DEP via E.S.

DEP Stream Code: 58418 **PA FISH AND BOAT COMMISSION** Mill Creek

COMMENTS AND RECOMMENDATIONS

February 14, 2000

WATER: Mill Creek (216C) Potter County

EXAMINED: July 14, 1999

BY: Allen Woomer and Ron Lee

Bureau Director Action: Approved - Delano R. Bell Date: 4-14-00

Division Chief Action: Richard A. Snyder Date: 4-14-00

WW Unit Leader Action: _____ Date: _____

CW Unit Leader Action: R. Thomas Greene Date: 4/12/00

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AREA COMMENTS:

Mill Creek, Section 01, has been managed as a Class A wild brown trout water since 1983. The 1999 survey was conducted to assess this management strategy and to monitor the wild brown trout population. Section biomass was estimated at 53.70 kg/ha compared to 57.40 and 55.15 kg/ha in 1991 and 1983, respectively.

AREA RECOMMENDATIONS:

1. Continue to manage Section 01 as a Class A wild brown trout stream.

2. Provide a copy of this report to John Arway, Chief, PFBC Environmental Services.

CWU COMMENTS:

Mill Creek (216C), Section 01, was examined during July 1999 as part of a routine reinventory of Class A wild trout waters in Fisheries Management Area 2.

Section 01 can be characterized as a small, coldwater stream. The 1999 examination (conducted at three sample sites) recorded the presence of 15 fish species, including an excellent Class A wild brown trout fishery estimated at 53.70 kg/ha. Interestingly, Class A wild brown trout densities were recorded at each of the three sample sites. Overall, mean wild brown trout biomass in Section 01 has increased since the initial (1977) survey and has remained consistent during follow-up surveys in 1983, 1991 and 1999.

CWU RECOMMENDATIONS:

1. Mill Creek (216C), Section 01, should continue to be managed as a Class A wild brown trout fishery. Conventional statewide regulations should apply with no stocking.

2. Due to the presence of a Class A wild brown trout fishery at site RM 0.40, the DEP Water Quality Standards should be upgraded to HQ-CWF. The special protected use classification should be extended to encompass the Mill Creek basin from the headwaters downstream to the mouth. A copy of this report should be forwarded to DEP via Environmental Services.

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PENNSYLVANIA FISH AND BOAT COMMISSION
BUREAU OF FISHERIES
DIVISION OF FISHERIES MANAGEMENT

Mill Creek (216C)
Section 01

Prepared by
Allen Woomer and Ron Lee

Date Surveyed: July 14, 1999 Date Prepared: February 2000

Abstract

Mill Creek (216C) is a small stream located in and around the town of Coudersport in Potter County. It has been managed as a Class A wild brown trout water since 1983. This management strategy was evaluated in July of 1999. Three stations were sampled located at River Miles (RM) 4.20, 2.00 and 0.40 (Figs. 1 & 2) which correspond to those described by Lee (1977). Previous surveys of Mill Creek have been Lee (1977), Lee et al. (1983) and Lee (1991). Mill Creek has been upgraded to High Quality Cold Water Fishery (HQ-CWF) in PA DEP Chapter 93 Water Quality Standards from the source downstream to North Hollow (near RM 2.00). It was cut off at North Hollow on the basis of Class A trout populations being estimated at the two upstream sites but not at the downstream site below North Hollow (PA DEP 1995). It is classified Cold Water Fishery from North Hollow downstream to the mouth. A PFBC request prompted this upgrade due to the Class A wild brown trout population present (PA DEP 1995). Water chemistry results in 1999 (Table 1) are similar to past surveys and reflect a fair level of total alkalinity for a freestone stream. At RM 4.20 ten fish species were sampled in the 340 m electrofishing site (Table 2). Brown trout ranged in size from 25 to 399 mm and biomass was estimated at 49.61 kg/ha (Table 3). This estimate was slightly less than the 1991 estimate of 56.16 kg/ha but better than other previous estimates. Numbers of young-of-year (YOY) brown trout were good compared to downstream sites. Abundance of brook trout was down in 1999 with a single brook trout sampled in the 50 mm size group. At RM 2.00 eight fish species were identified in 306 m. Brown trout ranged in size from 50 to 399 mm and biomass was estimated at 45.16 kg/ha (Table 4). This was a substantial decline compared to previous survey estimates. Eleven fish species were identified at RM 0.40. Brown trout ranged in size from 50 to 499 mm and biomass was estimated at 66.33 kg/ha (Table 5). This was a substantial increase compared to previous survey estimates. The average wild brown trout biomass for Section 01 in 1999 would be 53.70 kg/ha. This was close to the overall section estimate of 55.15 and 57.40 kg/ha for 1983 and 1991

