required Liner Thickness	----------	1.6 Ft.
Lagoon Surface Area: (Inside TOD)	----------	240,402 S.F.

Grower:	Stantonsburg Sow Farm	Designed By:	KBW
Address:	PO Box 856	Checked By:	DSE
	Warsaw, NC 28398	Date:	12/18/08
County:	Greene	Sheet 3 of 7	

MINIMUM REQUIRED VOLUME CALCULATIONS

Permanent Storage:

Required Treatment Volume:

Animal Type	Capacity	* ALW	* (cu.ft./lb)	= Total
Nursery	400	30	1.00	12,000
Wean to Finish	0	115	1.00	0
Finishing	1,000	135	1.00	135,000
Farrow to weanling	3,400	433	1.00	1,472,200
Farrow to feeder	0	522	1.00	0
Farrow to finish	0	1,417	1.00	0
Boars	0	400	1.00	0

Total Required Treatment Volume (cu. ft.)= 1,619,200

Sludge Storage Volume:

Animal Type	Capacity	* ALW	* (cu.ft./lb)	= Total
Nursery	400	30	0.00	0
Wean to Finish	0	115	0.00	0
Finishing	1,000	135	0.00	0
Farrow to weanling	3,400	433	0.00	0
Farrow to feeder	0	522	0.00	0
Farrow to finish	0	1,417	0.00	0
Boars	0	400	0.000	0

Total Required Sludge Storage Volume (cu. ft.)= 0

Temporary Storage Volume:

Manure Production:

Animal Type	Capacity *	Sto. Period d./day) = Total		
Nursery	400	67	0.30	8,159
Wean to Finish	0	67	1.17	0
Finishing	1,000	67	1.37	91,790
Farrow to weanling	3,400	67	4.39	1,000,987
Farrow to feeder	0	67	5.30	0
Farrow to finish	0	67	14.38	0
Boars	0	67	4.06	0

Total Manure Production (gals.)= 1,100,936

Total Manure Production (cu.ft.)= 147,184

Excess Fresh Water:

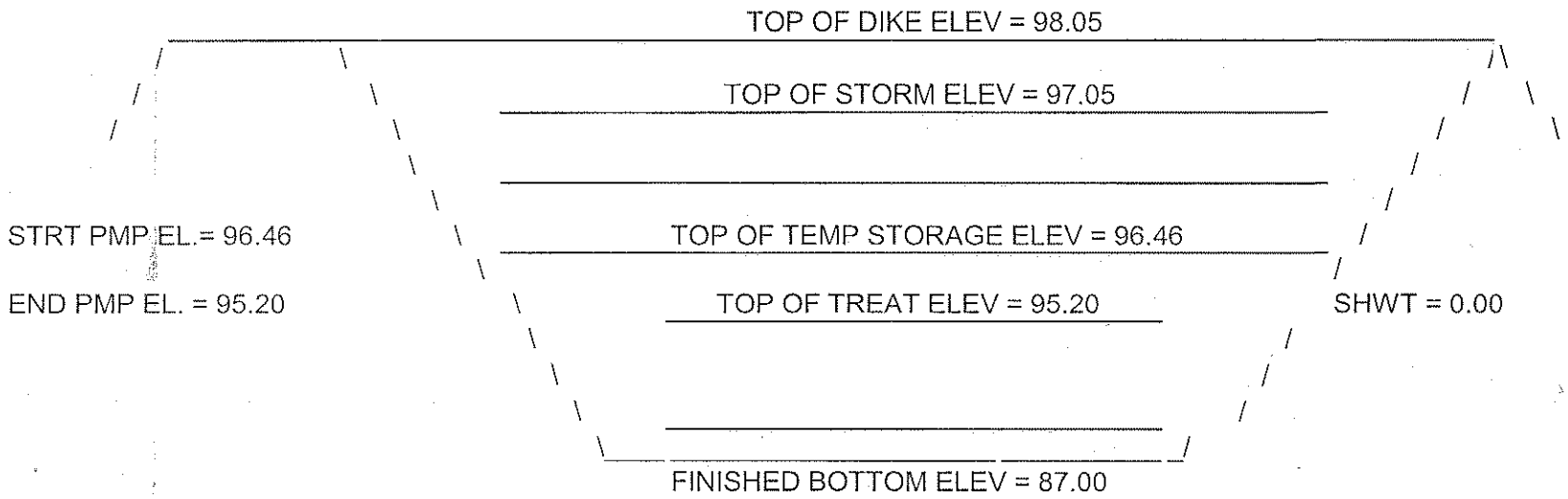
Animal Type	Capacity *	Sto. Period d./day) = Total		
Nursery	400	67	0.00	0
Wean to Finish	0	67	0.00	0
Finishing	1,000	67	0.00	0
Farrow to weanling	3,400	67	0.00	0
Farrow to feeder	0	67	0.00	0
Farrow to finish	0	67	0.00	0
Boars	0	67	0.00	0

