

Forestlands in the Trust Portfolio



Jordan Larson
Resource Economist



Trust Land Management Mission

School trust lands are managed to “**produce revenues for the trust beneficiaries while considering environmental factors and protecting the future income-generating capacity of the land.**”

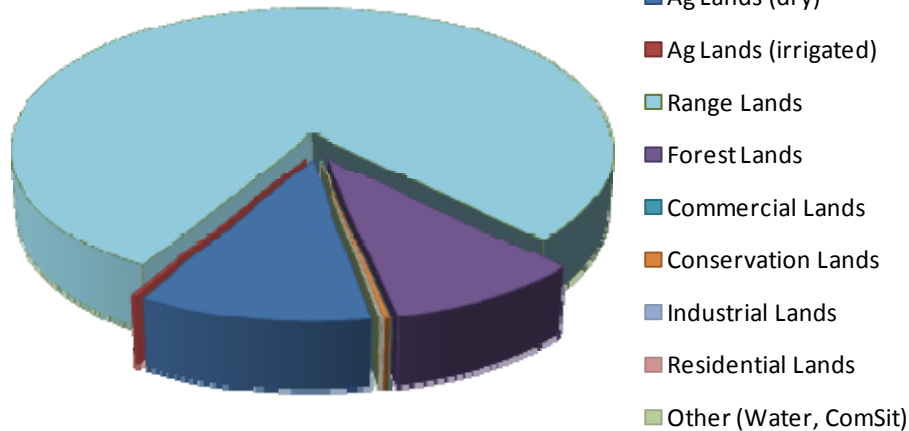


Trust Land Management Principles

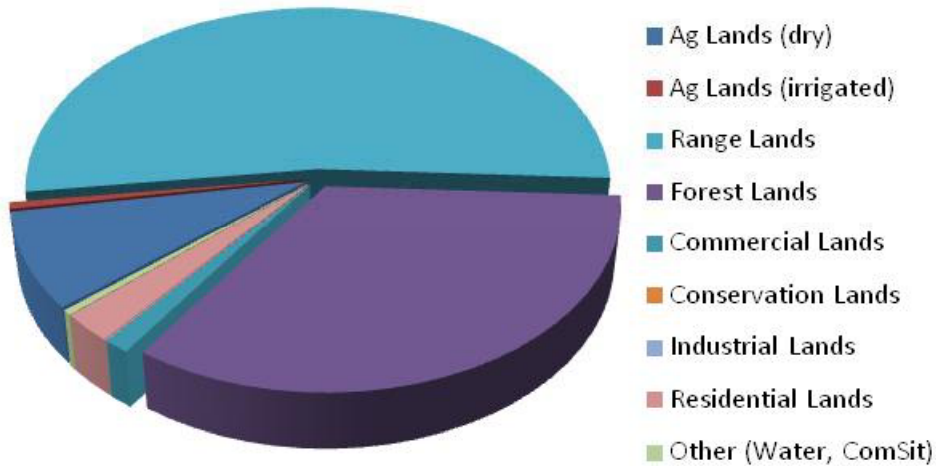
Managing school trust lands in support of education services, DNRC is mandated to operate within three overarching principles:

- **Diversify** trust land holdings to increase revenue to the trust beneficiaries while reducing **risk**
- **Manage, retain, and enhance** core land **assets** to improve revenue production over the long run
- Exert **leadership** in the **stewardship** and **multiple use** of Montana's trust land resources

Surface Portfolio Acres vs. Value



	TOTAL	%
Ag Lands (dry)	566,146	10.99%
Ag Lands (irrigated)	11,637	0.23%
Range Lands	4,066,766	78.91%
Forest Lands	483,938	9.39%
Commercial Lands	1,576	0.03%
Conservation Lands	14,643	0.28%
Industrial Lands	2,314	0.04%
Residential Lands	2,134	0.04%
Other (Water, ComSit)	4,452	0.09%
Total Lands	5,153,607	100.00%
%	100.00%	



