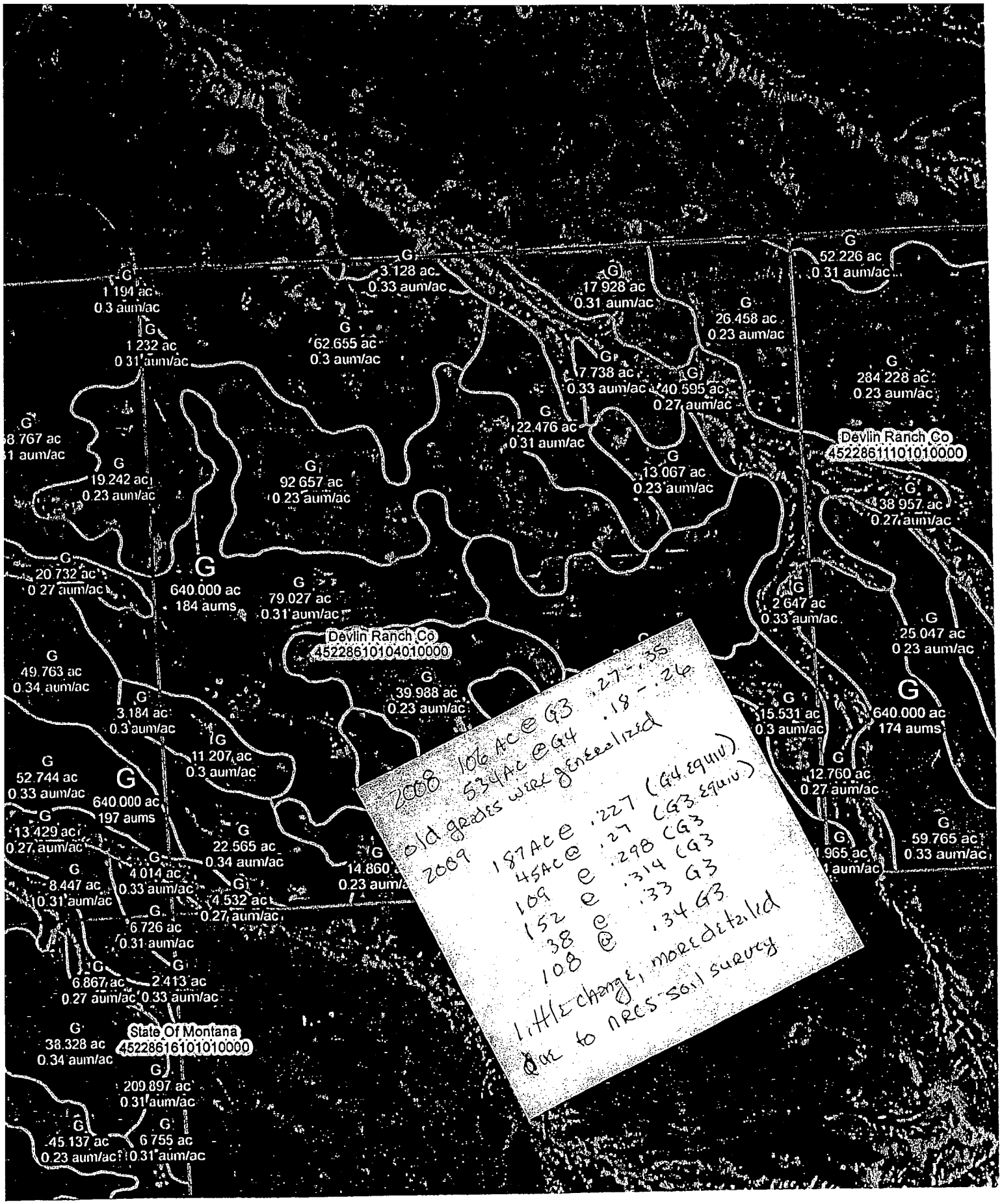


DOR. Map. with. Acreage + Aum. Values

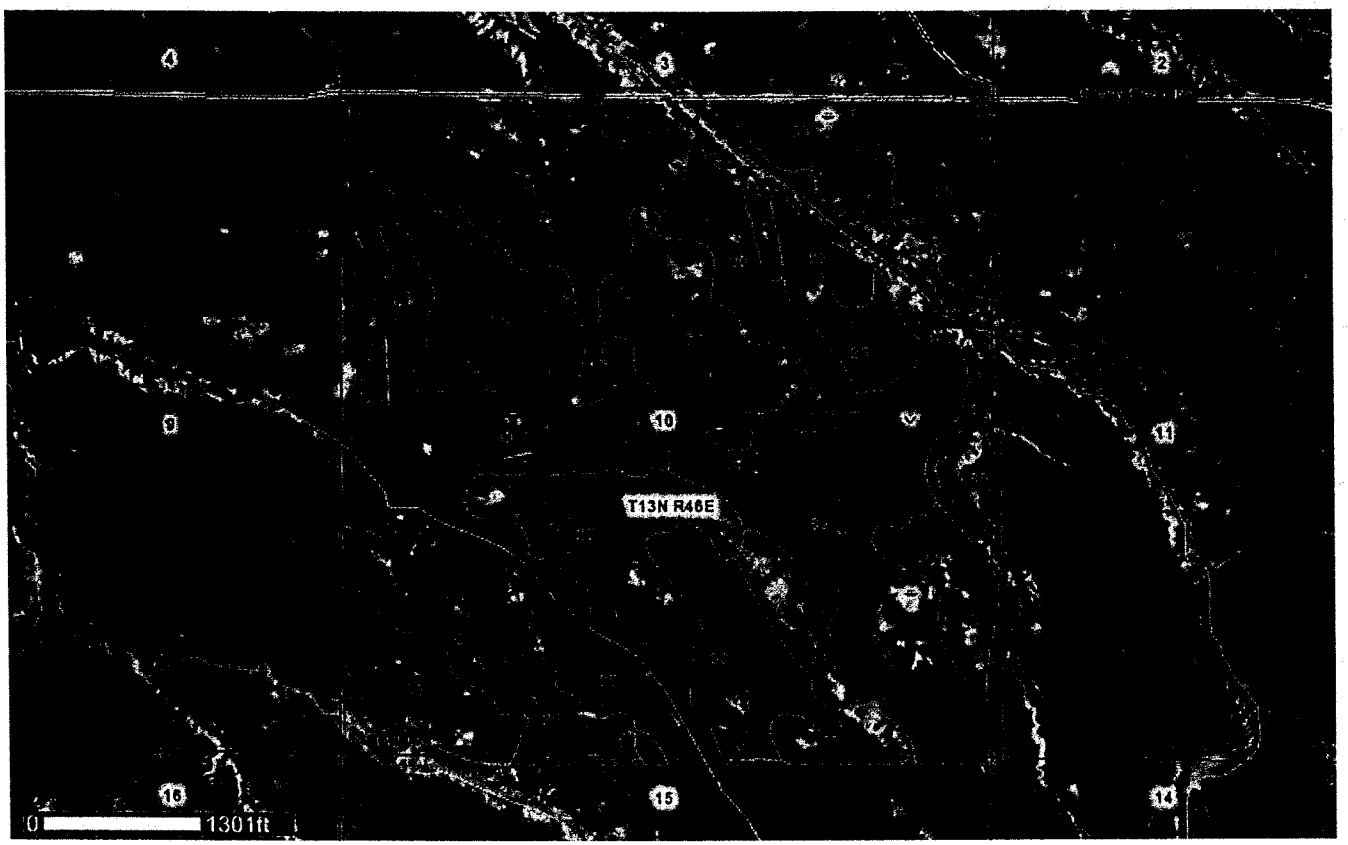
DOR. Note attached.

SENATE TAXATION

EXHIBIT NO. 2

DATE 4.7.11

BILL NO. HB616



Soil Survey Website
includes Numbers for Soil Names
Polygons. match DoR. maps

United States Department of Agriculture
Natural Resources Conservation Service

MT-ECS-3
(Rev.) 1/07

Prairie County MT-ECS-3 to Determine Initial Stocking Rate

Part I: Historical Stocking Rate Information:

This information is provided by the rancher and used as a comparison to NRCS initial stocking rate values.

Total grazed acres: 18016.3 Total number of grazing animals on acres:

Kind(s) of animal grazing: cow/calf (cow/calf, stockers, sheep, etc.)

