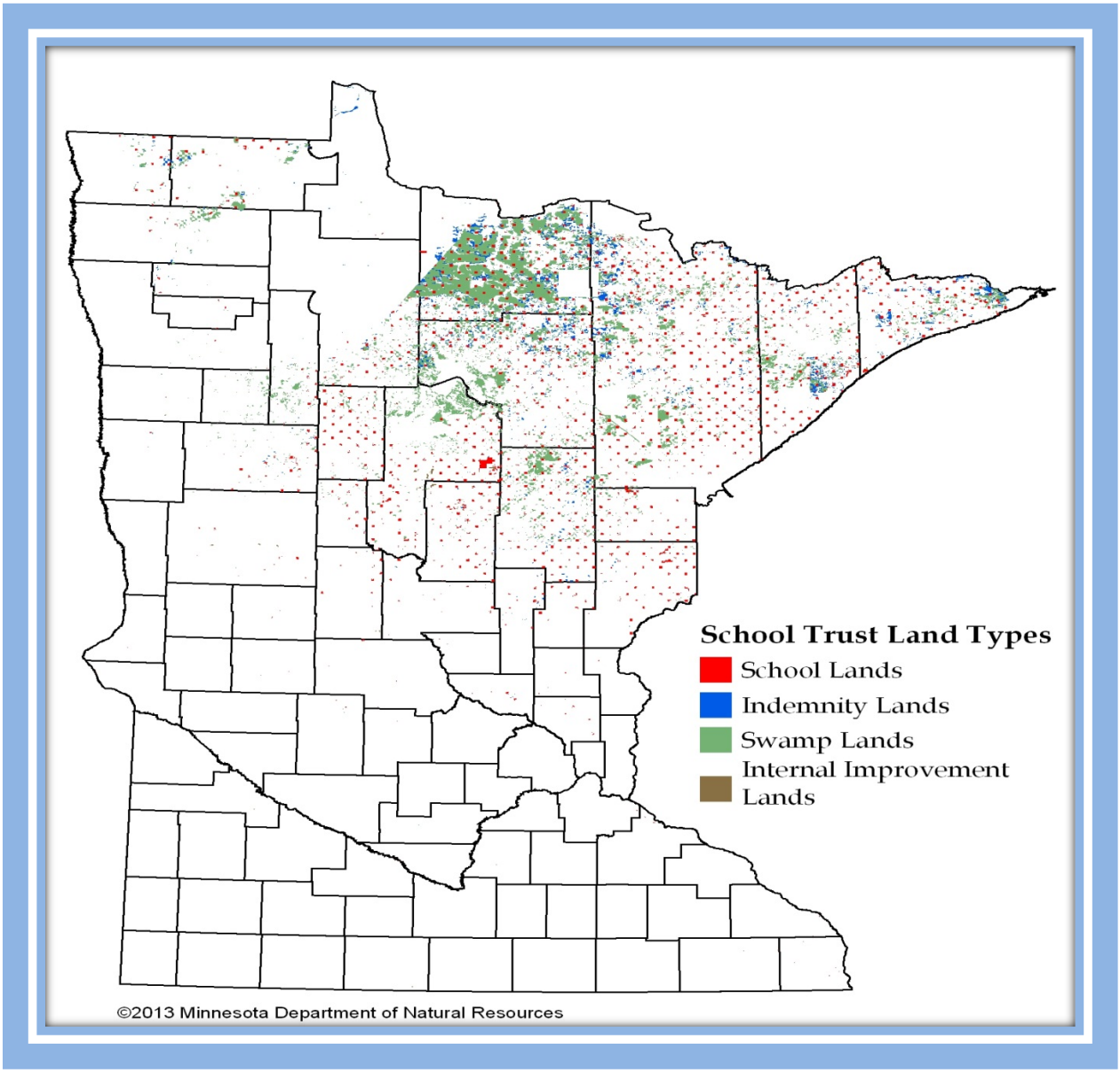
MINNESOTA'S SCHOOL TRUST LANDS
BIENNIAL REPORT
Fiscal Years 2012-2013
(7/1/2011 – 6/30/2013)



Minnesota Department of Natural Resources
December 2013

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This biennial financial report and its precursor inventory project cost approximately $135,000 to complete. Funds that the legislature appropriated for the school trust fund revenue enhancement program were used to complete the report and inventory.

This report describes an inventory framework, process and review steps to arrive at highest and best use classifications for the school trust lands. The inventory process commenced in August 2012 and was complete in August 2013. Options for compensation to the School Trust for policies and designations prohibiting revenue were identified in November 2013.

The report cost estimate above includes the multiple facets of this initial inventory project, including: (1) development of the inventory framework and process; (2) engaging MnIT staff to implement the process utilizing GIS data analytics; (3) requirement that DNR field staff review, comment and propose modifications to initial GIS results; (4) analyzing policies and designations to determine the existence of prohibitions; (5) formulating compensation plans to address prohibitions; and (6) drafting and editing the final report.

I. EXECUTIVE SUMMARY

A. Revenues and Operating Expenses.

The Department of Natural Resources (DNR) deposits annual net revenues derived from the school trust land administration in the Permanent School Fund (PSF). In FY12, gross revenue generated from school trust land totaled $42.08 million; net revenue was $32.8 million, with a net deposit of $32.6 million. [1] In FY13, gross revenue was $41.05 million; net revenue was $31.24 million, with a net deposit of $31.04 million. In both FY12 and FY13, the net revenue deposited was reduced by $200,000 legislative transfer from the Forest Suspense Account.

The DNR generates revenue on school trust lands through the following activities; mineral leasing, forest products sales, real estate sales, and real estate surface contracts. The rents and royalties from iron ore/taconite leases are the primary revenue source from school trust lands accounting for roughly eighty percent of historic net revenues. The economic trends reflect an iron ore/taconite industry that is projected to remain stable over the next biennium. The sluggish economic recovery from 2008-2009 continues to negatively affect the demand and pricing for forest products, with forest products revenues from school trust land remaining flat.

Table 1. Executive Summary Revenues.

Gross Revenues	**FY12**	**FY13**
Minerals	$33,382,994	$32,175,999
Real Estate Transactions	$849,095	$706,415
Forest Management	$7,849,212	$8,171,800
Total Gross Revenue	**$42,081,301**	**$41,054,214**
Operating Expenses		
Minerals	$1,559,610	$1,922,681
Forest Management	$6,157,235	$6,197,725
Protection costs	$1,506,274	$2,326,224
Total Operating Expenses	**$9,223,119**	**$10,446,630**
Net Revenues Deposited		
Minerals	$26,892,055	$25,794,947
Refund to PSF[2]	$4,931,329	$4,458,371
Non-certified Real Estate Transactions	$231,956	$706,415
Forest Management	$802,843	$283,040
Transfer for school trust land sales, exchanges and aggregate evaluations	<$200,000>	<$200,000>
DEPOSIT TO PERM. SCHOOL FUND	**$32,658,183**	**$31,042,773**

[1] Laws of Minnesota 2011, First Special Session, Chapter 2, Article 1, Section 4, subd. 2 transferring $200,000 from the Forest Suspense Account to accelerate school trust land sales, land exchanges, and aggregate evaluations.

[2] Minn. Stat., sec. 93.2236(b-c) requiring that the pro rata share of any deposits in excess of $3,000,000 from school trust lands be transferred to the Permanent School Fund.

B. School Trust Inventory.

The FY12-FY13 Biennial Budget report includes a school trust inventory section pursuant to Minnesota Statutes, section 84.027, subd. 18(c). This school trust inventory section of the Biennial Budget report includes the following: (a) an inventory all school trust lands; (b) identification of those school trust lands prohibited from generating long-term revenue as a result of a policy or designation placed on the school trust lands; and (c) a plan describing how the DNR will compensate the Permanent School Fund for those school trust lands encumbered by policies or designations prohibiting long-term revenue generation.

The DNR analyzed a total of 2,546,716 acres of school and university trust land for the inventory. The Permanent School Fund real estate asset is 2,520,616 acres, plus an additional one million acres of severed school trust mineral interests. An additional 26,100 acres of Permanent University Fund lands were analyzed during the inventory process since the DNR manages the university trust mineral interests. The DNR did not apply the inventory process to the one million acres of severed school trust mineral rights because the school trust does not own, and the DNR does not manage, the surface estate. Those acres will be classified as mineral estate lands. Likewise, the DNR inventory did not review the 86,000 acres of school trust land lying within the Boundary Waters Canoe Area Wilderness since the DNR is actively pursuing a hybrid land exchange/land sale project with the U.S. Department of Agriculture – Forest Service.

In addition to the statutory trust inventory requirement, the DNR recently adopted a new policy and process in February 2012 to ensure it meets the fiduciary obligations to the Permanent School Trust. DNR Operational Order 121 calls for an inventory of all school trust lands and a highest and best use analysis looking at the potential long term economic return as well as natural resource and recreation values. The DNR developed a highest and best use classification system in order to categorize school trust parcels by current and future economic potential. The classifications are; mineral estate lands, real estate development lands, productive forest lands, surface soil resources, agricultural lands, recreational lands, shoreline, stewardship lands, and economically non-productive lands.

DNR policies and designations potentially affecting revenue generation were also examined. These include policies and designations related to native prairie, rare species, old growth forests, wildlife habitat, and recreational sites (public water access sites, parks, and trails). Minnesota Statutes created Peatland Scientific and Natural Areas, which contain an additional 51,000 acres of school trust lands, and called for compensation of the school trust fund. As part of the inventory analysis DNR identified over 17,800 acres of old growth forest designations, approximately 7,000 acres of native prairie, 207 public water access sites, and over 16,000 acres with high and outstanding biodiversity. The DNR compensation plans propose to reimburse the school trust for these policies and designations when they prohibit long-term revenue generation. This compensation would come through a combination of condemnation, land exchanges, real estate contracts, and modifications to current DNR management. As an initial estimate, $50 to $100 million would be necessary to compensate the Permanent School Fund.

C. School Trust Management Subsidy

During the FY12-13 biennium the DNR completed a full cost accounting analysis of the DNR management activities on the 2.5 million acres of school trust land. The objective was to identify all appropriations utilized by DNR to fund its trust management activities. The DNR estimates that the annual subsidy totals nearly $7 million for DNR management activities performed to generate an economic return and for non-reimbursable expenses. The major non-reimbursable expense of school trust land management is the annual PILT (payments in lieu of taxes) payment made to counties.[3] The General Fund subsidy for PILT payments increased two-fold

[3] Minn. Stat., sec. 477A.12, subd. 1(7).

during the biennium from $1.6 million in FY12 to $3.75 in FY13. The largest management activity subsidies were in the areas of forestry management ($2.1M) and real estate management ($700,000).

II. MINNESOTA'S SCHOOL TRUST HISTORY

A. Federal Grants.

The Organic Act of 1849 created the Territory of Minnesota, and reserved sections 16 and 36 of each township "for the purpose of being applied to the schools in said territory." Minnesota was the first state to receive two sections of each township.[4] The Enabling Act of 1857 authorized Minnesotans to write a constitution in preparation for statehood granted sections 16 and 36 with the condition that said land be "for the use of schools." The initial 1857 Enabling Act granted approximately 2.9 million acres to the state to support public education in Minnesota.

Minnesota received three additional federal grants that currently make up Minnesota's School Trust Lands. Federal legislation in 1857 extended so called Indemnity trust lands to the state when sections 16 or 36 were occupied, reserved, otherwise unavailable, or submerged. In 1860, Congress extended the Swamp Acts of 1849 and 1850 to Minnesota thereby conveying 4.7 million acres of so-called Swamp Trust land. And, the final grant was made in 1866 for Internal Improvement lands meant to foster economic and railroad development in state.[5]

Table 2. School Trust by Federal Grant

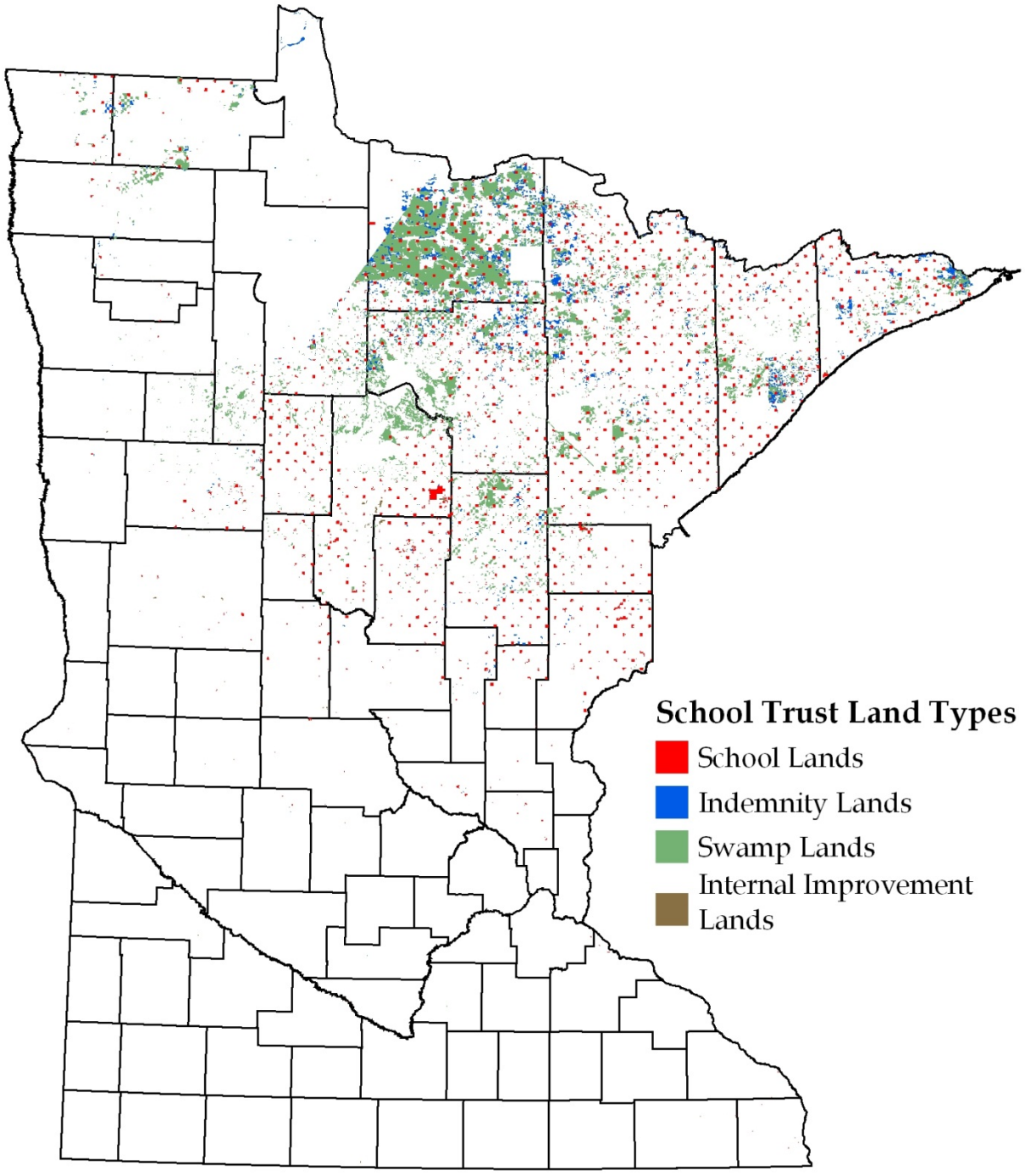
Federal Grant	Original Grant Acres	2013 Acres
School and Indemnity School	2,900,000	967,855
Swamp	4,706,503	1,546,252
Internal Improvement	500,000	6,509
Total	**8,106,503**	**2,520,616**

The four federal land grants described above entrusted Minnesota with a total of 8.1 million acres. All four federal grants are now considered school trust lands after constitutional amendments in 1914, 1938, 1974 and 1984.

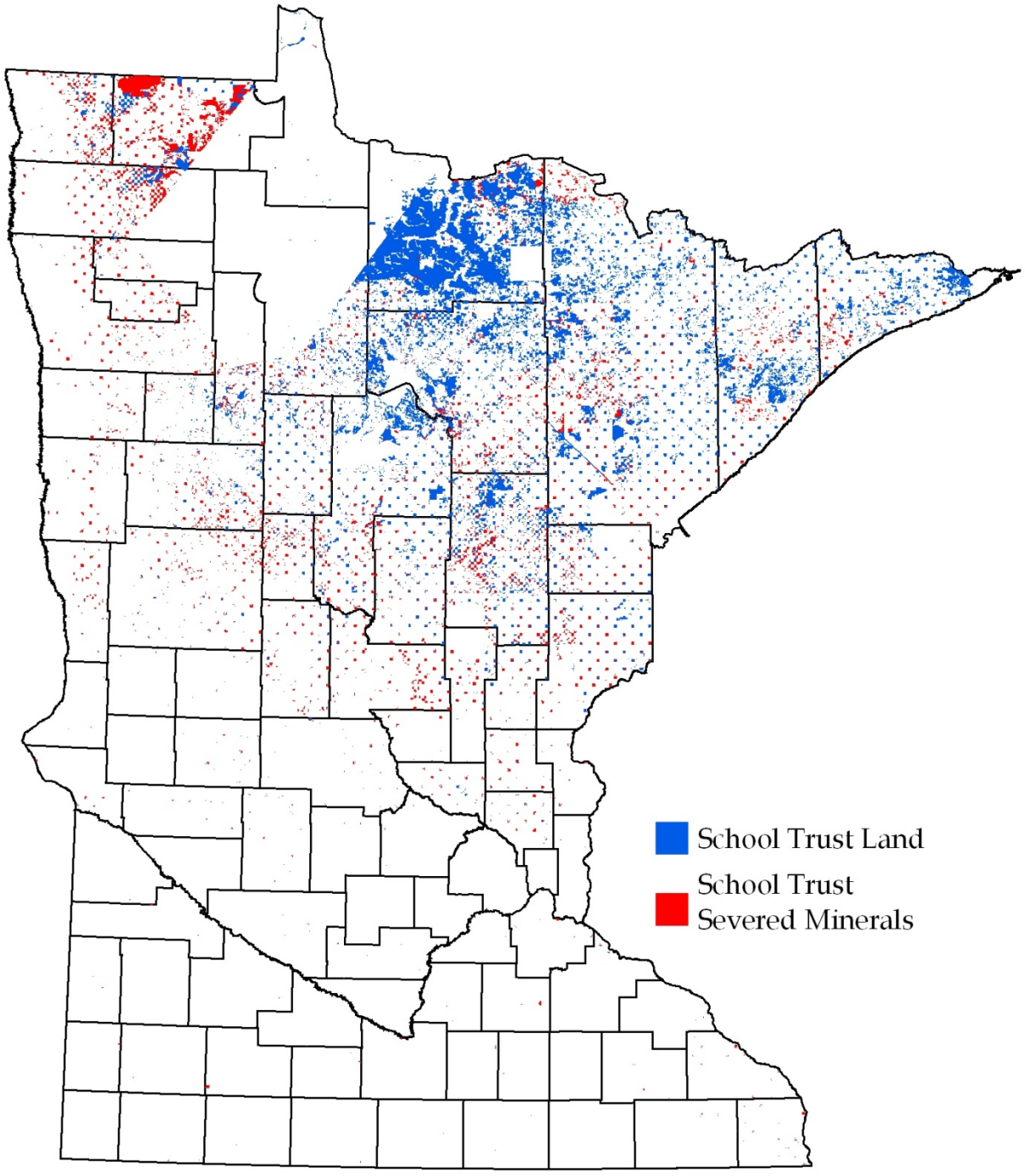
[4] Jon A. Souder and Sally K. Fairfax, *State Trust Lands: History, Management and Sustainable Use* (Lawrence, Kansas, University of Kansas, 1996), p. 27

[5] Matthias, Nordberf, Orfield, *Federal Land Grants to the States with Special Reference to Minnesota* (Minneapolis, University of Minnesota, 1915), p. 7-13.

Map 1. Minnesota School Trust Lands by Federal grant.



Map 2. Minnesota school trust land and school trust severed mineral rights.



B. Historic Management.

From 1862 until 1931 the State Auditor's State Land Office was charged with management of the school trust lands. The State Land Office approached its school trust management with the policy of speedy survey and sale of school trust land with the intent of growing the trust to support public schools. By 1880, the majority of high-quality agricultural lands in southern Minnesota were sold by the State Land Office under this policy.[6]

The wisdom of this quick sale policy for the best interests of the trust gradually came to be questioned. Other options, including retention of ownership with leasing for specified purposes, were considered. The Minnesota Legislature in the early 1900's modified its school trust management policy by placing a number of restrictions on how the remaining school trust lands would be managed. These limitations shifted Minnesota's policy from divesting of school trust lands to retaining school trust lands for future economic potential and to reserve some land for public use and enjoyment.[7] A non-exhaustive list of legislatively imposed limitations are the 1901 law requiring a reservation of mineral rights, the 1923 law restricting sale of land bordering public waters, and a 1935 law removing commercial peat deposits from sale. From the turn of the 20th century the school trust lands were managed with the idea of "selective retention" of lands that could best be managed by the state.[8]

The DNR has continuously managed the school trust lands since 1931. The DNR actively manages school trust land for revenue generation through the following general activities; mineral evaluation, leasing and extraction, forest products inventory and sales, sale of real property for residential and commercial uses, real property easements, leasing and licenses, evaluation and leasing of surface soil resources, and leasing for recreational uses.

The school trust lands account for 46 percent of all state-owned lands under DNR administration. The 2013 inventory report revealed that the DNR currently manages 2,520,616 acres of school trust land. In relation to the original federal grant, the remaining school trust acreages are: 967,855 acres of original school and indemnity school; 1,546,252 acres of swamp trust lands; and 6,509 acres of internal improvement (Table 2; Map 1). The DNR also manages an additional one million acres of severed school trust mineral rights (Map 2). Over two million acres, roughly 92 percent, of Minnesota's school trust lands are located in ten northern Minnesota counties – Aitkin, Beltrami, Cass, Cook, Hubbard, Itasca, Koochiching, Lake, Roseau and St. Louis (Table 3). The remaining school trust lands are dispersed throughout the state with less than 500 acres remaining in Minnesota's southern third (Table 4; Map 3).

Table 3. Ten Counties with School Trust Lands

County	Acres	County	Acres
Aitkin	134,645	Beltrami	60,777
Cass	150,901	Cook	121,755
Hubbard	29,344	Itasca	293,640
Koochiching	854,628	Lake	159,186
Roseau	45,928	St. Louis	481,868
Remaining 46 counties	187,945		

[6] Samuel T. Dana, et al. *Minnesota Lands Ownership, Use and Management of Forest and Related Lands* (Washington, D.C.: American Forestry Assoc. 1962), p. 92.
[7] *Evaluation of State Land Acquisition and Disposal*, Office of Legislative Auditor, (St. Paul, 1983), p. 12.
[8] Ibid., p. 14-15.

Map 3. School Trust Land distribution by County.

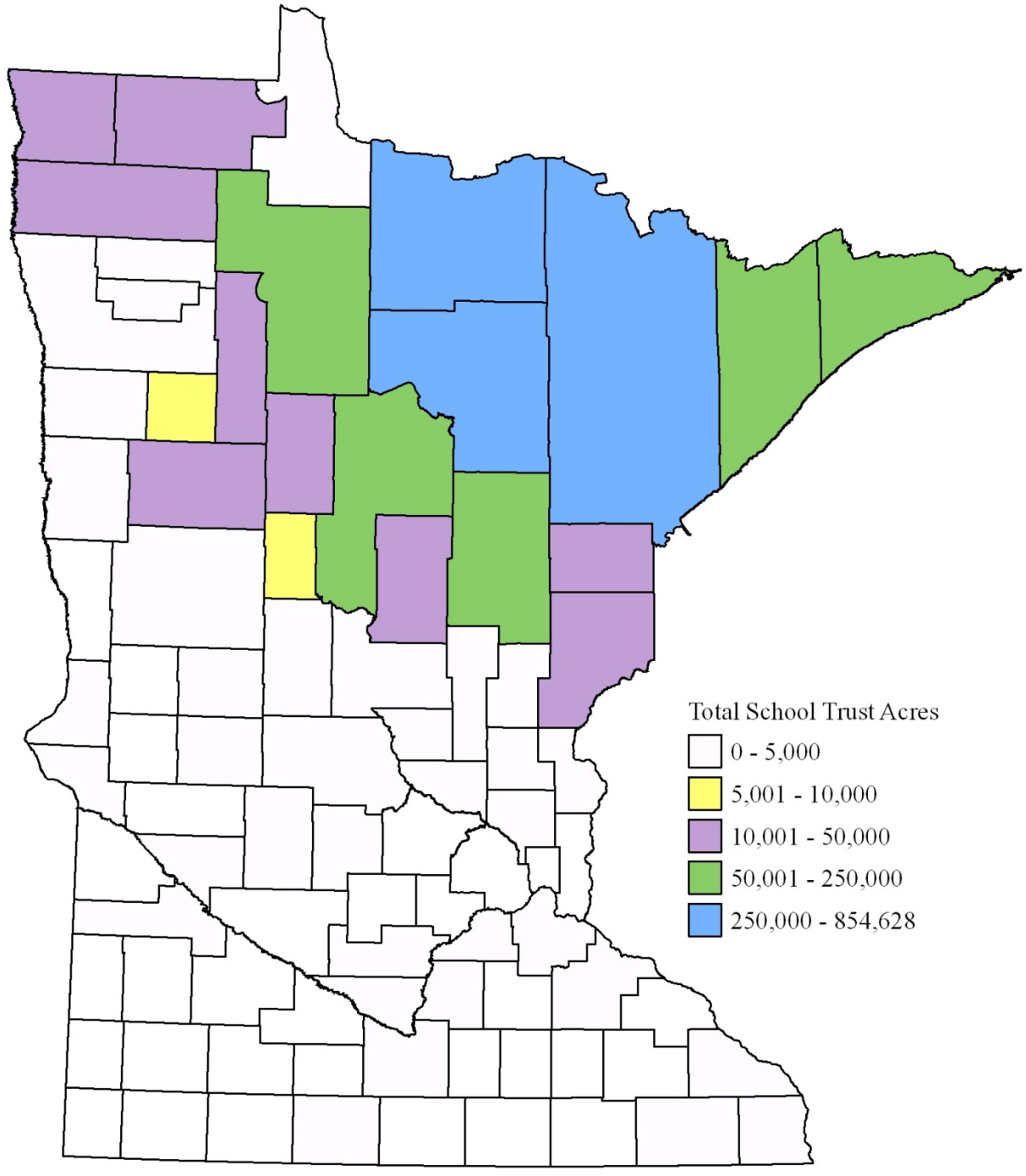


Table 4. Minnesota's school trust lands by county.

