2009 Agricultural Land Reappraisal Information

Joint Select Sub-Committee on Reappraisal

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Definitions of Agricultural Land: (from the 2006 Montana Agricultural Land Appraisal Manual)

Grazing land – native range or domestic pasture land. Grazing land is the most common land use in the state and is generally used for raising livestock. However, we include land in this class when it can't be classified as one of the other uses. For example, the hills and coulees that are generally interspersed among farmed lands are usually classified as grazing land, even though they may not be used for livestock production.

Grazing land includes native or domestic grassland that **is not** hayed a majority of the years. Native or domestic grassland that is hayed occasionally when there is above average precipitation is classified as grazing land, not hay land. Irrigated pastures are also classified as grazing land.

The grazing land classification should not be used as a catchall category for land under water bodies, road easements, irrigation ditches, barns and other farm structures.

Non-irrigated summer fallow farm land – non irrigated farming practice where the typical land use in the area is to leave the land idle (fallow) every other year. In some cases, producers may also plant alfalfa hay or a green manure crop as a regular part of the crop rotation to restore some productivity. Based on the Administrative Rules of Montana, lands enrolled in the Conservation Reserve Program are also considered summer fallow farmland.

The practice of double or triple cropping land is producing a crop two or three successive years on land that is typically cropped every other year. "Re-cropping" is generally done for economic reasons or to control excess moisture conditions that may be leading to high saline levels in the soil. The summer fallow farmland classification includes the practice of double or triple cropping the land.

Operators often rotate different crops in a cropping sequence. For example, land that is used as summer fallow may be planted to alfalfa for several years to restore certain nutrients to the soil. Land that is typically in summer fallow management should remain in summer fallow farmland classification, even when the land is rotated into another crop such as alfalfa for a short time period.

Tillable irrigated farm land – Farmland that is irrigated a majority of the years is classified as tillable irrigated farmland. Irrigated grazing land is classified as grazing land if the land is used solely by foraging livestock. If an irrigated crop is harvested from the land followed by livestock aftermath grazing, the land is classified as irrigated land.

There is one exception to the classification rule pertaining to irrigated grazing land. **All** land designated as irrigable within an irrigation district or association is classified as irrigated land. If land within an irrigation district or irrigation

association is designated as irrigable by the irrigation district or association, the land is classified as irrigated regardless of whether or not water is being applied to the land. The irrigable land must be specifically identified on irrigation maps or other documents held by the district or association with irrigation fees assessed to the landowner.

The land must have reasonable amounts of water available for periodic applications over the long-term and the water must actually be applied to the land (except in irrigation districts or associations). Short-term drought is not a basis for removing land from the irrigated classification unless it is the intent of the operator to discontinue irrigation over the long-term. Land that receives intermittent water applications less than 50 percent of the years is not classified as irrigated land. For example, infrequent or light rainfall may mean land with spreader dikes only receives one water application every few years.

Non-irrigated hay land – also called dry land hay or wild hay. Non irrigated continuously cropped hay land is land that is hayed a majority of the years. A majority of the years would be more than 50 percent over the long term (11 years out of the past 20 years). Hay land includes native vegetation, domestic grasses and non irrigated alfalfa. Native or domestic grassland that is hayed occasionally when there is above average precipitation is classified as grazing land, not hay land.

Hay land that is intermittently irrigated is classified as hay land, not tillable irrigated farmland. This situation commonly occurs on land in arid to semi-arid regions of the state in which the owner installs spreader irrigation dikes. Infrequent or light rainfall may mean the land only receives one water application every few years.

Hay fields located along creeks and rivers may experience natural sub-irrigation. Sub-irrigated hay land that receives water from natural sources is classified as hay land. Land must receive water from man-made irrigation delivery systems to be classified as tillable irrigated land. In many instances these lands are also used for short term fall pasture.

Non-irrigated continuously cropped farm land - Continuously cropped farmland is found extensively in only the northwestern section of the state. This farming practice crops the land at least 75 percent of the years over the long term. Nonirrigated farmland that is allowed to lay fallow more than 25 percent of the time over the long term is classified as summer fallow land.

Re-cropped farmland should not be confused with continuously cropped farmland. Continuous cropping must be the accepted long-term practice. Re-cropping is the occasional practice of double or triple cropping land to optimize profits or address specific management problems. Re-cropped land that is typically managed as summer fallow is classified as summer fallow farmland, not continuously cropped farmland.

