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# Trust Land Management

## CHAPTER 2

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**T**he Minnesota Legislature has delegated responsibility for managing most state-owned lands to the Department of Natural Resources (DNR).<sup>1</sup> In 1997, DNR managed a total of 5.4 million acres of land in state forests and parks, wildlife areas, scientific and natural areas, state trails, and public water accesses. A significant portion of this land, 2.5 million acres or 46 percent, was school trust land. The department also administered over 12 million acres of mineral rights in 1997, of which 3.4 million acres or 28 percent was school trust land.

Our evaluation focused primarily on DNR's role as a trustee responsible for managing school trust land. We asked the following questions:

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**School trust land represents 46 percent of DNR-managed land.**

- **How has DNR managed school trust land, including forest and mineral resources, lakeshore and other leases, and land sales?**
- **How does DNR determine its forestry management costs? Are the assumptions used to determine forestry management costs reasonable and appropriate?**
- **How do timber sales from trust land compare with those from other state-owned land?**
- **How does DNR reimburse the Permanent School Fund for the use of school trust land for purposes that do not produce revenue? What options are available for compensating the trust?**

To answer these questions, we used the Division of Forestry's inventory of forest land to determine the nature and estimate the value of timber on commercial forest trust land. We also used the timber sales database to examine timber sales on trust land. We talked with DNR staff about trust land, forestry, minerals, and other management policies and practices, as well as forestry management costs.

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<sup>1</sup> *Minn. Stat.* §84.027, subd. 2.

## POLICY OVERVIEW

While common law fiduciary obligations apply to DNR in exercising its management responsibilities for school trust land, the department must also comply with state law. Our review of DNR policies shows that:

- **DNR applies the same broad natural resource management policies contained in state law to all types of state-owned land, including school trust land. Consequently, some trust land is managed to secure a maximum long-term economic return, while other trust land is managed for natural resource purposes that do not generate revenues.**

Laws governing management of state forests, minerals, wildlife, state parks, and other resources generally apply to all state-owned land, including school trust land. For example, state law defines state forests as “all land and waters owned by the state within state forests, including all lands set apart under the Constitution.”<sup>2</sup> The department conducts annual timber sales on “all state lands,” including school trust land.<sup>3</sup> Similarly, state laws authorizing mineral leasing activities apply to “any lands owned by the state, including trust fund lands,” or “land belonging to the state or lands in minerals of which the state has an interest, in trust or otherwise.”<sup>4</sup> The Commissioner of DNR is authorized to “establish, develop, maintain, and operate recreational areas [such as wildlife management areas] . . . on any state-owned land under the commissioner’s jurisdiction.”<sup>5</sup>

School trust land is managed in accordance with the management plans for the DNR unit in which it is situated. In most cases, the plans are consistent with the statutory goal of securing the maximum long-term economic return from trust land consistent with sound environmental and natural resource conservation principles.

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**In some cases, natural resource considerations restrict revenue generation on trust land.**

In other situations, natural resource management considerations have the potential to restrict or prohibit economic activities on trust land. By law, some DNR units manage land, including trust land, to preserve and protect unique characteristics or to provide public recreational and educational opportunities. However, these goals do not emphasize an economic return to the trust.

DNR distinguishes between school trust land and other state-owned land when state law contains specific procedures to exchange school trust land, separate income for deposit into the Permanent School Fund, determine forestry management costs for the trust land, or appraise, lease, and sell trust land.<sup>6</sup> We also found that:

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<sup>2</sup> *Minn. Stat.* §89.001, subd. 6.

<sup>3</sup> *Minn. Stat.* §90.041, subd. 1.

<sup>4</sup> *Minn. Stat.* §§93.25 and 93.283, subd. 3.

<sup>5</sup> *Minn. Stat.* §84.029.

<sup>6</sup> *Minn. Stat.* §§16A.125, 92.28, 93.07, and 94.341 to 94.347.

- **In some instances, DNR applies more rigorous standards for revenue generation on trust land than other DNR-managed land.**

For example, DNR requires cash returns for the use of trust land and excludes “payment-in-kind” arrangements on trust land that are allowed on other land types. It also requires cash payments for “reciprocal access” agreements which are used with other units of government for trails and right-of-way leases on trust land.

The remainder of this chapter examines DNR’s management of school trust land in forestry, minerals, state parks, and other management units. It estimates the amount of trust land that does not produce revenue and discusses options for compensating the trust for the use of this land.

## FORESTRY MANAGEMENT

The Department of Natural Resources’ Division of Forestry manages almost all (about 2.4 of the 2.5 million acres) school trust land. Timber sales is one of the largest sources of revenue from trust land, with about \$5.2 million in revenues in 1997. The Division of Forestry is allowed to charge costs to the trust for its management of forest land; it charged the trust about \$4.4 million in 1997. In this section we discuss the characteristics of the trust forest land, DNR’s management costs for trust land, the likely value and returns from timber management on trust land, and the proportion of timber sales from trust land.

### Characteristics of School Trust Forest Land

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**Not all trust land has the same ability to generate revenue for the trust.**

The federal government gave school trust land to the state at different times for a variety of purposes. In addition to the original school land grant, Minnesota received internal improvement land grants to foster railroad and other economic development, and lands categorized as swamp land. Not all school trust land is of equal value or has an equal capacity to generate revenue for the trust. In this section, we describe the characteristics of school trust forest land and estimate its capacity to generate revenue.

DNR’s Bureau of Real Estate Management maintains records on the ownership and administration of over 2.5 million acres of trust land, but the data are of limited value in describing the land’s current and potential uses. However, the Division of Forestry maintains a database, the Cooperative Stand Assessment (CSA) inventory, that does capture information on most (2.2 million acres) of the trust fund land.<sup>7</sup>

The CSA inventory categorizes land by four major types: commercial forest, non-forest, non-stocked forest, and unproductive forest. The inventory also contains the timber harvest status of the lands, such as whether and under what circumstances timber harvesting is allowed.

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<sup>7</sup> The Division of Forestry also administers about 93,000 acres of trust land in the Boundary Waters Canoe Area Wilderness that are not included in the CSA inventory.

The major source of revenue on DNR-managed trust land is timber sales. In examining the inventory for trust land we found that:

- **More than 30 percent of school trust forest land is unlikely to generate timber revenue.**

As Table 2.1 shows, commercial forest makes up about 68 percent (1.5 million acres) of all trust land in the CSA inventory. About 98 percent of the trust land classified as commercial forest is available for timber harvest. The other 2 percent of commercial forest trust land (about 29,000 acres) is unavailable to harvest for forest policy reasons (for example, it might be old growth forest), or because it is restricted by county, state, or federal laws or ordinances (for example, shoreline restrictions). It is possible that additional lands might become restricted as the result of the planning process now being undertaken by the Forest Resources Council, which is developing guidelines that address riparian, soil productivity, cultural/historic, and site specific wildlife habitat concerns.<sup>8</sup>

**Table 2.1: Trust Land by Forest Type and Timber Harvest Status, 1997**

Forest Type	Trust Land Acres Available For Timber Harvest	Trust Land Acres Unavailable For Timber Harvest	Total	Percent of Total
Commercial Forest	1,491,117	29,175	1,520,292	68.0%
Non-Forest	11,288	956	12,244	.5
Non-Stocked Forest	272,417	1,891	274,308	12.3
Unproductive	415,090	10,999	426,089	19.0
Undecided	4,189	62	4,251	.2
Total	2,194,101	43,083	2,237,184	100.0%

SOURCE: Office of the Legislative Auditor analysis of Department of Natural Resources Cooperative Stand Assessment database.

**About 29,000 acres of commercial forest trust land are not available for timber harvest.**

An additional 426,000 acres (19 percent) of trust land are categorized as unproductive and are unlikely to yield commercially viable timber harvests. Much of this land is low lying, inaccessible, and swampy. Another 274,000 acres (12.3 percent) of trust land are categorized as non-stocked forest lands. Very little of the non-stocked land will produce an economically productive timber harvest. The non-stocked commercial forest type includes a category of “cutover area,” some portion of which will eventually regenerate. DNR officials told us that perhaps 10 percent of the non-stocked forest lands could eventually yield a commercial timber harvest. In addition, about 12,000 acres are on non-forest land, such as water, marsh, or muskeg cover types. A small portion of trust land (about 700 acres) is used for agricultural, industrial, or recreational purposes and is not expected to produce timber sales.

<sup>8</sup> The Legislature established the Forest Resources Council in 1995 to serve as a forum to discuss forest resources issues and provide forest management recommendations to the Governor and to federal, state, county, and local governments. *Minn. Stat.* §89A.

With DNR's assistance, we categorized the productivity of the 1.5 million acres of commercial forest trust land that are available for timber harvest. We used a site index for each timber species. The site index is a common indicator of site quality and potential timber volume that is based on tree height and age.<sup>9</sup> DNR's CSA Forestry Manual distinguishes between "excellent/good" timber sites and "medium/poor" timber sites.<sup>10</sup> Table 2.2 shows that 65 percent of the commercial forest trust land available for harvest is in the "excellent/good" category.

In summary, although the Division of Forestry administers the majority of trust land, only about 1.5 million acres are managed as commercial forest land. About two-thirds of the 1.5 million acres are excellent/good timber producing land. About 30 percent of forestry-administered land is unlikely to generate timber revenue because it is unsuitable for timber production or unavailable for timber harvest for policy reasons.

