

MERRIMACK STATION
THERMAL DISCHARGE MODELING STUDY

Prepared for

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1.0 INTRODUCTION

Merrimack Station is a coal-fired electric generating plant located in Bow, New Hampshire on the banks of the Merrimack River. The station has been operating with a potential capacity of 440 MW from two units (Unit 1 at 120 MW and Unit 2 at 320 MW) since 1968. Approximately 397 cfs of once-through cooling water is taken from and discharged back to the Merrimack River when both generating units are operating. From 1967 through 1978, Public Service Company of New Hampshire (PSNH) conducted numerous studies to assess potential impacts from this thermal discharge.

Normandeau Associates conducted extensive ecological studies for PSNH from 1972 to 1978 to determine the impact of the thermal discharge on anadromous and indigenous fish species in the area. In 1968, as a requirement of their NPDES permit PSNH installed continuous temperature monitors upstream of the station, in the discharge canal and downstream of the station. In 1979, EPA required monitoring to include dissolved oxygen and pH under a revised NPDES permit. In 1992 a Technical Advisory Committee (TAC) of regulatory agency personnel was formed to review the Merrimack Station monitoring programs during permit relicensing.

During the latest permitting proceedings, the U.S. Fish and Wildlife Service (USFWS) and NH Department of Environmental Services (NHDES) expressed concerns about the potential impact of Merrimack Station's thermal discharge on spring spawning and fall downstream migration runs of anadromous salmon and clupeids. Available data compiled by PSNH confirms that an adequate zone of passage exists in the Hooksett headpond, but concerns remained about the downstream Amoskeag headpond where it is believed that near-complete mixing of the ambient and elevated temperature waters may occur, thereby potentially eliminating a "safe" passage zone for avoidance of warmer water. This is especially true when Hooksett is spilling over the boards, thereby releasing the warmest water in the Hooksett headpond.

This report describes the results of a study designed to evaluate the impact of the thermal discharge on downstream river temperatures during critical migration periods under a variety of flow and plant output conditions. This study included both a field and a modeling component. The field component was used in support of the modeling efforts to "bridge" the data gap between the existing PSNH continuous monitoring stations and selected locations

downstream of the discharge. The modeling component developed a simple response function (i.e., regression equation) using field data collected in 1995 to predict downstream temperatures based on ambient temperatures, streamflow and plant output conditions. The model was then used to predict temperatures downstream of the Hooksett dam using ten years (1985-1994) of historical data. Based on temperature duration curves developed from the predicted data, potential impacts to target fish species during the migration periods of May through June and September through October were determined.

2.0 STUDY AREA

The study area extends from slightly above Merrimack Station to the Amoskeag dam, 17.2 km downstream. The Hooksett dam is located 4.6 km downstream of Merrimack Station in the middle of the study area. Hooksett pond is approximately 9.3 km long bordered by the Hooksett dam on the downstream end and Garvins Falls dam on the upstream end. All three dams are relatively low head facilities, operating run-of-river at higher flows and as peaking units during lower flow periods. Hooksett dam is operated in a manner to maintain suitable head for cooling water at Merrimack Station and to generate hydroelectric power (NAI 1979).

The Merrimack Station is located on the west bank of the Merrimack River approximately midway between the Hooksett and Garvins Falls dams. Two units of 120 MW and 320 MW use a total water volume of 397 cfs for once-through cooling with a designed maximum temperature increase of approximately 13.9°C. Cooling water is drawn from two intake structures at Station N5 (Figure 2-1). After passing through the Station, cooling water is passed through the 1189 M long discharge canal (Figure 2-1) with 54 banks of 4 (216 total) power spray modules (psm) which provide approximately 1-2°C of cooling. The psm's operate when the ambient river temperature exceeds 20.5°C (Saunders 1992).

Seventeen (17) sampling stations were established in Hooksett pond and Amoskeag pond based on historical sampling locations. Nine stations are located in Hooksett pond (Figure 2-1) and eight stations in Amoskeag pond (Figure 2-2).

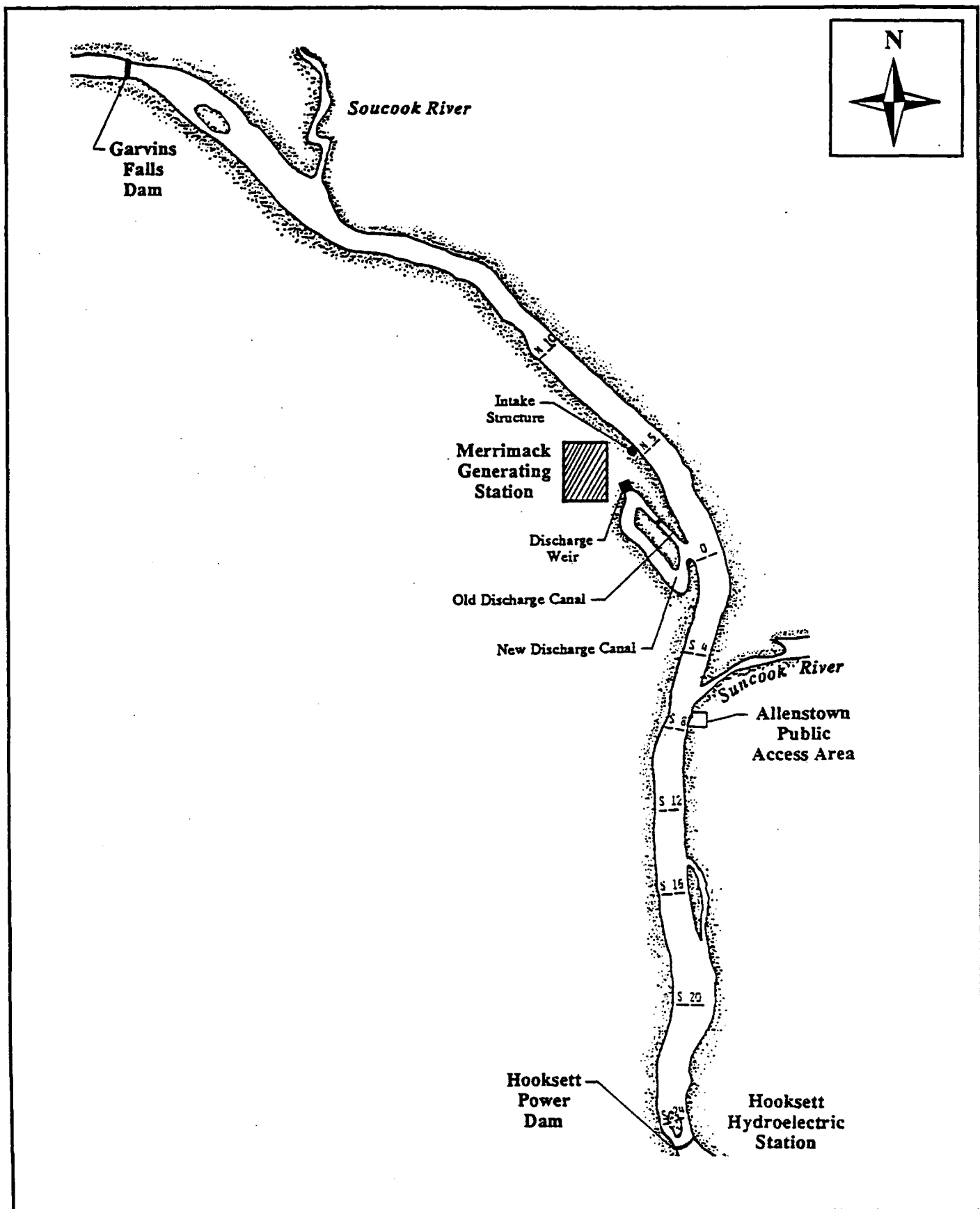


Figure 2-1. Location of sampling stations, Merrimack River Monitoring Program, Hooksett Pond, New Hampshire 1994-1995.

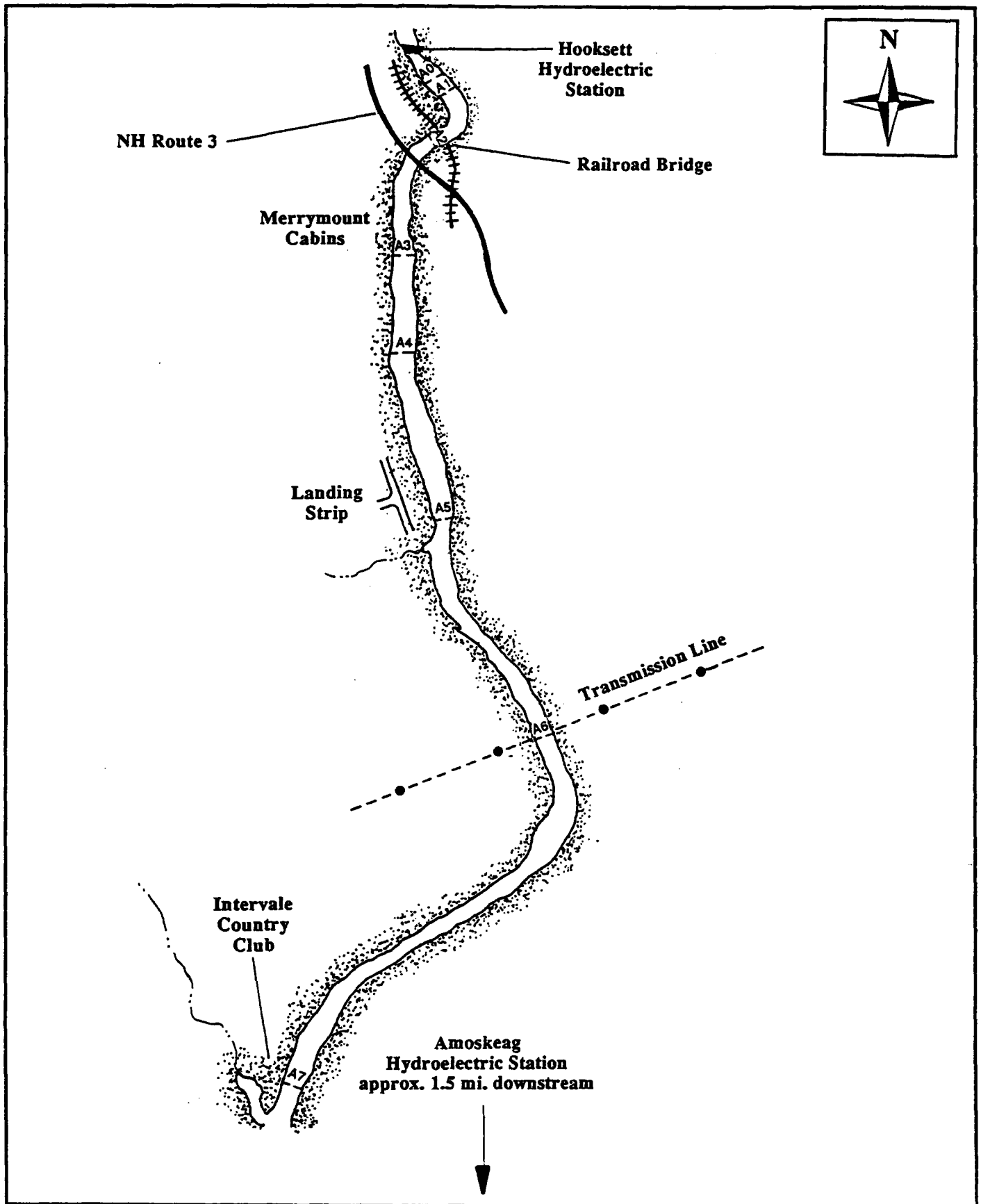


Figure 2-2. Location of sampling stations, Merrimack River Monitoring Program, Amoskeag Pond, New Hampshire 1994-1995.

3.0 FIELD STUDY

3.1 OBJECTIVES

PSNH continuously monitors water temperatures at four separate stations including upstream (Station N10), at the cooling water intake (Station N5), at the outlet of the cooling water canal (Station S0) and below the mixing zone (Station S4). Stations N5 and S0 are operated year-round while Stations N10 and S4 are operated seasonally during the ice-free period from March to December. The period of record for this data extends back to 1968. In addition, PSNH has, on occasion, operated continuous temperature monitors in the Hooksett and Amoskeag Dam tailraces.

The purpose of the field study was to expand the sampling area to include not only the continuous monitoring stations but also additional transects downstream including transects in the Amoskeag headpond to gain a better understanding of the relationship between the near-field and far-field thermal conditions. The results of the field study were used to develop a relationship (multiple regression) between downstream temperatures in Amoskeag pond and upstream ambient temperatures, river flow, and Merrimack Station output.

3.2 METHODOLOGY

Sampling was conducted on a biweekly basis during the two migration periods of concern (May 1 to June 30 and September 1 to October 31). Sample dates for the spring were May 11, 24, June 9 and 21. Sample dates for the fall were September 14, 27 and October 11. The fourth scheduled sampling event of the fall was not conducted due to extremely high river flows lasting from mid October until mid December. Loss of this data had no significant effect on the project because late October is not a critical time for anadromous fish passage or thermal impact from Merrimack Station.

During each sampling event, water temperatures were recorded across transects at seventeen separate stations as depicted on Figures 2-1 and 2-2. The station numbers and location descriptions are consistent with those stations sampled during the initial full-scale thermal

discharge monitoring conducted in 1968 (St. Anselms College 1969). In addition to the seventeen transects, measurements were also taken in the discharge canal, in the mouth of the Suncook River and at the boat buoy line at the Amoskeag dam during several of the early surveys. Those stations were eliminated in later surveys because data from these stations were not providing additional useful information.

HOOKSETT POND

<u>Station</u>	<u>Description</u>
N10	Upstream, below Bow Bog Brook
N5	At the cooling water intake
S0	At the cooling water canal outlet
S4	Mixing Zone, just above Suncook River
S8	Downstream, just below Suncook River
S12	Approx. 3000' below Suncook River
S16	Approx. 5000' below Suncook River
S20	At Southern tip of island along the East bank
S24	Approx. 200' above Hooksett Dam at buoy line.

AMOSKEAG HEADPOND

A0	Just below Hooksett dam
A1	Approx. 500' south of boat ramp
A2	At the railroad bridge
A3	Approx. 0.5 mile south of RR bridge
A4	Approx. 0.5 mile south of A-3; 1.0 mile below RR bridge
A5	Across from the old Airport landing strip along the west bank
A6	At the transmission line crossing
A7	Across from Intervale Country Club.

At each station location, temperature/depth profiles were measured at five equidistant points along a transect across the river channel. Water temperatures were measured at the

surface and at 1-foot intervals to the bottom using a YSI Dissolved Oxygen/Temperature Meter. Prior to and immediately after each sampling event, the meter was checked using a precision-grade mercury thermometer, a YSI TLC meter, and a Cole-Parmer Temptestr to verify surface water temperatures, in accordance with NAI's standard QA/QC procedures. No significant deviations were observed during any of the calibration checks throughout the sampling periods.

In addition to the transect sampling, PSNH maintained continuous temperature recorders at the tailraces of the Hooksett and Amoskeag hydropower stations. Due to equipment problems during the spring, the monitors were taken out of service. During the fall sampling, Hydrolab monitors were installed temporarily to attempt to capture data during the day of sampling. Data from these monitors was used to adjust the transect data to account for diurnal temperature fluctuations. An average daily temperature at each transect was determined by factoring in the difference between the average daily temperature at each continuous monitor and the measured temperature at the specific time of sampling at each discreet monitoring station.

3.3 RESULTS

The raw sampling data for each sampling event are presented in Appendix A. Appendix B illustrates cross-sectional contours of the thermal plume along each transect in the Hooksett pond and at three (A0, A3 and A7) transects in the Amoskeag headpond. Based on these contour plots, a "zone of passage" for anadromous fish is apparent throughout the Hooksett headpond. The ΔT (difference between background [N10] and downriver temperatures) in this zone never exceeded 2°C. Below the Hooksett dam there appears to be more or less complete mixing which is maintained throughout the Amoskeag pond. The maximum ΔT observed below Hooksett dam was 3.4°C, measured on September 14 when river flow was only 340 cfs which is a >Q99 occurrence.

Daily average temperatures for each transect are presented in Table 3-1 for each sampling event. For the September 14 sampling event, continuous monitors were installed in the middle of the sampling event so a daily average was calculated based on the first 24 hours the monitor was recording (9/14 - 9/15). For the October sampling event, the measured data was

TABLE 3-1. DAILY AVERAGE TEMPERATURES (°C) IN THE HOOKSETT AND AMOSKEAG PONDS, DAILY AVERAGE RIVER FLOWS AND MERRIMACK STATION OUTPUT (MW) DURING THE 1995 TEMPERATURE MONITORING PROGRAM.

Station	5/11	5/24	6/9	6/21	9/14	9/27	10/11
N10	13.0	16.2	19.1	23.7	18.7	15.5	12.9
N5	12.7	16.1	19.2	23.8	24.3	15.4	12.9
0	13.2	16.8	20.7	26.2	23.4	18.1	17.8
S4	12.9	16.4	21.0	25.2	23.2	17.9	16.5
S8	12.9	16.4	20.5	24.2	23.1	17.8	16.1
S12	13.0	16.5	20.6	25.0	23.3	18.1	15.9
S16	13.3	16.4	20.9	25.3	22.2	17.9	15.5
S20	13.4	16.4	20.9	25.3	22.7	18.0	15.5
S24	13.4	16.4	21.3	25.3	22.0	18.2	15.8
A0	13.6	16.5	21.6	25.8	22.1	18.1	15.5
A1	13.4	16.4	21.3	25.6	21.6	18.2	15.4
A2	12.8	16.4	21.3	25.8	22.0	18.1	15.4
A3	13.5	16.4	21.2	25.8	21.7	18.1	15.3
A4	13.6	16.4	21.2	26.2	21.3	18.1	14.9
A5	13.5	16.6	20.9	26.3	20.9	17.8	14.9
A6	13.2	16.7	21.1	26.1	20.6	17.8	14.9
A7	13.3	17.0	21.8	25.4	20.6	16.5	15.0
Daily Average River Flow (cfs)							
	1901	3109	1558	831	340	660	1139
Plant Output (MW)							
Unit #1	108.8	108.1	91.7	107.0	79.5	74.6	95.3
Unit #2	0	0	285.0	298.1	292.3	255.8	320.5
Total	108.8	108.1	376.7	405.1	371.8	330.4	415.8

assumed to be representative of average daily values due to the lack of continuous monitor data during the sampling event. This assumption is believed to be acceptable because of the overcast conditions and small fluctuation in air temperature during the event. Daily average temperatures, river flows, and plant output in megawatts (MW) from the Merrimack Station are presented in Table 3-1.

The greatest temperature increase observed below the Hooksett dam (A0) during the surveys was 3.4°C over background (N10). This occurred during the lowest river flow observed (340 cfs, >Q99 occurrence; on an unusually warm September day [85°F maximum] in Concord) with a plant operating level of 372 MW. At these low flows, and high operating levels the Merrimack Station is actually drawing water that has been discharged from the canal upstream to the intakes thus recirculating the warm water and reducing the cooling efficiency. This occurs when the river flow is near or below the intake water volume of 397 cfs with both units running.

4.0 MODELING STUDY

4.1 OBJECTIVES

The purpose of the modeling study was to develop a model to predict daily average temperatures in the Amoskeag pond. From these predictions, potential impacts from the thermal discharge on anadromous fish migration were determined. Impacts to historic and future migration periods were evaluated.

4.2 REGRESSION ANALYSIS

In order to predict daily average downstream temperatures in the Amoskeag pond, a relationship was established between downstream temperature and the independent parameters: river flow, ambient upstream temperature (Station N10), and plant output measured in daily average net megawatts from the Merrimack station. Since the historical data did not include any monitoring points below Hooksett dam, the 1995 sampling data was used to develop a multiple regression equation to predict temperatures at Stations A0 and A7.

The data from the seven spring and fall sampling events were pooled for evaluation by regression analysis. These data are presented in Table 3-1. In addition, data from continuous monitors at the Hooksett dam and the Amoskeag dam from the days previous to the sampling dates during the spring events were added to the database. These data are shown in Table 4-1. Thus, eleven data sets were used to develop the regression model.

Analysis of multiple regression resulted in a significantly correlated equation with a coefficient of determination (r^2) of 0.9961 for predicting temperatures at Station A0. However, no statistically significant equation for predicting temperatures at Station A7 could be found. This implies that temperatures 1.5 miles above Amoskeag dam are not well correlated with Merrimack Station operations and that potential thermal impacts are limited to the area from the

TABLE 4-1. ADDITIONAL INPUT DATA FOR MULTIPLE REGRESSION ANALYSIS BASED ON CONTINUOUS MONITOR DATA.

	5/10	5/23	6/8	6/20
Daily Average Background Temperature (°C) at N10	12.3	15.7	19.2	23.8
Daily Average River Flow (cfs)	1825	2744	1686	1008
Plant Output (MW)				
Unit #1	93.3	111.5	86.7	109.0
Unit #2	0	0	281.0	315.4
Total	93.3	111.5	367.7	424.4
Daily Average Temperature (°C) at Station A0*	12.9	16.0	21.7	25.9
Daily Average Temperature (°C) from Monitor at Amoskeag dam	13.3	16.0	22.2	23.6

*Estimated from continuous monitor at Hooksett dam and sampling data from the following day.

Merrimack Station discharge to the upper portion of the Amoskeag pond. The equation that predicts daily average downstream temperatures at Station A0 is as follows:

$$\text{TEMP (A0)} = 0.9425 * \text{TEMP(N10)} + 0.006158 * \text{OUTPUT} - 1.4363 * \text{Log}_{10}(\text{FLOW}) + 5.5001$$

For purposes of determining past daily average downstream temperatures, a historic data base was compiled for the spring and fall migration periods for the years 1985-1994. Downstream temperatures were then predicted using the developed regression equation. This data base is presented in Appendix C. To normalize the distribution of daily average river flow from Garvins Falls from the historic data, a transformation to log base 10 values was used in the regression analysis. The predicted temperatures at Station A0 from the regression equation were checked by comparing the results to those of a simple mass balance analysis to determine average temperatures at Station S0 using flow and temperature data in the river and in the discharge canal. Although this analysis compared temperatures at two different stations, the comparison was useful as it determined that the regression equation was predicting results that were reasonable based on seasonal conditions and the results of the mass balance analysis.

Because the multiple regression analysis could only predict daily average temperatures at Station A0 in the Amoskeag pond, a set of simple linear regression equations was developed to predict temperatures at the remaining Stations (A1-A7). The linear regression equations were developed based on the relationship between temperatures at Station A0 and each station downstream observed during the 1995 sampling events. Table 4-2 presents the simple linear regression equation for each station along with the coefficient of determination (r^2). In addition, predicted values are given for the minimum and maximum temperatures as predicted for Station A0 from the historical database. Based on these equations, the greatest difference between predicted temperatures at Station A0 and predicted temperatures at the southernmost station (A7) is only 0.8°C.

TABLE 4-2. REGRESSION EQUATIONS FOR PREDICTING DOWNSTREAM TEMPERATURES IN THE AMOSKEAG POND FROM PREDICTED VALUES AT STATION A0.

STA-TION	EQUATION	r^2	MINI-MUM=7.2°C*	MAXI-MUM=28.4°C*
A1	$A1=A0*0.9814+0.1677$	0.998 4	7.2	28.0
A2	$A2=A0*1.0348-0.8630$	0.997 1	6.6	28.5
A3	$A3=A0*0.9932-0.0420$	0.998 5	7.1	28.2
A4	$A4=A0*1.0143-0.4872$	0.991 4	6.8	28.3
A5	$A5=A0*1.0053-0.4289$	0.983 4	6.8	28.1
A6	$A6=A0*1.0018-0.4343$	0.981 3	6.8	28.0
A7	$A7=A0*0.9713+0.0317$	0.966 3	7.0	27.6

*Temperatures at Station A0 from the historical (1985-1994) database as predicted by the multiple regression analysis.

Caution must be used when applying the multiple and simple linear regression equations outside the limits of data used to develop them. The equations were developed from the range of values observed during the 1995 sampling events. When applying the equations to the historical database, the equations were used to predict temperatures outside the 1995 sampled range. Therefore, there may be greater uncertainty for some of the predicted values. Table 4-3 shows a comparison of ranges of data observed in 1995 and the historical data of 1985-1994.

TABLE 4-3. RANGE OF VALUES OBSERVED DURING THE 1995 TEMPERATURE MONITORING PROGRAM AND IN THE 1985-1995 HISTORICAL DATABASE.

	1995	1985-1994
Background Temperature at N10 (°C)	12.0 - 23.5	6.1 - 26.8
Plant Output (MW)	93.3 - 424.4	0 - 444
River Flow (cfs)	340 - 3109	178 - 19,895

4.3 RESULTS

Predicted temperatures at Station A0 based on the previously presented regression equation are presented in Appendix C. In general, predicted temperatures at Station A0 for the 10-year historical data record were typically about 2°C higher than background temperatures at Station N10. This change in temperature (ΔT) varies according to plant output and river flow. At higher plant output and lower river flows, the ΔT increases. During the spring period (May - June) the highest ΔT predicted for the years 1985-1994 was 2.4°C, and during the fall (September - October) the highest ΔT was 4.0°C. The high fall ΔT occurred at the lowest river flow (178 cfs) for the period of record and a high plant output (417 MW).

5.0 THERMAL IMPACTS ON ANADROMOUS FISH MIGRATION

5.1 TARGET SPECIES OF CONCERN

For the Merrimack River from the Merrimack Station to the Amoskeag dam, the anadromous species of concern are American shad, alewives, and Atlantic salmon (Saunders 1992). The primary migration seasons for these species has been determined to be May/June and September/October. Table 5-1 summarizes the migration periods for each species and life stage listed above as well as the preferred temperature range for species and migration period.

TABLE 5-1. MIGRATION SEASONS FOR ANADROMOUS FISH EXPECTED IN THE VICINITY OF MERRIMACK STATION.

SPECIES		TEMPERATURE RANGE (°C)	PERIOD
LIFE STAGE	DIRECTION		
American shad			
Adult	Upstream	10-24	May-June
Juvenile	Downstream	26-6	September-October
Alewife			
Adult	Upstream	5-24	May-June
Juvenile	Downstream	26-6	September-October
Atlantic salmon			
Adult	Upstream	<24	May-July
Adult (minor)	Upstream	<24	August-October
Adult	Downstream	4-15	April-May
Adult (minor)	Downstream	10-4	October-December
Smolt	Downstream	8-20	April 15-June 15

NOTE: Period describes the time at which migration would be expected during most years. A negligible proportion of the population may migrate outside of the period described in some years.

SOURCE: Saunders (1992)

5.2 PREDICTED IMPACTS ON HISTORIC ANADROMOUS FISH MIGRATION

Using the multiple regression equation developed in Section 4.0, daily average downstream temperatures at Station A0 were predicted for the entire historical database (1985-1994).

These predicted values are presented in Appendix C. We also developed plots of predicted temperature at Station A0, background temperature at Station N10 and the preferred temperature ranges to allow a visual examination of periods or exceedences of temperature criteria during 1985-1994. A sample of these plots is shown in Figure 5-1; the rest of the plots are presented in Appendix C.

5.2.1 American Shad and Alewife Impacts

During May and June, adult American shad and alewives run up the Merrimack River to spawn. The upper limit of their preferred temperature range during this spawning run is 24°C (Saunders 1992). Predicted temperatures at Station A0 for the spring migration from 1985-1994 exceeded 24°C only 13% of the time (67 of 512 days of data). Exceedences were predicted in six years of 10 evaluated which implies that the exceedences were not the result of an abnormally warm year but that they can be expected in more than 50% of the years. However, it should be noted that the majority of the exceedences (56) occurred after June 15 with only 11 exceedences occurring from May 25 to June 15. No exceedences occurred prior to May 25. Background temperatures as measured at Station N10 exceeded the optimal migration temperature 4% of the time. Thus, the Merrimack Station thermal discharge resulted in temperatures that may have influenced spring migration of American shad and alewives only an estimated 9% of the time over a ten-year period (1985-1994). However, most of these potential impacts occurred near the end of the migration period. Because of naturally high background temperatures, the alewife run is virtually over by mid June on the Merrimack River (Saunders 1992).

In the fall, the juvenile shad and alewives begin their downstream migration with an upper optimal temperature of 26°C. For the historical period (1985-1994), there were exceedences of 26°C on only 0.4% of the days (2 of 561 days of data) during September and October. These exceedences were less than 26.5°C and occurred on September 1 and 2, 1993. Background temperatures at Station N10 never exceeded 26°C for September and October (1985-1994). Thus, it appears that Merrimack Station has had little influence on downstream migration of shad and alewives at an upper optimal temperature of 26°C.

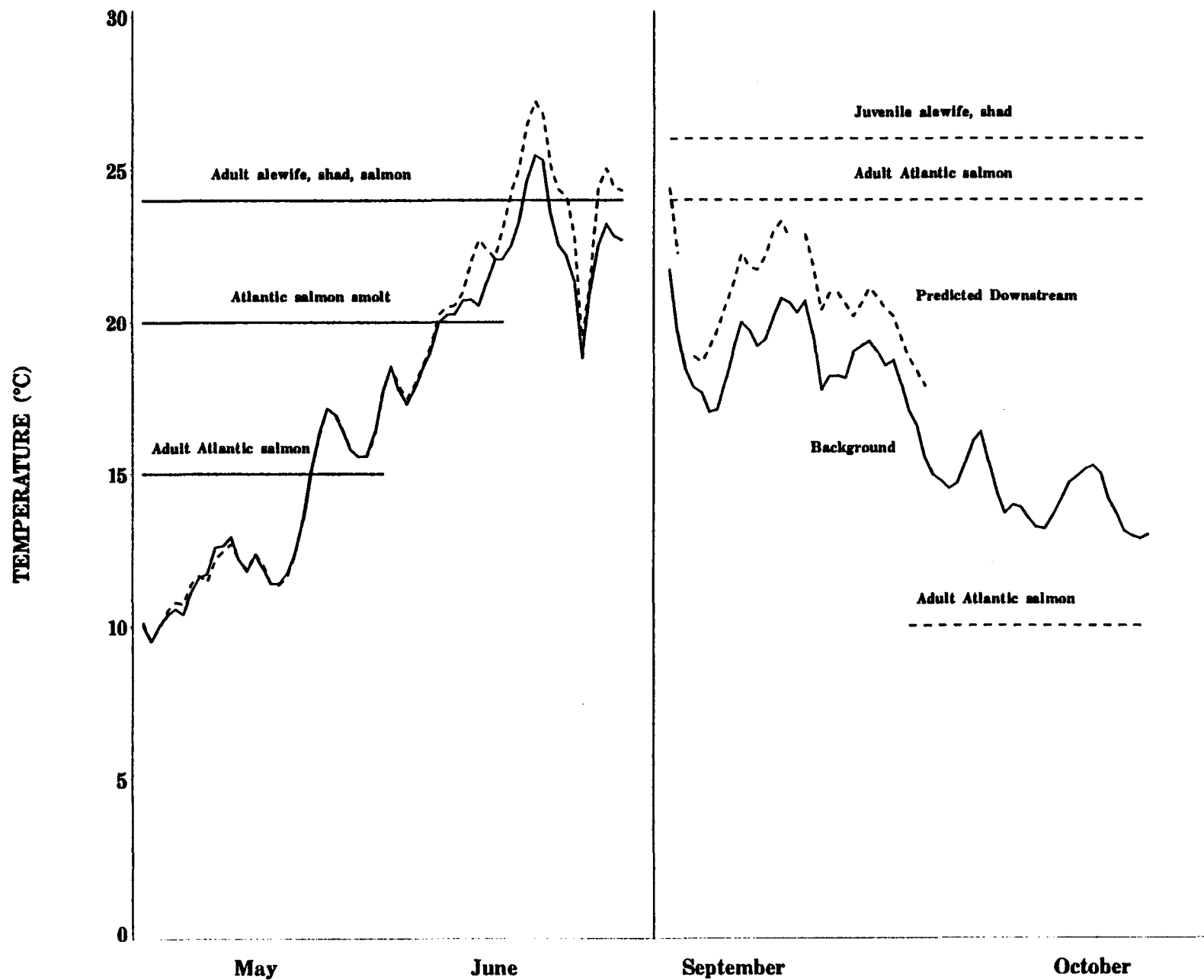


Figure 5-1. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1994 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

5.2.2 Atlantic Salmon Impacts

The spring upstream migration of adult Atlantic salmon occurs in May through July at temperatures typically less than 24°C (Saunders 1992). This coincides with the spring migration of shad and alewives; thus, impacts due to the thermal discharge on Atlantic salmon migration for the ten year period (1985-1994) were predicted to be exceedences 9% of the time. Although this analysis does not make predictions into July it is expected that exceedences of 24°C would have occurred more frequently than in June. Adult Atlantic salmon also may make a less significant migration upstream in the fall (August-October) just before spawning at the same temperature range as the spring migration. Optimal temperature (24°C) exceedences at Station A0 are predicted to have occurred only 5% of the time during the September and October (1985-1995) migration period. All exceedences occurred in September. There were no exceedences of 24°C observed at the background station (N10) for the ten year period. As with July, August temperatures were not predicted but it is expected that several exceedences of 24°C would have occurred at Station A0 and N10. Because of typically warm background temperatures, Atlantic salmon migration in July and August is expected to be minimal.

Downstream salmon migration occurs at lower temperatures than upstream migration. The primary adult downstream migration takes place in the spring (April-May) at a maximum optimal temperature of 15°C (Saunders 1992). During May (1985-1994), predicted temperatures at Station A0 exceeded 15°C 55% of the time, and observed background temperatures at Station N10 exceeded 15°C 53% of the time. Thus, exceedences attributable to the Merrimack Station occurred only 2% of the time in May for adult salmon migration downstream. The other minor downstream migration for adult salmon occurs from October to December between 4 and 10°C. Exceedences of 10°C during the historical period (1985-1994) in October occurred 95% of the time at Station A0 and 67% of the time at Station N10. Thus, the Merrimack Station may have caused thermal impacts 28% of the time during the migration period in October. No analysis was done for November or December.

Downstream migration of Atlantic salmon smolts typically occurs from mid-April through mid-June at temperatures between 8 and 20°C (Saunders 1992). Analysis of the historic record from May 1 through June 15 showed exceedences of 20°C 22% of the time at Station A0 and 17% of the time at Station N10. Thus, Merrimack Station increased the number of

exceedences by only 5% during the 1985-1994 period. Table 5-2 summarizes the percent exceedences of optimal migration temperatures that occurred during the historical record from 1985 through 1994.

TABLE 5-2. PREDICTED EXCEEDENCES OF OPTIMAL MIGRATION TEMPERATURES IN THE VICINITY OF MERRIMACK STATION FROM 1985-1994.

Species	Direction	Month of Concern	Upper Optimal Temperature (°C)	Percent Exceedence of Optimal Temperature		Percent Increase Due to Merrimack Station
				Station A0	Station N10	
American Shad	Upstream	May-June	24	13	4	9
	Downstream	Sept.-Oct.	26	0.4	0	0.4
Alewife	Upstream	May-June	24	13	4	9
	Downstream	Sept.-Oct.	26	0.4	0	0.4
Atlantic salmon ¹	Adult Upstream	May-June	24	13	4	9
	Adult (minor) Upstream	Sept.-Oct.	24	5	0	5
	Adult Downstream	May	15	55	53	2
	Adult (minor) Downstream	October	10	95	67	28
	Smolt Downstream	May-June 15	20	22	17	5

¹The migration periods for Atlantic salmon reflect a conservative management approach to protecting anadromous fish in so far as scheduling the operation of downstream fish passage facilities at PSNH hydro stations. The periods do not necessarily accurately reflect the precise timing of any migration of fish. PSNH, with the U.S. Fish and Wildlife Service, will begin sampling the out migration of juvenile salmon smolts at Ayers Island Hydroelectric Facility in the Spring of 1997. These data will help in assessing any potential exposure the smolts may have to elevated temperatures caused by Merrimack Station. As more data is acquired, these migration schedules will likely be refined.

As noted in Table 5-2, it is important to recognize that potential migration periods were determined primarily to assist scheduling of downstream fish passage facilities and do not necessarily accurately reflect times when migrant fish are typically expected to be passing. Therefore, we must emphasize that predicted exceedences of temperature criteria during the beginning or end of migration periods probably do not significantly impede anadromous fish

runs, since the fish would seldom, if ever, be present during these times. This comment applies to all species and migration periods.

5.3 PREDICTED IMPACTS ON FUTURE ANADROMOUS FISH MIGRATION

In order to determine future impacts on fish migration, a set of flow and temperature duration curves were developed (Appendix D). Because the model for predicting downstream temperatures depends on river flow, background temperatures and plant output, probabilities of occurrence for flow and temperature were determined from these curves. Flow duration curves are based on 20 years of data (1975-1994) for selected dates during the migration periods assuming a log-Pearson type III distribution (U.S.G.S. protocol). Temperature duration curves are based on 10 years of historical data (1985-1994) assuming a normal distribution at Station N10 for the same dates as the flow duration curves. Predictions were made for three plant operating conditions; no generation (0 MW), Unit 2 generating (320 MW), and Units 1 and 2 generating (440 MW).

Predictions were made using the multiple regression model, rewritten in the following form:

$$\text{TEMP (N10)} = \frac{0.006158 * \text{OUTPUT} - 1.4363 * \log_{10} (\text{FLOW}) + 5.50001 - \text{TEMP (A0)}}{-0.9425}$$

where: TEMP(A0) is now the optimal migration temperature at Station A0 for the species being evaluated.

For this analysis, input values for flow were taken from the flow duration curves presented in Appendix D at selected percentages of exceedences of 1, 2, 10, 50, 90 and 99. Plant output was assumed to be 0, 320 and 440 MW. Using the equation presented above, TEMP (N10) were then calculated. These calculated values represent the highest background tempera-

ture allowable while not exceeding the optimal migration temperature at Station A0, for various combinations of river flow and plant operating conditions.

Tables 5-3 to 5-5 present the results of this analysis for spring migration of adult American shad, alewives and Atlantic salmon. Table 5-3 presents the scenario with the plant operating at 0 MW (shut down), Table 5-4 presents the plant operating at 320 MW (Unit 2 only) and Table 5-5 presents the plant operating at 440 MW (Unit 1 and 2, full capacity). Each table contains two subtables, a and b. The first, subtable a, presents the probability that the upper optimal migration temperature will be exceeded, given a particular river flow, date and plant output. For example, in Table 5-3a, it can be seen that there is a 14% chance of exceedence on June 19 when river flow is at 99% and plant output is 0 MW. At a flow of 50%, probability of exceedence is only 9% on June 19.

While Table 5-3a presents probability of temperature exceedence given a particular flow, Table 5-3b presents the probability that both flow and background temperature will be such that an exceedence would result. For example, we noted above that on June 19 there was a 14% probability of exceedence if river flow was 99%. However, in Table 5-3b, it can be seen that the probability of occurrence of a 99% flow event and a background temperature that would cause an exceedence is <1%. Similarly, there is a 5% chance that on June 19, flow will be "normal" (50%) and temperature will be high enough to cause an exceedence.

It should be noted that probabilities of exceedence as presented in Table 5-3 and several other tables are higher on June 19 than on June 26. Although the available data support this conclusion, we believe that use of a larger data set (say, 20+ years instead of 10 years) would yield results that are more intuitively logical (i.e., the probability of exceedence would be greater on June 26 than on June 19). We therefore suspect that the numbers presented for June 19 are probably somewhat over-estimated while those for June 26 are somewhat under-estimated. Regardless, we doubt that the conclusions would change significantly even if we had a longer-term data set. Thus, we believe that the present analysis is sufficient to address the issues of concern.

TABLE 5-3. SPRING MIGRATION OF ADULT AMERICAN SHAD, ALEWIVES, AND ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 0 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	1	<1	<1	1	14	9
90	<1	<1	<1	1	<1	<1	1	12	7
50	<1	<1	<1	<1	<1	<1	1	9	5
10	<1	<1	<1	<1	<1	<1	<1	6	3
2	<1	<1	<1	<1	<1	<1	<1	5	2
1	<1	<1	<1	<1	<1	<1	<1	4	2

b. Probability of Occurrence of Flow and Background (N10) Temperature that Leads to an Exceedence of Upper Optimal Temperature.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	<1	<1	<1	<1	<1	<1	<1	<1	<1
50	<1	<1	<1	<1	<1	<1	<1	5	2
10	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	<1	<1	<1	<1	1	9	5

TABLE 5-4. SPRING MIGRATION OF ADULT AMERICAN SHAD, ALEWIVES, AND ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 320 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	4	3	3	11	39	39
90	<1	<1	<1	3	2	3	9	36	34
50	<1	<1	<1	3	1	2	6	31	27
10	<1	<1	<1	2	1	1	3	24	19
2	<1	<1	<1	1	1	1	1	20	15
1	<1	<1	<1	1	<1	<1	1	18	13

b. Probability of Occurrence of Flow and Background (N10) Temperature that Leads to an Exceedence of Upper Optimal Temperature.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	<1	<1	<1	<1	<1	<1	1	4	3
50	<1	<1	<1	1	1	2	3	15	13
10	<1	<1	<1	<1	<1	<1	<1	2	2
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	<1	3	1	2	6	30	27

TABLE 5-5. SPRING MIGRATION OF ADULT AMERICAN SHAD, ALEWIVES, AND ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 440 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	1	6	6	6	19	51	55
90	<1	<1	1	6	5	5	16	48	49
50	<1	<1	1	5	3	4	11	43	41
10	<1	<1	<1	3	2	2	6	35	32
2	<1	<1	<1	2	1	1	3	29	26
1	<1	<1	<1	2	1	1	3	27	24

b. Probability of Occurrence of Flow and Background (N10) Temperature that Leads to an Exceedence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	<1	<1	<1	<1	1	1
90	<1	<1	<1	<1	<1	1	2	5	5
50	<1	<1	<1	2	2	2	5	2	21
10	<1	<1	<1	<1	<1	<1	1	3	3
2	<1	<1	<1	<1	<1	<1	<1	1	1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	1	4	3	3	11	42	41

Tables 5-4a and b and 5-5a and b present cases where the plant generating capacity is at 320 MW and 440 MW, respectively. As expected, probabilities of exceedence increase with increasing plant output. In Table 5-4a (320 MW), we see that on June 19, there is nearly a 40% chance of exceedence if river flow is at 99%. However, the chances of this event occurring is still <1% (Table 5-4b). At 420 MW (Table 5-5a and b), the probability of exceedence increases to 51% at a river flow of 99%, but again, there is only a 1% chance of occurrence.

The most important numbers are found in the "b" tables because these present the probability that both a particular flow and a temperature exceedence will occur. It can be seen from any of the tables that the probability of occurrence of any particular event is generally very small. However, for a given date (say June 19), there is virtually a 100% chance that a flow will occur that falls within the range of flows presented. Therefore, the actual probability of an exceedence on a given day is represented by the sum of all probabilities for that day, unitized to 100%. Thus, we see for June 19 (Table 5-3b) that at 0 MW the probability of exceedence is 9% (which is identical to the 50% value presented in 5-3a). At 320 MW of production, probability of exceedence is 31% on June 19 and at 440 MW, there is a 43% chance that the upper optimal temperature criteria would be exceeded. Because the background probability of exceedence is 9%, the net effect of Merrimack Station on June 19 is to increase the probability of exceedence by 22 and 34% at plant generation of 320 and 440 MW, respectively.

We can summarize Tables 5-3 through 5-5 as follows. Merrimack Station has little potential to impact the spring migration of adult American shad, alewives and Atlantic salmon, regardless of plant output, during all of May and the first one and one-half weeks of June. By June 12, there is approximately a 6-11% chance that plant operation could cause an exceedence of optimal temperatures and by June 19 the probability increases to 31-43%. However, NAI's extensive experience with anadromous fish run downriver at Lowell and Lawrence, MA hydro facilities documents that these fish runs are virtually over by the middle of June. Therefore, we conclude that there is little potential for negative impact from operating Merrimack Station, regardless of the plant output.

Additional tables for fall migration of juvenile American shad and alewives, fall and spring migration of adult Atlantic salmon, and spring migration of Atlantic salmon smolts are provided in Appendix Tables E-3 through E-16. In general, these tables indicate little potential

influence of Merrimack Station on downstream migration of juvenile shad and alewives or fall upstream migration of Atlantic salmon. On the other hand, there appears to be significant exceedences during most of the downstream migration periods for both adults and smolts of Atlantic salmon. However, examination of the appropriate tables indicates that temperatures are naturally frequently greater than upper optimal. Thus, for adult Atlantic salmon to utilize the Merrimack River for migration, they must either tolerate higher than optimal temperatures or delay their downstream movements until temperatures are more suitable. Regardless, Merrimack Station probably plays a minimal role in influencing downstream Atlantic salmon migration since the maximum temperature that can result from full operation of the plant is only about 2°C during this time of year.

It should again be noted that predicted exceedences always occur during the beginning or end of the migration periods. These migration periods do not necessarily accurately reflect actual migration periods on the Merrimack River. It is expected that ongoing studies by PSNH and others will better define migration periods and will actually result in fewer predicted violations.

6.0 CONCLUSIONS

A study was undertaken to evaluate the potential impact of the thermal discharge from Merrimack Station on downstream river temperatures during critical migration periods. This study had the following components: 1) additional field data was collected to document temperatures in the area of concern (Hooksett dam to Amoskeag Dam) during May-June 1995 and September-October 1995; 2) a regression equation was developed that accurately predicted temperature immediately downstream in the Hooksett dam tailrace based on background temperature, river flow and Merrimack Station output; 3) a ten-year historic period (1985-1994) was simulated using this equation to assess probable impact of Merrimack Station during this time, and; 4) using flow and temperature duration/probability curves, the probability of exceeding selected temperature criteria during spring and fall migration periods was assessed. Based on this study, the following conclusions are made:

- The maximum observed temperature in the Hooksett tailrace was 3.4°C above background temperature when river flow was at an extreme low of 340 CFS. This flow occurs <1% of the time during the first part of September.
- A statistically significant relationship ($r^2 = 0.9961$) was found between temperature in the Hooksett dam tailrace and background temperature, river flow and plant output.
- No statistically significant relationship was found for Station A7, 1.5 miles above Amoskeag dam which implies little, if any, impact from Merrimack Station at Amoskeag dam or below.
- Based on thermal tolerance data derived from the literature, operation of Merrimack Station from 1985-1994 caused temperatures to exceed upper optimal temperatures for most of the species and time periods of concern <10% of the time.
- The only exception to this <10% of the time was for minor downstream migration of adult Atlantic salmon during October where it was predicted that the Station increased exceedences by 28%. However, background exceedences occurred 67% of the time during October which implies that in the Merrimack River, downstream fall migration of adult Atlantic salmon probably occurs during November when temperatures are more suitable.
- Based on temperature and flow duration curves, it was determined that Merrimack Station has a <1% probability of causing temperature exceedences for upstream migration of adult Atlantic salmon, American

shad and alewives from May 1 to May 15 and <10% probability from May 15 to approximately June 10, regardless of level of output from the Station.

- From about June 15 to June 30, temperature exceedences could increase to ~40% (at 440 MW) or ~30% (at 320 MW), but NAI's experience with anadromous fish on the Merrimack suggests that runs are virtually over by June 15. Thus, we conclude no significant potential for Merrimack Station to influence upstream migration of anadromous fish.
- The probability of Merrimack Station causing exceedence of upper optimal temperature for downstream fall migration of juvenile shad and alewives is <10% after September 1, <3% after September 8 and <1% after September 22, even when generating at full capacity of 440 MW.
- Merrimack Station has the potential to significantly affect migrating Atlantic salmon during: 1) early September for upstream migrating adults; 2) early May for downstream migrating adults; 3) October for downstream migrating adults; and 4) late May and June for downstream migrating smolts. However, there are generally significant times during these migration periods when temperatures are within preferred ranges.
- Merrimack Station typically causes no more than a 2°C temperature increase which leads us to conclude that it is unlikely that Merrimack Station could significantly impede migrating Atlantic salmon.

7.0 REFERENCES

Normandeau Associates Inc. 1979. Merrimack River Anadromous Fisheries Investigation, 1978. Bedford, NH. Prepared for Public Service Company of New Hampshire.

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APPENDIX A

**Merrimack River Temperature
Sampling Data for 1995**

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
N10	05/11/95	7:30	10	0	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	1	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	2	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	3	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	4	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	5	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	6	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	7	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	8	12.7	12.7	12.7	12.6	12.6
N10	05/11/95	7:30	10	9	.	.	12.7	12.6	12.6
N10	05/11/95	7:30	10	10	.	.	.	12.6	12.6
N5	05/11/95	7:55	10	0	12.6	12.6	12.6	12.6	12.6
N5	05/11/95	7:55	10	1	12.6	12.6	12.6	12.6	12.6
N5	05/11/95	7:55	10	2	12.7	12.6	12.6	12.6	12.6
N5	05/11/95	7:55	10	3	12.7	12.6	12.6	12.6	.
N5	05/11/95	7:55	10	4	12.7	12.6	12.6	12.6	.
N5	05/11/95	7:55	10	5	12.7	12.6	12.6	.	.
N5	05/11/95	7:55	10	6	12.7	12.6	.	.	.
N5	05/11/95	7:55	10	7	12.7	12.6	.	.	.
N5	05/11/95	7:55	10	8	12.7	12.6	.	.	.
N5	05/11/95	7:55	10	9	12.7	.	.	.	.
0	05/11/95	8:05	10	0	17.1	17.8	17.9	12.8	12.7
0	05/11/95	8:05	10	1	16.9	17.5	17.7	12.7	12.7
0	05/11/95	8:05	10	2	15.2	16.4	14.7	12.7	12.7
0	05/11/95	8:05	10	3	14.3	14.2	13.5	12.7	12.7
0	05/11/95	8:05	10	4	13.8	13.0	13.0	12.7	12.7
0	05/11/95	8:05	10	5	13.2	12.9	12.8	12.7	12.7
0	05/11/95	8:05	10	6	13.0	12.8	12.8	12.7	12.7
0	05/11/95	8:05	10	7	13.0	12.8	12.8	12.7	12.7
0	05/11/95	8:05	10	8	.	12.8	12.7	12.7	12.7
0	05/11/95	8:05	10	9	.	.	12.7	12.7	12.7
0	05/11/95	8:05	10	10	.	.	12.7	12.7	12.7
0	05/11/95	8:05	10	11	.	.	.	12.7	12.7
0	05/11/95	8:05	10	12	.	.	.	.	12.7
0	05/11/95	8:05	10	13	.	.	.	.	12.7
S4	05/11/95	8:25	9	0	15.1	13.6	14.8	14.9	13.8
S4	05/11/95	8:25	9	1	15.0	13.4	14.8	14.8	13.3
S4	05/11/95	8:25	9	2	13.4	13.4	13.1	14.8	13.2
S4	05/11/95	8:25	9	3	13.2	13.4	12.9	13.1	13.2
S4	05/11/95	8:25	9	4	13.1	13.4	12.9	13.0	13.2
S4	05/11/95	8:25	9	5	13.1	13.1	12.9	12.9	13.2
S4	05/11/95	8:25	9	6	13.1	13.0	12.9	12.9	13.1
S4	05/11/95	8:25	9	7	13.1	13.0	12.9	12.9	13.1
S4	05/11/95	8:25	9	8	13.1	13.0	12.9	12.9	13.0
S4	05/11/95	8:25	9	9	13.1	13.0	12.9	12.9	13.0
S4	05/11/95	8:25	9	10	.	13.0	12.9	12.9	13.0
S4	05/11/95	8:25	9	11	.	.	12.9	12.9	12.9
S4	05/11/95	8:25	9	12	.	.	12.9	12.9	12.9
S8	05/11/95	8:40	9	0	13.4	13.3	13.1	13.1	13.0
S8	05/11/95	8:40	9	1	13.3	13.3	13.1	13.1	13.0
S8	05/11/95	8:40	9	2	13.3	13.3	13.1	13.1	13.1
S8	05/11/95	8:40	9	3	13.3	13.3	13.1	13.1	13.1

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
S8	05/11/95	8:40	9	4	13.3	13.3	13.1	13.1	13.1
S8	05/11/95	8:40	9	5	13.3	13.3	13.1	13.1	13.1
S8	05/11/95	8:40	9	6	13.4	13.3	13.1	13.1	13.1
S8	05/11/95	8:40	9	7	13.3	13.3	13.1	13.1	13.1
S8	05/11/95	8:40	9	8	13.4	13.3	13.1	13.1	13.1
S8	05/11/95	8:40	9	9	13.4	13.3	13.1	13.1	.
S8	05/11/95	8:40	9	10	13.4	.	.	.	.
S12	05/11/95	8:55	9	0	13.4	13.2	13.0	13.1	13.1
S12	05/11/95	8:55	9	1	13.4	13.1	13.0	13.1	13.1
S12	05/11/95	8:55	9	2	13.4	13.1	13.0	13.1	13.1
S12	05/11/95	8:55	9	3	13.4	13.1	13.0	13.1	13.1
S12	05/11/95	8:55	9	4	13.4	13.1	13.0	13.1	.
S12	05/11/95	8:55	9	5	13.4	13.1	13.1	13.1	.
S12	05/11/95	8:55	9	6	13.4	13.1	13.1	13.1	.
S12	05/11/95	8:55	9	7	13.4	13.1	13.1	.	.
S12	05/11/95	8:55	9	8	13.4	13.1	13.1	.	.
S12	05/11/95	8:55	9	9	13.3	13.1	.	.	.
S12	05/11/95	8:55	9	10	13.3	13.2	.	.	.
S12	05/11/95	8:55	9	11	13.3	13.2	.	.	.
S12	05/11/95	8:55	9	12	13.3	.	.	.	.
S12	05/11/95	8:55	9	13	13.3	.	.	.	.
S16	05/11/95	9:05	10	0	13.6	13.6	13.5	13.4	13.3
S16	05/11/95	9:05	10	1	13.6	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	2	13.6	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	3	13.6	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	4	13.6	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	5	13.7	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	6	13.7	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	7	13.7	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	8	13.7	13.6	13.5	13.3	13.3
S16	05/11/95	9:05	10	9	.	13.6	13.5	.	13.3
S16	05/11/95	9:05	10	10	.	.	.	.	13.3
S16	05/11/95	9:05	10	11	.	.	.	.	13.3
S16	05/11/95	9:05	10	12	.	.	.	.	13.3
S20	05/11/95	9:20	10	0	13.8	13.8	13.7	13.7	13.3
S20	05/11/95	9:20	10	1	13.8	13.8	13.7	13.7	13.3
S20	05/11/95	9:20	10	2	13.8	13.8	13.7	13.7	13.3
S20	05/11/95	9:20	10	3	13.8	13.8	13.7	13.7	13.3
S20	05/11/95	9:20	10	4	13.8	13.8	13.7	13.7	13.3
S20	05/11/95	9:20	10	5	13.8	13.8	13.7	13.7	13.3
S20	05/11/95	9:20	10	6	.	13.8	13.8	13.6	13.3
S20	05/11/95	9:20	10	7	.	13.8	13.8	13.6	13.3
S20	05/11/95	9:20	10	8	.	.	13.8	13.6	13.3
S20	05/11/95	9:20	10	9	.	.	13.8	13.6	13.3
S20	05/11/95	9:20	10	10	.	.	.	13.6	13.3
S20	05/11/95	9:20	10	11	.	.	.	13.6	13.3
S20	05/11/95	9:20	10	12	.	.	.	13.6	13.3
S20	05/11/95	9:20	10	13	.	.	.	13.5	13.3
S20	05/11/95	9:20	10	14	.	.	.	.	13.3
S24	05/11/95	9:30	.	0	13.7	13.7	13.7	13.6	13.6
S24	05/11/95	9:30	.	1	13.7	13.7	13.7	13.7	13.6
S24	05/11/95	9:30	.	2	13.7	13.7	13.7	13.7	13.5

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID	MID	EAST	EAST
S24	05/11/95	9:30	.	3	13.8	13.7	13.7	13.7	13.5
S24	05/11/95	9:30	.	4	13.8	13.7	13.7	13.6	13.5
S24	05/11/95	9:30	.	5	13.8	13.7	13.7	13.5	13.4
S24	05/11/95	9:30	.	6	13.8	13.7	13.7	13.5	13.5
S24	05/11/95	9:30	.	7	13.8	13.7	13.6	13.5	13.5
S24	05/11/95	9:30	.	8	13.8	13.8	13.6	13.5	13.4
S24	05/11/95	9:30	.	9	13.8	13.7	13.5	13.5	13.4
S24	05/11/95	9:30	.	10	13.8	13.7	13.5	13.5	13.4
S24	05/11/95	9:30	.	11	.	13.7	13.5	.	13.4
S24	05/11/95	9:30	.	12	.	.	13.5	.	.
A0	05/11/95	10:15	10	0	13.7	13.7	13.6	13.4	13.4
A0	05/11/95	10:15	10	1	13.7	13.7	13.6	13.5	13.5
A0	05/11/95	10:15	10	2	13.7	13.7	13.6	13.5	13.5
A0	05/11/95	10:15	10	3	13.7	13.7	13.6	13.4	13.5
A0	05/11/95	10:15	10	4	13.7	13.7	13.6	13.4	13.5
A0	05/11/95	10:15	10	5	13.7	13.7	13.6	13.4	13.5
A0	05/11/95	10:15	10	6	13.7	13.7	13.6	13.4	13.5
A0	05/11/95	10:15	10	7	.	.	13.6	.	13.5
A0	05/11/95	10:15	10	8	.	.	13.6	.	.
A1	05/11/95	10:30	10	0	13.7	13.7	13.7	13.6	13.5
A1	05/11/95	10:30	10	1	13.7	13.7	13.7	13.6	13.5
A1	05/11/95	10:30	10	2	13.7	13.7	13.7	13.6	13.5
A1	05/11/95	10:30	10	3	13.7	13.7	13.7	13.5	13.5
A1	05/11/95	10:30	10	4	13.7	13.7	13.7	13.5	13.5
A1	05/11/95	10:30	10	5	13.7	13.7	13.7	13.5	13.5
A1	05/11/95	10:30	10	6	13.7	13.7	13.7	13.5	13.5
A1	05/11/95	10:30	10	7	13.7	13.7	13.7	13.5	13.5
A1	05/11/95	10:30	10	8	13.7	13.7	13.7	13.5	13.5
A1	05/11/95	10:30	10	9	.	.	13.7	13.5	13.5
A1	05/11/95	10:30	10	10	.	.	13.7	13.5	13.5
A1	05/11/95	10:30	10	11	.	.	13.7	13.5	13.5
A1	05/11/95	10:30	10	12	.	.	13.7	13.5	13.5
A1	05/11/95	10:30	10	13	.	.	13.7	13.5	.
A1	05/11/95	10:30	10	14	.	.	13.7	13.5	.
A2	05/11/95	10:45	.	0	13.5	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	1	13.5	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	2	13.6	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	3	13.6	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	4	13.6	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	5	.	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	6	.	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	7	.	13.6	13.6	13.6	13.6
A2	05/11/95	10:45	.	8	.	13.6	13.6	13.6	.
A2	05/11/95	10:45	.	9	.	.	13.6	13.6	.
A2	05/11/95	10:45	.	10	.	.	13.6	.	.
A3	05/11/95	11:10	10	0	13.5	13.6	13.6	13.6	13.6
A3	05/11/95	11:10	10	1	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	2	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	3	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	4	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	5	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	6	13.6	13.6	13.6	13.6	13.7

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
A3	05/11/95	11:10	10	7	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	8	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	9	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	10	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	11	13.6	13.6	13.6	13.6	13.7
A3	05/11/95	11:10	10	12	13.6	13.6	13.6	13.6	.
A3	05/11/95	11:10	10	13	13.6	.	13.6	.	.
A4	05/11/95	11:20	10	0	13.6	13.6	13.7	13.7	13.6
A4	05/11/95	11:20	10	1	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	2	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	3	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	4	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	5	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	6	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	7	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	8	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	9	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	10	13.6	13.7	13.7	13.7	13.6
A4	05/11/95	11:20	10	11	13.6	13.7	13.7	13.7	.
A4	05/11/95	11:20	10	12	13.6	13.7	13.7	13.7	.
A4	05/11/95	11:20	10	13	13.6	.	.	.	.
A5	05/11/95	11:30	10	0	13.5	13.5	13.6	13.6	13.6
A5	05/11/95	11:30	10	1	13.5	13.5	13.6	13.6	13.6
A5	05/11/95	11:30	10	2	13.5	13.5	13.6	13.6	13.6
A5	05/11/95	11:30	10	3	13.5	13.5	13.6	13.6	13.6
A5	05/11/95	11:30	10	4	13.5	13.5	13.6	13.6	13.6
A5	05/11/95	11:30	10	5	13.5	13.6	13.6	13.6	13.6
A5	05/11/95	11:30	10	6	13.5	13.6	13.6	13.6	13.6
A5	05/11/95	11:30	10	7	13.5	13.6	13.6	13.6	13.6
A5	05/11/95	11:30	10	8	13.5	13.6	13.6	13.6	13.6
A5	05/11/95	11:30	10	9	13.5	13.6	13.6	13.6	13.6
A5	05/11/95	11:30	10	10	13.5	13.6	13.6	13.6	13.5
A5	05/11/95	11:30	10	11	.	13.6	13.6	13.6	13.5
A5	05/11/95	11:30	10	12	.	13.6	13.6	13.6	13.5
A5	05/11/95	11:30	10	13	.	.	13.6	13.6	13.5
A5	05/11/95	11:30	10	14	.	.	.	13.6	13.5
A5	05/11/95	11:30	10	15	.	.	.	.	13.5
A5	05/11/95	11:30	10	16	.	.	.	.	13.5
A5	05/11/95	11:30	10	17	.	.	.	.	13.5
A6	05/11/95	11:45	9	0	13.2	13.2	13.2	13.2	13.2
A6	05/11/95	11:45	9	1	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	2	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	3	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	4	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	5	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	6	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	7	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	8	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	9	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	10	13.2	13.2	13.2	13.2	13.1
A6	05/11/95	11:45	9	11	.	.	.	13.2	13.1
A6	05/11/95	11:45	9	12	.	.	.	13.2	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A6	05/11/95	11:45	9	13	.	.	.	13.2	.
A7	05/11/95	11:55	9	0	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	1	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	2	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	3	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	4	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	5	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	6	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	7	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	8	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	9	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	10	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	11	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	12	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	13	13.3	13.3	13.3	13.3	13.3
A7	05/11/95	11:55	9	14	13.3	13.3	13.3	.	.
A7	05/11/95	11:55	9	15	13.3	.	.	.	.
A7	05/11/95	11:55	9	16	13.3	.	.	.	.
N10	05/24/95	7:00	16	0	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	1	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	2	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	3	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	4	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	5	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	6	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	7	16.0	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	8	.	16.0	16.0	15.9	15.9
N10	05/24/95	7:00	16	9	.	.	16.0	15.9	15.9
N10	05/24/95	7:00	16	10	.	.	.	15.9	15.9
N5	05/24/95	7:10	16	0	15.9	15.9	15.9	15.8	15.8
N5	05/24/95	7:10	16	1	15.9	15.9	15.8	15.8	15.8
N5	05/24/95	7:10	16	2	15.9	15.9	15.9	15.8	15.8
N5	05/24/95	7:10	16	3	15.9	15.9	15.9	15.8	.
N5	05/24/95	7:10	16	4	15.9	15.9	15.9	.	.
N5	05/24/95	7:10	16	5	15.9	15.9	15.9	.	.
N5	05/24/95	7:10	16	6	15.9	15.9	15.9	.	.
N5	05/24/95	7:10	16	7	15.9	15.9	.	.	.
N5	05/24/95	7:10	16	8	15.9	15.9	.	.	.
N5	05/24/95	7:10	16	9	15.9	.	.	.	.
0	05/24/95	7:20	17	0	19.0	19.9	20.3	15.9	15.9
0	05/24/95	7:20	17	1	18.9	19.9	19.5	15.9	15.8
0	05/24/95	7:20	17	2	18.3	19.9	18.0	15.9	15.8
0	05/24/95	7:20	17	3	18.2	17.9	17.5	15.9	15.8
0	05/24/95	7:20	17	4	16.8	17.1	16.9	15.9	15.8
0	05/24/95	7:20	17	5	16.4	16.1	16.3	15.9	15.8
0	05/24/95	7:20	17	6	16.3	16.0	16.0	15.9	15.8
0	05/24/95	7:20	17	7	16.3	15.9	15.9	15.9	15.8
0	05/24/95	7:20	17	8	16.3	15.9	15.9	15.9	15.8
0	05/24/95	7:20	17	9	.	.	15.9	15.9	15.8
0	05/24/95	7:20	17	10	.	.	15.9	15.9	15.8
0	05/24/95	7:20	17	11	.	.	.	15.9	15.8
0	05/24/95	7:20	17	12	.	.	.	.	15.8

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
S4	05/24/95	7:45	18	0	17.6	17.2	17.2	17.6	17.6
S4	05/24/95	7:45	18	1	17.5	16.5	17.2	17.1	17.5
S4	05/24/95	7:45	18	2	17.0	16.4	16.3	16.1	16.7
S4	05/24/95	7:45	18	3	16.3	16.2	16.1	16.0	16.7
S4	05/24/95	7:45	18	4	16.3	16.1	16.0	16.0	16.5
S4	05/24/95	7:45	18	5	16.2	16.1	16.0	16.0	16.1
S4	05/24/95	7:45	18	6	16.2	16.1	16.0	15.9	16.1
S4	05/24/95	7:45	18	7	16.1	16.1	16.0	15.9	16.0
S4	05/24/95	7:45	18	8	16.1	16.1	15.9	15.9	16.0
S4	05/24/95	7:45	18	9	16.1	16.1	15.9	15.9	15.9
S4	05/24/95	7:45	18	10	.	16.1	15.9	15.9	15.9
S4	05/24/95	7:45	18	11	.	16.1	15.9	15.9	15.9
S4	05/24/95	7:45	18	12	.	.	15.9	15.9	15.9
S4	05/24/95	7:45	18	13	.	.	.	.	15.9
SUN	05/24/95	7:55	.	0	17.2	.	.	.	.
SUN	05/24/95	7:55	.	1	17.2	.	.	.	.
SUN	05/24/95	7:55	.	2	17.2	.	.	.	.
S8	05/24/95	8:00	21	0	16.6	16.5	16.4	16.8	16.7
S8	05/24/95	8:00	21	1	16.6	16.5	16.4	16.8	16.6
S8	05/24/95	8:00	21	2	16.5	16.5	16.3	16.8	16.5
S8	05/24/95	8:00	21	3	16.4	16.4	16.3	16.6	16.4
S8	05/24/95	8:00	21	4	16.4	16.4	16.3	16.5	16.3
S8	05/24/95	8:00	21	5	16.3	16.3	16.2	16.5	16.3
S8	05/24/95	8:00	21	6	16.3	16.3	16.2	16.5	16.3
S8	05/24/95	8:00	21	7	16.2	16.3	16.2	16.3	16.2
S8	05/24/95	8:00	21	8	16.2	16.2	16.2	16.2	16.2
S8	05/24/95	8:00	21	9	16.2	16.2	16.2	16.2	.
S8	05/24/95	8:00	21	10	.	.	.	16.2	.
S12	05/24/95	8:15	21	0	16.3	16.3	16.3	16.4	16.3
S12	05/24/95	8:15	21	1	16.4	16.3	16.3	16.4	16.3
S12	05/24/95	8:15	21	2	16.3	16.3	16.3	16.4	16.3
S12	05/24/95	8:15	21	3	16.3	16.3	16.3	16.4	16.3
S12	05/24/95	8:15	21	4	16.3	16.3	16.3	16.3	.
S12	05/24/95	8:15	21	5	16.3	16.3	16.3	16.3	.
S12	05/24/95	8:15	21	6	16.2	16.3	16.3	.	.
S12	05/24/95	8:15	21	7	16.2	16.3	16.3	.	.
S12	05/24/95	8:15	21	8	16.2	16.3	16.3	.	.
S12	05/24/95	8:15	21	9	16.2	16.2	.	.	.
S12	05/24/95	8:15	21	10	16.2	.	.	.	.
S12	05/24/95	8:15	21	11	16.2	.	.	.	.
S12	05/24/95	8:15	21	12	16.2	.	.	.	.
S16	05/24/95	8:25	20	0	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	1	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	2	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	3	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	4	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	5	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	6	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	7	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	8	16.2	16.2	16.2	16.2	16.3
S16	05/24/95	8:25	20	9	16.2	16.2	.	.	16.3
S16	05/24/95	8:25	20	10	.	.	.	.	16.3

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	MID	EAST
S16	05/24/95	8:25	20	11	.	.	.	.	16.3
S20	05/24/95	8:35	20	0	16.2	16.2	16.2	16.2	16.2
S20	05/24/95	8:35	20	1	16.2	16.2	16.2	16.2	16.3
S20	05/24/95	8:35	20	2	16.2	16.2	16.2	16.2	16.2
S20	05/24/95	8:35	20	3	16.2	16.2	16.2	16.2	16.2
S20	05/24/95	8:35	20	4	16.2	16.2	16.1	16.2	16.2
S20	05/24/95	8:35	20	5	16.2	16.2	16.1	16.2	16.2
S20	05/24/95	8:35	20	6	16.2	16.2	16.1	16.2	.
S20	05/24/95	8:35	20	7	.	16.2	16.1	16.2	.
S20	05/24/95	8:35	20	8	.	16.2	16.1	16.2	.
S20	05/24/95	8:35	20	9	.	.	16.1	16.2	.
S20	05/24/95	8:35	20	10	.	.	16.1	16.2	.
S20	05/24/95	8:35	20	11	.	.	16.1	16.2	.
S20	05/24/95	8:35	20	12	.	.	16.1	16.2	.
S20	05/24/95	8:35	20	13	.	.	16.1	16.2	.
S20	05/24/95	8:35	20	14	.	.	.	16.2	.
S20	05/24/95	8:35	20	15	.	.	.	16.2	.
S20	05/24/95	8:35	20	16	.	.	.	16.2	.
S20	05/24/95	8:35	20	17	.	.	.	16.2	.
S20	05/24/95	8:35	20	18	.	.	.	16.2	.
S24	05/24/95	8:40	20	0	16.2	16.3	16.2	16.3	16.3
S24	05/24/95	8:40	20	1	16.3	16.2	16.2	16.3	16.3
S24	05/24/95	8:40	20	2	16.3	16.2	16.2	16.2	16.3
S24	05/24/95	8:40	20	3	16.3	16.2	16.2	16.2	16.3
S24	05/24/95	8:40	20	4	16.2	16.2	16.2	16.2	16.3
S24	05/24/95	8:40	20	5	16.2	16.2	16.2	16.2	16.2
S24	05/24/95	8:40	20	6	16.2	16.2	16.1	16.2	16.2
S24	05/24/95	8:40	20	7	16.2	16.2	16.1	16.2	16.2
S24	05/24/95	8:40	20	8	16.2	16.2	16.2	16.2	16.2
S24	05/24/95	8:40	20	9	16.2	16.2	16.1	16.2	16.2
S24	05/24/95	8:40	20	10	.	16.2	16.1	16.2	16.2
S24	05/24/95	8:40	20	11	.	.	16.1	.	.
A0	05/24/95	9:20	25	0	16.3	16.3	16.3	16.3	16.3
A0	05/24/95	9:20	25	1	16.3	16.3	16.3	16.3	16.3
A0	05/24/95	9:20	25	2	16.3	16.3	16.3	16.3	16.3
A0	05/24/95	9:20	25	3	16.3	16.3	16.3	16.3	16.3
A0	05/24/95	9:20	25	4	16.3	16.3	16.2	16.3	16.3
A0	05/24/95	9:20	25	5	16.3	16.3	16.2	16.3	16.3
A0	05/24/95	9:20	25	6	16.3	16.3	16.2	16.3	16.3
A0	05/24/95	9:20	25	7	16.3	16.3	16.2	16.3	16.3
A0	05/24/95	9:20	25	8	16.3	16.3	16.2	.	16.3
A0	05/24/95	9:20	25	9	16.3	16.3	16.2	.	16.3
A0	05/24/95	9:20	25	10	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	11	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	12	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	13	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	14	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	15	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	16	16.3	16.3	.	.	.
A0	05/24/95	9:20	25	17	.	16.3	.	.	.
A1	05/24/95	9:30	24	0	16.2	16.2	16.3	16.3	16.3
A1	05/24/95	9:30	24	1	16.2	16.2	16.3	16.3	16.3

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A1	05/24/95	9:30	24	2	16.3	16.2	16.3	16.3	16.3
A1	05/24/95	9:30	24	3	16.2	16.2	16.3	16.3	16.3
A1	05/24/95	9:30	24	4	16.2	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	5	16.2	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	6	16.2	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	7	16.2	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	8	16.2	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	9	16.2	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	10	.	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	11	.	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	12	.	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	13	.	16.2	16.2	16.3	16.3
A1	05/24/95	9:30	24	14	.	16.2	16.2	16.3	.
A1	05/24/95	9:30	24	15	.	16.2	16.2	16.3	.
A1	05/24/95	9:30	24	16	.	16.2	16.2	16.3	.
A1	05/24/95	9:30	24	17	.	16.2	16.2	16.3	.
A1	05/24/95	9:30	24	18	.	.	16.2	16.3	.
A1	05/24/95	9:30	24	19	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	20	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	21	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	22	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	23	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	24	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	25	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	26	.	.	16.1	16.3	.
A1	05/24/95	9:30	24	27	.	.	16.1	.	.
A1	05/24/95	9:30	24	28	.	.	16.1	.	.
A1	05/24/95	9:30	24	29	.	.	16.1	.	.
A1	05/24/95	9:30	24	30	.	.	16.1	.	.
A1	05/24/95	9:30	24	31	.	.	16.1	.	.
A1	05/24/95	9:30	24	32	.	.	16.1	.	.
A2	05/24/95	9:40	24	0	16.3	16.3	16.3	16.2	16.3
A2	05/24/95	9:40	24	1	16.3	16.3	16.3	16.2	16.3
A2	05/24/95	9:40	24	2	16.3	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	3	16.3	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	4	16.3	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	5	16.3	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	6	16.3	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	7	.	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	8	.	16.3	16.3	16.2	16.2
A2	05/24/95	9:40	24	9	.	16.3	16.2	16.2	.
A2	05/24/95	9:40	24	10	.	16.3	16.2	16.2	.
A2	05/24/95	9:40	24	11	.	16.3	16.2	16.2	.
A2	05/24/95	9:40	24	12	.	16.3	16.2	16.2	.
A2	05/24/95	9:40	24	13	.	.	.	16.2	.
A3	05/24/95	9:55	24	0	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	1	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	2	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	3	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	4	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	5	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	6	16.2	16.2	16.2	16.2	16.2

