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Minnesota's RIM Reserve: Easement Summary and Payment Procedures

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**MINNESOTA'S RIM RESERVE: EASEMENT SUMMARY AND
PAYMENT PROCEDURES**

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Minnesota's RIM Reserve: Easement Summary and
Payment Procedures

Steven J. Taff and S. Todd Lee*

Report Overview

Initiated in the 1986 Minnesota Legislature to stimulate investment in the state's fish, wildlife, water, soil and other natural resources, the RIM (Reinvest in Minnesota) Reserve was intended to reduce some undesirable consequences of farming. Roughly half of the State's total RIM expenditures are channeled into the Reserve, administered by the state Board of Water and Soil Resources and local Soil and Water Conservation Districts (SWCD); the remainder goes to habitat development projects administered by the State Department of Natural Resources.

Under the Reserve, the state buys cropping and grazing rights to land that, if cropped, is believed to cause unacceptable public damages from erosion or that, if not cropped, can increase desirable public benefits such as wildlife habitat and water quality. Since 1986, the state has spent some \$19 million to acquire limited ownership rights in and to establish conservation measures on over 34 thousand acres of Minnesota cropland.

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The essence of the Reserve is straightforward: the state buys limited term or perpetual easements on previously cropped farmland. Limited term easements were first set at ten years (paralleling federal Conservation Reserve Program contracts), but were extended to 20 years for 1987 and succeeding sign-up periods. Both limited term and perpetual easements were originally intended to be used on "marginal agricultural lands" (MAL). Essentially, these are parcels with soils that lie at the lower end of the joint distribution of soil productivity and resistance to productivity losses from erosion, measures that can be calculated for all Minnesota soils (Larson et al., 1988). Subsequent legislation expanded the set of easement types to include the restoration of previously drained wetlands, "living snowfences" (windbreaks of trees planted along highways), pastured hillsides, riparian lands, and sensitive groundwater areas, among others.

Participating landowners must establish and maintain permanent cover or other conservation practices as prescribed by a conservation plan developed for each easement. In exchange, landowners receive a lump-sum payment, plus appropriate cost-sharing for selected practices.

In this report we examine the characteristics of the land that had been enrolled in the Reserve as of May 1, 1990 (Part A) and how this program has been administered, particularly with respect to easement payments (Part B). Local property tax implications of RIM Reserve enrollment are examined in a companion document (Lee and Taff, 1990). In neither report do we attempt a monetary valuation of the public benefits that are said to result from RIM program investments.

PART A: RIM RESERVE ENROLLMENT DATA

The Data Set

Extensive use is made of two data sets: the RIM contract files and USDA Soil Conservation Service soils interpretation records. The former lists for each easement the year of purchase, the location (township) the number of acres, the conservation practice cost and source, the easement type, and all soil mapping units (by type and acreage) on the parcel. The mapping unit information permits a link with the SCS soils interpretation data to generate many of the tables presented here. Details are available from the authors.

The RIM easement characteristics reported in this section are not based upon a complete enumeration. Of the 1,382 easements completed (as of May 1, 1990), 780 can be linked to soils data, although some of the data are not complete. (For the remaining easements, the soils information had not yet been recorded by program staff, or the counties in which the easement is located do not have a completed soil survey.) These 780 easements account for 16,871 acres, roughly half of the total enrolled acreage. However, the characteristics of the enumerated set appear to be similar enough to the whole set to warrant confidence about any conclusions drawn from data reported here. Table 1 shows this comparison. Newer easement types such as sensitive groundwater areas are underrepresented in the enumerated set, because most 1989 contracts were not fully entered at the time of the analysis.

Table 1: Comparison of Complete RIM Easement Data Set and Soils Characteristics Data Set

<u>Easement Type</u>	<u>Percent of Total Set</u>			
	<u>Number of Easements</u>		<u>Easement Acreage</u>	
	<u>Full Set</u>	<u>Soils Set</u>	<u>Full Set</u>	<u>Soils Set</u>
Limited Term				
MAL-10	53	67	54	67
MAL-20	11	8	9	7
Hillsides	<1	-	<1	-
Riparian	<1	-	<1	-
Groundwater	1	-	<1	-
Perpetual				
MAL	24	21	24	21
Wetlands-History	6	4	8	5
Wetlands-No History	<1	-	<1	-
Hillsides	1	-	2	-
Riparian	2	-	2	-
Groundwater	<1	-	<1	-
Snowfence	1	<1	<1	<1

Note: See Chart 1 for Easement Type key.

Chart 1: RIM Reserve Easement Types

<u>Short Title</u>	<u>Full Title (onset date)</u>
Limited Term:	
MAL - 10	Marginal Agricultural Land - 10 year term (1986 only)
MAL - 20	Marginal Agricultural Land - 20 year term (1987 - present)
Hillside	Pastured Hillside - 20 year term (1989 - present)
Riparian	Riparian Land - 20 year term (1989 to present)
Groundwater	Sensitive Groundwater Area - 20 year term (1989 to present)
Perpetual	
MAL	Marginal Agricultural Land - (1986 - present)
Wetland - History	Restored Wetland with Cropping History - (1987 - present)
Wetland - No History	Restored Wetland with No Cropping History - (1989 - present)
Hillside	Pastured Hillside - (1989 - present)
Riparian	Riparian Land - (1989 - present)
Groundwater	Sensitive Groundwater Area - (1989 - present)
Snowfence	Living Snowfence (Highway Windbreak) - (1987 - present)

Easement Purchases

The nearly 1,400 RIM easements purchased to date are widely scattered across the state (Table 2). Eighty-four SWCDs report easements, and no district has more than 62 (Renville). The district (also Renville) with the largest aggregate acreage has only 1,474 acres. Easement payments are similarly widely dispersed: only one district received over \$1 million to date.

Tables 3 through 5 show statewide totals arrayed by sale year and easement type. RIM easements might be one of twelve types: either of limited or perpetual duration and either eligible as marginal agricultural land, previously-drained (but restorable) wetlands, riparian lands, pastured hillsides, sensitive groundwater areas, or living snowfence (Chart 1). The bulk of the RIM easements was acquired in the first program year, mostly for a limited duration (10 years). This imbalance is large part attributable to the diminishing budget resources appropriated to the RIM Reserve since that first program year (Table 7). At the same time as perpetual easements have become increasingly emphasized (at the specific urging of the Legislature), program attention has shifted away from marginal agricultural lands toward drained wetlands and, very recently, also toward riparian land and sensitive groundwater areas. None of these eligible land types are necessarily "marginal" in the sense used in the original legislation.

Table 6 shows the statewide average per-acre payments. The reader is cautioned that these average figures, particularly for the easement types with little sales activity to date, can be significantly influenced by the payment levels associated with the geographic areas in which these few easements happen to be located.

Table 2: RIM Reserve Easement Summary by SWCD: 1986- May 1, 1989

<u>SWCD</u>	<u>Number of Easements</u>	<u>Easement Acres</u>	<u>Total Payments (dollars)</u>
Aitkin	9	274	35,559
Anoka	1	22	5,510
Becker	16	420	110,402
Beltrami	13	199	23,753
Benton	24	598	151,523
Big Stone	9	215	78,449
Blue Earth	13	176	112,033
Brown	22	421	310,246
Carver	17	302	224,469
Cass	1	20	2,495
Chippewa	9	163	96,473
Chisago	24	356	94,259
Clay	26	1,036	419,524
Clearwater	6	386	43,217
Cook	1	6	701
Cottonwood	33	685	475,141
Dakota	16	362	173,457
Dodge	4	67	33,408
Douglas	25	492	167,189
East Ottertail	40	1,236	371,413
East Polk	30	1,086	297,626
East Agassiz (Norman)	20	701	231,523
Faribault	18	518	455,004
Fillmore	24	403	186,433
Freeborn	23	331	218,637
Goodhue	44	643	312,346
Grant	6	216	143,587
Hennepin	2	21	9,015
Hubbard	4	55	6,980
Isanti	41	557	143,541
Itasca	1	26	3,149
Jackson	16	250	171,730
Kanabec	3	56	14,480
Kandiyohi	33	679	358,182
Kittson	12	480	116,253
Lac Qui Parle	9	186	81,398
Lake of the Woods	5	93	11,575
Le Sueur	19	359	189,056
Lincoln	11	247	100,572
Lyon	10	214	103,375
Mahnomen	3	57	15,480
Marshall	14	565	147,481
Marshall Beltrami	5	133	27,572
Martin	23	463	310,600
McLeod	31	492	313,982

(continued)

Table 2: RIM Reserve Easement Summary by SWCD: 1986- May 1, 1989

<u>SWCD</u>	<u>Number of Easements</u>	<u>Easement Acres</u>	<u>Total Payments (dollars)</u>
Meeker	29	811	413,863
Mille Lacs	14	164	47,993
Morrison	42	854	209,112
Mower	10	182	106,505
Murray	16	351	189,616
Nicollet	8	124	74,791
Nobles	3	67	44,450
North St. Louis	2	44	5,412
Olmsted	13	227	104,045
Pennington	7	210	56,253
Pine	1	67	8,241
Pipestone	4	54	22,287
Pope	25	762	299,112
Red Lake	8	330	88,950
Redwood	29	787	665,286
Renville	62	1,474	1,033,948
Rice	23	330	179,059
Rock	3	26	11,345
Root River (Houston)	19	471	204,496
Roseau	13	524	137,628
Scott	35	678	429,801
Sherburne	23	610	154,330
Sibley	39	518	357,875
Stearns	32	607	188,137
Steele	12	244	132,187
Stevens	22	530	276,041
Swift	21	577	289,023
Todd	12	372	97,280
Traverse	5	135	70,746
West Ottertail	1	25	11,592
Wabasha	27	562	242,257
Wadena	21	435	51,834
Waseca	5	102	90,688
Washington	2	53	15,652
Watsonwan	11	122	62,558
Wilkin	7	221	97,605
Winona	18	178	81,586
Wright	33	594	301,099
Yellow Medicine	<u>9</u>	<u>303</u>	<u>185,506</u>
STATE TOTAL	1,382	30,985	13,938,000

Table 3: Number of RIM Reserve Easements by Easement Type by Year:
 State: 1986 - May 1, 1989

<u>Easement Type</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>Total</u>
Limited Term					
MAL-10	737	.	.	.	737
MAL-20	.	58	90	8	156
Hillside	.	.	.	5	5
Riparian	.	.	.	2	2
Groundwater	<u>.</u>	<u>.</u>	<u>.</u>	<u>7</u>	<u>7</u>
	737	58	90	22	907
Perpetual					
MAL	88	107	101	38	334
Wetland-History	.	33	33	23	89
Wetland-No History	.	.	.	5	5
Hillside	.	.	.	13	13
Riparian	.	.	.	23	23
Groundwater	.	.	.	3	3
Snowfence	<u>.</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>8</u>
	<u>88</u>	<u>144</u>	<u>137</u>	<u>106</u>	<u>475</u>
TOTAL	825	202	227	128	1,382

Note: See Chart 1 for Easement type key.

Table 4: RIM Reserve Easement Acreage by Easement Type by Year:
State: 1986 - May 1, 1989

<u>Easement Type</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>Total</u>
Limited Term					
MAL-10	16,712	.	.	.	16,712
MAL-20	.	955	1,612	86	2,653
Hillside	.	.	.	125	125
Riparian	.	.	.	21	21
Groundwater	<u>.</u>	<u>.</u>	<u>.</u>	<u>129</u>	<u>129</u>
	16,712	955	1,612	361	19,640
Perpetual					
MAL	2,024	2,578	1,974	798	7,374
Wetland-History	.	913	874	845	2,632
Wetland-No History	.	.	.	189	189
Hillside	.	.	.	477	477
Riparian	.	.	.	491	491
Groundwater	.	.	.	110	110
Snowfence	<u>.</u>	<u>42</u>	<u>23</u>	<u>7</u>	<u>72</u>
	2,024	3,533	2,871	2,917	11,345
TOTAL	18,736	4,488	4,483	3,278	30,985

Note: See Chart 1 for Easement type key.

**Table 5: RIM Reserve Easement Payments by Easement Type by Year:
State: 1986 - May 1, 1989 (thousand dollars)**

<u>Easement Type</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>Total</u>
Limited Term					
MAL-10	5,648	.	.	.	5,648
MAL-20	.	297	711	29	1,037
Hillside	.	.	.	38	38
Riparian	.	.	.	10	10
Groundwater	<u>.</u>	<u>.</u>	<u>.</u>	<u>43</u>	<u>43</u>
	5,648	297	711	120	6,776
Perpetual					
MAL	1,404	1,588	1,295	502	4,789
Wetland-History	.	549	641	528	1,718
Wetland-No History	.	.	.	110	110
Hillside	.	.	.	166	166
Riparian	.	.	.	298	298
Groundwater	.	.	.	50	50
Snowfence	<u>.</u>	<u>13</u>	<u>13</u>	<u>5</u>	<u>31</u>
	1,404	2,150	1,949	1,659	7,162
TOTAL	\$7,052	\$2,447	\$2,660	\$1,779	\$13,938

Note: See Chart 1 for Easement type key.

**Table 6: Average RIM Reserve Easement Payments by Easement Type by Year:
State: 1986 - May 1, 1989 (dollars per acre)**

<u>Easement Type</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>Total</u>
Limited Term					
MAL-10	338	.	.	.	338
MAL-20	.	311	441	334	391
Hillside	.	.	.	308	308
Riparian	.	.	.	479	479
Groundwater	<u>.</u>	<u>.</u>	<u>.</u>	<u>333</u>	<u>333</u>
	338	311	441	332	345
Perpetual					
MAL	694	616	656	629	649
Wetland-History	.	601	733	624	653
Wetland-No History	.	.	.	581	581
Hillside	.	.	.	348	348
Riparian	.	.	.	606	606
Groundwater	.	.	.	459	459
Snowfence	<u>.</u>	<u>301</u>	<u>563</u>	<u>736</u>	<u>426</u>
	694	609	679	569	631
TOTAL	\$376	\$545	\$593	\$543	\$450

Note: See Chart 1 for Easement type key.

Table 7: RIM Reserve Funding: 1986-1989

<u>Year</u>	<u>Funding (Thousand Dollars)</u>	
	<u>Easements (1)</u>	<u>Administration (2)</u>
1986	9,400	600
1987	4,500	750
1988	4,500	750
1989	1,500	750
1990	<u>750</u>	<u>750</u>
	\$20,650	\$3,600

- (1) Includes easement payments, practice cost sharing, and RIM Reserve coordinator's salary.
- (2) Pass-through payments to SWCDs for RIM Reserve program administration. State-level administrative costs covered by non-earmarked BWSR allocations.

For reference, Tables A1-A3 (located in the Appendix) report without comment the number of easements, easement acreage, and easement payments, respectively, by easement type for each SWCD in which an easement has been acquired. Table A4 reports easement acreage by conservation practice by SWCD.

Cover Practices

A given RIM Reserve parcel might contain up to a dozen specific conservation practices. In Table 10 we show the easement and acreage figures for conservation practices at the state level. (Comparable SWCD-level data is in Table A4.) By far the most prevalent practice is introduced grasses, followed at some distance by lands already in vegetative cover and by native grass establishment. This reflects the preponderance of RIM easements on marginal ag lands and the relatively low expense (to the land owner) of satisfying easement cover requirements by introducing non-native grasses.

