

## **Fall River County, South Dakota AG Presentation, November 2015**

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Fall River & Oglala Lakota Counties

Compiled for:

Agricultural Land Assessment

Implementation and Oversight

Advisory Task Force

### **Purpose:**

To identify flaws within the current system for making the needed adjustments from crop soils to grass soils, which are causing significant inequalities in the assessment and taxation of rangeland.

### **Introduction:**

Fall River County is a rural county in the southwest corner of the state. The county contains 1,115,584 acres, 70% of which is classified as AG land with another 27% being held by exempt government agencies. Fall River County can be divided into three diverse areas. The north central portion is part of the Black Hills. The east side contains the Angostura Reservoir which feeds the Angostura Irrigation District. The remainder of the county mimics the Wyoming sagebrush landscape. Ranching is the largest producer in the AG industry.

### **Summary:**

This presentation will focus on Fall River County, and will demonstrate the workings and some of the flaws in the current AG Productivity Methodology. This will also demonstrate how the practical application of this methodology directly affects the individual AG producer.

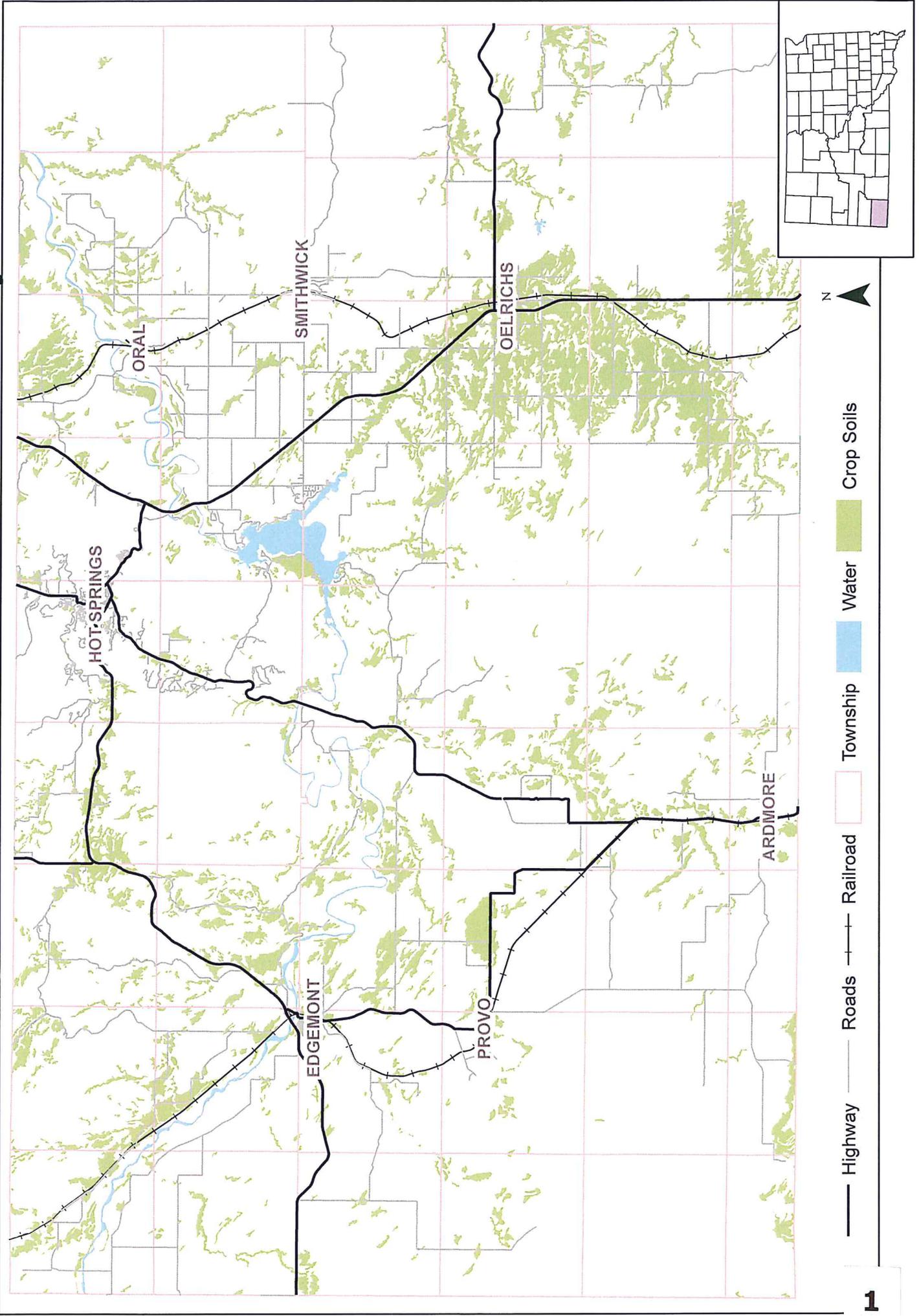
In Fall River County the need for numerous crop soil adjustments has been identified. These adjustments are allowed for by state statute (SDCL 10-6-33.31). There is a guideline issued by the Department of Revenue instructing Directors of Equalization on how to make these adjustments. A demonstration of the math of the adjustment methodology will reveal flaws in the calculations. These flaws result in unfair assessed values that translate into an unacceptable percentage of tax rate compared to productivity income.