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
A3	05/24/95	9:55	24	7	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	8	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	9	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	10	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	11	16.2	16.2	16.2	16.2	16.2
A3	05/24/95	9:55	24	12	16.2	16.2	16.2	16.2	.
A3	05/24/95	9:55	24	13	16.2	.	16.2	.	.
A3	05/24/95	9:55	24	14	16.2	.	16.2	.	.
A4	05/24/95	10:07	25	0	16.3	16.3	16.3	16.3	16.2
A4	05/24/95	10:07	25	1	16.3	16.3	16.3	16.3	16.2
A4	05/24/95	10:07	25	2	16.3	16.3	16.3	16.2	16.2
A4	05/24/95	10:07	25	3	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	4	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	5	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	6	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	7	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	8	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	9	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	10	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	11	16.3	16.2	16.2	16.2	16.2
A4	05/24/95	10:07	25	12	16.3	16.2	16.2	16.2	.
A4	05/24/95	10:07	25	13	16.3	16.2	.	.	.
A5	05/24/95	10:20	25	0	16.5	16.5	16.5	16.4	16.4
A5	05/24/95	10:20	25	1	16.5	16.5	16.4	16.4	16.4
A5	05/24/95	10:20	25	2	16.5	16.5	16.4	16.4	16.4
A5	05/24/95	10:20	25	3	16.5	16.4	16.4	16.4	16.4
A5	05/24/95	10:20	25	4	16.5	16.4	16.4	16.4	16.4
A5	05/24/95	10:20	25	5	16.4	16.4	16.3	16.4	16.4
A5	05/24/95	10:20	25	6	16.4	16.4	16.3	16.3	16.4
A5	05/24/95	10:20	25	7	16.4	16.3	16.3	16.3	16.4
A5	05/24/95	10:20	25	8	16.4	16.3	16.3	16.3	16.4
A5	05/24/95	10:20	25	9	16.4	16.3	16.3	16.3	16.4
A5	05/24/95	10:20	25	10	.	16.3	16.3	16.3	16.3
A5	05/24/95	10:20	25	11	.	16.3	16.3	16.3	16.3
A5	05/24/95	10:20	25	12	.	.	16.3	16.3	16.3
A5	05/24/95	10:20	25	13	.	.	16.3	16.3	16.3
A5	05/24/95	10:20	25	14	.	.	16.3	16.3	16.3
A5	05/24/95	10:20	25	15	.	.	.	16.3	16.3
A5	05/24/95	10:20	25	16	.	.	.	16.3	16.3
A5	05/24/95	10:20	25	17	.	.	.	16.3	16.3
A5	05/24/95	10:20	25	18	.	.	.	16.3	.
A6	05/24/95	10:30	26	0	16.7	16.7	16.7	16.6	16.6
A6	05/24/95	10:30	26	1	16.7	16.6	16.6	16.6	16.6
A6	05/24/95	10:30	26	2	16.7	16.6	16.5	16.5	16.6
A6	05/24/95	10:30	26	3	16.6	16.5	16.5	16.5	16.5
A6	05/24/95	10:30	26	4	16.5	16.5	16.5	16.5	16.5
A6	05/24/95	10:30	26	5	16.5	16.5	16.4	16.5	16.5
A6	05/24/95	10:30	26	6	16.5	16.5	16.4	16.4	16.5
A6	05/24/95	10:30	26	7	16.5	16.5	16.4	16.4	16.5
A6	05/24/95	10:30	26	8	.	16.5	16.4	16.4	16.5
A6	05/24/95	10:30	26	9	.	16.5	16.4	16.4	16.5
A6	05/24/95	10:30	26	10	.	16.5	16.4	16.4	16.5

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A6	05/24/95	10:30	26	11	.	16.5	.	16.4	16.5
A6	05/24/95	10:30	26	12	.	.	.	16.4	.
A6	05/24/95	10:30	26	13	.	.	.	16.4	.
A6	05/24/95	10:30	26	14	.	.	.	16.4	.
A7	05/24/95	10:45	27	0	17.1	17.0	17.0	17.1	17.0
A7	05/24/95	10:45	27	1	17.1	17.0	17.0	17.0	17.0
A7	05/24/95	10:45	27	2	17.1	17.0	17.0	17.0	17.0
A7	05/24/95	10:45	27	3	17.0	17.0	17.0	17.0	17.0
A7	05/24/95	10:45	27	4	17.0	17.0	16.9	17.0	17.0
A7	05/24/95	10:45	27	5	17.0	17.0	16.9	16.9	16.9
A7	05/24/95	10:45	27	6	17.0	17.0	16.9	16.9	16.9
A7	05/24/95	10:45	27	7	17.0	16.9	16.9	16.9	16.9
A7	05/24/95	10:45	27	8	17.0	16.9	16.9	16.9	16.9
A7	05/24/95	10:45	27	9	17.0	16.9	16.9	16.9	16.9
A7	05/24/95	10:45	27	10	17.0	16.9	.	16.9	16.9
A7	05/24/95	10:45	27	11	17.0	16.9	.	16.9	.
A7	05/24/95	10:45	27	12	17.0	16.9	.	.	.
A7	05/24/95	10:45	27	13	17.0	.	.	.	.
A7	05/24/95	10:45	27	14	17.0	.	.	.	.
N10	06/09/95	9:20	21	0	19.4	19.2	19.3	19.2	19.3
N10	06/09/95	9:20	21	1	19.3	19.2	19.3	19.2	19.3
N10	06/09/95	9:20	21	2	19.3	19.2	19.2	19.2	19.3
N10	06/09/95	9:20	21	3	19.3	19.2	19.2	19.2	19.3
N10	06/09/95	9:20	21	4	19.2	19.2	19.2	19.2	19.3
N10	06/09/95	9:20	21	5	19.2	19.2	19.2	19.2	19.3
N10	06/09/95	9:20	21	6	19.2	19.2	19.2	19.2	19.3
N10	06/09/95	9:20	21	7	.	19.2	19.2	19.2	19.3
N10	06/09/95	9:20	21	8	.	.	19.2	19.2	19.3
N10	06/09/95	9:20	21	9	.	.	.	19.2	19.3
N10	06/09/95	9:20	21	10	.	.	.	.	19.3
N5	06/09/95	9:35	23	0	19.2	19.3	19.4	19.5	19.4
N5	06/09/95	9:35	23	1	19.2	19.3	19.4	19.5	19.4
N5	06/09/95	9:35	23	2	19.2	19.3	19.4	19.5	19.4
N5	06/09/95	9:35	23	3	19.2	19.3	19.4	19.5	.
N5	06/09/95	9:35	23	4	19.2	19.3	19.4	.	.
N5	06/09/95	9:35	23	5	19.2	19.3	19.4	.	.
N5	06/09/95	9:35	23	6	19.2	19.3	.	.	.
N5	06/09/95	9:35	23	7	19.1	19.3	.	.	.
N5	06/09/95	9:35	23	8	19.1	19.3	.	.	.
CAN	06/09/95	9:45	.	0	.	.	26.4	.	.
CAN	06/09/95	9:45	.	1	.	.	26.4	.	.
CAN	06/09/95	9:45	.	2	.	.	26.4	.	.
CAN	06/09/95	9:45	.	3	.	.	26.4	.	.
CAN	06/09/95	9:45	.	4	.	.	26.4	.	.
CAN	06/09/95	9:45	.	5	.	.	26.4	.	.
CAN	06/09/95	9:45	.	6	.	.	26.4	.	.
CAN	06/09/95	9:45	.	7	.	.	26.4	.	.
CAN	06/09/95	9:45	.	8	.	.	26.4	.	.
0	06/09/95	9:47	.	0	25.5	24.9	25.1	25.0	19.5
0	06/09/95	9:47	.	1	23.1	23.8	24.2	24.5	19.5
0	06/09/95	9:47	.	2	21.9	21.0	23.0	21.5	19.4
0	06/09/95	9:47	.	3	20.1	20.1	21.5	20.9	19.4

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
S16	06/09/95	10:36	.	6	21.3	21.3	21.2	20.8	20.9
S16	06/09/95	10:36	.	7	21.2	21.2	21.2	20.7	20.9
S16	06/09/95	10:36	.	8	21.2	21.2	21.1	20.7	20.9
S16	06/09/95	10:36	.	9	.	.	.	.	20.9
S16	06/09/95	10:36	.	10	.	.	.	.	20.9
S16	06/09/95	10:36	.	11	.	.	.	.	20.9
S20	06/09/95	10:45	28	0	21.6	21.6	21.4	21.6	21.4
S20	06/09/95	10:45	28	1	21.6	21.5	21.6	21.6	21.4
S20	06/09/95	10:45	28	2	21.6	21.5	21.5	21.5	21.4
S20	06/09/95	10:45	28	3	21.6	21.5	21.3	21.3	21.3
S20	06/09/95	10:45	28	4	21.6	21.4	21.1	21.2	21.2
S20	06/09/95	10:45	28	5	21.6	21.0	20.9	21.1	21.2
S20	06/09/95	10:45	28	6	.	20.9	20.8	21.1	.
S20	06/09/95	10:45	28	7	.	.	20.7	21.2	.
S20	06/09/95	10:45	28	8	.	.	20.7	21.3	.
S20	06/09/95	10:45	28	9	.	.	20.7	21.3	.
S20	06/09/95	10:45	28	10	.	.	20.7	.	.
S24	06/09/95	10:55	.	0	21.9	21.8	21.7	21.7	21.6
S24	06/09/95	10:55	.	1	22.0	21.7	21.7	21.7	21.6
S24	06/09/95	10:55	.	2	21.7	21.6	21.6	21.6	21.5
S24	06/09/95	10:55	.	3	21.6	21.6	21.5	21.4	21.3
S24	06/09/95	10:55	.	4	21.5	21.5	21.2	21.4	21.2
S24	06/09/95	10:55	.	5	21.2	21.3	21.1	21.2	21.1
S24	06/09/95	10:55	.	6	20.9	21.0	20.9	21.1	21.0
S24	06/09/95	10:55	.	7	20.9	20.9	20.9	21.0	20.9
S24	06/09/95	10:55	.	8	20.9	20.8	20.9	21.0	20.9
S24	06/09/95	10:55	.	9	.	20.8	20.9	20.9	20.9
S24	06/09/95	10:55	.	10	.	20.8	20.9	.	20.9
A0	06/09/95	11:45	.	0	21.9	21.5	22.3	21.5	21.3
A0	06/09/95	11:45	.	1	22.0	21.5	22.2	21.4	21.3
A0	06/09/95	11:45	.	2	22.0	21.5	21.9	21.4	21.3
A0	06/09/95	11:45	.	3	22.0	21.5	21.8	21.4	21.3
A0	06/09/95	11:45	.	4	22.0	21.5	21.6	21.4	21.3
A0	06/09/95	11:45	.	5	22.0	21.5	21.5	21.4	21.3
A0	06/09/95	11:45	.	6	22.0	21.5	21.5	21.4	21.3
A0	06/09/95	11:45	.	7	22.0	21.4	21.5	21.4	21.3
A0	06/09/95	11:45	.	8	22.0	21.4	21.4	.	21.3
A0	06/09/95	11:45	.	9	21.9	21.4	.	.	21.3
A0	06/09/95	11:45	.	10	21.7	21.4	.	.	.
A0	06/09/95	11:45	.	11	21.6	21.4	.	.	.
A0	06/09/95	11:45	.	12	21.5	21.4	.	.	.
A0	06/09/95	11:45	.	13	21.5	21.4	.	.	.
A0	06/09/95	11:45	.	14	21.5	21.4	.	.	.
A0	06/09/95	11:45	.	15	21.5	21.4	.	.	.
A0	06/09/95	11:45	.	16	.	21.4	.	.	.
A0	06/09/95	11:45	.	17	.	21.4	.	.	.
A0	06/09/95	11:45	.	18	.	21.4	.	.	.
A1	06/09/95	11:55	23	0	21.6	21.4	21.5	21.4	21.4
A1	06/09/95	11:55	23	1	21.5	21.4	21.5	21.4	21.4
A1	06/09/95	11:55	23	2	21.5	21.4	21.5	21.4	21.4
A1	06/09/95	11:55	23	3	21.5	21.4	21.6	21.4	21.4
A1	06/09/95	11:55	23	4	21.5	21.4	21.6	21.4	21.4

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
0	06/09/95	9:47	.	4	19.7	19.9	20.4	20.0	19.4
0	06/09/95	9:47	.	5	19.6	19.7	19.9	20.7	19.4
0	06/09/95	9:47	.	6	19.6	19.5	19.4	19.4	19.4
0	06/09/95	9:47	.	7	19.5	19.5	19.3	19.3	19.4
0	06/09/95	9:47	.	8	19.5	.	19.2	19.3	19.4
0	06/09/95	9:47	.	9	.	.	19.2	19.2	.
0	06/09/95	9:47	.	10	.	.	.	19.2	.
0	06/09/95	9:47	.	11	.	.	.	19.2	.
S4	06/09/95	10:00	23	0	23.7	23.8	23.8	23.8	23.6
S4	06/09/95	10:00	23	1	23.5	23.6	23.8	23.7	22.9
S4	06/09/95	10:00	23	2	23.1	22.5	21.8	21.0	20.6
S4	06/09/95	10:00	23	3	22.5	22.0	21.2	20.6	20.0
S4	06/09/95	10:00	23	4	21.9	21.7	19.8	19.7	19.8
S4	06/09/95	10:00	23	5	21.8	20.5	19.6	19.6	19.7
S4	06/09/95	10:00	23	6	21.6	19.7	19.5	19.5	19.6
S4	06/09/95	10:00	23	7	19.9	19.6	19.5	19.5	19.5
S4	06/09/95	10:00	23	8	19.6	19.5	19.4	19.4	19.5
S4	06/09/95	10:00	23	9	.	19.5	19.4	19.4	19.4
S4	06/09/95	10:00	23	10	.	19.5	19.4	19.4	19.4
S4	06/09/95	10:00	23	11	.	.	19.4	19.4	19.4
SUN	06/09/95	10:10	.	0	.	.	20.2	.	.
SUN	06/09/95	10:10	.	1	.	.	20.1	.	.
S8	06/09/95	10:13	.	0	23.3	23.5	23.4	23.7	22.3
S8	06/09/95	10:13	.	1	23.1	22.6	22.7	23.3	22.1
S8	06/09/95	10:13	.	2	22.3	21.6	21.9	21.0	21.2
S8	06/09/95	10:13	.	3	21.8	21.2	21.0	20.4	19.9
S8	06/09/95	10:13	.	4	20.7	20.4	20.2	20.2	19.7
S8	06/09/95	10:13	.	5	19.9	19.8	20.0	20.0	19.6
S8	06/09/95	10:13	.	6	19.7	19.7	19.8	19.8	19.6
S8	06/09/95	10:13	.	7	19.6	19.7	19.7	19.8	19.5
S8	06/09/95	10:13	.	8	19.6	19.7	19.7	19.7	19.5
S8	06/09/95	10:13	.	9	19.6	.	19.7	19.7	19.5
S8	06/09/95	10:13	.	10	19.6	.	.	.	.
S12	06/09/95	10:24	.	0	22.5	22.0	21.2	22.4	20.8
S12	06/09/95	10:24	.	1	22.6	22.3	21.1	20.9	20.8
S12	06/09/95	10:24	.	2	22.3	22.1	21.1	20.8	20.8
S12	06/09/95	10:24	.	3	22.2	21.9	20.9	20.7	.
S12	06/09/95	10:24	.	4	22.0	20.8	20.8	20.7	.
S12	06/09/95	10:24	.	5	20.8	20.4	20.6	.	.
S12	06/09/95	10:24	.	6	20.6	20.3	20.4	.	.
S12	06/09/95	10:24	.	7	20.2	20.2	20.3	.	.
S12	06/09/95	10:24	.	8	20.1	20.1	.	.	.
S12	06/09/95	10:24	.	9	20.0	20.0	.	.	.
S12	06/09/95	10:24	.	10	19.9	.	.	.	.
S12	06/09/95	10:24	.	11	19.9	.	.	.	.
S12	06/09/95	10:24	.	12	19.9	.	.	.	.
S16	06/09/95	10:36	.	0	22.2	22.2	21.6	21.6	21.6
S16	06/09/95	10:36	.	1	22.2	22.2	21.6	21.6	21.5
S16	06/09/95	10:36	.	2	22.0	22.0	21.5	21.4	21.3
S16	06/09/95	10:36	.	3	21.8	21.7	21.4	21.1	21.1
S16	06/09/95	10:36	.	4	21.6	21.4	21.3	21.0	21.0
S16	06/09/95	10:36	.	5	21.5	21.3	21.2	20.9	20.9

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A1	06/09/95	11:55	23	5	21.4	21.4	21.6	21.4	21.4
A1	06/09/95	11:55	23	6	21.4	21.4	21.6	21.4	21.4
A1	06/09/95	11:55	23	7	21.4	21.4	21.5	21.4	21.4
A1	06/09/95	11:55	23	8	21.4	21.3	21.4	21.4	21.4
A1	06/09/95	11:55	23	9	21.4	.	21.4	21.4	21.4
A1	06/09/95	11:55	23	10	.	.	21.4	21.4	21.4
A1	06/09/95	11:55	23	11	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	12	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	13	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	14	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	15	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	16	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	17	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	18	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	19	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	20	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	21	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	22	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	23	.	.	21.3	21.4	21.4
A1	06/09/95	11:55	23	24	.	.	21.3	21.4	.
A1	06/09/95	11:55	23	25	.	.	21.3	21.4	.
A1	06/09/95	11:55	23	26	.	.	21.3	21.4	.
A1	06/09/95	11:55	23	27	.	.	21.3	.	.
A1	06/09/95	11:55	23	28	.	.	21.3	.	.
A1	06/09/95	11:55	23	29	.	.	21.3	.	.
A1	06/09/95	11:55	23	30	.	.	21.3	.	.
A2	06/09/95	12:10	.	0	21.5	21.4	21.5	21.4	21.4
A2	06/09/95	12:10	.	1	21.5	21.4	21.5	21.4	21.4
A2	06/09/95	12:10	.	2	21.5	21.4	21.4	21.4	21.4
A2	06/09/95	12:10	.	3	21.5	21.4	21.4	21.4	21.4
A2	06/09/95	12:10	.	4	21.4	21.4	21.4	21.4	21.4
A2	06/09/95	12:10	.	5	21.4	21.4	21.4	21.4	21.4
A2	06/09/95	12:10	.	6	21.4	21.4	21.4	21.4	21.4
A2	06/09/95	12:10	.	7	21.4	21.4	21.4	21.4	21.4
A2	06/09/95	12:10	.	8	21.4	21.4	21.3	21.4	21.4
A2	06/09/95	12:10	.	9	.	21.4	21.3	21.4	21.4
A2	06/09/95	12:10	.	10	.	.	21.3	21.4	21.4
A2	06/09/95	12:10	.	11	.	.	21.3	21.4	21.4
A2	06/09/95	12:10	.	12	.	.	.	21.4	.
A3	06/09/95	12:20	.	0	21.9	21.6	21.6	21.7	21.6
A3	06/09/95	12:20	.	1	21.7	21.6	21.6	21.7	21.5
A3	06/09/95	12:20	.	2	21.6	21.5	21.5	21.7	21.5
A3	06/09/95	12:20	.	3	21.6	21.5	21.5	21.6	21.5
A3	06/09/95	12:20	.	4	21.5	21.5	21.4	21.5	21.4
A3	06/09/95	12:20	.	5	21.5	21.4	21.4	21.4	21.3
A3	06/09/95	12:20	.	6	21.5	21.4	21.4	21.4	21.3
A3	06/09/95	12:20	.	7	21.5	21.4	21.4	21.3	21.3
A3	06/09/95	12:20	.	8	21.4	21.4	21.4	21.3	21.3
A3	06/09/95	12:20	.	9	21.4	21.4	21.4	21.3	21.3
A3	06/09/95	12:20	.	10	21.4	21.4	21.4	21.3	.
A3	06/09/95	12:20	.	11	21.4	21.4	21.4	21.3	.
A3	06/09/95	12:20	.	12	21.4	21.4	21.4	21.3	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
A3	06/09/95	12:20	.	13	21.3	21.3	21.4	21.3	.
A3	06/09/95	12:20	.	14	.	.	21.4	.	.
A4	06/09/95	12:30	27	0	21.7	21.7	21.6	21.7	21.6
A4	06/09/95	12:30	27	1	21.7	21.7	21.6	21.7	21.6
A4	06/09/95	12:30	27	2	21.7	21.7	21.6	21.7	21.6
A4	06/09/95	12:30	27	3	21.7	21.7	21.5	21.7	21.6
A4	06/09/95	12:30	27	4	21.7	21.6	21.5	21.6	21.5
A4	06/09/95	12:30	27	5	21.7	21.5	21.5	21.4	21.5
A4	06/09/95	12:30	27	6	21.6	21.5	21.4	21.4	21.4
A4	06/09/95	12:30	27	7	21.6	21.4	21.4	21.3	21.3
A4	06/09/95	12:30	27	8	21.6	21.3	21.4	21.3	21.2
A4	06/09/95	12:30	27	9	21.5	21.3	21.4	21.3	21.2
A4	06/09/95	12:30	27	10	21.4	21.3	21.4	21.3	21.2
A4	06/09/95	12:30	27	11	21.2	21.3	21.3	21.3	21.2
A4	06/09/95	12:30	27	12	21.2	21.3	21.3	21.2	21.2
A4	06/09/95	12:30	27	13	21.2	21.3	.	.	.
A4	06/09/95	12:30	27	14	21.2	21.2	.	.	.
A5	06/09/95	12:45	29	0	21.8	21.9	21.9	22.0	22.0
A5	06/09/95	12:45	29	1	21.8	21.9	21.9	22.0	22.0
A5	06/09/95	12:45	29	2	21.8	21.9	21.9	21.9	22.0
A5	06/09/95	12:45	29	3	21.7	21.8	21.7	21.7	21.9
A5	06/09/95	12:45	29	4	21.6	21.4	21.5	21.6	21.8
A5	06/09/95	12:45	29	5	21.4	21.4	21.5	21.5	21.8
A5	06/09/95	12:45	29	6	21.4	21.4	21.4	21.4	21.7
A5	06/09/95	12:45	29	7	21.3	21.3	21.4	21.4	21.7
A5	06/09/95	12:45	29	8	21.3	21.3	21.4	21.3	21.6
A5	06/09/95	12:45	29	9	21.3	21.3	21.3	21.3	21.6
A5	06/09/95	12:45	29	10	.	21.3	21.3	21.3	21.5
A5	06/09/95	12:45	29	11	.	21.3	21.3	21.3	21.5
A5	06/09/95	12:45	29	12	.	.	21.3	21.3	21.5
A5	06/09/95	12:45	29	13	.	.	21.3	21.2	21.5
A5	06/09/95	12:45	29	14	.	.	.	21.2	21.4
A5	06/09/95	12:45	29	15	.	.	.	.	21.4
A5	06/09/95	12:45	29	16	.	.	.	.	21.3
A5	06/09/95	12:45	29	17	.	.	.	.	21.3
A5	06/09/95	12:45	29	18	.	.	.	.	21.3
A6	06/09/95	12:55	28	0	22.2	22.2	22.1	21.8	21.8
A6	06/09/95	12:55	28	1	22.1	22.2	22.1	21.8	21.8
A6	06/09/95	12:55	28	2	21.7	21.9	21.9	21.8	21.7
A6	06/09/95	12:55	28	3	21.6	21.8	21.8	21.7	21.7
A6	06/09/95	12:55	28	4	21.5	21.7	21.7	21.6	21.5
A6	06/09/95	12:55	28	5	21.4	21.6	21.7	21.4	21.3
A6	06/09/95	12:55	28	6	21.4	21.5	21.5	21.3	21.3
A6	06/09/95	12:55	28	7	21.4	21.4	21.4	21.3	21.2
A6	06/09/95	12:55	28	8	21.3	21.3	21.3	21.2	21.2
A6	06/09/95	12:55	28	9	21.3	21.3	21.3	21.2	21.2
A6	06/09/95	12:55	28	10	.	21.3	21.3	21.2	21.1
A6	06/09/95	12:55	28	11	.	.	.	21.2	21.1
A6	06/09/95	12:55	28	12	.	.	.	21.2	21.1
A7	06/09/95	13:10	24	0	23.4	22.7	22.4	22.5	22.6
A7	06/09/95	13:10	24	1	23.3	22.6	22.6	22.5	22.5
A7	06/09/95	13:10	24	2	23.0	22.6	22.4	22.4	22.0

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	MID	EAST
A7	06/09/95	13:10	24	3	22.7	22.5	22.1	22.2	21.9
A7	06/09/95	13:10	24	4	22.6	22.5	22.2	22.0	21.8
A7	06/09/95	13:10	24	5	22.6	22.5	22.0	21.9	21.8
A7	06/09/95	13:10	24	6	22.5	22.3	21.9	21.8	21.7
A7	06/09/95	13:10	24	7	22.4	21.8	21.8	21.8	21.7
A7	06/09/95	13:10	24	8	22.3	21.8	21.8	21.8	21.7
A7	06/09/95	13:10	24	9	21.8	21.8	21.8	21.8	21.7
A7	06/09/95	13:10	24	10	21.8	21.8	21.8	21.8	21.7
A7	06/09/95	13:10	24	11	21.8	21.7	.	.	21.7
A7	06/09/95	13:10	24	12	.	21.7	.	.	.
N10	06/09/95	14:05	25	0	.	.	20.5	.	.
N10	06/09/95	14:05	25	1	.	.	20.5	.	.
N10	06/09/95	14:05	25	2	.	.	20.4	.	.
N10	06/09/95	14:05	25	3	.	.	20.4	.	.
N10	06/09/95	14:05	25	4	.	.	20.3	.	.
N10	06/09/95	14:05	25	5	.	.	20.3	.	.
N10	06/09/95	14:05	25	6	.	.	20.3	.	.
N10	06/09/95	14:05	25	7	.	.	20.3	.	.
N10	06/09/95	14:05	25	8	.	.	20.3	.	.
N10	06/09/95	14:05	25	9	.	.	20.3	.	.
N10	06/21/95	9:20	22	0	23.7	23.6	23.6	23.6	23.6
N10	06/21/95	9:20	22	1	23.7	23.6	23.6	23.6	23.6
N10	06/21/95	9:20	22	2	23.6	23.6	23.6	23.6	23.6
N10	06/21/95	9:20	22	3	23.6	23.5	23.5	23.5	23.6
N10	06/21/95	9:20	22	4	23.5	23.5	23.5	23.5	23.6
N10	06/21/95	9:20	22	5	23.5	23.5	23.5	23.5	23.6
N10	06/21/95	9:20	22	6	23.2	23.5	23.5	23.5	23.5
N10	06/21/95	9:20	22	7	.	23.4	23.5	23.5	23.5
N10	06/21/95	9:20	22	8	.	.	23.5	23.5	23.5
N10	06/21/95	9:20	22	9	.	.	.	23.5	23.5
N10	06/21/95	9:20	22	10	.	.	.	.	23.5
N5	06/21/95	9:30	.	0	23.9	23.8	24.0	24.1	24.2
N5	06/21/95	9:30	.	1	23.9	23.8	24.0	24.1	24.1
N5	06/21/95	9:30	.	2	23.8	23.8	24.0	24.1	23.9
N5	06/21/95	9:30	.	3	23.7	23.8	23.9	24.1	.
N5	06/21/95	9:30	.	4	23.7	23.8	23.9	.	.
N5	06/21/95	9:30	.	5	23.6	23.7	23.9	.	.
N5	06/21/95	9:30	.	6	23.6	23.7	.	.	.
N5	06/21/95	9:30	.	7	23.6	23.7	.	.	.
N5	06/21/95	9:30	.	8	23.6	.	.	.	.
N5	06/21/95	9:30	.	9	23.6	.	.	.	.
CAN	06/21/95	9:40	.	0	.	.	31.9	.	.
CAN	06/21/95	9:40	.	1	.	.	32.0	.	.
CAN	06/21/95	9:40	.	2	.	.	32.0	.	.
CAN	06/21/95	9:40	.	3	.	.	32.1	.	.
CAN	06/21/95	9:40	.	4	.	.	32.0	.	.
CAN	06/21/95	9:40	.	5	.	.	32.0	.	.
CAN	06/21/95	9:40	.	6	.	.	32.0	.	.
CAN	06/21/95	9:40	.	7	.	.	31.9	.	.
CAN	06/21/95	9:40	.	8	.	.	31.9	.	.
CAN	06/21/95	9:40	.	9	.	.	31.9	.	.
CAN	06/21/95	9:40	.	10	.	.	31.9	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
0	06/21/95	9:45	.	0	28.9	30.6	30.6	30.0	29.9
0	06/21/95	9:45	.	1	28.9	29.5	29.0	29.5	29.9
0	06/21/95	9:45	.	2	25.4	27.3	28.5	29.4	29.9
0	06/21/95	9:45	.	3	25.0	25.0	27.7	29.4	29.8
0	06/21/95	9:45	.	4	24.6	24.6	24.7	26.9	28.5
0	06/21/95	9:45	.	5	24.2	24.4	24.2	26.0	24.1
0	06/21/95	9:45	.	6	24.0	24.2	24.0	24.1	23.9
0	06/21/95	9:45	.	7	.	.	23.9	23.8	23.9
0	06/21/95	9:45	.	8	.	.	23.8	23.8	23.8
0	06/21/95	9:45	.	9	.	.	23.8	23.7	23.8
0	06/21/95	9:45	.	10	.	.	.	23.7	23.8
0	06/21/95	9:45	.	11	.	.	.	23.6	23.7
0	06/21/95	9:45	.	12	.	.	.	.	23.7
S4	06/21/95	9:55	27	0	28.1	28.0	28.6	28.7	28.7
S4	06/21/95	9:55	27	1	28.1	27.9	28.3	28.7	28.5
S4	06/21/95	9:55	27	2	27.9	27.8	25.8	27.7	27.4
S4	06/21/95	9:55	27	3	26.6	25.6	25.2	25.2	24.5
S4	06/21/95	9:55	27	4	24.1	24.2	24.5	24.8	23.9
S4	06/21/95	9:55	27	5	23.9	23.9	24.3	24.0	23.8
S4	06/21/95	9:55	27	6	23.9	23.8	24.0	23.9	23.8
S4	06/21/95	9:55	27	7	23.8	23.8	23.9	23.8	23.7
S4	06/21/95	9:55	27	8	23.8	23.7	23.8	23.8	23.7
S4	06/21/95	9:55	27	9	.	23.7	23.7	23.7	.
S4	06/21/95	9:55	27	10	.	23.7	23.7	23.7	.
S4	06/21/95	9:55	27	11	.	.	23.7	23.7	.
SUN	06/21/95	10:10	.	0	.	.	22.1	.	.
SUN	06/21/95	10:10	.	1	.	.	22.1	.	.
SUN	06/21/95	10:10	.	2	.	.	22.1	.	.
SUN	06/21/95	10:10	.	3	.	.	22.1	.	.
S8	06/21/95	10:14	24	0	27.6	27.7	27.8	27.4	27.5
S8	06/21/95	10:14	24	1	27.6	27.6	26.7	25.9	26.5
S8	06/21/95	10:14	24	2	25.1	25.9	24.2	24.0	25.5
S8	06/21/95	10:14	24	3	24.1	24.1	23.9	23.7	23.8
S8	06/21/95	10:14	24	4	24.0	24.0	23.6	23.5	23.5
S8	06/21/95	10:14	24	5	23.9	23.7	23.0	22.9	22.9
S8	06/21/95	10:14	24	6	23.5	23.4	22.8	22.7	22.8
S8	06/21/95	10:14	24	7	22.9	22.8	22.7	22.7	22.7
S8	06/21/95	10:14	24	8	22.8	22.7	22.6	.	.
S8	06/21/95	10:14	24	9	22.7	.	22.6	.	.
S12	06/21/95	10:25	.	0	27.4	27.4	27.3	27.2	27.0
S12	06/21/95	10:25	.	1	27.4	27.4	27.3	25.8	25.8
S12	06/21/95	10:25	.	2	25.2	25.6	25.6	25.1	24.9
S12	06/21/95	10:25	.	3	24.9	25.1	24.9	24.8	.
S12	06/21/95	10:25	.	4	24.5	24.8	24.1	.	.
S12	06/21/95	10:25	.	5	24.3	24.3	23.9	.	.
S12	06/21/95	10:25	.	6	24.2	24.1	23.9	.	.
S12	06/21/95	10:25	.	7	24.2	24.0	23.8	.	.
S12	06/21/95	10:25	.	8	24.1	23.9	.	.	.
S12	06/21/95	10:25	.	9	24.1	23.8	.	.	.
S12	06/21/95	10:25	.	10	24.0	23.8	.	.	.
S12	06/21/95	10:25	.	11	23.9	.	.	.	.
S12	06/21/95	10:25	.	12	23.7	.	.	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					MID		MID		EAST
					WEST	WEST	MID	EAST	
S16	06/21/95	10:35	27	0	27.0	27.1	27.1	27.3	27.2
S16	06/21/95	10:35	27	1	27.0	27.1	27.1	27.3	27.1
S16	06/21/95	10:35	27	2	26.2	25.9	25.8	26.3	26.6
S16	06/21/95	10:35	27	3	25.2	25.4	25.3	25.9	26.4
S16	06/21/95	10:35	27	4	24.7	24.8	24.9	25.8	26.1
S16	06/21/95	10:35	27	5	24.6	24.6	24.7	25.6	24.9
S16	06/21/95	10:35	27	6	24.5	24.5	24.6	25.3	24.7
S16	06/21/95	10:35	27	7	24.5	24.5	24.5	24.9	24.5
S16	06/21/95	10:35	27	8	24.5	24.5	24.5	24.7	24.5
S16	06/21/95	10:35	27	9	.	.	.	24.6	24.4
S16	06/21/95	10:35	27	10	.	.	.	24.5	24.4
S20	06/21/95	10:47	27	0	26.8	26.8	26.9	26.9	26.7
S20	06/21/95	10:47	27	1	26.8	26.8	26.9	26.9	26.7
S20	06/21/95	10:47	27	2	25.8	25.7	26.7	26.2	26.6
S20	06/21/95	10:47	27	3	24.9	25.2	25.8	26.1	26.3
S20	06/21/95	10:47	27	4	24.9	25.0	25.4	26.0	.
S20	06/21/95	10:47	27	5	.	24.9	25.1	25.9	.
S20	06/21/95	10:47	27	6	.	24.9	24.9	25.4	.
S20	06/21/95	10:47	27	7	.	24.8	24.8	25.0	.
S20	06/21/95	10:47	27	8	.	.	24.7	24.9	.
S20	06/21/95	10:47	27	9	.	.	24.7	24.8	.
S20	06/21/95	10:47	27	10	.	.	24.7	24.7	.
S20	06/21/95	10:47	27	11	.	.	24.7	24.7	.
S20	06/21/95	10:47	27	12	.	.	.	24.6	.
S20	06/21/95	10:47	27	13	.	.	.	24.6	.
S20	06/21/95	10:47	27	14	.	.	.	24.6	.
S20	06/21/95	10:47	27	15	.	.	.	24.6	.
S24	06/21/95	11:00	26	0	26.3	26.5	26.7	26.7	26.6
S24	06/21/95	11:00	26	1	26.2	26.1	26.7	26.7	26.4
S24	06/21/95	11:00	26	2	26.1	25.8	25.8	25.8	25.8
S24	06/21/95	11:00	26	3	26.0	25.6	25.3	25.1	25.1
S24	06/21/95	11:00	26	4	26.0	25.4	25.2	25.0	24.9
S24	06/21/95	11:00	26	5	25.9	25.3	25.1	24.9	24.8
S24	06/21/95	11:00	26	6	25.6	25.3	25.0	24.9	24.8
S24	06/21/95	11:00	26	7	25.4	25.3	25.0	24.8	24.8
S24	06/21/95	11:00	26	8	25.4	25.2	24.9	24.8	24.7
S24	06/21/95	11:00	26	9	.	25.1	24.9	.	24.7
S24	06/21/95	11:00	26	10	.	25.1	24.9	.	24.7
S24	06/21/95	11:00	26	11	.	.	.	.	24.7
A0	06/21/95	11:55	.	0	26.4	25.9	26.0	25.8	25.6
A0	06/21/95	11:55	.	1	26.2	25.9	26.0	25.7	25.6
A0	06/21/95	11:55	.	2	26.1	25.8	25.9	25.6	25.6
A0	06/21/95	11:55	.	3	26.1	25.8	25.8	25.6	25.6
A0	06/21/95	11:55	.	4	26.0	25.7	25.7	25.6	25.6
A0	06/21/95	11:55	.	5	25.8	25.6	25.5	25.6	25.6
A0	06/21/95	11:55	.	6	25.8	25.6	25.3	25.6	25.6
A0	06/21/95	11:55	.	7	25.8	25.5	25.3	25.6	25.6
A0	06/21/95	11:55	.	8	25.7	25.5	.	.	25.6
A0	06/21/95	11:55	.	9	25.6	25.4	.	.	25.6
A0	06/21/95	11:55	.	10	25.5	25.3	.	.	25.6
A0	06/21/95	11:55	.	11	25.4	25.3	.	.	.
A0	06/21/95	11:55	.	12	25.4	25.2	.	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
A0	06/21/95	11:55	.	13	25.3	25.2	.	.	.
A0	06/21/95	11:55	.	14	25.2	.	.	.	.
A0	06/21/95	11:55	.	15	25.1	.	.	.	.
A0	06/21/95	11:55	.	16	25.1	.	.	.	.
A1	06/21/95	12:05	.	0	25.4	25.4	25.5	25.5	25.5
A1	06/21/95	12:05	.	1	25.4	25.4	25.5	25.5	25.5
A1	06/21/95	12:05	.	2	25.4	25.4	25.5	25.5	25.5
A1	06/21/95	12:05	.	3	25.4	25.4	25.5	25.5	25.5
A1	06/21/95	12:05	.	4	25.4	25.4	25.5	25.5	25.5
A1	06/21/95	12:05	.	5	25.4	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	6	25.4	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	7	25.4	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	8	25.3	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	9	.	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	10	.	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	11	.	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	12	.	25.4	25.4	25.5	25.4
A1	06/21/95	12:05	.	13	.	25.4	25.4	25.5	25.3
A1	06/21/95	12:05	.	14	.	25.4	25.4	25.5	25.3
A1	06/21/95	12:05	.	15	.	25.4	25.4	25.5	25.3
A1	06/21/95	12:05	.	16	.	25.4	25.4	25.4	25.3
A1	06/21/95	12:05	.	17	.	.	25.4	25.4	25.3
A1	06/21/95	12:05	.	18	.	.	25.4	25.4	25.3
A1	06/21/95	12:05	.	19	.	.	25.4	25.4	25.3
A1	06/21/95	12:05	.	20	.	.	25.4	25.4	25.3
A1	06/21/95	12:05	.	21	.	.	25.4	25.3	25.3
A1	06/21/95	12:05	.	22	.	.	25.4	25.3	25.3
A1	06/21/95	12:05	.	23	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	24	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	25	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	26	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	27	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	28	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	29	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	30	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	31	.	.	25.4	25.3	.
A1	06/21/95	12:05	.	32	.	.	25.4	25.2	.
A1	06/21/95	12:05	.	33	.	.	25.4	25.2	.
A1	06/21/95	12:05	.	34	.	.	25.4	.	.
A2	06/21/95	12:20	.	0	25.5	25.5	25.6	25.5	25.4
A2	06/21/95	12:20	.	1	25.5	25.5	25.6	25.4	25.4
A2	06/21/95	12:20	.	2	25.5	25.6	25.5	25.4	25.4
A2	06/21/95	12:20	.	3	25.5	25.5	25.5	25.4	25.4
A2	06/21/95	12:20	.	4	25.5	25.4	25.4	25.4	25.4
A2	06/21/95	12:20	.	5	25.5	25.4	25.4	25.4	25.4
A2	06/21/95	12:20	.	6	25.5	25.3	25.3	25.3	25.4
A2	06/21/95	12:20	.	7	25.4	25.3	25.3	25.3	25.4
A2	06/21/95	12:20	.	8	.	25.3	25.3	.	25.4
A2	06/21/95	12:20	.	9	.	.	25.3	.	25.3
A2	06/21/95	12:20	.	10	.	.	25.3	.	.
A2	06/21/95	12:20	.	11	.	.	25.3	.	.
A2	06/21/95	12:20	.	12	.	.	25.3	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID	MID	EAST	EAST
A3	06/21/95	12:30	.	0	25.5	25.6	25.6	25.7	25.9
A3	06/21/95	12:30	.	1	25.5	25.6	25.6	25.7	25.8
A3	06/21/95	12:30	.	2	25.3	25.6	25.6	25.6	25.8
A3	06/21/95	12:30	.	3	25.3	25.6	25.6	25.5	25.7
A3	06/21/95	12:30	.	4	25.3	25.6	25.5	25.4	25.6
A3	06/21/95	12:30	.	5	25.3	25.6	25.4	25.3	25.4
A3	06/21/95	12:30	.	6	25.3	25.4	25.4	25.2	25.3
A3	06/21/95	12:30	.	7	25.3	25.2	25.3	25.2	25.2
A3	06/21/95	12:30	.	8	25.2	25.2	25.2	25.2	25.2
A3	06/21/95	12:30	.	9	25.2	25.2	25.2	25.2	25.2
A3	06/21/95	12:30	.	10	25.2	25.2	25.2	25.2	.
A3	06/21/95	12:30	.	11	25.2	25.1	25.2	25.1	.
A3	06/21/95	12:30	.	12	25.2	25.1	25.2	25.1	.
A3	06/21/95	12:30	.	13	25.2	.	25.2	25.1	.
A4	06/21/95	12:41	27	0	26.3	26.3	26.4	26.4	26.5
A4	06/21/95	12:41	27	1	26.3	26.3	26.4	26.4	26.5
A4	06/21/95	12:41	27	2	26.3	26.2	26.3	26.3	26.5
A4	06/21/95	12:41	27	3	26.3	26.2	26.1	26.2	26.3
A4	06/21/95	12:41	27	4	26.3	25.9	26.0	26.1	25.8
A4	06/21/95	12:41	27	5	26.1	25.7	25.8	25.8	25.7
A4	06/21/95	12:41	27	6	26.0	25.6	25.6	25.6	25.6
A4	06/21/95	12:41	27	7	25.6	25.5	25.5	25.5	25.5
A4	06/21/95	12:41	27	8	25.6	25.5	25.5	25.5	25.5
A4	06/21/95	12:41	27	9	25.5	25.5	25.5	25.5	25.5
A4	06/21/95	12:41	27	10	25.5	25.5	25.5	25.5	.
A4	06/21/95	12:41	27	11	25.5	25.5	25.5	25.5	.
A4	06/21/95	12:41	27	12	25.4	25.5	25.5	.	.
A4	06/21/95	12:41	27	13	25.4	.	25.5	.	.
A5	06/21/95	12:55	28	0	26.4	26.5	26.4	26.5	26.6
A5	06/21/95	12:55	28	1	26.4	26.5	26.4	26.5	26.6
A5	06/21/95	12:55	28	2	26.4	26.5	26.4	26.5	26.6
A5	06/21/95	12:55	28	3	26.4	26.4	26.4	26.5	26.4
A5	06/21/95	12:55	28	4	26.4	26.3	26.3	26.4	26.1
A5	06/21/95	12:55	28	5	25.9	26.2	26.3	26.1	26.0
A5	06/21/95	12:55	28	6	25.8	25.8	26.1	25.8	25.9
A5	06/21/95	12:55	28	7	25.7	25.8	25.9	25.7	25.8
A5	06/21/95	12:55	28	8	25.7	25.7	25.7	25.7	25.7
A5	06/21/95	12:55	28	9	25.7	25.7	25.7	25.6	25.7
A5	06/21/95	12:55	28	10	.	25.6	25.7	25.6	25.6
A5	06/21/95	12:55	28	11	.	25.6	25.7	25.6	25.6
A5	06/21/95	12:55	28	12	.	.	25.6	25.6	25.6
A5	06/21/95	12:55	28	13	.	.	25.6	25.6	25.6
A5	06/21/95	12:55	28	14	.	.	.	25.6	25.6
A5	06/21/95	12:55	28	15	.	.	.	25.6	25.6
A5	06/21/95	12:55	28	16	.	.	.	.	25.5
A5	06/21/95	12:55	28	17	.	.	.	.	25.5
A5	06/21/95	12:55	28	18	.	.	.	.	25.5
A6	06/21/95	13:05	28	0	26.2	26.0	26.2	26.3	26.5
A6	06/21/95	13:05	28	1	26.2	26.0	26.0	26.3	26.5
A6	06/21/95	13:05	28	2	25.8	26.1	25.9	26.2	26.5
A6	06/21/95	13:05	28	3	25.6	25.9	25.8	26.2	26.3
A6	06/21/95	13:05	28	4	25.6	25.7	25.6	25.8	26.2

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	EAST	EAST
A6	06/21/95	13:05	28	5	25.5	25.6	25.5	25.6	25.8
A6	06/21/95	13:05	28	6	25.5	25.6	25.5	25.5	25.7
A6	06/21/95	13:05	28	7	25.5	25.5	25.5	25.5	25.6
A6	06/21/95	13:05	28	8	.	25.5	25.5	25.5	25.6
A6	06/21/95	13:05	28	9	.	25.5	25.5	25.4	25.5
A6	06/21/95	13:05	28	10	.	25.5	25.5	25.4	.
A6	06/21/95	13:05	28	11	.	.	25.5	25.4	.
A6	06/21/95	13:05	28	12	.	.	.	25.4	.
A6	06/21/95	13:05	28	13	.	.	.	25.4	.
A7	06/21/95	13:15	28	0	26.5	26.5	26.2	26.3	26.3
A7	06/21/95	13:15	28	1	26.6	26.5	25.9	26.2	26.3
A7	06/21/95	13:15	28	2	25.7	25.9	25.7	25.9	25.9
A7	06/21/95	13:15	28	3	25.6	25.6	25.5	25.5	25.2
A7	06/21/95	13:15	28	4	25.5	25.4	25.3	25.4	25.0
A7	06/21/95	13:15	28	5	25.2	25.2	25.0	25.1	24.9
A7	06/21/95	13:15	28	6	25.2	25.1	24.9	24.9	24.8
A7	06/21/95	13:15	28	7	25.1	25.0	24.9	24.8	24.7
A7	06/21/95	13:15	28	8	25.0	25.0	24.9	24.8	24.7
A7	06/21/95	13:15	28	9	25.0	24.9	.	24.8	24.7
A7	06/21/95	13:15	28	10	25.0	24.9	.	.	24.6
A7	06/21/95	13:15	28	11	25.0	24.8	.	.	.
A7	06/21/95	13:15	28	12	24.9	.	.	.	.
N10	06/21/95	14:15	.	0	.	.	24.6	.	.
N10	06/21/95	14:15	.	1	.	.	24.6	.	.
N10	06/21/95	14:15	.	2	.	.	24.6	.	.
N10	06/21/95	14:15	.	3	.	.	24.5	.	.
N10	06/21/95	14:15	.	4	.	.	24.4	.	.
N10	06/21/95	14:15	.	5	.	.	24.3	.	.
N10	06/21/95	14:15	.	6	.	.	24.2	.	.
N10	06/21/95	14:15	.	7	.	.	24.2	.	.
N10	06/21/95	14:15	.	8	.	.	24.2	.	.
N10	09/14/95	9:15	24	0	18.9	18.9	18.7	18.8	18.7
N10	09/14/95	9:15	24	1	18.8	18.8	18.7	18.8	18.7
N10	09/14/95	9:15	24	2	18.7	18.8	18.7	18.7	18.6
N10	09/14/95	9:15	24	3	18.7	18.6	18.7	18.7	18.6
N10	09/14/95	9:15	24	4	18.7	18.6	18.6	18.7	18.6
N10	09/14/95	9:15	24	5	18.6	18.6	18.6	18.6	18.6
N10	09/14/95	9:15	24	6	18.6	18.6	18.6	18.6	18.6
N10	09/14/95	9:15	24	7	.	18.6	18.6	18.6	18.6
N10	09/14/95	9:15	24	8	.	18.6	18.6	18.6	18.6
N10	09/14/95	9:15	24	9	.	.	.	18.6	18.6
N10	09/14/95	9:15	24	10	.	.	.	.	18.6
N10	09/14/95	9:15	24	11	.	.	.	.	18.6
N5	09/14/95	9:25	26	0	27.2	27.4	28.0	28.1	27.8
N5	09/14/95	9:25	26	1	27.1	27.4	28.0	28.1	27.7
N5	09/14/95	9:25	26	2	27.0	27.4	28.0	28.1	27.7
N5	09/14/95	9:25	26	3	26.9	26.7	27.9	.	.
N5	09/14/95	9:25	26	4	25.1	24.4	24.2	.	.
N5	09/14/95	9:25	26	5	21.7	20.1	.	.	.
N5	09/14/95	9:25	26	6	21.5	19.0	.	.	.
N5	09/14/95	9:25	26	7	20.8	18.9	.	.	.
N5	09/14/95	9:25	26	8	19.9	18.9	.	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID		MID	
						WEST	MID	EAST	EAST
N5	09/14/95	9:25	26	9	19.3	.	.	.	.
N5	09/14/95	9:25	26	10	19.0	.	.	.	.
N5	09/14/95	9:25	26	11	18.9	.	.	.	.
N5	09/14/95	9:25	26	12	18.8	.	.	.	.
N5	09/14/95	9:25	26	13	18.8	.	.	.	.
CAN	09/14/95	9:35	.	0	.	.	31.9	.	.
CAN	09/14/95	9:35	.	1	.	.	32.0	.	.
CAN	09/14/95	9:35	.	2	.	.	32.0	.	.
CAN	09/14/95	9:35	.	3	.	.	32.0	.	.
CAN	09/14/95	9:35	.	4	.	.	32.0	.	.
CAN	09/14/95	9:35	.	5	.	.	32.0	.	.
CAN	09/14/95	9:35	.	6	.	.	32.0	.	.
CAN	09/14/95	9:35	.	7	.	.	32.0	.	.
CAN	09/14/95	9:35	.	8	.	.	32.0	.	.
CAN	09/14/95	9:35	.	9	.	.	32.0	.	.
0	09/14/95	9:40	28	0	27.8	28.0	28.9	29.0	29.6
0	09/14/95	9:40	28	1	27.9	28.1	28.8	29.0	29.6
0	09/14/95	9:40	28	2	27.6	27.9	27.6	29.0	29.6
0	09/14/95	9:40	28	3	27.3	26.3	27.5	28.6	29.4
0	09/14/95	9:40	28	4	21.3	22.5	22.7	20.6	20.5
0	09/14/95	9:40	28	5	21.5	20.0	19.8	19.8	19.9
0	09/14/95	9:40	28	6	19.8	19.8	19.7	19.7	19.7
0	09/14/95	9:40	28	7	19.7	19.6	19.6	19.6	19.6
0	09/14/95	9:40	28	8	.	19.6	19.6	19.6	19.5
0	09/14/95	9:40	28	9	.	.	19.5	19.5	19.5
0	09/14/95	9:40	28	10	.	.	.	19.5	19.5
0	09/14/95	9:40	28	11	.	.	.	19.5	.
S4	09/14/95	9:50	25	0	27.4	27.6	27.8	28.1	27.8
S4	09/14/95	9:50	25	1	27.4	27.7	27.7	28.0	27.7
S4	09/14/95	9:50	25	2	27.4	27.5	27.5	27.6	27.3
S4	09/14/95	9:50	25	3	27.0	27.1	27.3	25.9	26.5
S4	09/14/95	9:50	25	4	23.7	25.9	24.1	24.7	25.1
S4	09/14/95	9:50	25	5	20.1	20.7	22.4	21.7	23.2
S4	09/14/95	9:50	25	6	19.8	20.1	19.9	20.0	20.2
S4	09/14/95	9:50	25	7	19.7	19.8	19.8	19.7	19.8
S4	09/14/95	9:50	25	8	19.7	19.8	19.7	19.7	19.7
S4	09/14/95	9:50	25	9	.	19.7	19.6	19.6	.
S4	09/14/95	9:50	25	10	.	19.7	19.6	19.6	.
S4	09/14/95	9:50	25	11	.	19.6	19.6	19.6	.
S4	09/14/95	9:50	25	12	.	.	.	19.5	.
SUN	09/14/95	10:04	26	0	.	.	27.0	.	.
SUN	09/14/95	10:04	26	1	.	.	25.9	.	.
S8	09/14/95	10:05	26	0	27.1	27.1	27.3	27.3	27.2
S8	09/14/95	10:05	26	1	27.1	27.1	27.3	27.3	27.2
S8	09/14/95	10:05	26	2	27.1	27.0	27.3	27.3	27.2
S8	09/14/95	10:05	26	3	27.0	26.6	27.0	26.9	26.9
S8	09/14/95	10:05	26	4	26.7	24.0	25.0	26.4	25.4
S8	09/14/95	10:05	26	5	21.8	21.0	20.3	20.1	19.8
S8	09/14/95	10:05	26	6	20.2	19.9	19.8	19.8	19.7
S8	09/14/95	10:05	26	7	19.8	19.8	19.8	19.7	19.7
S8	09/14/95	10:05	26	8	19.8	19.8	19.7	19.7	19.6
S8	09/14/95	10:05	26	9	19.8	19.8	.	19.7	19.6

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
S8	09/14/95	10:05	26	10	.	.	.	19.6	19.6
S8	09/14/95	10:05	26	11	.	.	.	19.6	19.6
S12	09/14/95	10:19	26	0	26.6	26.7	26.8	26.9	26.7
S12	09/14/95	10:19	26	1	26.6	26.7	26.8	26.9	26.7
S12	09/14/95	10:19	26	2	26.6	26.6	26.8	26.9	20.7
S12	09/14/95	10:19	26	3	26.6	26.4	26.8	26.9	.
S12	09/14/95	10:19	26	4	24.6	21.4	26.2	.	.
S12	09/14/95	10:19	26	5	21.9	19.9	21.0	.	.
S12	09/14/95	10:19	26	6	20.3	19.9	20.0	.	.
S12	09/14/95	10:19	26	7	20.0	19.8	19.9	.	.
S12	09/14/95	10:19	26	8	19.9	19.8	.	.	.
S12	09/14/95	10:19	26	9	19.8	19.8	.	.	.
S12	09/14/95	10:19	26	10	19.8	19.8	.	.	.
S12	09/14/95	10:19	26	11	19.8	.	.	.	.
S12	09/14/95	10:19	26	12	19.8	.	.	.	.
S12	09/14/95	10:19	26	13	19.8	.	.	.	.
S12	09/14/95	10:19	26	14	19.7	.	.	.	.
S16	09/14/95	10:28	28	0	25.0	24.8	24.4	24.0	24.1
S16	09/14/95	10:28	28	1	25.0	24.7	24.4	24.0	24.1
S16	09/14/95	10:28	28	2	24.9	24.1	24.3	24.0	24.1
S16	09/14/95	10:28	28	3	24.8	23.9	24.1	24.0	24.1
S16	09/14/95	10:28	28	4	21.4	23.2	23.9	24.0	24.1
S16	09/14/95	10:28	28	5	20.5	20.6	20.6	21.6	20.6
S16	09/14/95	10:28	28	6	20.4	20.4	20.4	20.4	20.4
S16	09/14/95	10:28	28	7	20.3	20.4	20.3	20.3	20.3
S16	09/14/95	10:28	28	8	20.3	20.3	20.3	20.3	20.3
S16	09/14/95	10:28	28	9	.	.	20.3	20.2	20.3
S16	09/14/95	10:28	28	10	.	.	.	20.2	20.3
S16	09/14/95	10:28	28	11	.	.	.	20.2	20.2
S20	09/14/95	10:45	28	0	23.7	23.7	23.4	23.2	23.3
S20	09/14/95	10:45	28	1	23.7	23.6	23.4	23.3	23.3
S20	09/14/95	10:45	28	2	23.7	23.6	23.3	23.3	23.2
S20	09/14/95	10:45	28	3	23.6	23.6	23.3	23.3	23.2
S20	09/14/95	10:45	28	4	21.5	23.6	23.3	23.3	23.0
S20	09/14/95	10:45	28	5	21.3	21.6	23.2	23.3	.
S20	09/14/95	10:45	28	6	.	21.2	23.1	23.2	.
S20	09/14/95	10:45	28	7	.	.	22.6	22.2	.
S20	09/14/95	10:45	28	8	.	.	21.2	21.2	.
S20	09/14/95	10:45	28	9	.	.	20.7	20.7	.
S20	09/14/95	10:45	28	10	.	.	.	20.6	.
S20	09/14/95	10:45	28	11	.	.	.	20.5	.
S20	09/14/95	10:45	28	12	.	.	.	20.5	.
S24	09/14/95	10:55	29	0	23.1	23.0	23.1	23.1	23.0
S24	09/14/95	10:55	29	1	23.1	23.0	23.1	23.0	23.0
S24	09/14/95	10:55	29	2	23.0	23.0	23.1	23.0	23.0
S24	09/14/95	10:55	29	3	23.0	23.0	23.1	23.0	23.0
S24	09/14/95	10:55	29	4	22.5	22.6	22.8	22.8	23.0
S24	09/14/95	10:55	29	5	21.9	22.3	22.6	21.9	22.9
S24	09/14/95	10:55	29	6	21.4	21.4	21.3	20.7	22.5
S24	09/14/95	10:55	29	7	20.8	20.8	20.6	20.6	20.8
S24	09/14/95	10:55	29	8	20.7	20.7	20.6	20.6	20.7
S24	09/14/95	10:55	29	9	20.6	20.6	20.5	20.6	20.7

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
S24	09/14/95	10:55	29	10	.	20.6	20.5	.	.
A0	09/14/95	11:45	28	0	22.8	21.8	22.1	22.1	22.0
A0	09/14/95	11:45	28	1	22.8	21.8	22.1	22.1	22.0
A0	09/14/95	11:45	28	2	22.7	21.8	22.1	22.1	22.0
A0	09/14/95	11:45	28	3	22.5	21.8	22.1	22.1	22.0
A0	09/14/95	11:45	28	4	22.4	21.9	22.1	22.1	21.9
A0	09/14/95	11:45	28	5	22.3	22.0	22.0	22.1	21.9
A0	09/14/95	11:45	28	6	22.3	22.0	22.0	22.0	21.8
A0	09/14/95	11:45	28	7	22.3	22.0	22.0	.	21.8
A0	09/14/95	11:45	28	8	22.3	22.0	22.0	.	21.8
A0	09/14/95	11:45	28	9	22.3	21.9	.	.	.
A0	09/14/95	11:45	28	10	22.2	21.9	.	.	.
A0	09/14/95	11:45	28	11	22.1	.	.	.	.
A0	09/14/95	11:45	28	12	22.1	.	.	.	.
A0	09/14/95	11:45	28	13	22.1	.	.	.	.
A0	09/14/95	11:45	28	14	22.1	.	.	.	.
A0	09/14/95	11:45	28	15	22.1	.	.	.	.
A0	09/14/95	11:45	28	16	22.1	.	.	.	.
A1	09/14/95	11:55	28	0	22.2	22.2	22.3	22.2	22.1
A1	09/14/95	11:55	28	1	22.2	22.2	22.2	22.2	22.1
A1	09/14/95	11:55	28	2	22.1	22.2	22.2	22.2	22.1
A1	09/14/95	11:55	28	3	22.1	22.1	22.1	22.2	22.1
A1	09/14/95	11:55	28	4	22.1	22.0	22.1	22.2	22.1
A1	09/14/95	11:55	28	5	22.0	22.0	22.1	22.2	22.1
A1	09/14/95	11:55	28	6	22.0	22.0	22.1	22.2	22.1
A1	09/14/95	11:55	28	7	22.0	22.0	22.1	22.2	22.1
A1	09/14/95	11:55	28	8	22.0	22.0	22.1	22.2	22.1
A1	09/14/95	11:55	28	9	21.9	22.0	22.1	22.2	22.1
A1	09/14/95	11:55	28	10	.	22.0	22.0	22.2	22.1
A1	09/14/95	11:55	28	11	.	21.9	22.0	22.2	22.1
A1	09/14/95	11:55	28	12	.	21.9	22.0	22.1	.
A1	09/14/95	11:55	28	13	.	21.9	21.9	22.0	.
A1	09/14/95	11:55	28	14	.	.	21.9	22.0	.
A1	09/14/95	11:55	28	15	.	.	21.9	21.9	.
A1	09/14/95	11:55	28	16	.	.	21.9	21.9	.
A1	09/14/95	11:55	28	17	.	.	21.8	21.9	.
A1	09/14/95	11:55	28	18	.	.	21.2	21.1	.
A1	09/14/95	11:55	28	19	.	.	20.6	20.6	.
A1	09/14/95	11:55	28	20	.	.	20.5	20.5	.
A1	09/14/95	11:55	28	21	.	.	20.4	20.4	.
A1	09/14/95	11:55	28	22	.	.	20.4	20.3	.
A1	09/14/95	11:55	28	23	.	.	20.3	20.2	.
A1	09/14/95	11:55	28	24	.	.	20.1	20.1	.
A1	09/14/95	11:55	28	25	.	.	20.0	20.1	.
A1	09/14/95	11:55	28	26	.	.	20.0	20.0	.
A1	09/14/95	11:55	28	27	.	.	20.0	20.0	.
A1	09/14/95	11:55	28	28	.	.	19.9	.	.
A1	09/14/95	11:55	28	29	.	.	19.9	.	.
A1	09/14/95	11:55	28	30	.	.	19.9	.	.
A1	09/14/95	11:55	28	31	.	.	19.9	.	.
A1	09/14/95	11:55	28	32	.	.	19.9	.	.
A2	09/14/95	12:10	28	0	22.1	22.1	22.1	22.1	22.1

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A2	09/14/95	12:10	28	1	22.2	22.1	22.1	22.1	22.1
A2	09/14/95	12:10	28	2	22.2	22.1	22.1	22.0	22.0
A2	09/14/95	12:10	28	3	22.2	22.1	22.0	22.0	22.0
A2	09/14/95	12:10	28	4	22.2	22.1	22.0	22.0	21.9
A2	09/14/95	12:10	28	5	22.2	22.1	22.0	21.9	21.9
A2	09/14/95	12:10	28	6	22.2	22.0	21.9	21.9	21.8
A2	09/14/95	12:10	28	7	22.1	22.0	21.8	21.9	21.8
A2	09/14/95	12:10	28	8	22.1	21.6	21.8	21.8	.
A2	09/14/95	12:10	28	9	.	21.6	21.7	21.8	.
A2	09/14/95	12:10	28	10	.	.	21.7	.	.
A2	09/14/95	12:10	28	11	.	.	21.7	.	.
A2	09/14/95	12:10	28	12	.	.	21.7	.	.
A2	09/14/95	12:10	28	13	.	.	21.7	.	.
A3	09/14/95	12:20	31	0	21.9	22.0	21.9	21.9	22.0
A3	09/14/95	12:20	31	1	22.0	21.9	21.9	21.9	22.0
A3	09/14/95	12:20	31	2	22.0	21.9	21.9	21.9	22.0
A3	09/14/95	12:20	31	3	22.0	21.9	21.9	21.9	22.0
A3	09/14/95	12:20	31	4	22.0	21.9	21.9	21.9	21.9
A3	09/14/95	12:20	31	5	21.9	21.8	21.9	21.9	21.9
A3	09/14/95	12:20	31	6	21.9	21.8	21.8	21.9	21.8
A3	09/14/95	12:20	31	7	21.8	21.7	21.8	21.8	21.8
A3	09/14/95	12:20	31	8	21.7	21.7	21.7	21.7	.
A3	09/14/95	12:20	31	9	21.7	21.7	21.6	21.6	.
A3	09/14/95	12:20	31	10	21.7	21.6	21.6	21.5	.
A3	09/14/95	12:20	31	11	21.6	21.5	21.6	21.4	.
A3	09/14/95	12:20	31	12	21.6	21.4	21.5	21.3	.
A3	09/14/95	12:20	31	13	21.5	21.4	21.4	21.2	.
A3	09/14/95	12:20	31	14	.	.	21.2	.	.
A3	09/14/95	12:20	31	15	.	.	21.0	.	.
A4	09/14/95	12:32	28	0	21.5	21.4	21.4	21.4	21.5
A4	09/14/95	12:32	28	1	21.5	21.4	21.4	21.4	21.5
A4	09/14/95	12:32	28	2	21.5	21.4	21.4	21.4	21.5
A4	09/14/95	12:32	28	3	21.5	21.4	21.4	21.4	21.5
A4	09/14/95	12:32	28	4	21.5	21.4	21.4	21.4	21.5
A4	09/14/95	12:32	28	5	21.3	21.4	21.3	21.4	21.5
A4	09/14/95	12:32	28	6	21.3	21.4	21.3	21.4	21.4
A4	09/14/95	12:32	28	7	21.3	21.3	21.3	21.3	21.4
A4	09/14/95	12:32	28	8	21.2	21.3	21.2	21.3	21.3
A4	09/14/95	12:32	28	9	21.2	21.3	21.1	21.2	.
A4	09/14/95	12:32	28	10	21.1	21.2	21.0	21.1	.
A4	09/14/95	12:32	28	11	.	21.1	20.9	20.9	.
A4	09/14/95	12:32	28	12	.	21.0	20.9	20.9	.
A4	09/14/95	12:32	28	13	.	20.9	20.9	.	.
A4	09/14/95	12:32	28	14	.	20.7	.	.	.
A5	09/14/95	12:45	28	0	21.5	21.5	21.4	21.4	21.4
A5	09/14/95	12:45	28	1	21.5	21.4	21.4	21.4	21.4
A5	09/14/95	12:45	28	2	21.4	21.2	21.4	21.4	21.4
A5	09/14/95	12:45	28	3	21.2	21.0	21.3	21.4	21.4
A5	09/14/95	12:45	28	4	21.0	21.0	21.2	21.3	21.3
A5	09/14/95	12:45	28	5	20.9	20.9	21.1	21.2	21.3
A5	09/14/95	12:45	28	6	20.9	20.9	21.0	21.1	21.2
A5	09/14/95	12:45	28	7	20.8	20.9	20.9	20.9	21.2