Table 9 shows the distribution of such practices per parcel. Even though most easements have only one or two associated practices, caution must nonetheless be exercised in interpreting aggregate data on practices, to avoid double counting. It is valid, however, to use this data as a structure count (so many wildlife food plots or diversions, for example) or as an aggregate area (so many acres of permanent nature grasses, for example).

In these charts we follow the RIM Reserve program managers' custom of treating donated land as a cover practice, although of course it is not strictly so. Unlike the CRP, which brings in non-eligible lands for payment if it comprises less than one third of an otherwise eligible field, the RIM Reserve accepts non-eligible land only if it is donated by the landowner or

another party. Examples are woodland within the boundaries of a marginal ag land parcel or uncropped upland within a restored wetland parcel. For reporting purposes, total easement acres includes donated lands. Most of the 424 acres of donated land in the total Reserve is associated with perpetual easements, especially marginal ag land, restored wetlands, and riparian lands (Table 10).

Parcel records list previous cropping history on a field basis. However, a RIM parcel might be made up of all or parts of one or several fields. Therefore, we cannot compile a cropping history for each parcel from existing data. We cannot answer questions such as, How much corn (or wheat or alfalfa) land did the RIM Reserve remove from production?

Land Attributes

Linking together the easement data set with soil interpretation records permits us to characterize the "quality" of the various lands under RIM easements. Easement records are disaggregated to the field level, and each field has associated with it a predominant soil mapping unit (which may only be a general soil complex, in which case the first soil in the complex, is assumed to be dominant.) Soil data is available only for those contracts signed prior to 1989; consequently, only marginal agricultural land, wetland, and living snowfence easement types are considered in the tables that follow. Because up to half of a MAL easement may consist of land not eligible in and of itself, the impact of RIM reserve expenditures on the targeted environmental goal (habitat, erosion, water quality) may be muted to the extent that the included non-eligible land does not provide such services. However, other RIM Reserve guidelines seek to minimize this potential. For example, every acre of restored wetland can have associated

**Table 8: Conservation Practices on RIM Reserve Easements: State:
1986- May 1, 1989**

<u>Practice</u>	<u>Number of Easements Practice with Practice</u>	<u>Easement Acres with Practice</u>
Donated Land	64	424
Introduced Grasses	949	16,273
Already in Trees	19	327
Living Snowfence	8	40
Shallow Water	5	8
Native Grasses	358	5,484
Trees/Shrubs	423	2,585
Field Windbreak	72	141
Diversion	12	1
Grass Waterway	4	2
Restored Wetland	109	1,079
Already in Cover	503	7,185
Wildlife Food Plot	108	212
Temporary Cover	64	682

Note: Many easements incorporate more than one practice. "Temporary Cover" is used for transition into one or more of the permanent practices listed above.

**Table 9: Distribution of Conservation Practices per RIM Easement: State:
May 1, 1986-89**

<u>Number of Practices</u>	<u>Number of Easements</u>
1	640
2	426
3	204
4	56
5	32
6	8
7	6
8	1
9	<u>1</u>
	1,376

Note: Six easements missing data

Table 10: Distribution of Donated Land by RIM Reserve Easement Type:
State: 1986 - May 1, 1989

<u>Easement Type</u>	<u>Number of Easements with Donated Land</u>
Limited Term	
MAL-10	3
MAL-20	3
Hillsides	-
Riparian	-
Groundwater	-
Permanent	
MAL	22
Wetland-History	18
Wetland-No History	-
Hillsides	-
Riparian	15
Groundwater	1
Snowfence	2

Note: See Chart 1 for Easement Type key.

with it four acres of adjoining upland, for the express purpose of providing additional high quality habitat.

Under the widely-used SCS land capability classification system (see Appendix B for details), roughly half of the RIM easement soils fall under classes I, II, or III (Table 11). While most land in this range has varying degrees of difficulty associated with cultivation, none is deemed "unsuitable" for crop production, given appropriate crop selection, tillage regimes, and conservation practices. Much of this land probably entered the Reserve as parts of fields the dominant part of which were eligible marginal agricultural lands. Table 12 shows that perpetual MAL easements do show a little more emphasis toward more unproductive land, as measured here. None of this should be surprising. The RIM Reserve uses its own set of criteria to judge eligibility for the various easement types. Only the MAL criterion is even remotely consistent with the SCS classification used here for characterization purposes.

The remaining tables categorize RIM easements by various soil factors. Most of the parcels are on slopes averaging less than 10% (Table 13). The commonly-reported soil T-factor, which is an estimate of the maximum annual erosion (measured in tons per acre per year) that a soil can "tolerate" without reducing productivity, is reported in Table 14. The majority of RIM easement soils are in the 5-ton category, regardless of easement type. Because soils with low (1 or 2 tons per acre per year) T-Factors are the most sensitive to erosion loss, they are usually not cropped and are generally, as a result, not often eligible for the RIM Reserve in the first place. (The exception is the pastured hillsides category.)

Table 11: RIM Reserve Easement Acres by Land Capability Class and Sub Class: State: 1986-88

<u>Class</u>	<u>Easement Acres in Class</u>
I	150
IIc	10
IIe	1,316
IIs	349
IIw	1,903
IIIe	2,218
IIIs	1,527
IIIw	1,920
IVe	1,332
IVs	1,979
IVw	795
Vw	297
VIe	492
VIs	148
VIw	394
VIIe	147
VIIs	38
VIIw	3
VIIIw	9
	<hr/>
Total	15,026

Note: Data presented for land characterization purposes only. RIM eligibility is based on criteria other than Land Capability Class. No data for 1989 easements.

Table 12: RIM Reserve Easement Acres by Land Capability Major Class and Easement Type: State 1986-88

<u>Major Class</u>	<u>MAL/ 10 yr</u>	<u>MAL/ 20 yr</u>	<u>MAL/ Perp.</u>	<u>Wetland/ History</u>	<u>Living Snowfence</u>	<u>Total</u>
I	90	11	37	11	3	150
II	1,931	264	1,018	356	9	3,579
III	3,757	472	1,131	305	2	5,665
IV	3,345	178	581	5	0	4,105
V	85	31	142	39	0	297
VI	783	99	153	0	0	1,035
VII	143	3	39	0	0	185
VIII	0	0	9	0	0	9
	<u>10,133</u>	<u>1,055</u>	<u>3,108</u>	<u>716</u>	<u>14</u>	<u>15,026</u>

Note: See Chart 1 for Easement Type key. Data presented for land characterization purposes only. RIM eligibility is based on criteria other than Land Capability Class. No data for 1989 easements.

**Table 13: Distribution of RIM Reserve Easement Acreage by High Slope Range:
State: 1986-88**

<u>High Slope Range</u>	<u>Easement Type</u>					<u>Total</u>
	<u>MAL/ 10 yr</u>	<u>MAL/ 20 yr</u>	<u>MAL/ Perp.</u>	<u>Wetland/ History</u>	<u>Living Snowfence</u>	
1-5	4,890	620	2,059	598	10	8,177
6-10	2,402	214	391	99	2	3,108
11-15	1,743	178	475	25	2	2,423
16-20	1,006	49	141	5	0	1,201
21-25	197	22	44	0	0	263
26+	<u>221</u>	<u>13</u>	<u>38</u>	<u>0</u>	<u>0</u>	<u>272</u>
	10,459	1,096	3,148	727	14	15,442

Note: See Chart 1 for Easement Type key. High Slope is the greater of the endpoints of the reported slope range. Data presented for land characterization purposes only. RIM eligibility is based on criteria other than High Slope Range. No data for 1989 easements.

Table 14: Distribution of RIM Reserve Easement Acreage by T-Factor:
State: 1986-88

<u>T-Factor</u>	<u>Easement Type</u>					<u>Total</u>
	<u>MAL/ 10 yr</u>	<u>MAL/ 20 yr</u>	<u>MAL/ Perp.</u>	<u>Wetland/ History</u>	<u>Living Snowfence</u>	
1	6	0	0	0	0	6
2	132	0	16	0	0	148
3	1,678	145	311	1	0	2,135
4	1,725	140	298	31	0	2,195
5	<u>6,918</u>	<u>812</u>	<u>2,521</u>	<u>695</u>	<u>14</u>	<u>10,959</u>
	10,459	1,097	3,148	726	14	15,443

Note: See Chart 1 for Easement Type key. Data presented for land characterization purposes only. RIM eligibility is based on criteria other than T-factor. No data for 1989 easements.

PART B. RIM RESERVE PAYMENT PROCEDURES

Rights Acquired

The set of rights acquired under any RIM easement varies somewhat by easement type and enrollment period. ("Property rights," in the context used here, includes liabilities and obligations as well as entitlements.) Some of the transferred rights are explicit in the easement contract, while others are implicit or are spelled out only in other legal forms. The rights transferred to the state are more than simply those to plant and harvest crops. One way to characterize them is to think of them as use rights, access rights, management rights, or entitlements. Some are transferred to the state as buyer; others clearly remain with the landowner.

a) Use rights. The principal rights acquired by the State under a RIM easement are those to grow annual crops, to cultivate the soil, to hay or graze the parcel, to apply agricultural chemicals (other than those authorized in the management plan), to snowmobile, to build structures (including wells and irrigation equipment), to harvest timber (unless approved in the management plan) or to otherwise damage the vegetative cover. The landowner retains the right to control access, to hunt, to charge a fee for use by others, and to subsurface mineral rights. (If mineral rights have been previously severed, the landowner must obtain a quitclaim or a non-mining consent contract prior to selling the RIM easement.) Starting in 1990, Minnesota law requires that all abandoned wells must be sealed by the owner prior to these easement being acquired by the state.

b) Management rights. Most land management discretion remains with the landowner, although it is severely limited by the transfer of use rights, of course. The landowner faces the added responsibility of managing the RIM parcel according to the official easement conservation plan. Significantly, in the case of restored wetlands easements, the State assumes management authority.

c) Access rights. While the landowner retains the right to post RIM land against trespass, the State acquires the right to enter the property for easement monitoring purposes and restored wetland management. As with non-RIM land, the owner can sell or lease access rights for recreational activities such as hunting.

d) Entitlements/Taxes. The state picks up the seller's right to break out (for cropping) new land on associated properties (see below), and the owner retains the right (obligation) to pay property taxes and other assessments (see below) and the right to lease or sell the property (with easement attached). The conveyance does provide the seller with certain protection against subsequent zoning changes, liability assignments, and utility right-of-way assessments.

RIM easements have transferred slightly different packages of rights over the years. For example, 1986 easements were silent with respect to property tax payments. Reflecting legislative concern over possible non-payment, easements since 1987 make property tax delinquency a violation of the contract. Another change over time has been the sodbusting requirement. Earlier easements forbade sodbusting on any land owned by the easement seller, at any time thenceforth. Subsequent legislative

action confined the sodbusting restriction to land owned by the seller at the time of the transaction.

A fundamental right that is not explicitly transferred is the "right" to pollute. More specifically, Minnesota farmland owners are largely immune from off-site damages attributable to cropping practices. For example, public roadside ditch cleanup costs are usually not assigned to landowners whose eroding fields contributed the sediment. For example, one of the purposes of public purchase of RIM MAL easements is to reduce erosion from cropped land. What is actually purchased thereby is the right to farm on erosive soils; what is implicitly purchased is the right to pollute.

Theoretical Price Determination

How much should the state pay for a RIM easement? The upper bound, presumably, is the level of public benefit achieved by removing the parcel from cropping. This benefit is generally assumed by analysts and program managers to be higher than any foreseeable acquisition costs. This assumption is made more valid, but not necessarily proven, to the extent that purchases are targeted to those parcels that are felt to provide the highest benefits.

The lower bound of the easement price continuum is the landowner's "reservation price," the price below which a sale will not be made and above which a sale will be made. The reservation price captures the landowner's opportunity costs, discount rates, and risk preferences, along with other price determinants. However, landowners cannot be expected to know their reservation prices with precision, and public agencies generally cannot elicit this price in advance of a payment offer. (See

concluding section on bidding mechanisms.) A common practice among economic analysts is to treat this private reservation price as the social opportunity cost as well. This entails an assumption that markets are free and that prices reflect underlying preferences, not market distortions.

By definition, any sale above the owner's reservation prices leaves the owner better off than before, and any sale below the public benefit price leaves the public better off. The closer the easement payment is to the lower bound, therefore, the more cost-effective is the acquisition program from the government's point of view. Landowners, of course, would prefer the reverse. The higher the easement price, the more money the owner obtains for relinquishing the same set of rights.

Since in practice the administering agency knows neither the public benefit nor the private reservation price, how should it formulate an easement offer price? That has been the problem confronting RIM program managers over the years. Unlike most goods where prices are established through market transactions, there is no conventional market for the package of rights that RIM acquires. There are, however, several similar rights packages for which there does exist a market. The prices of these packages might be used as proxies for the unknown price of the RIM easement rights.

1) Cropland rental rate. In Minnesota most rental arrangements are for one year (or in some cases two or three years), with payment either in cash or a share of the harvested crop. Any entitlements--notably the acreage base which provides eligibility for federal crop subsidies--are usually transferred over to the renter. (If they are not, the rental rate

is considerably lower.) Average tillable land rent data are surveyed each year by the Minnesota Extension Service, in cooperation with the State Department of Revenue and the State Planning Agency. The data are appropriately disaggregated to the county level at best, and even then with considerable caution.

2) Land market value. As was discussed above, the bulk of the traditional rights in land are transferred to the state when a RIM easement is purchased. Therefore, we would expect the price of full fee-title to the land not to be that much higher than the price of the easement. Full fee-title estimated market values are published each year at the township level by the Minnesota Department of Revenue. The estimates cover agricultural land without structures and, since 1989, have been guided by a valuation schedule distributed by the Department. This schedule is linked to calculated crop equivalency ratings (CER), which themselves are based on broad soil class groupings. We will discuss these links later in this report.

3) CRP rental rate. The RIM Reserve was originally set up to take advantage of the CRP's promised bidding system, by which landowners would compete to enter land into the federal reserve. In the process, a price for marginal land cropping rights would be "revealed" to RIM program managers. As it turned out, however, the CRP became essentially a flat payment scheme, with the price immediately settling at the previously determined maximum acceptable rental rate (MARR) for each multi-county bidding pool. These MARRS are widely known for each county in Minnesota--especially by local landowners.

The ideal price series for pegging RIM payments would be widely known, well accepted, geographically disaggregated, and matched to the rights actually acquired under RIM and the owner's reservation price. None of the three price series discussed above--cash rents, estimated market values, or CRP MARRs--meets all four criteria. Cash rents aren't systematically collected at a local level, although the rights acquired are akin to RIM rights. Market values meet the first two tests and partially meet the third (townships are still fairly large for price targeting purposes). Fee-title prices are obviously in excess of those acquired by RIM. The CRP matches most closely the rights--but not the terms--of RIM, but the rates are invariant within their multi-county bidding pool.

The best price series from the public's point of view would be information about each landowner's reservation prices, thus enabling the administering agency to pay just enough to acquire the necessary rights. Short of such a list, RIM payments are increasingly linked to estimated market values. These and other payment issues are discussed below.

