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Continuous Water Temperature Investigations
in support of Task 32

Alaska Department of Fish and Game
Susitna Hydro Aquatic Studies
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1.0 INTRODUCTION

1.1 Background

The Alaska Department of Fish and Game (ADF&G) Susitna Hydro Aquatic Feasibility Study Team has collected surface and intragravel temperature data on a continuous basis at selected locations throughout the Susitna River Basin since 1981. The primary intent of the data collection program has been to characterize the seasonal surface and intragravel water temperature regimes of the mainstem Susitna River and its peripheral side channel, side slough, upland slough, tributary mouth and tributary habitats. Results of these investigations have been used by project biologists to evaluate the effects of intragravel and surface water temperatures on fish and fish habitats, and by project engineers to validate or calibrate various temperature related models.

1.2 FY 85 Objectives

The objective of the 1984 open water season temperature study conducted by the ADF&G Susitna Hydro Aquatic Feasibility Study Team was to collect sufficient surface water temperature data to meet the specific objectives of the task 32 temperature modelling study being conducted by the Arctic Environmental and Information Data Center (AEIDC).

This technical memorandum presents a summary of the data collection methods and a summary of the initial data reduction and analyses.

2.0 Methods

2.1 Site Selection

In support of Task 32, water temperatures were recorded at 15 mainstem Susitna River sites and 8 tributary sites located between Susitna River Miles 18.5 and 184 (Table 1 and Figure 1). Also included are additional tributary sites at which continuous water temperatures were recorded. Selection of study sites was based on discussions with AEIDC personnel (Voos and Meyer 1984).

2.2 Field Data Collection

Water temperatures were continuously recorded using either Peabody-Ryan model J-90 temperature recorders or Omnidata two channel datapod recorders. The Peabody-Ryan temperature recorders were used to record surface water temperatures only. The two channel datapod recorders were installed at monitoring stations to simultaneously record intragravel and surface water temperatures.

2.2.1 Peabody-Ryan Temperature Recorders (Thermographs)

The Peabody-Ryan model J-90 temperature recorders (thermographs) continuously record temperatures on a 90-day strip chart. Instrument accuracy, as stated by the manufacturer, is $\pm 0.6^{\circ}\text{C}$. Prior to field installation, each instrument was screened at two temperatures (0°C and between 10 - 16°C) using a calibrated American Society for Testing and Manufacturing (ASTM) thermometer as a standard. Following this

Table 1. Continuous temperature monitoring stations located in the Susitna River basin during the 1984 open water season in support of Task 32.

Mainstem Sites	River Mile	Temp. Data Type
Susitna River	18.5	Surface
Susitna River-Above Yentna River	29.5	Surface
Susitna River-Above Deshka River	41.1	Surface
Susitna River-Above Kashwitna	61.2	Surface
Susitna River-Parks Hwy Bdg.(Site 4)	83.9	Surface
Susitna River-Above Parks Hwy Brg.	86.9	Surface
Susitna River-Talkeetna Fishwheel Camp	103.0	Surface
Susitna River-LRX 9 (Site 3)	103.5	IntraGravel & Surf.
Susitna River-Curry Fishwheel Camp	120.7	Surface
Susitna River-LRX 29 (Site 3)	125.9	IntraGravel & Surf.
Susitna River-LRX 53	140.1	Surface
Susitna River-LRX 56	142.1	IntraGravel & Surf.
Susitna River-Above Portage	148.9	Surface
Susitna River-Above Fog Creek (St.1)	176.8	Surface
Susitna River-Above Fog Creek (St.2)	176.8	Surface
Susitna River-Above Fog Creek (St.3)	176.8	Surface
Susitna River at Watana Dam Site	184.2	Surface
<u>Tributary Sites</u>	<u>RM/TM</u>	
Yentna River (Site 2)	28.6/4.0	Surface
Deshka River	40.6/3.0	Surface
Kashwitna River	60.9/0.1	Surface
Talkeetna River (Site 3)	97.2/4.0	Surface
Chulitna River (Site 5)	98.6/15.0	Surface
Portage Creek	148.8/0.2	Surface
Fog Creek	176.7/0.1	Surface
Tsusena Creek	181.1/0.1	Surface
<u>Misc. Tributary Sites</u>	<u>RM/TM</u>	
Deadhorse Creek	120.9/1.0	Surface
4th of July Creek & Plume (Site 1)	131.1/0.0	Intragravel
Indian River Site 3	138.6/0.2	Intragravel & Surf.
Indian River Site 4	138.6/0.2	Intragravel & Surf.

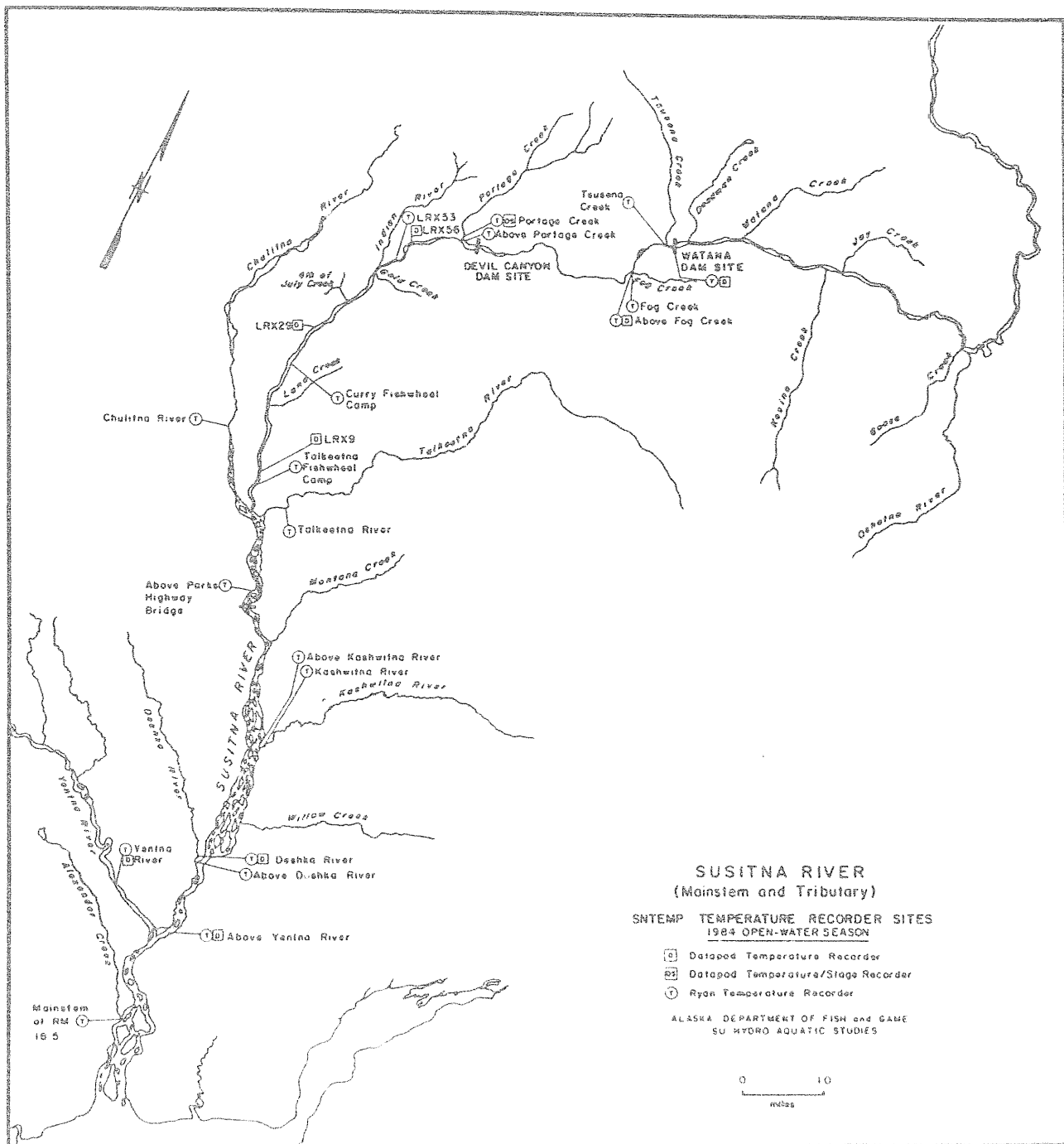


Figure 1. Locations of temperature monitoring stations in mainstem and tributary habitats during the 1984 open water season in support of Task 32.

screening process a calibration factor was applied to each instrument. Thermographs found in error by more than 2°C at either screening temperature are returned to the manufacturer for calibration.

Peabody-Ryan temperature recorders are used to monitor surface water temperatures. Thermographs are inspected twice each month to retrieve the charts and to detect malfunctioning instruments. Each time the thermographs are checked, an instantaneous water temperature measurement is taken using a calibrated Brooklyn thermometer (accuracy $\pm 0.1^{\circ}\text{C}$). Field installation procedures are outlined in the FY 84 ADF&G Su Hydro Aquatic Studies (May, 1983 - June, 1984) Procedures Manual (ADF&G 1984).

2.2.2 Omnidata Temperature Recorders (Datapods)

Omnidata model DP2321 two channel temperature recorders (datapods) simultaneously record water temperatures using TP10V temperature probes. Instrument accuracy, as stated by the manufacturer, Omnidata International, is $\pm 0.1^{\circ}\text{C}$. Temperature data are recorded on an ultraviolet, erasable electronic memory chip referred to as a data storage module (DSM). Temperatures are measured every five minutes and the mean, minimum, and maximum temperature measured during each six-hour interval are recorded on the DSM. Prior to installation each temperature probe is calibrated at 0.0°C and assigned a correction factor. Intragravel temperatures are measured at a substrate depth of approximately 15 inches, whereas surface water temperatures are measured approximately two inches above the substrate.

The datapods are also examined twice each month to exchange DSM's and to detect malfunctioning units. A short display sequence is activated on the datapod which enables the field investigator to determine the operating condition of the instrument and associated probes. The following information is displayed by the instrument, and recorded by the field investigator: errors made in storage, number of storage points used, minutes until the next recording, and current temperatures. An instantaneous surface water temperature was also measured using a calibrated Brooklyn thermometer (accuracy $\pm 0.1^{\circ}\text{C}$).

Field installation procedures are outlined in the ADF&G Su Hydro Aquatic Studies (May, 1983 - June 1984) Procedures Manual (ADF&G 1984).

2.3 Data Analysis

2.3.1 Peabody Ryan Temperature Recorders (Thermographs)

Using field notes as a guide, all Peabody-Ryan thermograph strip charts were screened for anomalous temperatures which may have resulted from instrument failure. From the strip charts, a reduced temperature data base was obtained as two-hour point temperatures.

A correction value for each strip chart was determined as the difference between the temperature obtained with a calibrated Brooklyn thermometer (accuracy $\pm 0.1^{\circ}\text{C}$) and the thermograph reading at the time the strip chart was removed. (A correction value is determined at the time of strip chart removal rather than installation because response time of the recorder to actual water temperatures can vary with each

installation). The correction value was then used to correct the two-hour point temperature data obtained from each strip chart. From these corrected data bases the daily, USGS water year weekly, and monthly minimum, mean, and maximum surface water temperatures were computer calculated and reported in tables and plots.

2.3.2 Omnidata Temperature Recorders (Datapods)

Water temperature data were retrieved from the datapod temperature recorders as six-hour minimum, mean, and maximum temperatures by reading the data storage module (DSM) via an Omnidata model 217 Datapod/cassette reader into a microcomputer. These six-hour data bases were edited and corrected for storage errors and anomalous data. From these corrected data bases the daily, USGS water year weekly, and monthly mean, minimum, and maximum temperatures were computer calculated and reported in tables and plots.

3.0 RESULTS

The water temperature data recorded at mainstem and tributary sites during the 1984 open water season in support of Task 32 are summarized in a series of tables and plots. Also included are site maps depicting the study locations.

3.1 Table 2 - Susitna River index of temperatures recorded in mainstem and tributary habitats during the 1984 open water season.

Table 2. ADF&G Susitna River index of temperatures recorded in mainstem and tributary habitats during the 1984 open water season.

Location	Instrument/ Temperature Type	Period of Record
<u>Mainstem</u>		
Susitna River RM 18.5 GC S16N07W15DCD	Thermograph Surface Surface Surface Surface Surface	5/24/84-6/24/84 7/8/84-7/15/84 7/19/84-8/12/84 8/19/84-8/31/84 9/12/84-9/13/84 10/17/84-10/24/84
Susitna River above the Yentna RM 29.5 GC S17N06W07CAD	Thermograph Surface Surface Datapod Surface Surface	5/24/84-7/8/84 9/1/84-10/3/84 8/14/84-8/31/84 9/12/84-9/29/84
Susitna River above the Deshka RM 41.1 GC S19N06W26SBC	Thermograph Surface Surface Surface Surface	5/24/84-5/31/84 6/1/84-6/9/84 6/29/84-7/4/84 7/24/84-11/29/84
Susitna River above the Kashwitna RM 61.2 GC S31N05W13ABA	Thermograph Surface Surface	5/24/84-7/19/84 7/25/84-10/24/84
Susitna River at Parks Hwy Bridge RM 83.9 GC S24N05W15BAD	Thermograph Surface	6/8/84-6/16/84
Susitna River above Pks. Hwy Bridge RM 86.9 GC S26N04W16CBA	Thermograph Surface	6/28/84-9/29/84
Susitna River at Talkeetna Camp RM 103.0 GC S27N05W26DDD	Thermograph Surface Surface	5/25/84-9/17/84 9/29/84-10/16/84

Location	Instrument Temperature/Type	Record
Susitna River at LRX 9 RM 103.5 GC S27N05W25BBC	Datapod Intra/Surface Surface Intra/Surface Surface Intra/Surface Surface Intra/Surface Surface Intra/Surface Surface Intragravel	5/1/84-5/31/84 6/1/84-6/1/84 6/2/84-6/3/84 6/4/84-6/4/84 6/5/84-6/5/84 6/6/84-6/6/84 6/7/84-6/12/84 6/13/84-7/8/84 7/9/84-8/30/84 8/31/84-9/21/84 9/30/84-10/3/84
Susitna River at Curry Camp RM 120.7 GC S27N04W10CBA	Thermograph Surface	6/4/84-10/12/84
Susitna River at LRX 29 RM 125.9, Site 3 GC S30N05W19DAB	Datapod Intra/Surface Intra/Surface Intra/Surface Intra/Surface	5/25/84-5/28/84 6/27/84-7/7/84 7/9/84-8/2/84 8/12/84-9/2/84 9/12/84-10/10/84
Susitna River at LRX 53 RM 140.1 GC S31N11W10AAC	Thermograph Surface	5/23/84-10/15/84
Susitna River at LRX 56 RM 142.1 GC S31N11W36BCD	Datapod Intra/Surface Intragravel Intra/Surface Intra/Surface Intra/Surface	6/6/84-6/18/84 6/19/84-7/7/84 7/8/84-7/15/84 7/29/84-8/30/84 9/16/84-10/25/84
Susitna River above Portage RM 148.9 GC S32N10W16ACB	Thermograph Surface	5/23/84-6/24/84 6/29/84-7/25/84 7/29/84-9/28/84
Susitna River above Fog Creek RM 176.8, Site 1 GC S31N06W15BAC	Thermograph Surface Surface Surface Surface	5/23/84-5/28/84 6/4/84-6/22/84 6/24/84-8/12/84 8/20/84-8/26/84

Location	Instrument/ Temperature Type	Record
Susitna River above Fog Creek RM 176.8, Site 2 GC S31N06W15BAC	Thermograph Surface	6/29/84-6/30/84 7/25/84-8/1/84 8/6/84-8/14/84 8/18/84-8/18/84 8/26/84-8/27/84 9/14/84-10/15/84
Susitna River above Fog Creek RM 176.8, Site 3 GC S31N06W15BAC	Thermograph Surface	9/14/84-10/15/84
Susitna River at Watana Dam Site RM 184.2 GC S32N05W33BDB	Thermograph Surface	5/23/84-5/26/84 6/13/84-7/1/84 8/10/84-8/14/84 8/18/84-8/27/84 9/14/84-10/15/84
<u>Tributaries</u> Yentna River RM 28, TRM 4.0, Site 2 GC S18N07W28ABC	Datapod Surface	8/10/84-8/13/84 8/20/84-8/28/84 9/17/84-9/23/84 9/28/84-10/15/84
	Thermograph Surface	5/24/84-7/1/84 7/26/84-7/29/84 8/20/84-9/24/84
	Datapod Surface	8/11/84-8/31/84 9/12/84-9/25/84 9/29/84-10/24/84
	Thermograph Surface	5/24/84-6/2/84 6/7/84-7/15/84 8/9/84-9/14/84 10/17/84-10/24/84
Deshka River RM 40.6, TRM 3.0 GC S19N06W23BDC	Datapod Surface	10/1/84-10/15/84
Kashwitna River RM 60.9, TRM 0.1 GC S21N06W13AAC	Thermograph Surface	5/25/84-6/29/84 7/7/84-10/24/84

Location	Instrument/ Temperature Type	Record
Talkeetna River RM 97.2, TRM 4.0, Site 3 GC S26N04W16CBA	Thermograph Surface	5/24/84-9/16/84 9/28/84-10/31/84
Chulitna River RM 98.6, TRM 11.0, Site 5 GC S27N05W05ABC	Thermograph Surface	5/23/84-10/16/84
Deadhorse Creek RM 120.9, TRM 1.0 GC S29N04W14BCB	Thermograph Surface Surface	5/1/84-8/11/84 9/14/84-10/31/84
Fourth of July Creek & Plume RM 131.1, Site 1 GC S30N03W03DAC	Datapod Creek Intragravel Plume & Creek- Intragravel	5/1/84-5/19/84 5/20/84-6/16/84
Indian River RM 138.6, TRM 0.2, Site 3 GC S31N02W09CAB	Datapod Intra/Surface Surface Intra/Surface	5/22/84-6/3/84 6/4/84-6/4/84 8/11/84-10/31/84
Indian River RM 138.6, TRM 0.2, Site 4 GC S31N02W09CAB	Datapod Intra/Surface	9/28/84-10/31/84
Portage Creek RM 148.8, TRM 0.2, Site 2 GC S32N10W25ADC	Datapod Surface	5/25/84-10/15/84
Fog Creek RM 176.7, TRM 0.1 GC S31N06W15DBB	Thermograph Surface Surface Surface	5/23/84-5/28/84 6/4/84-9/18/84 9/28/84-10/15/84
Tsusena Creek RM 181.1, TRM 0.1 GC S32N06W36ADB	Thermograph Surface	5/23/84-6/2/84 6/29/84-8/18/84 8/20/84-8/23/84 8/26/84-8/28/84 8/30/84-10/15/84

- 3.2 Tables 3 to 22 - Daily and monthly minimum, mean and maximum temperatures recorded at mainstem Susitna River sites during the 1984 open water season.

Appendix Table 3

Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River at RM 18.5, GC
S16N07W15DCD.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840524	7.5	-----	8.5
840525	8.0	8.1	8.5
840526	7.5	7.5	8.0
840527	7.0	7.5	8.0
840528	7.5	7.6	8.0
840529	7.5	8.1	8.5
840530	8.0	8.0	8.0
840531	7.5	8.1	8.5
Monthly Value	7.0	-----	8.5

----- Data not available.

Appendix Table 3

continued

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	8.0	8.8	9.5
840602	9.5	10.2	11.0
840603	10.5	10.5	10.5
840604	10.0	10.6	11.0
840605	10.5	10.6	11.0
840606	9.5	10.1	10.5
840607	8.0	8.8	9.5
840608	7.5	7.8	8.0
840609	8.0	8.5	9.0
840610	9.0	9.0	9.0
840611	9.0	9.5	10.5
840612	10.5	10.9	11.5
840613	10.5	10.7	11.0
840614	9.5	9.8	10.5
840615	9.5	9.5	9.5
840616	8.5	8.9	9.5
840617	8.0	8.3	8.5
840618	8.5	8.5	8.5
840619	8.5	9.0	10.0
840620	10.5	10.7	11.0
840621	11.0	11.0	11.0
840622	10.5	11.1	11.5
840623	11.0	11.1	11.5
840624	10.0	-----	11.0
Monthly Value	7.5	9.8	11.5

----- Data not available.

Appendix Table 3

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840708	10.0	-----	10.5
840709	9.5	9.8	10.5
840710	9.0	9.4	9.5
840711	8.5	9.0	9.5
840712	8.5	8.8	9.5
840713	9.5	9.5	9.5
840714	8.5	9.1	9.5
840715	8.5	-----	8.5
840719	7.0	7.3	7.5
840720	7.0	7.0	7.0
840721	7.0	7.2	7.5
840722	7.5	7.5	7.5
840723	8.0	8.1	8.5
840724	8.5	9.0	10.0
840725	9.0	9.6	10.0
840726	8.5	8.7	9.0
840727	8.5	8.7	9.0
840728	9.0	9.3	9.5
840729	8.5	8.9	9.5
840730	7.5	7.6	8.0
840731	7.5	7.5	7.5
Monthly Value	7.0	-----	10.5

----- Data not available.

Appendix Table 3

continued

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	7.5	7.5	7.5
840802	7.5	7.5	8.0
840803	8.0	8.0	8.0
840804	8.0	8.3	9.0
840805	9.0	9.2	9.5
840806	9.5	9.5	9.5
840807	9.0	9.3	9.5
840808	9.0	9.4	9.5
840809	9.0	9.2	9.5
840810	9.0	9.0	9.0
840811	8.5	8.8	9.0
840812	9.0	-----	9.0
840819	7.0	7.0	7.0
840820	7.0	7.0	7.0
840821	7.0	7.0	7.0
840822	7.0	7.3	7.5
840823	7.5	7.6	8.0
840824	7.5	7.5	7.5
840825	7.0	7.4	7.5
840826	7.0	7.1	7.5
840827	6.5	6.5	6.5
840828	6.0	-----	7.0
840829	6.5	-----	6.5
840830	6.5	6.5	6.5
840831	6.5	6.7	7.5
Monthly Value	6.0	7.8	9.5

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840912	6.5	-----	7.5
840913	6.5	-----	6.5
Monthly Value	6.5	-----	7.5

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841017	0.0	-----	0.0
841018	0.0	0.0	0.0
841019	0.0	0.0	0.0
841020	0.0	0.0	0.0
841021	0.0	0.0	0.0
841022	0.0	0.0	0.0
841023	0.0	0.0	0.0
841024	0.0	-----	0.0
Monthly Value	0.0	-----	0.0

----- Data not available.

Appendix Table 4 Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River above the Yentna River,
RM 29.5, GC S17N06W07CAD.

May 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840524	7.5		8.5
840525	8.0	8.1	8.5
840526	7.5	7.7	8.0
840527	7.0	7.3	8.0
840528	7.5	8.0	8.5
840529	8.0	8.3	8.5
840530	7.5	7.8	8.0
840531	7.0	8.0	9.5
Monthly Value	7.0		9.5

Data not available.

June 1984

Surface Water Temperature (C)

Date

Min

Mean

Max

840601	8.5	9.6	11.0
840602	10.0	10.8	11.5
840603	10.5	11.0	11.5
840604	10.0	10.9	12.0
840605	10.5	11.3	12.0
840606	10.0	10.4	11.5
840607	9.0	9.5	10.0
840608	9.0	9.8	10.5
840609	10.0	10.2	10.5
840610	10.0	10.4	11.0
840611	10.0	10.8	11.5
840612	10.5	11.3	12.0
840613	11.0	11.2	12.0
840614	10.0	10.5	11.0
840615	9.5	9.8	10.5
840616	8.0	8.8	9.5
840617	7.5	8.1	9.0
840618	8.0	9.0	10.5
840619	10.0	10.8	12.0
840620	11.5	12.1	13.0
840621	12.0	12.5	13.0
840622	12.0	13.0	14.0
840623	12.5	12.8	13.5
840624	11.0	11.6	12.5
840625	11.0	11.5	12.0
840626	11.5	11.8	12.0
840627	11.0	11.2	11.5
840628	10.0	10.4	11.0
840629	10.0	10.9	12.0
840630	11.0	12.0	13.0

Monthly Value

7.5

10.8

14.0

Data not available.

July 1984

Surface Water Temperature (C)

Date

Min

Mean

Max

840701	11.0	11.6	12.5
840702	11.0	11.3	12.0
840703	11.0	11.5	12.0
840704	10.0	10.4	11.5
840705	9.5	9.5	10.0
840706	9.5	10.8	12.0
840707	11.5	11.5	11.5
840708	10.5	10.8	11.5

Monthly Value	9.5		12.5
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Data not available.

Appendix Table 4

continued

September 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840901	6.5	6.8	7.5
840902	7.0	7.5	8.0
840903	7.5	7.9	8.0
840904	8.0	8.0	8.0
840905	8.0	8.2	8.5
840906	8.0	8.5	9.0
840907	9.0	9.0	9.0
840908	8.5	9.1	9.5
840909	8.5	8.8	9.0
840910	8.0	8.5	9.0
840911	8.0	8.1	8.5
840912	8.0	8.3	8.5
840913	8.0	8.1	8.5
840914	7.5	7.7	8.0
840915	7.0	7.4	7.5
840916	7.5	7.7	8.0
840917	7.5	7.8	8.0
840918	8.0	8.0	8.0
840919	7.0	7.6	8.0
840920	6.5	6.6	7.0
840921	6.0	6.4	6.5
840922	5.5	5.8	6.5
840923	5.5	5.5	5.5
840924	5.5	5.5	5.5
840925	6.0	6.0	6.0
840926	6.0	6.3	6.5
840927	6.5	6.5	6.5
840928	6.5	6.5	6.5
840929	6.5	6.5	6.5
840930	6.5	6.5	6.5
Monthly Value	5.5	7.4	9.5

Data not available.

October 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
841001	5.5	6.1	6.5
841002	5.0	5.1	5.5
841003	2.0		4.5
Monthly Value	2.0		6.5

Data not available.

Appendix Table 5 Datapod temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River above the Yentna
River, RM 29.5, GC S17N06W07CAD.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840814	11.4	-----	12.4
840815	10.6	11.6	12.4
840816	10.9	11.8	12.7
840817	11.5	11.9	12.7
840818	10.2	10.9	12.0
840819	9.3	9.7	10.3
840820	8.0	8.5	9.5
840821	8.3	8.7	9.4
840822	9.0	9.3	9.9
840823	9.4	9.8	10.4
840824	9.6	10.0	10.4
840825	8.6	9.0	9.8
840826	7.5	8.1	9.0
840827	6.9	7.7	8.4
840828	6.6	7.3	8.2
840829	6.4	7.3	7.7
840830	6.4	7.3	7.7
840831	6.2	7.0	7.8
Monthly Value	6.2	-----	12.7

----- Data not available.

Appendix Table 5 continued

September 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840912	8.2	8.3	8.3
840913	7.7	8.3	8.3
840914	7.4	7.9	7.9
840915	6.9	7.6	7.6
840916	7.0	8.3	8.3
840917	7.8	8.8	8.8
840918	8.1	8.9	8.9
840919	7.3	8.1	8.1
840920	6.3	7.4	7.4
Monthly Value	6.3	8.9	8.9

— Data not available.

Appendix Table 6 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River above the Deshka River,
 RM 41.1, GC S19N06W26SBC.

May 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840524	8.5		9.5
840525	8.0	8.2	8.5
840526	7.5	7.8	8.0
840527	6.5	7.6	8.5
840528	7.0	8.2	9.5
840529	8.0	8.5	9.0
840530	7.5	8.0	8.5
840531	7.0	8.7	10.0
Monthly Value	6.5		10.0

Data not available.

Appendix Table 6

continued

June 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840601	9.0	10.2	11.5
840602	10.0	11.0	12.0
840603	10.0	11.0	12.0
840604	10.0	11.1	12.5
840605	10.5	11.4	12.5
840606	9.5	10.3	11.5
840607	8.5	9.5	10.0
840608	9.0	10.1	11.0
840609	10.0	10.4	11.0
840629	11.5	11.5	11.5
840630	10.5	11.4	12.0
Monthly Value	8.5		12.5

Data not available.

Appendix Table 6

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	10.0	11.4	13.0
840702	11.5	12.2	13.5
840703	11.0	11.9	12.5
840704	10.5	-----	11.5
840724	12.0	-----	13.0
840725	10.5	11.0	11.5
840726	9.5	10.0	11.0
840727	10.0	10.4	11.0
840728	10.0	10.5	11.0
840729	10.0	10.3	11.0
840730	9.0	9.8	10.5
840731	10.0	10.3	10.5
Monthly Value	9.0	-----	13.5

----- Data not available.

Appendix Table 6

continued

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	10.0	10.0	10.5
840802	9.5	9.8	10.0
840803	9.5	10.2	11.0
840804	10.5	11.1	12.0
840805	12.0	12.2	12.5
840806	11.0	11.4	12.0
840807	11.5	12.3	13.5
840808	11.5	12.3	13.5
840809	11.0	11.5	12.5
840810	10.5	11.1	11.5
840811	10.0	10.8	12.0
840812	10.5	11.3	12.0
840813	10.5	11.0	11.5
840814	10.5	11.2	12.0
840815	10.0	11.1	12.0
840816	10.5	11.2	12.0
840817	11.0	11.3	11.5
840818	10.0	10.2	11.0
840819	9.0	9.2	10.0
840820	8.5	8.6	9.0
840821	8.0	8.5	9.0
840822	8.5	8.9	9.5
840823	9.0	9.3	10.0
840824	9.0	9.4	10.0
840825	8.0	8.6	9.0
840826	7.5	7.8	8.0
840827	7.0	7.3	7.5
840828	6.0	6.8	7.0
840829	6.5	7.0	7.5
840830	6.5	7.0	7.5
840831	6.0	6.5	7.0
Monthly Value	6.0	9.8	13.5

----- Data not available.

Appendix Table 6

continued

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	6.0	6.7	7.5
840902	7.0	7.5	8.5
840903	7.0	7.9	8.5
840904	7.0	7.9	8.5
840905	7.0	7.9	8.5
840906	8.0	8.6	9.5
840907	8.5	8.8	9.0
840908	8.5	8.8	9.0
840909	8.0	8.5	9.0
840910	7.5	8.1	8.5
840911	7.0	7.8	8.5
840912	7.0	7.5	8.0
840913	7.0	7.3	8.0
840914	7.0	7.0	7.0
840915	6.5	6.7	7.0
840916	6.5	7.0	7.5
840917	7.0	7.5	8.0
840918	7.0	7.3	8.0
840919	7.0	7.0	7.0
840920	6.0	6.3	6.5
840921	6.0	6.2	6.5
840922	5.0	5.3	6.0
840923	5.0	5.2	5.5
840924	5.0	-----	6.0
840925	5.5	5.8	6.0
840926	6.0	6.3	7.0
840927	5.5	5.9	6.5
840928	5.0	5.3	6.0
840929	5.0	5.0	5.0
840930	5.0	5.3	5.5
Monthly Value	5.0	6.9	9.5

----- Data not available.

Appendix Table 6

continued

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.5	5.5	5.5
841002	5.0	5.2	5.5
841003	5.0	5.0	5.0
841004	4.0	4.1	4.5
841005	3.0	3.0	3.5
841006	2.5	2.8	3.0
841007	3.0	3.0	3.0
841008	3.0	3.0	3.0
841009	3.0	3.0	3.0
841010	2.5	2.7	3.0
841011	2.5	2.6	3.0
841012	1.5	1.7	2.5
841013	1.5	1.7	2.0
841014	1.5	1.5	2.0
841015	.5	.6	1.5
841016	0.0	.0	.5
841017	0.0	0.0	0.0
841018	0.0	0.0	0.0
841019	0.0	0.0	0.0
841020	0.0	0.0	0.0
841021	0.0	0.0	0.0
841022	0.0	0.0	0.0
841023	0.0	0.0	0.0
841024	0.0	0.0	0.0
841025	0.0	0.0	0.0
841026	0.0	0.0	0.0
841027	0.0	0.0	0.0
841028	0.0	0.0	0.0
841029	0.0	0.0	0.0
841030	0.0	0.0	0.0
841031	0.0	0.0	0.0
Monthly Value	0.0	1.5	5.5

----- Data not available.

Appendix Table 6

continued

November 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841101	0.0	0.0	0.0
841102	0.0	0.0	0.0
841103	0.0	0.0	0.0
841104	0.0	0.0	0.0
841105	0.0	0.0	0.0
841106	0.0	0.0	0.0
841107	0.0	0.0	0.0
841108	0.0	0.0	0.0
841109	0.0	0.0	0.0
841110	0.0	0.0	0.0
841111	0.0	0.0	0.0
841112	0.0	0.0	0.0
841113	0.0	0.0	0.0
841114	0.0	0.0	0.0
841115	0.0	0.0	0.0
841116	0.0	0.0	0.0
841117	0.0	0.0	0.0
841118	0.0	0.0	0.0
841119	0.0	0.0	0.0
841120	0.0	0.0	0.0
841121	0.0	0.0	0.0
841122	0.0	0.0	0.0
841123	0.0	0.0	0.0
841124	0.0	0.0	0.0
841125	0.0	0.0	0.0
841126	0.0	0.0	0.0
841127	0.0	0.0	0.0
841128	0.0	0.0	0.0
841129	0.0	-----	0.0
Monthly Value	0.0	0.0	0.0

----- Data not available.

Appendix Table 7

Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River above Kashwitna River,
RM 61.2, GC S31N05W13ABA.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840524	8.5	-----	9.5
840525	7.0	7.8	8.5
840526	7.0	7.5	8.0
840527	6.5	7.6	8.5
840528	7.0	8.2	9.5
840529	8.0	8.3	8.5
840530	8.0	8.1	8.5
840531	7.5	8.5	10.0
Monthly Value	6.5	-----	10.0

----- Data not available.

Appendix Table 7

continued

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	8.5	10.0	11.5
840602	9.5	10.7	12.0
840603	10.0	10.7	11.5
840604	10.0	10.7	12.0
840605	10.0	11.0	12.0
840606	9.5	10.1	11.0
840607	8.0	9.2	10.0
840608	9.0	10.1	11.0
840609	10.0	10.4	11.0
840610	9.5	10.3	11.0
840611	10.5	11.0	11.5
840612	11.0	11.5	12.5
840613	10.5	11.0	11.5
840614	9.0	10.0	11.0
840615	9.5	10.0	10.5
840616	8.0	8.5	9.0
840617	7.5	8.3	9.0
840618	8.5	9.8	11.5
840619	10.5	11.6	13.0
840620	12.0	12.6	13.5
840621	12.0	12.7	13.5
840622	12.5	13.3	14.0
840623	12.0	12.8	13.5
840624	11.0	11.8	12.5
840625	11.5	12.0	12.5
840626	12.0	12.1	12.5
840627	11.0	11.2	12.0
840628	10.0	10.6	11.0
840629	11.0	11.5	12.5
840630	11.0	11.8	12.5
Monthly Value	7.5	10.9	14.0

----- Data not available.

Appendix Table 7

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	12.0	12.0	12.0
840702	11.0	11.4	12.0
840703	10.0	10.9	12.0
840704	11.0	12.2	13.5
840705	12.5	12.8	13.5
840706	12.0	12.3	12.5
840707	11.0	12.1	13.0
840708	11.5	12.0	12.5
840709	11.0	11.3	11.5
840710	11.0	11.2	12.0
840711	10.0	10.9	11.5
840712	11.0	11.5	12.0
840713	11.0	11.2	11.5
840714	10.5	11.1	11.5
840715	11.0	11.6	12.5
840716	12.0	12.0	12.0
840717	10.0	10.8	11.5
840718	9.5	9.9	10.0
840719	9.0	-----	9.0
840725	10.5	-----	11.0
840726	10.0	10.4	11.0
840727	10.0	10.5	11.0
840728	10.0	10.7	11.5
840729	10.0	10.2	11.0
840730	9.5	10.4	11.0
840731	10.5	10.5	10.5
Monthly Value	9.0	11.2	13.5

----- Data not available.

Appendix Table 7

continued

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	10.0	10.0	10.0
840802	10.0	10.1	10.5
840803	10.0	10.5	11.0
840804	10.5	11.1	12.0
840805	11.5	11.8	12.0
840806	10.5	11.3	12.0
840807	12.0	12.4	13.0
840808	11.5	12.0	12.5
840809	10.5	11.4	12.0
840810	10.5	10.8	12.0
840811	10.0	10.9	12.0
840812	10.0	10.7	11.5
840813	10.0	10.4	11.0
840814	10.0	10.5	11.0
840815	10.0	10.4	11.0
840816	10.0	10.8	11.5
840817	10.0	10.6	11.0
840818	9.5	9.7	10.0
840819	9.0	9.0	9.5
840820	8.5	8.6	9.0
840821	8.5	8.7	9.0
840822	8.5	8.8	9.0
840823	8.5	9.1	10.0
840824	8.5	8.8	9.0
840825	8.0	8.5	8.5
840826	7.5	7.7	8.0
840827	6.5	6.8	7.0
840828	5.5	6.3	6.5
840829	5.5	6.4	7.0
840830	6.0	6.5	7.0
840831	5.5	5.9	6.0
Monthly Value	5.5	9.6	13.0

----- Data not available.

Appendix Table 7

continued

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	6.0	6.6	7.5
840902	6.5	7.3	8.0
840903	6.5	7.4	8.5
840904	7.0	7.4	8.0
840905	7.0	7.8	8.5
840906	7.5	8.3	9.0
840907	8.0	8.5	8.5
840908	8.0	8.4	9.0
840909	7.5	8.3	9.0
840910	7.0	7.5	8.0
840911	7.0	7.5	8.5
840912	7.0	7.6	8.5
840913	7.5	7.7	8.0
840914	7.0	7.1	7.5
840915	7.0	7.3	7.5
840916	7.0	7.6	8.5
840917	7.5	8.0	8.5
840918	7.5	7.5	7.5
840919	6.5	7.2	7.5
840920	6.0	6.4	6.5
840921	6.0	6.2	6.5
840922	5.0	5.4	6.0
840923	5.0	5.4	5.5
840924	5.5	5.7	6.0
840925	6.0	6.2	6.5
840926	6.5	6.6	7.0
840927	6.0	6.4	7.0
840928	6.0	6.0	6.0
840929	6.0	6.0	6.0
840930	6.0	6.4	7.0
Monthly Value	5.0	7.0	9.0

----- Data not available.

Appendix Table 7

continued

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	6.0	6.4	6.5
841002	6.5	6.7	7.0
841003	6.0	6.3	6.5
841004	4.5	4.9	5.5
841005	3.5	3.9	4.0
841006	3.5	4.1	4.5
841007	4.0	4.3	4.5
841008	4.0	4.0	4.0
841009	4.0	4.0	4.0
841010	3.5	3.9	4.0
841011	2.5	2.6	3.0
841012	2.0	2.6	3.0
841013	2.5	2.7	3.0
841014	1.5	2.3	2.5
841015	1.0	1.1	1.5
841016	0.0	.5	1.0
841017	0.0	0.0	0.0
841018	0.0	0.0	0.0
841019	0.0	0.0	0.0
841020	0.0	0.0	0.0
841021	0.0	0.0	0.0
841022	0.0	0.0	0.0
841023	.5	.5	.5
841024	0.0	-----	.5
Monthly Value	0.0	2.6	7.0

----- Data not available.

Appendix Table 8 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River at Parks Highway Bridge
 Center Span - Site 4, RM 83.9GC S24N05W15BAD.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840608	8.0	-----	10.0
840609	9.0	9.2	10.0
840610	8.0	9.3	10.5
840611	9.0	10.1	11.0
840612	10.0	10.5	11.0
840613	9.0	9.6	10.5
840614	7.5	8.5	9.5
840615	8.0	8.7	9.5
840616	7.0	7.3	8.0
Monthly Value	7.0	-----	11.0

----- Data not available.

Appendix Table 9

Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River above the Parks Highway
Bridge, RM 86.9, GC S24N05W01BCD.

June 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840628	8.5		9.0
840629	8.5	9.2	9.5
840630	8.5	9.4	10.0
Monthly Value	8.5		10.0

Data not available.

Appendix Table 9

continued

July 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840701	9.0	9.7	10.0
840702	8.0	8.6	10.0
840703	7.5	8.3	9.0
840704	9.0	9.7	10.5
840705	9.0	9.6	10.5
840706	8.5	9.2	9.5
840707	7.5	8.8	10.0
840708	8.0	9.0	9.5
840709	8.0	8.5	9.0
840710	8.5	8.7	9.0
840711	8.0	8.5	9.5
840712	8.5	9.1	9.5
840713	8.5	8.9	9.5
840714	8.5	9.0	9.5
840715	9.0	9.7	10.5
840716	9.5	9.9	10.5
840717	8.0	8.4	9.5
840718	7.5	7.9	8.0
840719	7.5	7.5	7.5
840720	7.0	7.3	7.5
840721	7.5	7.7	8.0
840722	7.5	7.8	8.0
840723	8.0	8.9	10.5
840724	9.0	9.7	10.5
840725	8.0	8.3	9.0
840726	7.0	7.8	8.5
840727	8.5	9.0	9.5
840728	9.0	9.1	9.5
840729	8.5	8.6	9.0
840730	8.0	8.6	9.5
840731	9.0	9.0	9.0
Monthly Value	7.0	8.7	10.5

Data not available.

Appendix Table 9

continued

August 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840801	8.5	8.6	9.0
840802	8.5	8.5	8.5
840803	8.5	9.0	9.5
840804	9.0	9.9	10.5
840805	8.5	9.8	10.5
840806	8.0	9.2	10.5
840807	9.0	9.7	10.0
840808	8.5	9.1	10.0
840809	7.5	8.7	9.5
840810	8.0	8.5	9.0
840811	8.5	9.3	10.0
840812	8.5	9.1	9.5
840813	8.0	9.0	9.5
840814	3.0	8.9	9.5
840815	8.0	8.9	9.5
840816	8.5	8.9	9.5
840817	8.0	8.7	9.5
840818	7.0	7.2	8.0
840819	6.5	6.8	7.0
840820	6.5	6.6	7.0
840821	7.0	7.0	7.0
840822	7.0	7.2	7.5
840823	7.5	7.7	8.0
840824	7.0	7.5	8.5
840825	7.0	7.0	7.0
840826	6.5	7.0	7.5
840827	6.0	6.6	7.0
840828	5.5	6.0	6.5
840829	5.0	5.5	6.0
840830	4.5	5.2	5.5
840831	5.0	5.1	5.5
Monthly Value	4.5	7.9	10.5

Data not available.

Appendix Table 9

continued

September 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840901	5.0	5.5	6.5
840902	6.0	6.4	7.0
840903	6.0	6.6	7.0
840904	6.5	6.8	7.0
840905	6.5	7.0	7.5
840906	7.0	7.3	7.5
840907	7.0	7.5	8.0
840908	7.0	7.3	7.5
840909	6.5	7.0	7.5
840910	6.0	6.3	7.0
840911	6.0	6.3	6.5
840912	6.0	6.2	6.5
840913	6.0	6.2	6.5
840914	5.5	5.6	6.0
840915	5.5	6.0	6.5
840916	6.5	6.7	7.0
840917	6.5	6.8	7.0
840918	6.5	6.5	6.5
840919	5.5	5.8	6.5
840920	5.0	5.3	5.5
840921	4.5	4.6	5.5
840922	4.5	4.7	5.0
840923	4.5	4.5	4.5
840924	4.5	4.7	5.0
840925	5.0	5.2	5.5
840926	5.5	5.6	6.0
840927	5.5	5.6	6.0
840928	5.0	5.2	5.5
840929	5.0	5.0	5.0
Monthly Value	4.5	6.0	8.0

Data not available.

Appendix Table 10 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River at Talkeetna Fishwheel
 Camp, RM 103.0, GC S27N05W26DDD.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840525	6.0	-----	6.5
840526	5.5	5.8	6.0
840527	5.5	6.2	7.0
840528	5.5	6.8	8.0
840529	6.5	7.1	8.0
840530	6.5	7.2	8.0
840531	7.0	8.1	9.5
Monthly Value	5.5	-----	9.5

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	7.5	8.8	10.0
840602	8.0	9.2	10.5
840603	8.5	9.5	10.5
840604	9.0	10.0	11.0
840605	9.0	9.8	10.5
840606	8.5	8.8	9.5
840607	8.0	9.0	9.5
840608	8.5	9.3	10.5
840609	9.0	9.4	10.0
840610	9.0	9.8	10.5
840611	9.5	10.2	11.0
840612	10.0	10.5	11.0
840613	9.5	9.9	10.0
840614	8.0	8.9	9.5
840615	8.0	8.7	9.0
840616	7.0	7.5	8.0
840617	6.5	7.1	8.0
840618	7.5	8.8	10.0
840619	10.0	11.0	12.0
840620	12.0	12.2	12.5
840621	11.5	12.5	13.5
840622	12.0	12.8	13.5
840623	12.5	12.5	13.0
840624	11.5	12.0	12.5
840625	11.5	12.2	13.0
840626	12.0	12.2	12.5
840627	10.0	11.2	12.0
840628	9.5	10.4	11.0
840629	10.5	11.1	11.5
840630	11.0	12.1	13.0
Monthly Value	6.5	10.3	13.5

----- Data not available.

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	12.0	12.4	13.0
840702	11.5	11.9	12.0
840703	11.5	12.1	12.5
840704	11.5	12.7	13.5
840705	12.5	12.9	13.5
840706	12.0	12.9	13.5
840707	12.0	12.8	13.5
840708	11.5	12.0	12.5
840709	11.0	11.8	12.0
840710	11.0	11.4	12.0
840711	11.0	11.9	12.5
840712	11.5	12.0	12.5
840713	11.5	12.1	12.5
840714	11.5	12.1	13.0
840715	11.5	12.4	13.0
840716	12.0	12.3	13.0
840717	10.5	11.3	12.0
840718	9.0	9.8	10.0
840719	9.0	9.3	9.5
840720	9.0	9.2	9.5
840721	9.0	9.2	9.5
840722	9.0	9.6	10.0
840723	9.5	11.1	12.0
840724	11.5	11.8	12.0
840725	11.0	11.6	12.0
840726	10.0	10.7	11.0
840727	10.0	10.1	10.5
840728	10.0	-----	11.0
840729	10.5	10.9	11.0
840730	10.5	11.0	11.5
840731	10.5	10.7	11.0
Monthly Value	9.0	11.4	13.5

----- Data not available.

Appendix Table 10

continued

August 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840801	10.0	10.3	10.5
840802	10.5	10.7	11.0
840803	10.5	11.1	11.5
840804	11.0	12.3	14.0
840805	13.0	13.0	13.0
840806	12.5	13.5	14.5
840807	13.0	13.5	14.0
840808	12.5	12.9	13.0
840809	12.0	12.5	13.0
840810	11.0	11.6	12.0
840811	11.0	11.6	12.0
840812	10.5	11.3	12.0
840813	10.5	11.2	12.0
840814	10.0	11.0	12.0
840815	10.0	11.2	12.5
840816	11.0	12.0	13.0
840817	11.5	12.0	12.5
840818	11.5	11.5	12.0
840819	10.5	11.0	11.5
840820	10.0	10.0	10.5
840821	9.5	9.9	10.0
840822	9.0	9.2	9.5
840823	9.0	9.2	9.5
840824	8.5	8.8	9.5
840825	7.5	7.9	8.5
840826	6.0	6.7	7.0
840827	5.0	5.5	6.0
840828	5.0	5.5	6.0
840829	5.0	5.7	6.5
840830	5.0	5.7	6.5
840831	5.0	5.8	6.5
Monthly Value	5.5	10.3	14.5

Data not available.

September 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840901	5.5	6.4	7.5
840902	5.5	6.8	8.0
840903	6.0	7.2	8.0
840904	6.5	7.4	8.0
840905	7.0	7.9	8.5
840906	7.5	8.3	9.0
840907	8.0	8.5	9.0
840908	7.5	8.3	9.0
840909	7.0	7.5	8.0
840910	6.5	7.3	8.0
840911	6.5	7.1	7.5
840912	6.5	7.0	7.5
840913	7.0	7.2	7.5
840914	6.5	6.7	7.0
840915	6.5	7.0	7.5
840916	6.5	7.4	8.0
840917	7.0		8.0
840929	6.0		6.0
840930	5.5	5.8	6.0
Monthly Value	5.5		9.0

Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.5	5.8	6.0
841002	5.5	5.8	6.0
841003	5.0	5.3	6.0
841004	3.5	3.8	4.5
841005	2.5	2.9	3.0
841006	3.0	3.2	3.5
841007	2.5	2.8	3.0
841008	2.5	2.8	3.0
841009	3.0	3.2	3.5
841010	2.5	2.7	3.0
841011	1.0	1.5	2.0
841012	1.5	1.7	2.0
841013	1.5	1.7	2.0
841014	1.0	1.1	1.5
841015	0.0	.1	.5
841016	0.0	-----	0.0
Monthly Value	0.0	-----	6.0

----- Data not available.

Appendix Table 11

Datapod temperature recorder data summary:
intragravel and surface water temperatures
(C) recorded at Mainstem Susitna River at
LRX 9 - Site 3, RM 103.5, GC 27N05W26ADD.