	TOTAL	%
Ag Lands (dry)	\$223,426,806	8.55%
Ag Lands (irrigated)	\$15,330,649	0.59%
Range Lands	\$1,379,313,545	52.75%
Forest Lands	\$883,310,505	33.78%
Commercial Lands	\$32,329,763	1.24%
Conservation Lands	----	0.00%
Industrial Lands	\$2,418,360	0.09%
Residential Lands	\$66,535,019	2.54%
Other (Water, ComSit)	\$11,925,462	0.46%
Total Lands	\$2,614,590,109	100.00%

Trust Land Diversification Vehicles

- **Land Exchange**
- **Land Banking**
- **Legislative Acquisition**
- **Reclassification**

Potomac Acquisition

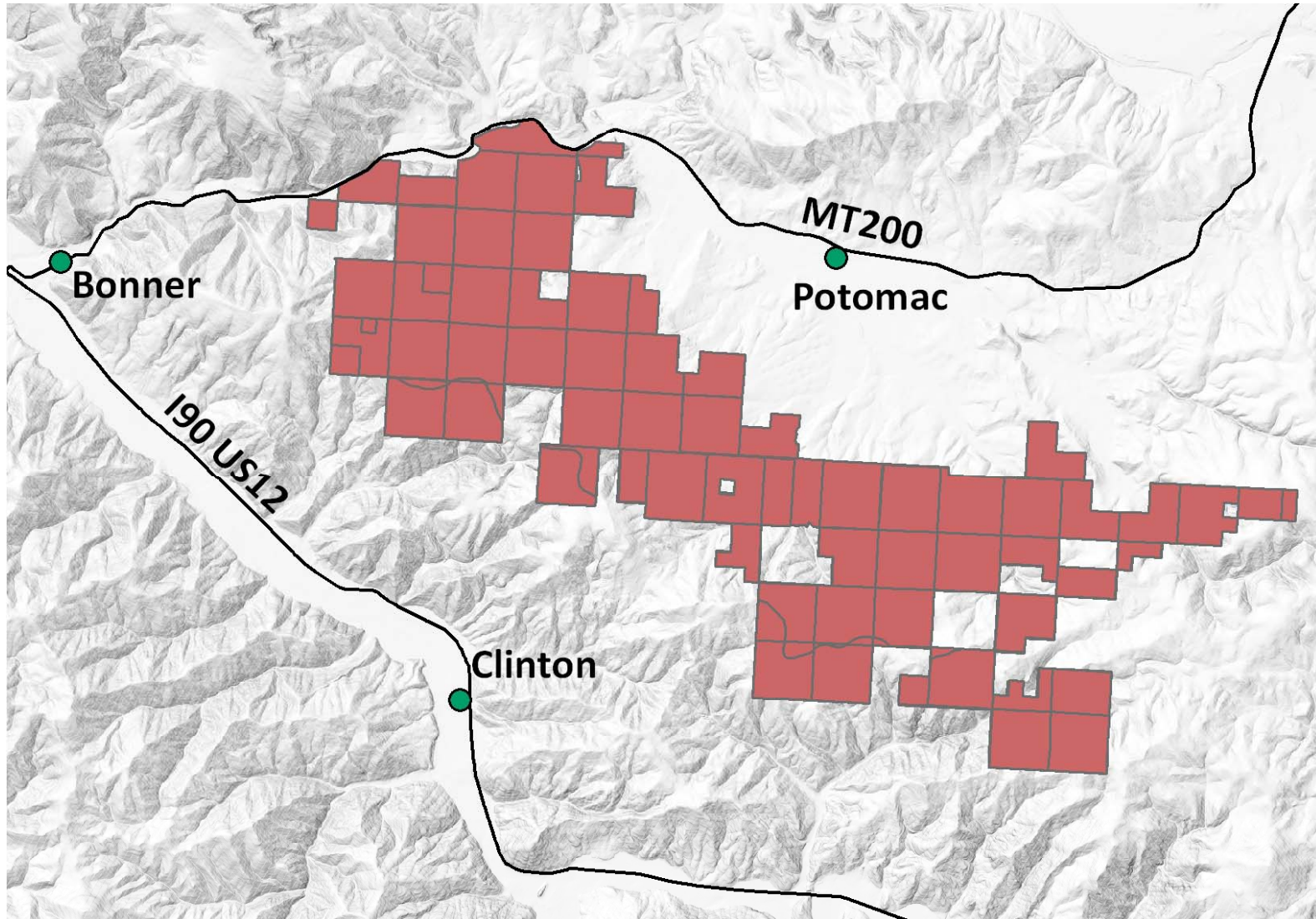


Table 2. Potomac Total Productivity (MMBF)

Forest Acre BF Growth Rate	Full Analysis Area		HB 674 Proposal		
	34,200 acres	29,300 acres	25,600 acres	22,750 acres	20,500 acres
80	1.64	1.41	1.23	1.09	0.98
90	1.85	1.58	1.38	1.23	1.11
100	2.05	1.76	1.54	1.37	1.23
110	2.26	1.93	1.69	1.50	1.35
120	2.46	2.11	1.84	1.64	1.48