ALFALFA HAY
Acreage, Yield, and Production, Montana, USA

Last updated September 29, 2008

	Total							
	Acres	Production			Value		Olympic Average Price	
Year	Harvested Acres	Yield Per Acre (Tons)	Total Tons	Price Per Ton Dols.	Value of Production (Dols)	Value Per Acre Dols.	7 yr Olympic Avg Price per Ton	Alfalfa Hay Adjustment - 80%
2007	1,650,000	2.30	3,795,000	$79.00	$299,805,000	$182.00		
2006	1,550,000	2.10	3,255,000	$78.00	$249,008,000	$164.00		
2005	1,750,000	2.20	3,850,000	**$71.00**	$273,350,000	$144.00		
2004	1,400,000	2.30	3,220,000	$77.00	$247,940,000	$177.00	**$78.80**	**$63.04**
2003	1,600,000	2.10	3,360,000	$75.00	$252,000,000	$158.00		
2002	1,500,000	2.00	3,000,000	$85.00	$255,000,000	$170.00		
2001	1,600,000	2.20	3,520,000	**$96.50**	$336,160,000	$210.00		
2000	1,400,000	2.10	2,940,000	$86.50	$254,310,000	$182.00		
1999	1,700,000	2.20	3,740,000	$66.00	$246,840,000	$145.00		
1998	1,700,000	2.20	3,740,000	$73.00	$273,020,000	$161.00		
1997	1,650,000	2.40	3,960,000	$80.00	$316,800,000	$192.00		
1996	1,700,000	2.10	3,570,000	$81.00	$289,170,000	$170.00		
1995	1,600,000	2.50	4,000,000	$67.50	$270,000,000	$169.00	**N/A**	
1994	1,550,000	2.30	3,565,000	$71.50	$254,898,000	$164.00		
1993	1,450,000	2.40	3,480,000	$69.50	$241,860,000	$167.00		
1992	1,300,000	2.30	2,990,000	$71.50	$213,785,000	$164.00		
1991	1,350,000	2.50	3,375,000	$51.50	$173,813,000	$129.00		

* Highlighted cells indicate the high and low year of average commodity price.
Source: Montana Agricultural Statistical Services

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OTHER SPRING WHEAT
Prices Received by Farmers, Monthly and Market Year Average, Montana, USA

Last updated September 29, 2008

Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Market Yr. Avg. 1/	2001 to 2007 7 year Olympic Average	2001 to 2007 USDA Farm Program Payment per Bushel	2009 - 2015 Reappraisal Cycle Commodity Price
	Dollars per Bushel															
1/ Marketing year is July through June of the following year.																
2007	**$4.61**	**$4.78**	**$4.75**	**$4.82**	**$4.97**	**$5.08**	**$5.32**	**$5.61**	**$6.12**	**$7.57**	**$6.97**	**$7.06**	**$7.49**			
2006	**$3.76**	**$3.79**	**$4.00**	**$3.93**	**$4.54**	**$4.18**	**$4.31**	**$4.05**	**$4.08**	**$4.47**	**$4.55**	**$4.56**	**$4.58**			
2005	**$3.85**	**$3.77**	**$3.72**	**$3.47**	**$3.30**	**$3.69**	**$3.43**	**$3.27**	**$3.50**	**$3.65**	**$3.73**	**$3.76**	**$3.80**			
2004	**$3.80**	**$3.93**	**$3.97**	**$3.99**	**$4.04**	**$3.92**	**$3.89**	**$3.43**	**$3.64**	**$3.77**	**$3.86**	**$3.63**	**$3.69**	**$3.99**	**$0.59**	**$4.58**
2003	**$4.13**	**$3.92**	**$3.95**	**$3.69**	**$3.65**	**$3.63**	**$3.43**	**$3.48**	**$3.52**	**$3.60**	**$3.83**	**$3.80**	**$3.78**			
2002	**$3.04**	**$2.98**	**$2.99**	**$3.05**	**$2.94**	**$3.07**	**$3.31**	**$3.63**	**$4.46**	**$4.66**	**$4.48**	**$4.45**	**$4.08**			
2001	**$3.05**	**$3.13**	**$3.18**	**$3.27**	**$3.34**	**$3.26**	**$3.16**	**$3.02**	**$2.98**	**$3.17**	**$3.18**	**$3.13**	**$3.06**			
2000	2.93	2.89	2.9	2.95	3	2.96	2.93	2.64	2.71	2.89	3.07	3.14	3.03			
1999	3.25	3.26	3.15	3.13	3.05	3.14	3.13	2.93	3.04	2.95	3.06	3	2.97			
1998	3.5	3.42	3.54	3.55	3.54	3.41	3.31	2.92	2.73	3.09	3.25	3.23	3.13			
1997	4.13	4.05	4.03	4.13	4.17	3.99	3.85	3.85	3.62	3.58	3.57	3.73	3.58			
1996	4.55	4.68	4.74	4.94	5.46	5.26	5.36	4.79	4.37	4.27	4.21	4.31	4.22			
1995	3.62	3.52	3.52	3.38	3.53	3.74	3.95	4.08	4.16	4.36	4.43	4.51	4.59			
1994	3.79	3.52	3.77	3.76	3.49	3.7	3.47	3.21	3.37	3.4	3.5	3.63	3.51			
1993	3.62	3.57	3.44	3.53	3.43	3.46	3.55	3.55	3.56	3.44	3.44	3.73	3.63		**NA**	
1992	3.35	3.4	3.59	3.8	3.88	3.93	3.75	3.31	3.48	3.53	3.66	3.59	3.54			
1991	2.7	2.65	2.71	2.8	2.86	2.83	2.71	2.55	2.68	2.85	3.06	3.23	3.24			
1990	3.69	3.57	3.58	3.56	3.5	3.4	3.29	3.03	2.82	2.75	2.67	2.69	2.8			
1989	4.16	4.11	4.2	4.2	4.15	4.12	4.04	3.81	3.76	3.68	3.63	3.63	3.64			
1988	2.78	2.83	2.87	2.87	2.98	3.26	3.74	3.94	4.11	4.1	4.04	4.07	4.1			
1987	2.79	2.64	2.65	2.66	2.77	2.56	2.31	2.46	2.61	2.66	2.8	2.74	2.78			
1986	3.83	3.84	3.88	3.76	3.83	3.24	2.87	2.5	2.43	2.47	2.65	2.67	2.62			