May 1984

Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840501	.1	.2	.3	-.1	.1	.5
840502	-.2	.0	.2	-.1	-.1	.2
840503	-.1	.7	2.3	-.1	-.1	0.0
840504	1.9	1.9	2.0	-.1	-.1	-.1
840505	2.1	-----	2.2	-.1	-.1	0.0
840506	2.0	2.2	2.4	-.2	-.1	-.1
840507	2.1	2.2	3.4	-.1	-.1	-.1
840508	1.6	1.7	2.1	-.2	-.1	.2
840509	2.0	-----	3.4	-.1	1.7	2.4
840510	3.3	3.4	3.5	.2	2.1	2.7
840511	3.3	3.4	3.5	0.0	.7	2.8
840512	3.3	3.4	3.5	0.0	.3	.8
840513	3.4	3.5	3.6	.1	2.2	5.5
840514	3.6	3.6	3.8	1.3	3.5	6.4
840515	3.6	3.7	3.9	1.3	3.4	5.7
840516	3.7	3.8	3.9	1.3	2.7	4.6
840517	3.6	3.8	4.0	.1	2.5	4.6
840518	3.7	3.9	4.0	1.4	3.0	4.1
840519	3.7	3.8	4.1	2.3	3.0	3.8
840520	3.6	3.8	4.0	1.9	3.1	4.5
840521	4.0	4.2	4.7	3.8	5.0	6.3
840522	4.4	4.5	4.6	4.9	5.4	5.9
840523	4.4	-----	4.6	4.3	5.4	6.6
840524	4.6	4.7	4.7	5.5	6.1	6.7
840525	4.6	4.7	4.9	5.4	6.0	6.9
840526	4.7	4.8	4.9	5.4	5.9	6.4
840527	4.5	4.6	4.7	5.4	6.2	7.2
840528	4.3	4.4	4.6	5.5	6.8	8.4
840529	4.2	4.3	4.5	5.9	7.1	8.6
840530	4.1	4.1	4.3	6.2	7.2	8.3
840531	4.0	4.1	4.2	6.1	8.2	11.0
Monthly Value	-.2	3.4	4.9	-.2	3.1	11.0

Data not available.

Appendix Table 11 continued

June 1984

Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840601				6.5	9.0	11.7
840602	4.2		4.4	7.1	9.2	11.7
840603	4.3		4.4	7.9	9.5	11.0
840604				8.1	10.1	11.4
840605	5.4		5.6	8.2	10.0	11.3
840606				8.7	9.2	10.6
840607	5.3		5.5	8.1	9.1	10.2
840608	5.4	6.2	7.6	8.3	9.4	10.5
840609	5.5	5.6	5.7	9.1	9.6	10.4
840610	5.5	5.7	5.9	9.0	9.9	11.2
840611	5.7	5.8	8.3	9.3	10.5	11.7
840612	5.8		8.2	10.3	10.9	11.9
840613				9.5	10.0	11.1
840614				8.0	8.9	9.7
840615				8.4	8.9	9.5
840616				7.1	7.7	8.4
840617				6.5	7.0	8.1
840618				8.0	8.9	10.4
840619				10.3	11.1	12.3
840620				12.1	12.4	12.8
840621				11.7	12.6	13.5
840622				12.4	13.2	13.9
840623				12.2	12.8	13.7
840624				11.5	12.2	12.8
840625				11.5	12.4	13.6
840626				12.1	12.6	13.2
840627				11.3	11.7	12.3
840628				9.8	10.5	11.3
840629				10.7	11.3	12.0
840630				11.1	11.9	13.2
Monthly Value	4.2		8.3	6.5	10.4	13.9

Data not available.

Appendix Table II continued

July 1984

Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840701				11.5	12.3	13.0
840702				11.4	11.7	12.4
840703				11.0	11.5	12.4
840704				11.1	12.2	13.5
840705				11.9	12.8	13.5
840706				12.0	12.9	13.8
840707				11.9	12.9	14.0
840708				11.7	12.3	13.1
840709	8.3		8.5	11.8	12.4	12.9
840710	7.6	7.9	8.3	11.5	12.1	13.0
840711	7.8	8.1	8.6	11.8	12.5	13.6
840712	8.1	8.4	8.6	12.1	13.0	14.0
840713	8.0	8.2	8.5	12.7	13.0	13.5
840714	8.0	8.3	8.6	12.6	13.4	14.4
840715	7.9	8.3	8.7	12.5	13.5	15.0
840716	7.9	8.2	8.6	13.1	13.9	14.6
840717	7.9	8.0	8.3	12.3	12.9	13.8
840718	7.4	7.6	8.0	10.8	11.3	12.3
840719	7.0	7.2	7.4	10.4	11.1	11.5
840720	6.8	7.0	7.1	10.8	11.3	11.5
840721	6.8	7.1	7.5	10.7	11.3	11.6
840722	7.0	7.3	7.6	10.8	11.4	12.2
840723	7.5	7.8	8.5	11.5	12.3	14.0
840724	8.4	8.6	8.8	13.2	13.6	14.1
840725	8.4	8.6	8.8	12.8	13.4	13.9
840726	8.2	8.9	9.2	11.1	12.1	12.9
840727	8.4	8.9	9.2	10.0	11.0	11.7
840728	8.4	9.0	9.2	10.3	11.5	12.1
840729	7.8	8.8	9.2	10.3	11.4	12.0
840730	7.4	8.6	9.2	9.6	11.3	12.3
840731	7.7	8.8	9.2	9.8	11.2	12.1
Monthly Value	6.8	8.2	9.2	9.6	12.2	15.0

Data not available.

Appendix Table 11 continued

August 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840801	7.0	8.1	8.7	9.1	10.5	11.5
840802	7.0	8.2	8.8	9.3	10.7	11.6
840803	7.0	8.4	9.1	10.5	12.3	13.7
840804	7.3	8.8	10.0	10.9	13.3	15.5
840805	8.2	9.3	10.0	12.2	13.9	15.3
840806	8.1	9.8	11.1	12.1	14.3	16.5
840807	8.2	10.2	11.1	11.6	14.2	15.8
840808	8.2	9.8	10.8	11.5	13.5	14.8
840809	7.3	9.4	10.6	10.3	12.8	14.7
840810	5.7	8.2	9.4	7.8	10.8	12.4
840811	6.6	8.5	9.6	8.8	11.2	12.9
840812	4.7	7.6	9.7	6.7	10.2	13.0
840828	6.7		7.0	6.5		6.8
840829	3.6	6.0	8.1	3.0	5.4	7.2
840830	4.1	6.1	8.7	4.8	6.2	7.4
840831				4.1	5.9	7.4
Monthly Value	3.6		11.1	3.0		16.5

Data not available.

Appendix Table II continued

September 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840901				4.5	7.0	9.6
840902				5.6		7.3
840912				6.0		8.0
840913				6.9	7.8	8.0
840914				5.5	6.9	7.5
840915				4.6	6.9	8.2
840916				4.2	7.1	9.0
840917				5.6	7.7	8.6
840918				5.3	7.0	7.8
840919				4.5	6.3	7.5
840920				2.6	5.2	7.4
840921				2.2		5.4
840930	2.3	4.0	6.8			
Monthly Value	2.3		6.8	2.2		9.6

Data not available.

Appendix Table II continued

October 1984

Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
841001	1.3	3.2	5.5			
841002	1.8	3.2	6.2			
841003	.4	2.0	5.3			
Monthly Value	.4		6.2			

Data not available.

Appendix Table 12 Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River at Curry Fishwheel
Camp, RM 120.7, GC S27N04W10CBA.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840604	9.5	-----	10.0
840605	8.5	9.2	9.5
840606	8.5	8.8	9.0
840607	8.0	8.5	9.0
840608	8.0	8.8	9.5
840609	9.0	9.1	9.5
840610	9.0	9.4	10.0
840611	9.0	9.6	10.0
840612	9.5	9.9	10.0
840613	9.0	9.2	9.5
840614	7.5	8.4	9.0
840615	8.0	8.3	9.0
840616	6.0	6.9	7.5
840617	6.0	6.5	7.5
840618	7.5	8.5	10.0
840619	10.0	10.5	11.5
840620	11.0	11.5	12.0
840621	11.0	11.7	12.5
840622	12.0	12.3	13.0
840623	11.5	12.0	13.0
840624	11.0	11.4	11.5
840625	11.0	11.7	12.0
840626	11.5	12.0	12.0
840627	10.0	11.0	11.5
840628	9.5	9.9	10.5
840629	10.5	10.7	11.0
840630	11.0	11.4	12.0
Monthly Value	6.0	9.9	13.0

----- Data not available.

Appendix Table 12

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	11.5	11.9	12.0
840702	11.5	11.6	12.0
840703	11.0	11.5	12.0
840704	11.5	12.0	12.5
840705	12.0	12.3	12.5
840706	12.5	12.5	12.5
840707	12.0	12.1	12.5
840708	11.5	12.0	12.0
840709	11.5	11.5	11.5
840710	11.0	11.0	11.5
840711	11.0	11.5	12.0
840712	11.5	11.7	12.0
840713	11.5	11.8	12.0
840714	11.5	11.8	12.0
840715	11.0	11.7	12.0
840716	12.0	12.0	12.0
840717	10.5	11.3	12.0
840718	9.5	9.6	10.0
840719	9.0	9.0	9.0
840720	9.0	9.0	9.0
840721	9.0	9.0	9.0
840722	9.0	9.3	9.5
840723	9.5	10.3	11.0
840724	11.0	11.4	11.5
840725	11.0	11.4	11.5
840726	10.0	10.6	11.0
840727	9.5	9.8	10.0
840728	10.0	10.5	10.5
840729	10.5	10.5	10.5
840730	10.0	10.3	11.0
840731	10.0	10.0	10.5
Monthly Value	9.0	11.0	12.5

--- Data not available.

Appendix Table 12

continued

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	10.0	10.1	10.5
840802	10.0	10.2	10.5
840803	10.5	10.5	10.5
840804	10.5	11.8	13.0
840805	12.5	12.6	13.0
840806	12.5	13.0	13.5
840807	12.5	12.8	13.0
840808	12.0	12.4	12.5
840809	11.5	12.0	12.0
840810	11.0	11.3	11.5
840811	11.0	11.1	11.5
840812	10.0	10.6	11.0
840813	10.0	10.6	11.0
840814	10.0	10.5	11.0
840815	10.0	10.8	11.5
840816	11.0	11.4	12.0
840817	11.5	11.5	11.5
840818	11.0	11.0	11.0
840819	9.5	10.1	10.5
840820	9.5	9.5	9.5
840821	9.5	9.5	9.5
840822	9.0	9.1	9.5
840823	9.0	9.2	9.5
840824	8.0	8.7	9.0
840825	6.5	7.5	8.0
840826	5.5	6.1	6.5
840827	5.0	5.0	5.0
840828	5.0	5.0	5.0
840829	5.0	5.2	5.5
840830	5.0	5.2	5.5
840831	5.0	5.4	5.5
Monthly Value	5.0	9.7	13.5

----- Data not available.

Appendix Table 12

continued

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	5.0	5.6	6.0
840902	5.5	6.4	7.0
840903	6.0	6.5	7.0
840904	6.0	6.8	7.0
840905	7.0	7.3	7.5
840906	7.5	7.8	8.0
840907	7.5	7.7	8.0
840908	6.5	7.3	8.0
840909	6.5	6.9	7.5
840910	6.0	6.8	7.5
840911	6.0	6.7	7.5
840912	6.0	6.5	7.0
840913	6.5	7.0	7.0
840914	6.0	6.4	6.5
840915	6.0	6.6	7.0
840916	6.5	7.0	7.5
840917	6.0	6.5	7.0
840918	6.5	6.5	6.5
840919	6.0	6.4	6.5
840920	5.5	5.8	6.0
840921	5.0	5.2	5.5
840922	4.0	4.3	4.5
840923	4.0	4.2	4.5
840924	4.5	4.5	4.5
840925	4.5	4.7	5.0
840926	5.0	5.0	5.0
840927	4.5	4.8	5.0
840928	4.0	4.3	4.5
840929	4.5	4.8	5.5
840930	5.0	5.3	5.5
Monthly Value	4.0	6.0	8.0

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.0	5.4	5.5
841002	5.0	5.3	5.5
841003	4.5	4.7	5.0
841004	3.0	3.4	4.0
841005	2.5	2.5	2.5
841006	2.5	2.5	2.5
841007	2.5	2.5	2.5
841008	2.5	2.5	2.5
841009	2.5	2.7	3.0
841010	2.5	2.5	3.0
841011	1.0	1.5	2.0
841012	1.5	-----	1.5
Monthly Value	1.0	-----	5.5

----- Data not available.

Appendix Table 13 Datapod temperature recorder data summary:
intragravel and surface water temperatures
(C) recorded at Mainstem Susitna River at
LRX 29 - Site 3, RM 125.9, GC S30N05W19DAB.

May 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840525	5.6	-----	5.8	6.0	-----	6.6
840526	5.4	5.6	5.7	5.3	5.7	6.2
840527	5.4	5.6	5.8	5.4	6.0	6.6
840528	5.8	-----	5.9	6.2	-----	6.6
Monthly Value	5.4	-----	5.9	5.3	-----	6.6

----- Data not available.

Appendix Table 13 continued

June 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840627	11.5	-----	11.8	10.6	-----	11.2
840628	10.6	10.9	11.5	9.6	10.2	11.0
840629	10.7	10.9	11.1	10.8	11.1	11.6
840630	8.7	11.4	11.9	11.4	11.9	12.9
Monthly Value	8.7	-----	11.9	9.6	-----	12.9

----- Data not available.

Appendix Table 13 continued

July 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840701	11.8	12.0	12.2	12.0	12.5	13.0
840702	10.1	11.9	12.2	11.8	12.0	12.4
840703	10.5	11.7	12.0	11.4	11.9	12.6
840704	11.3	12.0	12.4	11.7	12.4	13.3
840705	12.4	12.6	12.9	12.5	12.9	13.3
840706	9.6	12.6	12.8	12.8	13.0	13.5
840707	10.5	12.6	12.9	12.2	12.7	13.2
840709	11.2	-----	11.4	11.6	-----	12.0
840710	11.0	11.1	11.4	11.2	11.5	11.9
840711	11.0	11.2	11.6	11.4	11.8	12.9
840712	11.2	11.4	11.7	11.6	12.0	12.8
840713	11.4	11.6	12.0	11.9	12.3	12.9
840714	11.5	11.7	11.9	12.0	12.3	12.9
840715	11.3	11.6	11.8	11.7	12.2	12.9
840716	11.5	11.8	11.9	12.2	12.5	13.0
840717	11.1	11.6	11.9	11.1	11.9	12.4
840718	10.0	10.5	11.1	9.9	10.3	11.1
840719	9.3	9.6	10.0	9.3	9.6	9.9
840720	9.5	9.8	10.1	9.4	9.6	9.8
840721	9.4	9.6	10.0	9.3	9.4	9.7
840722	9.3	9.7	10.2	9.4	9.7	10.3
840723	9.4	9.6	10.2	10.0	10.7	12.1
840724	10.2	10.7	11.0	11.9	12.1	12.4
840725	10.9	11.3	11.7	12.1	12.4	12.6
840726	10.6	11.2	11.6	10.9	11.4	12.1
840727	9.8	10.1	10.7	10.0	10.5	11.0
840728	9.9	10.6	11.4	10.7	11.2	11.4
840729	10.5	11.0	11.8	11.3	11.7	11.9
840730	10.4	11.2	11.9	10.9	11.4	12.0
840731	10.5	10.6	10.9	11.0	11.4	11.8
Monthly Value	9.3	11.1	12.9	9.3	11.5	13.5

----- Data not available.

Appendix Table 13 continued

August 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840801	10.3	10.4	10.6	10.9	11.2	11.5
840802	10.4	10.8	11.5	11.3	11.5	11.9
840812	10.9	11.3	11.8	10.7	11.2	11.8
840813	10.8	11.2	11.6	10.6	11.2	11.9
840814	10.7	11.1	11.5	10.5	11.2	11.8
840815	10.7	11.2	11.9	10.5	11.3	12.5
840816	11.5	11.8	12.3	11.6	12.1	13.0
840817	12.0	12.1	12.3	12.1	12.4	12.6
840818	11.6	11.8	12.1	11.6	11.8	12.1
840819	10.7	11.1	11.7	10.3	10.9	11.6
840820	10.2	10.4	10.7	9.9	10.2	10.4
840821	10.0	10.1	10.4	9.8	9.9	10.4
840822	9.5	9.7	10.0	9.2	9.5	9.9
840823	9.6	9.7	9.9	9.5	9.6	10.1
840824	8.8	9.3	9.9	8.7	9.1	9.8
840825	8.0	8.5	8.9	7.6	8.2	8.7
840826	6.9	7.3	8.0	6.4	7.0	7.7
840827	5.8	6.3	7.0	5.1	5.8	6.7
840828	5.5	5.9	6.2	5.0	5.6	6.1
840829	5.6	6.0	6.5	5.2	5.8	6.6
840830	5.6	6.1	6.6	5.3	5.9	6.7
840831	6.0	6.3	6.6	5.6	6.1	6.6
Monthly Value	5.5	9.5	12.3	5.0	9.4	13.0

----- Data not available.

Appendix Table 13 continued

September 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840901	5.9	6.5	7.3	5.5	6.3	7.3
840902	6.2	6.7	7.8	6.0	6.5	7.7
840912	6.5	7.0	7.8	6.6	7.0	7.8
840913	7.1	7.3	7.7	7.2	7.4	7.7
840914	6.2	6.8	7.4	6.3	6.9	7.5
840915	6.4	7.1	8.1	6.5	7.2	8.2
840916	6.9	7.7	8.7	7.0	7.7	8.8
840917	6.5	7.0	8.1	6.6	7.1	8.1
840918	6.9	7.1	7.4	7.0	7.2	7.4
840919	6.5	6.7	7.0	6.6	6.8	7.2
840920	5.8	6.3	7.0	5.9	6.4	7.1
840921	4.9	5.6	6.5	5.0	5.7	6.6
840922	4.0	4.8	5.5	4.1	4.9	5.6
840923	4.0	4.6	5.2	4.2	4.7	5.3
840924	4.5	4.9	5.2	4.7	5.0	5.4
840925	5.0	5.3	6.0	5.1	5.4	6.1
840926	5.3	5.7	6.3	5.4	5.8	6.4
840927	4.8	5.4	6.2	4.9	5.5	6.3
840928	4.0	4.8	5.6	4.2	4.9	5.8
840929	4.8	5.0	5.4	4.9	5.2	5.6
840930	5.2	5.6	6.1	5.3	5.7	6.2
Monthly Value	4.0	6.1	8.7	4.1	6.2	8.8

----- Data not available.

Appendix Table 13 continued

October 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
841001	5.2	5.8	6.4	5.3	5.9	6.5
841002	5.4	5.7	6.3	5.5	5.8	6.4
841003	4.5	5.1	5.7	4.7	5.2	5.9
841004	2.9	3.7	4.8	3.0	3.8	4.9
841005	2.2	2.7	3.4	2.4	2.8	3.5
841006	2.5	2.8	3.2	2.6	2.9	3.3
841007	2.2	2.6	3.2	2.4	2.8	3.3
841008	2.4	2.6	3.1	2.6	2.8	3.3
841009	3.0	3.3	4.0	3.1	3.4	4.1
841010	2.9	-----	3.6	3.0	-----	3.7
Monthly Value	2.2	-----	6.4	2.4	-----	6.5

----- Data not available.

Appendix Table 14 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River at LRX 53, RM 140.1,
 GC S31N11W10AAC.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840523	6.0	-----	6.0
840524	5.5	5.7	6.0
840525	5.5	5.9	6.0
840526	5.0	5.4	6.0
840527	5.5	5.7	6.0
840528	5.5	6.2	6.5
840529	6.5	6.5	6.5
840530	6.5	6.7	7.0
840531	7.0	7.5	8.0
Monthly Value	5.0	-----	8.0

----- Data not available.

Appendix Table 14

continued

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	7.5	8.2	9.0
840602	8.0	8.3	9.0
840603	8.0	8.8	9.5
840604	8.5	8.9	9.5
840605	8.0	8.9	9.5
840606	8.5	8.7	9.0
840607	8.5	8.8	9.0
840608	8.0	8.6	9.0
840609	8.5	8.8	9.0
840610	8.5	9.1	9.5
840611	8.5	9.5	10.5
840612	9.5	9.6	10.0
840613	8.0	8.7	9.5
840614	7.5	8.3	9.0
840615	7.5	8.1	9.0
840616	6.5	7.0	7.5
840617	6.5	7.2	8.5
840618	8.0	9.2	10.5
840619	10.0	11.1	12.5
840620	11.0	11.6	12.0
840621	11.0	11.8	12.5
840622	11.5	12.1	13.0
840623	11.5	11.8	12.5
840624	11.0	11.3	11.5
840625	11.0	11.6	12.0
840626	11.5	11.6	12.0
840627	9.5	10.6	11.5
840628	9.5	9.9	10.5
840629	10.5	10.6	11.0
840630	11.0	11.4	12.0
Monthly Value	6.5	9.7	13.0

----- Data not available.

Appendix Table 14

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	11.5	11.8	12.0
840702	11.0	11.5	11.5
840703	11.0	11.3	11.5
840704	11.5	11.8	12.0
840705	12.0	12.0	12.0
840706	12.0	12.3	12.5
840707	11.5	11.8	12.0
840708	11.5	11.6	12.0
840709	11.0	11.3	11.5
840710	11.0	11.4	11.5
840711	11.0	11.7	12.0
840712	11.5	11.7	12.0
840713	11.5	11.8	12.0
840714	11.5	11.6	12.0
840715	11.5	11.6	12.0
840716	11.5	11.9	12.0
840717	10.5	11.2	12.0
840718	9.5	9.7	10.5
840719	9.0	9.3	9.5
840720	9.0	9.3	9.5
840721	9.0	9.0	9.0
840722	9.0	9.2	9.5
840723	9.5	10.3	12.0
840724	11.0	11.4	11.5
840725	11.0	11.5	11.5
840726	10.0	10.5	11.0
840727	9.5	9.8	10.5
840728	10.5	10.5	11.0
840729	11.0	11.0	11.0
840730	10.0	10.7	11.0
840731	10.5	10.6	11.0
Monthly Value	9.0	11.0	12.5

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	10.5	10.7	11.0
840802	10.5	10.9	11.0
840803	11.0	11.2	12.0
840804	12.0	12.4	13.5
840805	13.0	13.2	13.5
840806	13.0	13.4	14.0
840807	12.5	13.1	13.5
840808	12.5	12.9	13.5
840809	12.0	12.4	13.0
840810	11.5	11.8	12.0
840811	11.0	11.3	11.5
840812	10.5	11.1	11.5
840813	11.0	11.3	11.5
840814	11.0	11.2	11.5
840815	11.0	11.5	12.0
840816	12.0	12.0	12.0
840817	12.0	12.3	12.5
840818	11.5	12.0	12.0
840819	10.5	10.8	11.5
840820	10.0	10.3	10.5
840821	10.0	10.0	10.0
840822	9.5	9.8	10.0
840823	9.5	9.6	10.0
840824	8.5	-----	9.5
840826	6.0	-----	6.0
840827	4.5	5.0	5.5
840828	4.5	5.0	5.5
840829	5.0	5.2	5.5
840830	5.0	5.3	5.5
840831	5.5	5.5	5.5
Monthly Value	4.5	10.3	14.0

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	5.5	5.7	6.0
840902	6.0	6.3	6.5
840903	6.0	6.5	7.0
840904	6.5	7.0	7.5
840905	7.0	7.3	7.5
840906	7.5	7.9	8.5
840907	8.0	8.0	8.0
840908	7.5	7.6	8.0
840909	6.5	7.2	7.5
840910	6.5	7.0	7.5
840911	6.5	6.8	7.0
840912	6.5	6.8	7.0
840913	7.0	7.0	7.0
840914	6.0	6.5	7.0
840915	6.5	7.0	7.5
840916	6.5	6.9	7.0
840917	6.0	6.1	6.5
840918	5.0	5.8	6.0
840919	4.0	4.6	5.0
840920	4.0	4.1	4.5
840921	4.0	4.3	4.5
840922	4.0	4.3	4.5
840923	4.5	4.8	5.0
840924	4.5	4.8	5.0
840925	4.0	4.6	5.0
840926	4.0	-----	4.0
840930	5.5	-----	5.5
Monthly Value	4.0	6.2	8.5

----- Data not available.

Appendix Table 14

continued

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.0	5.4	5.5
841002	5.0	5.5	5.5
841003	4.5	4.7	5.0
841004	3.0	3.4	4.0
841005	2.5	2.7	3.0
841006	2.5	2.7	3.0
841007	2.5	2.5	3.0
841008	2.5	2.7	3.0
841009	3.0	3.2	3.5
841010	2.0	2.6	3.0
841011	1.0	1.5	2.0
841012	1.5	1.7	2.0
841013	1.5	1.8	2.0
841014	.5	1.0	1.5
841015	0.0	-----	.5
Monthly Value	0.0	-----	5.5

----- Data not available.

Appendix Table 15 Datapod temperature recorder data summary:
intragravel and surface water temperatures
(C) recorded at Mainstem Susitna River at
LRX 56, RM 142.1, GC S31N11W36BCD.

June 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840606	5.9	-----	6.1	8.2	-----	8.4
840607	5.7	5.8	6.1	8.1	8.5	9.3
840608	5.9	6.1	6.1	8.0	8.6	9.8
840609	6.1	6.3	6.3	8.2	9.0	9.8
840610	6.2	6.3	6.4	8.5	9.2	10.0
840611	6.3	6.4	6.6	8.4	9.5	10.8
840612	6.5	6.6	6.7	8.9	9.6	11.0
840613	6.6	7.1	7.4	8.3	9.0	9.9
840614	6.9	7.1	7.3	7.3	8.1	9.4
840615	6.5	6.8	7.0	7.5	8.1	9.3
840616	6.5	6.6	6.7	6.7	7.0	7.7
840617	6.0	6.2	6.5	6.3	7.0	8.5
840618	6.0	6.2	6.3	8.0	-----	9.0
840619	6.3	6.6	6.9	-----	-----	-----
840620	6.9	7.1	7.3	-----	-----	-----
840621	7.3	7.5	7.7	-----	-----	-----
840622	7.6	7.8	8.0	-----	-----	-----
840623	8.0	8.1	8.2	-----	-----	-----
840624	7.7	7.9	8.0	-----	-----	-----
840625	7.6	7.8	7.8	-----	-----	-----
840626	7.7	7.8	7.9	-----	-----	-----
840627	7.8	8.0	8.2	-----	-----	-----
840628	7.7	7.9	8.0	-----	-----	-----
840629	7.6	7.7	7.8	-----	-----	-----
840630	7.6	7.8	8.1	-----	-----	-----
Monthly Value	5.7	7.0	8.2	6.3	-----	11.0

----- Data not available.

Appendix Table 15 continued

July 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840701	7.8	8.0	8.1	-----	-----	-----
840702	7.9	8.1	8.2	-----	-----	-----
840703	8.1	8.1	8.2	-----	-----	-----
840704	8.0	8.1	8.2	-----	-----	-----
840705	8.2	8.4	8.5	-----	-----	-----
840706	8.4	8.6	8.7	-----	-----	-----
840707	8.4	8.6	8.7	-----	-----	-----
840708	8.4	8.5	8.5	11.2	-----	11.6
840709	8.3	8.5	8.6	10.5	11.2	11.7
840710	8.3	8.4	8.6	10.5	11.0	11.3
840711	8.6	8.7	8.8	10.6	11.3	12.2
840712	8.6	8.7	8.8	10.7	11.5	12.0
840713	8.5	8.7	8.8	11.3	11.8	12.4
840714	8.7	8.9	9.0	11.3	11.6	12.1
840715	8.5	8.6	8.8	10.8	11.2	11.6
840729	8.3	-----	8.4	11.1	-----	11.2
840730	7.9	8.4	9.9	10.2	10.7	11.2
840731	7.8	7.9	7.9	10.3	10.6	11.1
Monthly Value	7.8	-----	9.9	10.2	-----	12.4

----- Data not available.

Appendix Table 15 continued

August 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840801	7.8	7.9	7.9	10.5	10.7	11.0
840802	7.9	8.0	8.0	10.7	10.9	11.3
840803	8.0	8.0	8.1	11.0	11.3	11.9
840804	8.0	8.5	8.9	11.9	12.5	13.5
840805	8.9	9.4	9.7	13.0	13.5	14.0
840806	9.5	9.9	10.2	13.1	13.7	14.3
840807	9.8	10.1	10.3	12.5	13.4	14.3
840808	9.7	10.0	10.2	12.6	13.3	14.1
840809	9.5	9.8	10.0	12.4	12.9	13.4
840810	9.4	9.5	9.6	11.8	12.2	12.5
840811	8.8	9.2	9.4	11.2	11.9	12.3
840812	8.6	8.8	8.9	10.9	11.7	12.2
840813	8.6	8.7	8.8	10.9	11.7	12.1
840814	8.5	8.7	8.7	11.2	11.6	12.0
840815	8.4	8.6	8.7	11.5	12.0	12.8
840816	8.7	8.8	9.0	12.5	12.8	13.0
840817	8.9	9.2	9.4	12.8	13.1	13.4
840818	9.1	9.2	9.3	12.4	12.6	12.9
840819	8.3	8.6	9.1	11.1	11.6	12.4
840820	8.1	8.2	8.4	10.7	10.9	11.2
840821	8.2	8.3	8.4	10.4	10.7	10.9
840822	7.9	8.1	8.3	10.1	10.4	10.7
840823	7.7	7.8	7.9	10.1	10.6	10.8
840824	7.4	7.6	7.8	9.4	9.9	10.6
840825	7.2	7.3	7.4	8.5	9.0	9.5
840826	6.8	7.0	7.2	7.2	7.8	8.4
840827	6.4	6.6	6.9	5.9	6.8	7.8
840828	6.4	6.5	6.5	5.9	6.7	7.2
840829	6.5	6.5	6.6	6.3	6.9	7.3
840830	6.5	6.6	6.6	6.5	6.9	7.2
Monthly Value	6.4	8.4	10.3	5.9	11.0	14.3

----- Data not available.

Appendix Table 15 continued

September 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840916	7.7	-----	8.7	7.1	-----	8.1
840917	7.1	7.5	7.9	6.4	6.9	7.2
840918	7.4	7.7	7.8	6.8	7.0	7.1
840919	6.9	7.3	7.4	6.3	6.7	6.8
840920	6.6	6.9	7.4	5.9	6.3	6.8
840921	5.7	6.2	7.0	5.0	5.6	6.3
840922	4.9	5.4	5.8	4.4	4.8	5.2
840923	4.9	5.3	5.7	4.4	4.8	5.2
840924	5.1	5.5	5.8	4.6	5.0	5.3
840925	5.7	6.0	6.5	5.2	5.6	6.1
840926	5.8	6.3	6.7	5.6	5.9	6.4
840927	5.6	5.9	6.4	5.2	5.7	6.1
840928	4.8	5.3	5.7	4.6	5.1	5.5
840929	5.3	5.6	6.0	5.1	5.5	5.9
840930	5.7	6.1	6.7	5.6	6.0	6.5
Monthly Value	4.8	-----	8.7	4.4	-----	8.1

----- Data not available.

Appendix Table 15 continued

October 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
841001	5.8	6.3	6.7	5.7	6.1	6.6
841002	5.9	6.1	6.4	5.9	6.1	6.4
841003	4.9	5.5	6.1	4.9	5.5	6.0
841004	3.3	4.0	4.9	3.3	4.0	4.9
841005	2.8	3.1	3.6	2.8	3.2	3.6
841006	2.8	3.2	3.6	2.9	3.3	3.7
841007	2.7	3.0	3.4	2.7	3.1	3.5
841008	3.0	3.3	3.7	3.1	3.5	3.9
841009	3.6	3.9	4.3	3.8	4.2	4.6
841010	2.3	3.1	3.9	2.6	3.4	4.1
841011	1.5	2.0	2.4	1.7	2.2	2.6
841012	2.0	2.3	2.7	2.2	2.6	3.1
841013	1.9	2.2	2.6	2.1	2.6	3.0
841014	.8	1.4	2.2	1.2	1.7	2.5
841015	.4	.6	.9	.7	.9	1.2
841016	.4	.6	.9	.7	.8	.9
841017	.4	.6	.8	.7	.8	.9
841018	.4	.5	.7	.7	.8	.9
841019	.4	.5	.8	.8	.8	.9
841020	.4	.4	.5	.7	.9	.9
841021	.4	.4	.5	.8	.9	.9
841022	.4	.4	.5	.7	.9	1.0
841023	.4	.6	.7	.8	1.0	1.1
841024	.3	.5	.7	.8	1.0	1.1
841025	.4	.6	.9	.8	1.0	1.0
Monthly Value	.3	2.2	6.7	.7	2.4	6.6

----- Data not available.

Appendix Table 16 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River above Portage Creek,
 RM 148.9, GC S32N10W16ACB.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840523	4.5	-----	6.0
840524	5.5	5.7	6.0
840525	5.5	5.8	6.0
840526	5.0	5.6	6.0
840527	6.0	6.3	7.0
840528	6.0	6.6	7.5
840529	7.0	7.1	7.5
840530	7.0	7.3	8.0
840531	7.5	7.9	8.5
Monthly Value	4.5	-----	8.5

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	7.5	8.0	8.5
840602	8.5	8.8	9.5
840603	9.0	9.4	10.0
840604	9.0	9.5	10.0
840605	9.0	9.6	10.0
840606	9.0	9.5	10.0
840607	9.0	9.4	9.5
840608	8.5	9.3	10.0
840609	9.0	9.7	10.0
840610	9.5	9.8	10.5
840611	9.0	10.1	11.0
840612	10.0	10.3	11.0
840613	8.5	9.5	10.5
840614	8.0	8.8	9.5
840615	8.0	8.5	9.0
840616	6.5	7.1	8.0
840617	6.5	7.5	9.0
840618	8.5	9.6	11.5
840619	10.5	11.5	13.0
840620	12.0	12.3	12.5
840621	11.5	12.3	13.0
840622	12.0	12.7	13.5
840623	12.0	12.5	13.0
840624	11.5	-----	12.5
840629	10.5	-----	11.5
840630	11.0	11.5	12.0
Monthly Value	6.5	9.9	13.5

-- - Data not available.

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	11.0	11.7	12.0
840702	11.0	11.4	12.0
840703	10.5	11.0	11.5
840704	11.0	11.6	12.5
840705	11.5	12.0	12.5
840706	12.0	12.3	12.5
840707	11.5	11.8	12.5
840708	11.5	11.8	12.0
840709	10.5	11.2	12.0
840710	10.5	11.2	11.5
840711	11.0	11.5	12.0
840712	10.5	11.4	12.0
840713	11.5	11.9	12.5
840714	11.5	11.6	12.0
840715	10.5	11.4	12.0
840716	11.0	11.7	12.0
840717	9.5	10.6	11.5
840718	9.0	9.1	9.5
840719	8.5	8.7	9.0
840720	8.5	8.8	9.0
840721	8.5	8.9	9.0
840722	8.5	9.0	9.5
840723	9.0	10.2	11.5
840724	10.5	11.5	12.0
840725	10.0	11.0	12.0
840729	10.5	-----	11.0
840730	10.0	10.3	10.5
840731	10.0	10.1	10.5
Monthly Value	8.5	10.9	12.5

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	10.0	10.3	10.5
840802	10.0	10.3	10.5
840803	10.5	10.7	11.5
840804	11.5	11.9	13.5
840805	12.5	12.8	13.5
840806	12.5	12.8	13.0
840807	11.5	12.3	13.0
840808	11.5	12.1	13.0
840809	11.5	11.8	12.5
840810	11.0	11.2	11.5
840811	10.0	10.6	11.0
840812	10.0	10.5	11.0
840813	10.0	10.5	11.0
840814	10.0	10.3	10.5
840815	10.5	10.8	11.5
840816	11.0	11.4	12.0
840817	11.5	11.7	12.0
840818	11.0	11.3	11.5
840819	10.0	10.3	11.0
840820	9.5	9.6	10.0
840821	9.0	9.2	9.5
840822	8.5	8.8	9.0
840823	9.0	9.0	9.0
840824	8.5	8.8	9.0
840825	7.5	8.1	8.5
840826	6.5	6.8	7.5
840827	4.5	5.4	6.0
840828	4.5	5.3	6.0
840829	5.0	5.4	6.0
840830	5.5	5.8	6.0
840831	6.0	6.0	6.0
Monthly Value	4.5	9.7	13.5

----- Data not available.

Appendix Table 16

continued

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	5.5	6.0	6.5
840902	6.5	6.7	7.0
840903	6.5	7.0	7.0
840904	7.0	7.2	7.5
840905	7.5	7.6	8.0
840906	8.0	8.1	8.5
840907	8.0	8.1	8.5
840908	7.5	7.7	8.0
840909	7.0	7.3	7.5
840910	7.0	7.2	7.5
840911	6.5	6.8	7.0
840912	7.0	7.1	7.5
840913	7.0	7.0	7.0
840914	6.5	6.8	7.0
840915	6.5	7.0	7.5
840916	7.0	7.2	7.5
840917	6.5	6.8	7.0
840918	7.0	7.0	7.0
840919	6.5	6.5	6.5
840920	6.0	6.0	6.0
840921	5.0	5.3	6.0
840922	4.0	4.4	5.0
840923	4.5	4.5	4.5
840924	4.5	4.7	5.0
840925	5.0	5.2	5.5
840926	5.0	5.0	5.5
840927	5.0	5.0	5.0
840928	4.5	-----	5.0
Monthly Value	4.0	6.5	8.5

----- Data not available.

Appendix Table 17 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River above Fog Creek -
 Site 1, RM 176.8, GC S31N06W15BAC.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840523	3.5	-----	4.5
840524	3.5	4.3	5.0
840525	4.0	4.5	5.0
840526	3.5	4.2	5.0
840527	4.5	4.9	5.5
840528	4.0	-----	4.5
Monthly Value	3.5	-----	5.5

----- Data not available.

Appendix Table 17

continued

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840604	5.5	7.0	8.0
840605	6.5	-----	8.0
840606	6.5	7.7	8.0
840607	7.5	8.0	8.5
840608	7.5	8.4	10.0
840609	8.5	9.1	9.5
840610	8.5	9.2	10.5
840611	8.5	9.5	10.5
840612	9.0	9.3	9.5
840613	7.5	8.3	9.5
840614	7.0	7.6	8.0
840615	7.0	7.1	8.0
840616	5.0	5.6	6.5
840617	5.0	6.0	7.5
840618	7.5	8.6	10.5
840619	9.5	10.6	12.0
840620	11.0	11.3	11.5
840621	10.5	11.3	12.0
840622	11.0	11.7	12.5
840624	10.0	10.5	11.0
840625	9.5	10.6	11.5
840626	10.5	11.0	11.5
840627	8.5	9.4	10.5
840628	8.0	8.5	9.0
840629	9.0	9.5	10.5
840630	9.5	10.3	11.0
Monthly Value	5.0	9.1	12.5

----- Data not available.

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	10.0	10.6	11.0
840702	10.5	10.5	10.5
840703	9.5	9.9	10.5
840704	10.0	10.6	11.5
840705	10.5	11.0	11.5
840706	11.0	11.3	11.5
840707	10.0	10.6	11.0
840708	10.0	10.4	11.0
840709	9.5	9.8	10.5
840710	9.5	9.8	10.5
840711	10.0	10.2	10.5
840712	9.5	10.1	11.0
840713	10.0	10.6	11.0
840714	10.0	10.3	10.5
840715	9.5	10.0	10.5
840716	10.0	10.3	10.5
840717	8.5	9.2	10.0
840718	7.5	7.7	8.0
840719	7.0	7.4	7.5
840720	7.5	7.5	7.5
840721	7.5	7.5	7.5
840722	7.5	7.6	8.0
840723	8.0	8.9	10.5
840724	9.5	10.0	10.5
840725	10.0	10.3	10.5
840726	8.5	8.9	10.0
840727	7.5	8.4	9.5
840728	9.0	9.5	10.5
840729	9.5	10.0	10.5
840730	9.0	9.3	9.5
840731	9.0	9.3	9.5
Monthly Value	7.0	9.6	11.5

----- Data not available.

Appendix Table 17

continued

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	9.5	9.5	9.5
840802	9.5	9.7	10.0
840803	9.5	10.1	11.0
840804	10.5	11.5	13.0
840805	12.0	12.3	13.0
840806	11.5	12.0	12.5
840807	11.0	11.5	12.5
840808	10.5	11.1	11.5
840809	10.5	10.9	11.5
840810	9.5	10.1	10.5
840811	8.0	8.9	9.5
840812	7.0	-----	7.5
840820	6.5	7.1	7.5
840821	7.0	7.0	7.5
840822	6.5	6.8	7.5
840823	6.5	-----	6.5
840824	6.0	6.8	7.0
840825	6.0	6.4	6.5
840826	4.5	-----	6.0
Monthly Value	4.5	-----	13.0

----- Data not available.

Appendix Table 18 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River above Fog Creek -
 Site 2, RM 176.8, GC S31N06W15EAC.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840629	10.5	-----	11.0
840630	10.0	10.4	11.0
Monthly Value	10.0	-----	11.0

----- Data not available.

Appendix Table 18

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840725	10.5	10.7	11.0
840726	9.0	9.5	10.5
840727	8.5	9.3	10.5
840728	9.5	10.3	11.5
840729	10.0	10.6	11.0
840730	9.5	9.8	10.0
840731	9.5	9.5	10.0
Monthly Value	8.5	-----	11.5

----- Data not available.

August 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840801	9.0	9.3	9.5
840806	11.5	12.0	12.5
840807	11.0	11.7	12.5
840808	10.5	11.2	12.0
840809	10.5	11.0	11.5
840810	10.5		11.0
840811	9.5	9.9	10.5
840812	9.0	9.6	10.0
840813	8.5	9.0	9.5
840814	8.0		8.5
840818	8.0		8.5
840826	5.0		5.5
840827	4.0	4.5	5.0
Monthly Value	4.0		12.5

Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840914	6.0	-----	6.0
840915	5.5	6.3	7.0
840916	5.5	6.0	6.5
840917	5.5	6.0	6.5
840918	6.0	6.0	6.0
840919	5.5	5.8	6.0
840920	5.5	5.5	5.5
840921	4.0	4.4	5.0
840922	3.0	3.7	4.0
840923	3.5	3.7	4.0
840924	3.5	3.9	4.0
840925	4.0	4.3	4.5
840926	4.0	4.5	5.0
840927	4.0	4.3	4.5
840928	3.5	3.7	4.0
840929	4.0	4.0	4.0
840930	4.0	4.3	5.0
Monthly Value	3.0	-----	7.0

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	4.5	4.7	5.0
841002	4.5	4.5	5.0
841003	3.5	4.0	4.5
841004	2.0	2.6	3.5
841005	2.0	2.1	2.5
841006	2.0	2.0	2.0
841007	1.5	1.8	2.0
841008	2.0	2.2	2.5
841009	2.5	2.7	3.0
841010	1.5	1.7	2.5
841011	.5	1.0	1.5
841012	1.0	1.0	1.0
841013	.5	.9	1.0
841014	0.0	.2	.5
841015	0.0	-----	0.0
Monthly Value	0.0	-----	5.0

----- Data not available.

Appendix Table 19 Datapod temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River above Fog Creek
 - Site 2, RM 176.8, GC S31N06W16BAC.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840810	11.0	-----	11.4
840811	9.6	10.4	11.2
840812	7.9	9.5	10.8
840813	7.4	8.5	9.1
840820	7.3	8.7	9.5
840821	8.6	8.9	9.5
840822	7.5	8.3	8.8
840823	6.5	-----	8.0
840824	6.6	8.1	8.7
840825	7.0	7.7	8.6
840826	5.7	6.3	7.1
840827	4.1	5.0	6.0
840828	3.8	-----	5.7
Monthly Value	3.8	-----	11.4

----- Data not available.

Appendix Table 20 Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
Mainstem Susitna River above Fog Creek -
Site 3, RM 176.8, GC S31N06W15BAC.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840914	6.0	-----	6.0
840915	6.0	6.5	7.5
840916	6.0	6.4	7.0
840917	5.5	6.3	6.5
840918	6.0	6.1	6.5
840919	6.0	6.0	6.0
840920	5.5	5.7	6.0
840921	4.0	4.5	5.5
840922	3.0	3.7	4.5
840923	3.5	3.8	4.0
840924	3.5	4.0	4.5
840925	4.5	4.7	5.0
840926	4.5	4.8	5.0
840927	4.0	4.4	5.0
840928	3.5	4.0	4.5
840929	4.0	4.3	4.5
840930	4.5	4.9	5.5
Monthly Value	3.0	-----	7.5

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.0	5.2	5.5
841002	5.0	5.0	5.0
841003	3.5	4.1	4.5
841004	2.0	2.6	3.5
841005	2.0	2.0	2.0
841006	2.0	2.0	2.0
841007	1.5	1.8	2.0
841008	2.0	2.2	2.5
841009	2.5	2.7	3.0
841010	1.5	1.7	2.5
841011	.5	1.0	1.5
841012	1.0	1.0	1.0
841013	.5	1.0	1.0
841014	0.0	.1	.5
841015	0.0	-----	0.0
Monthly Value	0.0	-----	5.5

----- Data not available.

Appendix Table 21 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Mainstem Susitna River at Watana Dam Site,
 RM 184.2, GC S32N05W33BDB.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840523	6.0	-----	6.0
840524	5.0	5.8	6.5
840525	5.5	5.7	6.0
840526	5.0	5.5	6.5
Monthly Value	5.0	-----	6.5

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840613	8.5	9.2	10.0
840614	8.0	8.6	9.0
840615	8.0	8.3	8.5
840616	7.0	7.2	7.5
840617	7.0	7.8	9.0
840618	9.0	10.0	11.5
840619	10.5	11.7	13.0
840620	12.0	12.2	12.5
840621	11.5	12.3	13.0
840622	12.0	12.8	13.5
840623	12.5	12.6	13.0
840624	11.0	11.6	12.5
840625	11.0	11.9	13.0
840626	12.0	12.3	12.5
840627	10.0	10.7	12.0
840628	9.0	10.1	11.0
840629	10.5	10.7	11.0
840630	10.5	11.2	12.0
Monthly Value	7.0	-----	13.5

----- Data not available.

July 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840701	11.5		11.5
Monthly Value	11.5		11.5
Data not available.			

August 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840810	10.0		10.5
840811	9.5	10.0	10.5
840812	9.5	10.0	10.5
840813	9.0	10.0	11.0
840814	9.0		10.0
840818	10.5	10.8	11.0
840819	9.0	9.5	10.0
840820	9.0	9.3	9.5
840821	8.5	8.6	9.0
840822	8.0	8.5	9.0
840823	8.5		9.0
840824	8.0	8.5	9.0
840825	6.5	7.3	8.0
840826	5.5	5.9	6.5
840827	4.5	5.2	6.0
Monthly Value	4.5		11.0

Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840914	6.0	-----	6.0
840915	5.5	6.3	7.0
840916	5.5	6.0	6.5
840917	5.5	6.0	6.5
840918	5.5	5.9	6.0
840919	5.5	5.8	6.0
840920	5.0	5.4	5.5
840921	3.5	4.3	5.0
840922	3.0	3.7	4.0
840923	3.5	3.8	4.0
840924	3.5	4.0	4.5
840925	4.0	4.5	5.0
840926	4.0	4.6	5.0
840927	3.5	4.3	5.0
840928	3.5	3.6	4.0
840929	3.5	3.7	4.0
840930	4.0	4.2	4.5
Monthly Value	3.0	-----	7.0

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	4.0	4.4	5.0
841002	4.0	4.3	4.5
841003	3.0	3.3	4.0
841004	1.5	2.0	3.0
841005	1.0	1.5	2.0
841006	1.5	1.5	1.5
841007	1.5	1.7	2.0
841008	2.0	2.2	2.5
841009	2.0	2.3	2.5
841010	1.0	1.3	2.0
841011	0.0	.5	1.0
841012	.5	.7	1.0
841013	.5	.6	1.0
841014	0.0	.1	.5
841015	0.0	-----	0.0
Monthly Value	0.0	-----	5.0

----- Data not available.

Appendix Table 22 Datapod temperature recorder data summary
 surface water temperatures (C) recorded at
 Mainstem Susitna River at Watana Dam Site,
 RM 184.2, GC S32N05W33BDB.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840810	10.8	-----	11.2
840811	9.5	10.3	11.5
840812	9.4	10.6	11.9
840813	9.1	-----	11.2
840820	9.1	9.4	9.8
840821	8.4	8.9	9.6
840822	8.2	8.7	9.5
840823	7.8	-----	9.3
840824	5.3	7.8	9.3
840825	6.9	7.5	8.4
840826	5.6	6.2	6.9
840827	4.0	4.9	6.0
840828	4.6	-----	5.8
Monthly Value	4.0	-----	11.9

----- Data not available.

Appendix Table 22 (continued).

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840917	6.7	7.4	8.3
840918	6.7	7.2	8.0
840919	6.3	6.8	7.4
840920	4.9	5.9	6.7
840921	3.3	4.3	5.5
840922	3.5	4.1	4.8
840923	4.4	-----	4.7
840928	3.6	-----	4.1
840929	3.9	4.1	4.5
840930	4.4	4.9	5.6
Monthly Value	3.3	-----	8.3

----- Data not available.

Appendix Table 22 (continued).

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	4.7	5.2	5.7
841002	4.5	4.9	5.6
841003	3.2	3.9	4.9
841004	1.7	2.6	3.8
841005	1.3	1.9	2.6
841006	1.3	1.7	2.0
841007	1.2	1.6	2.3
841008	2.0	2.3	2.9
841009	2.4	2.8	3.2
841010	.9	1.7	3.0
841011	.1	.8	1.6
841012	.5	.8	1.0
841013	.5	.8	1.1
841014	-.2	.0	.8
841015	-.2	-----	-.1
Monthly Value	-.2	-----	5.7

----- Data not available.

3.3 Tables 23 to 36 - Daily and monthly minimum, mean and maximum temperatures recorded at tributary sites during the 1984 open water season.

Appendix Table 23

Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
the Yentna River - Site 2, RM 28.0, TRM 4.0,
GC S18N07W28ABC.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840524	8.5	-----	9.0
840525	7.5	7.8	8.0
840526	6.5	7.0	7.5
840527	6.5	7.1	8.0
840528	6.5	7.3	8.0
840529	7.5	7.8	8.5
840530	7.5	7.7	8.0
840531	7.0	7.7	8.5
Monthly Value	6.5	-----	9.0

----- Data not available.