Payment Procedures

RIM Reserve payments are typically made in a lump sum at the beginning of the easement, although they can be stretched into four equal annual payments, if the enrollee chooses, for tax purposes. This contrasts with the federal CRP, Water Bank, and most ASCS ACP (Agricultural Conservation Practices) programs, all of which make equal annual payments.

The initial reason for the lump sum procedure was said to be the pressing need of some farmers for immediate payments to alleviate cash

flow problems. The payment method has the incidental benefit of being less expensive to administer, at least with respect to payments. It also helps confirm that the RIM easement is an actual transfer of property and not--particularly for limited term easements--a long term "lease."

Up-front payments are not without their drawbacks. There was initial concern that some participating landowners, having received their payments, would cease paying local property taxes on the parcels, even to the point of allowing the property to become tax delinquent. (If a RIM parcel does go delinquent, its ownership reverts to the state, not the RIM Reserve program.) In a subsequent legislative session, non-payment of property taxes was made a violation of the terms of the easement. Since that time, RIM Reserve administrators have received no reports of property tax nonpayment.

A second possible problem with one-time payments is the loss of leverage over contract compliance. For example, most RIM contracts call for the landowner to perform certain management activities (e.g, weed control, thinning, etc.) at periodic intervals. Non-compliance is an easement violation, subject to enforcement by the state's attorney general's office. The threat of withholding an annual payment such as that under the CRP is not possible under the RIM Reserve because all payments are up-front.

A final possible disadvantage is that landowners don't seem to understand it. As discussed below, potential RIM enrollees are said to sometimes simply divide the RIM offer by the number of years in the contract, comparing this to local rents or to prevailing annual CRP payments. This misperception places the RIM offer, which is based on a

present-value concept, at an apparent disadvantage with respect to enrollment incentives.

Actual Payment Determination

The evolution of RIM Reserve payment and targeting schemes can be viewed as an attempt to continually improve the program's cost effectiveness. The 1986 RIM enabling legislation called for 10-year easements to be paid at the present value of 90% of the average CRP bid in the county for the most recent round of CRP bidding. The driving principle here was to let the CRP bidding "reveal" the proper price for marginal cropland in a locality. Ninety percent of the average CRP bid was felt to be low enough that farmers, if eligible for both programs, would tend to take the federal offer first, thereby maximizing joint federal and state program coverage in Minnesota.

Both the mean CRP bid per contract and the mean CRP payment per acre for each county and USDA reporting district were provided by the University's Department of Agricultural and Applied Economics. (Three Minnesota counties are halved for USDA administrative purposes: Ottertail, Polk, and St.Louis.) The payment levels were compiled from bids "tentatively accepted" by USDA in the third CRP bidding round, for land to be retired in 1987. Final CRP contract data, not available at the time initial RIM payments were announced, varied slightly from the tentative figures.

RIM program managers needed to select an appropriate discount, or interest, rate to determine the present value of CRP payments for 1986 limited term easement offers. Upon consultation with University

Table 15: Limited-Term RIM Easement Payment Offers: By SWCD:
1986 Sign-up

<u>SWCD</u>	<u>Offers (dollars per acre)</u>
Aitkin	126
Anoka	246
Becker	273
Beltrami	112
Benton	266
Big Stone	332
Blue Earth	524
Brown	489
Carlton	123
Carver	418
Cass	126
Chippewa	440
Chisago	269
Clay	328
Clearwater	126
Cook	123
Cottonwood	523
Crow Wing	121
Dakota	488
Dodge	483
Douglas	303
East Agassiz (Norman)	333
East Ottertail	265
East Polk	269
Faribault	533
Fillmore	487
Freeborn	517
Goodhue	473
Grant	344
Hennepin	303
Hubbard	126
Isanti	260
Itasca	123
Jackson	523
Kanabec	244
Kandiyohi	420
Kittson	272
Koochiching	123
Lac Qui Parle	430
Lake	123
Lake of the Woods	125
Le Sueur	518
Lincoln	423
Lyon	432
Mahnomen	273
Marshall	265

(continued)

Table 15: Limited-Term RIM Easement Payment Offers: By SWCD:
1986 Sign-up (Continued)

<u>SWCD</u>	<u>Offers (dollars per acre)</u>
Marshall-Beltrami (Beltrami)	112
Marshall-Beltrami (Marshall)	265
Martin	532
McLeod	407
Meeker	418
Mille Lacs	273
Morrison	246
Mower	503
Murray	428
Nicollet	507
Nobles	415
North St. Louis	123
Olmsted	476
Pennington	268
Pine	123
Pipestone	389
Pope	305
Ramsey	303
Red Lake	264
Redwood	524
Renville	526
Rice	506
Rock	427
Root River (Houston)	477
Roseau	264
Scott	398
Sherburne	253
Sibley	502
South St. Louis	123
Stearns	304
Steele	514
Stevens	345
Swift	329
Todd	270
Traverse	305
Wabasha	492
Wadena	123
Waseca	520
Washington	297
Watonwan	504
West Ottertail	324
West Polk	330
Wilkin	341
Winona	470
Wright	301
Yellow Medicine	432

Source: Minnesota Board of Water and Soil Resources, "RIM Reserve Comments #23". Nov. 6, 1986

economists, they decided upon 7%, a rate that was somewhat below the prevailing cost of money for state bond-raising and slightly above the prevailing rate of return for small private investments. The official RIM discount rate has remained at 7% since that time.

The RIM administrators prepared a list of official offers for each soil and water conservation district (SWCD), the Reserve's local administering agency. Counties with no CRP bids were assigned the average bid in the multi-county pool to which they were assigned for CRP bidding purposes. The 90% bid figure was then multiplied by 7.02358 (the present value of 1.00 annually at 7% for 10 years) and rounded off to the nearest dollar to obtain the final RIM payment offer for each SWCD (Table 15).

(Minnesota SWCDs correspond in most cases to county boundaries.

Exceptions are the three split counties noted above and the Marshall-Beltrami district, which consists of adjoining portions of those two counties.)

For the 1986 program year, perpetual easements were paid at a flat 70% of the 1985 township estimated market value for tillable land. (In several instances, the 10-year payment, based on the CRP, was higher than this perpetual payment.) The 30% reduction from full value was felt to reflect both the fact that RIM parcels were less productive (by targeting objectives) than the average parcel and the fact that the state was buying only some of the available property rights. Payment rates at these levels were calculated by the Minnesota Department of Revenue and provided to RIM program managers.

In the next legislative session, significant changes in program administration were authorized. The limited term easement term went from

ten to twenty years (because average state bond pay-offs take about 17 years), and perpetual easements were "strongly encouraged." The perpetual easement payment was set at the lower of 90% of the 1986 township EMV or the present value of the township average weighted annual cash rent.

(Cash rent estimates are available only at the county level. For RIM program purposes, these county rents were weighted by the ratio of each township's average tillable EMV to the county average tillable EMV.)

These figures were set by administrative rule, not by legislation. (For comparison, the state Water Bank program pays at a rate of 50% of EMV.)

The 20-year limited term payments for 1987 were set at 65% of the perpetual payment. Apparently, the 20-year payment was to be the same proportion of the perpetual payment as is the proportion of the two (presumably uniform and continuous) streams of public benefits. However, the 65% of perpetual payment arrangement cannot be grounded directly in such present value ratios. At 7%, the ratio of the two benefit streams is 0.74, not 0.65. It appears that the ratio was further multiplied by the 90% figure: $.90 * .74 = .67$, or 65% rounded down a bit. Strictly speaking, then, the 65% proportion for limited term easements should be applied to the property's full value, not the price of the easement, if the underlying rationale is to be followed. At present, the perpetual payment is 90% of EMV, and the limited term payment is therefore 58.5% of EMV. The shift from 1986 to 1987 in SWCD average RIM offers are shown in Table 16 for illustration. Actual offers, of course, were at the township level.

These payment arrangements remained in place for 1988 and subsequent easements, with a few exceptions. Restored wetlands with no cropping

Table 16: SWCD Average RIM Payment Rates and Estimated Market Values: 1986 and 1987-89 Signups

<u>SWCD</u>	<u>1986</u>		<u>1987-1989</u>	
	<u>10-year payment</u>	<u>Average EMV</u>	<u>20-year payment</u>	<u>Average EMV</u>
Aitkin	126	217	121	207
Anoka	246	483	299	511
Becker	273	359	190	324
Beltrami	112	203	104	178
Benton	266	496	236	404
Big Stone	332	548	242	414
Blue Earth	524	965	428	731
Brown	489	1,158	486	830
Carlton	123	206	118	202
Carver	418	953	483	826
Cass	126	178	97	166
Chippewa	440	879	351	601
Chisago	269	474	250	427
Clay	328	606	320	547
Clearwater	126	211	111	189
Cook	123	322	186	318
Cottonwood	523	990	377	644
Crow Wing	121	230	138	236
Dakota	488	735	367	627
Dodge	483	886	355	608
Douglas	303	451	232	396
East Agassiz (Norman)	333	557	289	494
East Ottertail	265	339	184	315
East Polk	269	575	283	484
Faribault	533	1,135	464	794
Fillmore	485	527	197	338
Freeborn	517	908	316	540
Goodhue	473	767	381	650
Grant	344	724	314	536
Hennepin	303	1,056	1,601	1,028
Hubbard	126	218	122	208
Isanti	260	378	211	360
Itasca	123	251	125	213
Jackson	523	1,017	417	713
Kanabec	244	286	151	258
Kandiyohi	420	773	331	567
Kittson	272	388	190	325
Koochiching	123	130	68	117
Lac Qui Parle	430	663	263	449
Lake	123	127	73	125
Lake of the Woods	125	158	94	160
Le Sueur	518	851	366	626
Lincoln	423	428	188	322
Lyon	432	641	292	499
McLeod	407	887	374	640

(continued)

Table 16: SWCD Average RIM Payment Rates and Estimated Market Values:
1986 and 1987-89 Signups

SWCD	1986		1987-1989	
	10-year payment	Average EMV	20-year payment	Average EMV
Mahnomen	273	375	188	321
Marshall	265	405	189	323
Marshall Beltrami (Beltrami)	112	203	104	178
Marshall Beltrami (Marshall)	265	405	189	323
Martin	532	1,157	478	816
Meeker	418	795	342	584
Mille Lacs	276	342	190	325
Morrison	246	294	161	276
Mower	503	786	306	523
Murray	428	706	314	537
Nicollet	507	1,047	458	784
Nobles	415	746	324	553
North St. Louis	123	143	81	138
Olmsted	476	709	307	525
Pennington	268	322	136	233
Pine	123	232	136	232
Pipestone	389	537	228	390
Pope	305	478	229	392
Ramsey	303	1,863	1,235	2,112
Red Lake	264	346	159	272
Redwood	524	1,044	410	700
Renville	526	1,056	418	715
Rice	506	804	373	638
Rock	427	720	305	522
Root River (Houston)	477	446	190	324
Roseau	264	249	113	193
Scott	398	1,039	483	826
Sherburne	253	409	243	416
Sibley	502	970	412	703
South St. Louis	123	143	81	138
Stearns	304	529	255	436
Steele	514	894	399	683
Stevens	345	721	319	545
Swift	329	643	268	457
Todd	270	318	155	264
Traverse	305	736	325	555
Wabasha	492	635	273	466
Wadena	123	207	121	207
Waseca	520	1,026	393	672
Washington	297	761	494	844
Watonwan	504	1,036	451	771
West Ottertail	324	339	184	315
West Polk	330	575	283	484
Wilkin	341	697	367	628
Winona	470	577	239	408
Wright	301	788	429	733
Yellow Medicine	432	737	298	510

history which is a perpetual easement, are paid at the 58.5% EMV rate. Perpetual pastured hillside easements are paid at 58.5% EMV, and 20-year pastured hillside easements are paid at 65% of that figure.

In 1988 and 1989, the EMV and rent figures were again based solely upon 1986 data. Program administrators felt that the more current EMV data provided by newer assessment reports did not fit actual market conditions. Land values were perceived to be going up, even though assessment data, with their built-in lags, still showed land prices going down. Consequently, proffered RIM prices were the same for the 1987, both 1988, and the 1989 rounds. No adjustment was made for inflation.

Statewide township EMV the data do not provide strong support for this argument, however. Figure 1 shows that 714 townships increased in average estimated market values between 1986 and 1987, and a great many others remained unchanged. (RIM payments are based upon the previous year's assessments, so this is the relevant period for the 1987-1988 RIM offers.) If the newer data had been used, easements located in townships that had gone up in EMV would have been "overpaid" because the sale was consummated at the lower, previous price. Easements in townships that had gone down in EMV might not have been sold at all under the new, lower price.

Interestingly, of those 353 townships in which RIM easements were actually purchased between 1987 and 1989, all but a handful were among those that had experienced a drop in market values between 1986 and 1987 sign-ups (Figure 2). If the newer rates had been used, the easements in those townships would have been offered a lower payment. Whether or not owners would have responded as they did to the frozen 1986 EMV rates is not known. Also, the newer EMV values might have elicited new participation from townships in which EMVs went up between 1986 and 1987.

Figure 1: Distribution of Changes in Township Average Estimated Market Value: 1986-1987: State