It is our hope that with this presentation, we will have demonstrated the need for some changes in the current methodology. We would like to thank the AG Land Task Force for considering the shortcomings within the current system. We have the utmost confidence in your ability to make it possible to assess rangeland in such a way that will better reflect its income producing capability.

## Table of Contents

Fall River County Crop Soil Map	1
Calculations of AG Land Assessed Value	2
Soil Adjustment Math	3
Mr. White spreadsheet	4
Mr. White map	5
Mr. Frahm spreadsheet	6
Mr. Frahm map	7
<b>Reference Materials Appendix:</b>	
Dept of Revenue Soil Adjustment Guidelines	A1 – A8
Proof of Adjustment Math Formula	A9
HB1003	B1
Dept of Revenue Top Dollar Worksheets	B2 – B4
Rangeland Carrying Capacity Map	C1
Fall River County Range study	C2
Fall River County Productivity Data	D1 – D3
Non-Crop Olympic Averages	D4 – D5
Crop Olympic Averages	D6 – D7
Fall River County Statistics	E1
Fall River Precipitation Maps	E2 – E3
Fall River County Land Use map – USDA	E4
Frahm actual productivity numbers per private appraisal	F1 – F2
White spreadsheet – using new Soil Table 1A	G1
Frahm spreadsheet – using new Soil Table 1A	G2

# Crop Soil Locations in Fall River County



The following pages will inform you of how to calculate an AG land value, how to make adjustments to the crop rated soils, and the proposed method we believe should be used.

You will find these methods demonstrated in the spreadsheets for Mr. White and Mr. Frahm. The standard calculations are in the peach column, the adjusted values in the green column and the proposed calculations are in the purple column.

**How to calculate AG land values:**

<b>Map Unit/Soil Rating</b>	<b>x</b>	<b>Top \$</b>	<b>x</b>	<b># of acres</b>	<b>=</b>	<b>assessed value</b>
NoB 0.864	x	\$535.22	x	124	=	\$68,810.24

Follow this process for each soil type (map unit) in the parcel, and then add all of the values together to arrive at the total assessed value for the parcel. (shown in the peach column)

Note:

Soil Rating = comes from DOR issued Table 1A

Top Dollar = comes from DOR and SDSU (calculated each year for each county)

Dept of Revenue – Adjustment Guideline math (see Appendix A):

**HOW TO ADJUST**

**ADJUSTING SINGLE SOIL**

EXAMPLE: You have a crop rated soil that needs to be adjusted due to excessive stoniness. You want to adjust the non-crop rating (will start with the crop dollar value and the crop rating)

