The Fiscal Impact of Federal and State Waterfowl Production Areas on Local Units of Governments in West Central Minnesota

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NATURAL RESOURCES
DIVISION OF GAME AND FISH

Coffee fueled many sessions such as this one. The result: this report.

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INTRODUCTION

State and federal properties located in Minnesota are not taxed by local levels of government. To pay for services of local government, some state and federal agencies are required by law to make "in-lieu of tax payments" or more simply referred to here as in-lieu payments.

Local officials often question whether these payments equal the revenues they would receive if the properties were held by private citizens and subject to local property taxes. Where the in-lieu payment is below the local tax bill, local government makes up the difference by imposing a higher tax rate on private property. If the in-lieu payment is above the local tax bill, local government has excess revenue resulting in a lower tax rate on private property in the area. These changes in local government revenues and tax rates are called fiscal impacts.

Officials of rural governments comprising the Upper Minnesota Valley Regional Development Commission have long been concerned with not being able to evaluate sufficiently the fiscal impact associated with the resident State and Federal Fish and Wildlife Services' waterfowl management areas. The region's wetlands are resting and nesting areas for waterfowl. To guarantee adequate wetlands, both the Federal and State Fish and Wildlife Services have extensive programs for acquiring wetlands as waterfowl production areas. In the five counties that comprise the commission, Big Stone, Chippewa, Lac Qui Parle, Swift, and Yellow Medicine, these programs have removed 47,490 acres from the local tax rolls. The federal program accounts for 27,153 acres and the state for 20,337 acres or a total of 2.22 percent of the region. These waterfowl management areas are not distributed

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evenly throughout the region, as shown in table 1, with the majority located in Big Stone, Lac Qui Parle, and Swift counties.

Table 1. Federal and state fish and wildlife holdings of land as of June 1978 in the Upper Minnesota Valley Regional Development Commission

| | Land holdings in acres and as percent of county or region's total area | | | | | |
| | Federal | | State | | Total | |
County	Acres	Percent	Acres	Percent	Acres	Percent
Big Stone	9,456	3.02	2,205	.70	11,661	3.72
Chippewa	0	0	2,299	.61	2,299	.61
Lac Qui Parle	12,051	2.45	7,752	1.58	19,803	4.03
Swift	5,576	1.18	4,500	.95	10,076	2.13
Yellow Medicine	70	.01	3,581	.74	3,651	.75
REGION	27,153	1.27	20,337	.95	47,490	2.22

Under guidelines of Title V of the Rural Development Act of 1972, the Department of Agricultural and Applied economics and Agricultural Extension Service at the University of Minnesota, in cooperation with the Upper Minnesota Valley Regional Development Commission, undertook to evaluate the fiscal impacts of both state and federal wildlife management lands on local governments comprising the commission.

The local fiscal impact is defined as having three separate components or impacts: direct fiscal impact, indirect fiscal impact, and administrative impact. The level of fiscal impact is measured in terms of changed revenues received by local governments and changed mill rate paid by local taxpayers. The change is the difference in local revenues and tax rates between the situation where the lands are held by either State or Federal Wildlife Services and the same properties if privately owned and subject to local property taxes. It assumes that no change takes place in the demand for local public services so local expenditures remain the same no matter how the land is held.

UNDERSTANDING THE LOCAL FISCAL IMPACT

Direct Fiscal Impacts

The dollars to support local government come from sources such as local property tax, fees, licenses, and funds transferred from other governmental units. The part of the local budget paid for by the local property tax is called the levy. The property tax is measured in the number of mills a taxpayer is charged per $1,000 of taxable value of property owned. The taxable value of property, its assessed valuation, is some percent less or equal to the market value of the property. The local mill rate or tax rate is determined by dividing the local unit of government's levy by the total assessed valuation within the government's boundaries.

$$\text{MILL RATE} = \frac{\text{LEVY}}{\text{TOTAL ASSESSED VALUATION}}$$

The local property tax on a parcel of land is a total of individual mill rates for local units of government controlling the area where the property is located. In Minnesota, units of government with powers to tax are townships, cities, county governments, and school districts. There also are special service districts in some counties which can tax, such as fire districts, hospital districts, and regional development commissions. Local government units do not share common boundaries so the local property tax can vary substantially within a county. The overlap in local government boundaries creates the unique tax districts which determine the tax rate applied to any individual taxpayer.

