Implementation Phase

The implementation phase of the Cedar Creek priority watershed project began following review of the draft priority watershed plan, a public hearing, and approval by the DNR, DATCP, and the Boards of Supervisors for Washington and Ozaukee counties. Public review during plan development occurred primarily through the efforts of the Milwaukee River Basin Advisory Committee and the Cedar Creek Watershed Advisory Subcommittee, including its technical work group.

During the implementation phase:

1. DNR enters into local assistance agreements with local units of government that have implementation responsibilities identified in the plan. These agreements provide funds necessary to maintain the resources and staff required for plan implementation.

2. In the rural portions of the watershed, the Ozaukee and Washington County Land Conservation Department staffs contact eligible landowners to determine their interest in voluntarily installing best management practices identified in the plan.

   In the urban portions of the watershed, the DNR or its designee contacts local units of government to discuss in detail the required actions for implementing plan recommendations.

3. In rural areas, the landowner signs a cost-share agreement with the county that outlines the practices, costs, cost-share amounts and a schedule for installation of management practices. Practices are scheduled for installation up to five years from the date an agreement is signed. Practices must be maintained for at least 10 years. Easements purchased through the Nonpoint Source Program must be for a period of at least 20 years, and in many cases will be perpetual.

   In urban areas, similar processes are used. In some cases, the local units of government and the DNR sign agreements for urban practices. In other cases the agreements will be between local units of government and their private landowners.

Legal Status of the Nonpoint Source Control Plan

The Cedar Creek priority watershed plan was prepared under the authority of the Wisconsin Nonpoint Source Water Pollution Abatement Program described in Section 144.25 of the Wisconsin Statutes and Chapter NR 120 of the Wisconsin Administrative Code. It was prepared through the cooperative efforts of DNR, DATCP, land conservation departments

for Ozaukee and Washington counties, the villages of Grafton and Jackson, the city of Cedarburg, and the Cedar Creek Watershed Advisory Subcommittee.

This watershed plan is the basis for the DNR to enter into cost-share and local assistance grants with agencies responsible for project implementation and will be used as a guide to implement measures to achieve desired water quality conditions. If a discrepancy occurs between this plan and the statutes or the administrative rules, or if the statutes or rules change during implementation, the statutes and rules will supersede the plan. This watershed plan does not in any way preclude the use by local, state or federal governments of normal regulatory procedures developed to protect the environment. All local, state and federal permit procedures must be followed. In addition, this plan does not preclude the Department of Natural Resources from using its authority under chapters 147 and 144 of the state statutes to regulate significant nonpoint pollution sources in the project area.

Comprehensive water quality management plans pertaining to the Cedar Creek Priority Watershed have been completed by the Southeastern Wisconsin Regional Planning Commission (SEWRPC 1971, 1979). The SEWRPC more recently completed a water quality management plan for the Milwaukee Harbor Estuary (SEWRPC 1987). These reports recognize the importance of reducing nonpoint sources for improved water quality in the streams and lakes contained in the watershed and downstream areas to which it is a tributary.

This priority watershed plan was approved by DNR following approvals by DATCP, Ozaukee County and Washington County. This watershed is covered under the adopted areawide water quality management plan for southeastern Wisconsin prepared by the SEWRPC. Consequently, DNR will request that SEWRPC recommend that the priority watershed plan be approved as an amendment to the adopted areawide water quality management plan for southeastern Wisconsin.

Relationship of the Nonpoint Source Control Plan to the Integrated Basin Management Plan

The 838-square-mile Milwaukee River Basin is comprised of the North Branch, the East-West Branch, the Milwaukee River South, the Menomonee River and the Cedar Creek watersheds. The basin drains to Lake Michigan in the city of Milwaukee and occupies portions of seven counties: Dodge, Fond du Lac, Milwaukee, Ozaukee, Sheboygan, Washington and Waukesha. Home to more than 1 million people, the basin contains nearly 500 miles of streams and 21 major lakes with a combined surface area of 3,400 acres.

The DNR has designed and implemented a new approach to natural resource management in the basin, an approach called "integrated resource management." It uses the nonpoint source control program as the foundation for coordinating other departmental environmental quality

(solid waste, wastewater, water regulation and zoning, water resources management, water supply) and resource management (fisheries, forest management, parks and recreation, and wildlife and endangered resources management) efforts.

This coordinated program is documented in a seven-volume report entitled *Milwaukee River Integrated Basin Management Plan: 2000* (DNR, 1990). It is being prepared by the DNR with the cooperation of an advisory committee and six subcommittees, whose membership includes representatives from local, state and federal units and agencies of government. The plan establishes comprehensive goals and management strategies for the DNR's environmental quality and resource management programs. Also, the plan serves to coordinate DNR activities with similar efforts of local, state and federal units and agencies of government.

Importantly, recommendations contained in the integrated basin management plan are incorporated in this priority watershed plan. Consequently, this nonpoint plan meets the requirements of Section 144.25 of the Wisconsin Statutes. This statute requires the DNR to develop "an integrated resource management strategy to protect or enhance fish and wildlife habitat, aesthetics and other natural resources" for priority watersheds.

Relationship of the Nonpoint Source Control Plan to the Federal Stormwater Discharge Permit Program

The United States Environmental Protection Agency issued final regulations on Nov. 16, 1990 that govern the control of pollutants in urban stormwater runoff. These regulations require large cities (over 100,000 in population) and major industries to apply for a National Pollutant Discharge Elimination System (NPDES) permit to cover the discharge of pollutants from separate stormwater sewer systems. Over time, these permitting requirements may be extended to other smaller municipalities.