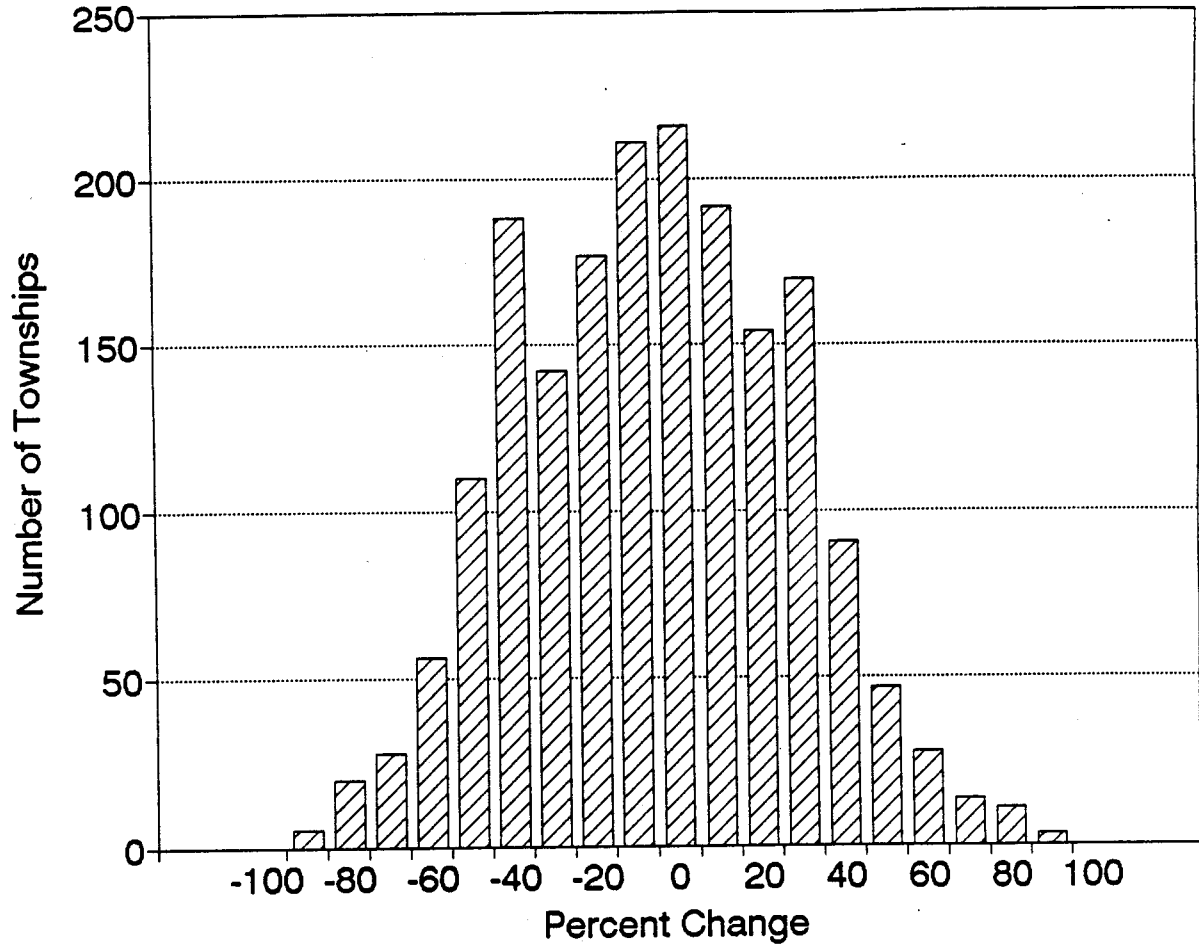
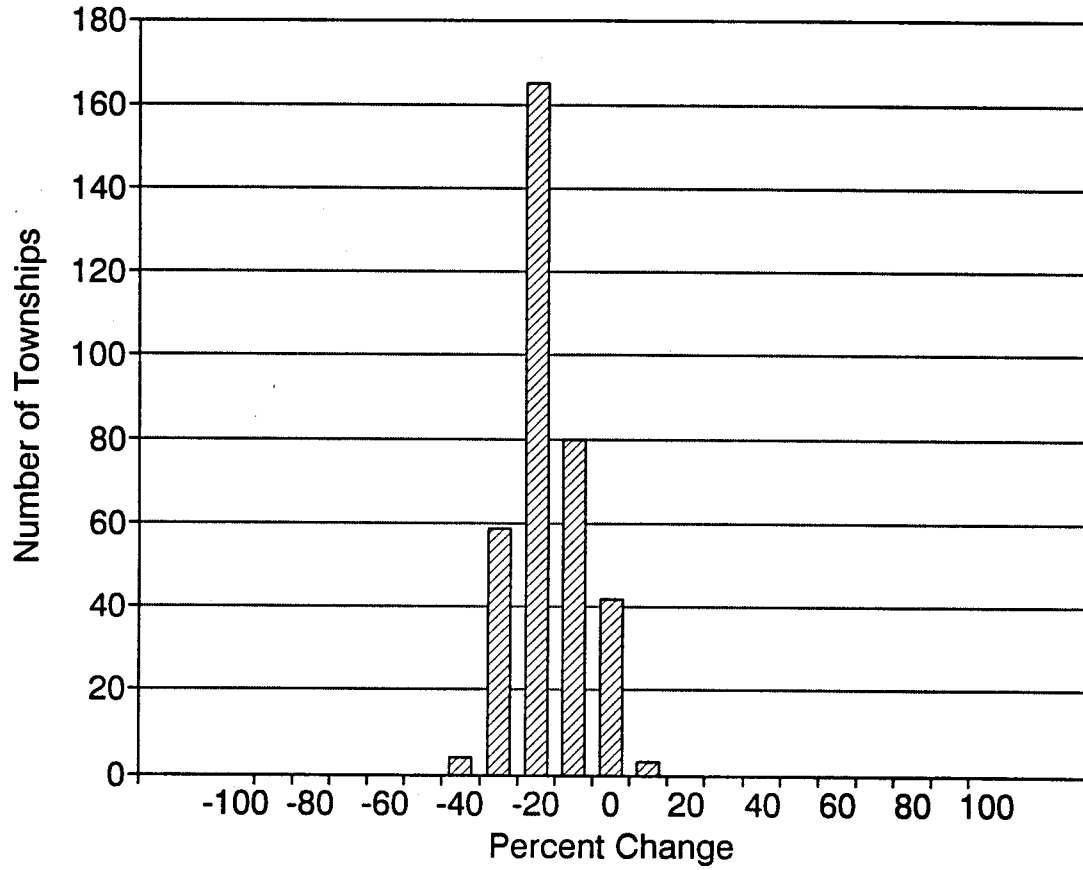


Figure 2: Distribution of Changes in Estimated Market Value: 1986-1987:
Townships with 1987-1989 RIM Easements



Reduction in Limited Term Easements

There was a significant shift in RIM payment rates and enrollment distribution following the 1986 sign-up. Payments were thenceforth severed from CRP rental rates, and overall sign-up dropped percipitously, with more interest shown in perpetual easements. Several reasons might explain this drop.

a) The duration of the limited term easement was increased to twenty years. This presumably dampened the interest of potential sellers who found the new term too long. These either shifted to the permanent easement option or opted out entirely. No available data either confirms or refutes this contention.

b) The Legislature allocated much less overall RIM financial support to 1987 and succeeding sign-ups and directed that permanent easements be stressed by local program managers. Combined, these actions greatly reduced the amount of money available for limited-term easements.

c) With the heavy participation by Minnesota farmers in the CRP and in the 1986 RIM sign-up, there was inevitably a reduction in the amount of crop land even eligible for RIM, let alone owned by an interested farmer.

d) The shift in payment bases from CRP to market or rent values dramatically reduced RIM limited-term payment offers in many localities from the 1986 round, as Table 20 showed. Where the payment dropped, interest in RIM may to have dropped as well.

Practice Payments

The RIM Reserve permits other agencies and organizations to participate in cost-sharing for conservation practices. Table 17 shows that such outside assistance is highest (in dollar terms) in the restoration of wetlands and in planting of trees and shrubs. Overall, the

RIM program pays 83.8% of the establishment costs, and the landowner puts in another 8%. Most of the outside funding came from the Minnesota Department of Natural Resources (Table 18).

To generate Table 17, data set structure required that the RIM share be calculated as the residual of estimated total costs minus the amount paid by the landowner and by other parties. (For those easements on which estimated costs do not exceed the reported payment limit for RIM, simple aggregations greatly overstate RIM contributions.) The results are not exactly precise because in some few cases, the reported payments by other parties exceeded the estimated costs. In those instances, the relative shares are calculated on the basis of non-RIM contributions, and the RIM share is set to zero.

CRP Competition

In the eyes of many landowners the CRP and RIM Reserve are said to compete with each other. Assume that a particular parcel is eligible for either program. If CRP entry is selected, for whatever reason, then there is a smaller pool of RIM eligible land remaining. If this tightening of potential RIM supply reduces RIM entry then the competition can be considered "effective." Why might the CRP be selected? Presumably landowners decide that they're better off with the ten annual federal payments than with the one-time state payment. To what extent is this the case?

Because RIM and CRP are paid on different bases, a common monetary measure must be found so that the two payment schemes can be compared. One could calculate either the annual rental equivalent of the one-time RIM payment or find the present value of the annual CRP rents. We employ the first procedure in what follows. (Any such direct comparison risks the

Table 17: Cost Sharing for RIM Easement Conservation Practices:
 State: 1986 - May 1, 1989

<u>Practice</u>	<u>Total Cost</u> <u>(dollars)</u>	<u>Established Payments</u> <u>(Percent)</u>		
		<u>Landowner</u>	<u>RIM</u>	<u>Others</u>
Donated	100	100.0	--	--
Introduced Grasses	1,280,625	4.4	95.2	0.4
Already Est. Trees/Shrubs	75	--	100.0	--
Living Snowfence	14,249	1.6	89.9	8.5
Shallow Water	4,100	17.7	9.7	72.6
Native Grasses	504,147	6.5	89.3	4.2
Trees/Shrubs	547,576	13.6	76.7	9.7
Field Windbreak	42,838	19.1	56.7	24.2
Diversion	2,375	--	42.9	57.1
Grass Waterway	4,160	27.6	8.2	64.2
Wetland Restoration	271,484	4.0	50.6	45.4
Already Est. Cover	108,478	20.5	79.5	--
Wildlife Food Plot	21,079	64.7	--	35.3
Temporary Cover	<u>17,763</u>	<u>16.0</u>	<u>82.0</u>	<u>2.0</u>
	\$2,819,049	8.0	83.8	8.2

Table 18: Sources of Non-RIM Establishment Cost Shares: All Practices:
State: 1986 - May 1, 1989

<u>Source</u>	<u>Payments (Dollars)</u>
USDA Agricultural Conservation and Stabilization Service	48,398
Dept. of Natural Resources	225,908
Minnesota Waterfowl Association	5,580
Pheasants Forever	33,406
U.S. Fish and Wildlife Service	16,000
Others	<u>14,183</u>
	\$229,760

implication that the rights acquired under the two programs are equivalent. This is clearly not the case in actuality; the CRP and the RIM Reserve are increasingly different programs, both with respect to program goals and to the property rights acquired. It is also evident that a one-time up-front payment is more certain than is the contractual promise of a stream of future annual payments.)

Either comparison technique requires the use of some discount rate. The higher the discount rate chosen for analysis, the higher will be the revealed RIM annual equivalent and the lower will be the present value of the annual CRP rent. The appropriate rate for RIM is clearly spelled out in regulations (7%), but no rate is self-evident for the CRP.

One way to portray the financial choice facing landowners with parcels eligible for both programs is to calculate an "annuity equivalent" of the lump-sum RIM payment. We want to find an annuity (an annual payment) that, if continually invested at i percent each year, will provide the same amount of money at the end of the n -year contract period as would the lump-sum RIM payment, if invested at the same i percent for the duration of the contract. (This is formally equivalent to comparing the present value of an annuity to the initial RIM payment.)

Table 19 shows the annuity equivalents of each SWCD's average 1987-88 RIM payment offers for perpetual easements (at 7%) in comparison to CRP maximum acceptable rental rates for the same enrollment periods. (Actual CRP payments averaged slightly less than the county MARRs (Taff, 1990). Landowners' personal discount rates of course may differ from the 7% used here.) Nearly all districts show a higher MARR than RIM annuity equivalent. The strongly urban Ramsey and Hennepin districts are notable

Table 19: SWCD Average Estimated Market Values, CRP Maximum Acceptable Rental Rates, and RIM Perpetual Easement Annuity Equivalents: 1988

<u>SWCD</u>	<u>Ave. EMV</u>	<u>CRP MARR</u>	<u>Annuity Equivalent</u>
Aitkin	201.66	20.00	17.14
Anoka	521.53	45.00	44.32
Becker	292.30	45.00	24.84
Beltrami	161.88	20.00	13.76
Benton	404.42	45.00	34.37
Big Stone	373.88	55.00	31.77
Blue Earth	731.92	85.00	62.20
Brown	745.09	85.00	63.32
Carlton	201.45	20.00	17.12
Carver	830.21	70.00	70.56
Cass	155.73	20.00	13.23
Chippewa	564.81	70.00	48.00
Chisago	434.03	45.00	36.89
Clay	492.39	55.00	41.85
Clearwater	171.50	20.00	14.58
Cook	309.14	20.00	26.27
Cottonwood	638.67	85.00	54.28
Crow Wing	235.37	20.00	20.00
Dakota	627.44	80.00	53.32
Dodge	608.83	85.00	51.74
Douglas	365.98	50.00	31.10
East Agassiz (Norman)	447.36	55.00	38.02
East Ottertail	296.25	45.00	25.18
East Polk	450.26	45.00	38.27
Faribault	793.74	85.00	67.46
Fillmore	339.62	80.00	28.86
Freeborn	576.25	85.00	48.97
Goodhue	620.95	80.00	52.77
Grant	479.67	55.00	40.77
Hennepin	1,036.31	50.00	88.07
Hubbard	206.38	20.00	17.54
Isanti	345.96	45.00	29.40
Itasca	209.76	20.00	17.83
Jackson	713.05	85.00	60.60
Kanabec	244.19	45.00	20.75
Kandiyohi	537.28	70.00	45.66
Kittson	339.12	44.00	28.82
Koochiching	117.18	20.00	9.96
Lac Qui Parle	436.52	70.00	37.10
Lake	129.55	20.00	11.01
Lake of the Woods	150.63	20.00	12.80
Le Sueur	625.54	85.00	53.16
Lincoln	321.68	70.00	27.34
Lyon	509.79	70.00	43.32
Mahnomen	290.65	45.00	24.70
Marshall	318.16	44.00	27.04

(continued)

Table 19: SWCD Average Estimated Market Values, CRP Maximum Acceptable Rental Rates, and RIM Perpetual Easement Annuity Equivalents: 1988

<u>SWCD</u>	<u>Ave. EMV</u>	<u>CRP MARR</u>	<u>Annuity Equivalent</u>
Marshall Beltrami (Beltrami)	161.88	20.00	13.76
Marshall Beltrami (Marshall)	318.16	44.00	27.04
Martin	816.03	85.00	69.35
McLeod	585.23	70.00	49.74
Meeker	528.00	70.00	44.87
Mille Lacs	304.10	45.00	25.84
Morrison	258.98	45.00	22.01
Mower	526.59	85.00	44.75
Murray	519.44	70.00	44.15
Nicollet	722.75	85.00	61.42
Nobles	553.30	70.00	47.02
North St. Louis	133.68	20.00	11.36
Olmsted	512.43	80.00	43.55
Pennington	205.35	44.00	17.45
Pine	210.13	20.00	17.86
Pipestone	390.21	70.00	33.16
Pope	347.49	50.00	29.53
Ramsey	2,045.10	50.00	173.80
Red Lake	223.17	44.00	18.97
Redwood	700.15	85.00	59.50
Renville	681.00	85.00	57.88
Rice	638.48	85.00	54.26
Rock	524.58	70.00	44.58
Root River (Houston)	303.07	80.00	25.76
Roseau	193.39	44.00	16.44
Scott	846.54	70.00	71.94
Sherburne	422.01	45.00	35.86
Sibley	625.72	85.00	53.18
South St. Louis	133.68	20.00	11.36
Stearns	408.64	50.00	34.73
Steele	669.99	85.00	56.94
Stevens	493.16	55.00	41.91
Swift	434.75	55.00	36.95
Todd	251.06	45.00	21.34
Traverse	505.67	55.00	42.97
Wabasha	378.23	80.00	32.14
Wadena	180.53	20.00	15.34
Waseca	777.32	85.00	66.06
Washington	877.82	50.00	74.60
Watonwan	771.06	85.00	65.53
West Ottertail	296.25	55.00	25.18
West Polk	450.26	55.00	38.27
Wilkin	566.35	55.00	48.13
Winona	407.60	80.00	34.64
Wright	656.90	50.00	55.83
Yellow Medicine	509.37	70.00	43.29

exceptions. The RIM Reserve, measured this way, clearly cannot compete on price with the CRP.

Another way to characterize inter-program competition is the way in which CRP affects people's perceptions of the going rate for land retirement. It was the original intent of RIM Reserve program designers not to try to compete with the then-new CRP. Rather, initial RIM payment rates were set so that if a landowner had a choice between the two programs (by virtue of equally eligible land), and if the decision was to be made strictly on the basis of price, then the owner would choose to enter the federal program. In that way, scarce state dollars would be husbanded. The downside to this line of reasoning is now apparent. By essentially fixing annual CRP rental rates at the maximum acceptable rental rate and by its large presence in most counties, the CRP has established a new market value: the annual rental rate for retiring marginal land from crop production for a specified period. If the RIM Reserve is thought to pay substantially less than this amount, then landowners might decide not to enter the Reserve, even if they weren't eligible for the CRP, because they feel that RIM offers weren't up to the market rate.