Average weights of animal classes:

Animal Unit equivalents:
(AU equivalent is 1,000 lb cow+calf = 1.0; 1200 lb cow+calf = 1.2;
(AU equivalent is 1 sheep+ lamb = 0.17; yearling cattle = 0.6; mature horse = 1.2)

Total days animals are grazing on all acres: days

Total Animal Units (# animals * AU equivalent): 0 AU's

Calculated AUM/acre based on historical information: 0.00 AUM/ac
(total animal units / total grazed acres) x (total days grazed / 30)

Ron Devlin:
FARM No:
1388
1583
1183
419

Part II: Rangeland Inventory

Calculated acres	18038.1	Total AUM's	4575.32
Calculated AUM/ac from range inventory			0.25

musym	acres	lbs/ac	AUMs/ac	Adjusted lbs/ac	AUMs_calc	AUMs_calc adj. for yr
9	5	476	0.13	1	0.65	0.65
11	62.7	659	0.18	1	11.29	11.29
15	25.5	952	0.26	1	6.63	6.63
16	12.8	1098	0.30	1	3.84	3.84
18	11	952	0.26	1	2.86	2.86
20	894.5	403	0.11	1	98.40	98.40
25	808.3	622	0.17	1	137.41	137.41
26	188.1	769	0.21	1	39.50	39.50
27	54.6		0.22	1	12.01	12.01
38	16.5	1061	0.29	1	4.79	4.79
45	67.4	732	0.20	1	13.48	13.48
46	26.3	695	0.19	1	5.00	5.00
55	210.4	1061	0.29	1	61.02	61.02
56	60.2	1061	0.29	1	17.46	17.46
57	48.4	1061	0.29	1	14.04	14.04
84	789.9	1061	0.29	1	229.07	229.07
85	2105.2	1061	0.29	1	610.51	610.51
86	36.4	1061	0.29	1	10.56	10.56
89	1064.4	1135	0.31	1	329.96	329.96
90	4941.6	1025	0.28	1	1383.65	1383.65
91	3345.3	952	0.26	1	869.78	869.78
126	194.7	769	0.21	1	40.89	40.89
132	79.3	988	0.27	1	21.41	21.41
135	37.4	915	0.25	1	9.35	9.35
136	266.3	1061	0.29	1	77.23	77.23
137	232.4	988	0.27	1	62.75	62.75
142	917	732	0.20	1	183.40	183.40
143	85.5	1208	0.33	1	28.22	28.22
147	96.8	732	0.20	1	19.36	19.36
149	513.7	732	0.20	1	102.74	102.74
150	20.6	732	0.20	1	4.12	4.12
151	587.8	732	0.20	1	117.56	117.56
155	39.9	732	0.20	1	7.98	7.98
156	44.9	732	0.20	1	8.98	8.98
158	129.9	732	0.20	1	25.98	25.98
161	17.4	732	0.20	1	3.48	3.48
				1		0.00
				1		0.00

AVG. PROD = 816 lb/ac

MT079-Prairie County		
mukey	musym	Range AUM
344774	1	0.22
344834	2	0.26
344862	3	0.19
344903	4	0.64
344936	5	0.14
344971	6	0.19
344993	7	0
345022	8	0.16
345045	9	0.13
344775	10	0.36
344786	11	0.18
344797	12	0.33
344810	13	0.33
344821	14	0.29
344826	15	0.26
344827	16	0.3
344829	17	0.35
344830	18	0.26
344833	19	0.13
344835	20	0.11
344836	21	0.21
344837	22	0.23
344839	23	0.26
344844	24	0.19
344845	25	0.17
344846	26	0.21
344847	27	0.22
344854	28	0.29
344859	29	0.29
344864	30	0.29
344869	31	0.26
344872	32	0.26
344877	33	0.37
344880	34	0.33
344885	35	0.31
344891	36	0.25
344892	37	0.33
344893	38	0.29

Normal Year

USDA United States Department of Agriculture
Natural Resources Conservation Service

Web Soil Survey

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Area of Interest (AOI) | Soil Map | Soil Data Explorer | Shopping Cart (Free)

View Soil Information By Use: Rangeland

Printable Version | Add to Shopping Cart

Intro to Rangeland | Suitabilities and Limitations for Use | Soil Properties and Qualities | Ecological Site Assessment | Soil Rep

Search

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Enter keywords

Advanced Search

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Suitabilities and Limitations Ratings

Open All | Close All

Building Site Development

Disaster Recovery Planning

Land Classifications

Land Management

Military Operations

Recreational Development

Vegetative Productivity

Range Production (Favorable Year)

Range Production (Normal Year)

