



FISHERIES
STREAM POPULATION ASSESSMENT

REGION	AREA	STREAM NAME	TRIBUTARY NO.	LENGTH
V	510 Lake City	Wells Creek	M-43	18.8 miles
COUNTY	WATERSHED NAME, NO.		SOURCE (T.R.S)	MOUTH (T.R.S)
Goodhue	Zumbro River, 35		111,14, 7	112,13,12

DATE(S) OF ASSESSMENT: 10/3/96

REASON FOR ASSESSMENT: Clipped brown trout fingerling stocking evaluation

SIMILAR REACH	STATION	STREAM MILE	LENGTH	AVE. WIDTH	ACRES
4	4A	14.0	990 ft.	15	0.34
4	4C	17.7	1050 ft.	20	0.48

SUMMARY:

The majority of brown trout (>71%) were stocked fish for each year class where stocked fingerlings were fin-clipped. Total adult populations remain at low levels, with a high proportion of large brown trout.

1997 will be the final year of sampling for the clipped fingerling stocking evaluation.

Stream Wells Creek

Date 1996

FISHERY CHARACTERISTICS

Station	4A	4C		
Date	10/3/96	10/3/96		
Gear*	SS-2	SS-2		
Effort	1 run	1 run		

TROUT POPULATION ESTIMATE

Adults	Number	Wt-lbs	Number	Wt-lbs	Number	Wt-lbs	Number	Wt-lbs
Brown trout	26	20.4	12	5.2				
Young of Year	Number	Wt-lbs	Number	Wt-lbs	Number	Wt-lbs	Number	Wt-lbs
Brown trout	72	4.4	23	1.6				
Total trout	Number	Wt-lbs	Number	Wt-lbs	Number	Wt-lbs	Number	Wt-lbs
Brown trout	98	24.8	35	6.8				
OTHER SPECIES	Relative abun.		Relative abun.		Relative abun.		Relative abun.	
Common Shiner	Occasional							
Blacknose dace	Common		Common					
Longnose dace	Occasional		Occasional					
Creek chub	Occasional		Occasional					
White sucker	Abundant		Abundant					
Fantail darter	Occasional		Occasional					
Johnny darter	Occasional		Common					

*SS=stream shocker, BP=backpack electroshocker, MB=mini-boom boat shocker

POPULATION ESTIMATE SUMMARY (Minimum estimate expanded from 1 run)

Station (Month/Yr)	4A (10/96)		4C (10/96)					
	No./Mi	Lbs./A	No./Mi	Lbs./A	No./Mi	Lbs./A	No./Mi	Lbs./A
Species								
Brown Trout								
Adult	139	60.0	60	10.7				
> 12 inches	43		15					
Fingerlings	384	12.9	116	3.3				

AGE AND GROWTH

Stream Wells Creek

AGE CLASS DISTRIBUTIONS

Date 1996

Species	Sample Size	Subsample Size	Number of fish in age group (Percent)								
			0	I	II	III	IV	V	VI	VII	VII+
Brown trout-4A, no clip	79*	4	72 (91)	4 (5)			3 (4)				
Brown trout- 4A, adipose clipped	17*	15		10 (59)	5 (29)	2 (12)					
Brown trout- 4C, no clip	31	3	31 (100)								
Brown trout- 4C, adipose clipped	4	4		1 (25)	3 (75)						

* Unable to age fish sampled in the following length categories: 4A (no clip) 10.5"; 4A (adipose clipped) 17"

GROWTH

Species	Calculated mean total length at time of last annulus formation (N)								
	I	II	III	IV	V	VI	VII	VIII	IX+
Brown trout- 4A, no clip									
Age 1 - 1995 year class (1)	5.0								
Age 4 - 1992 year class (3)	10.4	14.0	16.1	18.9					
ALL	9.1 (4)	14.0 (3)	16.1 (3)	18.9 (3)					
Brown trout- 4A, adipose clipped									
Age 1 - 1995 year class (8)	5.7								
Age 2 - 1994 year class (5)	5.7	9.4							
Age 3 - 1993 year class (2)	8.5	12.5	13.7						
ALL	6.0 (15)	10.3 (7)	13.7 (2)						
Brown trout- 4C, adipose clipped									
Age 1 - 1995 year class (1)	4.8								
Age 2 - 1994 year class (3)	8.7	13.3							
ALL	7.8 (4)	13.3 (3)							