Dept. of Revenue	Simplified Formula
<p>Crop rating = .875      non –crop rating=.462</p> $\frac{0.462}{0.875} = 0.528$ $1 - .528 = 0.472$ <p>Apply downward adjustment of 47.2% for that soil.</p> <p>Crop top dollar of \$900            Crop rating of .875  <math>900 \times .875 = \\$787.50</math> (initial per acre value)            Less 47.2%: <math>(787.50 \times 47.2\% = 371.70)</math>  <math>\\$787.50 - 371.70 = \\$415.80</math>            (dollar value applied to the acres for this soil)</p>	<p>You arrive at the same result, by taking the Crop Dollar x grass rating = adjusted soil value</p> $\$900 \times 0.462 = \$415.80$ <p>(Mathematical proof that the DOR formula equates to the simplified formula is demonstrated in Appendix A9.)</p>

The above adjustment math is currently being used to make soil adjustments. We have used the **simplified formula** in our calculations as demonstrated in the following spreadsheets. (shown in the green column)

**This is the flaw we are referring to in the DOR guidelines:**

If the purpose for the adjustment was to value the land at its true income potential, which was determined to be range land, why would we apply the crop productivity dollar amount to an adjusted soil that we are trying to get to a grass productivity value? It would seem logical to adjust the crop rated soil to a grass rating and apply the grass dollar.

We propose the following math would be better suited:

**Grass rating x Grass dollar = Grass value** (shown in the purple column)

White - Old Soil Ratings

Year	2014	Top Dollar	Mill Levy	13.093
Cash Rent**	7.88	Grass	State Factor	0.85
Acres per Animal Unit (Year)***	30	Crop		

REGULAR		REGULAR	
SOIL	ACRES	RATE	ASSESSMENT
BUB	54	0.482	\$ 7,863.32
HE	49	0.169	\$ 2,501.77
KED	90	0.487	\$ 13,241.48
ORE	54	0.149	\$ 2,430.78
PEB	46	0.482	\$ 6,698.38
PSE	4	0.399	\$ 482.17
WPC	23	0.399	\$ 2,772.46
ACRES:	320		
TOTAL ASSESSMENT:			\$ 35,990.36
TOTAL TAX:			\$ 400.54

Taxes as percentage of Cash Rent Income	2521.6	16%
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Taxes Per Cow/calf Pair	# Pairs	\$	37.55
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REGULAR		ADJUSTED		RANGE	
SOIL	ACRES	RATE	ASSESSMENT	RATE	ASSESSMENT
BA	8	0.1	\$ 241.69	0.1	\$ 241.69
BUB	37	0.482	\$ 5,387.83	0.482	\$ 5,387.83
HE	20	0.169	\$ 1,021.13	0.169	\$ 1,021.13
KED	78	0.487	\$ 11,475.95	0.487	\$ 11,475.95
KYA	3	0.538	\$ 487.61	0.538	\$ 487.61
NOB*	142	0.864	\$ 65,665.07	0.511	\$ 21,921.71
PEB	14	0.482	\$ 2,038.64	0.482	\$ 2,038.64
WPC	18	0.399	\$ 2,169.75	0.399	\$ 2,169.75
ACRES:	320				
TOTAL ASSESSMENT:			\$ 88,487.67		\$ 44,744.30
TOTAL TAX:			\$ 984.78		\$ 497.96