There are two direct local fiscal impacts when land ownership is held by a nonlocal (meaning state or federal) government: loss of property tax revenue the property would generate if privately held, and the in-lieu payments made by the nonlocal government. The property tax loss associated with a nonlocal government's property is not just the current mill rate times the assessed valuation. If the nonlocal government's property was on the local tax rolls, the total local assessed valuation would increase by the amount of that property's assessed valuation. The local government's levy, assuming expenditures remain the same, is increased by the in-lieu payment received. The mill rate with the nonlocal government's property on the tax rolls is calculated by including both the in-lieu payment and assessed value of the nonlocal government's property in the mill rate formula. This is referred to as the replacement mill rate.

$$\text{REPLACEMENT MILL RATE} = \frac{\text{LEVY} + \text{IN-LIEU PAYMENT}}{\begin{array}{l}\text{TOTAL ASSESSED VALUATION} + \text{ASSESSED}\\ \text{VALUE OF NONLOCAL GOVERNMENT'S}\\ \text{PROPERTY}\end{array}}$$

When the replacement mill rate is set, the fiscal impact measured in both property tax revenue and mill rate can now be calculated. The local government unit loses or gains the difference between the in-lieu payment and the replacement mill rate times the assessed valuation of the nonlocal government's property (if on the local tax rolls).

$$\begin{array}{l}\text{LOCAL}\\ \text{GOVERNMENT}\\ \text{REVENUE IMPACT}\end{array} = \left(\begin{array}{l}\text{IN-LIEU PAYMENT} -\\ \text{REPLACEMENT} \quad \text{ASSESSED}\\ \text{MILL RATE} \quad \times \text{VALUATION OF}\\ \qquad\qquad \text{NONLOCAL}\\ \qquad\qquad \text{GOVERNMENT'S}\\ \qquad\qquad \text{PROPERTY}\end{array}\right)$$

The impact on the local taxpayers is the difference between the present mill rate and the replacement mill rate. This simply says if the

$$\text{IMPACT ON TAXPAYER} = \text{PRESENT MILL RATE} - \frac{\text{REPLACEMENT}}{\text{MILL RATE}}$$

local taxpayers pay more or less tax because of the presence of the nonlocal government's property.

Example I shows calculations for a county government housing nonlocal government property. In this example the in-lieu payment to the county is $711 greater than the tax revenue if the property was privately owned. The taxpayers in the county pay a .7 mill lower tax rate because a nonlocal government holds the land. There are different federal and state programs which remove land from the local tax rolls (table 2). Each program has a different payment structure; these differences cause different local fiscal impacts.

Example I. Fiscal impact on county government

Nonlocal government's property not on tax rolls (present situation)

County budget	= $	151,025
Revenue sources		
1) Levy	= $	150,000
2) In-lieu payment	= $	1,025
County tax base	= $10,000,000	

(Assessed valuation of private property on tax rolls)

Assessed value of nonlocal government's property not on local tax rolls = $ 20,000

$$\text{Present mill rate} = \frac{\$\ 150,000}{\$10,000,000} = 15.\text{ mills}$$

Nonlocal government's property on tax rolls

County budget	= $	151,025
Revenue sources		
1) Levy	= $	151,025
2) In-lieu payment	= $	0
County tax base	= $10,020,000	
1) Assessed valuation of private property	= $10,000,000	
2) Assessed valuation of nonlocal government property	= $	20,000

$$\text{Replacement mill rate} = \frac{\$\ 151,025}{\$10,020,000} = 15.7 \text{ mills}$$

Fiscal impacts

$$\begin{array}{l}\text{Revenue impact on}\\ \text{county government}\end{array} = \begin{array}{l}\$1,025 - (.0157 \times \$20,000)\\ = \$711\end{array}$$

$$\begin{array}{l}\text{Impact on county}\\ \text{taxpayer}\end{array} = \begin{array}{l}15.0 \text{ mills} - 15.7 \text{ mills}\\ = -.7 \text{ mills}\end{array}$$

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Table 2. Federal and state natural resource lands acquisition programs and in-lieu payments

STATE

State Forests	50% of gross revenues from acquired or tax-forfeited land
State Parks	None
Wildlife Management Areas	35% of gross revenues or 50¢/acre — whichever is greater from acquired land used for public hunting grounds or game refuges
Consolidated Conservation Areas	50% of gross revenues, plus up to $1,000/year for administration
Trust Fund Lands	Payment per student distributed equally throughout the state as part of categorical aid for schools
Tax-Forfeited Lands	80% of gross mineral royalties and receipts; counties may also keep all revenues from sales, leases, timber, etc., which are a result of county management of the lands
Law Enforcement, Public Access, Department of Natural Resources Administration	None

FEDERAL

National Forests[a]	3/4 of 1% appraised value of acquired wilderness lands (Boundary Water Canoe Area), plus 25% of net revenues
National Parks[a]	None
Wildlife Management Areas	3/4 of 1% appraised value of acquired lands of 25% of net revenues, whichever is greater, plus 25% of net revenues from public domain lands
Corps Lands[a]	75% of revenues from fee title lands
Bureau of Land Management Lands (1)	25% of net revenues from acquired lands
Indian Lands[a]	None

[a] New federal legislation provides for payments of 75¢/acre minus existing payments for certain federal lands.

SOURCE: *Minnesota Public Lands Impact Study.* Legislative Commission on Minnesota Resources, in cooperation with the Tax Study Commission and Barton-Aschman Associates, Inc., March 1977, p. 97.