Source: Montana Agricultural Statistical Services

PRIVATE GRAZING FEE RATES:
Average Rates by Method of Payment [1], Montana, USA

Last updated July 31, 2008

Year	Animal Unit [2]	Cow-Calf	Per Head	
	Dollars Per Month			
1/ Non-irrigated grazing land. 2/Includes animal unit plus cow-calf rates. Cow-calf rate converted to animal unit (AUM) using (1 aum= cow-calf *0.833). 2/ Insufficient reports to compute average.				7 yr Olympic Avg Grazing fee per AUM
2007	**$17.80**	20.10	19.20	
2006	16.20	18.70	18.30	
2005	16.20	18.70	17.30	
2004	15.90	17.40	16.20	**$15.72**
2003	15.20	17.40	15.90	
2002	15.10	17.30	16.30	
2001	**$14.90**	16.70	16.00	
2000	14.10	15.60	14.70	
1999	13.20	15.00	14.00	
1998	12.60	14.30	13.30	
1997	12.30	13.90	13.20	
1996	11.80	13.20	11.70	**NA**
1995	11.90	13.70	12.80	
1994	11.80	13.50	12.90	
1993	11.40	12.90	11.50	
1992	11.86	12.61	11.97	
1991	10.58	12.13	10.53	

Source: Montana Agricultural Statistical Services

Agricultural Land Productivity Valuation Formula

V=I/R

V	=	productivity value of ag use
I	=	net income of agricultural use[1]
R	=	capitalization rate. The rate converts an on-going income stream into value; by law the rate is 6.4%

Non Irrigated Summer Fallow Farmland

2009 Olympic Avg. price for spring wheat	= $4.58/bu.
Estimated Productivity	= 20 bu/ac
Gross Income/ac. = 20 bu/ac. * $4.58	= $91.60/ac
Net Income per acre = $91.60 *0.125	= $11.45/ac

$11.45/.064 = $178.91 Productive Value/Acre

2008 Class 3 Tax Rate	= 3.01%
Taxable Value (TV)	= $5.39/ac ($178.91 X 0.0301 = $5.39TV)
2008 Effective Mill Levy	= 494.93
Estimated Tax/Acre	= $2.67/ac ($5.39TV X 0.49493 = $2.67)
Effective Tax Rate	= 1.49% ($2.67 ÷ $178.91 = 0.01492)

Non Irrigated Continuously Cropped Farmland

2009 Olympic Avg. price for spring wheat	= $4.58/bu
Productivity	= 20 bu/ac.
Income/ac. = 20 bu/ac. * $4.58	= $91.60/ac.
Net Income per acre = $91.60 * .25	= $22.90/ac

$22.90/.064 = $357.81 Productive Value/Acre

2008 Class 3 Tax Rate	= 3.01%
Taxable Value	= $10.77/ac ($357.81 X 0.0301 = $10.77)
2008 Effective Mill Levy	= 494.93
Estimated Tax/Acre	= $5.33/ac ($10.77 X 0.49493 = $5.33)
Effective Tax Rate	= 1.49% ($5.33 ÷ $357.81 = 0.01489)

[1] A crop share approach is used to determine the net income attributable to agricultural production. In a crop share approach, a percentage of the income from production (the share) is attributed to the landlord (owner) of the land. The remaining percentage is considered the tenant's share and includes expenses of production.

