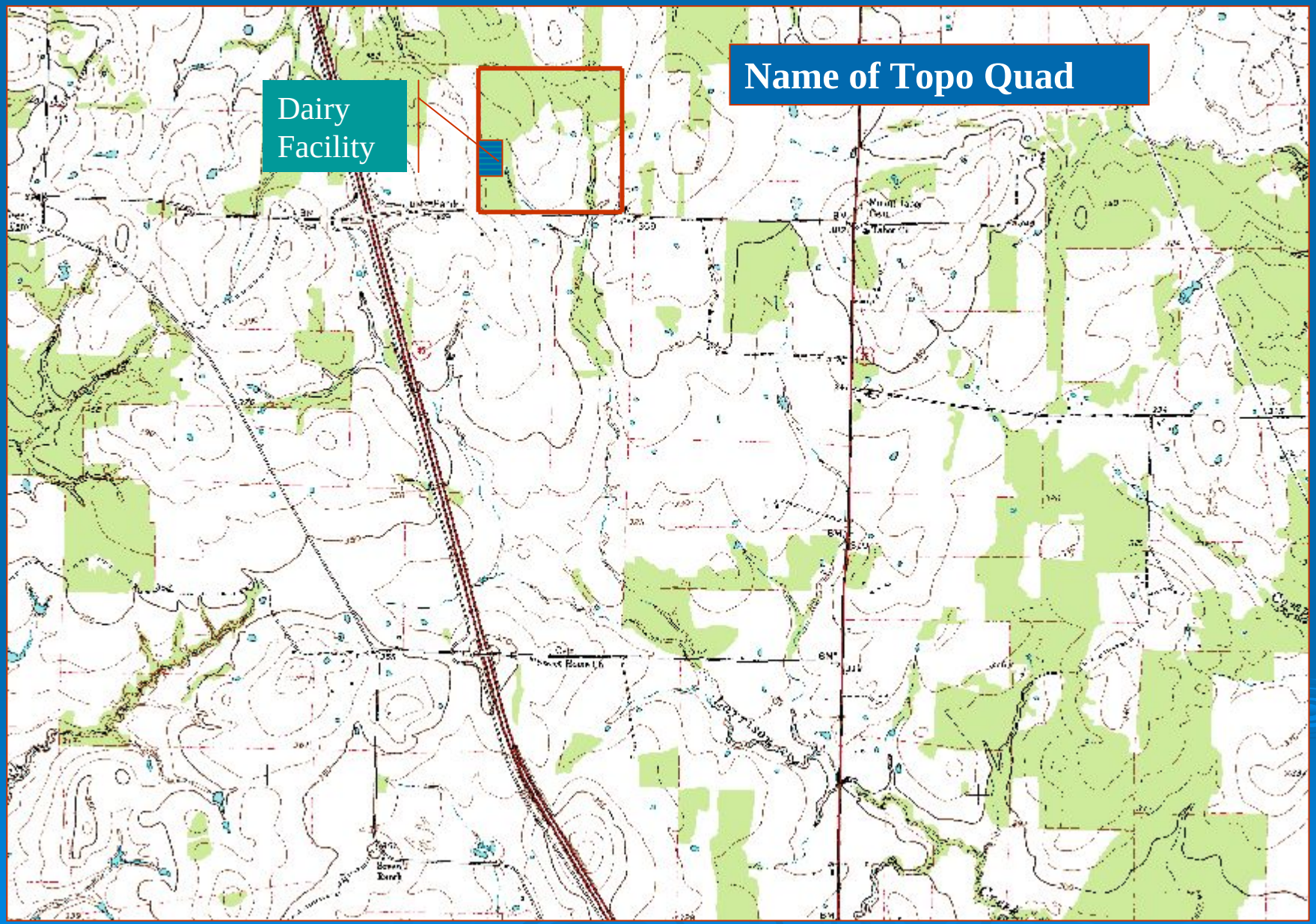
Example Waste Utilization / Nutrient Management Plan

Revised 7/05

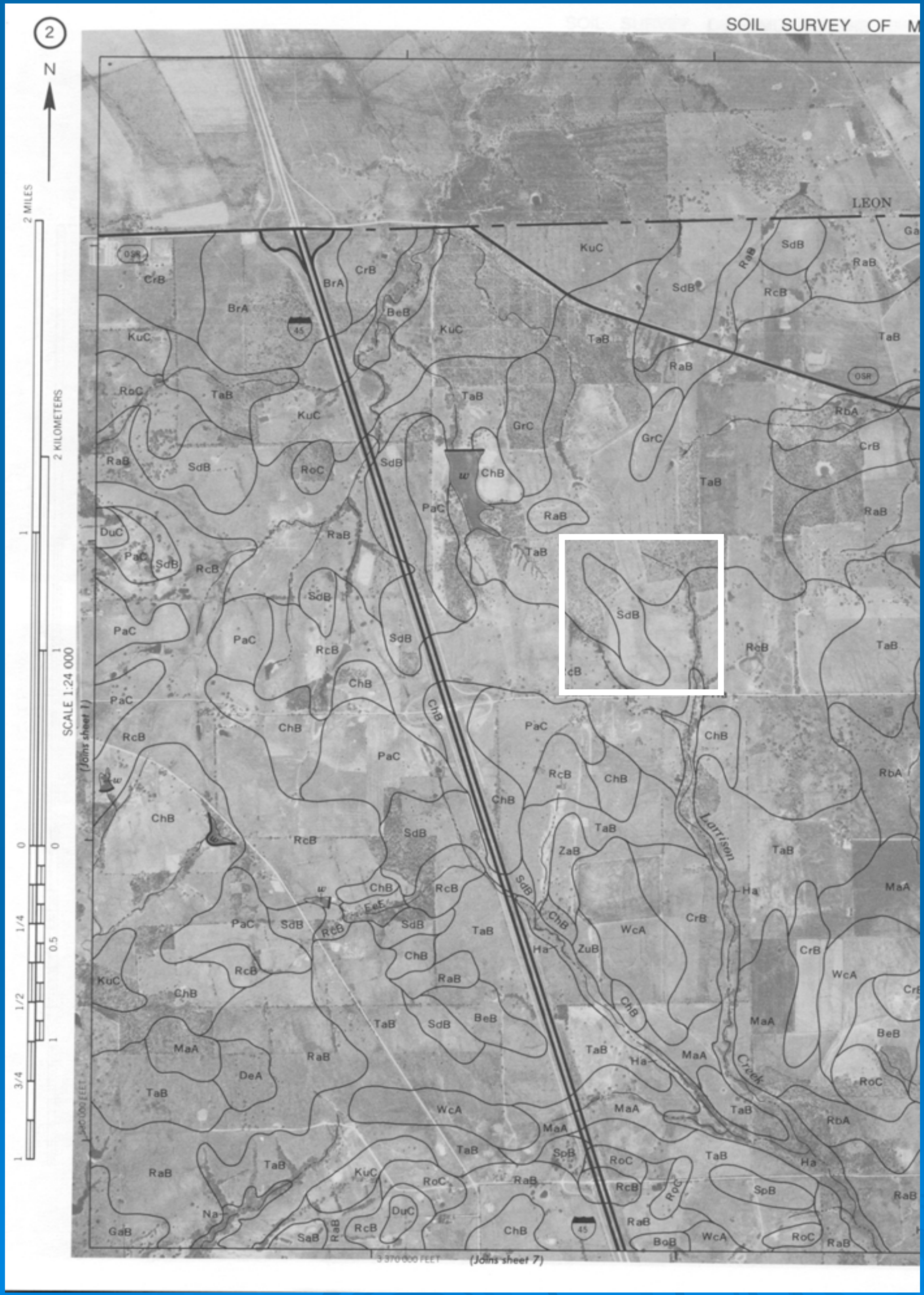
Step 1 - Locate Operation

- Locate on Topo Map first.
  - Note if any named streams or water bodies present within 2000 feet of the application area of any field, look for other areas of environmental significance.