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A5	09/14/95	12:45	28	8	20.8	20.9	20.8	20.8	20.8
A5	09/14/95	12:45	28	9	20.8	20.8	20.8	20.7	20.7
A5	09/14/95	12:45	28	10	20.8	20.7	20.8	20.7	20.6
A5	09/14/95	12:45	28	11	.	20.7	20.8	20.6	20.6
A5	09/14/95	12:45	28	12	.	20.7	20.7	20.6	20.6
A5	09/14/95	12:45	28	13	.	.	20.6	20.6	20.6
A5	09/14/95	12:45	28	14	.	.	.	20.6	20.5
A5	09/14/95	12:45	28	15	.	.	.	20.5	20.5
A5	09/14/95	12:45	28	16	.	.	.	20.5	20.5
A5	09/14/95	12:45	28	17	.	.	.	20.0	19.9
A5	09/14/95	12:45	28	18	.	.	.	.	19.6
A5	09/14/95	12:45	28	19	.	.	.	.	19.3
A6	09/14/95	12:55	30	0	20.9	21.2	21.2	21.5	21.4
A6	09/14/95	12:55	30	1	21.0	21.1	21.1	21.3	21.4
A6	09/14/95	12:55	30	2	20.9	21.0	20.8	20.8	21.3
A6	09/14/95	12:55	30	3	20.8	20.7	20.7	20.7	20.8
A6	09/14/95	12:55	30	4	20.6	20.6	20.6	20.6	20.7
A6	09/14/95	12:55	30	5	20.5	20.5	20.5	20.5	20.6
A6	09/14/95	12:55	30	6	20.5	20.4	20.4	20.5	20.5
A6	09/14/95	12:55	30	7	.	20.4	20.3	20.4	20.5
A6	09/14/95	12:55	30	8	.	20.3	20.3	20.3	20.5
A6	09/14/95	12:55	30	9	.	20.2	20.2	20.2	20.4
A6	09/14/95	12:55	30	10	.	20.1	20.1	20.2	20.3
A6	09/14/95	12:55	30	11	.	.	.	20.2	.
A7	09/14/95	13:10	30	0	21.2	20.8	20.9	20.9	21.2
A7	09/14/95	13:10	30	1	21.3	20.8	20.9	20.9	21.2
A7	09/14/95	13:10	30	2	21.2	20.8	20.9	20.9	21.2
A7	09/14/95	13:10	30	3	21.0	20.8	20.8	20.8	21.2
A7	09/14/95	13:10	30	4	20.5	20.7	20.6	20.7	21.1
A7	09/14/95	13:10	30	5	20.5	20.6	20.5	20.5	20.9
A7	09/14/95	13:10	30	6	20.4	20.5	20.4	20.4	20.5
A7	09/14/95	13:10	30	7	20.3	20.5	20.4	20.4	20.5
A7	09/14/95	13:10	30	8	20.3	20.4	20.4	20.4	20.4
A7	09/14/95	13:10	30	9	20.3	20.3	20.4	20.4	.
A7	09/14/95	13:10	30	10	20.3	20.3	.	20.4	.
A7	09/14/95	13:10	30	11	20.3	20.3	.	.	.
A7	09/14/95	13:10	30	12	20.3	20.3	.	.	.
N10	09/27/95	7:57	14	0	15.0	15.0	15.1	15.1	15.1
N10	09/27/95	7:57	14	1	15.0	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	2	15.1	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	3	15.1	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	4	15.1	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	5	15.1	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	6	.	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	7	.	15.1	15.1	15.1	15.1
N10	09/27/95	7:57	14	8	.	.	15.1	15.1	15.1
N10	09/27/95	7:57	14	9	.	.	.	.	15.1
N10	09/27/95	7:57	14	10	.	.	.	.	15.1
N10	09/27/95	7:57	14	11	.	.	.	.	15.1
N5	09/27/95	8:10	13	0	15.0	15.0	15.0	15.0	15.0
N5	09/27/95	8:10	13	1	15.0	15.0	15.0	15.0	15.0
N5	09/27/95	8:10	13	2	15.0	15.1	15.0	15.0	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	EAST	EAST
N5	09/27/95	8:10	13	3	15.0	15.1	15.0	.	.
N5	09/27/95	8:10	13	4	15.0	15.1	15.0	.	.
N5	09/27/95	8:10	13	5	15.0	15.1	.	.	.
N5	09/27/95	8:10	13	6	15.0	15.1	.	.	.
N5	09/27/95	8:10	13	7	15.0	15.1	.	.	.
N5	09/27/95	8:10	13	8	15.0	.	.	.	.
N5	09/27/95	8:10	13	9	15.0	.	.	.	.
N5	09/27/95	8:10	13	10	15.1	.	.	.	.
N5	09/27/95	8:10	13	11	15.1	.	.	.	.
N5	09/27/95	8:10	13	12	15.1	.	.	.	.
N5	09/27/95	8:10	13	13	15.1	.	.	.	.
N5	09/27/95	8:10	13	14	15.1	.	.	.	.
N5	09/27/95	8:10	13	15	15.1	.	.	.	.
CAN	09/27/95	8:15	.	0	.	.	23.1	.	.
CAN	09/27/95	8:15	.	1	.	.	23.1	.	.
CAN	09/27/95	8:15	.	2	.	.	23.1	.	.
CAN	09/27/95	8:15	.	3	.	.	23.1	.	.
CAN	09/27/95	8:15	.	4	.	.	23.2	.	.
CAN	09/27/95	8:15	.	5	.	.	23.1	.	.
CAN	09/27/95	8:15	.	6	.	.	23.1	.	.
CAN	09/27/95	8:15	.	7	.	.	23.1	.	.
CAN	09/27/95	8:15	.	8	.	.	23.0	.	.
CAN	09/27/95	8:15	.	9	.	.	23.0	.	.
CAN	09/27/95	8:15	.	10	.	.	23.0	.	.
0	09/27/95	8:18	15	0	19.6	20.0	20.2	20.7	21.0
0	09/27/95	8:18	15	1	19.5	20.1	19.4	20.7	21.0
0	09/27/95	8:18	15	2	19.5	19.7	18.9	20.7	19.6
0	09/27/95	8:18	15	3	18.9	19.4	18.4	18.5	19.1
0	09/27/95	8:18	15	4	17.6	17.0	17.4	16.0	18.5
0	09/27/95	8:18	15	5	16.4	16.4	15.7	15.4	15.5
0	09/27/95	8:18	15	6	16.0	15.7	15.6	15.3	15.4
0	09/27/95	8:18	15	7	15.7	15.6	15.5	15.3	15.4
0	09/27/95	8:18	15	8	.	.	15.5	15.2	15.4
0	09/27/95	8:18	15	9	.	.	15.5	15.2	15.4
0	09/27/95	8:18	15	10	.	.	.	15.2	15.4
0	09/27/95	8:18	15	11	.	.	.	15.2	15.4
0	09/27/95	8:18	15	12	.	.	.	.	15.4
S4	09/27/95	8:30	16	0	19.2	19.2	19.3	19.1	18.9
S4	09/27/95	8:30	16	1	19.2	19.2	19.3	18.8	18.8
S4	09/27/95	8:30	16	2	19.2	19.2	19.1	18.0	18.1
S4	09/27/95	8:30	16	3	19.1	19.2	18.8	17.7	16.5
S4	09/27/95	8:30	16	4	18.1	19.2	17.0	17.1	15.9
S4	09/27/95	8:30	16	5	17.7	19.0	16.3	16.2	15.9
S4	09/27/95	8:30	16	6	17.0	16.3	16.1	16.0	15.8
S4	09/27/95	8:30	16	7	15.9	16.0	16.0	16.0	15.8
S4	09/27/95	8:30	16	8	15.9	15.8	15.8	15.9	15.8
S4	09/27/95	8:30	16	9	.	15.7	15.7	15.7	15.7
S4	09/27/95	8:30	16	10	.	15.6	15.6	15.7	.
S4	09/27/95	8:30	16	11	.	15.6	.	15.7	.
S4	09/27/95	8:30	16	12	.	.	.	15.6	.
S4	09/27/95	8:30	16	13	.	.	.	15.6	.
SUN	09/27/95	8:40	.	0	.	.	18.3	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
SUN	09/27/95	8:40	.	1	.	.	18.0	.	.
SUN	09/27/95	8:40	.	2	.	.	17.2	.	.
S8	09/27/95	8:45	16	0	19.1	19.0	19.0	18.9	18.9
S8	09/27/95	8:45	16	1	19.1	19.0	19.0	18.9	18.9
S8	09/27/95	8:45	16	2	19.1	19.0	17.8	18.9	18.7
S8	09/27/95	8:45	16	3	17.1	18.2	17.1	17.5	17.5
S8	09/27/95	8:45	16	4	16.5	17.5	16.3	16.3	16.5
S8	09/27/95	8:45	16	5	16.3	16.5	16.2	16.0	16.1
S8	09/27/95	8:45	16	6	16.2	16.2	16.1	15.9	15.9
S8	09/27/95	8:45	16	7	16.1	16.1	16.1	15.9	15.8
S8	09/27/95	8:45	16	8	16.1	16.0	16.1	15.8	.
S8	09/27/95	8:45	16	9	16.0	.	.	.	.
S12	09/27/95	8:55	17	0	19.0	19.2	19.3	18.4	18.3
S12	09/27/95	8:55	17	1	19.0	19.2	19.3	18.4	18.3
S12	09/27/95	8:55	17	2	19.0	19.2	19.2	18.3	17.8
S12	09/27/95	8:55	17	3	19.0	19.1	18.3	.	.
S12	09/27/95	8:55	17	4	18.0	17.5	17.4	.	.
S12	09/27/95	8:55	17	5	17.4	16.9	16.4	.	.
S12	09/27/95	8:55	17	6	16.7	16.5	16.3	.	.
S12	09/27/95	8:55	17	7	16.4	16.3	.	.	.
S12	09/27/95	8:55	17	8	16.4	16.2	.	.	.
S12	09/27/95	8:55	17	9	16.3	16.2	.	.	.
S12	09/27/95	8:55	17	10	16.2	16.2	.	.	.
S12	09/27/95	8:55	17	11	16.2	.	.	.	.
S12	09/27/95	8:55	17	12	16.2	.	.	.	.
S12	09/27/95	8:55	17	13	16.2	.	.	.	.
S16	09/27/95	9:05	18	0	18.5	18.5	19.5	18.4	18.3
S16	09/27/95	9:05	18	1	18.5	18.4	18.6	18.4	18.3
S16	09/27/95	9:05	18	2	17.3	17.2	17.4	18.4	18.3
S16	09/27/95	9:05	18	3	17.1	17.1	16.8	18.4	18.3
S16	09/27/95	9:05	18	4	17.0	17.0	16.7	17.7	18.3
S16	09/27/95	9:05	18	5	16.9	16.9	16.6	17.8	17.4
S16	09/27/95	9:05	18	6	16.9	16.8	16.5	17.6	16.7
S16	09/27/95	9:05	18	7	16.8	16.8	16.5	16.9	16.5
S16	09/27/95	9:05	18	8	16.8	16.8	.	16.4	16.5
S16	09/27/95	9:05	18	9	.	.	.	16.3	16.5
S16	09/27/95	9:05	18	10	.	.	.	16.3	16.4
S16	09/27/95	9:05	18	11	.	.	.	.	16.4
S20	09/27/95	9:15	17	0	18.3	18.4	18.5	18.6	18.6
S20	09/27/95	9:15	17	1	18.2	18.4	18.5	18.7	18.6
S20	09/27/95	9:15	17	2	18.0	18.4	18.5	18.7	18.3
S20	09/27/95	9:15	17	3	17.1	17.1	18.4	18.7	.
S20	09/27/95	9:15	17	4	17.0	17.1	16.9	18.6	.
S20	09/27/95	9:15	17	5	.	17.0	16.8	17.1	.
S20	09/27/95	9:15	17	6	.	16.9	16.7	16.8	.
S20	09/27/95	9:15	17	7	.	.	16.6	16.6	.
S20	09/27/95	9:15	17	8	.	.	.	16.5	.
S20	09/27/95	9:15	17	9	.	.	.	16.5	.
S20	09/27/95	9:15	17	10	.	.	.	16.5	.
S20	09/27/95	9:15	17	11	.	.	.	16.5	.
S20	09/27/95	9:15	17	12	.	.	.	16.4	.
S20	09/27/95	9:15	17	13	.	.	.	16.4	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
S20	09/27/95	9:15	17	14	.	.	.	16.4	.
S24	09/27/95	9:28	16	0	19.0	18.9	18.9	19.0	18.9
S24	09/27/95	9:28	16	1	19.0	18.9	18.9	19.0	18.9
S24	09/27/95	9:28	16	2	19.0	18.7	18.9	18.9	18.8
S24	09/27/95	9:28	16	3	18.9	18.7	18.3	18.1	18.8
S24	09/27/95	9:28	16	4	18.6	17.8	17.8	17.6	18.1
S24	09/27/95	9:28	16	5	17.1	17.2	17.0	16.9	17.8
S24	09/27/95	9:28	16	6	16.9	16.8	16.8	16.7	17.0
S24	09/27/95	9:28	16	7	16.8	16.8	16.7	16.6	16.9
S24	09/27/95	9:28	16	8	.	16.7	16.7	16.6	16.7
S24	09/27/95	9:28	16	9	.	.	16.6	.	16.6
S24	09/27/95	9:28	16	10	.	.	16.6	.	16.6
A0	09/27/95	10:07	17	0	17.6	17.8	17.7	17.9	17.6
A0	09/27/95	10:07	17	1	17.6	17.8	17.7	17.9	17.6
A0	09/27/95	10:07	17	2	17.6	17.8	17.6	17.8	17.6
A0	09/27/95	10:07	17	3	17.6	17.8	17.6	17.8	17.6
A0	09/27/95	10:07	17	4	17.6	17.8	17.6	17.8	17.7
A0	09/27/95	10:07	17	5	17.6	17.8	17.6	17.7	.
A0	09/27/95	10:07	17	6	17.6	17.8	17.6	17.7	.
A0	09/27/95	10:07	17	7	17.6	17.8	.	.	.
A0	09/27/95	10:07	17	8	17.6	17.8	.	.	.
A0	09/27/95	10:07	17	9	17.6	17.7	.	.	.
A0	09/27/95	10:07	17	10	17.6	17.7	.	.	.
A0	09/27/95	10:07	17	11	17.6	.	.	.	.
A0	09/27/95	10:07	17	12	17.6	.	.	.	.
A0	09/27/95	10:07	17	13	17.6	.	.	.	.
A0	09/27/95	10:07	17	14	17.6	.	.	.	.
A0	09/27/95	10:07	17	15	17.6	.	.	.	.
A0	09/27/95	10:07	17	16	17.6	.	.	.	.
A1	09/27/95	10:15	19	0	17.9	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	1	17.8	17.8	17.9	17.8	17.8
A1	09/27/95	10:15	19	2	17.7	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	3	17.7	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	4	17.7	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	5	17.7	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	6	17.7	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	7	17.7	17.8	17.8	17.8	17.8
A1	09/27/95	10:15	19	8	17.7	17.8	17.8	17.7	17.8
A1	09/27/95	10:15	19	9	.	17.8	17.8	17.7	17.8
A1	09/27/95	10:15	19	10	.	17.8	17.8	17.7	17.8
A1	09/27/95	10:15	19	11	.	17.8	17.8	17.7	17.8
A1	09/27/95	10:15	19	12	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	13	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	14	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	15	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	16	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	17	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	18	.	.	17.8	17.7	17.8
A1	09/27/95	10:15	19	19	.	.	17.8	17.7	.
A1	09/27/95	10:15	19	20	.	.	17.8	17.8	.
A1	09/27/95	10:15	19	21	.	.	17.8	17.8	.
A1	09/27/95	10:15	19	22	.	.	17.8	17.8	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A1	09/27/95	10:15	19	23	.	.	17.8	.	.
A1	09/27/95	10:15	19	24	.	.	17.8	.	.
A1	09/27/95	10:15	19	25	.	.	17.8	.	.
A1	09/27/95	10:15	19	26	.	.	17.8	.	.
A1	09/27/95	10:15	19	27	.	.	17.8	.	.
A1	09/27/95	10:15	19	28	.	.	17.8	.	.
A1	09/27/95	10:15	19	29	.	.	17.8	.	.
A1	09/27/95	10:15	19	30	.	.	17.8	.	.
A1	09/27/95	10:15	19	31	.	.	17.8	.	.
A2	09/27/95	10:28	24	0	18.0	17.9	18.0	18.0	17.9
A2	09/27/95	10:28	24	1	17.9	17.9	18.0	17.9	17.9
A2	09/27/95	10:28	24	2	17.9	17.9	17.9	17.9	17.8
A2	09/27/95	10:28	24	3	17.9	17.8	17.9	17.8	17.8
A2	09/27/95	10:28	24	4	17.9	17.8	17.8	17.8	17.8
A2	09/27/95	10:28	24	5	17.9	17.8	17.8	17.8	17.8
A2	09/27/95	10:28	24	6	17.9	17.8	17.8	17.8	17.8
A2	09/27/95	10:28	24	7	17.8	17.8	17.8	17.8	.
A2	09/27/95	10:28	24	8	.	17.8	17.8	17.8	.
A2	09/27/95	10:28	24	9	.	.	17.8	17.8	.
A2	09/27/95	10:28	24	10	.	.	17.8	17.8	.
A2	09/27/95	10:28	24	11	.	.	17.8	17.8	.
A2	09/27/95	10:28	24	12	.	.	17.8	17.8	.
A2	09/27/95	10:28	24	13	.	.	17.8	17.8	.
A2	09/27/95	10:28	24	14	.	.	.	17.8	.
A3	09/27/95	10:40	22	0	17.9	17.8	17.9	17.9	17.9
A3	09/27/95	10:40	22	1	17.9	17.9	17.9	17.9	17.9
A3	09/27/95	10:40	22	2	17.9	17.9	17.9	17.9	17.9
A3	09/27/95	10:40	22	3	17.8	17.9	17.8	17.9	17.8
A3	09/27/95	10:40	22	4	17.8	17.9	17.8	17.8	17.8
A3	09/27/95	10:40	22	5	17.8	17.8	17.8	17.8	.
A3	09/27/95	10:40	22	6	17.8	17.8	17.8	17.8	.
A3	09/27/95	10:40	22	7	17.8	17.8	17.8	17.8	.
A3	09/27/95	10:40	22	8	17.8	17.8	17.7	17.8	.
A3	09/27/95	10:40	22	9	17.8	17.8	17.7	17.8	.
A3	09/27/95	10:40	22	10	17.8	17.8	17.7	17.7	.
A3	09/27/95	10:40	22	11	17.7	17.7	17.7	17.7	.
A3	09/27/95	10:40	22	12	.	17.7	17.7	.	.
A3	09/27/95	10:40	22	13	.	.	17.7	.	.
A3	09/27/95	10:40	22	14	.	.	17.7	.	.
A4	09/27/95	10:58	20	0	18.1	18.0	18.0	17.9	17.8
A4	09/27/95	10:58	20	1	18.1	18.0	18.0	17.9	17.8
A4	09/27/95	10:58	20	2	18.0	18.0	17.9	17.9	17.8
A4	09/27/95	10:58	20	3	18.0	17.9	17.8	17.8	17.7
A4	09/27/95	10:58	20	4	18.0	17.8	17.8	17.7	17.6
A4	09/27/95	10:58	20	5	17.9	17.8	17.7	17.7	17.6
A4	09/27/95	10:58	20	6	17.9	17.8	17.7	17.7	17.6
A4	09/27/95	10:58	20	7	17.9	17.8	17.7	17.6	17.6
A4	09/27/95	10:58	20	8	17.9	17.8	17.7	17.6	17.6
A4	09/27/95	10:58	20	9	17.9	17.7	17.7	17.6	17.6
A4	09/27/95	10:58	20	10	17.8	17.7	17.7	17.6	.
A4	09/27/95	10:58	20	11	17.8	17.7	17.6	.	.
A4	09/27/95	10:58	20	12	17.8	17.7	17.6	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A4	09/27/95	10:58	20	13	17.8	17.7	.	.	.
A5	09/27/95	11:05	18	0	18.0	17.9	17.8	17.8	17.9
A5	09/27/95	11:05	18	1	17.9	17.9	17.8	17.8	17.9
A5	09/27/95	11:05	18	2	17.8	17.8	17.8	17.7	17.8
A5	09/27/95	11:05	18	3	17.7	17.8	17.7	17.7	17.7
A5	09/27/95	11:05	18	4	17.6	17.6	17.6	17.6	17.6
A5	09/27/95	11:05	18	5	17.6	17.5	17.5	17.5	17.6
A5	09/27/95	11:05	18	6	17.5	17.5	17.5	17.5	17.5
A5	09/27/95	11:05	18	7	17.5	17.5	17.5	17.5	17.5
A5	09/27/95	11:05	18	8	17.5	17.5	17.5	17.5	17.5
A5	09/27/95	11:05	18	9	17.5	17.5	17.5	17.5	17.5
A5	09/27/95	11:05	18	10	.	17.5	17.5	17.5	17.5
A5	09/27/95	11:05	18	11	.	.	17.5	17.4	17.5
A5	09/27/95	11:05	18	12	.	.	17.4	17.4	17.5
A5	09/27/95	11:05	18	13	.	.	.	17.4	17.5
A5	09/27/95	11:05	18	14	.	.	.	17.4	17.5
A5	09/27/95	11:05	18	15	.	.	.	17.4	17.5
A5	09/27/95	11:05	18	16	.	.	.	.	17.5
A5	09/27/95	11:05	18	17	.	.	.	.	17.4
A5	09/27/95	11:05	18	18	.	.	.	.	17.3
A5	09/27/95	11:05	18	19	.	.	.	.	16.9
A6	09/27/95	11:15	25	0	17.9	17.9	17.9	17.8	17.9
A6	09/27/95	11:15	25	1	17.9	17.9	17.8	17.8	17.8
A6	09/27/95	11:15	25	2	17.8	17.8	17.7	17.8	17.8
A6	09/27/95	11:15	25	3	17.7	17.7	17.6	17.6	17.6
A6	09/27/95	11:15	25	4	17.6	17.6	17.5	17.6	17.5
A6	09/27/95	11:15	25	5	17.6	17.6	17.5	17.6	17.5
A6	09/27/95	11:15	25	6	.	17.5	17.4	17.5	17.5
A6	09/27/95	11:15	25	7	.	17.5	17.4	17.5	17.4
A6	09/27/95	11:15	25	8	.	17.4	17.4	17.5	17.4
A6	09/27/95	11:15	25	9	.	17.1	17.3	17.5	17.4
A6	09/27/95	11:15	25	10	.	17.0	17.3	17.5	17.3
A6	09/27/95	11:15	25	11	.	16.9	.	17.4	.
A6	09/27/95	11:15	25	12	.	.	.	17.4	.
A6	09/27/95	11:15	25	13	.	.	.	17.4	.
A6	09/27/95	11:15	25	14	.	.	.	17.3	.
A7	09/27/95	11:30	26	0	16.9	16.6	16.5	16.5	16.5
A7	09/27/95	11:30	26	1	16.9	16.5	16.5	16.5	16.5
A7	09/27/95	11:30	26	2	16.8	16.5	16.3	16.4	16.5
A7	09/27/95	11:30	26	3	16.5	16.4	16.2	16.3	16.5
A7	09/27/95	11:30	26	4	16.2	16.3	16.1	16.2	16.2
A7	09/27/95	11:30	26	5	16.2	16.2	16.1	16.1	16.2
A7	09/27/95	11:30	26	6	16.2	16.1	16.1	16.1	16.2
A7	09/27/95	11:30	26	7	16.2	16.1	16.1	16.1	16.2
A7	09/27/95	11:30	26	8	16.1	16.1	16.1	16.1	16.2
A7	09/27/95	11:30	26	9	16.1	16.1	16.1	16.1	16.2
A7	09/27/95	11:30	26	10	16.1	16.1	.	.	.
A7	09/27/95	11:30	26	11	16.1	16.1	.	.	.
A7	09/27/95	11:30	26	12	16.1	.	.	.	.
A7	09/27/95	11:30	26	13	16.1	.	.	.	.
AMO	09/27/95	11:43	24	0	.	.	16.9	.	.
AMO	09/27/95	11:43	24	1	.	.	16.8	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
AMO	09/27/95	11:43	24	2	.	.	16.5	.	.
AMO	09/27/95	11:43	24	3	.	.	16.5	.	.
AMO	09/27/95	11:43	24	4	.	.	16.4	.	.
AMO	09/27/95	11:43	24	5	.	.	16.4	.	.
AMO	09/27/95	11:43	24	6	.	.	16.4	.	.
AMO	09/27/95	11:43	24	7	.	.	16.4	.	.
AMO	09/27/95	11:43	24	8	.	.	16.4	.	.
AMO	09/27/95	11:43	24	9	.	.	16.4	.	.
AMO	09/27/95	11:43	24	10	.	.	16.4	.	.
AMO	09/27/95	11:43	24	11	.	.	16.4	.	.
AMO	09/27/95	11:43	24	12	.	.	16.4	.	.
AMO	09/27/95	11:43	24	13	.	.	16.4	.	.
AMO	09/27/95	11:43	24	14	.	.	16.4	.	.
N10	10/11/95	7:50	9	0	12.9	12.8	12.8	12.8	12.8
N10	10/11/95	7:50	9	1	12.9	12.8	12.8	12.8	12.9
N10	10/11/95	7:50	9	2	12.9	12.9	12.9	12.9	12.9
N10	10/11/95	7:50	9	3	12.9	12.9	12.9	12.9	12.9
N10	10/11/95	7:50	9	4	12.9	12.9	12.9	12.9	12.9
N10	10/11/95	7:50	9	5	12.9	12.9	12.9	12.9	12.9
N10	10/11/95	7:50	9	6	.	12.9	12.9	12.9	12.9
N10	10/11/95	7:50	9	7	.	12.9	12.9	12.9	12.9
N10	10/11/95	7:50	9	8	.	.	12.9	12.9	12.9
N10	10/11/95	7:50	9	9	.	.	.	.	12.9
N10	10/11/95	7:50	9	10	.	.	.	.	12.9
N5	10/11/95	8:00	9	0	12.8	12.9	12.9	12.9	12.9
N5	10/11/95	8:00	9	1	12.9	12.9	12.9	13.0	12.9
N5	10/11/95	8:00	9	2	12.9	12.9	12.9	13.0	13.0
N5	10/11/95	8:00	9	3	12.9	12.9	13.0	13.0	.
N5	10/11/95	8:00	9	4	12.9	12.9	13.0	.	.
N5	10/11/95	8:00	9	5	12.9	12.9	.	.	.
N5	10/11/95	8:00	9	6	12.9	13.0	.	.	.
N5	10/11/95	8:00	9	7	12.9	13.0	.	.	.
N5	10/11/95	8:00	9	8	13.0	.	.	.	.
CAN	10/11/95	8:12	9	0	.	.	23.3	.	.
CAN	10/11/95	8:12	9	1	.	.	23.3	.	.
CAN	10/11/95	8:12	9	2	.	.	23.4	.	.
CAN	10/11/95	8:12	9	3	.	.	23.4	.	.
CAN	10/11/95	8:12	9	4	.	.	23.4	.	.
CAN	10/11/95	8:12	9	5	.	.	23.4	.	.
CAN	10/11/95	8:12	9	6	.	.	23.4	.	.
CAN	10/11/95	8:12	9	7	.	.	23.4	.	.
O	10/11/95	8:14	9	0	21.5	22.0	21.6	21.5	21.5
O	10/11/95	8:14	9	1	21.6	22.0	21.6	21.6	21.6
O	10/11/95	8:14	9	2	21.2	21.2	17.8	20.8	21.7
O	10/11/95	8:14	9	3	20.6	20.4	17.1	19.9	21.7
O	10/11/95	8:14	9	4	15.2	17.2	16.7	19.7	21.7
O	10/11/95	8:14	9	5	14.4	15.4	14.6	14.2	21.6
O	10/11/95	8:14	9	6	14.3	.	13.8	14.2	20.8
O	10/11/95	8:14	9	7	14.2	.	13.7	13.4	13.7
O	10/11/95	8:14	9	8	.	.	13.6	13.3	13.5
O	10/11/95	8:14	9	9	.	.	.	13.2	13.4
O	10/11/95	8:14	9	10	.	.	.	.	13.3

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					MID		MID		EAST
					WEST	WEST	MID	EAST	
0	10/11/95	8:14	9	11	.	.	.	.	13.3
S4	10/11/95	8:30	10	0	20.1	20.3	20.4	20.4	20.4
S4	10/11/95	8:30	10	1	20.2	20.2	20.5	20.5	19.4
S4	10/11/95	8:30	10	2	19.0	19.5	20.5	20.3	17.9
S4	10/11/95	8:30	10	3	17.6	19.5	20.2	20.2	17.3
S4	10/11/95	8:30	10	4	16.2	16.0	18.0	15.0	14.5
S4	10/11/95	8:30	10	5	14.5	15.8	14.2	14.2	14.3
S4	10/11/95	8:30	10	6	14.1	14.2	13.9	13.9	14.0
S4	10/11/95	8:30	10	7	14.0	13.9	13.8	13.7	13.9
S4	10/11/95	8:30	10	8	.	13.9	13.7	13.6	13.9
S4	10/11/95	8:30	10	9	.	.	13.7	13.6	13.8
S4	10/11/95	8:30	10	10	.	.	13.7	.	.
S4	10/11/95	8:30	10	11	.	.	13.7	.	.
SUN	10/11/95	8:43	.	0	.	.	12.3	.	.
SUN	10/11/95	8:43	.	1	.	.	12.3	.	.
SUN	10/11/95	8:43	.	2	.	.	12.4	.	.
S8	10/11/95	8:47	10	0	19.3	19.6	20.0	19.9	19.6
S8	10/11/95	8:47	10	1	18.5	19.7	20.1	20.0	18.6
S8	10/11/95	8:47	10	2	19.4	18.9	17.7	20.0	18.1
S8	10/11/95	8:47	10	3	16.0	16.2	15.0	14.3	14.7
S8	10/11/95	8:47	10	4	14.9	15.7	14.2	14.2	14.0
S8	10/11/95	8:47	10	5	14.4	14.3	14.0	14.2	13.5
S8	10/11/95	8:47	10	6	14.1	14.0	14.0	14.1	.
S8	10/11/95	8:47	10	7	14.0	13.9	13.9	13.6	.
S8	10/11/95	8:47	10	8	13.9	13.9	.	13.4	.
S8	10/11/95	8:47	10	9	.	.	.	13.1	.
S12	10/11/95	8:59	10	0	19.5	19.5	19.3	19.2	18.6
S12	10/11/95	8:59	10	1	19.1	19.1	18.0	18.2	18.3
S12	10/11/95	8:59	10	2	18.3	18.0	15.9	16.1	15.5
S12	10/11/95	8:59	10	3	15.2	15.6	14.5	.	.
S12	10/11/95	8:59	10	4	14.5	15.0	14.2	.	.
S12	10/11/95	8:59	10	5	14.2	14.6	14.1	.	.
S12	10/11/95	8:59	10	6	14.1	14.0	14.1	.	.
S12	10/11/95	8:59	10	7	14.0	13.9	.	.	.
S12	10/11/95	8:59	10	8	14.0	13.9	.	.	.
S12	10/11/95	8:59	10	9	13.9	.	.	.	.
S12	10/11/95	8:59	10	10	13.8	.	.	.	.
S12	10/11/95	8:59	10	11	13.8	.	.	.	.
S12	10/11/95	8:59	10	12	13.8	.	.	.	.
S16	10/11/95	9:13	11	0	16.8	16.3	17.4	17.0	17.2
S16	10/11/95	9:13	11	1	16.4	16.0	17.0	17.2	17.2
S16	10/11/95	9:13	11	2	15.4	16.0	15.4	16.4	17.2
S16	10/11/95	9:13	11	3	15.0	15.3	14.9	15.7	16.7
S16	10/11/95	9:13	11	4	14.9	15.0	14.8	14.9	16.2
S16	10/11/95	9:13	11	5	14.9	14.8	14.7	14.9	14.8
S16	10/11/95	9:13	11	6	14.9	14.8	14.4	14.5	14.7
S16	10/11/95	9:13	11	7	14.9	14.8	14.6	14.4	14.5
S16	10/11/95	9:13	11	8	.	.	14.6	14.3	.
S16	10/11/95	9:13	11	9	.	.	.	14.3	.
S16	10/11/95	9:13	11	10	.	.	.	14.3	.
S20	10/11/95	9:25	11	0	15.7	16.1	16.8	16.9	16.7
S20	10/11/95	9:25	11	1	15.5	15.5	16.4	16.5	16.7

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	WEST	MID	MID	EAST
S20	10/11/95	9:25	11	2	15.2	15.3	15.6	15.4	16.7
S20	10/11/95	9:25	11	3	15.0	15.2	15.4	15.1	16.7
S20	10/11/95	9:25	11	4	15.0	15.2	15.4	15.0	16.7
S20	10/11/95	9:25	11	5	.	15.2	15.4	14.9	.
S20	10/11/95	9:25	11	6	.	.	15.3	14.8	.
S20	10/11/95	9:25	11	7	.	.	15.2	14.7	.
S20	10/11/95	9:25	11	8	.	.	15.2	14.7	.
S20	10/11/95	9:25	11	9	.	.	.	14.7	.
S20	10/11/95	9:25	11	10	.	.	.	14.8	.
S20	10/11/95	9:25	11	11	.	.	.	14.8	.
S20	10/11/95	9:25	11	12	.	.	.	14.8	.
S20	10/11/95	9:25	11	13	.	.	.	14.8	.
S20	10/11/95	9:25	11	14	.	.	.	14.7	.
S20	10/11/95	9:25	11	15	.	.	.	14.7	.
S24	10/11/95	9:36	12	0	16.9	17.1	17.0	17.0	16.9
S24	10/11/95	9:36	12	1	16.8	16.9	16.3	16.6	16.9
S24	10/11/95	9:36	12	2	16.5	16.0	15.6	15.8	16.8
S24	10/11/95	9:36	12	3	16.5	15.7	15.4	15.4	15.2
S24	10/11/95	9:36	12	4	16.5	15.6	15.4	15.2	15.1
S24	10/11/95	9:36	12	5	16.4	15.5	15.3	15.1	15.1
S24	10/11/95	9:36	12	6	16.4	15.5	15.3	15.1	15.0
S24	10/11/95	9:36	12	7	16.3	15.5	15.2	15.0	14.9
S24	10/11/95	9:36	12	8	.	15.5	15.1	15.0	14.9
S24	10/11/95	9:36	12	9	.	15.5	15.1	.	.
A0	10/11/95	10:19	13	0	15.7	15.6	15.6	15.6	15.6
A0	10/11/95	10:19	13	1	15.7	15.7	15.6	15.6	15.6
A0	10/11/95	10:19	13	2	15.7	15.7	15.6	15.6	15.6
A0	10/11/95	10:19	13	3	15.6	15.7	15.5	15.6	15.6
A0	10/11/95	10:19	13	4	15.5	15.5	15.4	15.6	15.6
A0	10/11/95	10:19	13	5	15.5	15.3	15.3	15.6	15.6
A0	10/11/95	10:19	13	6	15.5	.	15.3	15.6	.
A0	10/11/95	10:19	13	7	15.4	.	15.2	15.6	.
A0	10/11/95	10:19	13	8	15.4	.	.	15.6	.
A0	10/11/95	10:19	13	9	15.3	.	.	15.6	.
A0	10/11/95	10:19	13	10	15.2	.	.	.	.
A0	10/11/95	10:19	13	11	15.1	.	.	.	.
A0	10/11/95	10:19	13	12	15.0	.	.	.	.
A0	10/11/95	10:19	13	13	15.0	.	.	.	.
A0	10/11/95	10:19	13	14	15.0	.	.	.	.
A0	10/11/95	10:19	13	15	14.9	.	.	.	.
A1	10/11/95	10:30	13	0	15.4	15.4	15.4	15.5	15.5
A1	10/11/95	10:30	13	1	15.4	15.4	15.4	15.6	15.5
A1	10/11/95	10:30	13	2	15.4	15.4	15.4	15.6	15.5
A1	10/11/95	10:30	13	3	15.4	15.4	15.4	15.6	15.5
A1	10/11/95	10:30	13	4	15.4	15.4	15.4	15.6	15.5
A1	10/11/95	10:30	13	5	15.4	15.4	15.4	15.5	15.5
A1	10/11/95	10:30	13	6	15.4	15.4	15.4	15.5	15.5
A1	10/11/95	10:30	13	7	15.4	15.4	15.4	15.5	15.5
A1	10/11/95	10:30	13	8	15.4	15.4	15.4	15.5	15.5
A1	10/11/95	10:30	13	9	.	15.4	15.4	15.5	.
A1	10/11/95	10:30	13	10	.	15.4	15.4	15.5	.
A1	10/11/95	10:30	13	11	.	15.4	15.4	15.5	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A1	10/11/95	10:30	13	12	.	15.4	15.4	15.5	.
A1	10/11/95	10:30	13	13	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	14	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	15	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	16	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	17	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	18	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	19	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	20	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	21	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	22	.	.	15.4	15.5	.
A1	10/11/95	10:30	13	23	.	.	15.4	.	.
A1	10/11/95	10:30	13	24	.	.	15.4	.	.
A1	10/11/95	10:30	13	25	.	.	15.4	.	.
A1	10/11/95	10:30	13	26	.	.	15.4	.	.
A1	10/11/95	10:30	13	27	.	.	15.4	.	.
A1	10/11/95	10:30	13	28	.	.	15.4	.	.
A1	10/11/95	10:30	13	29	.	.	15.4	.	.
A1	10/11/95	10:30	13	30	.	.	15.4	.	.
A1	10/11/95	10:30	13	31	.	.	15.4	.	.
A1	10/11/95	10:30	13	32	.	.	15.4	.	.
A1	10/11/95	10:30	13	33	.	.	15.4	.	.
A2	10/11/95	10:42	14	0	15.4	15.4	15.5	15.5	15.4
A2	10/11/95	10:42	14	1	15.4	15.5	15.5	15.5	15.4
A2	10/11/95	10:42	14	2	15.5	15.5	15.5	15.5	15.4
A2	10/11/95	10:42	14	3	15.4	15.5	15.5	15.5	15.4
A2	10/11/95	10:42	14	4	15.4	15.4	15.5	15.5	15.4
A2	10/11/95	10:42	14	5	15.4	15.4	15.5	15.5	15.4
A2	10/11/95	10:42	14	6	15.4	15.4	15.4	15.4	15.4
A2	10/11/95	10:42	14	7	15.4	15.4	15.4	15.4	15.4
A2	10/11/95	10:42	14	8	.	15.4	15.4	15.4	15.4
A2	10/11/95	10:42	14	9	.	15.4	15.4	15.4	.
A2	10/11/95	10:42	14	10	.	.	15.4	15.4	.
A2	10/11/95	10:42	14	11	.	.	15.4	15.4	.
A3	10/11/95	10:52	15	0	15.3	15.2	15.3	15.4	15.3
A3	10/11/95	10:52	15	1	15.3	15.3	15.4	15.4	15.3
A3	10/11/95	10:52	15	2	15.4	15.3	15.4	15.4	15.2
A3	10/11/95	10:52	15	3	15.3	15.3	15.4	15.3	15.2
A3	10/11/95	10:52	15	4	15.3	15.3	15.4	15.3	15.2
A3	10/11/95	10:52	15	5	15.3	15.2	15.4	15.2	15.2
A3	10/11/95	10:52	15	6	15.3	15.2	15.3	15.2	15.2
A3	10/11/95	10:52	15	7	15.3	15.2	15.3	15.2	.
A3	10/11/95	10:52	15	8	15.3	15.2	15.2	15.2	.
A3	10/11/95	10:52	15	9	15.2	15.2	15.2	15.2	.
A3	10/11/95	10:52	15	10	15.2	15.2	15.2	15.2	.
A3	10/11/95	10:52	15	11	15.2	15.2	15.1	15.2	.
A3	10/11/95	10:52	15	12	15.2	15.2	15.1	15.2	.
A3	10/11/95	10:52	15	13	15.2	15.2	15.1	15.2	.
A3	10/11/95	10:52	15	14	.	.	15.1	.	.
A4	10/11/95	11:03	15	0	15.2	14.9	15.2	15.2	15.1
A4	10/11/95	11:03	15	1	15.2	15.1	15.1	15.1	15.1
A4	10/11/95	11:03	15	2	15.2	15.0	15.0	15.1	15.1

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

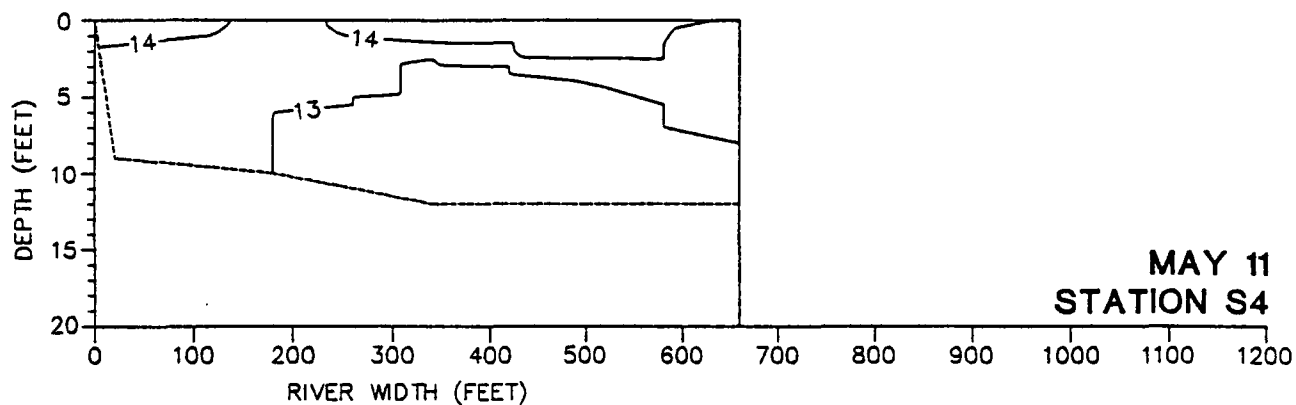
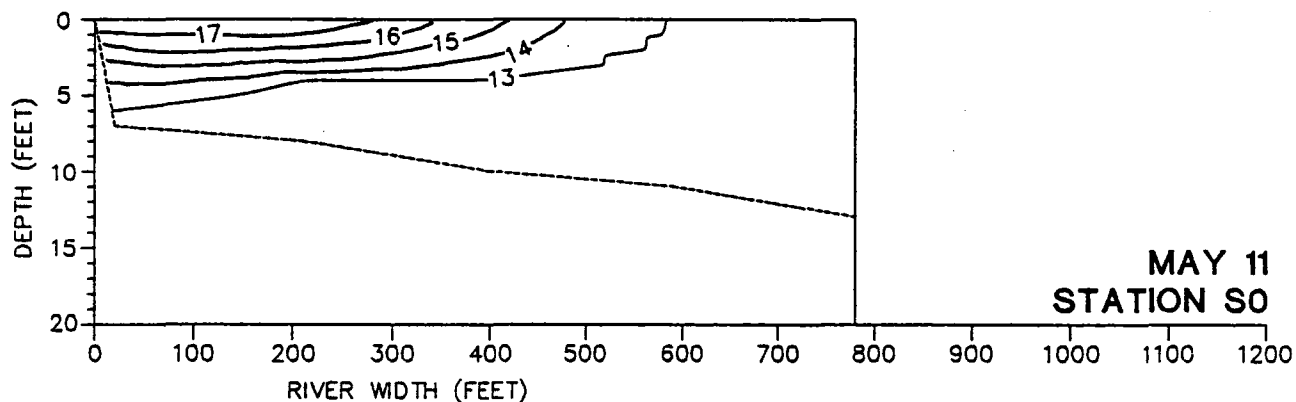
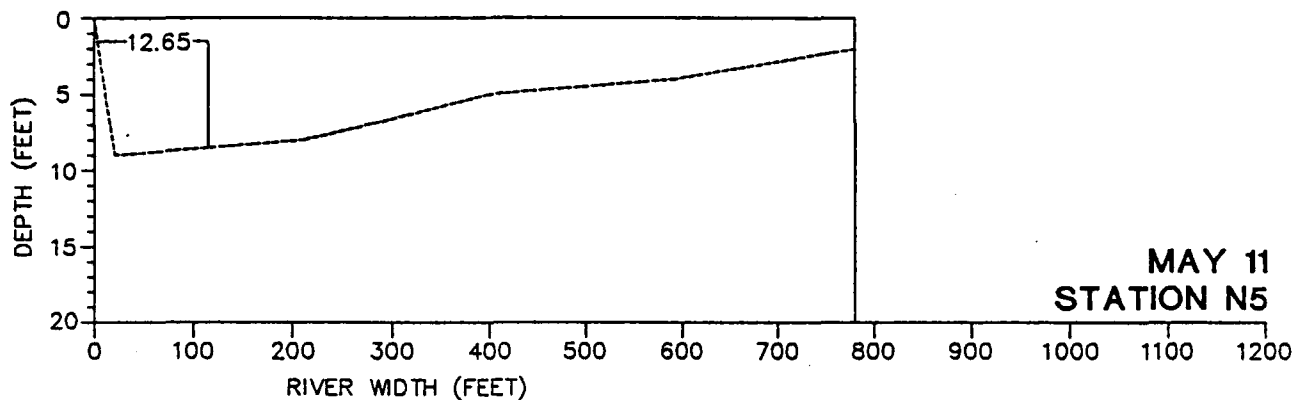
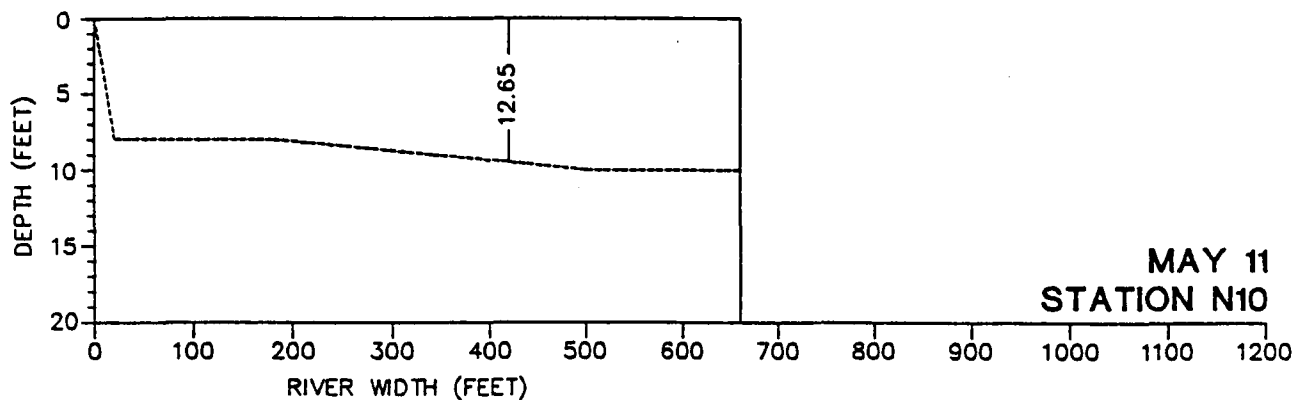
STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
A4	10/11/95	11:03	15	3	15.1	15.0	14.9	15.0	15.0
A4	10/11/95	11:03	15	4	15.0	14.9	14.9	14.9	14.9
A4	10/11/95	11:03	15	5	15.0	14.9	14.9	14.9	14.9
A4	10/11/95	11:03	15	6	15.0	14.9	14.9	14.9	14.9
A4	10/11/95	11:03	15	7	15.0	14.8	14.9	14.8	14.9
A4	10/11/95	11:03	15	8	14.9	14.8	14.9	14.8	14.9
A4	10/11/95	11:03	15	9	14.9	14.8	14.9	14.8	14.9
A4	10/11/95	11:03	15	10	14.9	14.8	14.9	14.8	14.8
A4	10/11/95	11:03	15	11	.	14.8	14.9	14.8	.
A4	10/11/95	11:03	15	12	.	14.8	14.9	14.8	.
A4	10/11/95	11:03	15	13	.	14.8	.	14.8	.
A5	10/11/95	11:14	15	0	15.3	15.2	15.4	15.3	15.3
A5	10/11/95	11:14	15	1	15.2	15.2	15.2	15.1	15.2
A5	10/11/95	11:14	15	2	15.1	15.1	15.0	14.9	15.1
A5	10/11/95	11:14	15	3	15.0	14.9	14.9	14.8	15.1
A5	10/11/95	11:14	15	4	14.9	14.8	14.8	14.8	15.0
A5	10/11/95	11:14	15	5	14.8	14.8	14.7	14.7	14.9
A5	10/11/95	11:14	15	6	14.8	14.8	14.7	14.7	14.9
A5	10/11/95	11:14	15	7	14.8	14.7	14.7	14.7	14.8
A5	10/11/95	11:14	15	8	14.8	14.7	14.7	14.7	14.8
A5	10/11/95	11:14	15	9	14.8	14.7	14.7	14.7	14.8
A5	10/11/95	11:14	15	10	.	14.7	14.7	14.7	14.7
A5	10/11/95	11:14	15	11	.	.	14.7	14.7	14.7
A5	10/11/95	11:14	15	12	.	.	14.7	14.7	14.7
A5	10/11/95	11:14	15	13	.	.	14.7	14.7	14.7
A5	10/11/95	11:14	15	14	.	.	.	14.7	.
A5	10/11/95	11:14	15	15	.	.	.	14.7	.
A5	10/11/95	11:14	15	16	.	.	.	14.7	.
A6	10/11/95	11:25	16	0	15.3	15.2	15.1	15.0	15.2
A6	10/11/95	11:25	16	1	15.0	15.2	15.0	15.1	15.1
A6	10/11/95	11:25	16	2	14.8	15.1	14.9	15.0	15.0
A6	10/11/95	11:25	16	3	14.8	14.8	14.8	14.9	14.9
A6	10/11/95	11:25	16	4	14.8	14.8	14.8	14.8	14.9
A6	10/11/95	11:25	16	5	14.7	14.8	14.8	14.8	14.9
A6	10/11/95	11:25	16	6	14.7	14.7	14.7	14.7	14.9
A6	10/11/95	11:25	16	7	.	14.7	14.7	14.8	14.9
A6	10/11/95	11:25	16	8	.	14.7	14.7	14.7	14.9
A6	10/11/95	11:25	16	9	.	14.7	14.7	14.7	14.9
A6	10/11/95	11:25	16	10	.	14.7	14.7	14.7	14.9
A6	10/11/95	11:25	16	11	.	14.7	.	14.7	.
A7	10/11/95	11:38	16	0	15.3	15.1	15.3	15.2	15.2
A7	10/11/95	11:38	16	1	15.3	15.2	15.3	15.2	15.2
A7	10/11/95	11:38	16	2	15.3	15.2	15.2	15.1	15.1
A7	10/11/95	11:38	16	3	15.1	15.2	15.0	14.9	15.0
A7	10/11/95	11:38	16	4	15.0	15.1	14.9	14.9	14.9
A7	10/11/95	11:38	16	5	14.9	15.0	14.9	14.8	14.9
A7	10/11/95	11:38	16	6	14.9	14.9	14.9	14.8	14.8
A7	10/11/95	11:38	16	7	.	14.9	14.8	14.8	14.8
A7	10/11/95	11:38	16	8	.	14.9	14.8	14.8	14.8
A7	10/11/95	11:38	16	9	.	14.9	14.8	.	14.8
A7	10/11/95	11:38	16	10	.	14.8	14.8	.	14.8
A7	10/11/95	11:38	16	11	.	14.8	.	.	.

TABLE A-1. MERRIMACK RIVER TEMPERATURE PROFILES FOR 1995.

STATION	DATE	TIME	AIR TEMP. (C°)	DEPTH (FT.)	TEMP. (C°) AT TRANSECT LOCATIONS				
					WEST	MID WEST	MID	MID EAST	EAST
AMO	10/11/95	11:49	17	0	.	.	14.9	.	.
AMO	10/11/95	11:49	17	1	.	.	15.0	.	.
AMO	10/11/95	11:49	17	2	.	.	15.0	.	.
AMO	10/11/95	11:49	17	3	.	.	15.0	.	.
AMO	10/11/95	11:49	17	4	.	.	15.0	.	.
AMO	10/11/95	11:49	17	5	.	.	15.0	.	.
AMO	10/11/95	11:49	17	6	.	.	15.0	.	.
AMO	10/11/95	11:49	17	7	.	.	15.0	.	.
AMO	10/11/95	11:49	17	8	.	.	15.0	.	.
AMO	10/11/95	11:49	17	9	.	.	15.0	.	.
AMO	10/11/95	11:49	17	10	.	.	15.0	.	.
AMO	10/11/95	11:49	17	11	.	.	15.0	.	.
AMO	10/11/95	11:49	17	12	.	.	15.0	.	.

APPENDIX B

**Temperature Contour Plots
for 1995**



One contour line indicates temperature change less than 0.2°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



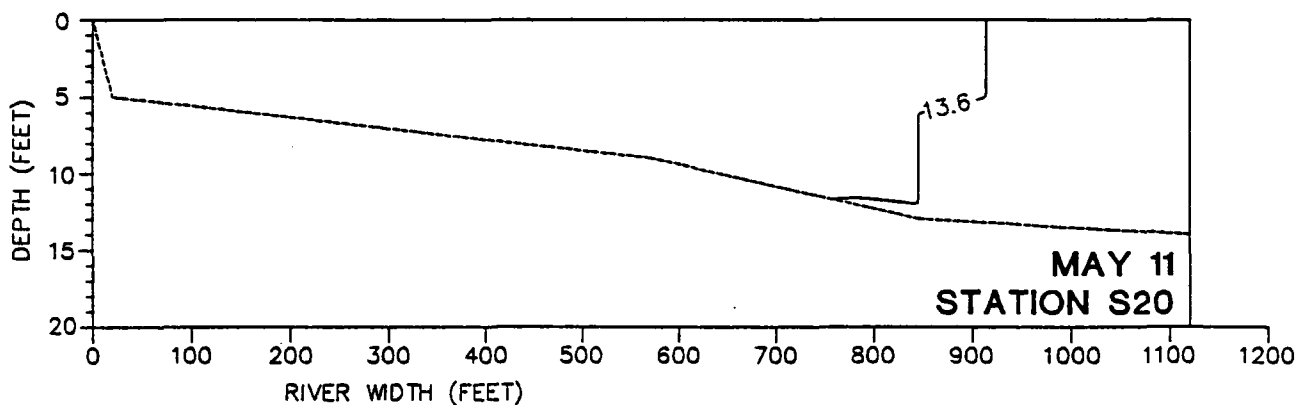
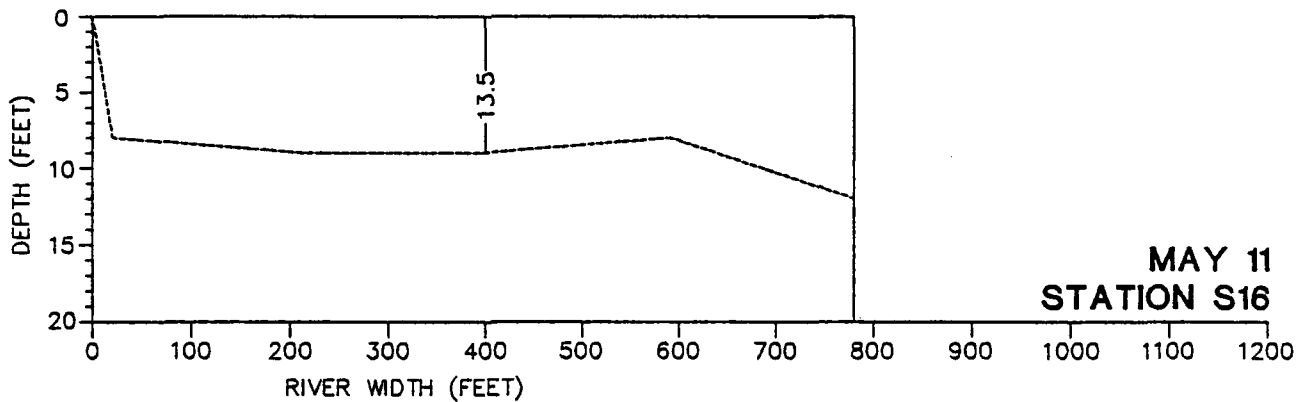
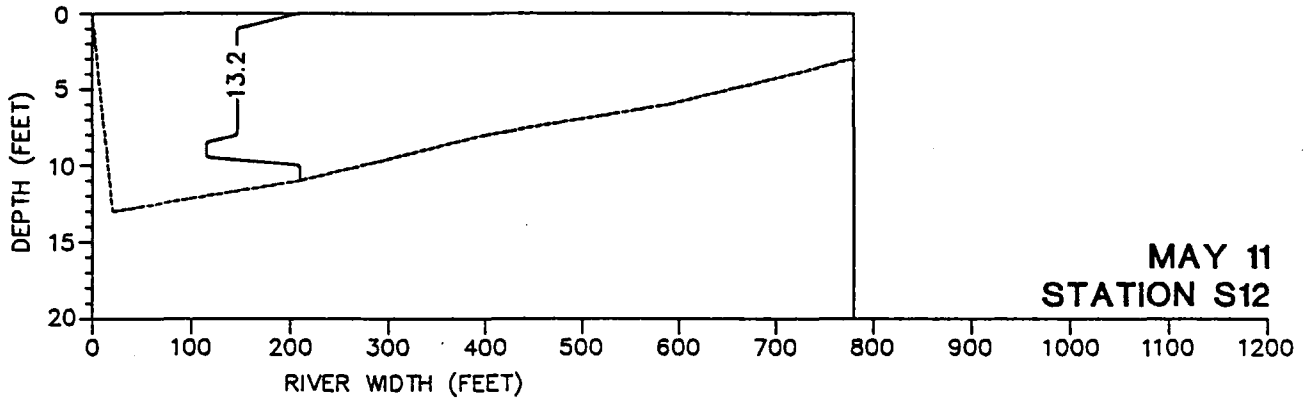
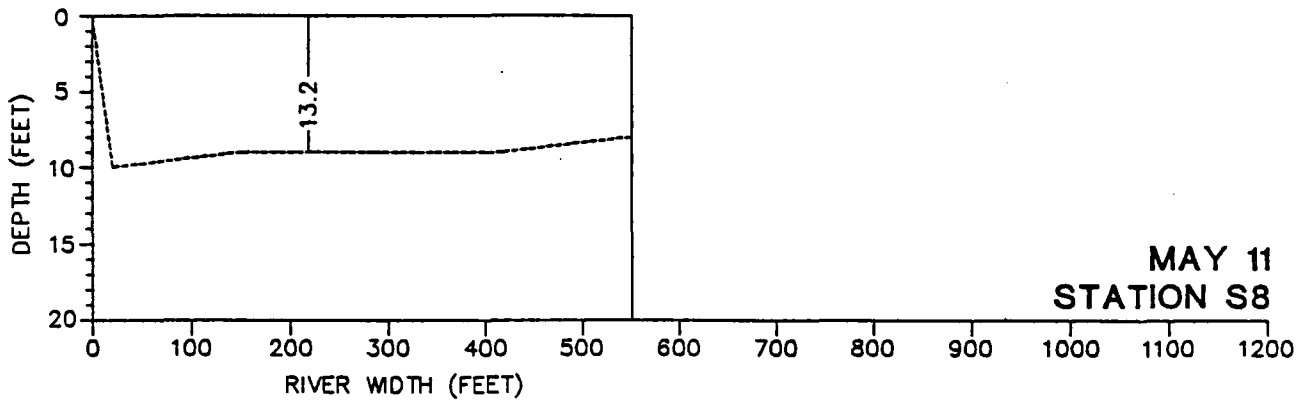
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON MAY 11, 1995

DATE: 3-27-96
FILE NO.: 14395001
SCALE: AS SHOWN

FIGURE

1



One contour line indicates temperature change less than 0.6°C

VERTICAL SCALE: $1''=12.5'$
HORIZONTAL SCALE: $1''=200'$



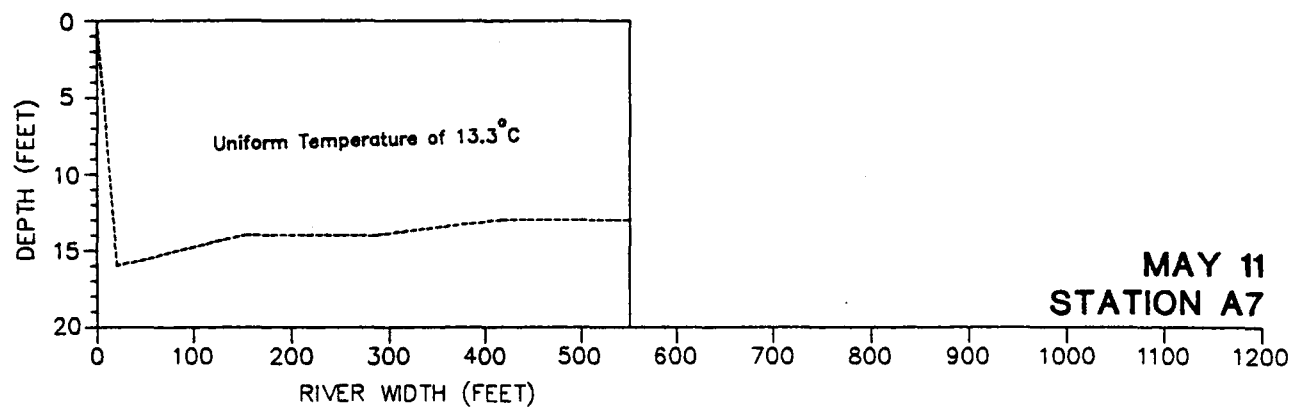
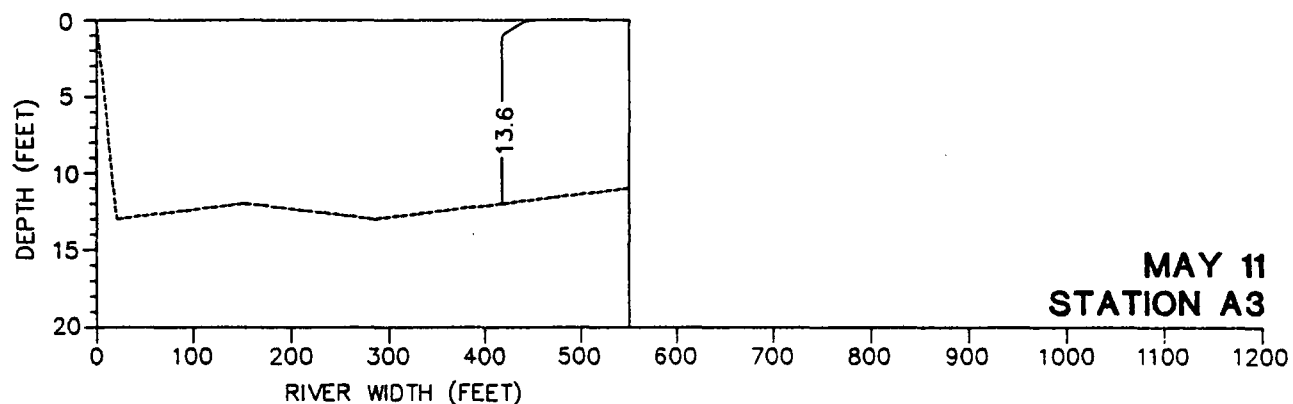
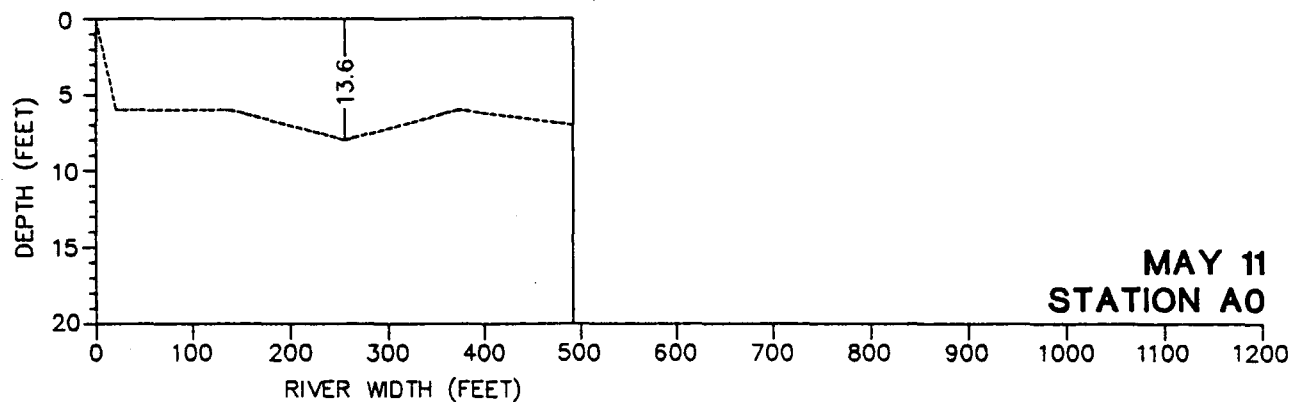
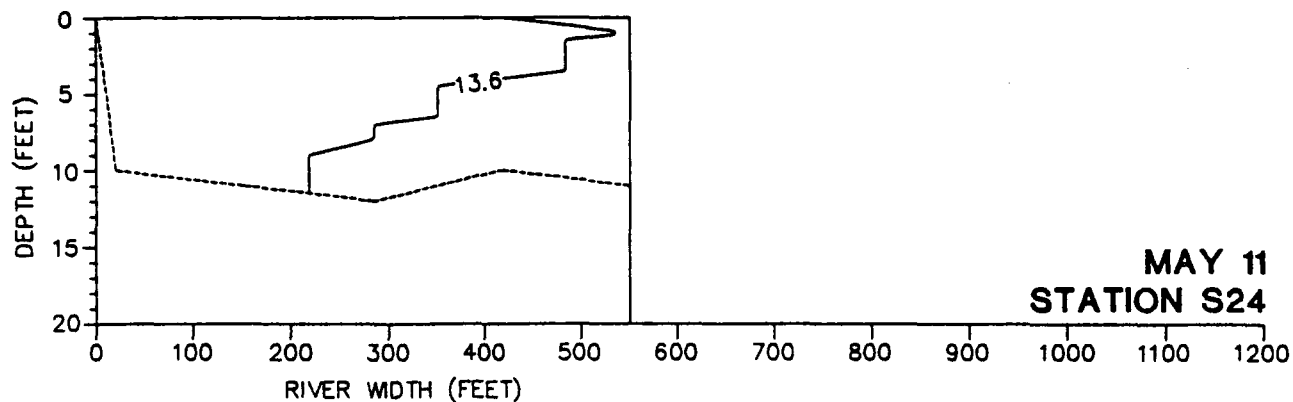
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON MAY 11, 1995

DATE: 3-27-96
FILE NO.: 14395002
SCALE: AS SHOWN

FIGURE

2



One contour line indicates temperature change less than 0.5°C

VERTICAL SCALE: 1" = 2.5'
HORIZONTAL SCALE: 1" = 200'

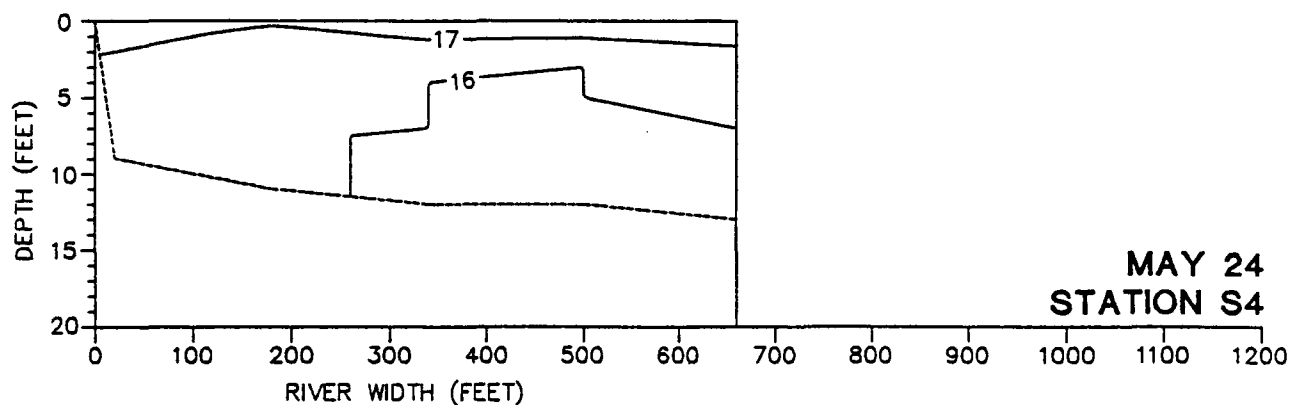
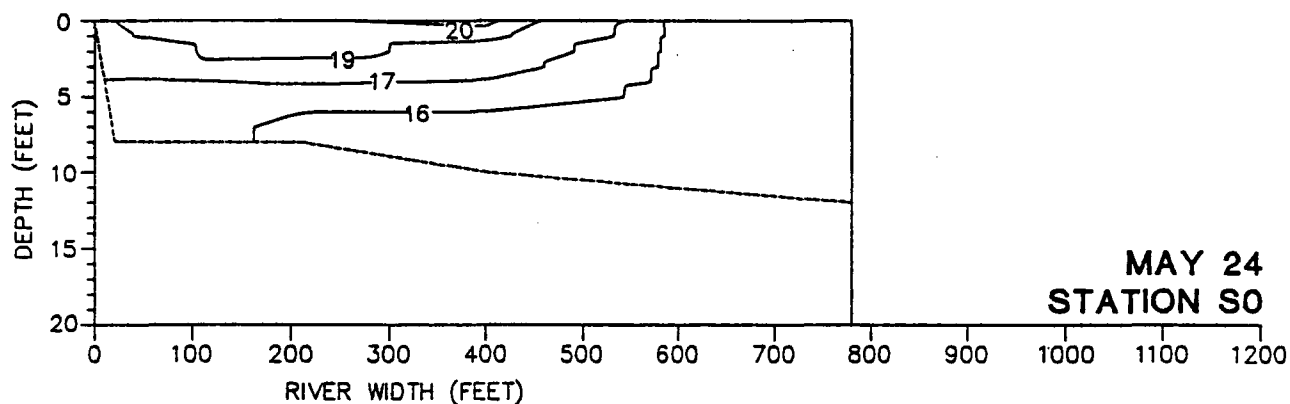
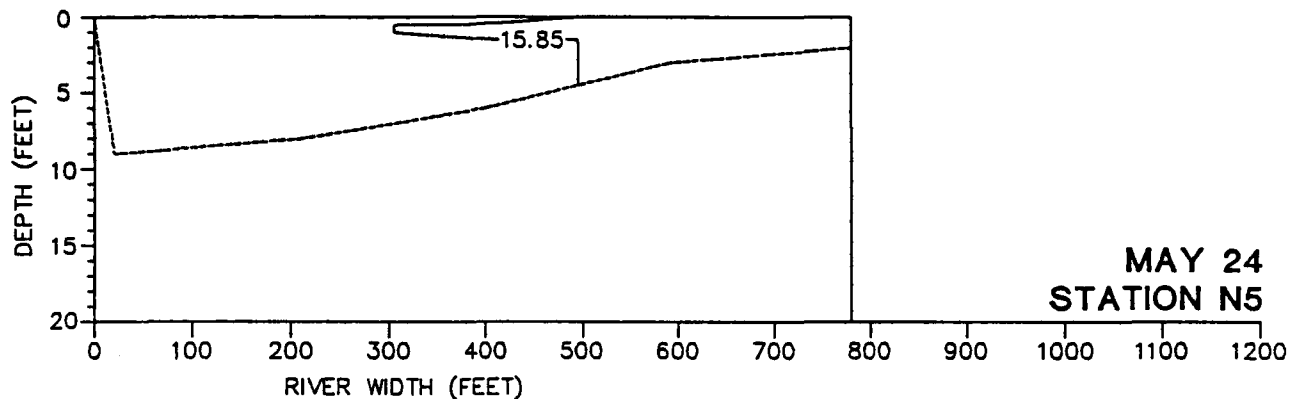
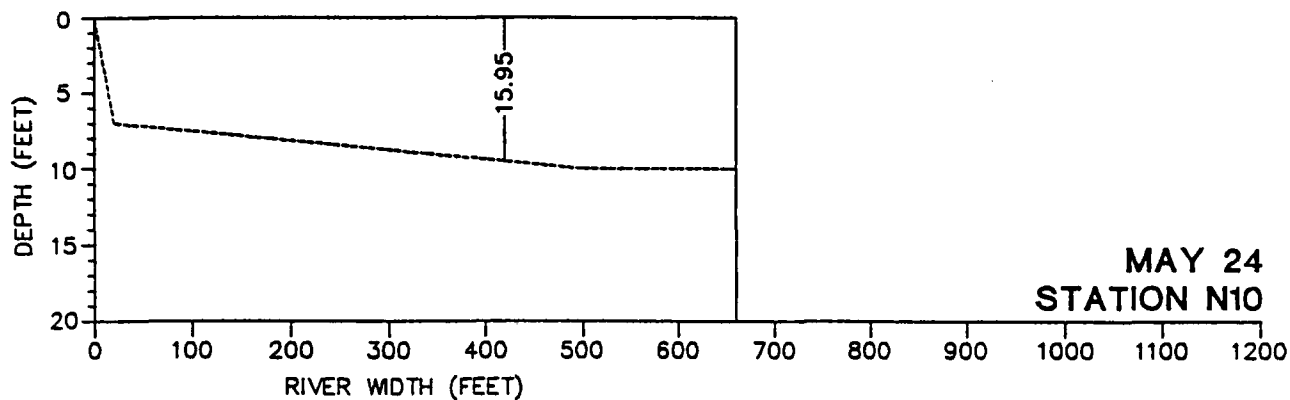


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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON MAY 11, 1995

DATE: 3-27-96
FILE NO.: 14395003
SCALE: AS SHOWN

FIGURE
3



One contour line indicates temperature change less than 0.2°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



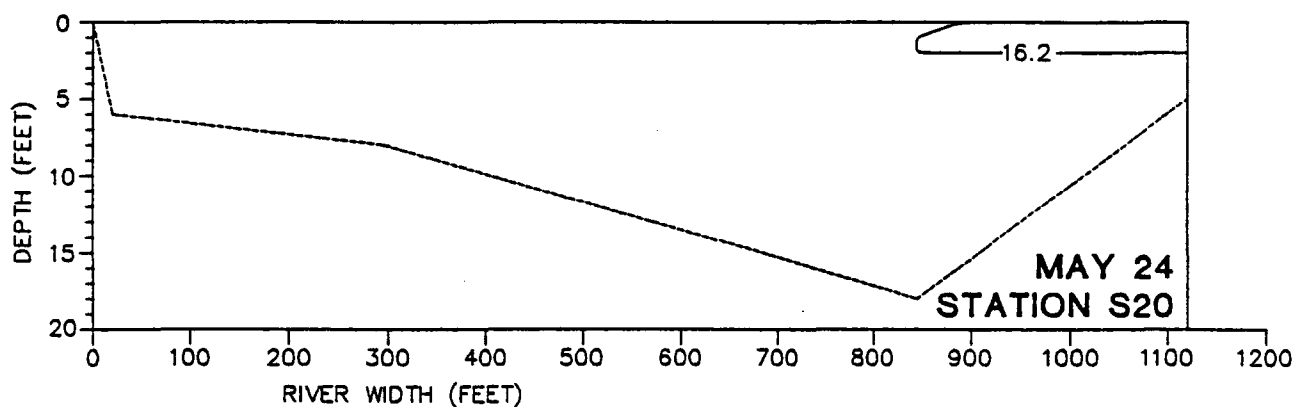
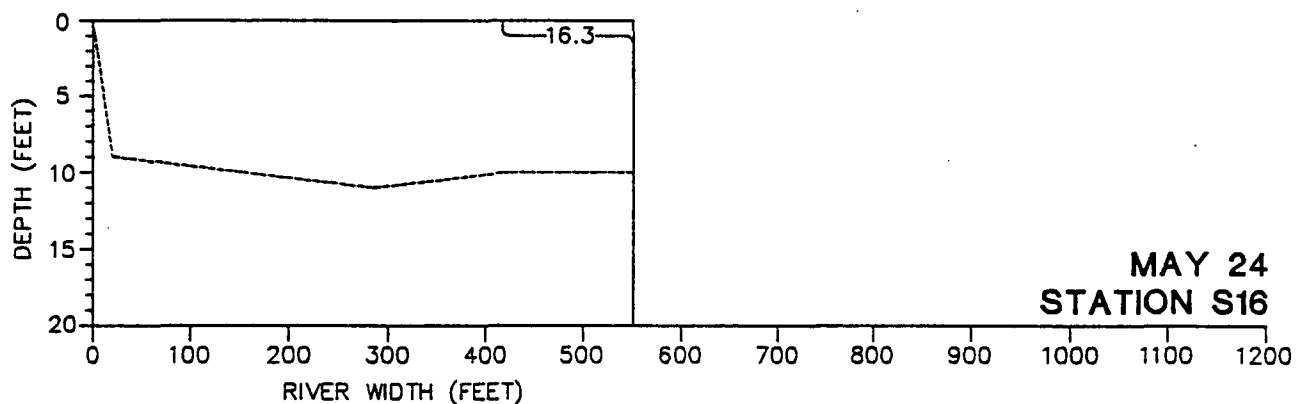
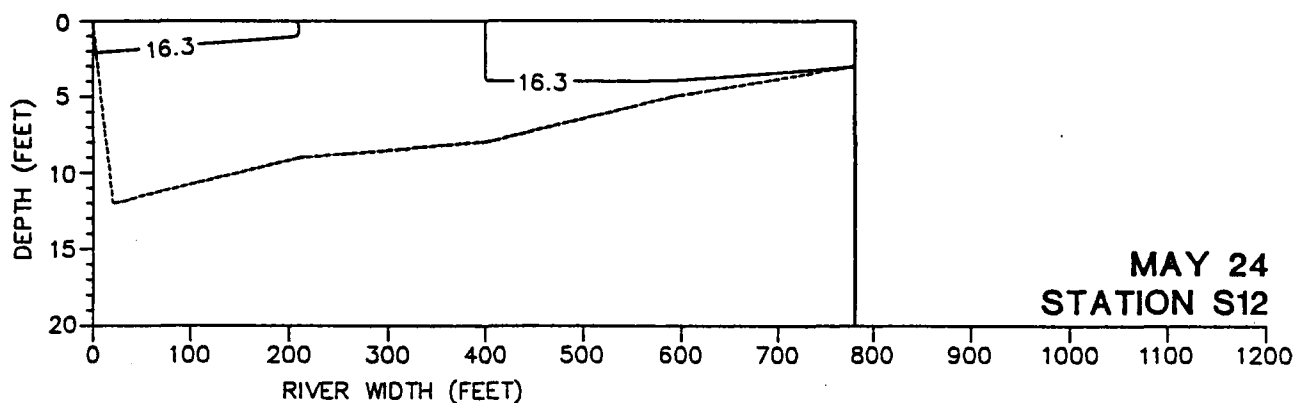
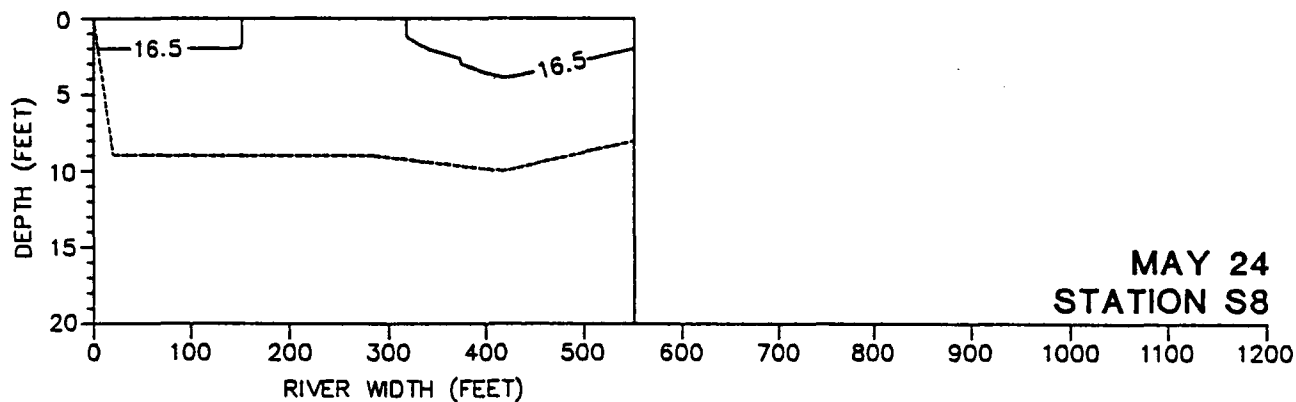
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON MAY 24, 1995

DATE: 3-27-96
FILE NO.: 14395004
SCALE: AS SHOWN

FIGURE

4



One contour line indicates temperature change less than 0.2°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON MAY 24, 1995