**Two-thirds of commercial forest trust land is excellent/good timber producing land.**

**Table 2.2: Acres of Commercial Forest by Cover Type and Site Productivity**

Cover Type	Site Productivity for Trust Land Available for Harvest		
	Medium/Poor	Excellent/Good	Total Acres
Ash	38,599	22,370	60,969
Aspen	67,314	403,613	470,927
Balm of Gilead	9,039	13,223	22,262
Balsam Fir	22,691	51,683	74,374
Birch	3,561	53,452	57,013
Black Spruce, Upland	5,328	4,764	10,092
Black Spruce, Lowland	142,133	207,239	349,372
Central Hardwoods	0	458	458
Cottonwoods	5	9	14
Jack Pine	2,496	37,008	39,504
Lowland Hardwoods	6,685	11,401	18,086
N. White Cedar	80,774	15,105	95,879
Northern Hardwoods	22,509	15,227	37,736
Norway Pine	1,327	46,534	47,861
Oak	4,050	11,811	15,861
Scotch Pine	0	29	29
Tamarack	114,242	40,078	154,320
Unknown Code	0	5	5
Walnut	6	6	12
White Pine	3,211	1,758	4,969
White Spruce	3,888	27,466	31,354
Willow	20	0	20
<b>Total Acres</b>	<b>527,878</b>	<b>963,239</b>	<b>1,491,117</b>
<b>Percent of Total</b>	<b>35%</b>	<b>65%</b>	<b>100%</b>

SOURCE: Department of Natural Resources, Division of Forestry.

<sup>9</sup> See Thomas Avery and Harold Burkhardt, *Forest Measurements* (New York: McGraw Hill, 1983), 246.

<sup>10</sup> Minnesota Department of Natural Resources, *Forest Survey Manual, Cooperative Stand Assessment, Phase II Intensive Inventory* (St. Paul, 1997), 15.

## Forestry Management Revenues and Costs

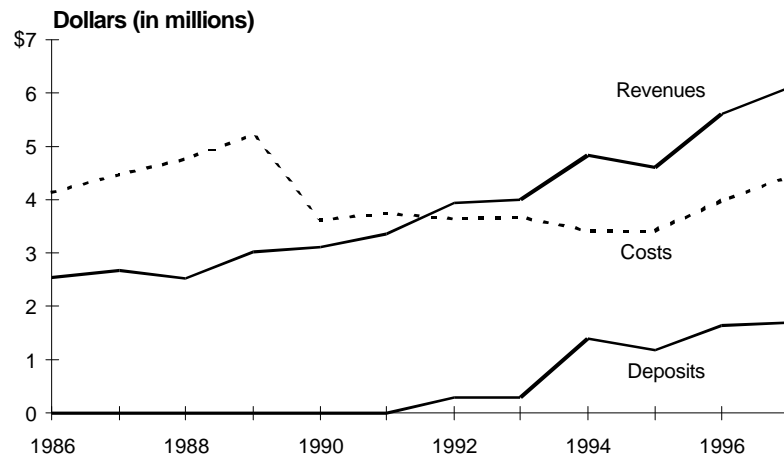
The Minnesota Constitution allows DNR to charge its costs of managing trust forest resources against the gross revenue produced from the trust land it manages.<sup>11</sup> In this section we examine how DNR determines its trust land forestry management revenues and costs.

**DNR charges forestry management costs to the trust.**

Historically, expenses incurred for the management of school trust forest land were paid from the General Fund. Beginning in 1953, however, the Legislature allowed forestry management costs to be subtracted from the revenues generated from school trust forest land.<sup>12</sup> Since 1982, all revenues from school trust forest land are placed in a special account, the Forest Suspense Account. The costs of managing school trust forest land are paid out of that account to the General Fund, and the remaining balance is transferred to the Permanent School Fund. Figure 2.1 shows forest management revenues and costs, and the net income deposited into the PSF from forest management activities. We found that:

**Forestry management costs exceeded revenues for many years.**

**Figure 2.1: Forestry Management Revenues, Costs, and Deposits to the PSF, 1986-97**



SOURCE: Department of Natural Resources, Division of Forestry, Trust Fund Transfer Certification Reports, 1986-97.

<sup>11</sup> *Minn. Const.*, art. XI, sec. 11. The Constitution provides that trust lands “may be set aside as state school forests” and that “the Legislature may also provide for their management on forestry principles.” The Constitution also provides that *thenet revenues* shall be used for the purposes for which the lands were granted to the state. [Emphasis added.]

<sup>12</sup> *Minn. Laws* (1953), ch. 741, sec. 60. Between 1953 and 1982, the reimbursement of forestry management costs from trust revenues was limited to \$500,000 a year.

- **From 1983 until 1992, management costs for school trust forest land exceeded revenues earned from that land. As a result, no revenues from forestry management activities on trust land were deposited into the Permanent School Fund.**

In 1982, the Legislature passed the Forest Resource Management Act authorizing payments for forest management costs on trust land out of the Forest Suspense Account up to the amount of gross revenue.<sup>13</sup> According to DNR, prior to 1983 the department did not practice intensive management on trust land which created a large backlog of forest improvement activities (such as reforestation) for subsequent years. Part of the purpose of the Forest Resource Management Act was to reforest the backlog of trust land. DNR estimated in 1983 that, due to investment in forest improvements on trust land, net income to the trust would be limited until 1998. As Figure 2.1 shows, school trust forest land revenues have exceeded DNR forest management costs since 1992.

As Table 2.3 shows, income from timber sales represents the predominant source of revenue (76 to 85 percent) to the Forest Suspense Account. Other revenues deposited into the suspense account include: state campground fees, sand and gravel lease fees, 50 percent of lakeshore lease payments, and other lease payments.

There is some question about whether revenues from sand and gravel leases on trust land should be used to pay forestry management costs. According to DNR officials, sand and gravel revenues are included in the Forest Suspense Account for “historical reasons.” Legally, sand and gravel can be sold and are not mineral rights subject to the reservation of mineral rights for the state.<sup>14</sup> Based on this interpretation, DNR considers the removal of sand and gravel a land-related use and its management a forestry management activity. Statutes are in conflict about whether the removal of sand and gravel should be considered an extractive use (and, therefore, not part of the Forest Suspense Account revenues) or a land-related use that might be considered a part of forestry activities.

There is some rationale for including the sand and gravel revenues in the Forest Suspense Account: Division of Forestry personnel inspect the lease sites to ensure compliance with the lease terms and conditions, although the leases are negotiated and administered by DNR’s Bureau of Real Estate Management. Staff from the Division of Minerals also assist with the planning and management of sand and gravel leases on trust land. Given the ambiguity of statutes, DNR has chosen to consider the costs of managing sand and gravel leases to be forestry-related costs.

By law, DNR can charge forestry costs to the Forest Suspense Account in five different areas: protection, improvement, administration, management of state forest trust land, and construction and improvement of forest roads.<sup>15</sup> DNR uses a

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**Sand and gravel lease revenue is deposited in the account used to pay forestry costs.**

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<sup>13</sup> *Minn. Laws* (1982), ch. 511, sec. 3, subd. 2, and sec. 11.

<sup>14</sup> Minnesota Attorney General’s Opinion # 311-J, August 13, 1946; and *Resler v. Rogers*, 139 N.W. (2d) 379, (1965).

<sup>15</sup> *Minn. Stat.* §16A.25, subd. 5.



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**Timber sale and reforestation costs are charged to the trust in proportion to the trust's percentage of total timber sale revenues.**

number of methods to allocate a portion of the forestry division's costs to the trust. Each year the department prepares a report that summarizes the allocation of costs to the five allowed areas and submits the costs to the Department of Finance, which approves the costs before they are charged against the Forest Suspense Account.

We examined the cost allocation system that the Division of Forestry uses to calculate the costs charged to the Forest Suspense Account, and we conclude that:

- **Overall, the methods used to allocate forestry management costs to trust land are reasonable, but DNR should consider improving the way it allocates costs for fire protection and recreation management activities.**

The major DNR costs are those associated with timber sales and reforestation. These costs are allocated based on the percentage of total timber sale revenues that are generated from trust land. We think using the trust's proportion of timber sale revenues is a reasonable way to allocate the actual forest management and improvement costs incurred. However, improvements that DNR might consider in allocating costs for fire protection and recreation management are discussed below.

DNR is responsible for *fire protection* (fire prevention and suppression) on over 5 million acres of state-owned lands (including school trust lands) and more than 17 million acres of other public and private lands. The costs of fire protection are allocated to the trust on a per acre basis, although private landowners and local governments are not charged for fire costs. DNR's cost allocation method apportions a full 10 percent of its total fire protection costs to the trust land's Forestry Suspense Account. This amounted to about \$758,000 in fiscal year 1997. This apportionment is based on the fact that school trust land represents about 10 percent of the total land for which DNR provides fire protection services. However, about 7 percent of the fires over the last 10 years occurred on state-owned lands and the rest were on other lands. Since about half of state-owned lands are school trust lands, it could be surmised that roughly 3.5 percent of fires on DNR-protected land occurred on school trust land.<sup>16</sup> Some fire costs are clearly associated with the number of fires, however, DNR believes that the costs of fire suppression and prevention on trust land may be greater than the number of fires would suggest.

DNR has chosen a reasonable method of apportioning fire protection costs, but we think that a per acre allocation for fire protection may overstate the actual fire protection costs incurred on trust lands. We recommend that:

- **DNR should reexamine its cost allocation for fire protection to determine if a different method could more closely reflect the actual cost of protecting trust acres.**

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<sup>16</sup> Since much school trust land acreage is concentrated in swampy areas, the percent of fires on trust land is likely to be even less than this estimate.