Dairy Facility
Name of Topo Quad

Step - 2

- Locate operation on a soil map.
- If published soil survey is not available
  - Contact county office to see if they have maps available
  - If no maps available locally, have office contact Area Resource Soil Scientist to get mapping done.



2
N
SOIL SURVEY OF M
LEON
2 MILES
2 KILOMETERS
SCALE 1:24 000
(Joins sheet 1)
(Joins sheet 7)
Larrison
Creek
KuC
SdB
RaB
RcB
TaB
CrB
BrA
BeB
RoC
GrC
ChB
PaC
DuC
RbA
WcA
MaA
ZaB
ZuB
Ha
DeA
SpB
GaB
BoB

Step - 3

- Again, note if any named water bodies present within 2000 feet of the application area of any field, look for other areas of environmental significance.
- Check soils to see if any are frequently flooded.

Step - 4

- Site visit
  - Discuss operation with producer and mention need to get soil tests on all application fields
  - Gather facility data needed for waste utilization plan
  - Record slope of the predominant soil of each field
  - Note quality of perennial grass cover
  - Record cropping system in cropland
  - Record yield goal for crops

Step - 5

- Develop plan map
  - Operation may be located on an aerial photo.
  - A sketch of the property can be made.
- You must have current soil test results for each field before you can complete plan.

Plan Map


N
1 - Headquarters - 9.0 ac
2 - Pasture - 9.5
3 - Pasture - 27.9 ac
4 - Pasture - 8.7 ac
5 - Hay land - 44.0 ac
6 - Wildlife land - 11.5 ac
7 – Hay Land- 24.8 ac
8 – Hay Land - 16.1 ac
Dairy Lagoons
Dairy Blds.
Well
Scale 1:7920
1
2
3
4
5
6
7
8

Step - 6

- Create an application area map
  - Show buffers
  - Filter Strips
  - Other out areas
- Adjust field acreage due to these out areas

Application Area Map

Step - 7

- Locate fields on soil map.
- Find soil information needed for P-Index or other waste utilization planning
  - Soil legend
  - Soil and Water Features
  - Physical & Chemical Properties of Soil

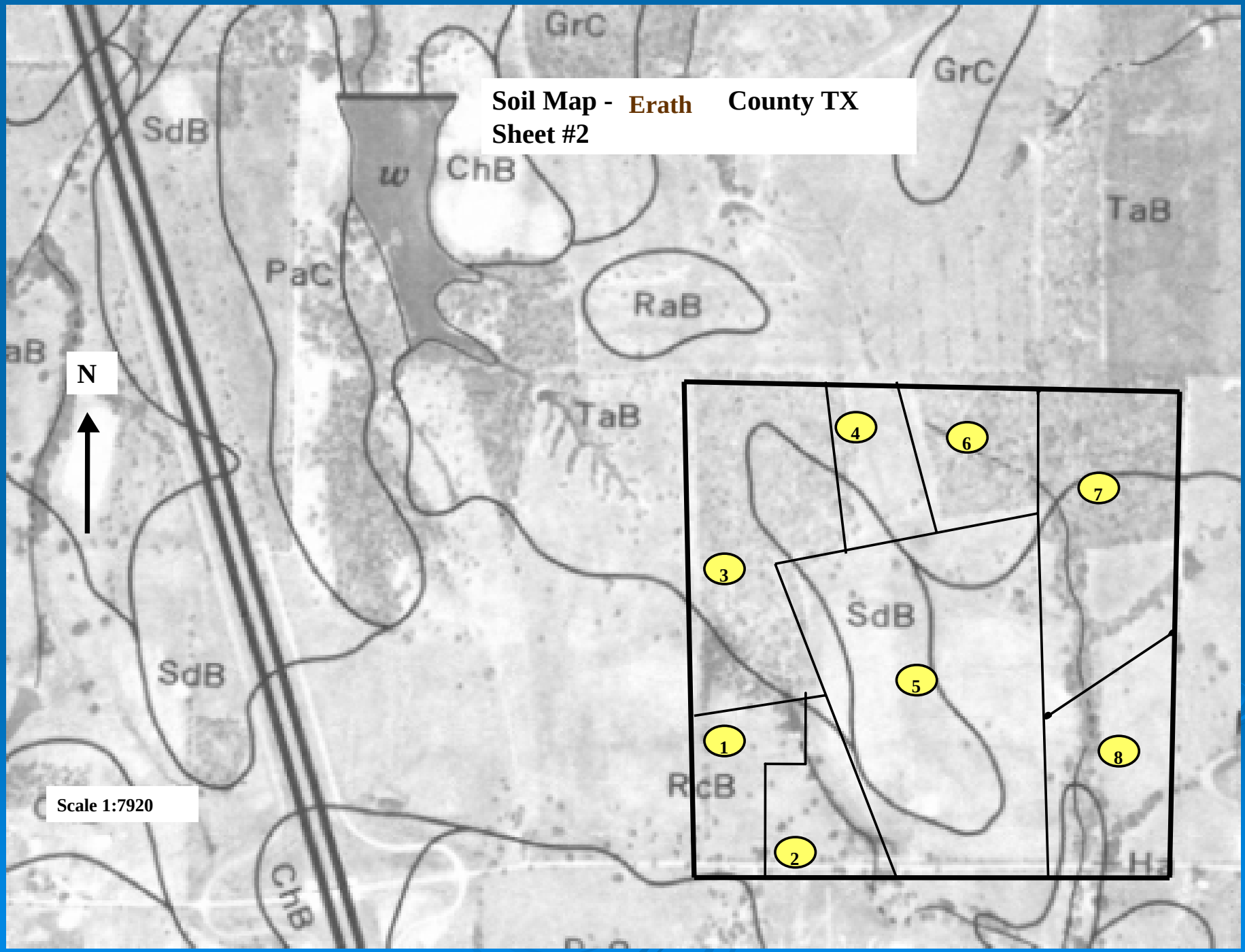

Soil Map - Erath County TX
Sheet #2
GrC
GrC
SdB
w
ChB
TaB
PaC
RaB
TaB
N
SdB
SdB
RcB
ChB
Scale 1:7920
1
2
3
4
5
6
7
8