Total Fresh Water Excess (gals.)= 0

Total Fresh Water Excess (cu.ft.)= 0

Grower:	Stantonsburg Sow Farm	Designe	KBW
Address:	PO Box 856	Checke	DSE
	Warsaw, NC 28398	Date:	12/18/08
County:	Greene	Sheet 6 of 7	

ZONE ELEVATIONS



Grower:	Stantonsburg Sow Farm	Designed By:	KBW
Address:	PO Box 856	Checked By:	DSE
	Warsaw, NC 28398	Date:	12/18/08
County:	Greene	Sheet 7 of 7	

This livestock waste treatment lagoon is designed in accordance with the United States Natural Resources Conservation Service PRACTICE STANDARD 359- WASTE TREATMENT LAGOON, revised prior to June, 1996.

Emergency Spillway:

An Emergency Spillway is not required.

NOTE: See attached Waste Utilization Plan

NORTH CAROLINA PROFESSIONAL SEAL 023994 ENGINEER DAVID S. ELKIN

DESIGNED: David S. Elkin

DATE: 12/18/08

COMMENTS: The lagoon has been designed as an irregular shape. This design is update of start and stop pump elevations and to show the 1/2 treatment volume level for sludge storage. This design does not supercede the original certification of the farm.

OPERATION & MAINTENANCE PLAN

Proper lagoon liquid management should be a year-round priority. It is especially important to manage levels so that you do not have problems during extended rainy and wet periods.

Maximum storage capacity should be available in the lagoon for periods when the receiving crop is dormant (such as wintertime for bermudagrass) or when there are extended rainy spells such as the thunderstorm season in the summertime. This means that at the first signs of plant growth in the later winter/early spring, irrigation according to a farm waste management plan should be done whenever the land is dry enough to receive lagoon liquid. This will make storage space available in the lagoon for future wet periods. In the late summer/early fall the lagoon should be pumped down to the low marker (see Figure 2-1) to allow for winter storage. Every effort should be made to *maintain* the lagoon close to the minimum liquid level as long as the weather and waste utilization plan will allow it.

Waiting until the lagoon has reached its maximum storage capacity before starting to irrigate does not leave room for storing excess water during extended wet periods. Overflow from the lagoon for any reason except a 25-year, 24-hour storm is a violation of state law and subject to penalty action.

The routine maintenance of a lagoon involves the following:

- Maintenance of a vegetative cover for the dam.
  Fescue or common bermudagrass are the most common vegetative covers. The vegetation should be fertilized each year, if needed, to maintain a vigorous stand. The amount of fertilizer applied should be based on a soils test, but in the event that it is not practical to obtain a soils test each year, the lagoon embankment and surrounding areas should be fertilized with 800 pounds per acre of 10-10-10, or equivalent.

- Brush and trees on the embankment must be controlled. This may be done by mowing, spraying, grazing, chopping, or a combination of these practices. This should be done at least once a year and possibly twice in years that weather conditions are favorable for heavy vegetative growth.

NOTE: If vegetation is controlled by spraying, the herbicide must not be allowed to enter the lagoon water. Such chemicals could harm the bacteria in the lagoon that are treating the waste.