View Description | View Rating

View Options

Map

Table

Description of Rating

Rating Options

Detailed Description

Advanced Options

View Description | View Rating

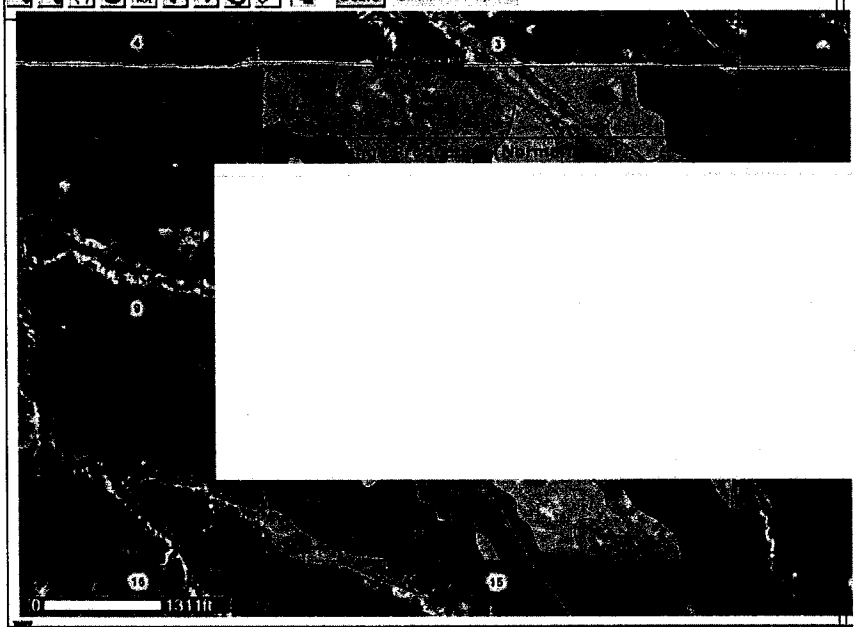
Range Production (Unfavorable Year)

Waste Management

Water Management

Map — Range Production (Normal Year)

Scale (fit to scale)



Warning: Soil Ratings Map may not be valid at this scale.

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:24,000. The map units and the level of detail shown in the resulting soil map are dependent on that map scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could be shown at a more detailed scale.

Data Available

To see available data for a specific point on the map, click the map at the location of interest.

To see a map showing available data for all locations in the U.S. and territories, as a PDF in a separate browser window, click the **Soil Survey Status** link in the Navigation Bar above.

Tables — Range Production (Normal Year) — Summary By Map Unit

Summary by Map Unit — Prairie County, Montana

Map unit symbol	Map unit name	Rating (pounds per acre per year)	Acres in AOI	Percent of AOI
25	Cambeth, calcareous-Cabbart-Kirby complex, 8 to 45 percent slopes	978	188.9	28.9%
84	Lonna silt loam, 0 to 2 percent slopes	1375	0.2	0.0%
85	Lonna silt loam, 2 to 8 percent slopes	1382	41.6	6.4%
89	Lonna-Cambeth silt loams, 2 to 8 percent slopes	1416	109.9	16.8%
90	Lonna-Cambeth-Cabbart silt loams, 4 to 12 percent slopes	1312	152.4	23.3%
91	Lonna-Cambeth-Cabbart silt loams, 12 to 25 percent slopes	1263	110.7	16.9%
142	Cabbart-Havre loams, 0 to 35 percent slopes	1208	49.8	7.6%
Totals for Area of Interest			**653.3**	**100.0%**

Unfavorable Year

Search

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Suitabilities and Limitations Ratings

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Building Site Development

Disaster Recovery Planning

Land Classifications

Land Management

Military Operations

Recreational Development

Vegetative Productivity

Range Production (Favorable Year)

Range Production (Normal Year)

Range Production (Unfavorable Year)