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
ArD	Arriola fine sandy loam, 5 to 8 percent slopes	722	0.3
BeB	Benchley clay loam, 1 to 5 percent slopes	702	0.2
BnB	Bienville loamy fine sand, 0 to 3 percent slopes	2,747	0.9
BoB	Boonville fine sandy loam, 1 to 3 percent slopes	21,397	7.1
BrA	Bremond-Wilson complex, 0 to 2 percent slopes	609	0.2
BuA	Burleson clay, 0 to 1 percent slopes	1,358	0.4
ChB	Chazos loamy fine sand, 1 to 5 percent slopes	12,068	4.1
CrB	Crockett loam, 1 to 3 percent slopes	2,825	0.9
DdA	Derly silt loam, 0 to 1 percent slopes	887	0.3
DeA	Derly-Rader complex, 0 to 1 percent slopes	7,833	2.6
DmA	Dimebox silty clay, 0 to 1 percent slopes	375	0.1
DuC	Dutek loamy fine sand, 1 to 5 pecent slopes	343	0.1
EeE	Ellis clay, 5 to 15 percent slopes	999	0.3
EmB	Elmina loamy fine sand, 1 to 3 percent slopes	2,336	0.8
EuB	Eufaula loamy fine sand, 1 to 5 percent slopes	780	0.3
EuE	Eufaula loamy fine sand, 5 to 15 percent slopes	769	0.3
FtB	Flatonia clay loam, 1 to 3 percent slopes	1,654	0.5
GaB	Gasil fine sandy loam, 1 to 5 percent slopes	4,307	1.4
Gg	Gladewater clay, occasionally flooded	1,685	0.6
Gh	Gladewater clay, frequently flooded	4,323	1.4
Gn	Gladewater and Nahatche soils, frequently flooded	1,935	0.6
Go	Gowker clay loam, frequently flooded	25,031	8.3
GpA	Gowker-Portersprings complex, 0 to 2 percent slopes	4,026	1.3
GrC	Gredge fine sandy loam, 1 to 5 percent slopes	15,826	5.2
GrD	Gredge fine sandy loam, 5 to 8 percent slopes	6,254	2.1
Ha	Hatliff fine sandy loam, frequently flooded	5,134	1.7
HuC	Huntsburg loamy fine sand, 1 to 5 percent slopes	1,053	0.4
JeD	Jedd fine sandy loam, 5 to 12 percent slopes	2,669	0.9
Ka	Kaufman clay, occasionally flooded	4,604	1.5
Kf	Kaufman clay, frequently flooded	2,247	0.7
KuC	Kurten fine sandy loam, 1 to 5 percent slopes	2,809	0.9
LfA	Lufkin fine sandy loam, 0 to 1 percent slopes	2,015	0.7
MaA	Mabank fine sandy loam, 0 to 1 percent slopes	2,450	0.8
Na	Nahatche loam, frequently flooded	10,846	3.6
NvB	Navasan loamy fine sand, 1 to 3 percent slopes	531	0.2
PaC	Padina loamy fine sand, 1 to 5 percent slopes	2,678	0.9
RaB	Rader fine sandy loam, 1 to 3 percent slopes	35,214	11.6
RbA	Rader-Derly complex, 0 to 2 percent slopes	12,016	4.0
RcB	Robco loamy fine sand, 1 to 3 percent slopes	9,128	3.0
RoC	Rosanky fine sandy loam, 1 to 5 percent slopes	2,231	0.7
RvC	Rosanky gravelly fine sandy loam, 1 to 5 percent slopes	250	0.1
SaB	Silawa fine sandy loam, 1 to 5 percent slopes	2,203	0.7
SdB	Silstid loamy fine sand, 1 to 5 percent slopes	2,029	0.7
SpB	Spiller fine sandy loam, 1 to 3 percent slopes	1,514	0.5
TaB	Tabor fine sandy loam, 1 to 3 percent slopes	9,345	3.1
ToD	Tonkavar loamy fine sand, 1 to 8 percent slopes	361	0.1
WcA	Wilson loam, 0 to 1 percent slopes	609	0.2
ZaB	Zack fine sandy loam, 1 to 5 percent slopes	27,300	9.0
ZaC2	Zack fine sandy loam, 3 to 8 percent slopes, eroded	2,700	0.9
ZaD	Zack fine sandy loam, 5 to 8 percent slopes	6,242	2.1
ZgC3	Zack-Gullied land complex, 3 to 8 percent slopes	905	0.3
ZuB	Zulch fine sandy loam, 1 to 3 percent slopes	30,500	10.1
	Water areas 2 to 39 acres in size	962	0.3
	Water areas more than 40 acres in size	115	*
	Total	302,451	100.0

* Less than 0.1 percent.

TABLE 18.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	Uncoated steel	Concrete
					Ft			In			
RbA*:											
Rader	D	None	---	---	2.0-5.0	Perched	Dec-Mar	>60	---	High	Moderate.
Derly	D	None	---	---	0-1.5	Perched	Dec-Apr	>60	---	High	High.
RcB	C	None	---	---	1.5-3.5	Perched	Jan-Apr	>60	---	High	High.
Robco											
RoC, RvC	C	None	---	---	>6.0	---	---	>60	---	High	Low.
Rosanky											
SaB	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
Silawa											
SdB	A	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
Silstid											
SpB	C	None	---	---	>6.0	---	---	>60	---	High	Moderate.
Spiller											
TaB	D	None	---	---	>6.0	---	---	>60	---	High	High.
Tabor											
ToD	A	None	---	---	4.0-6.0	Perched	Nov-May	>60	---	Moderate	High.
Tonkavar											
WcA	D	None	---	---	0.5-1.5	Perched	Nov-Mar	>60	---	High	High.
Wilson											
ZaB, ZaC2	D	None	---	---	>6.0	---	---	>60	---	High	Low.
Zack											
ZaD	D	None	---	---	>6.0	---	---	>60	---	High	Low.
Zack											
ZgC3*:											
Zack	D	None	---	---	>6.0	---	---	>60	---	High	Low.
Gullied land.											
ZuB	D	None	---	---	0.5-1.0	Perched	Dec-Feb	>60	---	High	Moderate.
Zulch											

* See description of the map unit for composition and behavior characteristics of the map unit.