Maintenance inspections of the entire lagoon should be made during the initial filling of the lagoon and at least monthly and after major rainfall and storm events. Items to be checked should include, as a minimum, the following:

- Waste Inlet Pipes, Recycling Pipes, and Overflow Pipes—look for:
  1. separation of joints
  2. cracks or breaks
  3. accumulation of salts or minerals
  4. overall condition of pipes

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- Lagoon surface—look for:
  1. undesirable vegetative growth
  2. floating or lodged debris

- Embankment—look for:
  1. settlement, cracking, or "jug" holes
  2. side slope stability—slumps or bulges
  3. wet or damp areas on the back slope
  4. erosion due to lack of vegetation or as a result of wave action
  5. rodent damage

Larger lagoons may be subject to liner damage due to wave action caused by strong winds. These waves can erode the lagoon sidewalls, thereby weakening the lagoon dam. A good stand of vegetation will reduce the potential damage caused by wave action. If wave action causes serious damage to a lagoon sidewall, baffles in the lagoon may be used to reduce the wave impacts.

Any of these features could lead to erosion and weakening of the dam. If your lagoon has any of these features, you should call an appropriate expert familiar with design and construction of waste lagoons. You may need to provide a temporary fix if there is a threat of a waste discharge. However, a permanent solution should be reviewed by the technical expert. Any digging into a lagoon dam with heavy equipment is a serious undertaking with potentially serious consequences and should not be conducted unless recommended by an appropriate technical expert.

- Transfer Pumps—check for proper operation of:
  1. recycling pumps
  2. irrigation pumps

Check for leaks, loose fittings, and overall pump operation. An unusually loud or grinding noise, or a large amount of vibration, may indicate that the pump is in need or repair or replacement.

NOTE: Pumping systems should be inspected and operated frequently enough so that you are not completely "surprised" by equipment failure. You should perform your pumping system maintenance at a time when your lagoon is at its low level. This will allow some safety time should major repairs be required. Having a nearly full lagoon is not the time to think about switching, repairing , or borrowing pumps. Probably, if your lagoon is full, your neighbor's lagoon is full also. You should consider maintaining an inventory of spare parts or pumps.

- Surface water diversion features are designed to carry *all* surface drainage waters (such as rainfall runoff, roof drainage, gutter outlets, and parking lot runoff) away from your lagoon and other waste treatment or storage structures. The only water that should be coming from your lagoon is that which comes from your flushing (washing) system pipes and the rainfall that hits the lagoon directly. You should inspect your diversion system for the following:
  1. adequate vegetation
  2. diversion capacity
  3. ridge berm height

Identified problems should be corrected promptly. It is advisable to inspect your system during or immediately following a heavy rain. If technical assistance is needed to determine proper solutions, consult with appropriate experts.

You should record the level of the lagoon just prior to when rain is predicted, and then record the level again 4 to 6 hours after the rain (assumes there is no pumping). This will give you an idea of how much your lagoon level will rise with a certain rainfall amount (you must also be recording your rainfall for this to work). Knowing this should help in planning irrigation applications and storage. If your lagoon rises excessively, you may have an inflow problem from a surface water diversion or there may be seepage into the lagoon from the surrounding land.

Lagoon Operation

Startup:

1. Immediately after construction establish a complete sod cover on bare soil surfaces to avoid erosion.

2. Fill new lagoon design treatment volume at least half full of water before waste loading begins, taking care not to erode lining or bank slopes.

3. Drainpipes into the lagoon should have a flexible pipe extender on the end of the pipe to discharge near the bottom of the lagoon during initial filling or another means of slowing the incoming water to avoid erosion of the lining.

4. When possible, begin loading new lagoons in the spring to maximize bacterial establishment (due to warmer weather).

5. It is recommended that a new lagoon be seeded with sludge from a healthy working swine lagoon in the amount of 0.25 percent of the full lagoon liquid volume. This seeding should occour at least two weeks prior to the addition of wastewater.

6. Maintain a periodic check on the lagoon liquid pH. If the pH falls below 7.0, add agricultural lime at the rate of 1 pound per 1000 cubic feet of lagoon liquid volume until the pH rises above 7.0. Optimum lagoon liquid pH is between 7.5 and 8.0.

7. A dark color, lack of bubbling, and excessive odor signals inadequate biological activity. Consultation with a technical specialist is recommended if these conditions occur for prolonged periods, especially during the warm season.

Loading:

The more frequently and regularly that wastewater is added to a lagoon, the better the lagoon will function. Flush systems that wash waste into the lagoon several times daily are optimum for treatment. Pit recharge systems, in which one or more buildings are drained and recharged each day, also work well.