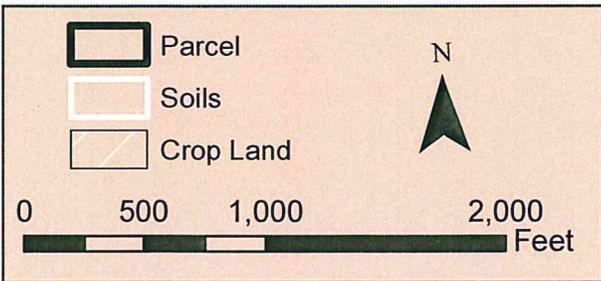
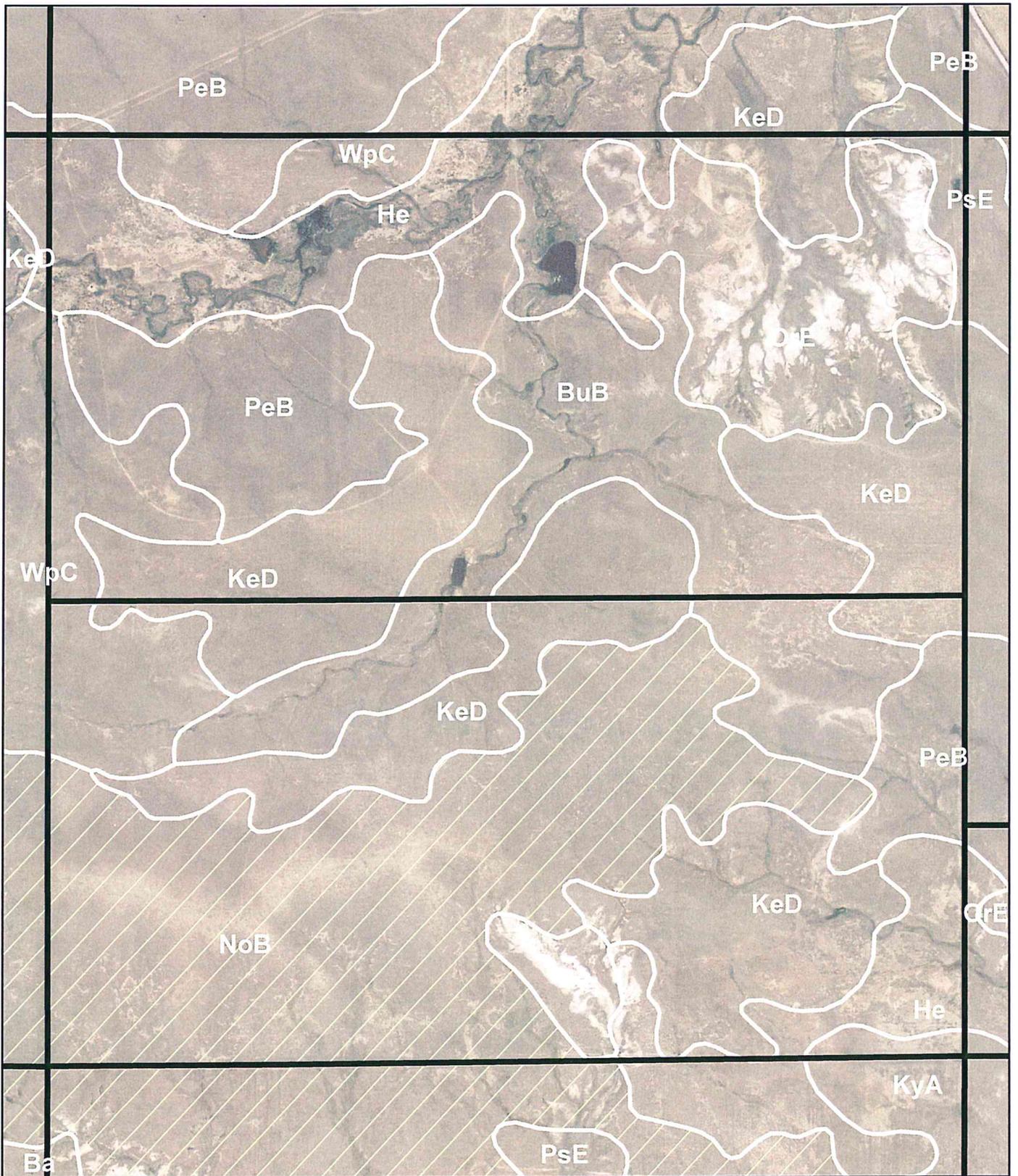
Taxes as percentage of Cash Rent Income	\$ 2,521.60	39%
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Taxes Per Cow/calf Pair	# Pairs	\$	92.32
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\*Crop Soils, South Dakota Department of Revenue, Fall River County Table 1A