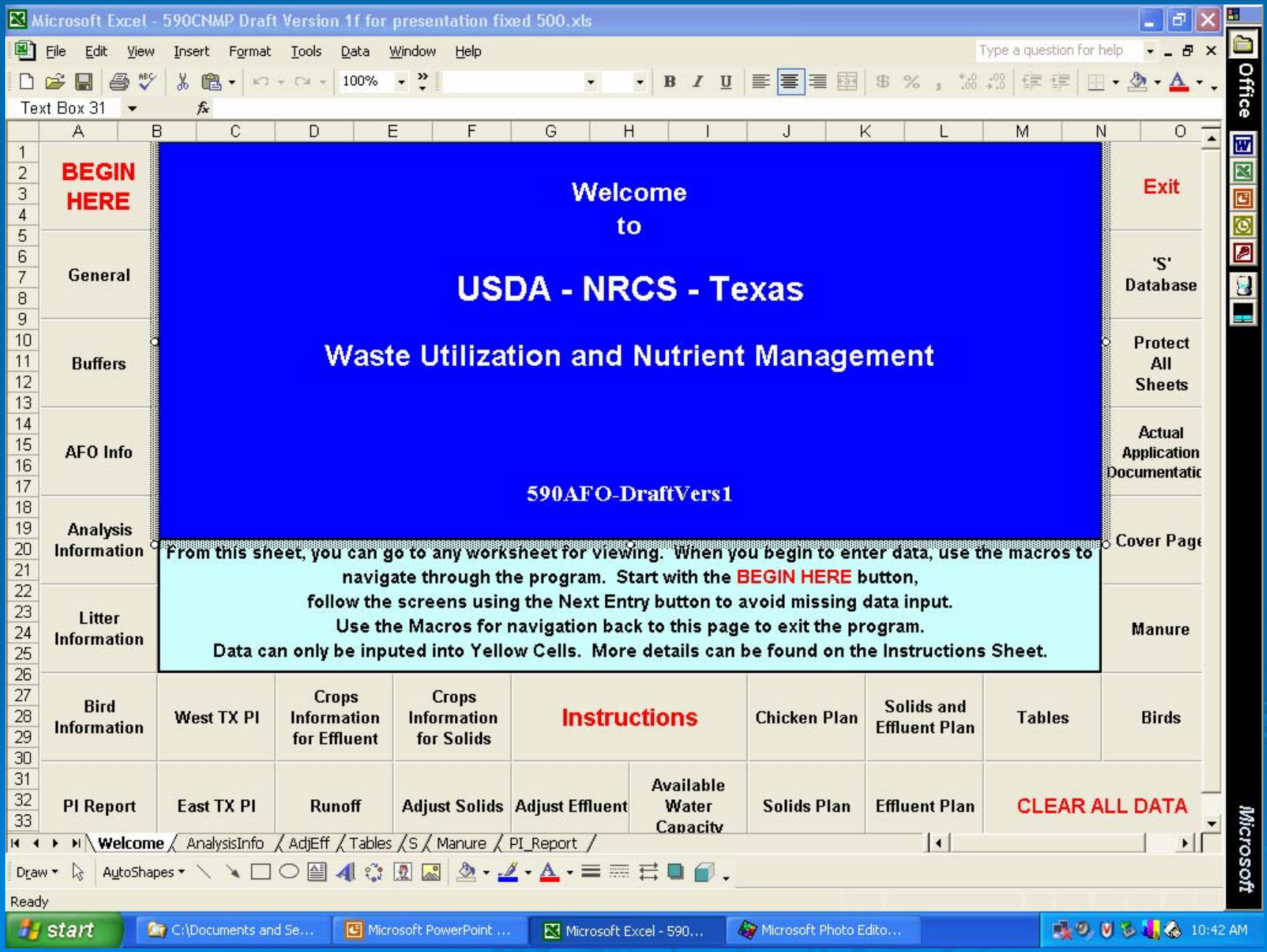
Erath County, Texas

TABLE 17.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Shrink-swell potential
	In	Pct	g/cc	In/hr	In/in	pH	
RaB----------	0-25	5-20	1.40-1.60	2.0-6.0	0.10-0.15	4.5-6.5	Low----
Rader	25-34	18-30	1.40-1.60	0.2-0.6	0.12-0.18	5.1-6.5	Moderat
	34-50	35-50	1.45-1.70	<0.06	0.12-0.18	4.5-5.5	High---
	50-96	24-45	1.45-1.70	0.06-0.2	0.12-0.18	5.1-8.4	Moderat
RbA*:							
Rader----------	0-24	5-20	1.40-1.60	2.0-6.0	0.10-0.15	4.5-6.5	Low----
	24-29	18-30	1.40-1.60	0.2-0.6	0.12-0.18	5.1-6.5	Moderat
	29-33	35-50	1.45-1.70	<0.06	0.12-0.18	4.5-5.5	High---
	33-80	24-45	1.45-1.70	0.06-0.2	0.12-0.18	5.1-8.4	Moderat

Step 8

- Confer with engineer in charge of designing the waste management system in order to get quantities of waste to be land applied.
- Start entering data into ag. waste utilization / nutrient management spreadsheet.


Microsoft Excel - 590CNMP Draft Version 1f for presentation fixed 500.xls
File Edit View Insert Format Tools Data Window Help
Type a question for help
Text Box 31
BEGIN HERE
Welcome
to
USDA - NRCS - Texas
Waste Utilization and Nutrient Management
590AFO-DraftVers1
Exit
General
'S' Database
Buffers
Protect All Sheets
AFO Info
Actual Application Documentatic
Analysis Information
Cover Page
From this sheet, you can go to any worksheet for viewing. When you begin to enter data, use the macros to navigate through the program. Start with the BEGIN HERE button,
follow the screens using the Next Entry button to avoid missing data input.
Use the Macros for navigation back to this page to exit the program.
Data can only be inputed into Yellow Cells. More details can be found on the Instructions Sheet.
Litter Information
Manure
Bird Information
West TX PI
Crops Information for Effluent
Crops Information for Solids
Instructions
Chicken Plan
Solids and Effluent Plan
Tables
Birds
PI Report
East TX PI
Runoff
Adjust Solids
Adjust Effluent
Available Water Capacity
Solids Plan
Effluent Plan
CLEAR ALL DATA
Welcome AnalysisInfo AdjEff Tables S Manure PI_Report
Draw AutoShapes
Ready
start
C:\Documents and Se...
Microsoft PowerPoint ...
Microsoft Excel - 590...
Microsoft Photo Edito...
10:42 AM
Office
Microsoft

Go to Welcome Page	Proceed to Next Entry			

GENERAL DATA

Data on all Entry Sheets are automatically placed into the correct place on all other sheets.
Values on the "S" Sheet come from the Nutrient Management Standard (590).

Date:	7/16/2005	
Farmer Name:	Joe Doe	
Planner's Name:	Jim Childers	
Your Position:	Conservation Agronomist	
Your Employer:	USDA - NRCS	
Your Mailing Address:	13434 Leopard St, Suite A-10	
Your Town, ST, Zip:	Corpus Christi, TX, 78410	
Phone Number:	361-241-0609	
County in which the Land is located:	Erath	(must use the drop down menu)
Type of Waste Plan:	Other AFO-CAFO Waste Plan	(must use the drop down menu)
TMDL watershed for nutrients? Yes or No	Yes	TMDL watershed - Watershed that has been designated a TMDL area as being impaired due to agricultural non-point source nutrients or organics.
Is any field PERMITTED by TCEQ? Yes or No	Yes	
If permitted, Permit #:	345	

Go to Welcome Page | Proceed to Next Entry

Application Areas

Enter the field numbers and acres for each field in the appropriate block below. Enter the acres in each field which will be devoted to each type of buffer and/or non-application area. The value calculated as Actual Application Acres will be the acres used in the plan.