- Practice water conservation—minimize building water usage and spillage from leaking waterers, broken pipes and washdown through proper maintenance and water conservation.

- Minimize feed wastage and spillage by keeping feeders adjusted. This will reduce the amount of solids entering the lagoon

Management:

- Maintain lagoon liquid level between the permanent storage level and the full temporary storage level.

- Place visible markers or stakes on the lagoon bank to show the minimum liquid level and the maximum liquid lever (Figure 2-1).

- Start irrigating at the earliest possible date in the spring based on nutrient requirements and soil moisture so that temporary storage will be maximized for the summer thunderstorm season. Similarly, irrigate in the late summer/early fall to provide maximum lagoon storage for the winter.

- The lagoon liquid level *should never* be closer than 1 foot to the lowest point of the dam or embankment.

- Do not pump the lagoon liquid level lower that the permanent storage level unless you are removing sludge.

- Locate float pump intakes approximately 18 inches underneath the liquid surface and as far away from the drainpipe inlets as possible.

- Prevent additions of bedding materials, long-stemmed forage or vegetation, molded feed, plastic syringes, or other foreign materials into the lagoon.

- Frequently remove solids from catch basins at end of confinement houses or wherever they are installed.

- Maintain strict vegetation, rodent, and varmint control near lagoon edges.

- Do not allow trees or large bushes to grow on lagoon dam or embankment.

- Remove sludge from the lagoon either when the sludge storage capacity is full or before it fills 50 percent of the permanent storage volume.

- If animal production is to be terminated, the owner is responsible for obtaining and implementing a closure plan to eliminate the possibility of a pollutant discharge.

Sludge Removal:

Rate of lagoon sludge buildup can be reduced by:

- proper lagoon sizing,
- mechanical solids separation of flushed waste,
- gravity settling of flushed waste solids in an appropriately designed basin, or
- minimizing feed wastage and spillage.

Lagoon sludge that is removed annually rather than stored long term will:

- have more nutrients,
- have more odor, and
- require more land to properly use the nutrients.

Removal techniques:

- Hire a custom applicator.

- Mix the sludge and lagoon liquid with a chopper-agitator impeller pump through large-bore sprinkler irrigation system onto nearby cropland; and soil incorporate.

- Dewater the upper part of lagoon by irrigation onto nearby cropland or forageland; mix remaining sludge; pump into liquid sludge applicator; haul and spread onto cropland or forageland; and soil incorporate.

- Dewater the upper part of lagoon by irrigation onto nearby cropland or forageland; dredge sludge from lagoon with dragline or sludge barge; berm an area beside lagoon to receive the sludge so that liquids can drain back into lagoon; allow sludge to dewater; haul and spread with manure spreader onto cropland or forageland; and soil incorporate.

Regardless of the method, you must have the sludge material analyzed for waste constituents just as you would your lagoon water. The sludge will contain different nutrient and metal values from the liquid. The application of the sludge to fields will be limited by these nutrients as well as any previous waste applications to that field and crop requirement. Waste application rates will be discussed in detail in Chapter 3.

When removing sludge, you must also pay attention to the liner to prevent damage. Close attention by the pumper or drag-line operator will ensure that the lagoon liner remains intact. If you see soil material or the synthetic liner material being disturbed, you should stop the activity immediately and not resume until you are sure that the sludge can be removed without liner injury. If the liner is damaged it must be repaired as soon as possible.

Sludge removed from the lagoon has a much higher phosphorus and heavy metal content than liquid. Because of this it should probably be applied to land with low phosphorus and metal levels, as indicated by a soil test, and incorporated to reduce the chance of erosion. Note that if the sludge is applied to fields with very high soil-test phosphores, it should be applied only at rates equal to the crop removal of phosphorus. As with other wastes, always have your lagoon sludge analyzed for its nutrient value.

The application of sludge will increase the amount of odor at the waste application site. Extra precaution should be used to observe the wind direction and other conditions which could increase the concern of neighbors.