\*\*South Dakota Department of Revenue, 8 year olympic average for 2014

\*\*\*South Dakota Rangeland and Pasture Grazing Records, Figure 1. Carrying Capacity of Ranges and Pastures in South Dakota



**WHITE  
PROPERTY**

**Soil Map**  
 Fall River County GIS  
 June 2015

Property boundaries are drawn as a general reference and may not represent an exact survey of the land.

Year	2014	Top Dollar	13.093
Cash Rent**	7.88	Grass	302.11
Acres per Animal Unit (Year)***	30	Crop	535.22
		Mill Levy	0.85
		State Factor	

Frahm - Old Soil Ratings

SOIL	ACRES	REGULAR			ADJUSTED			RANGE		
		RATE	DOLLAR ASSESSMENT	ASSESSMENT	RATE	DOLLAR ASSESSMENT	ASSESSMENT	RATE	DOLLAR ASSESSMENT	ASSESSMENT
NOB*	124	0.864	\$ 57,341.33	\$ 33,913.68	0.511	\$ 535.22	\$ 33,913.68	0.511	\$ 302.11	\$ 19,142.90
PSE	25	0.399	\$ 3,013.55	\$ 3,013.55	0.399	\$ 302.11	\$ 3,013.55	0.399	\$ 302.11	\$ 3,013.55
SDA*	24	0.898	\$ 11,535.06	\$ 6,756.62	0.526	\$ 535.22	\$ 6,756.62	0.526	\$ 302.11	\$ 3,813.84
SDB*	224	0.844	\$ 101,186.55	\$ 61,263.42	0.511	\$ 535.22	\$ 61,263.42	0.511	\$ 302.11	\$ 34,580.72
W	3	0.1	\$ 90.63	\$ 90.63	0.1	\$ 302.11	\$ 90.63	0.1	\$ 302.11	\$ 90.63
ACRES:	400	TOTAL ASSESSMENT:	\$ 173,167.12	\$ 105,037.90	TOTAL ASSESSMENT:	\$ 105,037.90	TOTAL ASSESSMENT:	\$ 60,641.63	TOTAL ASSESSMENT:	\$ 60,641.63
		TOTAL TAX:	\$ 1,927.19	\$ 1,168.97	TOTAL TAX:	\$ 1,168.97	TOTAL TAX:	\$ 674.88	TOTAL TAX:	\$ 674.88