and better that the 1977 estimate of 47.19 kg/ha. This suggests that although the estimate at RM 2.00 fell, overall trout abundance is close to historical levels. YOY brown trout abundance was also down at RM 2.00 and suggests severe drought conditions of 1998 and 1999 may have affected this site. Management of Mill Creek, Section 01, as a Class A brown trout water is appropriate and should continue. As the 1999 survey results suggest it was unfortunate that PA DEP 1995 did not recommend the High Quality upgrade for all of Mill Creek downstream to the channelization at Coudersport. By their rationale Mill Creek from North Hollow downstream to RM 0.40 would now qualify for High Quality based on the Class A population sampled in 1999. Class A populations are estimated and assigned to sections and these should be the units considered not sites. This is especially true of brown trout populations which have components that are highly mobile and may not always be present at a particular site in a given year but are present within the section year in and out. In view of the presence of a Class A trout population at all the sites in 1999 it is requested that PFBC Division of Environmental Services resubmit Mill Creek for continuation of the High Quality designation for that portion of Section 01 from North Hollow downstream to the concrete channelization in Coudersport.

Literature Cited

Lee, R.D. 1977. Mill Creek (216C) Stream Examination Report. PFBC files, Robinson Lane, Bellefonte, PA.

Lee, R.D. 1991. Mill Creek (216C) Stream Data Input Forms. PFBC files, Robinson Lane, Bellefonte, PA.

Lee, R.D., E. Obert, E. McCleary, R. Snyder, M. Marcinko, Scheirer, Dugan. 1983. Mill Creek (216C) Management Report. PFBC files, Robinson Lane, Bellefonte, PA.

PA DEP. 1995. Mill Creek, Potter County, Draft Special Protection Evaluation Report, Water Quality Standards Review. Bureau of Water Quality Management, PA Department of Environmental Resources, Harrisburg, PA.

Table 1. Chemical-thermal analyses of Mill Creek (216C) on July 14, 1999.

Riv. Mile	0.40	2.00	4.20
Air Temp	18	23	26
Water Temp	16.0	18.2	19.4
pH	7.1	7.3	7.2
Spec Cond	92	91	90
Tot Alk	25	22	21
Tot Hard	30	35	34

Table 2. Fish species occurrence in Mill Creek (216C) on July 14, 1999.

Common Name	Scientific Name	River mile: 4.20 Date: 07/14	2.00 07/14	0.40 07/14
Brown trout	*Salmo trutta*	x	x	x
Brook trout	*Salvelinus fontinalis*	x		
Bluntnose minnow	*Pimephales notatus*			x
Blacknose dace	*Rhinichthys atratulus*	x	x	x
Longnose dace	*Rhinichthys cataractae*	x	x	x
Creek chub	*Semotilus atromaculatus*			x
White sucker	*Catostomus commersoni*	x	x	x
Pumpkinseed	*Lepomis gibbosus*	x		x
Bluegill	*Lepomis macrochirus*		x	
Greenside darter	*Etheostoma blennioides*			x
Fantail darter	*Etheostoma flabellare*	x	x	x
Johnny darter	*Etheostoma nigrum*		x	x
Mottled sculpin	*Cottus bairdi*	x	x	x
Yellow perch	*Perca flavescens*	x		
Lamprey unid	*Lamprey*	x		
Species Total		10	8	11

Table 3. Mill Creek (216C) estimated abundance and biomass of brown trout from 1977, 1983, 1991, 1999 for Site RM 4.20.

