

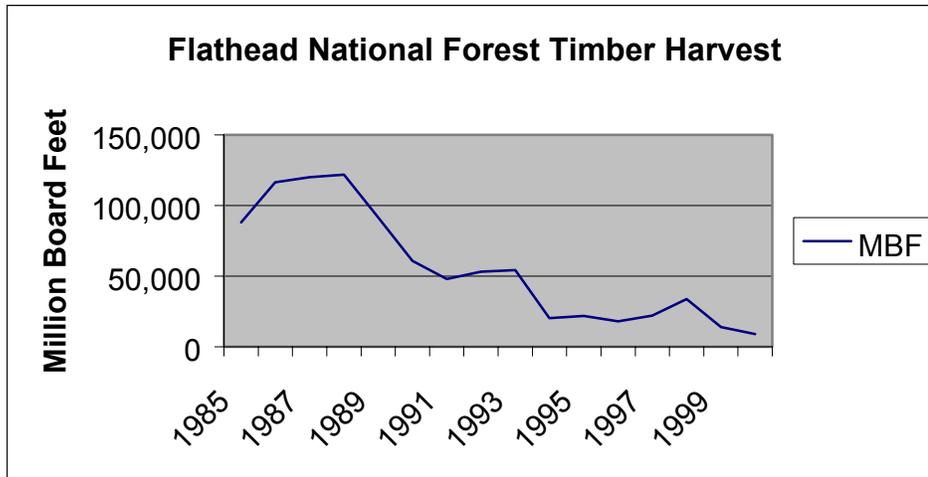
# **Appendix B**

## **HISTORICAL PERSPECTIVE ON MANAGED FOREST LANDS**

## Historical Perspective on Managed Forest Lands

Based on a nutrient loading analysis conducted by source category (Section 4.2.3), forested lands comprise the greatest single source of nutrients to Flathead Lake. At the same time, timber harvest on National Forest lands fell from a high of 122,000,000 board feet in 1988 to less than 9,000,000 board feet in 2000 (See Figure B-1). The National Forest comprises 60 percent of the land base of the watershed. While timber harvest has not declined similarly on state and private forest lands, the increased implementation of forestry best management practices has reduced the impacts of all logging operations.

**Figure B-1. Flathead National Forest Timber Harvest Trends.**



Statewide Best Management Practices for forestry were adopted in 1987. These practices are described and illustrated in the **Forestry BMPs** handbook, a publication developed by the Department of Natural Resources and Conservation, Montana State University Cooperative Extension Service and the Montana Logging Association. In 1989 the Montana legislature required landowners who were planning to harvest a significant amount of timber to notify the state. Under this law best management practice information is sent to the landowner. BMPs are also promoted at industry meetings, workshops and conferences. Each year DNRC and the Montana Logging Association conduct workshops for timber harvest operators, road builders, private landowners and other interested parties to improve the effectiveness and application of BMPs.

Since 1990, biennial audits have tracked the progress of BMP implementation. These audits show considerable progress in BMP application over the past decade (Table B-1). The 2000 audit found that forestry best management practices are correctly applied 96 percent of the time. The 1991 Streamside Management Zone (SMZ) law regulates forest practices in riparian areas. Since 1994, the BMP audits have also evaluated compliance with SMZ. The 2000 audit found SMZ rules were correctly applied 96 percent of the time. Of 17 departures from the rules, 14 were considered minor and three major. SMZ effectiveness was rated very high--over 99 percent.

Plum Creek Timber, the watershed's largest private forest landowner, signed a Habitat Conservation Plan (HCP) agreement with the U.S. Department of Interior in November 2000. The agreement, which covers 1.5 million acres in western Montana, specifies measures to conserve 17 native fish species, including eight species that are threatened or endangered. The Native Fish HCP adopts a multi-species aquatic ecosystem approach, spanning all watersheds within the project area. All of Plum Creek's land management activities, including timber harvesting, road building, and land sales

are governed by the plan. The HCP will help minimize impacts to water quality in watersheds where Plum Creek Timber is a major landowner.

While managed forest lands may continue to provide a source of nutrients to Flathead Lake from a legacy of historic management practices, this contribution has likely decreased significantly in the last 10 to 15 years as a result of declining timber harvest levels, implementation of voluntary BMP's, and the SMZ law. This source category will be reevaluated in context with all other potential significant sources as described in Section 5.3.

**TABLE B-1. Comparison of Audit Results 1990-2000 (statewide results)**

	2000	1998	1996	1994	1992	1990
Application of practices that meet or exceed BMP requirements	96%	94%	92%	91%	87%	78%
Application of high risk practices that meet or exceed BMP requirements	92%	84%	81%	79%	72%	53%
Percentage of sites with at least one major departure in BMP application.	9%	17%	27%	37%	43%	61%
Average number of departures in BMP application, per site.	1.4	2	3	3.9	5.6	9
Percentage of practices providing adequate protection.	98%	96%	94%	93%	90%	80%
Percentage of high risk practices providing adequate protection	93%	89%	86%	83%		58%
Percentage of sites having at least major/temporary or minor/prolonged effectiveness departure.	21%	26%	34%	28%	37%	64%
Average number of effectiveness departures per site.	1	1.5	2.3	3	4.6	8