

The State of the Rock River Basin



April 2002

PUBL # WT-668-2002



A report by the Wisconsin Department of Natural Resources
in cooperation with the Rock River Basin partnership team and stakeholders

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April 2002

To: Those who live, work, and play in the Rock River Basin;

The Wisconsin Department of Natural Resources' Upper and Lower Rock River Basin Teams are pleased to present the first State of the Rock River Basin Report. This report is prepared to fulfill the requirements of Areawide Water Quality Management Planning under Section 208 of the U.S. Clean Water Act and Wisconsin Department of Natural Resources' Strategic Implementation Plan. However, as you read this report, you will find that we have departed from the traditional technical format of previous basin water quality reports. Ruth Johnson, our basin planner, wanted to make this report a "reader friendly" document that will help to inform basin residents and government agency staff about the state of natural resources in the Rock River Basin, Your River Neighborhood.

The Rock River Basin is located in the heart Wisconsin's population triangle of Madison, Milwaukee and the Fox River Valley. The geologic, glacial, and vegetative history of this area produced some of the most productive agricultural soils in the state, the virtual bread basket of Wisconsin. The basin is still primarily rural and agricultural in character but parts of the basin are experiencing some of the most rapid urbanization in the state. This report contrasts the historical background of your basin with the present day landscape to provide a basis for understanding the changes that have occurred and the challenges we face to maintain a sustainable economic, social and biological environment for future generations.

This report emphasizes the interconnectiveness of our land and water resources, and the quality of life we enjoy in the Rock River Basin. We are all residents of this basin neighborhood. We are dependent upon the quality of water, soil, air and biological resources in the basin. The choices that our predecessors made, and the life style choices that each of us make, will determine the future sustainability of this place we live. The goal of this report is to inform basin residents and decision-makers about the status of our resource base so that we can make informed, thoughtful decisions that will protect and improve the future state of the Rock River Basin.

The State of the Rock River Basin Report is only the first step in a planning and implementation process to address the issues that are discussed in the report. This report is of no value if it only gathers dust on a shelf. Working in partnership with basin residents, business and local, county, state and federal agencies, Department staff will be developing action plans to implement the recommendations that are contained in this report. This effort will only be successful if all of us who live, work, and play in the Rock River Basin are part of the decision making and implementation process.

Ruth Johnson authored this report, but it is a compilation of contributions by many Department of Natural Resources staff and our many basin partners. We have referenced and integrated in this report many related resource planning processes, particularly the county land and water resource management plans, to attempt to coordinate these efforts into an effective natural resource management program for the basin. We especially wish to thank our basin partnership organization, the Rock River Coalition, for their assistance with the issue identification process and public participation process for review of this document.

We are hopeful that you will find this report informative and that it spurs efforts to keep the Rock River Basin a great place to live, work and play.

Sincerely,

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Lower Rock Water Team Leader

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Acknowledgements

We would like to thank the South Central Region (SCR) Upper and Lower Rock River Basin Water and Lands Teams who, with great team spirit, reviewed the many drafts of the State of the Rock River Basin Report. It's only with their participation that the report attained its high level of ecological insight and technical accuracy. Thanks goes out to the University of Wisconsin staff, and a number of private citizens for their review of the State of the Rock River Basin Report. Through the contribution of everyone, it is hoped that this publication will: *Educate, inform, motivate, and inspire people who live, work, or play in the Rock River Basin to work together to protect their natural resource legacy in the Basin.*

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Pictures and Photographs: All Pictures and Photographs are from stock files unless otherwise noted below.
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☆ This report can also be found on the DNR website at <http://www.dnr.state.wi.us/org/gmu/lowerrock.htm> or <http://www.dnr.state.wi.us/org/gmu/uprock.htm> (select publication title)

This publication was partially funded by 604(b) and 104(b) grants from the U.S. Environmental Protection Agency to fulfill requirements of Areawide Water Quality Management Planning under Section 208 of the Clean Water Act and NR121 of Wisconsin's Strategic Implementation Plan. This plan also serves as an implementation component of Wisconsin's Fisheries, Habitat and Wildlife Strategic Implementation Plan.

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Your River Neighborhood

The Rock River Basin

Executive Summary

The Rock River Basin covers over 3,700 square miles and is located in the south central part of Wisconsin. The Basin's natural resources are the legacy of the last period of Wisconsin glaciation. Many Native American tribal peoples lived here because of the outstanding land, water, and wildlife resources in the Basin. European settlers described the Basin as a paradise of fertile soils, large forests, and many clear sparkling rivers and lakes.

Much has changed over the last 150 years. Today, most of the prairies and oak savannas are gone, the wetlands are diminished by 50%, and most forests have been cut down to make way for agriculture. Currently, agriculture dominates the land use; however urbanization in the Basin is growing rapidly.

Overall, some of the Rock River Basin's natural resources are slightly improved compared to 20 years ago. Land management and forestry law changes have supported a small increase in forests in the Basin. Better waste water treatment at wastewater treatment plants has improved water quality in some stretches of streams. Yet today, most water bodies in the Basin remain significantly impacted by soil and nutrients washing into the streams and lakes from urban and agricultural stormwater runoff. Wildlife habitat continues to be lost and fragmentation of habitat has accelerated.