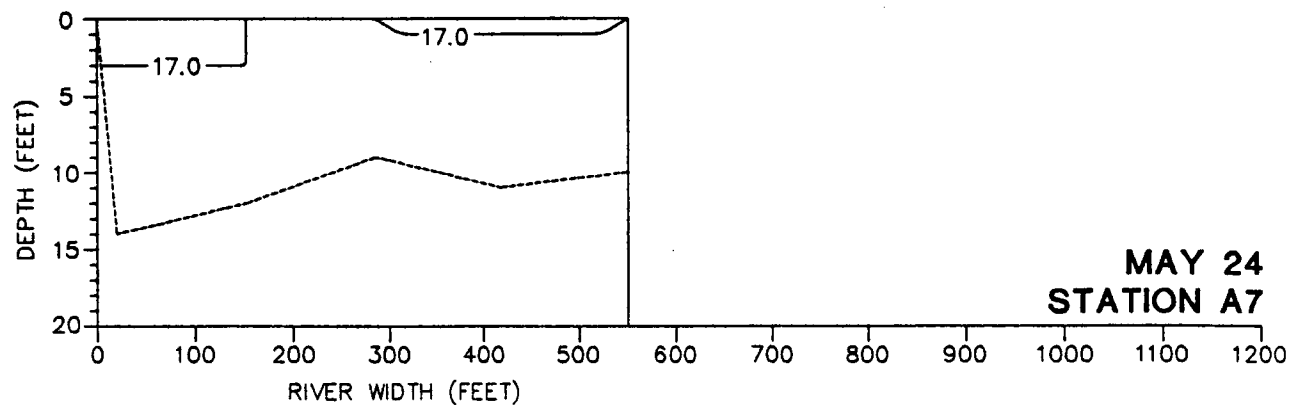
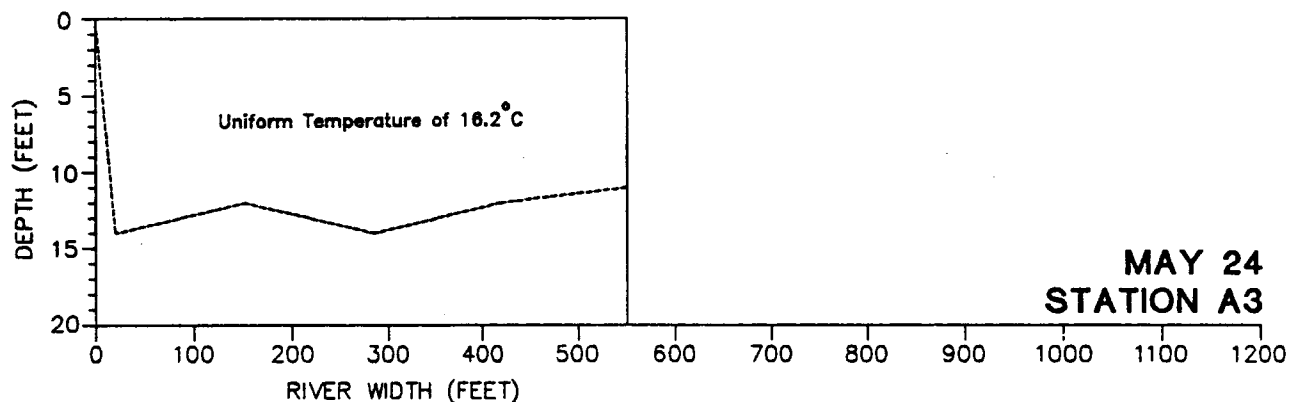
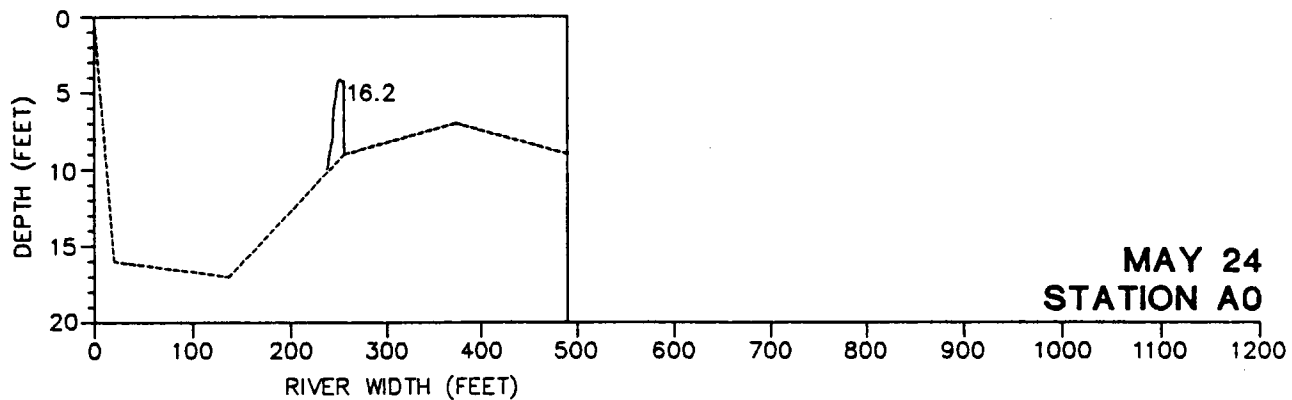
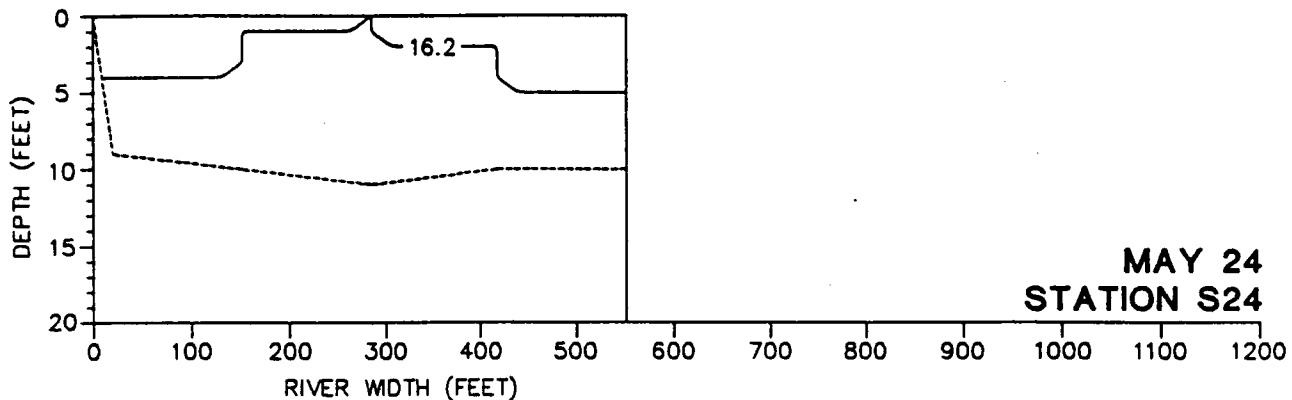
DATE: 3-27-96

FILE NO.: 14395005

SCALE: AS SHOWN

FIGURE

5



One contour line indicates temperature change less than 0.3°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



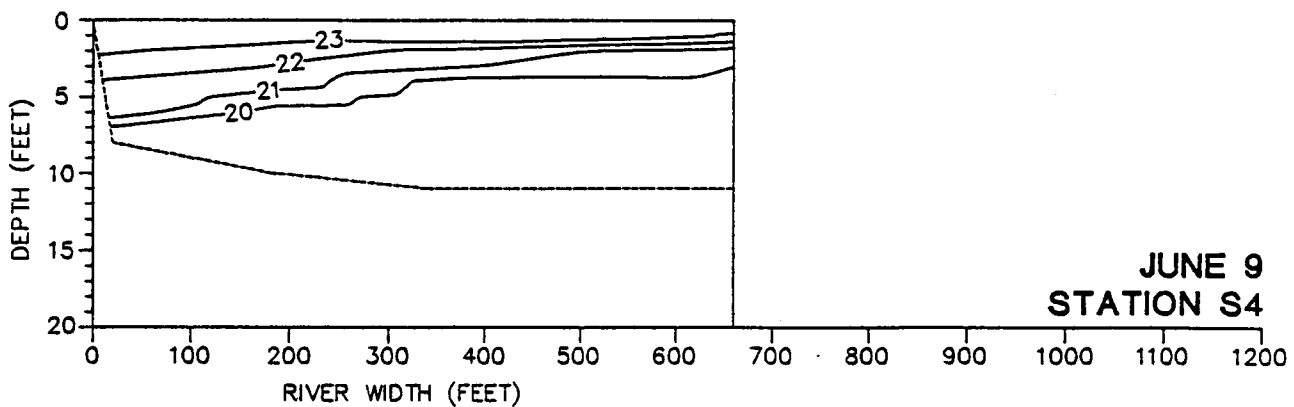
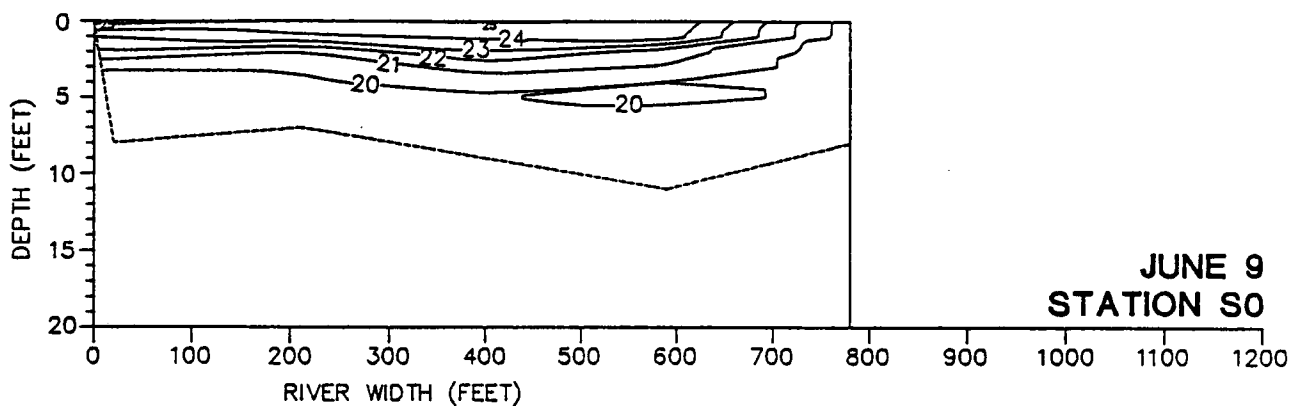
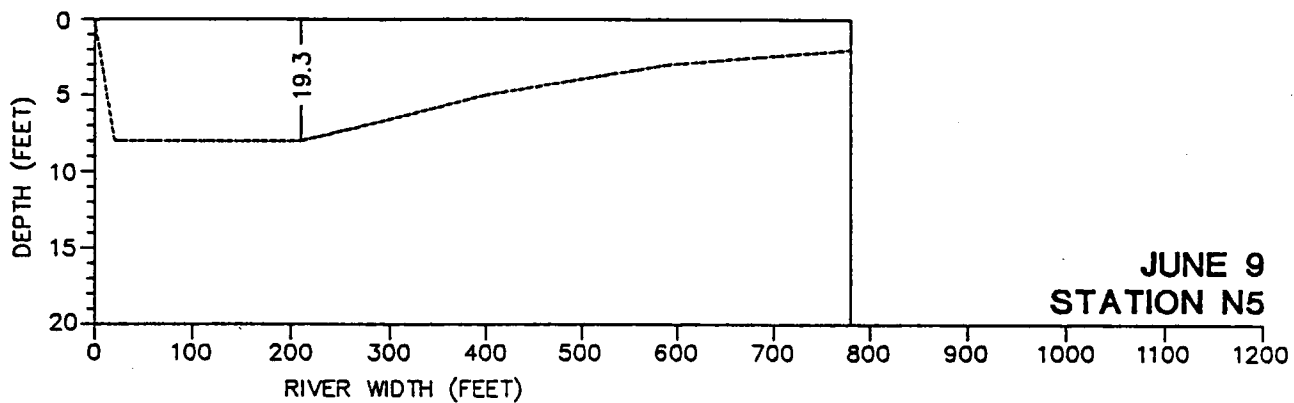
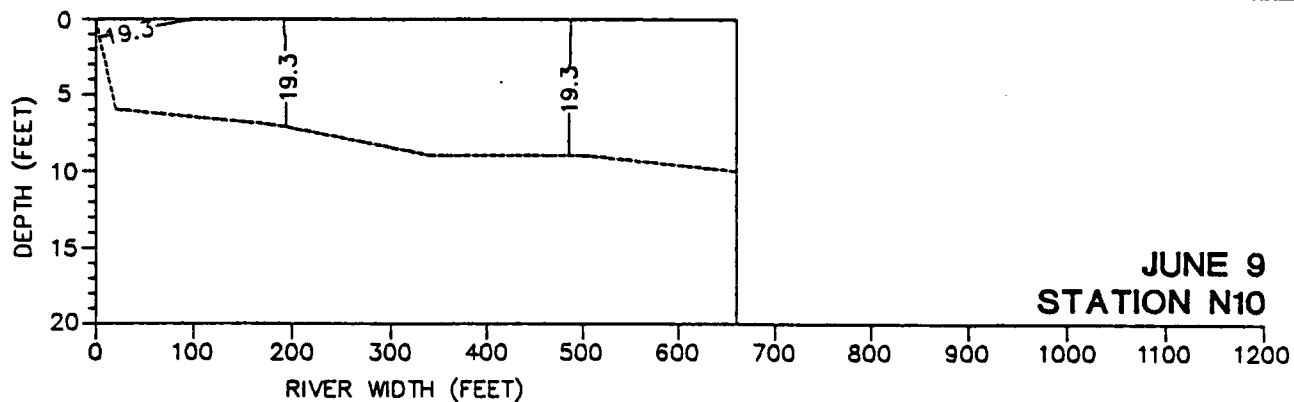
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON MAY 24, 1995

DATE: 3-27-96
FILE NO.: 14395006
SCALE: AS SHOWN

FIGURE

6



One contour line indicates temperature change less than 0.5°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



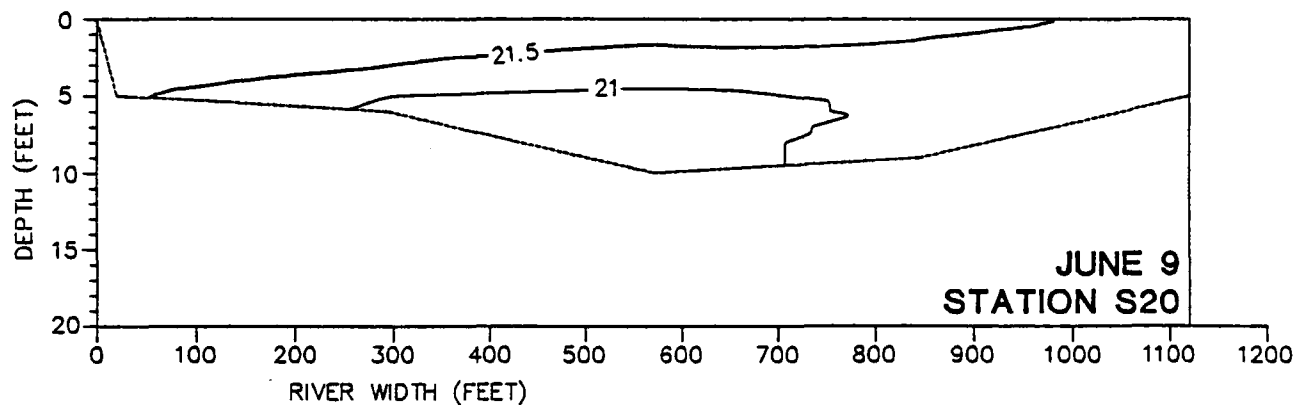
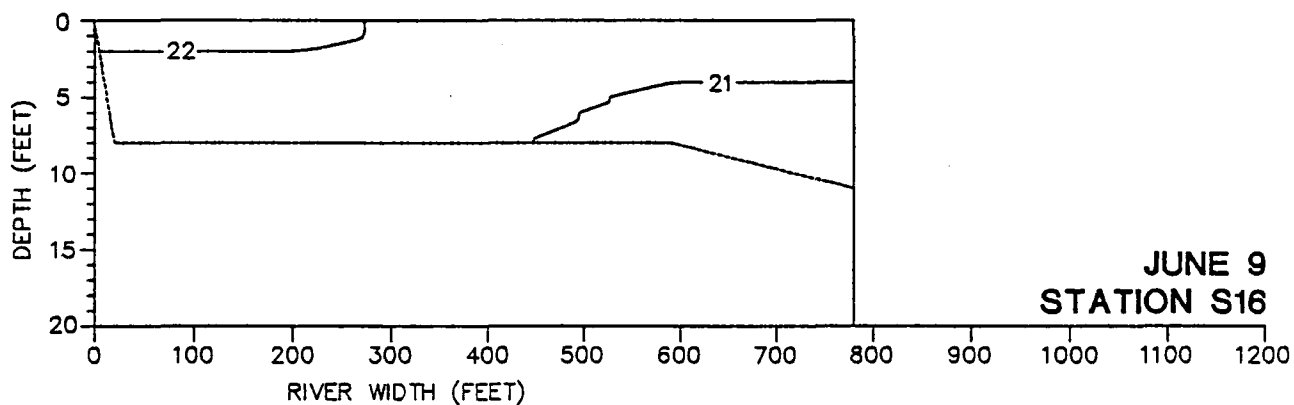
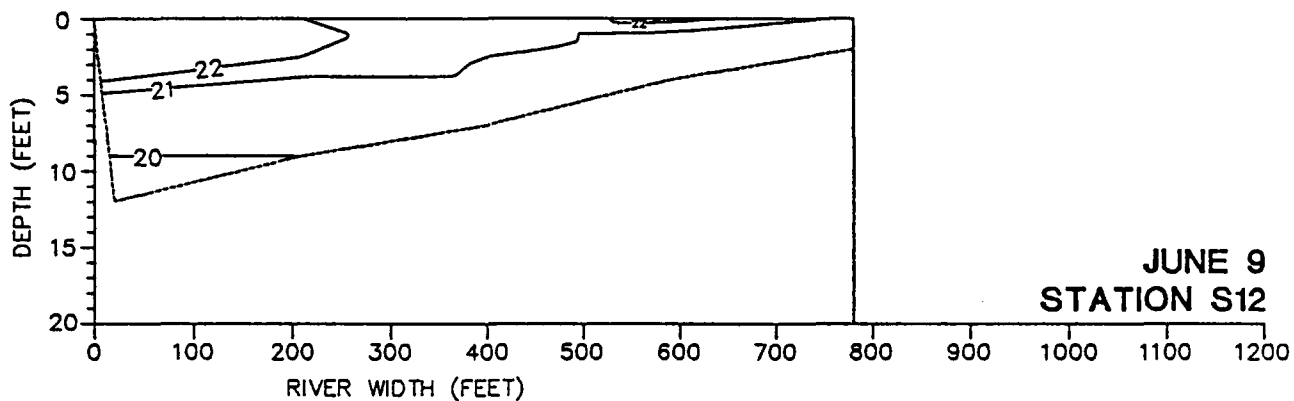
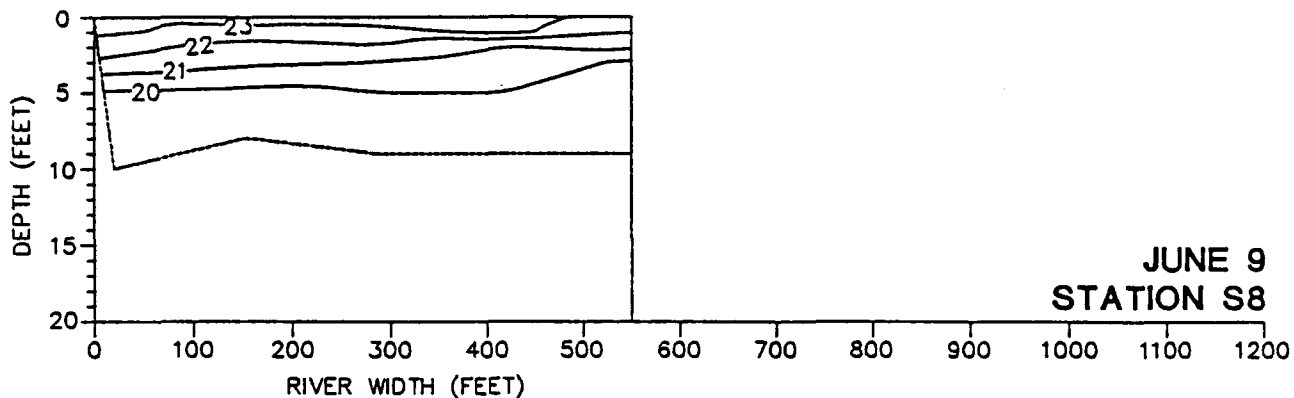
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON JUNE 9, 1995

DATE:	3-27-96
FILE NO.:	14395007
SCALE:	AS SHOWN

FIGURE

7



VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



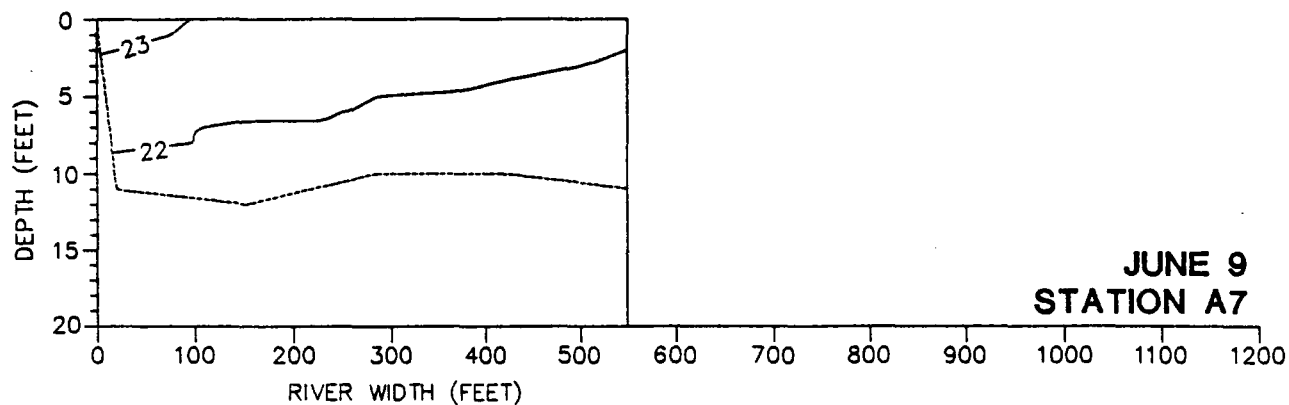
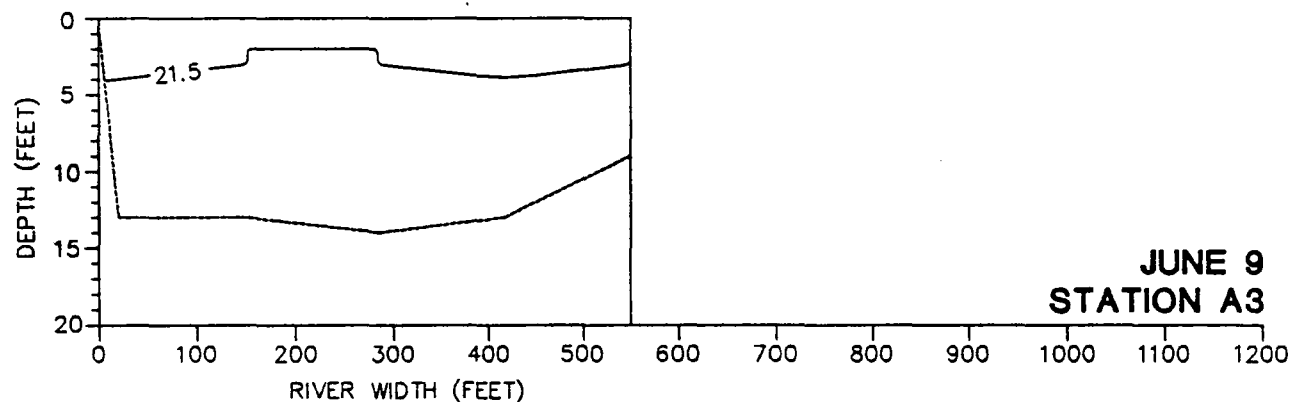
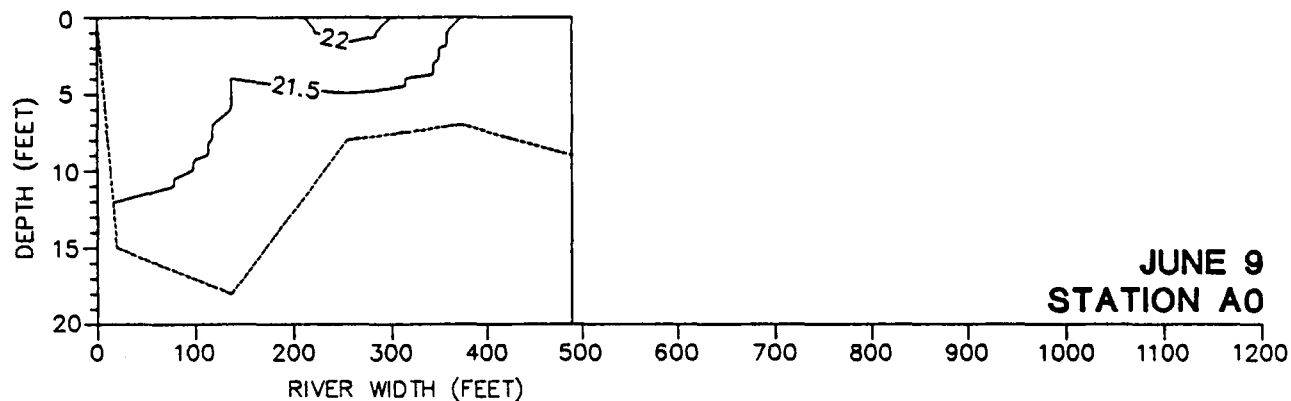
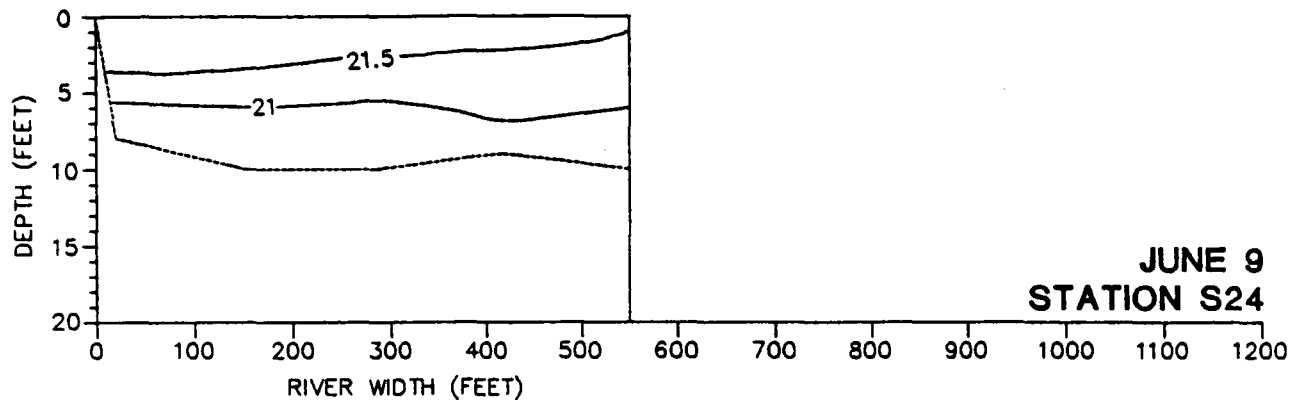
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON JUNE 9, 1995

DATE: 3-27-96
FILE NO.: 14395008
SCALE: AS SHOWN

FIGURE

8



One contour line indicates temperature change less than 0.7°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'

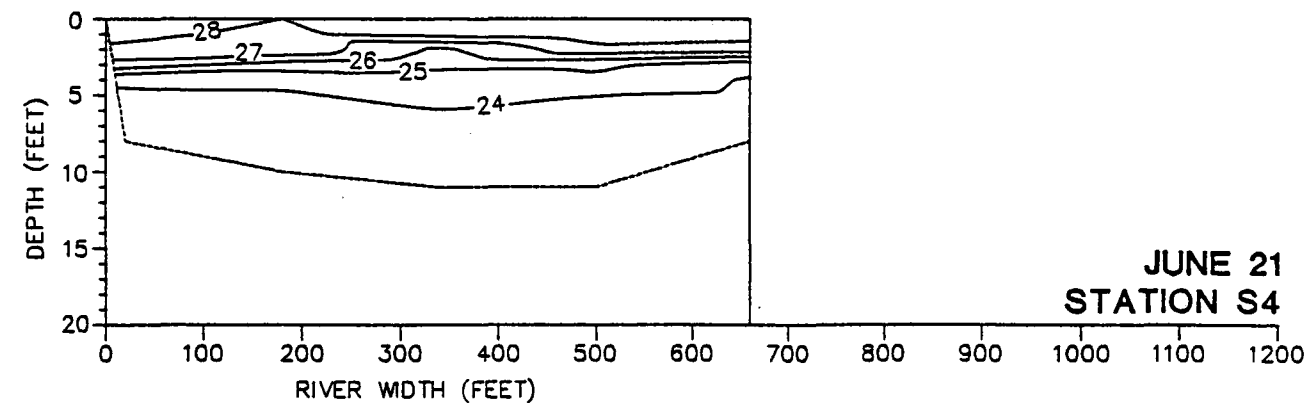
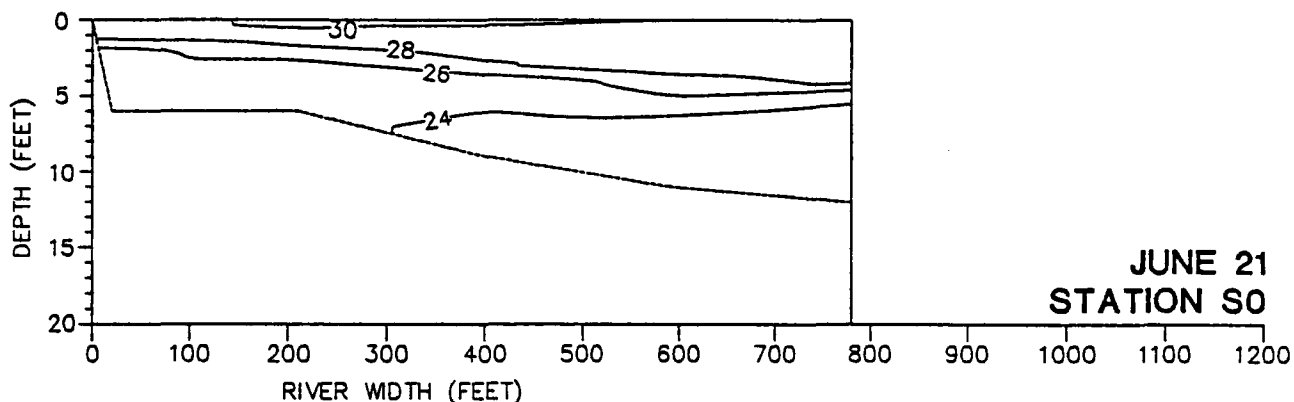
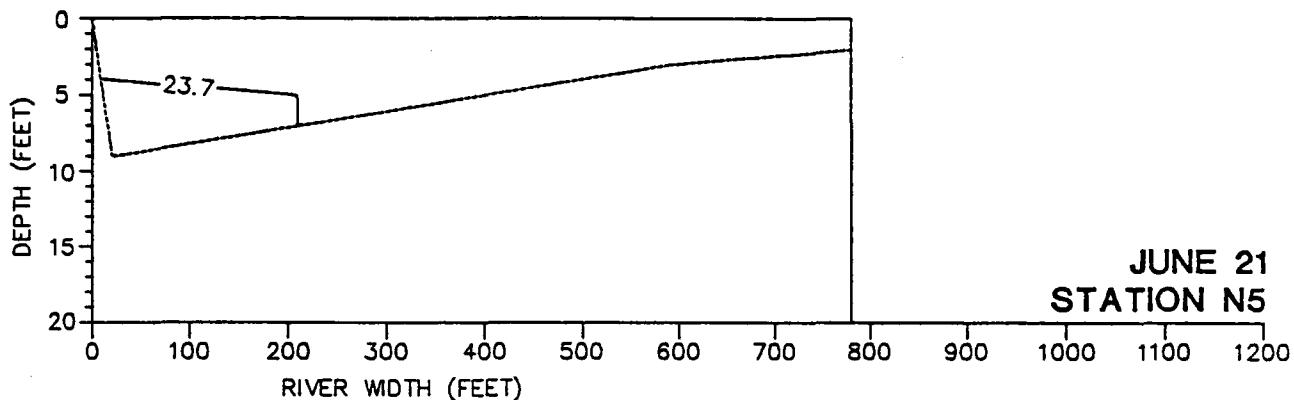
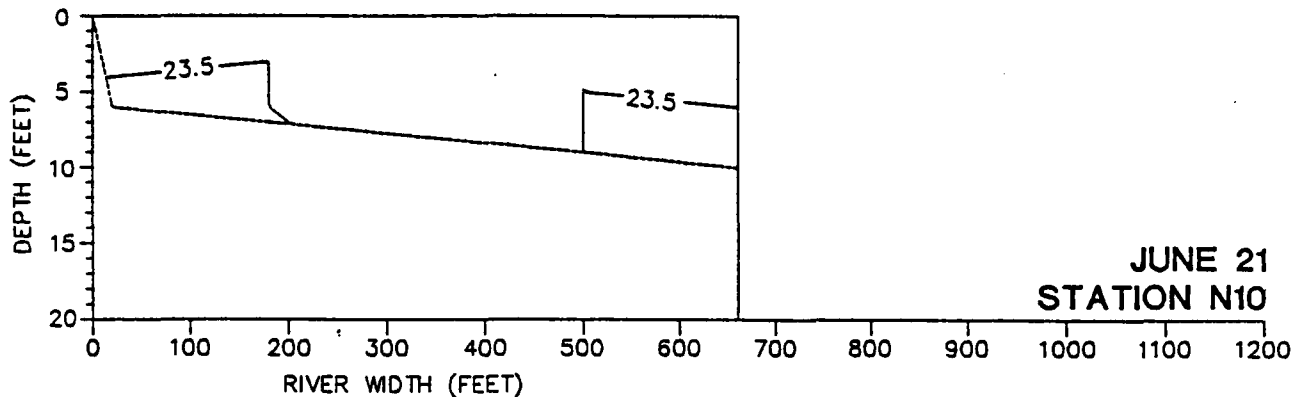


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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON JUNE 9, 1995

DATE: 3-27-96
FILE NO.: 14395009
SCALE: AS SHOWN

9



One contour line indicates temperature change less than 0.7°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'

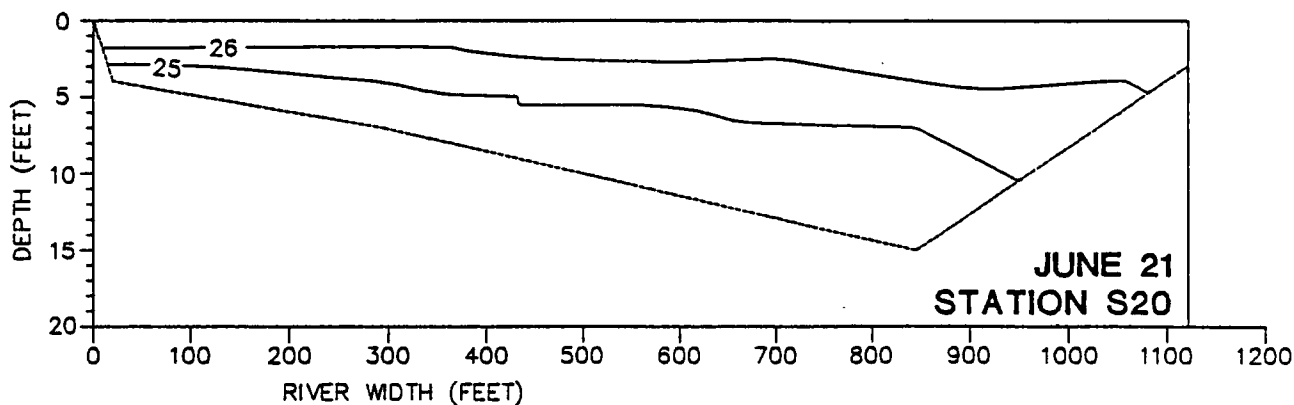
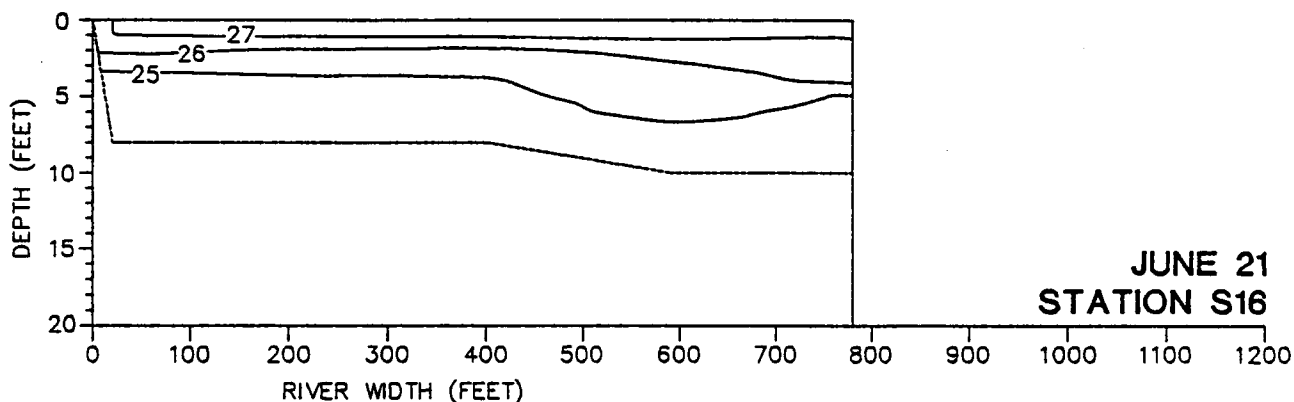
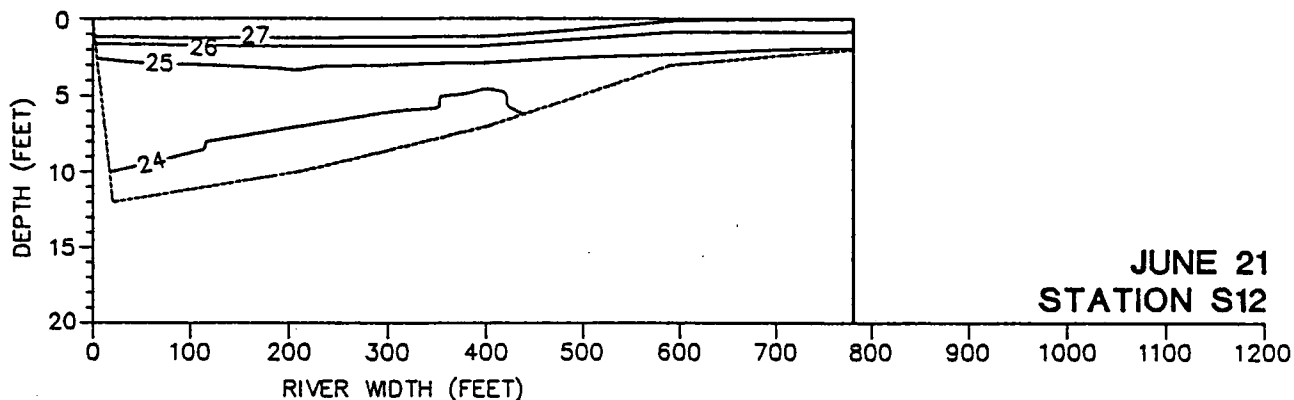
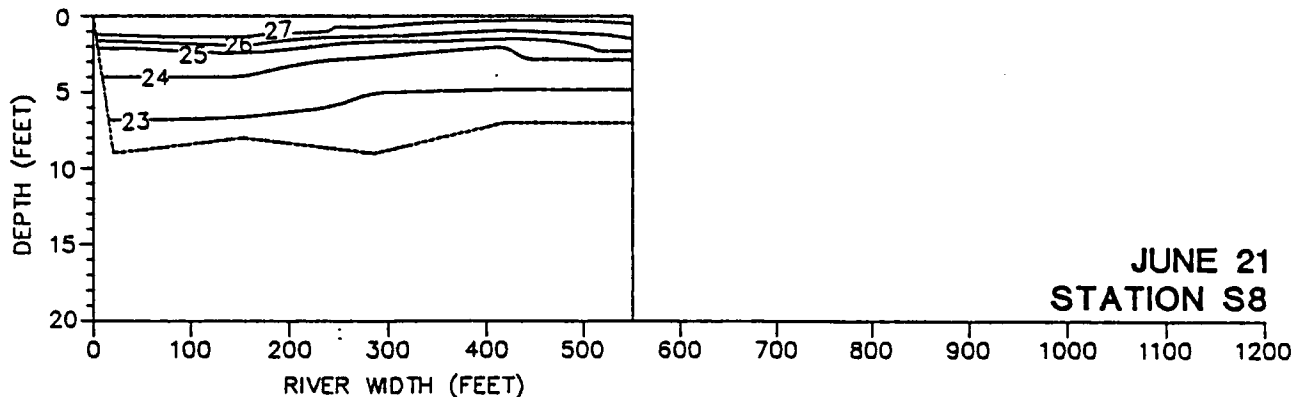


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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON JUNE 21, 1995

DATE: 3-27-96
FILE NO.: 14395010
SCALE: AS SHOWN

FIGURE
10



VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'

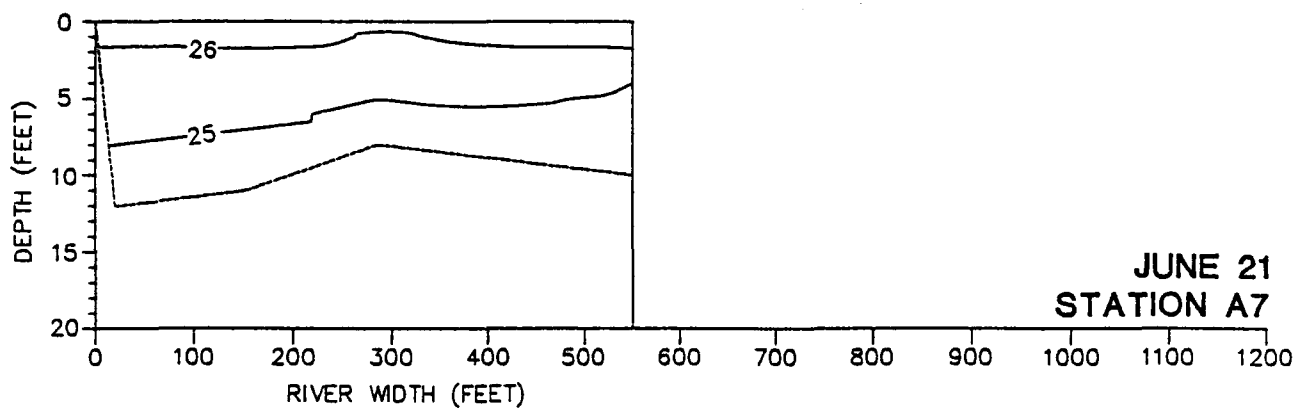
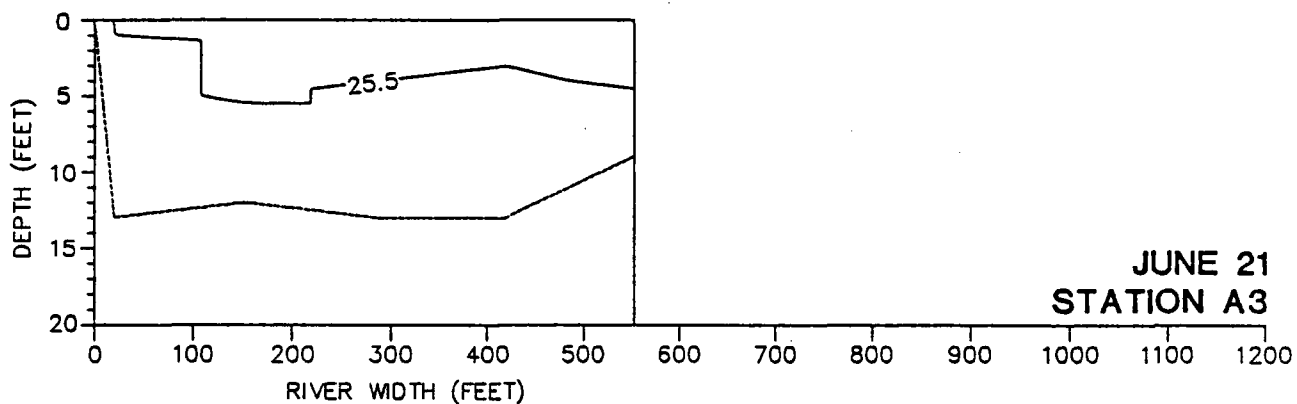
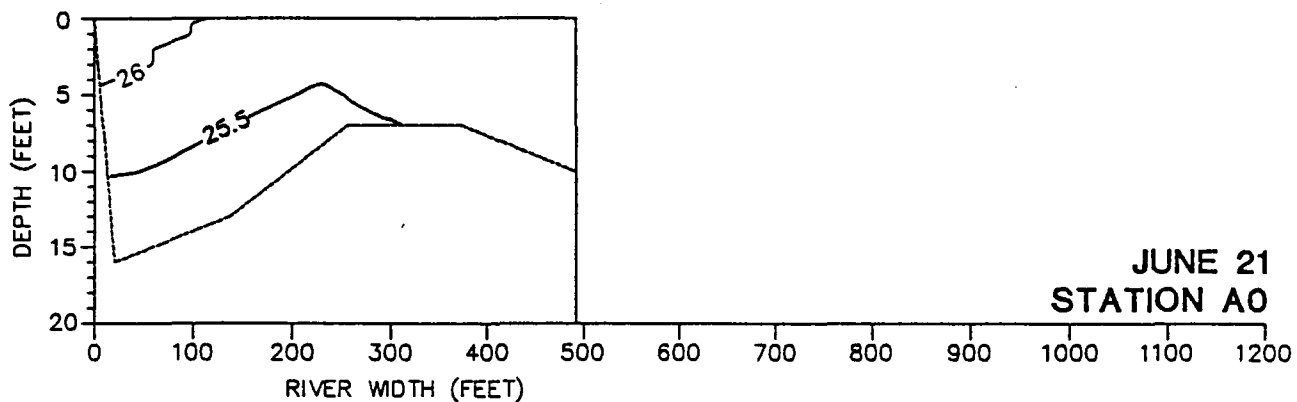
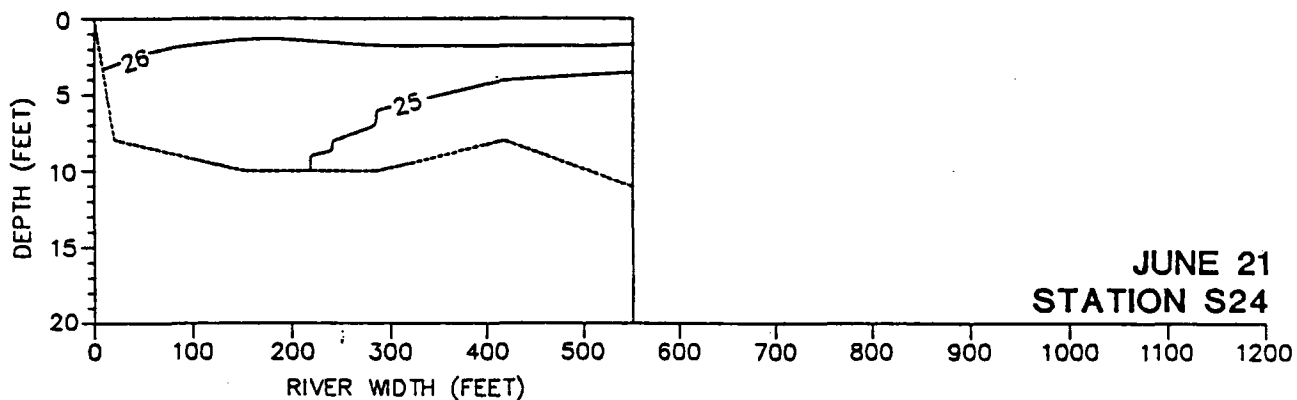


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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON JUNE 21, 1995

DATE: 3-27-96
FILE NO.: 14395011
SCALE: AS SHOWN

11



One contour line indicates temperature change less than 0.9°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



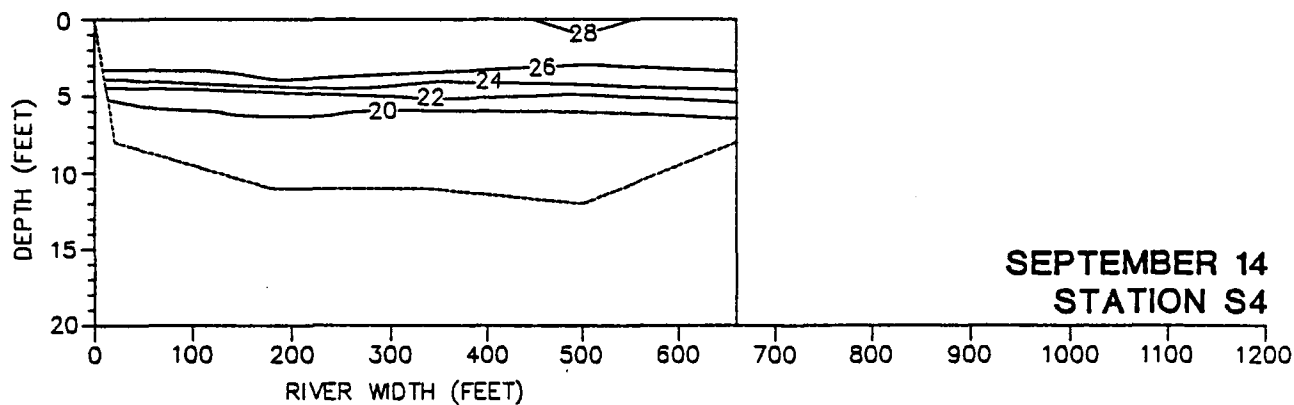
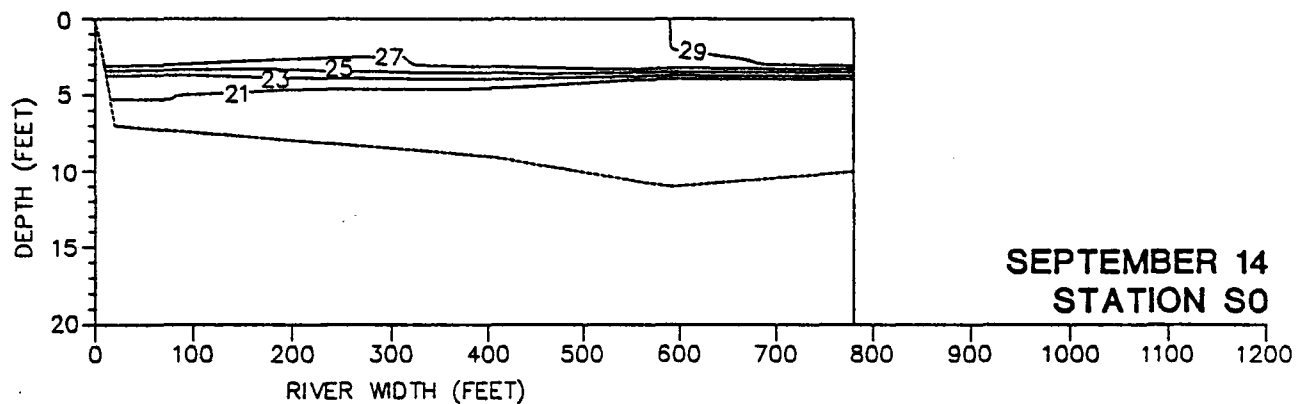
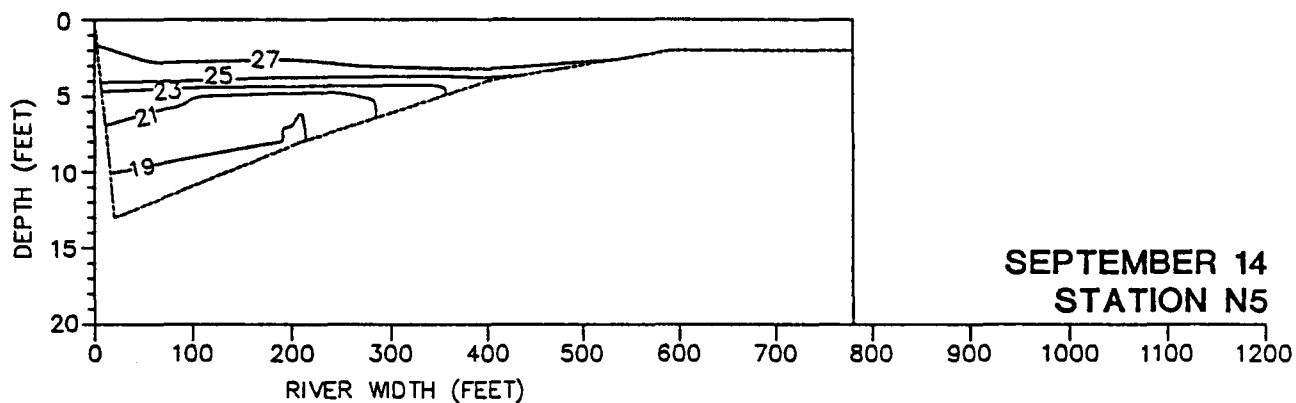
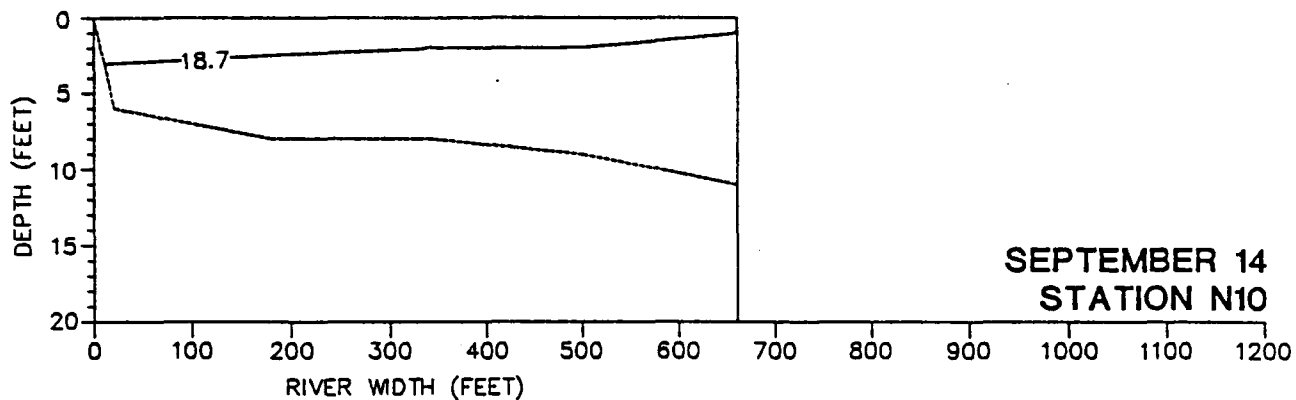
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON JUNE 21, 1995

DATE: 3-27-98
FILE NO.: 14395012
SCALE: AS SHOWN

FIGURE

12



One contour line indicates temperature change less than 0.4°C

VERTICAL SCALE: $1''=12.5'$
HORIZONTAL SCALE: $1''=200'$



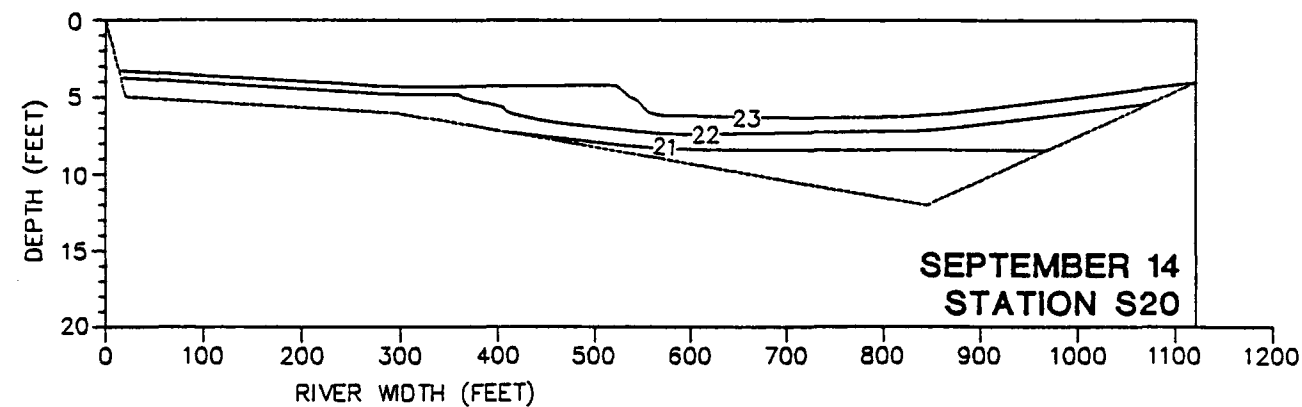
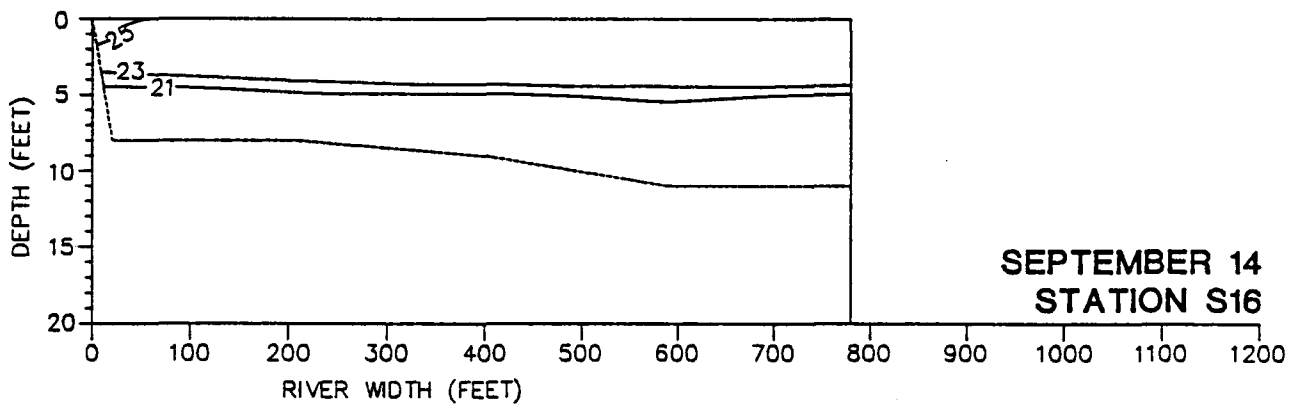
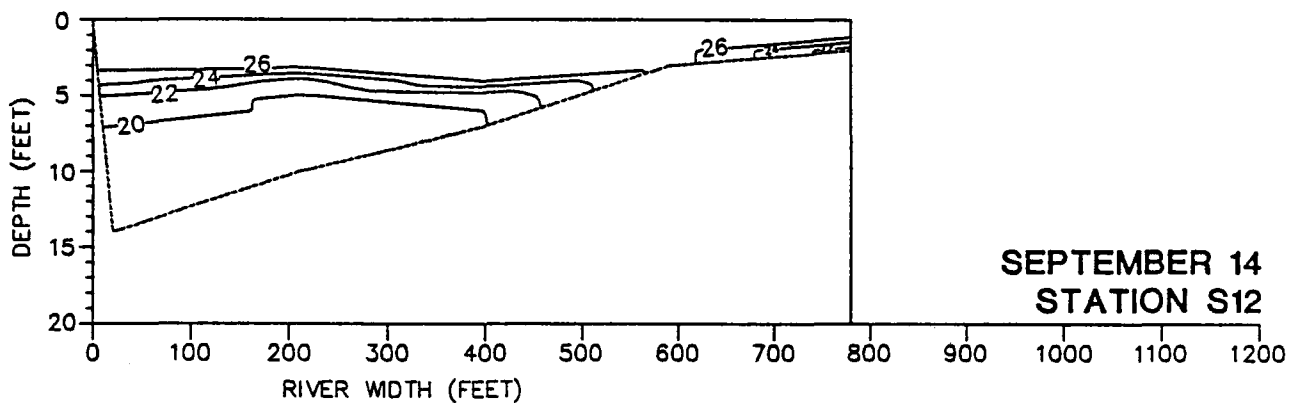
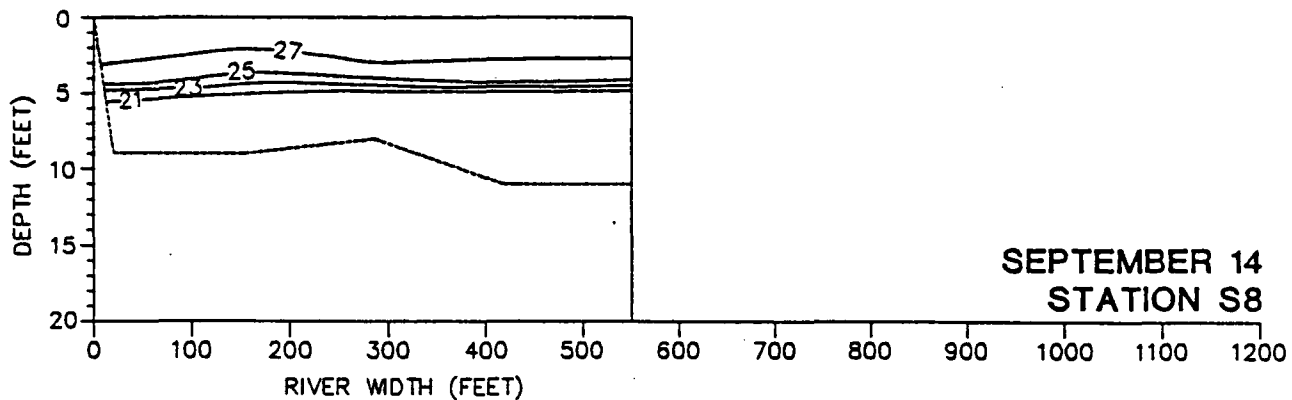
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON SEPTEMBER 14, 1995

DATE: 3-27-96
FILE NO.: 14395013
SCALE: AS SHOWN

FIGURE

13



VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



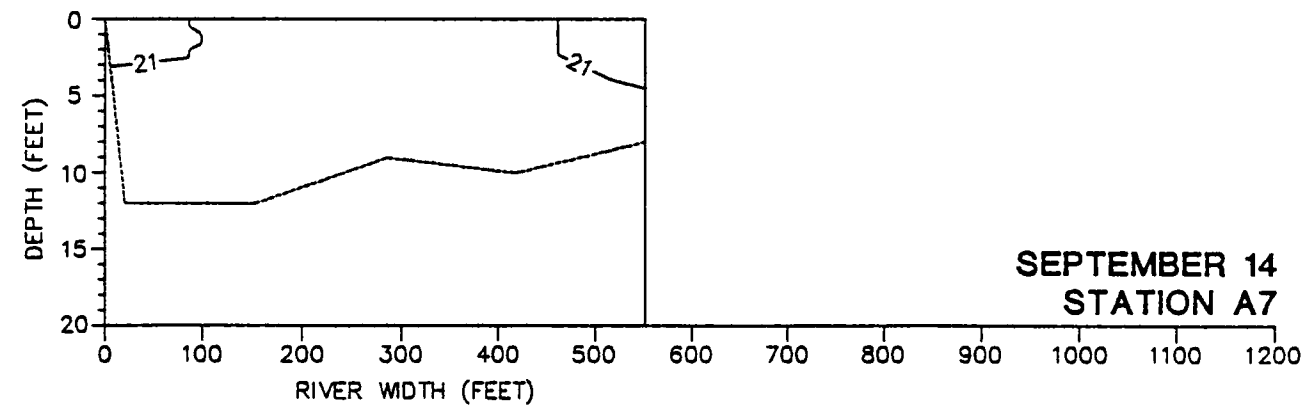
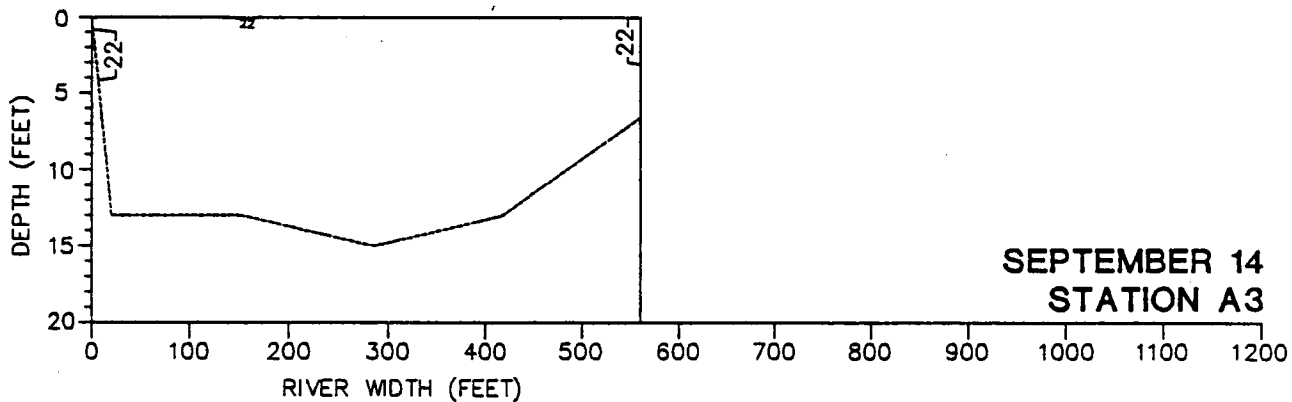
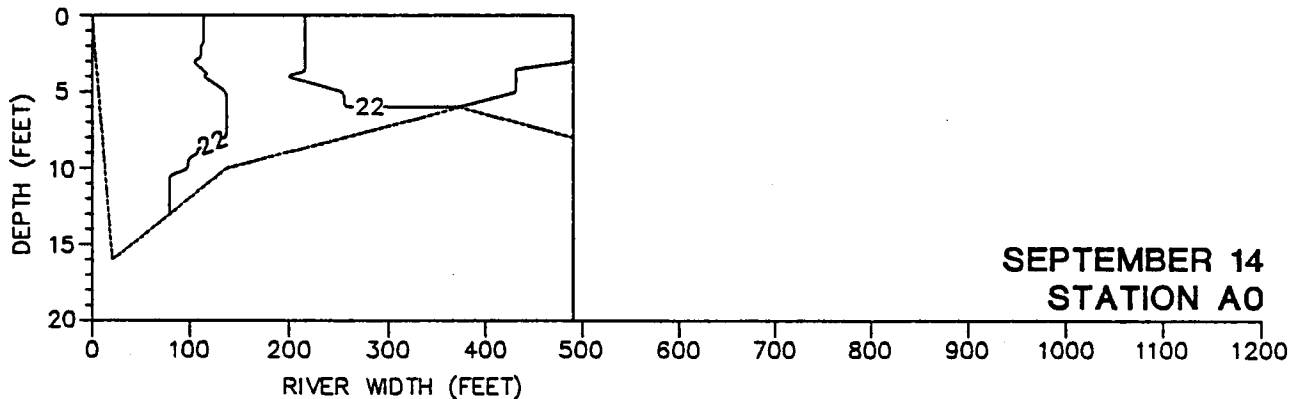
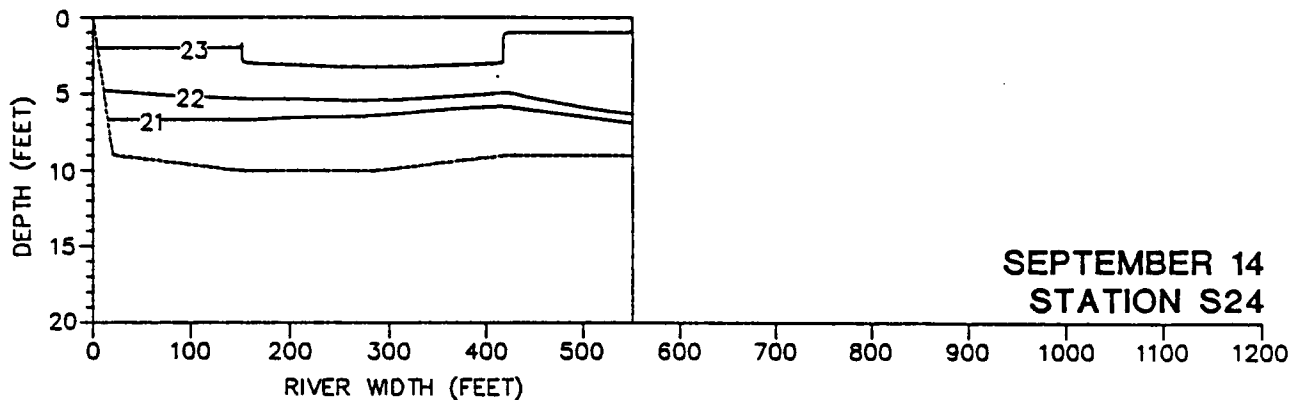
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON SEPTEMBER 14, 1995

DATE: 3-27-96
FILE NO.: 14395014
SCALE: AS SHOWN

FIGURE

14



One contour line indicates temperature change of 1.0°C or less

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



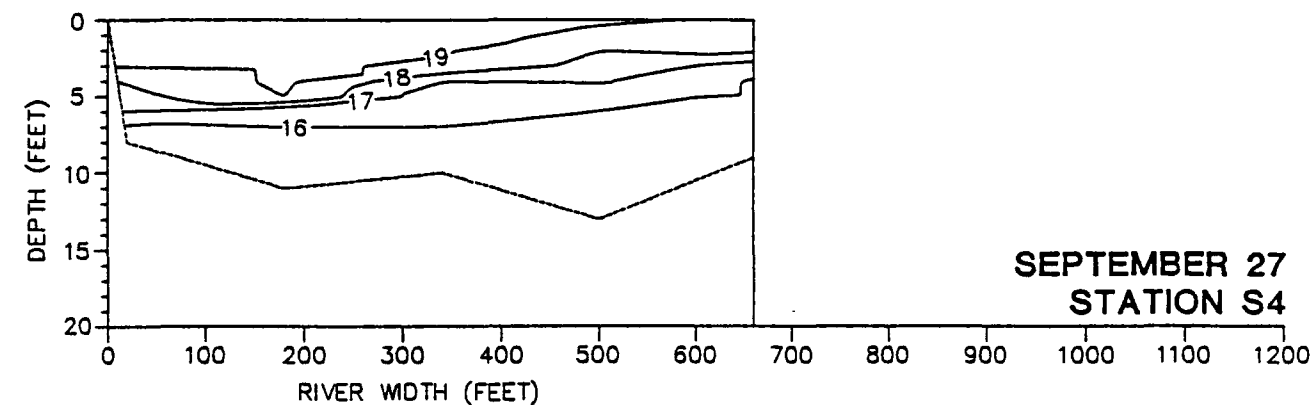
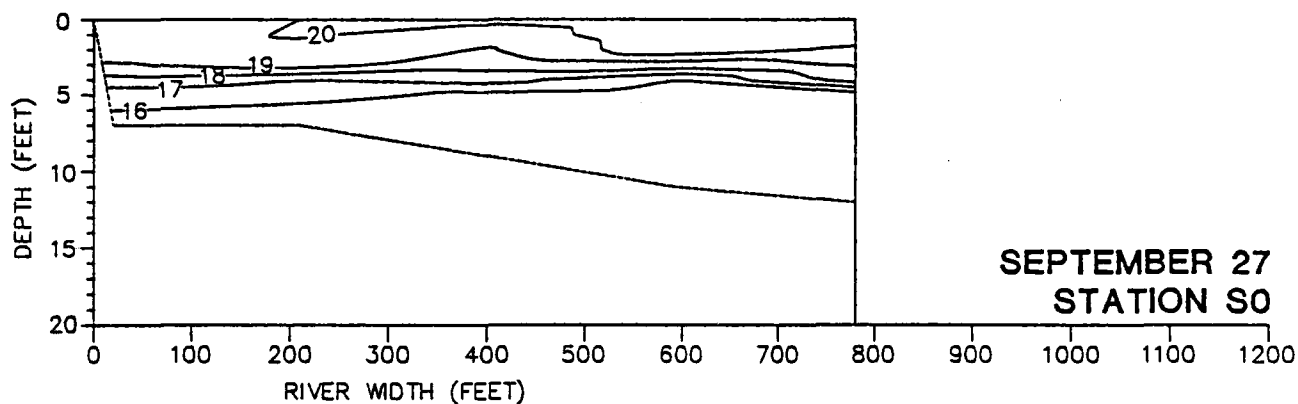
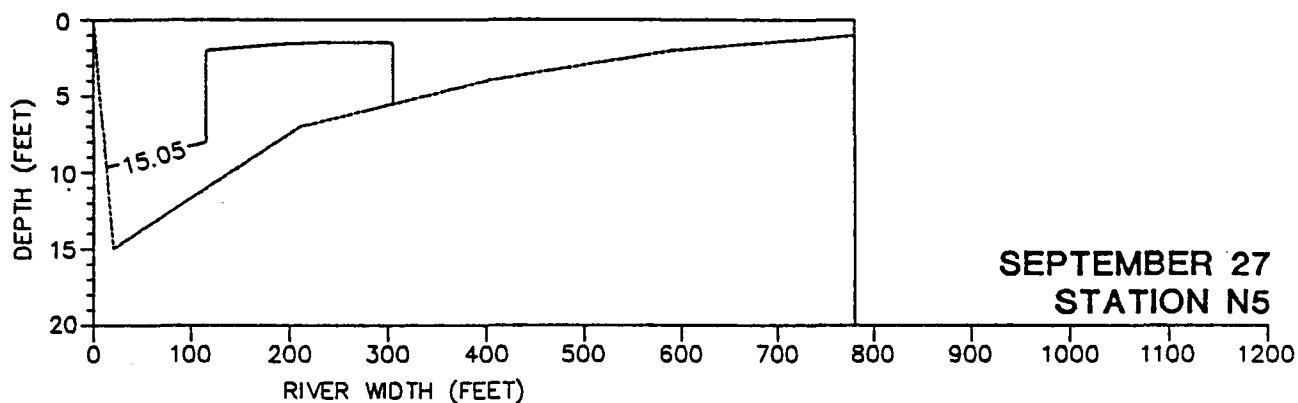
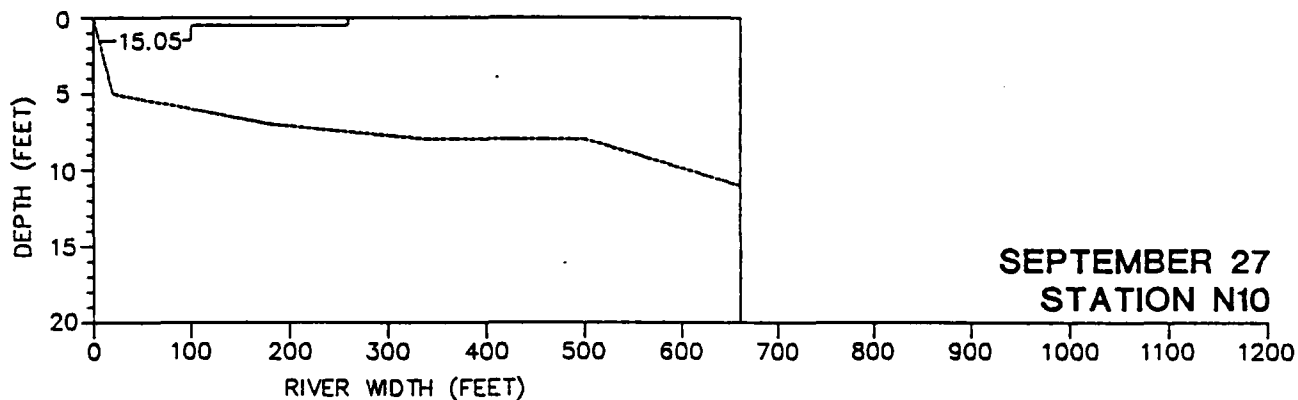
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON SEPTEMBER 14, 1995

DATE: 3-27-96
FILE NO.: 14395015
SCALE: AS SHOWN

FIGURE

15



One contour line indicates temperature change less than 0.2°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