County	School Trust Land Acres	County	School Trust Land Acres
Aitkin	134,645	Lake of the Woods	4,636
Anoka	645	Lesueur	80
Becker	16,041	Mahnomen	7,267
Beltrami	60,777	Marshall	22,363
Benton	120	Martin	51
Big Stone	94	Mcleod	< 1
Blue Earth	7	Meeker	41
Carlton	21,851	Mille Lacs	4,478
Cass	150,901	Morrison	2,884
Chippewa	11	Nicollet	< 1
Chisago	120	Norman	320
Clay	321	Ottertail	2,562
Clearwater	21,558	Pennington	2,340
Cook	121,755	Pine	23,136
Crow Wing	24,013	Polk	1,095
Dakota	110	Pope	80
Douglas	160	Red Lake	760
Fillmore	120	Roseau	45,928
Goodhue	227	St. Louis	481,868
Houston	220	Scott	< 1
Hubbard	29,344	Sherburne	1,116
Isanti	200	Sibley	41
Itasca	293,640	Stearns	495
Kanabec	3,731	Todd	3,227
Kandiyohi	200	Traverse	40
Kittson	14,929	Wadena	6,128
Koochiching	854,628	Winona	122
Lake	159,186	Yellow Medicine	2

Note: Table 3 shows acres as of November 30, 2013. The 31 counties not listed in this table do not contain school trust land.

III. GROSS REVENUES

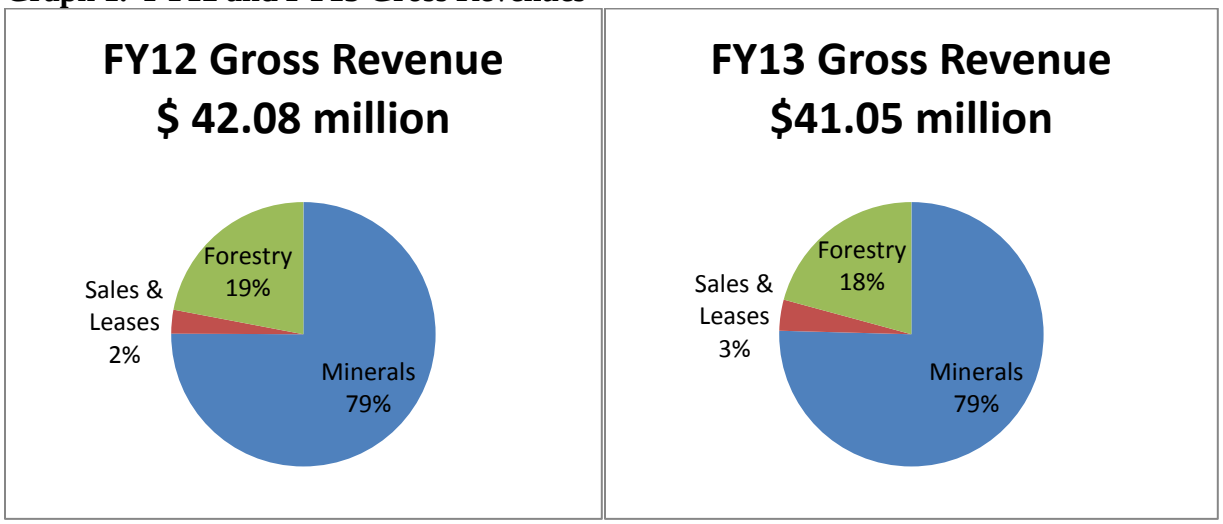
A. Total Gross revenues.

DNR management of school trust land generates revenues from three major categories – mineral leasing and royalty payments, forest management activities, and real estate contracts and sales. Factors outside DNR control, such as global economic issues and extreme weather events, impact the gross revenues generated on school trust lands. By way of example, the worldwide price of steel impacts the royalty rate received on iron ore and taconite leases; while windstorms in northern Minnesota compel the DNR to sell timber at salvage harvest rates.

In FY12 (7/1/11 – 6/30/12), DNR management activities on school trust land generated $42 million (Graph 1). Mineral leasing and royalty payments accounted for $33.3 million, forest products contributed $7.8 million, and real estate contracts and sales supplied an additional $849,000 million.

In FY13 (7/1/12 – 6/30/13), DNR management activities on school trust land generated roughly $41 million (Graph 1). Mineral leasing and royalty payments accounted for $32.1 million, forest products contributed $8.1 million, and real estate contracts and sales supplied an additional $706,000 million.

Graph 1. FY12 and FY13 Gross Revenues



B. Mineral Gross Revenues.

In FY12, gross revenue generated from minerals activities on school trust lands was $33.3 million (Table 3). The largest contributor was $32.6 million from iron ore/taconite rents and royalties. Other contributing categories were non-ferrous metallic minerals leases ($495,056), and R-leases (leases for iron bearing materials used for metallurgical purposes $68,195), and M-leases (leases for stockpiled, low-grade iron materials used for aggregate production; $131,170.00).

In FY13, gross revenue generated from minerals activities on school trust lands was $32.1 million (Table 3). The largest contributor was $30.4 million from iron ore/taconite rents and royalties. Other contributing categories were non-ferrous metallic minerals leases ($573,234.00), peat leases ($147,791), R-leases (leases for iron bearing materials used for metallurgical purposes $849,662), and M-leases (leases for stockpiled, low-grade iron materials used for aggregate production; $91,206).

Table 5. FY12-FY13 Gross revenue from mineral management

	FY12	FY13
Taconite and Iron ore rents/royalties	$32,619,401	$30,477,629
Non-ferrous metallic minerals	$495,056	$573,234
Stockpiling/Surface leases	$0	$8,640
Residue leases	$68,195	$849,662
Peat	$34,603	$147,791
M-leases	$131,170	$91,206
Industrial Minerals	$12,600	$13,375
Interest payments	$21,969	$23,102
Total	$33,382,994	$32,175,999

C. Forestry Gross Revenues.

In FY12, gross revenue generated from forest management activities on school trust lands was $7.8 million (Table 4). The largest contributor was $7.7 million from timber sales with $4.0 million generated through regular timber auctions,[9] and $3.4 million generated through intermediate timber auctions.[10]

In FY13, gross revenue generated from forest management activities on school trust lands was $7.1 million (Table 4). The largest contributor was $6.9 million from timber sales with $3.9 million generated through regular timber auctions, and $2.6 million generated through intermediate timber auctions.

Table 6. FY12-FY13 Gross revenue from forest management.

	FY12	FY13
Timber Sales	$7,708,033	$6,949,793
Resource Management access permits	$911	$630
Forest Campgrounds	$120,054	$144,121
Interest Penalty	$5,076	$7,427
Total	$7,834,074	$7,101,971

D. Real Estate Gross Revenues.

In FY12, gross revenue generated from real estate contracts and sales on school trust lands was $1.04 million (Table 5). The largest contributor was $640,592 from real estate leasing activities. Additional revenue contributions were generated from utility licensing ($214,856) and easement crossing fees ($96,078). Real estate sales in FY12 totaled $17,648, which were generated from land sale installment payments remaining due from the lakeshore lease lot program of the 1990's. The DNR held two public auctions in FY12 offering six school trust parcels totaling 151 acres; none sold at public auction.[11]

In FY13, gross revenue generated from real estate contracts and sales on school trust lands was $1.29 million (Table 5). The largest contributor was $549,417 from real estate leasing activities. Additional revenue contributions were generated from utility licensing ($278,697) and easement crossing fees ($72,817). Real estate sales in FY13 totaled $268,041, which were generated from land sale installment payments ($65,475) and

[9] Minn. Stat., sec. 90.101 establishes statutory timber sale requirements.

[10] Minn. Stat., sec. 90.121 establishes standards that a lot size not exceed 3,000 cords, the number of bids that DNR may award to any one bidder, and the limits bidders based on the number of employees (no more than 30).

[11] MINN. CONST. ART. XI, SEC. 8. Requiring that school trust lands be sold only at public auction.

public auction sales ($202,566). The DNR held two public auctions in FY13 offering 21 school trust parcels totaling 841 acres. The two public auctions resulted in DNR selling eight school trust parcels and a total of 395 acres of school trust land. The average price per acre was $512.00. All eight parcels sold were located in Roseau County, and were the result of the joint sale between DNR and Roseau County in November 2012.

Table 7. FY12-FY13 Gross revenue from Real Estate management.

	FY12	FY13
Leases	$640,592.00	$549,417.83
Permits	$20,202.00	$82,795.00
Licenses – land crossings	$86,825.61	$125,933.49
Licenses – water crossings	$128,031.00	$152,764.00
Easements	$96,078.69	$72,817.18
Real Estate Sales	$17,648.98	$268,041.31
Wild Rice farming	$3,693.30	$3,948.09
Salvage sales	$0.00	$153.05
Damages	$17,688.08	$13,549.96
Late charges	$94.46	$299.78
Interest	$24,400.28	$24,154.34
Total	$1,044,605.94	$1,293,874.03

IV. NET REVENUES

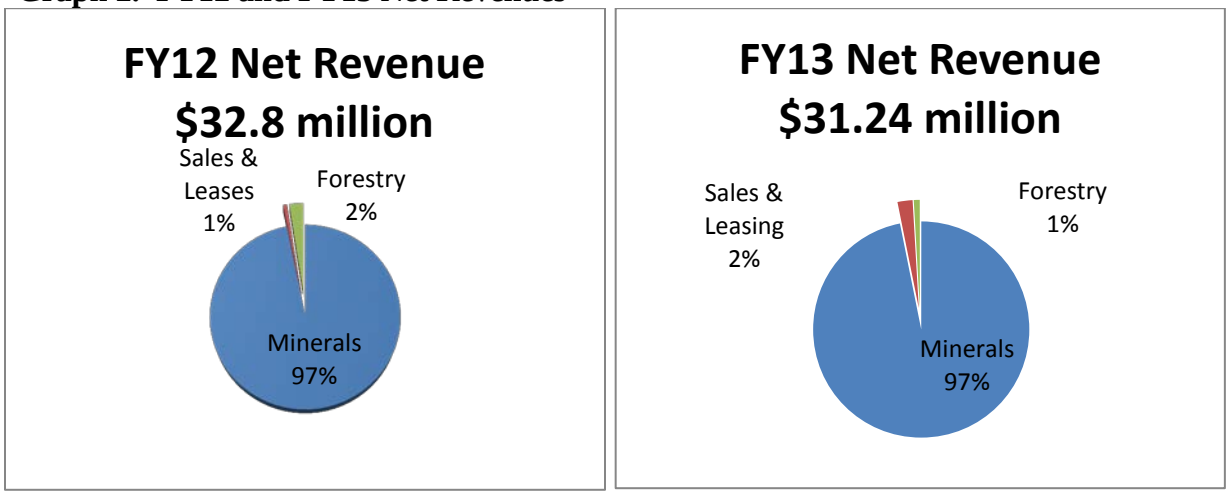
A. Total Net Revenues.

The total net revenue is equal to gross revenues generated after the deduction of operating costs as permitted by Minnesota law. Minnesota Statutes, section 93.22 directs to the Minerals Management Account 20 percent of school trust mineral revenues for the administration and management of the 3.5 million acres of school trust mineral resources. The Legislature appropriates funds from the Minerals Management Account to the DNR for management of the state-owned mineral resources. The DNR certifies its forestry related operating expenses under Minnesota Statutes, section 16A.125 for its activities related to forest protection (e.g. from wildfire)[12], improvement, administration and management.

In FY12 (7/1/11 – 6/30/12), net revenue to the school trust fund was $32.8 million (Graph 2). Mineral leasing activities accounted for $31.6 million; $834,000 from forest product sales and harvests; and $402,000 was the result of real estate management.

In FY13 (7/1/11 – 6/30/13), net revenue to the school trust fund was $31.24 million (Graph 2). Mineral leasing activities accounted for $30.2 million; and approximately $706,415 was generated from real estate management. The DNR generated an additional $283,040 in FY13 through forest management activities not related to forest product sales and harvests such as forest campground fees and utility licensing across public waters.

Graph 2. FY12 and FY13 Net Revenues



As depicted in Graph 2, during FY12 and FY13 DNR management of the school trust mineral interests continued to provide the lion's share of school trust revenues accounting for 97 percent of all net revenues. DNR forest products management rebounded briefly in FY10 and FY11, but experienced another blow in FY12 and FY13 with reduced timber values due to extreme weather events. Nevertheless, net revenues from school trust forest management remain flat in the $1 million range. Similar to forest management, real estate management sustained dramatic declines in real estate values during the economic downturn. The depressed real estate market impacted real estate sales, lease rates, and other real estate development projects. In the sections below the DNR's operating costs will be explained further with respect to these three revenue categories.

[12] Pursuant to *Laws of Minnesota 2012, Chapter 249, section 3* fiscal year 2013 is the final year in which the DNR may certify forest protection costs against School Trust land gross revenues.

B. Mineral Operating Costs.

Pursuant to Minnesota Statutes, section 93.22, twenty percent of all school trust mineral receipts are deposited in the Minerals Management Account for the administration and management of the 3.5 million acres of school trust mineral interests. Eighty percent of the revenue from mineral leasing covering these school trust mineral interests is distributed to the Permanent School Fund, from which the annual net interest and dividends are distributed to the school districts throughout the state.

The minerals management account was designed to create a $3 million principal that could be drawn upon in the event that future income generation drops. The $3 million level was reached in 2007. At the end of each fiscal year the amount exceeding $3 million is distributed to the Permanent School Fund, Permanent University Fund and local taxing districts in proportion to the revenue contributed to the minerals management account by these three land types. Minnesota Statutes, section 93.2236 states that the DNR can utilize the minerals management account funds, once appropriated by the legislature, for "mineral resource management and projects to enhance future mineral income and promote new mineral resource opportunities."

Each year the legislature appropriates money from the minerals management account to the DNR for minerals management activities. In FY12 and FY13, the legislature appropriated $5.392 million ($2.696M each fiscal year) from the minerals management account to fund DNR's mineral management activities. In FY12 and FY13, the Legislature also appropriated $200,000 each fiscal year from the Minerals Management Account for iron ore cooperative research with a required industry match.

Table 8. School Trust mineral revenues transferred.

	Gross mineral lease revenue	Mineral lease revenue sent directly to the permanent school fund*	Mineral lease revenue to the Minerals Management Account (20% of revenue)			Transferred back to the permanent school fund **	Costs charged against the school trust mineral lease revenue	Net revenue to the permanent school fund
			Iron ore / taconite	Metallic minerals	Total***			
FY12	$33,382,994	$26,743,944	$6,523,880	$102,870	$6,639,050	$4,931,329	$1,707,721	$31,675,273
FY13	$32,175,999	$25,794,947	$6,095,526	$285,526	$6,381,052	$4,458,371	$1,922,681	$30,253,318

* Includes 80% of taconite/iron ore, metallic mineral, and industrial mineral lease revenues and 100% of all other mineral lease revenues.
** At the end of each FY, the amount in the minerals management account exceeding $3,000,000 is returned to the school trust, university trust, and local taxing districts in proportion to the amount that each paid into the account in the previous biennium.
*** FY12-FY13 totals include industrial minerals revenues on school trust lands.

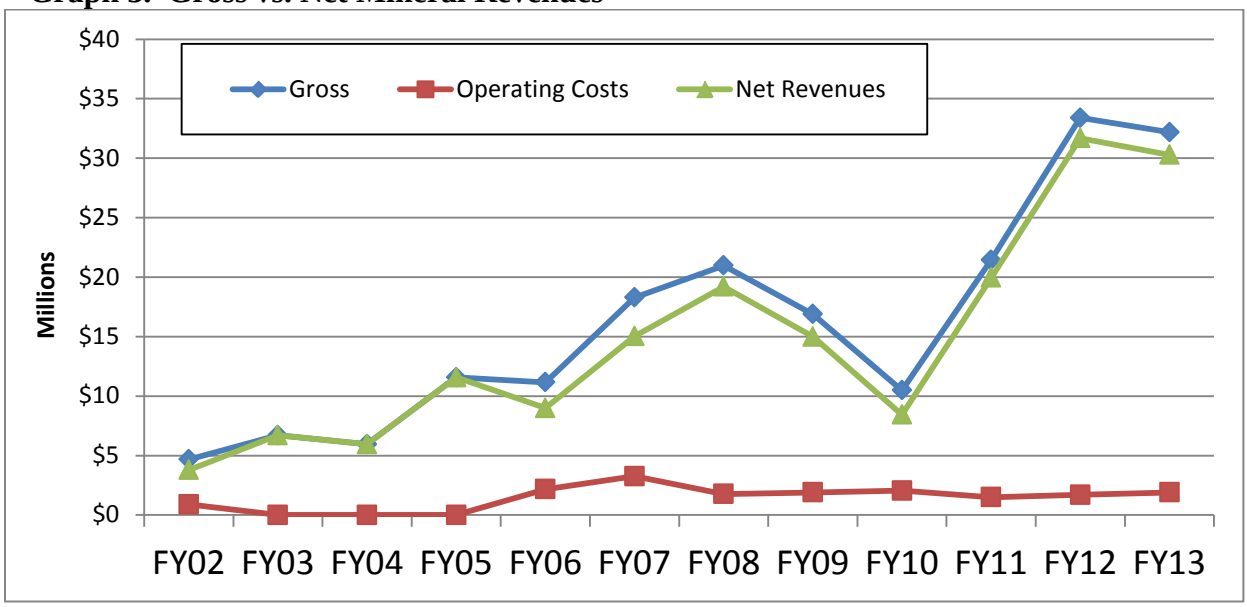
As shown in Table 9 above, the DNR's operating costs associated with the school trust mineral management totaled $1.7 million, or 5.1 percent of gross mineral revenues, in FY12. The DNR deposited the remaining $4.9 million directly into the Permanent School Fund at the close of FY12, which amount equaled the pro rata share of school trust revenues held in the minerals management account during the fiscal year less DNR's operating costs.

The DNR's operating costs associated with the school trust mineral management totaled $1.9 million, or 5.9 percent of gross mineral revenues, in FY13 (Table 8). The DNR deposited the remaining $4.4 million directly

into the Permanent School Fund at the close of FY12, which amount equaled the pro rata share of school trust revenues held.

The DNR operating costs related to school trust mineral management has been approximately $2 million per fiscal year since 2008. In 2005, legislative changes permitted the DNR to receive a portion of gross revenues to fund mineral management activities. Since that time the DNR's operating costs related to minerals management for school trust lands has averaged $2.02 million per fiscal year.

Graph 3. Gross vs. Net Mineral Revenues



C. Forestry Operating Costs.

Gross revenues generated from forest products management are first deposited into the Forest Suspense Account with operating costs certified against gross revenues pursuant to Minnesota Statutes, section 16A.125. Section 16A.125 directs those forest management costs that may be certified against school trust gross revenues, and restricts certification costs from actual operating costs paid from General Fund or Forest Management Investment Fund during a fiscal year. Any forest management costs charged against dedicated funds and federal funds are excluded from the cost certification process. Section 16A.125 separates forest management activities into five categories for cost certification: administration, improvement, management, fire protection, and forest road construction.

a. Administration costs are those direct and necessary costs related to the support of forestry field staff that generates revenue on school trust lands. Administrative costs are tracked by administrative area and allocated by area based on the percentage of trust land in each area.

b. Forest improvement activities include forest stand site preparation and stand improvement. Improvement costs are tracked across all 17 distinct forestry areas with improvement costs allocated against school trust gross revenues in each forestry area based on the percentage of trust land in each area. On a statewide basis, the allocation against school trust revenues averages 46 percent.

c. Management costs consist of activities like forest stand inventory, and insect and disease management. Timber activities consist of timber sales preparation and administration. These timber activities can be directly tied to the revenue generated on trust lands. Management costs are tracked by administrative area and allocated by area based on the percentage of trust land managed in each area. On a statewide basis, the trust allocation averages 44 percent.

d. Fire protection, prevention and pre-suppression costs are not specific to any land base, but provide general protection to all lands equally. Suppression costs, however, can be tracked to a specific administrative area so costs are allocated on an area acreage percentage basis. The DNR certifies its forest management operating costs against 2,392,214 acres of school trust land. In an effort to ensure maximum revenue to the Permanent School Fund during FY12-FY13, the DNR utilized the same stratification model implemented during FY11 cost certification. The stratification method applies suppression costs against the revenues from each distinct forestry area. For example, if school trust lands are 20 percent of the land base in a specific forestry area, 20 percent of suppression costs would be certified against that area's gross revenues. Protection costs in FY13 totaled $2.3 million and actually exceeded gross revenues in a number of forestry areas. FY12-FY13 will be the final biennium for which the DNR will certify the cost of protecting school trust lands against wildfire.[13]

e. The state forest road system provides access to thousands of acres of school trust lands. Road construction and maintenance costs are tracked by forestry area and allocated to the trust based on the percentage of trust land served by that area's roads. During the FY12-FY13 biennium, approximately 2.5 percent of school trust acres are subject to road costs.

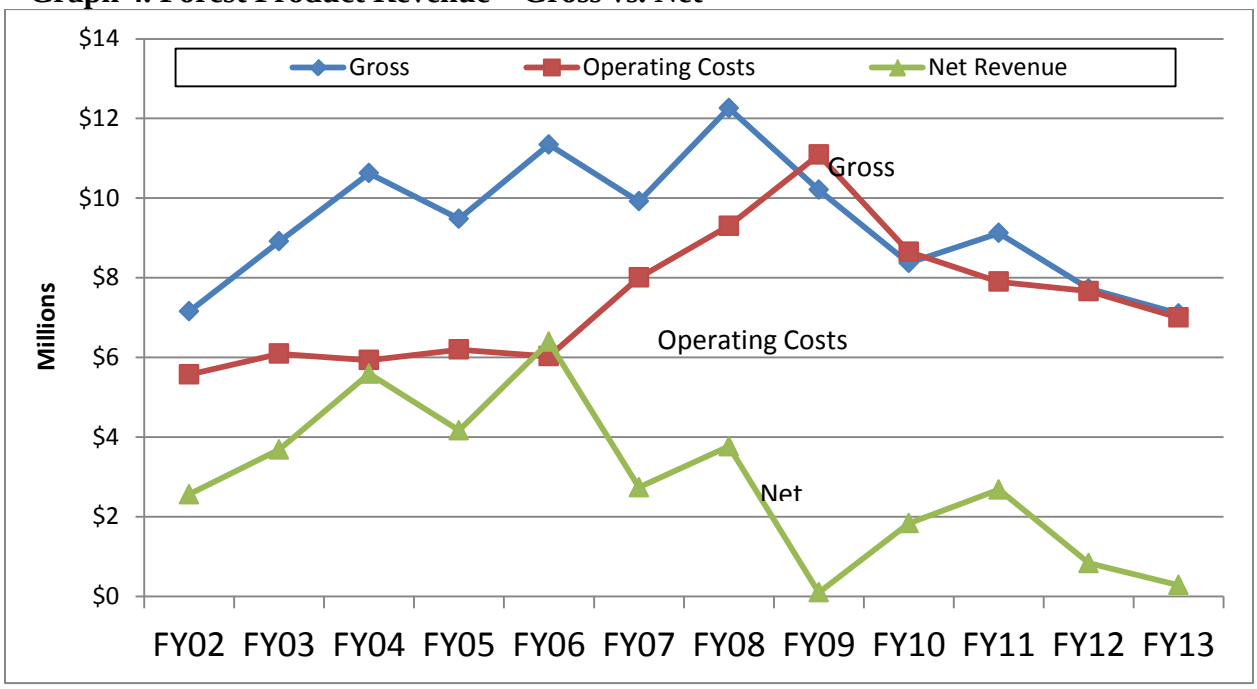
[13] Pursuant to *Laws of Minnesota 2012, Chapter 249, section 3* fiscal year 2013 is the final year in which the DNR may certify forest protection costs against School Trust land gross revenues.