View Description | View Rating

View Options

Map ☑

Table ☑

Description of Rating ☑

Rating Options ☑

☑ Detailed Description

Advanced Options

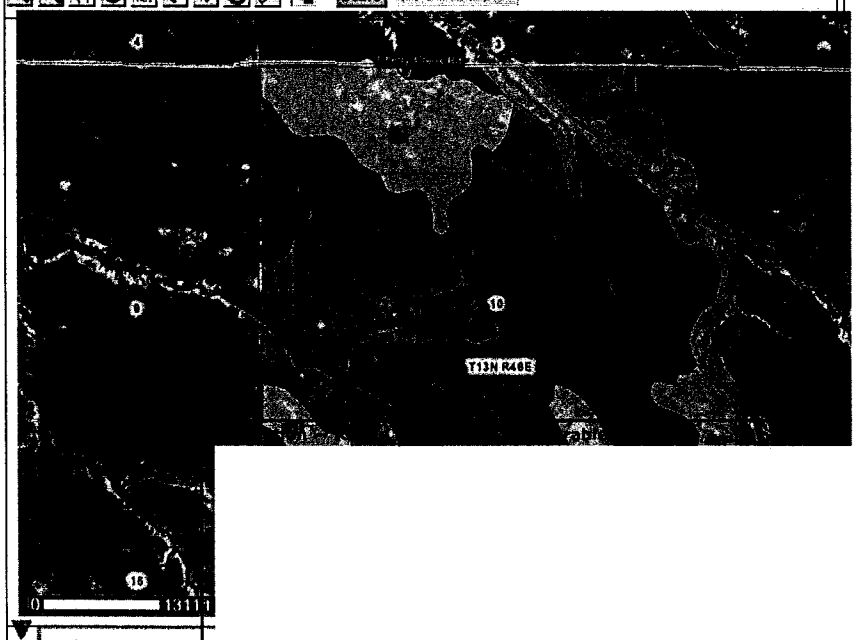
View Description | View Rating

Waste Management

Water Management

Map — Range Production (Unfavorable Year)

Scale | Fit to Scale



Warning: Soil

You have zoomed in
is done at a particu
map units and the l

Enlargement of ma
accuracy of soil line
shown at a more detailed scale.

Data Available

To see available data for a specific point on the map, click the map at the location of interest.

To see a map showing available data for all locations in the U.S. and territories, as a PDF in a separate browser window, click the **Soil Survey Status** link in the Navigation Bar above.

Tables — Range Production (Unfavorable Year) — Summary By Map Unit

Summary by Map Unit — Prairie County, Montana

Map unit symbol	Map unit name	Rating (pounds per acre per year)	Acres in AOI	Percent of AOI
25	Cambeth, calcareous-Cabbart-Kirby complex, 8 to 45 percent slopes	681	188.9	28.9%
84	Lonna silt loam, 0 to 2 percent slopes	1022	0.2	0.0%
85	Lonna silt loam, 2 to 8 percent slopes	1036	41.6	6.4%
89	Lonna-Cambeth silt loams, 2 to 8 percent slopes	1064	109.9	16.8%
90	Lonna-Cambeth-Cabbart silt loams, 4 to 12 percent slopes	989	152.4	23.3%
91	Lonna-Cambeth-Cabbart silt loams, 12 to 25 percent slopes	917	110.7	16.9%
142	Cabbart-Havre loams, 0 to 35 percent slopes	768	49.8	7.6%
Totals for Area of Interest			**653.3**	**100.0%**

Description — Range Production (Normal Year)

Total range production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation. In a normal year, growing conditions are about average. Yields are adjusted to a common percent of air-dry moisture content.

In areas that have similar climate and topography, differences in the kind and amount of vegetation produced on rangeland are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

Rating Options — Range Production (Normal Year)

Units of Measure: pounds per acre per year

Aggregation Method: Weighted Average

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Weighted Average" computes a weighted average value for all components in the map unit. Percent composition is the weighting factor.

The result returned by this aggregation method represents a weighted average value of the corresponding attribute throughout the map unit.

Component Percent Cutoff: *None Specified*

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Interpret Nulls as Zero: Yes

This option indicates if a null value for a component should be converted to zero before aggregation occurs. This will be done only if a map unit has at least one component where this value is not null.

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Rangeland Productivity

Prairie County, Montana

[Only the soils that support rangeland vegetation suitable for grazing are rated. This report shows only the major soils in each map unit]

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Normal year	Unfavorable year
		Lb/ac	*Lb/ac*	*Lb/ac*
9:				
Blacksheep	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Delpoint	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
Rock outcrop	---	---	---	---
11:				
Borollic Camborthids	---	---	---	---
Ustic Torrifluvents	Overflow (Ov) RRU 58A-E 10-14" p.z.	3,000	2,500	2,000
15:				
Busby	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200
Blacksheep	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Twilight	Sandy-Steep (SyStp) RRU 58A-E 10-14" p.z.	1,400	1,200	950
16:				
Busby	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200
Twilight	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200
Blacksheep	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
18:				
Busby	Sandy-Steep (SyStp) RRU 58A-E 10-14" p.z.	1,400	1,200	950
Yetull	Sands (Sa) RRU 58A-E 10-14" p.z.	2,200	1,800	1,400
Rock outcrop, soft	---	---	---	---
20:				
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Rock outcrop, soft	---	---	---	---
Yawdim	Shallow Clay (SwC) RRU 58A-E 10-14" p.z.	1,100	800	600
25:				
Cambeth	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,200	800