Length Grp(mm)	07/27/1977 (N/ha)	07/27/1977 (kg/ha)	08/16/1983 (N/ha)	08/16/1983 (kg/ha)	08/05/1991 (N/ha)	08/05/1991 (kg/ha)	07/14/1999 (N/ha)	07/14/1999 (kg/ha)
25	....	.....	....	.....	....	.....	5	0.01
50	20	0.04	27	0.66	351	1.40	552	1.11
75	4	0.02	55	0.27	55	0.33	....	.....
100	4	0.06	....	.....	9	0.12	10	0.14
125	28	0.92	14	0.42	80	2.07	5	0.13
150	103	5.55	73	2.55	167	6.50	36	1.46
175	45	4.03	69	3.37	63	3.31	50	3.35
200	40	4.32	28	2.44	33	3.04	71	7.00
225	40	5.72	75	9.30	45	5.05	43	5.61
250	32	6.40	14	2.62	48	7.97	24	4.36
275	12	3.26	14	3.06	36	8.07	43	10.20
300	8	2.84	5	1.41	23	6.34	19	5.56
325	8	3.02	9	3.27	14	4.45	14	5.66
350	8	3.95	18	7.44	18	7.51	5	2.30
375	....	.....	5	2.36	....	.....	5	2.72
550	4	7.71	....	.....	....	.....	....	.....
TOTALS	356	47.84	406	38.57	942	56.16	882	49.61

Table 4. Mill Creek (216C) estimated abundance and biomass of brown trout from 1977, 1983, 1991 and 1999 for Site River Mile 2.00.

Length Grp(mm)	07/25/1977 (N/ha)	(kg/ha)	08/16/1983 (N/ha)	(kg/ha)	08/06/1991 (N/ha)	(kg/ha)	07/14/1999 (N/ha)	(kg/ha)
50	18	0.04	564	1.13	522	2.09	86	0.17
75	5	0.01	705	3.52	517	3.10	....	.....
100	14	0.21	5	0.03	30	0.40	....	.....
125	45	0.96	86	2.66	58	1.51	14	0.36
150	210	7.56	326	11.42	236	9.19	41	1.51
175	74	5.01	343	16.81	164	8.72	32	2.13
200	85	8.74	130	11.14	68	6.31	32	3.25
225	36	5.09	95	11.84	98	10.86	36	4.76
250	57	10.88	70	13.44	37	6.10	61	10.00
275	23	5.07	68	15.27	26	5.79	41	8.59
300	23	6.55	32	9.83	54	15.16	14	4.00
325	9	3.34	14	4.91	26	8.50	9	3.46
350	5	2.25	....	.....	9	3.59	5	1.93
375	....	.....	5	2.36	....	.....	9	5.00
TOTALS	604	55.71	2443	104.36	1845	81.32	380	45.16

Table 5. Mill Creek (216C) estimated abundance and biomass of brown trout from 1977, 1983, 1991, 1999 for Site River Mile 0.40.

Length Grp(mm)	07/26/1977 (N/ha)	07/26/1977 (kg/ha)	08/17/1983 (N/ha)	08/17/1983 (kg/ha)	08/06/1991 (N/ha)	08/06/1991 (kg/ha)	07/14/1999 (N/ha)	07/14/1999 (kg/ha)
50	13	0.01	54	0.11	399	1.60	4	0.01
75	7	0.03	265	1.33	117	0.70	....	.....
100	....	.....	4	0.03	7	0.09	4	0.06
125	20	0.48	7	0.22	11	0.28	8	0.20
150	60	2.40	75	2.63	194	7.56	35	1.52
175	37	2.05	46	2.28	146	7.75	75	4.88
200	53	4.43	11	0.92	38	3.54	8	0.75
225	28	3.44	7	0.89	37	4.08	27	3.85
250	40	6.00	4	0.69	25	4.18	70	11.69
275	37	9.35	11	2.40	18	3.96	52	11.89
300	20	6.04	4	1.10	4	1.00	31	9.42
325	7	2.44	14	5.14	....	.....	35	12.46
350	3	1.35	7	2.92	....	.....	8	2.62
375	....	.....	4	1.86	....	.....	4	2.28
475	....	.....	....	.....	....	.....	4	4.70
TOTALS	325	38.02	513	22.52	996	34.74	365	66.33