Today, the most serious challenges facing the Basin include:

-  Water quality impacts and increased runoff quantity from agriculture and urban land uses, such that many of the rivers and streams are not meeting water quality standards.
-  Loss of agricultural lands impacts wildlife habitat, recreational usages, the rural landowners, and the economy because it changes the nature of the Basin.
-  Loss of critical, sensitive habitat and connection between habitats.
-  Significant groundwater contamination in areas of the Basin.
-  Lower urban groundwater levels due to increased use and decreased groundwater infiltration due to more acres of impervious land.

At the Basin-wide public forum held in November 1998, the highest priorities in the Rock River Basin were identified as: Surface Water Quality, Groundwater Aquifers, Wetland/Shoreland/Habitat Protection, Recreation, Rural Development Concerns, Storm Water Runoff, and Hunting & Fishing. These critical issues are the focus of plans, recommendations, and projects developed by the DNR and citizen-led organizations that are included in this report. Recommendations and projects range from a singular dam removal or fish passage to landscape scale restoration of wetlands and prairies.

Public response to the challenges in the Basin continues to grow. The Department of Natural Resources (DNR), the many private citizen organizations in the Basin, and other state, federal, and county agencies are joining forces to increase protection and restoration of the resource health and beauty of the Rock River Basin.

Preface

This report is an overview of the state of the natural resources in the Rock River Basin. The Basin's natural resources in pre-settlement past are described as well as limited records allow. Much more information is known about natural resources today. The future, as we shall see, will be what we make it.

As you read the State of the Rock River Basin Report, note that the different resources, land uses, and potential solutions are presented in separate sections. A challenge for people understanding the environment is that it is generally easier to learn about its pieces, than to comprehend the whole ecosystem to which those pieces belong.

However, nature doesn't come in separate sections. Everything is related - resources, land uses, and solutions. To help Basin residents better understand the connections between natural resources, issues and solutions; important linkages are sometimes mentioned in more than one section.

Finally, the most important information to take away from this report is that the most significant pollution source in the Basin is every one of us. Every individual choice adds up: where we live, how we landscape, the vehicles we buy, how much we drive, whether we reuse and recycle, and how we produce agricultural products. These choices and many others discussed in the report are taking a significant toll on our water, land and air.

In this report...

-  We'll explore your *Rock River Neighborhood* - Its water, land, air, plants, animals and cultural heritage.
-  We'll examine the past and present uses and health of the Basin's natural resources.

We'll learn about ...

-  How the present was shaped by past events and decisions.
-  Personal choices that build a better future for today's residents and future generations.
-  How current actions by individuals and communities are shaping the future for you, your children and all Basin residents.

Suggestions ...

-  At the end of each section there is information on "What you can do" and "To learn more about" the topics previously discussed.
-  This icon is placed throughout this report to indicate that there is a website relating to the information discussed. If a website is not found when you search for it on the internet, it may be necessary to change the search engine you are using. *The use of these websites does not confer the endorsement of the organization or agency, nor their views by Wisconsin DNR.
-  This icon is placed next to telephone numbers you can call for additional information.

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Natural Resources Acronym Guide

State/County Agencies

DATCP	Department of Agriculture, Trade and Consumer Protection
DNR	Department of Natural Resources
DOC	Department of Commerce
DOT	Department of Transportation
LCD	Land Conservation Department
LWCB	Land and Water Conservation Board
NPM	Nutrient and Pest Management
UWEX	University of Wisconsin - Extension
WGNHS	WI Geographical and Natural History Survey

Federal Agencies (many have county or regional offices)

EPA	Environmental Protection Agency
FSA	Farm Services Administration
NRCS	Natural Resources Conservation Service
RC&D	Resource Conservation & Development
USCOE	U. S. Army Corp of Engineers
USDA	U. S. Department of Agriculture
USFS	U. S. Forest Service
USFWS	U. S. Fish and Wildlife Service
USGS	U. S. Geological Survey

Conservation Programs

CRP	Conservation Reserve Program (federal)
CREP	Conservation Reserve Enhancement Program (federal)
EQIP	Environmental Quality Incentive Program (federal)
FIP	Forestry Incentive Program (federal)
FPP	Farmland Preservation Program (state)
GHRA	Glacial Habitat Restoration Act (state)
LESA	Land Evaluation Site Assessment
MFL	Managed Forest Law (state)
NPS	Nonpoint Source Program (state)
SIP	Stewardship Incentive Program (federal)
TRM	Targeted Resource Management Program (state)
WRP	Wetland Reserve Program (federal)
WHIP	Wildlife Habitat Incentives Program (federal)

Conservation Organizations

RRHI	Rock River Headwaters, Inc. (formerly Horicon Marsh Area Coalition)
RRC	Rock River Coalition
RRP	Rock River Watershed Partnership

Educational Initiatives

WAV	Water Action Volunteers
WERC	Water Education Resource Centers