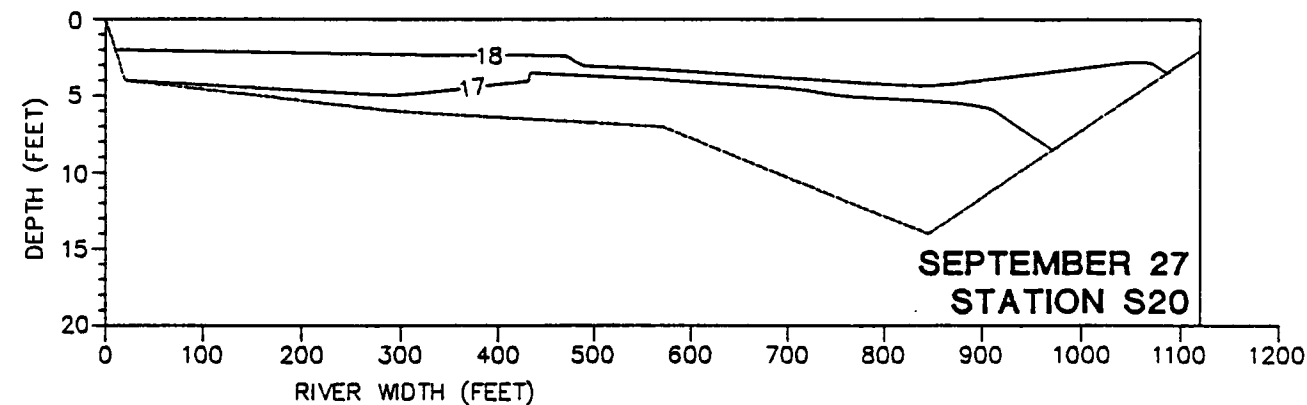
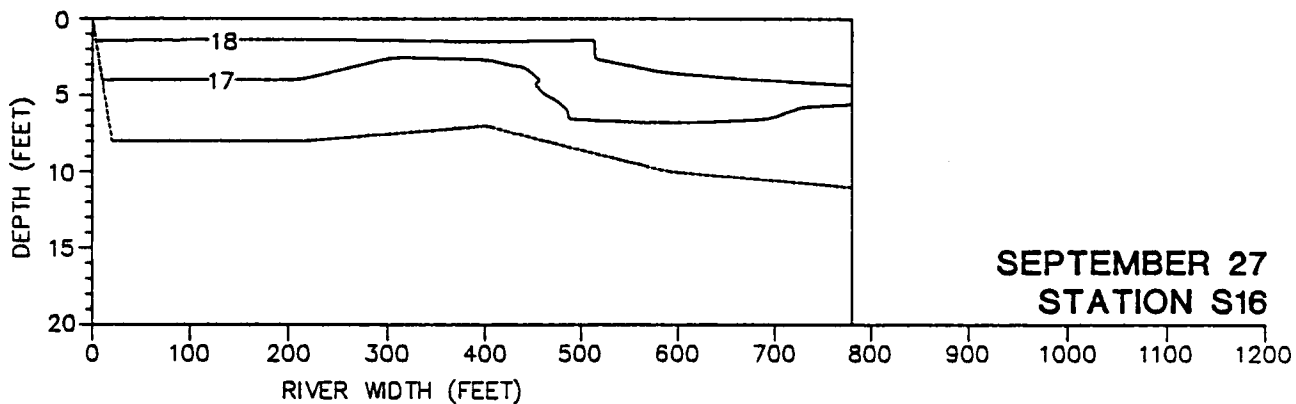
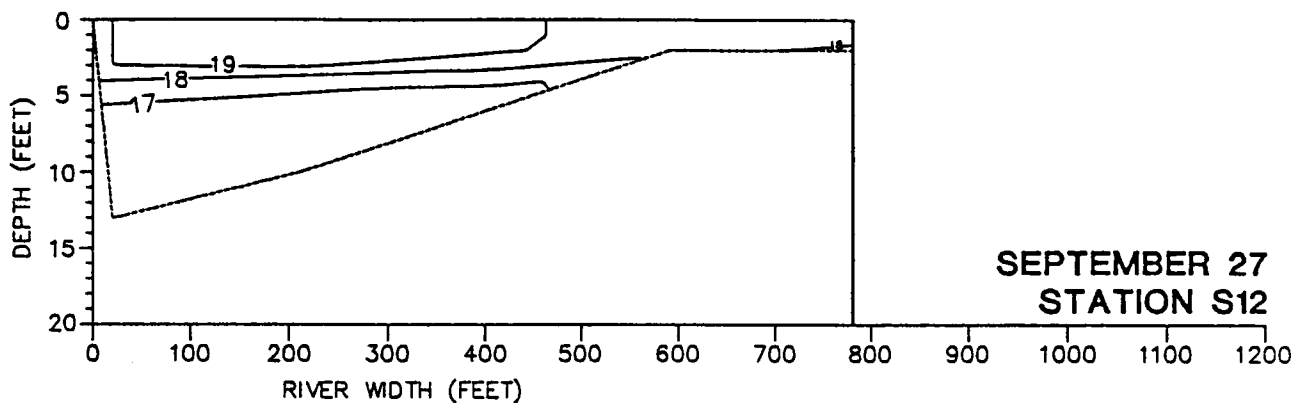
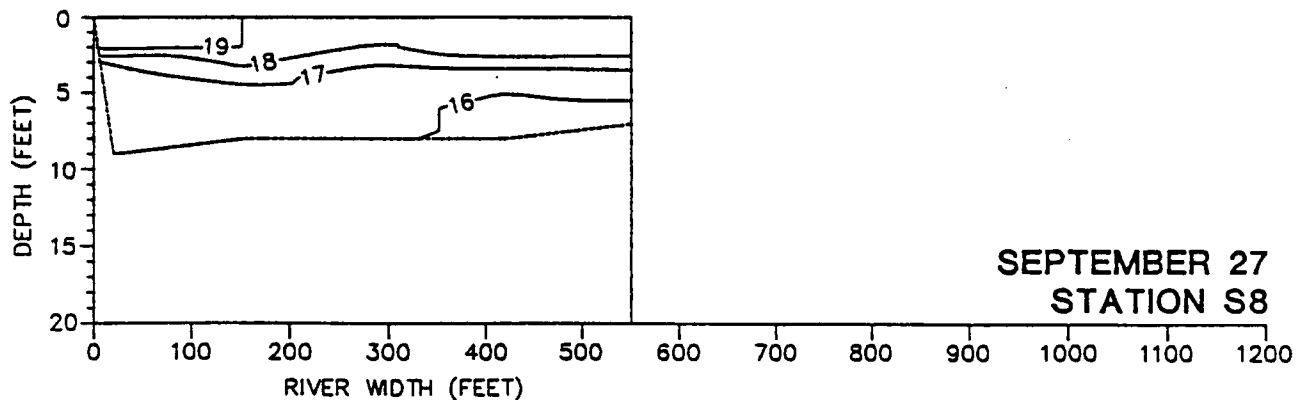
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON SEPTEMBER 27, 1995

DATE: 3-27-96
FILE NO.: 14395016
SCALE: AS SHOWN

FIGURE

16



VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



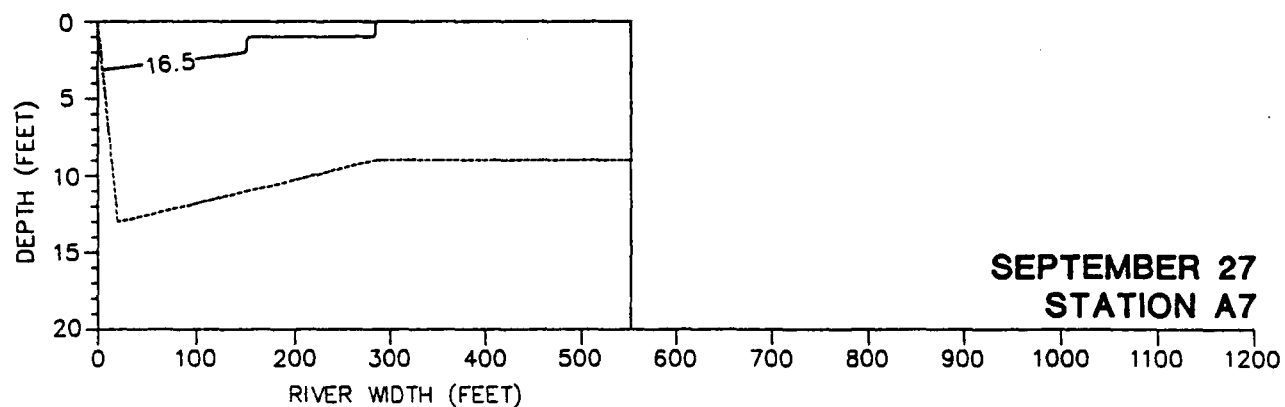
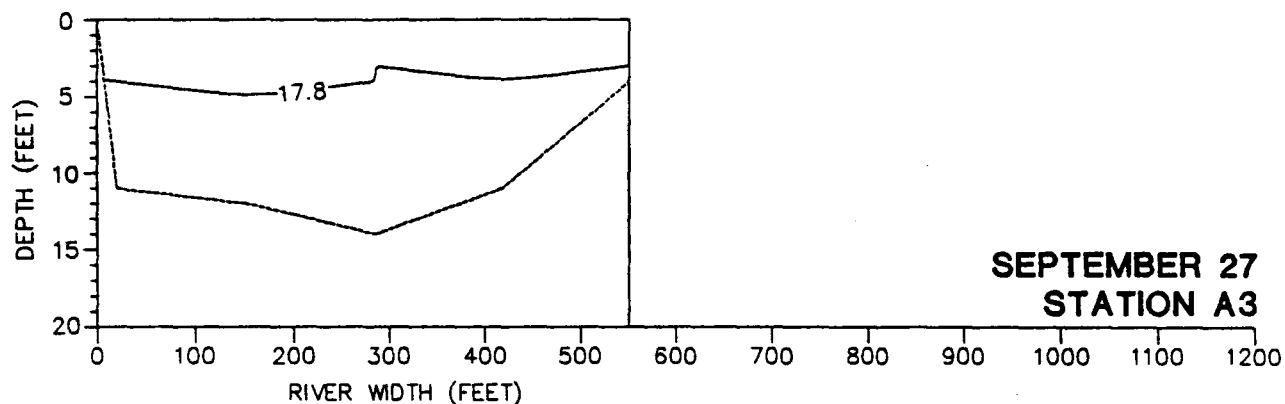
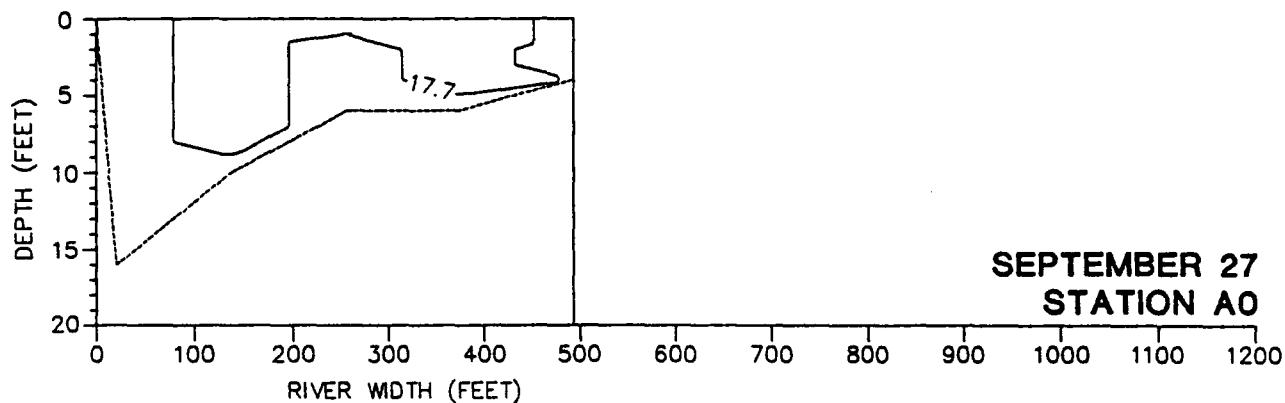
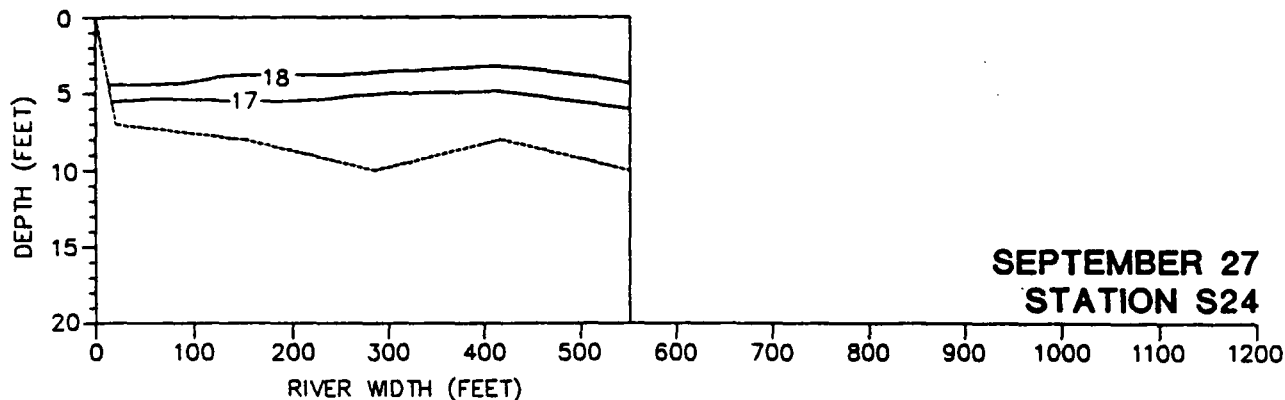
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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON SEPTEMBER 27, 1995

DATE: 3-27-96
FILE NO.: 14395017
SCALE: AS SHOWN

FIGURE

17



One contour line indicates temperature change less than 0.9°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



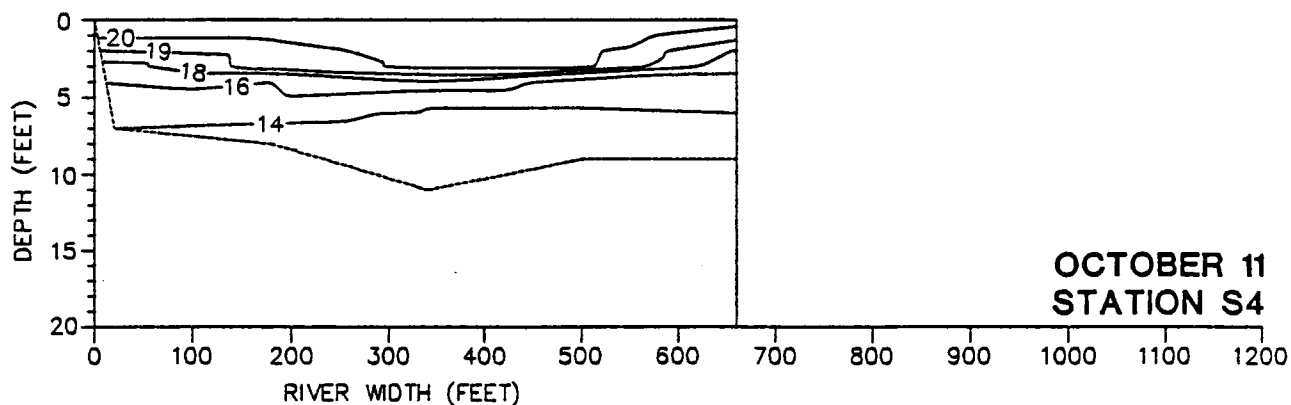
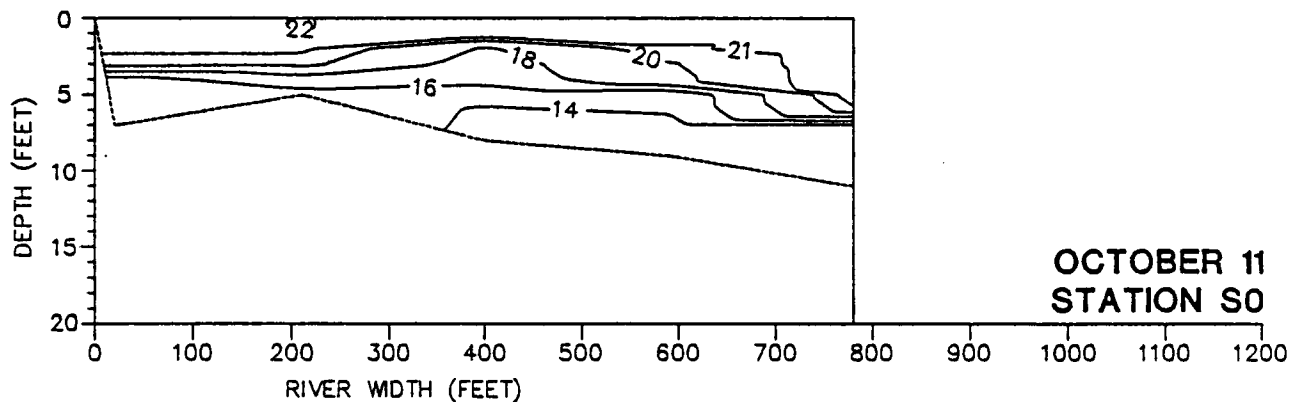
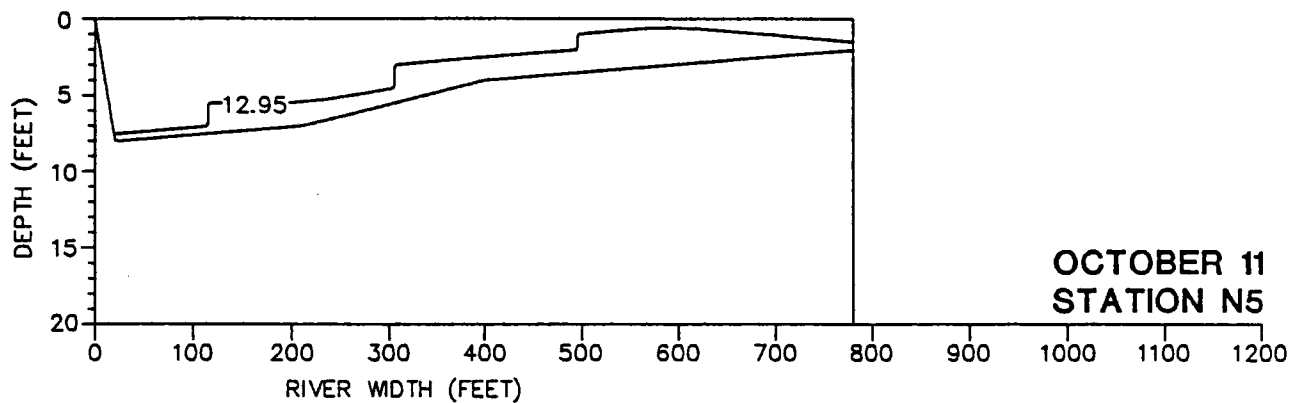
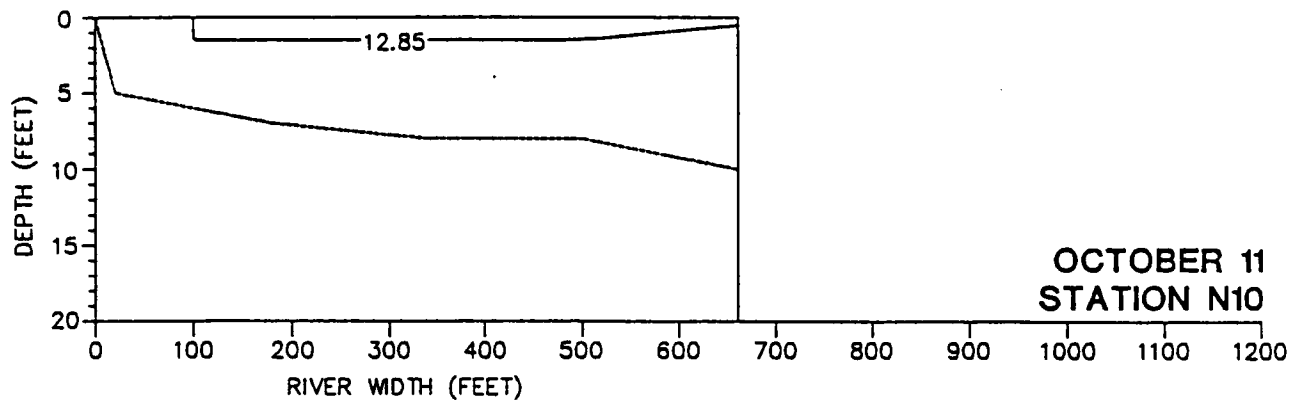
NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
25 Mathias Road
Bedford, NH 03110-3300

TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON SEPTEMBER 27, 1995

DATE:	3-27-96
FILE NO.:	14395018
SCALE:	AS SHOWN

FIGURE

18



One contour line indicates temperature change less than 0.3°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



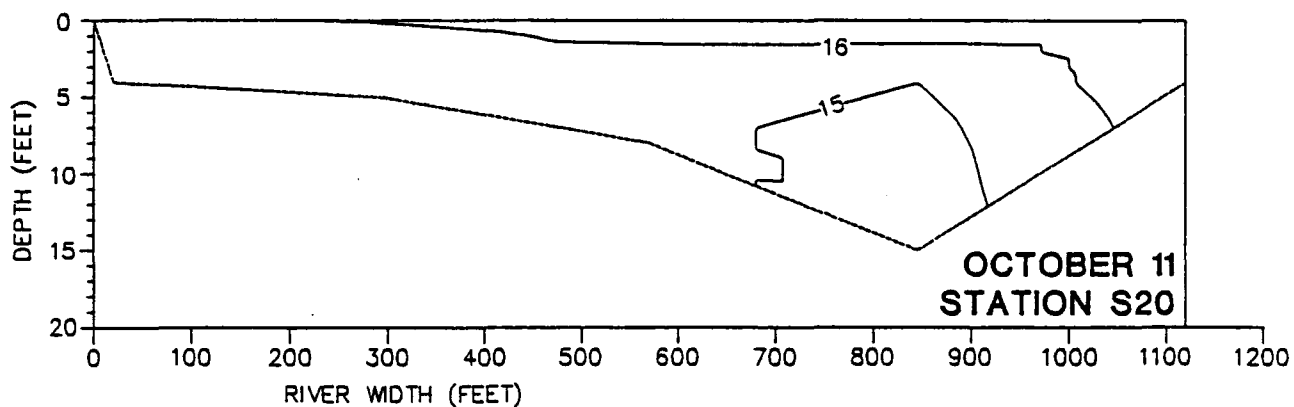
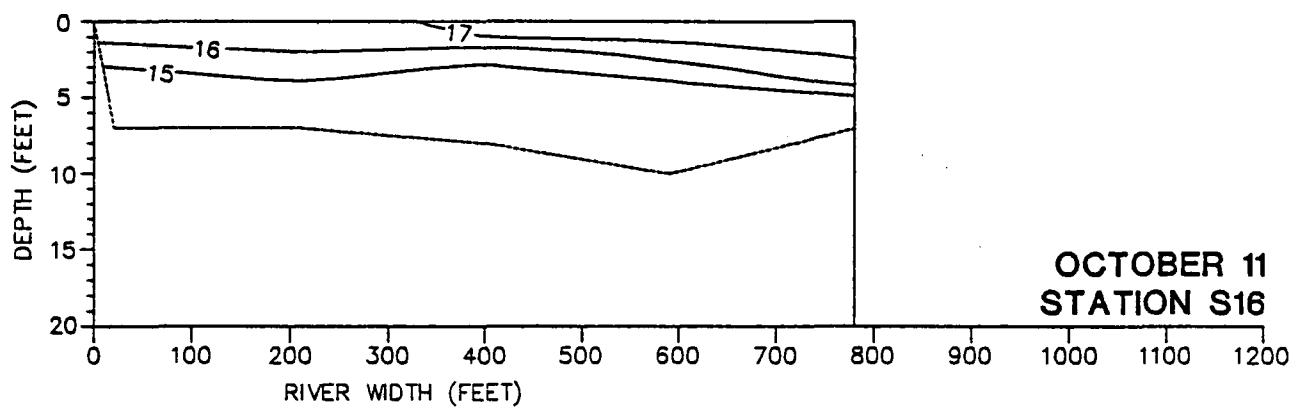
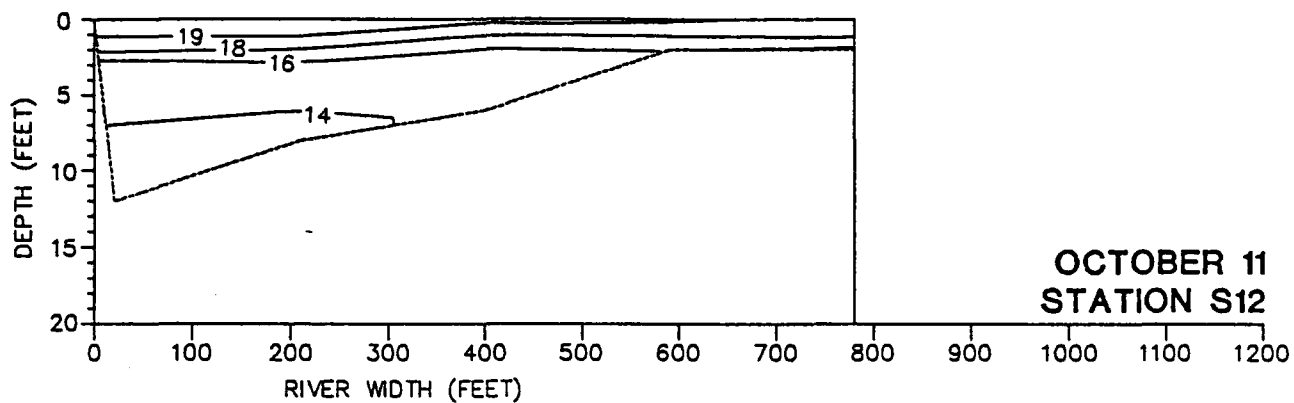
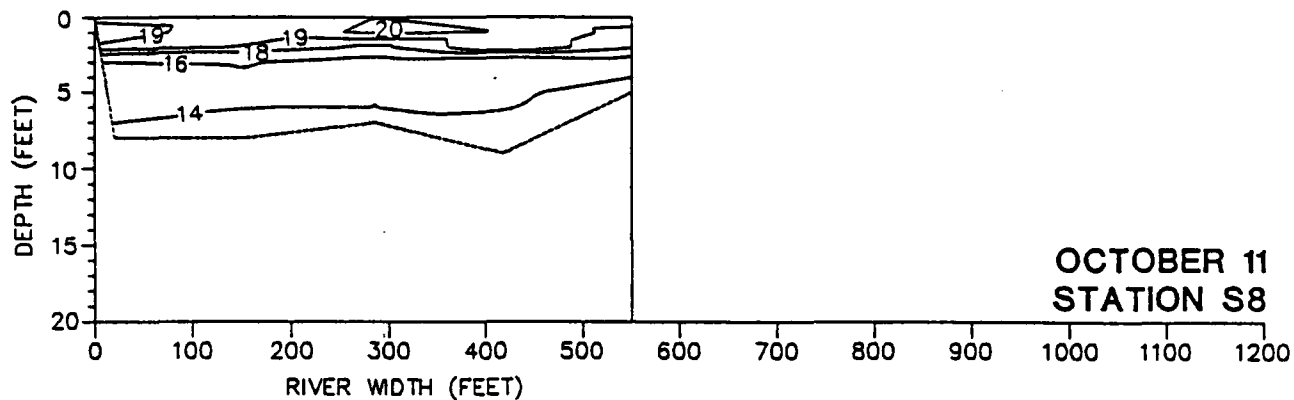
NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS
25 Nashua Road
Bedford, NH 03110-5500

TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON OCTOBER 11, 1995

DATE: 3-27-96
FILE NO.: 14395019
SCALE: AS SHOWN

FIGURE

19



VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'

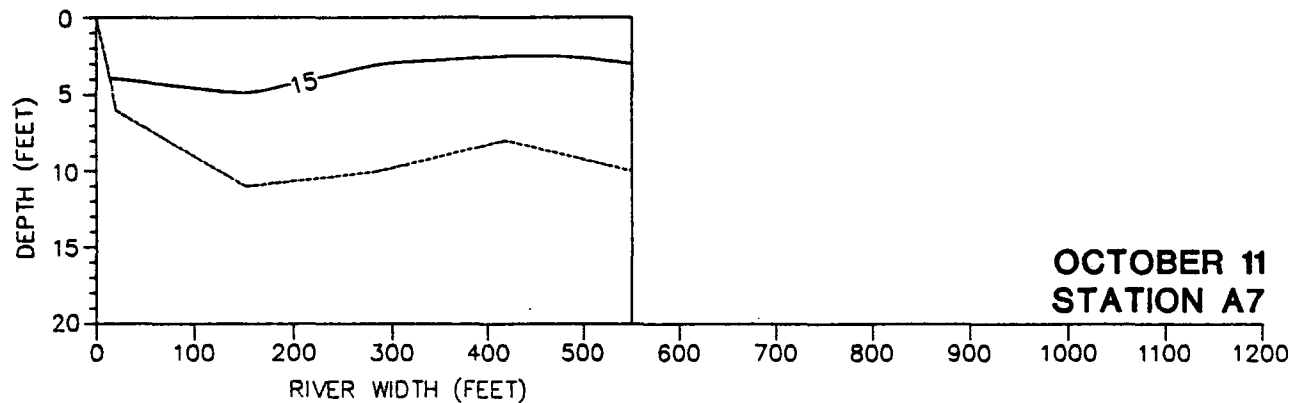
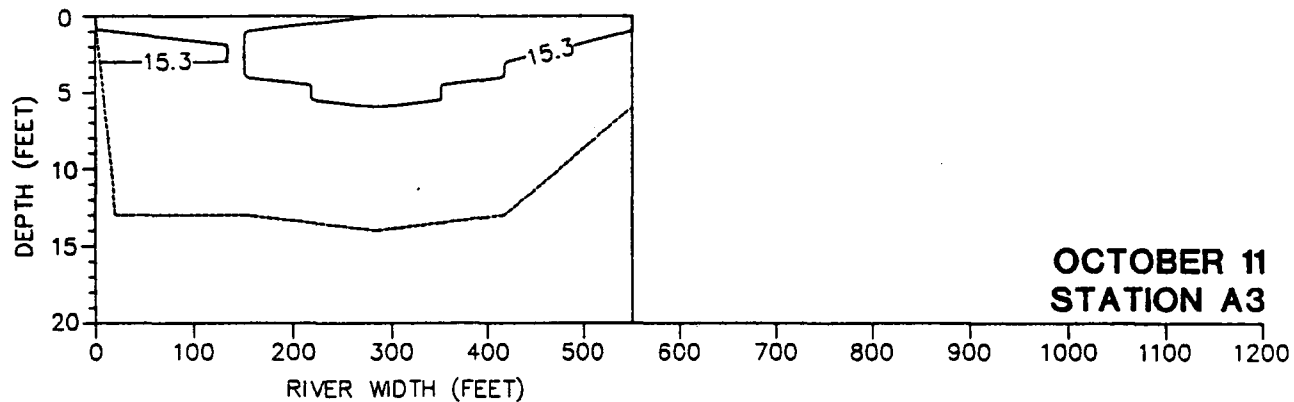
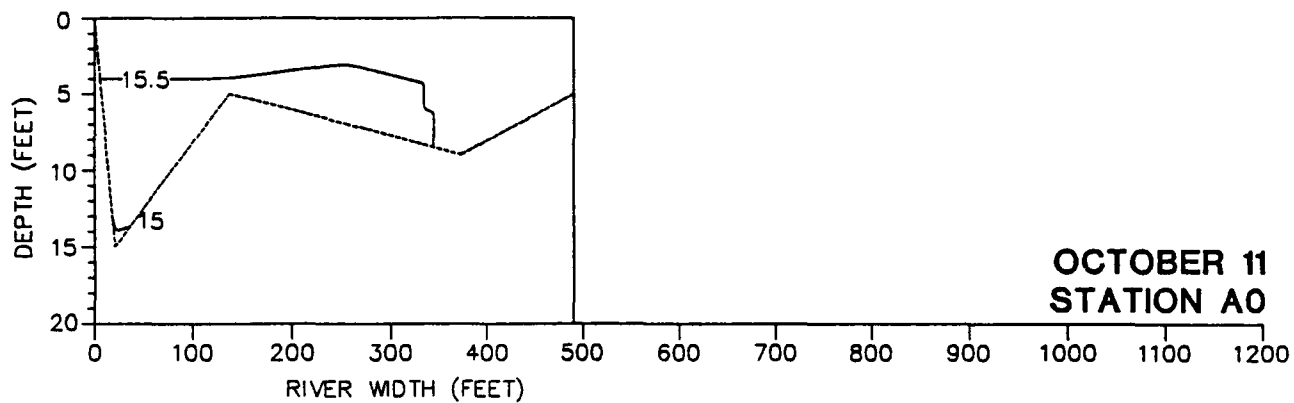
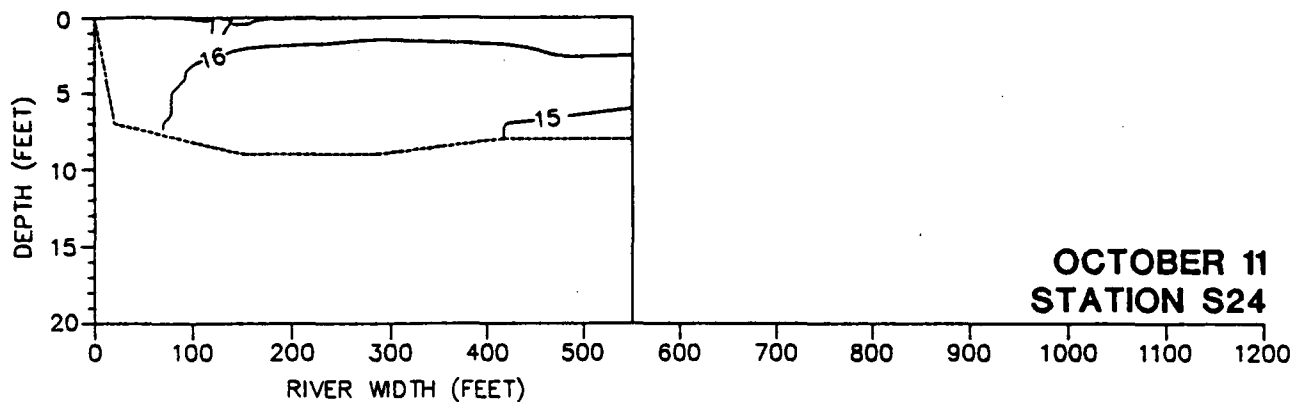


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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON OCTOBER 11, 1995

DATE: 3-27-96
FILE NO.: 14395020
SCALE: AS SHOWN

FIGURE
20



One contour line indicates temperature change less than 0.6°C

VERTICAL SCALE: 1"=12.5'
HORIZONTAL SCALE: 1"=200'



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TEMPERATURE PROFILES FOR THE
MERRIMACK RIVER ON OCTOBER 11, 1995

DATE: 3-27-96
FILE NO.: 14395021
SCALE: AS SHOWN

FIGURE

21

APPENDIX C

**Historical Database (1985-1994)
and
Predicted Temperatures at Station A0**

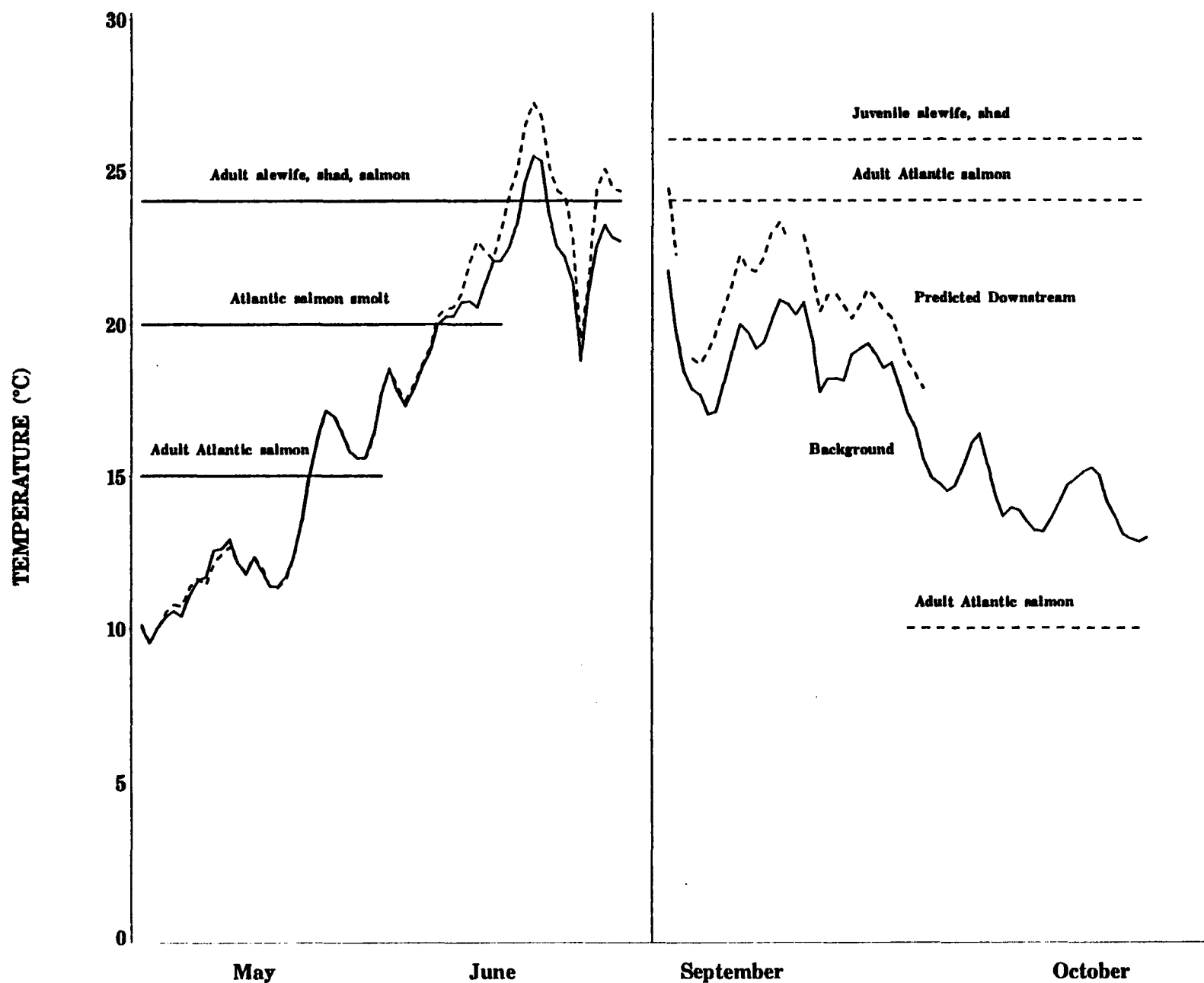


Figure C-1. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1994 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

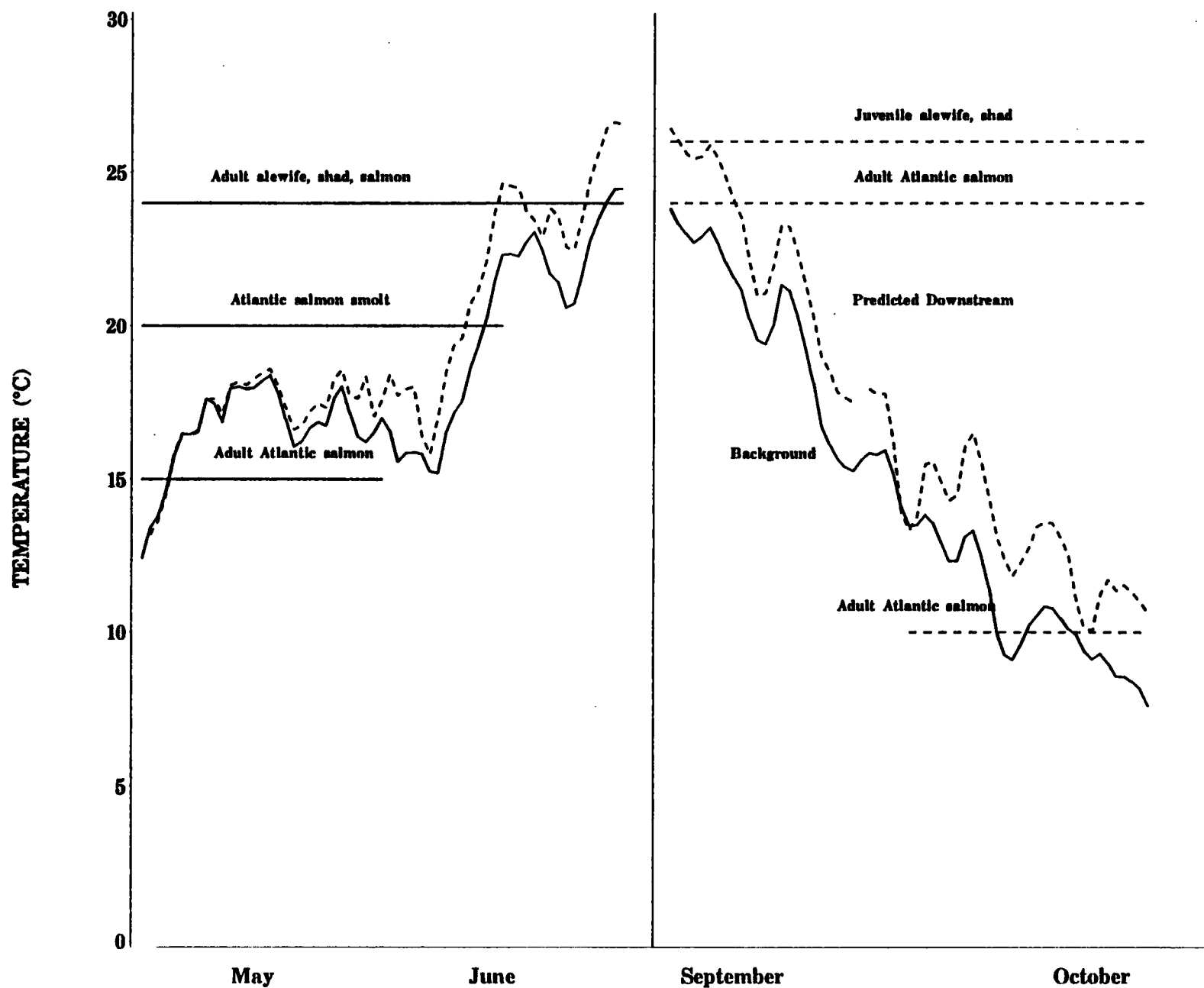


Figure C-2. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1993 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

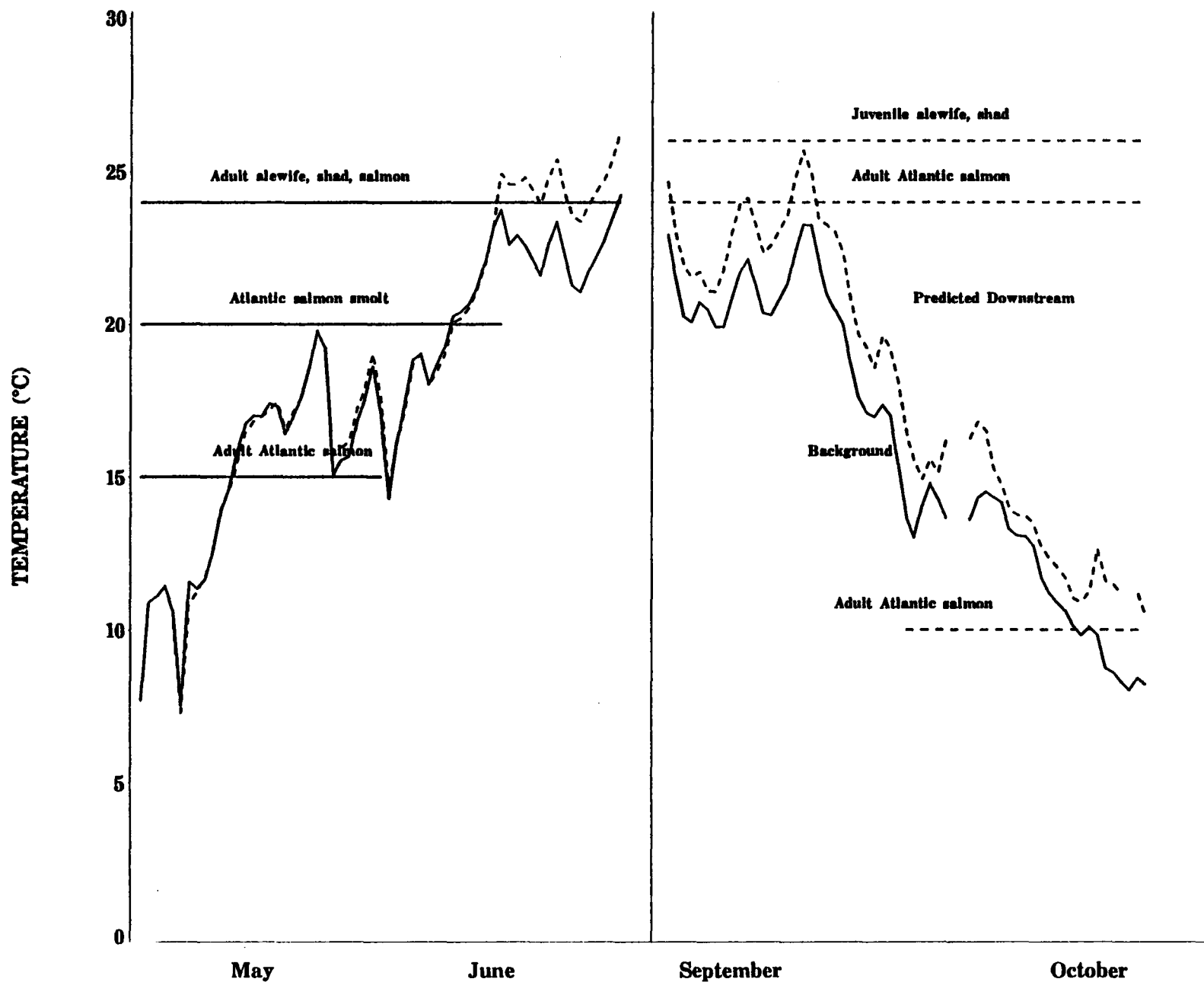


Figure C-3. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1992 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

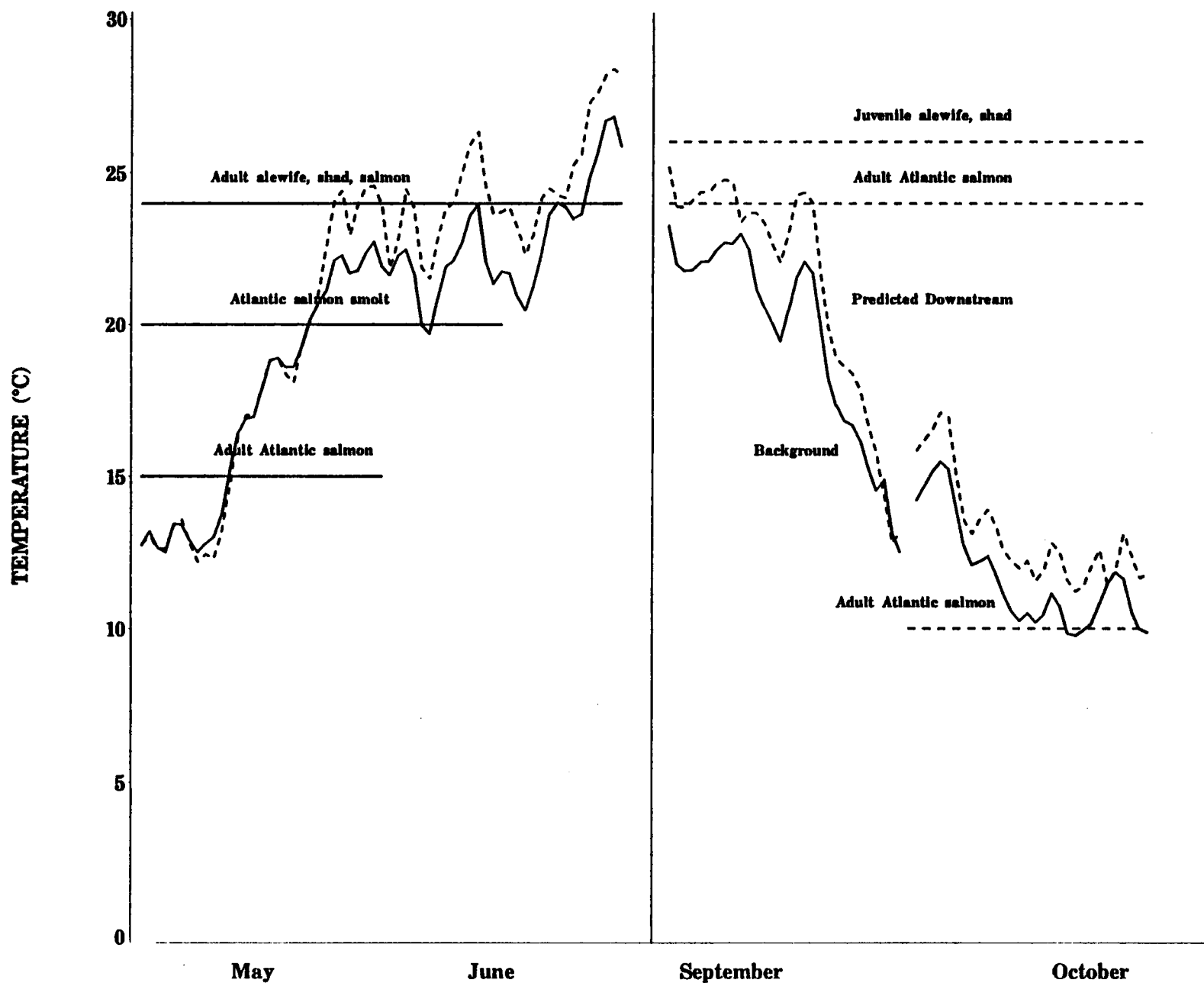


Figure C-4. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1991 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

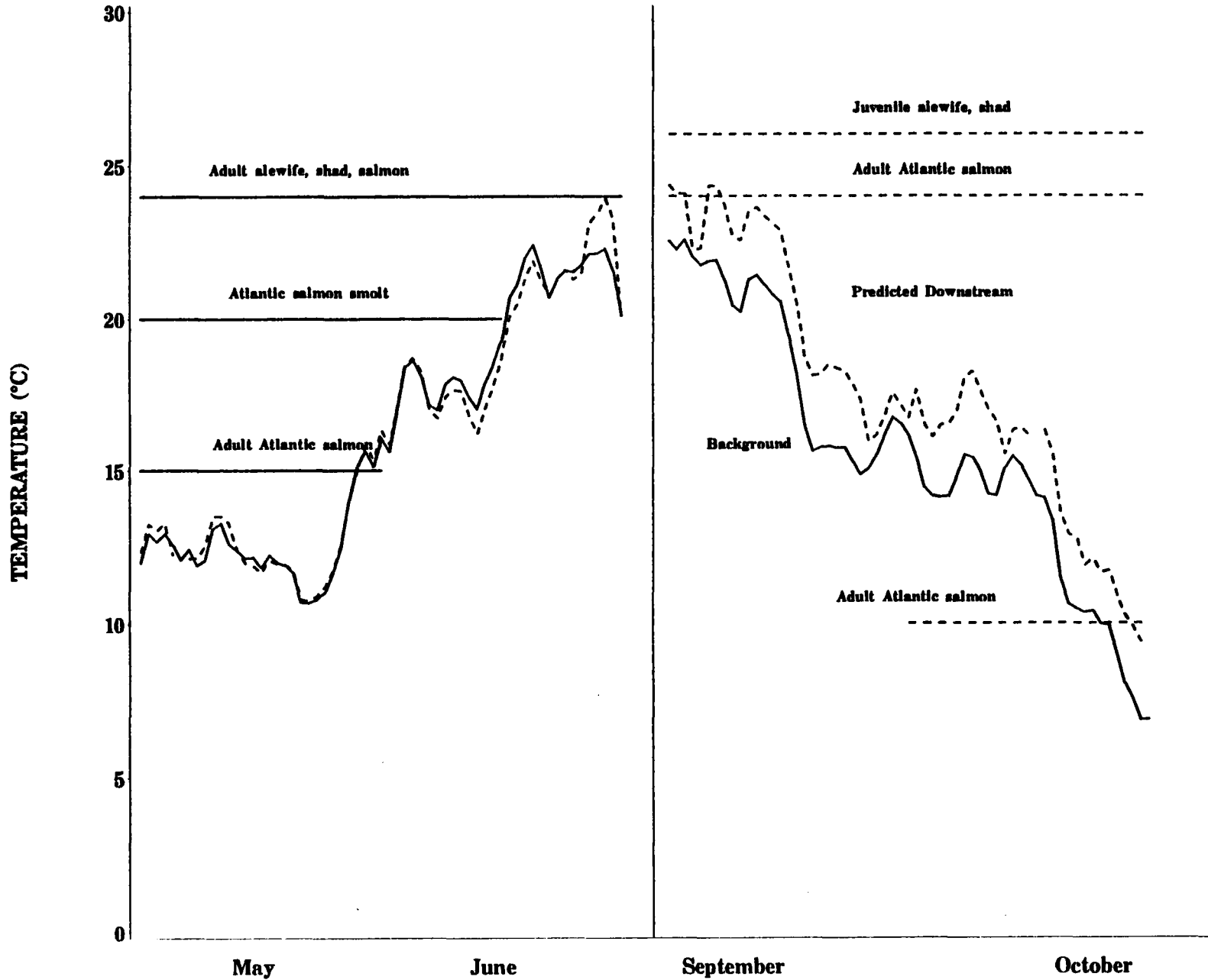


Figure C-5. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1990 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

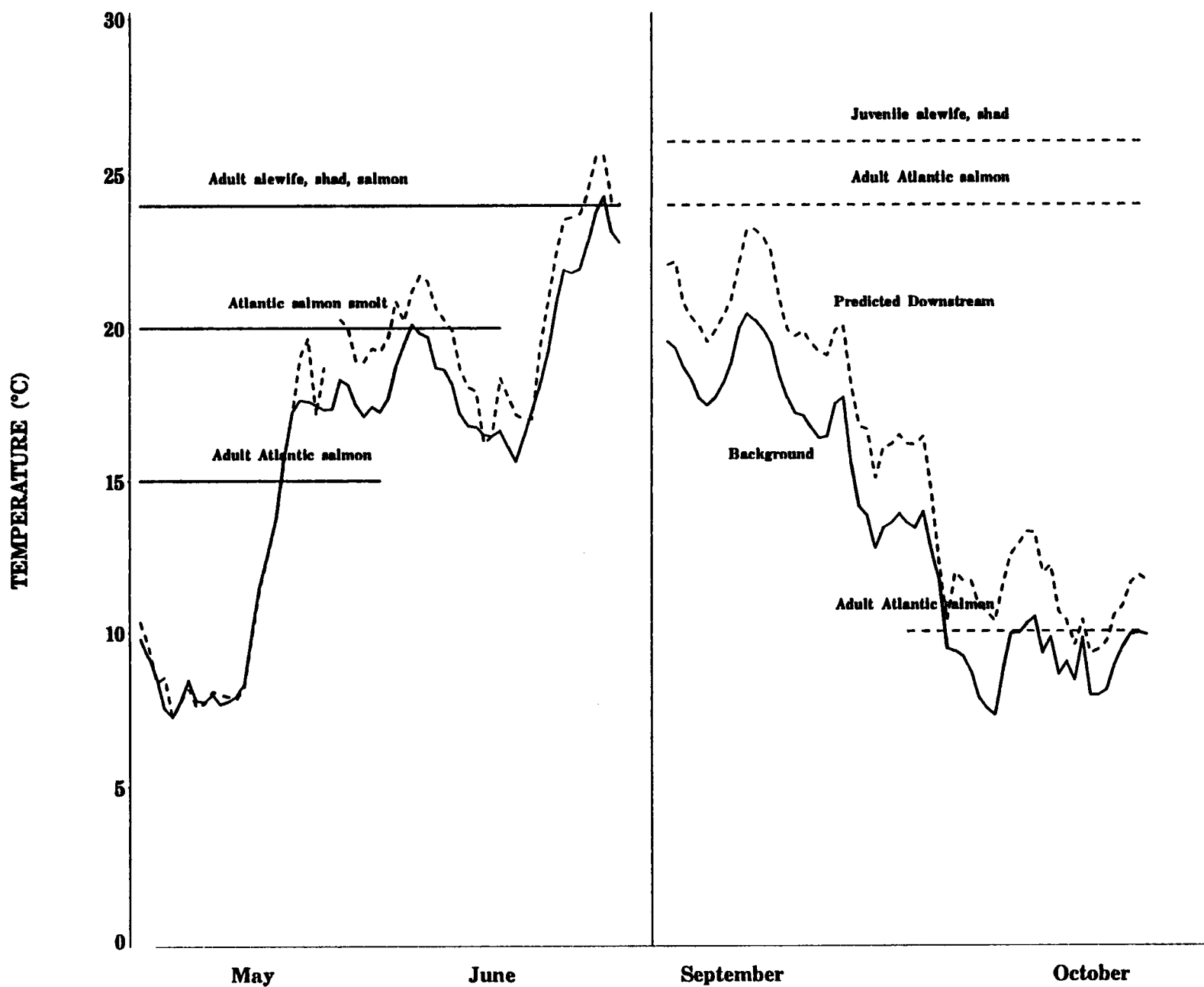


Figure C-6. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1989 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

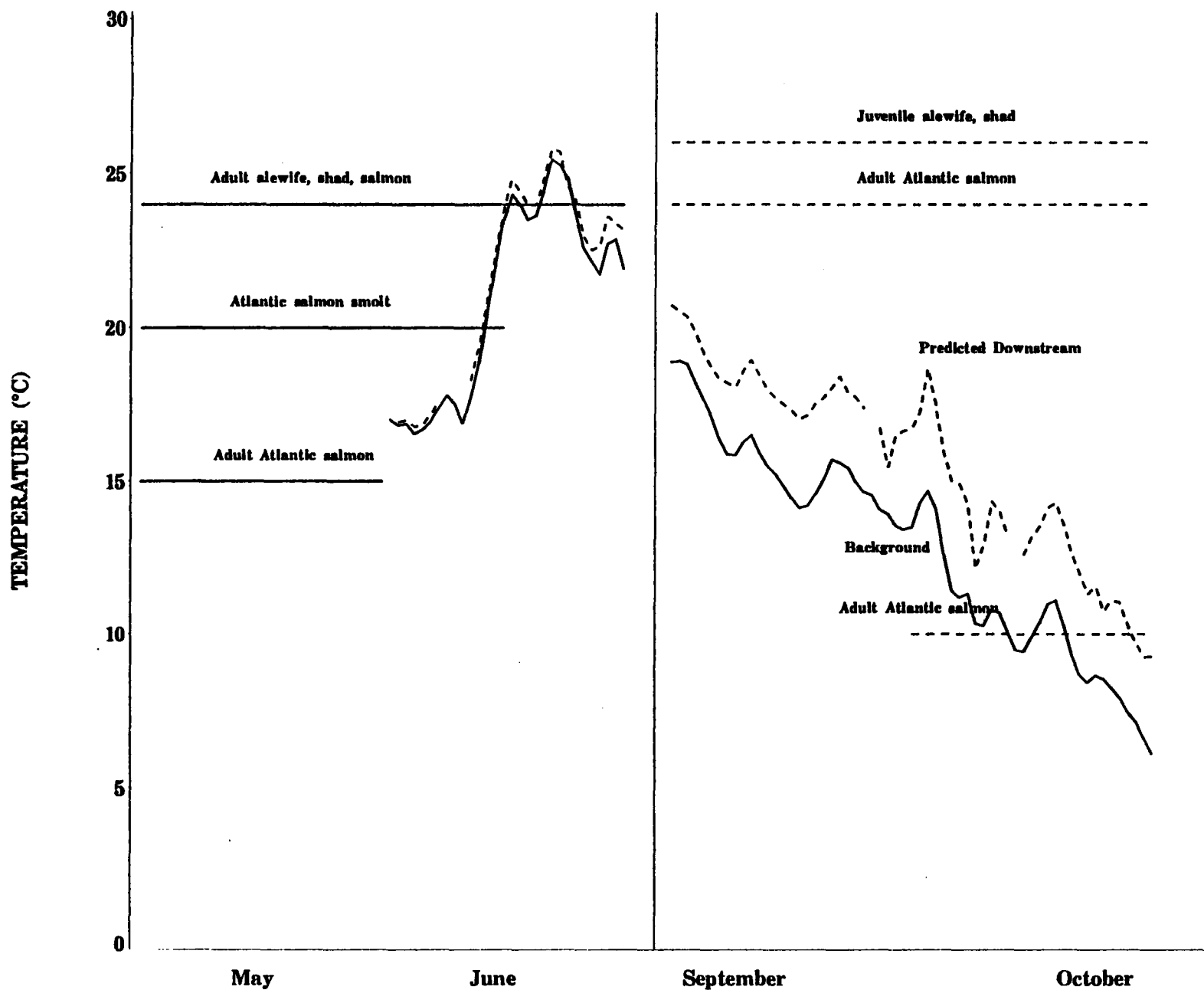


Figure C-7. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1988 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

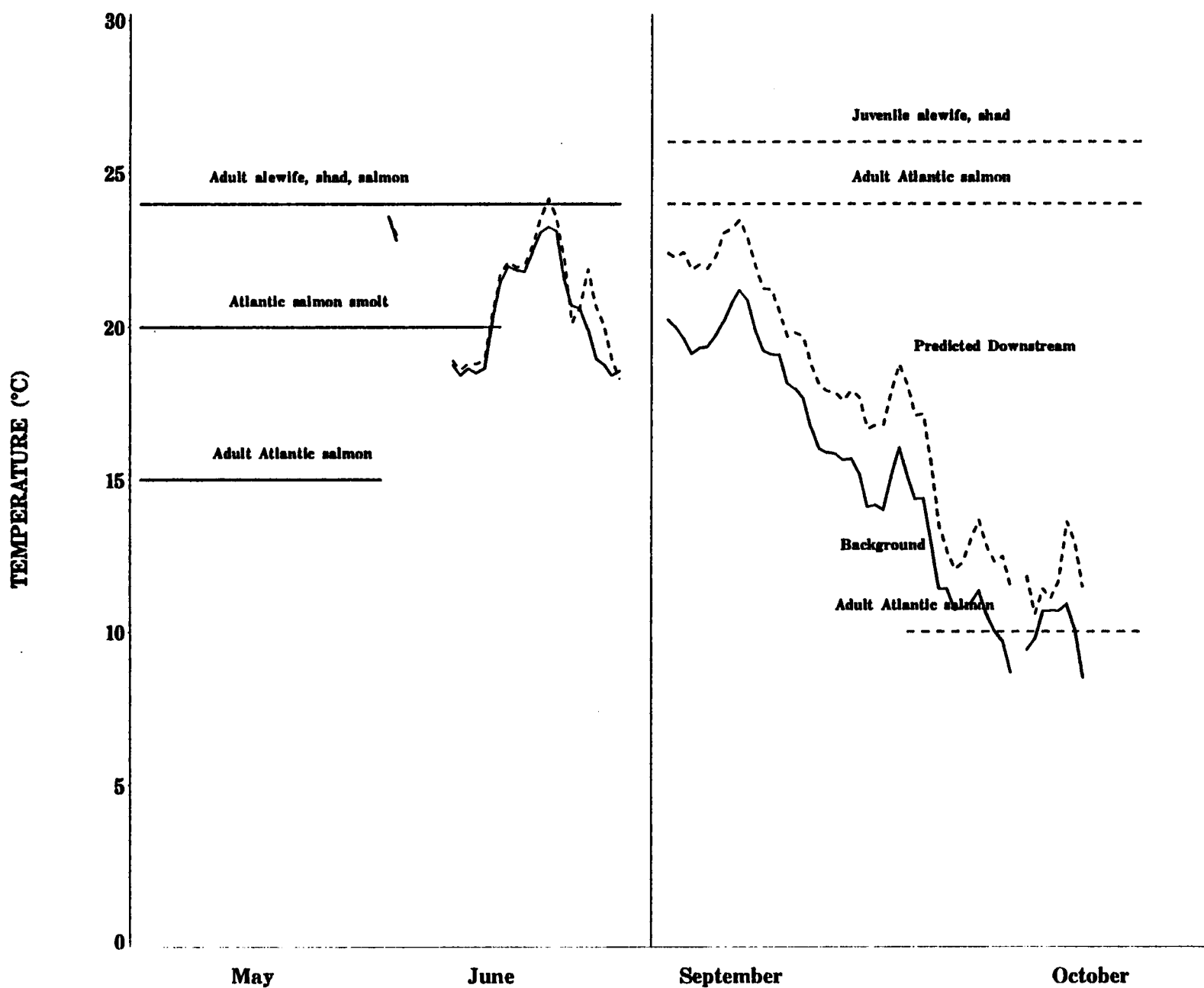


Figure C-8. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1987 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

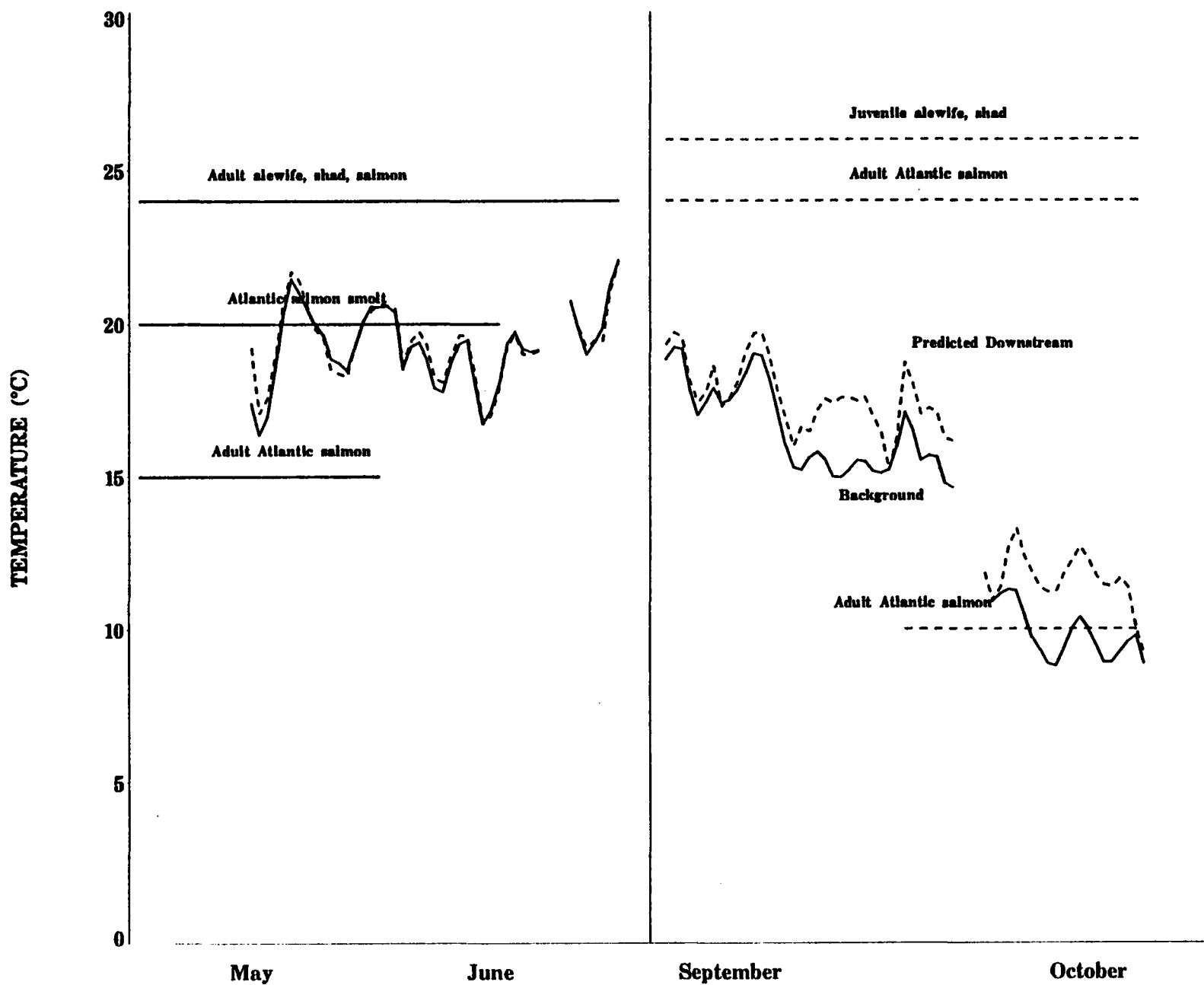


Figure C-9. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1986 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

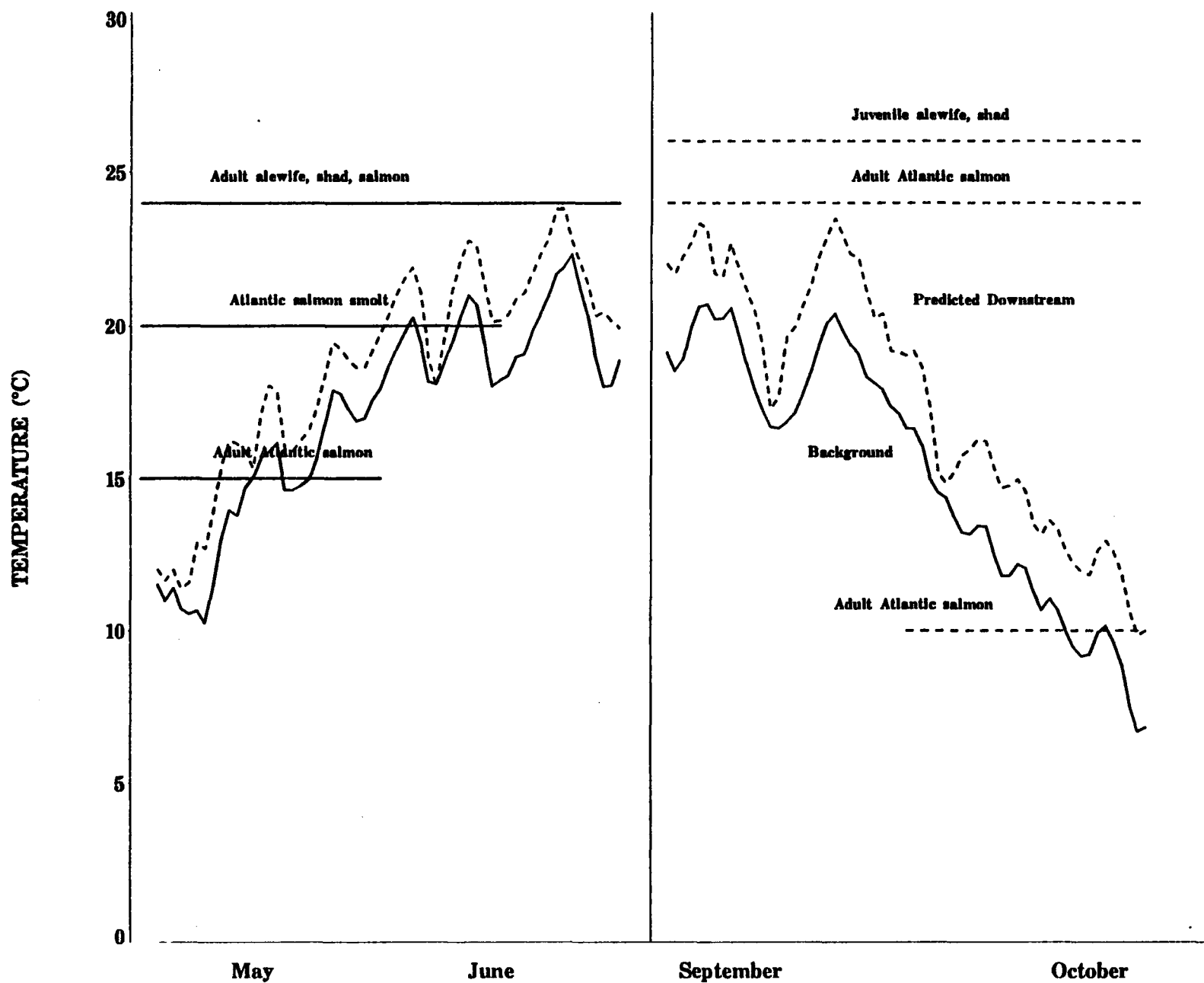


Figure C-10. Observed average daily background (Station N10) temperatures (°C) and predicted daily average downstream (Station A0) temperatures (°C) on the Merrimack River during 1985 anadromous fish migration periods. Upper optimal migration temperatures shown for the species of concern.