1. **Timber sales.**

In FY12, timber sale gross revenues totaled more than $7.71 million. All of this revenue was deposited into the State Forest Suspense Account (Table 6). The FY12 forest cost certification report[14] specified that operating costs related to forest management activities totaled $7.89 million (i.e. protection $1.5M, management $4.2M, improvement $664,000, administration $1.275M, and forest roads $240,000).

In FY13, timber sale revenues totaled more than $8.171 million. All of this revenue was deposited into the State Forest Suspense Account (Table 6). The FY13 forest cost certification report specified that operating costs related to forest management activities totaled $8.523 million (i.e. protection $2.3M, management $3.7M, improvement $783,000, administration $1.5M, and forest roads $26,111).

Graph 4. Forest Product Revenue – Gross vs. Net



As depicted in Graph 4 above, net revenues increase and decrease in relation to the forest management activities on school trust land in any given fiscal year. The forest industry establishes the prevailing market rates for timber at public auctions. When harvest rates and gross revenues increase due to market driven demand, the DNR operating costs also increase to supply the market with the forest products. Net revenues from forest products have a direct correlation to the ebbs and flows of the forest products industry as well as to factors such as the incidence of fire and tree disease. Unforeseen weather and wildfire events can cause operating costs to skyrocket and can also significantly reduce revenue as damaged timber is sold at salvage prices. For example, fire and severe weather events severely decreased the value of the forest products on school trust land in FY12-FY13.[15]

The DNR's overarching forest management strategy differs significantly from many private timber managers. The DNR recognizes the symbiotic relationship between school trust lands and Minnesota's economy. While

[14] Fiscal Year 2012, Transfer Certification Report, Minnesota DNR, February 22, 2013. available at http://files.dnr.state.mn.us/aboutdnr/reports/legislative/FY12TransferCertificationReport.pdf (last visited by author December 23, 2013).

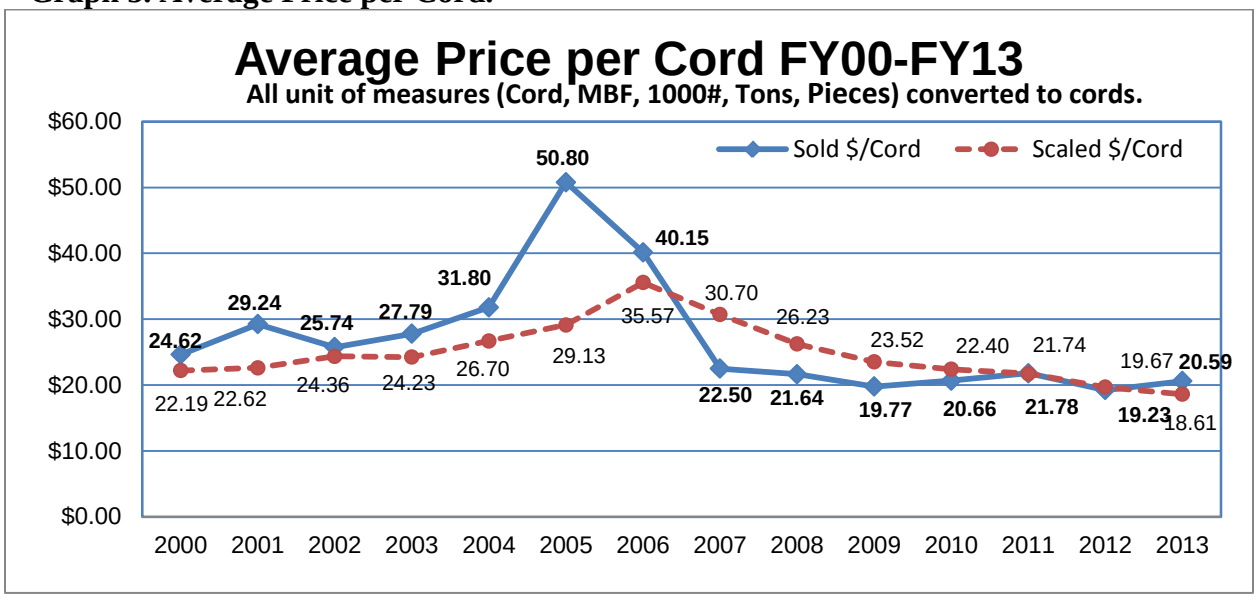
[15] *State Timber Revenue Forecast, November 2013*, Minnesota Department of Natural Resources, Don Deckard, Ph.D., State Forest Economist. (November 27, 2013), pg. 15.

private timber companies may elect to hold their timber off the market when prices are low, the DNR approach is to continue to offer school trust timber resources for two main reasons. First, continuing to offer school trust timber resources is the primary means by which the DNR can manage the health of the trust's forested lands. And, second, maintaining harvest levels helps ensure that a viable forest products industry will remain in Minnesota, thereby protecting the long-term value of the trust's timber resources.

DNR has employed a number of strategies since FY09 to reduce its operating costs related to forest management activities. One chief modification was not to fill vacancies left by the retirement of approximately 100 program foresters. Despite reduced staffing, DNR maintained its output levels in school trust timber offered by analyzing school trust timber resources and temporarily reassigning its workforce to cruise, appraise, and prepare timber stands for public auction. In order to reduce costs while maintaining output levels, the DNR temporarily postponed forest management activities related to forest inventory and silviculture treatments. Both activities have a direct correlation to forest health, productivity of school trust forest resources, and long-term revenue potential. The DNR will address the backlog of activities with increased appropriations in FY14-15. Additionally, the DNR reduced its operating costs by refining its cost allocation formula applied against school trust revenues. The new cost allocation formula assigns forest management costs based on the percentage of school trust acreage under management in specific administrative areas. Doing so more accurately links forest management operating expenses to revenue generated from school trust timber sales. The DNR also now monitors the profitability of each administrative area, with an emphasis on reducing operating costs on school trust lands.

Graph 5 below depicts the difference between average sold values per cord and average scaled values per cord. The average sold value per cord represents the average per cord value at public timber auctions. The average scaled value per cord represents the average per cord value of harvested timber once weighed and measured at a mill. From FY07 to FY13, the average per cord value of sold timber continued to hover in the $20.00 per cord range, with a seven year average value of $20.88 per cord sold. Since FY06, the average scaled value per cord has suffered a steady decline from a high of $35.57 in FY06 to a low in FY13 of $18.61. Due to the economic downturn average sold per cord decreased 60 percent in FY09 when compared to FY05 values. Graph 5 suggests that the timber industry experienced market corrections after the $50.80 average sold value per cord in FY05 and that average sold timber value per cord will remain in the $20.00 per cord range for the foreseeable future.

Graph 5. Average Price per Cord.

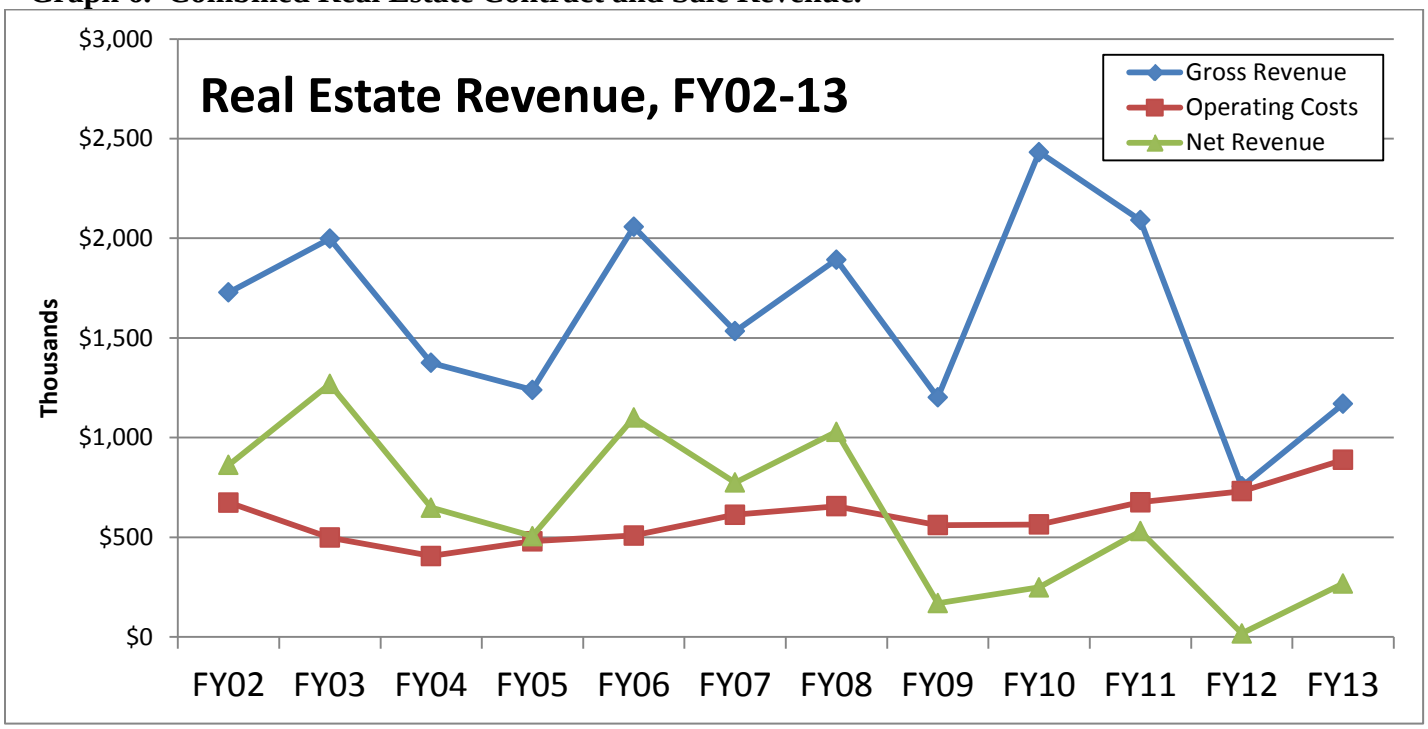


D. Real Estate Management.

Revenues deposited in the State Forest Suspense Account from forest management subject to forestry cost certification per Section 16A.125 are not limited to timber sales and mineral resource permits. Revenues are also generated from real estate transactions (aggregates, agriculture, hunting cabins, miscellaneous commercial and government, and lakeshore), permits (resource management access, and grant-in-aid), easements (permanent and temporary easements primarily road), and utility licenses (land crossings). Water crossing licenses,[16] wild rice farming leases and the sale of standing timber are not subject to forestry cost certification under section 16A.125. In addition, for FY12-13, the legislature appropriated $200,000 each fiscal year from the forest suspense account to accelerate leasing, land sales and land exchanges, and for the identification, evaluation and leasing of aggregate resources.[17]

[16] Laws of Minnesota 2009, Chapter 37, Article 1, section 12 amending Minnesota Statutes, section 84.415 to require licenses and permits for the use of the beds of public waters be credited directly to the Permanent School Fund.
[17] *See* Laws of Minnesota 2011, First Special Session, Chapter 2, Art 1, Sec. 4, subd. 2.

Graph 6. Combined Real Estate Contract and Sale Revenue.



1. Real Estate Contracts

In FY12, a gross total of about $1,044,606 was collected from surface contracts on school trust land. Because many of the agreements involve a one-time payment in the year of issue, only some of the active contracts generated revenue in FY12.

In FY13, a gross total of about $1,293,874 was collected from surface contracts on school trust land. As was the case in FY12, many of the active agreements generated revenue only in their year of issue.

2. Real Estate Sales

Minnesota Statutes, section 92.12 requires that the DNR hold frequent sales of school trust lands and other state-owned lands. Revenue generated from the public auction sale[18] of school trust lands is not subject to forest cost certification under Minnesota Statutes, section 16A.125.

In order to comply with the constitutional and statutory requirements to offer school trust land at public auction, the DNR incurs operating expenses for professional services related to survey, appraisal, legal, advertising and other fees on behalf of the school trust.[19] The minimum bid price for public auction therefore includes the appraised value plus any operating costs. When a school trust parcel sells at public auction, pursuant to Minnesota Statutes, section 94.16, the DNR deposits the successful high bid amount into the Permanent School Fund less operating expenses incurred to offer the land for sale. Given that school trust land can only be sold at public auction, DNR incurs unreimbursed expenses for all unsold parcels and the DNR cannot recoup those costs without incurring additional costs to reoffer unsold school trust land at subsequent public auctions.

Since 1999 the DNR no longer offers school trust land for sale by certificate of sale, which provided for installment payments over a 10 or 20 year period. Therefore, the amount of revenue generated by older sales will continue to decrease as the final certificates of sale are paid. Current public auction sale terms require a 10

[18] *See* Minnesota Constitution Article 11, Section 8 requiring that school trust lands be sold only at public auction.
[19] Minn. Stat., sec. 94.16.

percent down payment at the time of the auction with the remaining 90 percent due within 90 days of the auction.

In FY12, the DNR administered two public auctions offering six school trust parcels totaling 151 acres. No school trust parcels were sold at public auction in FY12. School trust land sale revenue totaled $37,767 in FY12. This sale revenue was generated from certificate of sale installment contract payments ($17,648), installment contract interest payments ($2,431), and the sale of standing timber ($17,688).

In FY13, the DNR administered one public auction sale offering twenty-one school trust parcels totaling 841 acres. The public auction sale of school trust land generated $202,566. Nine of the twenty-one school trust parcels were sold during the November 2012 public auction, and 395 of the 841 acres were sold. The remainder of the $268,041 in total FY13 real estate sale revenue was generated from certificate of sale installment contract payments ($55,685), installment contract interest payments ($1,053), and sale of standing timber ($8,737).

Table 9. Land Sale Revenues, FY12-13.

Sale Revenue	FY12	FY13
Public Auction sales	$0.00	$202,566
Certificates of Sale installment contracts	$17,648	$55,685
Interest payments from installment contracts	$2,431	$1,053
Sale of standing timber	$17,688	$8,737
Total	$37,767	$268,041

V. TRUST MANAGEMENT

A. DNR Operational Order.

The DNR uses a system of operational orders to define and clarify internal department management procedures and policies. In February 2012, the DNR issued Operational Order 121 clarifying its policy related to school trust land management. Operational Order 121 sets forth the clear priority that school trust lands are to be managed to maximize long-term economic returns. It also explains how the DNR will implement and apply the statutory language requiring the DNR to manage the lands consistent with sound natural resource conservation and management principles. Additionally, Operational Order 121 requires the agency to implement a number of business best practices related to managing and reporting revenues and costs. Lastly, Operational Order 121 establishes a management structure and action items to be executed in the DNR's ongoing effort to ensure accountability, greater transparency and oversight of the DNR's management of school trust lands.

B. Subsidy of School Trust Management.

One action item of Operational Order 121 is to employ business best practices in DNR's management of school trust lands. As an initial step, DNR completed a full cost accounting review of all management activities performed on school trust lands, including identification of all non-reimbursable expenses incurred. The DNR estimates that the school trust receives a subsidy of approximately $7 million annually through various funding sources. The General Fund provides a significant subsidy through the payment of PILT to Minnesota counties ($1.6 million in FY12; $3.75 million in FY13). The largest management activity subsidies were in the areas of forestry management and real estate management, with four year averages of $2.1 million and $700,000, respectively.

1. MANAGEMENT ACTIVITIES

Each DNR division was asked to provide an analysis of management activities on school trust lands for which the division was not reimbursed through cost certification or the minerals management account. The objective was to determine the amount of the subsidy provided to the school trust through DNR management of school trust lands utilizing non-school trust funding sources. The subsidy analysis specifically asked each division to identify the funding source of the subsidy, estimate the subsidy amount, and describe the management activities. The DNR subsidy analysis revealed that the DNR utilizes the following funding sources to subsidize management on school trust land: General Fund, Forest Management Investment Account, Environment and Natural Resource Trust Fund, Heritage Enhancement, Critical Habitat, bonding funds and federal funds.

Recognizing that some of those non-trust funded activities do not further the purpose of the trust (i.e. revenue generation in support of education), the DNR limited its full cost accounting analysis to those management activities that do further revenue generation. Management activities for natural resource or recreation purposes were thus not included in the subsidy calculation. A non-exhaustive list of management activities in furtherance of revenue generation includes: forest management (timber sales, forest stand improvement, access improvements, and forest roads); real estate management (boundary resolution, real estate contracts, land exchanges, land sales, and land records system); recreational opportunities (forest campgrounds, wildlife management areas, and state trail system); and facility asset preservation.

Limiting the subsidy analysis to those DNR management activities performed to generate an economic return, the DNR's annual subsidy totals $3.2 million. The largest subsidies were in the areas of forestry management ($2.1M) and real estate management ($700,000). The analysis additionally provided recommendations to address the subsidy and to accurately capture the full cost to manage the school trust lands. The DNR presented the analysis and recommendations to the Legislative Permanent School Trust Fund Commission in September 2013. The DNR is implementing recommendations to secure additional funding to support real estate activities, to more accurately record work hours for management activities in furtherance of revenue generation, and to

develop economic models to ensure that future management decisions are taken to secure the maximum long-term revenue potential from school trust lands.

2. P.I.L.T.

The 2.5 million acres of school trust land is classified as "other natural resource land" administered by the DNR pursuant to Minnesota Statutes, section 477A.11. Based on this classification, the DNR, from its General Fund appropriation, transfers to the Department of Revenue funding for Payment in Lieu of Taxes (PILT) to the counties with school trust lands.[20] This non-reimbursable expense from school trust land management more than doubled during the biennium. In FY12, a payment of $1.6 million was disbursed to Minnesota counties. The value per acre was increased to $1.50 for calendar year 2013, thereby increasing the total payment to $3.75 million for FY13.

C. Limitations on School Trust Land Management.

The checkerboard nature of the school trust land creates many situations that limit revenue opportunities, increase operating costs, and discourage real estate transactions. This limits both gross receipts and net deposits into the Permanent School Fund, relative to what might be feasible with more consolidated land holdings. Likewise, the DNR's ability to effectively manage the school trust lands to secure long-term revenue generation is constrained by both funding and policy constraints that commercial real estate investment and timber management entities do not face.

The largest impediment to revenue generation is that thousands of acres of school trust land are landlocked with no legal access. Without legal access, a landlocked parcel has limited forest management opportunities, as DNR must rely on its contract loggers to acquire access. This, in turn, results in a diminished return from timber resources as the logger factors the cost of access into the timber permit maximum bid. Also, a landlocked parcel typically has an appraised value far less than a similar property with legal access. The landlocked parcel is less desirable for sale, with the only potential buyers frequently limited to the adjacent private property owners. Currently, the DNR can acquire an easement to access school trust land if funds were appropriated for such an acquisition. The acquired easement, however, would not be an asset of the school trust it served and would remain DNR administered land. The only statutory mechanism to designate acquired land as school trust land would be to enter into a land exchange.

Under current Minnesota law, the trust cannot invest in additional real property that could improve the value of the school trust real property asset. Nor can the trust access its own capital to improve its existing land base through activities such as development of wetland mitigation banks. Proposed sales and exchanges of school trust land are limited by DNR's staff capacity and ability to pay the transactional costs required to complete the sale or exchange. These statutory, staffing, and funding constraints all combine to limit the DNR's ability to improve and reposition the trust's land holdings to enhance revenue generation. Finally, the trust does not have access to its own resources to pay for the legal services needed to defend its property rights and maximize its revenue generation, but instead relies on the DNR's ability to fund these legal services from other sources. Statutory modifications and funding are necessary in order to advance school trust project proposals in an effort to increase future revenues to the Permanent School Fund.

Additional policies hinder maximum long-term revenue generation from school trust lands. Two recent statutory changes result in uncompensated permanent encumbrances on school trust land. Specifically, compensation is no longer required for granting utility licenses within public right-of-ways[21] and trail

[20] Minn. Stat., sec. 477A.12 subd. 1(7).
[21] Minn. Stat., sec. 84.415.

easements to local units of government.[22] Both types of encumbrance constrain future management options and decrease long-term revenue generation due to the physical occupation of real estate.

The DNR, as trustee seeking to ensure maximum long-term revenue potential, will analyze and report on future limitations, will explore alternative sources for long-term revenue, and will continue to generate revenue through mineral evaluation, leasing and extraction; forest products inventory and sales; the sale of real property for residential and commercial uses; the evaluation and leasing of surface soil resources; and leasing for recreational uses.

D. Mineral Management.

As part of its trustee responsibilities prescribed in the state constitution and statutes, the DNR administers the mineral rights of the school trust, university trust, and tax forfeit lands on the iron range. In this capacity, the DNR exercises the fiduciary duty to manage these rights for the benefit of Minnesota students and local taxing authorities. The DNR manages the school trust mineral rights for iron ore and taconite production, non-ferrous metallic mineral exploration, dimension stone projects, industrial minerals, stockpiled ore extraction, and peat mining.

1. IRON ORE AND TACONITE LEASING, FY12-FY13.

In 2008, the DNR negotiated new mineral leases with U.S. Steel Corporation (U.S. Steel) covering the Minntac and Keetac mining operations. Taconite leases in Minnesota generally contain two components by which royalties are determined – a base royalty and an escalator to the royalty. To ensure that the state was calculating royalties based on the most representative market conditions, the 2008 mineral leases included a royalty escalator clause based on the "Eastern Canadian Blast Furnace Pellet Price." This index was the primary method to calculate the rate of growth for state royalties. In July of 2010, the Eastern Canadian Price was published for the last time.

Each state mineral lease contains a substantively identical provision regarding the selection of a replacement for an escalator that is no longer published. For over one year, the DNR and U.S. Steel representatives engaged in negotiations to select a replacement price index. These negotiations were not successful. By notice dated August 22, 2012, and consistent with the terms of the two leases in question, the DNR demanded arbitration with U.S. Steel on the issue of selecting the "most reasonable substitute" for the Eastern Canada price. The parties entered an arbitration agreement on January 17, 2013. As part of the arbitration agreement, U.S. Steel and the DNR agreed that U.S. Steel would pay an interim rate of $1.25/ton for state material removed from April 2012 through the arbitration period. Any over, or under, payments would be settled through the arbitration process. U.S. Steel made the interim payment of $6,537,012.92 to the state on January 20, 2013. The pro rata share of the interim royalty payments from school trust mineral interests totaled $4,697,337.

Between June 3 and June 5, 2013 the DNR, acting as trustee, and U.S. Steel participated in a binding arbitration hearing regarding a dispute over the calculation and payment of royalties for school and university trust minerals. On June 25, 2013, the arbitration panel affirmed the DNR's position and awarded the state a total of $18,831,591 in disputed royalties and interest that accrued from July 2011 through March 2013. The state received final payment of all past due royalties from U.S. Steel on July 30, 2013[23].

[22] Minn. Stat., sec. 84.63.

[23] These amounts will be deposited to the appropriate trust accounts. The DNR's costs in pursuing the arbitration were paid from non-trust resources and those expenses did not reduce the amount deposited to the trust accounts.

Table 10. Breakdown of Arbitration Award.

Land Type	Interim Royalty Payments	Award Royalty Payments	Interest Payments	Award Distribution
School Trust	$4,697,737	$8,886,246	$185,146	$13,768,730
University Trust	$1,839,675	$3,171,096	$52,089	$5,062,861
Total	$6,537,012	$12,057,342	$237,236	$18,831,591

Even more significant, over the remainder of the two leases the arbitration award also settled a dispute over the escalation of future royalty payments in favor of the State. Assuming current prices and production levels, the trust will receive $1 billion dollars of royalty revenue over the final 20 years of the lease term. Had the arbitration ruling gone against the state, revenue over the remaining term of these leases would have been an estimated $400 million less.

2. NON-FERROUS METALLIC MINERALS LEASING, FY12-13.

Three processes are used to issue non-ferrous metallic mineral leases in Minnesota – i.e., public auction, negotiation, and preference rights application.[24] Before the DNR can issue any non-ferrous metallic mineral lease, the proposed lease must be approved by the State Executive Council.[25] During the past biennium, the DNR has held two public auctions to lease school trust mineral rights.

a. FY12

At its March 2012 meeting, the State Executive Council approved the DNR's issuance of 77 non-ferrous leases. The 77 leases issued cover approximately 21,974 acres in Itasca, Koochiching, Lake and St. Louis Counties, of which 42 percent (9,141) acres are school trust mineral rights.

