

Minnesota
F-29-R(P)-24
Area 315
Study 3
April 2007

**Minnesota Department of Natural Resources
Division of Fish and Wildlife
Section of Fisheries**

Stream Survey Report

**Fairhaven Creek
2006**

By

Montrose Area Fisheries Office

General InformationElectrofishing

Stream Name: Fairhaven Creek
Alternate Name: None
Tributary Number: M- 071- 003
Counties: Stearns
Nearest Town: Fairhaven
Source of flow: Wetlands 2 miles northwest of the town of Fairhaven
Waterway sequence: Wetland /Fairhaven Creek/Clearwater River/ Mississippi River
Stream Length: 3.6 miles from wetland complex to mouth
Gradient: 25-53 ft/ mile
Sinuosity: 5.52
Classification: Class I-A (coldwater, brook trout)

Watershed Description

Watershed Name and Number

Major: Mississippi River (17) – Clearwater River (17010)
Minor: Fairhaven Creek Unnamed
Watershed Area: 1800 acres
Watershed Land Use: 49% agricultural, 22% grassland/shrub/pasture, 26% forested, and 2% residential.
Riparian Zone: The surrounding land is primarily farmland with a growing portion as residential. The stream is bordered by wetland or reed canary grass in upper reaches, with some willows. Stearns County Road 44 is the only road crossing and publicly accessible area.

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Summary

Fairhaven Creek is a designated trout stream with a headwater located approximately two miles northwest of the town of Fairhaven in Stearns County. It flows 3.6 miles to the confluence with Lake Marie. Fairhaven Creek has a gradient between 25 and 53 feet per mile and a sinuosity of 5.52 between Lake Marie and 140th street northwest of the town of Fairhaven. The stream has a watershed of 1800 acres with estimated land use of 49% agricultural, 26% forested, 22% grassland/shrub, and 2% residential.

During 2006, sampling included electrofishing, photo documentation and GPS use to collaborate with an enforcement investigation along the creek. Electrofishing was conducted at three stations; two were south of County Road 44 and one station was north of the road (Figure 1).

Electrofishing results showed a lower number of brook trout per 100 feet in 2006 than the 2000 survey (Table 1). However, CPUE was slightly higher than the 2000 results. This could be due to selective sampling in 2006, where parts of some stations were not electrofished. The number of larger trout (> 200 mm) per 100 feet was lower than in 2000. The highest catch of larger trout was upstream of the highway in 2006, versus downstream of the highway in 2000. This may be due to road construction which occurred on County Road 44 in 2003. Substantial silt deposition was observed in the stream below the road at the time. The added silt load may be continuing to affect the stream by filling in deeper pools preferred by larger trout, reducing survival of larger fish. Only a few trout were aged, but combining these with the length frequency (Table 2) indicates that nearly all trout captured were age-0 or age-1.

Electrofishing should be repeated every other year to monitor brook trout recovery. Stream classification should be repeated as soon as possible at the 2000 sites to assess the impact of silt deposition on stream function and morphology.

Figure 1. Sampling locations on Fairhaven Creek, Fairhaven, MN, 2006.