Stream Wells CreekDate 1996

Length Frequency Distribution

Total Length	Species Station (inches)	Brown trout Adipose	Brown trout No clip	Brown trout Adipose	Brown trout No clip		
		4A	4A	4C	4C		
2.5 - 2.9							
3.0 - 3.4							
3.5 - 3.9							
4.0 - 4.4							
4.5 - 4.9			13		1		
5.0 - 5.4			26		7		
5.5 - 5.9			18		7		
6.0 - 6.4			15		8		
6.5 - 6.9			4		4		
7.0 - 7.4					3		
7.5 - 7.9					1		
8.0 - 8.4							
8.5 - 8.9	2						
9.0 - 9.4	3						
9.5 - 9.9	5						
10.0 - 10.4	2			1			
10.5 - 10.9			1				
11.0 - 11.4	1						
11.5 - 11.9							
12.0 - 12.4							
12.5 - 12.9							
13.0 - 13.4	2						
13.5 - 13.9							
14.0 - 14.9	2			1			
15.0 - 15.9				2			
16.0 - 16.9							
17.0 - 17.9	1						
18.0 - 18.9							
19.0 - 19.9			1				
20.0 - 20.9			1				
21.0 - 21.9			1				
22.0 - 22.9							
23.0 - 23.9							
24.0 - 24.9							
25.0 - 25.9							
Total sampled		18	80	4	31		

Stream Wells Creek

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DISCUSSION OF FISHERY

DISCUSSION: Stations 4A and 4C were sampled to evaluate brown trout fingerling stocking. All fingerlings stocked in 1993, 1994 and 1995 were given an adipose clip.

In all cases, the majority of adults in each year class were comprised of stocked fish (Table 1). Fingerling abundance estimates for 1993-1995 indicate that in each year, a small amount of natural reproduction took place (Table 2). Total abundance and biomass continue to remain low, although several large fish captured in station 4A resulted in a higher biomass estimate (60 lbs/acre) for 1996 (Table 2).

Growth rates are often high in Wells Creek. This may explain the continued sampling of a high proportion of fish > 15 inches (see length frequency, page 4). Although abundance and biomass remain low, this stream continues to produce an above average number of large brown trout.

Population assessments in 1997 will complete the stocking evaluation.

Credits and Signatures:

Field Crew: D. Bushong, A. Schmidt, R. Moore

Report Completed by:

Name	Title	Date
Deserae L. Bushong	NR Specialist 5I	3/6/97

APPROVED BY:

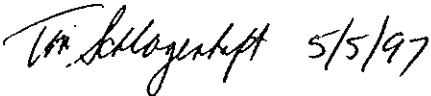
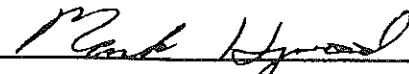
Area Supervisor's Signature	Regional Fisheries Manager's Signature	Date
 5/5/97		5/14/97

Table 1. The 1996 contribution of adipose clipped fingerlings stocked in Wells Creek from 1993 to 1995.

	Proportion of year class stocked	
	Station 4A	Station 4C
1993 Year Class	100%	No fish sampled
1994 Year Class	83%	100%
1995 Year Class	71%	100%

Table 2. Fall brown trout abundance and biomass (lbs/acre) in Wells Creek, 1989-1996.

Year	Station 4A			Station 4C		
	Fgl/mi (% clip)	Adult/mi	Adult Biomass	Fgl/mi (% clip)	Adult/mi	Adult Biomass
1991	0	0	0	0	39	5.5
1993	0	22	6.2	148 (57%)	25	12.8
1994	26 (100%)	37	33.6	55 (80%)	15	4.3
1995	482 (94%)	80	41.0	73 (95%)	58	16.1
1996	384	139	60.0	116	60	10.7

Table 3. Stocking record for Wells Creek, 1990-1996.

Year	Species (size)	Clip	Number
1990	Brown (fingerling)		30,931
1991	None		
1992	Brown (fingerling)		11,005
1993	Brown (fingerling)	Adipose	11,000
1994	Brown (fingerling)	Adipose	11,000
1995	Brown (fingerling)	Adipose	11,000
1996	Brown (fingerling)		11,000