DNR also charges recreation management costs (mostly related to campground activities) to the trust's Forest Suspense Account. Recreation management costs charged to the trust have exceeded revenues generated from campgrounds on trust lands for fiscal years 1992-97. In 1997, \$264,000 in costs were charged to the trust compared to \$138,000 in revenues. DNR has interpreted statutes to require it to include recreation management revenues and costs as part of "forestry management." However, we are uncertain whether the Legislature wanted the trust to subsidize the General Fund by over \$100,000 per year for recreation management. We recommend that:

- **The Legislature and DNR should consider whether costs for recreation management should continue to be paid from trust revenues.**

Recreation management costs could be considered an expenditure that benefits the public as a whole and thus an appropriate General Fund expense. Alternately, the Legislature and DNR may want to consider whether the amount of forestry management recreation costs charged to the trust should exceed the revenues from recreation activities (campground fees).

DNR charges the trust for its costs of conducting *forest management* activities, primarily timber sales, based on the proportion of timber sales revenue generated from trust lands. Costs for *forest improvement* activities (such as reforestation) also are charged to the trust based on the trust's proportion of total timber sales revenue. In our opinion, using the school trust's proportion of total timber sales revenue is probably a reasonable approximation of the actual forest improvement management costs incurred.

The *administrative* costs paid by the trust are based on the proportion of costs from "other categories" (such as fiscal/personnel management and clerical support) expended from the General Fund by the forestry division. To the extent that the department has over- or under-estimated the trust's share of other cost categories, the administrative charges will not reflect the true costs. In fiscal year 1997, the trust paid \$702,000 of the Division of Forestry's administrative costs.

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**DNR's methods of allocating most management costs to the trust are reasonable.**

In 1995, the Legislature expanded the allowable categories of costs that could be recovered from the trust to include *forest road construction and improvement*.<sup>17</sup> DNR determines the trust land acres within 1/4 mile of a forest road as a proportion of the total acres served by forest roads and multiplies that percentage times the total state forest road costs. In fiscal year 1997, the department determined that the trust's share of road construction and improvement was about 5.7 percent of the total or \$51,000. We believe the department's allocation basis for road costs is reasonable.

## **The Value of and Return on Asset Value for Timber on School Trust Land**

The largest sources of revenue from school trust land are mining royalties, land sales, and timber sales. Timber sales on school trust land managed by DNR are

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<sup>17</sup> *Minn. Laws* (1995), ch. 220, sec. 26.

one of the largest sources of trust land revenues because timber, unlike minerals payments and land sales, can continue to produce revenue in perpetuity. As a result, we looked at how much income timber was likely to contribute to the trust.

With DNR's assistance, we estimated the net income likely to be produced from trust timber land over the next 40 years. A relatively simple timber income model was produced with the assistance of DNR and represents the best judgments of a number of experts on Minnesota forestry.<sup>18</sup> Nonetheless, like any model, it relies on a number of simplifying assumptions and cannot take into account many potential external factors. The model projects the amount of timber harvested from trust land and the harvest value after DNR's management costs. We modeled several different scenarios to obtain a range for the results.<sup>19</sup> We found that:

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**We estimated the value of timber on trust land over the next 40 years.**

- **If DNR forestry management costs do not grow faster than inflation, the estimated accumulated net income from timber on trust forest land over the next 40 years will be between \$186 million and \$305 million, with a midpoint estimate of \$245 million in 1998 dollars.**

These estimates are sensitive to assumptions about the level of DNR forestry management costs. For example, if DNR costs increase at a rate of 1 percent more than inflation, the estimated present value of net timber income over the 40-year period decreases to between \$146 million and \$265 million with a midpoint of \$205 million. If DNR forestry costs were to increase at a rate of 2 percent more than the inflation rate over the 40-year period, the estimated present value of net timber income would decline to between \$94 million and \$213 million with a midpoint of \$153 million.

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<sup>18</sup> DNR estimated the average annual growth and growing stock volume of timber on trust land by species from 1990 federal forest timber inventory data. The resulting timber growth estimates were applied to a base volume species table derived from DNR's Cooperative Stand Assessment (CSA) inventory. In essence, the amount of timber available for each species of trees was increased each year between 1998 and 2037 to account for growth and then adjusted downward to account for projected harvest. Changes were made in assumptions about the harvest of aspen acreage on CSA trust land in 2007, 2017, and 2027 based on the growing stock volume composition available on trust land.

The projected harvest of trust land timber was estimated as a simple percentage of the amount of total timber harvest in the state. About 20 percent of Minnesota's total timber harvest has historically come from state land and about 56 percent of that timber is harvested from trust lands. DNR officials expect these average percentages to continue. The total statewide timber harvest was based on current projections from DNR timber marketing officials and are in line with recent trends. Total statewide harvest is estimated to be 3.82 million cords in 1998 and 1999, 4.1 million cords in 2000, 4.34 million cords in 2001-09, 4.34 million cords in 2010-25, and 4.7 million cords in 2026-2037. These estimates take into account currently known production capacity increases and estimates of technology effects as well as the species-age composition of Minnesota timber resources. The estimates are in the middle range of harvest scenarios evaluated by the Forest Generic Environmental Impact Statement. Also see *Minnesota Forest Resources*, (St. Paul: Minnesota Department of Natural Resources, September 1997).

The value of the timber harvest was based on current timber stumpage prices by species, advanced into the future based on the 30 year average annual percentage increase by species. The value of the projected timber harvest on trust land by species was accumulated and discounted at a 7.5 percent rate to put the values in 1998 dollars.

<sup>19</sup> Revenues were estimated based on increases in prices over the last 30 years plus/minus one standard deviation.

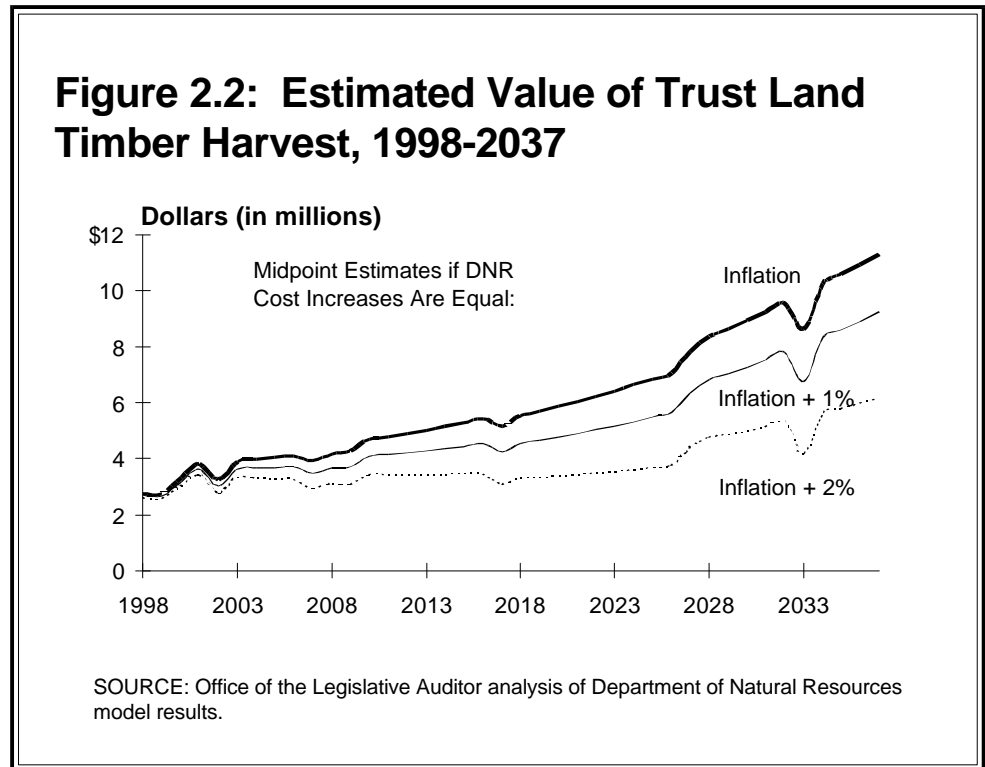
Figure 2.2 presents three scenarios of the value of timber income from trust land. Because income is expected to grow more rapidly than costs, the net present value of timber revenues will be greater several years from now. In other words, the present value of trust timber income is dependent on DNR keeping its increase in costs less than the growth in revenues.

DNR informally has estimated the average value of trust land at between \$100 and \$250 per acre. Estimates of trust land value vary with its characteristics: upland timber acres in northern Minnesota are generally valued at about \$250 per acre; land in the Boundary Waters Canoe Area Wilderness is estimated to be worth between \$300-350 per acre; and some swampy land in Koochiching County may be worth as little as \$50-75 per acre. A more exact valuation of trust land depends on land appraisals that DNR has not conducted.<sup>20</sup> A very rough estimate of forest trust land value is probably in the range of \$300 million. This estimate is similar to the value derived above from looking at timber harvest value.

**The net return on asset value from timber sales has been less than one percent in recent years.**

As discussed in the previous sections, the trust fund has not generated significant net earnings from timber sales on trust land. The net return on asset value from timber sales has been less than 1 percent in recent years, and for many years was zero.

**Figure 2.2: Estimated Value of Trust Land Timber Harvest, 1998-2037**



20 DNR officials note that such appraisals would be expensive to conduct.

## Timber Sales

State laws and policies for timber sales generally apply equally to both school trust and other state-owned land.<sup>21</sup> The Division of Forestry is responsible for administering the sale of timber from state-owned land, including: identifying tracts to harvest, estimating the appraised value of timber to be sold, selling timber, and supervising the timber harvest.<sup>22</sup> DNR's timber sale procedures are contained in state law and described in DNR timber sale manuals.<sup>23</sup>

We examined what proportion of timber sale activity is generated from school trust land and how timber sale activities on trust land compared with similar activity on other state-owned land.<sup>24</sup> We analyzed timber sales data from fiscal years 1986 to 1996, reviewed statutes and policies, and interviewed forestry management staff.