Alternative Mechanisms

Lacking a ready market for cropping rights on agricultural land, program administrators have sought proxies to the unknown reservation price at which land owners would be willing to sell RIM easements. To date, three procedures have been employed: a fixed proportion of federal Conservation Reserve Program enrollment "bids", capitalized local cash rental rates, and varying proportions of local average estimated agricultural land values. What is sought is a payment scheme that

accomplishes public purposes at the lowest possible outlay, including administration expenditures.

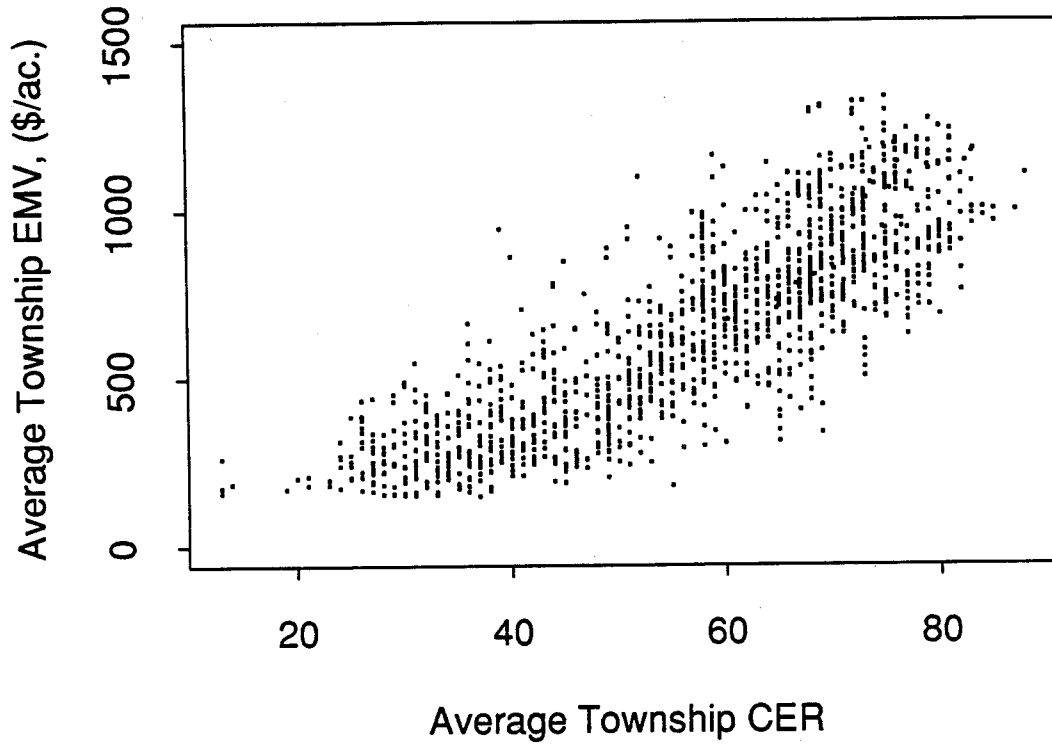
Increasingly, RIM payments are based on average local land values as determined at the township level by county assessors for property tax purposes. Is this mechanism consistent with the need for RIM to pay for a specified set of property rights on a varying set of land parcels?

Two determinations are necessary, in no particular order, if neither bidding nor direct appraisal (discussed below) is to be used. The first is the proportion of fee-simple parcel value reflected in the set of rights acquired. Program administrators have set 90% as the proper ratio for most perpetual RIM easements and 65% of that 90%, for most limited term (twenty year) easements.

The second is the determination of the full value of the parcel itself. RIM program administrators have largely settled upon the average estimated market value of all tillable land in the township for this figure. The EMV value series has the advantage of being widely accepted and widely available. It is likely a high-side estimate of the monetary value of RIM-eligible lands, since they are generally thought to be "marginal" (erosive, wet, low in productivity, or hilly) in some sense. However, many drained wetlands, sensitive groundwater areas, or riparian lands are in no sense marginal with respect to productivity.

The estimated market values used as the basis for RIM payments reflect land productivity as measured by crop equivalent ratings (CERs). (See Rust, 1984). Figure 3 plots each of 1,401 townships' 1987 EMVs by their calculated CERs (Smith, 1990). The linear fit is reasonably close, ($R^2 = .705$). Basing RIM payments on EMVs, therefore, is tantamount to basing them upon productivity. However, given the current township-level payment

Figure 3: Scatterplot of Average Cropland Estimated Market Values and Average Crop Equivalence Ratings by Township: State: 1987



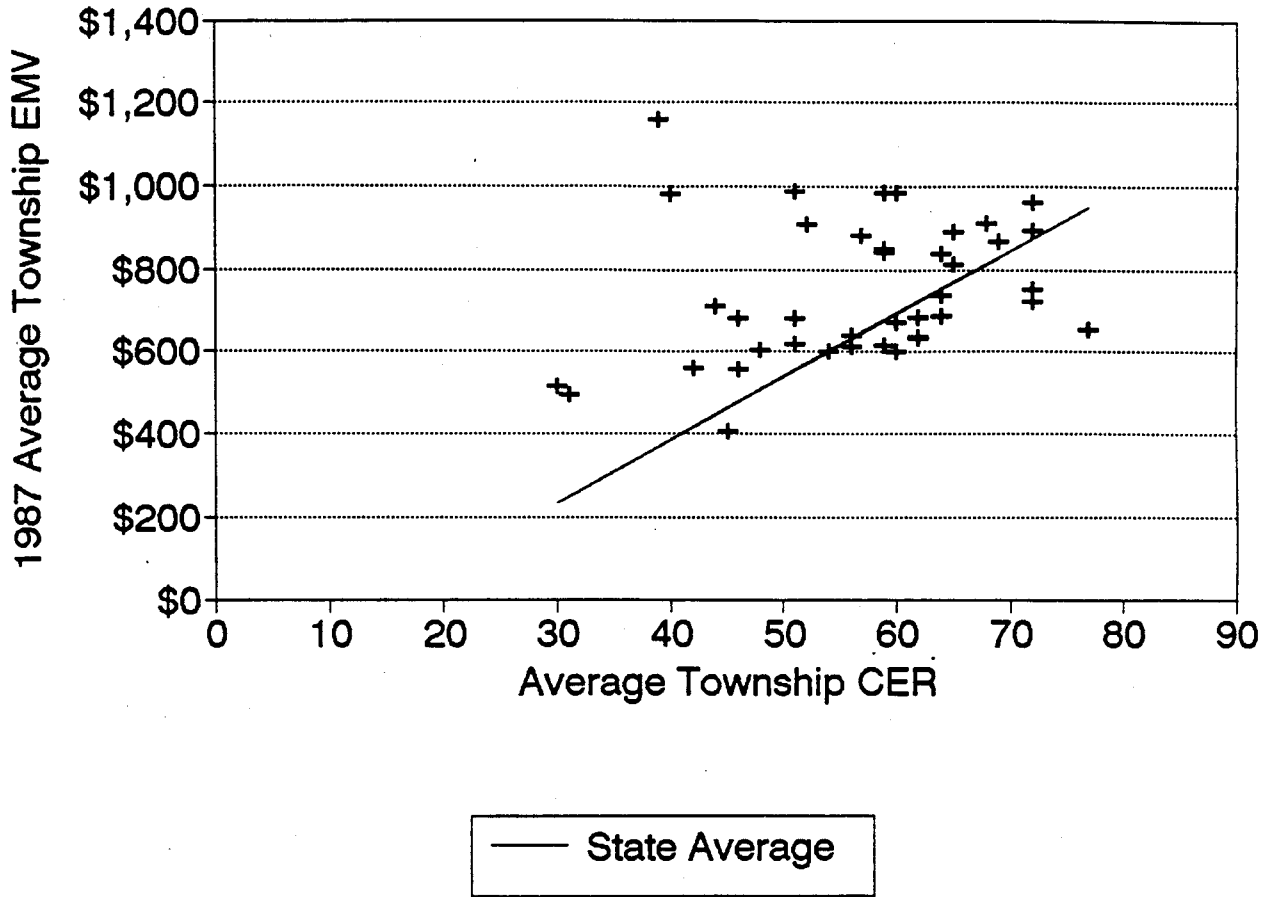
series employed, less productive lands receive the same payment as do more productive lands within the same township. (The public environmental benefit achieved by retiring any particular parcel is presumably independent of the agricultural productivity of the parcel.)

Productivity indices can be expected to be less tied to market values in areas subject to substantial non-agricultural development pressure. For example, Figure 4 shows the EMV/CER relationship in the seven-county Twin Cities metropolitan area (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties). The linear relationship is far less direct ($R^2=0.07$) than it was for the state as a whole. In these areas, an EMV-based RIM will generally "overpay" for easements compared to values based strictly upon productivity. (Overpayment in this sense is suggested by points above the state average line, which itself is the best linear predictor of the relationship shown in Fig. 3).

If RIM payments could more closely approximate landowner reservation prices, program cost effectiveness would of course be enhanced. "Overpayments" would be avoided, and the resulting savings could go toward additional enrollments. This is easier said than done.

Three mechanisms might achieve a better matching. The first is direct appraisal. RIM program managers could first decide which parcels in a locality would--if retired--provide maximum public benefits. Each such parcel could be professionally appraised for the appropriate RIM easement offer price. Alternatively, RIM parcels could be screened from a pool of interested owners, and the selected parcels could then be appraised. In either case, landowners might or might not agree to the appraised price.

Figure 4: Scatterplot of Average Cropland Estimated Market Values and Average Crop Equivalent Ratings by Township: Seven Metro Counties



The current procedure has the advantage that parcel landowners know the offered price before they submit their names, so the likelihood of their entry once selected is presumably high. Appraisal schemes might result in lower easement acquisition payments, but they may have associated with them considerable administrative expenses. Direct appraisal systems used in other state programs consistently show a 12-18 month processing delay.

A second possible way to better match RIM payments to landowner reservation prices is through competitive bidding. In theory at least, a well-constructed bidding mechanism would provide the incentive for landowners to bid nearer their true reservation price. RIM program managers could then take the lowest bids (for otherwise equally desirable parcels) or could select the most desirable parcels, secure in the knowledge that the bid price would be the most cost-effective from the government's point of view. Unfortunately, practical bidding schemes for such purposes have yet to be developed, although they are under examination at the University of Minnesota's Department of Agricultural and Applied Economics. Schemes proposed to date suffer from exposure to strategic behavior, administrative complexity, or sheer impracticality.

A third mechanism might be to pay a fixed percentage of each farm's or even each parcel's estimated market value. These figures are collected annually by county assessors and would presumably better match "real" property values than do the presently-used township averages. The procedure would not be without its problems, however. Many assessors report only their whole-farm estimated values, not their field-by-field figures. Too, landowners would face the interesting incentive to seek a

higher assessment for their property, at least in the year prior to easement sale.

In our judgement, if surrogate cropping rights values are to be used, lower administrative costs and "truer" market values favor use of EMVs over other productivity indicators, including cash rent. (This is what program administrators have done, starting in 1990.) If the state had paid only on an EMV basis from 1987 through 1989, it would have had to pay \$36,000 more for the 20 year easements and \$548,000 more for the perpetual easements than was actually spent on the mixed rent\SMV system (Table 20). This "overpayment" might be thought of as the "cost" of switching earlier to an all-EMV payment section. These calculations assume that all entrants who entered under on a rent-based payment would also have entered under a higher EMV-based figure, and vice versa. Also assumed is that the hypothetical schemes would pay on the basis of 1986 rents or values, as was actually the case.

Section Summary

In this section we examined the RIM payment experience to date and showed the increasing emphasis on EMVs as proxies for unknown cropping rights prices. Our study did not determine whether or not these payments, as made, exceeded sellers' reservation prices. This can be determined only by establishing a market for rights such as those acquired by the State under a RIM easement or by setting up a conceptually sound and administratively practical bidding system. The administrative costs of switching to such systems may outweigh the cost-effectiveness gains thereby achieved.

**Table 20: Actual, Hypothetical EMV-Based, and Hypothetical Rent-Based
Total RIM Payments: State 1987-1989.**

	Easement <u>Acres</u>	<u>Payments (\$000)</u>		
		<u>Actual</u>	<u>EMV-Based</u>	<u>Rent-Based</u>
Limited-Term	2,928	1,128	1,164	1,410
Perpetual	9,321	5,758	6,306	7,708

Any proposal to make the current RIM payment determination and parcel selection process more cost-effective must be carefully examined to determine the costs and benefits of moving to a new system. In many cases, the costs of acquiring the necessary information may outweigh the advantages of more carefully matching public expenditures and public benefits.

Given the RIM Reserve program's present modest funding level, the most straightforward and publicly acceptable price determination mechanism is probably the present system of offers based on pre-established proportions of current published township average estimated market values.