130	2.67	2.29	2.00	1.77	1.60
140	2.87	2.46	2.15	1.91	1.72
150	3.08	2.64	2.30	2.05	1.85

*Calculation includes a 60% adjustment for non-forested acres, risk of loss, and deterioration.

Table 3. Stratified Purchase Prices at \$20.5 million

Acre Price	Full Analysis Area		HB 674 Proposal		
	34,200 acres	29,300 acres	25,600 acres	22,750 acres	20,500 acres
\$400	\$13,680,000	\$11,720,000	\$10,240,000	\$9,100,000	\$8,200,000
\$500	\$17,100,000	\$14,650,000	\$12,800,000	\$11,375,000	\$10,250,000
\$600	\$20,500,000	\$17,580,000	\$15,360,000	\$13,650,000	\$12,300,000
\$700	\$23,940,000	\$20,500,000	\$17,920,000	\$15,925,000	\$14,350,000
\$800	\$27,360,000	\$23,440,000	\$20,500,000	\$18,200,000	\$16,400,000
\$900	\$30,780,000	\$26,370,000	\$23,040,000	\$20,500,000	\$18,450,000
\$1,000	\$34,200,000	\$29,300,000	\$25,600,000	\$22,750,000	\$20,500,000

* Prices may not be exact from rounding.