Our analysis is based on timber sale activity by type of land ownership (school trust and other state-owned land), referred to as "land type." During the timber appraisal process, a forester determines the volume and value of timber on each 40-acre tract.<sup>25</sup> The forester also estimates the percentage of the total sale value within each 40-acre tract assigned to the owners of the tract, such as school or University trust. The estimated percentage value of the timber for each land type depends on how much of the total sale value on a specific tract comes from each land type. Our analysis of timber sales data divides timber sale permits into three categories based on land type: (1) a "trust" timber sale involves only school trust land; (2) a "nontrust" timber sale involves other state-owned land, but no school trust land; and (3) a "partial" trust timber sale involves a combination of school trust and other state-owned land.

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**School trust land is the largest source of timber from public land in Minnesota.**

### Timber Sales Activity

In 1996, DNR accounted for about 44 percent of all timber (excluding fuel wood) sold by public agencies in Minnesota.<sup>26</sup> School trust land timber sales accounted for more than half of that volume, making the school trust land the single largest source of timber from Minnesota public lands.

The volume of state-owned timber sold in 1996 represented a 100 percent increase over 1986. Although it fluctuated from year to year, the volume of state-owned

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<sup>21</sup> *Minn. Stat.* §89.001, subd. 6.

<sup>22</sup> Minnesota Department of Natural Resources, Division of Forestry *Minnesota Forest Resources Plan: Program Direction, 1991-1995* (St. Paul, July 1991), 38.

<sup>23</sup> *Minn. Stat.* §§89, 89A, 90.

<sup>24</sup> This evaluation did not focus on the overall management of the timber sale program or timber appraisal procedures.

<sup>25</sup> *Minn. Stat.* §90.061, subd. 4. Timber appraisers use land ownership information from the Bureau of Land Management, along with aerial photographs and maps, to determine the land ownership for each tract.

<sup>26</sup> Minnesota Department of Natural Resources, Division of Forestry *Public Stumpage Price Review* (St. Paul, 1996).

timber sold increased from 377,000 cords in 1986 to over 757,000 cords in 1996. The volume sold peaked in 1989, when approximately 814,200 cords were sold.<sup>27</sup>

Minnesota has benefited from a national increase in timber prices over the past 12 years. Although timberland in Minnesota may be isolated, the market for timber resources has become global.<sup>28</sup> An index of stumpage prices for common species in Minnesota increased over 300 percent between 1985 and 1996; after adjusting for inflation, the index value increased 193 percent.<sup>29</sup>

We analyzed Minnesota timber sale activities based on the volume and value of timber sold, and the number of timber sale permits, and found:

- **Timber sales on school trust land accounted for one half of the total volume and value of state-owned timber sold in Minnesota between 1986 and 1996.**

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### **Timber production on state-owned land has doubled over the last ten years.**

The volume of state-owned timber sold from school trust land represented an average of 53 percent of total timber volume in cords sold annually between 1986 and 1996. Figure 2.3 shows that timber sales on school trust land represented the largest share of timber volume (in cords) sold every year except 1994. During that same time period, the volume of timber sold from nontrust land averaged 39 percent of all timber sold while the volume from partial trust land types averaged 8 percent of the volume sold.

We found a similar pattern in the dollar value of timber sales by land type. Timber sales on school trust land accounted for an average of 54 percent of the total value of timber sold between 1986 and 1996. As Figure 2.4 shows, timber sales from trust land generated the greatest share of total sale value for every year examined. Nontrust land timber sales averaged 39 percent of total timber sales and partial trust land timber sales averaged 7 percent of the value of timber sold, during the same period. Timber sale values reflect the actual value of timber sold in a fiscal year. Sale values do not reflect timber sale revenues because a timber buyer has from 2 to 5 years to harvest the timber purchased. Revenues are recognized when the timber is harvested. Therefore, revenues for a specific fiscal year are generated from earlier timber sales.

### **Timber Sale Methods**

DNR uses three primary methods to sell timber from state-owned lands: regular auction, intermediate auction, and informal sale. Prior to 1996, timber sale

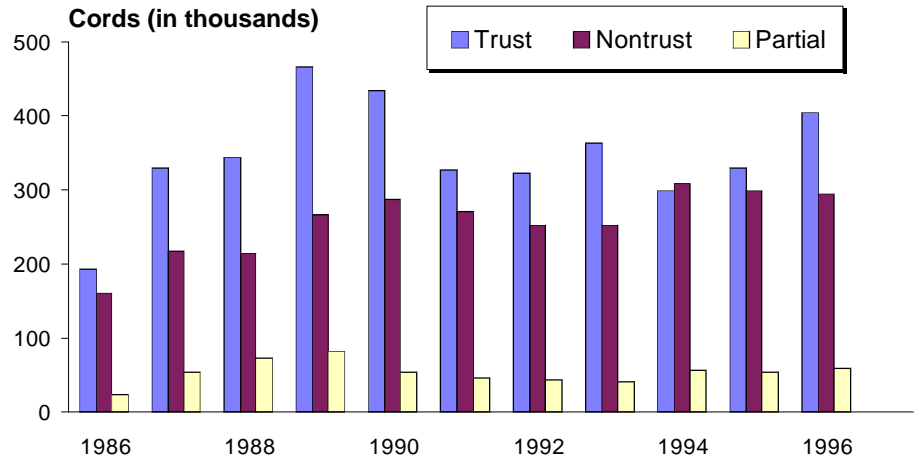
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27 We calculated the volume of timber sold using the DNR's timber sales database. The DNR converted all timber volumes to cords if they were not already measured in cords. The conversion rate for board feet was 500 board feet per cord for products measured in board feet. Other conversion rates were used for products measured by the piece, in linear feet, or in other units.

28 Sources we interviewed told us that timber prices in Minnesota are influenced by conditions that affect the worldwide markets for paper, lumber, and other forest products. For instance, a reduction in the supply of timber from the Pacific Northwest has contributed to increased demand and higher prices for timber resources in Minnesota.

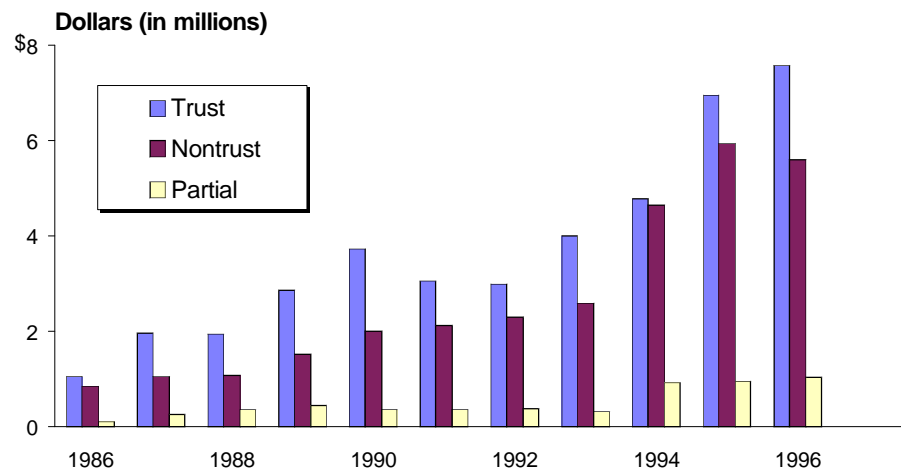
29 Minnesota Department of Natural Resources, *Public Stumpage Price Review* (St. Paul, 1996), 1.

**Figure 2.3: Volume of Timber Sold by Land Type, 1986-96**



SOURCE: Office of the Legislative Auditor analysis of Department of Natural Resources timber sale data.

**Figure 2.4: Value of Timber Sold by Land Type, 1986-96**



SOURCE: Office of the Legislative Auditor analysis of Department of Natural Resources timber sale data.

methods were defined using dollar values. In 1996, the state started using volume limits in response to the rapid timber price increases in the past decade. The timber sale methods are distinguished by the volume of timber that can be sold in one tract, as summarized below.<sup>30</sup>

1. Under the regular auction method, stands of timber not exceeding 6,000 cords are sold to the highest bidder at public auction. The minimum price is the appraised value. Regular auctions are the least restrictive method of selling timber. According to DNR, regular auctions should provide the truest indication of stumpage value because logging operations of all sizes are able to bid.<sup>31</sup>
2. The intermediate auction method, which is used for sales not exceeding 3,000 cords, allows DNR to auction smaller tracts to small businesses and independent timber operators. Businesses with more than 20 employees are excluded from bidding. Intermediate auctions enable independent timber operators to compete more successfully in the auction process and reduce their dependence on informal permits.<sup>32</sup>
3. The informal method can be used for any sale not exceeding 500 cords.<sup>33</sup> This method allows DNR to sell timber in small tracts without public auction. Under this method timber is sold at the appraised price.

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**Auction sales are the most effective way to sell timber and generate revenue.**

Figure 2.5 highlights other distinguishing characteristics of each sale method. Auctions are more effective at generating revenue than informal sale methods.<sup>34</sup> Auctions allow for competition between or among potential buyers, and therefore, are more likely to result in a competitive price. An earlier study by the Office of the Legislative Auditor found that between 1955 and 1980 the state had sold approximately 67 percent of its timber by volume using the informal method and 33 percent using the auction method.<sup>35</sup> Over the past 11 years, DNR has changed its timber sale methods. Our analysis of state timber sales shows that:

- **Between 1986 and 1997, DNR sold the majority of state timber through regular and intermediate auctions.**

Figure 2.6 shows that the volume (in cords) of state-owned timber sold by regular and intermediate auctions increased from about 45 percent in 1986 to 97 percent

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<sup>30</sup> *Minn. Laws* (1996), ch. 295, sec. 6, 7, and 8. The Executive Council has authority to approve any sale exceeding 6,000 cords. See *Minn. Stat.* §90.031 subd. 4.