Indirect Fiscal Impacts

Minnesota makes direct cash payments to help finance the daily operations of local governments. For two of these payment programs, Local Government Aid and School Foundation Aid, state aid is determined by the value of local property on the tax rolls. Since state or federal properties are off the local tax rolls, state aid may increase. This increase in state aid is the indirect fiscal impact.

The Minnesota Local Government Aid Law[1] established a block grant distribution system in 1973 to replace revenue paid local governments from the following sources: cigarette and liquor taxes, bank excise taxes, mortgage registry taxes, and half of inheritance tax receipts. Under the Local Government Aid Law, a fixed dollar amount per person is paid to the county. The county deducts a fixed proportion as its and the special taxing district's share. What is left is distributed to the cities and townships based on the percentage arrived at by multiplying a city or township population times its 3-year average mill rate, times its previous year's aggregate real estate ratio, and dividing by the total of these calculations for all cities and townships in the county. Local governments receive either the old distribution, or the amount calculated under the new law, whichever is greater. The 3-year average mill rate can change when property is taken off the tax rolls, changing the local share of state aid. Having wildlife land generally does not change the level of local government aids for agricultural areas.[2] This is because the aid from calculated formula is less than the required minimum aid distribution to the townships and counties.

State aid pays over 50 percent of the cost of local schools. This comes in two forms: the agricultural mill rate differential and the school district foundation aid. The agricultural mill rate differential is a property tax credit on agricultural homesteads, agricultural land, and recreational property. A school district calculates its mill rate by dividing its levy by its total assessed valuation. This determines the base mill rate called the nonagricultural mill rate.

$$\frac{\text{NONAGRICULTURAL SCHOOL}}{\text{MILL RATE}} = \frac{\text{SCHOOL DISTRICT LEVY}}{\text{TOTAL SCHOOL DISTRICT ASSESSED VALUATION}}$$

Homesteaded agricultural property pays 15 mills less than the nonagricultural rate, and nonhomesteaded agricultural property 10 mills less. The state pays the school districts the difference in revenue between the agricultural and nonagricultural mill rate. For nonlocal government's property within its boundaries, a school district loses both the direct tax revenue and the differential from the state or the equivalent to the nonagricultural mill rate.

Most state aid to local schools is through the foundation aid program which provides the major indirect local fiscal impact resulting from the presence of state or federal property. The reason for this is that the foundation aid formula is based on the total local assessed valuation. Each year the state sets a dollar amount, called the formula allowance, which it believes should be spent by each school district per pupil unit.[3] The ability of a school district to finance this expenditure level is determined by taking the state established mill rate times the equalized assessed valuation of the district. The state determines the equalized assessed valuation by taking the local assessed valuation and recalculating the assessed valuation of a district as if there were uniform valu-

[1] "1978 Local Government Aid Summary and 1977-1978 Local Government Levy Limitations," Local Government Aids and Analysis Division, State of Minnesota Department of Revenue, St. Paul, Minnesota 55101, pp. 1-2.

[2] This program may result in indirect fiscal impacts for Minnesota's non-agricultural areas.

[3] "Paying for the Public Schools: The ABC's of Minnesota School Finance," Minnesota State Department of Education, Room 760 Capitol Square, St. Paul, Minnesota 55101, March 1978. pp. 8-11.

ation statewide. The state pays the difference between the revenue required by multiplying the number of pupil units times the formula allowance and the amount calculated as the school district's ability to pay. Any expense over the state foundation aid figure must come from other sources: state or federal special payments or local taxes.

$$\text{FOUNDATION AID} = \text{(PUPIL UNITS x FORMULA ALLOWANCE)} - \text{(STATE ESTABLISHED MILL RATE x ADJUSTED ASSESSED VALUATION)}$$

In 1978 the formula allowance per pupil unit expenditure was $1,090 and the state established mill rate was 28 mills. The present foundation aid for the school district as well as the replacement foundation aid (the foundation aid with the nonlocal government's property on the local tax rolls) must be calculated with the difference between the two, the level of indirect fiscal impact on the school district.

$$\text{INDIRECT FISCAL IMPACT ON SCHOOL DISTRICT} = \text{PRESENT FOUNDATION AID} - \text{REPLACEMENT FOUNDATION AID}$$

School districts can also receive in-lieu payments. To measure the local fiscal impact, it is necessary to calculate the school district replacement mill rate with the assessed valuation of a nonlocal government's property on the tax rolls and the revenue the school district receives from the foundation aid and the in-lieu payments.

SCHOOL DISTRICT PLACEMENT MILL RATE =

$$\frac{\text{SCHOOL DISTRICT LEVY BUDGET} + \text{DIFFERENCE IN FOUNDATION AID} + \text{IN-LIEU PAYMENT}}{\text{TOTAL ASSESSED VALUATION} + \text{ASSESSED VALUATION OF NONLOCAL GOVERNMENT'S PROPERTY}}$$

The revenue impact on the school district is determined by taking the difference between the sum of in-lieu payment and the difference in foundation aid and the school district replacement mill rate times assessed valuation of the nonlocal government's property.