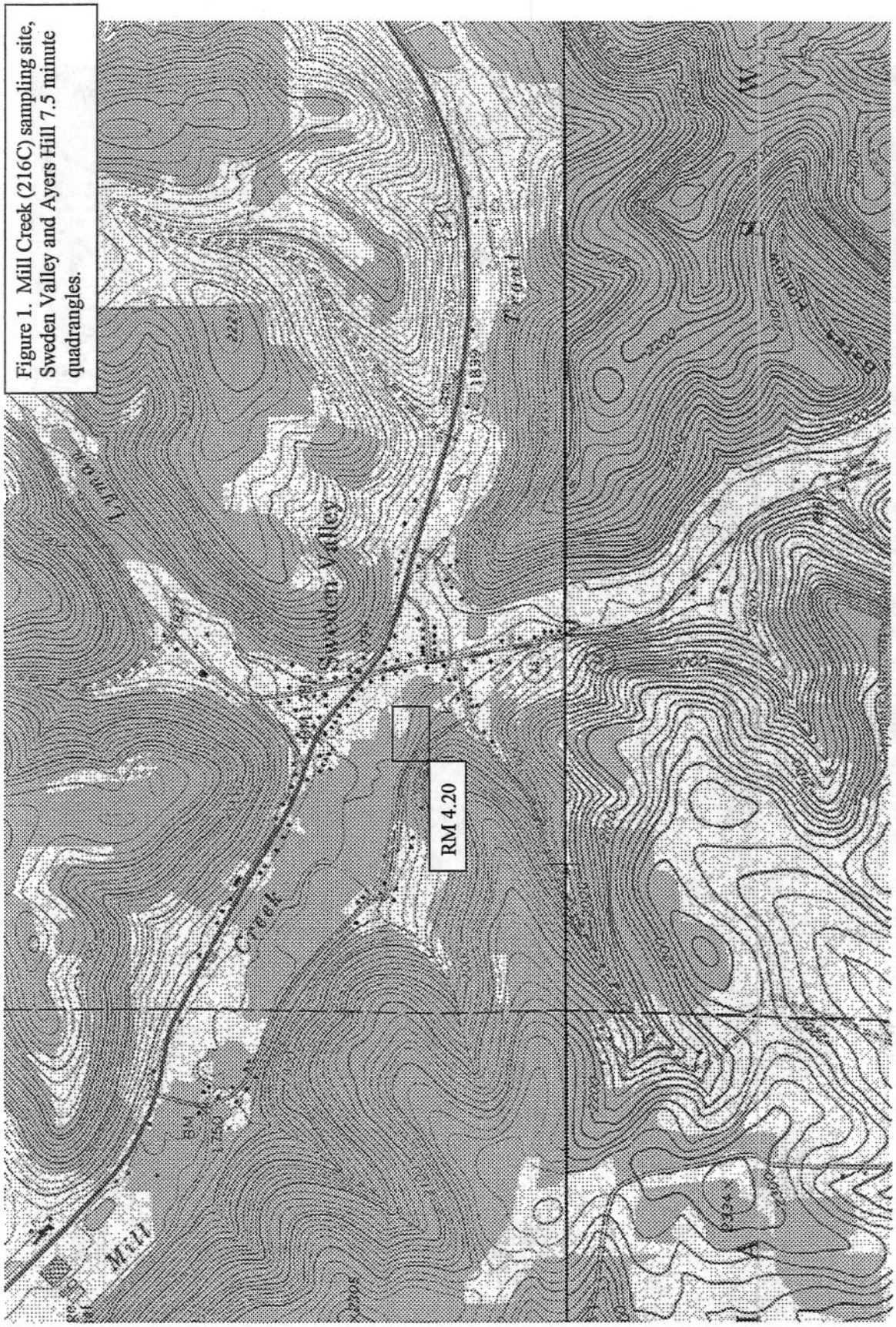

Figure 1. Mill Creek (216C) sampling site, Sweden Valley and Ayers Hill 7.5 minute quadrangles.