Possible Causes of Lagoon Failure

Lagoon failures result in the unplanned discharge of wastewater from the structure. Types of failures include leakage through the bottom or sides, overtopping, and breach of the dam. Assuming proper design and construction, the owner has the responsibility for ensuring structure safety. Items which may lead to lagoon failures include:

- Modification of the lagoon structure—an example is the placement of a pipe in the dam without proper design and construction. (Consult an expert in lagoon design before placing any pipes in dams.)
- Lagoon liquid levels—high levels are a safety risk.
- Failure to inspect and maintain the dam.
- Excess surface water flowing into the lagoon.
- Liner integrity—protect from inlet pipe scouring, damage during sludge removal, or rupture from lowering lagoon liquid level below groundwater table.

NOTE: If lagoon water is allowed to overtop the dam, the moving water will soon cause gullies to form in the dam. Once this damage starts, it can quickly cause a large discharge of wastewater and possible dam failure.

EMERGENCY ACTION PLAN

PHONE NUMBERS

DWQ 252-946-6481
EMERGENCY MANAGEMENT SYSTEM 910-293-3434
SWCD 252-747-3705
NRCS 252-747-3705

This plan will be implemented in the event that wastes from your operation are leaking, overflowing, or running off site. You should not wait until wastes reach surface waters or leave your property to consider that you have a problem. You should make every effort to ensure that this does not happen. This plan should be posted in an accessible location for all employees at the facility. The following are some action items you should take.

1. Stop the release of wastes. Depending on the situation, this may or may not be possible. Suggested responses to some possible problems are listed below.

   A. Lagoon overflow-possible solutions are:

      a. Add soil to berm to increase elevation of dam.
      b. Pump wastes to fields at an acceptable rate.
      c. Stop all flows to the lagoon immediately.
      d. Call a pumping contractor.
      e. Make sure no surface water is entering lagoon.

   B. Runoff from waste application field-actions include:

      a. Immediately stop waste application.
      b. Create a temporary diversion to contain waste.
      c. Incorporate waste to reduce runoff.
      d. Evaluate and eliminate the reason(s) that caused the runoff.
      e. Evaluate the application rates for the fields where runoff occurred.

   C. Leakage from the waste pipes and sprinklers-action include:

      a. Stop recycle pump.
      b. Stop irrigation pump.
      c. Close valves to eliminate further discharge.
      d. Repair all leaks prior to restarting pumps.

   D. Leakage from flush systems, houses, solid separators-action include:

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a. Stop recycle pump.
b. Stop irrigation pump.
c. Make sure no siphon occurs.
d. Stop all flows in the house, flush systems, or solid separators.
e. Repair all leaks prior to restarting pumps.

E. Leakage from base or sidewall of lagoon. Often this is seepage as opposed to

a. Dig a small sump or ditch away from the embankment to catch all seepage, put in a submersible pump, and pump back to the lagoon.
b. If holes are caused by burrowing animals, trap or remove animals and fill holes and compact with a clay type soil.
c. Have a professional evaluate the condition of the side walls and lagoon bottom as soon as possible.

2. Assess the extent of the spill and note any obvious damages.

a. Did the waste reach any surface waters?
b. Approximately how much was released and for what duration?
c. Any damage noted, such as employee injury, fish kills, or property damage?
d. Did the spill leave the property?
e. Does the spill have the potential to reach surface waters?
f. Could a future rain event cause the spill to reach surface waters?
g. Are potable water wells in danger (either on or off of the property)?
h. How much reached surface waters?

3. Contact appropriate agencies.

a. During normal business hours, call your DWQ (Division of Water Quality) regional office; Phone 252-946-6481 After hours, emergency number: 919-733-3942. Your phone call should include: your name, facility, telephone number, the details of the incident from item 2 above, the exact location of the facility, the location or direction of movement of the spill, weather and wind conditions. The corrective measures that have been under taken, and the seriousness of the situation.
b. If spill leaves property or enters surface waters, call local EMS phone number 252-747-2544
c. Instruct EMS to contact local Health Department.
d. Contact CES, phone number 252-747-5831, local SWCD office phone number 252-747-3705, and local NRCS office for advice/technical assistance phone number 252-747-3705

4. If none of the above works call 911 or the Sheriff's Department and explain your problem to them and ask that person to contact the proper agencies for you.

5. Contact the contractor of your choice to begin repair of problem to minimize off-site damage.

a. Contractors Name: Willie Ammons (MB)
b. Contractors Address: 2822 Hwy 24 West Warsaw, NC 28398
c. Contractors Phone: 910-296-7853 910-296-8293

6. Contact the technical specialist who certified the lagoon (NRCS, Consulting Engineer, etc.

a. Name: David Elkin
b. Phone: 910-293-3434

7. Implement procedures as advised by DWQ and technical assistance agencies to rectify the damage, repair the system, and reassess the waste management plan to keep problems with release of wastes from happening again.