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/01/85	.	.	3008	109.6	0.0	109.6	.
05/02/85	.	.	3122	108.0	0.0	108.0	.
05/03/85	11.5	11.6	3039	109.0	0.0	109.0	12.0
05/04/85	11.0	11.5	2590	112.2	0.0	112.2	11.6
05/05/85	11.4	11.7	2711	112.5	0.0	112.5	12.0
05/06/85	10.7	11.2	2621	109.5	0.0	109.5	11.4
05/07/85	10.6	11.1	3341	111.0	84.7	195.8	11.6
05/08/85	10.7	11.0	4845	109.8	320.6	430.4	12.9
05/09/85	10.3	10.6	3748	109.9	321.4	431.3	12.7
05/10/85	11.5	12.3	3655	109.2	321.0	430.2	13.8
05/11/85	13.0	13.9	3314	109.3	321.2	430.5	15.4
05/12/85	13.9	14.2	3323	109.0	320.2	429.2	16.2
05/13/85	13.8	14.5	3102	111.6	321.5	433.1	16.1
05/14/85	14.7	15.0	2929	109.7	141.8	251.5	15.9
05/15/85	15.0	15.8	3137	110.5	0.0	110.5	15.3
05/16/85	15.7	16.0	2891	109.0	183.4	292.4	17.1
05/17/85	15.9	16.6	2409	81.3	316.5	397.8	18.1
05/18/85	16.2	16.4	2412	0.0	321.8	321.8	17.8
05/19/85	14.6	15.5	4632	0.0	313.1	313.1	15.9
05/20/85	14.6	15.1	4985	0.0	315.4	315.4	15.9
05/21/85	14.8	15.0	3925	0.0	321.3	321.3	16.2
05/22/85	15.0	15.8	3079	0.0	318.8	318.8	16.6
05/23/85	15.7	16.3	2987	0.0	321.1	321.1	17.3
05/24/85	16.7	17.7	2592	0.0	322.6	322.6	18.4
05/25/85	17.9	18.8	2522	0.0	321.6	321.6	19.5
05/26/85	17.8	18.1	2152	0.0	287.7	287.7	19.2
05/27/85	17.3	17.8	1947	0.0	297.0	297.0	18.9
05/28/85	16.9	17.1	1856	0.0	314.1	314.1	18.6
05/29/85	17.0	17.8	2290	0.0	321.3	321.3	18.6
05/30/85	17.6	18.5	2200	0.0	314.9	314.9	19.2
05/31/85	18.0	18.8	1574	0.0	320.4	320.4	19.8
06/01/85	18.7	19.4	1917	0.0	322.1	322.1	20.4
06/02/85	19.3	20.8	1574	0.0	321.5	321.5	21.1
06/03/85	19.8	20.6	1553	0.0	320.4	320.4	21.5
06/04/85	20.3	21.3	1752	0.0	319.5	319.5	21.9
06/05/85	19.4	20.3	1752	0.0	320.1	320.1	21.1
06/06/85	18.2	18.9	1392	0.0	133.6	133.6	18.9
06/07/85	18.1	19.3	1441	0.0	0.0	0.0	18.1*
06/08/85	18.8	19.5	1620	0.0	167.8	167.8	19.7
06/09/85	19.5	20.4	1800	0.0	320.7	320.7	21.2
06/10/85	20.3	21.2	1283	0.0	318.7	318.7	22.1
06/11/85	21.0	22.0	1277	0.0	318.8	318.8	22.8
06/12/85	20.7	21.3	1096	0.0	320.1	320.1	22.6
06/13/85	19.4	19.9	1071	0.0	320.2	320.2	21.4
06/14/85	18.0	18.4	1075	0.0	322.0	322.0	20.1
06/15/85	18.2	19.2	1332	0.0	321.2	321.2	20.2
06/16/85	18.4	18.7	1108	0.0	312.2	312.2	20.4
06/17/85	19.0	19.9	1315	0.0	320.8	320.8	20.9
06/18/85	19.1	19.5	1119	0.0	320.4	320.4	21.1
06/19/85	19.8	20.5	1255	0.0	319.4	319.4	21.7

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
06/20/85	20.4	21.3	1213	9.9	319.5	329.4	22.3
06/21/85	21.0	21.8	1214	0.0	322.5	322.5	22.8
06/22/85	21.7	22.8	1261	55.3	319.3	374.6	23.8
06/23/85	21.9	22.5	1007	110.2	207.5	317.8	23.8
06/24/85	22.3	23.1	1200	110.2	0.0	110.2	22.8
06/25/85	21.3	22.0	1025	109.5	32.3	141.7	22.1
06/26/85	20.3	21.0	1112	111.2	67.4	178.7	21.4
06/27/85	19.0	19.9	1237	95.4	131.1	226.5	20.3
06/28/85	18.0	18.4	1202	93.0	294.0	386.9	20.4
06/29/85	18.1	18.7	1756	91.8	278.4	370.2	20.1
06/30/85	18.9	19.8	2290	85.4	151.9	237.3	19.9
09/01/85	19.1	20.0	828	114.2	321.6	435.7	22.0
09/02/85	18.5	19.0	544	113.5	320.7	434.2	21.7
09/03/85	18.9	20.0	392	113.6	320.6	434.2	22.3
09/04/85	19.9	21.0	903	113.7	317.9	431.6	22.7
09/05/85	20.6	21.6	913	113.4	319.6	433.0	23.4
09/06/85	20.7	21.0	1299	105.9	320.4	426.3	23.2
09/07/85	20.2	20.6	2520	12.5	318.7	331.2	21.7
09/08/85	20.3	20.9	2792	0.0	318.2	318.2	21.6
09/09/85	20.6	20.9	2169	102.1	321.1	423.2	22.7
09/10/85	19.7	20.3	1750	113.3	292.9	406.3	21.9
09/11/85	18.8	19.2	1712	112.9	309.7	422.6	21.2
09/12/85	17.9	18.4	1617	112.9	320.5	433.3	20.5
09/13/85	17.2	17.7	1928	113.0	259.2	372.2	19.3
09/14/85	16.7	17.2	1715	112.3	3.8	116.1	17.3
09/15/85	16.6	17.4	1471	112.3	53.7	166.0	17.7
09/16/85	16.8	17.6	1231	114.1	321.5	435.6	19.6
09/17/85	17.1	18.0	1095	113.5	320.8	434.3	20.0
09/18/85	17.8	18.8	909	113.4	320.9	434.2	20.7
09/19/85	18.4	19.5	944	113.2	320.7	434.0	21.3
09/20/85	19.3	20.5	829	112.5	320.3	432.8	22.2
09/21/85	20.1	21.2	790	104.0	320.2	424.2	22.9
09/22/85	20.4	21.1	502	113.2	320.8	434.0	23.5
09/23/85	19.8	20.2	498	113.2	321.1	434.3	23.0
09/24/85	19.4	19.8	563	91.7	319.9	411.6	22.3
09/25/85	19.1	19.6	526	111.5	321.2	432.7	22.2
09/26/85	18.3	18.8	807	104.0	308.6	412.5	21.2
09/27/85	18.1	18.5	2246	102.4	297.3	399.7	20.2
09/28/85	17.9	18.2	1791	113.5	321.7	435.1	20.4
09/29/85	17.4	17.8	5536	113.3	321.2	434.5	19.2
09/30/85	17.1	17.6	4088	113.4	320.6	434.0	19.1
10/01/85	16.6	17.1	2292	113.7	322.1	435.8	19.0
10/02/85	16.6	16.8	1817	113.6	321.7	435.3	19.2
10/03/85	16.1	16.4	1885	113.3	322.4	435.7	18.6
10/04/85	15.0	15.5	1890	113.6	273.2	386.8	17.3
10/05/85	14.5	14.7	1971	112.9	0.0	112.9	15.2
10/06/85	14.4	14.8	2502	112.8	0.0	112.8	14.9
10/07/85	13.7	14.1	2985	113.0	167.7	280.7	15.2
10/08/85	13.2	13.5	2548	113.9	320.6	434.5	15.8
10/09/85	13.2	13.3	1613	114.0	316.1	430.2	16.0

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/29/86	20.1	21.0	2998	112.3	0.0	112.3	20.1
05/30/86	20.6	20.9	3990	113.8	0.0	113.8	20.6*
05/31/86	20.6	20.7	2670	114.4	0.0	114.4	20.7
06/01/86	20.6	21.2	2994	113.7	0.0	113.7	20.6
06/02/86	20.4	21.0	2427	113.0	0.0	113.0	20.6
06/03/86	18.5	19.1	2748	112.9	0.0	112.9	18.7
06/04/86	19.3	20.1	2584	113.4	0.0	113.4	19.5
06/05/86	19.4	19.8	1967	113.3	0.0	113.3	19.8
06/06/86	18.9	19.2	1804	113.6	0.0	113.6	19.3
06/07/86	17.9	18.5	2357	113.1	0.0	113.1	18.2
06/08/86	17.8	18.4	2472	113.5	0.0	113.5	18.1
06/09/86	18.7	19.6	2411	112.6	0.0	112.6	19.0
06/10/86	19.4	20.5	2217	112.8	0.0	112.8	19.6
06/11/86	19.5	19.9	2012	84.6	0.0	84.6	19.6
06/12/86	18.1	19.1	2348	113.4	0.0	113.4	18.4
06/13/86	16.8	17.0	4019	114.4	0.0	114.4	16.8
06/14/86	17.2	17.8	5431	113.5	0.0	113.5	17.2*
06/15/86	18.0	18.9	5211	113.7	0.0	113.7	18.0*
06/16/86	19.4	20.1	4438	112.9	0.0	112.9	19.4*
06/17/86	19.7	20.2	3823	113.1	0.0	113.1	19.7*
06/18/86	19.2	19.4	4651	112.8	0.0	112.8	19.2*
06/19/86	19.1	19.6	4000	111.0	0.0	111.0	19.1*
06/20/86	19.1	19.5	3685	112.9	0.0	112.9	19.1*
06/21/86	.	.	4012	108.9	0.0	108.9	.
06/22/86	.	.	4317	102.3	0.0	102.3	.
06/23/86	.	.	4004	112.7	0.0	112.7	.
06/24/86	20.7	20.9	3362	115.8	0.0	115.8	20.7*
06/25/86	19.8	20.4	2703	107.7	0.0	107.7	19.9
06/26/86	19.0	19.7	2560	114.7	0.0	114.7	19.2
06/27/86	19.4	19.9	2271	82.8	0.0	82.8	19.5
06/28/86	19.9	21.1	2227	0.0	0.0	0.0	19.9*
06/29/86	21.3	23.3	1404	0.0	0.0	0.0	21.3*
06/30/86	22.1	22.9	978	0.0	0.0	0.0	22.1*
09/01/86	18.8	19.8	1652	112.0	0.0	112.0	19.3
09/02/86	19.2	19.8	1581	111.6	0.0	111.6	19.7
09/03/86	19.2	19.8	1910	112.6	0.0	112.6	19.6
09/04/86	17.9	18.7	2468	115.3	0.0	115.3	18.2
09/05/86	17.0	17.2	2174	113.1	0.0	113.1	17.5
09/06/86	17.4	18.2	2499	113.1	0.0	113.1	17.8
09/07/86	17.9	18.4	1783	154.5	0.0	154.5	18.7
09/08/86	17.4	18.2	2152	26.5	0.0	26.5	17.4*
09/09/86	17.5	18.4	1236	0.0	0.0	0.0	17.6
09/10/86	17.8	18.6	1442	54.2	0.0	54.2	18.1
09/11/86	18.4	19.0	1236	112.8	0.0	112.8	19.1
09/12/86	19.0	19.5	1266	113.0	0.0	113.0	19.7
09/13/86	19.0	19.7	1021	105.5	0.0	105.5	19.7
09/14/86	18.2	19.1	1254	120.1	0.0	120.1	19.0
09/15/86	17.1	17.5	1417	113.1	0.0	113.1	17.8
09/16/86	16.0	17.0	1090	112.0	0.0	112.0	16.9
09/17/86	15.3	16.2	1643	113.4	0.0	113.4	16.0

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
10/10/85	13.4	13.9	1505	113.3	321.4	434.7	16.3
10/11/85	13.4	13.8	1684	113.8	321.1	434.9	16.2
10/12/85	12.5	13.2	1709	113.7	320.8	434.5	15.3
10/13/85	11.8	12.3	1655	113.4	320.7	434.1	14.7
10/14/85	11.8	12.1	1520	114.0	321.3	435.3	14.8
10/15/85	12.2	12.5	1973	114.2	325.6	439.9	15.0
10/16/85	12.1	12.4	2952	114.1	321.6	435.7	14.6
10/17/85	11.3	11.6	5006	113.9	318.6	432.5	13.5
10/18/85	10.7	11.0	3270	113.8	316.9	430.7	13.2
10/19/85	11.1	11.2	2931	113.5	321.4	435.0	13.6
10/20/85	10.7	11.1	2788	114.0	321.3	435.3	13.3
10/21/85	10.0	10.4	3029	114.1	320.8	434.8	12.6
10/22/85	9.5	9.8	2534	113.7	322.1	435.8	12.2
10/23/85	9.1	9.7	2312	114.4	316.0	430.4	11.9
10/24/85	9.2	9.6	2207	113.4	286.1	399.6	11.8
10/25/85	9.9	10.5	2030	106.0	307.1	413.1	12.6
10/26/85	10.2	10.6	1923	100.6	321.4	422.0	13.0
10/27/85	9.6	10.0	2158	118.5	334.7	453.2	12.6
10/28/85	8.9	9.5	1801	113.5	321.0	434.6	11.9
10/29/85	7.5	8.2	1544	113.6	321.3	434.9	10.7
10/30/85	6.7	7.0	1644	113.9	320.8	434.7	9.9
10/31/85	6.8	7.2	1575	113.6	321.5	435.1	10.0
05/01/86	.	.	3847	113.8	330.2	444.0	.
05/02/86	.	.	4158	113.2	263.8	377.0	.
05/03/86	.	.	3117	112.4	0.0	112.4	.
05/04/86	.	.	2951	113.6	7.6	121.2	.
05/05/86	.	.	2837	114.6	313.6	428.3	.
05/06/86	.	.	2753	113.9	248.2	362.1	.
05/07/86	.	.	2753	113.5	282.3	395.8	.
05/08/86	.	.	2770	113.1	264.7	377.8	.
05/09/86	.	.	2632	114.9	234.5	349.4	.
05/10/86	.	.	2875	113.1	0.0	113.1	.
05/11/86	.	.	2936	113.9	148.8	262.8	.
05/12/86	.	.	2491	114.2	0.0	114.2	.
05/13/86	.	.	2501	113.7	225.4	339.1	.
05/14/86	.	.	1901	114.0	293.3	407.3	.
05/15/86	17.4	18.1	1780	112.2	211.3	323.5	19.2
05/16/86	16.4	17.2	1496	113.2	0.0	113.2	17.1
05/17/86	17.0	17.8	1680	113.4	0.0	113.4	17.6
05/18/86	18.5	19.9	1757	114.2	0.0	114.2	19.0
05/19/86	20.3	21.8	1775	113.8	0.0	113.8	20.7
05/20/86	21.5	22.3	1900	113.0	0.0	113.0	21.7
05/21/86	21.0	21.4	1600	113.8	0.0	113.8	21.4
05/22/86	20.5	20.6	2525	115.5	0.0	115.5	20.6
05/23/86	20.0	20.3	4339	113.1	0.0	113.1	20.0*
05/24/86	19.7	20.0	3757	113.5	0.0	113.5	19.7*
05/25/86	18.9	19.2	6566	113.7	0.0	113.7	18.9*
05/26/86	18.7	19.2	6508	113.5	0.0	113.5	18.7*
05/27/86	18.5	18.8	5307	113.6	0.0	113.6	18.5*
05/28/86	19.3	20.0	3617	113.8	0.0	113.8	19.3*

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
09/18/86	15.2	16.0	1144	112.8	83.4	196.2	16.7
09/19/86	15.6	16.4	1263	113.5	0.0	113.5	16.5
09/20/86	15.8	16.0	1330	112.3	93.4	205.7	17.2
09/21/86	15.6	15.7	1399	99.1	211.5	310.6	17.6
09/22/86	15.0	15.3	1486	113.0	268.4	381.4	17.4
09/23/86	15.0	15.3	1420	113.1	292.6	405.7	17.6
09/24/86	15.2	15.5	2438	112.5	310.3	422.8	17.6
09/25/86	15.5	16.2	2969	112.4	265.2	377.7	17.5
09/26/86	15.5	15.7	2621	95.6	294.6	390.3	17.6
09/27/86	15.2	15.7	2212	0.0	319.3	319.3	17.0
09/28/86	15.1	15.6	2124	0.0	239.7	239.7	16.4
09/29/86	15.2	15.7	1646	0.0	0.0	0.0	15.2
09/30/86	16.0	16.7	1983	0.0	82.7	82.7	16.4
10/01/86	17.1	17.7	1844	0.0	293.6	293.6	18.7
10/02/86	16.5	17.2	2431	0.0	296.3	296.3	18.0
10/03/86	15.5	15.9	2606	0.0	294.4	294.4	17.1
10/04/86	15.7	16.1	2397	0.0	294.2	294.2	17.3
10/05/86	15.6	15.9	2833	0.0	295.0	295.0	17.1
10/06/86	14.8	15.1	2870	0.0	295.1	295.1	16.3
10/07/86	14.6	14.6	2779	0.0	295.7	295.7	16.2
10/08/86	.	.	2774	0.0	298.3	298.3	.
10/09/86	.	.	2737	0.0	320.0	320.0	.
10/10/86	.	.	2650	0.0	320.5	320.5	.
10/11/86	10.9	10.9	2693	0.0	166.9	166.9	11.8
10/12/86	10.9	10.9	2385	0.0	0.0	0.0	10.9
10/13/86	11.2	11.2	1696	0.0	0.0	0.0	11.4
10/14/86	11.3	11.4	2449	0.0	229.6	229.6	12.7
10/15/86	11.3	11.5	2221	0.0	319.7	319.7	13.3
10/16/86	10.5	10.9	2473	0.0	297.7	297.7	12.4
10/17/86	9.7	10.1	2201	0.0	318.7	318.7	11.8
10/18/86	9.3	9.6	2499	0.0	319.5	319.5	11.4
10/19/86	8.9	9.5	1596	0.0	319.9	319.9	11.2
10/20/86	8.8	9.3	1379	0.0	319.3	319.3	11.2
10/21/86	9.4	10.1	1272	0.0	319.5	319.5	11.8
10/22/86	10.0	10.6	1794	0.0	319.3	319.3	12.3
10/23/86	10.4	10.8	1536	0.0	320.1	320.1	12.7
10/24/86	10.1	10.4	1769	0.0	320.5	320.5	12.3
10/25/86	9.5	9.8	1768	0.0	320.0	320.0	11.8
10/26/86	8.9	9.3	1362	0.0	334.5	334.5	11.4
10/27/86	8.9	9.1	1305	0.0	320.6	320.6	11.4
10/28/86	9.3	9.7	1386	0.0	320.0	320.0	11.7
10/29/86	9.6	10.1	1945	0.0	257.7	257.7	11.4
10/30/86	9.8	10.3	1657	0.0	0.0	0.0	10.1
10/31/86	8.9	9.4	1720	0.0	0.0	0.0	9.2
05/01/87	.	.	5237	111.3	0.0	111.3	.
05/02/87	.	.	5471	113.2	0.0	113.2	.
05/03/87	.	.	5361	107.0	0.0	107.0	.
05/04/87	.	.	5306	113.9	0.0	113.9	.
05/05/87	.	.	5028	113.8	0.0	113.8	.
05/06/87	.	.	5136	115.3	0.0	115.3	.

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/07/87	.	.	5942	113.3	0.0	113.3	.
05/08/87	.	.	5848	154.5	0.0	154.5	.
05/09/87	.	.	4827	71.8	0.0	71.8	.
05/10/87	.	.	4375	113.4	0.0	113.4	.
05/11/87	.	.	4141	113.1	0.0	113.1	.
05/12/87	.	.	3658	113.9	0.0	113.9	.
05/13/87	.	.	3800	113.3	0.0	113.3	.
05/14/87	.	.	3259	113.5	0.0	113.5	.
05/15/87	.	.	3294	114.5	0.0	114.5	.
05/16/87	.	.	2782	114.2	0.0	114.2	.
05/17/87	.	.	2294	112.2	0.0	112.2	.
05/18/87	.	.	2190	106.1	0.0	106.1	.
05/19/87	.	.	2043	110.0	0.0	110.0	.
05/20/87	.	.	1919	107.6	0.0	107.6	.
05/21/87	.	.	1971	114.0	0.0	114.0	.
05/22/87	.	.	2052	113.3	0.0	113.3	.
05/23/87	.	.	1836	113.7	0.0	113.7	.
05/24/87	.	.	2169	103.5	0.0	103.5	.
05/25/87	.	.	2090	85.6	0.0	85.6	.
05/26/87	.	.	2335	79.9	0.0	79.9	.
05/27/87	.	.	1730	82.4	0.0	82.4	.
05/28/87	.	.	2139	68.8	0.0	68.8	.
05/29/87	.	.	1756	1.6	0.0	1.6	.
05/30/87	.	.	1727	0.0	0.0	0.0	.
05/31/87	.	.	1918	0.0	0.0	0.0	.
06/01/87	23.6	23.8	1641	76.4	0.0	76.4	23.6*
06/02/87	22.8	22.9	1895	110.8	0.0	110.8	23.0
06/03/87	.	.	1960	110.7	0.0	110.7	.
06/04/87	.	.	2064	111.2	0.0	111.2	.
06/05/87	19.4	19.8	2485	99.5	0.0	99.5	19.5
06/06/87	.	.	3495	0.0	0.0	0.0	.
06/07/87	.	.	2775	31.2	0.0	31.2	.
06/08/87	.	.	2540	105.4	0.0	105.4	.
06/09/87	18.7	18.9	2617	103.1	0.0	103.1	18.9
06/10/87	18.4	19.0	2636	107.0	0.0	107.0	18.6
06/11/87	18.6	19.3	2757	111.8	0.0	111.8	18.8
06/12/87	18.5	18.9	2339	112.3	0.0	112.3	18.8
06/13/87	18.6	19.5	2366	111.8	0.0	111.8	18.9
06/14/87	20.2	21.2	2176	111.6	0.0	111.6	20.5
06/15/87	21.5	22.4	1819	115.0	0.0	115.0	21.8
06/16/87	22.0	23.1	2131	113.2	0.0	113.2	22.1
06/17/87	21.9	22.7	2333	112.0	0.0	112.0	21.9
06/18/87	21.8	22.9	1944	111.8	0.0	111.8	22.0
06/19/87	22.4	23.6	1849	112.3	0.0	112.3	22.7
06/20/87	23.1	24.1	1189	112.8	0.0	112.8	23.5
06/21/87	23.3	24.0	970	112.7	56.0	168.7	24.2
06/22/87	23.1	23.4	1282	113.3	0.0	113.3	23.5
06/23/87	21.6	22.5	2626	113.5	101.6	215.1	22.3
06/24/87	20.7	21.4	6771	102.0	0.0	102.0	20.7*
06/25/87	20.6	21.2	5515	112.8	67.9	180.6	20.7

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
06/04/88	16.5	17.0	2887	107.0	0.0	107.0	16.8
06/05/88	16.7	17.3	3203	103.7	0.0	103.7	16.8
06/06/88	16.9	17.4	2794	109.1	0.0	109.1	17.2
06/07/88	17.4	18.3	2442	97.0	0.0	97.0	17.6
06/08/88	17.8	18.7	2481	.	.	.	.
06/09/88	17.5	17.8	2137	110.3	0.0	110.3	17.9
06/10/88	16.9	18.1	1980	.	.	.	.
06/11/88	17.8	18.9	1691	109.3	0.0	109.3	18.3
06/12/88	18.9	20.4	1405	108.4	0.0	108.4	19.4
06/13/88	20.5	22.0	1568	102.7	0.0	102.7	20.9
06/14/88	22.0	23.6	1429	112.0	0.0	112.0	22.4
06/15/88	23.5	24.7	1427	113.9	0.0	113.9	23.8
06/16/88	24.3	25.0	1006	111.5	0.0	111.5	24.8
06/17/88	24.0	24.4	1139	111.6	0.0	111.6	24.4
06/18/88	23.5	25.1	1104	112.0	0.0	112.0	24.0
06/19/88	23.6	24.7	1273	106.2	0.0	106.2	24.0
06/20/88	24.5	25.5	1157	107.4	0.0	107.4	24.8
06/21/88	25.4	26.3	1118	112.1	0.0	112.1	25.8
06/22/88	25.3	25.6	1032	112.2	0.0	112.2	25.7
06/23/88	24.9	25.5	1184	8.5	0.0	8.5	24.9*
06/24/88	23.7	24.3	1099	108.3	0.0	108.3	24.1
06/25/88	22.6	23.4	1278	105.7	0.0	105.7	23.0
06/26/88	22.2	23.0	1314	98.0	0.0	98.0	22.5
06/27/88	21.8	22.7	1185	107.9	61.3	169.1	22.6
06/28/88	22.7	23.6	1079	112.3	60.0	172.3	23.6
06/29/88	22.9	23.7	1032	108.8	0.0	108.8	23.4
06/30/88	21.9	22.7	1189	106.6	127.5	234.1	23.2
09/01/88	18.9	19.5	3034	96.1	298.3	394.5	20.7
09/02/88	18.9	19.4	2455	20.0	318.1	338.1	20.6
09/03/88	18.8	19.2	2115	0.0	306.1	306.1	20.4
09/04/88	18.2	18.5	2006	0.0	309.9	309.9	19.9
09/05/88	17.7	18.4	2052	0.0	295.1	295.1	19.2
09/06/88	17.1	17.6	2850	53.6	279.9	333.5	18.7
09/07/88	16.4	16.9	2929	99.9	287.5	387.5	18.4
09/08/88	15.9	16.5	2066	91.3	313.6	405.0	18.2
09/09/88	15.9	16.4	2403	87.9	312.2	400.1	18.1
09/10/88	16.3	16.9	2036	112.1	295.8	407.9	18.6
09/11/88	16.5	17.1	1281	99.0	283.0	382.1	19.0
09/12/88	15.9	16.3	1368	96.0	300.4	396.3	18.5
09/13/88	15.5	15.8	1391	111.1	277.8	389.0	18.0
09/14/88	15.2	15.7	1236	100.4	274.6	375.0	17.7
09/15/88	14.9	15.3	1195	102.8	290.5	393.3	17.5
09/16/88	14.5	15.2	1188	108.6	310.2	418.8	17.3
09/17/88	14.1	14.7	1098	108.5	309.4	417.9	17.0
09/18/88	14.2	14.6	951	108.7	304.4	413.1	17.2
09/19/88	14.6	15.3	1001	109.6	314.2	423.8	17.6
09/20/88	15.1	15.7	1063	108.5	278.9	387.3	17.7
09/21/88	15.7	16.1	1116	110.2	232.6	342.8	18.1
09/22/88	15.6	16.2	1086	108.5	307.2	415.7	18.4
09/23/88	15.5	15.9	1906	108.3	305.5	413.8	17.9

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
09/24/88	15.0	15.4	1429	118.3	310.0	428.3	17.7
09/25/88	14.7	15.2	1239	105.9	302.9	408.8	17.4
09/26/88	14.6	14.9	1234	.	.	.	.
09/27/88	14.1	14.6	1582	110.2	304.4	414.6	16.8
09/28/88	13.9	14.5	917	108.0	67.7	175.7	15.5
09/29/88	13.6	14.0	1067	110.6	311.5	422.1	16.5
09/30/88	13.5	13.9	749	110.7	313.5	424.1	16.7
10/01/88	13.5	14.4	760	110.4	315.0	425.4	16.7
10/02/88	14.3	14.8	788	100.2	300.5	400.7	17.3
10/03/88	14.7	14.9	178	108.3	308.8	417.0	18.7
10/04/88	14.1	14.9	507	105.5	306.9	412.4	17.5
10/05/88	12.7	13.7	673	104.9	308.7	413.6	15.9
10/06/88	11.4	11.9	530	111.5	319.9	431.3	15.0
10/07/88	11.2	12.4	453	112.7	320.0	432.6	14.9
10/08/88	11.3	11.9	463	113.8	197.3	311.0	14.3
10/09/88	10.4	10.7	436	111.7	0.0	111.7	12.2
10/10/88	10.3	10.8	550	113.4	163.2	276.6	13.0
10/11/88	10.8	11.3	550	113.6	310.3	423.9	14.4
10/12/88	10.7	11.2	898	109.1	320.0	429.1	14.0
10/13/88	10.1	10.5	1275	113.5	318.5	432.0	13.2
10/14/88	9.5	9.9	1011	.	.	.	.
10/15/88	9.4	9.9	1137	114.1	310.2	424.3	12.6
10/16/88	9.9	10.3	1036	113.7	320.2	433.9	13.2
10/17/88	10.4	10.6	1076	113.8	310.5	424.2	13.6
10/18/88	11.0	11.3	1065	113.8	316.8	430.7	14.2
10/19/88	11.1	11.5	960	113.6	312.0	425.6	14.3
10/20/88	10.3	10.8	983	113.7	320.0	433.8	13.6
10/21/88	9.3	9.7	960	113.5	320.4	433.8	12.7
10/22/88	8.7	9.1	1054	111.0	319.5	430.5	12.0
10/23/88	8.4	8.7	1626	113.9	296.0	410.0	11.3
10/24/88	8.6	9.0	1548	113.8	294.9	408.7	11.6
10/25/88	8.5	8.8	1580	10.5	286.9	297.4	10.8
10/26/88	8.2	8.6	1653	115.5	289.6	405.2	11.1
10/27/88	7.9	8.3	1318	113.8	308.5	422.3	11.1
10/28/88	7.4	7.8	1389	103.9	272.4	376.3	10.3
10/29/88	7.1	7.5	1294	0.0	319.9	319.9	9.7
10/30/88	6.6	6.8	1250	0.0	320.5	320.5	9.3
10/31/88	6.1	6.5	1611	103.2	322.3	425.4	9.3
05/01/89	9.8	10.1	3458	113.8	0.0	113.8	10.3
05/02/89	9.2	9.6	5013	113.8	0.0	113.8	9.5
05/03/89	8.5	8.8	11445	108.3	0.0	108.3	8.5*
05/04/89	7.5	8.1	2012	114.0	0.0	114.0	8.5
05/05/89	7.3	7.7	11168	113.8	0.0	113.8	7.3*
05/06/89	7.8	8.3	9926	110.0	0.0	110.0	7.8*
05/07/89	8.4	9.0	13864	107.4	0.0	107.4	8.4*
05/08/89	7.8	8.3	13679	111.8	0.0	111.8	7.8*
05/09/89	7.7	8.3	10991	112.1	0.0	112.1	7.7*
05/10/89	8.0	8.2	8167	110.5	0.0	110.5	8.1
05/11/89	7.7	8.0	6238	113.0	0.0	113.0	8.0
05/12/89	7.8	8.1	7796	112.5	0.0	112.5	7.9

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/13/89	7.9	8.1	11281	108.8	0.0	108.8	7.9*
05/14/89	8.3	9.1	11741	113.1	0.0	113.1	8.3*
05/15/89	10.0	11.3	9581	110.4	0.0	110.4	10.0*
05/16/89	11.6	12.2	8700	113.3	0.0	113.3	11.6*
05/17/89	12.6	13.3	6739	110.8	0.0	110.8	12.6*
05/18/89	13.8	14.5	5719	112.8	0.0	112.8	13.8
05/19/89	15.7	17.4	5351	112.8	0.0	112.8	15.7*
05/20/89	17.2	18.0	4646	113.6	2.0	115.5	17.2*
05/21/89	17.6	18.0	3517	112.8	215.4	328.2	19.0
05/22/89	17.6	18.2	2887	110.4	307.3	417.8	19.7
05/23/89	17.5	17.9	3471	0.0	43.8	43.8	17.5*
05/24/89	17.3	18.0	4000	65.3	270.9	336.1	18.7
05/25/89	17.3	18.3	3309	.	.	.	.
05/26/89	18.3	18.5	3473	112.5	314.7	427.2	20.3
05/27/89	18.1	18.3	4316	108.8	316.3	425.0	20.0
05/28/89	17.5	17.9	5044	102.9	265.5	368.4	18.9
05/29/89	17.1	17.7	4549	110.0	303.2	413.2	18.9
05/30/89	17.4	17.6	4296	112.1	316.3	428.4	19.3
05/31/89	17.2	17.4	3669	108.9	311.9	420.8	19.2
06/01/89	17.7	18.1	3307	111.0	306.8	417.8	19.7
06/02/89	18.8	19.4	3099	116.1	327.4	443.5	20.9
06/03/89	19.5	20.5	3037	113.0	111.0	224.0	20.2
06/04/89	20.1	20.6	2991	109.4	178.3	287.7	21.2
06/05/89	19.8	20.3	3057	111.3	306.5	417.8	21.8
06/06/89	19.7	20.2	3259	112.6	295.9	408.5	21.5
06/07/89	18.7	19.0	3566	111.7	315.8	427.5	20.7
06/08/89	18.6	18.8	4088	98.7	291.5	390.2	20.3
06/09/89	18.2	18.5	5002	110.1	313.9	424.0	19.9
06/10/89	17.2	17.6	7365	105.2	306.1	411.3	18.7
06/11/89	16.8	17.2	10725	106.0	303.3	409.2	18.0
06/12/89	16.7	17.3	10185	83.6	305.3	388.8	17.9
06/13/89	16.5	17.1	8442	73.9	58.3	132.2	16.5*
06/14/89	16.4	17.1	6746	113.1	40.7	153.8	16.4
06/15/89	16.6	17.1	5841	111.0	311.9	422.8	18.4
06/16/89	16.1	16.2	6523	110.5	302.7	413.2	17.7
06/17/89	15.6	15.9	8766	108.7	308.9	417.5	17.1
06/18/89	16.4	17.1	7453	111.8	142.4	254.2	17.0
06/19/89	17.3	18.0	6678	111.8	0.0	111.8	17.3*
06/20/89	18.1	18.7	5952	110.7	242.4	353.1	19.3
06/21/89	19.2	20.0	4904	111.8	309.7	421.5	20.9
06/22/89	20.8	22.0	3752	112.4	285.0	397.3	22.4
06/23/89	21.9	22.4	3412	112.3	286.7	399.0	23.5
06/24/89	21.8	22.4	3377	111.4	313.5	424.8	23.6
06/25/89	22.0	22.5	3596	111.8	318.4	430.2	23.7
06/26/89	22.8	23.4	3822	112.4	310.4	422.8	24.4
06/27/89	23.8	24.6	3246	113.1	319.7	432.8	25.5
06/28/89	24.3	24.5	2417	17.5	312.6	330.1	25.6
06/29/89	23.1	23.7	3334	0.0	301.1	301.1	24.1
06/30/89	22.8	23.4	2636	0.0	317.3	317.3	24.0
09/01/89	19.5	20.0	877	110.5	277.1	387.7	22.1

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
09/02/89	19.3	19.9	649	89.1	319.3	408.3	22.2
09/03/89	18.7	19.4	834	0.0	309.3	309.3	20.8
09/04/89	18.3	18.9	1170	5.4	319.3	324.7	20.3
09/05/89	17.7	18.2	698	0.0	320.1	320.1	20.0
09/06/89	17.5	18.2	1135	0.0	317.4	317.4	19.5
09/07/89	17.7	18.3	939	5.4	317.6	323.0	19.9
09/08/89	18.2	19.3	846	0.0	316.7	316.7	20.4
09/09/89	18.9	20.4	760	0.0	291.6	291.6	21.0
09/10/89	20.0	21.1	823	29.8	293.8	323.6	22.2
09/11/89	20.5	21.1	689	113.6	294.5	408.0	23.2
09/12/89	20.2	20.7	637	113.9	319.8	433.7	23.2
09/13/89	19.9	20.6	561	113.5	314.1	427.7	23.0
09/14/89	19.5	19.9	539	107.0	308.2	415.1	22.5
09/15/89	18.4	19.0	869	58.8	319.7	378.5	21.0
09/16/89	17.7	18.1	966	32.5	300.4	332.8	19.9
09/17/89	17.2	17.4	1114	100.9	288.1	389.0	19.7
09/18/89	17.1	17.7	1071	111.2	313.8	424.9	19.9
09/19/89	16.7	17.2	1074	111.2	308.0	419.2	19.5
09/20/89	16.4	16.5	1086	112.2	314.2	426.4	19.2
09/21/89	16.4	16.9	1466	112.0	316.9	428.9	19.1
09/22/89	17.5	18.2	2003	113.5	320.3	433.8	19.9
09/23/89	17.7	18.2	1989	110.7	315.3	425.9	20.1
09/24/89	15.5	16.5	1285	106.1	287.3	393.4	18.1
09/25/89	14.1	14.6	1420	96.4	306.5	402.9	16.8
09/26/89	13.8	14.1	1022	111.3	285.0	396.3	16.7
09/27/89	12.7	13.3	2553	112.0	285.8	397.8	15.1
09/28/89	13.4	13.9	1992	113.7	320.3	434.0	16.1
09/29/89	13.6	14.2	1906	106.8	310.1	416.8	16.2
09/30/89	13.9	14.4	1679	110.0	299.2	409.3	16.5
10/01/89	13.6	14.2	1277	111.0	269.7	380.7	16.2
10/02/89	13.4	13.9	1303	103.0	300.3	403.3	16.2
10/03/89	13.9	14.3	1738	112.5	283.7	396.2	16.4
10/04/89	12.7	13.6	3405	75.5	289.9	365.4	14.6
10/05/89	11.7	11.8	2807	107.8	0.0	107.8	12.2
10/06/89	9.4	9.9	2028	111.2	0.8	112.0	10.3
10/07/89	9.4	9.6	2016	110.3	271.4	381.6	11.9
10/08/89	9.2	9.4	1852	108.0	249.8	357.8	11.7
10/09/89	8.7	9.0	1861	112.3	316.7	428.9	11.6
10/10/89	7.8	8.2	1627	111.1	311.9	423.0	10.9
10/11/89	7.5	7.8	1396	110.3	311.5	421.8	10.6
10/12/89	7.3	7.7	1778	111.5	314.8	426.3	10.3
10/13/89	8.7	10.5	2032	100.4	318.9	419.3	11.6
10/14/89	9.9	10.4	1873	80.1	307.0	387.0	12.5
10/15/89	10.0	10.4	1688	112.2	316.1	428.3	12.9
10/16/89	10.3	10.7	1357	111.3	314.9	426.2	13.3
10/17/89	10.5	10.6	1728	111.5	298.8	410.3	13.3
10/18/89	9.3	10.2	2629	113.1	304.5	417.6	11.9
10/19/89	9.8	12.7	3560	100.5	310.2	410.8	12.2
10/20/89	8.6	9.0	4288	48.3	319.3	367.6	10.6
10/21/89	9.0	9.5	7965	0.0	320.6	320.6	10.4

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
10/16/87	9.4	9.6	2260	110.2	262.4	372.6	11.8
10/17/87	9.8	10.3	2216	110.4	0.0	110.4	10.6
10/18/87	10.7	11.0	2278	108.3	0.0	108.3	11.4
10/19/87	10.7	11.3	1812	32.5	0.0	32.5	11.1
10/20/87	10.7	11.2	1897	97.5	34.7	132.3	11.7
10/21/87	10.9	11.1	1669	111.0	291.3	402.3	13.6
10/22/87	10.1	10.7	1697	108.3	311.4	419.7	13.0
10/23/87	8.5	9.4	1954	115.1	322.1	437.2	11.5
10/24/87	.	.	2226	108.4	304.7	413.0	.
10/25/87	.	.	1847	92.0	284.0	376.0	.
10/26/87	.	.	1841	102.0	304.2	406.2	.
10/27/87	.	.	1674	115.9	321.6	437.6	.
10/28/87	.	.	2021	103.9	280.5	384.3	.
10/29/87	.	.	3092	102.2	295.4	397.6	.
10/30/87	.	.	3401	104.9	274.1	379.0	.
10/31/87	.	.	3035	107.4	0.0	107.4	.
05/01/88	.	.	12510	27.8	260.5	288.3	.
05/02/88	.	.	10104	0.0	264.9	264.9	.
05/03/88	.	.	6955	64.8	284.9	349.7	.
05/04/88	.	.	5033	97.0	261.7	358.7	.
05/05/88	.	.	4196	93.4	273.8	367.2	.
05/06/88	.	.	3915	91.5	275.5	367.0	.
05/07/88	.	.	4460	109.4	299.0	408.4	.
05/08/88	.	.	4427	84.2	238.6	322.8	.
05/09/88	.	.	4275	112.8	306.5	419.3	.
05/10/88	.	.	3605	113.4	294.0	407.4	.
05/11/88	.	.	3690	113.2	297.7	410.9	.
05/12/88	.	.	4567	111.9	316.1	428.0	.
05/13/88	.	.	3832	106.3	275.1	381.4	.
05/14/88	.	.	3867	85.7	303.8	389.5	.
05/15/88	.	.	3875	89.3	241.8	331.1	.
05/16/88	.	.	3365	110.6	291.1	401.7	.
05/17/88	.	.	3020	113.4	315.5	428.8	.
05/18/88	.	.	3782	113.3	307.4	420.7	.
05/19/88	.	.	3419	113.4	319.5	432.8	.
05/20/88	.	.	4216	110.5	310.3	420.8	.
05/21/88	.	.	4467	92.9	267.7	360.6	.
05/22/88	.	.	4635	88.3	242.9	331.3	.
05/23/88	.	.	4257	96.1	287.6	383.7	.
05/24/88	.	.	3858	113.2	302.3	415.5	.
05/25/88	.	.	3498	114.5	300.3	414.8	.
05/26/88	.	.	6813	103.5	313.2	416.7	.
05/27/88	.	.	10643	108.5	273.3	381.8	.
05/28/88	.	.	9441	113.1	0.0	113.1	.
05/29/88	.	.	5405	101.2	0.0	101.2	.
05/30/88	.	.	3633	103.9	0.0	103.9	.
05/31/88	.	.	3770	91.3	0.0	91.3	.
06/01/88	17.0	17.0	3664	.	.	.	.
06/02/88	16.8	16.8	3416	104.9	0.0	104.9	16.9
06/03/88	16.9	17.1	3054	95.0	0.0	95.0	17.0

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
06/26/87	19.9	20.4	4260	94.0	365.4	459.4	21.9
06/27/87	19.0	19.5	3392	94.4	292.5	386.9	20.7
06/28/87	18.8	19.3	8162	87.4	321.1	408.5	20.1
06/29/87	18.4	18.7	10954	108.6	195.4	304.1	18.9
06/30/87	18.6	19.5	7715	100.0	45.2	145.2	18.6*
09/01/87	20.2	21.1	748	0.0	319.4	319.4	22.4
09/02/87	20.0	20.3	749	10.3	321.6	331.8	22.3
09/03/87	19.6	20.3	814	110.0	314.0	424.1	22.4
09/04/87	19.1	19.9	1018	112.6	321.2	433.8	21.9
09/05/87	19.3	20.1	922	109.9	313.3	423.2	22.0
09/06/87	19.3	20.0	691	95.4	271.5	366.9	21.9
09/07/87	19.7	20.0	672	104.8	264.9	369.7	22.3
09/08/87	20.2	20.7	742	111.2	323.2	434.3	23.1
09/09/87	20.8	21.2	1333	112.5	314.4	426.9	23.2
09/10/87	21.2	22.1	1781	112.8	320.4	433.2	23.5
09/11/87	20.9	21.4	2155	95.6	313.4	409.0	22.9
09/12/87	19.9	20.2	2158	109.8	305.0	414.8	22.0
09/13/87	19.2	19.4	2099	108.0	284.6	392.6	21.3
09/14/87	19.1	19.8	2020	109.6	297.2	406.7	21.2
09/15/87	19.1	19.4	6264	109.4	295.4	404.7	20.5
09/16/87	18.1	18.8	5453	110.5	285.5	396.0	19.7
09/17/87	18.0	18.3	3798	110.4	298.9	409.3	19.8
09/18/87	17.6	18.1	2873	109.9	299.8	409.7	19.7
09/19/87	16.7	17.2	2690	101.0	296.6	397.6	18.7
09/20/87	16.0	16.2	2230	96.7	278.2	374.9	18.1
09/21/87	15.9	16.1	2625	98.4	279.0	377.4	17.9
09/22/87	15.8	16.1	2929	96.8	290.2	387.0	17.8
09/23/87	15.7	16.0	2934	96.5	276.8	373.3	17.6
09/24/87	15.7	16.1	2592	114.5	294.1	408.6	17.9
09/25/87	15.2	15.6	2278	112.8	321.7	434.5	17.7
09/26/87	14.1	14.5	1783	104.4	306.1	410.4	16.6
09/27/87	14.2	15.0	1699	107.4	306.3	413.7	16.8
09/28/87	14.0	15.0	1475	111.9	312.8	424.7	16.8
09/29/87	15.1	16.2	1465	113.5	319.6	433.1	17.9
09/30/87	16.0	16.3	1391	112.3	321.0	433.3	18.8
10/01/87	15.1	15.6	1033	112.5	321.3	433.9	18.1
10/02/87	14.4	14.9	1177	102.2	298.1	400.3	17.1
10/03/87	14.4	14.6	1439	114.1	312.2	426.3	17.1
10/04/87	13.0	14.2	1662	102.4	295.2	397.6	15.5
10/05/87	11.4	12.3	3570	85.3	293.9	379.2	13.5
10/06/87	11.4	12.3	5650	0.0	293.6	293.6	12.7
10/07/87	10.7	11.0	5669	0.0	299.3	299.3	12.0
10/08/87	10.8	11.3	4919	21.3	291.6	312.9	12.3
10/09/87	11.0	11.5	3934	76.1	311.8	387.9	13.0
10/10/87	11.3	11.7	3061	112.6	291.7	404.4	13.7
10/11/87	10.6	11.3	2716	91.7	276.5	368.2	12.8
10/12/87	10.0	10.2	3050	90.9	292.9	383.8	12.3
10/13/87	9.7	10.1	1963	103.7	314.5	418.2	12.5
10/14/87	8.7	9.3	2285	107.7	317.2	424.9	11.4
10/15/87	.	.	2805	109.9	319.9	429.7	.

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
10/22/89	8.4	9.2	11671	0.0	319.1	319.1	9.6
10/23/89	9.8	10.6	19895	0.0	296.8	296.8	10.4
10/24/89	7.9	8.2	8582	0.0	320.1	320.1	9.3
10/25/89	7.9	8.2	7060	0.0	320.3	320.3	9.4
10/26/89	8.1	8.5	5896	0.0	319.2	319.2	9.7
10/27/89	8.9	9.3	4878	0.0	315.7	315.7	10.5
10/28/89	9.5	10.0	7410	0.0	314.2	314.2	10.8
10/29/89	9.9	10.2	4838	0.0	328.3	328.3	11.6
10/30/89	10.0	10.3	2815	0.0	311.9	311.9	11.9
10/31/89	9.9	10.2	3622	0.0	313.5	313.5	11.7
05/01/90	12.0	12.4	4055	113.4	0.0	113.4	12.4
05/02/90	12.9	13.6	3810	113.5	0.0	113.5	13.3
05/03/90	12.7	13.3	3719	113.8	0.0	113.8	13.0
05/04/90	12.9	13.6	3392	107.3	0.0	107.3	13.3
05/05/90	12.6	13.4	3524	0.0	0.0	0.0	12.6*
05/06/90	12.1	12.9	3816	.	.	.	.
05/07/90	12.4	12.9	3890	13.6	0.0	13.6	12.4*
05/08/90	11.9	12.3	3411	77.8	0.0	77.8	12.2
05/09/90	12.1	12.9	3294	113.7	0.0	113.7	12.6
05/10/90	13.1	13.3	3260	113.3	0.0	113.3	13.5
05/11/90	13.3	13.6	4189	113.4	0.0	113.4	13.5
05/12/90	12.6	13.3	2224	113.6	0.0	113.6	13.3
05/13/90	12.4	13.1	6624	113.7	0.0	113.7	12.4*
05/14/90	12.2	12.7	8692	113.6	0.0	113.6	12.2*
05/15/90	12.2	12.6	10340	113.3	0.0	113.3	12.2*
05/16/90	11.9	12.4	8744	108.3	0.0	108.3	11.9*
05/17/90	12.2	12.7	7252	97.3	0.0	97.3	12.2*
05/18/90	12.0	12.3	7555	113.8	0.0	113.8	12.0*
05/19/90	11.9	12.3	6652	113.6	0.0	113.6	12.0
05/20/90	11.7	12.3	6247	113.4	0.0	113.4	11.8
05/21/90	10.7	11.3	6623	113.3	0.0	113.3	10.8
05/22/90	10.7	11.1	6862	113.6	0.0	113.6	10.8
05/23/90	10.8	11.1	6451	112.5	0.0	112.5	10.9
05/24/90	11.1	11.6	5477	113.6	0.0	113.6	11.2
05/25/90	11.7	12.6	6137	113.5	0.0	113.5	11.8
05/26/90	12.5	13.6	5434	113.5	0.0	113.5	12.6
05/27/90	14.1	14.7	4457	92.3	0.0	92.3	14.1
05/28/90	15.1	16.1	5614	99.9	0.0	99.9	15.1*
05/29/90	15.6	16.2	3408	111.5	0.0	111.5	15.8
05/30/90	15.1	15.4	3445	109.5	0.0	109.5	15.4
05/31/90	16.1	16.3	2994	112.3	0.0	112.3	16.3
06/01/90	15.6	16.7	3355	111.6	0.0	111.6	15.8
06/02/90	17.0	17.8	3621	112.8	0.0	112.8	17.1
06/03/90	18.4	19.3	3284	111.4	0.0	111.4	18.5
06/04/90	18.6	19.0	3274	112.4	0.0	112.4	18.7
06/05/90	18.1	18.6	2863	104.9	0.0	104.9	18.3
06/06/90	17.2	17.7	2873	48.1	0.0	48.1	17.2*
06/07/90	17.0	17.8	2447	10.0	0.0	10.0	17.0*
06/08/90	17.8	18.5	2586	0.0	0.0	0.0	17.8*
06/09/90	18.1	18.5	2478	0.0	0.0	0.0	18.1*

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
06/10/90	18.0	18.3	2301	0.0	0.0	0.0	18.0*
06/11/90	17.4	18.0	3740	0.0	0.0	0.0	17.4*
06/12/90	17.0	17.7	5252	0.0	0.0	0.0	17.0*
06/13/90	17.9	18.6	4710	0.0	0.0	0.0	17.9*
06/14/90	18.5	19.3	3901	0.0	0.0	0.0	18.5*
06/15/90	19.3	19.9	3033	0.0	0.0	0.0	19.3*
06/16/90	20.7	21.9	2808	0.0	0.0	0.0	20.7*
06/17/90	21.1	22.1	2713	0.0	0.0	0.0	21.1*
06/18/90	22.0	22.7	2501	0.0	0.0	0.0	22.0*
06/19/90	22.4	23.1	2264	16.0	0.0	16.0	22.4*
06/20/90	21.7	22.2	2546	35.8	0.0	35.8	21.7*
06/21/90	20.7	21.1	2736	111.8	0.0	111.8	20.8
06/22/90	21.3	21.8	2887	111.7	0.0	111.7	21.3*
06/23/90	21.6	21.8	2687	110.7	0.0	110.7	21.6
06/24/90	21.6	22.3	4192	109.1	0.0	109.1	21.6*
06/25/90	21.8	22.4	4690	110.4	6.8	117.2	21.8*
06/26/90	22.1	22.8	3999	112.5	202.8	315.3	23.1
06/27/90	22.2	22.5	3061	113.8	221.7	335.5	23.4
06/28/90	22.3	22.8	2493	113.0	258.5	371.5	23.9
06/29/90	21.6	22.1	2322	97.0	265.5	362.5	23.2
06/30/90	20.2	20.8	2361	69.4	0.0	69.4	20.2*
09/01/90	22.6	23.2	2381	105.2	295.1	400.3	24.4
09/02/90	22.3	23.2	1963	94.7	280.9	375.6	24.1
09/03/90	22.6	23.1	1978	106.9	223.4	330.3	24.1
09/04/90	22.0	22.9	1762	109.5	0.0	109.5	22.3
09/05/90	21.8	22.0	1581	111.4	31.3	142.7	22.3
09/06/90	21.9	22.0	1277	113.3	320.7	434.0	24.3
09/07/90	21.9	22.0	1325	112.7	314.6	427.3	24.3
09/08/90	21.3	22.0	1443	113.5	320.0	433.5	23.7
09/09/90	20.4	21.1	1432	109.3	300.9	410.3	22.7
09/10/90	20.2	20.8	1620	110.8	314.9	425.8	22.6
09/11/90	21.3	22.0	1665	110.5	314.0	424.4	23.5
09/12/90	21.4	21.9	1910	111.4	318.0	429.4	23.6
09/13/90	21.1	21.8	1779	110.3	315.0	425.3	23.4
09/14/90	20.8	21.2	1500	110.8	311.5	422.3	23.1
09/15/90	20.6	21.0	1658	111.0	317.1	428.0	22.9
09/16/90	19.4	20.1	1574	101.1	302.4	403.5	21.7
09/17/90	18.2	19.0	1957	110.5	308.0	418.5	20.5
09/18/90	16.5	17.4	1718	96.6	288.9	385.5	18.8
09/19/90	15.6	16.2	1391	96.8	294.4	391.2	18.1
09/20/90	15.7	16.2	1602	95.9	296.9	392.8	18.2
09/21/90	15.8	16.4	1407	110.6	316.1	426.7	18.5
09/22/90	15.7	16.0	1565	110.6	315.3	425.9	18.4
09/23/90	15.7	16.2	1543	107.0	303.2	410.2	18.3
09/24/90	15.3	15.7	1835	112.3	317.8	430.0	17.9
09/25/90	14.9	15.4	2142	110.4	313.3	423.7	17.3
09/26/90	15.1	15.7	1798	101.3	48.6	149.9	15.9
09/27/90	15.5	16.2	1443	96.0	0.0	96.0	16.2
09/28/90	16.2	16.7	1519	102.5	0.0	102.5	16.8
09/29/90	16.7	17.3	1145	108.9	0.0	108.9	17.6

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
09/30/90	16.5	17.0	1475	102.8	0.0	102.8	17.2
10/01/90	16.1	16.5	1834	113.1	0.3	113.5	16.7
10/02/90	15.4	15.9	2190	110.7	287.0	397.7	17.7
10/03/90	14.4	14.8	1922	33.2	307.5	340.7	16.5
10/04/90	14.2	14.5	1821	0.0	313.3	313.3	16.1
10/05/90	14.1	14.5	1794	78.5	303.8	382.3	16.5
10/06/90	14.1	14.7	2500	110.4	309.0	419.4	16.5
10/07/90	14.8	15.3	2611	98.0	293.6	391.6	16.9
10/08/90	15.5	16.1	1760	110.8	311.8	422.7	18.0
10/09/90	15.4	15.7	1092	111.4	311.4	422.8	18.3
10/10/90	15.0	15.3	1619	111.6	315.2	426.8	17.6
10/11/90	14.2	14.5	1334	110.4	310.5	420.9	17.0
10/12/90	14.2	14.7	2246	106.8	309.3	416.1	16.6
10/13/90	15.0	15.2	2580	112.3	6.1	118.5	15.5
10/14/90	15.5	16.0	5226	83.4	173.8	257.2	16.3
10/15/90	15.2	15.6	9592	94.7	283.6	378.3	16.4
10/16/90	14.7	15.2	6276	86.0	279.5	365.5	16.1
10/17/90	14.1	14.5	3523	.	.	.	.
10/18/90	14.1	14.4	2906	101.2	308.0	409.2	16.3
10/19/90	13.4	14.1	3067	111.0	270.8	381.8	15.5
10/20/90	11.5	12.2	4013	107.3	289.1	396.3	13.6
10/21/90	10.6	11.3	3874	107.8	303.8	411.5	12.9
10/22/90	10.5	10.8	2676	107.0	270.3	377.3	12.8
10/23/90	10.4	10.4	3163	100.7	171.5	272.1	11.9
10/24/90	10.4	10.8	5238	112.0	236.5	348.6	12.1
10/25/90	10.0	10.5	11129	105.8	314.4	420.1	11.7
10/26/90	10.0	10.1	10827	113.4	318.5	431.9	11.7
10/27/90	9.0	9.6	7852	110.2	300.1	410.3	10.9
10/28/90	8.0	8.6	6200	110.0	323.2	433.2	10.3
10/29/90	7.5	7.8	5231	112.9	317.4	430.3	9.9
10/30/90	6.8	7.0	4136	112.0	316.0	428.0	9.4
10/31/90	6.8	7.1	3446	105.1	309.3	414.5	9.4
05/01/91	12.7	13.4	4996	91.6	0.0	91.6	12.7
05/02/91	13.2	13.5	6084	87.4	0.0	87.4	13.2*
05/03/91	12.6	13.0	5818	96.4	0.0	96.4	12.6*
05/04/91	12.5	13.1	4545	98.1	0.0	98.1	12.6
05/05/91	13.4	14.1	4225	71.4	0.0	71.4	13.4*
05/06/91	13.4	13.7	3650	89.9	0.0	89.9	13.6
05/07/91	12.9	13.4	5654	85.5	0.0	85.5	12.9*
05/08/91	12.5	13.1	8226	85.8	0.0	85.8	12.5*
05/09/91	12.8	13.2	7206	70.7	0.0	70.7	12.8*
05/10/91	13.0	13.9	6373	0.0	0.0	0.0	13.0*
05/11/91	13.8	14.5	4781	0.0	0.0	0.0	13.8*
05/12/91	15.2	16.0	3881	0.0	0.0	0.0	15.2*
05/13/91	16.4	17.3	4051	83.5	0.0	83.5	16.4*
05/14/91	16.9	17.3	3496	110.4	0.0	110.4	17.0
05/15/91	16.9	17.8	3485	99.0	0.0	99.0	17.0
05/16/91	17.8	19.0	3015	98.3	0.0	98.3	17.9
05/17/91	18.8	20.1	2988	95.1	0.0	95.1	18.8
05/18/91	18.9	20.1	2877	87.6	0.0	87.6	18.9*

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
09/08/91	22.7	23.6	1491	88.7	303.2	391.9	24.8
09/09/91	22.7	23.5	1309	110.3	260.6	370.8	24.7
09/10/91	23.0	23.9	1309	110.4	0.0	110.4	23.4
09/11/91	22.5	23.1	1309	109.0	125.1	234.2	23.7
09/12/91	21.2	22.0	1072	106.0	307.9	413.9	23.7
09/13/91	20.6	21.6	600	95.9	300.8	396.7	23.4
09/14/91	20.0	20.6	900	107.7	302.7	410.3	22.7
09/15/91	19.5	19.6	786	98.7	289.9	388.5	22.1
09/16/91	20.5	21.6	1072	111.3	308.2	419.5	23.0
09/17/91	21.6	22.3	796	110.7	314.7	425.4	24.3
09/18/91	22.1	22.9	1346	110.5	299.5	410.0	24.4
09/19/91	21.7	22.4	1365	107.3	303.6	410.9	24.0
09/20/91	20.0	20.8	1264	21.0	292.7	313.6	21.8
09/21/91	18.2	18.7	1398	0.0	281.0	281.0	19.9
09/22/91	17.3	17.9	1509	0.0	259.0	259.0	18.9
09/23/91	16.8	17.2	1557	0.0	299.1	299.1	18.6
09/24/91	16.7	17.1	1578	0.0	280.5	280.5	18.4
09/25/91	16.2	16.5	2180	0.0	305.9	305.9	17.8
09/26/91	15.3	15.7	3060	0.0	288.7	288.7	16.7
09/27/91	14.6	14.9	4414	0.0	286.1	286.1	15.7
09/28/91	14.9	16.5	4435	0.0	0.0	0.0	14.9*
09/29/91	13.2	14.2	3605	0.0	0.0	0.0	13.2*
09/30/91	12.5	13.3	3924	0.0	164.9	164.9	13.2
10/01/91	.	.	3233	0.0	303.5	303.5	.
10/02/91	14.2	14.4	3041	0.0	317.2	317.2	15.9
10/03/91	14.7	14.9	3153	0.0	307.9	307.9	16.2
10/04/91	15.2	15.6	3588	0.0	298.9	298.9	16.5
10/05/91	15.5	15.6	2680	0.0	312.3	312.3	17.1
10/06/91	15.3	15.4	2234	0.0	304.3	304.3	16.9
10/07/91	14.0	15.0	6790	0.0	312.8	312.8	15.1
10/08/91	12.7	13.5	11007	0.0	304.4	304.4	13.6
10/09/91	12.1	12.2	7343	0.0	288.0	288.0	13.1
10/10/91	12.2	12.5	5041	0.0	309.9	309.9	13.6
10/11/91	12.4	12.5	3984	0.0	308.8	308.8	13.9
10/12/91	11.8	12.1	3448	0.0	293.5	293.5	13.4
10/13/91	11.1	11.4	4601	0.0	297.4	297.4	12.6
10/14/91	10.6	11.0	4057	0.0	313.3	313.3	12.2
10/15/91	10.3	10.5	3668	0.0	313.1	313.1	12.0
10/16/91	10.5	10.8	3498	0.0	310.0	310.0	12.2
10/17/91	10.2	10.5	6445	0.0	314.0	314.0	11.6
10/18/91	10.5	10.8	5135	0.0	304.2	304.2	11.9
10/19/91	11.2	11.8	3679	0.0	309.2	309.2	12.8
10/20/91	10.8	11.5	3112	0.0	311.5	311.5	12.5
10/21/91	9.8	10.2	3750	0.0	318.7	318.7	11.6
10/22/91	9.8	10.1	5399	0.0	306.2	306.2	11.2
10/23/91	10.0	10.3	2851	0.0	240.6	240.6	11.4
10/24/91	10.2	10.5	2763	0.0	308.9	308.9	12.1
10/25/91	10.8	11.2	2838	0.0	300.1	300.1	12.6
10/26/91	11.5	12.0	2419	0.0	0.0	0.0	11.5*
10/27/91	11.9	12.1	2047	0.0	0.0	0.0	11.9

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/19/91	18.6	19.6	3328	62.3	0.0	62.3	18.6*
05/20/91	18.6	19.6	2812	0.0	0.0	0.0	18.6*
05/21/91	19.3	22.9	2383	86.6	0.0	86.6	19.4
05/22/91	20.2	21.0	2398	.	.	.	.
05/23/91	20.7	21.5	2096	113.3	4.5	117.8	21.0
05/24/91	21.1	22.3	1762	97.3	194.9	292.2	22.5
05/25/91	22.1	23.1	1734	97.3	284.4	381.7	24.1
05/26/91	22.3	23.2	1611	112.2	291.8	404.0	24.4
05/27/91	21.7	22.4	1813	83.3	187.5	270.9	23.0
05/28/91	21.8	22.8	1950	111.2	322.6	433.8	24.0
05/29/91	22.4	23.2	1953	111.5	319.6	431.1	24.5
05/30/91	22.7	23.5	2323	112.8	287.0	399.8	24.6
05/31/91	21.9	22.4	1915	112.0	288.0	400.0	23.9
06/01/91	21.7	22.6	2125	112.5	7.9	120.5	21.9
06/02/91	22.3	23.0	2884	93.5	111.9	205.4	22.8
06/03/91	22.5	23.2	2290	110.1	310.8	420.9	24.5
06/04/91	21.8	22.2	1959	108.8	310.1	418.9	23.9
06/05/91	20.0	20.7	1807	94.9	271.8	366.7	21.9
06/06/91	19.7	20.7	1791	85.3	261.9	347.2	21.5
06/07/91	20.9	22.4	1694	93.8	288.3	382.0	22.9
06/08/91	21.9	23.1	1695	93.3	281.0	374.3	23.9
06/09/91	22.1	23.3	1421	91.0	265.8	356.8	24.0
06/10/91	22.7	23.6	1253	109.0	305.0	414.0	25.0
06/11/91	23.6	24.2	1340	111.0	317.9	428.9	25.9
06/12/91	24.0	24.6	1101	110.5	312.0	422.5	26.3
06/13/91	22.1	23.3	1027	109.2	298.2	407.4	24.5
06/14/91	21.4	22.1	1334	104.0	297.5	401.5	23.6
06/15/91	21.8	22.6	1052	106.7	226.7	333.4	23.7
06/16/91	21.7	22.2	1038	97.6	265.6	363.3	23.9
06/17/91	20.9	21.2	1368	97.0	305.3	402.3	23.2
06/18/91	20.5	21.3	2346	90.6	291.3	382.0	22.3
06/19/91	21.3	22.2	2305	91.1	276.5	367.5	23.0
06/20/91	22.4	23.8	2024	91.3	289.5	380.8	24.2
06/21/91	23.7	24.8	1448	107.7	91.5	199.2	24.5
06/22/91	24.0	24.8	1439	106.8	0.0	106.8	24.3
06/23/91	23.9	24.5	1221	96.7	0.0	96.7	24.2
06/24/91	23.5	24.1	1203	107.0	222.1	329.1	25.3
06/25/91	23.7	24.8	1161	92.6	264.3	356.9	25.6
06/26/91	24.9	26.1	875	108.6	311.3	419.8	27.3
06/27/91	25.6	26.9	869	103.5	245.8	349.3	27.6
06/28/91	26.7	28.1	936	81.4	207.4	288.8	28.2
06/29/91	26.8	27.5	975	70.2	237.6	307.8	28.4
06/30/91	25.9	26.3	795	104.5	297.0	401.5	28.2
09/01/91	23.3	24.3	1355	80.0	286.2	366.2	25.2
09/02/91	22.0	22.7	1274	70.5	271.5	342.1	23.9
09/03/91	21.8	22.3	1419	99.7	281.8	381.5	23.9
09/04/91	21.8	22.3	1317	95.9	312.3	408.2	24.1
09/05/91	22.1	22.6	1309	95.8	315.1	410.9	24.4
09/06/91	22.1	23.1	1603	110.6	315.2	425.8	24.4
09/07/91	22.5	23.4	1544	108.5	304.9	413.4	24.7

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
10/28/91	11.7	12.3	2284	0.0	236.2	236.2	13.1
10/29/91	10.6	11.0	2865	0.0	310.3	310.3	12.4
10/30/91	10.0	10.2	2713	0.0	276.7	276.7	11.7
10/31/91	9.9	10.0	2851	0.0	313.3	313.3	11.8
05/01/92	7.7	7.7	4837	74.6	219.9	294.5	9.3
05/02/92	10.9	10.9	4806	.	.	.	.
05/03/92	11.1	11.9	6682	.	.	.	.
05/04/92	11.4	11.9	8823	.	.	.	.
05/05/92	10.6	11.4	7102	39.6	0.0	39.6	10.6*
05/06/92	7.5	9.8	5127	0.0	0.0	0.0	7.5*
05/07/92	11.6	12.0	7732	0.0	0.0	0.0	11.6*
05/08/92	11.4	11.6	5428	72.3	0.0	72.3	11.4*
05/09/92	11.7	12.2	4549	81.6	0.0	81.6	11.8
05/10/92	12.6	13.3	3372	54.1	0.0	54.1	12.6
05/11/92	13.9	14.7	4564	102.3	0.0	102.3	14.0
05/12/92	14.6	15.3	4061	79.0	0.0	79.0	14.6*
05/13/92	15.9	17.1	3174	0.0	0.0	0.0	15.9*
05/14/92	16.7	17.6	3323	33.3	0.0	33.3	16.7*
05/15/92	17.0	17.6	4573	89.1	0.0	89.1	17.0*
05/16/92	17.0	17.5	3707	94.1	0.0	94.1	17.0*
05/17/92	17.4	18.0	3322	57.8	0.0	57.8	17.4*
05/18/92	17.3	17.7	2720	91.0	0.0	91.0	17.5
05/19/92	16.4	16.8	2965	92.5	0.0	92.5	16.6
05/20/92	17.0	17.5	2486	84.8	0.0	84.8	17.2
05/21/92	17.6	18.2	2838	75.4	0.0	75.4	17.6*
05/22/92	18.5	19.4	2338	.	.	.	.
05/23/92	19.8	21.7	2390	.	.	.	.
05/24/92	19.2	21.3	2462	.	.	.	.
05/25/92	15.1	17.5	2371	.	.	.	.
05/26/92	15.5	18.1	2351	109.1	0.0	109.1	16.0
05/27/92	15.7	17.6	1986	97.8	0.0	97.8	16.1
05/28/92	16.8	18.5	2093	106.3	0.0	106.3	17.2
05/29/92	17.5	19.6	1986	100.3	0.0	100.3	17.9
05/30/92	18.6	20.2	1860	112.3	0.0	112.3	19.0
05/31/92	17.0	18.1	1636	110.1	0.0	110.1	17.6
06/01/92	14.3	15.4	2428	104.0	0.0	104.0	14.7
06/02/92	16.2	17.7	4187	93.8	0.0	93.8	16.2*
06/03/92	17.4	18.0	4796	91.9	0.0	91.9	17.4*
06/04/92	18.8	19.7	3787	94.6	0.0	94.6	18.8*
06/05/92	19.0	19.5	2988	92.3	0.0	92.3	19.0*
06/06/92	18.0	18.5	2714	73.4	0.0	73.4	18.0*
06/07/92	18.7	19.5	4327	88.9	0.0	88.9	18.7*
06/08/92	19.3	19.5	5106	104.7	0.0	104.7	19.3*
06/09/92	20.3	21.1	4387	112.6	0.0	112.6	20.3*
06/10/92	20.4	20.9	3770	96.5	0.0	96.5	20.4*
06/11/92	20.7	21.3	3110	93.6	0.0	93.6	20.7*
06/12/92	21.2	21.9	2956	95.5	3.0	98.5	21.2*
06/13/92	22.0	23.0	2485	91.3	0.9	92.2	22.0*
06/14/92	23.2	24.1	2133	95.9	0.0	95.9	23.2*
06/15/92	23.8	24.8	1807	111.7	167.5	279.3	24.9

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
06/16/92	22.6	24.5	1108	106.7	240.0	346.8	24.6
06/17/92	22.9	24.4	1576	112.3	224.3	336.5	24.6
06/18/92	22.6	24.8	1331	112.3	296.8	409.2	24.8
06/19/92	22.1	23.9	1266	112.3	295.4	407.6	24.4
06/20/92	21.6	22.7	1233	112.3	296.8	409.1	24.0
06/21/92	22.7	24.1	1480	112.4	296.6	409.0	24.8
06/22/92	23.4	24.5	1900	112.5	306.3	418.8	25.4
06/23/92	22.3	23.4	1480	112.3	266.1	378.4	24.3
06/24/92	21.3	22.2	1467	112.6	301.5	414.1	23.6
06/25/92	21.1	21.6	1414	112.5	300.2	412.7	23.4
06/26/92	21.7	23.1	1487	112.4	293.5	405.8	23.9
06/27/92	22.3	23.1	1554	112.3	288.8	401.1	24.4
06/28/92	22.8	23.9	1350	112.3	257.7	370.0	24.8
06/29/92	23.5	24.8	1578	112.0	269.9	381.9	25.4
06/30/92	24.2	25.6	1315	112.3	287.5	399.7	26.3
09/01/92	22.9	23.7	1513	78.5	266.8	345.3	24.7
09/02/92	21.5	22.1	1123	0.0	256.2	256.2	23.0
09/03/92	20.2	21.4	1133	0.0	278.7	278.7	21.9
09/04/92	20.1	20.7	1392	0.0	267.4	267.4	21.5
09/05/92	20.7	21.5	2988	0.0	273.7	273.7	21.7
09/06/92	20.5	20.9	2611	0.0	195.6	195.6	21.1
09/07/92	19.9	20.3	2088	0.0	254.8	254.8	21.1
09/08/92	19.9	20.8	1749	76.3	276.6	352.9	21.8
09/09/92	20.8	21.8	1610	112.4	291.5	403.9	23.0
09/10/92	21.7	22.6	1547	112.3	307.7	420.0	23.9
09/11/92	22.1	22.8	1778	109.0	290.4	399.4	24.2
09/12/92	21.4	22.0	1783	91.6	289.7	381.3	23.3
09/13/92	20.4	20.9	1755	106.4	266.8	373.2	22.3
09/14/92	20.3	21.4	1584	112.4	306.2	418.6	22.6
09/15/92	20.8	21.8	1318	101.5	300.6	402.2	23.1
09/16/92	21.3	22.1	1179	99.7	289.0	388.7	23.6
09/17/92	22.4	23.2	1140	112.3	308.7	421.0	24.8
09/18/92	23.3	24.2	1098	109.4	317.6	427.0	25.7
09/19/92	23.3	23.6	1215	0.0	310.7	310.7	24.9
09/20/92	22.0	22.5	1100	0.0	248.4	248.4	23.4
09/21/92	21.0	21.5	1089	85.2	296.0	381.1	23.3
09/22/92	20.5	20.8	1086	112.5	309.8	422.3	23.0
09/23/92	20.0	20.4	1377	110.1	301.3	411.4	22.4
09/24/92	18.7	19.5	1874	91.5	293.4	384.9	20.8
09/25/92	17.6	18.1	2124	105.1	272.8	377.9	19.6
09/26/92	17.1	17.4	2084	97.4	283.4	380.8	19.2
09/27/92	17.0	17.3	1717	20.6	255.0	275.5	18.6
09/28/92	17.4	18.0	1723	96.5	293.7	390.2	19.6
09/29/92	17.0	17.5	1851	96.5	278.2	374.7	19.2
09/30/92	15.4	16.4	1477	112.3	308.6	420.8	18.1
10/01/92	13.7	14.2	1494	113.4	310.1	423.5	16.5
10/02/92	13.0	13.7	1533	113.4	272.1	385.5	15.6
10/03/92	14.0	14.9	1390	113.8	0.0	113.8	14.9
10/04/92	14.8	15.2	1219	97.0	0.0	97.0	15.6
10/05/92	14.3	15.0	1302	110.0	0.0	110.0	15.1

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
10/06/92	13.6	13.8	1234	108.4	264.2	372.5	16.2
10/07/92	.	.	1103	113.5	309.5	423.0	.
10/08/92	.	.	968	94.0	302.7	396.6	.
10/09/92	13.6	13.8	1128	97.6	283.5	381.1	16.3
10/10/92	14.3	14.9	1367	101.4	278.3	379.7	16.8
10/11/92	14.5	14.8	2475	92.9	266.4	359.3	16.5
10/12/92	14.3	14.6	2397	97.1	88.1	185.3	15.3
10/13/92	14.1	14.5	2021	102.5	0.0	102.5	14.7
10/14/92	13.3	13.7	2184	113.4	0.0	113.4	13.9
10/15/92	13.1	13.2	2045	109.5	0.0	109.5	13.7
10/16/92	13.0	13.1	2075	110.4	0.0	110.4	13.7
10/17/92	12.7	13.1	1802	101.1	0.0	101.1	13.5
10/18/92	11.7	12.2	1426	113.2	0.0	113.2	12.7
10/19/92	11.2	11.7	1196	113.3	0.0	113.3	12.3
10/20/92	10.9	11.3	1202	113.5	0.0	113.5	12.1
10/21/92	10.6	10.9	1270	102.0	0.0	102.0	11.7
10/22/92	10.1	10.4	1420	83.8	0.0	83.8	11.0
10/23/92	9.8	10.3	1277	100.2	0.0	100.2	10.9
10/24/92	10.1	10.4	1431	64.3	66.0	130.4	11.3
10/25/92	9.8	10.3	1820	108.0	304.8	412.8	12.6
10/26/92	8.7	9.1	2101	113.5	318.6	432.1	11.6
10/27/92	8.6	9.0	1926	113.5	313.6	427.2	11.5
10/28/92	8.3	8.6	1714	111.8	299.9	411.6	11.2
10/29/92	8.0	8.3	1613	.	.	.	.
10/30/92	8.4	8.9	1618	80.7	308.8	389.5	11.2
10/31/92	8.2	8.5	1680	0.0	310.9	310.9	10.5
05/01/93	12.4	13.3	7096	.	.	.	.
05/02/93	13.4	14.2	6225	79.3	0.0	79.3	13.4*
05/03/93	13.8	14.3	5998	93.2	0.0	93.2	13.8*
05/04/93	14.6	15.6	5544	94.5	0.0	94.5	14.6*
05/05/93	15.8	16.5	3989	111.3	0.0	111.3	15.9
05/06/93	16.5	17.1	3556	93.0	0.0	93.0	16.5
05/07/93	16.5	17.0	4108	94.1	0.0	94.1	16.5*
05/08/93	16.6	17.4	3967	89.4	0.0	89.4	16.6*
05/09/93	17.6	18.6	3674	98.8	0.0	98.8	17.6*
05/10/93	17.5	18.0	3250	110.4	0.0	110.4	17.6
05/11/93	16.9	18.1	2817	110.0	0.0	110.0	17.1
05/12/93	18.0	18.7	2802	92.9	0.0	92.9	18.0
05/13/93	18.0	18.5	2537	93.0	0.0	93.0	18.2
05/14/93	17.9	18.8	2745	98.2	0.0	98.2	18.1
05/15/93	18.0	18.7	2399	110.8	0.0	110.8	18.3
05/16/93	18.2	19.0	2208	96.9	0.0	96.9	18.5
05/17/93	18.4	18.9	2500	104.2	0.0	104.2	18.6
05/18/93	17.8	18.2	2208	89.4	0.0	89.4	18.0
05/19/93	16.9	17.3	1948	93.5	0.0	93.5	17.3
05/20/93	16.1	16.4	1735	100.5	0.0	100.5	16.6
05/21/93	16.2	17.0	1892	106.7	0.0	106.7	16.8
05/22/93	16.7	17.4	1885	113.1	0.0	113.1	17.2
05/23/93	16.9	17.9	1553	109.5	0.0	109.5	17.5
05/24/93	16.8	17.4	1774	112.5	0.0	112.5	17.3