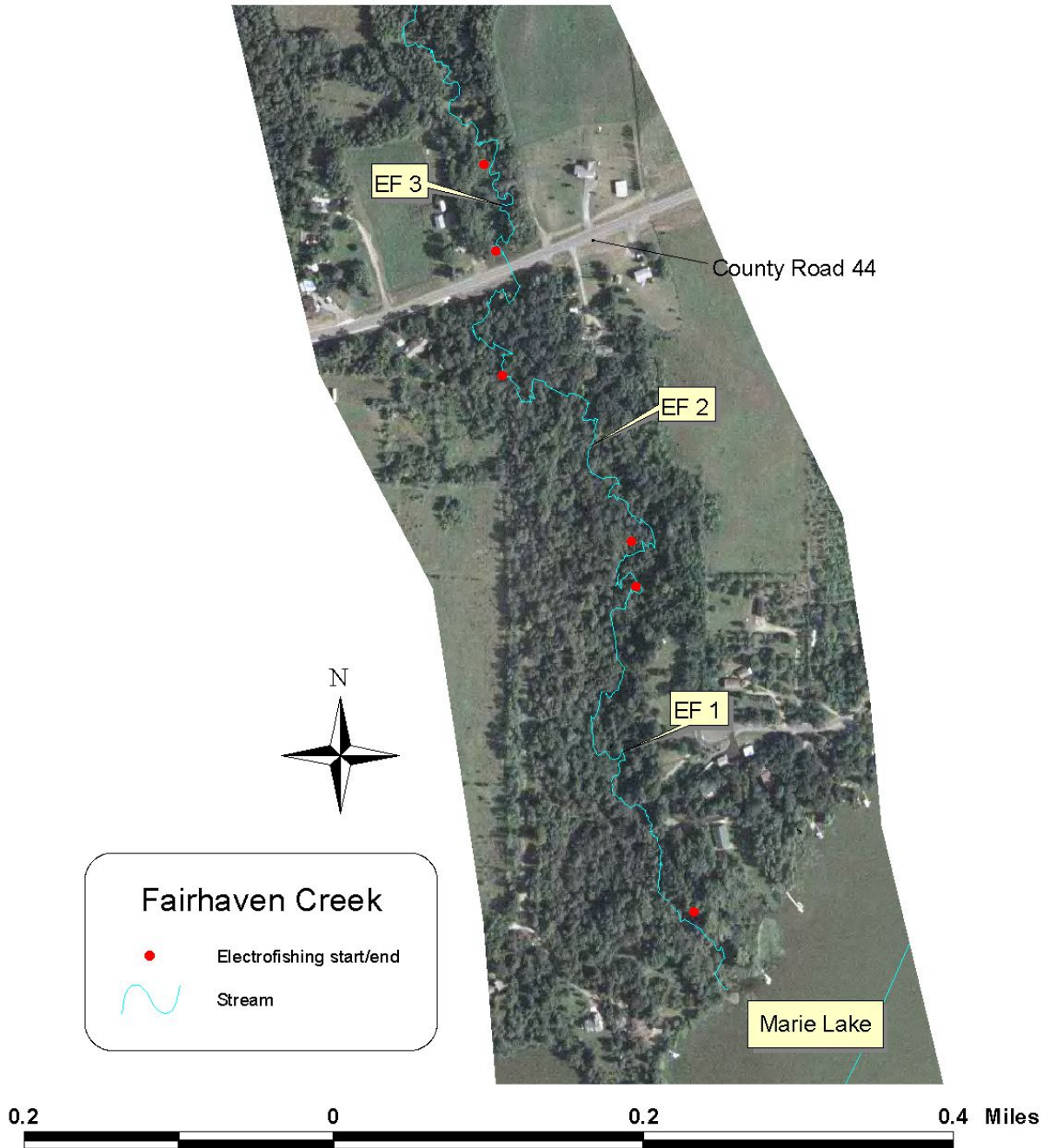


Table 1. Electrofishing station information for Fairhaven Creek, MN, 2006 and 2000.

	EF 1	EF 2	EF 3	2006 all	2000 all
Length (ft)	1,783	1,619	619	4,021	3,853
Effort (sec)	5,314	1,590	854	7,758	12,193
N-BKT	369	321	97	787	1,130
BKT>200 mm	7	3	6	16	67
CPUE	250.0	726.8	408.9	365.2	333.6
CPUE>200mm	4.7	6.8	25.3	7.4	19.8
BKT/100ft	20.7	19.8	15.7	19.6	29.3
BKT>200mm/100ft	0.39	0.19	0.97	0.40	1.74

Gear: Smith-Root Model 15-D (backpack)
 Crew: Mark Pelham, Eric Altena

Table 2. Number of brook trout per 10 mm group from all electrofishing stations for Fairhaven Creek, MN, 2000 and 2006.

Length Group	2006	2000
70	88	568
80	128	98
90	142	104
100	138	87
110	74	29
120	17	7
130	20	7
140	42	15
150	38	21
160	32	28
170	18	31
180	19	36
190	10	32
200	10	22
210	3	11
220	5	9
230	2	10
240		10
250		2
260		3
270		
280		
290		
300	1	
Total	787	1130

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Author Date

Area Fisheries Supervisor Date

Regional Fisheries Supervisor Date

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