<sup>31</sup> *Minn. Stat.* §90.101, subd. 1, and Minnesota Department of Natural Resources, Division of Forestry, *Timber Sales Manual* (St. Paul, 1997), F-2.

<sup>32</sup> *Minn. Stat.* §90.121, and DNR, *Timber Sales Manual*, F-2.

<sup>33</sup> *Minn. Stat.* §90.191, subd. 1.

<sup>34</sup> D.G. MacKay, Ph.D. dissertation, *Alternative Timber Pricing Mechanisms for Minnesota's State Forests* (St. Paul: University of Minnesota, 1994), 62 and 65; Gerald A. Rose, Office memorandum, State Timber Auction Sales, May 9, 1989, Department of Natural Resources, Division of Forestry, St. Paul, MN, 1; and Office of the Legislative Auditor *Evaluation of State Timber Sales* (St. Paul, 1982), 28.

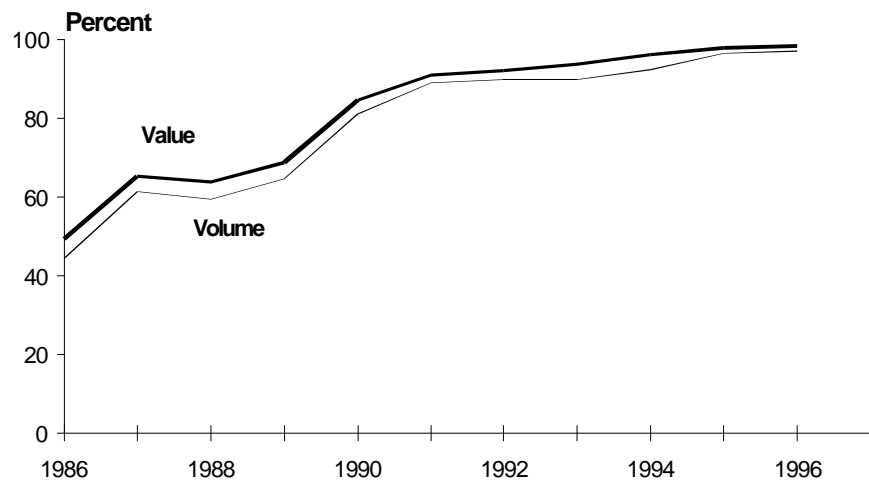
<sup>35</sup> Office of the Legislative Auditor, *Evaluation of State Timber Sales*, 20-22. At the time of this study (1982), the state had just resumed use of the intermediate auction method, therefore, the analysis focused on the regular auction and informal methods only.

**Figure 2.5: Comparison of Timber Sale Methods**

	<u>Regular Auction</u>	<u>Intermediate Auction</u>	<u>Informal Sale</u>
Maximum Appraisal Volume	Up to 6000 cords	Up to 3000 cords	Up to 500 cords
Required Down Payment	25% of appraised value	25% of appraised value	100%
Permit Eligibility	None	Only persons with 20 or less employees	None
Sales Per Individual	No limit	Not more than 6 permits or not more than 25 percent of tracts at first round of bidding	No more than 2 permits, except partnerships and corporations may hold 2 permits for each of not more than 3 partners
Permit Duration	5 years	3 years	2 years
Bond Requirements	Bond equal to 100% of value of timber covered by the permit minus the down payment	Bond equal to 100% of value of timber covered by the permit minus the down payment	None
Special Extension	1 year	1 year	1 year

SOURCE: *Minn. Stat. §90*, and Department of Natural Resources, Division of Forestry, *Timber Sales Manual* (St. Paul, 1997), F-6.

**Figure 2.6: Percentage of Timber Sales by Auction, 1986-96**



SOURCE: Office of the Legislative Auditor analysis of Department of Natural Resources timber sale data.

**Since 1986, DNR has increased its use of auctions for timber sales.**

in 1996. During the same period, the value (in dollars) of timber sold by auction increased from about 50 percent to 98 percent. DNR increased its use of auctions for timber sales on both trust and other state-owned land.

## Bid Method

The state may use two bid methods to conduct auctions: oral and sealed bids. Either bid method may be used with regular and intermediate auctions. Whether the auction is by sealed bid or oral bid, DNR is required to sell timber at not less than the appraised value, also called the minimum allowable price.<sup>36</sup> The appraised value is the starting point for bidding in oral auctions.

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### Sealed bid auctions generate higher sale prices than oral bid auctions.

Research demonstrates that sealed bid auctions generate higher sale prices than oral bid auctions.<sup>37</sup> According to a national study on U.S. Forest Service timber sales, sealed bid auctions were “significantly related to higher bid premiums.”<sup>38</sup> A “bid premium” is the amount the winning bidder paid over the appraised price. In sealed bid sales, individual bidders assess the likelihood of competing bidders and determine their bid accordingly. With a sealed bid auction, even if a tract of timber receives only one bid, the bidder does not know this. There is a greater potential that bidders will bid according to what they think the timber is worth rather than basing it on the minimum price, which is the appraised value.<sup>39</sup> In oral auction sales, however, bidders know if anyone else is competing against them. When there is only one bidder, that bidder can win the sale by bidding the appraised price. Our analysis of DNR timber sales data shows that:

- **Sealed bid auctions comprised a very small proportion of DNR’s total auctions between 1986 and 1996.**

DNR conducted 7,696 regular and intermediate auctions of Minnesota timber between 1986 and 1996. About 98 percent of these auctions were oral bid auctions. Only 116 timber auctions (less than 2 percent) used sealed bids during this time period, and in 1988, 1995 and 1996 no auctions were conducted using sealed bids.

Auctions that sold above the appraised value are a reflection of increased competition. The percentage of oral bid auction sales that sold above the appraised value increased from about 26 percent in 1986 to 72 percent in 1994, before declining to 61 percent in 1996. Between 1986 and 1996, an average of 56 percent of oral bid auctions sold above the appraised value.<sup>40</sup> There is no significant difference in the distribution of oral bid auctions between trust and nontrust land. Of the 116 sealed bid auctions for all land types between 1986 and

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<sup>36</sup> *Minn. Stat.* §§90.101 and 90.191.

<sup>37</sup> Ross W. Gorte, *Forest Service Timber Sale Practices and Procedures: Analysis of Alternative Systems*, Washington, D.C.: Congressional Research Service: Report for Congress, October 30, 1995, WWW document, URL <http://www.cnie.org/nle/for-14.html>, (December 2, 1997), 11-13; and U.S. Government Accounting Office, *Forest Service: Factors Affecting Bids on Timber Sales* (Washington D.C., June 17, 1997), 2.

<sup>38</sup> U.S. GAO, *Forest Service*, 2. Sealed bid auctions are used almost exclusively for timber sales on the Chippewa and Superior National Forests, according to U.S. Forest Service staff

<sup>39</sup> Gorte, *Forest Service Timber*, 11

<sup>40</sup> We calculated the percentage above the appraised value for each timber sale using the following formula: ((total sale value minus total appraised value)/ total appraised value) x100. Several changes in timber stumpage pricing and appraisal method in the past ten years make it difficult to compare the final sale prices and percentages on a year-to-year basis.

1996, 89 percent sold above the appraised value. The limited number of sealed bid auctions precluded our analysis of sealed bid auctions by land type.

According to DNR staff, the department does not have explicit criteria to determine when to use sealed- versus oral-bid auction procedures. The department has been reluctant to use sealed bids because they are perceived to involve higher administrative costs. To facilitate more competition and possibly receive higher prices for state-owned timber, we suggest that:

- **DNR should analyze the costs and benefits of increasing the use of sealed bid auctions.**

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**A future study of DNR's management of timber resources may be timely.**

In 1996, DNR implemented a new method for establishing the list value of timber from which appraised values are determined based on sale-specific conditions. The list value used on auction sales has been determined by taking 67 percent of the volume weighted mean auction sales price for the preceding 12 months for each species and product. This is done to take into account timber markets that can be volatile and state law requiring that timber may not be sold for less than the appraised price. Of the 376 auction timber sales conducted between March 1 and June 30, 1996, 55 percent sold above the appraised value. DNR recently changed its timber stumpage pricing methods for auction sales, changing the bid allowance from 33 percent to 17 percent.<sup>41</sup>

We did not evaluate the Division of Forestry's overall management of Minnesota's timber resources. We think that a future study of the Division of Forestry may be timely. Such a study could focus on timber management policies and practices, management costs, the timber appraisal process, and stumpage pricing methods.<sup>42</sup>

## MINERALS MANAGEMENT

The Division of Minerals administered about 3.4 million acres of mineral rights on school trust land, which included about 1 million acres of "severed" mineral rights in 1997. Severed mineral rights occur when the state owns the subsurface rights but not the surface rights to a parcel of land. School trust mineral rights represented 28 percent of the 12.4 million acres of state-owned mineral rights. Most of the school trust land mineral rights are in the northeastern part of the state; 80 percent are located in 8 northeastern counties.<sup>43</sup>

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<sup>41</sup> Minnesota Department of Natural Resources, "Minnesota DNR Timber Stumpage Pricing," Office Memorandum, draft revision, December 10, 1997, St. Paul, Minnesota, 1-3.