FS = Filter Strip, FB = Field Border, RFB = Riparian Forest Buffer,
OLEA = Other Land Exclusion Areas or non-application areas

Field No.	Total Field Acres	FS	FB	RFB	OLEA	Total Buffer Acres	Actual Application Acres
2	9.5	1.9			1.3	3.2	6.3
4	8.7				1.0	1.0	7.7
5	44.0	1.2			2.3	3.5	40.5
7	24.8	1.1		1.5	1.5	4.1	20.7
8	16.1	1.0		2.7	1.8	5.5	10.6

Go to Welcome Page	Proceed to Next Entry			
Enter Data as Requested				
AFO-CAFO Data				
Plan Year:		2005		
Number of animals:		850		
Approximate Weight:		1400		
Days per year in confinement:		365.0		
Hours per day confined:		6.0		
Acre inches of effluent to be irrigated*:		473.00		*From engineering design
Estimated annual gallons of effluent to be irrigated/applied annually:		12,843,842		acre inches times 27,154
Estimated Tons Solids to be Land Applied Annually (on or off site)*:		2,000.0		*From engineering design

Go to Welcome Page	Proceed to Next Entry

Enter Data as Requested		
Effluent / Manure Analysis Data		
Effluent Information:		
Date of Analysis:	March 5, 2005	
Manure Source:	Dairy Lagoon	(Must use dropdown box)
Nitrogen % From Analysis:	0.008	Use N/A if no effluent analysis
Phosphorus % From Analysis:	0.003	Use N/A if no effluent analysis
Potassium % From Analysis:	0.037	Use N/A if no effluent analysis
Moisture % From Analysis:	99.5	**Moisture use: 99.5%, for lagoon effluent, Layer scraped 70%, 97% storage pond effluent and 91% swine (slats) respectively, if not reported on analysis. Liquid sludge ranges 83 - 92% moisture or less. Consult testing lab to determine if it is run as a liquid or a solid.**
Manure / Solids Information:		
Date of Analysis:	March 5, 2005	
Nitrogen % From Analysis:	2.200	Use N/A if no effluent analysis
Phosphorus % From Analysis:	0.500	Use N/A if no effluent analysis
Potassium % From Analysis:	1.800	Use N/A if no effluent analysis
Moisture % From Analysis:	34.0	**Use 45% moisture for Beef feedlot, 35% for Dairy solids, 82% for swine if not reported on analysis. Solid sludge ranges 63 - 81% moisture or less. Consult testing lab to determine if it is run as a liquid or a solid.**
What will be Applied to Fields on this Farm?	Effluent Only	(Must use dropdown box)
Is this Farm part of an AFO-CAFO?	Yes	(Must use dropdown box)

Step - 9

- Complete P-Index for each field to be used for waste application.

Application Area Map

Fields 2, 4, 5, 7, & 8 will be used for waste application.

- Soil test P results are:
  - Field 2 - 405 ppm (Very High)
  - Field 4 - 70 ppm (Very High)
  - Field 5 - 50 ppm (High)
  - Field 7 - 9 ppm (Low)
  - Field 8 - 12 ppm (Medium)

P Index

- Start with Field 2

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	Place an X in the approprate box for each of the Site Characteristic listed below.					Sub Total
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	

Site Characteristic #1

- Soil Test P Level
  - 405 ppm P = Very High

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	**Place an X in the approprate box for each of the Site Characteristic listed below.**					**Sub Total**
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	**8.00**

Site Characteristic #2

- P Fertilizer Application Rate
  - none

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	**Place an X in the approprate box for each of the Site Characteristic listed below.**					**Sub Total**
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	**8.00**

Site Characteristic #3

- Organic P application rate
  - Start with the > than 150 lb / ac rate.
  - This will give you the highest value to begin with and then work back there, if enough acreage is available to reduce rate.
  - Use a lower rate to start if you know the planned crop has a low P requirement.

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	**Place an X in the approprate box for each of the Site Characteristic listed below.**					**Sub Total**
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
					x	6.00
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	**14.00**

Site Characteristic #4

- P fertilizer application method and timing
  - None applied

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	**Place an X in the approprate box for each of the Site Characteristic listed below.**					**Sub Total**
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
					x	6.00
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
	x					0.00
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	**14.00**

Site Characteristic #5

- Organic P application method and timing
  - Unless the dates shown in very high can be avoided you must check this box.

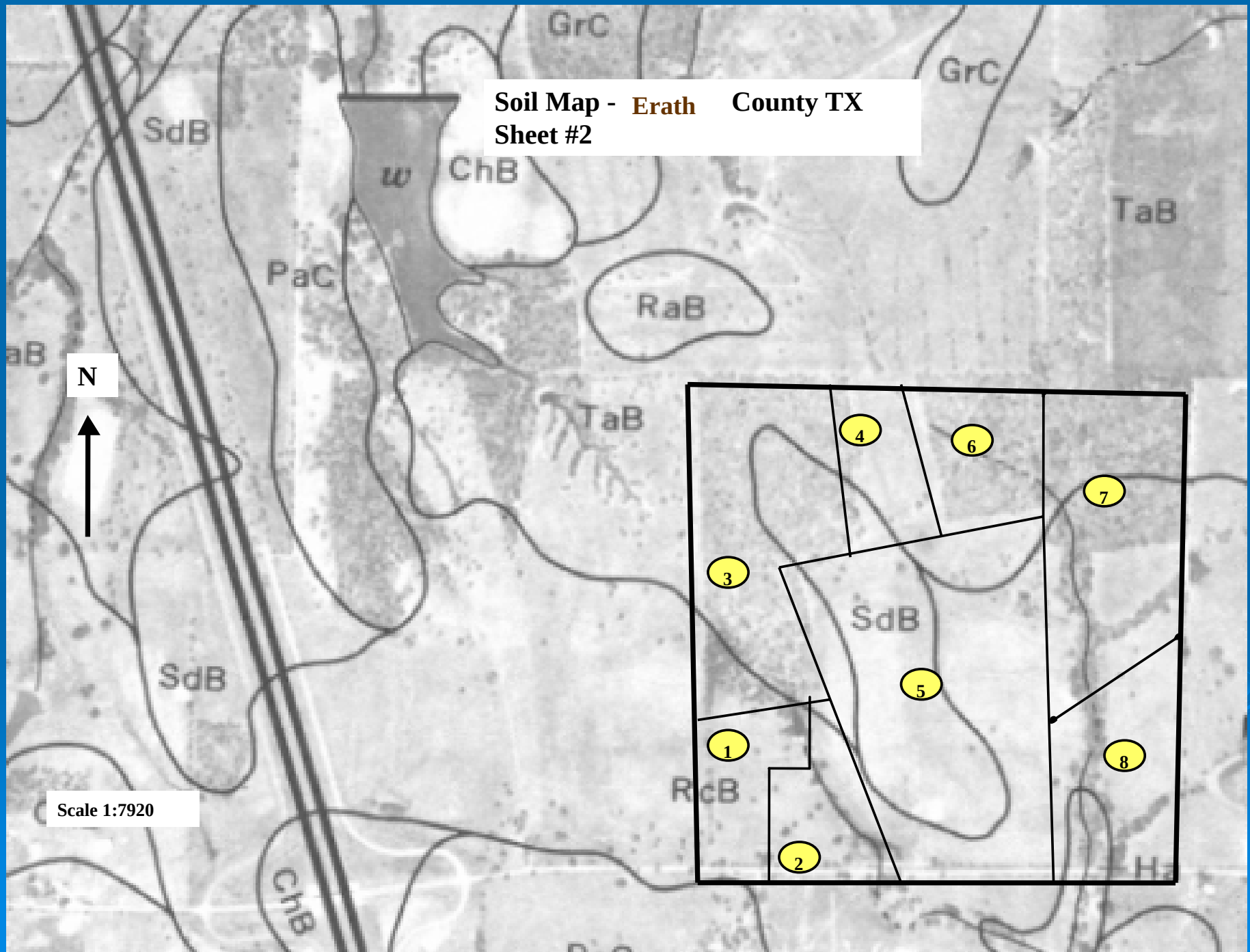
PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	**Place an X in the approprate box for each of the Site Characteristic listed below.**					**Sub Total**
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
					x	6.00
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
	x					0.00
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
					x	4.00
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	**18.00**