The FY12 approval of the 77 non-ferrous metallic mineral leases originated from the April 2011 public lease auction. In June 2011 (FY11), the DNR recommended approval of these 77 non-ferrous metallic minerals leases. Two citizens owning a surface interest overlying the state's mineral rights spoke in opposition to the issuance of all or some of the leases, and two other citizens spoke in opposition to the leases in general. The citizens articulated two basic concerns. Firstly, the public notices for the sale were inadequate because private surface owners did not receive individual notice that the state's mineral rights underlying their surface ownership were being offered for leasing. And, secondly, there should be no non-ferrous metallic minerals exploration or mining in Minnesota. After hearing testimony and discussion among members, the State Executive Council deferred action until a later date on the 77 non-ferrous metallic mineral leases. The Executive Council also approved a motion requesting that the DNR work in collaboration with the State Executive Council to outline better practices related to how the State provides public notices on mineral lease sales; review with the Executive Council current rules, procedures and policies of the DNR; and clarify the terms of the non-ferrous metallic mineral lease. Between June 2011 and May 2012, the DNR collaborated with the State Executive Council and interested parties to address public notice concerns and DNR procedures, and provided in-depth explanations of the non-ferrous lease terminology.

b. FY13

During FY13, the DNR held another public lease auction for non-ferrous metallic mineral leases. The public lease auction was held on October 24, 2012 and 31 mining units covering 9,509 acres received qualifying bids. Prior to the October 24th public lease auction, a citizen petition was submitted to the Environmental Quality Board (EQB) requesting that an environmental assessment worksheet be prepared in relation to the proposed

[24] *See* Minn. R. Part 6125.0500 – .0610.
[25] *See* Minn. Stat., sec. 93.25 subd. 2.

non-ferrous metallic mineral leasing of state lands.[26] The DNR, as the regulatory government unit, responded to the petition, issuing its findings of fact, conclusions of law, and order on November 8, 2012. The DNR found that the public lease auction was not a project as defined by Minnesota Rule,[27] and found that the sale of metallic minerals does not directly, or indirectly, result in a physical manipulation of the environment. The DNR order, however, did find that the approval of an exploration plan submitted under a lease is a governmental action under EAW rules. Finally, the order found that the DNR could not act on the petition as no exploration plans had been submitted for review. The petition remained in effect until September 13, 2013 and applied to any proposed project for which an exploration plan was submitted and in which the nature and location was substantially similar to the alleged project identified in the petition. The DNR decision was appealed to the Minnesota Court of Appeals.

At its December 2012 meeting, the DNR recommended that the State Executive Council approve of the 31 non-ferrous metallic minerals leases resulting from the October 24, 2012 sale of state non-ferrous metallic minerals leases. The Executive Council approved a motion to postpone a decision on the DNR's recommendation to approve the leases until the Minnesota Court of Appeals issued a decision regarding the citizen petition requesting an environmental assessment worksheet.

The Minnesota Court of Appeals published its opinion on September 9, 2013. The Minnesota Court of Appeals affirmed the DNR's decision that the State's sale of mineral leases does not by itself constitute a project triggering environmental review requirements under the Minnesota Environmental Protection Act and related rules. The Court of Appeals further held that the non-ferrous metallic mineral leases do not contemplate definite, on-the-ground physical changes to the environment. And, finally the Court of Appeals held that environmental review requirements may be triggered in the future by more specific exploration plans for property leased as a result of the sale. On October 10, 2013, the Appellate Court Clerk received a petition requesting further appellate review by the Minnesota Supreme Court. The Clerk's office rejected the October 10th petition on procedural grounds.

In FY14, the State Executive Council approved the DNR's issuance of the 31 non-ferrous leases at a special meeting held on October 25, 2013. The 31 leases issued cover approximately 9,509 acres in Aitkin, Lake and St. Louis counties of which 22 percent (2,112) acres are school trust mineral rights.

3. MINERAL RESEARCH

The DNR's Mineral Potential Unit completed a number of activities to better understand the school trust mineral interests along with other state-owned mineral interests. During the biennium, the DNR compiled chemical analyses from Koochiching County, assayed drill core and completed 110 geo-chemical surveys from the International Falls area where active gold exploration is occurring. The DNR also completed 127 new soil surveys and had each sample assayed to determine the mineral composition in the Duluth complex. The assay results confirmed previously identified platinum and palladium anomalies. The Mineral Potential unit also continued its work to convert published mineral potential reports from the past 40 years into a searchable digital format and create locational data. This information will be used to market Minnesota's school trust mineral resources.

In addition to non-ferrous metallic mineral research, the Mineral Potential unit conducted field evaluations of school trust dimension stone resources. Dimension stone is classified as an industrial mineral under Minnesota law.[28] It includes granite, limestone, marble, sandstone and slate. Dimension stone blocks are used in various

[26] *See* Minn. R. Part 4410.1100.
[27] Minn. R. Part 4410.0200, subp. 65.
[28] Minn. R. part 6125.8100, subp. 3.

construction applications, to make monuments, and for decorative uses once polished. In northeastern Minnesota, one dimension stone quarry exists on school trust land. It is operated by Cold Spring Granite, which also operates two other quarries in the region.

The DNR commenced field evaluations on school trust lands during the FY12-13 biennium within the same geologic terranes as the existing quarries to determine the location of dimension stone prospects. The field research was conducted in northern St. Louis County on approximately 2,000 acres of school trust land with bedrock outcroppings. The field research examined and ranked prospects based on an area at least 10-acres in size, and relied on the bedrock outcroppings to examine the color, pattern, deleterious minerals, and cracks in the dimension stone. The field evaluations identified three prospects that could generate future school trust revenues. Long-term revenue generation from these three prospects will depend on the market appeal of the colors and patterns of the stone, and the future markets for dimension stone over the next fifty year period.

E. Forest Management.

The Minnesota Constitution establishes that school trust lands, along with other state-owned lands, can be set aside as a special class of productive forest lands and managed on forestry principles.[29] The DNR has implemented a forest management approach that addresses all state-owned lands as one group. The 2.5 million acres of school trust lands account for 46 percent of all DNR managed forestry lands.

Since the global economic downturn and housing market decline that began in August 2006, the demand for forest products has suffered a steady decline. During the FY12-13 biennium, the state's forest products industry experienced statewide plant closures – the Verso paper mill in Sartel, Georgia-Pacific's hardboard plant in Duluth, and Ainsworth Lumber plants in Cook, Grand Rapids and Bemidji. The plant closures reduce the demand for timber products from all sources, including school trust lands. As an example, the Verso mill used balsam fir to make its paper products and its closure created a significant drop in demand for balsam fir timber. In order to address the market impact, the DNR provided timber permit holders with balsam fir permits an option to extend the permits. Special legislation in 2013 also allowed permit holders to request that the DNR cancel permits sold prior to September 1, 2012 that included at least fifty cords of balsam fir.[30] The potential negative impact to school trust revenues is estimated at $900,000 from the Verso closure alone.

1. Fire and Severe Weather

Minnesota's forests also endured extreme wildfires and severe weather events during the FY12-13 biennium. Severe weather events, mainly straight line winds, damaged an estimated 25,000 acres of forest resources across northwestern Minnesota in July 2012. Similar weather events struck eastern Minnesota in July 2011, damaging 30,000 acres of forest resources. The magnitude of these wind events limited the DNR's ability to actively market timber sales on school trust lands. They also required DNR to adapt its management approach in offering timber sales under a salvage sale scenario, which reduced price per cord values by approximately 50 percent. In FY12, an estimated 250,000 cords were offered under a salvage timber permit scenario, with an estimated 100,000 salvage cords harvested in FY12. In FY13, an additional 50,000 salvage cords were offered and an estimated 150,000 salvage cords were harvested. As previously stated, approximately 46 percent of all timber sales are of school trust forest products, which translates to 115,000 salvage cords harvested from school trust lands.

In FY13 the state experienced an extended fire season due to persistent drought conditions. Three major wildfires – North Minnie fire near Baudette, County 27 fire that threatened Karlstad, and the Green Valley fire near Menagha – burned thousands of acres including peat bogs fires as a result of low water tables. The

[29] Minn. Const. Art. XI, sec. 11.
[30] Laws of Minnesota 2013, Chapter 114, Article 4, section 101.

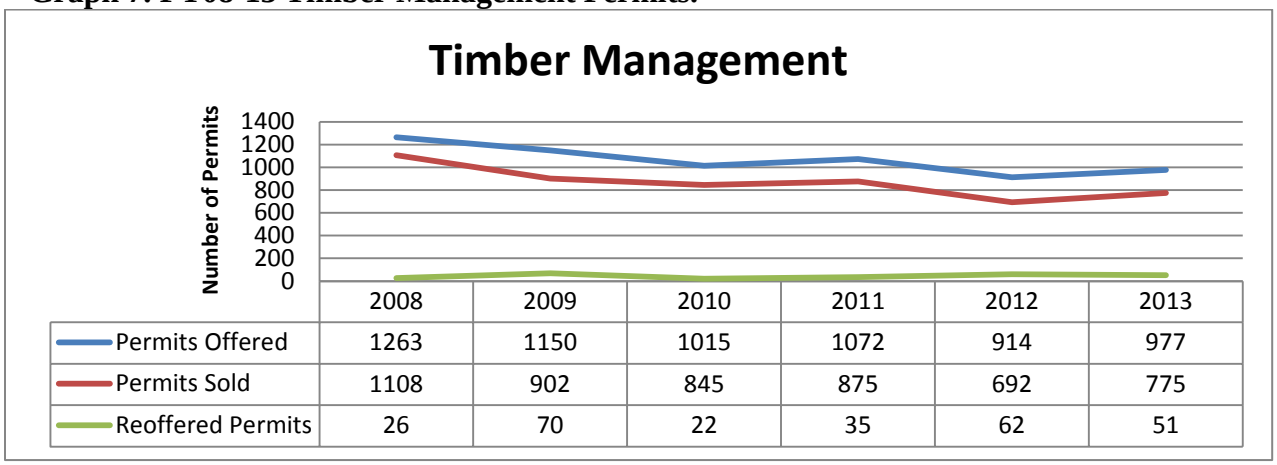
combination of low water tables, drought conditions and wildfires occurring over dry peat bog soils resulted in higher fire suppression costs on school trust lands. It has been estimated that the school trust lost $1 million in peat resources due to the wildfires. DNR continued to battle peat fires by saturating the soils and turning the soils with tractors until it was extinguished in the early winter of 2012.

2. TIMBER MANAGEMENT

In FY12, the DNR offered 914 timber permits, with 692 being sold at public auction. The FY12 volume of school trust timber was 283,146 cords on 14,119 acres. Timber permits offered and sold increased in FY13, with 977 timber permits offered and 775 timber permits sold. The FY13 volume of school trust timber was 381,548 cords on 20,145 acres.

DNR timber management activities in each fiscal year generate revenue across a number of fiscal years. The initial revenue is the 15 percent deposit, based on the high bid value of the permit, made at the time of sale. The remaining value of the timber permit is recognized once the high bidder completes the harvest. Timber permits have a three year lifespan with ability for a one year extension, if requested.[31] DNR research has determined that the average length of both regular auction and intermediate auction permits is less than 2 years. Additional analysis shows that, on average, 80 percent of all timber permits offered were sold at auction since FY08. Graph 7 below charts the timber permits offered and sold on all land types since FY08. From FY08 to FY13, the DNR offered an average of 1,026 timber permits and sold an average of 818 permits annually. However, as depicted in Graph 7 the DNR timber management has experienced a 23 percent decrease since FY08 in the number of timber permits offered. And, the number of timber permits sold declined by 30 percent during the same timeframe.

Graph 7. FY08-13 Timber Management Permits.

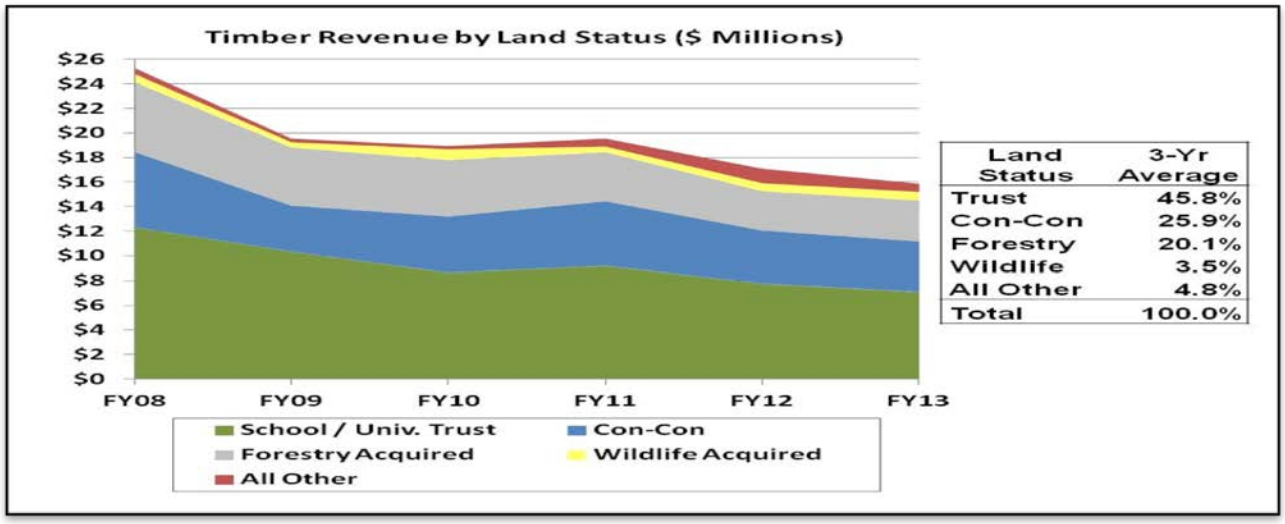


	2008	2009	2010	2011	2012	2013
Permits Offered	1263	1150	1015	1072	914	977
Permits Sold	1108	902	845	875	692	775
Reoffered Permits	26	70	22	35	62	51

The declines in permits offered and sold were both driven by the soft markets for timber products. This decrease in timber permits offered and sold has a direct correlation to the decline in timber revenues across all land classes. As depicted in Graph 8 below, the economic decline has severely impacted the forest products industry and timber markets across all state land classes in Minnesota since FY08.

[31] Minn. Stat., sec. 90.193.

Graph 8. Timber revenues, FY08-13 – DNR managed lands.[32]



3. SUPER PERMIT

The DNR Forestry Utilization and Marketing Unit and Timber Sales Unit collaborated on a new timber management strategy in FY13. The new strategy seeks to address the decline in the volume of school trust forest products being offered through standard timber permits. The DNR concept is a pilot project to offer what has been termed a "super permit" in Cook County.

Cook County was chosen due to the vast school trust acres with otherwise merchantable timber that has not been managed as desired due to low market demand in Minnesota's Arrowhead. If successful, the super permit will provide the market with a reliable source of forest products over a longer period of time, and will achieve the level of disturbance necessary to ensure a healthy forest into the future. The DNR will utilize its existing process to identify marketable stands but will modify its process by giving preference to a large block of timber resources, timber stands in proximity to roads, and stands with all season access or the ability to construct all season access. The DNR also will modify its approach to give the contract logger an option to harvest their desired species mix based on market demand.

The super permit also will facilitate DNR's management of school trust lands that likely will be under gypsy moth quarantine. In addition, decreased timber harvests in the Arrowhead have been identified as a possible factor in the decline of Minnesota's moose population.[33] The super permit could improve moose habitat, while ensuring the health of the school trust forests in the Arrowhead.

F. Real Estate Management.

As part of its real estate management activities, the DNR enters into various real estate contracts on school trust lands. The DNR generates revenue from school trust lands through lease contracts,[34] easements,[35] and licenses.[36] Additional revenue is generated through annual public auctions of school trust lands.[37] Also, the

[32] *State Timber Revenue Forecast, November 2013*, Minnesota Department of Natural Resources, Don Deckard, Ph.D., State Forest Economist. (November 27, 2013), pg. 24.
[33] *Minnesota Moose Population: Using Forest Inventory Data to Assess Changes in Habitat*, Minnesota Forestry Research Notes, No. 296. David C. Wilson and Alan R. Ek. Department of Forest Resources, University of Minnesota. (May 2013).
[34] Minn. Stat., secs. 84.153 (residences); 89.17 (forest use); and 92.50 (miscellaneous).
[35] Minn. Stat., sec. 84.63.
[36] Minn. Stat., sec. 84.415.
[37] Minn. Stat., sec. 92.12.

DNR as a trustee enters into land exchanges[38] that reposition the school trust lands to consolidate ownership, improve management, or to take advantage of future revenue potential.

1. Real Estate Contracts

The DNR administers 2,320 active real estate contracts on approximately 30,000 acres of school trust lands. Utility licenses with a 50-year term account for 570 of all active contracts, followed by 325 perpetual easements for county road rights-of-way, and 275 miscellaneous leases.

During FY12-13, the DNR entered into 100 real estate contracts involving 1,357 acres of school trust land. Table 12 below provides a breakdown of the FY12-13 contracts.

Table 11. Real Estate Contracts

Contract type	Number	Acres
Easements	11	70
Utility License – land crossings	18	90
Leases: aggregate	7	67
Leases: agricultural	15	670
Leases: miscellaneous	38	420
Grant-in-Aid Permits	10	40
Total	**99**	1,357

2. Land Exchanges

During FY12, the DNR completed two land exchanges involving school trust lands. Land exchange #895 was completed in September 2011 with Roseau County. Land exchange #895 involved 280 acres of school trust land that was exchanged for 320 acres of county tax-forfeit land, with both of valued equally at $80,000. This land exchange consolidated school trust ownership in Roseau County. Land exchange #897 was completed in June 2012 with Pine County. Land exchange #897 involved 2,560 acres of school trust land for 2,711 acres of county tax-forfeit land, with both valued equally at $1,360,000. This land exchange consolidated ownership and reduced school trust boundaries to limit future boundary management issues. No land exchanges involving school trust lands were completed in FY13. However, the DNR initiated two large land exchanges with Kanabec County and Lake County under its new Strategic Land Asset Management initiative.

3. Strategic Land Asset Management

DNR administers approximately 5.5 million acres of state-owned land, 2.5 million of which is school trust land. The DNR has developed a standard decision making framework to guide DNR in managing the state-owned land it administers. The framework, known as Strategic Land Asset Management (SLAM), seeks to optimize the use of DNR administered lands within the context of all Minnesota's public lands and focuses on collaboration between the DNR, school trust land administrator, and other public land managers.

The DNR created the SLAM Integration Team to develop, among other things, strategic priorities related to school trust management. The first task was designing the school trust inventory process (see Section VI). The next task was creating and implementing land transaction policies and procedures to ensure DNR's effectiveness from land asset planning through consummation of land transactions. By implementing these two strategies, the DNR aims to fulfill its fiduciary obligations to secure long-term revenue generation through the sound management of school trust lands.

[38] Minn. Stat., sec. 94.343.

The DNR undertook SLAM projects during FY12-13 with Roseau, Kanabec and Lake Counties. The overall SLAM objectives were to consolidate school trust lands to improve management efficiencies, identify surplus school trust parcels for public auction, and collaborate with county staff to build and strengthen partnerships. The results from each county project met all stated objectives. The success of the Fall 2012 land sale is attributable to the Roseau County project. The Kanabec and Lake County SLAM projects are focusing on land exchanges of school trust land, each of which realigns the school trust asset to improve management.

4. RECREATIONAL USES

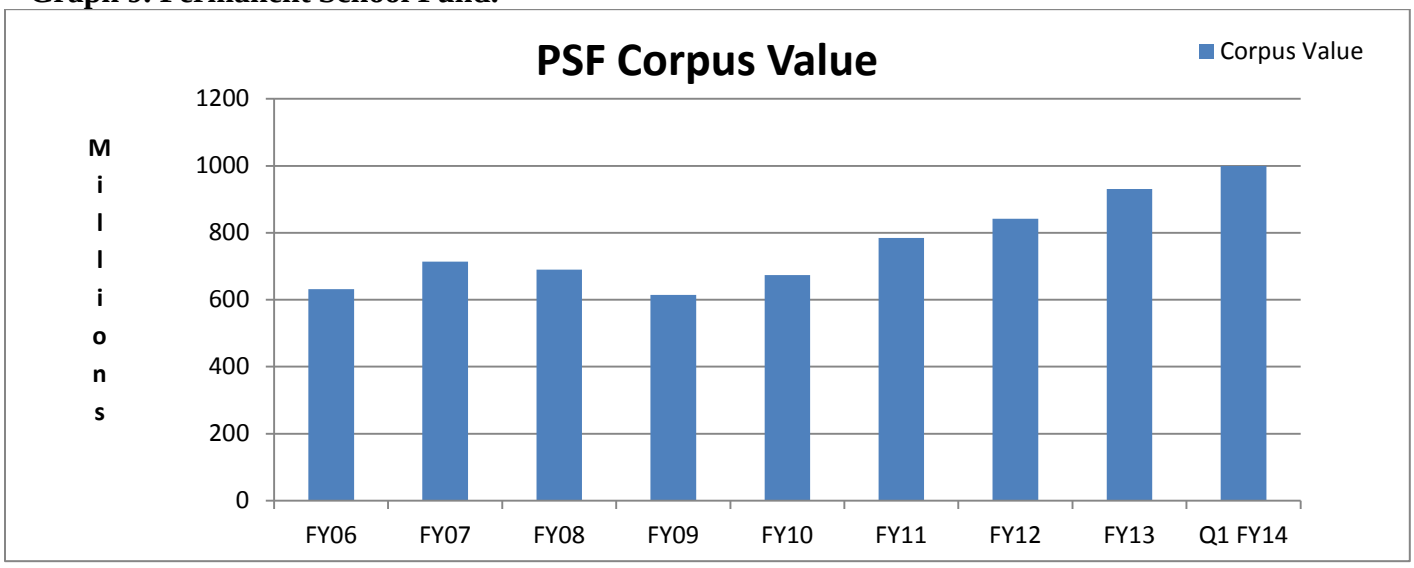
The DNR manages forest campgrounds located on school trust lands. In FY12, total revenue generated from campground fees was $120,054. In FY13, total revenue generated from campground fees was $144,121. The revenue generated from forest campgrounds is not subject to forest cost certification under Minnesota Statutes, section 16A.125. Thus, the DNR pays the costs of operating forest campgrounds on school trust lands from other sources. All gross revenues from forest campground are deposited in the Forest Suspense Account prior to being deposited into the Permanent School Fund.

Additionally, the DNR leases school trust land for recreational purposes. The revenues generated from these real estate leases are subject to forest cost certification under Minnesota Statutes, section 16A.125. Examples of such recreational leases are Hill Annex State Park, Knife River Marina, North Country hiking trail, and Superior hiking trail.

G. Management of the Permanent School Fund.

In accordance with the Minnesota Constitution, the principal of the Permanent School Fund cannot be spent, and instead must remain perpetual and inviolate.[39] The commissioner of Minnesota Management & Budget (MMB) has overall management responsibilities for the Permanent School Fund (PSF).[40] New investment policies enacted in 1997 allowed the State Board of Investment (SBI) to invest in a balanced portfolio of common stocks and bonds.[41] Reflecting strong stock market gains over the FY12-13 time period, the market value of the Permanent School Fund principal increased from $842 million to $931 million during the biennium.[42] As of September 30, 2013 (first quarter FY14), the Permanent School Fund value was $1.0 billion.

Graph 9. Permanent School Fund.



[39] MINN. CONST. ART. XI, SEC. 8.
[40] Minn. Stat., sec. 11A.16 subd. 3.
[41] Minn. Stat., sec. 11A.24.
[42] http://mn.gov/sbi/SBI%20Funds%20Under%20Management%20Performance.html (last visited by author January 3, 2014).

These financial investments generate annual income from interest and dividends, which is transferred to the School Endowment Fund.[43] The Department of Education allocates the funds semi-annually to school districts based on "the number of pupils in average daily membership during the preceding year."[44] Less than one percent of the total school aid amount appropriated annually by the legislature is contributed by the Permanent School Fund. Table 13 below depicts Permanent School Fund distributions to Minnesota school districts on a per pupil basis from FY10-14.[45]

Table 12. School Endowment Fund Distributions.

	Investment Earnings Distributed	Number of Students	Per Pupil Rate
FY10	$22,865,418	816,716	$27.99
FY11	$22,826,404	817,539	$27.92
FY12	$24,293,857	817,605	$29.71
FY13	$24,124,268	819,413	$29.44
FY14	$23,788,090	824,983	$28.83
5-year average	**$23,579,607**	**819,251**	**$28.78**

[43] Minn. Stat., sec. 127A.32.
[44] Minn. Stat., sec. 127A.33.
[45] http://w20.education.state.mn.us/MDEAnalytics/Data.jsp (last visited by author January 3, 2014).

VI. SCHOOL TRUST INVENTORY

Minnesota Statutes, section 84.027, subd. 18 requires the DNR to inventory all school trust lands and submit the inventory report with this biennial revenue report. This inventory section of the biennial report will provide the DNR's inventory all school trust lands by county, identify all school trust lands encumbered by a designation or policy that prohibits long-term economic return, and provide a plan to compensate the Permanent School Fund for those designations or policies prohibiting long-term economic returns to the Permanent School Fund. Although the DNR has historically maintained accurate land title records related to the school trust lands, this was the DNR's first attempt to inventory the school trust lands based on economic considerations.