REVENUE IMPACT ON SCHOOL DISTRICT =

(DIFFERENCE IN FOUNDATION AID + IN-LIEU PAYMENTS) - (SCHOOL DISTRICT REPLACEMENT MILL RATE x ASSESSED VALUATION OF NONLOCAL GOVERNMENT'S PROPERTY)

The impact on the local taxpayers is again calculated by subtracting the replacement mill rate from the present mill rate.

$$\text{IMPACT ON TAXPAYER} = \text{PRESENT SCHOOL DISTRICT MILL RATE} - \text{SCHOOL DISTRICT REPLACEMENT MILL RATE}$$

Example II calculates both direct and indirect fiscal impacts of a nonlocal government's lands on a local school district. In this example the in-lieu payment and foundation aid more than compensate for the lost tax revenue. The school district receives a net increase in its revenue and the local school district taxpayers receive a net reduction in their tax rate.

Example II. Direct and indirect school district fiscal impacts

Nonlocal government's property not on school district tax rolls (present situation)

School district budget	= $ 408,925
Revenue source	
Levy	= $ 350,000
In-lieu payment	= $ 1,025
Foundation aid	= $ 57,900
Adjusted assessed valuation of private property on school district tax rolls	= $10,000,000
Student pupil units	= 310

Foundation aid =
$(310 \times \$1,090) - (.028 \times \$10,000,000) = \$57,900$

School district tax base (assessed valuation of private property on tax rolls)	= $ 9,000,000
Assessed value of nonlocal government's property not on local tax rolls	= $ 20,000

Present nonagricultural mill rate $= \dfrac{350,000}{9,000,000}$
$= 38.889$ mills

Nonlocal government's property on school district tax rolls

School district budget	= $ 408,925
Revenue source	
Levy	= $ 351,647
In-lieu tax payment	= $ 0
Foundation aid	= $ 57,278
Adjusted assessed valuation	= $10,022,000
Adjusted assessed valuation on private property	= $10,000,000
Adjusted assessed valuation on nonlocal government's property	= $ 22,000
Student pupil units	= 310

Foundation aid =
$(310 \times \$1,090) - (.028 \times \$10,022,000)$
$= \$57,278$

School district tax base	= $ 9,020,000
Assessed value of private property	= $ 9,000,000
Assessed value of nonlocal government's property	= $ 20,000
Change in foundation aid	= $57,900 – $57,278 = $622

Nonagricultural replacement = mill rate

$$\frac{\$350,000 + \$622 + \$1,025}{\$9,020,000} = 38.985 \text{ mills}$$

Example II (continued).

Fiscal impacts

Revenue impact on school district	= ($622 + $1,025) – (.038985 × $20,000) = $867.30
Impact on school district taxpayers	= 38.889 – 38.985 = –.096 mills

Administrative Impacts

Federal legislation allows county boards to allocate in-lieu payments to the local units of governments in the county. Before 1979, the federal legislation limited the expenditure of in-lieu payments to roads and schools. Current legislation allows county governments to allocate at their discretion to all taxing units in the county for any expenditure. There is no simple formula for calculating the administrative impacts associated with federal lands. Each county must be dealt with individually. There can be a variety of impacts depending on the geographic location of the lost valuation in the county and how a county distributes the in-lieu payments.

Present Minnesota legislation directs county boards to distribute the state in-lieu payments based on the percent any local unit of government's mill rate is of the total mill rate for all units of local government in which the state property lies. This legislation attempts to share equally the benefits or losses among the affected units of governments. Table 3 lists the federal and state allocation of in-lieu payments made by the counties that comprise the Upper Minnesota Valley Regional Development Commission.

THE FISCAL IMPACTS

Each parcel of land in the region held by either the State or Federal Fish and Wildlife Services in June 1978 was evaluated for its local fiscal impact on each unit of government in the region. The revenue impacts were totaled by source of revenue and type of government to develop aggregate levels of fiscal impacts within the region. The change in mill rates was aggregated by tax district to determine the impact on the local taxpayers.

Revenue Impacts

Table 4 shows the aggregate dollar revenue changes for State and Federal Fish and Wildlife lands by type of local government by county in the Upper Minnesota Valley Regional Development Commission. The federal in-lieu payment for all governments in the region is $3,634.78 less than the lands would generate on the local tax rolls. When the state foundation aid of $35,736.73 is added, the region as a whole gains $32,101.95 because of its Federal Fish and Wildlife lands. The county governments gain $18,306.13 in additional revenue, the school districts gain $18,648.63, while the townships lose $4,852.81.

The state in-lieu payments are $45,397.97 less than local units of government would receive if the lands were privately owned. When state foundation aid is included with the in-lieu payments, the local units of government lose $16,512.66 because of the state holding of lands in the region. County governments lose $12,223.98, townships lose $3,521.44, and school districts lose $767.24.

