

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*.



plus plant species in the southeast to approximately 200 in the far northwest. This sea of grass likewise supported millions of waterfowl, prairie song birds, and lesser species such as butterflies. Similarly, countless numbers of elk, buffalo, and other large mammals were dependent on this vast grassland resource.

By the late 1800's most of Minnesota's native prairie had been plowed under. The first prairie to go was the mesic deep soil prairie portion, today Minnesota's corn and soybean fields. Later improvements in drainage (tiling, ditching, etc.) and fence row to fence row agricultural policies resulted in the destruction of the remaining wet deep soil prairies. In 1983 alone, for instance, one of Minnesota's largest contiguous prairies, over 5,000 acres in size, was leveled, ditched, rock raked, and plowed. That prairie which plowing didn't destroy intensive grazing and range improvement practices severely altered. Today maybe 75,000 acres, or less than 1/2 of 1%, remains of what was once over 1/3 of Minnesota.

**Today's prairie resources in Minnesota** vary from small, isolated remnants to a few large complexes. Today's prairies also vary from severely degraded to high quality examples and combinations in between. Approximately half of the remaining prairie acreage today is in public ownership (State natural areas, wildlife areas, etc.) or owned by The Nature Conservancy, a private conservation organization. Another 10,000 acres is enrolled in the Minnesota Native Prairie Tax Credit Program. Under this program qualifying privately owned prairie lands are exempt from taxes. Private land-



owners may continue to use these lands for haying but other land use practices are not permitted. In addition, through 1988, landowners are also given a tax credit for prairie lands enrolled under this program.

The future of protecting native prairie in Minnesota is improving, however. In 1987 the Minnesota legislature enacted two pieces of legislation that hold significant promise for accelerating prairie protection efforts.

One law directs the Department of Natural Resources to develop and manage permanent prairie landscape reserves in order to maintain the native plant and animal populations, landscape features, and habitat types characteristic of intact native prairie ecosystems. Further, this legislation notes that prairie landscape reserves are composed of an integrated network of protected prairie lands, prairie restoration sites, and private prairie lands. This legislation further provided for the establishment of a prairie biologist under the State Scientific and Natural Areas Program to plan, develop, and manage native prairie reserves and prairie land. Minnesota's first prairie biologist was hired in October 1987 and is permanently stationed at Fergus Falls.

The second significant piece of legislation was simply called "Prairie Bank." Developed as a part of the "Reinvest in Minnesota" conservation legislation, "Prairie Bank" permits

the purchase of easements for the protection of native prairie. This landmark legislation specifies that priority must be given to permanent easements for prairie protection. Minnesota's prairie biologist is utilizing this important protection tool to assist in developing prairie landscape reserves as well as to protect other key prairie tracts in danger of being destroyed. Using this important protection tool the Department of Natural Resources will be implementing prairie protection and management while working with private prairie landowners. Management of prairie bank easements and other prairie lands may consist of prescribed burning, prescribed grazing, and regulated haying or combinations thereof to enhance and maintain the native prairie resource at any given site. The actual management prescription will depend on site resources and rare resources present, among other things. One thing is clear, however; the long term outlook for the protection of the remaining native prairie in Minnesota is brighter today than it has been for years, although a lot of work remains to be done to see that it happens.

**Those interested in visiting one** of Minnesota's remaining protected prairies should contact the author: Bob Djupstrom, Supervisor, Scientific & Natural Areas Program, DNR, Box 7, 500 Lafayette Road, St. Paul, Minn. 55155. Telephone: 612-297-2357.

## Minneapolis/St. Paul: An Agricultural Hub

David S. Dahl

In ancient Greece a metropolis was the mother city of a colony. Minneapolis/St. Paul today is the double-headed metropolis for that far-reaching, agriculturally oriented area of the United States often referred to as the Upper Midwest. The Twin Cities, as the Minneapolis/St. Paul metropolitan area is frequently called, is home to about 2 million people, making it the nation's 16th largest urban area. In fact, across the northern tier of states, Minneapolis/St. Paul is the largest economic complex between Milwaukee and the Pacific Coast.

The Twin Cities serves a region which includes Minnesota, Montana, North Dakota, South Dakota, northwestern Wisconsin, and the Upper Peninsula of Michigan. The region stretches 1,800 miles from east to west and encompasses 411,000 square miles. Although the Upper Midwest accounts for 12 percent of the nation's land, only 3 percent of the nation's population resides here (roughly 8 million people).

One of the distinguishing features of this vast area is its strong orientation toward agriculture. As a significant producer of a wide range of agricultural products, the Upper Midwest:

- contains 12 percent of the nation's grassland pasture, making it an important livestock producer;
- produces 26 percent of the nation's wheat, 11 percent of its corn, and 10 percent of its soybeans; and
- accounts for 15 percent of the nation's milk production.

The Upper Midwest's development into a preeminent agricultural producer and Minneapolis/St. Paul's evolution into a major urban center were intertwined. In the late 1800's as the railroads pushed west from the Twin Cities, immigrants began to develop the Upper Midwest's agricultural potential. They relied on railroads to supply goods and to ship crops and livestock to market. One of their major markets became the Twin Cities. Millers in Minneapolis had coupled the power of St. Anthony Falls on the Mississippi River with growing wheat production in the Upper Midwest to develop a booming flour milling industry. Two of the largest flour millers were C.A. Pillsbury and Company and Washburn-Crosby Milling Company (later General Mills). Their success resulted in Minneapolis becoming known as the "Mill City." The Twin Cities has diversified into an important finance, high tech manufacturing, education, business services, and medical center that serves national and international markets. Nevertheless, many Minneapolis/St. Paul businesses continue to have close ties to Upper Midwest agriculture. Twin

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