Site Characteristic #6

- Proximity of nearest field edge to named stream or lake.
  - See soil map
  - 1000 - 1999 feet


Soil Map - Erath County TX
Sheet #2
GrC
GrC
SdB
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ChB
TaB
PaC
RaB
TaB
N
SdB
SdB
RcB
ChB
Scale 1:7920
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PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	**Place an X in the approprate box for each of the Site Characteristic listed below.**					**Sub Total**
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
					x	6.00
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
	x					0.00
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
					x	4.00
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
		x				1.25
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
					Total Index Points:	**19.25**

Site Characteristic #7

- Runoff class
  - Use predominant soil map unit for field 2
  - Use avg. field slope (2%) of that map unit (as determined in field)
  - Find the hydrologic group for that soil
  - Need to know field cover type and hydrologic condition.

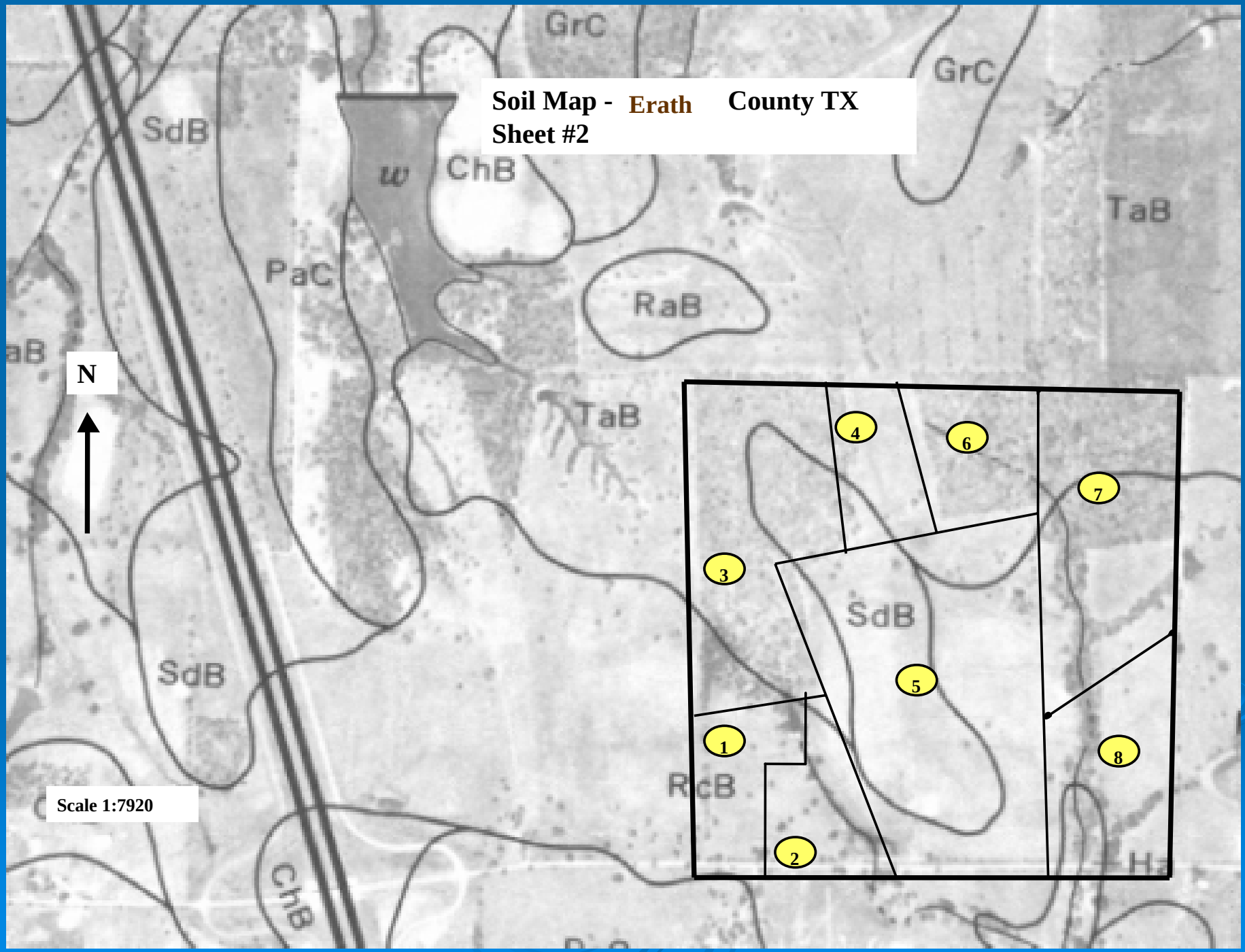
Soil Map - Erath County TX
Sheet #2
GrC
GrC
SdB
w
ChB
TaB
PaC
RaB
TaB
N
SdB
SdB
RcB
ChB
Scale 1:7920
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TABLE 18.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Bedrock		Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Depth	Hardness	Uncoated steel	Concrete
					Ft			In			
RbA*:											
Rader	D	None	---	---	2.0-5.0	Perched	Dec-Mar	>60	---	High	Moderate.
Derly	D	None	---	---	0-1.5	Perched	Dec-Apr	>60	---	High	High.
RcB Robco	C	None	---	---	1.5-3.5	Perched	Jan-Apr	>60	---	High	High.
RoC, RvC Rosanky	C	None	---	---	>6.0	---	---	>60	---	High	Low.
SaB Silawa	B	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
SdB Silstid	A	None	---	---	>6.0	---	---	>60	---	Moderate	Moderate.
SpB Spiller	C	None	---	---	>6.0	---	---	>60	---	High	Moderate.
TaB Tabor	D	None	---	---	>6.0	---	---	>60	---	High	High.
ToD Tonkavar	A	None	---	---	4.0-6.0	Perched	Nov-May	>60	---	Moderate	High.
WcA Wilson	D	None	---	---	0.5-1.5	Perched	Nov-Mar	>60	---	High	High.
ZaB, ZaC2 Zack	D	None	---	---	>6.0	---	---	>60	---	High	Low.
ZaD Zack	D	None	---	---	>6.0	---	---	>60	---	High	Low.
ZgC3*:											
Zack	D	None	---	---	>6.0	---	---	>60	---	High	Low.
Gullied land.											
ZuB Zulch	D	None	---	---	0.5-1.0	Perched	Dec-Feb	>60	---	High	Moderate.