Table 3. In-lieu formulas for counties of the Upper Minnesota Valley Regional Development Commission, June 1978

County	State distribution formula	Federal distribution formula
Big Stone	% of summed mill rate for governments in which unit lies[a]	1/2 to County Road and Bridge Fund 1/2 to be distributed equally to School Districts 57, 58, 60, and 62
Chippewa	% of summed mill rate for governments in which unit lies[a]	None
Lac Qui Parle	% of summed mill rate for governments in which unit lies[a]	1/2 to County Road and Bridge Fund 1/2 to be distributed to School Districts as percent of total students residing in county[b]
Swift	% of summed mill rate for governments in which unit lies[a]	Total minus $1 to County Road and Bridge Fund $1 to be distributed to School Districts in county[c]
Yellow Medicine	% of summed mill rate for governments in which unit lies[a]	1/2 to County Road and Bridge Fund 1/2 to be distributed to School Districts as a percent of total students residing in county[b]

[a]The mill rate for the governments are summed and each government's percent of the total is its share of the in-lieu payment. Example: county government 35 mills, township 11 mills, school district 40 mills and state in-lieu payment of $100. The sum of the mill rates is 86 mills (35 + 11 + 40) and the county's proportion of the in-lieu payment is $40.70 (35/86 × $100), the township's is $12.79 (11/86 × $100) and the school district's is $46.51 (40/86 × $100).

[b]Example: School District 1 has 40 students, School District 2 has 60 students, and the federal in-lieu payment is $100. The total number of students in the county is 100 (60 + 40). The county retains 50 percent of the in-lieu payment and distributes the rest to school districts on percent of county students. School District 1 receives $20 (1/2 × $100 × 40/100) and School District 2 receives $30 (1/2 × $100 × 60/100).

[c]This was not calculated because of the small amount of money (1) distributed to school districts.

The total region gains $15,589.29 because of its wildlife lands. The region gains $1.18 for each federal acre not on the local tax rolls, loses 82 cents for each state acre, and when averaged, gains 33 cents per acre.

In table 5 the replacement revenue is divided by the lost property tax revenue. At 100 percent, the replacement revenue equals the lost property tax revenue, below 100 percent the local governments lose revenue, and above 100 percent the local governments gain revenue. County governments for federal lands generally gain. The impact ranges from a 10.76 percent loss to a 257.92 percent gain. Taken together county governments receive a 78.72 percent increase in revenues because of the federal lands. Townships, however, lose absolutely in that in no county are any federal in-lieu payments allocated to townships. School districts in the region make up

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Table 4. Revenue changes resulting from federal and state wildlife land in the Upper Minnesota Valley Regional Development Commission

County	County government[a]			Township governments		
	Tax loss[b]	In-lieu payments	Net difference	Tax loss[b]	In-lieu payments	Net difference
FEDERAL						
Big Stone	12,251.59	10,933.50	−1,318.09	1,471.53	0	−1,471.53
Chippewa	0	0	0	0	0	0
Lac Qui Parle	5,270.18	18,863.00	13,592.82	1,876.42	0	−1,876.42
Swift	5,672.18	11,647.00	5,974.82	1,492.39	0	−1,492.39
Yellow Medicine	59.42	116.00	56.58	12.47	0	−12.47
Region	23,253.37	41,559.50	18,306.13	4,852.81	0	−4,852.81
STATE						
Big Stone	1,633.14	470.53	−1,162.61	215.44	65.29	−150.15
Chippewa	2,543.91	431.92	−2,111.99	644.60	109.70	−534.90
Lac Qui Parle	3,054.86	824.77	−2,230.09	1,145.85	260.90	−884.95
Swift	3,285.56	821.66	−2,463.90	1,100.51	263.63	−836.88
Yellow Medicine	4,797.06	541.67	−4,255.39	1,266.21	151.65	−1,114.56
Region	15,314.53	3,090.55	−12,223.98	4,372.61	851.17	−3,521.44

[a]Includes tax and in-lieu payment to special service districts.

[b]Tax loss calculated with derived mill rate with wildlife lands on the local tax rolls.

Table 4 (continued). Revenue changes resulting from federal and state wildlife land in the Upper Minnesota Valley Regional Development Commission

County	School districts				Total			
	Tax loss[b]	In-lieu payments	State foundation aid	Net difference	Tax loss[b]	In-lieu payments	State foundation aid	Net difference
FEDERAL								
Big Stone	17,882.44	10,933.50	13,349.60	6,400.66	31,605.56	21,867.00	13,349.60	3,611.04
Chippewa	0	0	0	0	0	0	0	0
Lac Qui Parle	19,107.25	18,863.00	13,646.63	13,402.38	26,253.85	37,726.00	13,646.63	25,118.78
Swift	9,873.02	1.00	8,614.98	−1,257.04	17,037.59	11,648.00	8,614.98	3,225.39
Yellow Medicine	138.89	116.00	125.52	102.63	210.78	232.00	125.52	146.74
Region	47,001.60	29,913.50	35,736.73	18,648.63	75,107.78	71,473.00	35,736.73	32,101.95
STATE								
Big Stone	2,430.59	560.18	1,778.83	−91.58	4,279.17	1,096.00	1,778.83	−1,404.34
Chippewa	4,432.67	611.38	3,852.73	31.44	7,621.18	1,153.00	3,852.73	−2,615.45
Lac Qui Parle	10,501.45	2,258.33	8,466.04	222.92	14,702.16	3,344.00	8,466.04	−2,892.12
Swift	5,762.45	1,167.71	5,023.90	429.16	10,148.52	2,253.00	5,023.90	−2,871.62
Yellow Medicine	12,225.67	1,102.68	9,763.81	−1,359.18	18,288.94	1,796.00	9,763.81	−6,729.13
Region	35,352.83	5,700.28	28,885.31	−767.24	55,039.97	9,642.00	28,885.31	−16,512.66

