

products, and coal. The first iron ore docks, built in 1892, opened modern era developments which have continued to the present. In 1987, the two ore terminals, operated by Burlington Northern (Superior) and Duluth Missabe and Iron Range railroads, loaded about 18,000,000 long tons of taconite pellets—processed iron ore for the nation's steel mills.

Foreign "salties" and U.S.-flag lake carriers enter and leave by the harbor's two entrances: the natural Superior entry and the man-made Duluth ship canal where vessels pass under the unique and world-famed Aerial Lift Bridge. The Duluth-Superior harbor covers 19 square miles of land and water and 17 miles of dredged channels varying from 21 to 27 feet deep. Three miles of upper channel have been designated for deepening and widening. Along the 49 miles of waterfront are 66 public and private berths handling all forms of commerce from bulk to packaged general cargo. The port is served by five major railroads and several interstate highway systems.

Private grain terminals operated by Archer-Daniels-Midland, Cargill, General Mills, Harvest States Cooperatives, International Multifoods and Peavey (ConAgra) are served by 12 loading berths at the elevators and can store more than 70 million bushels. In a year, over 200 million bushels of agricultural products pass through the port bound for overseas, Canada and domestic destinations. Algeria is the largest single destination for bulk grain from the Twin Ports, accounting for about one-third of the total. Barley exports showed a marked increase in 1987 as did soybeans. The Clure Public Marine Terminal, operated by Meehan Seaway Service, is the port's general cargo facility, loading and unloading bagged, boxed, and crated commodities. More than 6,000 lineal feet of dock space with berths dredged to 30

feet are available. Terminal facilities also include 315,000 square feet of warehouse storage, a 1.8 million gallon tank farm for liquid storage and Minnesota's only operating Foreign Trade Zone. The Port Authority's commodities bagging plant—the only one of its kind on the Great Lakes—is located adjacent to the General Mills elevator near the Port Terminal for sacking bulk grains, seeds and beans. Three government Food for Peace shipments to needy nations were allocated to the Port of Duluth last year because of the bagging plant: durum wheat for September shipment to Somalia and Ethiopia and spring wheat for Nepal. The facility also is available for commercial cargoes. In addition, the Port Terminal handles bagged grain products, pinto beans, dry milk, twine, steel plate and coils, machinery, project cargoes, and other imports and exports. The Superior Midwest Energy Terminal is the port's major coal loading facility, transferring Montana low-sulphur coal into 1,000-foot long lake vessels for shipment to domestic users. For the 11th straight year the ultra modern facility set a new record in 1987, loading more than 11,000,000 tons.

A recent analysis shows the Port of Duluth-Superior generated nearly 3,000 jobs and a total economic impact on the region of \$160 million in 1986. A transit port, it imports and exports cargoes produced or consumed at points far removed from the harbor. Most agricultural and mining users are within 250 miles but some, like Montana coal mines, are more than 1,000 miles away. Duluth-Superior, just hours overland from Denver, Fargo, Bismarck, Sioux Falls, Winnipeg, Omaha, and Minneapolis-St. Paul, is a crossroads of traffic to and from major world ports—five days to the Atlantic from the Great Lakes waterways through the St. Lawrence Seaway. A major world port for America's heartland.

## Innovation in Natural Resource Management—the Reinvest in Minnesota (RIM) Program

Wayne A. Edgerton

### Background

The Reinvest in Minnesota Resources Act of 1986 has been called by some the most significant agriculture and natural resource legislation ever passed in Minnesota. The concept of "reinvesting" in Minnesota's natural resources was the brain-child of the 1984 Governor's Citizen Commission to Promote Hunting and Fishing in Minnesota. Composed of 20 men and women with varied experience in business, natural resources, and legislation, the Commission's goal was to develop a plan for improving and promoting hunting, fishing, and tourism opportunities in the state.

Outdoor recreation is a one billion dollar industry in Minnesota. However, the Commission reported that a combina-

tion of increasing human population, decreasing wildlife habitat, and inadequate natural resource funding was severely limiting recreation and tourism opportunities and diminishing the overall quality of life. Adding insult to injury, the report also concluded that "Minnesota sportsmen annually export millions of dollars, making them the single most important source of out-of-state license and tourist money to almost every state and Canadian province on our borders." The report concluded that "it is good economics to invest in the outdoor recreation industry, one of the largest industries of our state; and we think it is a legitimate request that the equivalent of the 6% sales tax on an industry that produces a billion dollars of revenue per year be reinvested in that resource." The 6% sales tax is equivalent to \$60 million per year. The Commission recommended that this amount be reinvested annually for 10 years. Thus, Reinvest In Min-



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nesota—commonly called the RIM initiative—was born. However, the growth of the initiative and an assurance of state funding was no easy matter.