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Appendix A:

Summaries of Easement Data by SWCD

Table A1: Number of RIM Reserve Easements by SWCD by Easement Type:
 1986 - May 1, 1989: Part A
 (Percent of all Contracts in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Aitkin	6 66.67	1 11.11	2 22.22	0 0.00	0 0.00	0 0.00
Anoka	1 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Becker	13 81.25	1 6.25	1 6.25	0 0.00	1 6.25	0 0.00
Beltrami	6 46.15	3 23.08	4 30.77	0 0.00	0 0.00	0 0.00
Benton	18 75.00	1 4.17	2 8.33	1 4.17	0 0.00	0 0.00
Big Stone	2 22.22	3 33.33	3 33.33	1 11.11	0 0.00	0 0.00
Blue Earth	9 69.23	1 7.69	3 23.08	0 0.00	0 0.00	0 0.00
Brown	8 36.36	3 13.64	8 36.36	1 4.55	0 0.00	0 0.00
Carver	4 23.53	2 11.76	10 58.82	1 5.88	0 0.00	0 0.00
Cass	0 0.00	1 100.00	0 0.00	0 0.00	0 0.00	0 0.00
Chippewa	6 66.67	0 0.00	2 22.22	1 11.11	0 0.00	0 0.00
Chisago	23 95.83	1 4.17	0 0.00	0 0.00	0 0.00	0 0.00
Clay	12 46.15	3 11.54	11 42.31	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A1: Number of RIM Reserve Easements by SWCD by Easement Type:
 1986 - May 1, 1989: Part A
 (Percent of all Contracts in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Clearwater	2 33.33	4 66.67	0 0.00	0 0.00	0 0.00	0 0.00
Cottonwood	4 12.12	7 21.21	13 39.39	1 3.03	0 0.00	0 0.00
Dakota	13 81.25	3 18.75	0 0.00	0 0.00	0 0.00	0 0.00
Dodge	3 75.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Douglas	11 44.00	4 16.00	3 12.00	7 28.00	0 0.00	0 0.00
E. Agassi (Norman)	12 60.00	1 5.00	5 25.00	1 5.00	0 0.00	0 0.00
East Ottertail	35 87.50	1 2.50	3 7.50	1 2.50	0 0.00	0 0.00
East Polk	27 90.00	3 10.00	0 0.00	0 0.00	0 0.00	0 0.00
Faribault	0 0.00	1 5.56	8 44.44	8 44.44	0 0.00	0 0.00
Fillmore	22 91.67	0 0.00	2 8.33	0 0.00	0 0.00	0 0.00
Freeborn	14 60.87	2 8.70	4 17.39	3 13.04	0 0.00	0 0.00
Goodhue	24 82.93	12 7.32	5 9.76	0 0.00	0 0.00	0 0.00
Itasca	1 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Jackson	9 56.25	0 0.00	2 12.50	4 25.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A1: Number of RIM Reserve Easements by SWCD by Easement Type:
 1986 - May 1, 1989: Part A
 (Percent of all Contracts in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Kanabec	2 66.67	0 0.00	1 33.33	0 0.00	0 0.00	0 0.00
Kandiyohi	21 63.64	1 3.03	3 9.09	8 24.24	0 0.00	0 0.00
Lake of the Woods	5 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Le Sueur	11 57.89	7 36.84	1 5.26	0 0.00	0 0.00	0 0.00
Lincoln	7 63.64	0 0.00	2 18.18	2 18.18	0 0.00	0 0.00
Lyon	3 30.00	0 0.00	5 50.00	1 10.00	0 0.00	0 0.00
Mahnomen	3 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Marshall	12 85.71	0 0.00	2 14.29	0 0.00	0 0.00	0 0.00
Marshall Beltrami	3 60.00	1 20.00	1 20.00	0 0.00	0 0.00	0 0.00
Martin	8 34.78	7 30.43	5 21.74	1 4.35	0 0.00	0 0.00
McLeod	9 29.03	6 19.35	11 35.48	5 16.13	0 0.00	0 0.00
Meeker	14 48.28	1 3.45	9 31.03	2 6.90	2 6.90	0 0.00
Mille Lacs	6 42.86	4 28.57	4 28.57	0 0.00	0 0.00	0 0.00
Morrison	21 50.00	1 2.38	11 26.19	2 4.76	1 2.38	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A1: Number of RIM Reserve Easements by SWCD by Easement Type:
 1986 - May 1, 1989: Part A
 (Percent of all Contracts in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Mower	2 20.00	2 20.00	2 20.00	0 0.00	0 0.00	1 10.00
Murray	6 37.50	0 0.00	5 31.25	4 25.00	0 0.00	0 0.00
Nicollet	5 62.50	2 25.00	1 12.50	0 0.00	0 0.00	0 0.00
Nobles	2 66.67	0 0.00	1 33.33	0 0.00	0 0.00	0 0.00
North St. Louis	2 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Olmsted	10 76.92	0 0.00	2 15.38	0 0.00	0 0.00	0 0.00
Pennington	7 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Pine	1 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Pipestone	0 0.00	0 0.00	2 50.00	1 25.00	0 0.00	0 0.00
Pope	8 32.00	3 12.00	10 40.00	3 12.00	0 0.00	0 0.00
Red Lake	5 62.50	1 12.50	1 12.50	1 12.50	0 0.00	0 0.00
Redwood	0 0.00	0 0.00	21 72.41	5 17.24	0 0.00	0 0.00
Renville	4 6.45	19 30.65	25 40.32	6 9.68	1 1.61	0 0.00
Rice	16 69.57	2 8.70	2 8.70	3 13.04	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A1: Number of RIM Reserve Easements by SWCD by Easement Type:
 1986 - May 1, 1989: Part A
 (Percent of all Contracts in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Rock	1 33.33	2 66.67	0 0.00	0 0.00	0 0.00	0 0.00
Root River (Houston)	16 84.21	2 10.53	0 0.00	0 0.00	0 0.00	0 0.00
Roseau	12 92.31	0 0.00	1 7.69	0 0.00	0 0.00	0 0.00
Scott	13 37.14	2 5.71	20 57.14	0 0.00	0 0.00	0 0.00
Sherburne	23 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Sibley	7 17.95	7 17.95	20 51.28	5 12.82	0 0.00	0 0.00
Stearns	30 93.75	1 3.12	1 3.12	0 0.00	0 0.00	0 0.00
Steele	7 58.33	2 16.67	3 25.00	0 0.00	0 0.00	0 0.00
Stevens	2 9.09	0 0.00	14 63.64	2 9.09	0 0.00	1 4.55
Swift	6 28.57	1 4.76	12 57.14	1 4.76	0 0.00	0 0.00
Todd	10 83.33	1 8.33	1 8.33	0 0.00	0 0.00	0 0.00
Traverse	1 20.00	0 0.00	2 40.00	2 40.00	0 0.00	0 0.00
West Ottertail	0 0.00	0 0.00	1 100.00	0 0.00	0 0.00	0 0.00
Wabasha	18 66.67	0 0.00	4 14.81	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A1: Number of RIM Reserve Easements by SWCD by Easement Type:
 1986 - May 1, 1989: Part A
 (Percent of all Contracts in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Wadena	10 47.62	11 52.38	0 0.00	0 0.00	0 0.00	0 0.00
Waseca	0 0.00	1 20.00	3 60.00	0 0.00	0 0.00	0 0.00
Washington	2 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Watonwan	10 90.91	1 9.09	0 0.00	0 0.00	0 0.00	0 0.00
Wilkin	5 71.43	0 0.00	2 28.57	0 0.00	0 0.00	0 0.00
Winona	16 88.89	2 11.11	0 0.00	0 0.00	0 0.00	0 0.00
Wright	15 45.45	3 9.09	11 33.33	2 6.06	0 0.00	0 0.00
Yellow Medicine	1 11.11	0 0.00	6 66.67	2 22.22	0 0.00	0 0.00
STATE TOTAL	737	156	334	89	5	2

(continued)

Table A1: Number or RIM Reserve Easements by SWCD by Easement Type:
1986 - May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Aitkin	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	9
Anoka	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1
Becker	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	16
Beltrami	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	13
Benton	0 0.00	2 8.33	0 0.00	0 0.00	0 0.00	0 0.00	24
Big Stone	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	9
Blue Earth	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	13
Brown	2 9.09	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	22
Carver	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	17
Cass	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1
Chippewa	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	9
Chisago	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	24
Clay	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	26
Clearwater	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	6

Note: See Chart 1 Type Key

(continued)

Table A1: Number or RIM Reserve Easements by SWCD by Easement Type:
1986-May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Cook	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1
Cottonwood	1 3.03	0 0.00	1 3.03	0 0.00	3 9.09	3 9.09	33
Dakota	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	16
Dodge	1 25.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	4
Douglas	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	25
E. Agassiz (Norman)	1 5.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	20
East Ottertail	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	40
East Polk	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	30
Faribault	0 0.00	1 5.56	0 0.00	0 0.00	0 0.00	0 0.00	18
Fillmore	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	24
Freeborn	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	23
Goodhue	0 0.00	1 2.27	0 0.00	1 2.27	1 2.27	0 0.00	44
Grant	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	6
Hennepin	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	2

Note: See Chart 1 Type Key

(continued)

Table A1: Number or RIM Reserve Easements by SWCD by Easement Type:
1986 - May 1,1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Hubbard	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	4
Isanti	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	41
Itasca	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1
Jackson	0 0.00	0 0.00	0 0.00	1 6.25	0 0.00	0 0.00	16
Kanabec	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	3
Kandiyohi	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	33
Kittson	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	12
Lac Qui Parle	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	9
Lake of the Woods	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	5
Le Sueur	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	19
Lincoln	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11
Lyon	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 10.00	10
Mahnomen	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	3
Marshall	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	14

Note: See Chart 1 Type Key

(continued)

Table A1: Number or RIM Reserve Easements by SWCD by Easement Type:
1986 - May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Marshall Beltrami	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	5
Martin	1 4.35	1 4.35	0 0.00	0 0.00	0 0.00	0 0.00	23
McLeod	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	31
Meeker	1 3.45	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	29
Mille Lacs	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	14
Morrison	0 0.00	2 4.76	0 0.00	0 0.00	1 2.38	3 7.14	42
Mower	3 30.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	10
Murray	0 0.00	0 0.00	0 0.00	0 0.00	1 6.25	0 0.00	16
Nicollet	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	8
Nobles	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	3
North St. Louis	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	2
Olmsted	0 0.00	0 0.00	0 0.00	1 7.69	0 0.00	0 0.00	13
Pennington	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	7
Pine	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1

Note: See Chart 1 Type Key

(continued)

Table A1: Number or RIM Reserve Easements by SWCD by Easement Type:
1986 - May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Pipestone	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1 25.00	4
Pope	1 4.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	25
Red Lake	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	8
Redwood	3 10.34	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	29
Renville	7 11.29	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	62
Rice	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	23
Rock	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	3
Root River (Houston)	0 0.00	0 0.00	0 0.00	0 0.00	1 5.26	0 0.00	19
Roseau	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	13
Scott	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	35
Sherburne	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	23
Sibley	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	39
Stearns	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	32
Steele	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	12

Note: See Chart 1 Type Key

(continued)

Table A1: Number or RIM Reserve Easements by SWCD by Easement Type:
1986 - May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Stevens	1 4.55	0 0.00	1 4.55	1 4.55	0 0.00	0 0.00	22
Swift	1 4.76	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	21
Todd	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	12
Traverse	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	5
West Ottertail	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1
Wabasha	0 0.00	0 0.00	0 0.00	0 0.00	5 18.52	0 0.00	27
Wadena	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	21
Waseca	0 0.00	0 0.00	0 0.00	1 20.00	0 0.00	0 0.00	5
Washington	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	2
Watonwan	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	11
Wilkin	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	7
Winona	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	18
Wright	0 0.00	0 0.00	1 3.03	0 0.00	1 3.03	0 0.00	33
Yellow Medicine	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	9
STATE TOTAL	23	7	3	5	13	8	1,382

Table A2: RIM Reserve Easement Acreage by SWCD by Easement Type: 1986 - May 1, 1989: Part A (Percent of All RIM Acreage in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Aitkin	197.6 72.01	20.4 7.43	56.4 20.55	0 0.00	0 0.00	0 0.00
Anoka	22.4 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Becker	365.8 87.07	15.6 3.71	24.1 5.74	0 0.00	14.6 3.48	0 0.00
Beltrami	96 48.24	38.8 19.50	64.2 32.26	0 0.00	0 0.00	0 0.00
Benton	438.1 73.25	43 7.19	18.9 3.16	65 10.87	0 0.00	0 0.00
Big Stone	62 28.82	80.9 37.61	37.6 17.48	34.6 16.09	0 0.00	0 0.00
Blue Earth	123.6 70.43	14.3 8.15	37.6 21.42	0 0.00	0 0.00	0 0.00
Brown	118.1 28.05	61.4 14.58	141.9 33.71	19.1 4.54	0 0.00	0 0.00
Carver	72.6 24.08	32.6 10.81	190.2 63.08	6.1 2.02	0 0.00	0 0.00
Cass	0 0.00	20 100.00	0 0.00	0 0.00	0 0.00	0 0.00
Chippewa	74.8 45.83	0 0.00	19.7 12.07	68.7 42.10	0 0.00	0 0.00
Chisago	336.1 94.38	20 5.62	0 0.00	0 0.00	0 0.00	0 0.00
Clay	447.2 43.15	18.5 1.79	570.6 55.06	0 0.00	0 0.00	0 0.00
Clearwater	226.4 58.61	159.9 41.39	0 0.00	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Reserve Easement Acreage by SWCD by Easement Type: 1986 - May 1, 1989: Part A (Percent of All RIM Acreage in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Cook	5.7 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Cottonwood	101.8 14.86	169.6 24.76	267.2 39.01	41.6 6.07	0 0.00	0 0.00
Dakota	322.9 89.22	39 10.78	0 0.00	0 0.00	0 0.00	0 0.00
Dodge	51.7 77.28	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Douglas	206.3 41.97	55 11.19	87 17.70	143.2 29.14	0 0.00	0 0.00
E. Agassiz (Norman)	451 64.31	70.6 10.07	132.6 18.91	42 5.99	0 0.00	0 0.00
East Ottertail	1068.8 86.45	22.6 1.83	114.4 9.25	30.5 2.47	0 0.00	0 0.00
East Polk	975.9 89.89	109.7 10.11	0 0.00	0 0.00	0 0.00	0 0.00
Faribault	0 0.00	41 7.92	201.8 38.98	248 47.90	0 0.00	0 0.00
Fillmore	391.7 97.20	0 0.00	11.3 2.80	0 0.00	0 0.00	0 0.00
Freeborn	217.6 65.78	10.5 3.17	72.3 21.86	30.4 9.19	0 0.00	0 0.00
Goodhue	412.2 64.09	137.9 21.44	57.8 8.99	0 0.00	0 0.00	0 0.00
Grant	0 0.00	0 0.00	196.4 90.76	20 9.24	0 0.00	0 0.00
Hennepin	0 0.00	20.7 100.00	0 0.00	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Reserve Easement Acreage by SWCD by Easement Type: 1986 - May 1, 1989: Part A (Percent of All RIM Acreage in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Hubbard	55.4 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Isanti	504 90.57	35.1 6.31	17.4 3.13	0 0.00	0 0.00	0 0.00
Itasca	25.6 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Jackson	96.2 38.51	0 0.00	16.7 6.69	105.4 42.19	0 0.00	0 0.00
Kanabec	44 79.28	0 0.00	11.5 20.72	0 0.00	0 0.00	0 0.00
Kandiyohi	445.3 65.62	23.7 3.49	37.7 5.56	171.9 25.33	0 0.00	0 0.00
Kittson	342.2 71.26	0 0.00	138 28.74	0 0.00	0 0.00	0 0.00
Lac Qui Parle	148.1 79.50	0 0.00	38.2 20.50	0 0.00	0 0.00	0 0.00
Lake of the Woods	92.6 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Le Sueur	248.1 69.11	91.9 25.60	19 5.29	0 0.00	0 0.00	0 0.00
Lincoln	148.7 60.18	0 0.00	52.4 21.21	46 18.62	0 0.00	0 0.00
Lyon	78.7 36.84	0 0.00	89.4 41.85	27.1 12.69	0 0.00	0 0.00
Mahnomen	56.7 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Marshall	511.7 90.57	0 0.00	53.3 9.43	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Reserve Easement Acreage by SWCD by Easement Type: 1986 - May 1, 1989: Part A (Percent of All RIM Acreage in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Marshall Beltrami	101.3 75.99	14.8 11.10	17.2 12.90	0 0.00	0 0.00	0 0.00
Martin	171.2 37.02	114 24.65	103.9 22.46	45.6 9.86	0 0.00	0 0.00
McLeod	106.2 21.60	76.3 15.52	140.2 28.51	169 34.37	0 0.00	0 0.00
Meeker	459.6 56.71	5 0.62	175.3 21.63	69 8.51	86 10.61	0 0.00
Mille Lacs	56.2 34.25	34.1 20.78	73.8 44.97	0 0.00	0 0.00	0 0.00
Morrison	462.8 54.20	12.9 1.51	129.2 15.13	59.4 6.96	51 5.97	0 0.00
Mower	36.7 20.16	48.2 26.48	41.3 22.69	0 0.00	0 0.00	6.2 3.41
Murray	109.2 31.13	0 0.00	115.6 32.95	72 20.52	0 0.00	0 0.00
Nicollet	85.2 68.71	8.6 6.94	30.2 24.35	0 0.00	0 0.00	0 0.00
Nobles	28 41.79	0 0.00	39 58.21	0 0.00	0 0.00	0 0.00
North St. Louis	44 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Olmsted	195 85.90	0 0.00	7.3 3.22	0 0.00	0 0.00	0 0.00
Pennington	209.9 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Pine	67 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Reserve Easement Acreage by SWCD by Easement Type: 1986 - May 1, 1989: Part A (Percent of All RIM Acreage in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Pipestone	0 0.00	0 0.00	35.3 65.74	9 16.76	0 0.00	0 0.00
Pope	125.4 16.46	64.4 8.45	425.5 55.85	132.7 17.42	0 0.00	0 0.00
Red Lake	197.9 60.04	6.5 1.97	5.2 1.58	120 36.41	0 0.00	0 0.00
Redwood	0 0.00	0 0.00	541.8 68.81	160.8 20.42	0 0.00	0 0.00
Renville	87.8 5.96	408.4 27.71	512.9 34.80	261.8 17.76	37.2 2.52	0 0.00
Rice	202.6 61.41	36.9 11.19	46 13.94	44.4 13.46	0 0.00	0 0.00
Rock	8 31.37	17.5 68.63	0 0.00	0 0.00	0 0.00	0 0.00
Root River (Houston)	402.5 85.46	12.5 2.65	0 0.00	0 0.00	0 0.00	0 0.00
Roseau	489.5 93.51	0 0.00	34 6.49	0 0.00	0 0.00	0 0.00
Scott	238.6 35.18	21.7 3.20	418 61.62	0 0.00	0 0.00	0 0.00
Sherburne	610 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Sibley	76.4 14.76	68.9 13.31	274.2 52.99	98 18.94	0 0.00	0 0.00
Stearns	583 96.08	6.2 1.02	17.6 2.90	0 0.00	0 0.00	0 0.00
Steele	155.5 63.65	19.1 7.82	69.7 28.53	0 0.00	0 0.00	0 0.00