* See description of the map unit for composition and behavior characteristics of the map unit.

Table 3 Runoff Class Based on Field Slope and Runoff Curve Number

	Runoff Curve Number				
Slope %	<50	50 to 60	60 - 70	70 to 80	> 80
< 1	N	N	N	N	M
1 to 2	N	N	VL	L	M
>2 to 4	N	N	L	M	H
>4 to 8	N	VL	M	H	VH
>8 to 16	VL	L	M	VH	VH
> 16	VL	L	H	VH	VH

Refer to Texas NRCS Engineering Technical Note - Hydrology, No. 210-18-TX5, *Estimating Runoff for Conservation Practices* - 10/90 for information on runoff curve numbers.
Estimating Runoff for Conservation Practices - 10/90 for information on runoff curve numbers.

N = Negligible, VL = Very Low, L = Low, M = Moderate, H = High, VH = Very High

Table 4 - Partial Listing of Curve Numbers 1/

Cover Type	Hydrologic Condition 2/	Soil Hydrologic Group				
		A	B	C	D	
Pasture	poor	68	79	86	89	
	fair	49	69	79	84	
	good	39	61	74	80	
Hayland not grazed		30	58	71	78	

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	Place an X in the appropriate box for each of the Site Characteristic listed below.					Sub Total
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
					x	6.00
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
	x					0.00
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
					x	4.00
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
		x				1.25
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
		x				1.00
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	

Site Characteristic #8

- Soil Erosion must be controlled to acceptable levels
  - For water erosion RUSLE2 can be used
  - For wind erosion see field office
  - General guidance - if the area is pasture or hayland erosion is <1 unless poor cover, then 1 - 3 tons per acre should be used
  - Cropland - needs to be calculated, unless already in the file.

PHOSPHORUS INDEX WORKSHEET for East Texas

Client Name:	**Dairy**	**Field(s):**	**2**	**Date:**	**3/5/2005**
Planner:		**Location:**		**Crop:**	**Coastal Grazing**
Impaired Watershed:	**Yes**	**Runoff Curve No.:**	**74**	**Slope (%):**	**2**

Site Characteristic	Place an X in the appropriate box for each of the Site Characteristic listed below.					Sub Total
Soil Test P Level	N/A	Very Low -Low	Moderate	High	Very High	
					x	8.00
Phosphorus Fertilizer (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
	x					0.00
Organic Phosphorus (P_2O_5) Application Rate	None Applied	1-40 lbs/ac P_2O_5	41-90 lbs/ac P_2O_5	91-150 lbs/ac P_2O_5	>150 lbs/ac P_2O_5	
					x	6.00
Phosphorus Fertilizer Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
	x					0.00
Organic Phosphorus Source Application Method and Timing	None Applied	Placed Deeper than 2 in. or broadcast with incorporation within 48 hrs.	Surface applied 12/1 - 2/15	Surface applied 2/16 - 4/15 or 6/16 - 11/30	Surface Applied 4/16 - 6/15	
					x	4.00
Proximity of Nearest Field Edge to Named Stream or Lake	Very Low >2000 feet	Low 1000 - 1999 feet	Medium 500 - 999 feet	High 100 - 499 feet	Very High <100 feet	
		x				1.25
Runoff Class (Runoff Class Table)	Negligible	Very Low or Low	Moderate	High	Very High	
		x				1.00
Soil Erosion (All Sources)	Very Low <1 t/ac	Low 1-3 t/ac	Medium 3-5 t/ac	High 5-10 t/ac	Very High >10 t/ac	
	x					0.00
					Total Index Points:	**20.25**

P Runoff Potential: **Medium**

Post the P-Index to the PI Report

Go to Welcome Page	Clear All PI Worksheets	Print PI Report	Go to East TX P Worksheet to add fields	Go to West TX P Worksheet to add fields	Proceed to Next Entry

For operations in counties with > 25" rainfall, use the East TX P Worksheet.
For operations in counties with < 25" rainfall use the West TX P Worksheet.
Go to the appropriate sheet, enter the data and POST to this Summary Report and PRINT.

PI Report

Client Name:	Joe Doe			Date:	7/16/2005	
Planner:	Jim Childers			Location:	Erath	
				Rainfall:	>25.0 inches	
Fields	Crop	Slope	Runoff Curve	Total Index Points	P Runoff Potential	Soil Test Date:
2	Coastal Grazing 1 AU/0.5 ac	2.0%	74	21.75	Medium	3/5/05

Complete P Index for other Fields

Go to Welcome Page	Clear All PI Worksheets	Print PI Report	Go to East TX P Worksheet to add fields	Go to West TX P Worksheet to add fields	Proceed to Next Entry

For operations in counties with > 25" rainfall, use the East TX P Worksheet.
For operations in counties with < 25" rainfall use the West TX P Worksheet.
Go to the appropriate sheet, enter the data and POST to this Summary Report and PRINT.

PI Report

Client Name:	Joe Doe			Date:	7/16/2005	
Planner:	Jim Childers			Location:	Erath	
				Rainfall:	>25.0 inches	
Fields	Crop	Slope	Runoff Curve	Total Index Points	P Runoff Potential	Soil Test Date:
2	Coastal Grazing 1 AU/0.5 ac	2.0%	74	21.75	Medium	3/5/05
4	Coastal Grazing 1 AU/0.5 ac	2.0%	80	25.5	High	3/5/05
5	Coastal 3 Cut Hay	2.5%	71	22.5	Medium	3/5/05
7	Coastal 3 Cut Hay	1.5%	71	17	Medium	3/5/05
8	Coastal 3 Cut Hay	1.5%	71	17	Medium	3/5/05

Go to Welcome Page	Proceed to Next Entry

If a cell in the Plant Analysis Section, Columns M-P, is RED, you have a ENTRY probably a SPACE in the cell, the cell must be CLEARED and it will become YELLOW again.

SOIL TEST , CROP INFORMATION and PLANT ANALYSIS for Effluent

Enter the data in the Yellow Cells. If you have plant analysis for the vegetation, enter the analysis in the 4 digit decimal format (e.g. .0230 would equal 2.3%) for each applicable field, otherwise leave the plant analyses cells blank. Enter the yield in pounds per acre.

					Soil Test Recommendation				Plant Analysis & Yield (if available)			
Current Soil Test P Level (ppm)	Field Number	Application Area Acres	Crop/Land-Use and P Index Runoff Potential VL - L; M; H; or VH	Crop N Requirement (lbs/ac)	N (lbs/ac)	P_2O_5 (lbs/ac)	K_2O (lbs/ac)	Lime (enter amt or leave blank)	% N	% P	% K	Yield Air Dry Production(lbs/ac/yr)
405	2	6.3	Coastal Grazing 1 AU/0.5 ac M	300	240	0	0					
70	4	7.7	Coastal Grazing 1 AU/0.5 ac H	300	240	0	0					
50	5	40.5	Coastal 3 Cut Hay M	300	300	20	0					
9	7	20.7	Coastal 3 Cut Hay M	300	300	60	0					
12	8	10.6	Coastal 3 Cut Hay M	300	300	60	0					

Go to Welcome Page | Proceed to Next Entry

Enter the Data Needed. Enter the depths of the layers and Available Water similar to the example entries. Use data from the Soil Survey or NASIS for the County.