### Legislative Efforts

Like motherhood and apple pie, everyone, including legislators, supported the concepts outlined in the 1984 Commission report. Minnesota natural resources were compared to a well-used factory that must have major reinvestments to keep its machinery running and insure continuing returns to its stockholders. The advantages of the RIM idea were many: fish and wildlife resources would benefit greatly, and the Minnesota farm economy would also receive a much-needed boost. The RIM bill emerged from the 1985 legislative session full of options for improving Minnesota's natural resource base. The main features of this bill were:

- A conservation reserve program to retire marginal agricultural lands from cropping by providing payments to landowners;
- a critical habitat private sector matching fund to enable private donations to be matched with public (RIM) money for the acquisition of key habitat areas;
- a fish and wildlife short and long-range planning process so that issues and needs are tied into the legislative budget process; and
- an aspen recycling program in northeastern Minnesota to cut and regenerate old unmarketable aspen stands.

The bill was molded, guided, and prodded through the legislative session by the largest and most diverse coalition of environmental and agricultural groups ever assembled in Minnesota history. Known as the RIM Coalition, this group was formed solely to pass legislation based on the Commission's report. It was a diverse group with over 40 members ranging from the Sierra Club to the Minnesota Corn Growers Association. These organizations had never united forces on any one issue before; more often they had opposed each other. With the support of the RIM Coalition and the public, the RIM bill sailed through the Minnesota House and Senate in 1985. However, to the surprise and disappointment of the RIM Coalition, no funding was provided and RIM remained only so much rhetoric. The results of the 1985 legislative session drew the RIM Coalition even closer together in its efforts to see not only that RIM passed, but that it was funded at a realistic level. The Coalition's efforts were rewarded a year later with the passage of the Reinvest In Minnesota Resources Act of 1986 with \$16 million in funding from general revenue bonds. The bill passed the legislature with only six dissenting votes. Although far short of the \$60 million requested, it was a good start—a pilot effort of sorts. The \$16 million was allocated to two departments: \$10 million to the Department of Agriculture for the conservation reserve and \$6 million to the Department of Natural Resources for the critical habitat matching account, fish and wildlife enhancement and aspen recycling.

### The 1986 RIM Act

As stated earlier, \$10 million was appropriated to the Department of Agriculture for the conservation reserve portion of the law referred to as RIM Reserve. The \$10 million was allotted in the following manner:

- \$500,000 to the 91 Soil and Water Conservation Districts for local program administration
- \$100,000 to the State Soil and Water Conservation Board for overall program administration, and;
- \$9.4 million for easements, seeding, tree planting and required land title review.

The 1986 sign-up lasted for two weeks from September 29 through October 10. During this time over 2,100 applications were received to enroll over 60,000 acres. To satisfy all the requests RIM Reserve would have required over \$25.5 million. It was a success that even the most optimistic RIM supporters found hard to believe.

Approximately 800 easements were finalized from the 1986 sign-up enrolling over 18,000 acres into ten-year and perpetual easements. All easement acres have been seeded down to permanent vegetative cover. Approximately 15% of the easements also had tree and shrub plantings applied on a portion of the enrolled area.

### The 1987 RIM Law

The 1987 Legislative session found much interest by certain legislators to "fine tune" the RIM Reserve portion of the RIM Law. One major change was to eliminate the ten-year easement option and to offer only a perpetual easement program. The main reason for this is that bonds sold to fund RIM mature and in approximately 17 years, so payment on the bonds lasts about 7 years longer than the easements. Other proposed changes centered around payment rates to landowners, residency requirements, and additional program options such as wetland restoration and living snowfences.

When the dust settled at the end of the 1987 legislative session the following changes were made:

1. Easement duration options are twenty year or perpetual;
2. Emphasis must be placed on securing perpetual easements;
3. Landowner payments may be based on a cash rental rate formula;
4. Minnesota residency requirement was dropped;
5. A Wetland Restoration Program; and
6. A Living Snowfence Program was added to help reduce snow drifting on highways and provide wildlife habitat.

In addition to these, a major change was made in the funding level. The 1986 funding level of \$10 million for one year was reduced to \$9 million for two years (4.5 per year).

### The 1987 Sign-Up

The changes made in the 1987 legislative session are reflected in 1987 sign-up results. The \$9 million for the biennium was split in half, making \$4.5 million available for the two-week October sign-up. Here's how the 1986 sign-up compares to 1987:

	1986	1987
Total applications	2,149	417
Total acres applied for	60,000	12,000
Total \$ applied for	\$25.5 million	\$5.5 million

The main reasons expressed for the lower sign-up were:

- a) 20-year easements are too long; and
- b) payment rates are low compared to the Federal Conservation Reserve Program.

Two very bright spots in the 1987 sign-up are the shift to perpetual easements (58% of applications) and landowner acceptance of the Wetland Restoration Program. Over 100 of the 417 applications are to restore drained wetlands.