A. Inventory Framework.

In developing the school trust land inventory framework, DNR staff identified a process that could be completed in a timely manner, would be easily understood both within and outside the DNR, would be credible, and would engage DNR staff with technical expertise and local knowledge of the land being evaluated. While the 2012 legislation changes did not require that DNR undertake a highest and best use analysis, DNR Operational Order 121 does call for DNR to complete an inventory utilizing a modified highest and best use analysis.[46]

The DNR School Trust Team[47] developed a highest and best use classification system in order to categorize school trust parcels by current and future economic potential. The recommended framework includes nine classifications – six of which have economic potential and three that are based on non-economic values. This primary classification ranking institutes a hierarchy among the classifications based on each classification's historic ability to generate long-term revenue from trust land. The adapted highest and best use approach allowed DNR to analyze current market conditions without appraising each school trust parcel, to factor into the economic classification analysis future economic potential, and to account for evolving management concepts with the potential to secure the maximum long-term revenue potential from school trust lands. The economic classifications in order of revenue potential are: mineral estate; real estate development; productive forest; extractable surface resources; agricultural; and recreational lands. The non-economic classifications are: stewardship; shoreline; and economically non-productive. This inventory framework allowed DNR to engage staff at multiple levels in the process of analyzing and identifying recommended future uses. It also served to increase awareness among DNR staff of their role as trustee.

B. Inventory Process.

The school trust inventory process employed multi-discipline DNR staff in six successive evaluation phases. The initial phase created the highest and best use classification definitions and ranking system. Next, DNR experts developed classification descriptions, data sets, internal classification rankings, as well as field staff guidance documents to assure consistent statewide application. The third step was a preliminary analysis phase. This preliminary analysis integrated the data for each classification using geographic information systems (GIS) software. Using GIS, DNR assigned each school trust parcel to at least one of the nine classifications based on the criteria designed for each classification. DNR completed this preliminary analysis on all 2.5 million acres of school trust land by 40-acre parcel (65,325 parcels), based on the highest and best use criteria. The inventory classification results below may overestimate acreage amounts because the entire 40-acre parcel was classified if any portion had characteristics to earn a classification.

[46] A highest and best use analysis is a real estate appraisal methodology to address and understand the reasonably probable and legal use of each school trust parcel, as well as those uses that are physically possible, appropriately supported and financially feasible, and the uses that will result in the highest economic return to the school trust.

[47] In August 2012, Commissioner Landwehr established an interdisciplinary DNR team with representatives from each DNR division and each DNR region to work with the DNR School Trust Land Administrator.

After receiving the initial classifications, the inventory process engaged DNR field level staff. This fourth phase sought to obtain field staff input concerning initial highest and best use classifications, current conditions that might impact future revenue opportunities, and alternative highest and best use classifications. Field staff was asked to provide information on future management alternatives to ensure an economic return. This field evaluation of school trust land refined DNR's understanding of the potential multiple economic uses for each parcel. It also identified school trust lands with natural resource or recreation values not detected by GIS software. DNR field staff documented reasons for proposed modifications to a highest and best use classification, and identified for potential compensation those school trust lands on which long-term revenue generation was in conflict with natural resource or recreation values.

In the fifth phase, the DNR School Trust Team reviewed and revised the field evaluation results and the school trust lands identified for compensation. The purpose of this assessment was to ensure that DNR staff consistently utilized the highest and best use inventory statewide, the inventory results complied with Minnesota law and Operational Order 121, and modifications to a highest and best use classification were made in the best interests of the trust. The DNR School Trust Team, as such, focused its review on field staff recommendations that differed from the preliminary GIS analysis.

In the final phase of the inventory process, the DNR School Trust Team distributed all school trust parcels identified for compensation due to a policy or designation that prohibits long-term economic return among five distinct policy categories: (1) AMA/WMA Habitat; (2) Biodiversity; (3) Calcareous Fens; (4) Old Growth Forests; and (5) Recreational Uses. Five teams led by School Trust Team members undertook a final analysis that calculated the acreage of school trust land impacted by any such designations or policies, and recommended compensation methods.

The school trust inventory process did not provide a highest and best use classification for the following: school trust severed mineral interests (approximately 1 million acres); school trust lands lying within the statutory boundary of Peatland Scientific and Natural Areas (51,000 acres); or school trust lands lying within the Boundary Waters Canoe Area Wilderness (86,000 acres). The DNR did not consider the highest and best use of severed mineral interests because the asset does not have a corresponding surface with additional revenue options. The school trust lands within the Peatland Scientific and Natural Areas were not analyzed for long-term economic potential due to their statutory designations. The school trust lands within the Boundary Waters Canoe Area Wilderness are part of a proposed hybrid land exchange and land sale with the U.S. Department of Agriculture – Forest Service. The hybrid proposal calls one-third of the school trust lands to be exchanged for equally valued lands outside the wilderness and two-thirds condemned by the State and sold directly to the Forest Service.

C. Inventory Results.

The multiple review phases in the inventory process permitted DNR to rank the current and potential economical uses of school trust land. The highest and best use analysis completed for Minnesota's school trust lands offers insight on where these economic lands are located, how to maximize future revenue through multiple compatible economic uses, and which school trust lands have potential future revenue opportunities. The inventory review phases additionally presented DNR with an opportunity to review, identify and recommend for compensation school trust lands prohibited from revenue generation through a policy or designation.

Table 13. School Trust Inventory Classifications.

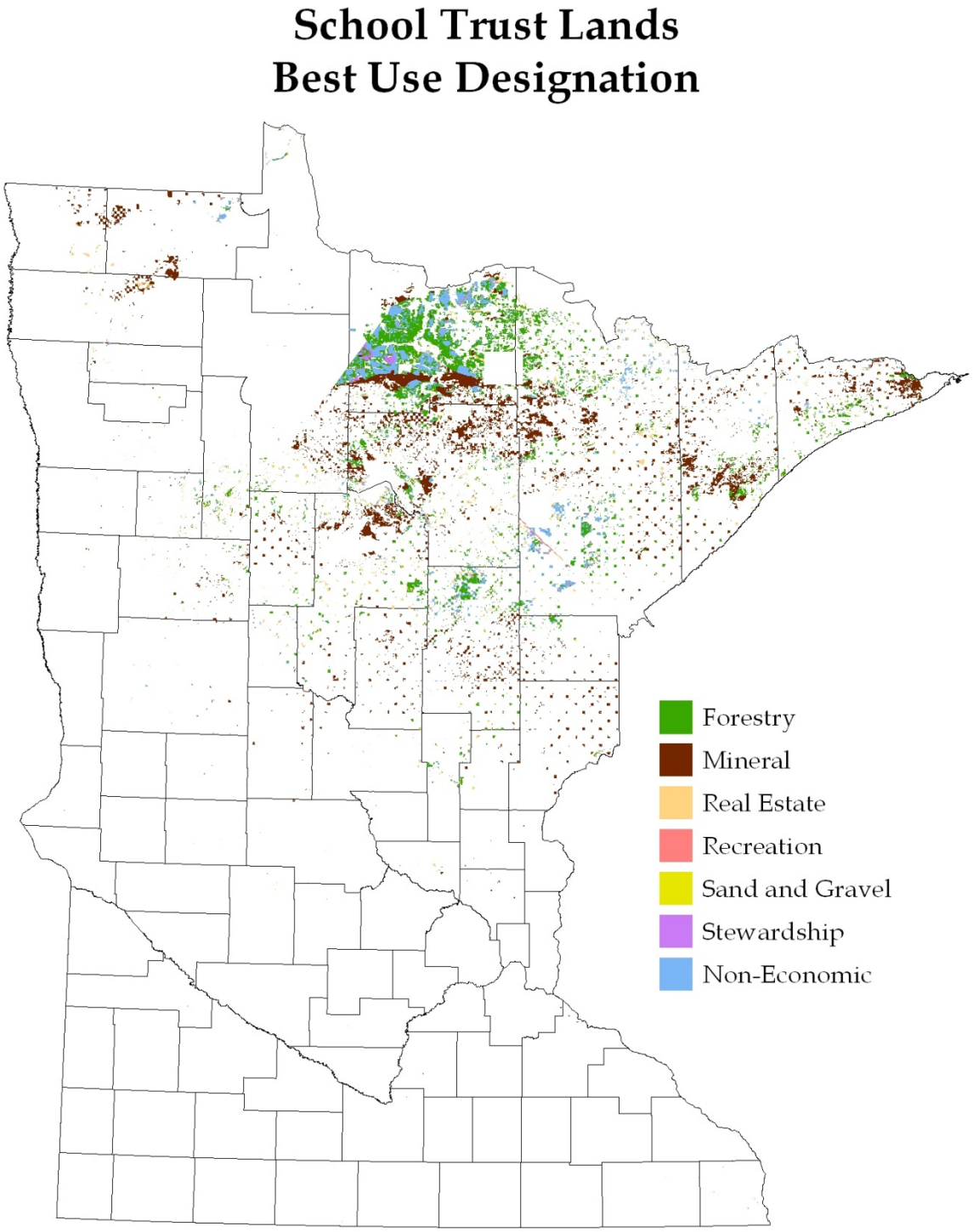
Classification	Acreage Total of Highest and Best Use	Secondary Acres of Classification	Total Acreage of Classification
Mineral Estate	**1,021,823**	0	1,021,823
Real Estate Development	**208,199**	234,331	442,530
Productive Forests	**824,636**	803,832	1,628,468
Extractable Surface Resources	**3,232**	93,563	96,795
Agricultural	**0**	40	40
Recreational	**23,387**	156,236	179,623
Stewardship	**21,242**	127,794	149,036
Shoreline	**0**	0	0
Unproductive	**444,197**	444,197	444,197
TOTAL	**2,546,716**[A]		

A. This total includes 2,520,616 acres of school trust land and an additional 26,100 acres of permanent university trust land.

The inventory results revealed that there is a considerable amount of school trust acreage with potential to secure long-term revenues by managing for multiple future revenue streams. As an example, the acreage totals for both the real estate development and productive forest classifications double when combined with a predominant mineral estate classification. The combined 1.6 million acres of productive forest will likely generate future revenue as part of Minnesota's working forests while waiting for anticipated future opportunities from real estate or mineral development.

By contrast, the inventory also revealed that currently there is little or no revenue potential on a considerable amount of school trust land, with 444,197 acres classified with economically unproductive. It is important to note that the highest and best use classifications of school trust lands are based on broad information, not parcel-specific analysis. The DNR can and will use these classifications to inform future management plans. But the classifications themselves do not represent concrete plans to manage specific parcels in particular ways on a definitive timeframe.

Map 4. School Trust Land highest and best Use designations.



VII. ECONOMICALLY PRODUCTIVE SCHOOL TRUST LANDS

This section discusses the five highest and best use classifications with economic potential: mineral estate; real estate development; productive forest; extractable surface resources; agricultural lands. Under the inventory framework each school trust parcel could receive more than one economic use, but each parcel received only one highest and best use based the long-term revenue potential. As an example, many school trust parcels classified as mineral estate lands also were characterized with productive forest potential. Due to the historic revenue potential associated with mining, school trust lands in this scenario would receive a highest and best use classification as mineral estate lands, not productive forest lands. The DNR's management strategy is to maximize long-term economic returns by capturing multiple revenue streams from school trust lands.

A. Mineral Estate Lands.

The school trust holds the rights to 3.5 million acres of mineral rights in Minnesota, consisting of 2.5 million acres of unified surface and mineral estate and 1 million of severed school trust mineral rights.[48] The DNR inventory process analyzed the 2.5 million acres of unified surface and mineral estate lands. It was not necessary to inventory the severed mineral interests because the trust does not own, and thus the DNR does not manage, the surface rights on these lands.

The school trust mineral interests – royalty and land rental payments – account for approximately 80 percent of historic school trust revenues. Out of the 2.5 million acres of school trust mineral rights, the DNR inventory process identified 1,021,823 acres with a highest and best use as mineral estate lands. Map 5 below depicts the location of the mineral estate lands throughout Minnesota.

Factors driving the potential for the trust's mineral estate lands include Minnesota's mineral laws and regulations, tax policies, global mineral demand, and capital for exploration and development. The mineral estate classification includes an assessment of these factors over a long time period. In order to accurately define the mineral estate classification, DNR mineral potential experts considered state mineral leases (existing and terminated), historical mineral exploration data, and DNR mineral potential surveys. The evaluation of the mineral estate classification included iron ore, non-ferrous metallic minerals, high-value industrial minerals, oil and natural gas potential, and auxiliary mining lands. Active and terminated state mineral leases were thought to offer the strongest primary evidence for significant mineral potential. Mineral leases are a key step in evaluating the potential for commercial mineral development and royalty revenue to the Permanent School Trust Fund. In the absence of quantitative data regarding undiscovered mineral resources, DNR experts used rational inference to determine the mineral potential in some cases. The DNR did not attempt to identify specific mineral deposit locations other than the Biwabik iron formation during the inventory process. Future school trust mineral estate revenue opportunities will likely come from four sources: (1) iron ore/taconite mining; (2) stockpile and lean ore mining; (3) non-ferrous mineral exploration and development; and (4) auxiliary mining facilities.

Iron ore and taconite mining remains the major source of school trust revenue. DNR mineral experts conservatively project that Minnesota's Iron Range contains reserves of five billion tons of iron ore and taconite. Iron ore and taconite mining on the Mesabi and Cuyuna ranges over the past century created stockpiles of lean ore that at the time of extraction was unrecoverable. Recent advances in metal recovery methods have unlocked a new revenue opportunity – iron ore and taconite stockpile mining. Two private

[48] Severed mineral estates are a separate property ownership created by a mineral reservation when the state conveyed the surface estate, retaining the minerals. *Handbook of Mineral Law, Field Edition*. pg 115-16. Terry S. Maley. 1990. *See also* Minn. Stat., sec. 94.14 requiring that all valuable minerals be reserved for the use of the state.

companies now compete for the rights to mine school trust stockpiles for the lean ore remaining. Since 2009, these private companies have mined over a million tons of lean ore from school trust stockpiles.

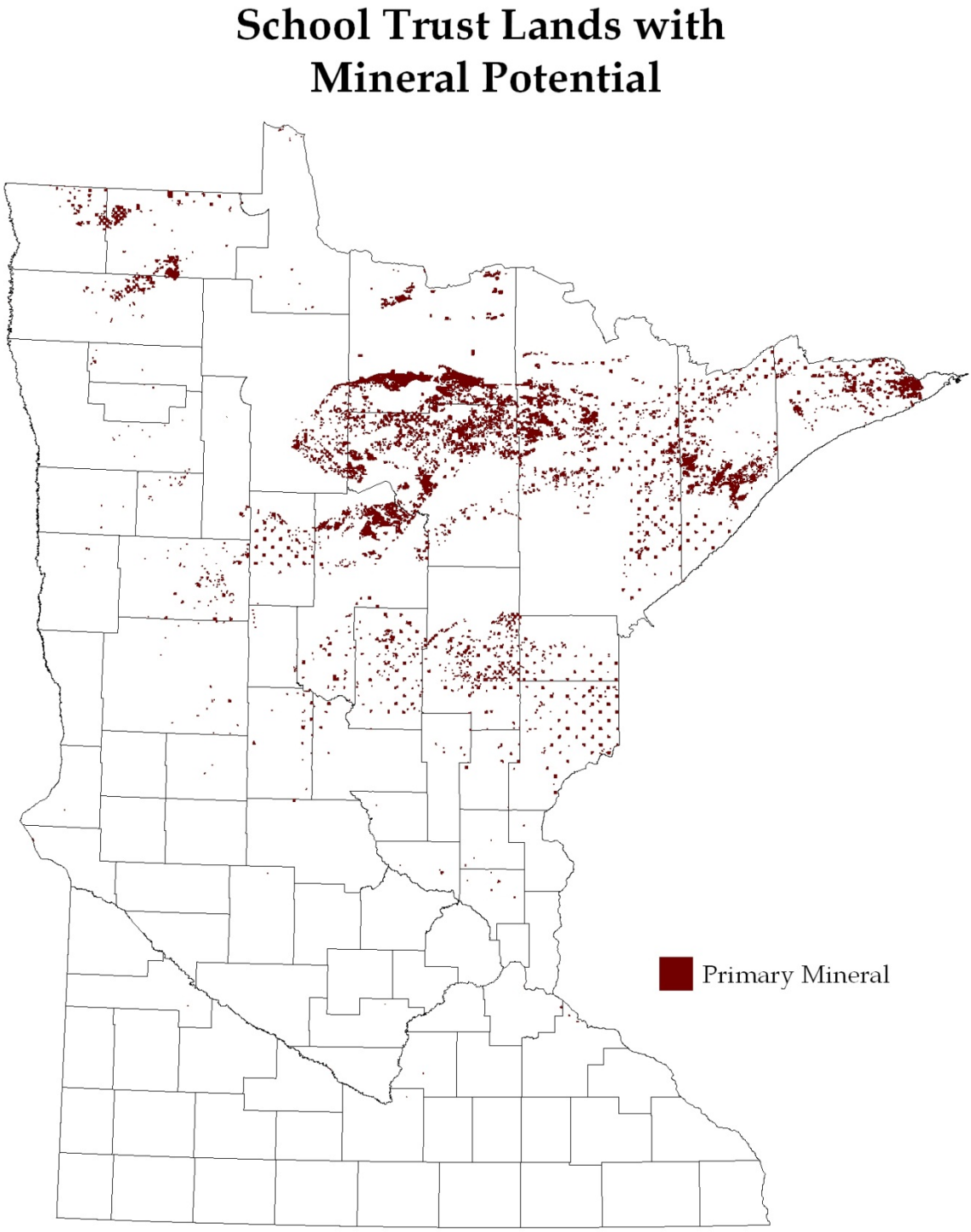
Development of a non-ferrous metallic mineral deposit, if permitted under Minnesota law and regulations, could generate billions of school trust royalties over the life of non-ferrous mining. While future non-ferrous metallic mineral mining in Minnesota is speculative, the Permanent School Fund mineral leases and royalties could generate upwards of $2 billion over a 25 to 30 year period.[49] Each of the three advanced projects in the Duluth Complex with school trust lands has had resource assessments verified by an independent mineral industry consultant. DNR mineral experts reviewed these estimates and further calculated mine life royalties using current metal prices from the American Metal Market, February 25, 2008. Understanding the forward-looking nature of these estimates, the actual future value of school trust mineral royalties would depend on whether these projects move forward, the actual resource grades and recoveries, and actual metal prices at time of mineral extraction.[50]

One key component of successful mineral development will be the siting of auxiliary mining lands for plants, stockpiles, and tailings basins. The strategic siting of auxiliary lands during the development of the Biwabik iron formation led to increased revenue generation on school trust lands. As an example, Hill Annex mine contains school trust stockpiles with iron units. The school trust received a payment for the deposition of lean ore on school trust lands while also maintaining its mineral rights. Today, those stockpiles are being mined for what was once thought to be waste rock. In this example, strategic management of school trust lands has resulted in multiple revenue streams from school trust lands.

The DNR's future management of the school trust's mineral estate will evaluate all proposals that may impact school trust mineral estate revenues in order to ensure DNR maximizes the long-term revenue potential from the school trust mineral estate. The DNR evaluation process will apply a risk analysis to each proposal so as to objectively assess impacts to short-term and long-term revenue potential.

[49] *2008 Policy Fact Sheet "Potential School Trust Royalty Income from Identified Mineral Deposits in the Duluth Complex,* Marty K. Vadis, Director Lands and Minerals Division, Minnesota Department of Natural Resources. (St. Paul, March 17, 2008).
[50] Ibid.

Map 5. School Trust lands with significant revenue potential as Mineral Estate lands.



B. Real Estate Development Lands.

Through the four federal land grants, Minnesota received 8.1 million acres of land that were dedicated for the support of public education. The initial capital infusion into the Permanent School Fund came about from the sale of 5.6 million acres of school trust land between 1858 and 1880. Nine percent of the Permanent School Fund corpus was generated through either the sale of school trust lands or other real estate transactions on school trust lands.

Today, the DNR manages the remaining 2.5 million acres of school trust land of which only 208,199 acres, or 8.3 percent, were classified with a highest and best use of real estate development. The inventory process also identified 234,331 additional acres of school trust land with real estate development characteristics as a secondary classification behind mineral estate lands. Similar to the mineral estate classification, real estate development lands are inherently tied to Minnesota's economy and tax policies. Map 6 below depicts the location of the real estate development lands throughout Minnesota.

When defining the criteria for real estate development lands, DNR real estate experts considered riparian frontage, accessibility to major thoroughfares, alternative energy potential, and proximity to population centers. School trust lands with the potential for real estate development or utility infrastructure, and those with existing utility infrastructure (communication towers, wind turbines, or other commercial infrastructure) were highlighted for their future long-term revenue potential to the Permanent School Fund.

The identification and public auction sale of riparian school trust lands will remain a source of revenue for the Permanent School Fund. The DNR, however, must balance short-term and long-term revenue goals from this source. By way of example, the school trust owns fee title to approximately 86,000 lineal front feet on Lake Vermillion in St. Louis County. This particular school trust lake frontage varies in suitability for lakeshore development. With real estate sale numbers trending upwards, the wisest strategy would be to offer a small selection of school trust lands for sale annually. Doing otherwise could have a negative effect of flooding the real estate market in some areas, thus minimizing overall value when analyzed from a long-term perspective. In addition, the gradual approach spreads the trust's sales across cycles in the market.

One unexploited future revenue option on school trust land is the industrial development for alternative energy sources, namely wind energy development. Minnesota's energy policy calls for the development of energy from renewable sources by 2025. Minnesota's first utility scale wind farm was developed in Lincoln County in 1994. Since that time, total operating capacity in Minnesota has grown to 1,800 Megawatts (MW) with over 600 MW under construction.[51] Continued wind energy development and growth is anticipated through 2025 under the Minnesota Renewable Electricity Standard (RES). The RES calls for all utilities serving Minnesota customers to supply 25 percent of their sales with renewable resources by 2025.

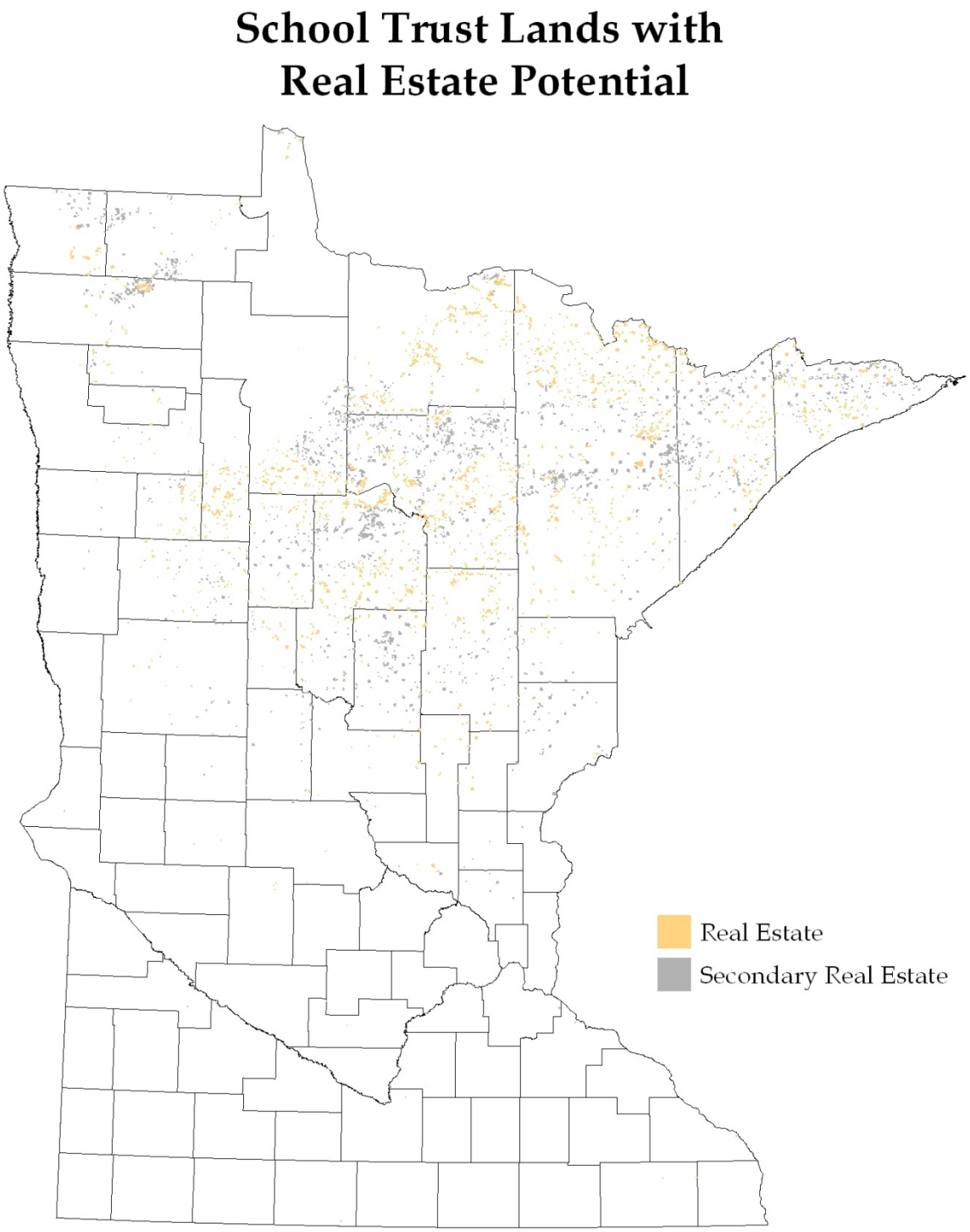
It is unclear how attractive school trust lands are to wind energy developers. The school trust lands are concentrated in northeast Minnesota, where wind resources tend to be least robust and transmission infrastructure is limited. However, wind development has been spreading throughout the state into areas once deemed unsuitable. The trust's most significant wind lease stems from legislative direction to sign a wind development lease with the Mountain Iron Economic Development Authority.[52] On February 24, 2010, a lease agreement was executed for 320 acres of school trust land in St. Louis County.