Fields receiving Effluent	Texture of the soil layer within the upper 24 inches of the soil profile that has the lowest permeability (Don't Abbreviate)	Depth of First Layer (inches)		AWC of First Layer (in/in)		Depth of Second Layer (inches)		AWC of Second Layer (in/in)		Depth of Third Layer (inches)		AWC of Third Layer (in/in)		Depth of Fourth Layer (inches)		AWC of Fourth Layer (in/in)		Available Water Holding Capacity (AWC) of the upper 24 inches of the soil profile (Inches)
	EXAMPLE ENTRIES	0	3	0.12	0.2	3	14	0.16	0.21	14	18	0.08	0.12	18	24	0	0	
		Enter Data for the top 24" only																
2	Sandy Loam	0	24	0.1	0.15													3
4	Clay Loam	0	8	0.1	0.15	8	24	0.12	0.18									3.4
5	Clay Loam	0	6	0.1	0.15	6	12	0.12	0.18	12	24	0.12	0.18					3.45
7	Clay Loam	0	24	0.08	0.12													2.4
8	Clay Loam	0	24	0.1	0.15													3

Go to Welcome Page	Proceed to Tables	Proceed to NMP	Proceed to Next Entry

Use this sheet to apply less than the Maximum Application Rates. **In situations where more land is available than is needed to utilize the maximum application rate on each field, REDUCE** the application rates down to the level that **does not exceed** the amount of Effluent produced. The amount of supplemental nutrients needed will then be calculated based on the **actual amount of waste available** rather than the **maximum rate that "could" be applied** to each field.

When the reduced rates uses all Effluent to be produced in a year, the green cells, L52/L100, will be "Yes". If the percentages are too low, cells L52/L100 will be "No". If "No" is indicated, change the percentages to higher values until "Yes" is indicated in order to use all Effluent unless the extra Effluent will be used off-site.

Different percentages may be used as long as the rate does not exceed the maximum shown for the field and the proper amount of supplemental nutrients are applied. Applying lower rates to fields with higher Soil Test P levels will slow down the P buildup and extend their land application life.

Effluent - Adjustment to Apply Less than the Maximum Rate

Joe Doe | Nutrient Adjustments ba

	473										YES		Nutrients Applied Red
Field No.	Acres	Crop Mamagement and PI runoff potential	Current Soil Test P ppm	Crop P_2O_5 Req.	Max Annual lbs. P2O	Max Annual Gallons Effluent /Acre	Max. Rate Allowed (ac in/ac)	Enter % of Maximum to apply	Reduced Rate (ac in/ac)	Reduced Effluent (Gallons /Acre)	Reduced Amount / field (Ac. In)	Field No.	N Lb/ac	
2	6.3	Coastal Grazing 1 AU/0.5 ac M	405	70	72	124,676	4.59	0	0.00	0	0.0	2	0	
4	7.7	Coastal Grazing 1 AU/0.5 ac H	70	70	105	182,348	6.72	0	0.00	0	0.0	4	0	
5	40.5	Coastal 3 Cut Hay M	50	125	250	434,161	15.99	35	5.60	151956	226.6	5	82	
7	20.7	Coastal 3 Cut Hay M	9	125	250	434,161	15.99	50	7.99	217081	165.5	7	116	
8	10.6	Coastal 3 Cut Hay M	12	125	250	434,161	15.99	50	7.99	217081	84.7	8	116	

tions where more land is available than is needed to utilize the maximum
level that **does not exceed** the amount of Effluent produced. The amount of
amount of waste available rather than the **maximum rate that "could" be**

cells, L52/L100, will be "Yes". If the percentages are too low, cells L52/L100 will
"Yes" is indicated in order to use all Effluent unless the extra Effluent will be used

ed the maximum shown for the field and the proper amount of
th higher Soil Test P levels will slow down the P buildup and extend their

Rate Joe Doe **Nutrient Adjustments based on Reduced Rates**

					YES		Nutrients Applied When Application is at Reduced Rates			Supplemental Nutrients Needed When Appl is at Reduced Rates		
Max Annual Gallons Effluent /Acre	Max. Rate Allowed (ac in/ac)	Enter % of Maximum to apply	Reduced Rate (ac in/ac)	Reduced Effluent (Gallons /Acre)	Reduced Amount / field (Ac. In)	Field No.	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac	N Lb/ac	P_2O_5 Lb/ac	K_2O Lb/ac
124,676	4.59	0	0.00	0	0.0	2	0	0	0	240	0	0
182,348	6.72	0	0.00	0	0.0	4	0	0	0	240	0	0
434,161	15.99	35	5.60	151956	226.6	5	82	88	566	220	0	0
434,161	15.99	50	7.99	217081	165.5	7	116	125	808	185	0	0
434,161	15.99	50	7.99	217081	84.7	8	116	125	808	185	0	0

Microsoft Excel - 590CNMP Draft Version 1f for presentation fixed 500.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

100% Times New Roman 11

B3

Go to Welcome Page

Go to Crop Information Input

Print Tables for Review

Proceed to NMP Plan

Proceed to Adjustment Page

Table 1 - Estimated Effluent and Solids Quantities Produced

Permit #: 345

Avg. Number of Animals	Type of Waste
850	Dairy Lagoon

Contact the local Soil and Water Conservation District or USDA Natural Resources Conservation Service office if the total number of animals changes by more than 10% so your plan can be revised.

Estimated Acre Inches of Effluent to be Irrigated Annually*	473.0
Estimated Tons Solids to be Land Applied Annually (on or off site)*	2,000.0

*From engineering design.

Estimated Nutrient Availabilty

Effluent	pounds/yr	Pounds / 1000 gal	Pounds / Acre Inch	
N	6,890	0.54	14.6	**
P_2O_5	7,396	0.58	15.6	
K_2O	47,798	3.72	101.1	

** Effluent Values Based on Analysis dated: March 5, 2005

Solids	pounds / yr	pounds / ton	
N	46,464	23.2	**
P_2O_5	30,228	15.1	
K_2O	57,024	28.5	

Solids Values Based on Analysis dated: March 5, 2005

Table 2a - Maximum annual manure application to crops based on P index (Soil Test P Level < 200/350 ppm)*

P- Index Result	Annual Manure Rate Based on P-index**
Very Low - Low	Balance for Nitrogen Requirement**
Medium	2 times crop P requirement ***
High	1.5 times crop P requirement ***

Table 3 - Crop Removal

Field No.	Acres	Crop and P In
2	6.3	Coastal Grazi
4	7.7	Coastal Grazi
5	40.5	Coastal 3 Cut
7	20.7	Coastal 3 Cut
8	10.6	Coastal 3 Cut

Welcome | Tables | S | Manure

Draw AutoShapes

Ready

start Microsoft PowerPoint ... Microsoft Excel - 590... Microsoft Photo Editor 11:04 AM

Step - 10

- Print waste sheet
- Review with producer

Step - 11

- At this point you should point out to the producer fields with maximum application rates that could be adjusted to make better use of nutrients.