### Summary

The RIM concept is truly an innovative approach to natural resource management. It is an idea with a very high "common sense factor," one people can understand, and support. The RIM Reserve Program has come along at the right time, when our natural resources need help and the agricultural economy needs a financial shot in the arm. Securing a permanent funding mechanism for RIM remains a tremendous challenge. For two years, the bulk of RIM funding has come from bonds which the legislature is very reluctant to continue. This has resulted in a much lower funding level than

needed and requested. The RIM Coalition, the governor, and a number of legislators are exploring many other options for funding. Presently momentum is picking up for an Environmental Trust Fund, placing one billion dollars into a trust over a period of years and using the interest to fund a number of environmental programs including RIM. Exactly how RIM will be permanently funded is yet to be determined.

The bottom line is that RIM is an idea whose time has come. With the support of the public and the acceptance it has received from legislators and landowners, we feel that RIM will continue. Its impacts will surely become more visible as the years pass with improved hunting, fishing, and tourism, and a strengthened agricultural economy. RIM is truly a win-win program for the people and natural resources of Minnesota.

# Minnesota's Prairies: Past, Present, and Future

Bob Djupstrom

## Prairie!

There is something magical in the variety of impressions one gets from the sight of the prairies. One never wearies of it. Seeing a prairie from a hollow or from a height, climbing on a slope toward a plateau, . . . , crossing these undulating plateaus formed from the thousand little rises or a thousand little valleys that come together, branch off, and cross again, and then descending to the opposite slope of this plateau to find the vast low prairies, whether it takes an hour, a day, a week—one always finds compensation a hundredfold in the fresh and lively sensations that make you forget the ennui of your travels. The heat of the day, the scarcity of water, the vast and unvaried view that surrounds you can increase the heavy burden of monotony, privation, and fatigue. But this does not last long. The fresh breeze that springs up from time to time, the absence of any danger close by (as one can see all around), the lack of any difficulty on the route, the sweet verdure everywhere, the flowers bedecking it, the blue of the sky, the variations of the atmosphere operating always on a grand scale, all of these things combine to arouse one, to free one's spirit. The always active imagination is prepared to grasp the slightest change occurring in the physical natural of the country, or in the aspects of the mirages occurring so constantly on these plains, or in the airy perspective which the least change in distance relative to neighboring objects modifies so astonishingly. In summer all is gay, laughing, gracious, and life-giving on these prairies. The soul is pleasantly aroused and excited. It is the life of the eclogue and idyl; herds of buffalo, antelope, and deer enliven the solitudes.

Indians, with their private morals, the laws of their families, their customs, and the moving language they speak which is so little known, are the heroes here. They and the metis and whites refer to the prairies by only two expressions: large, beautiful prairie, and pretty, ...<sup>1</sup>

So wrote explorer Joseph N. Nicollet of his impressions of traveling the prairies of Pipestone County, Minnesota, and adjacent areas on June 29, 1838. In another passage Nicollet referred to "traveling on this beautiful prairie as pleasant, and uniform as the green carpet of a royal salon, . . .". Other earlier and well known explorers like George Catlin described his impressions in the following quote:

...where no ought on earth is seen in distance save thousand treeless, brushless, weedless hills of grass and vivid green which all around me vanish into the infinity of blue and azure."<sup>2</sup>

Eighteen million acres of native prairie covered Minnesota in 1838. Just as the native grasslands were the largest vegetational unit in North America in presettlement times, so too was it in Minnesota. In presettlement times this vast expanse of prairie stretched diagonally across Minnesota from the southeast tip to the province of Manitoba, Canada, on the north. Known as the tall grass prairie or true prairie it is stated to have the greatest rainfall and greatest north-south diversity of any ecological association of the North American grassland system.<sup>3</sup>

The Minnesota Tallgrass Prairie Association represented a continuum of prairie types that graded into one another depending on soils and topography. Based on the underlying soils and topography various grass species such as big bluestem, Indian grass, cordgrass, bluejoint, little bluestem or side oats grama, among other grasses, dominated. Flowering plants too were abundant and presented a colorful and changing array from late April until the first frosts of September. Depending on rainfall and length of the growing season Minnesota's prairies contained anywhere from 300

<sup>1</sup>The author is supervisor, Scientific & Natural Areas Program, Department of Natural Resources (DNR), Box 7, 500 Lafayette Road, St. Paul, Minn. 55155.  
<sup>2</sup>Minnesota Historical Society Press—1976—Joseph N. Nicollet on the Plains and Prairies.

<sup>2</sup>Rose Arthur. 1911. An Illustrated History of the Counties of Rock and Pipestone. Northern History Publishing Co., Luverne, Minn.  
<sup>3</sup>Risser, P.G., Birney, E.C., Blocker, H.D., May, S.W., Parton, W.J., and Wiens, J.A. 1981. The True Prairie Ecosystem.