Table 7. NPV Baseline

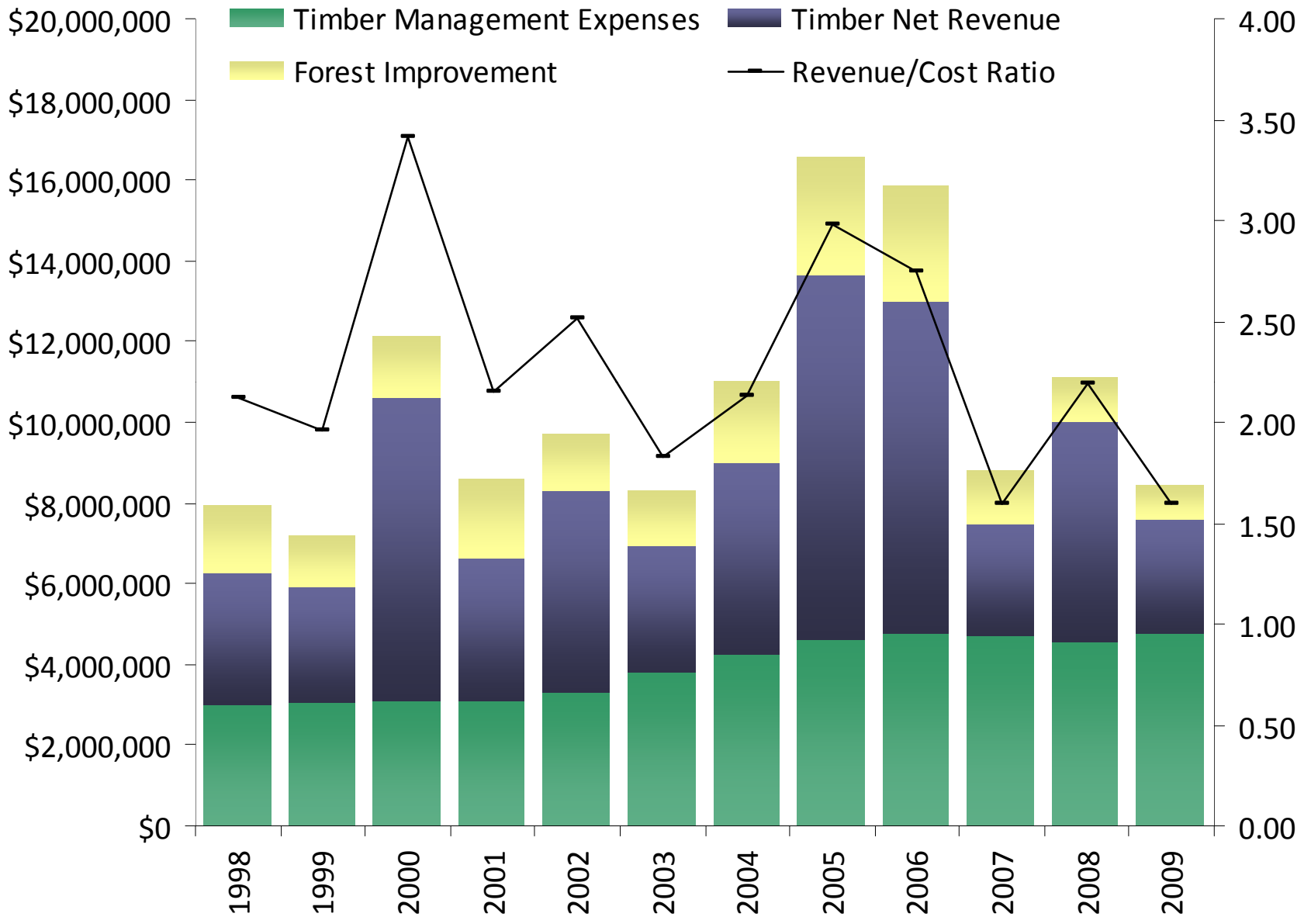
	Full Analysis Area 34,200 acres	HB 674 Proposal 25,600 acres	20,500 acres
Acres	34,200	25,600	20,500
Price _{ACRE}	\$600	\$800	\$1,000
Appreciation	6.0%	6.0%	6.0%
Growth _{BF}	150	150	150
SY _{MBF}	3,078	2,304	1,845
Price _{MBF}	\$200	\$200	\$200
Cost _{MBF}	\$100	\$100	\$100
AUM	1,250	936	749
Price _{AUM}	\$7.00	\$7.00	\$7.00
Cost _{AUM}	\$0.80	\$0.80	\$0.80
Inflation	3.0%	3.0%	3.0%
Real <i>r</i>	1.0%	1.0%	1.0%
Present Values			
Cost _{LAND}	\$20,520,000	\$20,480,000	\$20,500,000
Revenue _{AUM}	\$875,000	\$654,971	\$524,488
Cost _{AUM}	\$100,000	\$74,854	\$59,942
Revenue _{MBF}	\$61,560,000	\$46,080,000	\$36,900,000
Cost _{MBF}	\$30,780,000	\$23,040,000	\$18,450,000
NPV	\$11,035,000	\$3,140,117	-\$1,585,453