Appendix Table 23

continued

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	7.5	8.9	10.0
840602	9.5	10.4	11.5
840603	10.0	10.5	11.0
840604	10.0	10.6	11.0
840605	10.0	10.6	11.0
840606	9.0	9.6	10.5
840607	7.5	8.0	8.5
840608	7.0	7.5	8.0
840609	8.0	8.5	9.0
840610	8.5	9.0	9.5
840611	9.0	9.7	10.5
840612	10.0	10.8	11.5
840613	10.5	10.6	11.0
840614	9.0	9.3	10.5
840615	9.0	9.1	9.5
840616	8.0	8.7	9.5
840617	7.0	7.7	8.0
840618	7.5	7.8	8.0
840619	8.0	9.0	10.5
840620	10.0	10.7	11.5
840621	10.5	11.0	11.5
840622	10.5	11.0	11.5
840623	10.5	10.7	11.5
840624	9.0	9.5	10.5
840625	9.0	9.2	9.5
840626	9.0	9.2	9.5
840627	8.0	8.3	9.0
840628	7.0	7.5	8.5
840629	7.0	7.5	8.5
840630	7.5	7.8	8.0
Monthly Value	7.0	9.3	11.5

----- Data not available.

July 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840701	8.0		8.0
840726	8.5		9.0
840727	8.5	9.0	10.0
840728	9.0	9.7	10.0
840729	8.5	9.0	10.0
Monthly Value	8.5		10.0

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840820	7.0	7.1	7.5
840821	7.0	7.0	7.0
840822	7.0	7.0	7.0
840823	7.0	7.4	8.0
840824	7.5	7.8	8.0
840825	7.5	7.5	8.0
840826	7.0	7.3	7.5
840827	6.5	6.8	7.0
840828	6.0	6.7	7.0
840829	6.5	6.8	7.0
840830	6.5	6.9	7.0
840831	6.0	6.2	6.5
Monthly Value	6.0	-----	8.0

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	5.5	6.3	7.0
840902	6.0	7.1	8.0
840903	7.0	7.7	8.5
840904	7.0	7.6	8.5
840905	7.0	7.8	8.5
840906	7.5	8.2	9.0
840907	7.5	8.1	8.5
840908	8.0	8.3	9.0
840909	7.5	8.0	8.5
840910	7.0	7.7	8.5
840911	7.0	7.4	8.0
840912	7.0	7.4	8.0
840913	7.0	7.4	7.5
840914	6.5	7.0	7.0
840915	6.5	6.7	7.0
840916	6.5	6.9	7.5
840917	7.0	7.2	7.5
840918	7.0	7.3	7.5
840919	7.0	7.1	7.5
840920	6.0	6.6	7.0
840921	5.5	5.9	6.0
840922	5.0	5.5	7.0
840923	5.0	5.9	7.0
840924	6.0	6.6	7.0
Monthly Value	5.0	7.1	9.0

----- Data not available.

Appendix Table 24 Datapod temperature recorder data summary:
 surface water temperatures (C) recorded at
 the Yentna River - Site 2, RM 28.0,
 TRM 4.0, GC S18N07W28ABC.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840811	8.4	-----	9.2
840812	8.0	9.0	10.5
840813	8.5	9.5	10.2
840814	8.3	9.4	10.3
840815	8.6	9.6	10.8
840816	9.2	10.0	11.0
840817	9.0	9.7	10.9
840818	7.2	8.2	9.0
840819	6.6	7.0	7.5
840820	6.9	7.2	7.6
840821	6.8	7.1	7.6
840822	6.8	7.2	7.7
840823	7.1	7.6	8.6
840824	7.5	7.9	8.5
840825	7.0	7.6	8.4
840826	6.8	7.4	7.8
840827	5.8	6.8	7.6
840828	5.6	6.6	7.5
840829	5.5	-----	7.4
840830	6.0	-----	7.8
840831	5.7	-----	6.9
Monthly Value	5.5	-----	11.0

----- Data not available.

Appendix Table 24 (continued).

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840912	7.2	-----	8.2
840913	6.8	7.2	7.6
840914	6.3	6.5	6.9
840915	6.0	6.3	6.9
840916	6.1	6.7	7.6
840917	6.4	7.0	8.0
840918	6.8	7.2	7.6
840919	6.6	7.0	7.7
840920	6.1	6.5	7.0
840921	5.2	5.8	6.5
840922	4.2	5.4	8.4
840923	4.6	5.3	7.8
840924	6.2	-----	7.1
840925	6.4	-----	6.8
840929	6.4	-----	6.6
840930	6.2	6.4	6.8
Monthly Value	4.2	-----	8.4

----- Data not available.

Appendix Table 24 (continued).

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	6.3	6.5	6.7
841002	6.0	6.3	6.7
841003	5.7	6.1	6.4
841004	4.9	5.5	6.1
841005	3.7	4.2	5.0
841006	3.6	3.8	4.0
841007	3.9	4.2	4.7
841008	4.2	4.4	4.6
841009	3.9	4.0	4.3
841010	3.2	3.5	4.0
841011	2.5	2.9	3.5
841012	2.2	2.5	2.9
841013	2.3	2.6	2.9
841014	1.3	1.9	2.7
841015	-.2	.4	1.4
841016	-.3	-.1	.3
841017	-.2	-.0	.3
841018	-.3	-.0	.2
841019	-.2	-.0	.3
841020	-.2	.0	.3
841021	-.2	.1	.3
841022	-.2	.0	.3
841023	-.2	-.0	.3
841024	-.2	-----	.1
Monthly Value	-.3	2.5	6.7

----- Data not available.

Appendix Table 25

Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
the Deshka River, RM 40.6, TRM 3.0,
GCS19N06W23BDC.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840524	12.0	-----	13.0
840525	11.5	12.1	13.0
840526	11.0	11.5	12.0
840527	10.0	10.9	12.0
840528	10.0	11.3	12.5
840529	11.0	11.3	11.5
840530	10.0	10.5	11.0
840531	9.5	10.8	12.0
Monthly Value	9.5	-----	13.0

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	11.0	12.0	13.5
840602	12.5	-----	13.0
840607	11.5	13.3	15.0
840608	12.5	14.2	16.0
840609	13.5	14.6	16.0
840610	13.0	14.9	17.0
840611	14.0	15.6	17.5
840612	14.5	16.2	18.0
840613	15.0	15.7	16.5
840614	14.0	15.8	17.5
840615	14.0	14.8	16.5
840616	12.5	13.0	14.0
840617	12.0	12.3	13.5
840618	12.5	14.0	16.0
840619	14.5	16.0	18.0
840620	15.5	17.4	19.5
840621	16.5	18.1	19.5
840622	17.0	18.5	20.0
840623	17.5	18.3	20.0
840624	17.0	17.7	18.5
840625	16.0	17.3	18.0
840626	16.5	16.9	18.0
840627	15.5	15.9	16.5
840628	14.5	15.5	17.0
840629	16.0	16.5	17.0
840630	15.5	16.8	18.5
Monthly Value	11.0	15.6	20.0

----- Data not available.

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	16.5	16.9	18.5
840702	15.0	15.5	16.0
840703	15.0	15.9	17.5
840704	16.0	17.7	20.0
840705	18.0	19.4	21.0
840706	19.0	19.7	20.5
840707	18.0	19.5	21.0
840708	18.5	18.9	20.5
840709	17.0	17.7	18.5
840710	17.0	17.5	18.0
840711	16.0	17.2	18.5
840712	15.5	17.0	18.0
840713	16.0	17.2	18.0
840714	16.0	16.7	18.0
840715	15.5	17.0	19.0
Monthly Value	15.0	-----	21.0

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840809	17.0	-----	19.0
840810	17.0	17.7	18.5
840811	16.0	17.1	18.5
840812	15.5	16.8	18.0
840813	15.0	16.6	18.5
840814	14.5	16.5	18.5
840815	15.0	17.0	19.0
840816	16.0	17.1	18.0
840817	16.0	16.5	17.5
840818	14.5	15.1	16.0
840819	13.0	13.5	14.5
840820	12.5	12.6	13.0
840821	12.0	12.2	12.5
840822	12.0	12.4	12.5
840823	12.5	12.8	13.5
840824	12.0	12.4	12.5
840825	11.0	11.5	12.0
840826	10.0	10.3	10.5
840827	9.5	9.6	10.0
840828	9.0	9.3	9.5
840829	8.5	8.8	9.0
840830	8.5	8.9	10.0
840831	8.0	8.5	9.0
Monthly Value	8.0	13.5	19.0

----- Data not available.

September 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840901	7.5	8.8	10.0
840902	8.5	9.3	10.5
840903	8.5	9.5	10.5
840904	9.0	9.7	10.5
840905	8.5	9.6	11.0
840906	8.5	9.8	11.0
840907	9.5	10.1	11.0
840908	10.0	11.1	12.5
840909	10.0	11.0	12.0
840910	10.0	10.8	12.0
840911	9.0	10.3	11.5
840912	9.0	9.5	10.0
840913	9.5	9.7	10.0
840914	9.0	9.6	10.0
Monthly Value	7.5	-----	12.5

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841017	0.0	-----	0.0
841018	0.0	0.0	0.0
841019	0.0	0.0	0.0
841020	0.0	0.0	0.0
841021	0.0	0.0	0.0
841022	0.0	0.0	0.0
841023	0.0	0.0	0.0
841024	0.0	-----	0.0
Monthly Value	0.0	-----	0.0

----- Data not available.

Appendix Table 26 Datapod temperature recorder data summary
 surface water temperatures (C) recorded at
 Deshka River, RM 40.6, TRM 3.0, S19N06W23BDC.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	7.2	7.7	8.0
841002	7.1	7.6	8.5
841003	6.1	7.1	8.0
841004	4.5	5.8	6.8
841005	4.2	4.7	5.3
841006	4.2	4.9	5.5
841007	4.5	5.0	5.5
841008	4.5	4.8	5.0
841009	3.8	4.7	5.5
841010	3.2	3.9	4.6
841011	2.8	3.2	3.5
841012	2.0	2.8	3.7
841013	1.5	2.2	2.9
841014	.4	1.4	2.1
841015	-.1	.4	1.1
Monthly Value	-.1	-----	8.5

----- Data not available.

Appendix Table 27 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 the Kashwitna River, RM 60.9, TRM 0.1,
 GC S21N06W13AAC.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840525	8.0	8.8	9.5
840526	7.5	8.2	9.0
840527	7.0	8.0	9.0
840528	8.0	9.6	11.5
840529	9.5	9.9	10.5
840530	8.5	8.8	9.5
840531	7.5	9.0	10.5
Monthly Value	7.0	-----	11.5

----- Data not available.

Appendix Table 27

continued

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	9.5	10.8	12.5
840602	10.5	11.8	13.0
840603	11.0	11.9	12.5
840604	10.5	11.5	12.5
840605	10.0	11.1	12.0
840606	9.0	9.8	11.0
840607	7.0	8.3	9.5
840608	8.0	9.5	11.5
840609	10.0	10.4	11.0
840610	8.0	9.5	11.0
840611	9.5	10.2	11.0
840612	9.5	10.3	11.0
840613	9.0	9.4	10.0
840614	8.0	9.0	10.0
840615	8.0	8.6	9.5
840616	7.0	7.3	7.5
840617	7.0	8.0	9.0
840618	9.0	10.2	11.5
840619	10.0	11.0	12.0
840620	10.0	10.9	11.5
840621	9.5	10.6	11.5
840622	10.0	11.2	12.5
840623	9.0	10.4	11.0
840624	8.0	9.3	11.0
840625	9.5	10.4	11.5
840626	10.0	10.5	11.0
840627	8.5	8.9	9.5
840628	8.5	9.4	10.5
840629	10.0	10.7	11.5
Monthly Value	7.0	10.0	13.0

----- Data not available.

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840707	9.5	-----	11.0
840708	9.5	10.3	11.0
840709	8.5	9.8	10.5
840710	7.5	8.5	9.0
840711	7.5	9.2	10.5
840712	8.5	9.6	11.0
840713	9.0	9.5	10.5
840714	8.5	9.4	10.0
840715	8.5	9.5	11.0
840716	10.0	10.5	11.5
840717	8.0	8.8	10.0
840718	7.5	7.7	8.0
840719	7.5	7.8	8.0
840720	7.5	7.9	8.0
840721	7.5	8.4	9.5
840722	9.0	9.8	11.0
840723	9.5	10.7	12.0
840724	10.5	11.3	12.0
840725	9.5	10.2	11.0
840726	8.5	9.2	9.5
840727	9.0	9.8	10.5
840728	9.5	9.9	10.5
840729	8.5	9.0	9.5
840730	8.0	8.9	10.0
840731	8.5	9.6	10.5
Monthly Value	7.5	9.4	12.0

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	9.0	9.4	9.5
840802	9.0	9.4	10.0
840803	9.5	9.9	10.5
840804	9.5	10.6	11.5
840805	10.5	11.2	11.5
840806	10.0	10.8	11.5
840807	10.5	11.6	12.5
840808	11.0	11.8	12.5
840809	11.0	11.6	12.5
840810	10.0	10.5	11.0
840811	9.5	10.3	11.5
840812	10.0	10.8	11.5
840813	9.0	10.3	11.5
840814	9.5	10.7	12.0
840815	10.0	11.2	12.5
840816	10.5	11.5	12.5
840817	11.0	11.4	12.0
840818	10.0	10.6	11.0
840819	9.5	9.6	10.0
840820	9.0	9.2	9.5
840821	9.0	9.5	10.0
840822	9.5	9.8	10.0
840823	9.5	10.0	10.5
840824	9.0	9.6	10.0
840825	8.0	8.5	9.0
840826	7.0	7.4	8.0
840827	6.5	6.9	7.0
840828	6.0	6.5	7.0
840829	5.5	6.3	7.0
840830	5.5	6.2	7.0
840831	5.0	5.7	6.5
Monthly Value	5.0	9.6	12.5

Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	5.5	6.2	7.0
840902	5.5	6.6	7.5
840903	6.0	7.0	7.5
840904	6.0	6.9	7.5
840905	6.0	7.0	8.0
840906	6.5	7.5	8.5
840907	7.5	8.0	8.5
840908	7.5	8.0	8.5
840909	7.0	7.7	8.5
840910	7.0	7.7	8.5
840911	7.0	7.7	8.5
840912	6.5	7.2	7.5
840913	7.0	7.0	7.0
840914	7.0	7.0	7.0
840915	6.5	7.1	7.5
840916	6.5	7.0	7.5
840917	7.0	7.2	7.5
840918	7.0	7.5	7.5
840919	6.5	6.7	7.0
840920	5.0	5.6	6.0
840921	4.5	4.9	5.0
840922	3.5	4.2	5.0
840923	4.0	4.2	4.5
840924	4.5	4.7	5.0
840925	5.0	5.2	5.5
840926	5.0	5.5	6.0
840927	5.0	5.2	5.5
840928	5.0	5.0	5.0
840929	5.0	5.0	5.0
840930	5.0	5.5	6.0
Monthly Value	3.5	6.4	8.5

----- Data not available.

October 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
841001	5.0	5.6	6.0
841002	5.5	5.7	6.0
841003	5.0	5.5	6.0
841004	3.5	4.1	5.0
841005	2.5	2.9	3.0
841006	3.0	3.2	3.5
841007	3.5	3.5	3.5
841008	3.5	3.5	3.5
841009	3.5	3.5	3.5
841010	2.5	3.0	3.5
841011	1.0	1.2	2.0
841012	1.0	1.2	1.5
841013	1.5	1.5	1.5
841014	0.0	.5	1.0
841015	0.0	0.0	0.0
841016	0.0	0.0	0.0
841017	0.0	0.0	0.0
841018	0.0	0.0	0.0
841019	0.0	0.0	0.0
841020	0.0	0.0	0.0
841021	0.0	0.0	0.0
841022	0.0	0.0	0.0
841023	0.0	0.0	0.0
841024	0.0	0.0	0.0
Monthly Value	0.0	1.9	6.0

----- Data not available.

Appendix Table 28 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 the Talkeetna River - Site 3, RM 97.2, TRM 4.0,
 GC S26N04W16CBA.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840524	6.5	-----	7.0
840525	5.0	5.9	6.5
840526	4.5	5.2	5.5
840527	5.0	5.6	6.0
840528	4.5	6.0	7.5
840529	5.5	6.0	6.5
840530	5.5	5.9	6.5
840531	5.5	6.8	8.5
Monthly Value	4.5	-----	8.5

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	6.0	7.5	8.5
840602	5.5	7.2	8.5
840603	6.0	7.4	9.0
840604	6.0	7.6	9.0
840605	6.0	7.3	8.5
840606	6.0	6.5	8.0
840607	5.5	6.6	7.5
840608	6.5	7.3	8.5
840609	6.5	7.0	8.5
840610	6.5	7.6	9.0
840611	7.5	8.4	9.5
840612	7.5	8.4	9.5
840613	7.5	7.7	8.5
840614	6.5	7.5	8.5
840615	6.5	7.5	8.5
840616	6.0	6.4	6.5
840617	6.0	6.8	8.0
840618	7.5	8.3	9.5
840619	9.0	9.5	10.5
840620	9.5	10.0	10.5
840621	9.5	10.1	11.0
840622	10.5	10.9	11.5
840623	9.5	10.1	11.5
840624	8.5	9.2	10.0
840625	10.0	10.6	11.5
840626	10.0	10.6	11.5
840627	9.0	9.3	10.0
840628	8.5	9.4	10.5
840629	10.0	10.5	10.5
840630	9.5	10.4	11.5
Monthly Value	5.5	8.4	11.5

----- Data not available.

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	10.5	10.7	11.0
840702	9.5	9.8	10.5
840703	9.0	9.6	10.5
840704	10.5	11.4	12.5
840705	11.5	11.5	12.0
840706	10.5	11.1	11.5
840707	10.5	11.1	11.5
840708	10.5	11.0	11.5
840709	9.5	9.9	10.5
840710	9.5	9.7	10.0
840711	9.5	9.8	10.5
840712	9.5	9.8	10.0
840713	9.5	9.7	10.0
840714	9.5	9.8	10.0
840715	9.0	10.0	11.0
840716	10.0	10.5	11.0
840717	8.5	9.3	10.0
840718	8.5	8.5	8.5
840719	8.5	8.5	8.5
840720	8.5	8.5	8.5
840721	8.5	9.0	9.5
840722	9.5	9.9	11.0
840723	9.5	10.9	12.5
840724	10.5	11.2	12.0
840725	9.5	10.0	10.5
840726	9.0	9.5	10.0
840727	9.0	9.6	10.0
840728	9.5	9.9	10.0
840729	9.0	9.2	9.5
840730	8.5	9.2	10.0
840731	9.5	9.5	9.5
Monthly Value	8.5	9.9	12.5

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	9.0	9.1	9.5
840802	9.0	9.2	9.5
840803	9.5	9.7	10.0
840804	10.0	10.6	11.5
840805	10.0	10.8	11.5
840806	10.0	10.7	12.0
840807	10.5	11.2	11.5
840808	10.5	10.9	11.5
840809	10.5	10.9	11.0
840810	9.0	9.5	10.5
840811	9.5	-----	9.5
840812	9.5	9.8	10.0
840813	9.5	10.0	10.5
840814	9.5	9.9	10.0
840815	10.0	10.2	10.5
840816	10.0	10.4	10.5
840817	10.0	10.3	10.5
840818	9.5	10.0	10.0
840819	9.5	9.5	9.5
840820	9.5	9.5	9.5
840821	9.5	9.5	9.5
840822	9.5	9.5	9.5
840823	9.5	9.5	9.5
840824	9.0	9.2	9.5
840825	8.0	8.4	9.0
840826	7.0	7.3	7.5
840827	6.0	6.6	7.0
840828	5.5	6.2	6.5
840829	5.5	6.3	7.0
840830	5.5	6.2	6.5
840831	5.5	5.9	6.5
Monthly Value	5.5	9.2	12.0

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	6.0	6.5	7.0
840902	6.0	6.9	7.5
840903	6.0	6.9	7.5
840904	6.0	6.9	7.5
840905	6.5	7.3	8.0
840906	7.5	8.0	8.5
840907	8.0	8.1	8.5
840908	7.5	8.0	8.5
840909	7.0	7.6	8.0
840910	6.5	7.4	8.0
840911	6.5	7.3	8.0
840912	6.5	-----	7.0
840913	7.0	7.3	7.5
840914	6.5	6.9	7.0
840915	6.5	7.1	7.5
840916	7.0	-----	7.5
840928	6.0	-----	6.0
840929	6.0	6.3	6.5
840930	6.0	6.3	6.5
Monthly Value	6.0	-----	8.5

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.0	5.4	6.0
841002	5.5	5.6	6.0
841003	4.5	4.8	5.0
841004	3.0	3.6	4.0
841005	2.5	3.0	3.5
841006	3.0	3.6	4.0
841007	3.5	3.5	3.5
841008	3.5	3.5	3.5
841009	3.5	3.7	4.0
841010	2.0	2.5	3.0
841011	1.5	1.5	2.0
841012	1.5	2.1	2.5
841013	2.0	2.5	3.0
841014	1.5	1.6	2.0
841015	1.0	1.0	1.5
841016	.5	.5	1.0
841017	0.0	.0	.5
841018	0.0	0.0	0.0
841019	0.0	0.0	0.0
841020	0.0	0.0	0.0
841021	0.0	.2	.5
841022	.5	.5	1.0
841023	1.0	1.0	1.0
841024	0.0	.2	1.0
841025	0.0	0.0	0.0
841026	0.0	0.0	0.0
841027	0.0	0.0	0.0
841028	0.0	0.0	0.0
841029	0.0	0.0	0.0
841030	0.0	0.0	0.0
841031	0.0	0.0	0.0
Monthly Value	0.0	1.6	6.0

----- Data not available.

Appendix Table 29 Ryan temperature recorder data summary:
surface water temperatures (C) recorded at
the Chulitna River - Site 5, RM 98.6, TRM 11.0,
GC S27N05W05ABC.

May 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840523	7.0		7.5
840524	5.5	6.1	7.5
840525	5.0	5.7	6.5
840526	5.0	5.9	7.0
840527	5.0	5.9	7.0
840528	4.5	6.4	8.5
840529	6.0	6.5	7.5
840530	5.0	6.0	7.0
840531	5.5	7.1	9.5
Monthly Value	4.5		9.5

Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	6.5	8.0	9.5
840602	7.0	8.3	10.0
840603	7.0	8.4	10.0
840604	7.0	8.6	10.0
840605	7.0	8.5	10.0
840606	5.5	7.0	9.5
840607	5.0	6.1	7.5
840608	6.0	7.5	9.5
840609	7.0	7.5	9.0
840610	6.0	7.5	9.5
840611	6.5	8.3	10.0
840612	7.5	8.6	9.5
840613	7.0	7.6	9.0
840614	5.5	7.3	9.5
840615	6.5	7.0	8.5
840616	6.0	6.0	6.5
840617	5.0	6.2	8.0
840618	6.0	7.8	10.0
840619	7.0	8.7	10.5
840620	7.5	8.5	9.5
840621	7.0	8.7	10.5
840622	7.5	8.9	10.5
840623	6.5	7.1	9.0
840624	5.5	6.9	8.5
840625	6.5	7.9	9.5
840626	6.0	6.8	8.5
840627	6.0	6.2	7.0
840628	5.5	6.6	8.5
840629	6.5	7.8	9.0
840630	6.5	7.8	9.5
Monthly Value	5.0	7.6	10.5

----- Data not available.

Appendix Table 29

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	6.5	8.0	9.5
840702	6.0	6.7	8.0
840703	5.5	6.7	9.0
840704	5.5	7.7	9.5
840705	6.5	7.7	9.0
840706	6.0	7.1	8.0
840707	5.5	6.9	8.5
840708	6.0	7.0	8.0
840709	5.0	6.5	8.0
840710	5.5	6.2	7.5
840711	5.0	6.5	9.0
840712	5.5	6.8	8.0
840713	5.5	6.4	7.5
840714	5.5	6.8	8.0
840715	6.5	7.7	9.5
840716	6.0	6.9	8.5
840717	5.5	6.0	7.0
840718	5.5	5.7	6.5
840719	5.0	5.3	5.5
840720	5.0	5.5	6.0
840721	5.5	5.8	7.0
840722	5.5	5.9	7.0
840723	5.5	7.4	9.5
840724	6.5	7.2	9.0
840725	5.5	5.8	6.5
840726	5.0	6.0	7.5
840727	6.0	6.7	8.0
840728	6.0	6.5	7.0
840729	5.5	5.8	6.5
840730	5.0	5.8	7.0
840731	6.0	6.3	7.0
Monthly Value	5.0	6.5	9.5

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	5.5	5.8	6.0
840802	5.5	5.8	6.5
840803	5.5	6.3	7.5
840804	6.0	7.0	8.5
840805	5.5	6.4	8.0
840806	5.0	6.4	8.5
840807	5.5	6.9	8.0
840808	5.5	5.8	7.5
840809	5.0	5.7	7.0
840810	4.5	5.8	7.0
840811	5.0	6.5	8.0
840812	5.0	6.5	8.0
840813	5.0	6.4	8.0
840814	5.0	6.3	7.5
840815	5.0	6.5	8.0
840816	5.5	6.5	8.0
840817	5.5	6.1	7.0
840818	4.5	5.0	5.5
840819	5.0	5.2	5.5
840820	5.0	5.2	5.5
840821	5.5	5.8	6.0
840822	5.0	5.5	6.0
840823	6.0	6.3	7.5
840824	5.5	5.8	6.5
840825	5.5	5.5	5.5
840826	5.0	-----	5.5
840827	4.0	5.3	6.5
840828	4.0	4.9	6.0
840829	4.0	5.0	6.0
840830	3.5	4.5	5.5
840831	4.0	4.4	5.0
Monthly Value	3.5	5.8	8.5

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	4.0	5.3	7.0
840902	4.5	5.7	7.0
840903	4.5	5.7	6.5
840904	5.0	6.1	7.0
840905	5.5	6.5	7.5
840906	5.5	6.3	7.0
840907	5.5	6.0	6.5
840908	5.0	6.1	7.0
840909	4.5	5.4	6.0
840910	4.0	5.1	6.0
840911	5.0	5.5	6.0
840912	5.0	5.3	5.5
840913	4.5	4.9	5.0
840914	4.5	4.9	5.5
840915	4.5	5.3	6.0
840916	4.5	5.6	6.5
840917	5.0	5.2	6.0
840918	5.0	5.0	5.0
840919	4.5	4.9	5.0
840920	4.0	4.5	5.0
840921	3.0	4.0	4.5
840922	3.0	3.8	4.5
840923	3.5	4.0	4.5
840924	4.0	4.5	5.0
840925	4.5	5.0	5.5
840926	4.5	5.0	5.5
840927	4.0	4.5	5.0
840928	3.5	4.2	5.0
840929	4.5	5.0	5.5
840930	5.0	5.2	5.5
Monthly Value	3.0	5.1	7.5

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	4.5	5.0	5.5
841002	4.5	4.8	5.0
841003	4.0	4.1	5.0
841004	2.5	3.0	4.0
841005	2.0	2.6	3.0
841006	3.0	3.2	3.5
841007	3.0	3.3	3.5
841008	3.0	3.3	3.5
841009	3.0	3.2	3.5
841010	2.0	2.4	3.0
841011	1.0	1.5	2.0
841012	1.5	2.1	2.5
841013	2.0	2.0	2.5
841014	.5	.8	2.0
841015	0.0	.2	.5
841016	0.0	-----	0.0
Monthly Value	0.0	-----	5.5

----- Data not available.

Appendix Table 30 Datapod temperature recorder data summary:
 surface water temperatures (C) recorded
 at Portage Creek - Site 2, RM 148.8, TRM 0.2,
 GC S32N10W25ADC.

May 1984

Surface Water Temperature (C)

Date	Min	Mean	Max
840525	4.5		7.5
840526	3.5	5.1	6.5
840527	4.0	5.7	8.0
840528	3.5	5.5	8.0
840529	3.5	4.9	6.0
840530	3.5	5.0	7.0
840531	3.5	6.3	9.0
Monthly Value	3.5		9.0

Data not available.

Appendix Table 30 (continued).

June 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840601	4.0	7.0	10.0
840602	4.0	6.7	9.5
840603	4.0	6.6	9.0
840604	3.5	6.4	9.0
840605	3.5	6.3	9.0
840606	4.0	5.3	7.0
840607	4.5	6.1	8.0
840608	4.5	6.6	9.0
840609	4.0	5.8	7.5
840610	4.5	6.4	8.5
840611	4.0	6.9	9.5
840612	5.0	6.5	8.0
840613	5.0	5.8	7.0
840614	3.5	6.1	8.5
840615	4.5	5.4	7.0
840616	4.5	5.0	5.5
840617	4.5	6.2	8.5
840618	4.0	6.9	10.0
840619	4.5	7.6	11.0
840620	5.0	7.3	9.5
840621	5.0	7.7	11.0
840622	5.5	8.2	11.0
840623	5.0	6.9	9.0
840624	5.0	7.2	9.0
840625	5.5	8.3	11.0
840626	6.0	7.3	9.0
840627	6.0	6.6	7.5
840628	6.0	7.8	10.0
840629	7.0	8.2	9.0
840630	6.5	8.9	11.5
Monthly Value	3.5	6.8	11.5

Data not available.

Appendix Table 30 (continued).

July 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840701	7.0	9.1	11.0
840702	7.0	8.1	9.0
840703	7.0	8.7	11.0
840704	7.5	9.5	11.5
840705	8.0	9.7	11.5
840706	8.0	9.4	10.5
840707	9.5		9.5
840708	7.5		9.5
840709	7.5	8.9	10.5
840710	8.0	9.2	10.0
840711	7.5	9.5	11.5
840712	7.0	9.3	11.0
840713	8.5	9.8	11.0
840714	8.0	9.5	10.5
840715	8.5	10.0	12.0
840716	9.0	10.6	12.0
840717	8.5	9.3	11.0
840718	8.0	8.3	8.5
840719	7.5	7.6	8.0
840720	7.0	7.3	7.5
840721	6.5	7.0	7.5
840722	6.5	8.1	10.0
840723	7.0	9.3	12.0
840724	8.0	9.7	11.5
840725	8.5	8.9	10.5
840726	7.5	8.0	9.0
840727	7.5	8.6	10.5
840728	8.0	8.6	9.5
840729	7.5	7.9	8.5
840730	7.0	8.4	10.0
840731	7.5	8.4	9.0
Monthly Value	6.5	8.8	12.0

Data not available.

Appendix Table (continued).

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	7.5	8.1	8.5
840802	8.0	8.6	9.5
840803	8.0	9.2	10.5
840804	8.5	9.8	11.0
840805	9.0	9.8	10.5
840806	9.0	10.5	12.5
840807	8.0	10.3	12.5
840808	9.5	10.6	11.5
840809	9.0	10.1	11.0
840810	8.5	9.5	10.5
840811	8.0	9.8	11.5
840812	6.5	9.2	11.0
840813	7.0	9.5	11.5
840814	7.0	9.3	11.5
840815	7.5	10.1	12.0
840816	8.5	10.2	11.5
840817	9.5	9.9	10.5
840818	9.0	9.4	10.0
840819	8.0	8.7	9.5
840820	8.0	8.5	9.0
840821	7.5	8.3	9.0
840822	7.5	8.4	9.5
840823	7.5	8.1	8.5
840824	6.5	7.0	8.0
840825	6.0	6.5	7.0
840826	5.0	5.7	7.0
840827	4.0	5.3	7.0
840828	3.5	5.2	7.0
840829	3.5	5.3	7.0
840830	3.5	5.1	6.5
840831	4.5	5.4	6.5
Monthly Value	3.5	8.4	12.5

Data not available.

Appendix Table 30 (continued).

September 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840901	4.0	5.6	7.5
840902	4.5	6.2	8.0
840903	4.0	5.7	7.0
840904	5.0	6.6	8.0
840905	6.5	7.4	9.0
840906	6.5	7.5	8.5
840907	6.5	7.3	8.0
840908	5.5	7.0	8.5
840909	4.5	6.5	8.0
840910	4.5	6.4	7.5
840911	4.5	6.0	7.5
840912	5.5	6.8	8.0
840913	6.5	7.0	7.5
840914	5.0	6.5	8.0
840915	6.5	7.3	8.5
840916	5.5	6.7	8.0
840917	5.0	6.4	7.0
840918	6.0	6.5	7.0
840919	5.5	6.0	6.5
840920	5.0	5.7	6.5
840921	3.0	4.4	5.5
840922	3.0	4.3	5.5
840923	3.5	4.7	5.5
840924	4.0	5.2	6.0
840925	5.0	5.9	6.5
840926	5.5	5.9	6.5
840927	4.0	5.1	6.0
840928	3.5	4.6	5.5
840929	5.5	6.0	6.5
840930	5.5	6.2	7.0
Monthly Value	3.0	6.1	9.0

Data not available.

Appendix Table 30 (continued).

October 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
841001	5.0	5.8	6.5
841002	5.5	5.8	6.5
841003	4.0	4.8	5.5
841004	2.0	3.1	4.5
841005	2.5	3.2	4.0
841006	3.5	4.0	5.0
841007	3.0	3.6	4.5
841008	3.5	4.2	5.0
841009	3.5	4.3	5.0
841010	1.5	2.4	4.0
841011	1.0	1.8	3.0
841012	3.0	3.2	3.5
841013	2.5	3.0	3.5
841014	.5	1.4	2.5
841015	.5		1.0
Monthly Value	.5		6.5

Data not available.

Appendix Table 3| Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Fog Creek, RM 176.7, TRM 0.1, GC S31N06W15DBB.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840523	4.0	-----	6.0
840524	2.5	3.6	5.0
840525	3.0	3.9	5.5
840526	3.0	4.2	5.5
840527	3.0	4.5	5.5
840528	2.0	-----	4.0
Monthly Value	2.0	-----	6.0

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840604	3.5	6.5	9.5
840605	4.0	6.6	9.0
840606	5.5	6.0	7.0
840607	4.5	6.0	7.5
840608	4.5	7.1	9.5
840609	5.0	6.5	8.0
840610	4.5	6.7	9.0
840611	4.5	7.3	9.5
840612	6.5	7.5	8.5
840613	4.5	5.7	7.5
840614	3.5	6.0	8.5
840615	5.0	5.5	7.0
840616	4.0	4.5	5.0
840617	4.0	5.9	8.0
840618	4.5	7.8	11.0
840619	5.5	8.7	11.5
840620	6.5	8.3	10.0
840621	6.0	9.0	11.5
840622	7.0	9.7	12.0
840623	7.0	8.1	9.0
840624	6.0	8.3	10.5
840625	7.0	9.5	12.0
840626	8.0	9.1	10.5
840627	7.0	7.4	8.5
840628	6.0	8.4	11.0
840629	8.0	8.6	9.5
840630	7.0	9.2	11.0
Monthly Value	3.5	7.4	12.0

----- Data not available.

Appendix Table 31

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	7.0	9.3	11.0
840702	7.0	8.0	9.0
840703	7.0	9.0	11.0
840704	8.0	9.7	11.5
840705	7.5	9.6	11.5
840706	8.0	9.7	11.0
840707	7.0	9.3	11.0
840708	7.5	8.8	10.0
840709	7.5	8.9	10.5
840710	8.0	9.2	10.5
840711	8.0	9.2	11.0
840712	6.5	9.0	11.0
840713	8.0	9.3	11.0
840714	7.5	8.5	9.5
840715	8.0	9.2	11.0
840716	8.0	9.5	11.0
840717	8.0	8.2	9.0
840718	7.0	7.6	8.5
840719	7.0	7.7	8.5
840720	7.0	7.3	7.5
840721	7.0	7.8	9.0
840722	8.0	8.6	9.5
840723	7.5	9.9	12.0
840724	9.0	9.9	10.5
840725	9.0	9.2	9.5
840726	8.0	8.3	8.5
840727	7.5	9.3	11.5
840728	8.5	9.3	10.0
840729	8.0	8.8	9.5
840730	7.5	8.8	10.5
840731	8.0	8.8	9.5
Monthly Value	6.5	8.9	12.0

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	8.0	8.5	9.0
840802	8.0	8.8	9.5
840803	8.5	9.6	11.0
840804	9.0	11.0	13.5
840805	10.0	10.6	12.0
840806	9.5	11.2	13.0
840807	9.0	11.4	13.5
840808	10.0	11.5	13.0
840809	10.0	10.8	12.0
840810	8.5	9.4	10.5
840811	7.5	9.6	11.5
840812	6.5	8.7	11.0
840813	7.0	9.0	11.5
840814	6.5	9.0	11.0
840815	7.5	10.1	12.5
840816	8.0	10.3	12.0
840817	9.0	9.9	10.5
840818	8.5	9.0	9.5
840819	8.0	8.8	9.5
840820	8.5	9.0	9.5
840821	8.0	8.8	9.5
840822	8.0	9.0	10.0
840823	8.0	8.7	9.5
840826	5.5		7.0
840827	4.0	5.3	6.5
840828	3.5	5.0	6.5
840829	3.5	4.9	6.5
840830	3.5	4.7	6.0
840831	4.5	5.1	5.5
Monthly Value	3.5	8.8	13.5

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	3.5	5.3	7.0
840902	4.0	5.6	7.0
840903	3.5	5.3	6.5
840904	5.0	6.5	8.0
840905	6.0	7.0	8.5
840906	6.5	7.0	7.5
840907	6.0	6.8	7.5
840908	4.5	6.0	7.5
840909	4.0	5.7	7.5
840910	4.0	5.6	7.0
840911	3.5	5.0	6.5
840912	4.5	5.5	6.5
840913	5.0	5.6	6.0
840914	5.0	5.2	5.5
840915	4.5	5.1	6.0
840916	3.0	4.5	5.5
840917	3.5	4.7	5.5
840918	4.0	-----	4.5
840928	3.5	-----	4.0
840929	3.5	3.9	4.5
840930	3.5	4.2	4.5
Monthly Value	3.0	-----	8.5

----- Data not available.

Appendix Table 3\

continued

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	3.5	3.8	4.0
841002	2.5	3.3	4.0
841003	1.5	2.6	3.0
841004	1.0	1.6	2.0
841005	1.5	2.1	2.5
841006	1.5	2.2	3.0
841007	2.0	2.5	3.0
841008	2.0	2.7	3.0
841009	.5	2.1	3.0
841010	.5	1.0	1.5
841011	.5	1.3	1.5
841012	1.0	1.7	2.0
841013	.5	.9	1.5
841014	0.0	.5	1.0
841015	0.0	-----	0.0
Monthly Value	0.0	-----	4.0

----- Data not available.

Appendix Table 32 Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Tsusena Creek, RM 181.8, TRM 0.1,
 GC S32N06W36ADB.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840523	2.5	-----	4.5
840524	2.0	2.8	4.0
840525	1.5	3.0	4.5
840526	2.0	3.1	4.0
840527	2.0	3.2	4.0
840528	2.0	4.3	6.5
840529	2.5	3.9	5.0
840530	3.0	4.3	5.5
840531	2.0	4.6	7.0
Monthly Value	1.5	--- --	7.0

----- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	3.5	5.6	8.5
840602	2.5	5.4	8.0
840629	7.5	-----	9.0
840630	6.5	8.7	11.0
Monthly Value	2.5	-----	11.0

----- Data not available.

July 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840701	6.5	8.9	11.0
840702	7.5	8.4	9.5
840703	7.5	9.2	11.0
840704	8.0	9.5	11.0
840705	7.5	9.5	11.0
840706	8.0	9.5	11.0
840707	7.0	8.6	10.0
840708	7.0	8.5	10.0
840709	7.5	8.9	10.5
840710	8.0	9.4	10.5
840711	8.0	9.9	12.0
840712	7.0	9.3	11.5
840713	8.5	9.8	11.5
840714	8.0	9.0	10.0
840715	8.0	9.5	11.0
840716	8.5	10.1	11.5
840717	8.0	8.9	10.5
840718	7.5	7.8	8.0
840719	7.0	7.5	8.0
840720	7.0	7.3	8.0
840721	6.5	7.2	8.0
840722	7.0	8.1	10.0
840723	7.0	9.3	11.5
840724	7.5	9.6	11.5
840725	8.0	8.9	10.5
840726	7.0	7.5	8.0
840727	7.0	8.9	11.0
840728	8.0	8.6	9.5
840729	7.5	8.0	8.5
840730	7.0	8.5	10.5
840731	7.5	8.5	9.0
Monthly Value	6.5	8.8	12.0

----- Data not available.

August 1984			
Surface Water Temperature (C)			
Date	Min	Mean	Max
840801	7.5	8.0	8.5
840802	7.5	8.5	10.0
840803	8.0	9.4	10.5
840804	8.0	10.5	13.5
840805	9.5	10.1	11.5
840806	8.5	10.2	12.0
840807	8.5	10.7	13.5
840808	8.5	10.5	12.5
840809	8.5	9.5	10.5
840810	8.0	9.0	10.0
840811	7.5	9.0	11.0
840812	5.5	8.2	10.5
840813	6.5	8.6	11.0
840814	6.0	8.5	11.0
840815	7.0	9.3	11.5
840816	7.5	9.3	11.0
840817	8.5	9.5	10.0
840818	8.0	8.6	9.5
840820	7.0	8.1	9.0
840821	6.5	7.5	8.0
840822	6.5	7.8	9.0
840823	7.0	7.5	8.0
840826	5.5	-----	7.0
840827	4.0	5.6	7.5
840828	4.0	5.4	7.0
840830	4.5	5.5	6.5
840831	5.0	5.7	6.5
Monthly Value	4.0	8.3	13.5

----- Data not available.

Appendix Table 32

continued

September 1934			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840901	4.5	6.2	8.0
840902	5.0	6.6	8.5
840903	4.5	6.2	7.5
840904	6.0	7.0	8.0
840905	6.5	7.6	8.5
840906	7.0	7.7	8.5
840907	6.5	7.5	8.5
840908	5.5	6.9	8.5
840909	5.0	6.5	8.5
840910	4.5	6.3	7.5
840911	4.5	6.1	7.5
840912	5.0	6.5	8.0
840913	6.0	6.5	7.0
840914	5.0	5.9	6.5
840915	5.5	6.4	7.5
840916	4.5	5.8	6.5
840917	4.0	4.9	5.5
840918	5.0	5.3	5.5
840919	4.5	5.0	5.5
840920	4.0	4.6	5.5
840921	2.5	3.7	5.0
840922	2.0	3.6	5.0
840923	3.0	3.8	4.5
840924	3.5	4.3	5.0
840925	4.5	4.9	5.5
840926	4.0	4.5	5.0
840927	3.0	3.7	4.5
840928	2.5	3.5	4.5
840929	4.0	4.5	5.0
840930	4.5	4.9	5.5
Monthly Value	2.0	5.6	8.5

----- Data not available.

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	4.0	4.6	5.5
841002	3.5	4.2	5.0
841003	3.0	3.7	4.5
841004	1.0	2.2	3.5
841005	1.5	2.1	2.5
841006	2.0	2.6	3.0
841007	2.0	2.6	3.0
841008	3.0	3.2	3.5
841009	3.0	3.2	3.5
841010	.5	1.5	2.5
841011	.5	1.2	2.0
841012	2.0	2.1	2.5
841013	1.5	2.0	2.5
841014	.5	.9	1.5
841015	0.0	-----	1.0
Monthly Value	0.0	-----	5.5

----- Data not available.

Appendix Table 33

Ryan temperature recorder data summary:
 surface water temperatures (C) recorded at
 Deadhorse Creek, RM 120.9, TRM 1.0,
 CC S29N04W14BCB.

May 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840501	.5	.7	1.0
840502	.5	.9	1.0
840503	1.0	1.2	1.5
840504	1.0	1.2	1.5
840505	1.0	1.2	1.5
840506	1.0	1.3	1.5
840507	.5	1.1	1.5
840508	1.0	1.4	2.0
840509	1.0	1.3	2.0
840510	1.0	1.5	2.5
840511	1.0	1.6	2.5
840512	1.0	1.8	2.5
840513	1.5	2.2	3.0
840514	1.5	2.2	3.5
840515	1.5	2.5	3.5
840516	2.0	2.8	4.0
840517	2.0	3.0	4.0
840518	2.5	3.1	4.0
840519	2.5	3.3	4.5
840520	2.5	3.2	4.0
840521	2.5	3.3	4.0
840522	3.0	3.2	3.5
840523	2.0	3.2	5.0
840524	2.5	3.2	4.0
840525	2.5	3.0	4.0
840526	2.5	2.8	3.5
840527	2.0	2.9	4.0
840528	2.0	3.2	5.0
840529	2.5	3.4	4.5
840530	3.0	3.7	4.5
840531	2.5	4.1	5.5
Monthly Value	.5	2.4	5.5

--- Data not available.

June 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840601	3.0	4.3	6.0
840602	3.0	4.4	6.0
840603	3.5	4.6	6.0
840604	3.0	4.7	6.5
840605	3.5	5.4	7.0
840606	4.0	4.8	5.0
840607	4.0	5.0	6.0
840608	4.5	5.8	7.0
840609	5.5	5.8	6.0
840610	5.5	6.5	8.0
840611	6.0	7.5	8.5
840612	7.0	7.8	8.5
840613	7.0	7.5	8.0
840614	6.0	7.4	8.5
840615	6.5	6.6	7.0
840616	6.0	6.0	6.0
840617	6.0	6.7	7.5
840618	6.0	7.6	9.0
840619	7.0	8.2	9.0
840620	8.0	8.6	9.5
840621	7.5	9.0	10.0
840622	8.5	9.4	10.5
840623	8.0	8.5	9.0
840624	7.5	8.5	9.0
840625	8.5	9.0	9.5
840626	8.0	8.5	9.0
840627	8.5	8.6	9.0
840628	8.5	9.0	9.5
840629	9.0	9.5	10.0
840630	9.0	9.6	10.5
Monthly Value	3.0	7.2	10.5

----- Data not available.

Appendix Table 33

continued

July 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840701	9.0	9.7	10.5
840702	9.0	9.1	9.5
840703	9.0	9.3	10.0
840704	9.0	9.7	10.5
840705	9.5	10.1	10.5
840706	9.5	10.1	10.5
840707	9.0	9.7	10.0
840708	9.5	9.7	10.0
840709	9.0	9.3	9.5
840710	9.0	9.3	9.5
840711	9.0	9.3	10.0
840712	8.5	9.0	9.5
840713	9.0	9.0	9.0
840714	8.5	8.9	9.5
840715	9.0	9.5	10.0
840716	9.5	10.0	10.5
840717	9.5	9.5	9.5
840718	9.0	9.0	9.5
840719	8.5	8.7	9.0
840720	8.5	8.5	8.5
840721	8.5	8.7	9.0
840722	9.0	9.3	10.0
840723	9.0	9.9	10.5
840724	10.0	10.3	10.5
840725	9.5	10.0	10.0
840726	9.5	-----	9.5
840727	9.5	10.0	10.5
840728	9.5	9.8	10.0
840729	8.5	9.0	9.5
840731	9.0	9.2	9.5
Monthly Value	8.5	9.4	10.5

----- Data not available.

August 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840801	8.5	8.7	9.0
840802	8.5	8.9	9.5
840803	9.0	9.3	9.5
840804	9.0	10.0	11.0
840805	10.0	10.0	10.0
840806	10.0	10.3	11.0
840807	9.5	10.2	10.5
840808	10.0	10.0	10.5
840809	10.0	10.3	10.5
840810	9.0	9.6	10.0
840811	9.5	-----	10.0
Monthly Value	8.5	-----	11.0

----- Data not available.

September 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
840914	6.5	-----	7.0
840915	6.5	6.6	7.0
840916	5.5	6.2	6.5
840917	6.0	6.3	6.5
840918	6.5	6.5	6.5
840919	5.5	6.3	6.5
840920	5.0	5.2	5.5
840921	4.0	4.3	4.5
840922	4.0	4.5	5.0
840923	4.5	5.1	5.5
840924	5.5	5.7	6.0
840925	6.0	6.2	6.5
840926	5.5	5.7	6.0
840927	5.0	5.3	5.5
840928	4.5	5.0	5.5
840929	5.5	6.0	6.5
840930	6.0	6.1	6.5
Monthly Value	4.0	-----	7.0

----- Data not available.

Appendix Table 33

continued

October 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841001	5.5	5.8	6.0
841002	5.5	5.8	6.0
841003	4.5	4.9	5.5
841004	3.5	3.7	4.5
841005	3.0	3.5	4.0
841006	4.0	4.2	4.5
841007	4.0	4.3	5.0
841008	4.5	4.5	4.5
841009	3.5	4.0	4.0
841010	2.5	2.7	3.5
841011	2.0	2.2	2.5
841012	2.0	2.4	2.5
841013	2.0	2.6	3.0
841014	1.0	1.2	2.0
841015	.5	.6	1.0
841016	.5	.5	.5
841017	.5	.5	.5
841018	0.0	.4	.5
841019	0.0	.1	.5
841020	0.0	.3	.5
841021	.5	.7	1.0
841022	1.0	1.2	1.5
841023	1.0	1.3	1.5
841024	0.0	.4	1.0
841025	0.0	0.0	0.0
841026	0.0	0.0	0.0
841027	0.0	0.0	0.0
841028	0.0	0.0	0.0
841029	0.0	0.0	0.0
841030	0.0	0.0	0.0
841031	0.0	0.0	0.0
Monthly Value	0.0	1.9	6.0

----- Data not available.