[51] American Wind Energy Association, US Projects Database, http://www.awea.org/la_usprojects.cfm (last visited by author on December 21, 2010).
[52] Laws of Minnesota 2009, Chapter 176, Article 3, Section 12.

The growing size of wind turbines and other technological improvements have dramatically expanded the areas considered economically viable for wind energy development. Minnesota is part of a regional grid. There are substantial flows of power between utilities and across state and province lines. The size of the Minnesota wind industry will ultimately depend upon the relative costs and transmission capacities for different project locations across the Upper Midwest.

School trust lands classified as real estate development are located throughout Minnesota, which provides the trust with revenue opportunities from both traditional real estate development and renewable energy development. The DNR's management strategy will weigh the desire for short-term gains through the sale of school trust land with the responsibility to maximize long-term revenue potential. The DNR intends to apply management strategies on school trust lands that will strategically position school trust lands to take advantage of future revenue potential through leasing for renewable energy sites.

Map 6. School Trust lands with Real Estate development potential.



C. Productive Forest.

School trust revenues derived from the forest products industry ebb and flow with the global economy based on simple supply and demand economics. Additionally, more local drivers such as severe weather, wildfires, and forest pests are key factors in determining market prices and demand. And, as is the case with mineral and real estate development, Minnesota's forest and tax policies directly impact the forest products industry and revenue generated from school trust forest products. Forest products have accounted for seven percent of the historic revenue on school trust land. Graph 5 (see pg. 20) depicts the market trends in average price per cord and how the economy impacts school trust revenues from this source.

The inventory process identified 834,626 acres of school trust lands with highest and best use of productive forest. The inventory process also identified 803,832 additional acres of school trust land with productive forest characteristics as a secondary classification where the highest and best use was identified as mineral estate or real estate development. For these lands, productive forests managed for timber revenue provide a solid interim revenue strategy until the highest and best use mineral or real estate potential is realized. Map 7 below depicts the location of all productive forest lands throughout Minnesota.

School trust lands with the essential characteristics to yield a marketable forest product were flagged as productive forest lands. The general characteristics include currently stocked forest stands, school trust sites with a history of past forest product harvest and sites with marketable species cover types.

In Minnesota, the predominant economic species for timber harvest are: Aspen, Balsam Fir, Black Spruce, White Spruce, Pine (Jack, White and Red), and Northern Hardwoods. The productive forest classification additionally considered factors related to market feasibility. Forest stand acreage, proximity of a stand to mill/market, legal or management access, and seasonality of access all play a significant role in determining a stand's marketability.

Minnesota's forest products industry is a cornerstone of the state's economy. It represents the state's fifth largest manufacturing sector, with 40 percent of all manufactured forest products being utilizing locally.[53] Across all public and private landowner types, Minnesota harvests approximately 2.5 million cords of timber per year. DNR forest management has an annual harvest target of 800,000 cords per year, with 46 percent of that being harvested on school trust land in recent years. Even though Minnesota's school trust forest lands have seen declining revenues, the trust's long range objectives underscore the need to focus on the long term health of the State's forest products industry, rather than market cycles. In addition, it is important to recognize trust land contributions to ancillary benefits, including a healthy environment, clean water, and quality of life. The forest products industry and annual harvests remain critical to maintaining healthy and productive forests as well as providing a backdrop for outdoor recreation and tourism. Minnesota likely will continue to rely on productive forests to play a critical role in our state's economic development.

Disease and insects pose a real threat to the future of Minnesota's productive forests. In particular, productive forest lands are at risk from invading insects such as eastern larch beetle; emerald ash borer; forest tent caterpillar; gypsy moth; and larch beetle. Likewise, forest diseases such as maple anthracnose, oak wilt, and spruce needle rust impact the value of productive forest stands. These very real threats to future revenue streams will require active forest management by DNR, and potentially quarantines to delay or prevent spread in some instances. One such active management opportunity is marketing timber threatened or damaged by pests for alternative uses such as biomass for energy production.

[53] *Economic Contribution of Minnesota's Forest Products Industry*, Deckard, Donald State Forest Economist – MnDNR; and Skurla, James A. – Director, Bureau of Business and Economic Research, Labovitz School of Business and Economics UMD, April 2011.

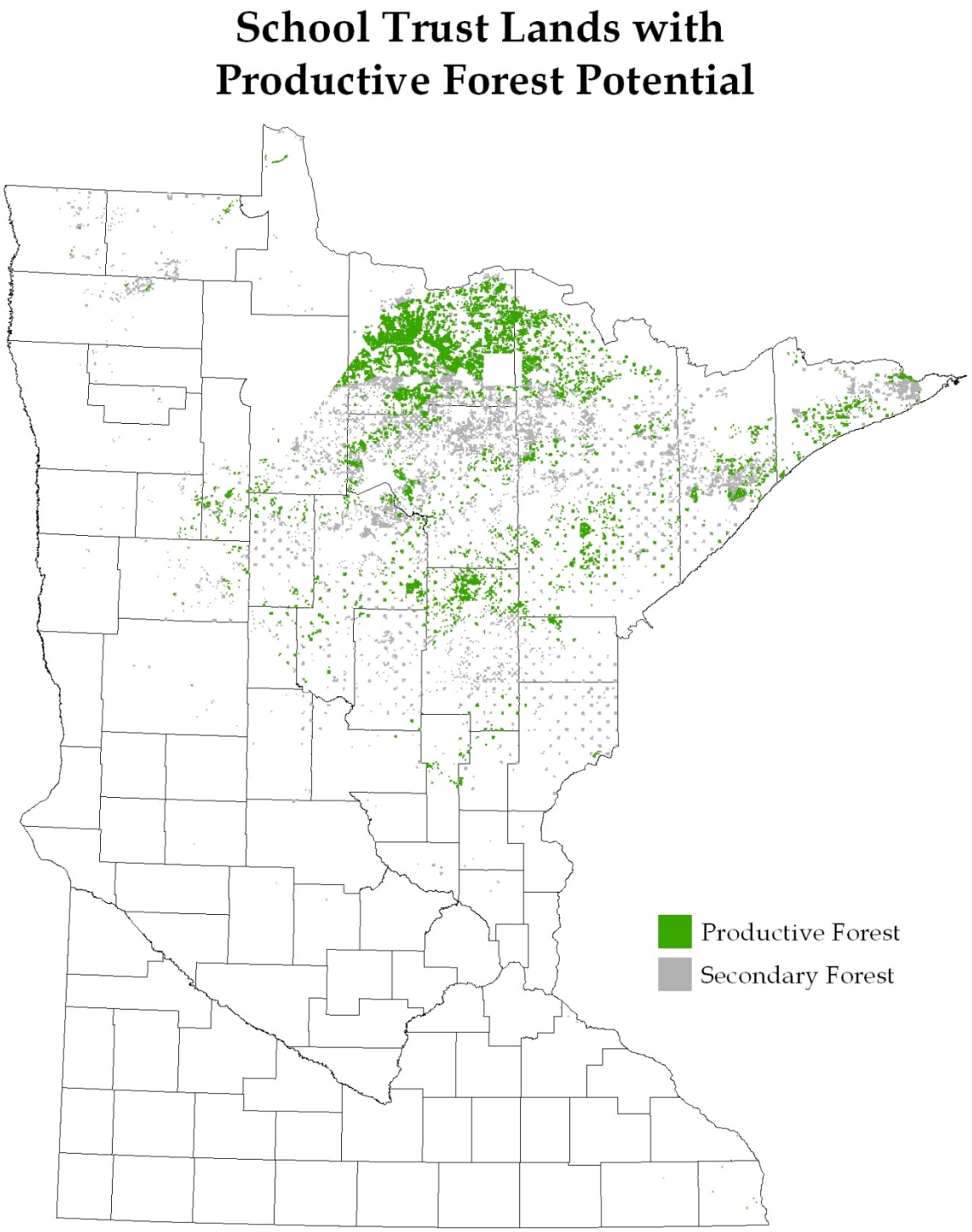
The forest products industry can be pivotal in the development of sustainable and renewable alternative energy sources from Minnesota's productive forests on school trust lands. To enhance its future viability, Minnesota's forest industry is seeking to develop new markets, price structures, and production and transportation methods that may positively impact the economic viability of some productive forest sites. It is imperative that the DNR position the school trust's productive forest holdings to capture future revenue streams from this renewable natural resource. Two examples of future revenue opportunities from forest products are advancements in the use of cellulose fiber and woody biomass.

Cellulose originates in trees and plants and is the most common organic compound found on Earth. Two building block structures of cellulose, nano-crystals and nano-fibrils, have potential applications in a wide range of industries, including the biomedical field, medical implants, lightweight composites, adhesives, and automotive industry. Cellulose nanotechnology intends to utilize these structures to create cost-effective products that are environmentally safer and lower in cost than carbon fiber epoxy materials and much stronger than glass fiber epoxy products. The beauty of these microscopic particles is that they are widely available, renewable, sustainable, and biodegrade with fewer environmental consequences.[54]

Woody biomass consists of living and recently dead biological material for use as fuel or in industrial production. Examples include residue material remaining from logging operations, dedicated energy crops, and brushland materials. Woody biomass as a future energy source is particularly appealing on school trust lands, where the goal is to maximize revenues while applying sound conservation principles.[55] Recent and future developments in new alternative energy sources have the potential to increase demand for all types of biomass. Minnesota's best opportunity may be woody biomass from brushlands – alders, hazel, and willows – across the northern region on 225,000 acres of school trust land. However, there has been little economic growth in Minnesota's biomass production due to uncertainty concerning the amount of biomass available and small biomass markets in the state.[56] To encourage the development of renewable energy sources such as biomass, Minnesota Business First Stop assembled a team from state agencies to assist renewable energy and clean technology companies with project development, biomass feedstock identification, financing, environmental permitting and site selection. Additionally, the U.S. Department of Agriculture awarded the DNR a grant to enhance the utilization of renewable energy sources from woody biomass, and thus open new markets for forest products.[57]

[54] Cellulose on The Infinitesimal Scale, *The Market Place*, Mimi Barzen, Minnesota Department of Natural Resources, Fall 2012.
[55] Minn. Stat., sec. 127A.31.
[56] *Development of Procedures to Assess Brushland Resources for Woody Biomass Energy Markets*, Rack, Jim, Resource Assessment, Minnesota Department of Natural Resources and Berguson, Bill and Buchman, Dan, University of Minnesota – Duluth at Natural Resources Research Institute. 2009.
[57] Biomass Grant, *The Market Place*, Mimi Barzen, Minnesota Department of Natural Resources. Fall 2013.

Map. 7. School Trust lands with Productive Forest resources.



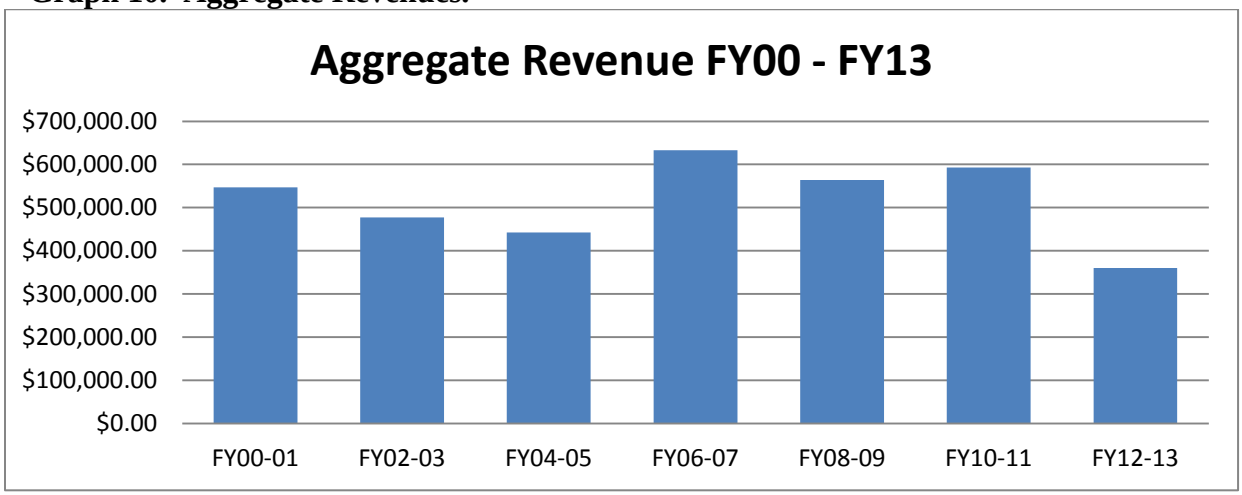
D. Extractable Surface Resources.

The inventory process identified 3,232 acres of school trust lands with a highest and best use as extractable surface resources. The inventory process also identified 93,563 additional acres of school trust land with extractable surface soil characteristics as a secondary classification behind mining, real estate, and productive forests. The extractable surface resources are those materials within the surface estate that can be used for industrial and commercial purposes. These include construction aggregates (sand and gravel), dimension stone (granites), and peat resources. Map 8 below depicts the location of school trust lands with current and historic leasing of extractable surface resources.

Prior to the initiation of the school trust inventory project, DNR geologists began analyzing the 2.5 million acres of school trust lands for these surface resources. When characterizing the school trust lands, the DNR inventory took a conservative approach that required the DNR expert to have reasonable certainty that a school trust parcel contained valuable extractable surface minerals in order to be classified as containing a potential resource. Factors affecting the future value of these resources are market demand, location of the resource, and the ability to legally access the resource.

Since 2005, the legislature has appropriated funds to DNR to increase school trust revenues from these extractable surface resources. Net revenues rose over 20 percent between the FY04-05 biennium and FY10-11 biennium. The increases between FY04-05 and FY10-11 continued during depressed market conditions, when commercial aggregate production was down 30 to 50 percent according to report by the US Dept. of Transportation.[58] As depicted in Graph 6 below, in the FY12-13 biennium aggregate leasing revenues declined as a result of less production from school trust aggregate resources even though DNR actively promoted school trust aggregate resources for lease through two public auctions.

Graph 10. Aggregate Revenues.



As surface mines are depleted, an ongoing effort is needed to maintain, much less grow, school trust revenues from this source. Furthermore, management of school trust aggregate resources becomes increasingly important as new housing construction rebounds and infrastructure capital improvements are funded.

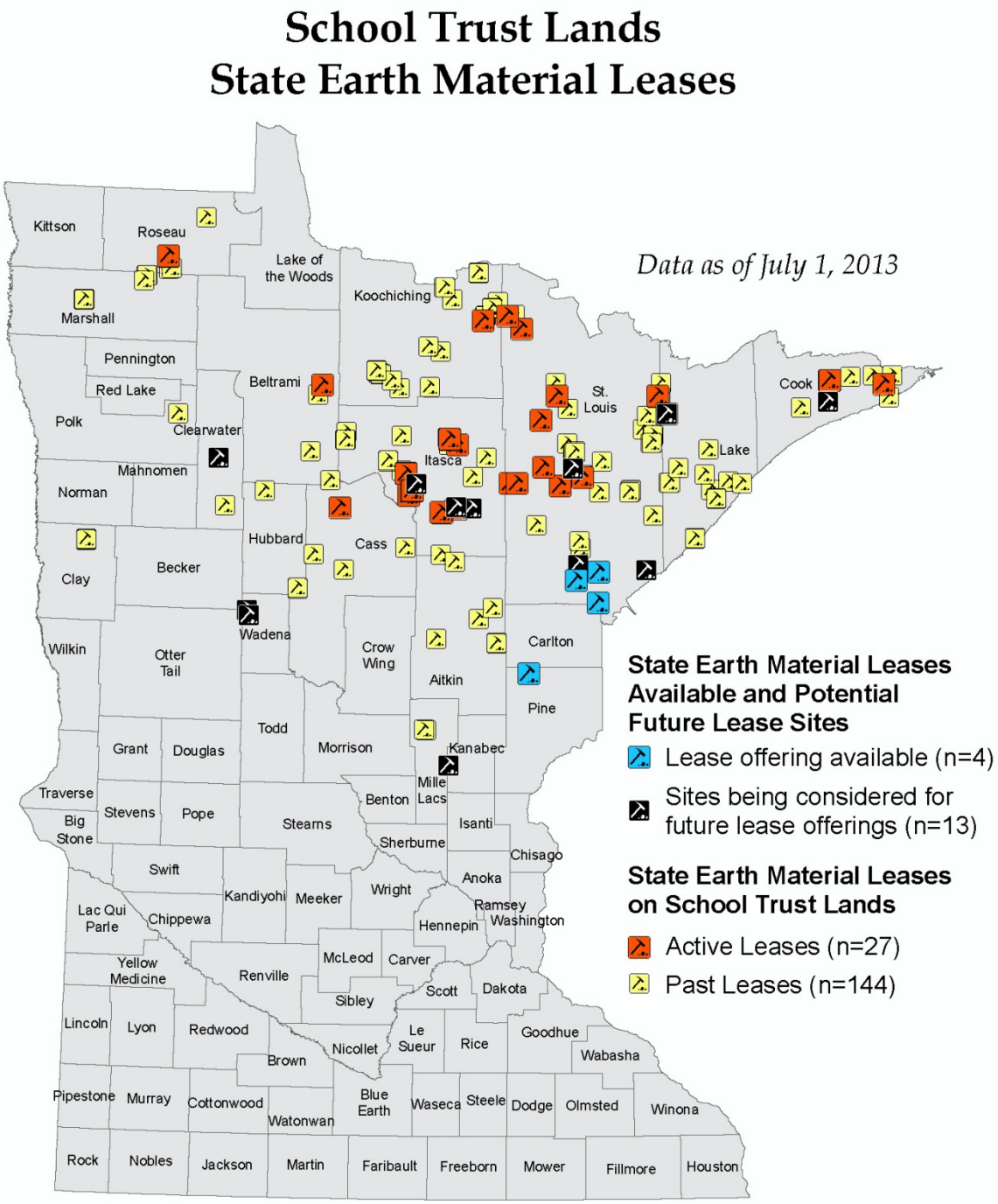
To date, aggregate potential is unknown for the majority of school trust lands. Of the 2.5 million acres of school trust lands, the DNR has remotely inventoried and mapped aggregate resources on 468,000 acres for

[58] Thomas D. Kelly and Grecia R. Matos, "Historical Statistics for Mineral and Material Commodities in the United States" (U.S. Geological Survey, data series 140, 2011), http://minerals.usgs.gov/ds/2005/140/ds140-sandc.pdf (last visited by author on June 26, 2013).

potential aggregate resources. Where these resources overlap other potential economic uses on school trust lands, aggregates may provide an additional future revenue stream. Significant aggregate resources have been identified on approximately 30,000 acres, or roughly six percent, of those school trust lands reviewed. Extrapolating across all 2.5 million acres, this suggests the school trust may have significant aggregate resources on approximately 150,000 acres. These aggregate resources have potential to produce a high rate of return per acre with local markets across the State.

The knowledge of where these resources are located can optimize the challenge of converting these land values into future revenues for the Permanent School Trust. To best manage this resource, DNR will continue to systematically inventory and identify prospective aggregate deposits on school trust lands. Doing so will avoid any possible lost revenues by making informed land use decisions. Converting this resource potential to school trust revenue will require DNR to complete its inventory through geologically assessing economic deposits, leasing deposits through a competitive bidding process, developing new mines in a logical and environmentally sound manner; and reclaiming mines to ensure other post-mining revenue generating opportunities.

Map 8. Historic and Current Leasing of School Trust surface resources.



E. Agricultural.

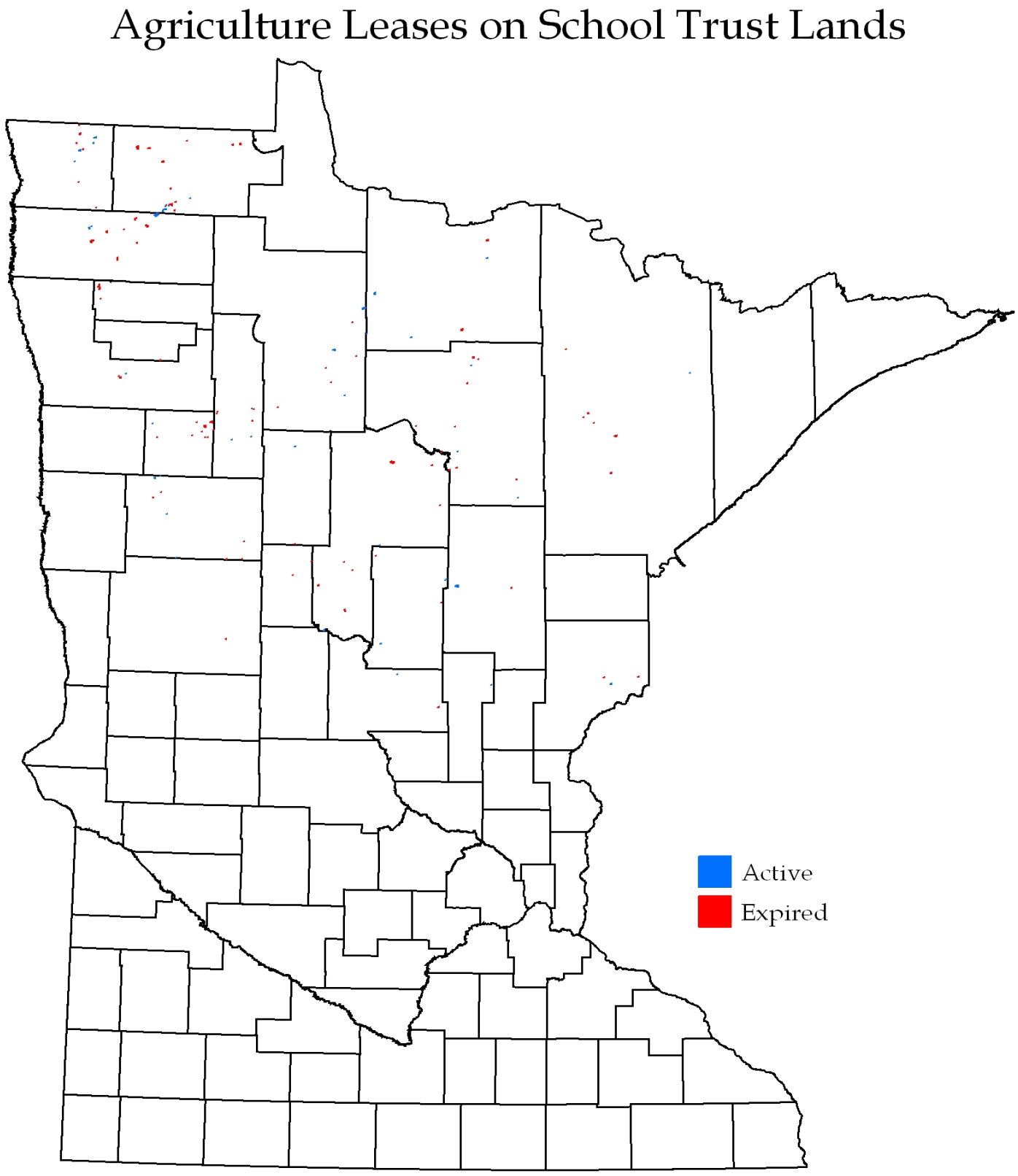
As stated previously, the policy of the State Land Office to expeditiously survey and sell Minnesota's school trust lands resulted in the sale of high-quality agricultural lands in southern Minnesota.[59] The agricultural production lands are those school trust lands with the appropriate soil characteristics to produce an agricultural crop. The DNR reviewed two agriculture databases, crop equivalency rating and crop productivity classifications, to assist in further defining school trust lands with agricultural potential. Additionally, the DNR relied on the statutory definitions of agricultural land and use in Minnesota's policy for agricultural land conservation.[60]

Based on these data sources, the inventory process determined that the school trust has limited opportunities to derive a long-term economic benefit from agricultural lands in Minnesota. The DNR nevertheless does lease school trust lands for agricultural purposes. There are 146 active agricultural leases on school trust lands, covering over 5,600 acres. Map 9 below depicts the active agricultural leases on school trust lands as well as the historical leasing of school trust lands for agricultural purposes.