The DNR will have responsibility for implementing this new program. These stormwater permits (called WPDES in Wisconsin) are similar to those permits issued by the DNR for public and private wastewater treatment plants and industrial dischargers of wastewater. The permits will require that stormwater discharges be controlled to the "Maximum Extent Practicable." Many of the permit requirements that are likely to be developed will probably overlap with the management actions specified in this plan for improving water quality in the watershed. At a minimum, industries that fall into specified standard industrial classifications must apply for and comply with permits. Although there are no municipalities within the watershed now required to apply for a stormwater discharge permits, such a requirement could be extended to these smaller communities at some point in the future as provided for under federal law.

Implementation of the Cedar Creek Priority Watershed Plan will fulfill some of the requirements of the stormwater permit program. The coordinated implementation of the stormwater permit program and this nonpoint source control plan will help ensure that the water quality objectives for the Milwaukee River and its tributaries, including Cedar Creek, will be achieved. More information is presented in Chapter 6 concerning the relationship between the stormwater permit program and the Cedar Creek priority watershed project.

Plan Organization

The remainder of this plan describes the watershed assessment, a detailed implementation program and project evaluation. The contents of these areas are described below.

Chapter 2. "General Watershed Characteristics" is an overview of the cultural and natural resource features pertinent to planning and implementation efforts for the priority watershed project.

Chapter 3. "Watershed Planning Methods" describes the inventory and evaluation techniques and procedures used to determine the condition of the surface water resources and the nonpoint sources affecting them.

Chapter 4. "Water Resources Conditions, Nonpoint Sources and Water Resources Objectives" characterizes the existing and potential biological and recreational uses of surface waters. The results of the nonpoint source inventories and evaluations and water resource objectives are discussed.

Chapter 5. "Nonpoint Source Control Needs" identifies the level of urban and rural nonpoint source control needed to meet the water resource objectives and identifies the nonpoint sources eligible for funding under the priority watershed project.

Chapter 6. "Detailed Program for Implementation" describes the means by which the local units of government administer the project, estimates a local assistance and management practice cost-share budget, identifies an information and education program, and identifies technical and financial assistance available to local units of government through the project.

Chapter 7. "Project Tracking" discusses the means for assessing the progress of the project in reducing nonpoint pollution loads.

Chapter 8. "Water Quality Monitoring and Evaluation" presents a strategy and a schedule for monitoring streams and lakes to determine the water quality effects of implementing nonpoint source controls.

CHAPTER TWO
General Watershed Characteristics

Introduction

The Cedar Creek Watershed is a 126-square-mile drainage area located in southeastern Wisconsin. The watershed, which includes portions of western Ozaukee and eastern Washington counties, is the smallest of the five watersheds comprising the Milwaukee River Basin. The watershed includes all lands draining to Cedar Creek, its principal tributaries, and its headwater lakes (Big Cedar Lake and Little Cedar Lake). The watershed is tributary to the main stem of the Milwaukee River near Grafton. The Cedar Creek Watershed, divided into 20 smaller hydrologic units for study purposes, is shown on Map 2.

The following is a brief overview of the watershed's cultural and natural resource features important in planning a nonpoint source pollution control effort. Additional information is contained in the *Milwaukee River Basin Integrated Management Plan: 2000, Volume 6, Cedar Creek Watershed Integrated Resource Management Plan* (DNR, 1990). This document contains detailed lists of significant natural resource features that are only briefly mentioned below, including: lakes, impounding structures, environmental corridors, natural areas, and Wisconsin species that are endangered, threatened or of special concern.

Cultural Features

Civil Divisions

Map 3 and Table 2-1 provide information about the 16 civil divisions included in the watershed. About 91 square miles, or 72 percent, of the watershed is in Washington County and 35 square miles, or 28 percent, is in Ozaukee County. The watershed contains all or parts of five incorporated municipalities, which comprise about 8 percent of the watershed area. The village of Jackson is contained entirely within the watershed, as is a significant portion of the city of Cedarburg. Small portions of the village of Grafton, the village of Germantown and the city of Mequon are also included.

The watershed includes all or parts of 11 civil townships. The towns of Jackson, Cedarburg and Polk contain the largest portions of the watershed, making up about 63 percent of its

area. Saukville, West Bend, Trenton and Richfield townships also contain important portions of the watershed, making up 27 percent of its area. The towns of Barton, Grafton, Addison and Germantown contain only small pieces of the watershed, combining to form about 2 percent of its area.

Table 2-1. Extent of counties, cities, villages and towns within the Cedar Creek Priority Watershed

County	Civil Division	Area In Watershed (Square Miles)	Percent of Watershed
Ozaukee County	City of Cedarburg	2.88	2.3
	City of Mequon	0.62	0.5
	Village of Grafton	0.48	0.4
	Town of Cedarburg	21.95	17.4
	Town of Grafton	0.53	0.4
	Town of Saukville	8.65	6.8
Subtotal		**35.11**	**27.8**
Washington County	Village of Germantown	5.07	4.0
	Village of Jackson	1.51	1.2
	Town of Addison	0.12	0.1
	Town of Germantown	0.94	0.8
	Town of Jackson	35.02	27.8
	Town of Polk	22.42	17.8
	Town of Richfield	5.52	4.4
	Town of Trenton	11.86	9.4
	Town of West Bend	8.5	6.7
Subtotal		**90.96**	**72.2**
Watershed Total		126.07	100.0

Source: Southeastern Wisconsin Regional Planning Commission.