November 1984			
Date	Surface Water Temperature (C)		
	Min	Mean	Max
841101	0.0	0.0	0.0
841102	0.0	0.0	0.0
841103	0.0	0.0	0.0
841104	0.0	0.0	0.0
841105	0.0	0.0	0.0
841106	0.0	0.0	0.0
841107	0.0	0.0	0.0
841108	0.0	0.0	0.0
841109	0.0	0.0	0.0
841110	0.0	0.0	0.0
841111	0.0	0.0	0.0
841112	0.0	0.0	0.0
841113	0.0	0.0	0.0
841114	0.0	0.0	0.0
841115	0.0	0.0	0.0
841116	0.0	0.0	0.0
841117	0.0	0.0	0.0
841118	0.0	0.0	0.0
841119	0.0	0.0	0.0
841120	0.0	0.0	0.0
841121	0.0	0.0	0.0
841122	0.0	0.0	0.0
841123	0.0	0.0	0.0
841124	0.0	0.0	0.0
841125	0.0	0.0	0.0
841126	0.0	0.0	0.0
841127	0.0	0.0	0.0
841128	0.0	0.0	0.0
841129	0.0	-----	0.0
Monthly Value	0.0	0.0	0.0

Data not available.

Appendix Table 34

Datapod temperature recorder data summary:
intragravel water temperatures (C) recorded
at Fourth of July Creek and Plume - Site 1,
RM 131.1, GC S30N03W03DAC.

May 1984						
Date	Plume intragravel			Creek intragravel		
	Min	Mean	Max	Min	Mean	Max
840501				2.1	2.1	2.2
840502				2.1	2.1	2.2
840503				2.1	2.2	2.2
840504				2.1	2.4	2.7
840505				2.4	2.9	3.6
840506				2.5	3.1	3.8
840507				2.4	3.1	4.2
840508				2.6	3.2	4.1
840509				2.6	3.3	4.3
840510				3.0	3.2	4.0
840511				3.3	3.4	3.5
840512				3.2	3.3	3.5
840513				3.4	3.5	3.8
840514				3.8	3.9	4.0
840515				3.8	4.0	4.1
840516				3.5	3.6	3.9
840517				3.5	3.7	3.9
840518				3.9	4.3	5.0
840519				4.7	5.0	5.5
840520	-.1		0.0	4.9	5.3	6.1
840521	0.0	.1	.2	5.4	5.7	6.2
840522	.1	.2	.4	5.3	5.7	6.1
840523	.3	.3	.4	4.9	5.2	5.5
840524	.4	.5	.7	5.0	5.2	5.5
840525	.7	1.0	1.2	5.2	5.3	5.4
840526	1.2	1.4	1.4	5.3	5.4	5.5
840527	1.4	1.6	1.8	5.4	5.7	6.2
840528	1.8	2.2	2.6	5.6	6.3	7.3
840529	2.6	2.9	3.1	6.2	7.1	8.0
840530	3.1	3.4	3.6	6.4	7.2	8.3
840531	3.6	3.8	4.0	6.2	7.8	10.3
Monthly Value	-.1		4.0	2.1	4.3	10.3

----- Data not available.

Appendix Table 34 continued

June 1984						
Date	Plume Intragravel			Creek intragravel		
	Min	Mean	Max	Min	Mean	Max
840601	3.9	4.2	4.3	6.7	8.7	10.8
840602	4.3	4.8	5.1	6.6	8.5	10.7
840603	5.1	5.5	5.6	7.1	8.8	10.9
840604	5.3	5.5	5.5	7.8	9.4	11.0
840605	5.3	5.4	5.5	8.4	9.9	11.3
840606	5.4	5.6	5.6	9.3	10.1	11.3
840607	5.6	5.8	5.9	8.8	9.3	10.4
840608	5.8	6.0	6.0	9.5	10.3	11.1
840609	5.6	5.7	5.9	10.6	11.1	11.7
840610	5.1	5.4	5.6	10.3	10.6	10.8
840611	4.7	5.0	5.2	10.7	11.2	12.0
840612	4.7	4.8	4.8	11.9	12.5	12.9
840613	4.8	5.0	5.0	11.7	12.7	13.3
840614	4.5	4.9	5.2	10.7	11.0	11.7
840615	3.5	4.0	4.5	9.6	10.3	10.8
840616	3.2	-----	3.5	9.4	-----	9.7
Monthly Value	3.2	-----	6.0	6.6	-----	13.3

----- Data not available.

Appendix Table 35

Datapod temperature recorder data summary:
intragravel and surface water temperatures
(C) recorded at Indian River - Site 3,
RM 138.6, TRM 0.2, GC S31N02W09CAB.

May 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840522	-----	-----	-----	4.8	-----	5.4
840523	2.8	3.5	4.5	2.4	4.7	7.8
840524	3.7	4.1	4.5	3.7	5.1	6.8
840525	3.7	4.0	4.5	4.0	5.3	7.2
840526	3.9	4.4	4.8	4.0	5.5	7.4
840527	4.1	4.7	5.1	3.7	5.6	7.0
840528	4.0	4.8	6.0	3.4	5.7	8.7
840529	4.2	5.0	6.0	3.7	5.4	7.7
840530	4.2	5.0	6.2	4.2	5.5	6.9
840531	3.9	6.0	9.2	4.0	6.4	9.9
Monthly Value	2.8	-----	9.2	2.4	-----	9.9

----- Data not available.

Appendix Table 35 continued

June 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840601	4.6	6.9	9.5	4.7	7.3	10.3
840602	5.5	6.8	8.7	4.4	7.2	10.4
840603	5.6	6.5	7.5	4.5	7.1	9.8
840604	-----	-----	-----	4.2	6.9	9.9
Monthly Value	4.6	-----	9.5	4.2	-----	10.4

----- Data not available.

Appendix Table 35 continued

August 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840811	8.4	9.8	11.9	9.1	10.6	12.7
840812	7.3	9.4	11.6	7.9	10.1	12.4
840813	7.3	9.4	11.8	7.9	10.1	12.5
840814	7.4	9.5	11.7	8.0	10.1	12.4
840815	7.6	9.7	12.3	8.2	10.4	13.0
840816	8.2	10.0	12.0	8.8	10.6	12.7
840817	9.3	9.9	11.3	9.9	10.6	11.8
840818	8.6	9.2	9.8	9.4	9.9	10.7
840819	8.4	8.8	9.5	9.0	9.5	10.1
840820	8.2	8.7	9.3	8.8	9.4	10.1
840821	7.9	8.6	9.2	8.6	9.2	9.9
840822	7.9	8.6	9.3	8.6	9.3	10.1
840823	8.2	8.6	9.1	8.8	9.1	9.8
840824	7.3	7.8	8.6	7.9	8.3	9.1
840825	7.2	7.6	7.9	7.6	8.1	8.5
840826	6.7	7.1	7.7	6.1	7.0	8.0
840827	6.1	6.7	7.6	5.3	6.4	7.9
840828	5.6	6.1	6.7	4.8	6.3	8.0
840829	5.5	6.0	6.6	5.0	6.4	8.0
840830	5.1	5.8	6.5	5.0	6.3	7.7
840831	5.5	5.9	6.3	5.8	6.5	7.4
Monthly Value	5.1	8.2	12.3	4.8	8.8	13.0

----- Data not available.

September 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840901	5.3	6.0	7.0	5.2	6.8	8.7
840902	5.5	6.3	7.2	5.4	7.0	8.8
840903	5.5	6.4	7.1	5.4	7.0	8.5
840904	6.0	6.7	7.8	6.3	7.6	9.3
840905	6.6	7.4	8.2	6.9	8.1	9.7
840906	7.0	7.7	8.6	7.2	8.3	10.1
840907	6.9	7.5	8.3	7.2	8.1	9.1
840908	6.6	7.4	8.2	6.8	8.0	9.3
840909	5.7	6.9	8.1	5.9	7.5	9.1
840910	5.6	6.9	8.0	5.8	7.5	9.2
840911	5.6	6.8	7.8	5.7	7.4	8.9
840912	6.1	6.8	7.6	6.6	7.5	8.7
840913	6.7	7.0	7.5	7.2	7.6	8.2
840914	5.8	6.6	7.6	6.2	7.3	8.5
840915	6.4	7.2	8.3	7.0	8.0	9.7
840916	5.9	7.1	8.2	6.1	7.7	9.2
840917	5.7	6.7	7.7	6.1	7.3	8.3
840918	6.5	6.8	7.1	7.2	7.6	7.9
840919	6.1	6.4	6.8	6.8	7.1	7.4
840920	5.3	6.0	7.0	6.0	6.8	7.9
840921	4.0	5.2	6.5	4.6	5.9	7.4
840922	3.8	5.0	6.4	4.4	5.8	7.4
840923	4.3	5.3	6.3	5.0	6.1	7.3
840924	5.1	5.8	6.5	5.8	6.6	7.4
840925	5.6	6.1	6.8	6.3	7.0	7.8
840926	5.5	6.2	7.0	5.9	6.9	8.0
840927	4.8	5.7	6.8	5.2	6.3	7.6
840928	4.2	5.2	6.3	4.6	5.4	6.9
840929	5.6	6.0	6.5	5.6	6.0	6.6
840930	5.7	6.3	7.0	5.6	6.3	7.2
Monthly Value	3.8	6.4	8.6	4.4	7.1	10.1

----- Data not available.

Appendix Table 35 continued

October 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
841001	5.3	6.1	6.8	5.0	6.0	6.7
841002	5.5	5.9	6.6	5.4	5.9	6.8
841003	4.5	5.4	6.3	4.3	5.2	6.1
841004	3.2	4.2	5.6	2.8	4.0	5.3
841005	3.4	4.0	4.8	3.3	4.0	5.0
841006	3.8	4.4	5.2	3.8	4.5	5.6
841007	3.8	4.4	5.2	3.6	4.4	5.4
841008	4.1	4.5	5.0	4.0	4.5	5.1
841009	4.1	4.5	5.1	4.0	4.5	5.5
841010	2.7	3.7	5.0	2.3	3.4	4.9
841011	2.2	3.0	3.8	1.8	2.9	3.8
841012	3.2	3.6	4.3	3.4	3.8	4.9
841013	3.1	3.5	4.0	3.0	3.5	4.2
841014	1.7	2.5	3.6	1.4	2.2	3.4
841015	1.4	1.9	2.4	1.1	1.7	2.4
841016	1.4	2.0	3.1	1.4	2.0	3.1
841017	.6	1.5	2.3	.6	1.5	2.3
841018	.4	1.1	2.0	.4	1.1	2.0
841019	.3	1.1	1.6	.4	1.1	1.6
841020	.9	1.2	1.7	.9	1.2	1.8
841021	1.4	1.9	2.6	1.5	1.9	2.6
841022	2.4	2.9	3.6	2.4	2.9	3.6
841023	2.1	2.6	3.4	2.1	2.6	3.4
841024	.4	1.2	2.1	.5	1.3	2.1
841025	.1	.4	.8	.2	.5	.9
841026	.1	.2	.6	.1	.3	.6
841027	.1	.2	.3	.1	.2	.4
841028	0.0	.1	.2	.1	.2	.3
841029	0.0	.1	.3	.1	.2	.4
841030	0.0	.1	.1	.1	.2	.2
841031	.1	.1	.2	0.0	.1	.2
Monthly Value	0.0	2.5	6.8	0.0	2.5	6.8

----- Data not available.

Appendix Table 36

Datapod temperature recorder data summary:
intragravel and surface water temperatures
(C) recorded at Indian River - Site 4,
RM 138.6, TRM 0.2, GC S3|N02W09CAB.

September 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
840928	5.8	-----	6.2	5.7	-----	6.0
840929	5.6	6.0	6.6	5.5	5.8	6.5
840930	5.7	6.4	7.2	5.5	6.2	7.0
Monthly Value	5.6	-----	7.2	5.5	-----	7.0

----- Data not available.

Appendix Table 36 continued

October 1984						
Date	Intragravel			Surface water		
	Min	Mean	Max	Min	Mean	Max
841001	5.1	6.0	6.9	4.9	5.9	6.7
841002	5.5	6.0	6.9	5.3	5.8	6.8
841003	4.6	5.4	6.2	4.5	5.3	6.0
841004	3.3	4.4	5.5	3.2	4.2	5.3
841005	3.6	4.3	5.1	3.5	4.1	5.0
841006	4.0	4.7	5.6	3.9	4.5	5.5
841007	3.9	4.6	5.4	3.7	4.4	5.2
841008	4.2	4.7	5.2	4.1	4.5	5.1
841009	4.2	4.7	5.6	4.1	4.7	5.4
841010	2.9	3.8	5.0	2.7	3.6	4.8
841011	2.5	3.3	3.9	2.3	3.1	3.8
841012	3.5	4.0	5.0	3.4	3.8	4.9
841013	3.3	3.7	4.3	3.1	3.5	4.1
841014	2.0	2.7	3.6	1.8	2.5	3.4
841015	1.8	2.3	2.8	1.6	2.2	2.6
841016	1.9	2.4	3.3	1.7	2.2	3.2
841017	1.1	1.9	2.5	1.0	1.7	2.4
841018	1.1	1.6	2.4	.9	1.5	2.3
841019	1.1	1.6	2.0	.9	1.5	1.8
841020	1.4	1.6	2.0	1.2	1.5	1.9
841021	1.6	2.0	2.5	1.4	1.9	2.3
841022	2.3	2.7	3.3	2.2	2.5	3.2
841023	2.2	2.5	3.2	2.0	2.4	3.0
841024	1.0	1.7	2.3	.9	1.5	2.1
841025	.8	1.0	1.4	.6	.9	1.3
841026	.8	1.1	1.6	.6	1.0	1.5
841027	.8	1.0	1.2	.6	.9	1.1
841028	.5	.7	.9	.2	.6	.8
841029	.4	.5	.6	.2	.3	.5
841030	.4	.5	.6	.2	.4	.5
841031	.3	.4	.5	.1	.2	.3
Monthly Value	.3	2.8	6.9	.1	2.7	6.8

----- Data not available.

3.4 Tables 37 to 56 - Water year weekly minimum, mean and maximum temperatures recorded at mainstem Susitna River sites during the 1984 open water season.

Appendix Table 37

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River at RM 18.5, GC S16N07W15CDC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	7.5	-----	8.5	32	3
35	840527	7.0	8.3	11.0	84	7
36	840603	7.5	9.6	11.0	84	7
37	840610	8.5	9.8	11.5	84	7
38	840617	8.0	10.0	11.5	84	7
39	840624	10.0	-----	11.0	6	1
41	840708	8.5	9.3	10.5	76	7
42	840715	7.0	-----	8.5	40	4
43	840722	7.5	8.7	10.0	84	7
44	840729	7.5	7.9	9.5	84	7
45	840805	8.5	9.2	9.5	83	7
46	840812	9.0	-----	9.0	1	1
47	840819	7.0	7.3	8.0	82	7
48	840826	6.0	-----	7.5	61	6
50	840909	6.5	-----	7.5	14	2
3	841015	0.0	-----	0.0	55	5
4	841022	0.0	-----	0.0	29	3

----- Data not available.

Appendix Table 38

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above the Yentna River, RM 29.5, GC S17N06W07CAD. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	7.5	-----	8.5	31	3
35	840527	7.0	8.5	11.5	84	7
36	840603	9.0	10.4	12.0	84	7
37	840610	8.0	10.4	12.0	84	7
38	840617	7.5	11.2	14.0	84	7
39	840624	10.0	11.3	13.0	81	7
40	840701	9.5	11.0	12.5	84	7
41	840708	10.5	-----	11.5	9	1
48	840826	6.5	-----	7.5	12	1
49	840902	7.0	8.3	9.5	84	7
50	840909	7.0	8.1	9.0	84	7
51	840916	5.5	7.1	8.0	84	7
52	840923	5.5	6.2	6.5	95	8
1	841001	2.0	-----	6.5	31	3

----- Data not available.

Appendix Table 39

Weekly minimum, mean and maximum surface surface water temperatures (C) recorded at Mainstem Susitna River above the Yentna River, RM 29.5, GC S17N06W07CAD. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calender Date	Weekly value (C)			n	No. of days in Record
		Min	Mean	Max		
46	840812	10.2	-----	12.7	34	5
47	840819	8.0	9.3	10.4	56	7
48	840826	6.2	7.4	9.0	48	6
50	840909	6.9	-----	8.3	13	4
51	840916	6.3	-----	8.9	20	5

----- Data not available.

Appendix Table 40

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above the Deshka River, RM 41.1, GC S19N06W26CBC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	7.5	-----	9.5	31	3
35	840527	6.5	8.9	12.0	84	7
38	840603	8.5	10.5	12.5	81	7
39	840624	10.5	-----	12.0	15	2
40	840701	10.0	-----	13.5	42	4
43	840722	9.5	-----	13.0	52	5
44	840729	9.0	10.2	12.0	84	7
45	840805	10.0	11.7	13.5	84	7
46	840812	10.0	11.0	12.0	84	7
47	840819	8.0	8.9	10.0	84	7
48	840826	6.0	7.0	8.0	84	7
49	840902	7.0	8.2	9.5	84	7
50	840909	6.5	7.6	9.0	82	7
51	840916	5.0	6.6	8.0	84	7
52	840923	5.0	5.5	7.0	92	8
1	841001	2.5	4.1	5.5	84	7
2	841008	1.5	2.3	3.0	84	7
3	841015	0.0	.1	1.5	84	7
4	841022	0.0	0.0	0.0	84	7
5	841029	0.0	0.0	0.0	84	7
6	841105	0.0	0.0	0.0	84	7
7	841112	0.0	0.0	0.0	84	7
8	841119	0.0	0.0	0.0	84	7
9	841126	0.0	-----	0.0	42	4

Data not available.

Appendix Table 4/

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above the Kashwitna River, RM 61.2, GC S21N05W13ABA. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	7.0	----	9.5	29	3
35	840527	6.5	8.8	12.0	84	7
36	840603	8.0	10.3	12.0	84	7
37	840610	8.0	10.3	12.5	84	7
38	840617	7.5	11.6	14.0	84	7
39	840624	10.0	11.6	12.5	85	7
40	840701	10.0	11.9	13.5	84	7
41	840708	10.0	11.3	12.5	84	7
42	840715	9.0	----	12.5	52	5
43	840722	10.0	----	11.5	40	4
44	840729	9.5	10.4	12.0	84	7
45	840805	10.0	11.5	13.0	84	7
46	840812	9.5	10.4	11.5	84	7
47	840819	8.0	8.8	10.0	84	7
48	840826	5.5	6.6	8.0	84	7
49	840902	6.5	7.9	9.0	84	7
50	840909	7.0	7.5	9.0	84	7
51	840916	5.0	6.9	8.5	84	7
52	840923	5.0	6.1	7.0	96	8
1	841001	3.5	5.2	7.0	83	7
2	841008	1.5	3.2	4.0	84	7
3	841015	0.0	.2	1.5	84	7
4	841022	0.0	----	.5	30	3

---- Data not available.

Appendix Table 42

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River at the Parks Hwy Bridge Center Span - Site 4, RM 83.9, GC S24N05W15BAD. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
36	840603	8.0	----	10.0	18	2
37	840610	7.0	9.2	11.0	84	7

---- Data not available.

Appendix Table 43

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above the Parks Highway Bridge, RM 86.9, GC S24N05W01BCD. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
39	840624	8.5		10.0	30	3
40	840701	7.5	9.1	10.5	84	7
41	840708	8.0	8.8	9.5	84	7
42	840715	7.0	8.3	10.5	84	7
43	840722	7.0	8.6	10.5	84	7
44	840729	8.0	8.9	10.5	84	7
45	840805	7.5	9.2	10.5	82	7
46	840812	7.0	8.7	9.5	84	7
47	840819	6.5	7.1	8.5	84	7
48	840826	4.5	5.8	7.5	82	7
49	840902	6.0	7.0	8.0	84	7
50	840909	5.5	6.2	7.5	83	7
51	840916	4.5	5.8	7.0	84	7
52	840923	4.5	5.1	6.0	77	7

Data not available.

Appendix Table 44

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River at Talkeetna Fishwheel Camp, RM 103.0, GC S27N05W26DDD. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	5.5	-----	6.5	18	2
35	840527	5.5	7.6	10.5	84	7
36	840603	8.0	9.4	11.0	84	7
37	840610	7.0	9.4	11.0	84	7
38	840617	6.5	11.0	13.5	84	7
39	840624	9.5	11.6	13.0	87	7
40	840701	11.5	12.5	13.5	84	7
41	840708	11.0	11.9	13.0	84	7
42	840715	9.0	10.5	13.0	84	7
43	840722	9.0	10.8	12.0	80	7
44	840729	10.0	11.0	14.0	84	7
45	840805	11.0	12.7	14.5	84	7
46	840812	10.0	11.5	13.0	84	7
47	840819	7.5	9.4	11.5	84	7
48	840826	5.0	5.9	7.5	84	7
49	840902	5.5	7.8	9.0	84	7
50	840909	6.5	7.1	8.0	82	7
51	840916	6.5	-----	8.0	18	2
52	840923	5.5	-----	6.0	17	2
1	841001	2.5	4.2	6.0	84	7
2	841008	1.0	2.1	3.5	84	7
3	841015	0.0	-----	.5	18	2

----- Data not available.

Appendix Table 45 Weekly minimum, mean and maximum intragravel and surface water temperatures (C) recorded at Mainstem Susitna River at LRX 9 - Site 3, RM 103.5, GC S27N05W26ADD. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Intragravel Weekly Values					Surface Water Weekly Values				
		Min (C)	Mean (C)	Max (C)	n	No. of days in record	Min (C)	Mean (C)	Max (C)	n	No. of days in record
31	840429	-1.2		2.3	16	5	-1.1		.5	20	5
32	840506	1.6	2.8	3.5	23	7	-1.2	.6	2.8	28	7
33	840513	3.4	3.7	4.1	28	7	.1	2.9	6.4	28	7
34	840520	3.6	4.5	4.9	24	7	1.9	5.2	6.9	28	7
35	840527	4.0		4.7	19	6	5.4	7.7	11.7	28	7
36	840603	4.3		7.6	11	5	7.9	9.5	11.4	27	7
37	840610	5.5		8.3	9	3	7.1	9.5	11.9	28	7
38	840617				0	0	6.5	11.1	13.9	28	7
39	840624				0	0	9.8	11.8	13.6	28	7
40	840701				0	0	11.0	12.3	14.0	28	7
41	840708	7.6	8.2	8.6	21	6	11.5	12.7	14.4	28	7
42	840715	6.8	7.6	8.7	28	7	10.4	12.2	15.0	28	7
43	840722	7.0	8.4	9.2	28	7	10.0	12.2	14.1	28	7
44	840729	7.0	8.5	10.0	28	7	9.1	11.5	15.5	28	7
45	840805	5.7	9.3	11.1	28	7	7.8	12.9	16.5	28	7
46	840812	4.7		9.7	4	1	6.7		13.0	4	1
48	840826	3.6		8.7	9	3	3.0		9.6	17	5
49	840902				0	0	5.6		7.3	1	1
50	840909				0	0	4.6		8.2	14	4
51	840916				0	0	2.2	6.3	9.0	22	6
52	840923	2.3		6.8	4	1				0	0
1	841001	.4		6.2	12	3				0	0

--- Data not available.

Appendix Table 46

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River at Curry Fishwheel Camp, RM 120.7, GC S27N04W10CBA. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
36	840603	8.0	8.9	10.0	63	6
37	840610	6.0	8.8	10.0	84	7
38	840617	6.0	10.4	13.0	84	7
39	840624	9.5	11.1	12.0	84	7
40	840701	11.0	12.0	12.5	84	7
41	840708	11.0	11.6	12.0	84	7
42	840715	9.0	10.2	12.0	84	7
43	840722	9.0	10.5	11.5	84	7
44	840729	10.0	10.5	13.0	84	7
45	840805	11.0	12.2	13.5	84	7
46	840812	10.0	10.9	12.0	82	7
47	840819	6.5	9.1	10.5	84	7
48	840826	5.0	5.4	6.5	84	7
49	840902	5.5	7.1	8.0	84	7
50	840909	6.0	6.7	7.5	81	7
51	840916	4.0	5.9	7.5	84	7
52	840923	4.0	4.7	5.5	96	8
1	841001	2.5	3.8	5.5	84	7
2	841008	1.0		3.0	52	5

Data not available.

Appendix Table 47 Weekly minimum, mean and maximum intragravel and surface water temperatures (C) recorded at Mainstem Susitna River at LRX 29 - Site 3, RM 125.9, GC S30N03W19DAB. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Intragravel Weekly Values					Surface Water Weekly Values				
		Min (C)	Mean (C)	Max (C)	n	No. of days in record	Min (C)	Mean (C)	Max (C)	n	No. of days in record
34	840520	5.4	-----	5.8	5	2	5.3	-----	6.6	5	2
35	840527	5.4	-----	5.9	5	2	5.4	-----	6.6	5	2
39	840624	8.7	-----	11.9	12	4	9.6	-----	12.9	13	4
40	840701	9.6	12.2	12.9	24	7	11.4	12.4	13.5	26	7
41	840708	11.0	11.4	12.0	21	6	11.2	12.0	12.9	21	6
42	840715	9.3	10.6	11.9	28	7	9.3	10.8	13.0	28	7
43	840722	9.3	10.5	11.7	28	7	9.4	11.1	12.6	28	7
44	840729	10.3	-----	11.9	20	5	10.9	-----	12.0	20	5
46	840812	10.7	11.5	12.3	28	7	10.5	11.6	13.0	28	7
47	840819	8.0	9.8	11.7	28	7	7.6	9.6	11.6	28	7
48	840826	5.5	6.3	8.0	28	7	5.0	6.1	7.7	28	7
49	840902	6.2	-----	7.8	3	1	6.0	-----	7.7	3	1
50	840909	6.2	-----	8.1	16	4	6.3	-----	8.2	16	4
51	840916	4.0	6.4	8.7	28	7	4.1	6.5	8.8	28	7
52	840923	4.0	5.2	6.3	31	8	4.2	5.3	6.4	31	8
1	841001	2.2	4.0	6.4	28	7	2.4	4.2	6.5	28	7
2	841008	2.4	-----	4.0	9	3	2.6	-----	4.1	9	3

----- Data not available.

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Appendix Table 48

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River at LRX 53, RM 140.1, GC S31N11W10AAC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	5.0	-----	6.0	41	4
35	840527	5.5	7.0	9.0	84	7
36	840603	8.0	8.8	9.5	84	7
37	840610	6.5	8.6	10.5	84	7
38	840617	6.5	10.7	13.0	84	7
39	840624	9.5	11.0	12.0	84	7
40	840701	11.0	11.8	12.5	84	7
41	840708	11.0	11.6	12.0	84	7
42	840715	9.0	10.3	12.0	84	7
43	840722	9.0	10.4	12.0	84	7
44	840729	10.0	11.1	13.5	84	7
45	840805	11.0	12.6	14.0	84	7
46	840812	10.5	11.6	12.5	82	7
47	840819	8.5	10.0	11.5	66	6
48	840826	4.5	5.3	6.0	78	7
49	840902	6.0	7.2	8.5	84	7
50	840909	6.0	6.9	7.5	84	7
51	840916	4.0	5.1	7.0	84	7
52	840923	4.0	-----	5.5	45	5
1	841001	2.5	3.8	5.5	84	7
2	841008	.5	2.1	3.5	84	7
3	841015	0.0	-----	.5	7	1

----- Data not available.

Appendix Table 49

Weekly minimum, mean and maximum intragravel and surface water temperatures (C) recorded at Mainstem Susitna River at LRX 56, RM 142.1, GC S31N11W36BCD. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Intragravel Weekly Values					Surface Water Weekly Values				
		Min (C)	Mean (C)	Max (C)	n	No. of days in record	Min (C)	Mean (C)	Max (C)	n	No. of days in record
36	840603	5.7	-----	6.3	13	4	8.0	-----	9.8	13	4
37	840610	6.2	6.7	7.4	28	7	6.7	8.6	11.0	28	7
38	840617	6.0	7.1	8.2	28	7	6.3	-----	9.0	6	2
39	840624	7.6	7.8	8.2	28	7	-----	-----	-----	0	0
40	840701	7.8	8.3	8.7	28	7	-----	-----	-----	0	0
41	840708	8.3	8.6	9.0	28	7	10.5	11.4	12.4	25	7
42	840715	8.5	-----	8.8	3	1	10.8	-----	11.6	3	1
44	840729	7.8	8.1	9.9	25	7	10.2	11.1	13.5	25	7
45	840805	8.8	9.7	10.3	28	7	11.2	13.0	14.3	28	7
46	840812	8.4	8.8	9.4	28	7	10.9	12.2	13.4	28	7
47	840819	7.2	8.0	9.1	28	7	8.5	10.4	12.4	28	7
48	840826	6.4	-----	7.2	19	5	5.9	-----	8.4	19	5
51	840916	4.9	6.9	8.7	25	7	4.4	6.2	8.1	25	7
52	840923	4.8	5.7	6.7	32	8	4.4	5.4	6.5	32	8
1	841001	2.7	4.5	6.7	28	7	2.7	4.5	6.6	28	7
2	841008	.8	2.6	4.3	28	7	1.2	2.9	4.6	28	7
3	841015	.4	.5	.9	28	7	.7	.8	1.2	28	7
4	841022	.3	-----	.9	16	4	.7	-----	1.1	16	4

----- Data not available.

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Appendix Table 50

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above Portage Creek, RM 148.9, GC S32N10W16ACB. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	4.5	----	6.0	44	4
35	840527	6.0	7.4	9.5	84	7
36	840603	8.5	9.5	10.0	84	7
37	840610	6.5	9.2	11.0	84	7
38	840617	6.5	11.2	13.5	84	7
39	840624	10.5	----	12.5	25	3
40	840701	10.5	11.7	12.5	84	7
41	840708	10.5	11.5	12.5	84	7
42	840715	8.5	9.9	12.0	84	7
43	840722	8.5	----	12.0	48	4
44	840729	10.0	10.6	13.5	78	7
45	840805	10.0	12.0	13.5	84	7
46	840812	10.0	10.9	12.0	84	7
47	840819	7.5	9.1	11.0	84	7
48	840826	4.5	5.8	7.5	84	7
49	840902	6.5	7.5	8.5	84	7
50	840909	6.5	7.0	7.5	84	7
51	840916	4.0	6.2	7.5	84	7
52	840923	4.5	4.9	5.5	65	6

---- Data not available.

Appendix Table 51

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above Fog Creek - Site 1, RM 176.8, GC S31N06W15BAC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	3.5	----	5.0	43	4
35	840527	4.0	----	5.5	18	2
36	840603	5.5	8.0	10.0	63	6
37	840610	5.0	8.1	10.5	84	7
38	840617	5.0	10.1	12.5	84	7
39	840624	8.0	10.0	11.5	84	7
40	840701	9.5	10.6	11.5	84	7
41	840708	9.5	10.2	11.0	84	7
42	840715	7.0	8.5	10.5	84	7
43	840722	7.5	9.1	10.5	84	7
44	840729	9.0	9.9	13.0	84	7
45	840805	8.0	11.0	13.0	84	7
46	840812	7.0	----	7.5	6	1
47	840819	6.0	----	7.5	61	6
48	840826	4.5	----	6.0	6	1

----- Data not available.

Appendix Table 52

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above Fog Creek - Site 2, RM 176.8, GC S31N06W15BAC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
39	840624	10.0	—	11.0	15	2
43	840722	8.5	—	11.5	45	4
44	840729	9.0	—	11.0	48	4
45	840805	9.5	11.0	12.5	84	7
46	840812	8.0	—	10.0	37	4
48	840826	4.0	—	5.5	24	3
50	840909	5.5	—	7.0	17	2
51	840916	3.0	5.3	6.5	84	7
52	840923	3.5	4.1	5.0	95	8
1	841001	1.5	3.1	5.0	84	7
2	841008	0.0	1.4	3.0	84	7
3	841015	0.0	—	0.0	5	1

— Data not available.

Appendix Table 53

Weekly minimum, mean and maximum surface water temperatures (C) recorded at Mainstem Susitna River above Fog Creek - Site 2, RM 176.9, GC S32N06W16BAC. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Values (C)			n	No. of days in Record
		Min	Mean	Max		
45	840805	9.6		11.4	10	2
46	840812	7.4		10.8	14	2
47	840819	6.5	8.2	9.5	42	6
48	840826	3.8		7.1	18	3

Data not available.

Appendix Table 54

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River above Fog Creek - Site 3, RM 176.8, GC S31N06W15BAC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
50	840909	6.0	-----	7.5	16	2
51	840916	3.0	5.5	7.0	84	7
52	840923	3.5	4.4	5.5	96	8
1	841001	1.5	3.2	5.5	84	7
2	841008	0.0	1.4	3.0	84	7
3	841015	0.0	-----	0.0	5	1

----- Data not available.

Appendix Table 55

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Mainstem Susitna River at Watana Dam Site, RM 184.2, GC S32N05W33BDB. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	5.0	-----	6.5	41	4
37	840610	7.0	-----	10.0	47	4
38	840617	7.0	11.4	13.5	84	7
39	840624	9.0	11.2	13.0	84	7
40	840701	11.5	-----	11.5	2	1
45	840805	9.5	-----	10.5	17	2
46	840812	9.0	-----	11.0	41	4
47	840819	6.5	8.6	10.0	80	7
48	840826	4.5	-----	6.5	24	2
50	840909	5.5	-----	7.0	18	2
51	840916	3.0	5.3	6.5	84	7
52	840923	3.5	4.1	5.0	96	8
1	841001	1.0	2.7	5.0	84	7
2	841008	0.0	1.1	2.5	84	7
3	841015	0.0	-----	0.0	5	1

----- Data not available.

Appendix Table 56

Weekly minimum, mean and maximum surface water temperatures (C) recorded at Mainstem Susitna River at Watana Dam Site, RM 184.2, GC S32N05W33BDB. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Values (C)			n	No. of days in Record
		Min	Mean	Max		
45	840805	9.5	-----	11.5	10	2
46	840812	9.1	-----	11.9	12	2
47	840819	5.3	8.4	9.8	42	6
48	840826	4.0	-----	6.9	16	3
51	840916	3.3	5.9	8.3	46	6
52	840923	3.6	-----	5.6	20	4
1	841001	1.2	3.1	5.7	56	7
2	841008	-.2	1.3	3.2	56	7
3	841015	-.2	-----	-.1	4	1

----- Data not available.

3.5 Tables 57 to 70 - Water year weekly minimum, mean and maximum temperatures recorded at tributary sites during the 1984 open water season.

Appendix Table 57

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at the Yentna River - Site 2, RM 28.0, TRM 4.0, GC S18N07W28ABC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	6.5	-----	9.0	31	3
35	840527	6.5	8.1	11.5	84	7
36	840603	7.0	9.3	11.0	84	7
37	840610	8.0	9.6	11.5	84	7
38	840617	7.0	9.7	11.5	84	7
39	840624	7.0	8.4	10.5	84	7
40	840701	8.0	-----	8.0	5	1
43	840722	8.5	-----	10.0	31	3
44	840729	7.5	8.2	10.0	84	7
45	840805	9.0	9.3	10.0	84	7
46	840812	8.5	8.6	9.0	84	7
47	840819	7.0	7.4	8.5	84	7
48	840826	5.5	6.7	7.5	84	7
49	840902	6.0	7.8	9.0	84	7
50	840909	6.5	7.4	8.5	84	7
51	840916	5.0	6.6	7.5	84	7
52	840923	5.0	-----	7.0	24	2

----- Data not available.

Appendix Table 58 Weekly minimum, mean and maximum surface water temperatures (C) recorded at the Yentna River, RM 28.0, TRM 4.0, GC S18N07W34DBC. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Values (C)			n	No. of days in Record
		Min	Mean	Max		
45	840805	8.4	-----	9.2	2	1
46	840812	7.2	9.3	11.0	56	7
47	840819	6.6	7.4	8.6	56	7
48	840826	5.5	-----	7.8	34	3
50	840909	6.0	-----	8.2	26	4
51	840916	4.2	6.5	8.4	56	7
52	840923	4.6	-----	7.8	22	3
1	841001	3.6	5.2	6.7	56	7
2	841008	1.3	3.1	4.6	56	7
3	841015	-.3	.1	1.4	56	7
4	841022	-.2	-----	.3	20	3

----- Data not available.

Appendix Table 59

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at the Deshka River, RM 40.6, TRM 3.0, GC S19N06W23BDC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	11.0	----	13.0	30	3
35	840527	9.5	11.2	13.5	78	7
36	840603	11.5	----	16.0	36	3
37	840610	12.5	15.1	18.0	84	7
38	840617	12.0	16.4	20.0	84	7
39	840624	14.5	16.7	18.5	83	7
40	840701	15.0	17.8	21.0	84	7
41	840708	15.5	17.5	20.5	84	7
42	840715	15.5	----	19.0	12	1
45	840805	16.0	----	19.0	31	3
46	840812	14.5	16.5	19.0	84	7
47	840819	11.0	12.5	14.5	84	7
48	840826	7.5	9.2	10.5	84	7
49	840902	8.5	9.9	12.5	84	7
50	840909	9.0	10.1	12.0	70	6
3	841015	0.0	----	0.0	55	5
4	841022	0.0	----	0.0	30	3

---- Data not available.

Appendix Table 60

Weekly minimum, mean and maximum surface surface water temperatures (C) recorded at the Doshka River, RM 40.6, TRM 3.0, GC S19N06W23BDC. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calender Date	Weekly values (C)			n	No. of days in Record
		Min	Mean	Max		
1	841001	4.2	6.0	8.5	316	7
2	841008	.4	3.3	5.5	336	7
3	841015	-.1	-----	1.1	30	1

----- Data not available.

Appendix Table 61

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at the Kashwitna River, RM 60.9, TRM 0.1, GC S21N05W13AAC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	7.5	-----	9.5	24	2
35	840527	7.0	9.7	13.0	84	7
36	840603	7.0	10.4	12.5	84	7
37	840610	7.0	9.2	11.0	84	7
38	840617	7.0	10.3	12.5	84	7
39	840624	8.0	9.8	11.5	69	6
40	840701	9.5	-----	11.0	6	1
41	840708	7.5	9.5	11.0	85	7
42	840715	7.5	8.6	11.5	84	7
43	840722	8.5	10.1	12.0	85	7
44	840729	8.0	9.5	11.5	84	7
45	840805	9.5	11.1	12.5	83	7
46	840812	9.0	10.9	12.5	84	7
47	840819	8.0	9.5	10.5	84	7
48	840826	5.0	6.5	8.0	84	7
49	840902	5.5	7.3	8.5	84	7
50	840909	6.5	7.3	8.5	84	7
51	840916	3.5	6.1	7.5	84	7
52	840923	4.0	5.0	6.0	96	8
1	841001	2.5	4.3	6.0	84	7
2	841008	0.0	2.1	3.5	84	7
3	841015	0.0	0.0	0.0	84	7
4	841022	0.0	-----	0.0	30	3

----- Data not available.

Appendix Table 62

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at the Talkeetna River - Site 3, RM 97.2, TRM 4.0, GC S26N04W16BCA. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	4.5	----	7.0	28	3
35	840527	4.5	6.4	8.5	84	7
36	840603	5.5	7.1	9.0	84	7
37	840610	6.0	7.6	9.5	84	7
38	840617	6.0	9.4	11.5	84	7
39	840624	8.5	10.0	11.5	84	7
40	840701	9.0	10.8	12.5	84	7
41	840708	9.5	10.0	11.5	84	7
42	840715	8.5	9.2	11.0	84	7
43	840722	9.0	10.1	12.5	84	7
44	840729	8.5	9.5	11.5	84	7
45	840805	9.0	10.6	12.0	78	7
46	840812	9.5	10.1	10.5	81	7
47	840819	8.0	9.3	9.5	84	7
48	840826	5.5	6.4	7.5	84	7
49	840902	6.0	7.5	8.5	84	7
50	840909	6.5	7.2	8.0	80	7
51	840916	7.0	----	7.5	7	1
52	840923	6.0	----	6.5	28	3
1	841001	2.5	4.2	6.0	84	7
2	841008	1.5	2.5	4.0	84	7
3	841015	0.0	.3	1.5	83	7
4	841022	0.0	.3	1.0	84	7
5	841029	0.0	0.0	0.0	84	7
6	841105	0.0	----	0.0	20	2

---- Data not available.

Appendix Table 63

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at the Chulitna River - Site 5, RM 98.6, TRM 11.0, GC S27N05W05ABC. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	5.0		7.5	40	4
35	840527	4.5	6.9	10.0	84	7
36	840603	5.0	7.7	10.0	84	7
37	840610	5.5	7.5	10.0	84	7
38	840617	5.0	8.0	10.5	84	7
39	840624	5.5	7.1	9.5	85	7
40	840701	5.5	7.2	9.5	84	7
41	840708	5.0	6.6	9.0	84	7
42	840715	5.0	6.1	9.5	84	7
43	840722	5.0	6.5	9.5	84	7
44	840729	5.0	6.1	8.5	84	7
44	840729	5.0	6.1	8.5	84	7
45	840805	4.5	6.2	8.5	84	7
46	840812	4.5	6.2	8.0	84	7
47	840819	5.0	5.6	7.5	84	7
48	840826	3.5	4.9	7.0	79	7
49	840902	4.5	6.1	7.5	84	7
50	840909	4.0	5.2	6.0	84	7
51	840916	3.0	4.7	6.5	84	7
52	840923	3.5	4.7	5.5	95	8
1	841001	2.0	3.7	5.5	84	7
2	841008	.5	2.2	3.5	84	7
3	841015	0.0		.5	19	2

Data not available.

Appendix Table 64

Weekly minimum, mean and maximum surface water temperatures (C) recorded at Portage Creek - Site 2, RM 148.8, TRM 0.2, GC S32N01W25ADC. Values were obtained from temperatures measured at one-hour intervals by a datapod depth/temperature recorder.

Water Year Week	Starting Calendar Date	Weekly values (C)			n	No. of days in Record
		Min	Mean	Max		
34	840520	3.5	-----	7.5	38	2
35	840527	3.5	5.9	10.0	168	7
36	840603	3.5	6.1	9.0	168	7
37	840610	3.5	6.0	9.5	168	7
38	840617	4.0	7.2	11.0	168	7
39	840624	5.0	7.8	11.5	168	7
40	840701	7.0	9.1	11.5	145	7
41	840708	7.0	9.3	11.5	157	7
42	840715	6.5	8.6	12.0	168	7
43	840722	6.5	8.8	12.0	168	7
44	840729	7.0	8.6	11.0	168	7
45	840805	8.0	10.1	12.5	167	7
46	840812	6.5	9.6	12.0	168	7
47	840819	6.0	7.9	9.5	168	7
48	840826	3.5	5.4	7.5	168	7
49	840902	4.0	6.8	9.0	168	7
50	840909	4.5	6.6	8.5	168	7
51	840916	3.0	5.7	8.0	167	7
52	840923	3.5	5.4	7.0	192	8
1	841001	2.0	4.3	6.5	168	7
2	841008	.5	2.9	5.0	168	7
3	841015	.5	-----	1.0	12	1

----- Data not available.

Appendix Table 65

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Fog Creek, RM 176.7, TRM 0.1, GC S31N06W15DBB. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	2.5		6.0	43	4
35	840527	2.0		5.5	18	2
36	840603	3.5	6.4	9.5	72	6
37	840610	3.5	6.1	9.5	84	7
38	840617	4.0	8.2	12.0	84	7
39	840624	6.0	8.6	12.0	84	7
40	840701	7.0	9.2	11.5	84	7
41	840708	6.5	9.0	11.0	84	7
42	840715	7.0	8.2	11.0	84	7
43	840722	7.5	9.2	12.0	84	7
44	840729	7.5	9.2	13.5	84	7
45	840805	7.5	10.7	13.5	83	7
46	840812	6.5	9.4	12.5	84	7
47	840819	8.0		10.0	60	5
48	840826	3.5	5.2	7.0	79	7
49	840902	3.5	6.3	8.5	84	7
50	840909	3.5	5.4	7.5	83	7
51	840916	3.0		5.5	30	3
52	840923	3.5		4.5	29	3
1	841001	1.0	2.6	4.0	84	7
2	841008	0.0	1.5	3.0	84	7
3	841015	0.0		0.0	1	1

Data not available.

Appendix Table 66

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Tsusena Creek RM 181.8, TRM 0.1, GC S32N06W36ADB. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
34	840520	1.5	----	4.5	43	4
35	840527	2.0	4.5	8.5	84	7
39	840624	6.5	----	11.0	18	2
40	840701	6.5	9.1	11.0	84	7
41	840708	7.0	9.3	12.0	84	7
42	8/ /715	6.5	8.3	11.5	84	7
43	840722	7.0	8.7	11.5	83	7
44	840729	7.0	8.8	13.5	84	7
45	840805	7.5	9.9	13.5	83	7
46	840812	5.5	8.9	11.5	84	7
47	840819	6.5	----	9.0	60	5
48	840826	4.0	5.7	8.0	79	7
49	840902	4.5	7.1	8.5	84	7
50	840909	4.5	6.3	8.5	83	7
51	840916	2.0	4.7	6.5	84	7
52	840923	2.5	4.3	5.5	96	8
1	841001	1.0	3.1	5.5	84	7
2	841008	.5	2.0	3.5	84	7
3	841015	0.0	----	1.0	5	1

---- Data not available.

Appendix Table 67

Weekly minimum, mean, and maximum surface water temperatures (C) recorded at Deadhorse Creek, RM 120.9, TRM 1.0, GC S29N04W14BCB. Values were obtained from temperatures measured at two-hour intervals by a Ryan temperature recorder.

Water Year Week	Starting Calendar Date	Weekly Value (C)			n	No. of Days in Record
		Min	Mean	Max		
31	840429	.5	----	1.5	60	5
32	840506	.5	1.4	2.5	84	7
33	840513	1.5	2.7	4.5	84	7
34	840520	2.0	3.1	5.0	82	7
35	840527	2.0	3.7	6.0	84	7
36	840603	3.0	5.1	7.0	84	7
37	840610	5.5	7.0	8.5	84	7
38	840617	6.0	8.3	10.5	84	7
39	840624	7.5	9.0	10.5	83	7
40	840701	9.0	9.7	10.5	84	7
41	840708	8.5	9.2	10.0	84	7
42	840715	8.5	9.1	10.5	84	7
43	840722	9.0	9.8	10.5	79	7
44	840729	8.5	9.2	11.0	71	6
45	840805	9.0	10.0	11.0	79	7
50	840909	6.5	----	7.0	16	2
51	840916	4.0	5.6	6.5	84	7
52	840923	4.5	5.6	6.5	95	8
1	841001	3.0	4.6	6.0	84	7
2	841008	1.0	2.8	4.5	84	7
3	841015	0.0	.4	1.0	84	7
4	841022	0.0	.4	1.5	84	7
5	841029	0.0	0.0	0.0	84	7
6	841105	0.0	0.0	0.0	84	7
7	841112	0.0	0.0	0.0	84	7
8	841119	0.0	0.0	0.0	84	7
9	841126	0.0	----	0.0	42	4

----- Data not available.

Appendix Table 68 Weekly minimum, mean and maximum intragravel water temperatures (C) recorded at Fourth of July Creek + Plume - Site 1, RM 131.1, GC S30N03W03DAC. Values were obtained from temperatures measured at six-hour intervals by a datapof temperature recorder.

Water Year Week	Starting Calendar Date	Plume Weekly Values					Creek Water Weekly Values				
		Min (C)	Mean (C)	Max (C)	n	No. of days in record	Min (C)	Mean (C)	Max (C)	n	No. in record
31	840429	-----	-----	-----	0	0	2.1	-----	3.6	20	5
32	840506	-----	-----	-----	0	0	2.4	3.2	4.3	28	7
33	840513	-----	-----	-----	0	0	3.4	4.0	5.5	28	7
34	840520	-1.1	.6	1.4	24	7	4.9	5.4	6.2	27	7
35	840527	1.4	3.3	5.1	28	7	5.4	7.3	10.8	28	7
36	840603	5.1	5.6	6.0	28	7	7.1	9.8	11.7	28	7
37	840610	3.2	4.7	5.6	26	7	9.4	11.2	13.3	26	7

----- Data not available.

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Appendix Table 59

Weekly minimum, mean and maximum intragravel and surface water temperatures (C) recorded at Indian River - Site 3, RM 138.6, TRM 0.2, GC S31N02W09CAB. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Intragravel Weekly Values					Surface Water Weekly Values				
		Min (C)	Mean (C)	Max (C)	n	No. of days in record	Min (C)	Mean (C)	Max (C)	n	No. of days in record
34	840520	2.8	-----	4.8	16	4	2.4	-----	7.8	17	5
35	840527	3.9	5.6	9.5	28	7	3.4	6.2	10.4	28	7
36	840603	5.5	- - - -	7.5	7	2	6.2	-----	9.9	8	2
45	840805	8.4	-----	11.9	4	1	9.1	-----	12.7	4	1
46	840812	7.3	9.6	12.3	28	7	7.9	10.2	13.0	28	7
47	840819	7.2	8.4	9.5	28	7	7.6	9.0	10.1	28	7
48	840826	5.1	6.2	7.7	28	7	4.8	6.5	8.7	28	7
49	840902	5.5	7.0	8.6	28	7	5.4	7.7	10.1	28	7
50	840909	5.6	6.9	8.3	28	7	5.7	7.5	9.7	28	7
51	840916	3.8	6.2	8.2	28	7	4.4	6.9	9.2	28	7
52	840923	4.2	5.8	7.0	32	8	4.6	6.3	8.0	31	8
1	841001	3.2	4.9	6.8	28	7	2.8	4.9	6.8	28	7
2	841008	1.7	3.6	5.1	28	7	1.4	3.6	5.5	28	7
3	841015	.3	1.5	3.1	28	7	.4	1.5	3.1	28	7
4	841022	0.0	1.1	3.6	28	7	.1	1.1	3.6	28	7
5	841029	-.1	.1	.5	28	7	0.0	.1	.4	28	7
6	841105	-.1	-----	.4	10	3	0.0	-----	.2	10	3

----- Data not available.

Appendix Table 70 Weekly minimum, mean and maximum intragravel and surface water temperatures (C) recorded at Mainstem Susitna River at Indian River - Site 4, RM 138.6, TRM 0.2, GC S31N02W09CAB. Values were obtained from temperatures measured at six-hour intervals by a datapod temperature recorder.