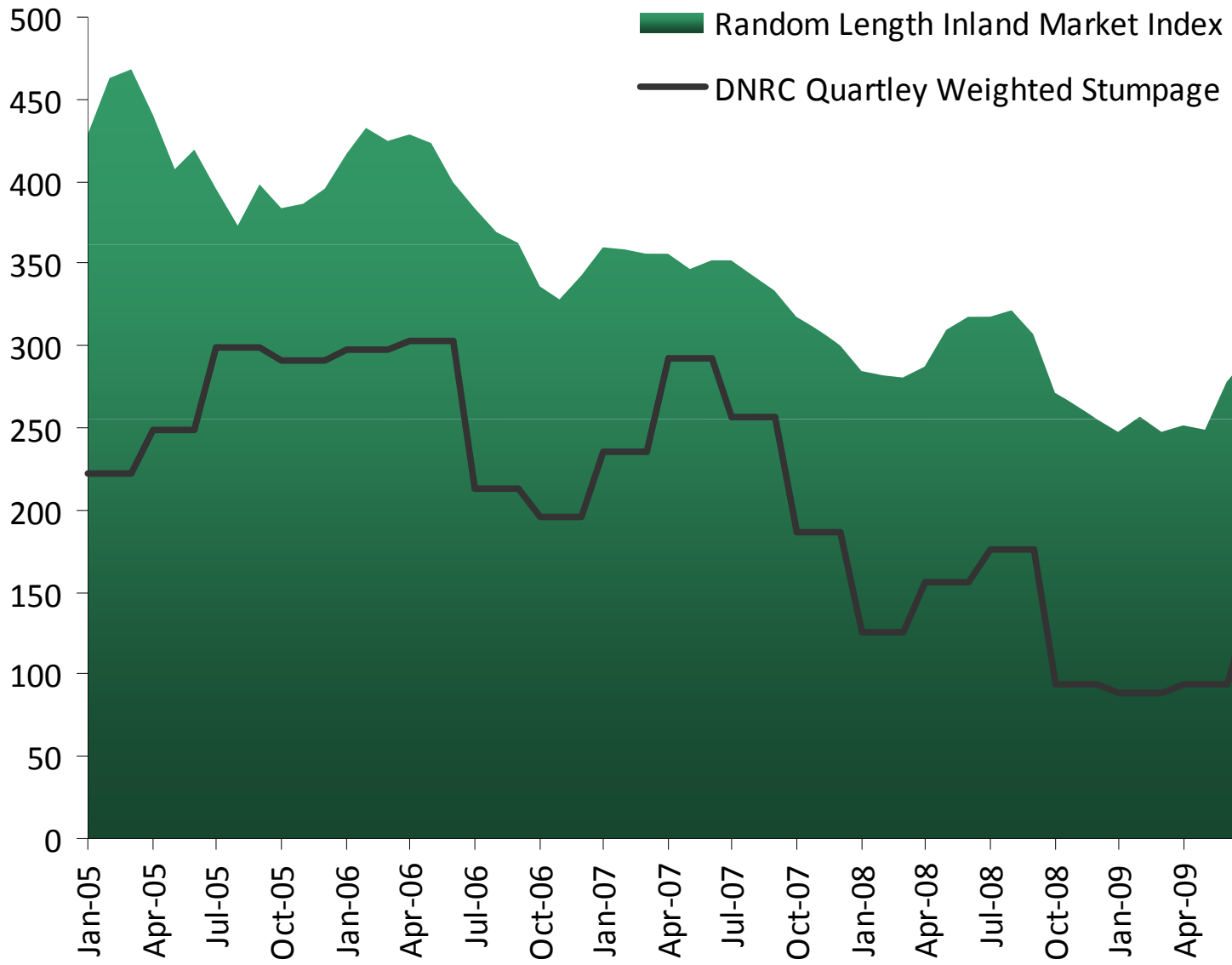
Table 9. NPV & Cost_{MBF} Sensitivity

	HB 674 Proposal 25,600 acres	HB 674 Proposal 25,600 acres	HB 674 Proposal 25,600 acres
Acres	25,600	25,600	25,600
Price _{ACRE}	\$800	\$800	\$800
Appreciation	6.0%	6.0%	6.0%
Growth _{BF}	150	150	150
SY _{MBF}	2,304	2,304	2,304
Price _{MBF}	\$200	\$200	\$200
Cost _{MBF}	\$120	\$110	\$90
AUM	936	936	936
Price _{AUM}	\$7.00	\$7.00	\$7.00
Cost _{AUM}	\$0.80	\$0.80	\$0.80
Inflation	3.0%	3.0%	3.0%
Real <i>r</i>	1.0%	1.0%	1.0%
Present Values			
Cost _{LAND}	\$20,480,000	\$20,480,000	\$20,480,000
Revenue _{AUM}	\$654,971	\$654,971	\$654,971
Cost _{AUM}	\$74,854	\$74,854	\$74,854
Revenue _{MBF}	\$46,080,000	\$46,080,000	\$46,080,000
Cost _{MBF}	\$27,648,000	\$25,344,000	\$20,736,000
NPV	-\$1,467,883	\$836,117	\$5,444,117

Table 8. NPV & Growth_{BF} Sensitivity

	HB 674 Proposal 25,600 acres	HB 674 Proposal 25,600 acres	HB 674 Proposal 25,600 acres
Acres	25,600	25,600	25,600
Price _{ACRE}	\$800	\$800	\$800
Appreciation	6.0%	6.0%	6.0%
Growth _{BF}	110	130	150
SY _{MBF}	1,690	1,997	2,304
Price _{MBF}	\$200	\$200	\$200
Cost _{MBF}	\$100	\$100	\$100
AUM	936	936	936
Price _{AUM}	\$7.00	\$7.00	\$7.00
Cost _{AUM}	\$0.80	\$0.80	\$0.80
Inflation	3.0%	3.0%	3.0%
Real <i>r</i>	1.0%	1.0%	1.0%
Present Values			
Cost _{LAND}	\$20,480,000	\$20,480,000	\$20,480,000