<sup>42</sup> The timber appraisal and stumpage pricing methods are important because: (1) DNR is the largest seller of timber in the state; (2) prices established by DNR serve as the minimum price in auction sales; and (3) prices ultimately determine what value will be received for timber sold by DNR.

<sup>43</sup> These counties are Koochiching, St. Louis, Itasca, Roseau, Aitkin, Cass, Lake, and Cook.

Minnesota leads the nation in the quantity and value of iron ore produced.<sup>44</sup> Iron ore has dominated Minnesota's mining activities. In addition to iron ore and taconite leases, DNR's Division of Minerals administers metallic minerals, peat, and industrial minerals leases. There were no active industrial mineral leases in 1997.

Like other DNR divisions, the minerals division does not distinguish between school trust and other state-owned lands in its management of mineral resources. State law authorizing mineral resource management applies to "any lands owned by the state, including trust fund lands."<sup>45</sup> Unlike other DNR divisions, however, we found that:

- **The Division of Minerals is the only DNR division that explicitly acknowledges its role as a trust agent with a fiduciary responsibility to generate income for the Permanent School Fund in the division's budget and performance report.**

The division's budget and performance reports specifically state:

*The Division of Minerals, as the trust agent for mineral rights and interests of the Permanent School Fund lands[and other lands], manages mineral exploration, mine development, and mine operation to generate income and maintain job growth for the state. As such, it has the fiduciary responsibility to obtain equitable rental and royalty income for the state trust funds through leasing of lands for exploration and mining. Equally important is the division's stewardship of state lands for future generations.*<sup>46</sup> [Emphasis added.]

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**Royalty rates on state-owned land are comparable to those received by the private sector.**

The Division of Minerals obtains rental and royalty income for school trust and other land by comparing its rental and royalty rates with those provided by other landowners.<sup>47</sup> As the mineral leases are renegotiated, the division analyzes the royalty rates received by private owners of mineral rights.<sup>48</sup> This results in negotiated royalty rates for state-owned iron ore and taconite ore comparable with those received by the private sector. If a mining operation involves a 40-acre section with split land ownership, then the negotiation process requires that the state receive at least the same royalty rate that private owners of mineral rights in that section are paid.

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<sup>44</sup> Minnesota produced 42,886 metric tons of iron ore in 1992, compared with Michigan, the nation's second leading producer of iron ore, which produced 12,741 metric tons of iron ore the same year. U.S. Dept. of Interior, Bureau of Mines, *State Mineral Summaries, 1993* (Washington, D.C., 1994), 67-70, 71-73.

<sup>45</sup> *Minn. Stat.* §§93.14, 93.15, and 93.25.

<sup>46</sup> *1998-99 Minnesota Biennial Budget*, Environmental and Natural Resources, D-155, and Minnesota Department of Natural Resources, *1996 Performance Report* (St. Paul, 1996), 6-11.

<sup>47</sup> Other owners of Minnesota's minerals include the federal government, local government, mining companies, and other private owners. Private parties hold the bulk of mineral rights in Minnesota. Rents are a flat charge per acre leased. Royalties are a charge per ton of material mined. Minnesota uses a schedule of minimum royalties and an additional royalty which companies offer in competitive sealed bids.

<sup>48</sup> This report did not evaluate Minnesota's mineral leasing procedures or the Division of Minerals performance in administering the mineral leasing process.

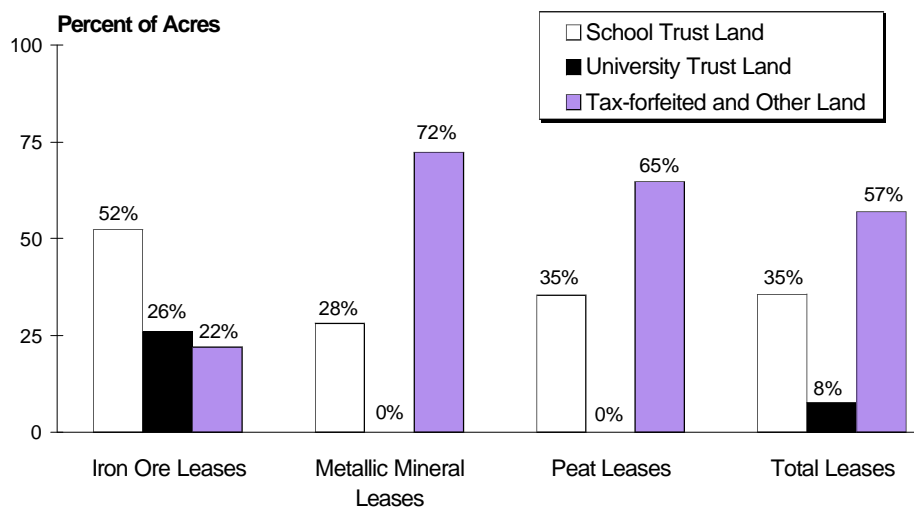
## Recent Mining Activity

Although Minnesota has a large amount of state-owned mineral rights, only a small percentage of the state-owned or school trust lands are currently leased for mining activities.<sup>49</sup> We found that:

- **School trust land accounted for about one-third of all acres of state-owned mineral rights leased and about one-fifth of all revenues from state mineral leases in 1997.**

School trust land accounted for about 11,300 acres (35 percent) of the total 31,837 acres of leased state mineral rights in 1997, as shown in Figure 2.7. School trust land accounted for 52 percent of the acres leased for iron ore and taconite mining; 28 percent of the acres leased for metallic minerals explorations; and 35 percent of the acres for peat leases.

**Figure 2.7: Percentage of Acres of Mineral Rights by Lease Category, 1997**



NOTE: Percentages shown indicate the percent of land within each lease category.

SOURCE: Department of Natural Resources, Division of Minerals, unpublished data, August 1997.

**Iron ore and taconite leases account for most mining revenues added to the Permanent School Fund.**

Of the \$7.6 million in total state revenues generated from mineral leasing activities in 1996, \$1.6 million, or 22 percent, was deposited in the Permanent School Fund.<sup>50</sup> Revenues from iron ore and taconite leases represented an average of 94 percent of all mineral revenues added to the Permanent School Fund principal between 1986 and 1997.

<sup>49</sup> Minnesota’s mineral leases occurred on school trust, University trust, tax-forfeited, and other DNR-owned land.

<sup>50</sup> Seventy-three percent of mineral revenues were deposited in the University trust and the remaining 5 percent were distributed to local units of government pursuant to *Minn. Stat.* §93.335, subd. 4.

The cost of mineral management on school trust land is financed with a General Fund appropriation. Revenues from state mineral leases on trust land do not finance management costs.

## OTHER MANAGEMENT UNITS AND AREAS

DNR's Divisions of Forestry and Minerals administer operations that are designed to generate revenues. The Divisions of Parks and Recreation and Fish and Wildlife manage land to preserve and protect unique characteristics and provide public recreational and educational opportunities for the enjoyment of the general public. The inclusion of trust land in these areas has the potential to prohibit revenue generating activity on the land. We estimate that:

- **In 1997, there were about 150,000 acres of trust land in DNR management units or uses that prohibited the generation of revenue.**

School trust land is located in state parks, scientific and natural areas (SNAs), and the Boundary Waters Canoe Area Wilderness (BWCAW), as shown in Table 2.4. In addition, between 85,000 and 95,000 acres of trust land are located in wildlife management areas (WMAs), which may limit the revenue generating potential of the land.

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**The Legislature and DNR recognize the need to compensate the PSF when revenues from trust land are diminished.**

The Minnesota Legislature and DNR recognize the need to compensate the Permanent School Fund when revenues are diminished.<sup>51</sup> In the past, DNR has compensated the trust by purchasing trust land and exchanging trust land for other state-owned land. However, we found that:

- **In recent years, DNR has not given a high priority to compensating the trust fund for the use of trust land.**

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**Table 2.4: School Trust Land in Uses That Prohibit the Generation of Revenue, 1997**

<u>Use</u>	<u>Estimated Acres</u>
State Parks	5,060
Peatland Scientific and Natural Areas	51,000
Boundary Waters Canoe Area Wilderness	<u>93,260</u>
Estimated Total	149,320

SOURCES: Department of Natural Resources, Divisions of Parks and Recreation, Fish and Wildlife, and Forestry.

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<sup>51</sup> Commissioner Joseph N. Alexander to Legislative Auditor Eldon Stoehr, June 17, 1981, letter; *Minn. Stat.* §84.035, subds. 4 and subd. 9; Minnesota Department of Natural Resources, *Recommendations for the Protection of Ecologically Significant Peatlands in Minnesota* (St. Paul, 1984), 27-30; and Minnesota Department of Natural Resources, *Operational Order 1961: Wildlife Management Areas* (St. Paul, June 10, 1983).

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**At times, DNR has emphasized natural resource management responsibilities over its fiduciary responsibilities to the trust.**

DNR does not have any immediate plans to remove the remaining acres of trust land from state parks, SNAs, or other management units. As discussed below, DNR has given priority to acquiring privately-held land in state parks and other management units that is threatened with development. Since school trust lands are already under state control they are not in danger of being developed. In past years, DNR has given higher priority to other private land acquisition projects.

The DNR is faced with a dilemma as it tries to balance its fiduciary responsibilities to the PSF with its natural resource management and conservation responsibilities. Given the choice of using limited capital bonding and land acquisition resources to acquire trust land versus acquiring private inholdings threatened with subdivision and development, the department has chosen to emphasize the latter. In these instances, the department has chosen to emphasize its natural resource responsibilities over its fiduciary responsibilities to the PSF.