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/25/93	17.6	18.9	1532	112.7	0.0	112.7	18.2
05/26/93	18.0	18.7	1623	112.8	0.0	112.8	18.6
05/27/93	17.1	17.7	1645	111.5	0.0	111.5	17.7
05/28/93	16.4	16.8	1785	113.1	106.6	219.7	17.6
05/29/93	16.2	16.8	1609	107.7	243.3	351.0	18.3
05/30/93	16.5	17.6	1398	77.7	1.7	79.3	17.0
05/31/93	17.0	17.6	1453	100.5	0.0	100.5	17.6
06/01/93	16.6	17.3	1573	110.0	195.3	305.3	18.4
06/02/93	15.6	16.7	2273	101.0	281.3	382.3	17.7
06/03/93	15.9	16.5	3002	110.5	292.7	403.2	17.9
06/04/93	15.9	16.4	2460	103.8	287.9	391.7	18.0
06/05/93	15.8	16.4	1877	109.5	0.0	109.5	16.4
06/06/93	15.3	15.7	2011	110.1	0.0	110.1	15.8
06/07/93	15.2	16.0	2179	106.6	210.9	317.5	17.0
06/08/93	16.5	17.7	2200	91.2	262.7	353.9	18.5
06/09/93	17.2	17.3	2143	102.7	297.2	399.9	19.4
06/10/93	17.6	18.3	2002	94.5	278.5	372.9	19.6
06/11/93	18.6	19.6	1846	89.4	301.1	390.5	20.7
06/12/93	19.3	20.4	1587	88.9	243.5	332.5	21.2
06/13/93	20.2	21.5	1354	80.3	253.1	333.3	22.1
06/14/93	21.4	23.0	1368	102.2	297.0	399.2	23.6
06/15/93	22.3	23.4	1234	103.5	313.2	416.7	24.7
06/16/93	22.4	22.7	1151	96.3	289.8	386.1	24.5
06/17/93	22.3	23.2	1161	102.4	287.8	390.2	24.5
06/18/93	22.7	23.9	1087	95.2	91.9	187.1	23.7
06/19/93	23.1	23.6	1307	110.9	0.0	110.9	23.5
06/20/93	22.5	23.0	1077	91.6	1.6	93.3	22.9
06/21/93	21.7	22.1	1120	96.5	272.0	368.5	23.8
06/22/93	21.4	21.8	1337	105.9	275.9	381.8	23.6
06/23/93	20.6	21.4	1630	94.6	273.3	368.0	22.6
06/24/93	20.7	22.0	1573	93.2	236.5	329.7	22.5
06/25/93	21.7	23.0	1604	94.0	263.6	357.6	23.6
06/26/93	22.8	24.3	1336	92.7	282.7	375.4	24.8
06/27/93	23.5	24.4	1204	105.4	283.5	388.9	25.6
06/28/93	24.0	24.9	916	105.6	303.1	408.7	26.4
06/29/93	24.5	25.5	1024	102.8	287.8	390.7	26.6
06/30/93	24.5	25.0	1221	110.8	288.9	399.7	26.6
09/01/93	23.8	24.5	804	111.4	320.4	431.8	26.4
09/02/93	23.4	24.2	755	111.7	319.5	431.2	26.0
09/03/93	23.0	23.5	852	111.5	315.1	426.7	25.6
09/04/93	22.7	23.1	743	106.9	320.4	427.3	25.4
09/05/93	22.9	23.8	680	110.5	291.7	402.1	25.5
09/06/93	23.2	24.0	678	111.2	308.5	419.6	25.9
09/07/93	22.7	23.2	674	111.4	311.1	422.5	25.5
09/08/93	22.1	22.4	646	102.9	307.8	410.7	24.8
09/09/93	21.6	22.0	792	101.7	288.0	389.7	24.1
09/10/93	21.2	21.6	1173	88.9	311.3	400.2	23.5
09/11/93	20.2	20.7	871	0.0	286.8	286.8	22.1
09/12/93	19.5	20.0	1138	0.0	236.5	236.5	21.0
09/13/93	19.4	20.2	1141	0.0	273.9	273.9	21.1

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
09/14/93	20.0	20.9	908	0.0	298.9	298.9	22.0
09/15/93	21.4	22.7	925	0.0	317.2	317.2	23.3
09/16/93	21.2	21.5	810	0.0	319.5	319.5	23.2
09/17/93	20.3	20.7	854	0.0	320.0	320.0	22.4
09/18/93	19.3	19.8	781	0.0	305.3	305.3	21.4
09/19/93	18.2	18.7	760	0.0	300.4	300.4	20.3
09/20/93	16.7	17.2	835	0.0	310.7	310.7	19.0
09/21/93	16.2	16.4	764	0.0	314.2	314.2	18.5
09/22/93	15.7	15.8	847	0.0	287.9	287.9	17.9
09/23/93	15.4	15.6	1043	0.0	321.1	321.1	17.7
09/24/93	15.3	15.8	1110	0.0	321.6	321.6	17.5
09/25/93	15.6	16.4	907	.	.	.	.
09/26/93	15.9	16.0	1294	0.0	317.4	317.4	18.0
09/27/93	15.8	16.0	1556	0.0	317.2	317.2	17.8
09/28/93	16.0	16.4	1798	0.0	313.3	313.3	17.8
09/29/93	15.2	15.7	2198	0.0	195.1	195.1	16.2
09/30/93	14.1	14.6	2494	0.0	0.0	0.0	14.1*
10/01/93	13.5	14.0	2491	0.0	0.0	0.0	13.5*
10/02/93	13.5	14.2	2031	0.0	46.6	46.6	13.8
10/03/93	13.8	14.3	1684	0.0	258.0	258.0	15.5
10/04/93	13.6	14.3	1530	0.0	304.7	304.7	15.6
10/05/93	13.0	13.5	2014	0.0	320.3	320.3	14.9
10/06/93	12.3	12.8	2151	0.0	320.0	320.0	14.3
10/07/93	12.3	12.9	2432	41.0	320.2	361.2	14.5
10/08/93	13.1	14.0	1310	120.2	319.5	439.7	16.1
10/09/93	13.3	13.5	830	112.2	317.4	429.6	16.5
10/10/93	12.6	13.1	1017	113.0	308.2	421.2	15.6
10/11/93	11.5	12.2	1264	113.7	297.6	411.3	14.4
10/12/93	10.0	10.8	1198	113.0	312.4	425.4	13.1
10/13/93	9.3	9.8	1290	113.8	312.5	426.4	12.4
10/14/93	9.1	9.9	2158	102.0	313.8	415.7	11.9
10/15/93	9.6	10.0	1938	84.3	316.3	400.5	12.3
10/16/93	10.2	10.7	1767	93.5	277.9	371.5	12.7
10/17/93	10.5	10.7	1141	111.3	281.5	392.8	13.5
10/18/93	10.9	11.3	1472	98.8	294.3	393.1	13.6
10/19/93	10.8	11.3	1434	92.8	299.4	392.2	13.6
10/20/93	10.5	10.7	1443	87.6	280.1	367.7	13.1
10/21/93	10.1	10.3	1385	97.2	225.3	322.5	12.5
10/22/93	9.9	10.3	1382	113.0	0.0	113.0	11.0
10/23/93	9.4	9.8	2582	113.0	0.0	113.0	10.1
10/24/93	9.1	9.6	2000	113.4	0.0	113.4	10.1
10/25/93	9.3	9.8	1658	113.2	148.8	262.0	11.3
10/26/93	9.0	9.5	1794	111.1	283.0	394.1	11.7
10/27/93	8.6	8.7	1532	95.5	290.5	386.0	11.4
10/28/93	8.6	9.0	1530	107.3	309.6	416.9	11.6
10/29/93	8.4	8.8	1425	96.6	301.0	397.7	11.3
10/30/93	8.1	8.3	1405	99.5	281.6	381.1	11.0
10/31/93	7.6	7.8	1429	105.8	298.2	404.0	10.6
05/01/94	10.1	10.3	6671	105.8	0.0	105.8	10.1
05/02/94	9.5	9.8	7485	97.4	0.0	97.4	9.5*

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°) AT N10	MAX. DAILY TEMP. (C°) AT N10	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION UNIT #2 (MW)	TOTAL (MW)	PREDICTED TEMP. (C°) AT A0
05/03/94	10.0	10.8	7911	103.1	0.0	103.1	10.0*
05/04/94	10.4	10.9	5870	106.3	0.0	106.3	10.5
05/05/94	10.6	10.8	4981	103.1	0.0	103.1	10.8
05/06/94	10.4	10.8	4642	112.2	0.0	112.2	10.7
05/07/94	11.1	12.0	4228	100.5	0.0	100.5	11.4
05/08/94	11.6	12.0	4849	87.7	0.0	87.7	11.7
05/09/94	11.7	12.4	8599	89.3	0.0	89.3	11.7*
05/10/94	12.6	13.1	9584	89.7	0.0	89.7	12.6*
05/11/94	12.7	13.2	8485	109.6	0.0	109.6	12.7*
05/12/94	12.9	13.1	6605	81.7	0.0	81.7	12.9*
05/13/94	12.2	12.6	6304	103.5	0.0	103.5	12.2*
05/14/94	11.8	12.4	6064	109.8	0.0	109.8	11.9
05/15/94	12.4	12.8	4878	89.4	0.0	89.4	12.4
05/16/94	11.9	12.5	4812	97.7	0.0	97.7	12.0
05/17/94	11.4	11.7	5567	91.7	0.0	91.7	11.4
05/18/94	11.4	11.6	7753	110.7	0.0	110.7	11.4*
05/19/94	11.7	12.0	7753	104.0	0.0	104.0	11.7*
05/20/94	12.4	13.2	6157	97.2	0.0	97.2	12.4*
05/21/94	13.5	14.6	5143	113.5	0.0	113.5	13.6
05/22/94	15.1	16.2	4204	93.0	0.0	93.0	15.1*
05/23/94	16.3	17.2	4657	102.7	0.0	102.7	16.3*
05/24/94	17.1	17.9	4209	110.3	0.0	110.3	17.1*
05/25/94	17.0	17.6	3942	111.1	0.0	111.1	17.0
05/26/94	16.4	16.7	3901	100.3	0.0	100.3	16.4
05/27/94	15.8	16.2	4242	106.9	0.0	106.9	15.8
05/28/94	15.6	16.1	4897	108.9	0.0	108.9	15.6*
05/29/94	15.6	16.2	3920	85.5	0.0	85.5	15.6*
05/30/94	16.4	17.0	3884	88.0	0.0	88.0	16.4*
05/31/94	17.7	18.8	3562	111.1	0.0	111.1	17.8
06/01/94	18.5	19.1	3216	93.5	0.0	93.5	18.5*
06/02/94	17.8	18.1	2956	106.4	0.0	106.4	17.9
06/03/94	17.3	17.9	2797	100.3	0.0	100.3	17.5
06/04/94	17.8	18.9	2638	98.0	0.0	98.0	18.0
06/05/94	18.5	19.4	2712	96.5	0.0	96.5	18.6
06/06/94	19.0	19.5	2562	109.0	0.0	109.0	19.2
06/07/94	20.0	20.9	2144	108.2	0.0	108.2	20.2
06/08/94	20.2	20.8	2028	106.4	3.3	109.8	20.5
06/09/94	20.3	21.5	1822	105.1	0.0	105.1	20.6
06/10/94	20.7	22.0	1650	95.9	0.0	95.9	21.0
06/11/94	20.8	21.8	1496	95.5	143.7	239.2	22.0
06/12/94	20.6	21.1	1346	87.3	292.0	379.3	22.7
06/13/94	21.3	22.5	1817	104.2	133.4	237.6	22.4
06/14/94	22.1	23.9	2535	112.5	0.0	112.5	22.1
06/15/94	22.1	22.8	3177	110.7	182.6	293.3	23.1
06/16/94	22.5	23.7	2658	109.3	289.0	398.3	24.2
06/17/94	23.3	24.6	2010	102.8	273.9	376.7	25.0
06/18/94	24.7	25.9	1709	112.1	276.6	388.7	26.5
06/19/94	25.5	26.3	1585	109.4	270.1	379.5	27.2
06/20/94	25.3	26.4	1566	111.2	220.1	331.3	26.8
06/21/94	23.5	24.8	1540	94.3	229.0	323.3	25.1

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

DATE	AVG. DAILY TEMP. (C°)	MAX. DAILY TEMP. (C°)	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION		PREDICTED TEMP. (C°) AT A0
	AT N10	AT N10			UNIT #2 (MW)	TOTAL (MW)	
06/22/94	22.5	24.0	1251	89.5	242.4	331.8	24.3
06/23/94	22.2	23.7	1314	101.2	255.4	356.6	24.1
06/24/94	21.4	22.8	1340	106.1	160.5	266.7	22.8
06/25/94	18.8	20.5	1223	112.6	0.0	112.6	19.5
06/26/94	21.1	22.8	1468	105.2	0.4	105.6	21.5
06/27/94	22.5	23.7	1494	112.2	255.5	367.7	24.4
06/28/94	23.2	23.7	1768	83.1	292.9	376.0	25.0
06/29/94	22.8	23.3	1439	0.0	311.7	311.7	24.4
06/30/94	22.7	23.6	1427	0.0	313.3	313.3	24.3
09/01/94	21.7	22.7	739	101.9	309.3	411.3	24.4
09/02/94	19.7	22.3	581	96.7	257.5	354.2	22.3
09/03/94	18.4	19.5	647	.	.	.	.
09/04/94	17.8	19.1	594	87.1	0.0	87.1	18.9
09/05/94	17.7	19.5	615	85.2	0.0	85.2	18.7
09/06/94	17.0	19.3	642	69.5	192.1	261.6	19.1
09/07/94	17.1	19.4	795	95.8	273.6	369.5	19.7
09/08/94	18.1	20.3	969	98.7	275.4	374.1	20.5
09/09/94	19.1	20.6	1095	86.9	267.3	354.3	21.3
09/10/94	20.0	20.8	1342	85.5	305.0	390.5	22.3
09/11/94	19.7	20.3	1325	86.8	270.2	357.0	21.8
09/12/94	19.2	20.2	1101	107.1	298.6	405.7	21.7
09/13/94	19.4	21.1	974	107.8	322.0	429.8	22.2
09/14/94	20.2	21.6	744	106.7	316.5	423.2	23.0
09/15/94	20.8	22.2	1039	104.7	309.7	414.4	23.3
09/16/94	20.7	21.6	1463	95.0	283.8	378.8	22.8
09/17/94	20.3	21.0	1763	.	.	.	.
09/18/94	20.7	21.1	1950	106.5	316.8	423.2	22.9
09/19/94	19.6	20.7	1610	91.7	312.2	403.9	21.8
09/20/94	17.7	19.4	1288	109.1	318.8	427.9	20.4
09/21/94	18.2	19.6	899	105.1	306.0	411.2	20.9
09/22/94	18.2	18.9	850	97.0	314.4	411.4	21.0
09/23/94	18.1	19.7	905	86.3	280.9	367.1	20.6
09/24/94	19.0	19.4	1458	0.0	213.3	213.3	20.2
09/25/94	19.2	19.5	1720	0.0	271.1	271.1	20.6
09/26/94	19.4	19.5	1747	61.6	271.3	332.9	21.1
09/27/94	19.0	19.4	2133	97.8	256.6	354.4	20.8
09/28/94	18.5	18.7	2452	97.4	279.9	377.3	20.4
09/29/94	18.7	19.0	3313	79.0	261.7	340.7	20.2
09/30/94	17.9	18.5	3424	79.1	265.0	344.1	19.5
10/01/94	17.0	17.4	3100	94.9	266.1	361.0	18.8
10/02/94	16.6	16.9	2455	85.1	254.4	339.5	18.3
10/03/94	15.5	15.8	1880	105.9	290.6	396.5	17.9
10/04/94	14.9	15.4	1664	.	.	.	.
10/05/94	14.8	15.0	1581	.	.	.	.
10/06/94	14.5	14.8	1349	.	.	.	.
10/07/94	14.7	15.2	1476	.	.	.	.
10/08/94	15.3	16.2	1134	.	.	.	.
10/09/94	16.1	16.6	1241	.	.	.	.
10/10/94	16.4	16.7	1290	.	.	.	.
10/11/94	15.4	15.8	1330	.	.	.	.

TABLE C-1. HISTORICAL DATABASE OF BACKGROUND TEMPERATURE AT STATION N10,
FLOW AT GARVINS FALLS, MERRIMACK STATION GENERATION AND
TEMPERATURE AT STATION A0.

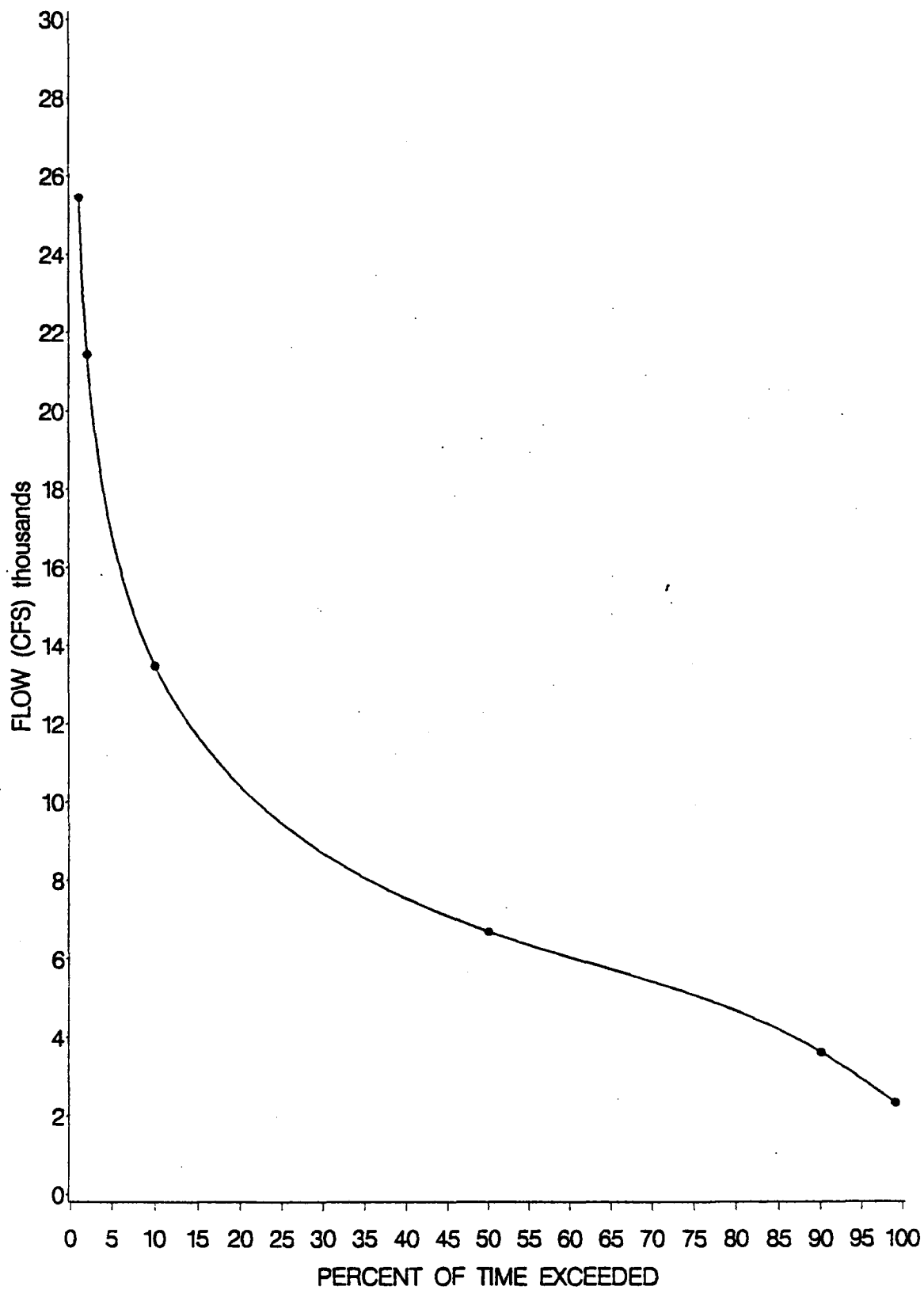
DATE	AVG. DAILY TEMP. (C°)	MAX. DAILY TEMP. (C°)	RIVER FLOW (cfs)	UNIT #1 (MW)	GENERATION		PREDICTED TEMP. (C°) AT A0
	AT N10	AT N10			UNIT #2 (MW)	TOTAL (MW)	
10/12/94	14.4	15.0	967	.	.	.	.
10/13/94	13.7	14.1	983	.	.	.	.
10/14/94	14.0	14.3	1126	.	.	.	.
10/15/94	13.9	14.5	817	.	.	.	.
10/16/94	13.5	13.9	528	.	.	.	.
10/17/94	13.2	13.7	500	.	.	.	.
10/18/94	13.2	13.5	736	.	.	.	.
10/19/94	13.6	14.2	858	.	.	.	.
10/20/94	14.1	14.3	1007	.	.	.	.
10/21/94	14.7	15.1	1303	.	.	.	.
10/22/94	14.9	15.2	1556	.	.	.	.
10/23/94	15.1	15.4	1472	.	.	.	.
10/24/94	15.3	15.6	1516	.	.	.	.
10/25/94	15.0	15.3	1377	.	.	.	.
10/26/94	14.2	14.6	1442	.	.	.	.
10/27/94	13.7	14.0	1564	.	.	.	.
10/28/94	13.1	13.4	1412	.	.	.	.
10/29/94	13.0	13.3	1593	.	.	.	.
10/30/94	12.9	13.3	1321	.	.	.	.
10/31/94	13.0	13.3	1382	.	.	.	.

* Predicted temperatures were less than Station N10 due to input parameters outside the range of values observed during sampling which were used to develop the regression equation. These estimated temperatures were assumed to be equal to those at Station N10 and are not derived from the multilpe regression model.