[b]Tax loss calculated with derived mill rate with wildlife lands on the local tax rolls.

only 63.64 percent of the property tax revenue from federal in-lieu payments. This ranges from a low of .01 percent to a high of 98.72 percent. Yet, state funds provide the school districts with 76.03 percent of the lost property tax revenue. Taking the in-lieu payments and foundation aid together, the school districts receive 139.67 percent of the lost property tax revenue or gain 39.67 percent in revenues because the lands are not on the local tax rolls. For the region, the federal government pays 95.16 percent of the lost local property tax revenue. The state indirectly contributes an additional 47.58 percent. In total, local government units receive 142.74 percent of the lost property tax revenue. For each dollar lost in property tax revenue, the region receives $1.43. This ranges

from a per county high of 195.68 percent to a low of 111.41 percent. These differences result from the local market value assigned to the federal lands, the percent of market value used for assessment purposes, and the variances in state adjusted valuation for school districts.

For state wildlife lands, the counties receive only 20.18 percent of the lost property tax revenue, or they lose .80 cents on each dollar of lost property tax revenue. The townships receive 19.47 percent of the lost property tax revenue. School districts receive, for the region, 97.83 percent of the lost property tax revenue. The school district foundation aid represents 83.56 percent of the replacement revenue and the in-lieu payment, the remainder. In total for the region, the

Table 5. Percent of tax loss made up by state or federal sources

County	County government in-lieu payment as percent of tax loss	Township governments in-lieu payment as percent of tax loss	School districts			Total		
			In-lieu payment as percent of tax loss	Foundation aid as percent of tax loss	Foundation aid and in-lieu payment as percent of tax loss	In-lieu payment as percent of tax loss	Foundation aid as percent of tax loss	Foundation aid and in-lieu payment as percent of tax loss
			FEDERAL					
Big Stone	89.24	.00	61.14	74.65	135.79	69.18	42.23	111.41
Chippewa								
Lac Qui Parle	357.92	.00	98.72	71.42	170.14	143.70	51.98	195.68
Swift	205.34	.00	.01	87.25	87.26	68.37	50.56	118.93
Yellow Medicine	195.22	.00	83.52	90.37	173.89	110.07	59.54	169.61
Region	178.72	.00	63.64	76.03	139.67	95.16	47.58	142.74
			STATE					
Big Stone	28.78	30.31	23.05	73.18	96.23	25.61	41.57	67.18
Chippewa	16.98	17.01	13.79	86.91	100.70	15.13	50.55	65.68
Lac Qui Parle	26.99	22.77	21.50	80.62	102.12	22.74	57.58	80.32
Swift	25.01	23.96	20.26	87.18	107.44	22.20	49.50	71.70
Yellow Medicine	11.29	11.98	9.02	79.86	88.88	9.82	53.39	63.21
Region	20.18	19.47	16.12	81.71	97.83	17.52	52.48	70.00

Table 6. Percent distribution of total county revenue by unit of government for tax dollars and for state and federal in-lieu payment and foundation aid

Unit of government	Big Stone		Chippewa		Lac Qui Parle		Swift		Yellow Medicine		Region	
	Tax	In-lieu payment and foundation aid	Tax	In-lieu payment and foundation aid	Tax	In-lieu payment and foundation aid	Tax	In-lieu payment and foundation aid	Tax	In-lieu payment and foundation aid	Tax	In-lieu payment and foundation aid
					FEDERAL							
County government	38.76	31.05			20.07	36.72	33.29	57.48	28.19	32.45	30.96	38.76
Township governments	4.66	.00			7.15	.00	8.76		5.92	.00	6.46	.00
School districts	56.58	68.95			72.78	63.28	57.95	42.52	65.89	67.55	62.58	61.24
					STATE							
County government	38.17	16.37	33.38	8.63	20.78	6.98	32.38	11.29	26.23	4.69	27.83	8.02
Township governments	5.03	2.27	8.46	2.19	7.79	2.21	10.84	3.62	6.92	1.31	7.94	2.21
School districts	56.80	81.36	58.16	89.18	71.43	90.81	56.78	85.09	66.85	94.00	64.23	89.77

state replaces 70 percent of the lost property tax revenue with the in-lieu payment representing 25 percent of the replacement revenue and 75 percent from the foundation aid for schools. For the state wildlife lands, the foundation aid formula represents the largest source of replacement revenue and is an indirect impact that local officials may tend to forget.