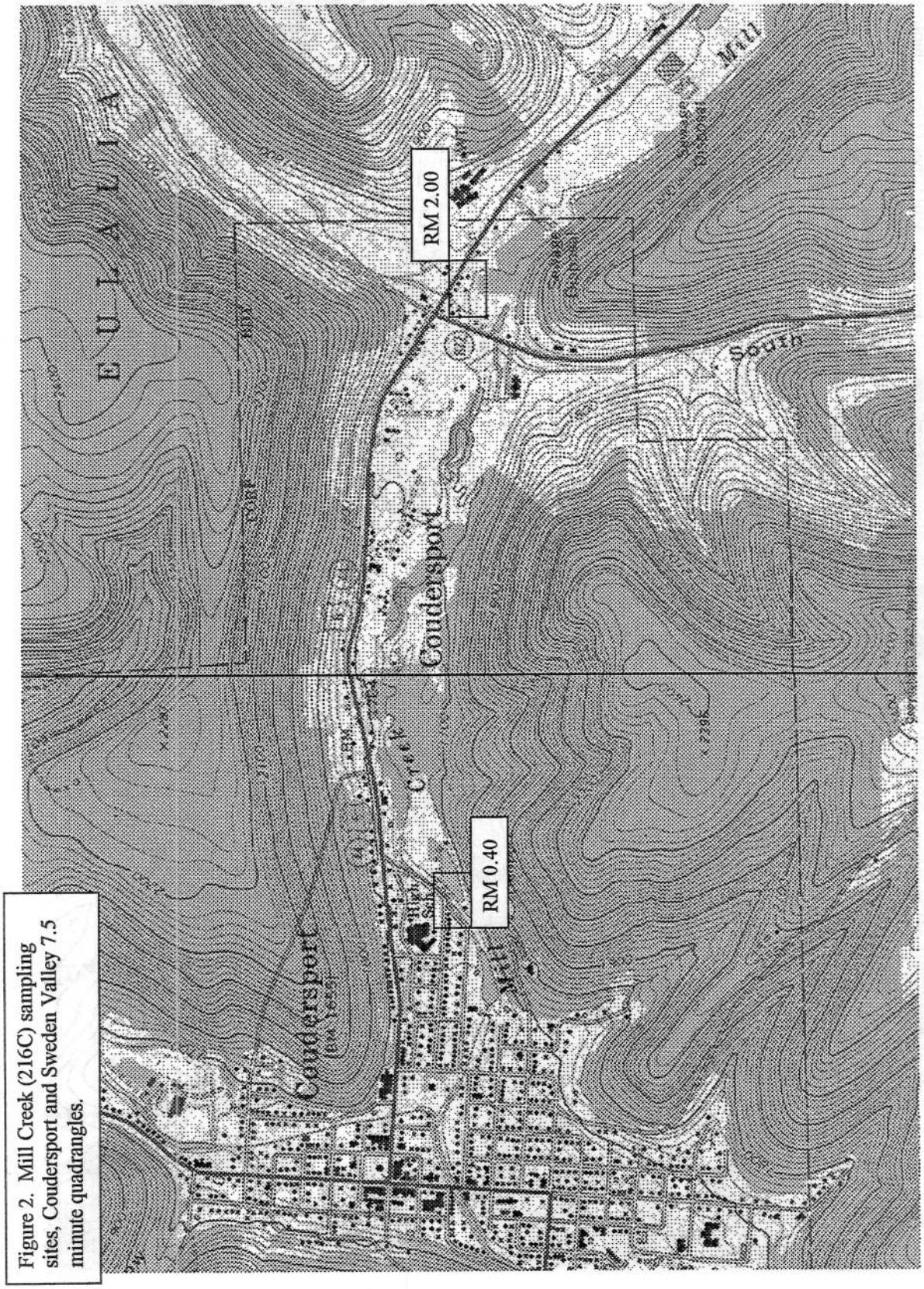

Figure 2. Mill Creek (216C) sampling sites, Coudersport and Sweden Valley 7.5 minute quadrangles.