~~Insect Control~~ Checklist for Animal Operations

Source		Cause	BMPs to Minimize Insects	Site Specific Practices
			Liquid Systems	
Flush Gutters	•	Accumulation of Solids	☑ Flush system is designed and operated sufficiently to remove accumulated solids from gutters as designed; ☑ Remove bridging of accumulated solids at discharge	
Lagoons and Pits	•	Crusted Solids	☑ Maintain lagoons, settling basins and pits where pest breeding is apparent to minimize the crusting of solids to a depth of no more than 6 - 8 inches over more than 30% of surface.	
Excessive Vegetative Growth	•	Decaying vegetation	☑ Maintain vegetative control along banks of lagoons and other impoundments to prevent accumulation of decaying vegetative matter along water's edge on impoundment's perimeter.	
			Dry Systems	
Feeders	•	Feed Spillage	☑ Design, operate and maintain feed systems (e.g., bunkers and troughs) to minimize the accumulation of decaying wastage. ☑ Clean up spillage on a routine basis (e.g., 7 - 10 day interval during summer; 15-30 day interval during winter).	
Feed Storage	•	Accumulation of feed residues	☑ Reduce moisture accumulation within and around immediate perimeter of feed storage areas by insuring drainage away from site and/or providing adequate containment (e.g., covered bin for brewer's grain and similar high moisture grain products). ☐ Inspect for and remove or break up accumulated solids in filter strips around feed storage as needed.	
Animal Holding Areas	•	Accumulations of animal wastes and feed wastage	☐ Eliminate low areas that trap moisture along fences and other locations where waste accumulates and disturbance by animals is minimal. ☐ Maintain fence rows and filter strips around animal holding areas to minimize accumulations of wastes (i.e. inspect for and remove or break up accumulated solids as needed.	

Source	Cause	BMPs to Minimize Insects	Site Specific Practices
Dry Manure Handling Systems	● Accumulations of animal wastes	☐ Remove spillage on a routine basis (e.g., 7-10 day interval during summer; 15-30 day interval during winter) where manure is loaded for land application or disposal. ☐ Provide fo adequate drainage around manure stockpiles. ☐ Inspect for an remove or break up accumulated wastes in filter strips around stockpiles and manure handling areas as needed.	

For more information contact the Cooperative Extension Service, Department of Entomology, Box 7613, North Carolina State University, Raleigh, NC 27695-7613

Swine Farm Waste Management Odor Control Checklist

Source		Cause	BMPs to Minimize Odor	Site Specific Practices
Farmstead	●	Swine Production	☑ Vegetative or wooded buffers; ☐ Recommended best management practices; ☑ Good judgement and common sense	
Animal body surfaces	●	Dirty manure-covered animals	☑ Dry floors	
Floor surfaces	●	Wet manure-covered floors	☑ Slotted floors; ☑ Waterers located over slotted floors; ☐ Feeders at high end of solid floors; ☐ Scrape manure buildup from floors; ☐ Underfloor ventilation for drying	
Manure collection pits	● ●	Urine; Partial microbial decomposition	☑ Frequent manure removal by flush, pit recharge, or scrape; ☐ Underfloor ventilation	
Ventilation exhaust fans	● ●	Volatile gases; Dust	☑ Fan maintenance; ☑ Efficient air movement	
Indoor surfaces	●	Dust	☑ Washdown between groups of animals; ☐ Feed additives; ☐ Feed covers; ☑ Feed delivery downspout extenders to feeder covers	
Flush tanks	●	Agitation of recycled lagoon liquid while tanks are filling	☐ Flush tank covers; ☐ Extend fill to near bottom of tanks with anti-siphon vents	
Flush alleys	●	Agitation during wastewater conveyance	☐ Underfloor flush with underfloor ventilation	
Pit recharge points	●	Agitation of recycled lagoon liquid while pits are filling	☑ Extend recharge lines to near bottom of pits with anti-siphon vents	
Lift stations	●	Agitation during sump tank filling and drawdown	☐ Sump tank covers	
Outside drain collection or junction boxes	●	Agitation during wastewater conveyance	☐ Box covers	

