

STREAM MANAGEMENT PLAN

REGION 5	AREA 510	STREAM NAME Straight River	TRIBUTARY NO. M-48-26	LENGTH 58.1 miles
SIMILAR REACH	STREAM MILE	STREAM TYPE	ECOLOGICAL CLASSIFICATION	SPECIES MANAGED
I, II, III, IV, V, VI and VII	0.0-43.1	Warmwater-gamefish	IIC, A	NOP, SMB
VIII	43.1-49.0	Roughfish-forage fish	IV	--
VIII	49.0-58.1	Warmwater feeder	III	--

Long Range Goal:

Protect and restore wetlands adjacent to the Straight River and its tributaries. Identify and prioritize present and potential northern pike spawning areas. Develop and implement sampling methods that target northern pike to better evaluate their relative abundance and size structure. Future goals can then be developed.

Determine if smallmouth bass become established as a result of the 1991 stocking. Revise Management Plan by 2000 to include specific goals for catch rates and size structure.

Operational Plan:

1. Through the environmental review process, exercise top priority protection for remaining wetlands and natural riparian corridor.
2. Using direct observations, past survey reports, and local landowner contacts, identify and prioritize northern pike spawning areas by fall, 1997. Use the following criteria:
 - Extent of present use
 - Habitat quality, including accessibility, and frequency and duration of flooding
 - Ownership (public or private)
 - Enhancement feasibility
3. In addition to electrofishing, initiate spring and summer trapnetting in 1996 and 1998 population assessments to better evaluate northern pike abundance and size structure.
4. Duplicate 1994 trapnet sets in Maple Creek in spring 1996 to determine northern pike use following the removal of the Dartt's Park Dam.
5. During summer 1996, attempt to determine the success of the 1991 smallmouth bass stocking by electrofishing the entire stream length between an area near Turtle Creek, downstream to the furthest bridge crossing within the Owatonna Country Club. Electrofishing should be preceded by a reconnaissance to determine suitability for boomshocker. Approximately two days will be needed for electrofishing.

Area Supervisor's Signature <i>Prepared by Al Schmidt</i> <i>Tom Schlegel</i>	Date 4/7/95	Regional Manager's Signature <i>Mark Ujval</i>	Date 4/22/95
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STREAM MANAGEMENT PLAN

STREAM NAME: Straight River	TRIBUTARY NO. M-48-26	Date: 031695
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Potential Plan:

Following Operational Plan #2, examine the potential for wetland acquisition. Contact organizations such as local sportmen's clubs, The Nature Conservancy or McKnight Foundation to solicit donations to the State's Critical Habitat Match Program for specific wetland (northern pike spawning areas) acquisitions. These areas would likely qualify as Aquatic Management Areas (AMA's).

Narrative:

Past Surveys and Investigations

The earliest fisheries investigation on file is a Fish Kill Report by Woods (1956). General observations of cloudy water, sewage smell, and distressed carp and minnows were reported. The responsible party was not reported. Pollution sources at the time included the Owatonna Sewage Disposal Plant and the Owatonna Canning Company.

A survey was completed by Haugstad (1973) near the headwaters in T105N, R19W, S17,9. The report concluded the Straight River was a valuable public resource, despite habitat degradation due to channelization, erosion and sedimentation.

Another survey was completed in 1974 (Haugstad 1976). Electrofishing was completed in five stations - stream miles were not reported. Nongame/forage species dominated the catch, however, 38 northern pike ranging in size from 6-29 inches were also collected. Centrarchid and northern pike abundance was estimated at 114 and 64/mile, respectively.

A report on mercury and PCB contamination in water, fish, and sediment was completed by the MPCA (1978). While the report concluded that mercury concentrations in water were higher above Owatonna than below, and that concentrations in sediment were higher below Owatonna than above, it failed to determine any sources. Concentrations of mercury or PCB's in fish specimens were within USDA tolerance levels.

An Initial Survey of the entire Straight River was completed in 1983 (Hirsch 1984). Northern pike were reported to be the most important gamefish. Channelization and wetland drainage were reported to have severely impacted northern pike spawning habitat. Acquisition of wetlands in T105N, R19W, S17 was recommended to enhance northern pike spawning. Despite earlier stocking efforts to establish smallmouth bass and channel catfish, neither species was collected.

A survey was conducted by Enblom et al. (Ecological Services 1985) to facilitate a Use Attainability Study prepared by The MPCA. Stations sampled correspond to those of Haugstad (1974) with two additional stations. As in the Initial Survey, northern pike were the most common gamefish collected. Smallmouth bass, walleye, or channel catfish were not collected. Water quality was reported as the primary limiting factor to gamefish abundance.

A Fish Kill Inspection Report was completed by Sogla (1987). On 3/29/87, an estimated 300 dead carp were found in a small impoundment area used as a hockey rink next to Morehouse Park in Owatonna. The pond had been drawn down, stranding the carp.

Enger (Ecological Services 1989) completed an assessment of physical, chemical, and biological parameters in a 1000 foot station just upstream from the Faribault State Hospital. Twenty- non-game species and one northern pike (2.5 lbs.) were collected. Additionally, an excellent sample of macroinvertebrates was obtained (6 Orders, 14 Families, and 15 Genera).

STREAM MANAGEMENT PLAN

STREAM NAME:
Straight River

TRIBUTARY NO.
M-48-26

Date:
031695

A population assessment was completed in 1990 (Wiechman 1991) in stations 3b and in the Owatonna Impoundment. Despite several previous stockings of channel catfish and one stocking of smallmouth bass, neither species were reported established. Northern pike were again judged to be the most important gamefish. Protection and enhancement of adjacent wetlands was deemed essential to maintaining and improving the northern pike fishery.