Non Irrigated Cont. Cropped Hay land

2009 Olympic Avg. price for alfalfa	= $63.04/ton
Productivity	= 1.25 tons/ac
Gross Income/ac. = $63.04 * 1.5 tons	= $94.56/acre
Net Income per acre = $94.56 * .25	= $23.64/acre

$23.64/.064 = $369.38 Productivity Value/Acre

2008 Class 3 Tax Rate	= 3.01%
Taxable Value (TV)	= $11.12/ac ($369.38 X 0.0301 = $11.12 TV)
2008 Effective Mill Levy	= 474.45
Estimated Tax/Acre	= $5.28/ac ($11.12 X 0.47445 = $5.28)
Effective Tax Rate	= 1.43% ($5.28 ÷ $369.38 = 0.01429)

Non Irrigated Cont. Cropped Hay land

(Minimum Value of irrigated land calculation)

2009 Olympic Avg. price for alfalfa	= $63.04/ton
Productivity	= 1.25 tons/ac
Gross Income/ac. = $63.04 * 0.9 tons	= $56.74/acre
Net Income per acre = $56.74 * .25	= $14.19/acre

$14.19/.064 = $221.72 Productivity Value/Acre

2008 Class 3 Tax Rate	= 3.01%
Taxable Value (TV)	= $6.67/ac ($221.72 X 0.0301 = $6.67 TV)
2008 Effective Mill Levy	= 474.45
Estimated Tax/Acre	= $3.16/ac ($6.67 X 0.47445 = $3.16)
Effective Tax Rate	= 1.43% ($3.16 ÷ $221.72 = 0.01425)

Irrigated Land

2009 Olympic Avg. price for alfalfa	= $63.04/ton
Productivity	= 3.0 tons/ac
Gross Income/ac. = 3.0 tons/ac.* $63.04	= $189.12/ac
Net Income = $189.12 * .25	= $47.28/acre
Water Cost 1 (less than $20.00 allowance)	= ($17.50)
Income per acre After Water Cost Deduction	= $29.78

$29.78/.064 = $465.31 Productivity Value/Acre

2008 Class 3 Tax Rate	= 3.01%
Taxable Value (TV)	= $14.01/ac ($465.31 X 0.0301 = $14.01 TV)
2008 Effective Mill Levy	= 472.56
Estimated Tax/Acre	= $6.62/ac ($14.01 X 0.47256 = $6.62)
Effective Tax Rate	= 1.42% ($6.62 ÷ $465.31 = 0.01422)

Irrigated Land
Example of Minimum Value

2009 Olympic Avg. price for alfalfa	= $63.04/ton
Productivity	= 3.0 tons/ac
Gross Income/ac. = 3.0 tons/ac.* $63.04	= $189.12/ac
Net Income = $189.12 * .25	= $47.28/acre
Water Cost 5 (Maximum allowance)	= ($37.50)
Income per acre After Water Cost Deduction	= $9.78

$9.78/.064 = $152.81 Productivity Value/Acre; Default value = $221.72

15-7-201(f) MCA states "With respect to irrigated land, the recommended value of irrigated land may not be below the value that the land would have if it were not irrigated." *When the valuation formula used to calculate the value of irrigated land results in the per-acre value falling below a certain amount, a minimum value equivalent to the value associated with non-irrigated hay land at .9 tons/acre production is assigned to the irrigated acres meeting the "minimum value" criteria.*

2008 Class 3 Tax Rate	= 3.01%
Taxable Value (TV)	= $6.67/ac ($221.72 X 0.0301 = $6.67 TV)
2008 Effective Mill Levy	= 472.56
Estimated Tax/Acre	= $3.15/ac ($6.67 X 0.47256 = $3.15)
Effective Tax Rate	= 1.42% ($3.15 ÷ $221.72 = 0.01420)

Grazing Land

2009 Olympic Avg. private grazing lease	= $15.72/AUM
Operating Expense = $15.72 * .25	= $3.93/AUM
Net Operating Income = $15.72 - $3.93	= $11.79/AUM
Productivity	= .30 AUM/Ac
Income per acre = $11.79/AUM * .30 AUM/Ac	= $3.54/ac.