Source	Cause	BMPs to Minimize Odor	Site Specific Practices
End of drainpipes at lagoon	• Agitation during wastewater conveyance	☑ Extend discharge point of pipes underneath lagoon liquid level	
Lagoon surfaces	• Volatile gas emission; • Biological mixing; • Agitation	☑ Proper lagoon liquid capacity; ☑ Correct lagoon startup procedures; ☐ Minimum surface area-to-volume ratio; ☑ Minimum agitation when pumping; ☐ Mechanical aeration; ☐ Proven biological additives	
Irrigation sprinkler nozzles	• High pressure agitation; • Wind drift	☑ Irrigate on dry days with little or no wind; ☐ Minimum recommended operating pressure; ☑ Pump intake near lagoon liquid surface; ☐ Pump from second stage lagoon	
Storage tank or basin surface	• Partial microbial decomposition; • Mixing while filling; • Agitation when emptying	☐ Bottom or midlevel loading; ☐ Tank covers; ☐ Basin surface mats of solids; ☐ Proven biological additives or oxidants	
Settling basin surface	• Partial microbial decomposition; • Mixing while filling; • Agitation when emptying	☐ Extend drainpipe outlets underneath liquid level; ☐ Remove settled solids regularly	
Manure, slurry or sludge spreader outlets	• Agitation when spreading; • Volatile gas emissions	☐ Soil injection of slurry/sludges; ☐ Wash residual manure from spreader after use; ☐ Proven biological additives or oxidants	
Uncovered manure, slurry or sludge on field surfaces	• Volatile gas emissions while drying	☐ Soil injection of slurry/sludges; ☐ Soil incorporation within 48 hrs.; ☐ Spread in thin uniform layers for rapid drying; ☐ Proven biological additives or oxidants	
Dead animals	• Carcass decomposition	☑ Proper disposition of carcasses	
Dead animal disposal pits	• Carcass decomposition	☐ Complete covering of carcasses in burial pits; ☐ Proper location/construction of disposal pits	
Incinerators	• Incomplete combustion	☐ Secondary stack burners	

Source	Cause	BMPs to Minimize Odor	Site Specific Practices
Standing water around facilities	• Improper drainage; • Microbial decomposition of organic matter	☑ Grade and landscape such that water drains away from facilities	
Mud tracked onto public roads from farm access	• Poorly maintained access roads	☑ Farm access road maintenance	

Additional Information:	Available From:
Swine Manure Management; .0200 Rule/BMP Packet	NCSU, County Extension Center
Swine Production Farm Potential Odor Sources and Remedies; EBAE Fact Sheet	NCSU - BAE
Swine Production Facility Manure Management: Pit Recharge - Lagoon Treatment; EBAE 128-88	NCSU - BAE
Swine Production Facility Manure Management: Underfloor Flush - Lagoon Treatment; EBAE 129-88	NCSU - BAE
Lagoon Design and Management for Livestock Manure Treatment and Storage; EBAE 103-88	NCSU - BAE
Calibration of Manure and Wastewater Application Equipment; EBAE Fact Sheet	NCSU - BAE
Controlling Odors from Swine Buildings; PIH-33	NCSU - Swine Extension
Environmental Assurance Program: NPPC Manual	NC Pork Producers Assoc.
Options for Managing Odor; a report from the Swine Odor Task Force	NCSU - Agri Communications
Nuisance Concerns in Animal Manure Management: Odors and Flies; PRO107, 1995 Conference Proceedings	Florida Cooperative Extension

Mortality Management Methods

(check which method(s) are being implemented)

- ☐ Burial three feet beneath the surface of the ground within 24 hours after knowledge of the death. The burial must be at least 300 feet from any flowing stream or public body of water.
- ☑ Rendering at a rendering plant licensed under G.S. 106-168.7.
- ☐ Complete incineration
- ☐ In the case of dead poultry only, placing in a disposal pit of a size and design approved by the Department of Agriculture.
- ☐ Any method which in the professional opinion of the State Veterinarian would make possible the salvage of part of a dead animal's value without endangering human or animal health. (Written approval of the State Veterinarian must be attached)

December 18, 1996