Water Year Week	Starting Calendar Date	Intragravel Weekly Values					Surface Water Weekly Values				
		Min (C)	Mean (C)	Max (C)	n	No. of days in record	Min (C)	Mean (C)	Max (C)	n	No. of days in record
52	840923	5.6	-----	7.2	9	3	5.5	-----	7.0	9	3
1	841001	3.3	5.0	6.9	28	7	3.2	4.9	6.8	28	7
2	841008	2.0	3.8	5.6	28	7	1.8	3.6	5.4	27	7
3	841015	1.1	1.9	3.3	28	7	.9	1.8	3.2	28	7
4	841022	.5	1.6	3.3	28	7	.2	1.4	3.2	28	7
5	841029	.2	.4	.6	28	7	.1	.3	.5	27	7
6	841105	.2	-----	.5	10	3	0.0	-----	.3	10	3

----- Data not available.

3.6 Table 71 - Water temperature profiles of continuous temperature monitoring sites located in the Susitna River Basin during the 1984 open water season.

Table 71. Water temperature profiles of continuous temperature monitoring sites located in the Susitna River basin during the 1984 open-water field season.

Location	Habitat	Date	USGS Discharge at ^a Sunshine Station (cfs)	USGS Discharge ^b at Gold Creek (cfs)	Station (ft)	Water Temperature (°C)		Comments
						At Water Surface	Above Streambed	
Susitna River at river mile 18.5	Mainstem	840928	17,080	7,290	0.0(Low)			Datapod recorder
					30.0	6.5	6.5	
					250.0	6.4	6.4	
					750.0	6.2	6.2	
					1350.0	6.1	6.1	
					1450.0	6.2	6.2	
					1500.0(Rew)			
Yentna River (RM 28.0) (TRM 4.0)	Tributary	840929	16,480	7,140	0.0(Low)			Datapod recorder
					20.0	6.6	6.6	
					200.0	6.4	6.4	
					500.0	6.5	6.4	
					600.0	6.6	6.7	
					700.0(Rew)			
Susitna River above the Yentna River (RM 29.5)	Mainstem	840929	16,480	7,140	0.0(Low)			Datapod recorder
					8.0	6.3	6.3	
					200.0	6.1	6.2	
					500.0	6.0	6.0	
					800.0	6.0	6.0	
					1150.0	6.0	6.0	
					1200.0(Rew)			
Deshka River (RM 40.6) (TRM 3.0)	Tributary	840930	17,200	7,320	0.0(Low)			Datapod recorder
					20.0	8.3	8.2	
					70.0	8.3	8.2	
					130.0	8.3	8.3	
					140.0	8.3	8.3	
					150.0(Rew)			
Susitna River above the Deshka River (RM 41.1)	Mainstem	840926	18,580	7,770	0.0(Low)	7.2		Datapod recorder
					30.0	7.2	7.1	
					200.0	7.2	7.2	
					400.0	7.2	7.2	
					700.0	7.2	7.2	
					950.0	7.2	7.2	
Kashwitna River (RM 60.9) (TRM 0.1)	Tributary	841001	18,100	7,740	0.0(Low)			Mercury thermometer
					5.0	6.3		
					10.0	6.3		
					25.0	6.3		
					40.0	6.3		
					60.0(Rew)	6.3		

a USGS gaging station 15292780, provisional data.

b USGS gaging station 15292000, provisional data.

Table 71 continued.

Location	Habitat	Date	USGS Discharge at ^a Sunshine Station (cfs)	USGS Discharge ^b at Gold Creek (cfs)	Station (ft)	Water Temperature (°C)		Comments
						At Water Surface	Above Streambed	
Susitna River above the Kashwitna River (RM 61.2)	Mainstem	841001	18,100	7,740	LEW 0.0	6.4		Mercury thermometer
					20.0	6.4		
					30.0	6.4		
					45.0	6.4		
					60.0	6.4		
					85.0	6.4		
					120.0 REW			
Susitna River above the Parks Highway Bridge (RM 86.9)	Mainstem	840915	21,670	8,560	Left Bank	5.6	5.6	Side channels may be influencing temperatures along the right bank. No visible plume from the Talkeetna or Chulitna Rivers Datapod Recorder
					25 feet from left bank	5.6	5.6	
					100 feet from left bank	6.0	5.8	
					Mid-river	6.1	6.0	
					200 feet from right bank	6.3	6.2	
					100 feet from right bank	6.3	6.3	
					Right Bank	6.3	6.3	
Talkeetna Fishwheel Camp (RM 103.0)	Mainstem	840911	22,690	9,240	Left Bank	7.6	7.6	Datapod recorder Shallow water
					50 feet from left bank	7.3	7.3	
					200 feet from left bank	7.3	7.2	
					gravel bar	---	---	
					50 feet from right bank	7.2	7.3	
					25 ft from RB (thermograph site)	7.2	7.3	
					Right bank	7.3	7.4	
Susitna River at LRX9 (RM 103.5)	Mainstem	840911	22,690	9,240	Left bank	7.6	7.6	Datapod recorder Left bank influenced by ground water seepage
					10 feet from LB-datapod site	7.0	7.0	
					100 feet from left bank	6.8	6.8	
					Mid-River	6.8	6.8	
					100 ft from right bank	6.8	6.8	
					Right bank	6.8	6.8	
Susitna River at Curry Fishwheel Camp (RM 120.7)	Mainstem	840911	22,690	9,240	Left bank	7.8	7.9	Datapod recorder Debris prevented the collection of data at right bank
					20 ft from LB (thermograph site)	7.6	7.6	
					50 ft from left bank	7.6	7.6	
					100 ft from left bank	7.5	7.5	
					Mid-river	7.5	7.5	
					100 ft from right bank	7.6	7.5	
					50 ft from right bank	7.6	7.5	
					10 ft from right bank	7.6	7.8	

^a USGS gaging station 15292780, provisional data.

^b USGS gaging station 15292000, provisional data.

Table 71 continued.

Location	Habitat	Date	USGS Discharge at ^a Sunshine Station (cfs)	USGS Discharge ^b at Gold Creek (cfs)	Station (ft)	Water Temperature (°C)		Comments
						At Water Surface	Above Streambed	
Susitna River at LXX 29 (RM 125.9)	Mainstem	840911	22,690	9,240	Left bank	7.8	7.9	Temperatures at right bank may be influenced by side channel
					20 ft from LB (datapod site)	7.9	7.9	
					50 ft from LB	7.9	7.8	
					100 ft from LB	7.6	7.6	
					Mid-river	7.5	7.5	
					100 ft from RB	7.5	7.5	
					50 ft from RB	7.7	7.6	
					10 ft from RB	8.1	8.0	
Susitna River at LXX 53 (RM 140.1)	Mainstem	840827	83,380	30,180	Left bank			
					4 feet from LB	4.9	5.0	
					20 feet from LB	4.7	4.7	
					150 feet from LB	4.7	4.7	
					200 feet from LB	4.8	4.8	
					Mid-river	4.8	4.7	
					200 feet from RB	4.8	4.8	
					100 feet from RB	4.8	4.8	
Susitna River at LXX 56 (RM 142.1)	Mainstem	840916	20,470	8,280	Left bank Datapod	7.5	7.5	
					25 feet from LB	7.3	7.3	
					100 feet from LB	7.2	7.2	
					200 feet from LB	7.2	7.2	
					Mid-river	7.2	7.2	
					200 feet from RB	7.3	7.2	
					100 feet from RB	7.2	7.2	
					25 feet from RB	7.3	7.3	
					Right bank	7.5	7.4	

^a USGS gaging station 15292780, provisional data.

^b USGS gaging station 15292000, provisional data.

3.7 Figures 2 to 16 - Mean daily temperatures recorded at mainstem Susitna River sites during the 1984 open water season.

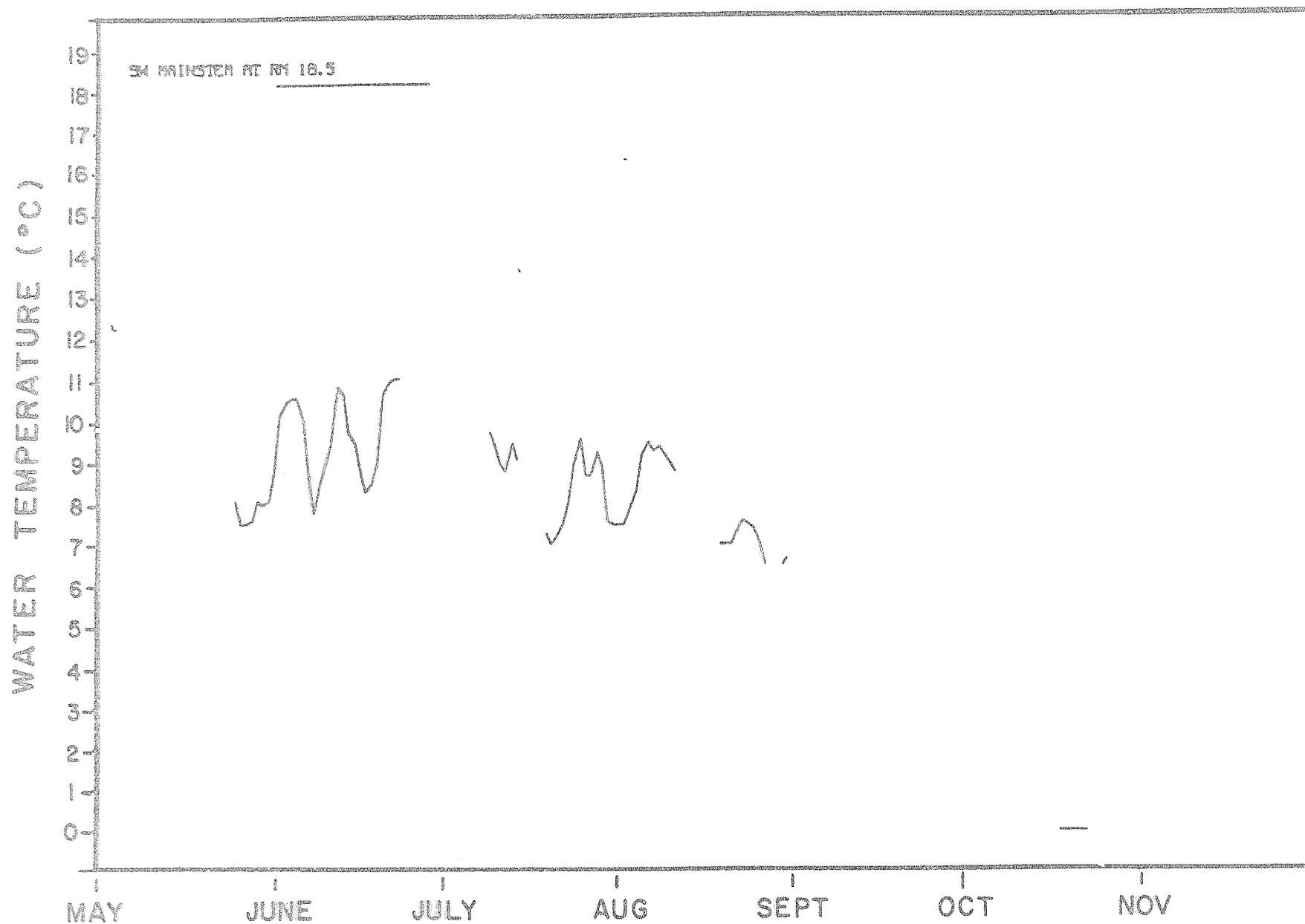


Figure 2. Mean daily surface water temperature recorded at Mainstem Susitna River (RM 18.5) during the 1984 open water season.

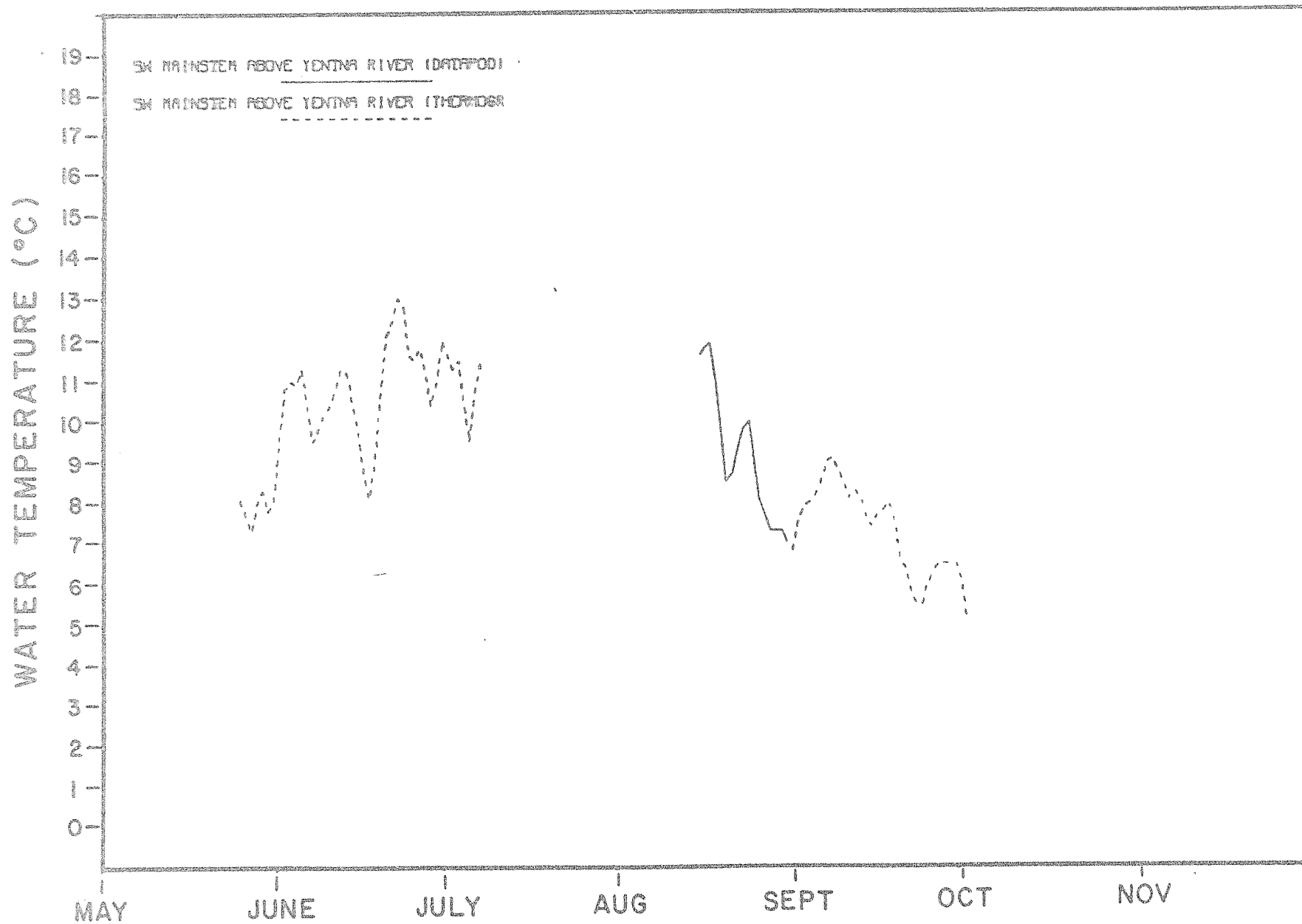


Figure 3. Mean daily surface water temperature recorded at Mainstem Susitna River above the Yentna River (RM 29.5) during the 1984 open water season.

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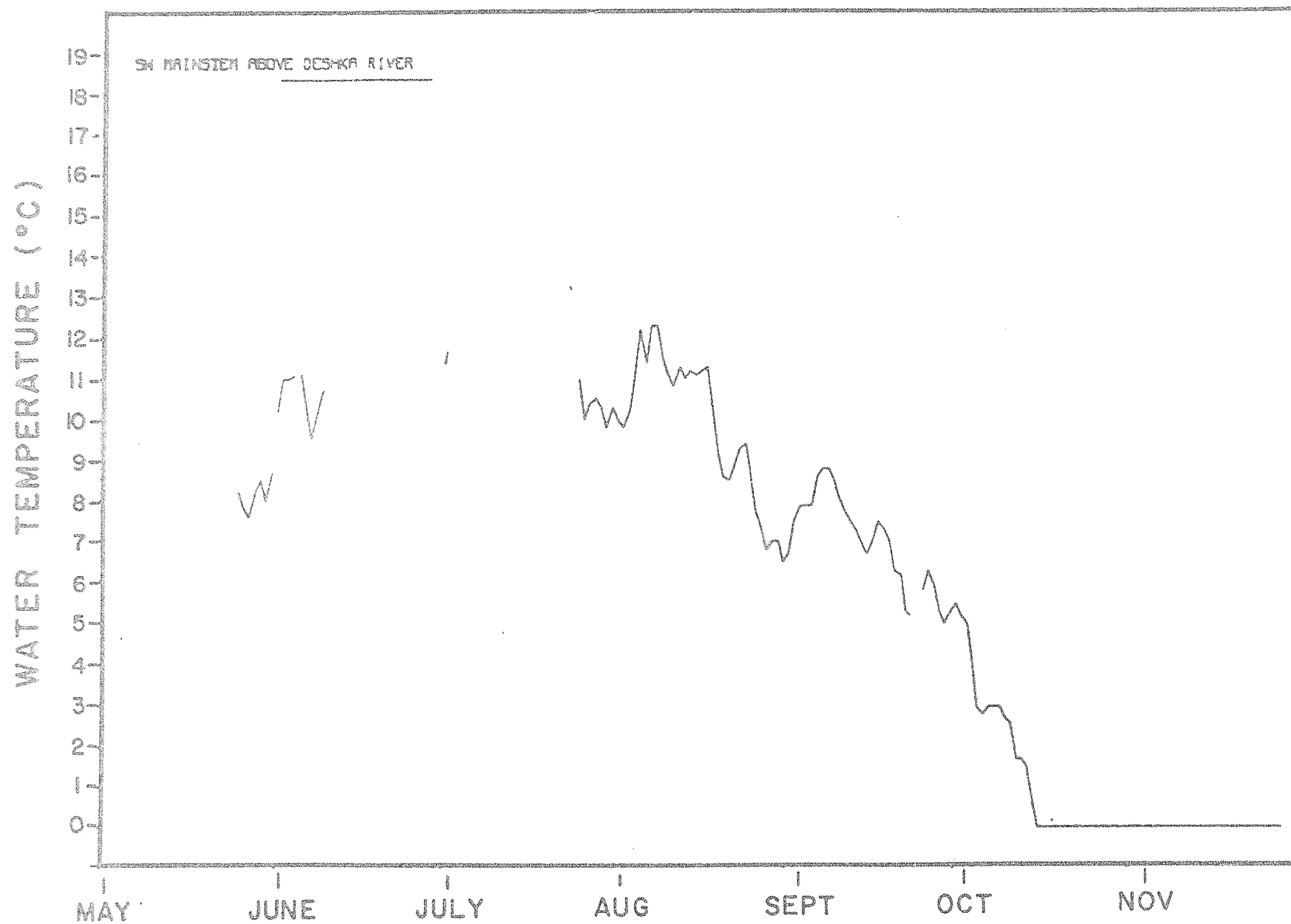


Figure 4. Mean daily surface water temperature recorded at Mainstem Susitna River above the Deshka River (RM 41.1) during the 1984 open water season.

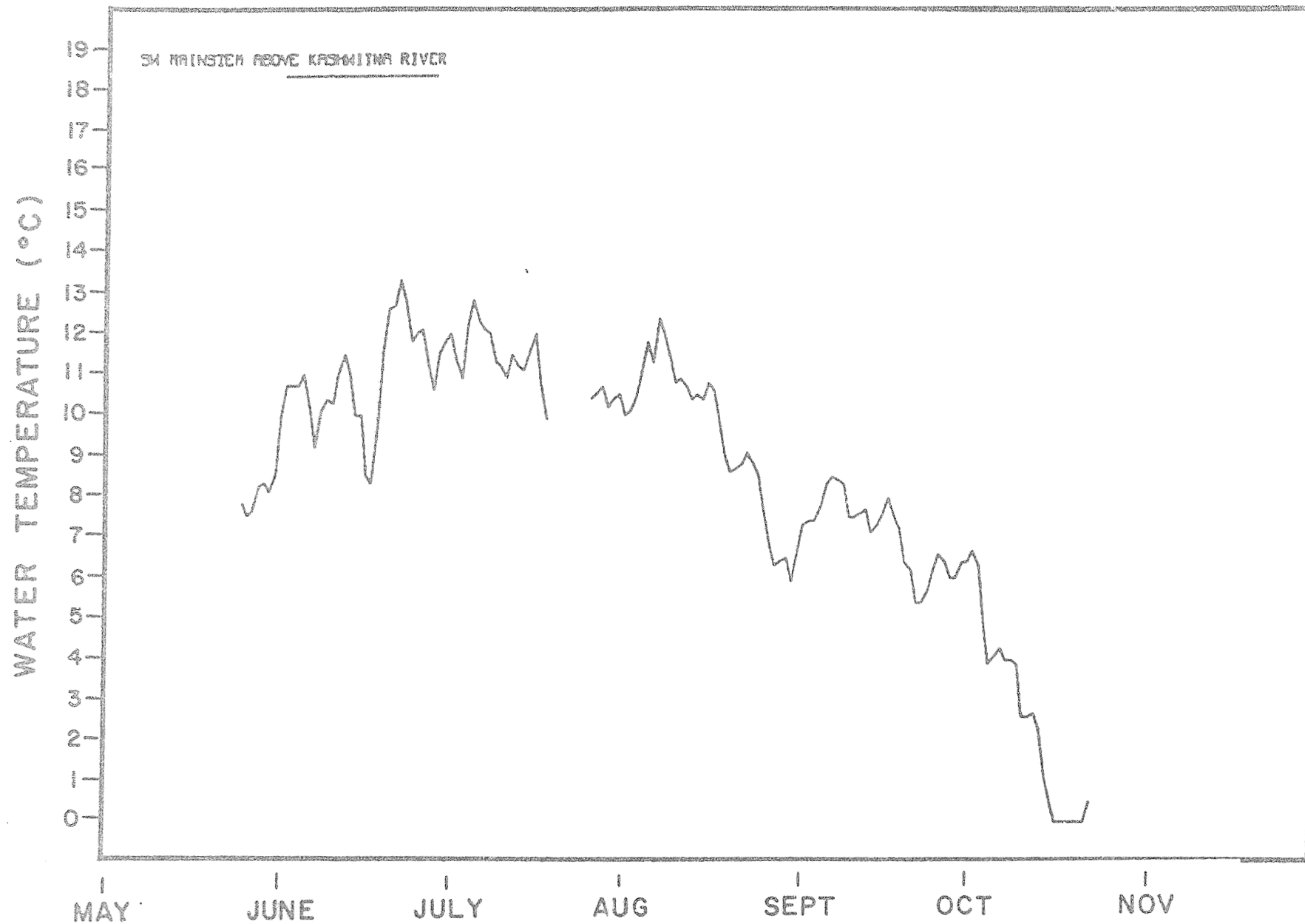


Figure 5. Mean daily surface water temperature recorded at Mainstem Susitna River above the Kashwitna River (RM 61.2) during the 1984 open water season.

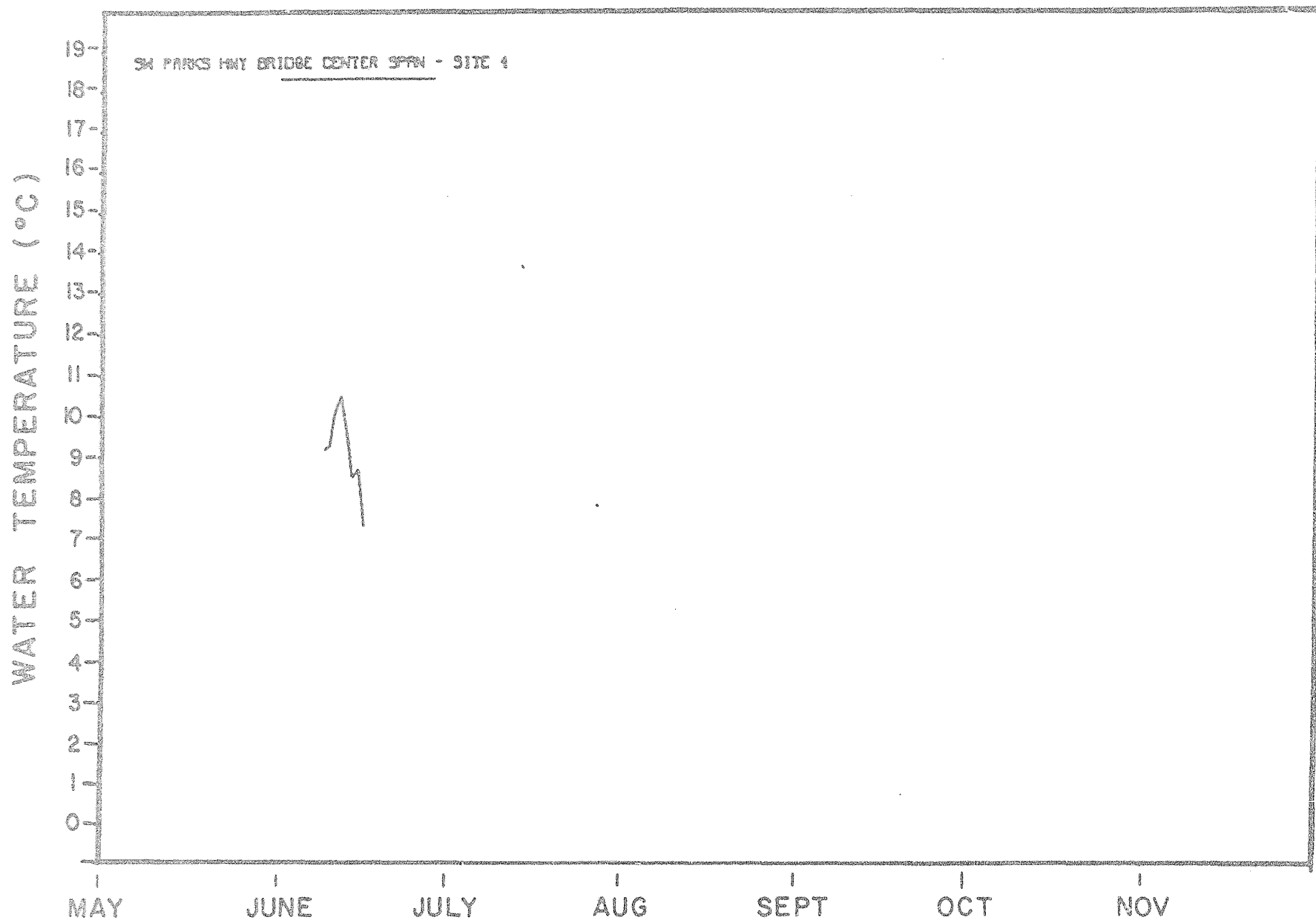


Figure 6. Mean daily surface water temperature recorded at Mainstem Susitna River at Parks Highway Bridge Center Span-Site 4 (RM 83.9) during the 1984 open water season.

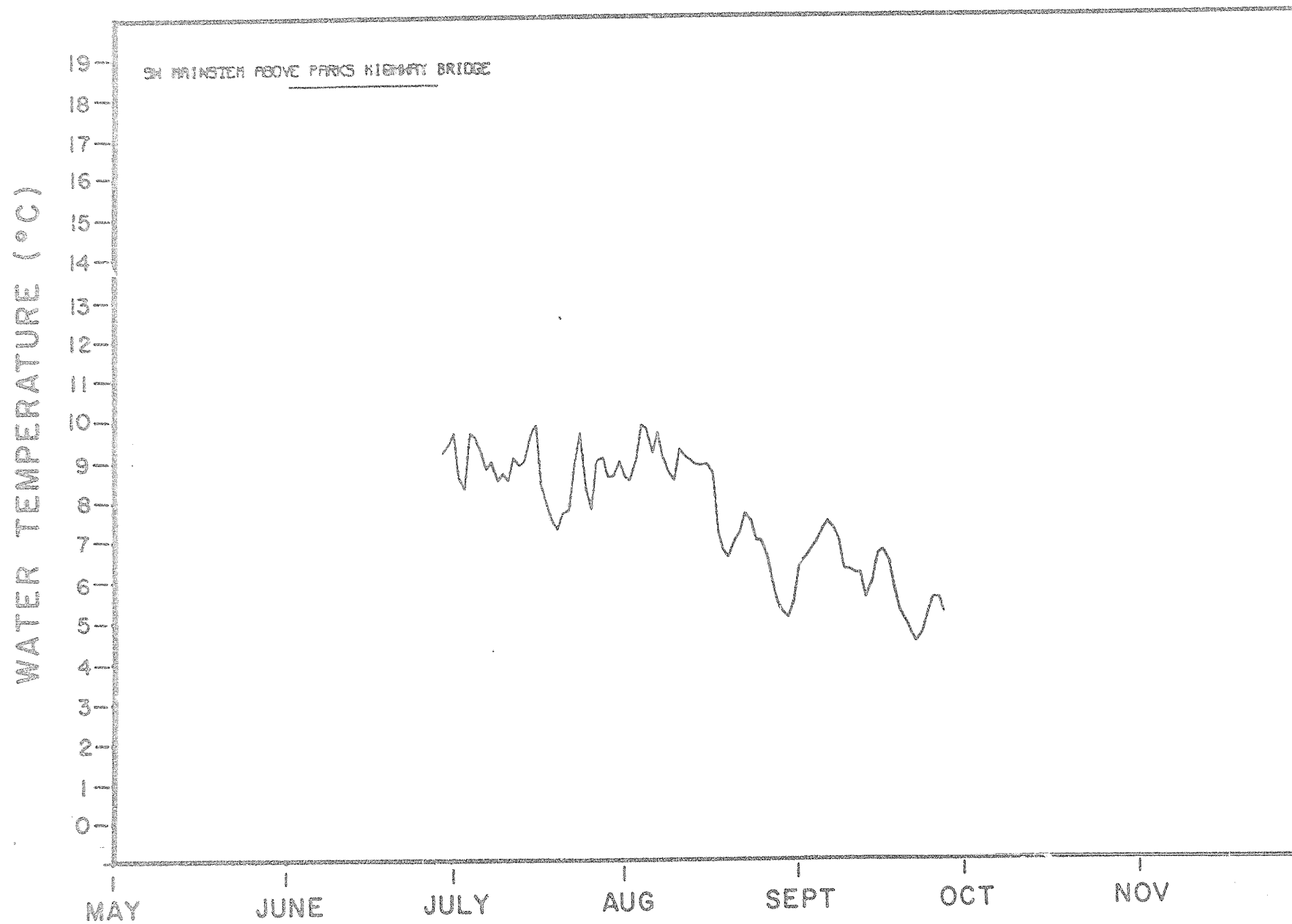


Figure 7. Mean daily surface water temperature recorded at Mainstem Susitna River above the Parks Highway Bridge (RM 86.9) during the 1984 open water season.

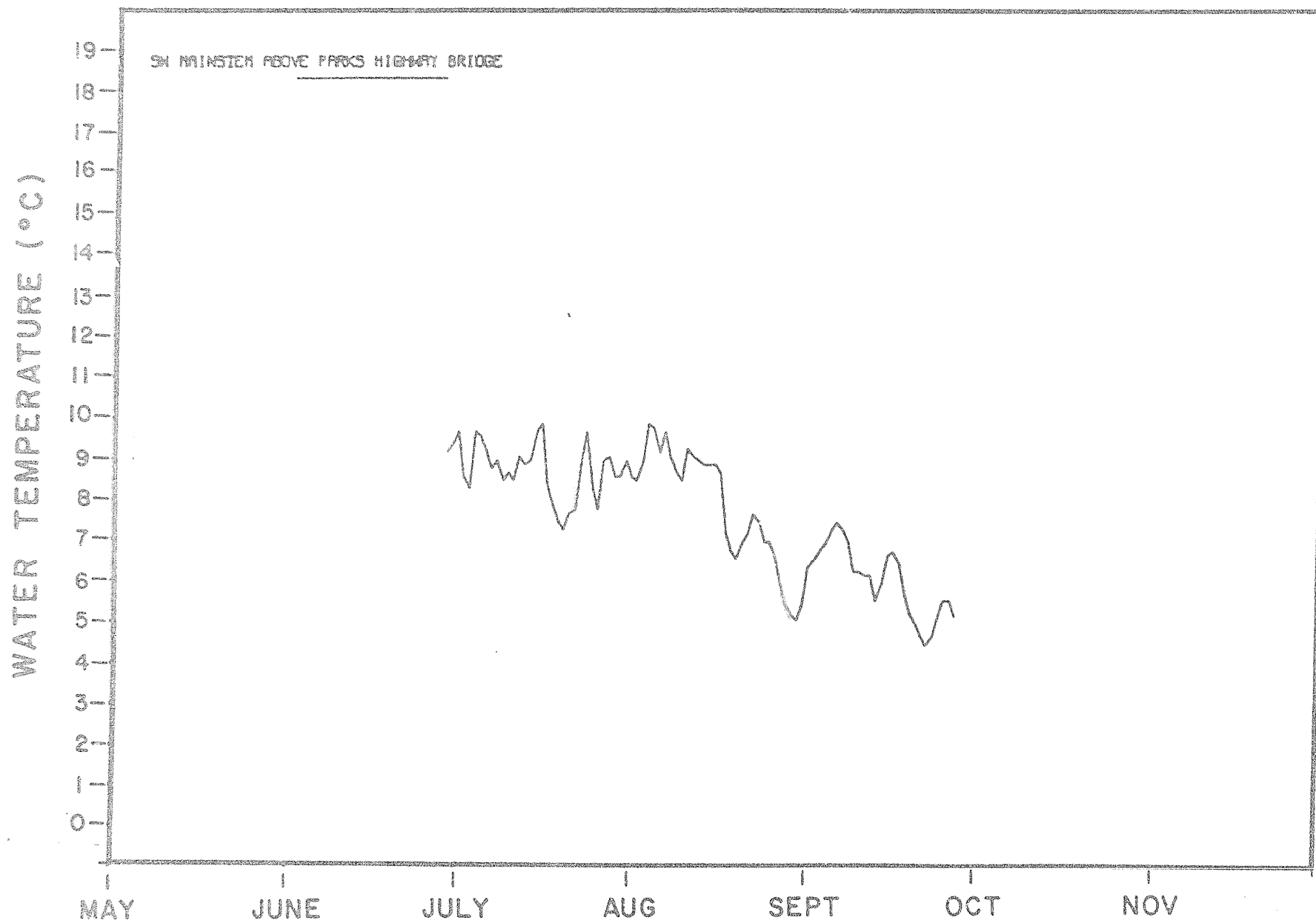


Figure 7. Mean daily surface water temperature recorded at Mainstem Susitna River above the Parks Highway Bridge (RM 86.9) during the 1984 open water season.

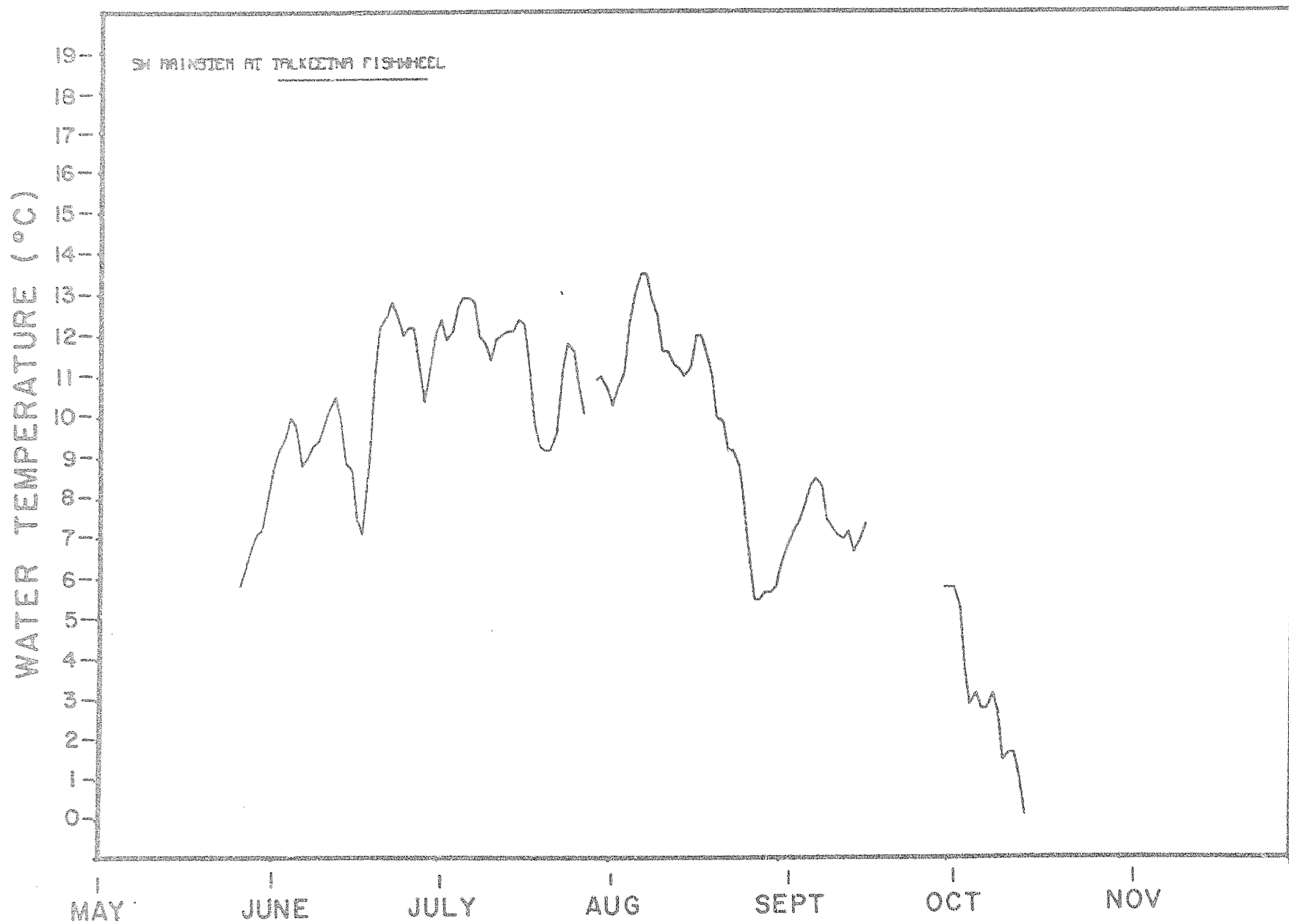


Figure 6. Mean daily surface water temperature recorded at Mainstem Susitna River at Talkeetna Fishwheel Camp (RM 103.0) during the 1984 open water season.

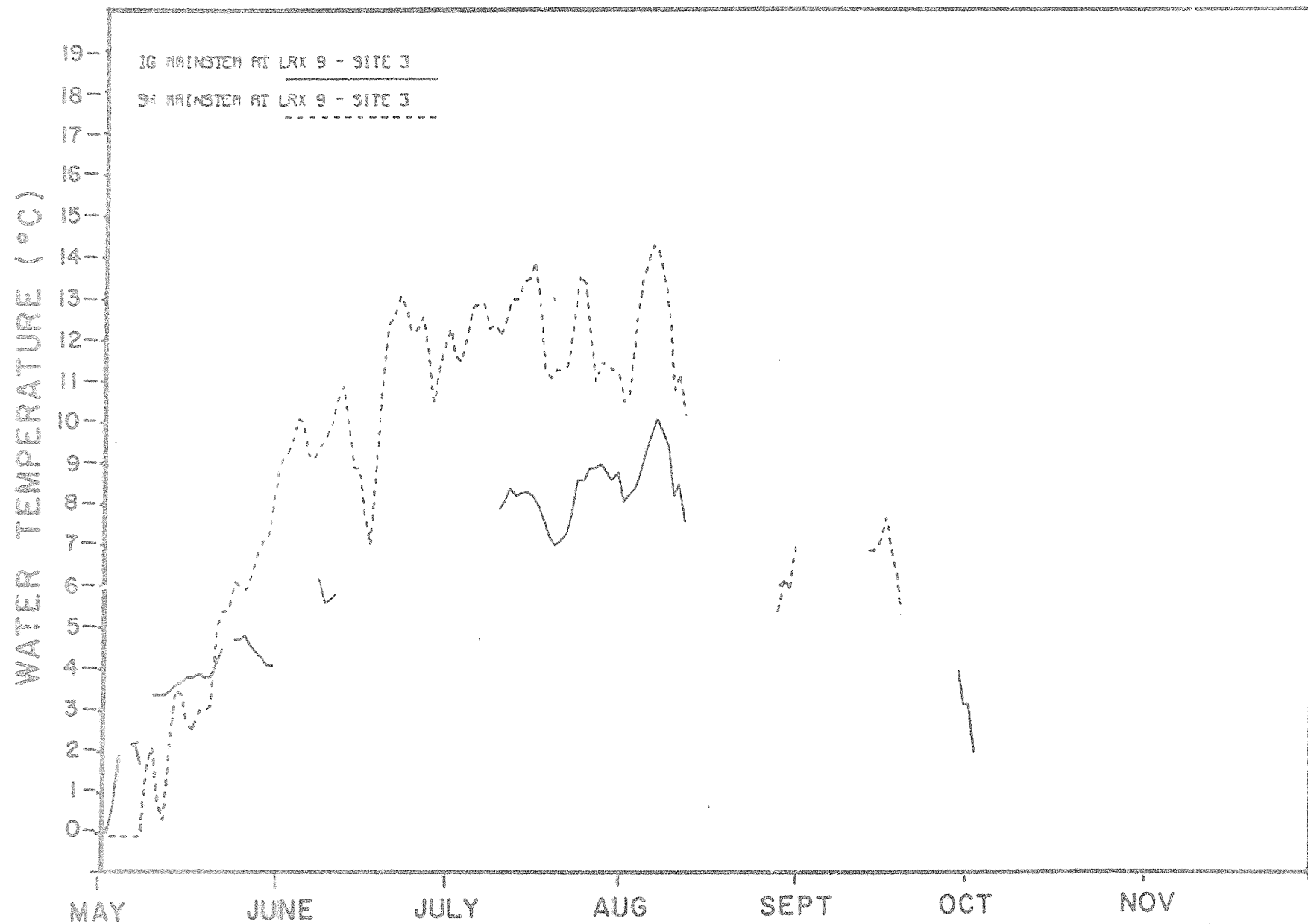


Figure 9. Mean daily surface and intragravel water temperatures recorded at Mainstem Susitna River at LRX9 - Site 3 (RM 103.5) during the 1984 open water season.

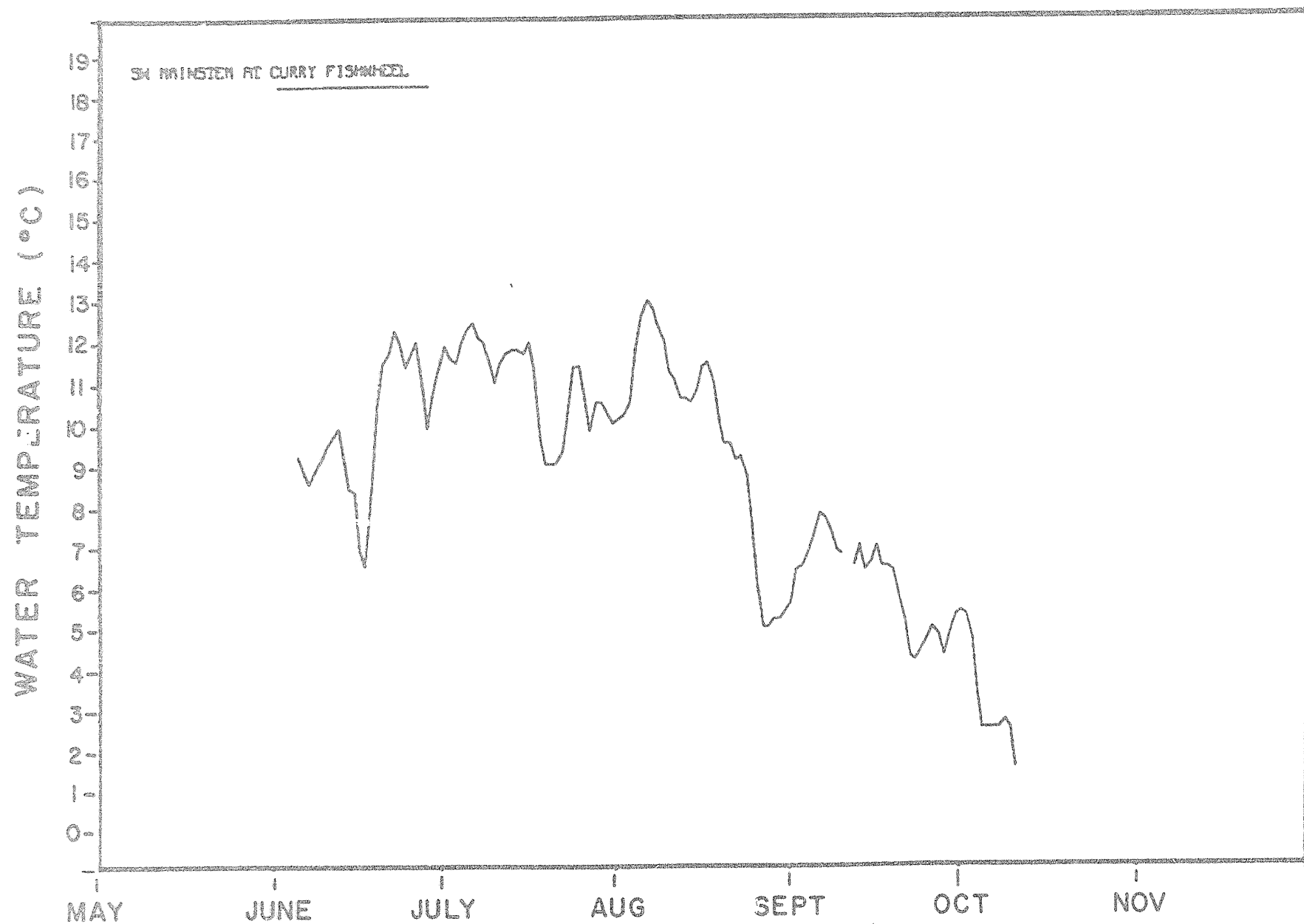


Figure 10. Mean daily surface water temperature recorded at Mainstem Susitna River at Curry Fishwheel Camp (RM 120.7) during the 1984 open water season.

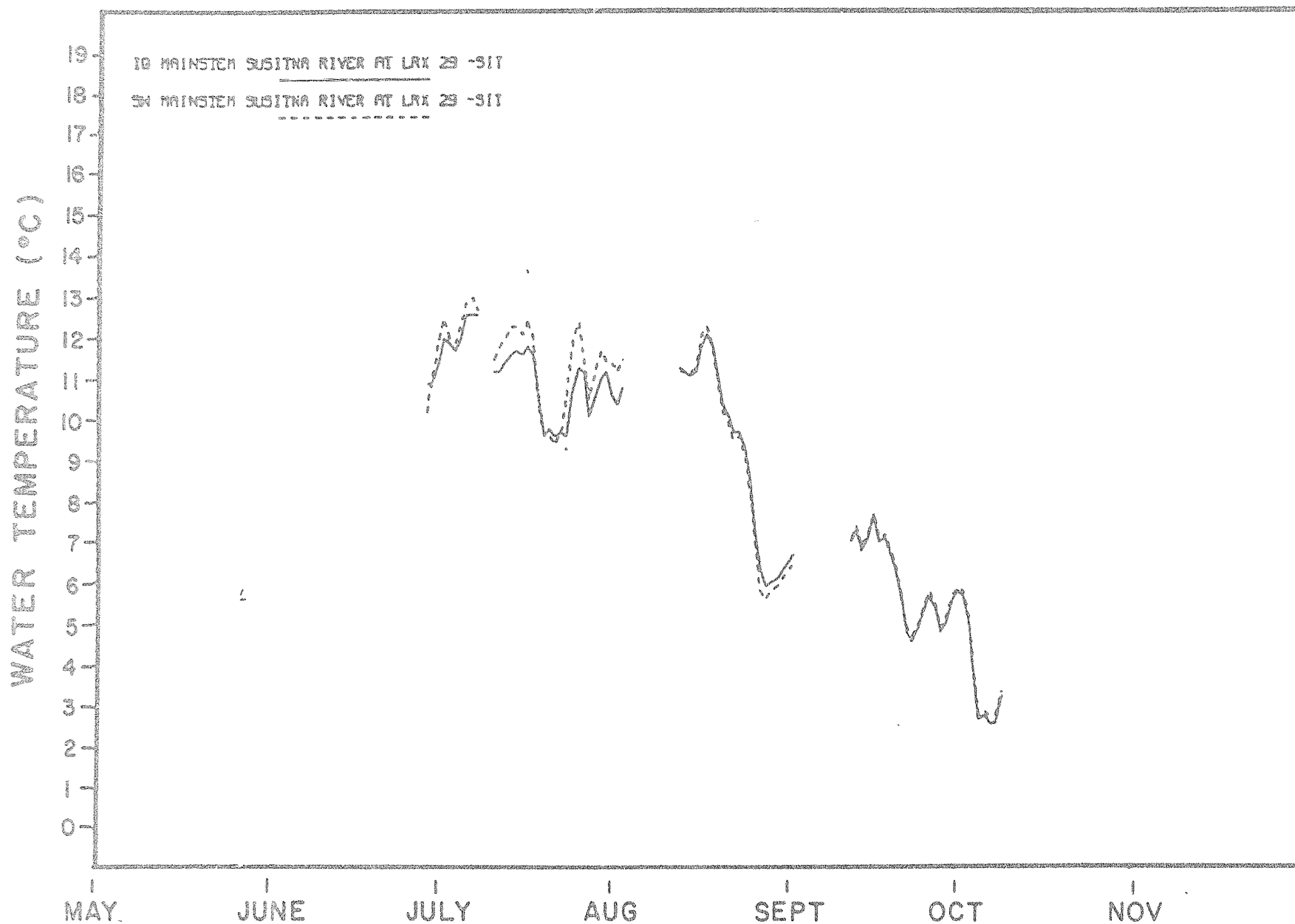


Figure 11. Mean daily surface and intragravel water temperatures recorded at Mainstem Susitna River at LRX 29 (RM 125.9) during the 1984 open water season.