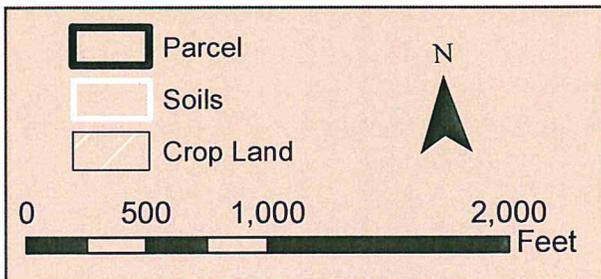
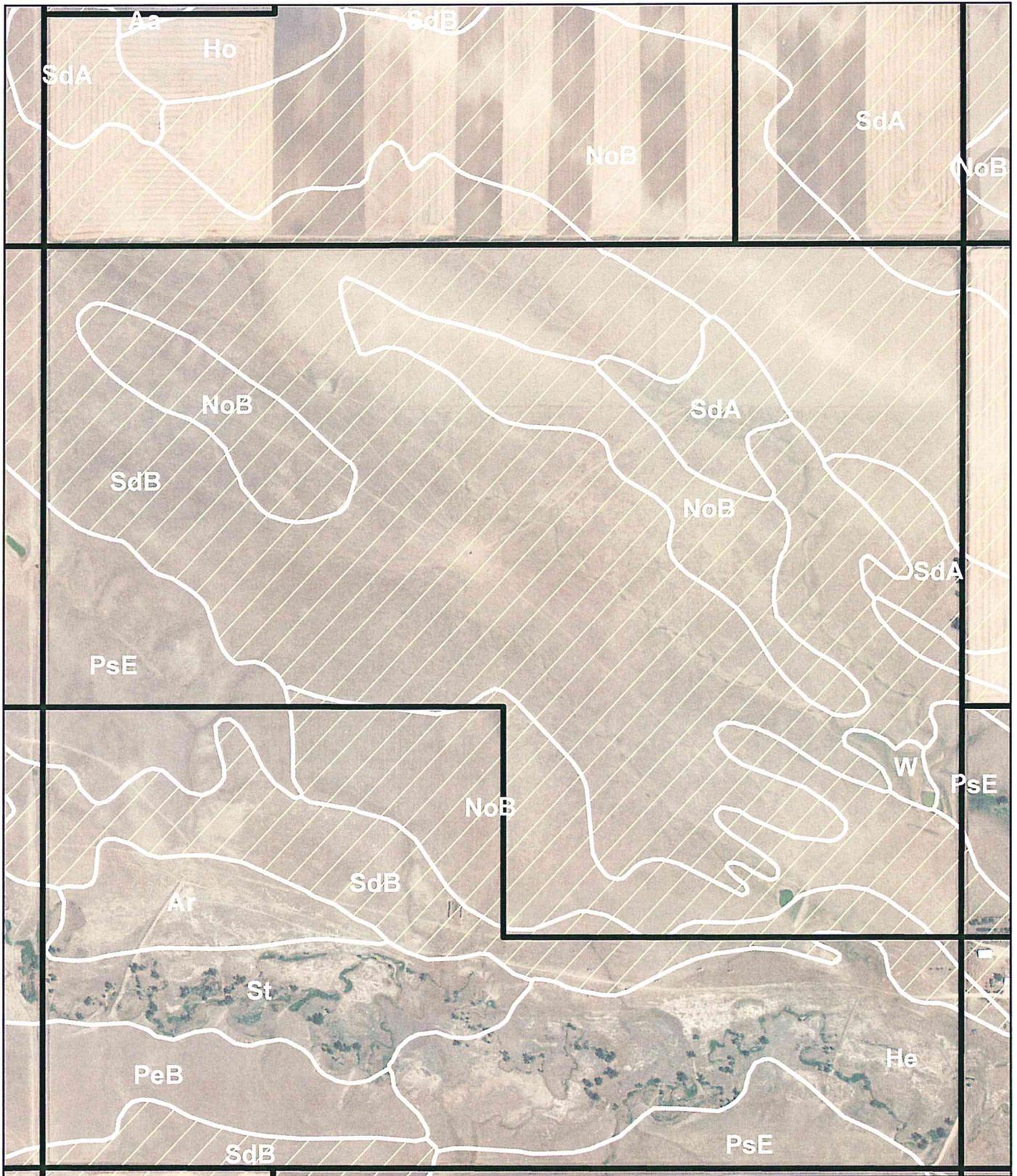
Taxes as percentage of Cash Rent Income	\$ 3,152.00	61%	37%	21%
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Taxes Per Cow/calif Pair	\$ 144.54	\$ 87.67	\$ 50.62
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\*Crop Soils, South Dakota Department of Revenue, Fall River County Table 1A

\*\*South Dakota Department of Revenue, 8 year olympic average for 2014

\*\*\*South Dakota Rangeland and Pasture Grazing Records, Figure 1. Carrying Capacity of Ranges and Pastures in South Dakota



**FRAHM  
PROPERTY**

**Soil Map**  
 Fall River County GIS  
 June 2015

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