A close evaluation of tables 4 and 5 leads to the conclusion in table 6 that the distribution of local revenues changes because of the in-lieu payments. Table 6 gives the distribution on a percentage basis of property tax revenue and replacement revenue. For the federal wildlife lands, the tax distribution for the region is 30.96 percent to the county governments, 6.46 percent to the township governments, and 62.59 percent to the school districts. County governments receive 38.76 percent of the replacement dollar, school districts 61.24 percent, and townships 0 percent. The fiscal impact of the federal lands is positive except on township governments.

For state lands both township and county governments lose in comparison with school districts. County governments receive 27.83 percent of the tax dollar and only 8.02 percent of the state's replacement revenue. The townships receive 7.94 percent of the tax dollar and 2.21 percent of the state's replacement dollar. School districts receive 64.34 percent of the tax dollar and 89.76 percent of the state's replacement dollar. Table 4 indicates the state does not completely replace the lost property tax revenue by the state in-lieu payment: the largest loss therefore falls on county and township governments.

Tax Rate Impacts

When in-lieu payments are distributed among local units of government, the tax rate for those governments also

changes. The impact on taxpayers is difficult to determine because it depends in which tax district a taxpayer lives. Consider the fiscal impact of one wildlife unit on local taxpayers. Table 7 illustrates the local fiscal impacts of the National Wildlife Refuge in Yellow Bank Township, Lac Qui Parle County. The tax rate changes for units of government run from a 1.1531 mill increase for Yellow Bank Township to a .8870 mill decrease for School District 371. For taxpayers residing in the tax district comprised of Yellow Bank Township, Lac Qui Parle County and School District 62, there is a 1.3372 (-.2298 + 1.1531 + .4139) increase in mill rate because of the National Wildlife Refuge. For taxpayers residing in Lac Qui Parle County and School District 371, the mill rate decreases by 1.1168 [(-.2298) + (-.8870)] mills. There is a net fiscal loss to taxpayers residing in the tax district where the wildlife parcel is located and a net fiscal gain to taxpayers in Lac Qui Parle County outside School District 62. In this example the total replacement revenues to be distributed are $5,303.29 more than if the land was privately owned. The local decision on how to distribute the in-lieu payments to local government causes a shift in local burdens.

Figure 1 shows the total shift in tax burden for both federal and state wildlife lands in the region. All taxing districts experience a change in tax burden because of the resident wildlife lands. The total change in mill rate paid by local taxpayers ranges from a .8109 mill increase to a .6806 mill decrease. As expected, those counties with largely state lands contain the majority of taxing districts with increased mill rates. Those counties with federal lands contain the majority of taxing districts with decreased mill rates. A close examination of figure 1 shows that taxing districts containing large amounts of wildlife lands experience increases in the mill rate. Further, the largest increase and decrease occurs in taxing districts located along a county boundary. The positive effect of these lands tends to be felt by those taxing districts without wildlife lands within their boundaries.

Conclusions and Applications

The direct federal in-lieu payments almost compensated for the lost local tax revenues. When the indirect state foundation aid to schools is added, local governments receive additional income because the land is used for waterfowl production. The direct state in-lieu payment by itself makes up less than 20 percent of the lost local revenue. When the indirect school foundation aids are added to the state's in-lieu payment, the state makes up approximately 70 percent of the lost local revenue. The level of calculated fiscal impacts varies substantially from county to county. The weight of the fiscal impact depends on local taxing and assessment procedures.

Both the allocation decision of the county boards for federal in-lieu payments and the required allocation for state in-lieu payments result in the reallocation of revenue among local government units resulting in changed tax burdens for local taxpayers. Even when the total replacement revenues supplied by nonlocal governments more than compensate for lost tax revenue, there can be lost tax dollars to some local units of government. Generally in this redistribution process the smallest units of governments where the wildlife are located lose revenues and their taxpayers pay higher tax rates.

The importance of this study is the understanding that is developed and can be used by local, state, and national officials. The local leaders launched the study by expressing concern that they did not understand the in-lieu payment process nor could they judge the fiscal impacts of their distribution formulas. The study results are being used by local officials to evaluate other possible distribution formulas for federal lands. The data developed by this study were used by the State of Minnesota in enacting its new in-lieu of tax legislation to take effect in 1980.