$3.54/.064 = $55.31 Productivity Value/Acre

2008 Class 3 Tax Rate	= 3.01%
Taxable Value (TV)	= $1.66/ac ($55.31 X 0.0301 = $1.66 TV)
2008 Effective Mill Levy	= 467.88
Estimated Tax/Acre	= $0.78/ac ($1.66 X 0.46788 = $0.78)
Effective Tax Rate	= 1.41% ($0.78 ÷ $55.31 = 0.01410)

Agricultural Land Reappraisal Impacts
Before and After Mitigation Impacts

2003 Agricultural Land Reappraisal Impacts
(For the reappraisal cycle beginning on January 1, 2003 and ending on December 31, 2008)

7 Year Olympic Average Commodity Prices	Unit of Measure	1997	2003	Percent Change
Wheat	per bushel	$3.91	$4.50	15.09%
Alfalfa	per ton	$54.46	$62.08	13.99%
Grazing Fee	per AUM	$11.05	$12.82	16.02%

	1997		2003				
Land Classification	Average Productive Value/Acre	Average Taxable Value/Acre @ 3.46%	Average Productive Value/Acre	Average Taxable Value/Acre @ 3.46%	Percent Change Prior to Mitigation	Average Taxable Value/Acre @ 3.01%	Percent Change After Mitigation
Grazing Land	$36.57	$1.27	$42.43	$1.47	15.75%	$1.28	0.56%
Summer Fallow Farmland	$151.71	$5.25	$174.60	$6.04	15.05%	$5.26	0.10%
Cont. Cropped Farmland	$449.53	$15.55	$517.36	$17.90	15.11%	$15.57	0.14%
Irrigated Land	$301.35	$10.43	$344.51	$11.92	14.29%	$10.37	-0.58%
Non irrigated Cont. Cropped Hayland	$227.42	$7.87	$259.27	$8.97	13.98%	$7.80	-0.84%
Statewide Impact	**$77.43**	**$2.68**	**$89.23**	**$3.09**	**15.30%**	**$2.69**	**0.37%**

1997 Agricultural Land Reappraisal Impacts
(For the reappraisal cycle beginning on January 1, 1997 and ending on December 31, 2002)

7 Year Olympic Average Commodity Prices	Unit of Measure	1993	1997	Percent Change
Wheat	per bushel	$3.89	$3.91	0.51%
Alfalfa	per ton	$55.52	$54.46	-1.91%
Grazing Fee	per AUM	$9.14	$11.05	20.90%

	1993		1997				
Land Classification	Average Productive Value/Acre	Average Taxable Value/Acre (3.86% Rate)	Average Productive Value/Acre	AverageTaxable Value/Acre @ 3.86%	Percent Change Prior to Mitigation	Average Taxable Value/Acre @ 3.46%	Percent Change After Mitigation
Grazing Land	$29.49	$1.14	$36.50	$1.41	23.75%	$1.26	10.93%
Summer Fallow Farmland	$157.70	$6.09	$151.93	$5.86	-3.66%	$5.26	-13.64%
Cont. Cropped Farmland	$453.27	$17.50	$448.59	$17.32	-1.03%	$15.52	-11.29%
Irrigated Land	$272.35	$10.51	$298.91	$11.54	9.75%	$10.34	-1.62%
Non irrigated Cont. Cropped Hayland	$204.12	$7.88	$223.02	$8.61	9.26%	$7.72	-2.06%
Statewide Impact	**$72.86**	**$2.81**	**$77.59**	**$3.00**	**6.49%**	**$2.68**	**-4.54%**

1993 Reappraisal Impacts
(For the reappraisal cycle beginning on January 1, 1994 and ending on December 31, 1996)

	1983		1993		
Land Classification	Average Productive Value/Acre	Average Taxable Value/Acre (30% Rate)	Average Productive Value/Acre	Average Taxable Value/Acre (3.86% Rate)	Percent Change/Acre
Grazing Land	$3.53	$1.06	$28.76	$1.11	4.90%
Summer Fallow Farmland	$22.77	$6.83	$163.99	$6.33	-7.40%
Cont. Cropped Farmland	$55.57	$16.67	$425.13	$16.41	-1.60%
Irrigated Land	$30.37	$9.11	$291.45	$11.25	23.50%
Non-Irrigated Cont. Cropped Hayland	$17.40	$5.22	$183.42	$7.08	35.70%
Statewide Impact	**$9.30**	**$2.79**	**$72.80**	**$2.81**	**0.70%**