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Reserve Easement Acreage by SWCD by Easement Type: 1986 - May 1, 1989: Part A (Percent of All RIM Acreage in SWCD on Second Line)

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Stevens	31.3 5.91	0 0.00	280.6 52.95	66 12.46	0 0.00	15 2.83
Swift	170.1 29.46	8.6 1.49	366 63.40	12 2.08	0 0.00	0 0.00
Todd	334.8 90.10	27.8 7.48	9 2.42	0 0.00	0 0.00	0 0.00
Traverse	50.6 37.40	0 0.00	26.6 19.66	58.1 42.94	0 0.00	0 0.00
West Ottertail	0 0.00	0 0.00	25 100.00	0 0.00	0 0.00	0 0.00
Wabasha	289.7 51.58	0 0.00	38 6.77	0 0.00	0 0.00	0 0.00
Wadena	249.7 57.35	185.7 42.65	0 0.00	0 0.00	0 0.00	0 0.00
Waseca	0 0.00	21 20.61	71.6 70.26	0 0.00	0 0.00	0 0.00
Washington	52.7 100.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00
Watonwan	115.4 94.44	6.8 5.56	0 0.00	0 0.00	0 0.00	0 0.00
Wilkin	117 52.94	0 0.00	104 47.06	0 0.00	0 0.00	0 0.00
Winona	162.9 91.47	15.2 8.53	0 0.00	0 0.00	0 0.00	0 0.00
Wright	228.5 38.47	59.1 9.95	247.3 41.64	46 7.75	0 0.00	0 0.00
Yellow Medicine	16 5.29	0 0.00	177.4 58.63	109.2 36.09	0 0.00	0 0.00
STATE TOTAL	16,712	2,653	7,374	2,632	184	21

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Easement Acreage by SWCD and by Easement Type: 1986 -
 May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Aitkin	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	274.4
Anoka	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	22.4
Becker	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	420.1
Beltrami	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	199
Benton	0 0.00	33.1 5.53	0 0.00	0 0.00	0 0.00	0 0.00	598.1
Big Stone	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	215.1
Blue Earth	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	175.5
Brown	80.5 19.12	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	421
Carver	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	301.5
Cass	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	20
Chippewa	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	163.2
Chisago	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	356.1
Clay	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1036.3
Clearwater	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	386.3

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Easement Acreage by SWCD and by Easement Type: 1986 -
 May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Cook	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	5.7
Cottonwood	3.9 0.57	0 0.00	24.9 3.64	0 0.00	64.3 9.39	11.6 1.69	684.9
Dakota	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	361.9
Dodge	15.2 22.72	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	66.9
Douglas	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	491.5
East Ottertail	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1236.3
East Polk	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1085.6
Faribault	0 0.00	26.9 5.20	0 0.00	0 0.00	0 0.00	0 0.00	517.7
Fillmore	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	403
Freeborn	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	330.8
Goodhue	0 0.00	7.9 1.23	0 0.00	17.4 2.71	10 1.55	0 0.00	643.2
Grant	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	216.4
Hennepin	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	20.7
Hubbard	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	55.4

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Easement Acreage by SWCD and by Easement Type: 1986 -
 May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Isanti	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	556.5
Itasca	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	25.6
Jackson	0 0.00	0 0.00	0 0.00	31.5 12.61	0 0.00	0 0.00	249.8
Kanabec	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	55.5
Kandiyohi	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	678.6
Kittson	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	480.2
Lac Qui Parle	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	186.3
Lake of the Woods	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	92.6
Le Sueur	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	359
Lincoln	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	247.1
Lyon	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	18.4 8.61	213.6
Mahnomen	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	56.7
Marshall	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	565
Marshall Beltrami	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	133.3

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Easement Acreage by SWCD and by Easement Type: 1986 -
May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Martin	21.5 4.65	6.3 1.36	0 0.00	0 0.00	0 0.00	0 0.00	462.5
McLeod	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	491.7
Meeker	15.6 1.92	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	810.5
Mille Lacs	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	164.1
Morrison	0 0.00	54.5 6.38	0 0.00	0 0.00	51 5.97	33.1 3.88	853.9
Mower	49.6 27.25	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	182
Murray	0 0.00	0 0.00	0 0.00	0 0.00	54 15.39	0 0.00	350.8
Nicollet	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	124
Nobles	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	67
Norman	5.1 0.73	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	701.3
North St. Louis	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	44
Olmsted	0 0.00	0 0.00	0 0.00	24.7 10.88	0 0.00	0 0.00	227
Pennington	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	209.9
Pine	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	67

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Easement Acreage by SWCD and by Easement Type: 1986 -
May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Pipestone	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	9.4 17.50	53.7
Pope	13.8 1.81	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	761.8
Red Lake	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	329.6
Redwood	84.8 10.77	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	787.4
Renville	165.8 11.25	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	1473.9
Rice	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	329.9
Rock	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	25.5
Root River (Houston)	0 0.00	0 0.00	0 0.00	0 0.00	56 11.89	0 0.00	471
Roseau	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	523.5
Scott	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	678.3
Sherburne	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	610
Sibley	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	517.5
Stearns	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	606.8
Steele	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	244.3

Note: See Chart 1 Type Key

(continued)

Table A2: RIM Easement Acreage by SWCD and by Easement Type: 1986 -
 May 1, 1989: Part B

SWCD	Easement Type						Total
	Riparian/ Perp.	Ground water/ 20 yr	Ground water/ Perp.	Hillside/ 20 yr	Hillside/ Perp.	Snow- fence	
Stevens	15 2.83	0 0.00	80 15.10	42 7.93	0 0.00	0 0.00	529.9
Swift	20.6 3.57	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	577.3
Todd	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	371.6
Traverse	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	135.3
West Ottertail	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	25
Wabasha	0 0.00	0 0.00	0 0.00	0 0.00	233.9 41.65	0 0.00	561.6
Wadena	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	435.4
Waseca	0 0.00	0 0.00	0 0.00	9.3 9.13	0 0.00	0 0.00	101.9
Washington	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	52.7
Watonwan	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	122.2
Wilkin	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	221
Winona	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	178.1
Wright	0 0.00	0 0.00	4.8 0.81	0 0.00	8.2 1.38	0 0.00	593.9
Yellow Medicine	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	0 0.00	302.6
Total	491	129	110	125	477	72	30,986

Note: See Chart 1 Type Key

Table A3: RIM Reserve Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989: Part A

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Aitkin	24898	1543.3	9117.8	0	0	0
Anoka	5510.4	0	0	0	0	0
Becker	99863	2255	5896.3	0	2387.3	0
Beltrami	10761	4069	8922.7	0	0	0
Benton	118646	10277	5623.6	11197	0	0
Big Stone	20584	27926	18813	11126	0	0
Blue Earth	64766	8463.2	38804	0	0	0
Brown	55306	37123	136430	22016	0	0
Carver	30347	18193	171008	4921.4	0	0
Cass	0	2494.6	0	0	0	0
Chippewa	32912	0	12893	50669	0	0
Chisago	90411	3848.4	0	0	0	0
Clay	146682	4299.6	268543	0	0	0
Clearwater	22415	20802	0	0	0	0
Cook	701.1	0	0	0	0	0
Cottonwood	47802	94850	244717	16525	0	0
Dakota	157575	15882	0	0	0	0
Dodge	24971	0	0	0	0	0
Douglas	62509	15805	36025	52851	0	0
E. Agassiz (Norman)	149217	12676	52783	14470	0	0
East Ottertail	299959	3523.6	48584	19347	0	0

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Reserve Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989: Part A

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
East Polk	278987	18639	0	0	0	0
Faribault	0	26503	187007	224106	0	0
Fillmore	180858	0	5575.1	0	0	0
Freeborn	112498	5394.1	75306	25438	0	0
Goodhue	194970	62355	42349	0	0	0
Grant	0	0	129265	14322	0	0
Hennepin	0	9014.8	0	0	0	0
Hubbard	6980.4	0	0	0	0	0
Isanti	131040	7390.7	5110.4	0	0	0
Itasca	3148.8	0	0	0	0	0
Jackson	50313	0	14954	94521	0	0
Kanabec	10736	0	3743.6	0	0	0
Kandiyohi	187026	7931.4	27100	136124	0	0
Kittson	93078	0	23175	0	0	0
Lac Qui Parle	63683	0	17715	0	0	0
Lake of the Woods	11575	0	0	0	0	0
Le Sueur	128516	45544	14996	0	0	0
Lincoln	62900	0	18297	19375	0	0
Lyon	33998	0	50087	10836	0	0
Mahnomen	15479	0	0	0	0	0
Marshall	135601	0	11880	0	0	0

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Reserve Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989: Part A

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Marshall Beltrami	24274	927.81	2370.2	0	0	0
Martin	88844	77579	98736	24412	0	0
McLeod	43223	38977	104256	127526	0	0
Meeker	192113	1642.3	106986	39337	65654	0
Mille Lacs	15372	9260.6	23361	0	0	0
Morrison	113849	2908.6	32287	16534	11958	0
Mower	18460	23652	28675	0	0	3401.3
Murray	46738	0	81713	38304	0	0
Nicollet	43196	5124.5	26470	0	0	0
Nobles	11620	0	32830	0	0	0
North St. Louis	5412	0	0	0	0	0
Olmsted	92820	0	4686.5	0	0	0
Pennington	56253	0	0	0	0	0
Pine	8241	0	0	0	0	0
Pipestone	0	0	15463	3337.7	0	0
Pope	38247	16578	189831	51957	0	0
Red Lake	51718	1109.2	1863.7	34260	0	0
Redwood	0	0	480431	122215	0	0
Renville	46183	227880	428682	220922	29616	0
Rice	102516	13840	30742	31962	0	0
Rock	3416	7929.3	0	0	0	0

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Reserve Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989: Part A

SWCD	Easement Type					
	MAL/ 10 yr	MAL/ 20 yr	MAL/ Perp.	Wetland/ History	Wetland/ No Hist.	Riparian/ 20 yr
Root River (Houston)	191992	2798.1	0	0	0	0
Roseau	129228	0	8400.2	0	0	0
Scott	94963	13828	321010	0	0	0
Sherburne	154330	0	0	0	0	0
Sibley	38353	36045	203036	80441	0	0
Stearns	177232	2409.8	8495.2	0	0	0
Steele	79927	9560.3	42699	0	0	0
Stevens	10799	0	174563	36150	0	6750.5
Swift	55963	3158.6	210823	8568.7	0	0
Todd	90396	4569.5	2314.4	0	0	0
Traverse	15433	0	16819	38494	0	0
West Ottertail	0	0	11592	0	0	0
Wabasha	142532	0	20911	0	0	0
Wadena	30713	21121	0	0	0	0
Waseca	0	12666	74468	0	0	0
Washington	15652	0	0	0	0	0
Watonwan	58162	4395.9	0	0	0	0
Wilkin	39897	0	57708	0	0	0
Winona	76563	5023	0	0	0	0
Wright	68779	27281	160043	38364	0	0
Yellow Medicine	6912	0	101364	77230	0	0
STATE TOTAL	5,647,543	1,037,068	4,788,350	1,717,857	109,615	10,152

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989:
Part B

SWCD	Easement Type						Total
	Riparian Perm.	Ground water/ 20 yr	Ground water Perm.	Hillside 20 yr	Hillside Perm	Snow- fence	
Aitkin	0	0	0	0	0	0	35559
Anoka	0	0	0	0	0	0	5510.4
Becker	0	0	0	0	0	0	110402
Beltrami	0	0	0	0	0	0	23753
Benton	0	5779.6	0	0	0	0	151523
Big Stone	0	0	0	0	0	0	78449
Blue Earth	0	0	0	0	0	0	112033
Brown	59370	0	0	0	0	0	310246
Carver	0	0	0	0	0	0	224469
Cass	0	0	0	0	0	0	2494.6
Chippewa	0	0	0	0	0	0	96473
Chisago	0	0	0	0	0	0	94259
Clay	0	0	0	0	0	0	419524
Clearwater	0	0	0	0	0	0	43217
Cook	0	0	0	0	0	0	701.1
Cottonwood	3491.9	0	22154	0	35951	9650	475141
Dakota	0	0	0	0	0	0	173457
Dodge	8437	0	0	0	0	0	33408
Douglas	0	0	0	0	0	0	167189
E. Agassiz (Norman)	2377.6	0	0	0	0	0	231523
East Ottertail	0	0	0	0	0	0	371413

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989:
Part B

SWCD	Easement Type						Total
	Riparian Perm.	Ground water/ 20 yr	Ground water Perm.	Hillside 20 yr	Hillside Perm	Snow- fence	
East Polk	0	0	0	0	0	0	297626
Faribault	0	17388	0	0	0	0	455004
Fillmore	0	0	0	0	0	0	186433
Freeborn	0	0	0	0	0	0	218637
Goodhue	0	2912.5	0	4979.3	4780.3	0	312346
Grant	0	0	0	0	0	0	143587
Hennepin	0	0	0	0	0	0	9014.8
Hubbard	0	0	0	0	0	0	6980.4
Isanti	0	0	0	0	0	0	143541
Itasca	0	0	0	0	0	0	3148.8
Jackson	0	0	0	11942	0	0	171730
Kanabec	0	0	0	0	0	0	14480
Kandiyohi	0	0	0	0	0	0	358182
Kittson	0	0	0	0	0	0	116253
Lac Qui Parle	0	0	0	0	0	0	81398
Lake of the Woods	0	0	0	0	0	0	11575
Le Sueur	0	0	0	0	0	0	189056
Lincoln	0	0	0	0	0	0	100572
Lyon	0	0	0	0	0	8453.1	103375
Mahnomen	0	0	0	0	0	0	15479
Marshall	0	0	0	0	0	0	147481