The DNR has managed specific school trust parcels for revenue from agricultural leases for prairie seed cultivation, haying, and for wild rice farming. In addition, the DNR has commenced two programs throughout the state to increase revenues on school trust lands through a public grazing program and a prairie plant seed production area. A rotational grazing program on school trust lands has the potential to provide a long-term sustainable economic return to the Permanent School Fund while at the same improving habitat and augmenting privately held pasturelands to ensure the vitality of the agricultural industry in Minnesota. There is potential for revenues from leasing school trust land for prairie seed production and harvest, with added benefits that the State's core prairie areas and corridors will remain intact, and native prairie seed will be available to reintroduce native prairie grasses. The DNR's current and future management will continue to offer school trust lands for agricultural lease purposes.

[59] Samuel T. Dana, et al. *Minnesota Lands Ownership, Use and Management of Forest and Related Lands* (Washington, D.C.: American Forestry Assoc. 1962), p. 92.
[60] Minn. Stat., sec. 17.81 subd. 3 and subd. 4.

Map 9. Historic and Current Leasing of School Trust lands for Agricultural purposes.



F. Recreational Uses.

The DNR sought to understand all recreational uses on school trust lands. The DNR inventory process approached recreational lands under two general methods. The first method identified school trust lands currently generating revenue from a recreational usage and trust lands with a recreational use not producing revenue. The second approach characterized school trust lands managed for both revenue generation and recreational purposes.

Under the first approach, the inventory process identified recreational uses of school trust lands and reviewed existing real estate transaction data to determine the uses producing a revenue stream. Both the DNR and private sector entities currently lease school trust land for recreational purposes. The DNR leases thousands of acres for the state trail system, marina small craft harbor sites, and snowmobile grant-in-aid trails. Likewise, the DNR leases school trust lands to private parties for recreational purposes, including golf courses, shooting ranges, canoe portages, ski facilities, and hunting cabins. The majority of school trust lands generating revenue from existing recreational uses received highest and best use classifications of mineral estate, real estate development and productive forests. This recreational revenue could be considered as interim revenue for the use of school trust land until greater revenue can be captured from another source. As such, the DNR intends to continue to generate interim revenue for the Permanent School Fund by leasing school trust lands for these recreational purposes.

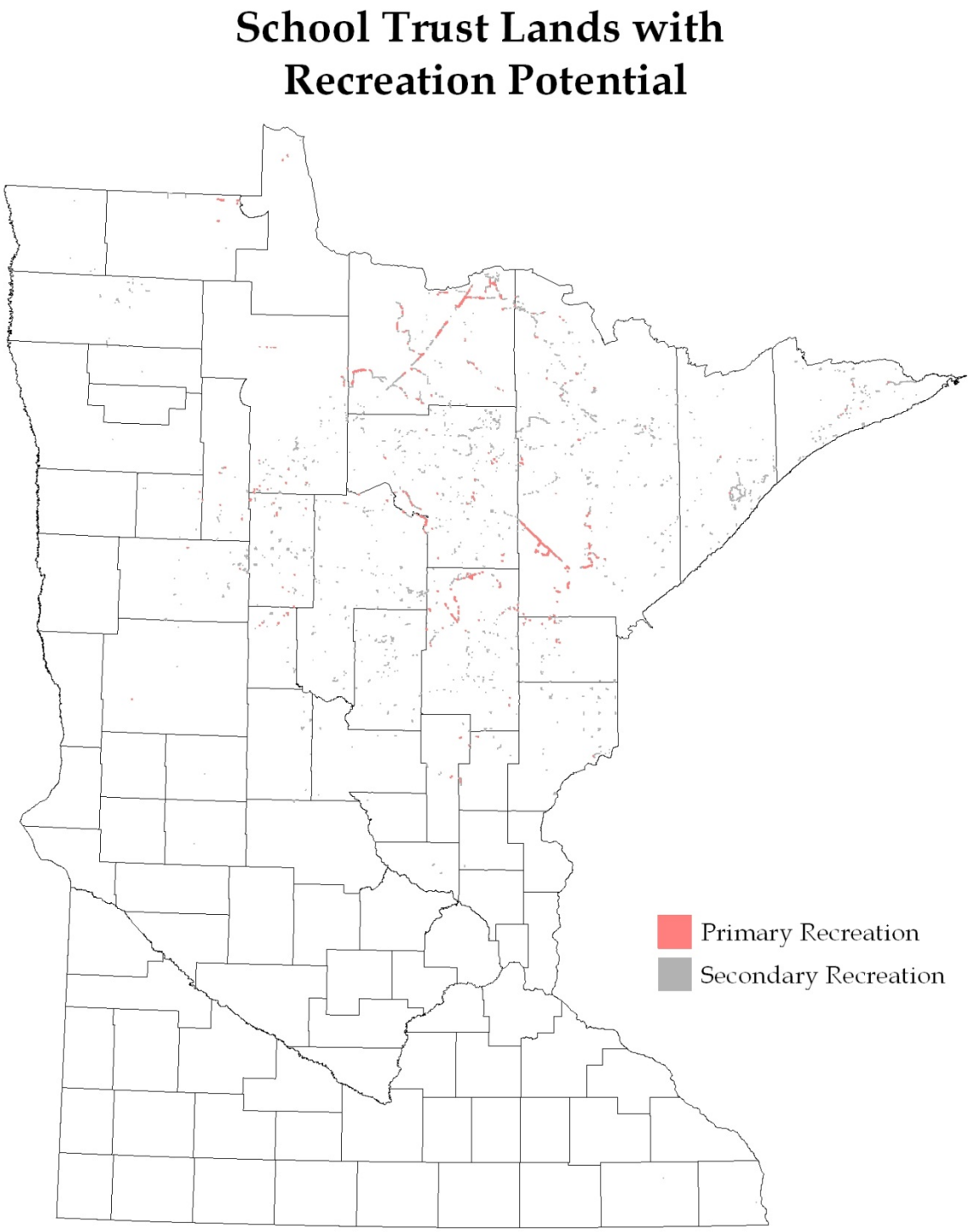
The second phase in the recreational use analysis focused on the Outdoor Recreation System lands as defined by Minnesota statutes.[61] This analysis allowed the DNR to focus on those school trust lands managed by DNR for both revenue generation and recreational purposes. All 2.5 million acres of school trust land remain open to the public for outdoor recreation. The state forest system and wildlife management areas are two excellent examples of outdoor recreation opportunities on school trust land. The DNR continues to generate revenue for the school trust through natural resource management efforts on both state forests and wildlife management areas while providing public outdoor recreation opportunities.

The inventory process identified 23,387 acres of school trust lands with highest and best use of recreational lands. Map 10 below depicts these school trust lands, and includes both revenue and non-revenue generating recreational uses.

An additional 156,236 acres of school trust land received a secondary classification where the highest and best use was identified as mineral estate, real estate development, or productive forests. For these 156,000 acres the DNR intends to manage for all interim revenue streams until realizing the potential highest and best use.

[61] Minn. Stat., sec. 86A.04.

Map 10. School Trust lands with recreational values.



VIII. NON-ECONOMIC SCHOOL TRUST LANDS

This section discusses the school trust land inventory classifications with limited or no economic potential; economically non-productive lands, and stewardship. The inventory framework permitted school trust parcels to receive both economic and non-economic uses. Over 465,000 acres of school trust lands did not receive economic highest and best use classifications, of which over 400,000 acres were conveyed to Minnesota under the 1860 Swamp Act.[62] The school trust inventory project classified 444,197 acres as non-economic, and 21,242 as stewardship lands. Map 11 below depicts these non-productive school trust lands.

A. Non-economic.

In order to determine what constituted non-economic school trust lands, DNR experts utilized the converse of the productive forest, real estate development and agricultural classifications. Doing so permitted the DNR to review the income producing capacity of school trust parcels through timber harvests, farming, or real estate sales. As such, the characteristics analyzed included stagnant tree species, wetland areas, inaccessible locations, and areas with no population densities. Non-economic lands, in essence, are those school trust parcels with no economic potential and limited natural resource or recreation values. Eighty-two percent, or roughly 362,000 acres, of these economically non-productive school trust lands are located in three northern Minnesota counties – Itasca (21,000), Koochiching (248,000), and St. Louis (93,000).

While currently there is no economic return from these school trust lands, the DNR is researching potential future models for maximizing long-term revenue. Three such potential revenue sources have been identified – alternative energy, carbon-sequestration credits, and wetland banking credits. This report previously discussed the potential for woody biomass as an alternative energy source. The vast northern Minnesota landscape, however, may hold future revenue options from carbon-sequestration markets and future development needs for wetland banking credits within watersheds[63].

Currently, North America has a single established carbon credit market, California AB32, servicing California and administered by the Air Resources Board of the California Environmental Protection Agency.[64] Additionally, six state and regional emission reduction schemes and evolving markets make up the North American regional market structure.[65] In November 2007, Minnesota joined eight Midwestern states and two Canadian provinces to participate in or observe the Midwestern Greenhouse Gas Reduction Accord (MGGRA). The final model rule for the MGGRA program was released in April 2010.[66]

Based on these regional and national efforts, the DNR has begun to investigate the viability of establishing carbon-offset credits on school trust lands. In order to determine if such a program is worthwhile, the DNR will need to understand the full-cost of converting non-economic school trust lands to a carbon-sequestration use, the limitations placed on lands where carbon credits have been sold, and the potential return-on-investment once carbon credits have been established.

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[62] The purpose of the 1860 Swamp Act was to convert lands unfit for cultivation to agricultural uses during the settlement of Minnesota. See *Federal Land Grants*, pg. 115. M.N. Orfield. 1915.

[63] *See* Minn. Stat., sec. 103G.222.

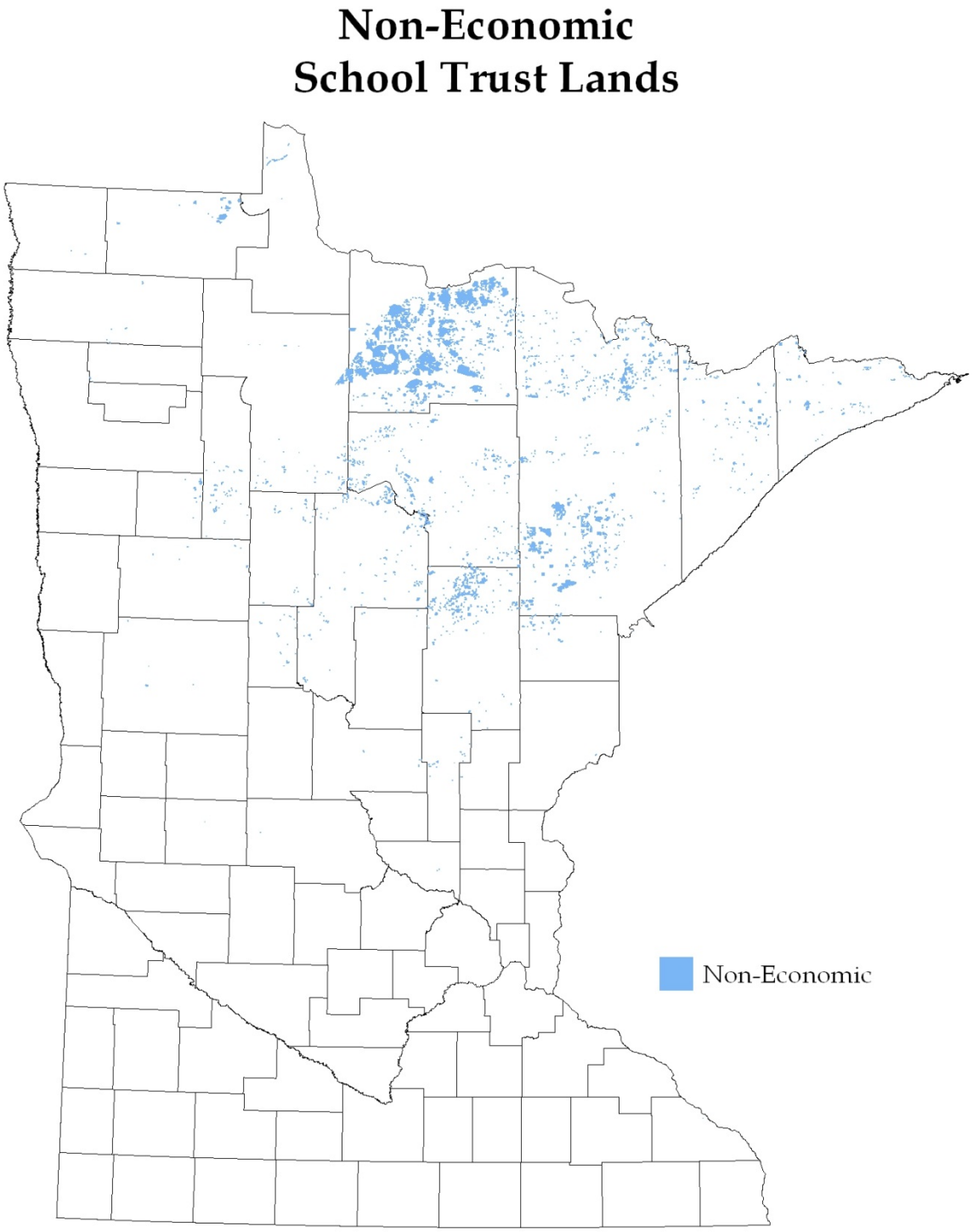
[64] The Global Warming Solutions Act of 2006, Cal. Health and Safety Code, Chapter 38500, et seq. established emissions standards through 2050 and a timetable to cap statewide emissions with 2020 goals and 2050 goals. It is the first state-wide program with caps for all major industries and which includes non-compliance penalties.

[65] Oregon Standard, Regional Greenhouse Gas Initiative (RGGI), Western Climate Initiative (WCI), California AB32, Midwestern Regional Greenhouse Gas Reduction Program (MRP). http://www.ecosystemmarketplace.com (last visited by author November 30, 2013).

[66] http://www.c2es.org/us-states-regions/regional-climate-initiatives/mggra (last visited by author November 30, 2013).

A lack of wetland banking credits in northeastern Minnesota may inhibit future development within the region. There are 2.2 million acres of school trust land within the region. However, establishing a wetland bank for revenue generating purposes can be a risky proposition requiring significant investment to reestablish functioning wetlands. These are investment risks that the school trust fund is not able to assume under its current constitutional and statutory mandates. However, the DNR is currently exploring a potential land exchange with a national non-profit and a private investment firm that are seeking to develop a wetland bank project. The partnership with private investors would shield the school trust from the speculative risk in wetland banking, while allowing it to realign and consolidate its land base, exchanging economically unproductive lands for productive forest lands. Although the Permanent School Fund would not see the potential rewards that may accrue to the private investors if the proposed wetland bank is successful, it also would not be assuming the considerable investment risk undertaken by those investors. The DNR will continue to pursue future opportunities to ensure that the Permanent School Fund realizes maximum long-term revenues from parcels once thought to be non-economic school trust lands.

Map 11. Non-economic school trust lands.



B. Stewardship.

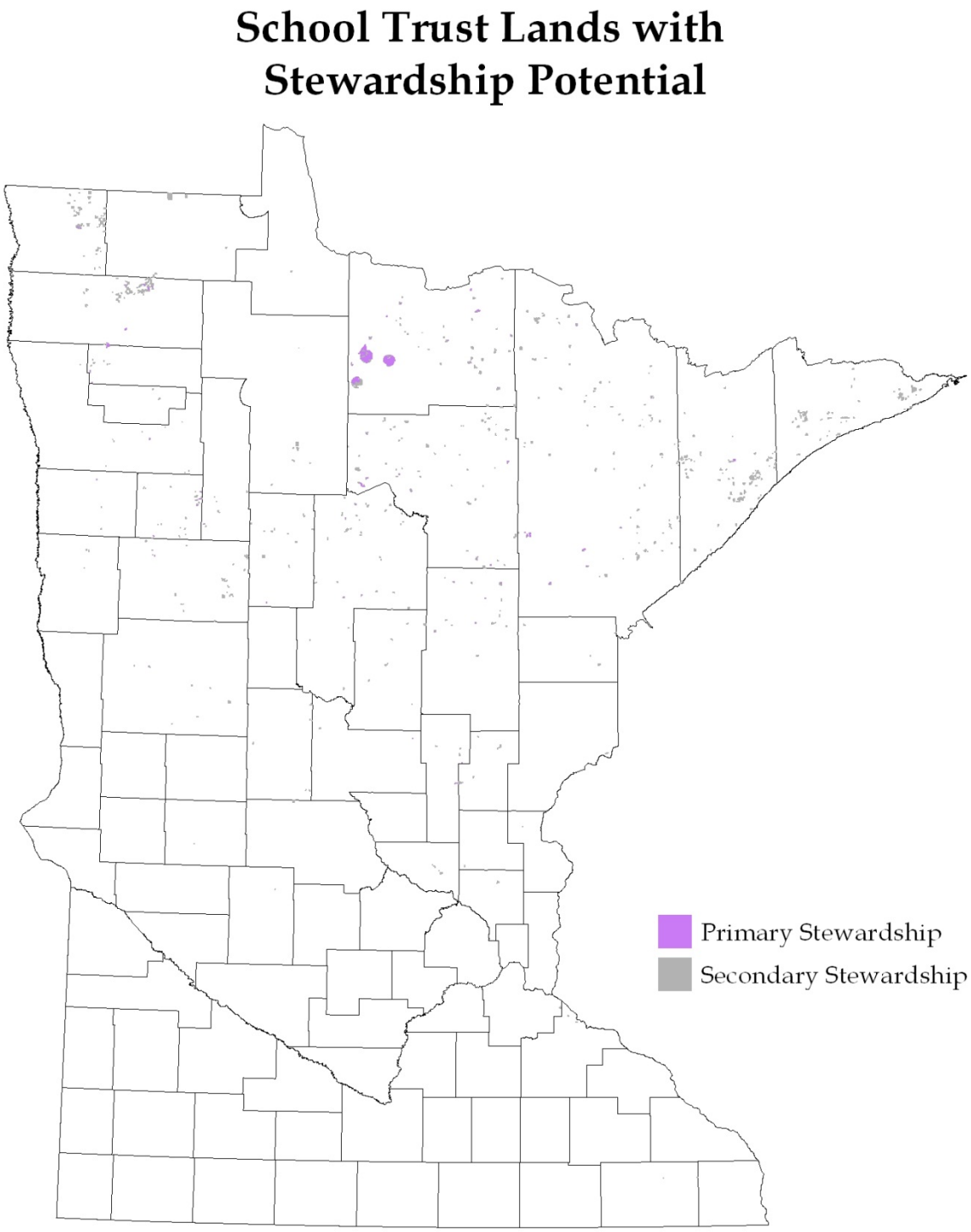
The DNR experts developing the stewardship classification sought to capture the highest quality biodiversity features, both fauna and flora, located on Minnesota's school trust lands. In particular, the stewardship classification relied on existing DNR datasets from the Minnesota Biological Survey, calcareous fen sites, Minnesota Prairie Conservation Plan core areas and corridors, Old Growth Forest designations, and rare species. Additionally, the stewardship experts reviewed and applied wildlife habitat and sensitive shoreline models to reach preliminary recommendations on protection areas. The school trust inventory process identified 21,242 acres with a highest and best use as stewardship. Map 12 below depicts these stewardship school trust lands.

As is the case with non-economic lands, the school trust lands receiving a stewardship classification produce no revenue for the Permanent School Fund. These school trust lands with stewardship designations, however, do provide ecosystem benefits to the State. In particular, stewardship lands and their surrounding ecosystems play a major role in securing our State's fundamental natural resources – water, food and energy supplies.[67] Determining a fair market value for the societal benefits provided by the ecosystems on school trust lands is difficult, at best. Equally important, imputing a market value would by no means guarantee a willing buyer prepared to pay for these ecosystem services, which markets generally treat as positive externalities that accrue to the common good free of charge. At the same time, it is important to recognize the very real societal expectations that large public and private landowners will manage their lands in a manner that preserves certain stewardship values.

Given these considerations, the DNR has researched employing new software developed by the Natural Capital Project[68] called InVEST – Integrated Valuation of Environmental Services and Tradeoffs. InVEST uses technology and modeling to inform and improve natural resource management and investment decisions, and currently includes sixteen models suited to terrestrial, freshwater and marine ecosystems.[69] Utilizing such a tool may assist DNR in future management decisions related to where Minnesota will be best served by retaining ecosystem services on school trust lands. The DNR will continue with this research and the development of policy models that can be used to protect these natural resources. By employing a management structure that considers and accounts for these vital ecosystems, the DNR will continue to meet its fiduciary obligation to secure long-term revenue opportunities on school trust lands balanced with sound natural resource management and conservation principles[70] in an effort to ensure the security of these natural resources for future generations of Minnesotans.

[67] *Integrating ecosystem-service tradeoffs into land-use decisions*. Goldstein, Joshua H., et al. available at www.pnas.org/cgi/doi/10.1073/pnas.1201040109. February 17, 2012 (last visited by author November 5, 2013).
[68] Natural Capital Project is a collaborative effort between Woods Institute for the Environment at Stanford University, Institute on the Environment at the University of Minnesota, The Nature Conservancy, and the World Wildlife Fund. www.naturalcapitalproject.org (last visited by author November 30, 2013).
[69] www.naturalcaptialproject.org (last visited by author November 30, 2013).
[70] Minn. Stat. secs. 127A.31; 84.027 subd. 18(a)(4).

Map 12. School Trust lands with stewardship resources.



IX. POLICY IMPACTS TO SCHOOL TRUST REVENUE

As part of the inventory required by Minnesota Statutes, section 84.027, subd. 18, the DNR identified policies and designations that may prohibit long-term economic returns. The DNR also identified policies and designations that may restrict, but not prohibit, future revenue generation from school trust lands. The policies and designations described below are categorized under two general groups – natural resource or recreational. An additional section details specific statutory prohibitions or limitations on revenue generation. The DNR's plans to compensate the Permanent School Fund for encumbering school trust lands are set out in Section X.

A. Natural Resource Policies and Designations.

Natural resource values are those stewardship values described previously (see pg. 60) that comprise lands with unique or rare values and features. In no particular order, the DNR identified the following policies and designations as potentially prohibiting long-term revenue generation: candidate research natural areas, native prairie conservation sites, natural area registry sites, and old growth forest complexes.

1. CANDIDATE RESEARCH NATURAL AREAS

The DNR, in cooperation with the USDA Forest Service, reserved 10,200 acres of school trust lands as future candidate research natural areas. The candidate research natural areas are adjacent to existing USDA Forest Service Research Natural Areas in Chippewa and Superior National forests. The USDA Forest Service manages Research Natural Areas for their natural features and to maintain natural ecosystem processes.[71] The DNR adopted identical management approaches for the school trust land candidate research natural areas in order to provide a buffer to the USDA Forest Service Research Natural Areas. Doing so removed these 10,200 acres from DNR subsection forest management plans and annual productive forest stand exam lists. The DNR will address the compensation for these set-asides in its subsection forest resource management plans.

2. NATIVE PRAIRIE CONSERVATION SITES

The state's recent Minnesota Prairie Conservation Plan[72] (developed by a partnership including the DNR) identifies core areas, corridors, and corridor complexes in western Minnesota's core prairie areas. The Prairie Conservation Plan impacts approximately 7,000 acres of school trust land. The Prairie Conservation Plan's stated objectives are to permanently protect, restore and enhance prairies, grasslands and wetland habitats and incorporate a working lands conservation model to promote a symbiotic relationship between conservation and agriculture. It is unknown at this time if these objectives will prohibit revenue generation, restrict revenue generation, or provide new revenue sources from otherwise non-income producing school trust lands.

3. NATURAL AREA REGISTRY SITES

The DNR uses a natural area registry agreement both internally and with other governmental entities to memorialize understandings regarding future management. The agreements, while non-binding, identify and explain the significance of the site, propose management prescriptions, and allow the parties flexibility in modifying management plans. The DNR has natural area registry agreements on approximately 1,040 acres of school trust lands. A prohibition against revenue generation on these school trust lands is not a foregone conclusion since these natural area registry agreements are non-binding.

4. OLD GROWTH FOREST COMPLEXES

The DNR's work to establish old growth forest complexes arose during the Minnesota forest-wide generic environmental impact statement (GEIS) in 1994 that established strategies to protect Minnesota's old growth forests. Three strategies to protect old growth were identified: inventory and reserve old growth; manage 20 percent of the Minnesota's forests on an extended rotation forest model; and create corridors that link old

[71] http://www.fs.fed.us/rmrs/research-natural-areas (last visited by author November 4, 2013).
[72] http://files.dnr.state.mn.us/eco/mcbs/mn_prairie_conservation_plan.pdf (last visited by author November 4, 2013).

growth complexes with other natural areas. The trust inventory identified over 42,500 acres of old growth forest complexes on school trust land, which includes special management zones surrounding core old growth stands. Of this total, 17,800 acres is actual designated old growth with the 24,700 acre balance consisting of special management buffer zones and undesignated timber stands.