The remainder of this section discusses trust land located in SNAs, state parks, the BWCAW, and WMAs. It also reviews DNR's efforts to compensate the PSF for use of school trust land for purposes other than maximizing long-term economic returns to the trust beneficiaries.

## Scientific and Natural Areas

Scientific and natural areas (SNAs) are established to protect critical habitats or rare species and natural communities, and to ensure the perpetuation of natural features possessing exceptional scientific and educational value in an undisturbed natural state.<sup>52</sup> Examples of these features include stands of old growth timber, geological and fossil formations, flora or fauna from an earlier period, or habitat supporting a vanishing, rare, endangered or restricted species of plant or animal. SNAs currently encompass about 29,000 acres and do not contain any school trust land. However, the 146,200 acres of peatland SNAs include about 51,000 acres of school trust land, or about 35 percent of the peatland SNAs. This acreage represents 2 percent of all acres of school trust land.

State law requires that the department acquire land before establishing a SNA.<sup>53</sup> A 1984 DNR report recommending protection of ecologically significant peatlands identified school trust land as an area of concern because the area proposed for peatland protection contained trust land. The report stated:

The DNR goal for management of School Trust Lands is to secure the maximum long-term economic return from the lands consistent with sound natural resource conservation and management principles and specific policy guidance as provided in state law. *When economic activities that would provide income to the Permanent School Fund are restricted or prohibited, the DNR's policy is to compensate the fund for economic value foregone.*

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<sup>52</sup> *Minn. Stat.* §86A.05, subd. 5.

<sup>53</sup> *Minn. Stat.* §84.033. The law provides that land may be acquired by purchase, lease, or easement.

For these reasons, it became clear that *any School Trust Lands within units of peatland protection areas in which economic activities were restricted would require compensation of the Permanent School Fund for the loss of revenue potential.* There was nearly unanimous agreement by members of the [Task Force on Peatlands of Special Interest] about this issue.<sup>54</sup> [*Emphasis added.*]

Legislation creating peatland SNAs in 1991 specifically stated, “the commissioner shall acquire by exchange or eminent domain the surface interest, including peat, on trust fund lands contained in peatland scientific and natural areas.”<sup>55</sup> We found that:

- **The DNR has not assigned a high priority to transferring school trust land in peatland scientific and natural areas to a non-trust status.**

Although the Legislature directed the commissioner of DNR to acquire the school trust land in these areas in 1991, the agency has not yet taken action on this issue. DNR staff told us that since the Legislature did not set a time frame or appropriate specific funding for the trust land acquisition, the department did not consider it a mandate.

The department has estimated the value of school trust land in peatland SNAs at \$3.8 million, an average of about \$75 per acre based on county assessor valuations.<sup>56</sup> The SNA program’s 1996 land acquisition priorities included 73,813 acres of land valued at \$15.9 million. Actual appropriations for land acquisition from all sources totaled \$1.95 million between 1994 and 1997. In its efforts to acquire and preserve pristine natural areas, DNR has used its limited resources to acquire privately-held lands that are in imminent danger of development. School trust land is already under state control and is not in danger of being developed.<sup>57</sup>

In the past, the SNA program has used some of its land acquisition budget to acquire trust land. In 1990, the SNA program acquired 40 acres of trust land valued at \$13,000. The program has also initiated some land exchanges. In 1994, the SNA program exchanged 46 acres of trust land valued at \$54,000 for other DNR-acquired land to preserve an old growth forest in the Lost Forty SNA. In 1996, 80 acres of school trust land valued at \$36,600 were exchanged for 200 acres of state-owned land to preserve a stand of old growth pine in the Kawishiwi Pines SNA.

## State Parks

There were about 5,750 acres of school trust land within the statutory boundaries of Minnesota state parks and recreational areas administered by the Divisions of

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<sup>54</sup> Minnesota Department of Natural Resources *Recommendations for the Protection of Ecologically Significant Peatlands in Minnesota* (St. Paul, 1984), 27-30.

<sup>55</sup> *Minn. Stat.* §84.035, subds. 4 and subd. 9.

<sup>56</sup> According to DNR staff, most of school trust land in peatland SNAs is not of commercial value because it is not readily accessible or close to commercial markets. About 84 percent of this land is located in Koochiching County.

<sup>57</sup> Minnesota Department of Natural Resources, Scientific and Natural Areas Acquisition and Betterment documents, January 26, 1996.

Parks and Recreation in 1997. The trust land in state parks comprise 0.2 percent of all the school trust land and 2.4 percent of the 240,000 acres in state park boundaries.

Like other units, DNR's goals and policies for management of Minnesota's state park system do not differentiate between school trust land and other state land in parks and recreation areas. Minnesota's state parks, recreation areas, and waysides were created to conserve "scenery, natural and historical objects and wildlife" and to provide for the general public's enjoyment of these resources in a manner that will "leave them unimpaired for the enjoyment of future generations."<sup>58</sup> As part of Minnesota's outdoor recreation system, state parks are designed to protect and perpetuate natural areas and to provide recreational and educational opportunities in natural settings consistent with ecological concerns.<sup>59</sup>

The above natural resource management goals and policies limit the potential for revenue generation from school trust lands located in the state parks and recreation system. Some timber may be harvested within state parks. However, when these lands are logged it is to address land management goals other than income generation. The revenues and associated management costs from selected timber harvesting on trust land in state parks are included in timber sale revenues and costs in the Forest Suspense Account for the Division of Forestry. DNR also compensates the trust for the 633 acres of trust land in the Hill-Annex Mine State Park by paying an annual lease fee of \$3,000 (or about \$5 per acre).

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**DNR exchanged over 5,000 acres of school trust land in state parks in the 1980s.**

In the 1980s, there were over 10,000 acres of school trust land in state parks. A report by the Office of the Legislative Auditor expressed concern that these trust lands were not generating revenue for trust beneficiaries.<sup>60</sup> During the late 1980s and early 1990s, DNR addressed this issue by exchanging 5,357 acres of school trust land in state parks valued at \$1.2 million for other DNR-acquired land of similar value. The Legislative Commission on Minnesota Resources financed the state park land exchange, which was finalized in 1992. The land exchange program left school trust land in four parks for the following reasons:

1. Nerstrand Big Woods State Park. The 460 acres of trust land in this park contain valuable stands of timber that were appraised at a value in excess of \$1 million in 1989. There were no DNR-acquired lands in Rice County with which to exchange the trust land.
2. Savanna Portage State Park. The 3,050 acres of trust land are located in the northern portion of this park. In the late 1980s the department considered changing the park's boundary to eliminate the trust land from the park. The boundary was not changed.
3. Hill-Annex Mine State Park. In the late 1980s, when the park land exchange program began, this area had not yet been designated as a state park. Given limited resources, and the fact that park designation would

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<sup>58</sup> *Minn. Stat.* §85.011.

<sup>59</sup> *Minn. Stat.* §86A.05, subd. 2.

<sup>60</sup> Office of the Legislative Auditor, *A Review of the Department of Natural Resources' Operation and Management of the Permanent School Fund* (St. Paul, 1981), 14-15.

not preclude mineral lease revenues, it was not included in the exchange program.

4. Itasca State Park. Approximately 613 acres of school trust land in Becker and Itasca counties were exchanged. However, the department was not able to reach an agreement with Clearwater County on the exchange of an additional 1,000 acres valued at approximately \$528,000 in 1989.

We found that:

- **Since the early 1990s, DNR has added school trust land to state parks without making provisions to compensate the trust by either acquiring the trust land or exchanging the trust land for other state-owned land.**

Table 2.5 lists the seven state parks and recreational areas which currently contain trust land. Since 1991, 601 acres of school trust land have been added to three state parks through the creation of new parks, boundary extensions, or survey adjustments. Mining activities are permitted in the Cuyana County Recreation Area and may provide revenue to the trust. DNR staff have estimated the value of school trust land remaining in state parks at between \$4 million and \$5 million.<sup>61</sup> According to DNR staff,

- **The department has no immediate plans to either acquire or exchange school trust land in state parks.**

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**DNR's top priority is acquiring privately-owned land in state parks.**

In addition to school trust land, the statutory boundaries of state parks contain approximately 24,000 acres of privately-owned land, called "inholdings." To prevent uncontrolled development within state park statutory boundaries, the division's top priority is acquiring private inholdings that are threatened with subdivision and development.<sup>62</sup> While this may be a reasonable strategy in the short run, we think that DNR should make specific plans to compensate the trust for land within state parks over the next 10 years.

## **Boundary Waters Canoe Area Wilderness**

The state owns approximately 112,000 acres of the Boundary Waters Canoe Area Wilderness (BWCAW), most of which (93,260 acres) is school trust land. The BWCAW is remote, pristine, and unique. Development in what is now the BWCAW has been restricted to some extent since 1926, when the Secretary of Agriculture declared most of it a roadless area. Federal laws and wilderness regulations and state laws have prohibited revenue generating activities, such as

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<sup>61</sup> These values are not based on formal appraisals, but are estimates developed by DNR Division of Parks and Recreation staff.

<sup>62</sup> Minnesota Department of Natural Resources, *1996 Performance Report* (St. Paul, 1996), 91-92, and telephone interview with John Strohkirch, December 3, 1997.

**Table 2.5: Acres of School Trust Land in Minnesota State Parks and Recreational Areas, 1997**

<u>State Parks/Recreational Areas</u>	<u>County</u>	<u>Total Current Acres</u>	<u>Acres Added Since 1991</u>
Cuyuna County <sup>a</sup>	Crow Wing	52	52
Hill-Annex Mine <sup>b</sup>	Itasca	633	--
Itasca	Becker/Clearwater	1,000	--
Nerstrand Big Woods	Rice	460	--
Savanna Portage	Aitken/St. Louis	3,050	--
Schoolcraft	Cass/Itasca	69	69
Tettegouche	Lake	<u>480</u>	<u>480</u>
Total		5,745	601

<sup>a</sup>Mining activities in the Cuyana County Recreation Area produce revenue for the Permanent School Fund.