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989
Part B

SWCD	Easement Type						Total
	Riparian Perm.	Ground water/ 20 yr	Ground water Perm.	Hillside 20 yr	Hillside Perm	Snow- fence	
Marshall Beltrami	0	0	0	0	0	0	27572
Martin	16717	4312.2	0	0	0	0	310600
McLeod	0	0	0	0	0	0	313982
Meeker	8130.3	0	0	0	0	0	413863
Mille Lacs	0	0	0	0	0	0	47993
Morrison	0	12417	0	0	9860.8	9296.8	209112
Mower	32315	0	0	0	0	0	106505
Murray	0	0	0	0	22861	0	189616
Nicollet	0	0	0	0	0	0	74791
Nobles	0	0	0	0	0	0	44450
North St. Louis	0	0	0	0	0	0	5412
Olmsted	0	0	0	6538.6	0	0	104045
Pennington	0	0	0	0	0	0	56253
Pine	0	0	0	0	0	0	8241
Pipestone	0	0	0	0	0	3486	22287
Pope	2499.1	0	0	0	0	0	299112
Red Lake	0	0	0	0	0	0	88950
Redwood	62640	0	0	0	0	0	665286
Renville	80666	0	0	0	0	0	1033948
Rice	0	0	0	0	0	0	179059
Rock	0	0	0	0	0	0	11345

Note: See Chart 1 Type Key

(continued)

Table A3: RIM Easement Payments by SWCD by Easement Type: 1986 - May 1, 1989
Part B

SWCD	Easement Type						Total
	Riparian Perm.	Ground water/ 20 yr	Ground water Perm.	Hillside 20 yr	Hillside Perm	Snow- fence	
Root River (Houston)	0	0	0	0	9705.4	0	204496
Roseau	0	0	0	0	0	0	137628
Scott	0	0	0	0	0	0	429801
Sherburne	0	0	0	0	0	0	154330
Sibley	0	0	0	0	0	0	357875
Stearns	0	0	0	0	0	0	188137
Steele	0	0	0	0	0	0	132187
Stevens	10514	0	25800	11464	0	0	276041
Swift	10510	0	0	0	0	0	289023
Todd	0	0	0	0	0	0	97280
Traverse	0	0	0	0	0	0	70746
West Ottertail	0	0	0	0	0	0	11592
Wabasha	0	0	0	0	78813	0	242257
Wadena	0	0	0	0	0	0	51834
Waseca	0	0	0	3553.2	0	0	90688
Washington	0	0	0	0	0	0	15652
Watsonwan	0	0	0	0	0	0	62558
Wilkin	0	0	0	0	0	0	97605
Winona	0	0	0	0	0	0	81586
Wright	0	0	2422.5	0	4210.5	0	301099
Yellow Medicine	0	0	0	0	0	0	185506
STATE TOTAL	297669	42809.9	50376.9	38476.9	166183	30885.9	13,936,987

Note: See Chart 1 Type Key

Table A4: RIM Reserve Easement Acreage by Conservation Practice by SWCD: 1986 - May 1, 1989: Part A

SWCD	Practice						
	Donated	Intro-duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
Aitkin	0	4.8	0	0	0	0	6
Anoka	0	14.5	0	0	0	0	7.9
Becker	0	265.4	0	0	0	0	112.1
Beltrami	0	178.2	0	0	0	0	51.9
Benton	23.9	380.1	0	0	0	65.6	44.1
Big Stone	3.4	147.6	0	0	0	0	7.5
Blue Earth	0	64.3	0	0	0	104.8	4.8
Brown	24.6	130.8	0	0	0	239.9	10.4
Carver	0	198.9	0	0	0	32.7	31.3
Cass	0	0	0	0	0	0	12
Chippewa	11.4	43.6	0.7	0	0	38.4	8.8
Chisago	0	220.5	0	0	0	78.1	7
Clay	0.3	425.5	5	0	0.2	168.4	32.6
Clearwater	0	4.1	16.7	0	0	21.9	15.4
Cook	0	5.7	0	0	0	0	0
Cottonwood	6	245.5	0	3	0	152.1	64.3
Dakota	0	150.9	0	0	0	171.6	15
Dodge	5.2	40.7	0	0	0	0	3.1
Douglas	0	240.4	0	0	0	107.9	108.6
E. Agassiz (Norman)	0	322.7	0	0	0	78.7	181.1
East Ottertail	0	720.6	0	0	0	103.9	32.9

(Continued)

Table A4: RIM Reserve Easement Acreage by Conservation Practice by SWCD: 1986 - May 1, 1989: Part A

SWCD	Practice						
	Donated	Intro-duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
East Polk	0	825	0	0	0	0	0
Faribault	35.8	78.1	0	0	0	308.5	46.5
Fillmore	0	172.1	0	0	0	0	53
Freeborn	0	167	0	0	0	112.6	41.1
Goodhue	0	354	0	0	0	38.7	76.1
Grant	0	15	0	0	0	130.3	0
Hennepin	0	1.9	0	0	0	15.3	4.5
Hubbard	0	38.4	0	0	0	0	9.8
Isanti	0	513.4	0	0	0	43.9	62.4
Itasca	0	11	0	0	0	0	14.6
Jackson	0	186.9	0	0	0	10	2
Kanabec	0	0	0	0	0	0	16.5
Kandiyohi	5.6	304.9	0	0	0	132.7	1
Kittson	0	288.7	0	0	0	20.6	3
Lac Qui Parle	0	88.2	0	0	0	15	1
Lake of the Woods	0	11	0	0	0	0	2.6
Le Sueur	0	122.5	0	0	0	28.4	6.5
Lincoln	0	120.1	0	0	0	44.5	28.4
Lyon	2.6	105.2	0	6	0	17.6	18.9
Mahnomen	0	49.5	0	0	0	0	0
Marshall	0	470.1	0	0	0	0	0
Marshall Beltrami	0	101.7	0	0	0	0	0

(continued)

Table A4: RIM Reserve Easement Acreage by Conservation Practice by SWCD: 1986 - May 1, 1989: Part A

SWCD	Practice						
	Donated	Intro-duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
Martin	35.1	299.3	3.9	0	0	77.4	8
McLeod	8.3	161.6	0	0	0	223.4	34
Meeker	2.3	308.3	0	0	0	454.3	8.6
Mille Lacs	0	139.9	0	0	0	0	90.9
Morrison	1	522.8	6.2	26.1	0	40	76.7
Mower	0	131.8	0	0	0	34.4	27.6
Murray	2.9	256.6	0	0	0	0	0
Nicollet	1.5	96.9	0	0	0	4.6	31.5
Nobles	0	19.4	0	0	0	0	3.2
North St. Louis	0	9	0	0	0	0	9
Olmsted	0	180.7	0	0	0	0	44.3
Pennington	0	196.9	0	0	0	0	0
Pine	0	0	0	0	0	0	11.4
Pipestone	0	9.3	0	4.5	0	19.1	24
Pope	35.7	634.3	0	0	0	0	196.3
Red Lake	0	97.4	0	0	0	0	0
Redwood	11.8	494.9	0	0	0	220.6	21.8
Renville	107.2	446.1	0	0	0	697.1	15.7
Rice	0	118.9	0	0	4	103.7	23
Rock	0	8	0	0	0	0	11
Root River (Houston)	0	59.2	68.5	0	0	30.1	51.1
Roseau	0	490	0	0	0	0	34

(continued)

Table A4: RIM Reserve Easement Acreage by Conservation Practice by SWCD: 1986 - May 1, 1989: Part A

SWCD	Practice						
	Donated	Intro-duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
Scott	2.1	372.9	1	0	0	185.5	57.7
Sherburne	0	511.8	0	0	0	15	0
Sibley	0	250.6	0	0	0	196.9	71.1
Stearns	0	460.2	0	0	0	24.5	49.9
Steele	0	32	0	0	1.5	155	13.5
Stevens	49.8	272.3	0	0	0	9	26.3
Swift	5.8	219.3	0	0	0	308.4	24.1
Todd	0	170.6	0	0	0	121.2	75.4
Traverse	0	110.5	0	0	0	0	4.3
West Ottertail	0	20	0	0	0	0	5
Wabasha	0	135.3	206.1	0	0	0	101.1
Wadena	0	181.8	8	0	0	102.4	89.9
Waseca	0	92.6	0	0	0	0	10
Washington	0	32.4	0	0	0	0	0
Watonwan	0	72.3	0	0	0	11.3	0.3
Wilkin	0	167	0	0	0	34	1
Winona	0	58.2	0	0	0	4	63.8
Wright	18.8	435.8	10.8	0	0	33.7	110.3
Yellow Medicine	22.7	166.9	0	0	2	96	14.4
STATE TOTAL	423.8	16273.3	326.9	39.6	7.7	5483.7	2584.9

(Continued)

Table A4: RIM Easement Acreage by Conservation Practice by SWCD: 1986-May 1, 1989:
Part B

SWCD	Practice						
	Donated	Intro-duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
Aitkin	0	0	0	0	269.6	0	0
Anoka	0	0	0	0	0	0	0
Becker	0	0	0	13	125.1	0	0
Beltrami	2	0	0	1.5	0	19.5	0
Benton	8	0	0	43	147.2	3.3	0
Big Stone	2.4	0	0	7	48.6	8.5	7
Blue Earth	2.5	0	0	15.2	4.4	2	0
Brown	0	0	0	6.7	0	9	5
Carver	0	0	0	7.2	29.7	2.6	0
Cass	0	0	0	0	20	0	0
Chippewa	0	0	0	58	3	0	58
Chisago	1.1	0	0	0	57.5	0	0
Clay	5.5	0	0	2	309.7	7	2
Clearwater	0	0	0	0	349	4	0
Cook	0	0	0	0	0	0	0
Cottonwood	15	0	0	39.6	279.3	2	14
Dakota	0	0	0	14.9	34.4	2	
Dodge	0	0	0	0	18.2	0.7	0
Douglas	0	0	0	50.8	113.7	3.3	0
E. Agassiz (Norman)	0	0	0	26.1	264.5	10	0
East Ottertail	19.7	0	0	17.5	310.9	7	18
East Polk	0.4	0	0	0	248.9	11.3	0

(continued)

Table A4: RIM Easement Acreage by Conservation Practice by SWCD: 1986-May 1, 1989:
Part B

SWCD	Practice						
	Donated	Intro- duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
Fillmore	0	0	0	0	230.9	0	0
Freeborn	0.6	0	0	10.9	45	0.5	12.7
Goodhue	0	0	0	0	240.5	2.5	7.5
Grant	5	0	0	10	59.1	2	10
Hennepin	0	0	0	0	3.5	0	0
Hubbard	0	0	0	0	17	0	0
Isanti	0	0	0	0	43.7	0	0
Itasca	0	0	0	0	0	0	0
Jackson	0	0	0	71.4	52.9	0	0
Kanabec	0	0	0	0	50.5	0	0
Kandiyohi	0	0	0	51	194.7	1	20.9
Kittson	0	0	0	0	170.9	0	0
Lac Qui Parle	5.4	0	0	0	60.1	0	0
Lake of the Woods	0	0	0	0	81.6	0	0
Le Sueur	0	0	0	0	208.1	0	0
Lincoln	3	0	0	56.5	44.8	0	9.7
Lyon	0	0	0	7	76.4	1	16.8
Mahnomen	1	0	0	0	7.2	0	0
Marshall	0	0	0	0	94.9	0	0
Marshall Beltrami	0	0	0	0	31.6	0	0
Martin	3.4	0	0	2.2	43.4	7.6	8.1
McLeod	17.3	0	0	46.5	60.7	13.6	100.9

(continued)

Table A4: RIM Easement Acreage by Conservation Practice by SWCD: 1986-May 1, 1989:
Part B

SWCD	Practice						
	Donated	Intro- duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses	Trees
Mille Lacs	0	0	0	0	17.7	0	0
Morrison	2.3	0	0	104.3	231.3	5	2.3
Mower	0	0	0	0	15.8	0	0
Murray	0	0	0	18.8	84.8	0.5	43.8
Nicollet	0	0	0	0	0	0	0
North St. Louis	0	0	0	0	35	0	0
Olmsted	0	0	1	1	31.3	0	0
Pennington	0	0	0	0	13	0	0
Pine	0	0	0	0	67	0	0
Pipestone	0	0	0	1.7	1.6	5	4.9
Pope	0	0	0	46	25.8	5	26
Red Lake	0	0	0	0	111.2	1	0
Redwood	11.2	0	0	73.3	0	3.8	115.5
Renville	0	0	0	84.7	194.9	1.6	15
Rice	0	0.2	0.4	3	99.7	1.5	5.5
Rock	0	0	0	0	17.5	0	8
Root River (Houston)	0	0	0	0	320.8	1	0
Roseau	0	0	0	0	33.5	0	0
Scott	0	0	0.2	4.3	92.4	0.5	22.2
Sherburne	3.2	0	0	0	60.7	7.2	0
Sibley	1.3	0	0	37.2	44.9	14.5	10.6
Stearns	2.7	0	0	0	111.3	6	0

(continued)

Table A4: RIM Easement Acreage by Conservation Practice by SWCD: 1986-May 1, 1989:
Part B:

SWCD	Practice							Trees
	Donated	Intro- duced Grasses	Already in Trees	Living Snow- fence	Shallow Water	Native Grasses		
Stevens	0	1	0	9.2	188.6	10.2	0	
Watonwan	1	0	0	0	38.6	0	0	
Wilkin	0	0	0	0	19	1	0	
Winona	0	0	0	0	115.9	0	0	
Wright	0	0	0	31.7	52.1	11.4	15	
Yellow Medicine	1.7	0	0	23.3	16	1	0	
STATE TOTAL	140.9	1.2	1.9	1078.8	7185.4	212.2	682.3	34442.6

Appendix B: Land Capability Classification

From USDA SCS, "Soil Survey for Dakota County, Minnesota."

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The grouping does not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor does it consider possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for rangeland, for woodland, and for engineering purposes.

In the capability system, soils are generally grouped at three levels: capability class, subclass, and unit. These levels are defined in the following paragraphs.

Capability classes, the broadest groups, are designated by Roman numerals I through VIII. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follow:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices, or both.

Class III soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both.

Class IV soils have very severe limitations

that reduce the choice of plants or that require very careful management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use.

Class VI soils have severe limitations that make them generally unsuitable for cultivation.

Class VII soils have very severe limitations that make them unsuitable for cultivation.

Class VIII soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, e, w, s, or c, to the class numeral, for example, IIe. The letter e shows that the main limitation is risk or erosion unless close-growing plant cover is maintained; w shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); s shows that the soil is limited mainly because it is shallow, droughty, or stony; and c, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class I there are no subclasses because the soils of this class have few limitations. Class V contains only the subclasses indicated by w, s, or c because the soils in class V are subject to little or no erosion. They have other limitations that restrict their use to pasture, rangeland, woodland, wildlife habitat, or recreation.