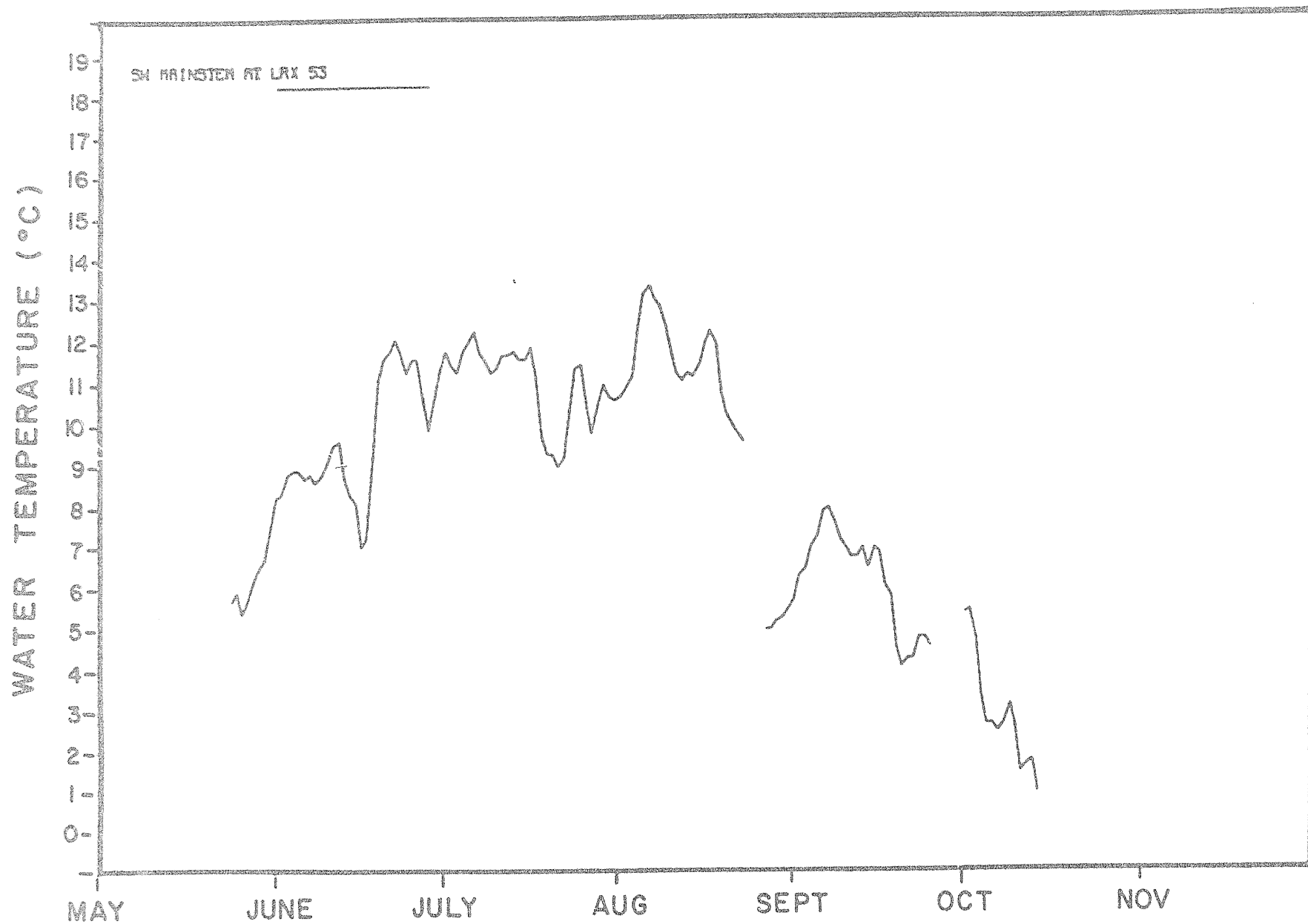


Figure 12. Mean daily surface water temperature recorded at Mainstem Susitna River at LRX 53 (RM 140.1) during the 1984 open water season.

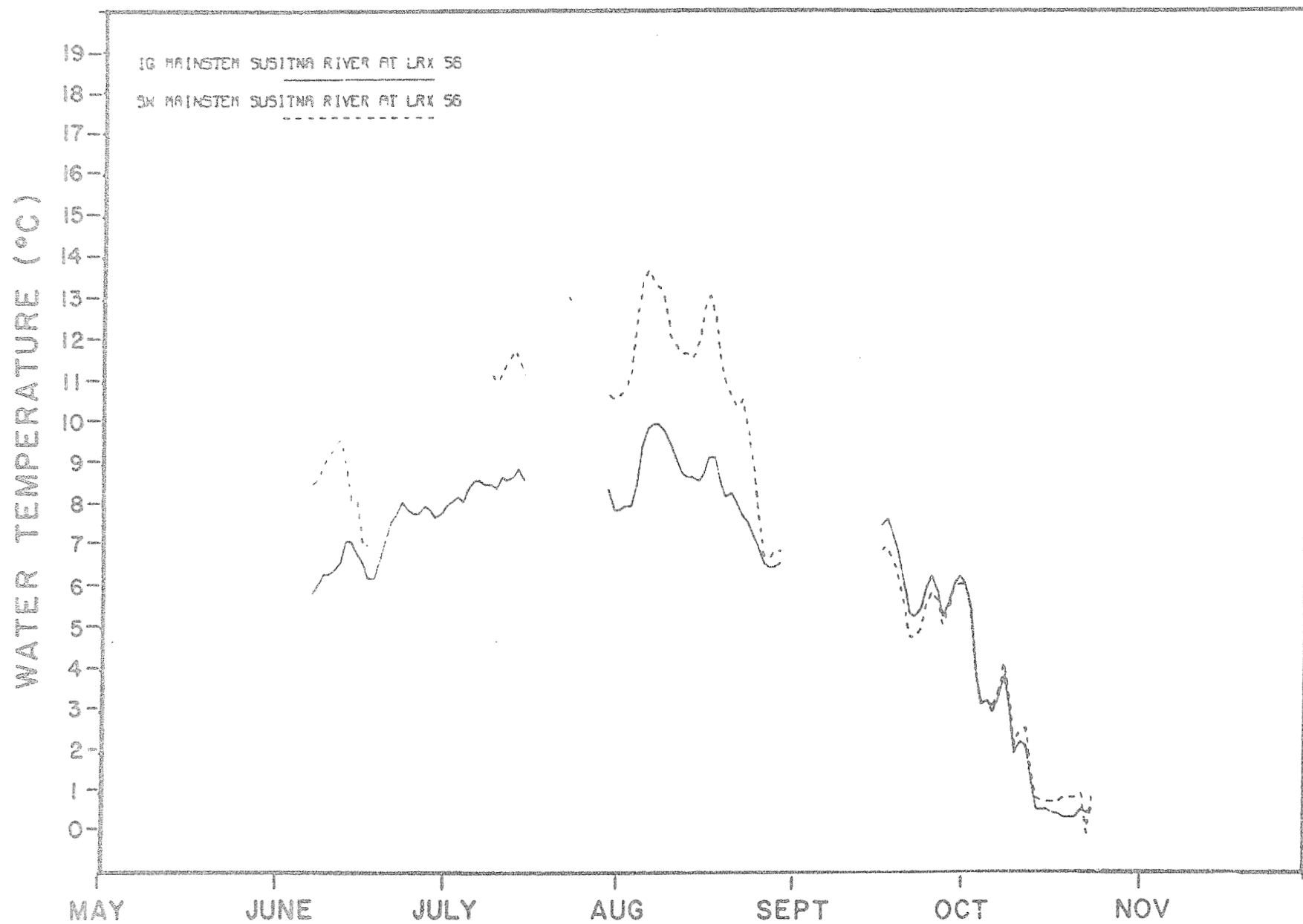


Figure 13. Mean daily surface and intragravel water temperatures recorded at Mainstem Susitna River at LRX 56 (RM 142.1) during the 1984 open water season.

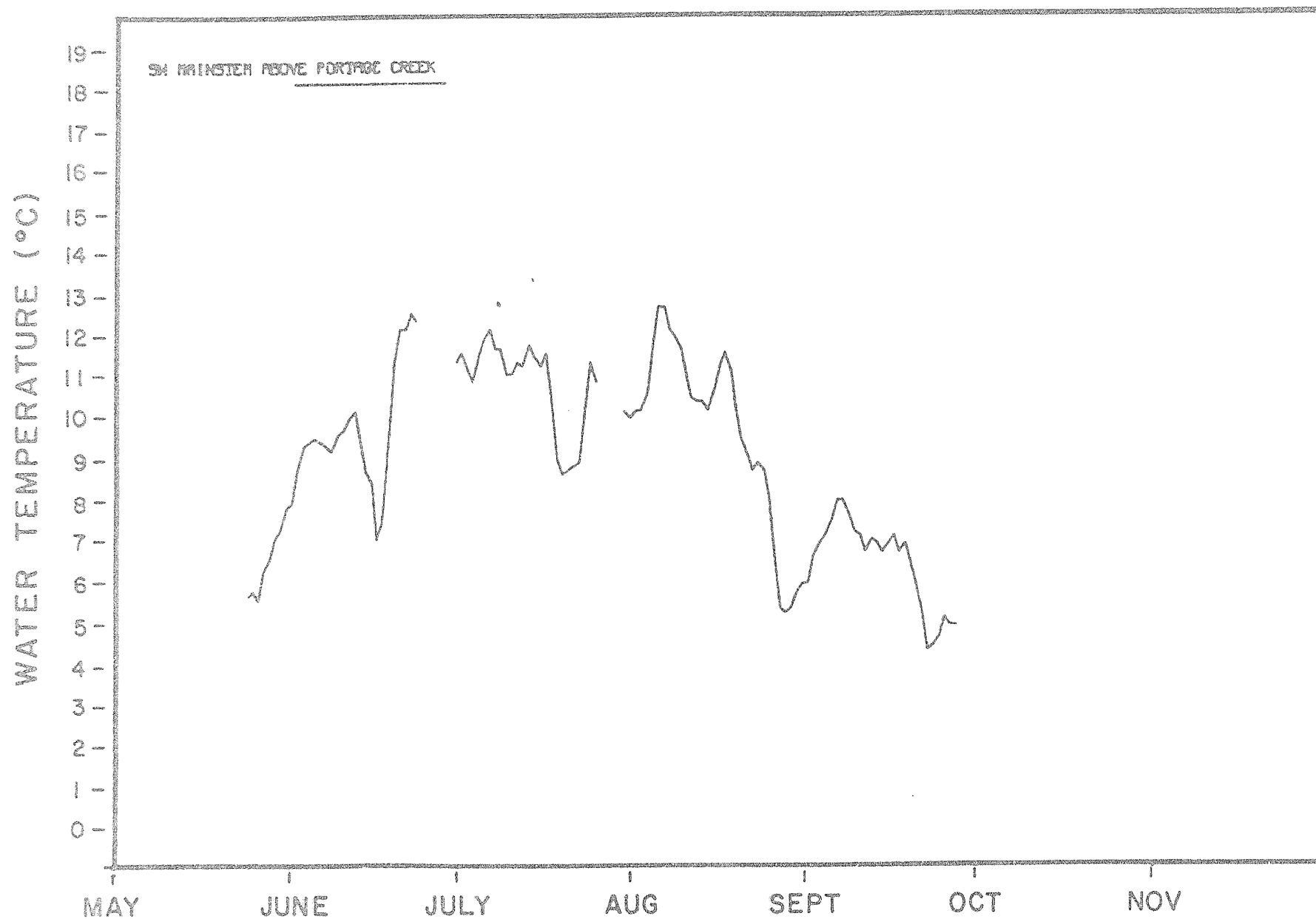


Figure 14. Mean daily surface water temperature recorded at Mainstem Susitna River above Portage Creek (RM 148.9) during the 1984 open water season.

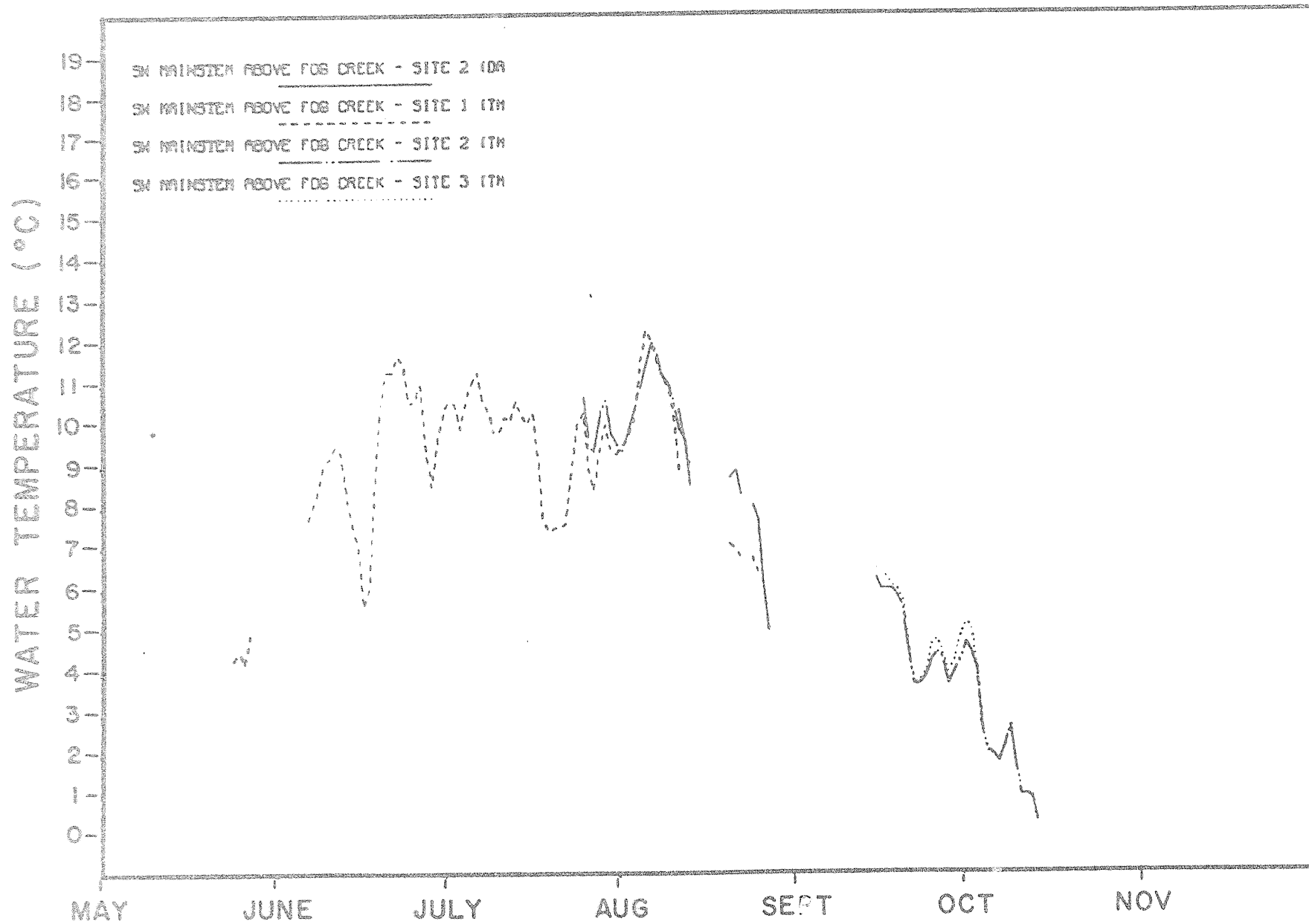


Figure 15. Mean daily surface water temperature recorded at Mainstem Susitna River above Fog Creek - Sites 1-3 (RM 176.8) during the 1984 open water season.

SN WAINSTEEN AT WAIANA DAM SITE (DATAPOOL)

SN WAINSTEEN AT WAIANA DAM SITE (THERMOGR)

WATER TEMPERATURE (°C)

MAY JUNE JULY AUG SEPT OCT NOV

Figure 16. Mean daily surface water temperature recorded at Mainstem Susitna River at Watana Dam Site (RM 184.2) during the 1984 open water season.

3.8 Figures 17 to 28 - Mean daily temperatures recorded at tributary sites during the 1984 open water season.

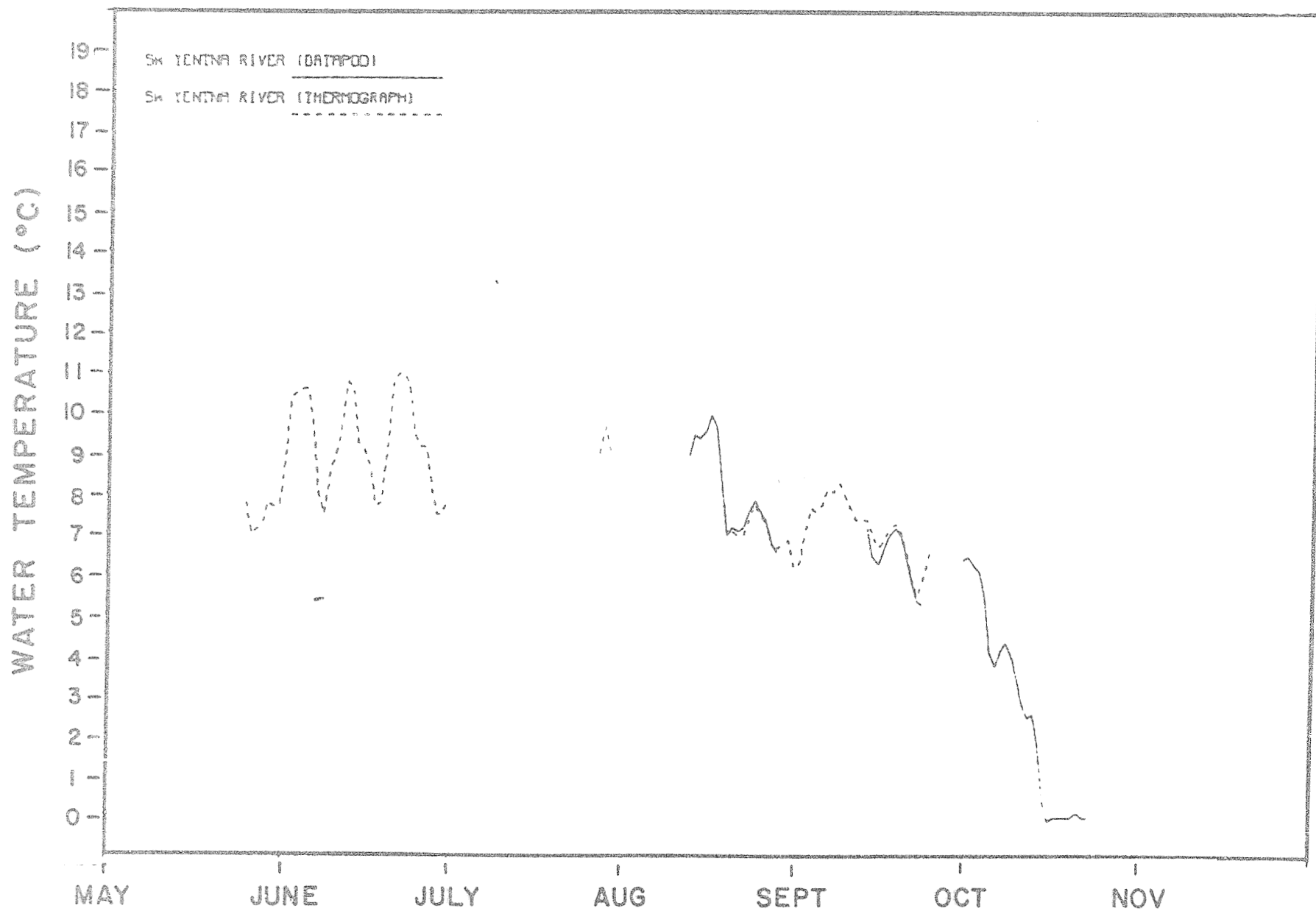


Figure 17. Mean daily surface water temperature recorded at the Yentna River - Site 2 (RM 28.0, TRM 4.0) during the 1984 open water season.

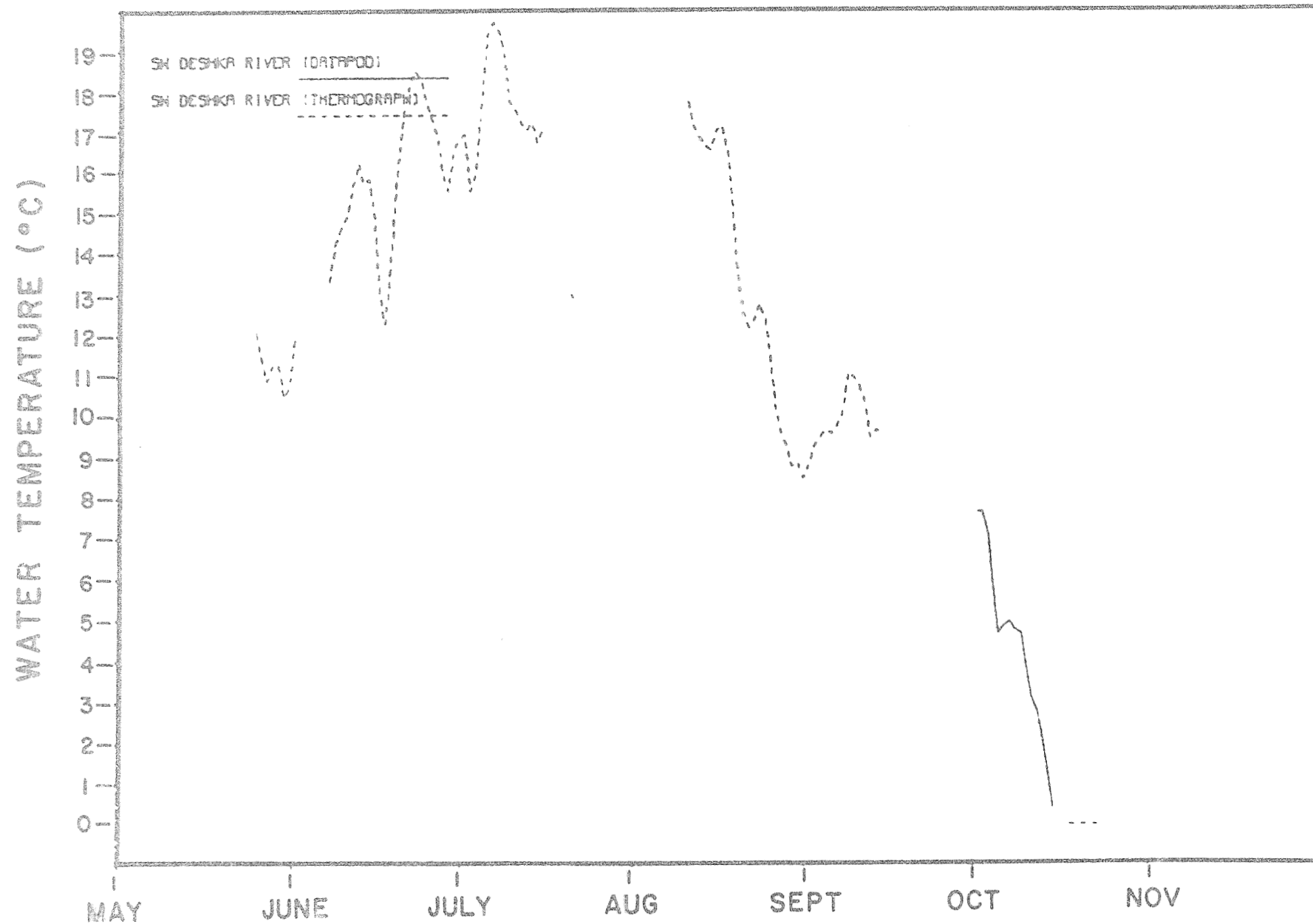


Figure 18. Mean daily surface water temperature recorded at the Deshka River (RM 40.6, TRM 3.0) during the 1984 open water season.

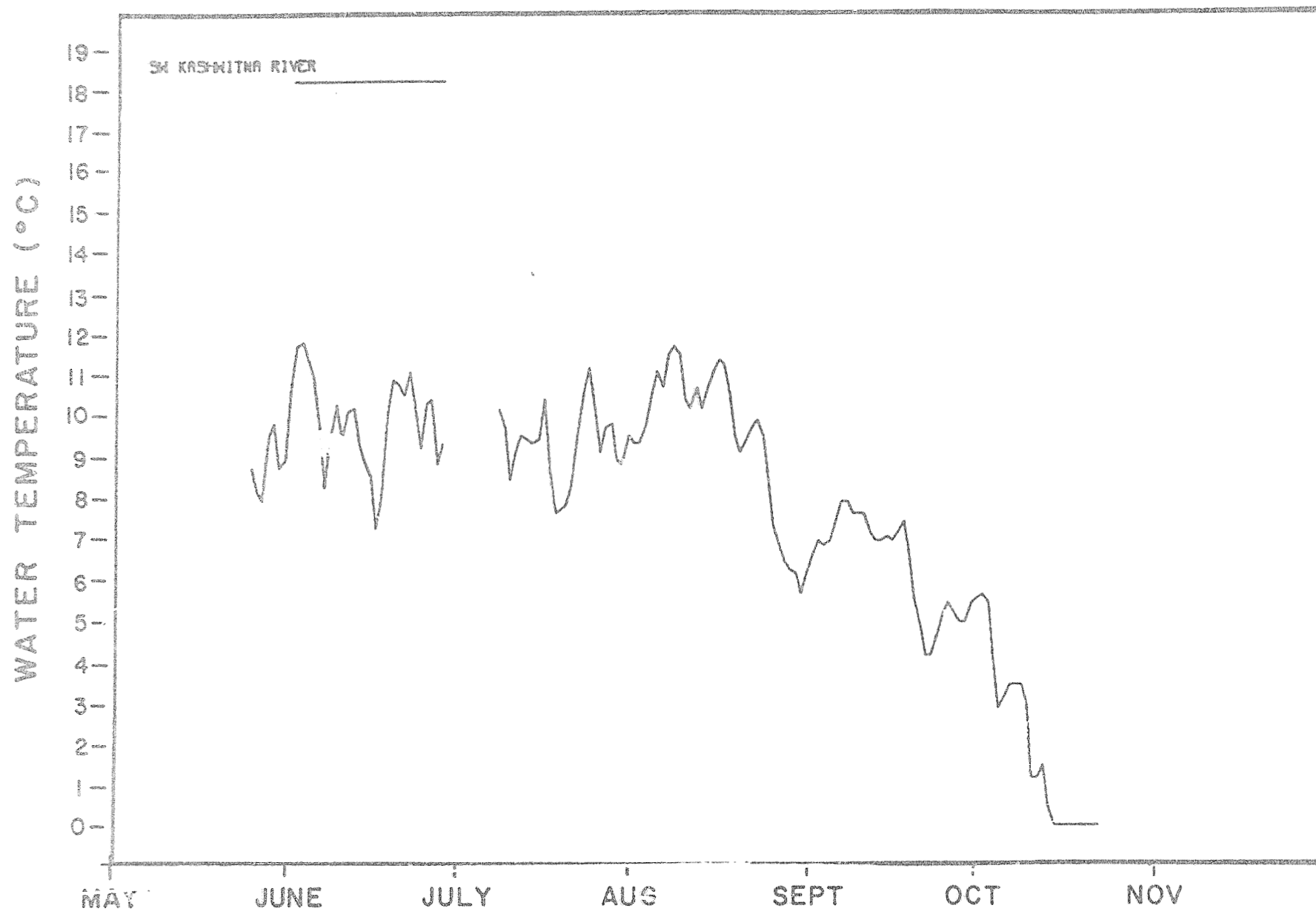


Figure 19. Mean daily surface water temperature recorded at the Kashwitna River (RM 60.9, TRM 0.1) during the 1984 open water season.

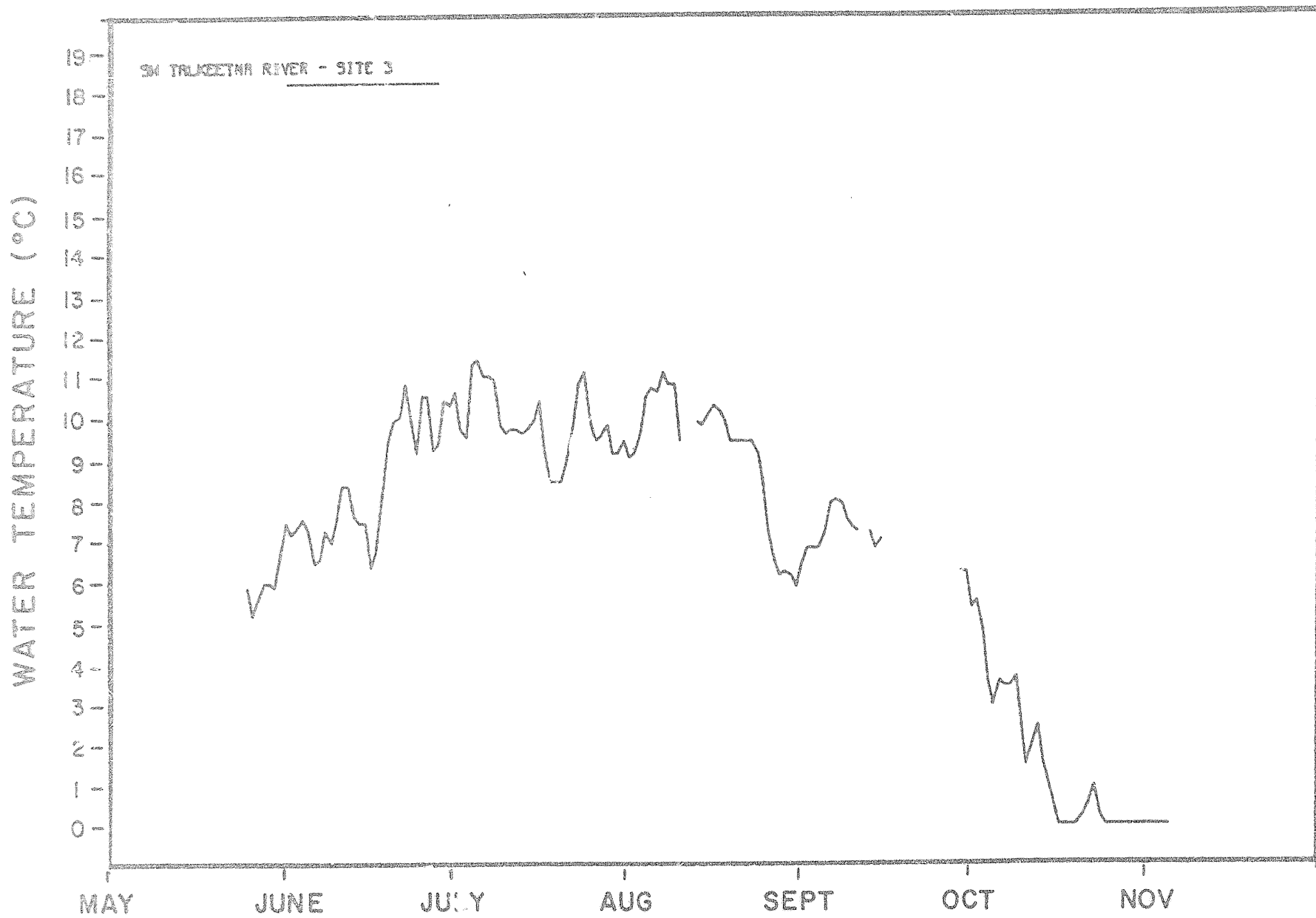


Figure 20. Mean daily surface water temperature recorded at the Talkeetna River - Site 3 (RM 97.2, TRM 4.0) during the 1984 open water season.

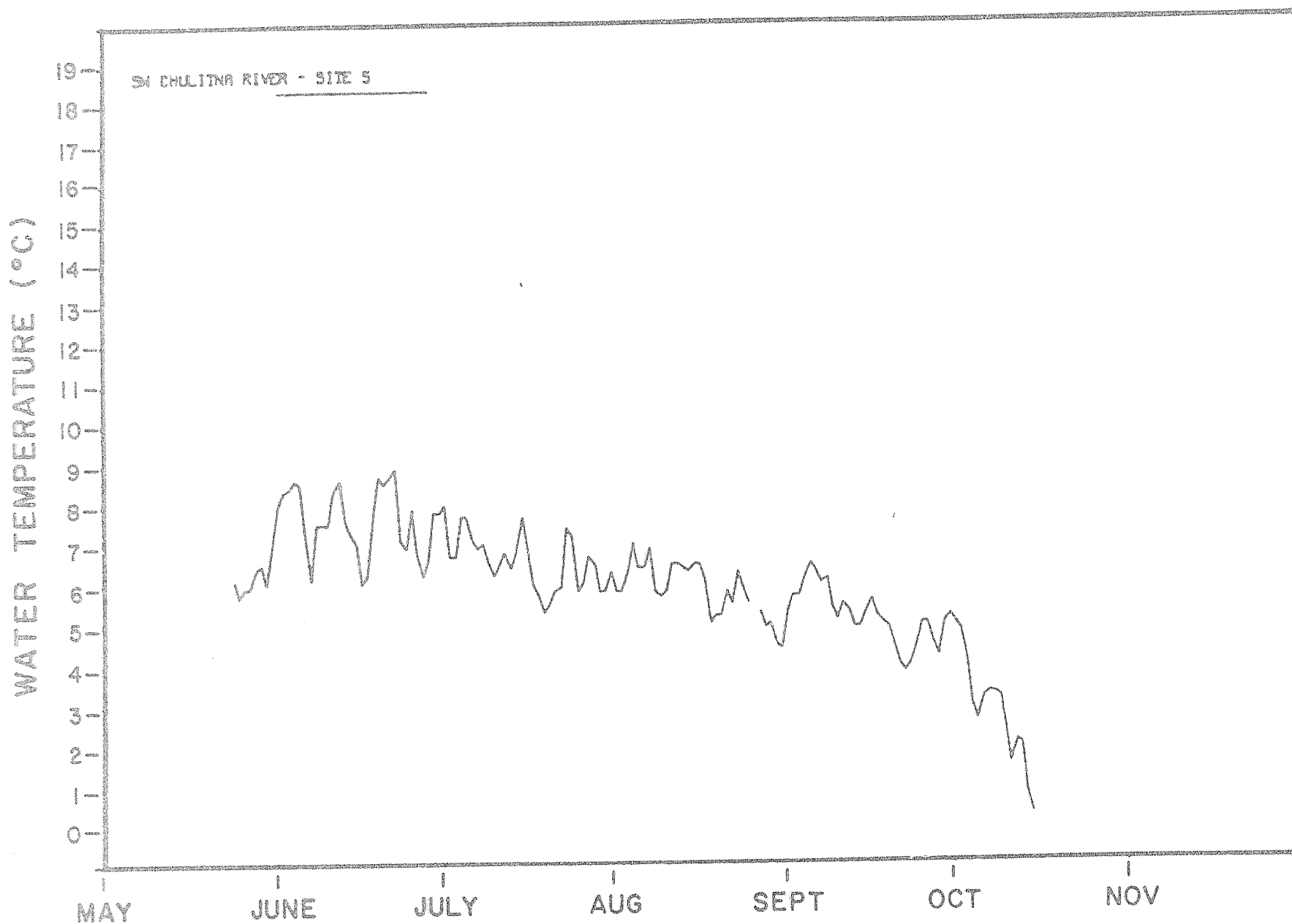


Figure 21. Mean daily surface water temperature recorded at the Chulitna River - Site 5 (RM 98.6, TRM 11.0) during the 1984 open water season.

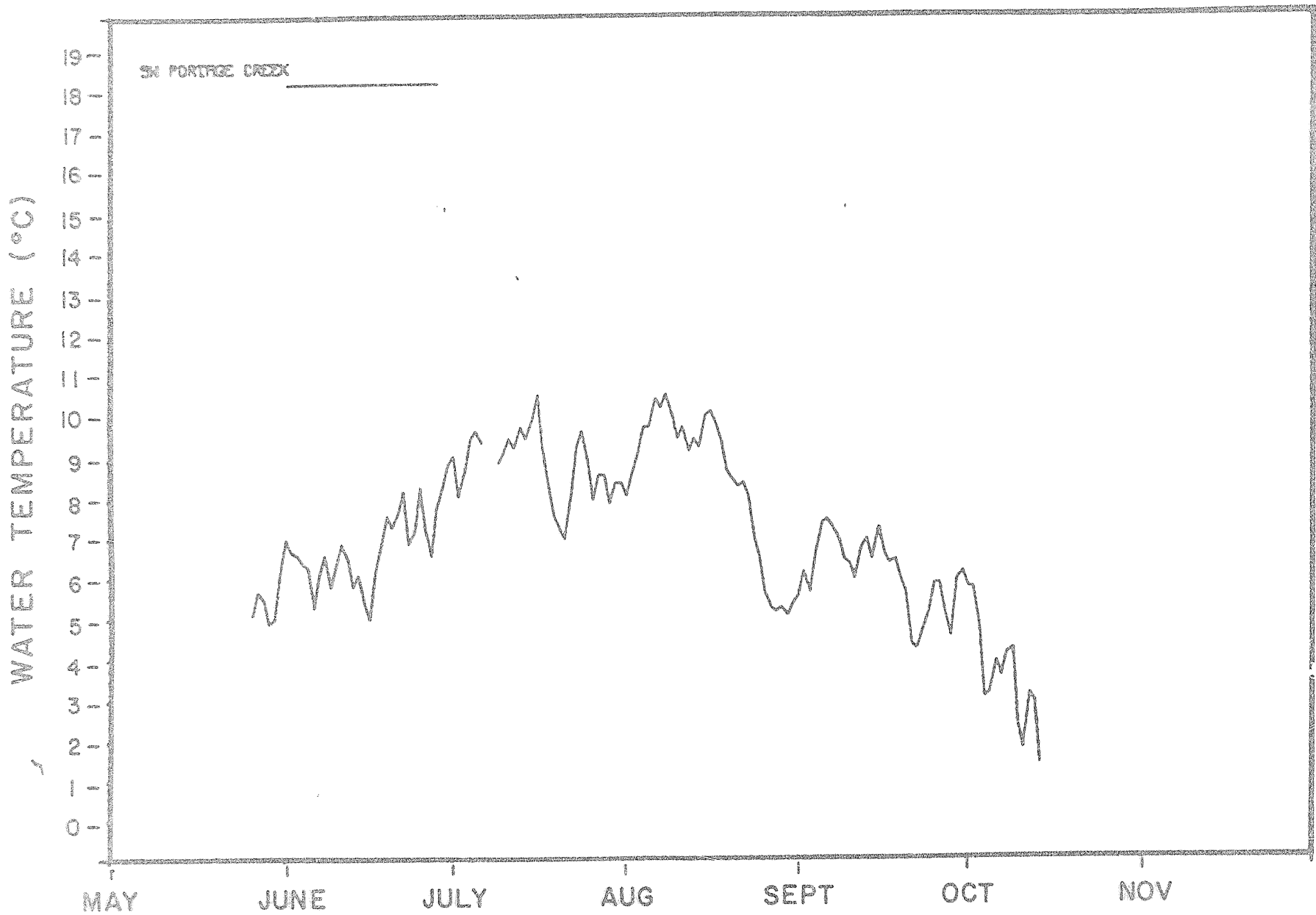


Figure 22. Mean daily surface water temperature recorded at Portage Creek (RM 148.8, TRM 0.1) during the 1984 open water season.

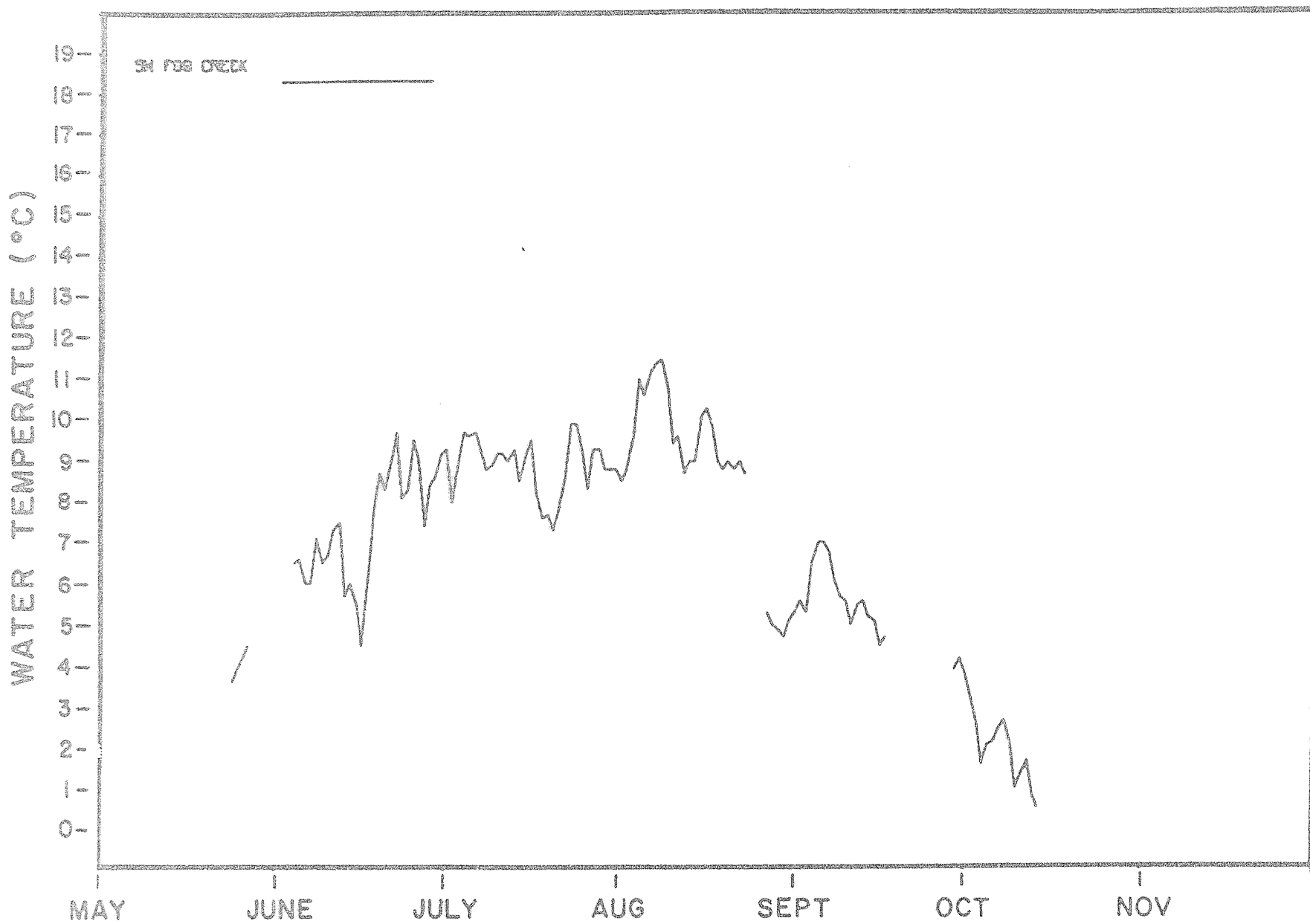


Figure 23. Mean daily surface water temperature recorded at Fog Creek (RM 176.7, TRM 0.1) during the 1984 open water season.

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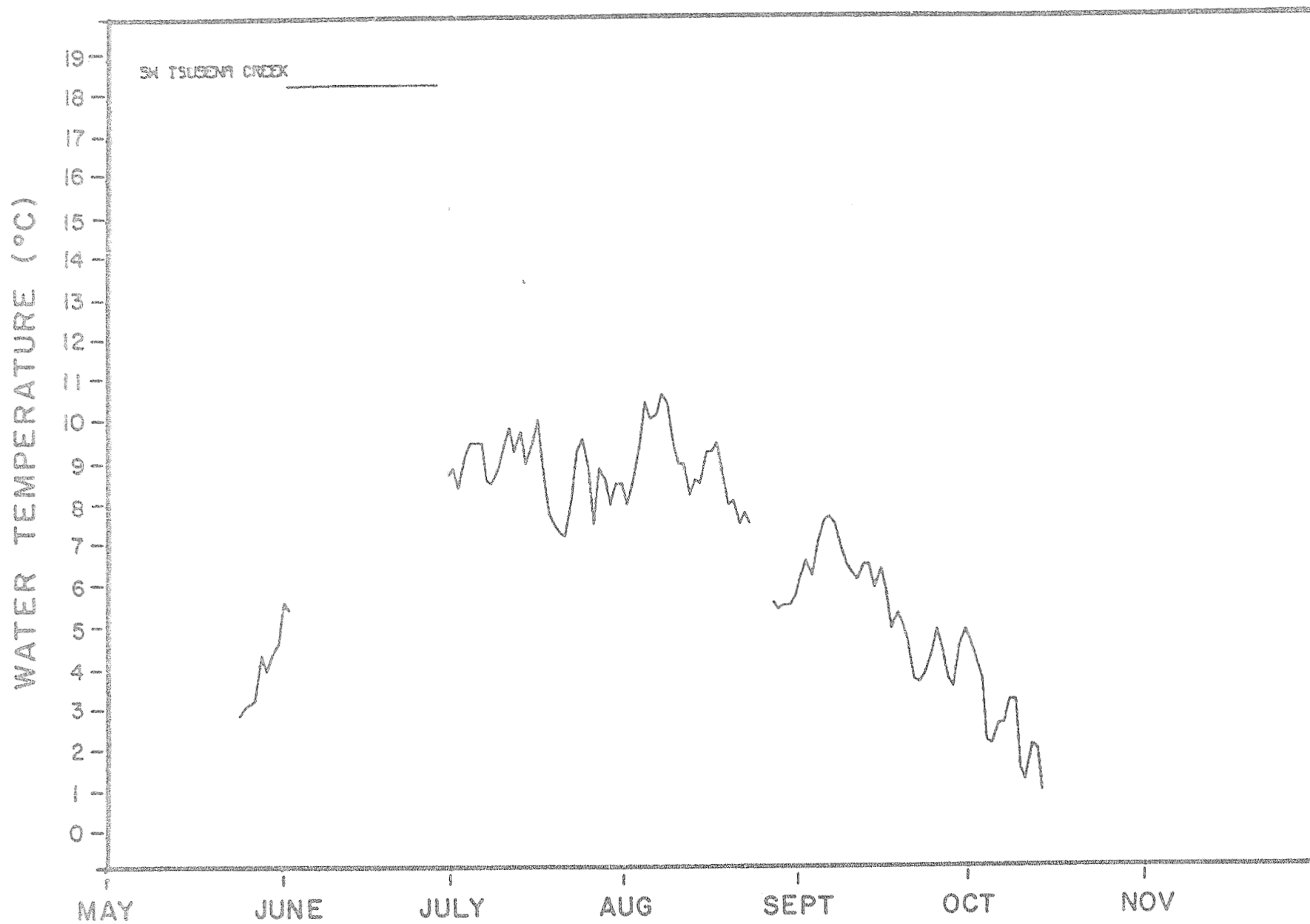


Figure 24. Mean daily surface water temperature recorded at Tsusena Creek (RM 181.8, TRM 0.1) during the 1984 open water season.

230

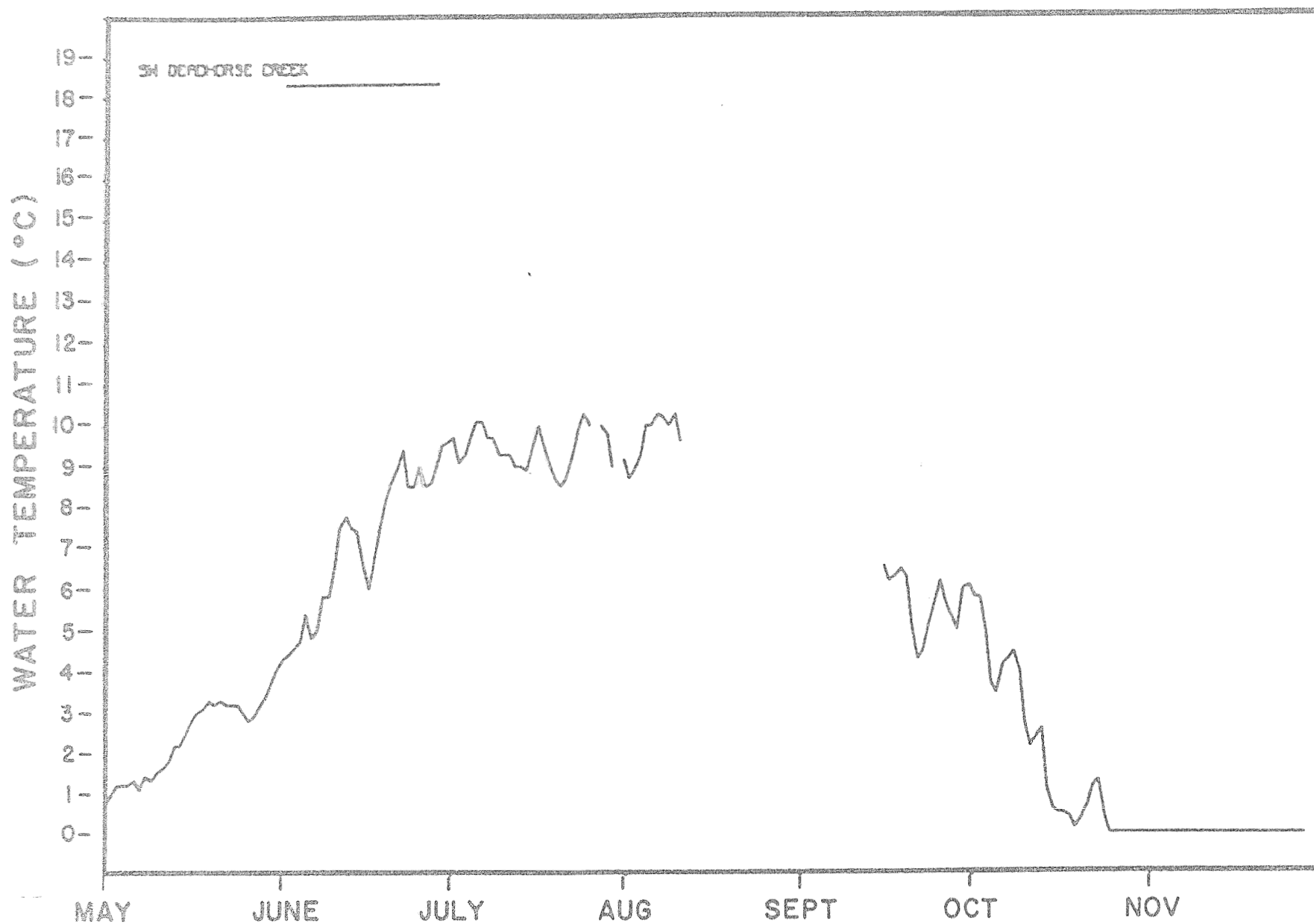


Figure 25. Mean daily surface water temperature recorded at Deadhorse Creek (RM 120.9, TRM 1.0) during the 1984 open water season.