B. Recreational Policies and Designations.

Recreation policies and designations are those uses that help connect Minnesota's citizens, and visitors to the state, with opportunities to recreate and enjoy Minnesota's outdoors. All school trust lands are open for public recreation, and the Permanent School Fund receives revenue from some these recreational uses, including state forest campgrounds, state trails, and small craft harbors. At the same time, there are some recreational policies and designations that currently prohibit, or restrict, long-term revenue generation for the Permanent School Fund. These include day use areas, state parks, state recreation areas, and public water access sites.

1. DAY-USE AREAS

Many day-use areas are situated on Minnesota's lakes and rivers. They provide boating access, swimming and other forms of outdoor recreation. Most day-use areas provide amenities like picnic tables, drinking water, garbage cans and toilets. An example of such a day-use area is the facility located on Gull Lake known as Pelican Beach, which DNR field staff indicated receives considerable traffic during the summer months on a very popular water body in the Brainerd-lakes area of Minnesota.

2. STATE PARKS

"State Park use shall be primarily for aesthetic, cultural, and educational purposes, and shall not be designed to accommodate all forms or unlimited volumes of recreational use."[73] The DNR identified school trust lands within the state park system and removed the school trust land status from most of this land through a series of land exchanges and condemnation actions pursuant to Minnesota Statutes, section 92.121. Currently, a few state parks still contain school trust lands within their respective legislative boundaries. The state parks with remaining school trust lands, however, provide revenue to the Permanent School Fund and permit future revenue generation through natural resource management. One such example is Hill Annex Mine State Park. The designation of Hill Annex Mine State Park permits future revenue generation through mineral extraction on the school trust lands within the park boundary. Currently, the school trust receives mineral lease revenue from residue leases from the Hill Annex stockpiles and mineral leases within the park boundary. In addition, the DNR compensates the Permanent School Fund through an annual lease payment for the park itself.

3. STATE RECREATION AREAS

Minnesota's state recreation areas offer a variety of outdoor recreation opportunities and must enhance and promote the use and enjoyment of the natural recreational resources of the area.[74] Cuyuna Country State Recreation Area has school trust resources, in the form of lean ore stockpiles, with the potential to generate future revenues for the Permanent School Fund. Similar to Hill Annex Mine State Park, the law establishing the recreation area authorizes future extraction of the school trust resources from Cuyuna Country State Recreation Area.

4. WATER ACCESS SITES

Public water access sites give the public the opportunity to access and enjoy the state's lakes and rivers. The Minnesota legislature created the public water access program in 1947 and included it in the 1975 Outdoor Recreation Act to provide and maintain a statewide system to ensure public access to high-quality recreation opportunities and to permit public use where access is necessary.[75] The DNR administers roughly 1,600 water

[73] Minn. Stat., sec. 86A.05 subd. 2(c).
[74] Minn. Stat., sec. 86A.05 subd. 3(c).
[75] Minn. Stat., sec. 86A.05 subd. 9.

access sites on Minnesota waters, with 207 of these water access sites located on school trust land. The 207 school trust public water access sites encumber approximately 41,000 lineal front feet on Minnesota water bodies, with the entire water access site facilities (access routes, parking lots, and boat launch) impacting approximately 1,100 acres of school trust land.

C. Statutory Prohibitions and Limitations.

This section details specific statutory provisions that either prohibit or restrict the DNR's ability to maximize long-term revenue generation on school trust lands.

1. Boundary Waters Canoe Area Wilderness

The Minnesota legislature passed legislation that mirrored federal wilderness area restrictions related to resource management within the BWCAW.[76] Approximately 86,000 acres of school trust lands are within the BWCAW and thus incapable of generating revenue. The DNR and U.S. Forest Service Superior National Forest are actively engaged in a land exchange project that would replace up to 30,000 acres school trust lands in the BWCAW with equivalent land currently in federal ownership that could produce future revenue for the trust. The DNR and USFS are also looking at sales and additional exchanges to address the remaining trust acreage in the BWCAW.

2. Peatland Protection Act

In 1991, approximately 51,000 acres of school trust lands were statutorily designated as Peatland Scientific and Natural Areas.[77] The Peatland Protection Act clearly restricts management of the surface and mineral estate for revenue generating purposes. These 51,000 acres of make up the largest block of school trust lands prohibited from revenue generation. Minnesota Statutes, section 84.035, subd. 9 provides the direction that the commissioner shall acquire the surface interests, including the peat resources, in these school trust lands by exchange or eminent domain. To-date, funding has not been provided for such acquisition.

3. Other Statutory Policies

In general, school trust management must comply with Minnesota laws and regulations relating to land use, zoning, wetland protection, shore land zoning and endangered species. Each of these laws and regulations impacts revenue potential from school trust land in order to conserve or preserve important natural resources. In addition to these limitations that apply broadly to the trust and other landowners, a number of Minnesota statutes more specifically limit the amount of revenue that can be generated from school trust lands.

Minnesota Statutes, section 84.415 and Minnesota Rules, part 6135 define and restrict how the DNR can calculate the crossing fee for utility licenses and permits. Effective July 1, 2014, no fees will be charged for water and land utility licenses within existing public road right-of-ways. This will reduce revenue to the Permanent School Fund.

Minnesota Statutes, section 84.63 sets forth the types of easements the DNR has an ability to grant across school trust lands and allows the DNR to establish the easement crossing fee at current market value. Effective July 1, 2014, no fees will be charged for trail easements to a county or joint county regional railroad authority.

Minnesota Statutes, section 90.121 establishes that DNR offer intermediate volume timber sales at public auction, sets a maximum number of employees for bidders at these intermediate timber auctions and restricts the total number of timber permits any one bidder can obtain at a particular auction.

[76] Minn. Stat., sec. 84.523.
[77] Minn. Stat., sec. 84.035.

Minnesota Statutes, section 92.03, subd. 1 limits the amount of school trust land (10,000 acres) the DNR can sell at public auction annually.

Minnesota Statutes, section 92.46 and Laws of Minnesota 1997, Chapter 216, Section 151; Laws of Minnesota 2003, First Special Session, Chapter 9, Article 1, Section 52; Laws of Minnesota 2004, Chapter 262, Article 2, Section 9 prohibit the DNR from issuing leases on school trust lands bordering public waters for cottage or camp purposes, except for three cabin sites on Lake Superior's Horseshoe Bay in Cook County. These laws place obligations and restrictions on the DNR's management of school trust lands. On most trust lands, restriction takes the form of a prohibition on leasing. In the case of the Horseshoe Bay sites, the trust is limited by requiring that the property be leased, setting the rental rate at two percent of appraised value as of 2003 for the life of the leases, allowing transfers to two persons within the second degree of kindred, setting the term of the lease at the lifetime of the lessee or transferee, and requiring the State to purchase the personal property improvements upon termination with revenues received as lease payments. The Permanent School Fund receives fifty percent of the Horseshoe Bay lease payments, with the remaining fifty percent retained in a separate account for the future buyout.

Minnesota Statutes, section 92.461 prohibits the sale of state-owned land with commercial peat deposits, including school trust lands.

Laws of Minnesota 2009, Chapter 176, Article 3, Section 12 required the DNR to enter into a state land lease on school trust lands with Mountain Iron Economic Development Authority for installation of up to four wind turbines and access roads.

Laws of Minnesota 2009, Chapter 176, Article 3, Section 13 required the DNR to grant easements across school trust land and university trust land to private landowners on Bass Bay on the north shore of Lake Vermilion to access Mud Creek Road (County Highway 408).

X. SCHOOL TRUST COMPENSATION PLANS

When the above-described policies and designations prohibit (as opposed to restrict) long-term revenue generation, Minnesota law requires that the DNR establish in this report a plan to compensate the Permanent School Fund through purchase, land exchange, or a plan to manage for long-term revenue generation. Compensation plans are not required for statutory prohibitions on revenue generation; but compensation costs are estimated for peatlands, the largest category of statutorily imposed prohibitions on revenue generation.

Each of the compensation plans described here would require funding from the Minnesota legislature to execute. The DNR's preliminary analysis estimates that $50 to $100 million would be needed to compensate the Permanent School Fund under these plans. This amount includes an estimated $25.5 million to compensate for the statutorily designated Peatland Scientific and Natural Areas. *This amount does not include future compensation that may be necessary for future policies or designations to preserve natural resource or recreation values that prohibit long-term school trust revenue generation.* The preliminary estimate was developed by applying fair market real estate values to the school trust acreage affected by a policy or designation. Individual compensation plans relating to each particular policy or designation are set out below along with a corresponding estimated compensation amount. The DNR will initiate a specific valuation project for each school trust parcel under a particular prohibitive policy or designation upon receipt of the necessary legislative funding to complete compensation to the Permanent School Fund.

A. Natural Resource Policies and Designations.

The DNR proposes to employ all three compensation tools – purchase, exchange and management changes – in order to compensate the Permanent School Fund for the preservation of natural resource values.

1. PURCHASE.

School Trust lands may only be sold at public auction.[78] However, the Minnesota Attorney General has offered an opinion that, by exercising its eminent domain powers, the State could meet the public sale requirement of the Minnesota Constitution.[79] Under this approach, The DNR would utilize its authority[80] to initiate site specific condemnation actions to compensate the Permanent School Fund for the use of the surface.[81] Each site would have a direct connection to a distinct natural resource value. The intent of site specific condemnations is to preserve the natural resource feature for future generations by transferring the land from the school trust to DNR ownership.

A second purchase option is available that does not require the purchase of school trust lands through eminent domain proceedings. Under this approach, the DNR would compensate the Permanent School Fund for the natural resources (e.g., timber) that have been prohibited from revenue generation. This option would preserve the unique natural resource while maintaining a unified school trust surface and mineral estate for future revenue generation.

a) Old Growth Forest Complexes

As described previously, the DNR identified 17,800 acres of school trust land with Old Growth Forest designations. The DNR proposes to initiate an eminent domain action to condemn the Permanent School Fund's interest in Old Growth Forest complexes located on school trust lands that were not inventoried with a highest and best use as mineral estate lands. The DNR estimates that it would condemn 500 acres of school

[78] MINN. CONST. ART. 11, SEC. 8.
[79] Opinion of Atty. Gen. 464-G; 700-D-28; January 17, 1938.
[80] Minn. Stat., sec. 84.027, subd. 9..
[81] Minnesota law, however, requires the state to reserve the school trust mineral rights. Minn. Stat., sec. 93.01

trust land to preserve Old Growth Forest complexes under this plan. The value of the school trust lands would be determined during the condemnation action as set forth in Minnesota law,[82] and consider the impact on value of the remainder parcel. The estimated compensation costs, including transaction costs and legal fees, totals $550,000.

The remaining 17,300 acres of Old Growth Forest complexes were classified with a highest and best use as mineral estate lands. The DNR proposes to undertake an economic analysis to determine the net present value of the forest products resource within the old growth forest complexes. DNR's resource assessment experts would determine the volume of forest products in each specific old growth complex based on cover type and density. The net present value then could be determined based on current per cord values with a discounted rate. The DNR would engage its forest economist in order to establish the per cord value based on the tree species in each old growth complex. No value estimate is currently available as DNR has not initiated this economic analysis. Once the net present value is established and funding received, the DNR would remit payment to the Permanent School Fund in an amount equal to the net present value. Additionally, the DNR would schedule periodic reviews of the old growth characteristics for each complex as well as the net present value based on the economic rotation age of the tree species within each old growth complex.

b) Peatland Scientific and Natural Areas

Unless specifically directed to do so by the legislature, the DNR does not plan to exercise its eminent domain powers to condemn the Permanent School Fund's interest in the statutorily created Peatland Scientific and Natural Areas.[83] The legislature could authorize a special appropriation to compensate the Permanent School Fund for this prohibition. Doing so would preserve 51,000 acres of peatland complexes on school trust lands. The DNR has estimated the fair market value of the Peatland Scientific and Natural Areas at $25.5 million.

2. EXCHANGE

School trust lands may be exchanged for lands of substantially similar value.[84] The DNR intends to utilize the land exchange process to reposition the location of school trust lands into areas with revenue potential while preserving natural resource features. Since land exchanges are based on a value for value transaction, there is no cost for the fair market value of the school trust lands. However, the DNR will incur transactional costs to complete land exchanges, including professional services for appraisals, surveys, title examination, and real estate experts. Since each land exchange is an arms-length transaction, the costs vary based on the scope of each project. DNR's capacity to execute these exchanges will be limited by both availability of funding for transactional costs and willing parties with land attractive to the trust.

The DNR has initiated a land exchange project in the northern metro area that seeks to consolidate school trust parcels. This exchange would relocate school trust lands to fertile pine plantation grounds in Sand Dunes State Forest while preserving natural resources with limited revenue potential. The natural resources in this case have been identified by the Minnesota Biological Survey as areas of high and outstanding biodiversity. In particular, the Sandhill Crane Natural Area contains rare plant species and is known habitat for Blanding's turtles.[85] The exchange also would reposition school trust lands in the Sand Dunes State Forest to better manage the school trust lands for revenue generation under the Anoka Sand Plain Subsection Forest Resource Management Plan.

A second land exchange proposal plans to realign school trust parcels in southern Minnesota and northwestern Minnesota. The proposal would have the school trust exchange parcels with high natural resource values for

[82] *See* Minn. Stat., Chap. 117.
[83] Minn. Stat., sec. 84.036
[84] Minn. Stat., sec. 94.343
[85] http://www.dnr.state.mn.us/eco/mcbs/maps.html (last visited by author November 30, 2013).

parcels with a known aggregate resource and known customer base. The DNR performed an aggregate resource assessment in 2004 that estimated two million cubic yards of material in these parcels.[86] Upon completion of the land exchange, the DNR would manage the aggregate resource for the benefit of the Permanent School Fund by entering into long-term aggregate extraction leases.

The DNR will use its strategic land asset management framework to identify other potential land exchange projects that could preserve natural resource values while furthering the interests of the trust in long-term revenue generation. Natural Area Registry sites are a prime candidate for inclusion in these strategic land asset plans due to these agreements being non-binding.

3. MODIFICATION OF NATURAL RESOURCE MANAGEMENT PLANS

The commissioner of natural resources has the authority and responsibility to manage the school trust lands in an efficient manner by reducing management expenditures, maximizing long-term economic returns, and optimizing short-term and long-term revenues for the Permanent School Fund.[87] The DNR's management strategies also must maintain sound natural resource and management principles.[88] As such, the DNR proposes to modify a number of its management strategies to secure maximum long-term economic returns. These modifications should not require compensation because DNR will give preference to economic returns on school trust land when irresolvable conflicts arise.[89] Pursuant to Minnesota law and DNR Operational Order 121, compensation to the school trust is required when management decisions prohibit or restrict revenue. The DNR acknowledges that some management practices may conflict with its fiduciary responsibility to the school trust. DNR will review and modify its decision-making processes to ensure that it meets its fiduciary obligations, complies with other relevant Minnesota law, and compensates the trust if necessary.

a) Subsection Forest Resource Management Plans

The DNR reviews and updates Subsection Forest Resource Management Plans (SFRMP) on a ten-year cycle, with interim modeling at five year intervals to revise timber stand exam lists. Many subsection plans are due for review in 2015 and 2016. The SFRMPs are a plan for the management of productive forest lands by either DNR Division of Forestry or DNR Division of Fish and Wildlife. The SFRMPs focus on forest composition goals and vegetation management, create multi-year stand exam lists, and estimate forest management access needs. The DNR additionally can further research adaptive management strategies to address potential climate change concerns, and how those changes may impact Minnesota's forest resources.

During the review process of each SFRMP, the DNR will have an ability to apply the school trust inventory highest and best use classifications to develop and update the SFRMP. This process will permit the DNR to analyze the long-term economic implications of particular management prescriptions on school trust lands. The process also will afford the DNR a second opportunity to identify and preserve those natural resource or recreation values of significant value. In particular, the DNR will be able to address a number of policies that affect school trust revenues from productive forest lands, including Candidate Research Natural Areas, High Conservation Value Forests, Ecologically Important Lowland Conifers, and the habitat needs for numerous threatened, rare and endangered species. The SFRMP review and update process will assist DNR in further defining where and when the school trust needs to be compensated, in contrast to those situations where resource protection is required by law (e.g., endangered species) or the present management prescription may serve the long-term best interest of the school trust (e.g., forest certification requirements).

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[86] *Aggregate Resource Evaluation, Project 334-20.* Glenn D. Melchert, Senior Geologist, Minnesota Department of Natural Resources, August 2004.
[87] Minn. Stat., sec. 84.027, subd. 18(a)(1-3;5).
[88] Minn. Stat., sec. 84.027, subd. 18(a)(4).
[89] Minn. Stat., sec. 84.027, subd. 18(b).

b) Minnesota Prairie Conservation Plan

The DNR along with non-profit conservation partners developed a twenty-five year strategic plan (the Minnesota Prairie Conservation Plan) regarding Minnesota's 204,000 acres of remnant native prairie. The plan sets forth three approaches to conserve this natural resource through permanent protection, restoration activities and enhancement through active management. Approximately 7,000 acres of school trust lands intersect with the Plan's core native prairie areas and native prairie corridors. The modification to DNR management of these school trust acres is detailed in the Prairie Conservation Plan as enhanced management strategies.

The new management approach on school trust lands would entail prescribed burning, conservation grazing, and haying to enhance the native prairie resource. An enhanced resource serves the trust's long-term interests in three ways. Short-term revenue could be generated through agricultural leasing for grazing and haying. Short-term and long-term revenue potential may be enhanced by leasing for prairie seed harvest and sale that utilize prescribed burning as a management tool. Retaining the school trust lands also provides a base for long-term revenue as the value of raw land continues to rise.

B. Recreation Policies and Designations.

The DNR's current plan to compensate the Permanent School Fund for recreation values relies solely on modifications to current DNR management. One main change would be to ensure that DNR compensates the school trust for recreational uses through annual payments for existing uses. Doing so would maintain outdoor recreation opportunities on school trust lands, and provide the school trust with annual revenues. The DNR would consider modifying its compensation plan for recreation opportunities to include purchase or exchange if modifications to management plans do not provide stable long-term revenue for the Permanent School Fund.

1. FOREST CAMPGROUNDS

The DNR manages forest campgrounds on school trust land, depositing 100 percent of forest campground revenues into the Permanent School Fund. That is, forest campground operating expenses are not certifiable costs under Minnesota Statutes, section 16A.125 (see pg. 18). The average revenue generated from forest campgrounds is $140,000 annually. The DNR management costs, however, have averaged $200,000 annually. In order address this shortfall, the DNR intends to investigate the viability of entering into a service contract with a private party for future operation of forest campgrounds.[90]

2. STATE TRAILS

Minnesota's state trail system has been recognized nationally, and provides a variety of uses across DNR acquired lands as well as school trust lands. The DNR currently reimburses the Permanent School Fund for the majority of state trails situated on school trust lands. The payments are in the form of an annual lease fee for the trail footprint or crossing of school trust lands. However, a small number of state trails involve school trust lands that were not leased by the DNR. The DNR plans to continue to allow state trails across these school trust lands, but will also take steps to ensure the trust is appropriately compensated. Additionally, the DNR plans to seek alternative revenue options through trail recreation opportunities on otherwise non-revenue generating lands. The DNR is studying the short-term and long-term revenue potential from a trail proposal in Grand Rapids, Minnesota. The proposal would lease an iron ore stockpile on school trust land for mountain bike trail development. The lease proposal has the potential to produce interim short-term revenues for the Permanent School Fund while maintaining the long-term revenue options from future mining of the stockpile for aggregate or lean ore.

[90] Minn. Stat., sec. 16C.09.

3. WATER ACCESS SITES

By constructing public water access sites on school trust lands bordering Minnesota waters, the DNR provides outdoor recreation opportunities to Minnesotans and visitors alike. The structures, however, limit the ability of the school trust to generate revenue from valuable lakeshore. In order to maintain these accesses, the DNR proposes to develop a master lease agreement for the 207 public water access sites located on school trust land. The DNR proposes to lease the 207 public water access sites for a twenty-one year lease term as permitted by Minnesota law.[91] The DNR would remit an annual lease payment for the 207 water access sites at a lease rate calculated as a percentage of the fair market value. This lease model demonstrates the DNR's commitment to generate short-term revenues while maintaining the long-term revenue options through future increases in land values.

[91] Minn. Stat., sec. 92.50 subd. (c).

XI. SCHOOL TRUST INVENTORY CONCLUSIONS

Sections VI to VIII described in detail the highest and best use classifications of the 2.5 million acres of school trust lands. The school trust inventory process also distinguished school trust lands with revenue potential from historically non-productive lands based on the resources present. The 444,000 acres of historically non-productive school trust lands present limited opportunities for future revenue. Regardless of these limitations, as trustee, the DNR is researching and analyzing the potential for future economic uses of these lands. Three revenue options that hold promise on the historically non-productive lands are renewable energy, carbon sequestration, and wetland banking.

The school trust inventory also presented the DNR with a systematic way to identify and document policies, designations, and statutory provisions that prohibit and restrict long-term revenue capabilities on school trust lands. A number of policy and designation-related prohibitions would require the DNR to acquire the school trust lands if the policies and designations are to be maintained. These acquisitions would need to be accomplished through purchase, which as described previously involves eminent domain proceedings. The DNR also will utilize land exchanges to reposition trust lands to enhance future revenues opportunities.

Table 14. Summary of Compensation Needs by Use Classification

Classification	Category	Acres	Proposed Compensation Approach
Mineral Estate	Revenue Generating	1,021,823	n/a
Real Estate	Revenue Generating	208,199	n/a
Productive Forest	Revenue Generating	824,636	n/a
Surface Soil Resources	Revenue Generating	3,232	n/a
Agriculture	Revenue Generating	40	n/a
Non-Productive	Future Revenue Potential	444,197	n/a
Stewardship	Candidate Research Natural Areas (cRNAs)	10,200	Modify management
	Native Prairie Conservation Sites	7,000	None – possibility to generate new revenue
	Natural Area Registry Sites	1,040	Condemn or Exchange
	Old Growth Forest Complexes	17,800	Compensation by condemnation on 500 acres, remainder net present timber value payment
Recreational	Day-use Areas (Pelican Beach on E Gull Lake)	40	Compensation due – Condemn or exchange
	State Parks (Hill Annex)	640	Lease payment made
	Recreation Areas (Cuyuna Country)	40	None-open to future mineral extraction
	State Forest Campgrounds		None – camping fees collected go directly to PSF
	State Trails		Most under lease, lease remainder
	Water Access Sites	1,600	Compensation via lease
Other	BWCAW	86,000	None – State law
	Peatland SNA	51,000	None – State law

Finally, consistent with its Operational Order 121, the DNR's school trust inventory involved analyzing the department's management strategies to determine if current management practices maximize long-term revenue generation. The DNR will continue to analyze and adapt its management strategies to fulfill its fiduciary obligation to the Permanent School Fund.

The next steps for the DNR's future management of school trust lands, when policies prohibit or restrict long-term revenue generation, are three-fold. First, the DNR will continue to seek appropriations to compensate the Permanent School Fund consistent with Minnesota law. This will include funding for purchases and land exchanges. The second phase will be the DNR's preparation of a school trust business plan during FY14-15 that will:

i) Include a comprehensive evaluation of management practices and costs associated with all aspects of agency work on School Trust lands including forest, minerals and recreation management;

ii) Identify targeted actions to improve efficiency, reduce costs and increase revenue consistent with goals for the school trust lands, including the ability to improve the school trust asset through strategic land exchanges, sales, and acquisition;

iii) Explore opportunities to simplify revenue cost certification and revenue flow to improve transparency; and

iv) Create a process of continuous improvement with focus on new revenue sources for School Trust lands.

The third phase will be the systematic implementation of the business plan to ensure that the DNR continues to meet its fiduciary obligation to secure the maximum long-term return for the Permanent School Fund from the 2.5 million acres of school trust lands. This third phase will require DNR to integrate the school trust inventory results in future management decisions. This will be facilitated by incorporating the school trust inventory results into the department's land records database. During the FY12-13 biennium, the DNR took several important steps toward ensuring the department properly executes its fiduciary responsibility to the school trust. This included institutionalizing school trust responsibilities with Operational Order 121, followed by the creation of a School Trust Land Administrator to oversee all aspects of DNR school trust management. After completion of the business plan, implementation will continue through the FY14-15 biennium as DNR develops new methods to ensure it meets its fiduciary duty.

Finally, the DNR, as trustee, acknowledges an ongoing duty to continue to analyze its policies and designations impacting long-term revenue from school trust lands, to improve the school trust inventory methodology, to adjust the highest and best use designations based on future analysis, and to adapt its management strategies in anticipation of and response to market conditions.

A final School Trust compensation report is due to the Legislative Permanent School Fund Commission on July 1, 2018. The final compensation report will identify any remaining school trust lands under a policy or designation for which the Permanent School Fund has not received compensation.

Minnesota Department of Natural Resources

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