Rangeland Productivity

Prairie County, Montana

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Normal year	Unfavorable year
		Lb/ac	*Lb/ac*	*Lb/ac*
25:				
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,000	800	600
Kirby	Very Shallow (VSw) RRU 58A-E 10-14" p.z.	700	600	400
26:				
Cambeth	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Lonna	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
27:				
Cambeth	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Yawdim	Shallow Clay (SwC) RRU 58A-E 10-14" p.z.	1,100	800	600
38:				
Chinook	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200
Twilight	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200
Blacksheep	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
45:				
Delpoint	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Yawdim	Shallow Clay (SwC) RRU 58A-E 10-14" p.z.	1,100	800	600
46:				
Delpoint	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Yawdim	Shallow Clay (SwC) RRU 58A-E 10-14" p.z.	1,100	800	600
55:				
Floweree	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
56:				
Floweree, calcareous	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050

Rangeland Productivity

Prairie County, Montana

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Normal year	Unfavorable year
		Lb/ac	*Lb/ac*	*Lb/ac*
57:				
Floweree, calcareous	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
84:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
85:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
86:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
89:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,600	1,200
Cambeth	Silty (Si) RRU 58A-E 10-14" p.z.	1,600	1,300	1,000
90:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,600	1,200
Cambeth	Silty (Si) RRU 58A-E 10-14" p.z.	1,600	1,300	1,000
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,000	800	600
91:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,600	1,200
Cambeth	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,200	800
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,000	800	600
126:				
Ustic Torriorthents	---	---	---	---
Ustic Torrifluvents	Overflow (Ov) RRU 58A-E 10-14" p.z.	3,000	2,500	2,000
Rock outcrop	---	---	---	---
132:				
Yamacall	Silty (Si) RRU 58A-E 10-14" p.z.	2,000	1,500	1,000
135:				
Yamacall	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Busby	Sandy-Steep (SyStp) RRU 58A-E 10-14" p.z.	1,400	1,200	950

Rangeland Productivity

Prairie County, Montana

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Normal year	Unfavorable year
		Lb/ac	*Lb/ac*	*Lb/ac*
135:				
Blacksheep	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
136:				
Yamacall	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Delpoint	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
137:				
Yamacall	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Delpoint	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
142:				
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,000	800	600
Havre	Overflow (Ov) RRU 58A-E 10-14" p.z.	3,000	2,000	1,000
143:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,600	1,200
Havre	Silty (Si) RRU 58A-E 10-14" p.z.	2,200	1,800	1,400
Glendive	Sandy (Sy) RRU 58A-E 10-14" p.z.	1,900	1,500	1,000
147:				
Floweree	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
149:				
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Cambeth	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
Rock outcrop, soft	---	---	---	---
150:				
Cambeth	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
Twilight	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200

Rangeland Productivity

Prairie County, Montana

Map symbol and soil name	Ecological site	Total dry-weight production		
		Favorable year	Normal year	Unfavorable year
		Lb/ac	*Lb/ac*	*Lb/ac*
151:				
Cambeth	Silty-Steep (SiStp) RRU 58A-E 10-14" p.z.	1,400	1,100	850
Tricart	Gravel (Gr) RRU 58A-E 10-14" p.z.	700	550	400
Floweree	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
155:				
Littlemo	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
156:				
Lonna	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
Busby	Sandy-Steep (SyStp) RRU 58A-E 10-14" p.z.	1,400	1,200	950
Cabbart	Shallow (Sw) RRU 58A-E 10-14" p.z.	1,200	900	600
158:				
Sixbeacon	Shallow to Gravel (SwGr) RRU 58A-E 10-14" p.z.	1,200	1,000	800
Littlemo	Silty (Si) RRU 58A-E 10-14" p.z.	1,800	1,400	1,050
161:				
Yetull	Sands (Sa) RRU 58A-E 10-14" p.z.	2,200	1,800	1,400
Twilight	Sandy (Sy) RRU 58A-E 10-14" p.z.	2,100	1,600	1,200
W:				
Water	---	---	---	---