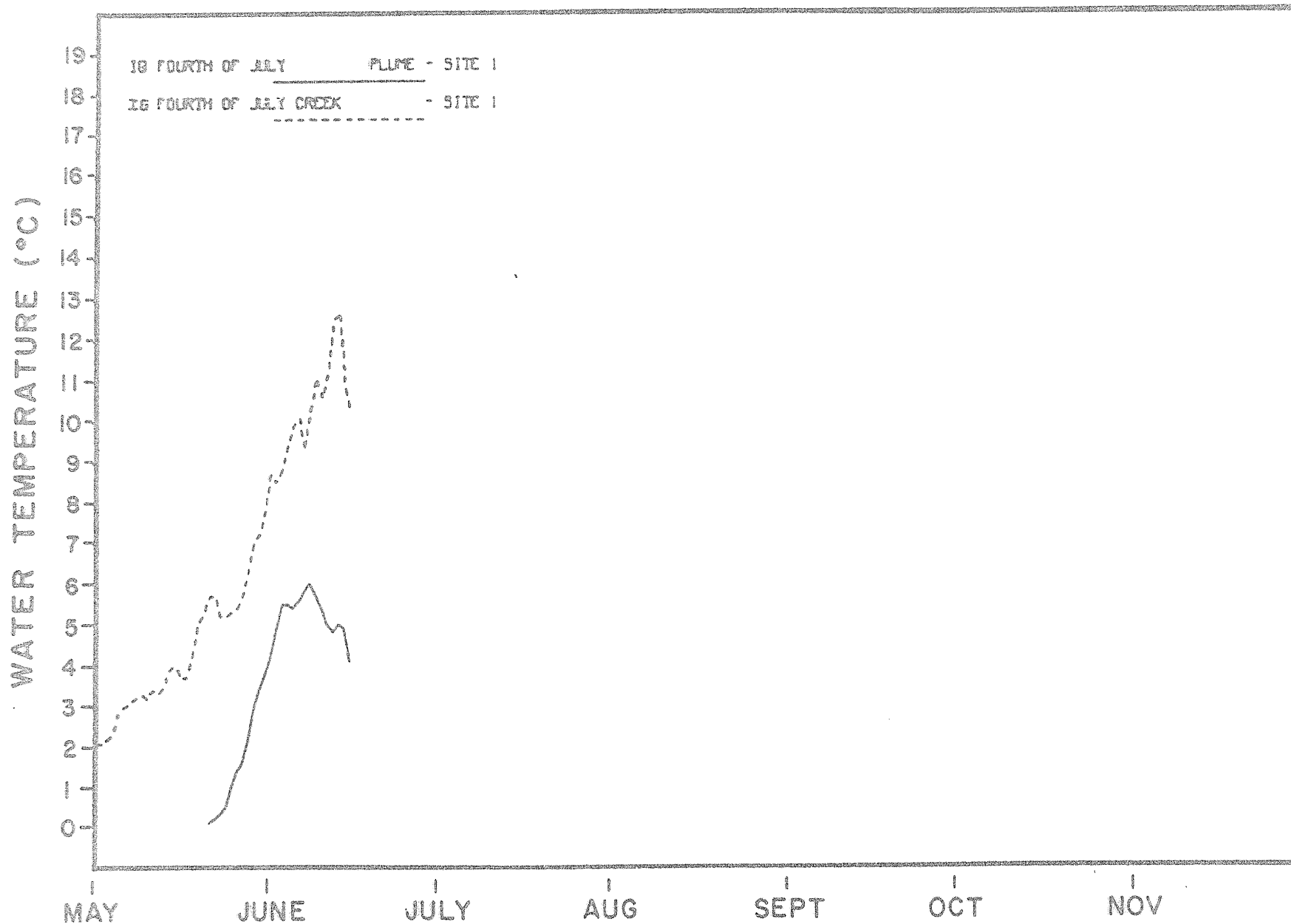


Figure 26. Mean daily intragravel water temperatures recorded at Fourth of July Creek and Plume - Site 1 (RM 131.1, TRM 0.0) during the 1984 open water season.

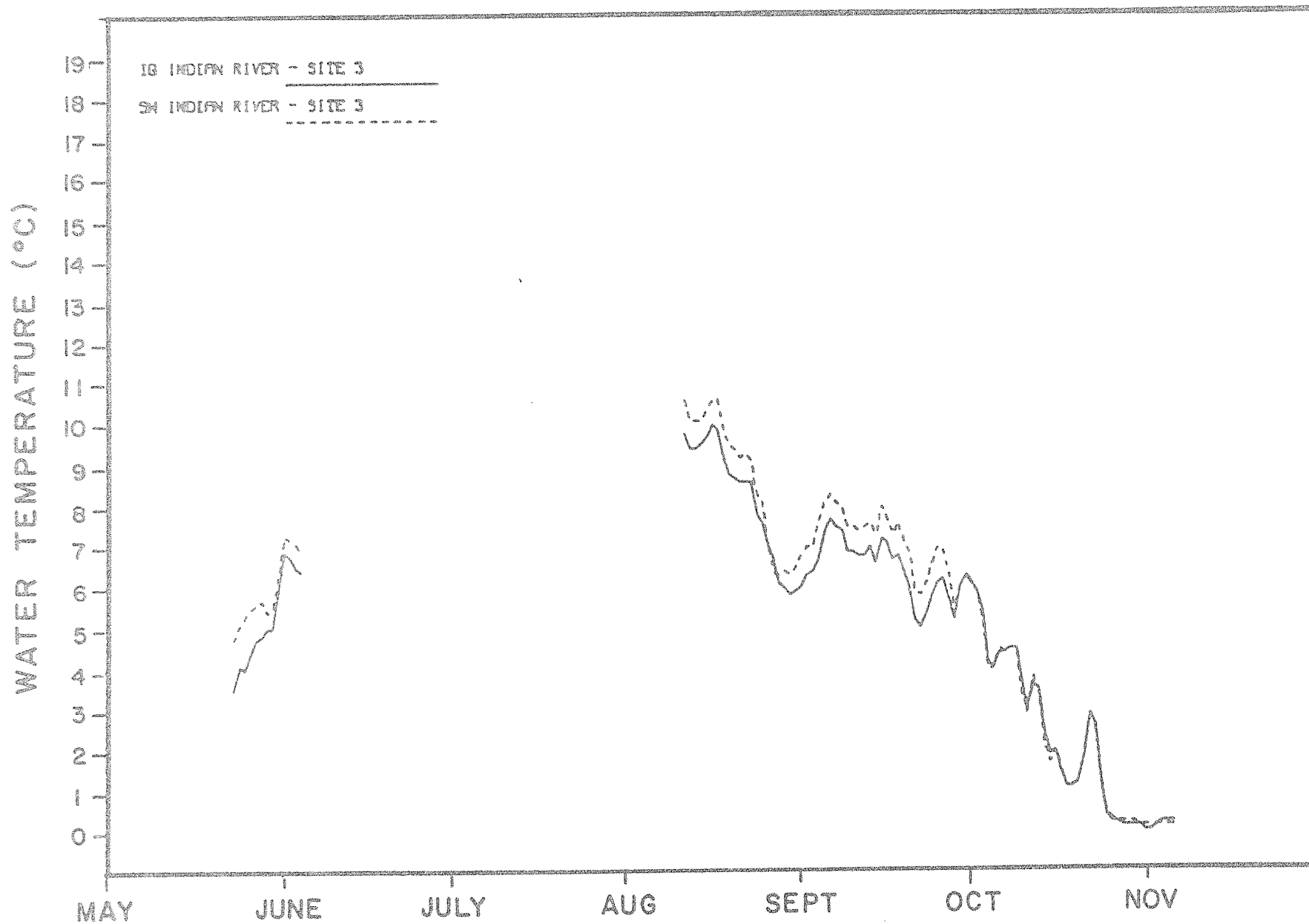


Figure 27. Mean daily surface and intragravel water temperatures recorded at Indian River - Site 3 (RM 138.6, TRM 0.2) during the 1984 open water season.

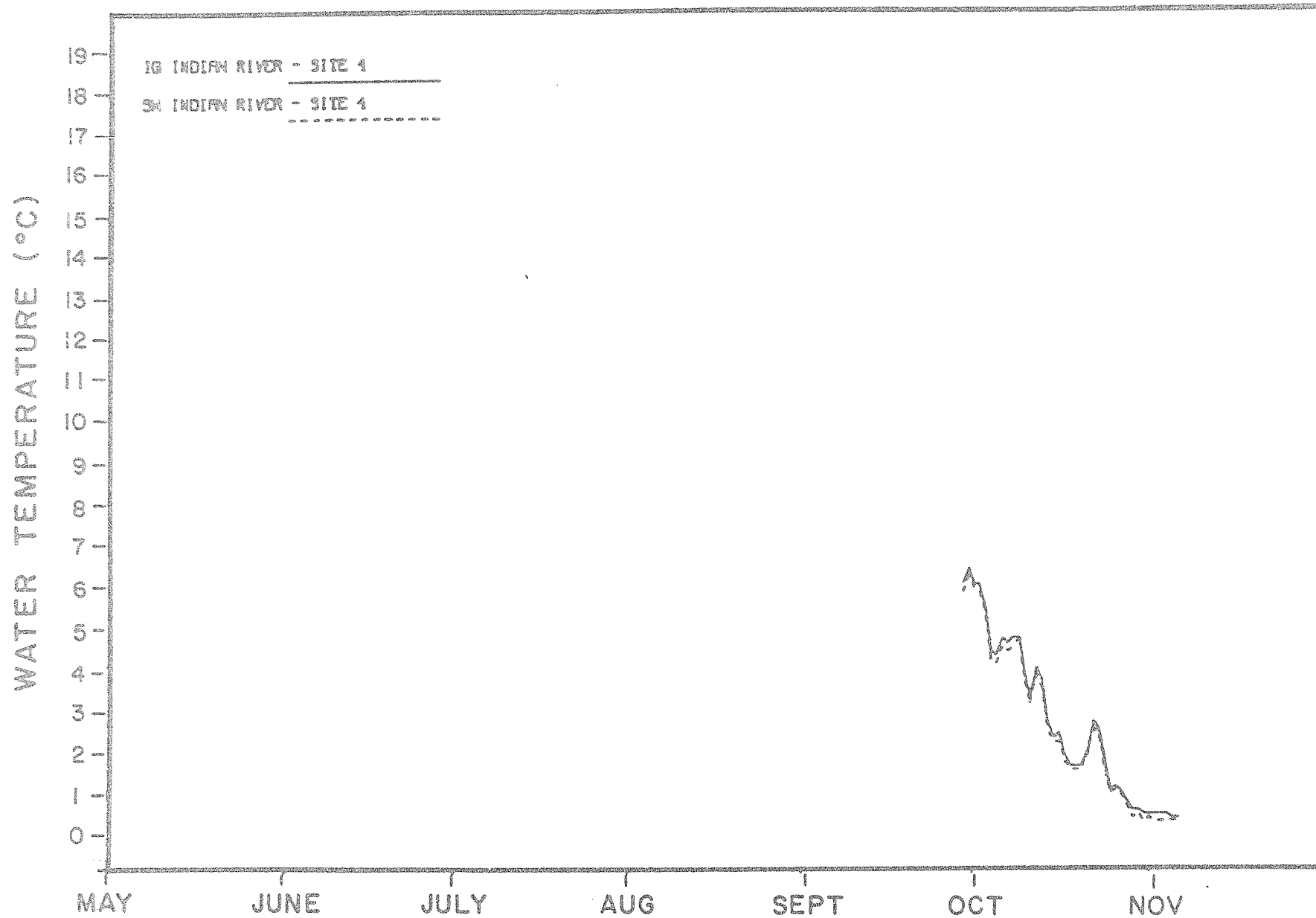


Figure 28. Mean daily surface and intragravel water temperatures recorded at Indian River - Site 4 (RM 138.6, TRM 0.2) during the 1984 open water season.

3.9 Figures 29 to 45 - Site maps depicting locations of study areas during the 1984 open water season.

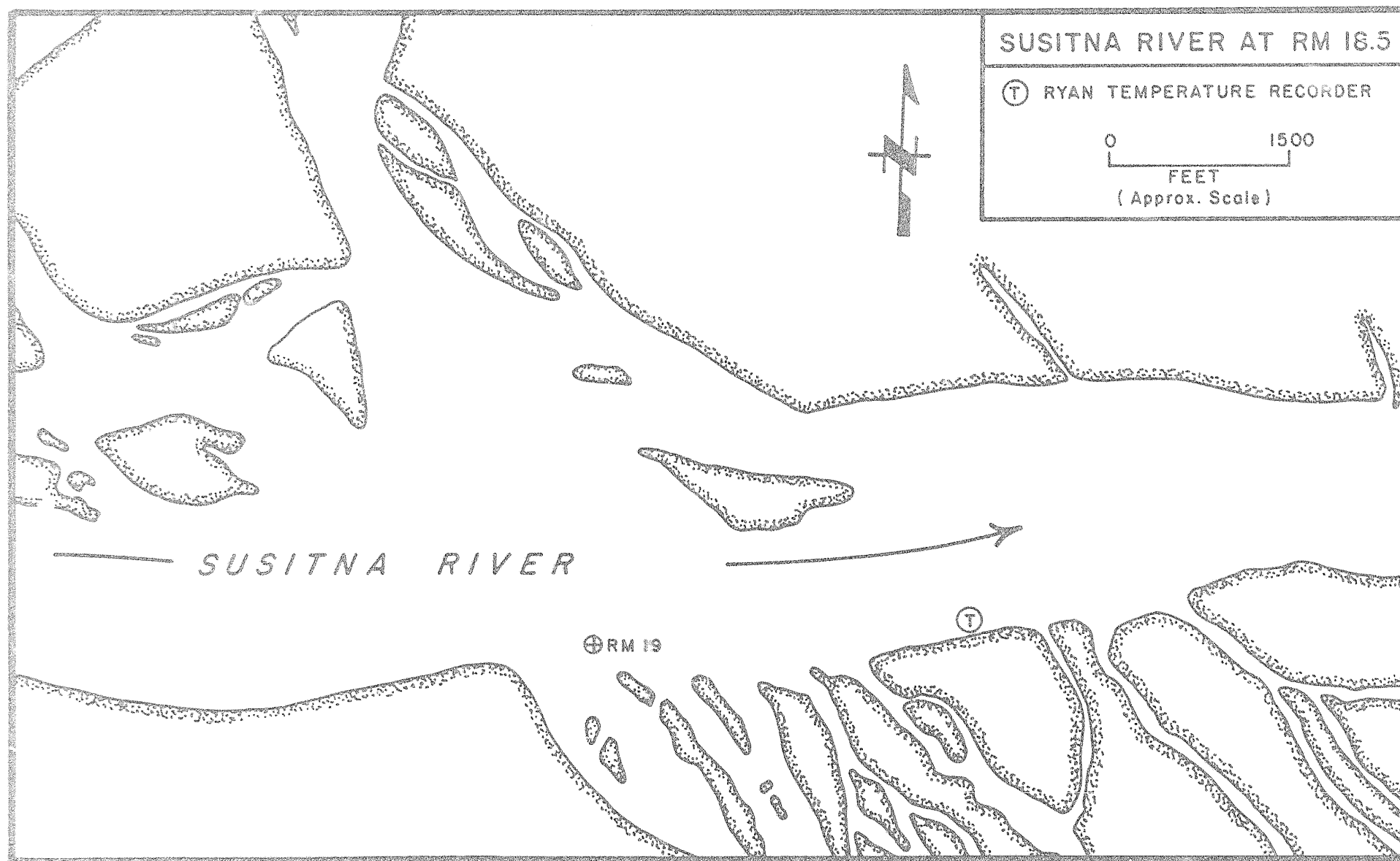


Figure 29. Location of the temperature monitoring station at Mainstem Susitna River at RM 18.5, GC S1GN07W15DCD.

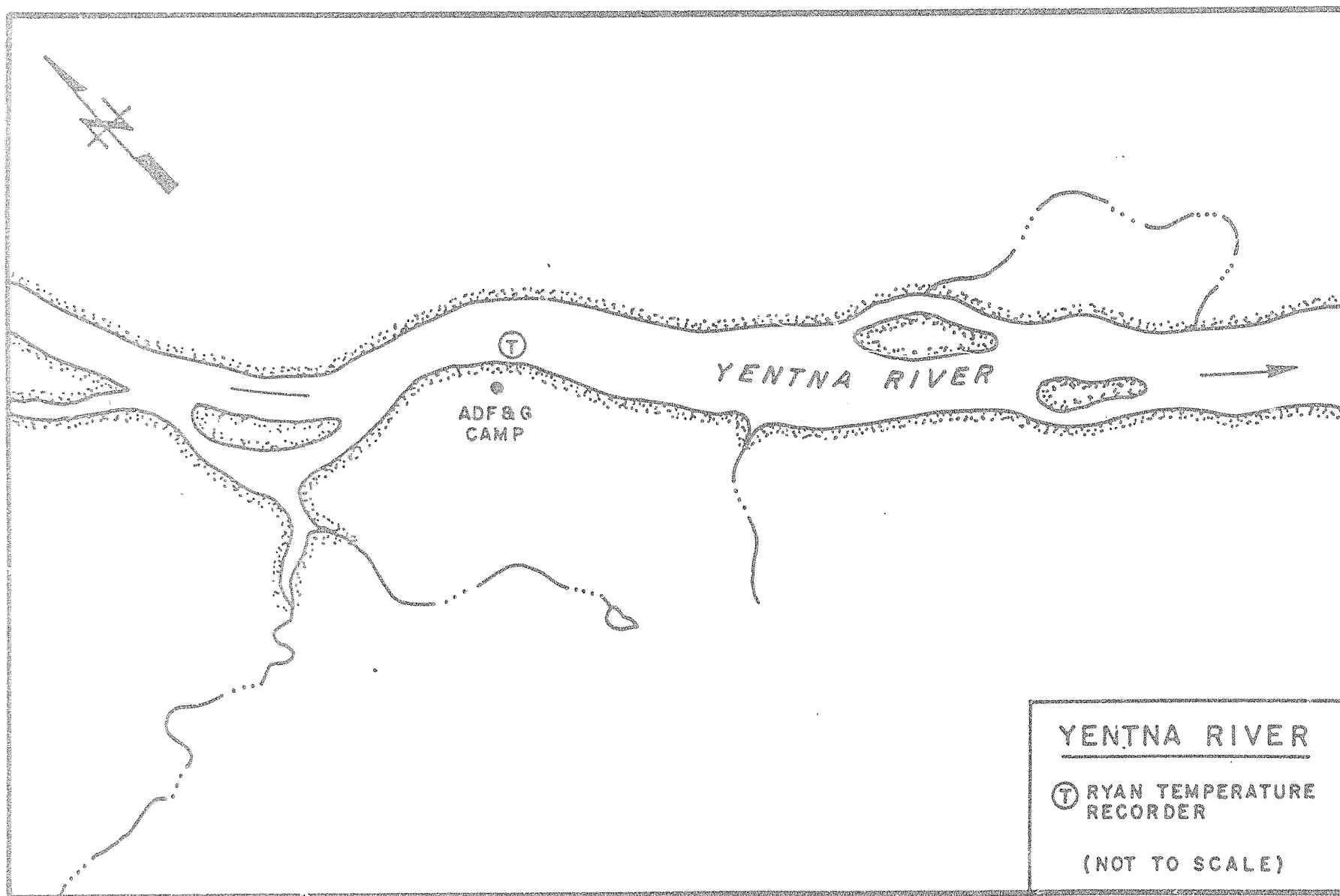


Figure 30. Location of the temperature monitoring station at the Yentna River. RM 28.0, TRM 4.0, GC S18N07W28AB0.

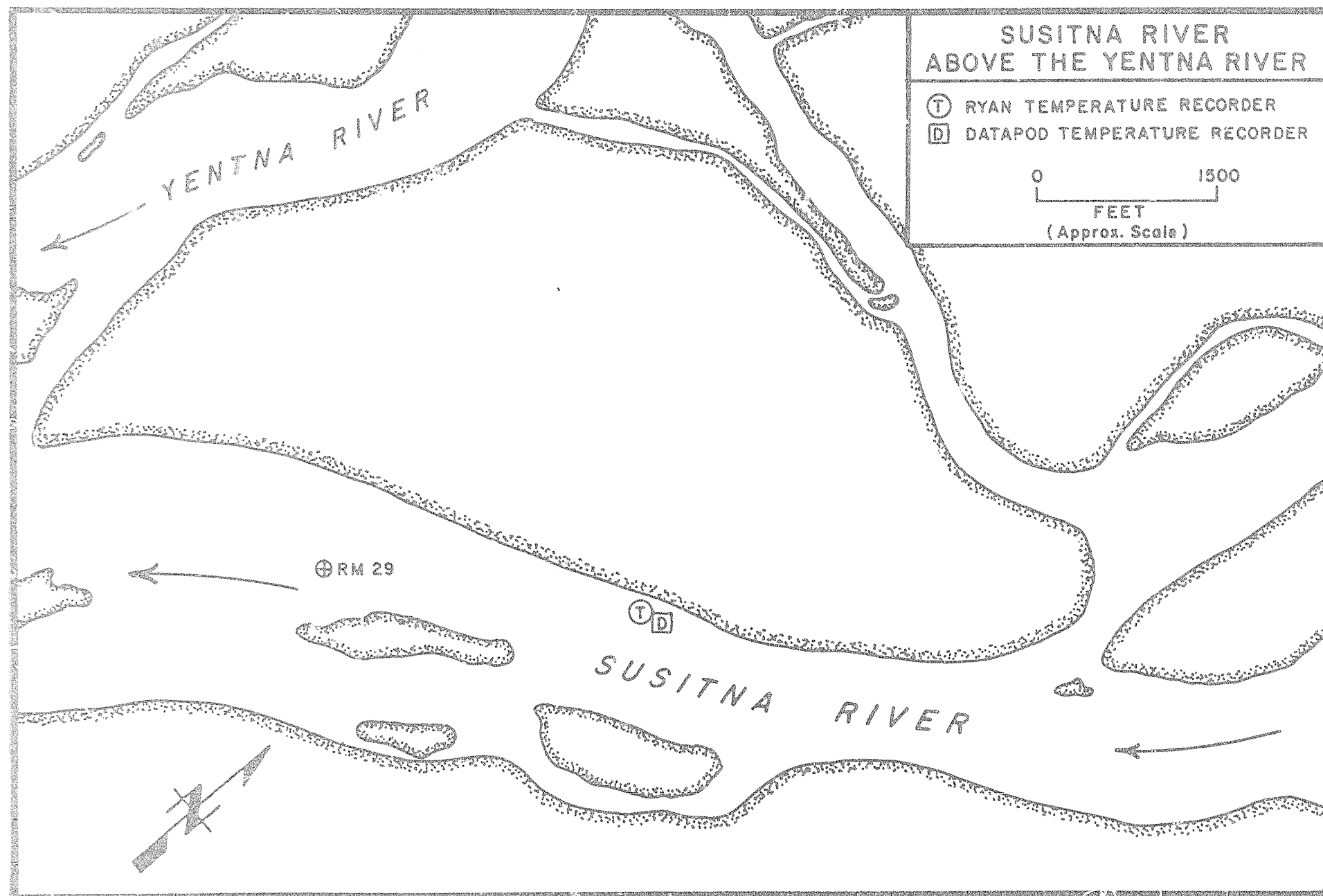


Figure 31. Location of the temperature monitoring station at Mainstem Susitna River above the Yentna River, RM 29.5, GC S17N06W07CAD.

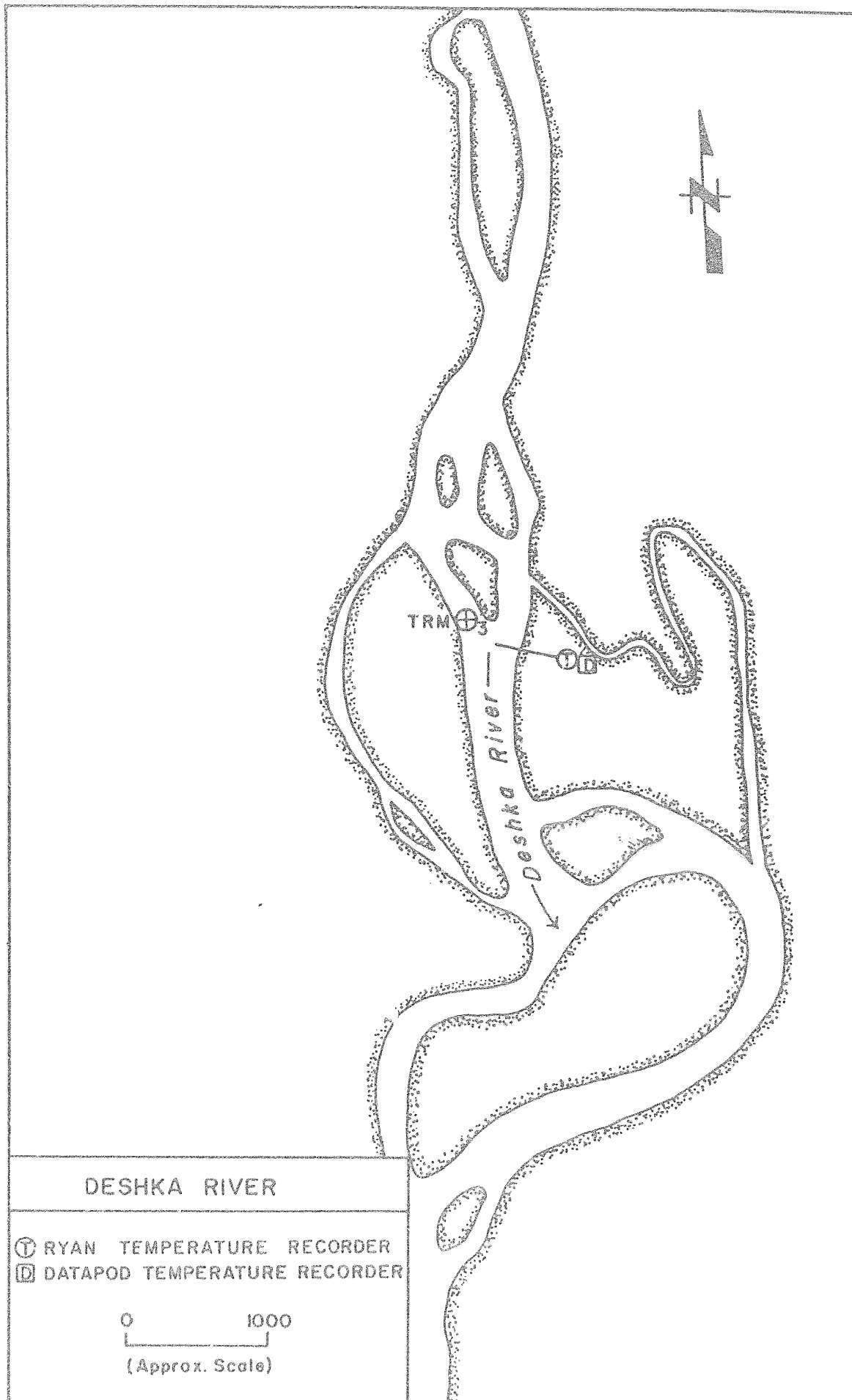


Figure 32. Location of the temperature monitoring station at the Deshka River, RM 40.6, TPM 3.0, GC S21N06W13AAC.

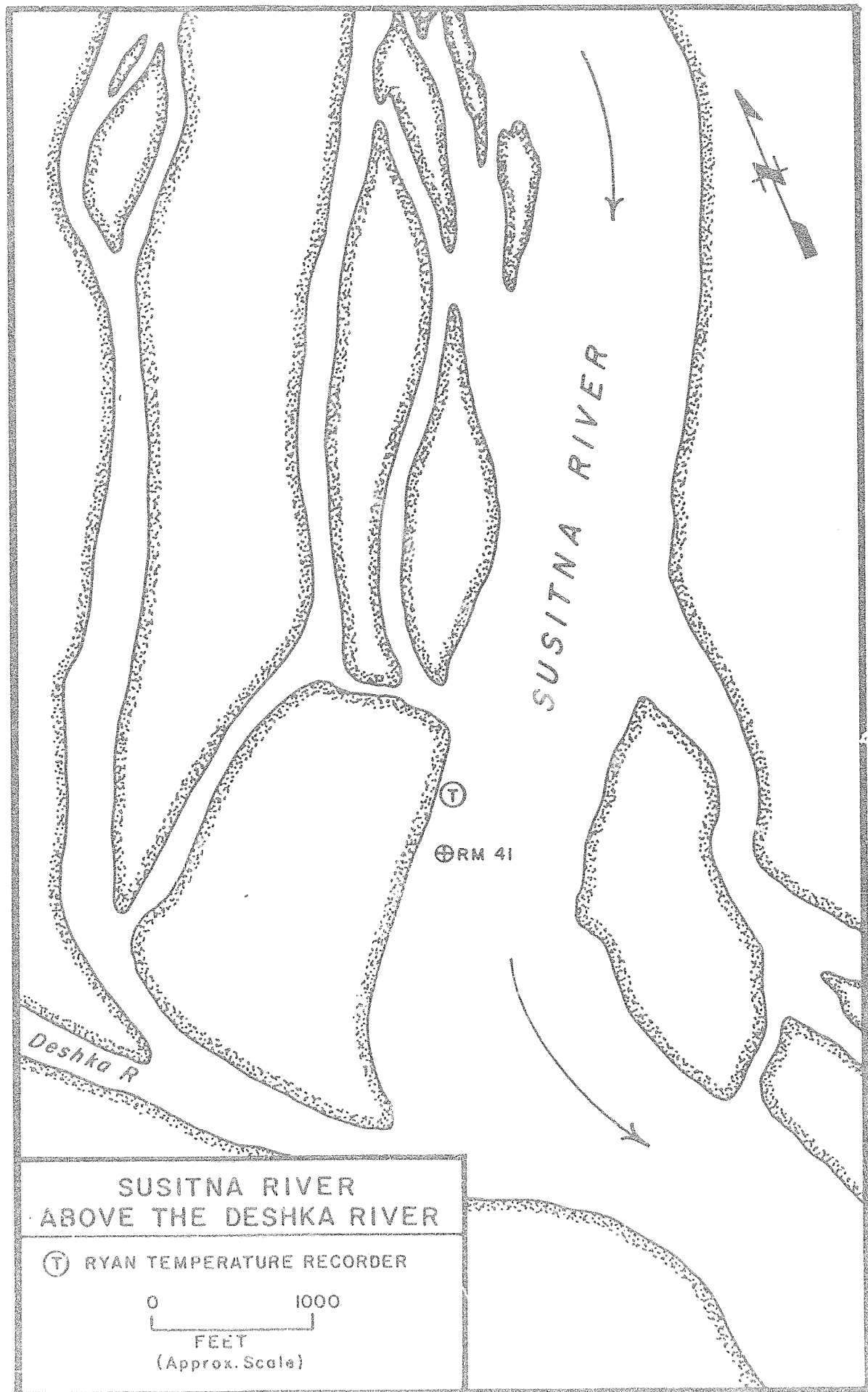


Figure 33. Location of the temperature monitoring station at Mainstem Susitna River above the Deshka River, RM 41.1, GC S19N05W26SBC.

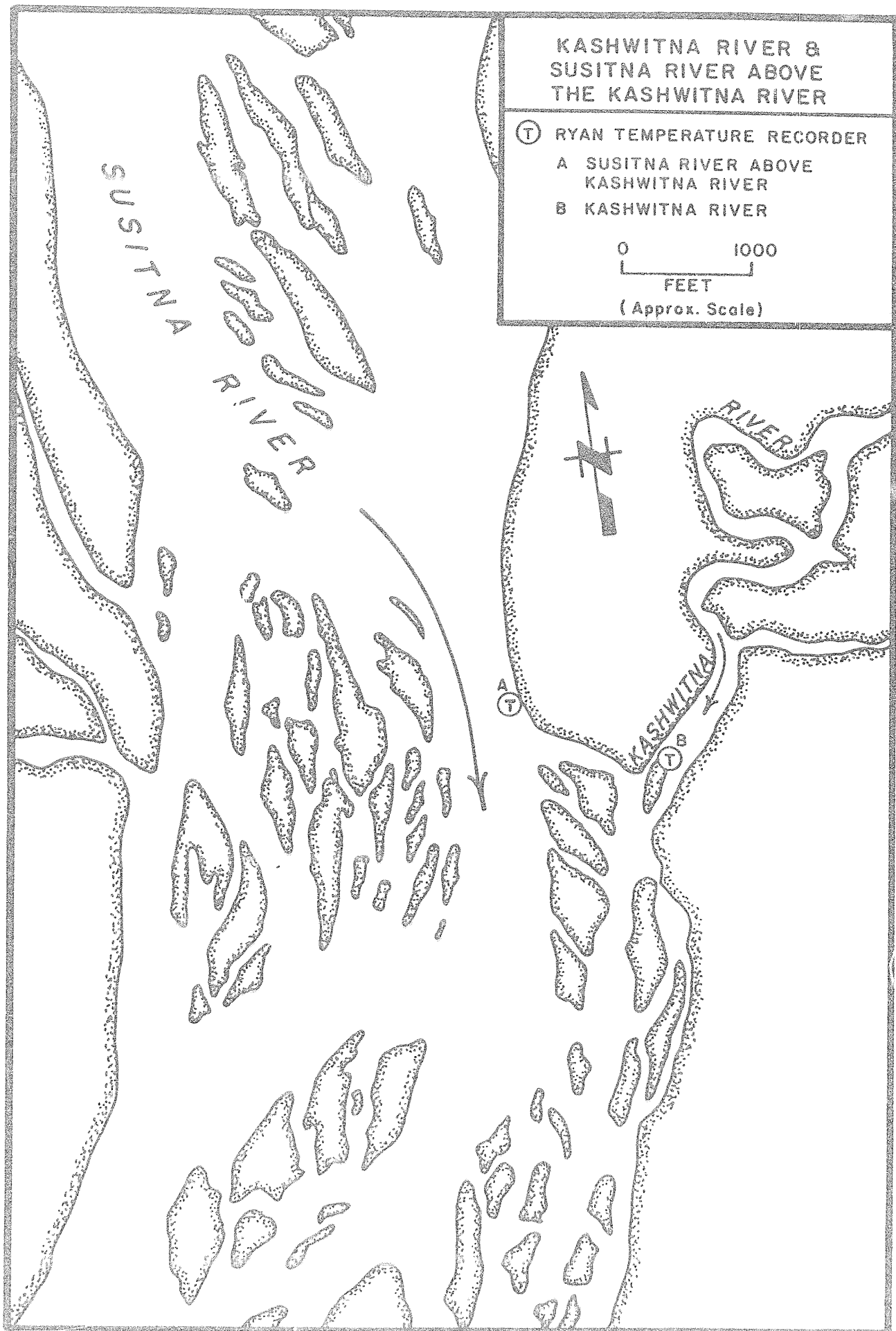


Figure 34. Locations of the temperature monitoring stations at the Kashwitna River, RM 60.9, TRM 0.1, GC S21N06W13AAC; and Mainstem Susitna River above the Kashwitna River, RM 61.2, GC S31N05W13ABA.

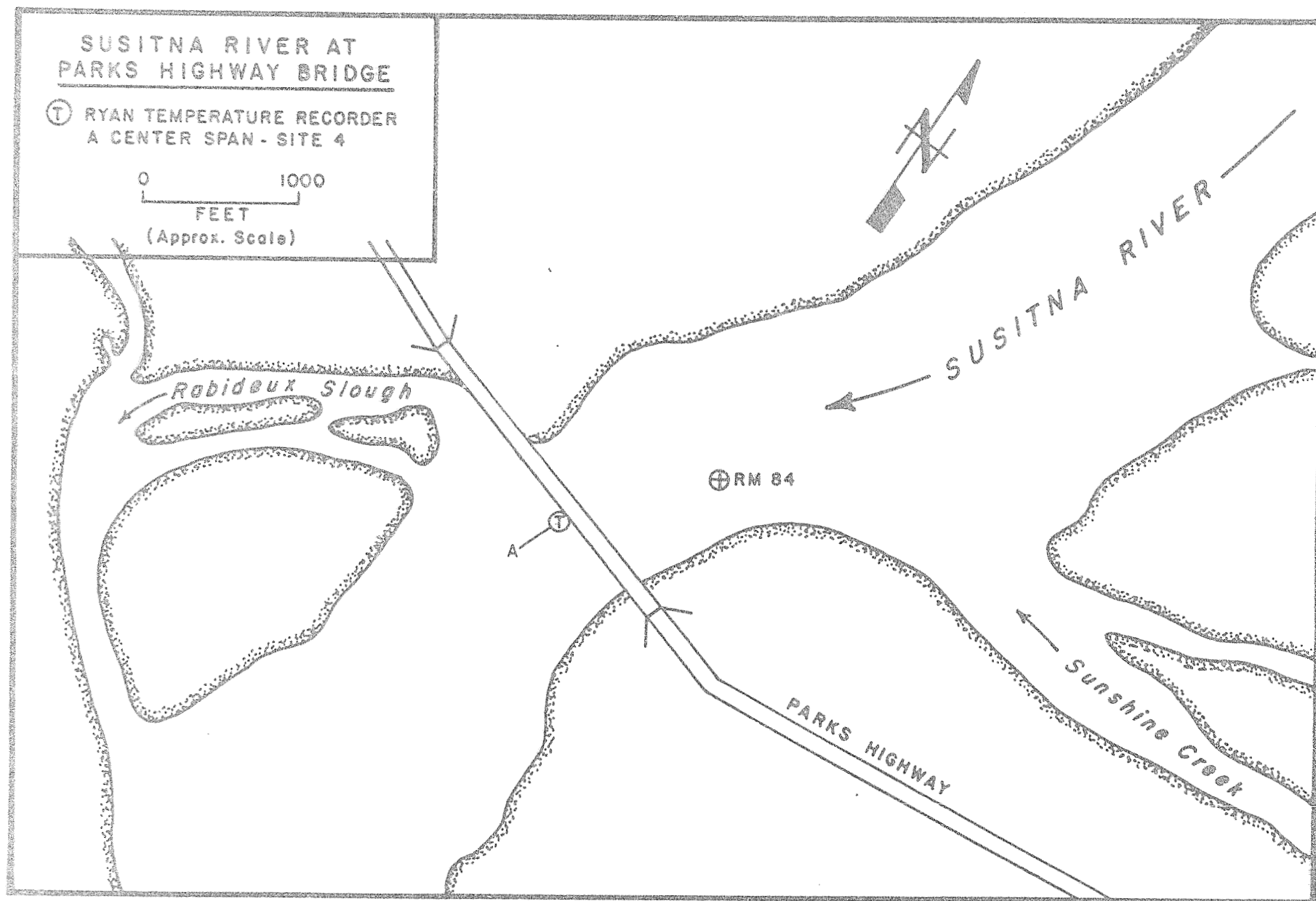


Figure 35. Location of the temperature monitoring station at Mainstem
Susitna River at Parks Highway Bridge, RM 83.9,
GCS24N05W15BAD.

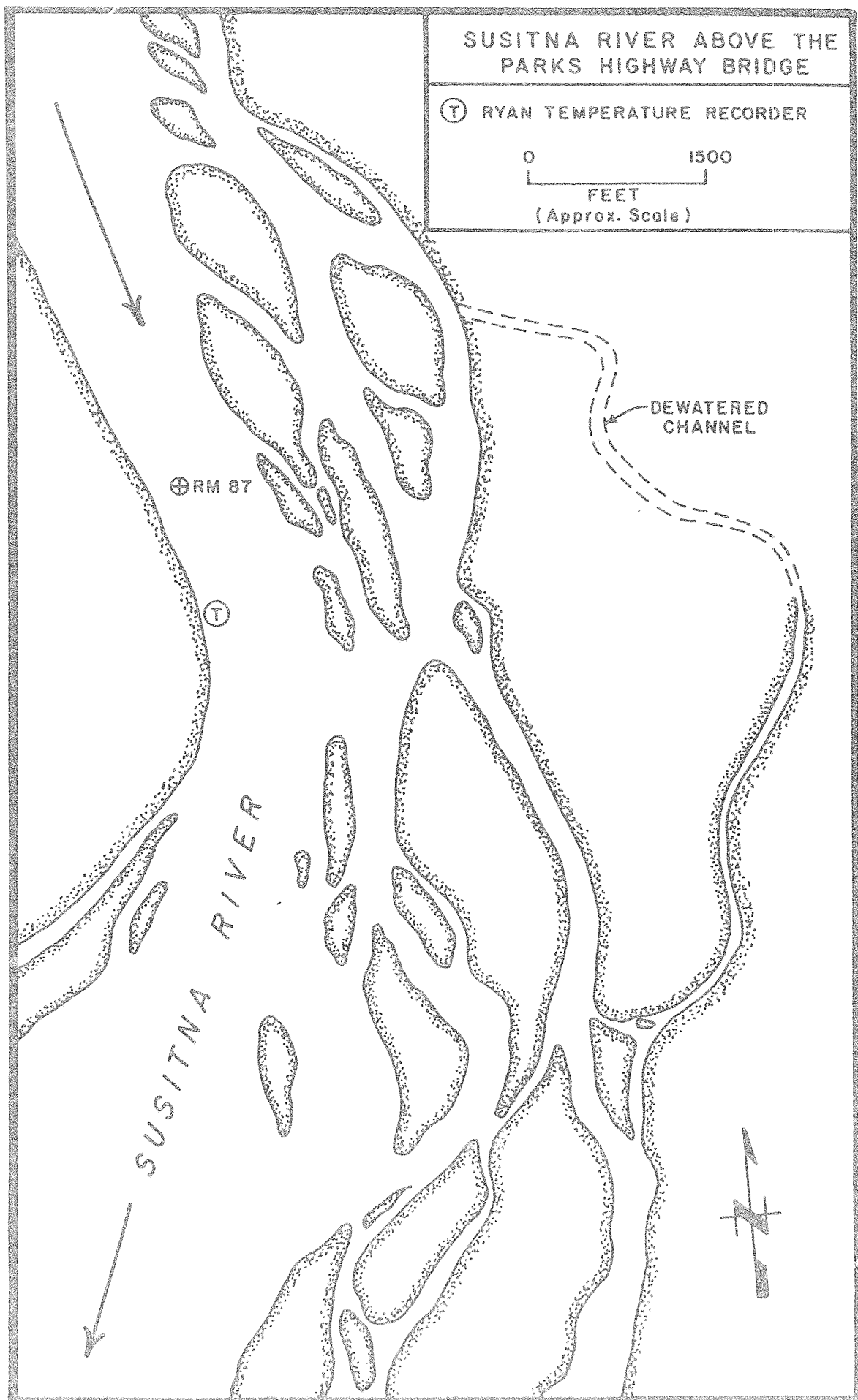


Figure 36. Location of the temperature monitoring station at Mainstem Susitna River above the Parks Highway bridge, RM 86.9, GC S26N04W16CBA.

250

251

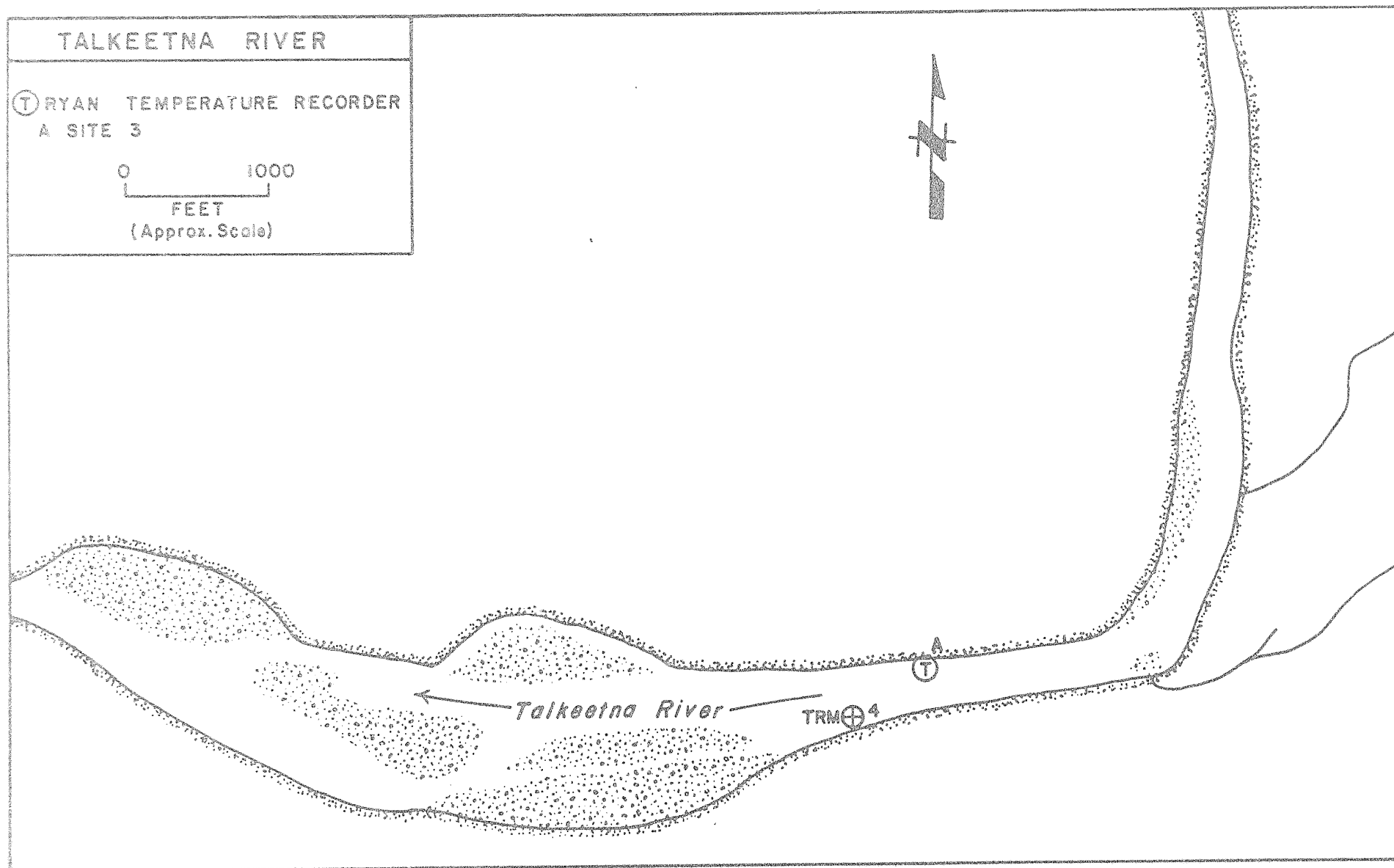


Figure 37. Location of the temperature monitoring station at the Talkeetna River, RM 97.2, TRM 4.0, GC S21N06W13AAC.