Water quality improvements resulting from the upgrading of the Owatonna Waste Treatment plant and off-site disposal of the Owatonna Cannery's effluent, were reported. The presence of pollution intolerant fish species such as redhorse sp. were also noted.

Electrofishing was conducted in 1992 to evaluate a 1991 stocking of 16,500 smallmouth bass fingerlings (Schmidt 1994). Seven smallmouth bass were collected in 2.8 hours of electrofishing in six stations. Lengths ranged from 4.0-5.4 inches. Management goals included dam removal, maintenance of a northern pike fishery, and the establishment of a smallmouth bass fishery.

Another Population Assessment was completed in 1994 (Schmidt 1995) in six representative stations described in the Initial Survey (Miles 1.3-35.7). In 9,730 feet of stream shocked, very few gamefish were collected (4 northern pike, 2 smallmouth bass, and 3 YOY walleye). Channel catfish stocking was unsuccessful. Habitat suitability was deemed questionable, and management for northern pike was recommended.

Past Management

Past management has focused on northern pike spawning habitat protection and enhancement, dam removal, and northern pike, smallmouth bass and channel catfish stocking (see Table 1).

From 1988-1993, a northern pike "spawning/rearing area" (basin connected to the river, used as a skating rink in Morehouse Park) was stocked with fry (adults on one occasion), and operated annually by the City of Owatonna and DNR. Following 3-4 weeks rearing time, fry were released to the river. Contributions to the Straight River northern pike population as a result of this operation is unknown. The operation was discontinued to help determine the extent of natural reproduction occurring in the reach. Channel catfish were stocked in 1985, 1987, and 1988. Smallmouth bass were stocked in 1991. Smallmouth bass survival was documented. Channel catfish stockings, however, have failed, as none have ever been collected.

The dam on Maple Creek in Dartt's Park, Owatonna, is scheduled for removal in 1995. In addition, the City of Owatonna will organize a meeting to discuss removal of the Morehouse Park Dam. All interested parties will be invited, including DNR Fisheries and Waters staff (personal communication on 2/13/95 with Leo Rudolph - Owatonna Parks and Recreation Director).

Stream and Watershed Alterations

Intensive agriculture within the watershed has been occurring for over 70 years. Urban development threatens the natural integrity of the stream and its corridor. Wetland drainage and stream channelization have significantly degraded or eliminated fish habitat and spawning areas. The Morehouse Park Dam blocks fish migration, alters temperature regimes, and creates habitat for less-desirable fish species.

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STREAM NAME:
Straight River

TRIBUTARY NO.
M-48-26

Date:
031695

Social considerations

Northern pike are the species most sought by anglers (Nagel's Bait Shop - Faribault). Specific fishing sites include areas near Hope, the Rice/Steele County line, and at the confluence of the Cannon River. The stream is also popular with canoeists, particularly from Owatonna to Faribault.

Limiting Factors

Wetland drainage and dams (Morehouse Park, Dartt's Park, and Oak Glen Lake, Crane Creek) restrict northern pike spawning habitat, and limit the potential of the species.

Survey Needs and Evaluations

Provided the removal of the Dartt's Park Dam in 1995, conduct spring trapnetting in Maple Creek in 1996 (see Maple Creek file for trap locations). Conduct a population assessment in 1996; duplicate 1994 sampling stations.

Land Acquisition Needs

Wetlands that serve or may serve as good northern pike spawning areas should be protected as Aquatic Management Areas (AMA); specifically, the area located in T105N, R19W, S17. Additional sites along Turtle Creek and Maple Creek should be inventoried and prioritized in terms of quality and acquisition feasibility.

Habitat Development Needs

Northern pike spawning habitat should become accessible following the removal of the Dartt's Park Dam. The remaining natural riparian corridor of the Straight River and its tributaries should be protected.

Stocking

None at this time.

Experimental Regulations

Not needed at this time.

References

Enblom, J., Hanson, S., and Renard, P. 1985. Stream survey of the t River (Ecological Services). Lake City files, 28 pp.

Enger, S. 1989. Straight River electrofishing results (Ecological Services). Lake City files, 17 pp.

Haugstad, M.C. 1973. Straight River, Steele County. Lake City files, 9 pp.

Haugstad, M.C. 1976. A survey of the fisheries resources in the Straight River, Steele and Rice Counties - field report. Lake City files, 7 pp.

STREAM MANAGEMENT PLAN

STREAM NAME:
Straight River

TRIBUTARY NO.
M-48-26

Date:
031695

- Hirsch, S. 1984. Initial Survey of the Straight River. Lake City files, 50 pp.
- Schmidt, A. 1993. Population Assessment of the Straight River - Smallmouth bass Stocking Evaluation. Lake City files, 7 pp.
- Schmidt, A. 1995. Population Assessment of the Straight River. Lake City files, 7 pp.
- Sogla, D. 1987. Fish and Wildlife Kill Report. Lake City files, 5 pp.
- Unknown. 1978. Mercury and polychlorinated biphenyls (PCB's) in water, fish, and sediment of the Straight River, Steele County Minnesota. Minnesota Pollution Control Agency, Division of Water Quality, Surface and Groundwaters Section. Lake City files, 17 pp.
- Wiechman, J. 1991. Population Assessment of the Straight River. Lake City files, 10 pp.
- Woods, D. 1956. Fish Kill Report: Straight River near Owatonna. Lake City files, 2 pp.

Table 1. Stocking history in the Straight River.

Date	Species	Size	Pounds	Number	Rate
1985	CCF	YRL	--	2005	--
1987	CCF	YRL	478	3919	8.2/lb
	CCF	FGL	162	3596	22.2/lb
1988	NOP	ADULT	30	30	1/lb
	CCF	FGL	82.2	10,053	122.3/lb
1991	SMB	FGL	330	16,500	50/lb