Revenue _{AUM}	\$654,971	\$654,971	\$654,971
Cost _{AUM}	\$74,854	\$74,854	\$74,854
Revenue _{MBF}	\$33,792,000	\$39,936,000	\$46,080,000
Cost _{MBF}	\$16,896,000	\$19,968,000	\$23,040,000
NPV	-\$3,003,883	\$68,117	\$3,140,117





Montana Trust Lands Net Income by Activity (2009)

Activity	Acres	FTE	Gross Income	Net Income	Cost/ Acre	Net Inc./Ac	Cost/Gr. Income	Net Income/FTE
Agriculture	576,882	5.93	\$14,650,880	\$13,632,273	\$1.77	\$23.63	7.0%	\$2,298,866
Grazing	4,067,496	17.81	\$7,163,795	\$6,129,636	\$0.25	\$1.51	14.4%	\$344,168
Forest Management	483,670	69.76	\$8,453,067	\$3,000,233	\$11.27	\$6.20	64.5%	\$43,008
Real Estate (Commercial)	5,665	5.20	\$5,203,027	\$4,919,588	\$50.03	\$868.44	5.4%	\$946,075
Real Estate (Conservation)	17,583	1.00	\$125,249	\$70,742	\$3.10	\$4.02	43.5%	\$70,742
Real Estate (Residential)	1,870	5.20	\$1,579,671	\$1,296,232	\$151.57	\$693.17	17.9%	\$249,275
Real Estate (Land Transactions)	----	6.60						
Recreational Use	5,128,048	----	\$1,090,628	\$949,116	\$0.03	\$0.19	13.0%	
Easement	----	5.00	\$349,720	\$186,198			46.8%	\$37,240
Minerals (Coal)	13,841	0.26	\$7,882,390	\$7,738,089	\$10.43	\$559.07	1.8%	\$7,738,089
Minerals (Oil & Gas)	1,798,550	15.19	\$35,706,567	\$34,942,452	\$0.42	\$19.43	2.1%	\$2,300,359
Total		131.95	\$82,204,994	\$72,844,789			11%	\$552,064