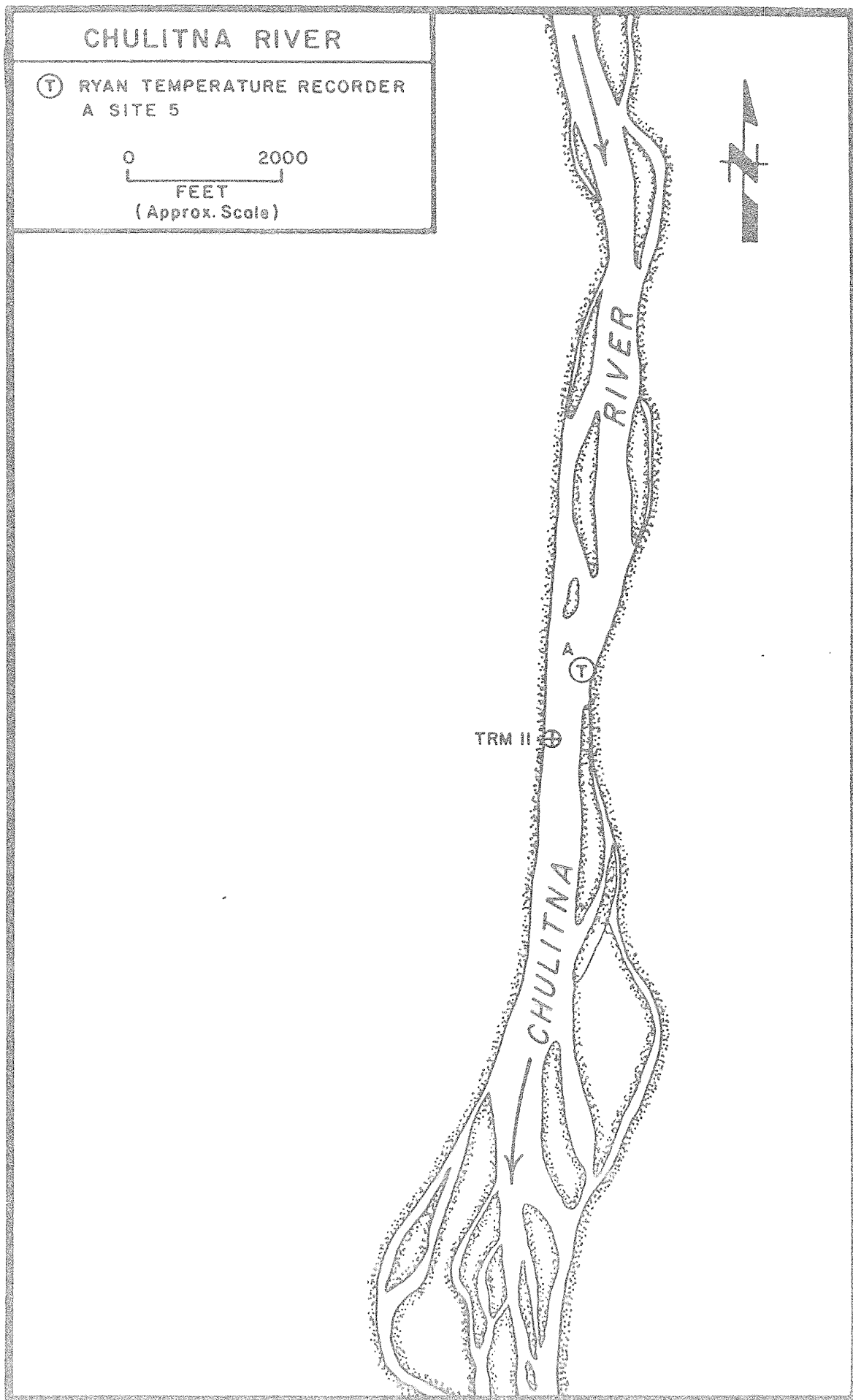


Figure 38. Location of the temperature monitoring station at the Chulitna River -Site 5, RM 98.6, TRM 11.0, GC S27N05W05ABC.

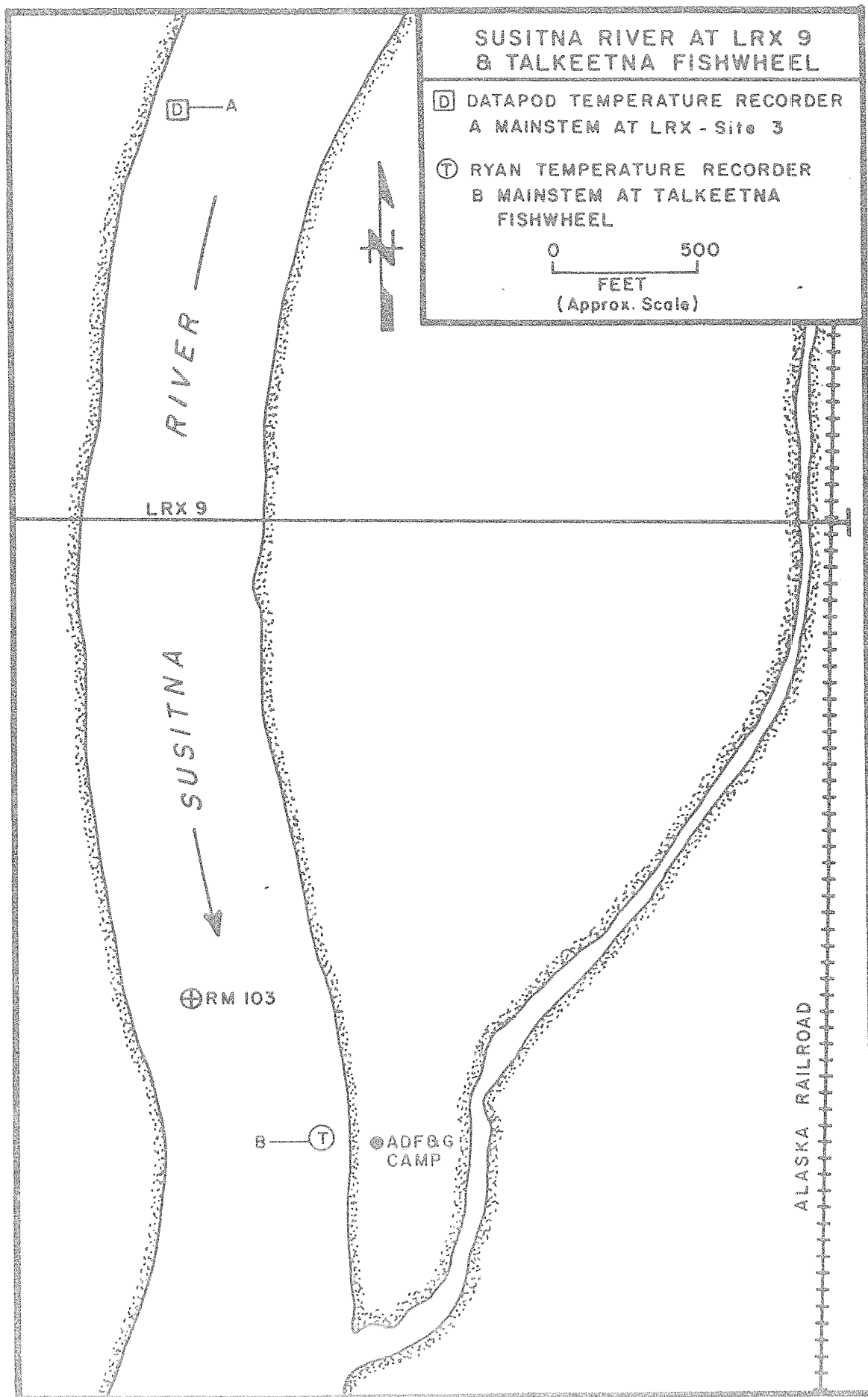


Figure 39. Locations of the temperature monitoring stations at Mainstem Susitna River at Talkeetna Fishwheel Camp, RM 103.0, GC S27N05W26DDD; and Mainstem Susitna River at LRX 9, RM 103.5, GC S27N05W25BBC.

754

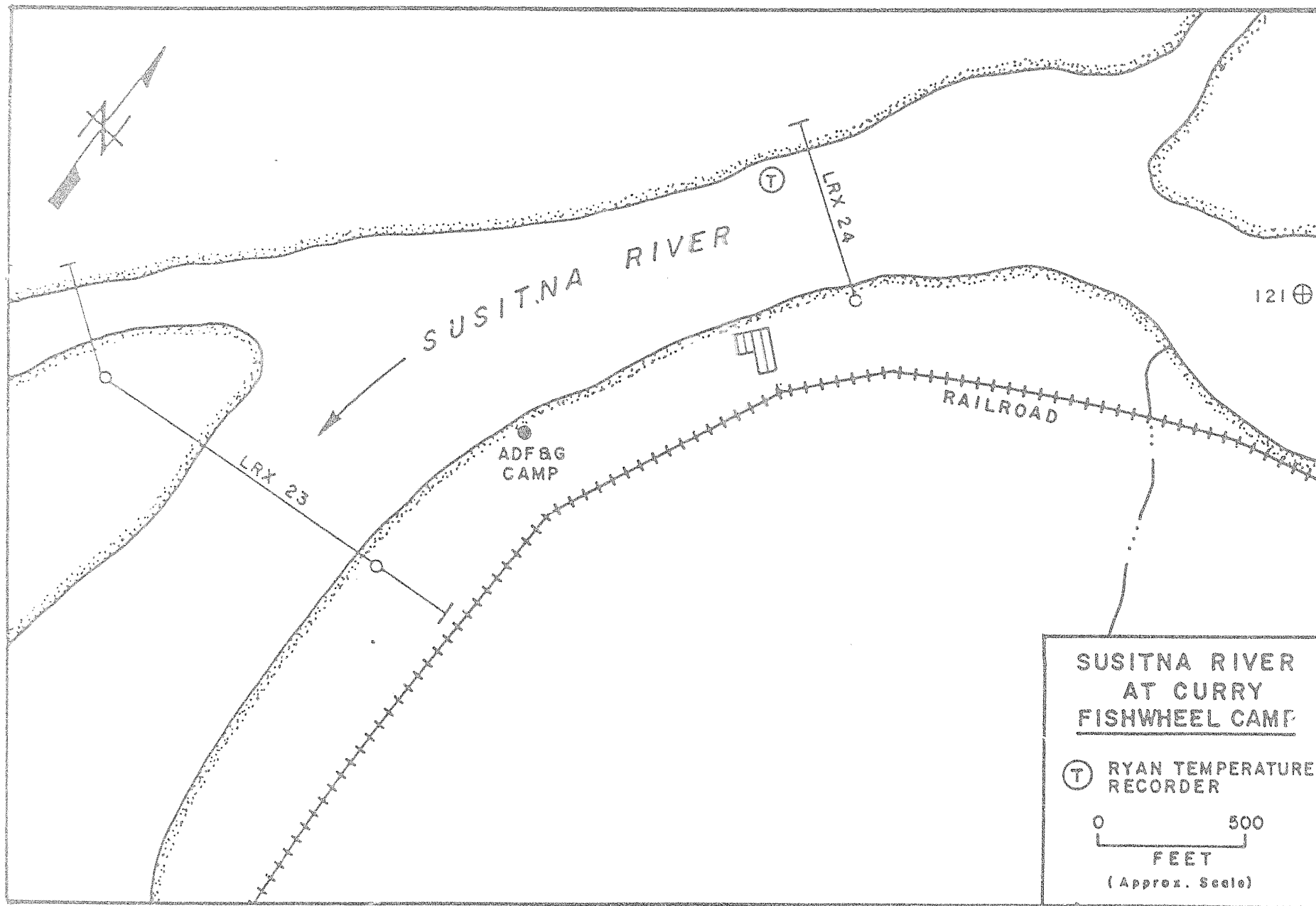


Figure 40. Location of the temperature monitoring station at Mainstem Susitna River at Curry Fishwheel Camp, RM 120.7, GC S27N04W10CBA.

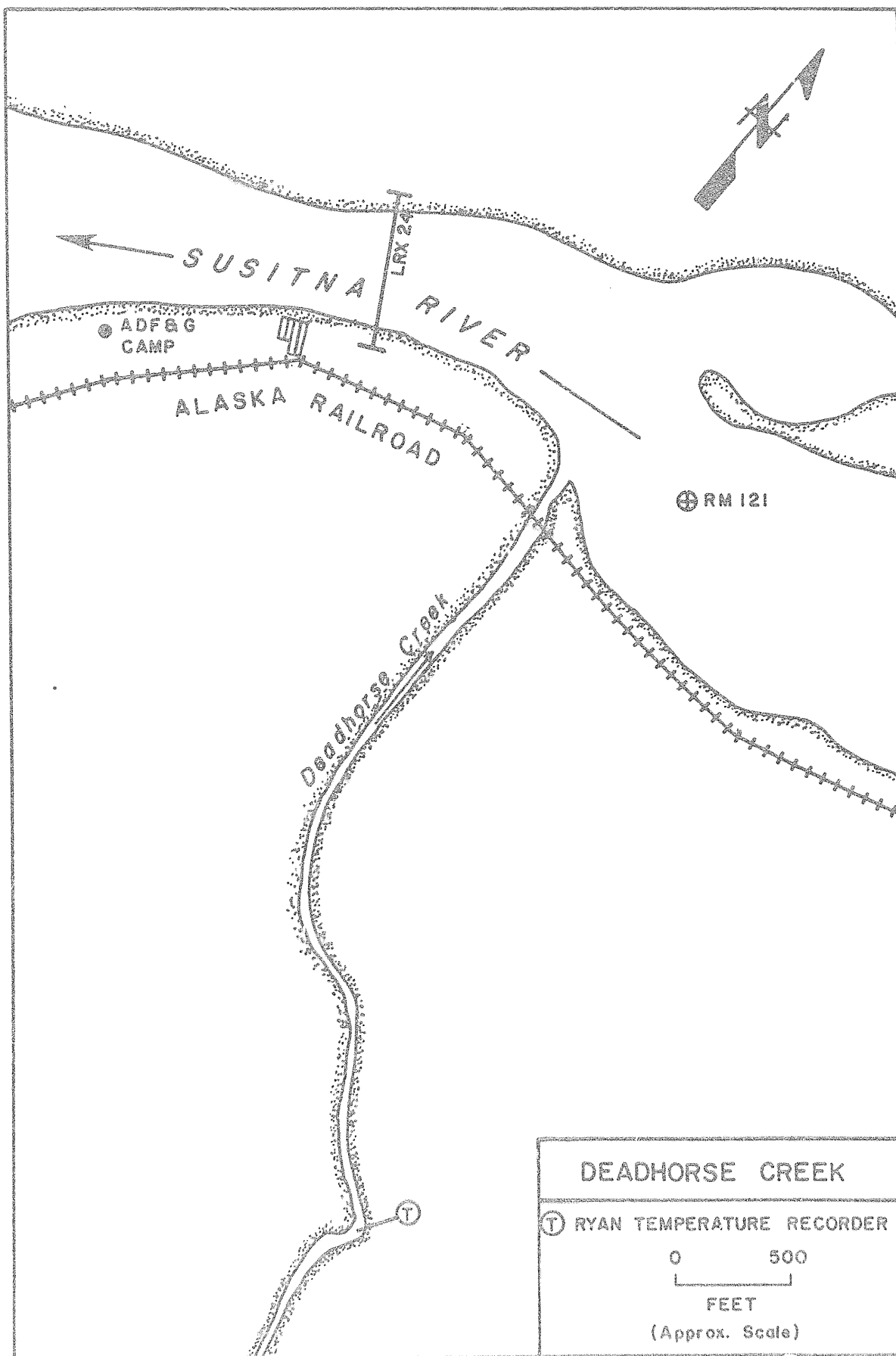


Figure 41. Location of the temperature monitoring station at Deadhorse Creek, RM 120.9, TRM 10, GC S29N04W14BCB.

956

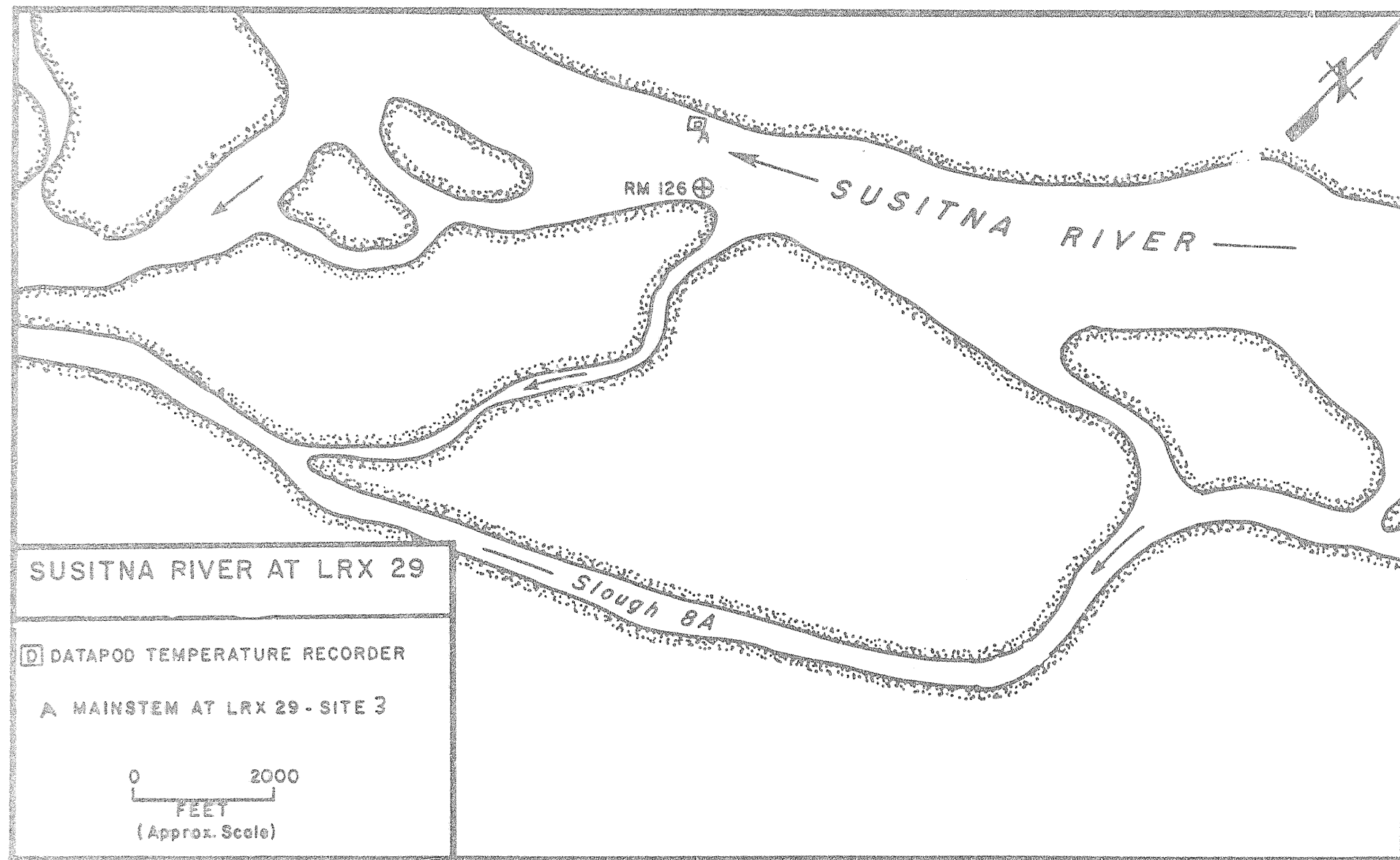


Figure 42. Location of the temperature monitoring station at Mainstem Susitna River at LRX 29, RM 125.9, GC S3ON05W19DAB.

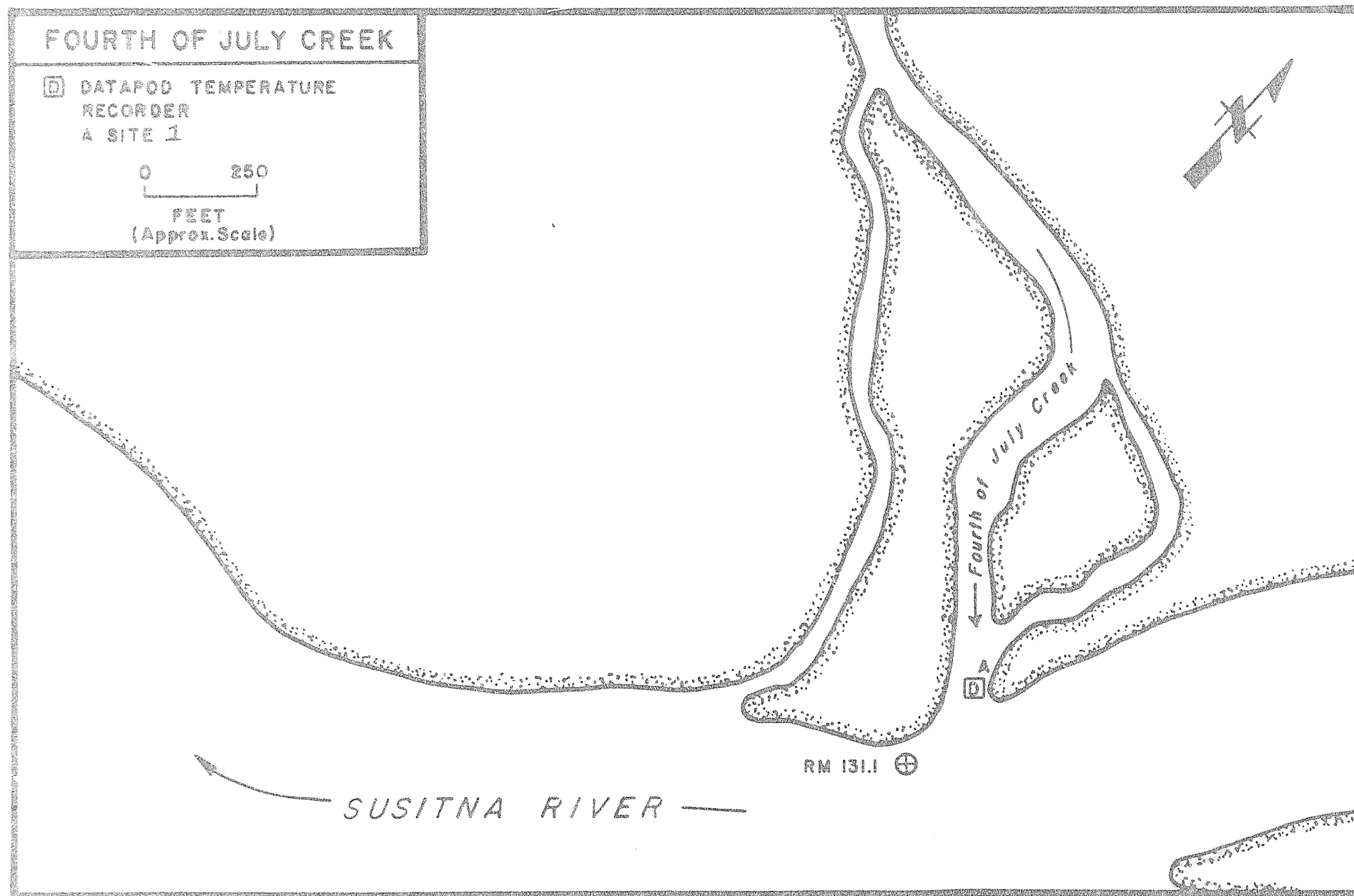


Figure 43. Location of the temperature monitoring station at Fourth of July Creek - Site 1, RM 131.1, TRM 0.0, GC S30N03W03DAC.

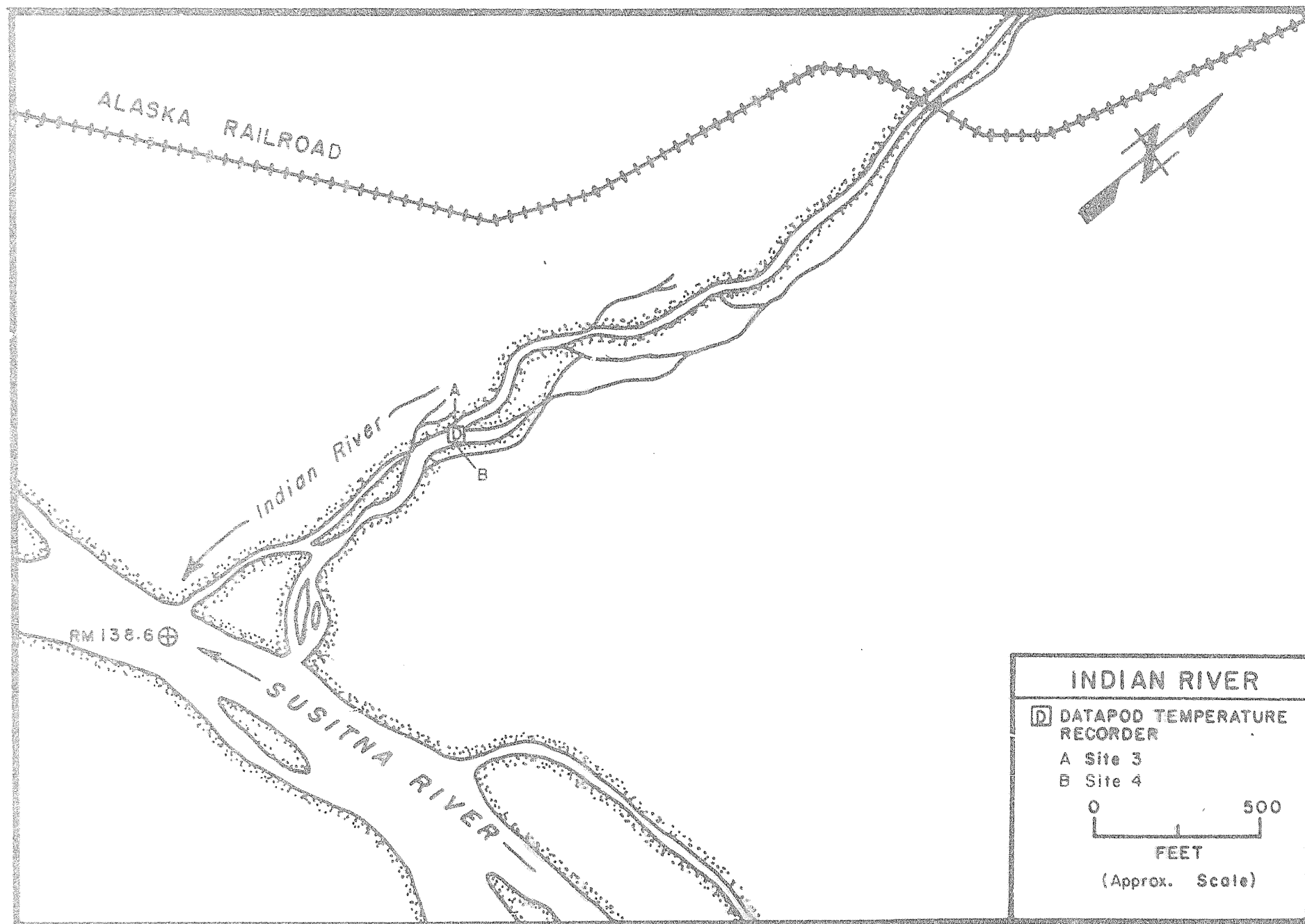


Figure 44. Location of the temperature monitoring station at Indian River - Sites 3 and 4, RM 138.6, TRM 0.2, GC S31N02W09CAB.

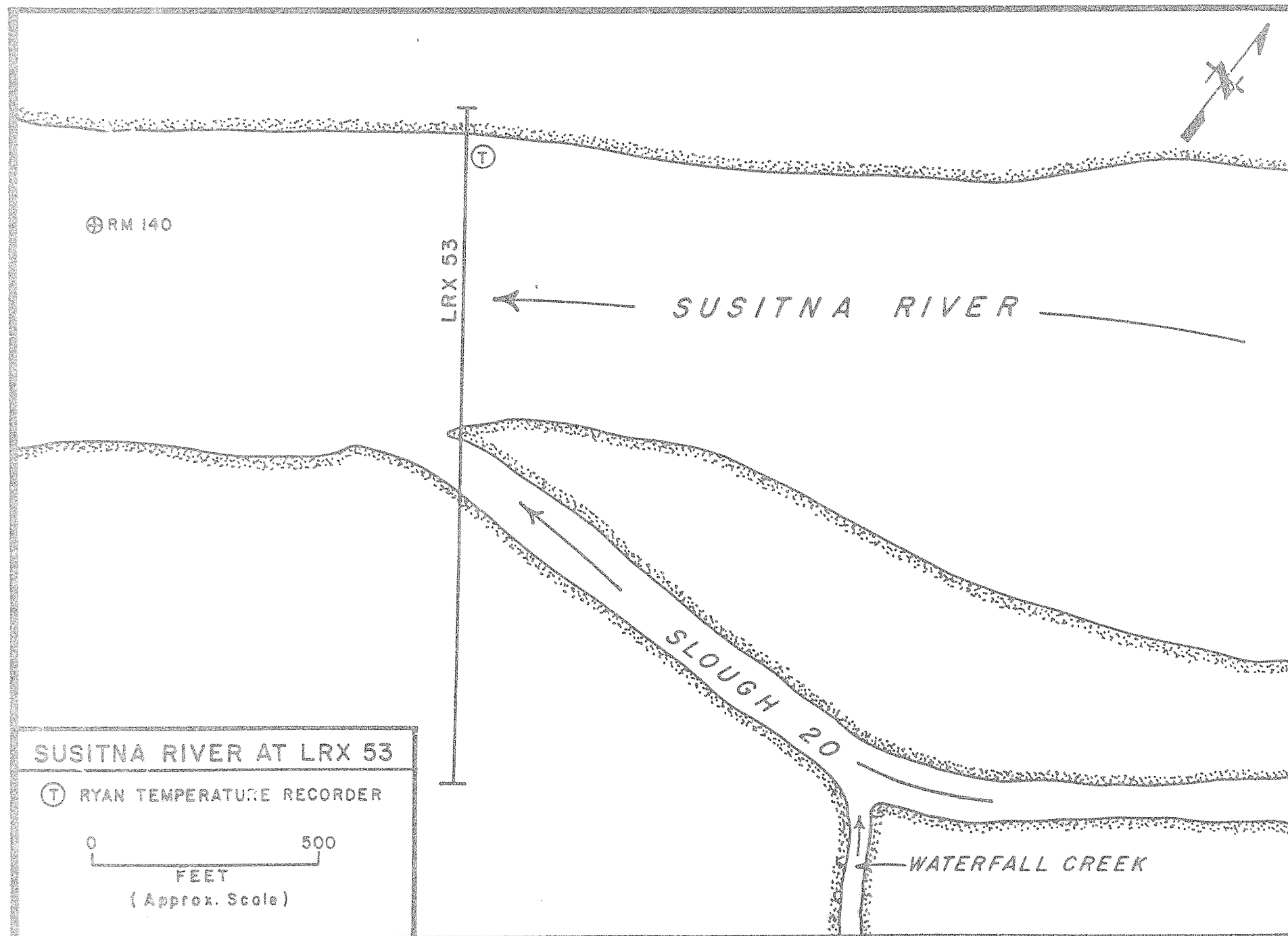


Figure 45. Location of the temperature monitoring station at LRX 53, RM 140.1, GC S31N11W10AAC.

092

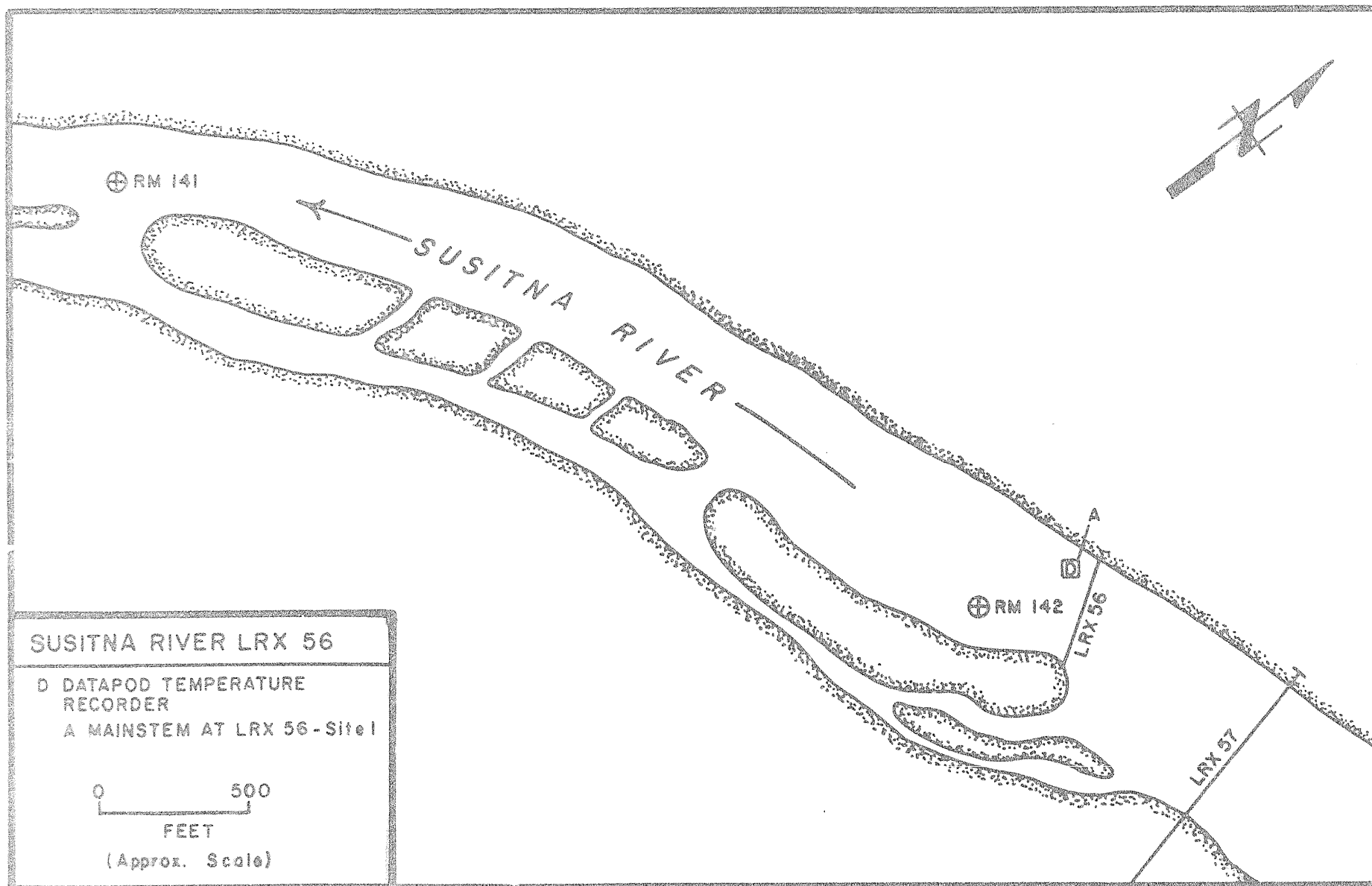


Figure 46. Location of the temperature monitoring station at Mainstem Susitna River at LRX 56, RM 142.1, GC S31N11W36BCD.

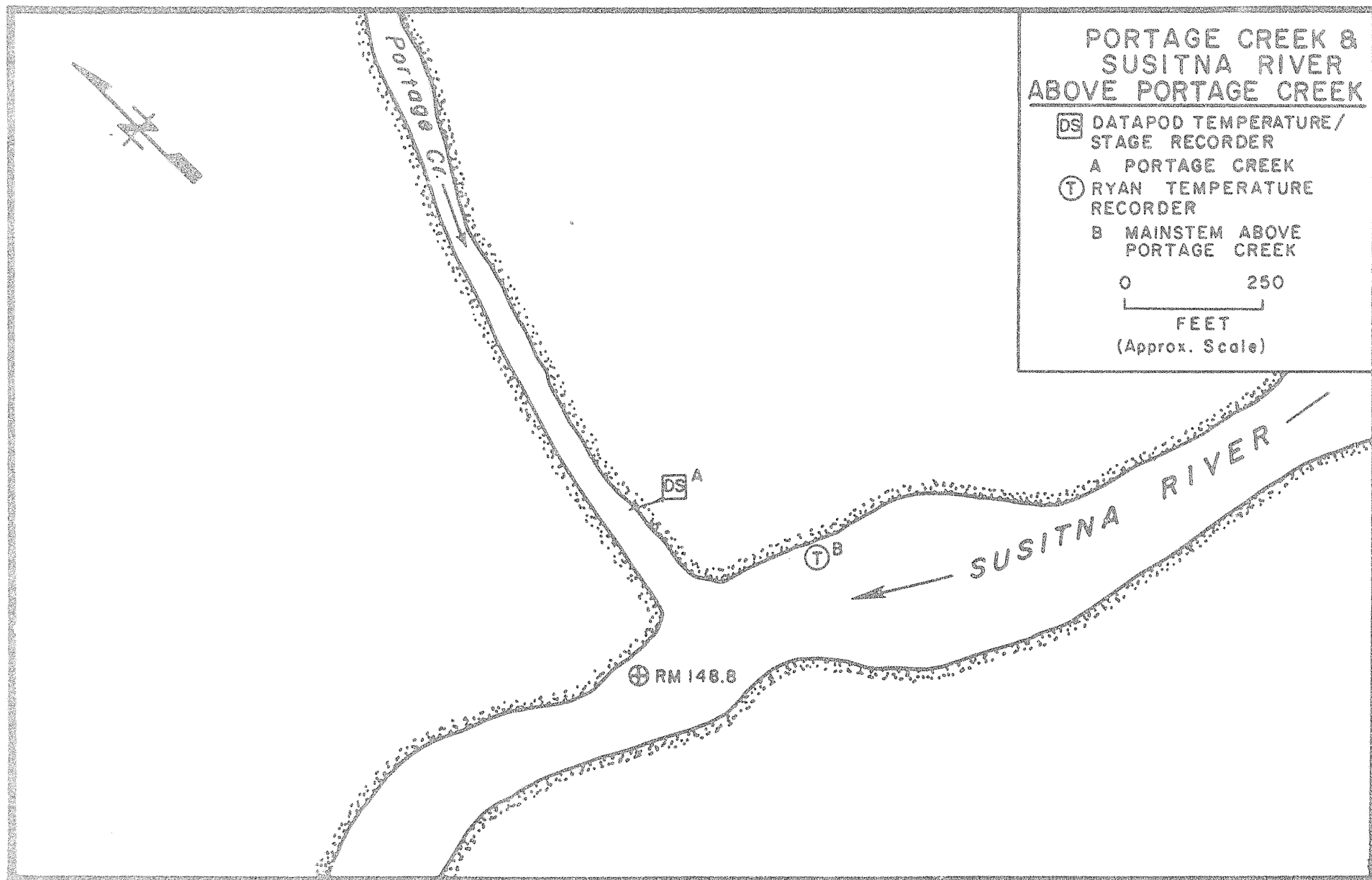


Figure 47. Locations of the temperature monitoring stations at Portage Creek, RM 148.8, TRM 0.2, GC S32N10W25ADC; and Mainstem Susitna River above Portage Creek, RM 148.9, GC S32N10W16ACB.

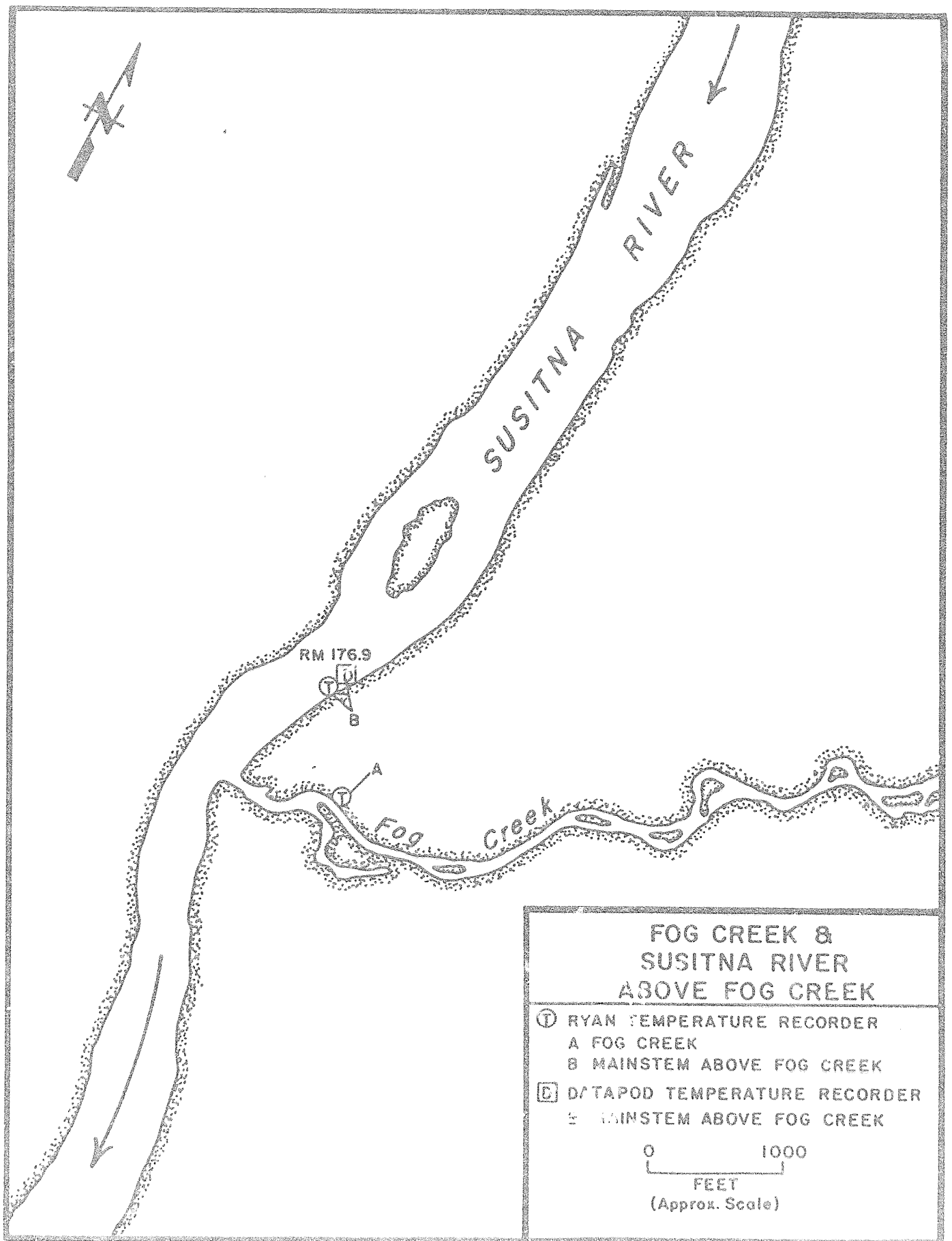


Figure 48. Locations of the temperature monitoring stations at Fog Creek, RM 176.7, TRM 0.1, GC S31N06W15DBB; and Mainstem Susitna River above Fog Creek, RM 176.8, GC S31N06W15BAC.

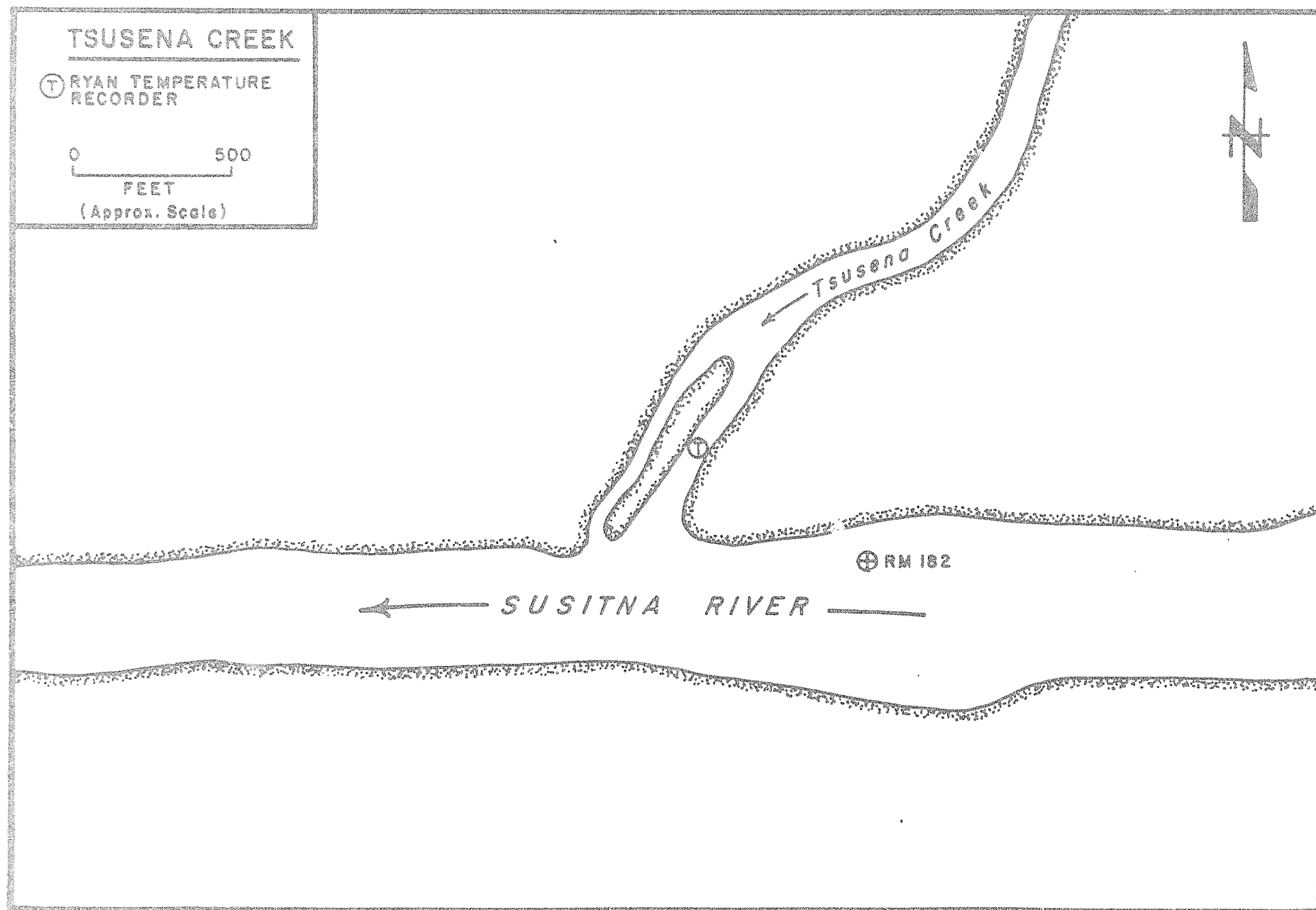


Figure 49. Location of the temperature monitoring station at Tsusena Creek, RM 181.8, TRM 0.1, GC S32N06W36ADB.

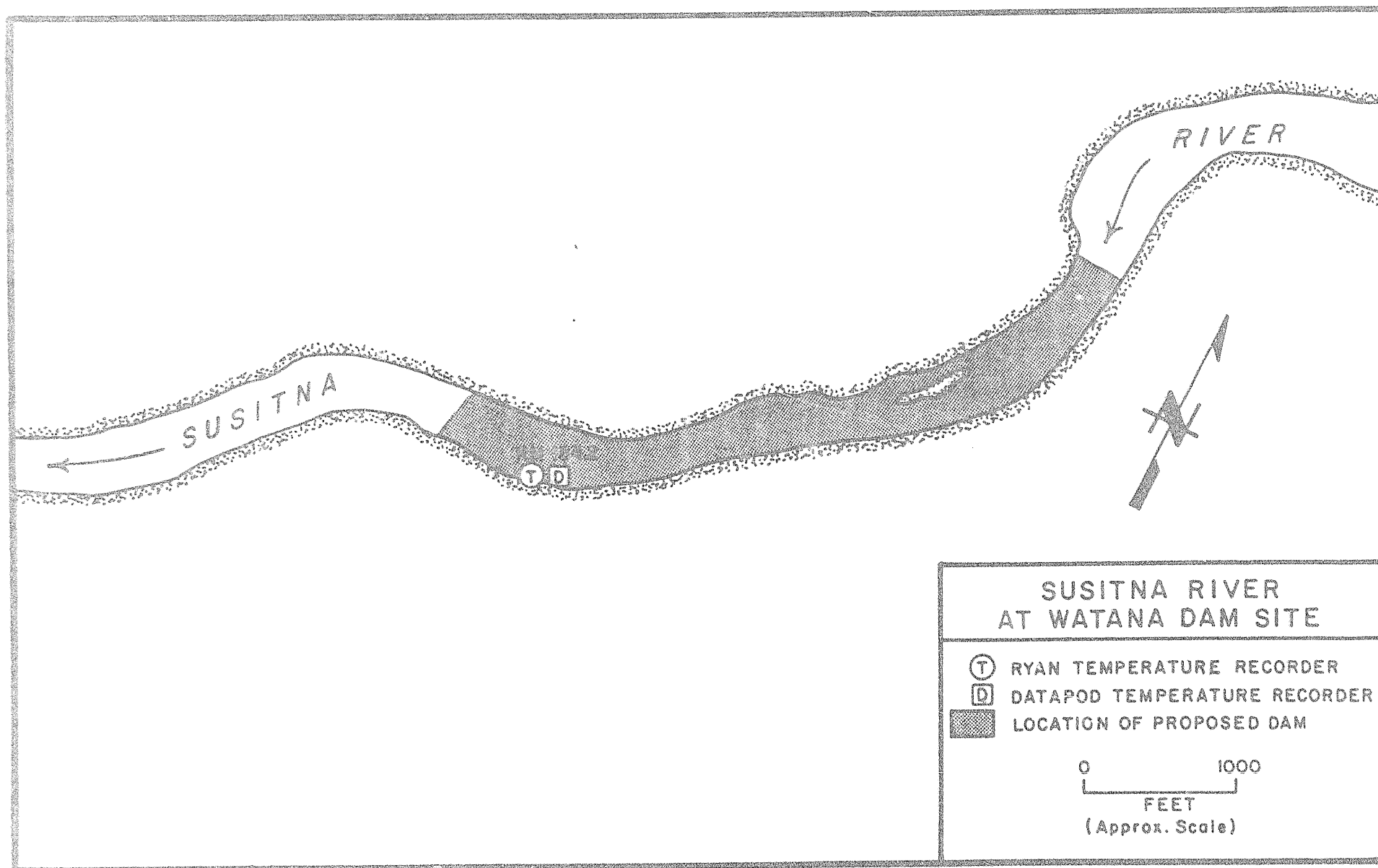


Figure 50. Location of the temperature monitoring station at Mainstem Susitna River at Watana Dam Site, RM 184.2, GC S32N05W33BDB.

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Alaska Department of Fish and Game. 1984. Susitna Hydro aquatic studies (May 1983 - June 1984) procedures manual (1 of 2). Alaska Department of Fish and Game Susitna Hydro Aquatic Studies. Anchorage, Alaska.

Voos K. and P. Meyer. 1984. Personal communication. Meeting May 16, 1984. Arctic Environmental Information and Data Center. Anchorage, Alaska.