Table 7. Local fiscal impact of national wildlife refuge in Yellow Bank Township of Lac Qui Parle County

Unit of government	Tax revenue if land on tax rolls	In-lieu payment	School district foundation aid	Net gain or loss	Change in mill rate[b]
Lac Qui Parle County[a]	3,940.88	15,940.50		11,999.61	-.2298
Yellow Bank Township	1,836.32			-1,836.32	1.1531
School District 62	15,343.95	134.42	10,483.94	-4,833.24	.4139
School District 128		107.68		107.68	-.0345
School District 129		450.42		450.42	-.0403
School District 371		1,912.16		1,912.16	-.8870
School District 376		1,202.05		1,202.05	-.7001
School District 377		5,524.63		5,524.63	-.8671
School District 378		5,892.70		5,892.70	-.5890
School District 784		175.94		175.94	-.0286
School District 891		492.64		492.64	-.0519
School District 892		49.26		49.26	-.0081

[a]Includes revenue for Special Taxing Districts.
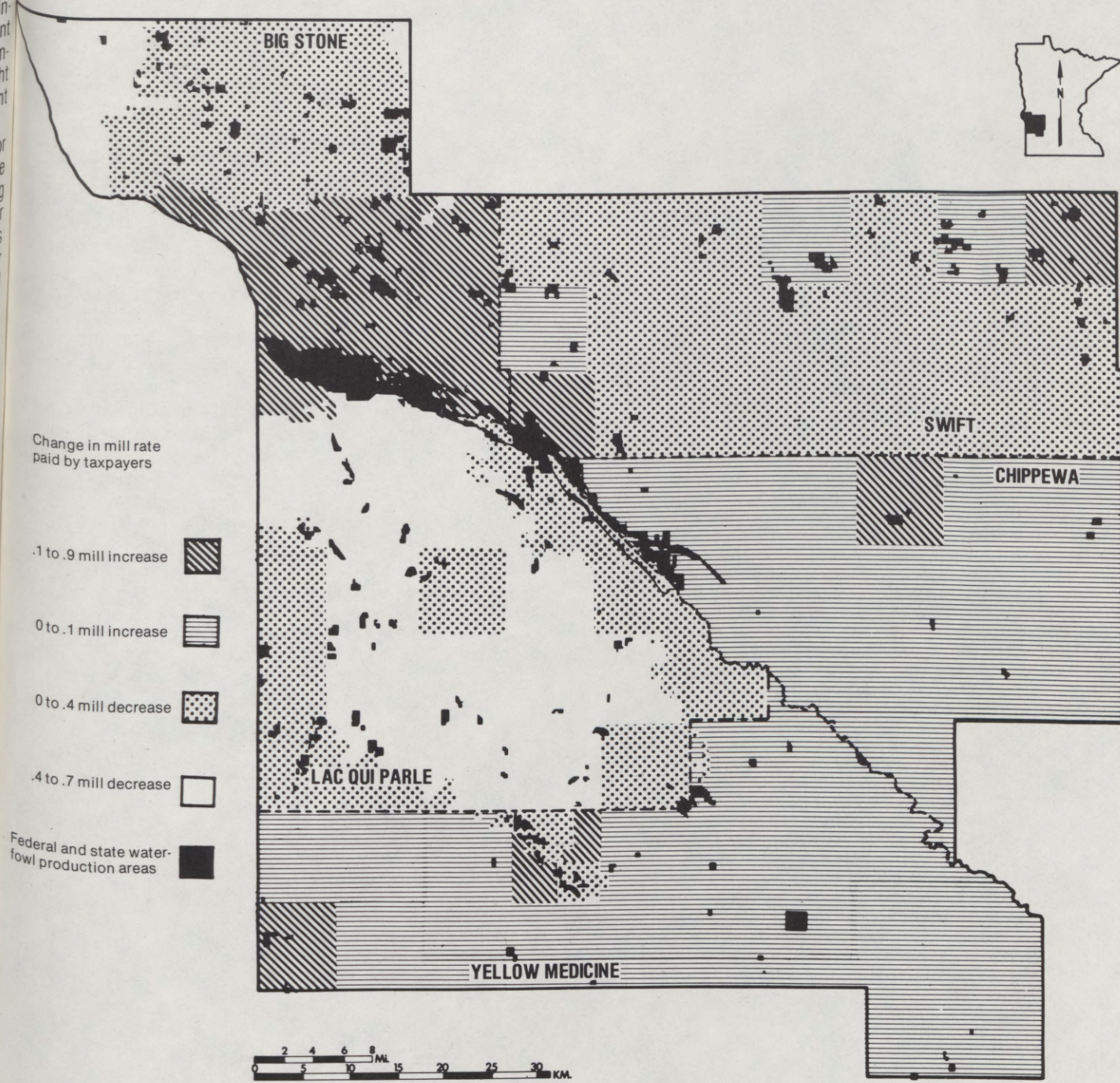[b]The nonagricultural mill rate for school districts.

Figure 1. Change in mill rate for taxing districts in Upper Minnesota Valley Regional Development Commission resulting from federal and state waterfowl production lands

Change in mill rate paid by taxpayers

.1 to .9 mill increase

0 to .1 mill increase

0 to .4 mill decrease

.4 to .7 mill decrease

Federal and state waterfowl production areas

BIG STONE

SWIFT

CHIPPEWA

LAC QUI PARLE

YELLOW MEDICINE

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Change in
mill rate[b]

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-.7001
-.8671
-.5890
.0286
-.0519
.0081

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