<sup>b</sup>DNR pays an annual lease fee of about \$3,000 to the trust for the use of trust land in Hill-Annex Mine State Park.

SOURCE: Department of Natural Resources, Division of Parks and Recreation, unpublished data.

**The federal government may be willing to buy trust land in the BWCAW, but it is not interested in a land exchange deal with the state.**

timber sales, minerals exploration, and mining in the BWCAW since 1978 when it was designated a wilderness area.<sup>63</sup>

Although the Boundary Waters Canoe Area is a unique natural resource, the state’s responsibility to the school trust should not be forgotten. Trust land in the BWCAW has generated little revenue since 1926 and no revenue in the last 20 years.

Several options exist for dealing with school trust land within the BWCAW. DNR has been interested in an exchange of school trust land in the BWCAW for U.S. Forest Service (USFS) land in Minnesota’s national forests since 1978. The USFS, however, has not been interested in a land exchange because a large scale exchange of land would severely disrupt the Forest Service’s timber harvest plan for federal timberland in northern Minnesota. USFS forest plans assign a priority to exchanging county lands within the BWCAW, but not state lands. According to federal officials, USFS regards the state as a partner in the BWCAW regulation because of the state’s jurisdiction over the waters in the BWCA, and, therefore, land exchange with the state has been a low priority.

Recent discussions between state and federal officials indicate that federal purchase of state land, and particularly school trust land, in the BWCAW may be feasible. Preliminary discussions between DNR and federal officials have estimated the value of trust land in the BWCAW at approximately \$35 million. More precise estimates would require appraisals. DNR officials are supportive of a purchase option, and have made efforts to obtain a “down payment” of \$10 million from federal Land and Water Conservation funds. While the state

63 *The 1978 BWCA Wilderness Act* (P.L. 95-495); and *Minn. Stat.* §84.523.

congressional delegation has been supportive of this request, some Minnesota state legislators continue to prefer a land exchange to a cash purchase.<sup>64</sup> The Permanent School Fund is the predominant owner of state land within the BWCAW and has not benefited from the stalemate between the state and federal government over how to deal with state inholdings in the BWCAW. We recommend that:

- **DNR should continue to pursue compensation to the PSF for the trust land in the BWCAW. If the federal government's cash purchase of some or all of the trust land in the BWCAW is the most practical option, then it should be pursued.**

User fees could be another option for compensating the trust. The USFS has recently instituted user fees for the BWCA of \$10 per trip beginning in 1998. Additional user fees to compensate the Permanent School Fund for the use of trust land in the BWCA are a possibility, although the details of how a state-imposed user fee might work are unclear.

## Wildlife Management Areas

DNR's Fish and Wildlife Division administers wildlife management areas (WMAs) to protect lands and waters with a high potential for wildlife production and to develop and manage these lands and waters for the production of wildlife, opportunities for public hunting, fishing, and trapping, and other compatible outdoor recreational activities.<sup>65</sup>

A DNR policy document first adopted in 1983, and currently in the process of being revised, states that trust land within an approved WMA project boundary will be managed in accordance with the WMA's management plan. In addition:

Management activities will be evaluated to determine whether they preclude or limit income producing uses of the trust fund land.

To the extent that management activities preclude all income producing uses of trust fund land, the department will initiate condemnation procedures.<sup>66</sup>

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<sup>64</sup> State Representative Tom Rukavina, et. al., to United States Representative James Oberstar, November 13, 1997, letter; James W. Sanders, Forest Supervisor, U.S. Forest Service, to Rodney W. Sando, Commissioner, Department of Natural Resources, October 21, 1997, letter; Rodney W. Sando, Commissioner, Department of Natural Resources, to Under Secretary James R. Lyon, U.S. Department of Agriculture, November 13, 1997, letter; Rodney W. Sando, Commissioner, Department of Natural Resources, to Michael P. Dombeck, Chief, U.S. Forest Service, November 13, 1997, letter; U.S. Senator Paul Wellstone and the Minnesota Congressional Delegation to U.S. Senator Robert C. Byrd, Ranking Member, Subcommittee on Interior Appropriations, November 3, 1997, letter.

<sup>65</sup> *Minn. Stat.* §86A.05, subd. 7.

<sup>66</sup> Minnesota Department of Natural Resources, *Operational Order 1961: Wildlife Management Areas* (St. Paul, June 10, 1983).

In 1997, the department managed 1,288 WMAs containing 753,000 acres of DNR-acquired land. Approved WMA project boundaries contained another 797,400 acres. Approved WMA project boundaries include a variety of land ownership, such as privately-held, trust, and tax-forfeited lands. Until the department begins acquiring title to land within a project boundary designation as a proposed WMA does not affect land use.

The department estimates that approved WMA project boundaries contained 109,000 acres of school trust land in 1983. About 15,800 acres were in proposed projects where DNR had not acquired any land; therefore, these acres were not managed as WMAs. Between 85,000 and 95,000 acres of trust land were in WMA project areas where the department had acquired title to some land.<sup>67</sup> About 65 percent of trust land in WMAs was located in Kittson, Marshall, and Roseau counties and was managed according to WMA policies, which may restrict the revenue generating potential of the trust land. While there are some agricultural and sand and gravel leases on WMA land, there are only selective timber harvests to meet wildlife management purposes, not to generate income.

In 1983, DNR stated that “it will eventually acquire by condemnation all remaining school trust land in WMAs as funding and acquisition priorities permit.”<sup>68</sup> DNR staff told us that if WMA management decisions remove trust land from revenue producing status, such as flooding land to create a wildlife habitat, then the department condemns the land and compensates the trust fund. Since 1986, however, the WMA program has initiated only six condemnations involving 2,037 acres valued at \$288,640, and one land exchange. In addition, three condemnations initiated in 1995 and 1997 are pending.

## Options for Compensating the PSF

There are many different ways of compensating the PSF for uses of trust land that result in decreased or foregone income. DNR can purchase the trust land or exchange it for other DNR-owned land that generates revenue. User fees and lease payments are other options for compensating the PSF. For example, DNR could lease the acres of trust land in a management unit or it could pay a share of the public access fees to the trust fund. These payments could be determined a number of different ways. For instance, lease fees could be calculated on a per-acre basis or public access fees could be shared based on the share of trust land acres in a park. In most situations, however, the lost revenues for DNR divisions would have to be balanced with General Fund appropriations made by the Legislature.

Another approach could involve special legislative appropriations for the specific purpose of acquiring the trust land and compensating the trust fund. For example, the Legislature may want to consider specific appropriations for any trust land affected by the creation of new state parks or boundary changes that add trust land to existing state parks.

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**Several options exist for compensating the trust.**

<sup>67</sup> The 1983 acreage data was the most current information available from DNR’s Fish and Wildlife Division. The DNR’s GIS/MIS system reports about 85,000 acres of trust land in WMAs.

<sup>68</sup> Minnesota Department of Natural Resources, *School Trust Land Management*, 47-48.

## SUMMARY

The DNR manages some trust land to secure an economic return. In this chapter we found that 1.5 million acres of the 2.2 million acres of trust land managed by the Division of Forestry was classified as commercial forest and was available for timber harvest in 1997. We estimated that the accumulated net income of timber from forest trust land over the next 40 years will be between \$186 million and \$305 million in 1998 dollars.

Timber sales on school trust land accounted for one half of the total volume and value of timber sold in Minnesota between 1986 and 1996. Because DNR is allowed to use revenues from forestry management activities (including timber sales and leases) to finance its trust land management costs, forestry management has not generated significant net earnings for the trust fund. From 1982 to 1992, nothing was deposited into the PSF principal from forestry management activities on trust land. Since 1992, forestry management activities have added \$6.5 million to PSF principal. Forestry management costs have averaged 70 percent of revenues, however, resulting in a net return on asset value of less than 1 percent.

The department uses a number of methods to allocate a portion of its fire protection, forest improvement and management, administration, and road improvement and construction costs to school trust land. We found that the per acre allocation of fire protection and suppression costs may overstate the actual costs incurred on trust land. We suggest that DNR review whether specific components, such as sand and gravel and recreation management activities, should be included with other forestry management revenues and costs.

We did not examine the Division of Forestry's overall management of Minnesota's timber resources. We think that a study of Minnesota's timber management policies and practices, management costs, and timber appraisal and stumpage pricing methods may be timely.

Between 1986 and 1997, mineral revenues from school trust land accounted for \$17.1 million or about 40 percent of revenues from all school trust land proceeds added to the PSF principal. Revenues from iron ore and taconite leases represented about 94 percent of all mineral revenues. Because the value of Minnesota's mineral resources is unknown, it is not possible to estimate a return on asset value for mineral leasing on school trust land.

We estimate that about 150,000 acres of school trust land are included in areas that prohibit revenue generating activities, such as state parks, peatland scientific and natural areas, and the Boundary Waters Canoe Area Wilderness. Given the choice of using limited capital bonding and land acquisition money to compensate the trust versus acquiring private inholdings threatened with development, DNR has chosen to emphasize the latter. In these instances, the department's natural resource responsibilities have predominated over its fiduciary responsibilities to the PSF. If the Legislature wants to compensate the PSF for the trust land that does not generate revenue, then it could consider authorizing specific appropriations for that purpose.