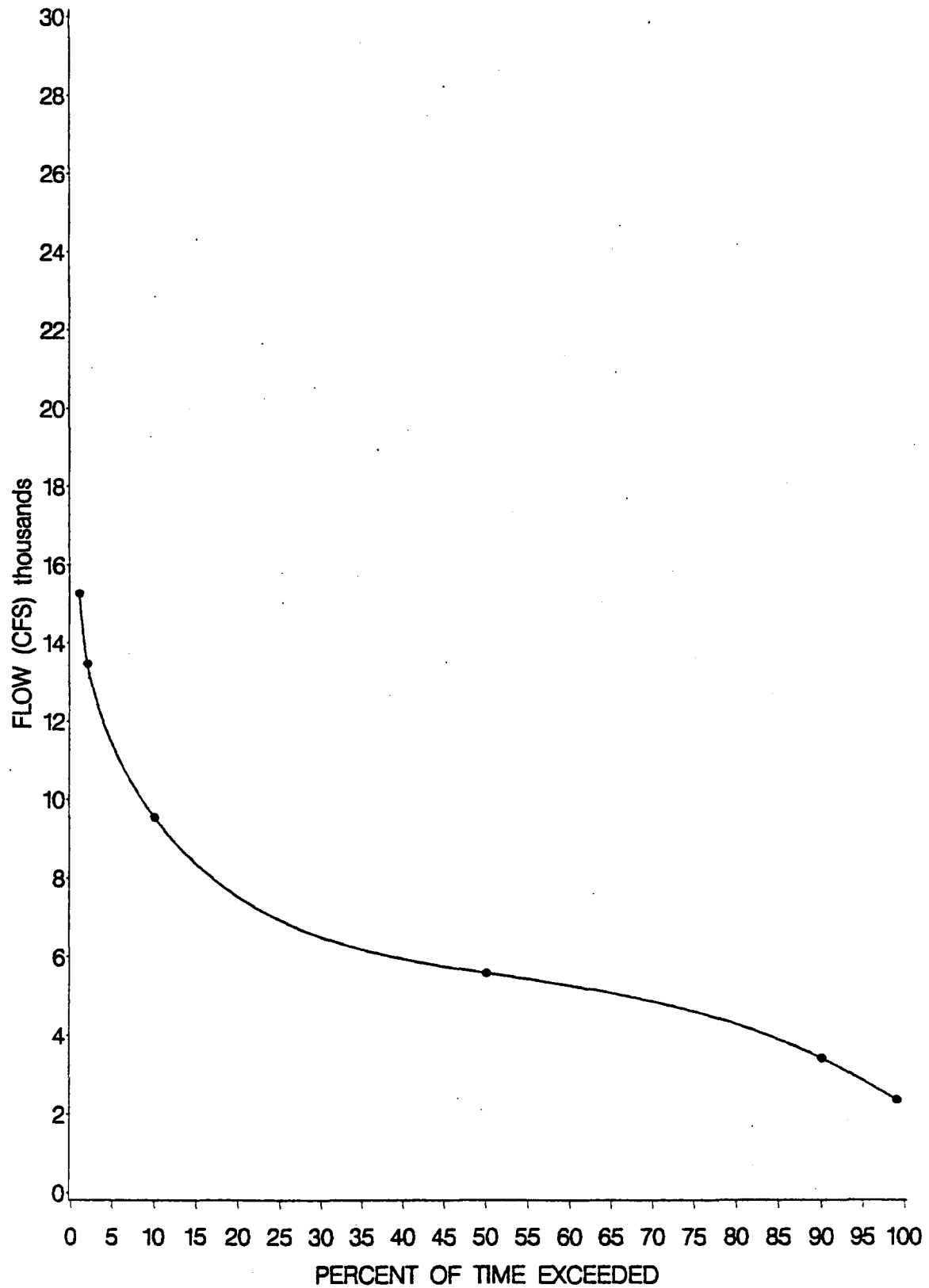
APPENDIX D

**Flow Duration Curves for Garvins Falls
and
Temperature Duration Curves for Station N10**

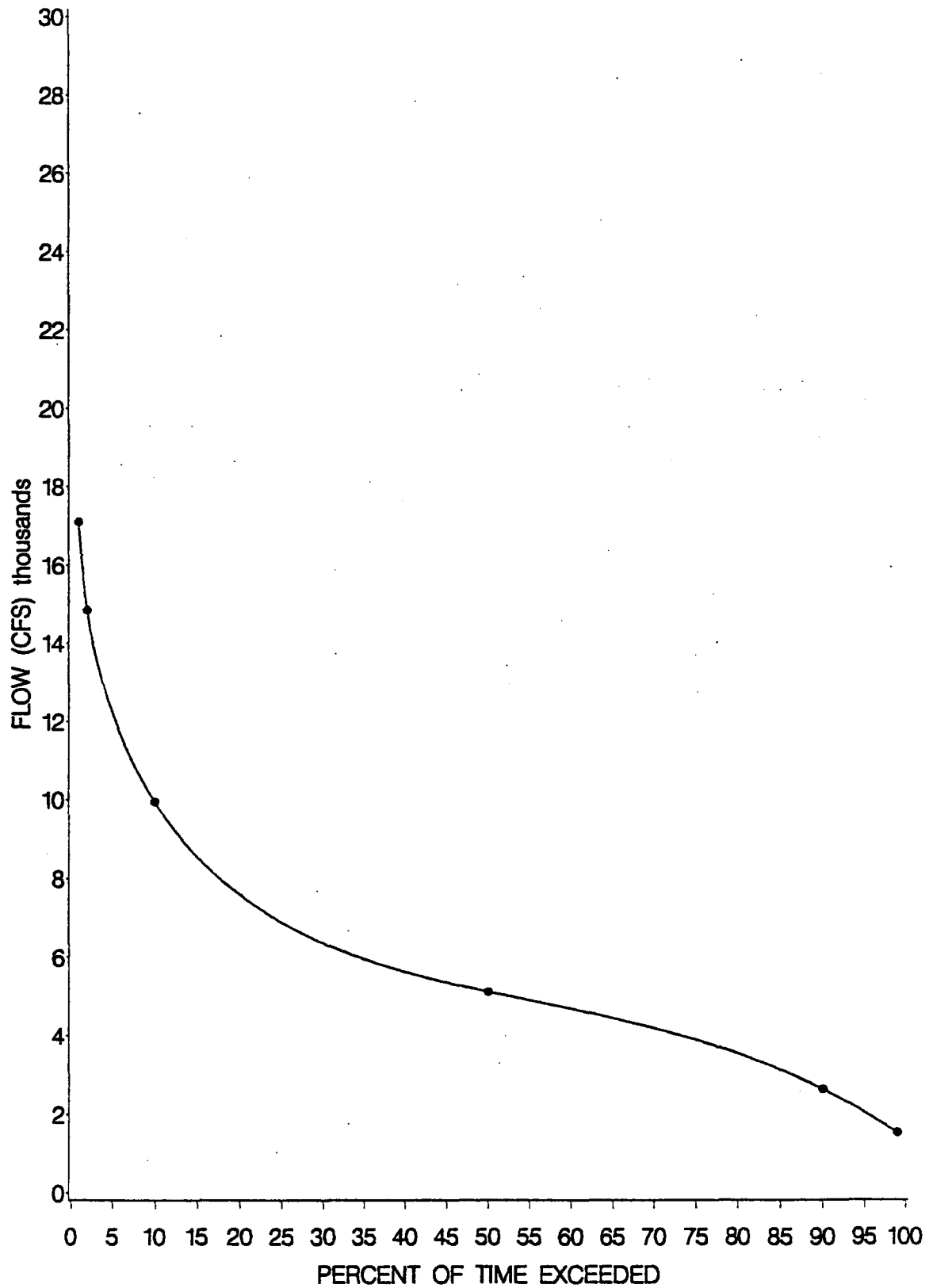
FLOW DURATION CURVE
01MAY



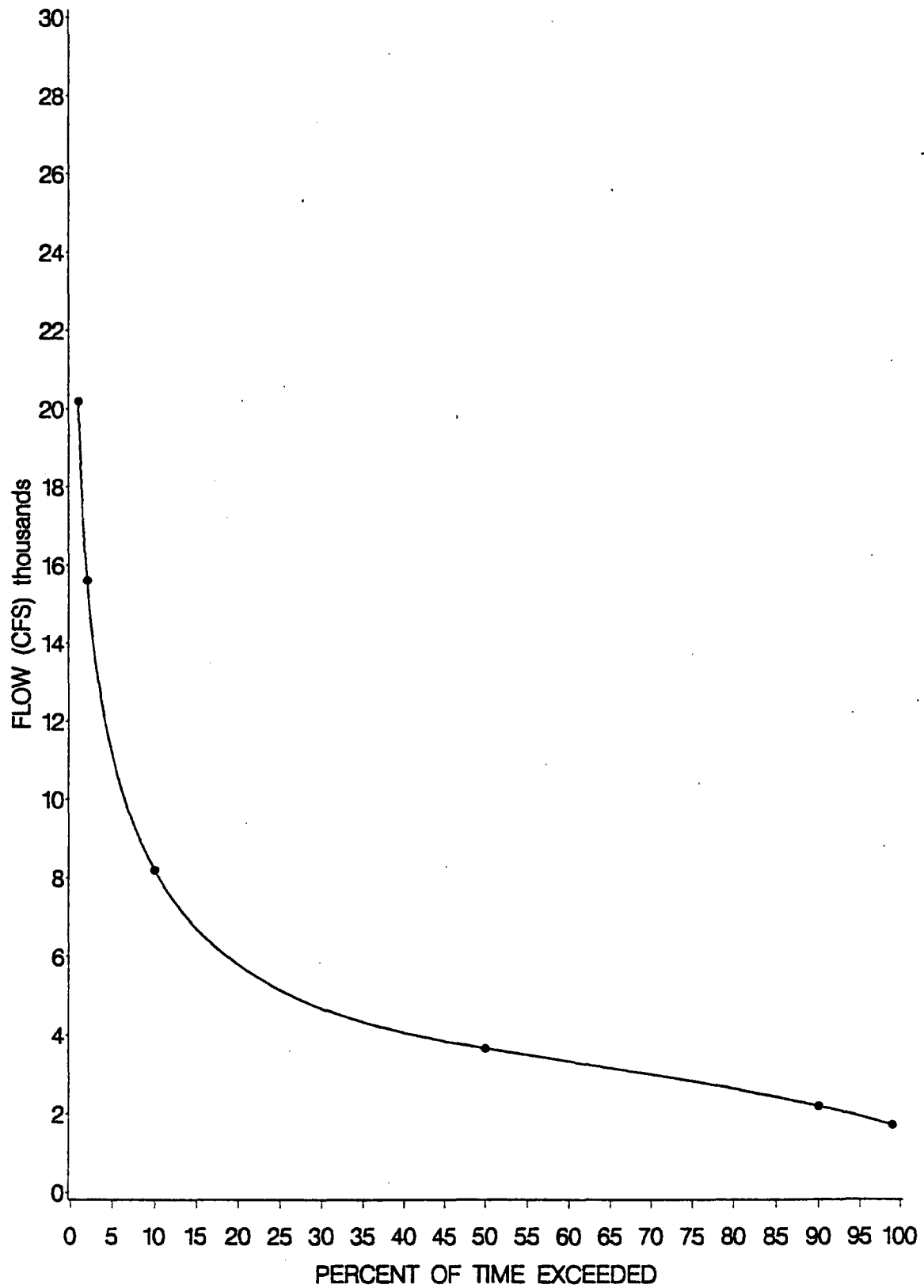
FLOW DURATION CURVE
08MAY



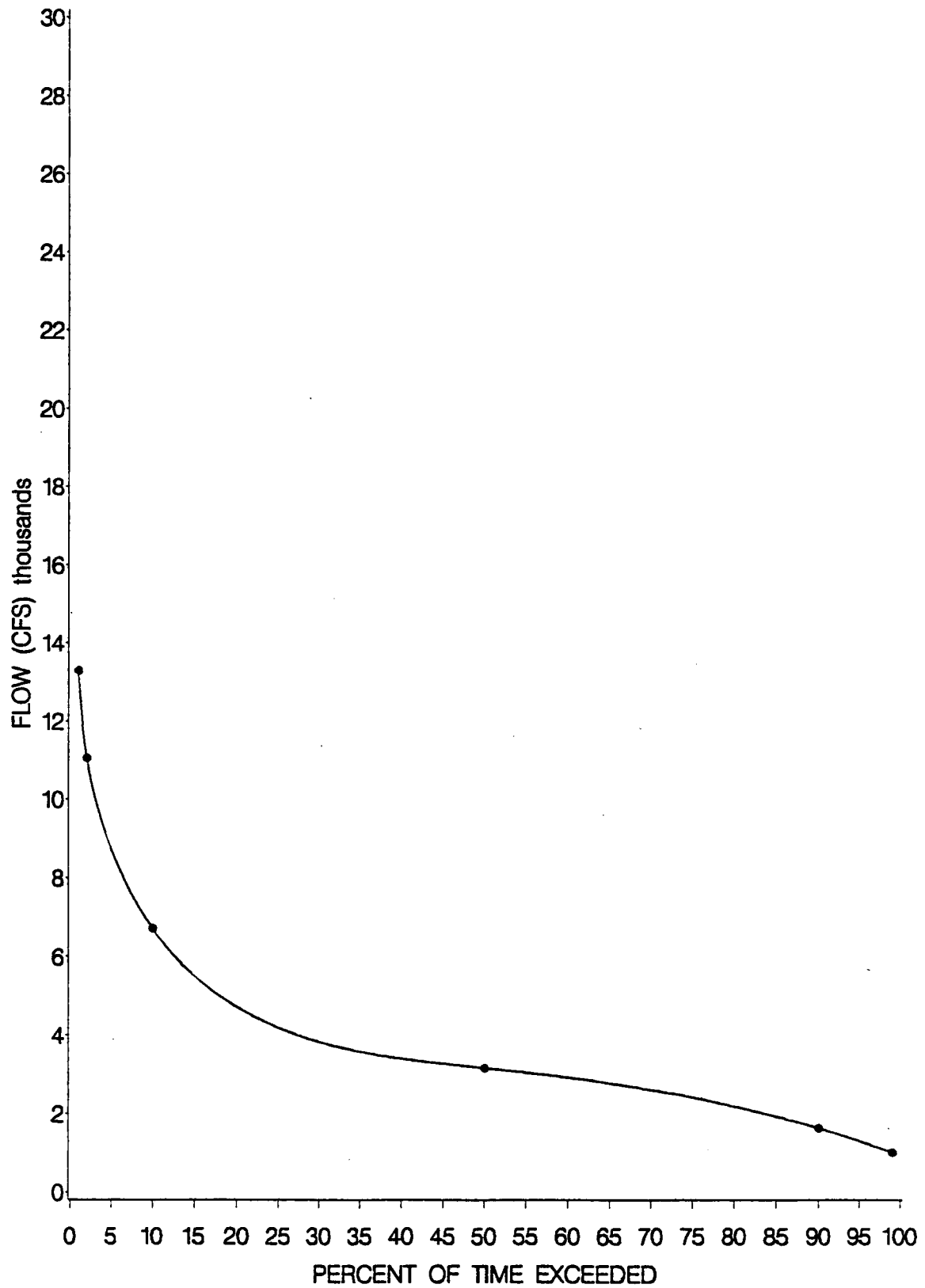
FLOW DURATION CURVE
15MAY



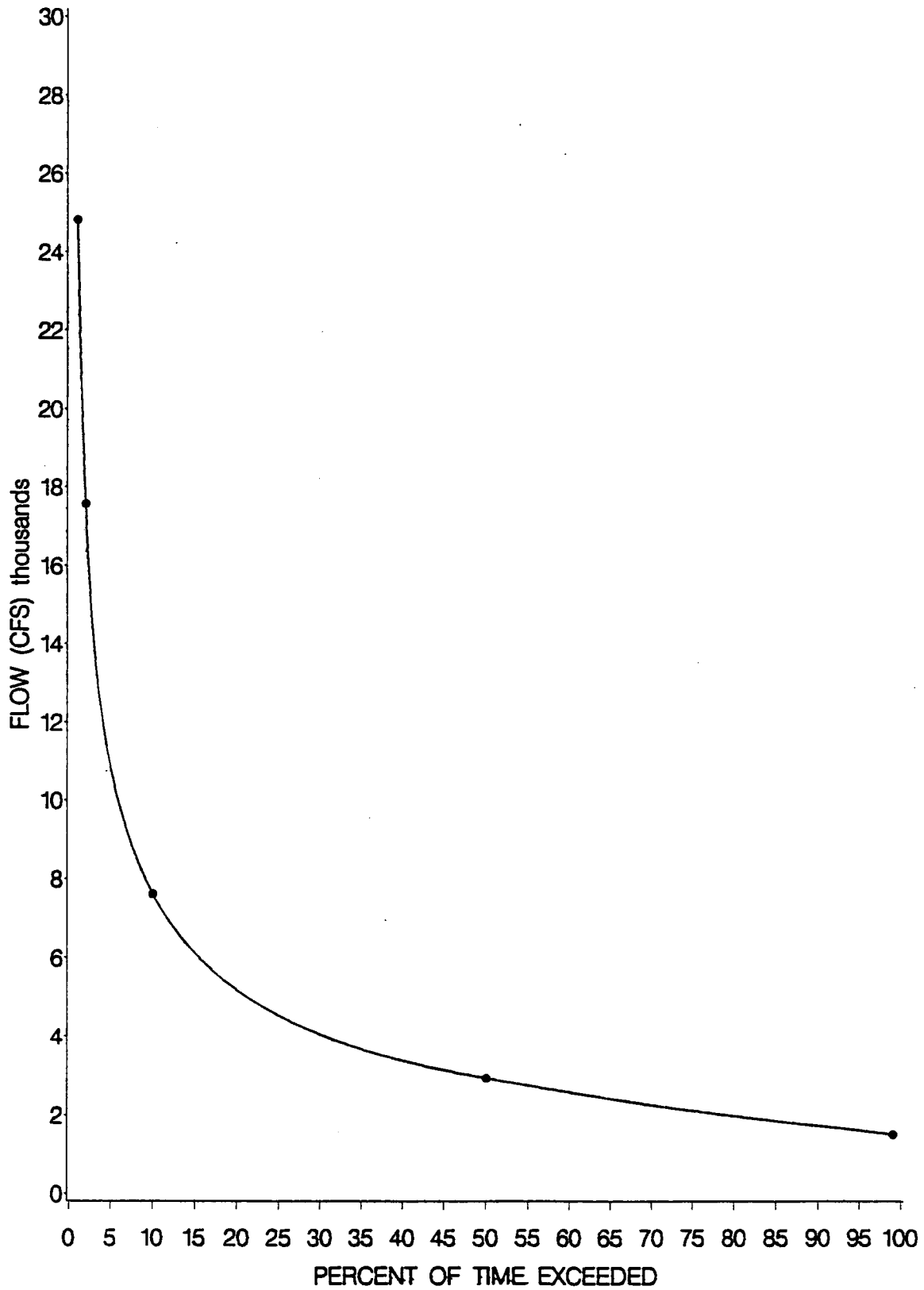
FLOW DURATION CURVE
22MAY



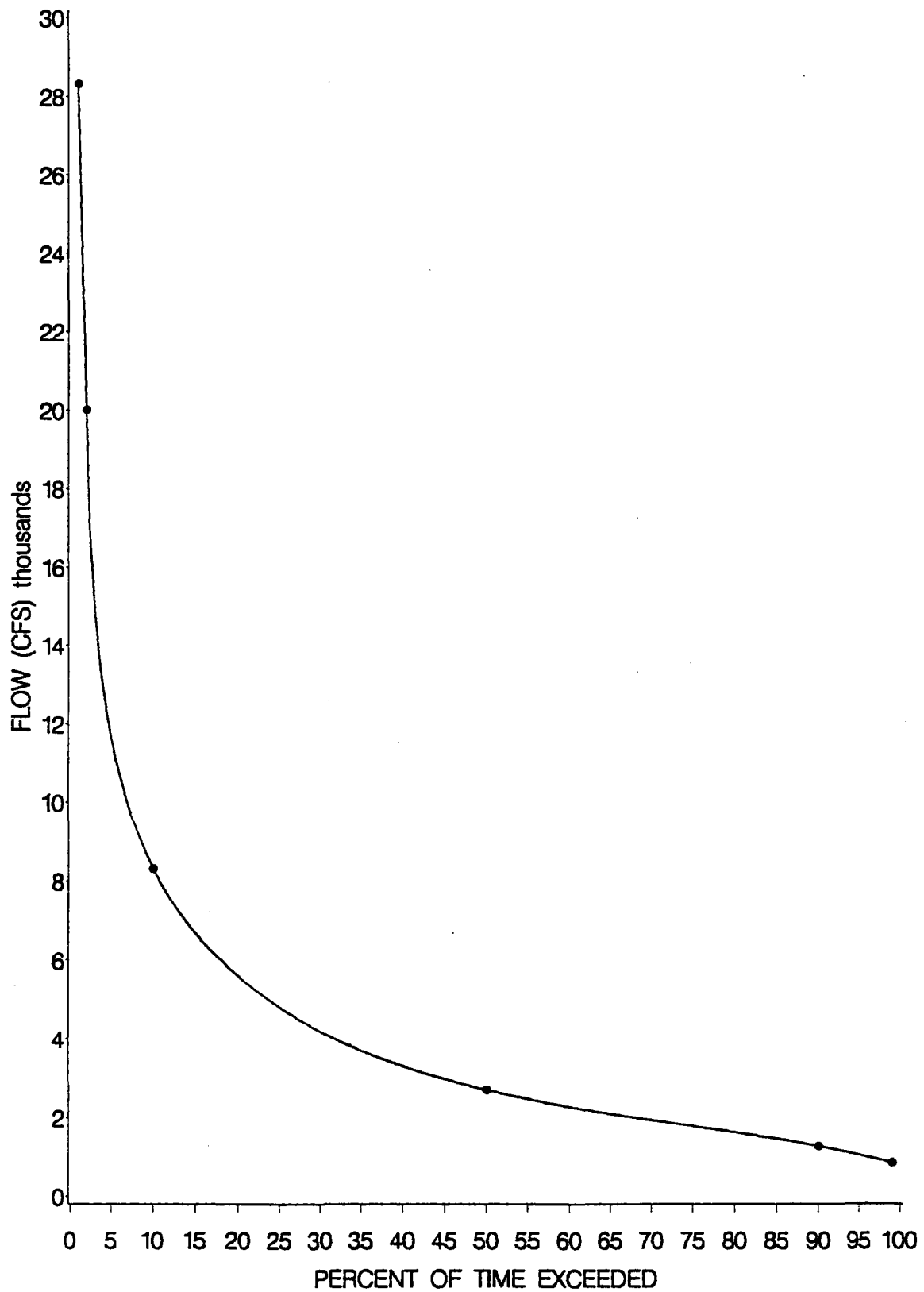
FLOW DURATION CURVE
29MAY



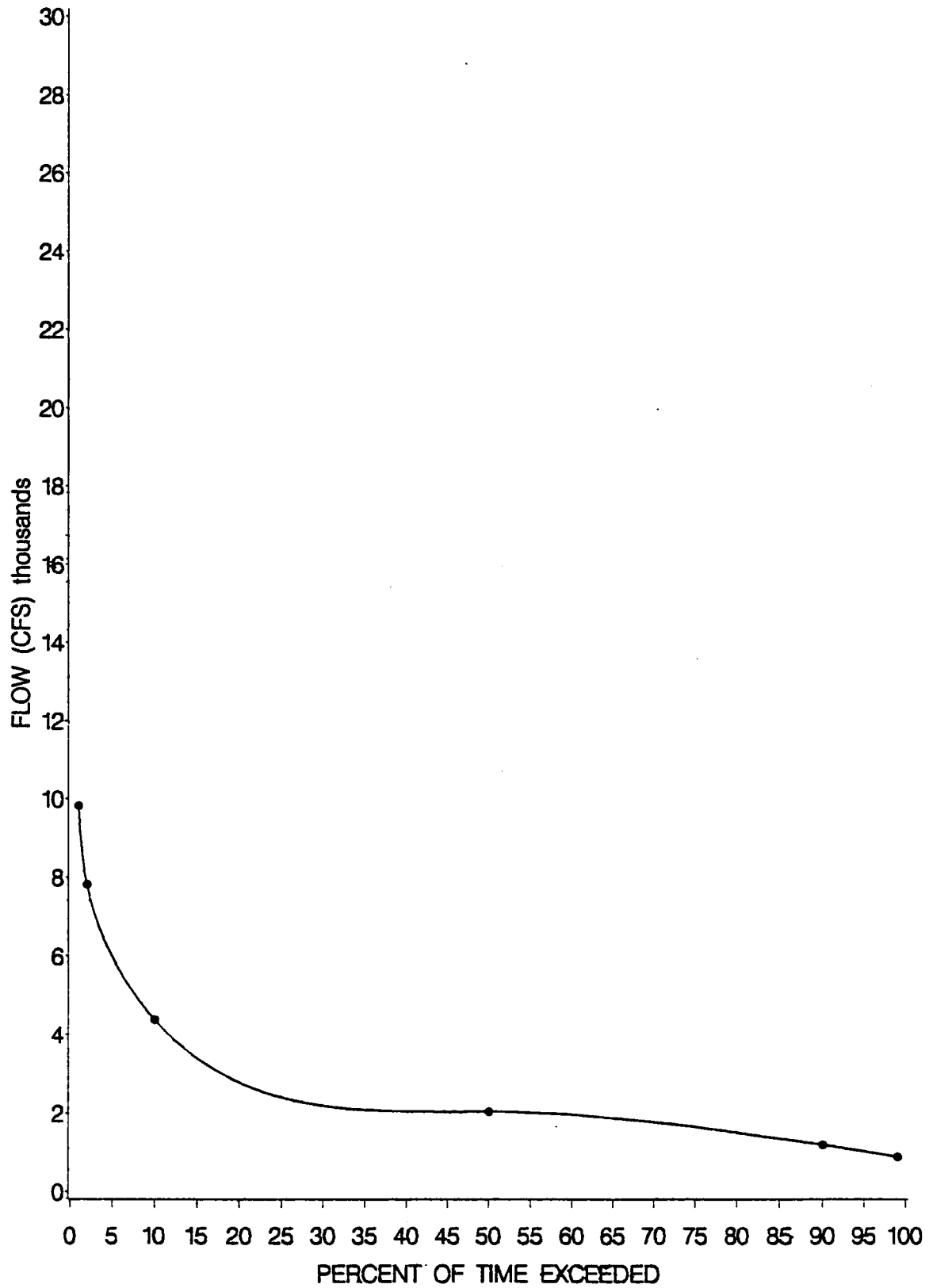
FLOW DURATION CURVE
05JUN



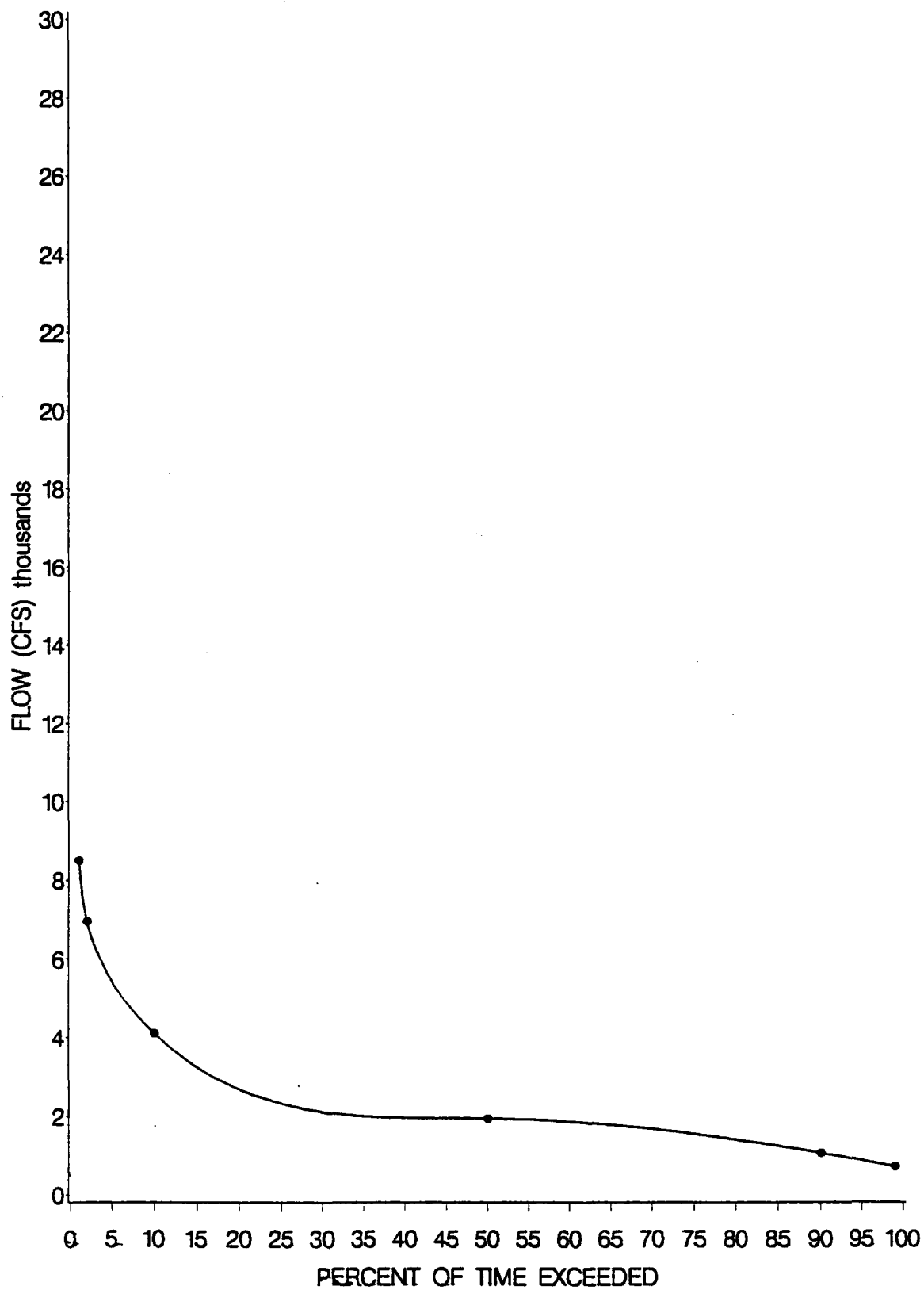
FLOW DURATION CURVE
12JUN



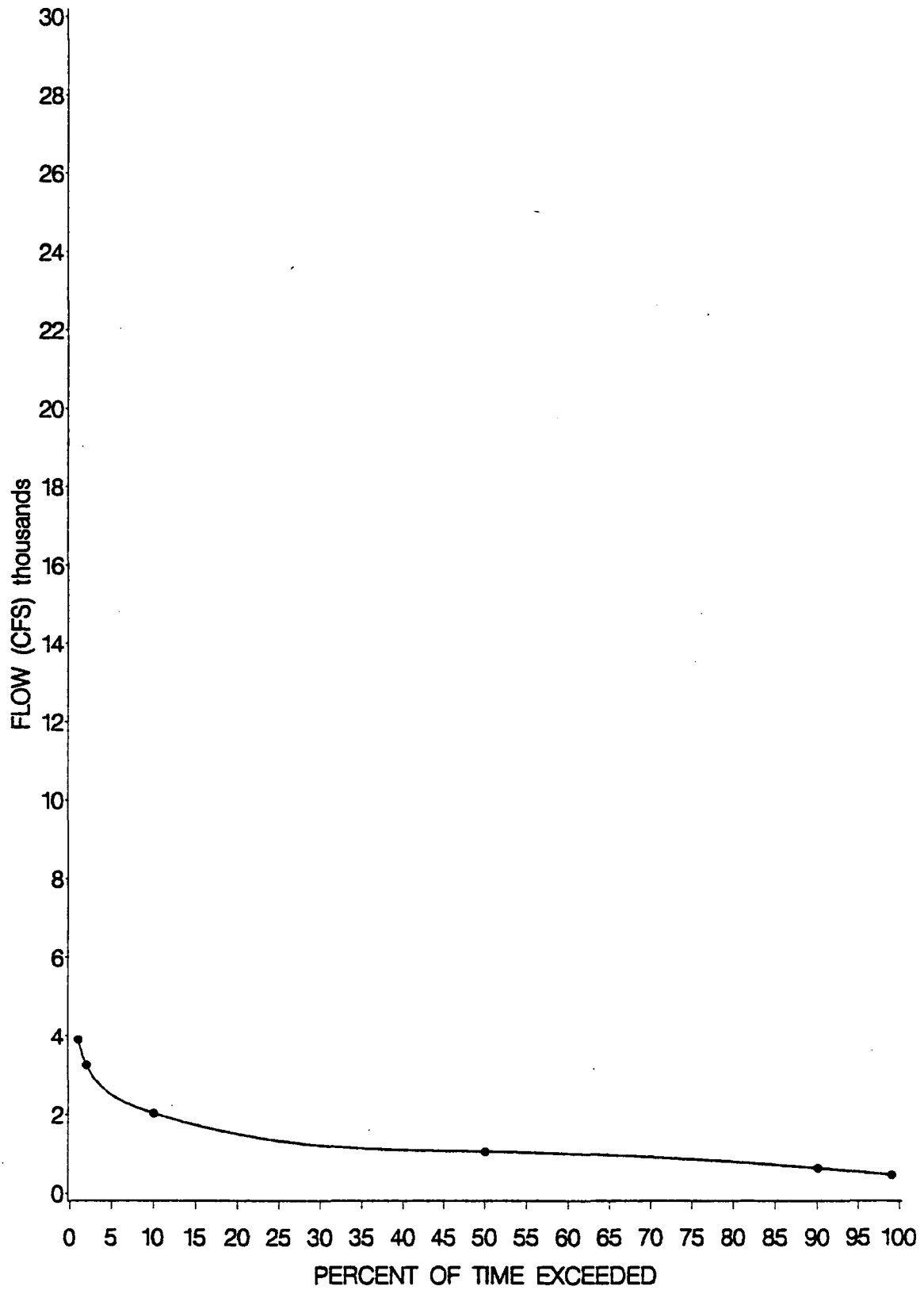
FLOW DURATION CURVE
19JUN



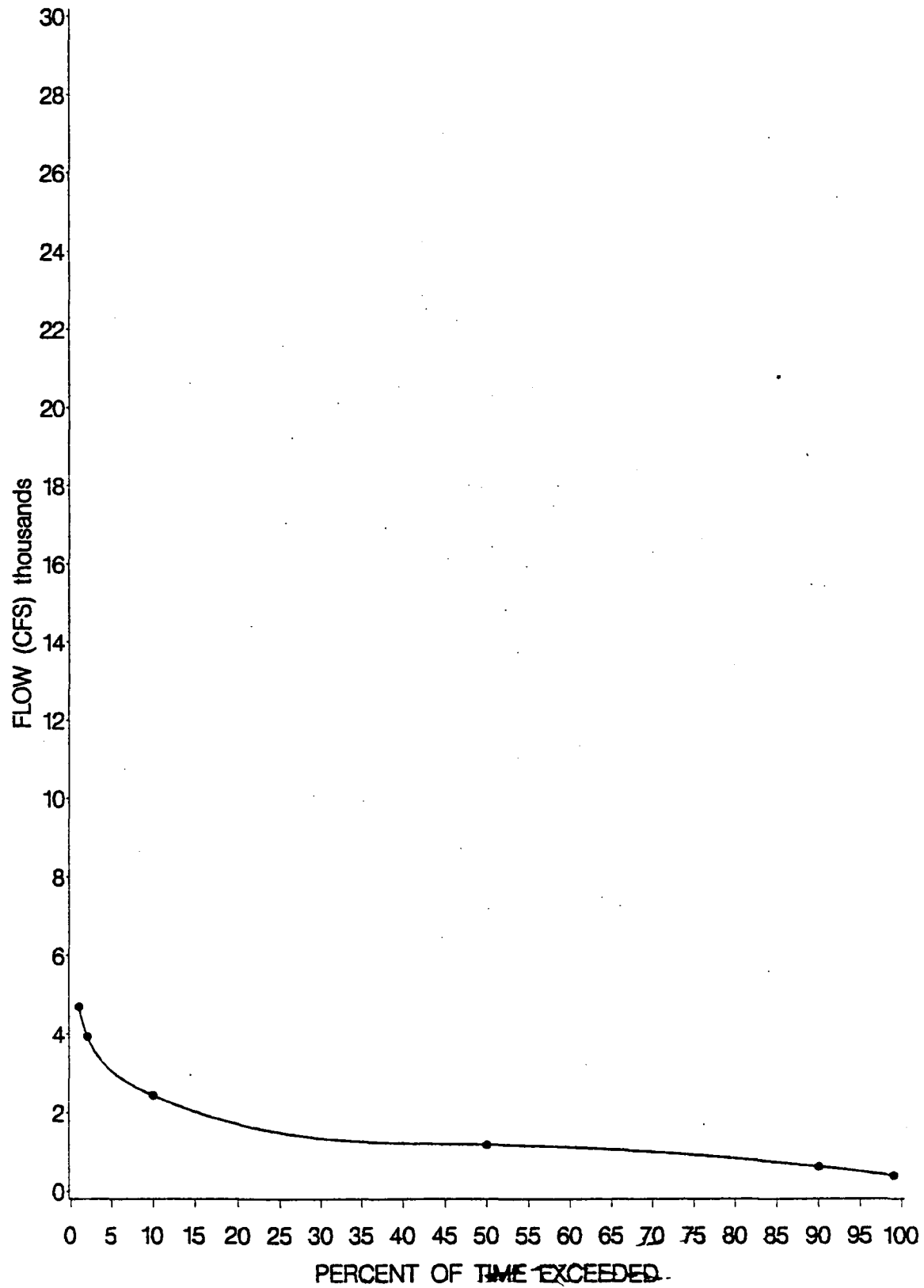
FLOW DURATION CURVE
26JUN



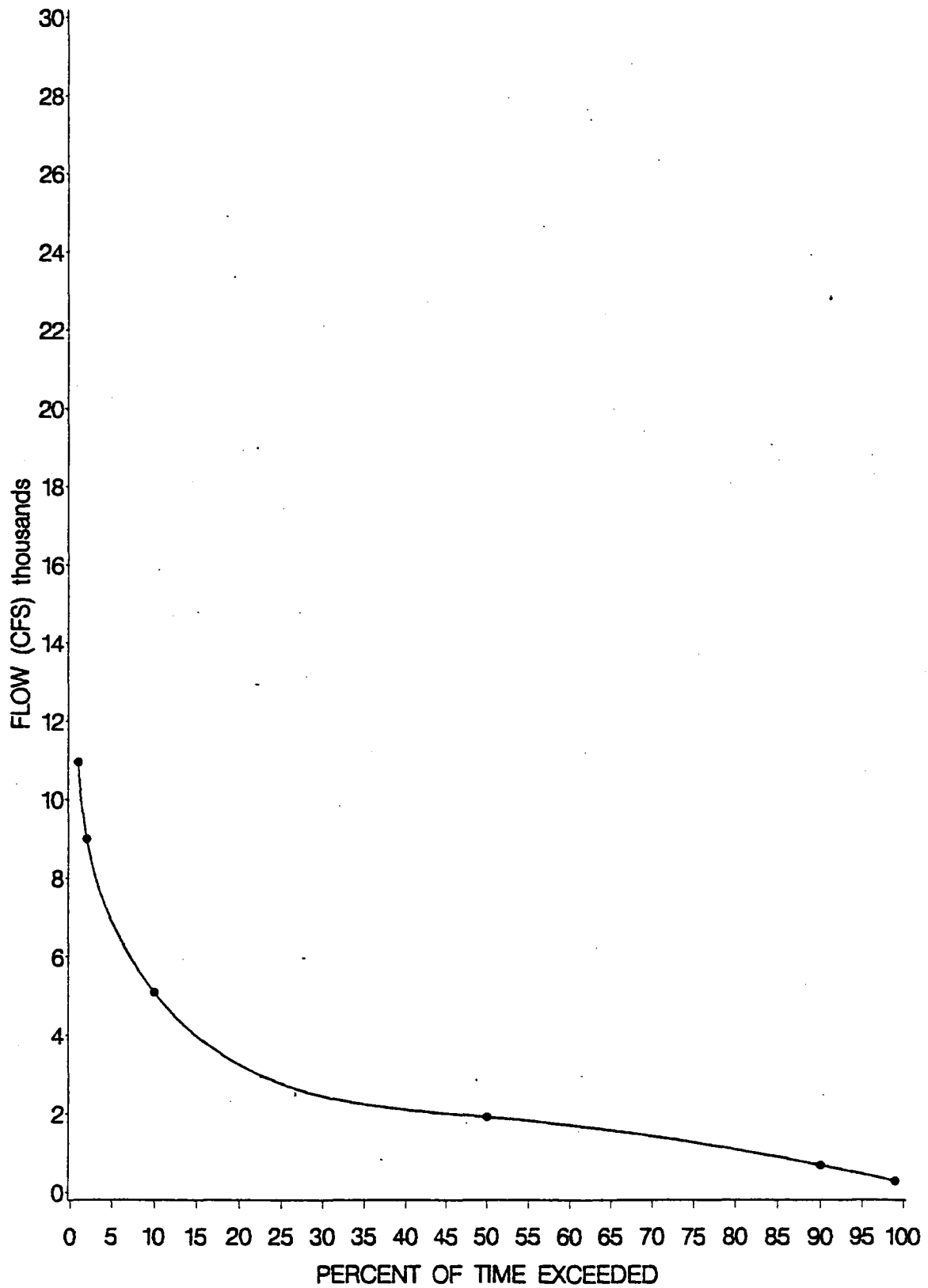
FLOW DURATION CURVE
01SEP



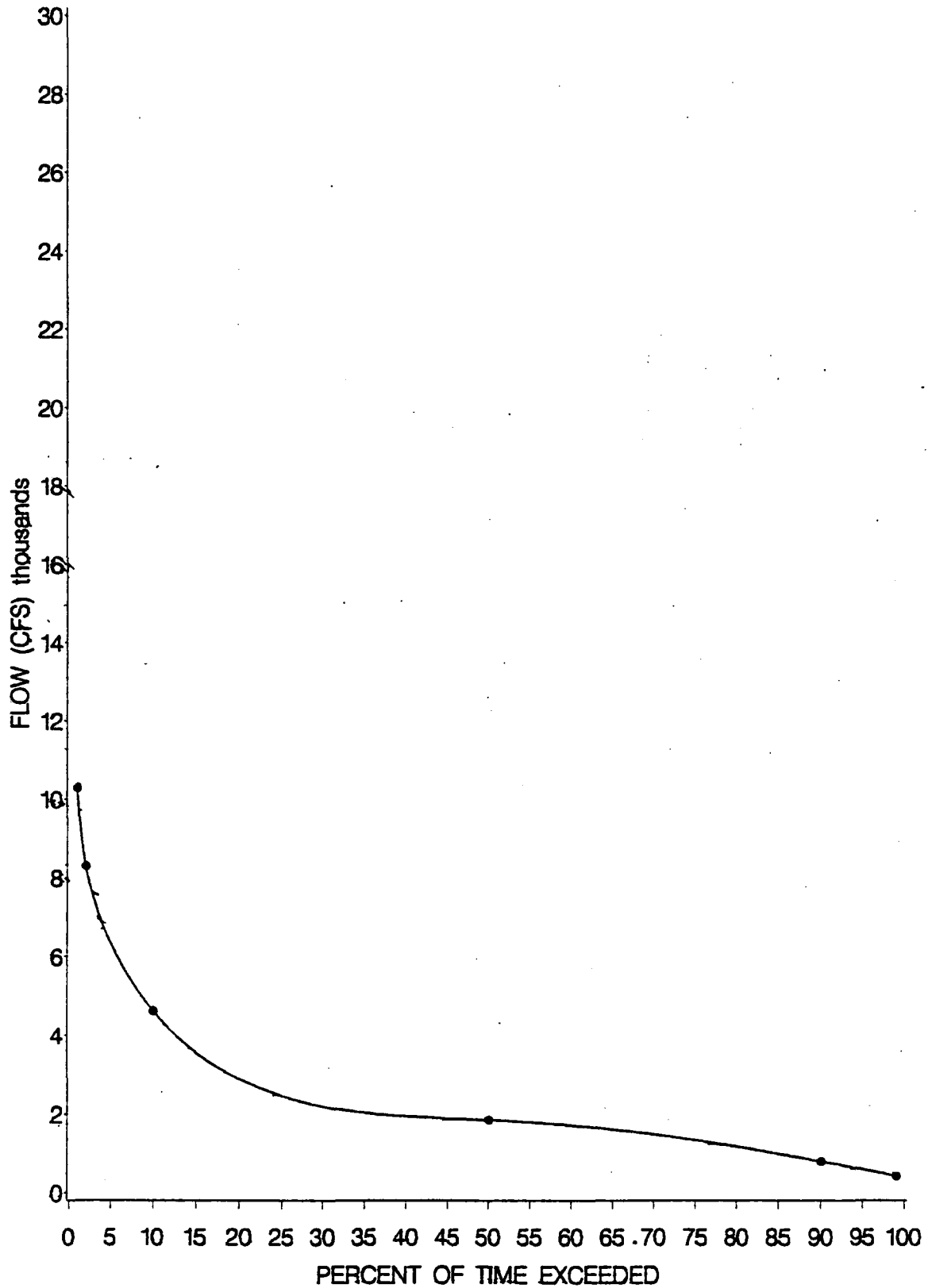
FLOW DURATION CURVE
08SEP



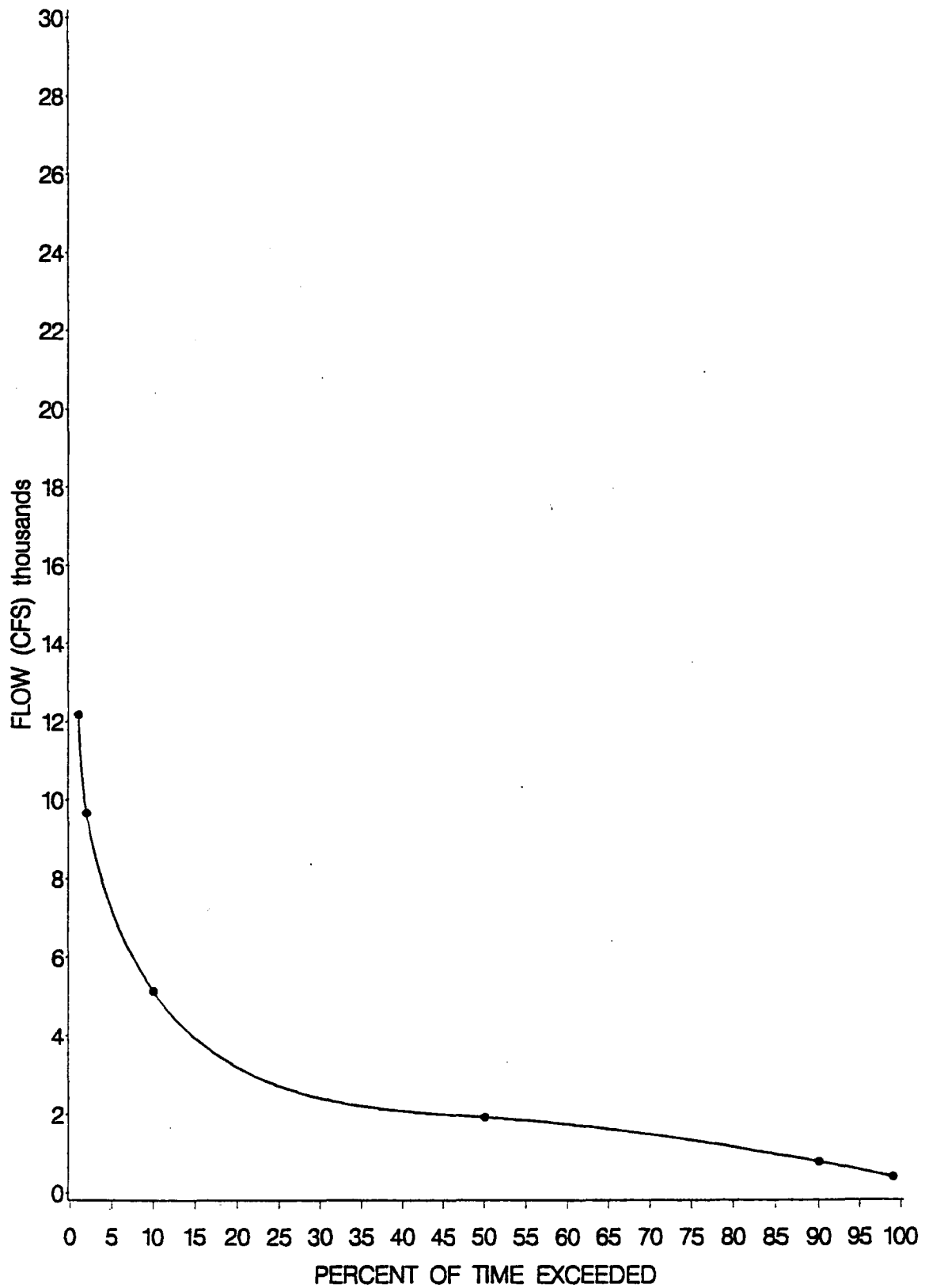
FLOW DURATION CURVE
29SEP



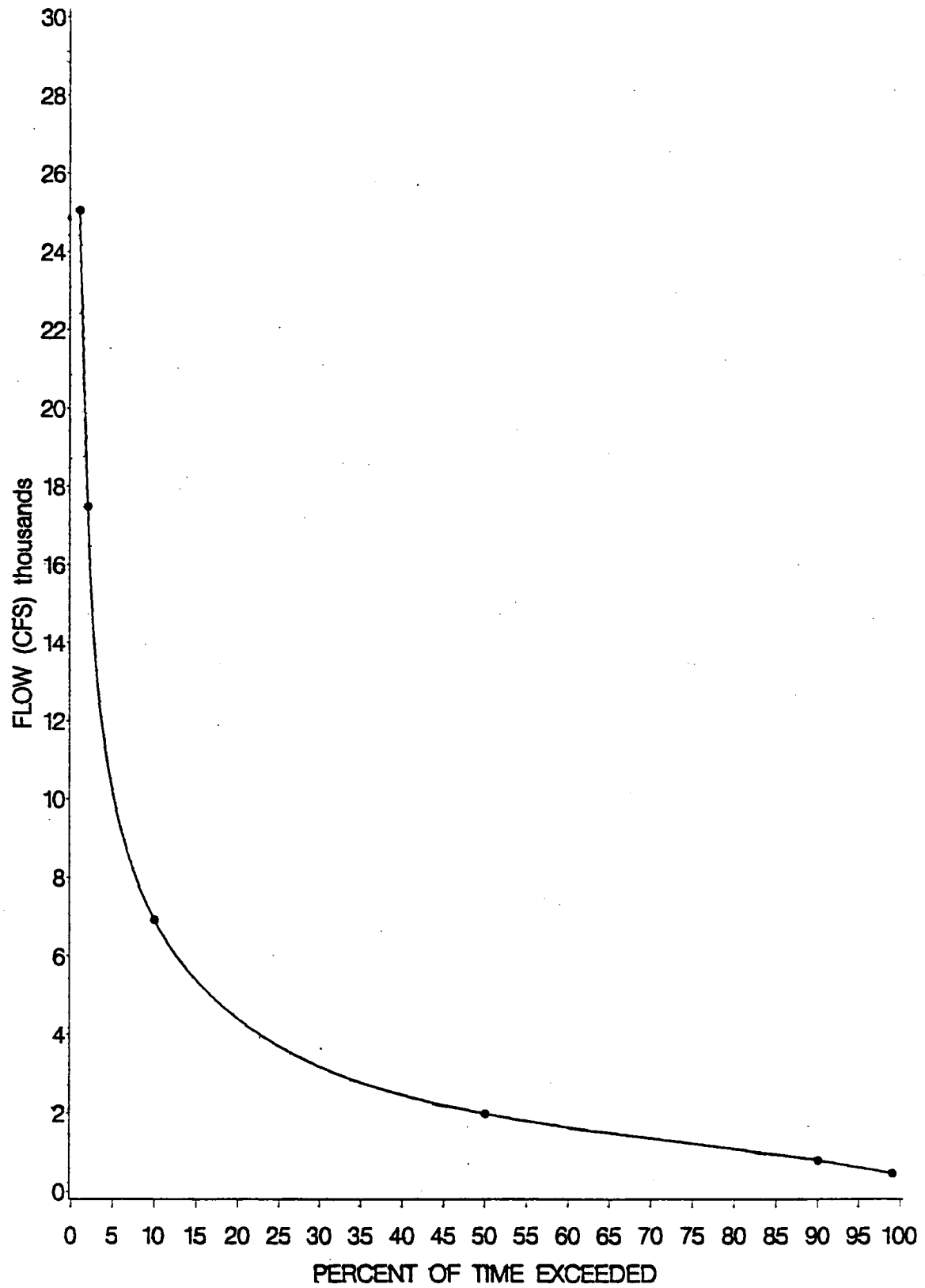
FLOW DURATION CURVE
06OCT



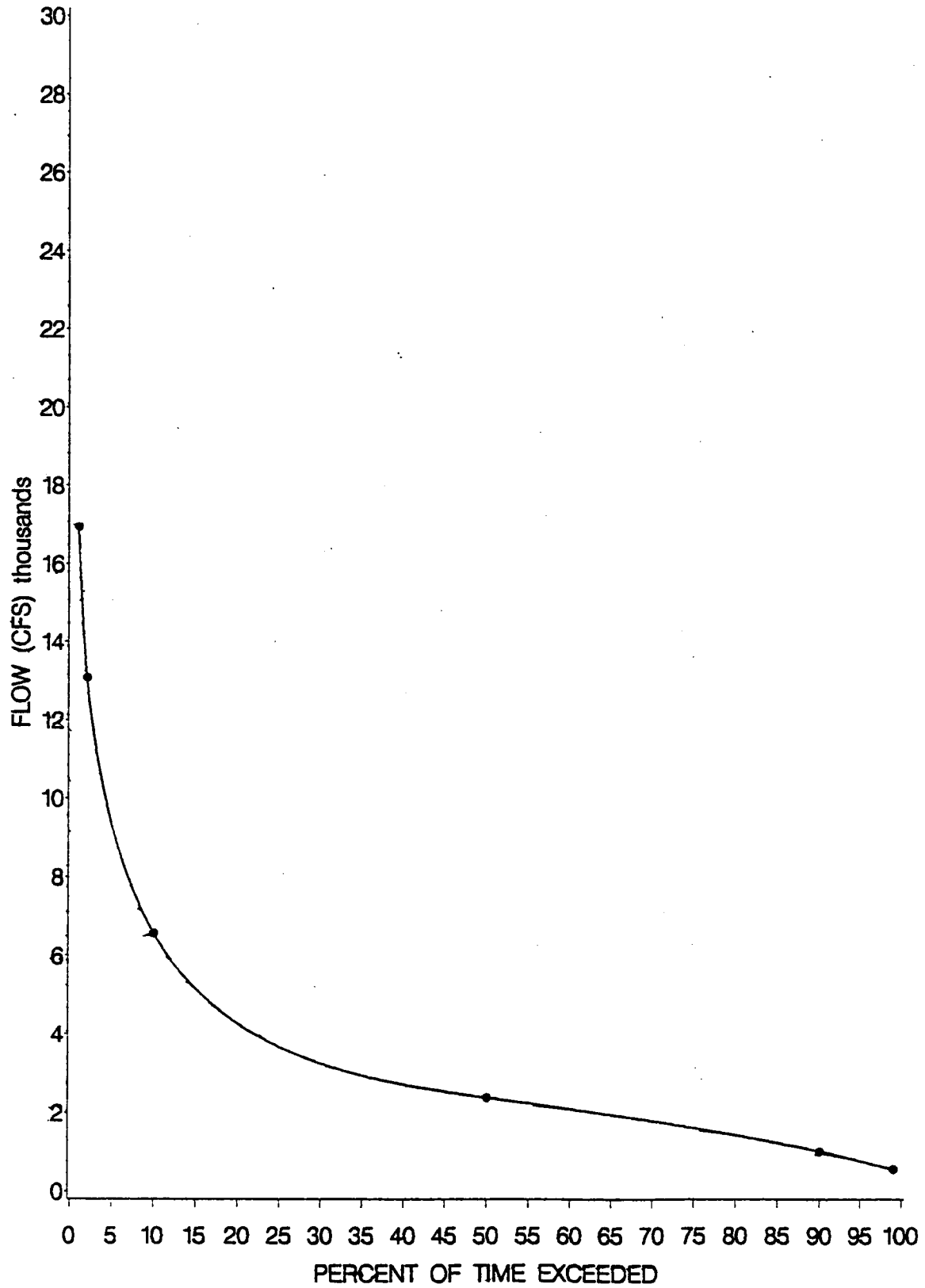
FLOW DURATION CURVE
13OCT



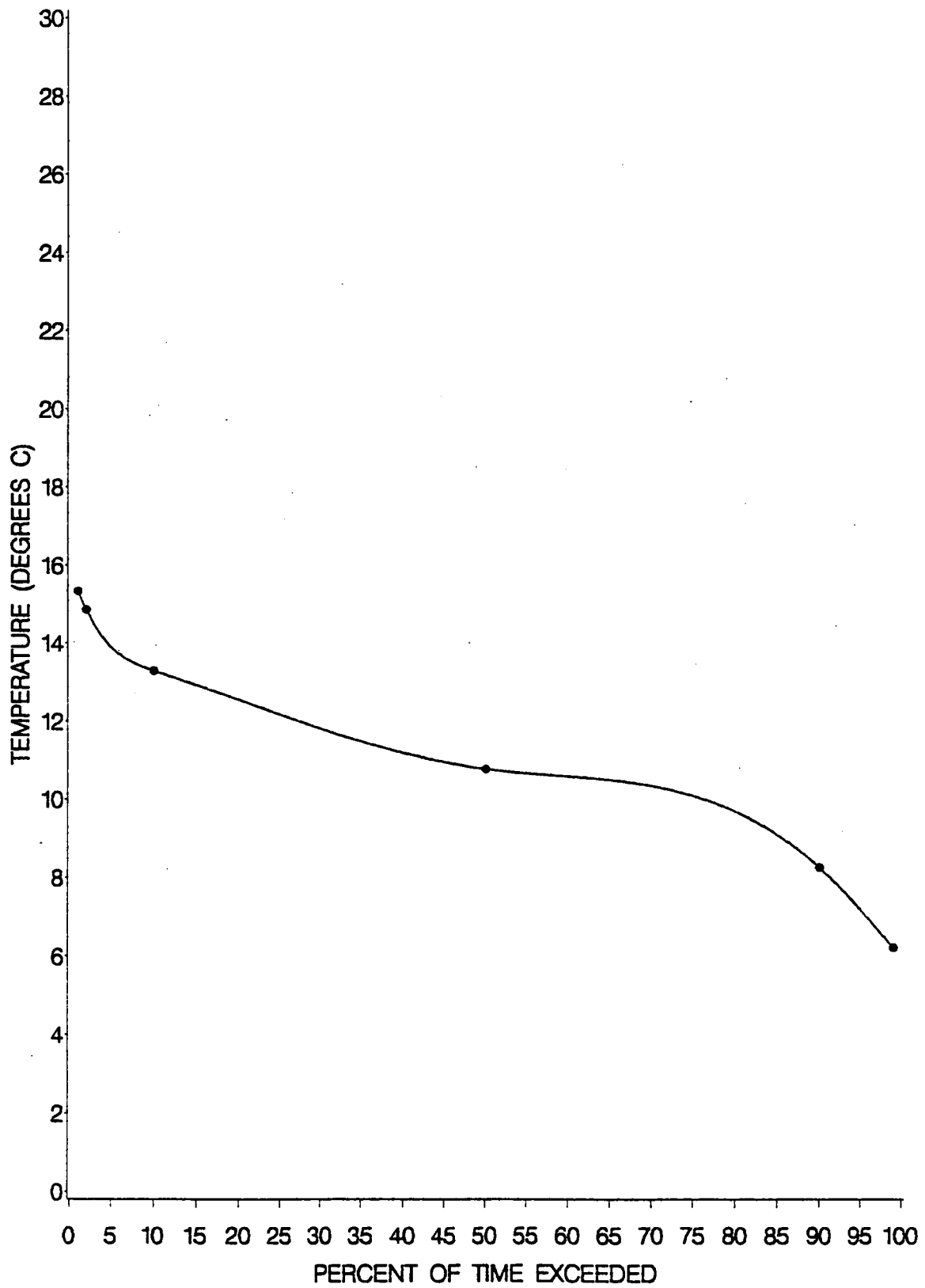
FLOW DURATION CURVE
20OCT



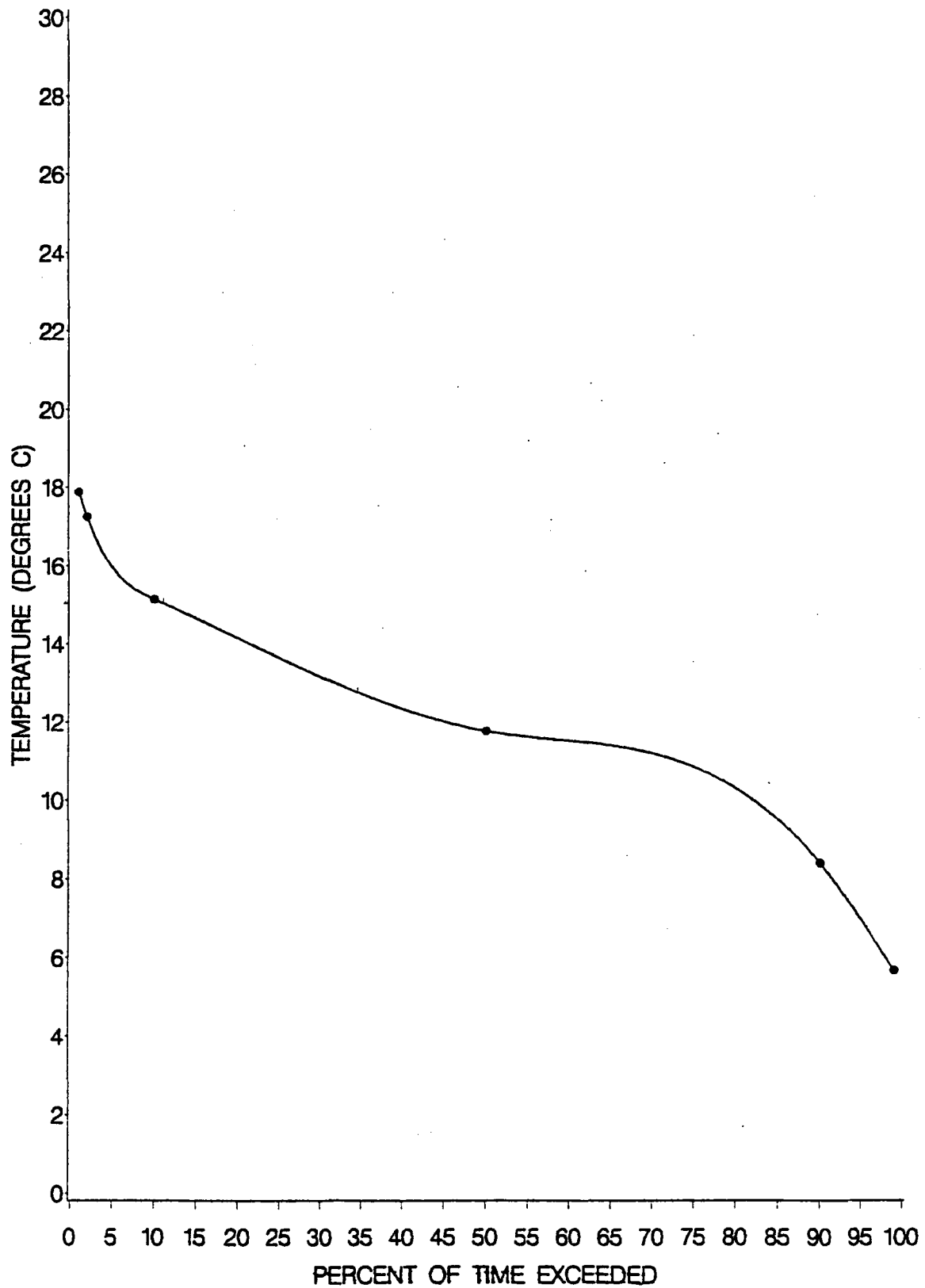
FLOW DURATION CURVE
27OCT



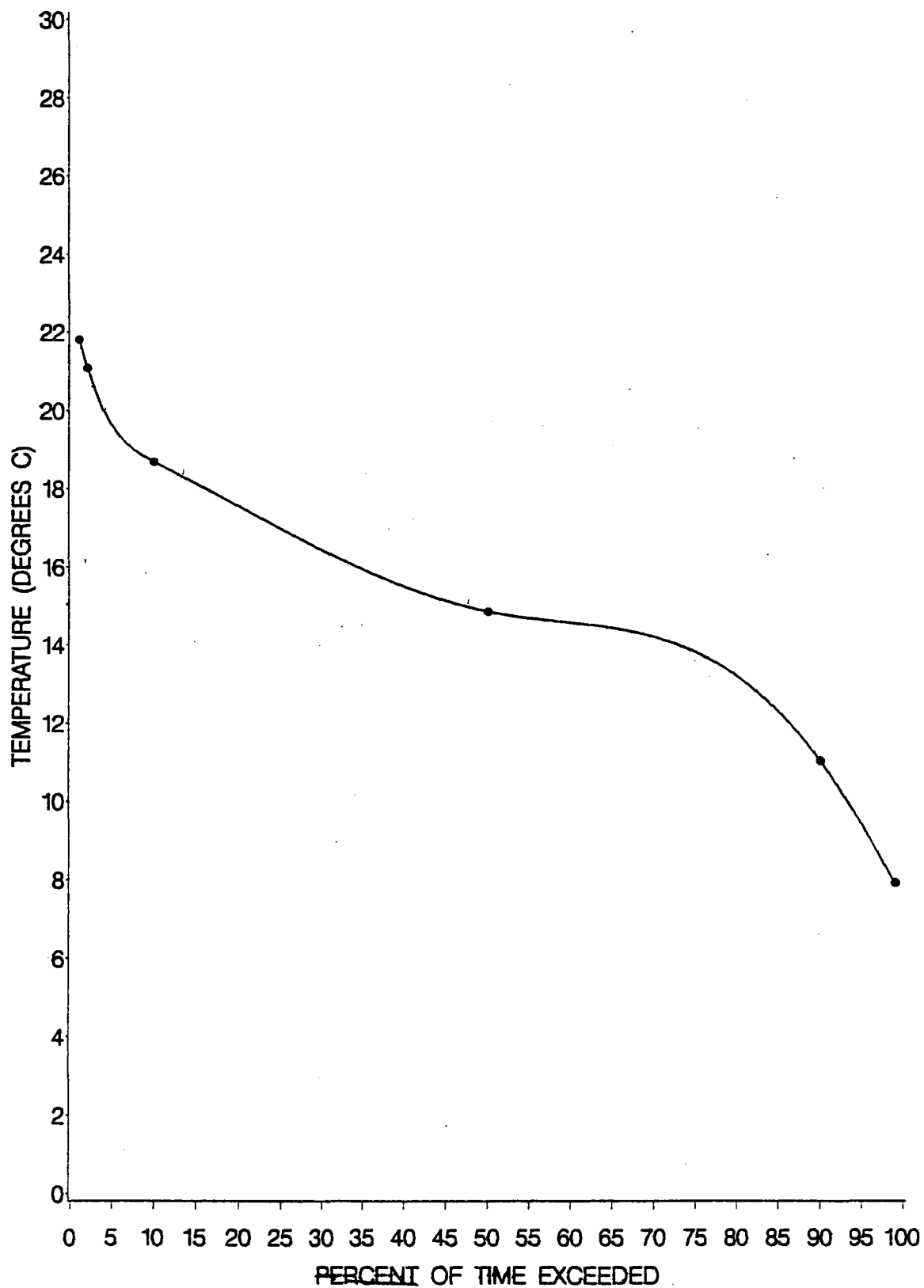
TEMPERATURE DURATION CURVE
01MAY



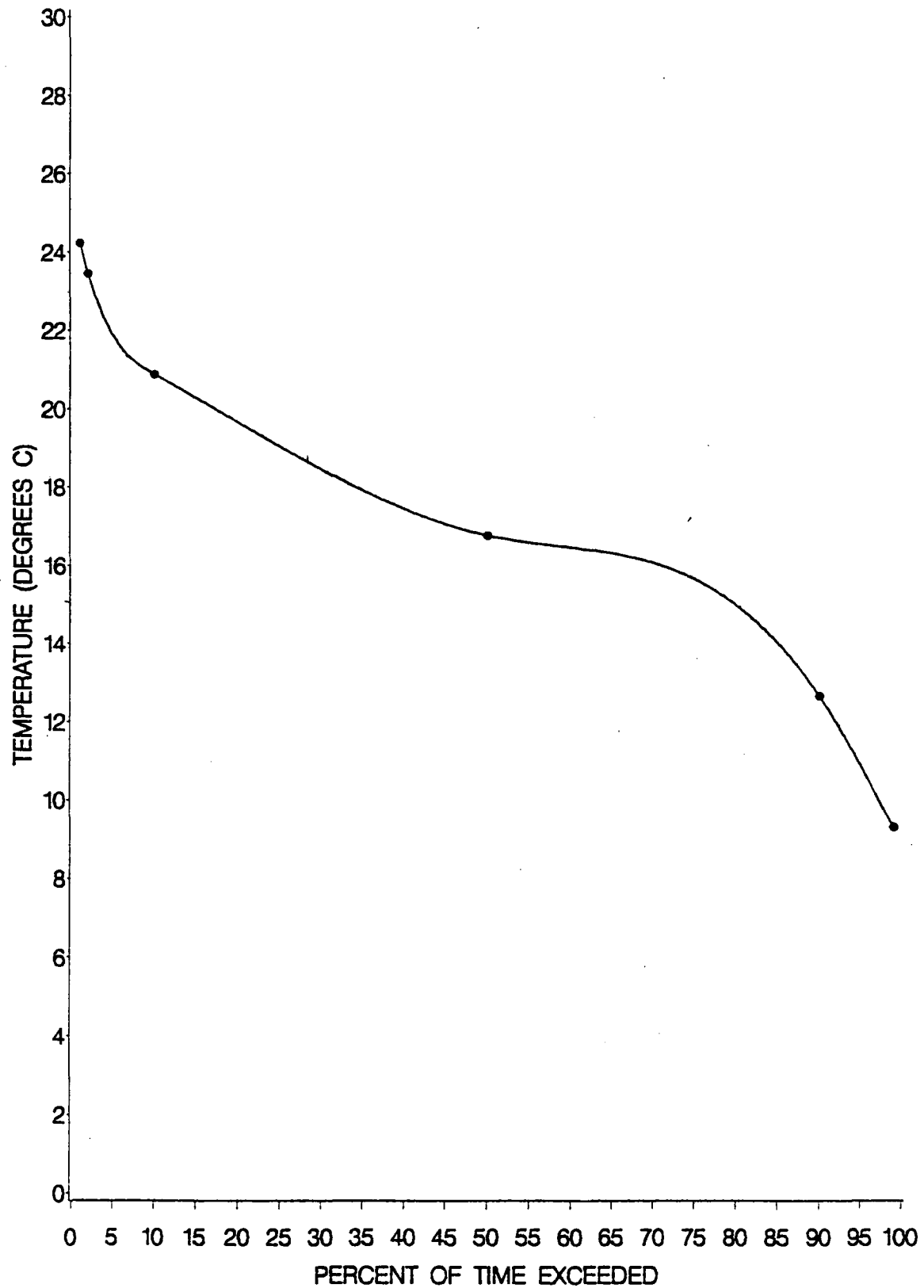
TEMPERATURE DURATION CURVE
08MAY



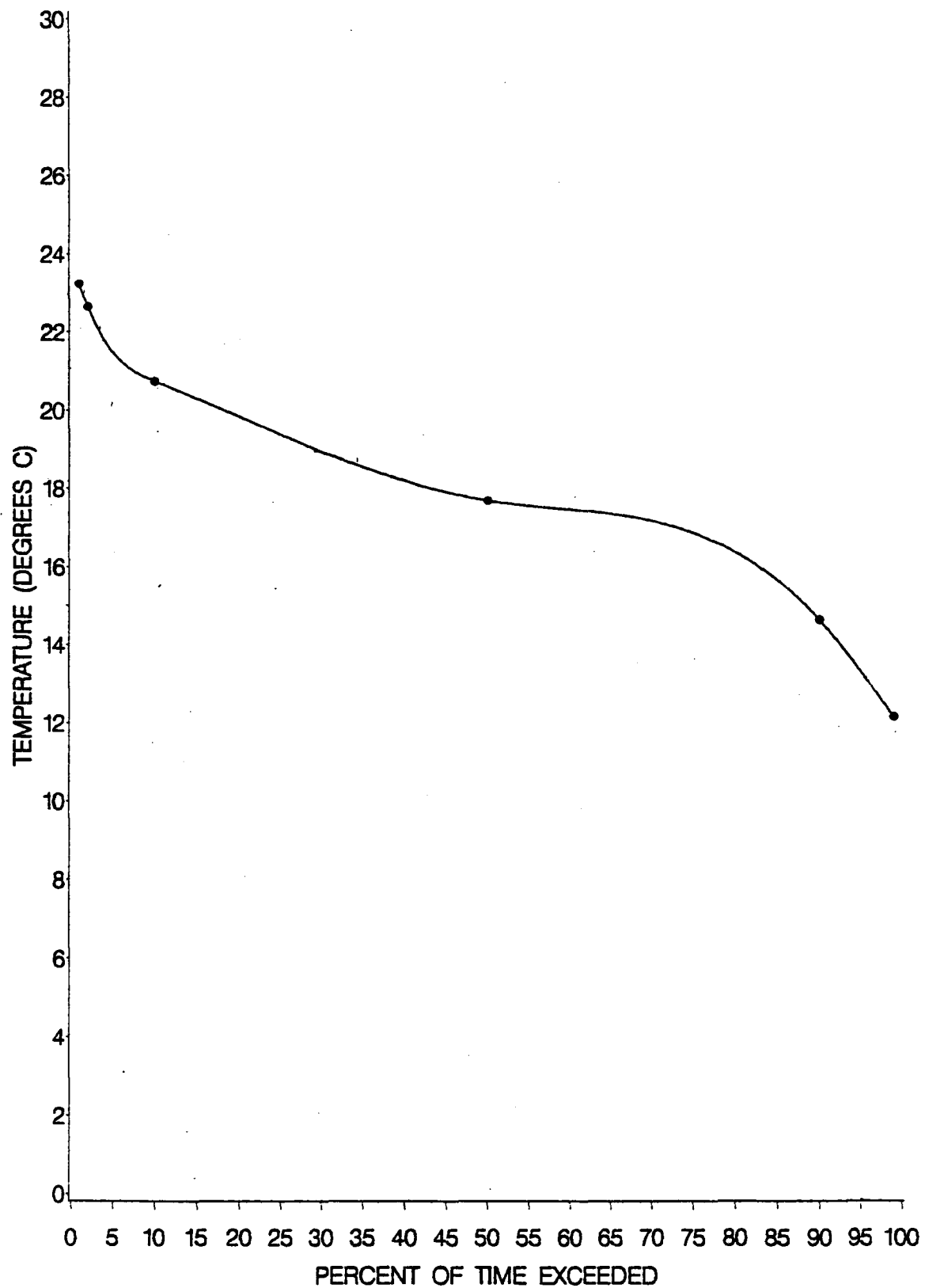
TEMPERATURE DURATION CURVE
15MAY



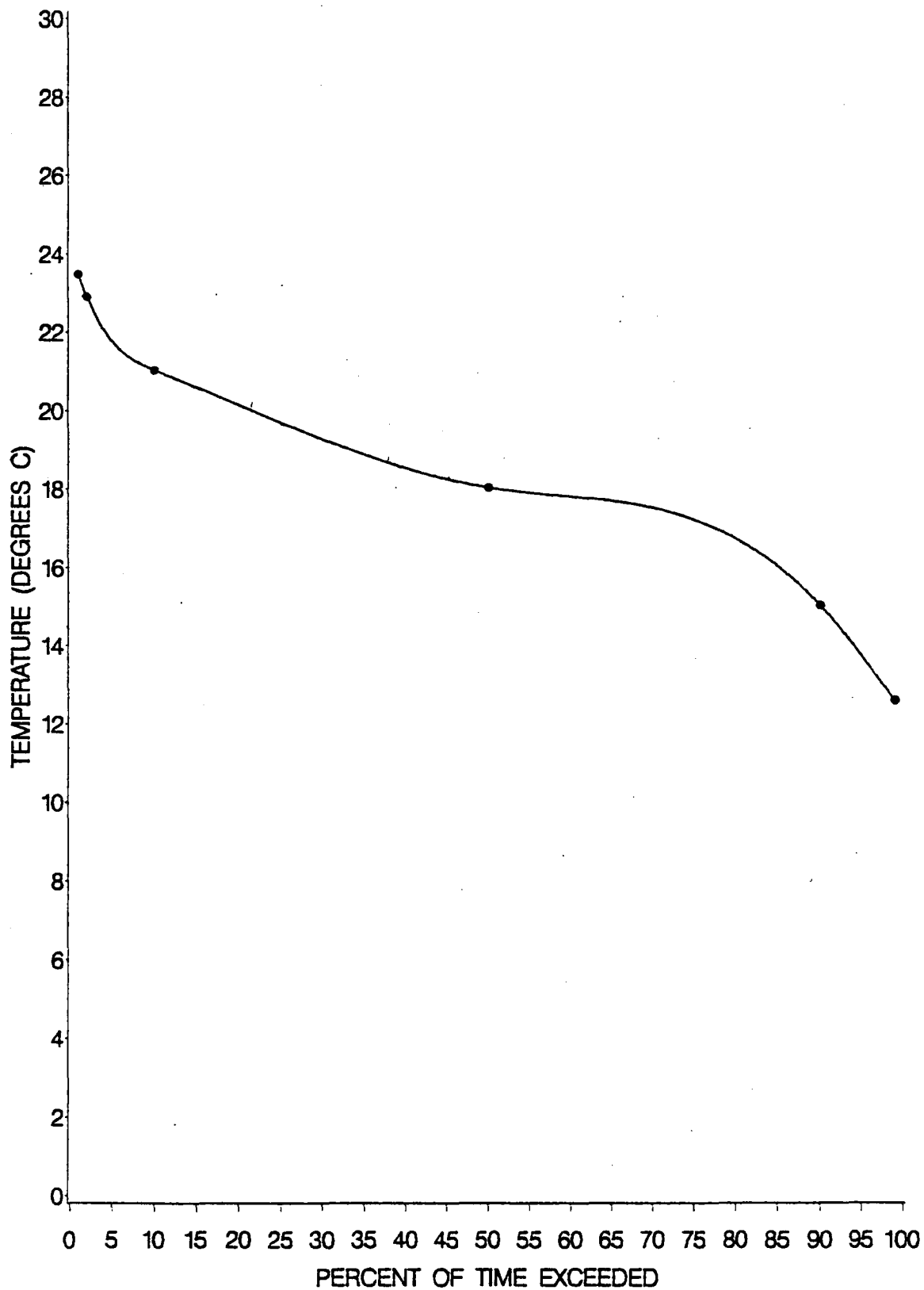
TEMPERATURE DURATION CURVE
22MAY



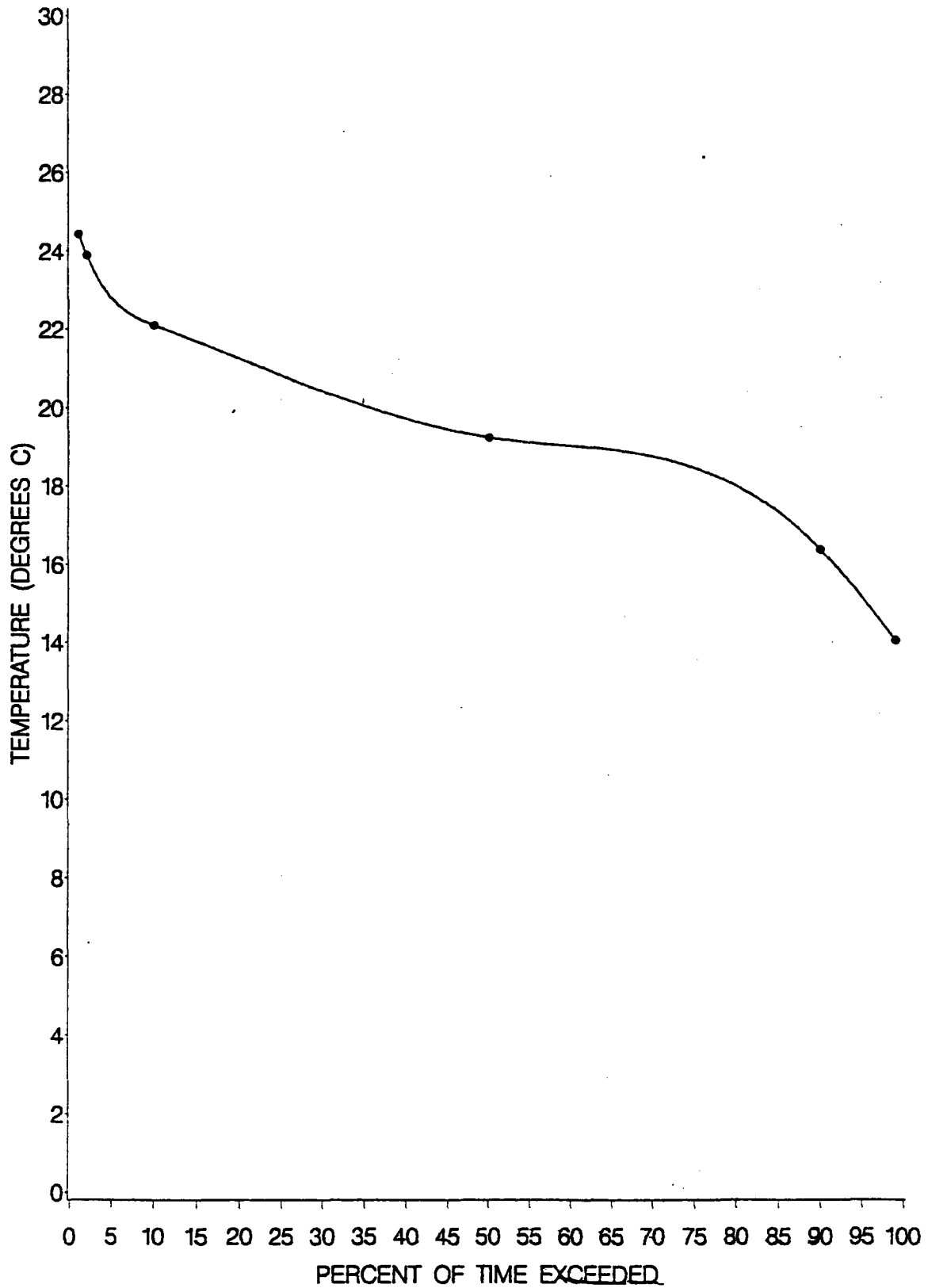
TEMPERATURE DURATION CURVE
29MAY



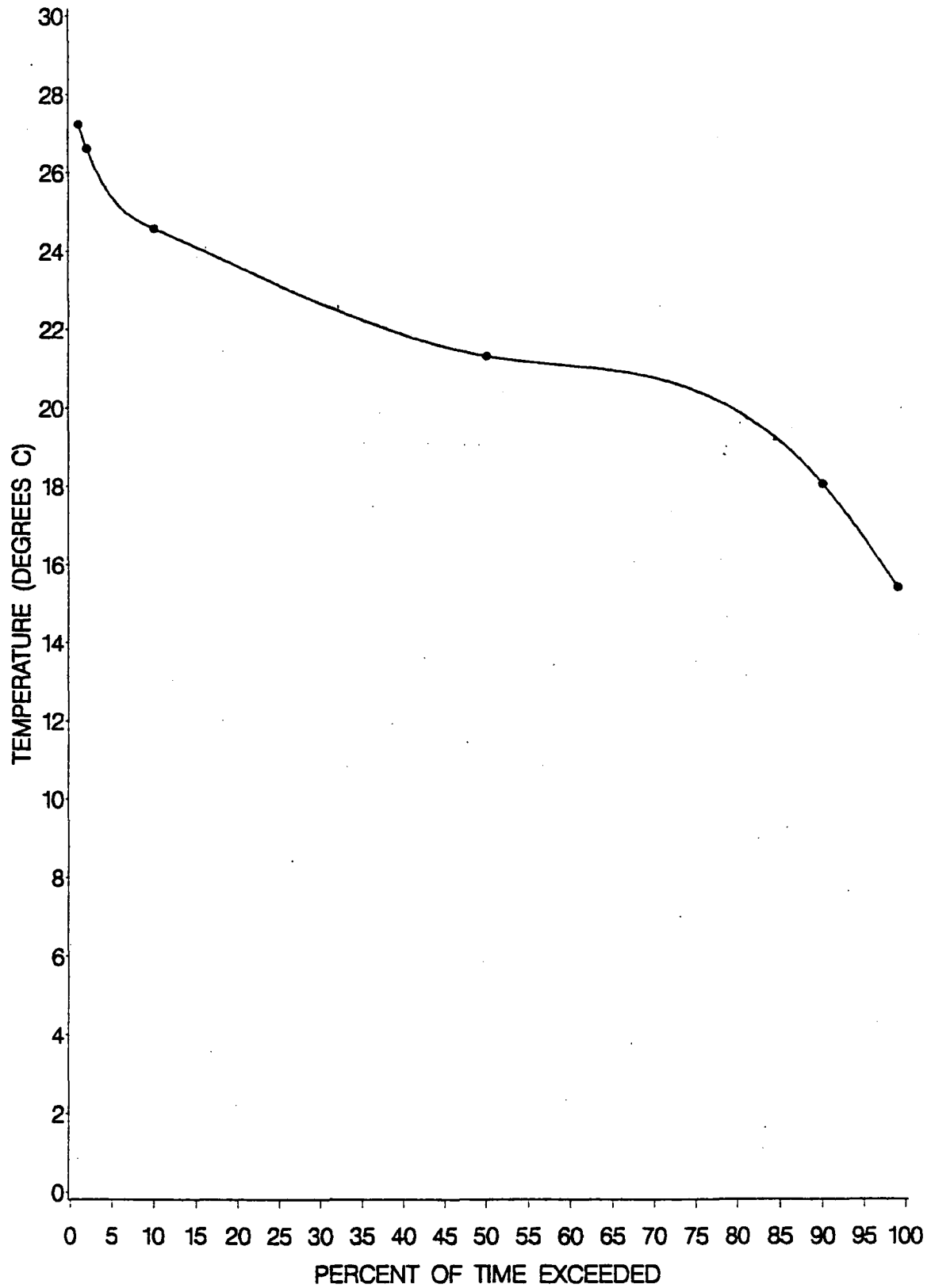
TEMPERATURE DURATION CURVE
05JUN



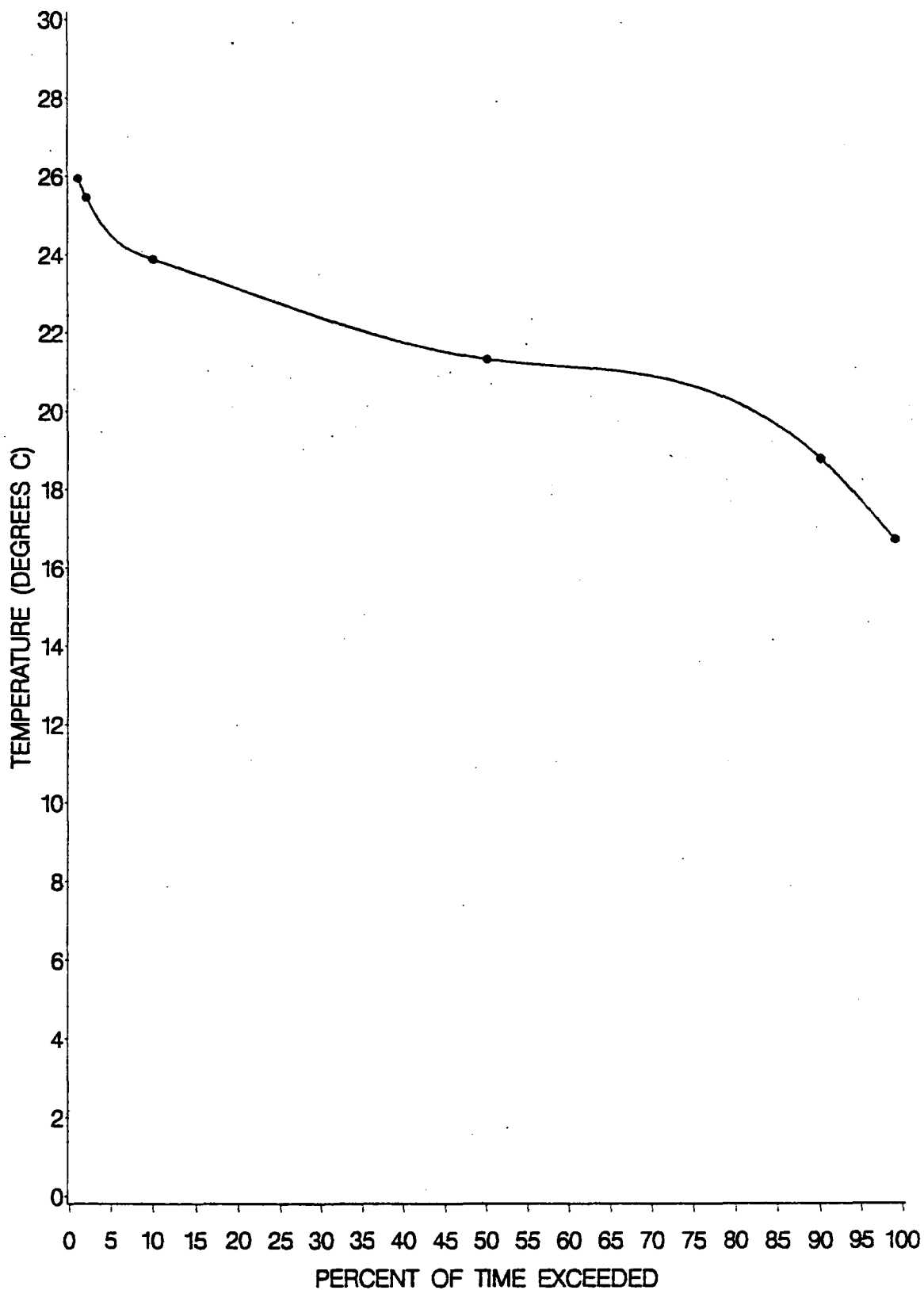
TEMPERATURE DURATION CURVE
12JUN



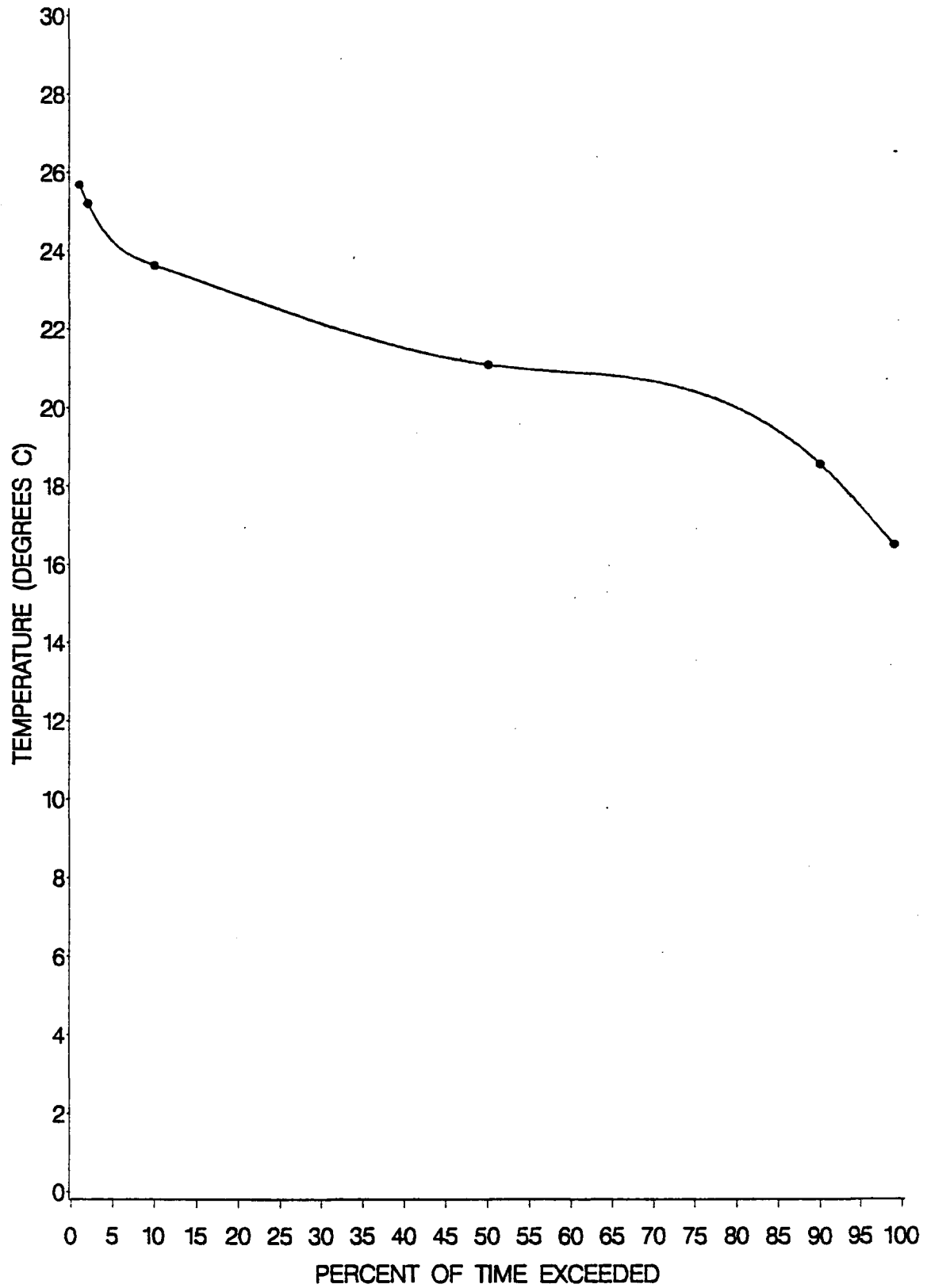
TEMPERATURE DURATION CURVE
19JUN



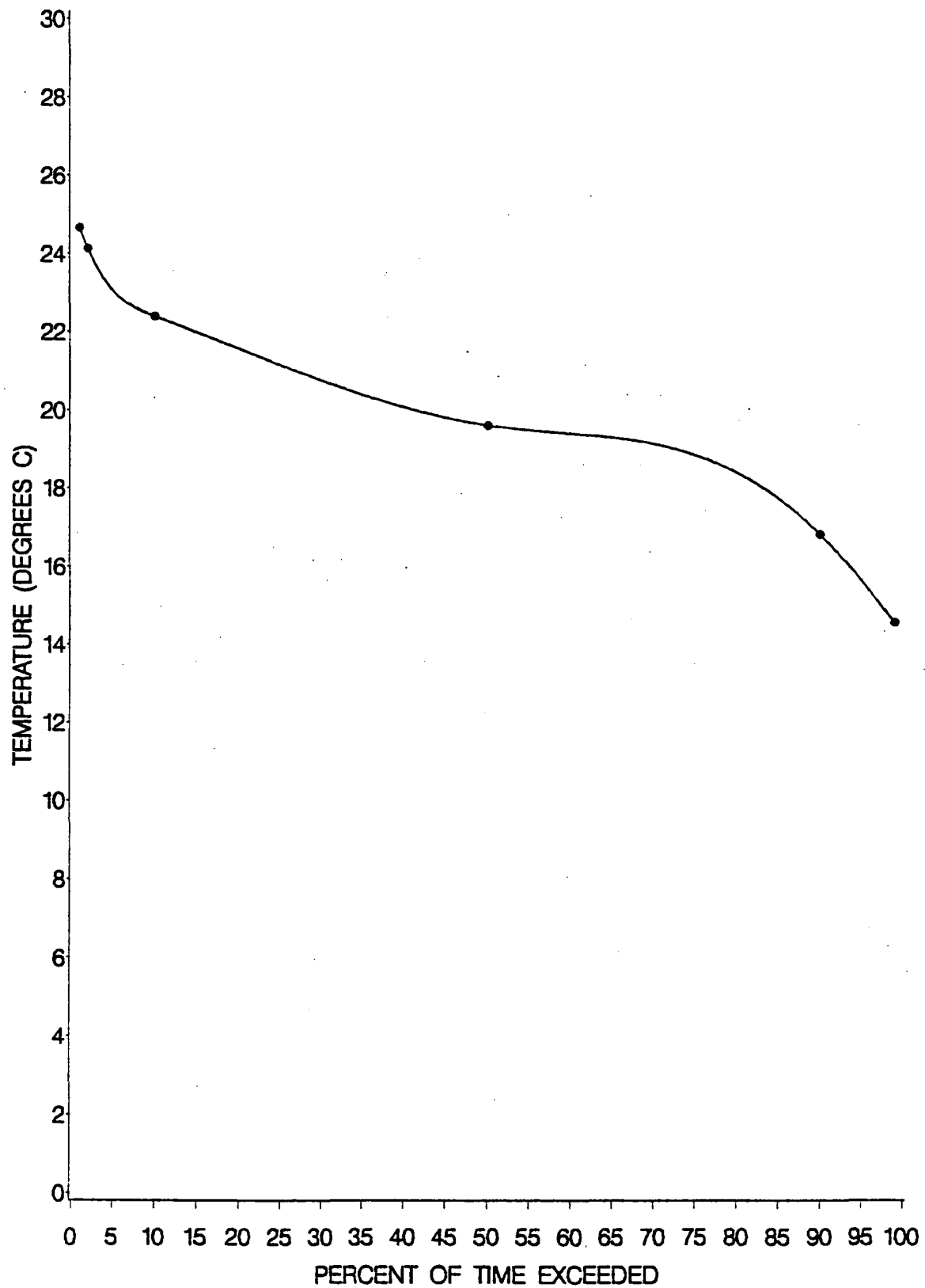
TEMPERATURE DURATION CURVE
26JUN



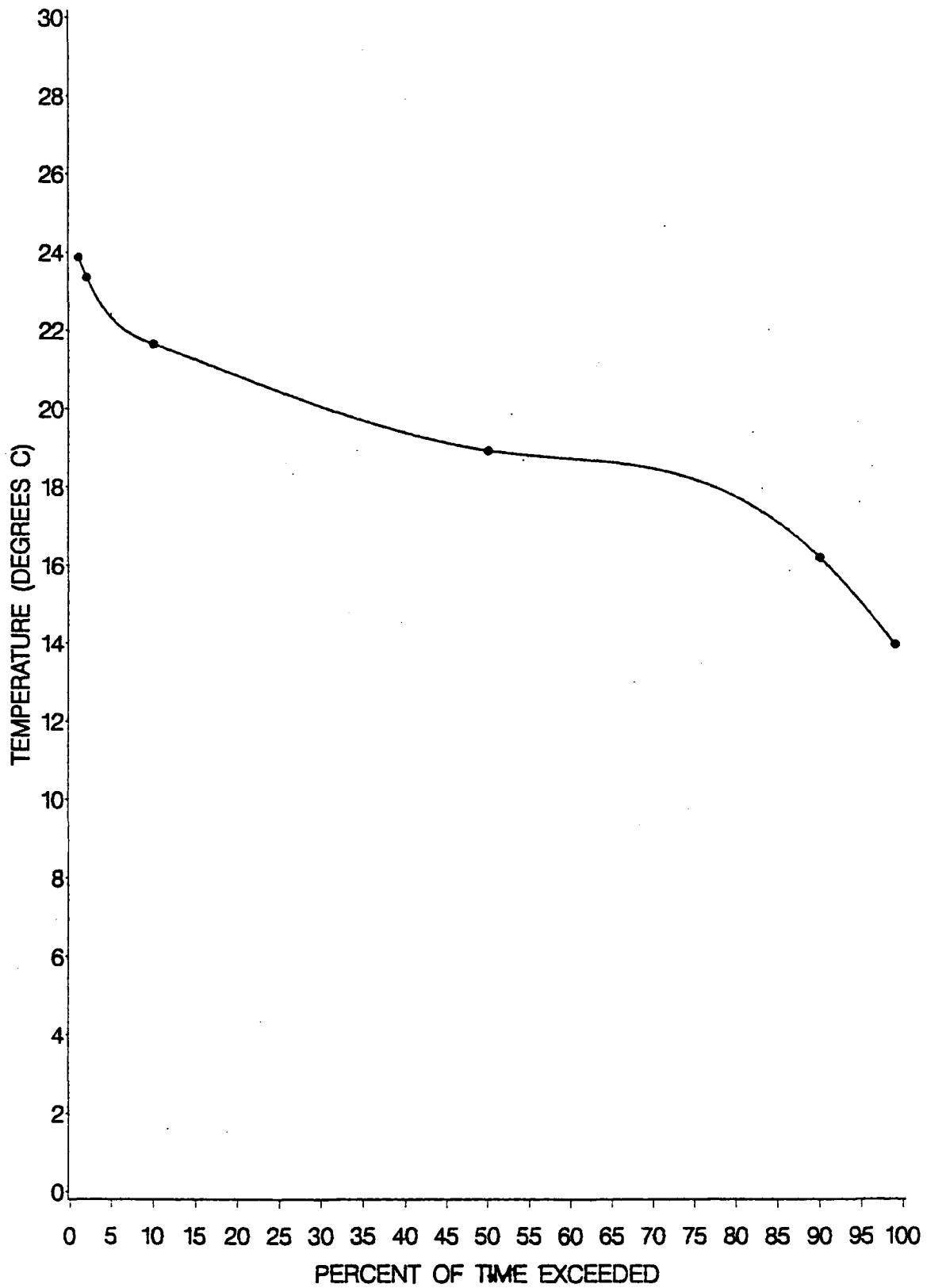
TEMPERATURE DURATION CURVE
01SEP



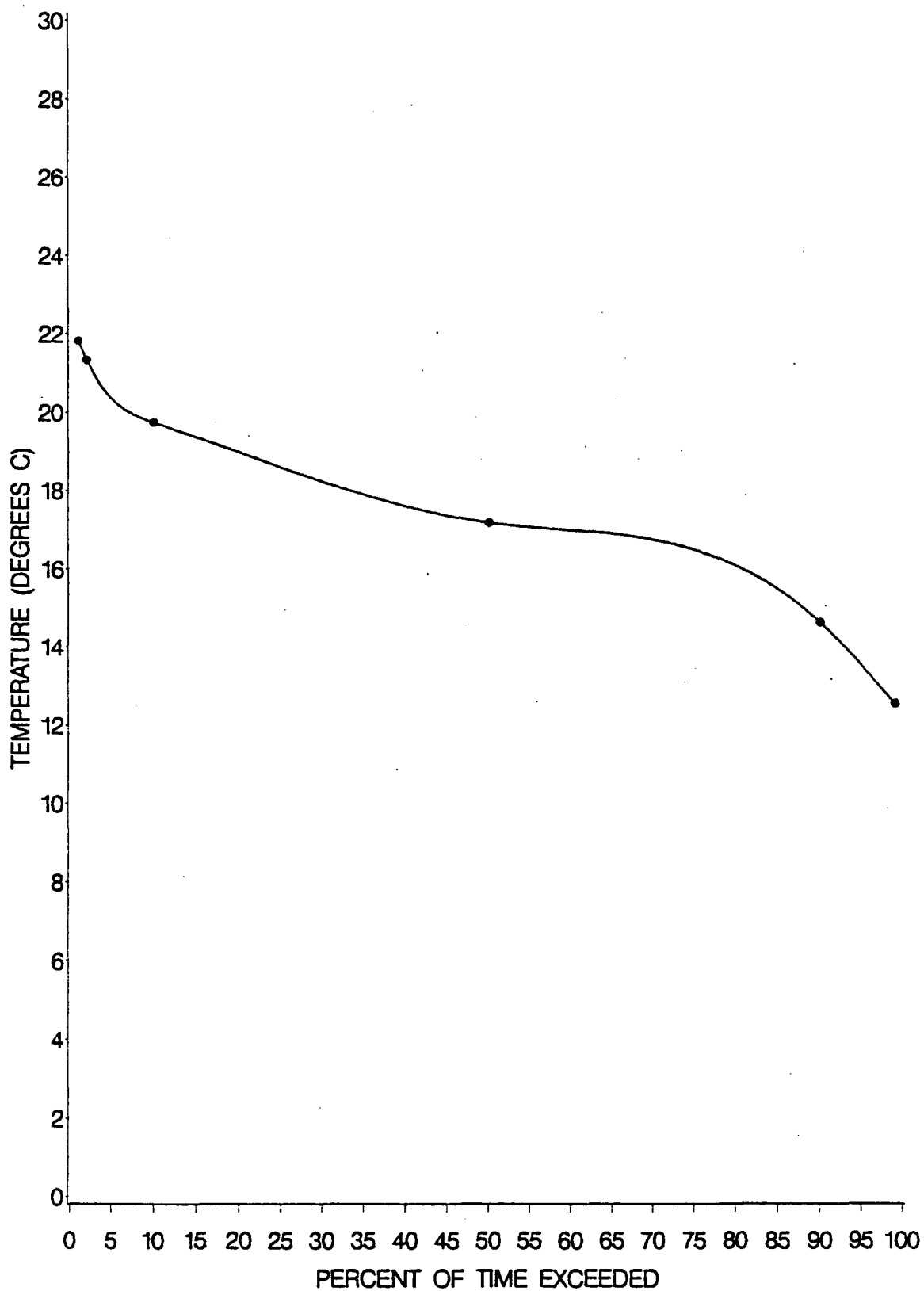
TEMPERATURE DURATION CURVE
08SEP



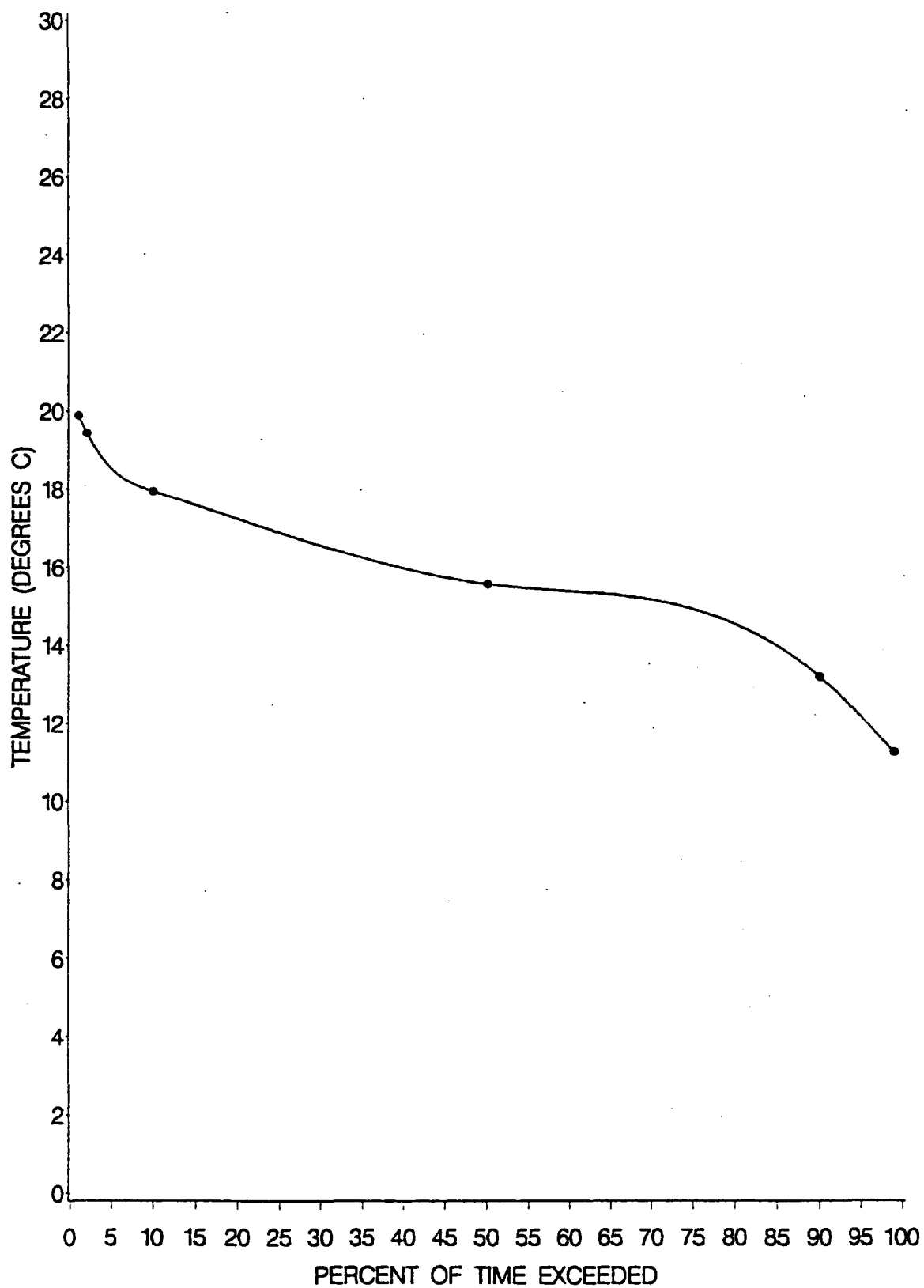
TEMPERATURE DURATION CURVE
15SEP



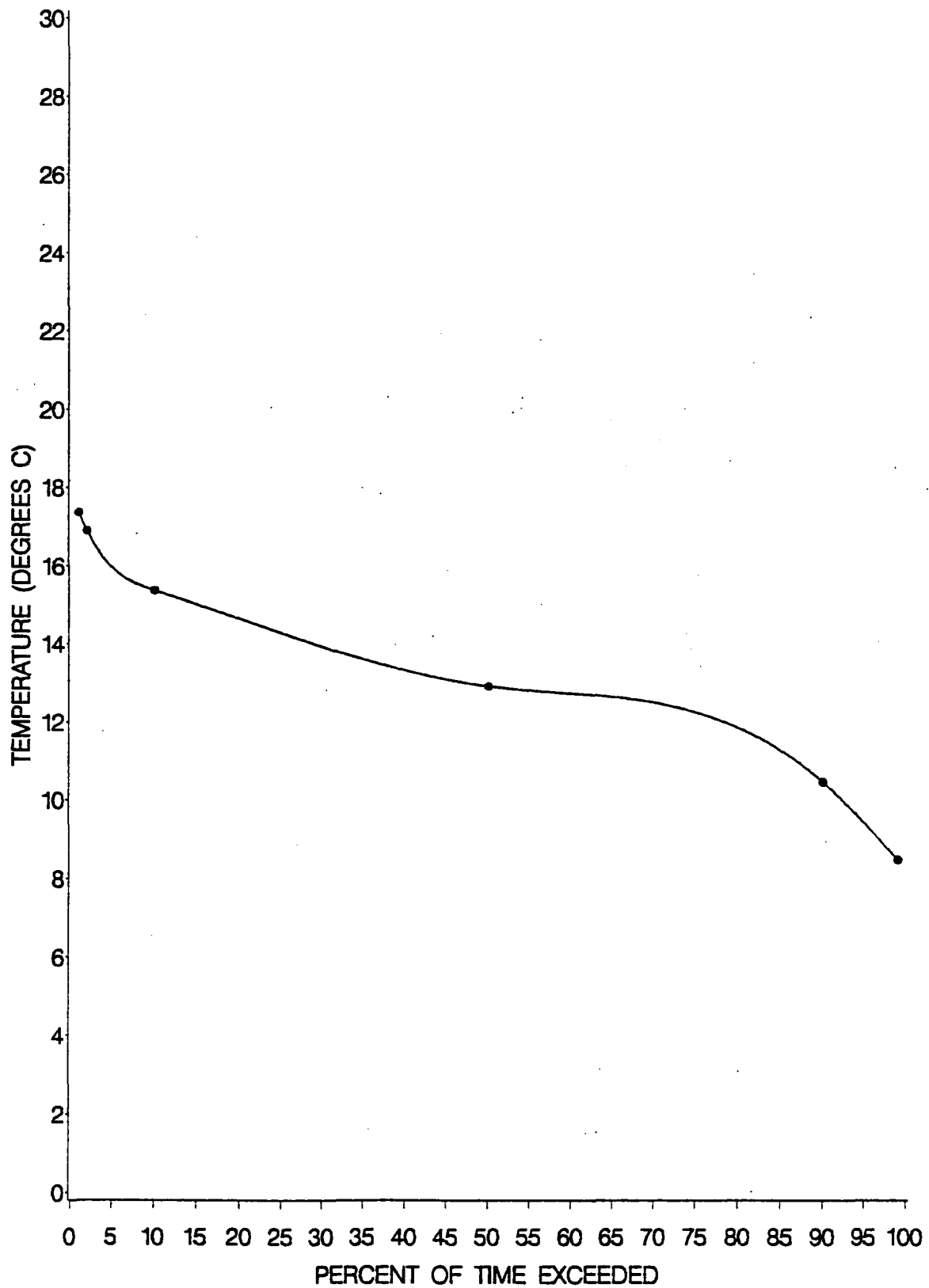
TEMPERATURE DURATION CURVE
22SEP



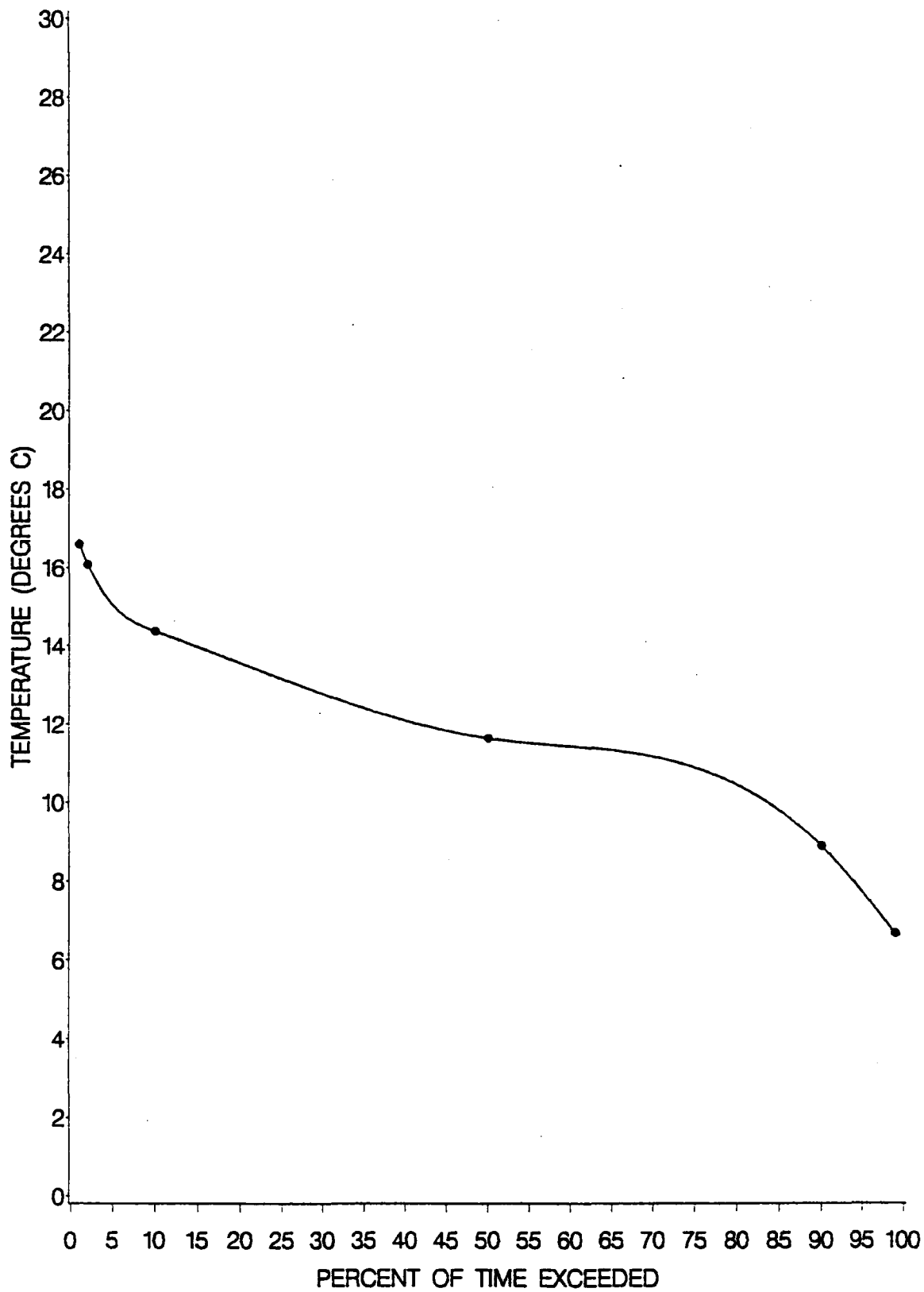
TEMPERATURE DURATION CURVE
29SEP



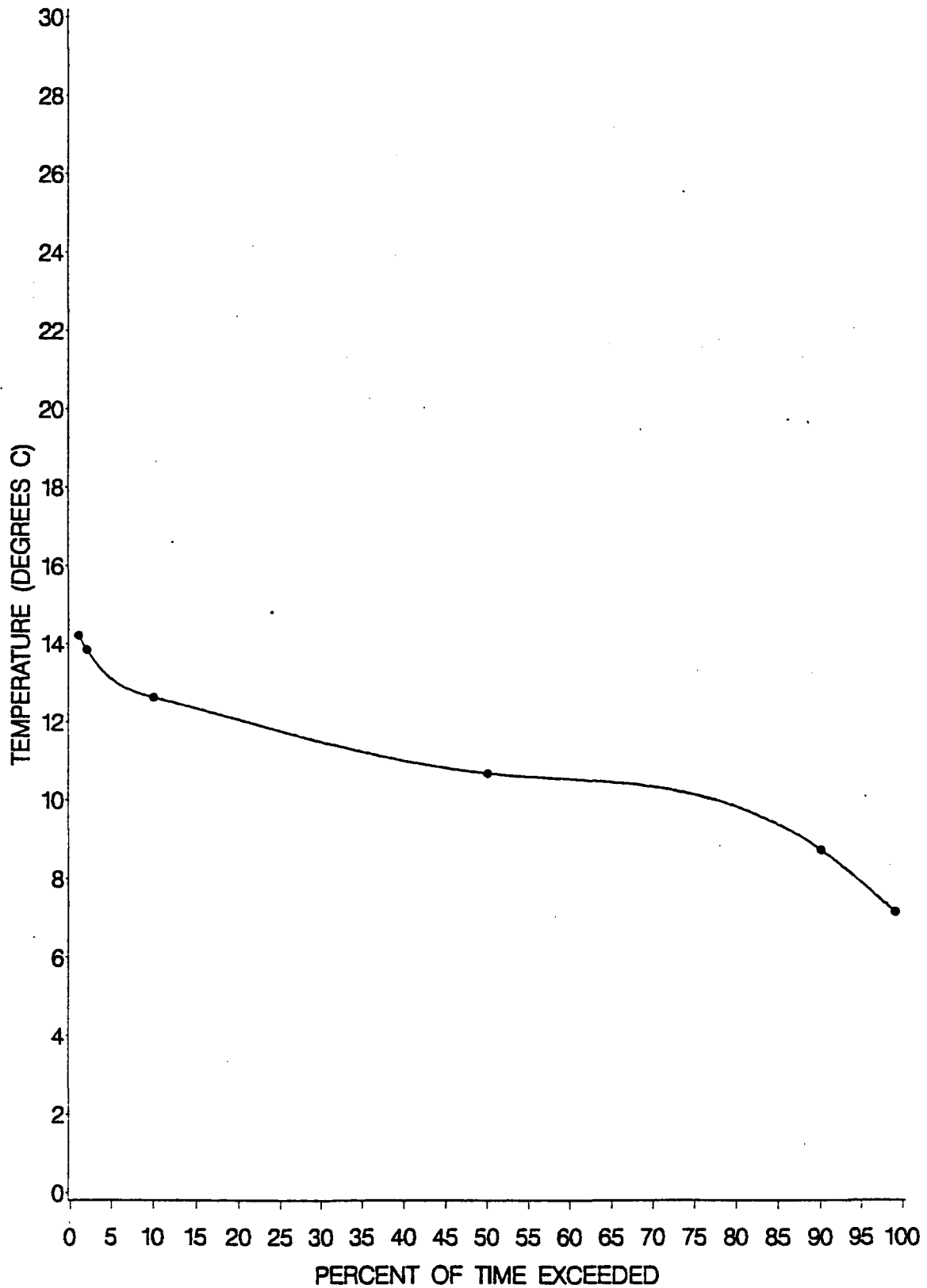
TEMPERATURE DURATION CURVE
06OCT



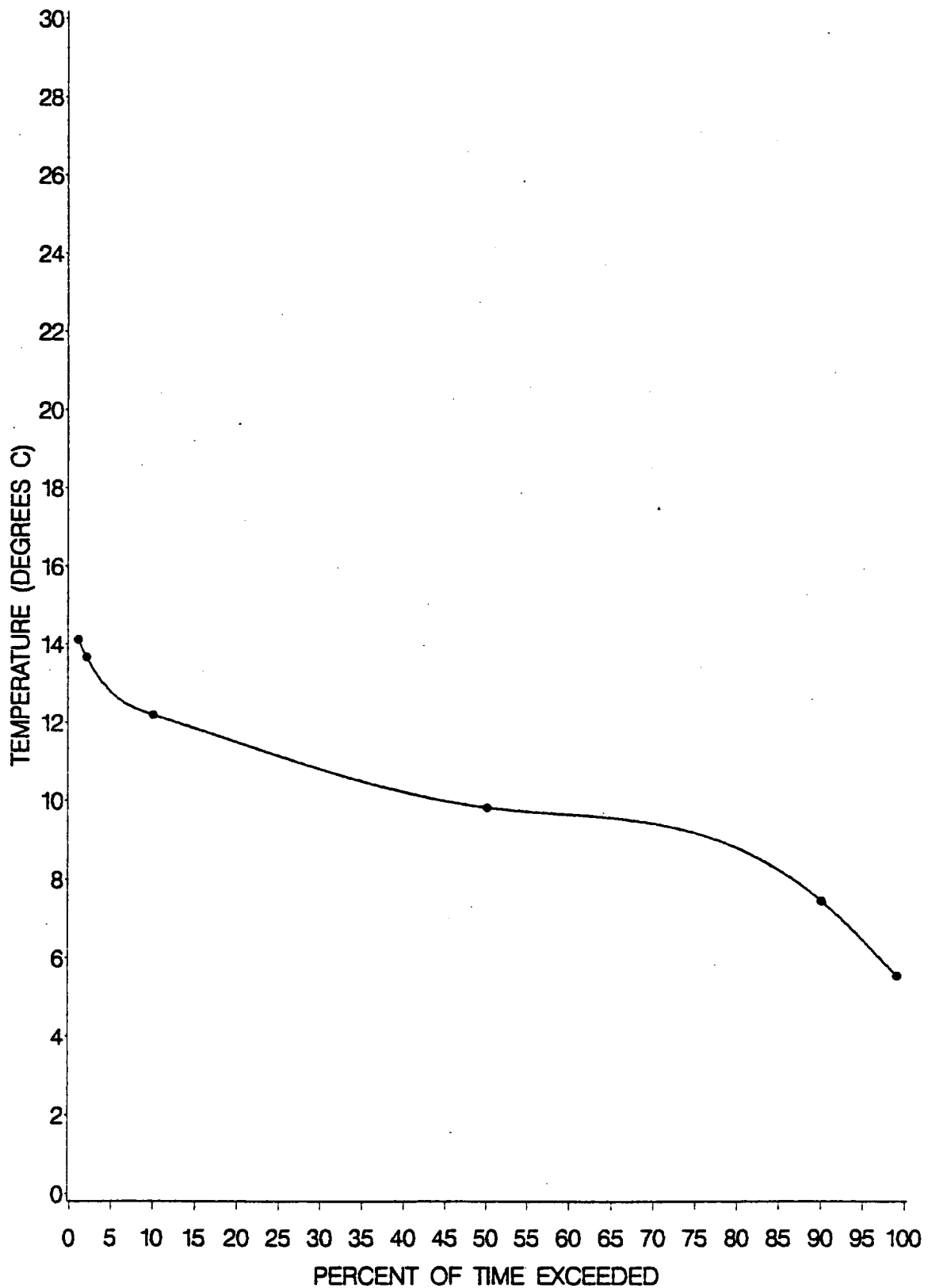
TEMPERATURE DURATION CURVE
13OCT



TEMPERATURE DURATION CURVE
20OCT



TEMPERATURE DURATION CURVE
27OCT



APPENDIX E

**Predicted Probability of Exceedence
of Upper Optimal Migration Temperatures**

TABLE E-1. SPRING MIGRATION OF ADULT AMERICAN SHAD, ALEWIVES, AND ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 0 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	1	<1	<1	1	14	9
90	<1	<1	<1	1	<1	<1	1	12	7
50	<1	<1	<1	<1	<1	<1	1	9	5
10	<1	<1	<1	<1	<1	<1	<1	6	3
2	<1	<1	<1	<1	<1	<1	<1	5	2
1	<1	<1	<1	<1	<1	<1	<1	4	2

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	<1	<1	<1	<1	<1	<1	<1	<1	<1
50	<1	<1	<1	<1	<1	<1	<1	5	2
10	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	<1	<1	<1	<1	1	9	5

TABLE E-2. SPRING MIGRATION OF ADULT AMERICAN SHAD, ALEWIVES, AND ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 320 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	4	3	3	11	39	39
90	<1	<1	<1	3	2	3	9	36	34
50	<1	<1	<1	3	1	2	6	31	27
10	<1	<1	<1	2	1	1	3	24	19
2	<1	<1	<1	1	1	1	1	20	15
1	<1	<1	<1	1	<1	<1	1	18	13

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	<1	<1	<1	<1	<1	<1	1	4	3
50	<1	<1	<1	1	1	1	3	15	13
10	<1	<1	<1	<1	<1	<1	<1	2	2
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	<1	3	1	2	6	30	27

TABLE E-3. SPRING MIGRATION OF ADULT AMERICAN SHAD, ALEWIVES, AND ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 440 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	1	6	6	6	19	51	55
90	<1	<1	1	6	5	5	16	48	49
50	<1	<1	1	5	3	4	11	43	41
10	<1	<1	<1	3	2	2	6	35	32
2	<1	<1	<1	2	1	1	3	29	26
1	<1	<1	<1	2	1	1	3	27	24

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26
99	<1	<1	<1	<1	<1	<1	<1	1	1
90	<1	<1	<1	<1	<1	1	2	5	5
50	<1	<1	<1	2	2	2	5	2	21
10	<1	<1	<1	<1	<1	<1	1	3	3
2	<1	<1	<1	<1	<1	<1	<1	1	1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	1	4	3	3	11	42	41

TABLE E-4. FALL MIGRATION OF JUVENILE AMERICAN SHAD AND ALEWIVES: UPPER OPTIMAL TEMPERATURE = 26°C, PLANT GENERATION = 0 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	1	<1	<1	<1	<1	<1	<1	<1	<1
90	1	<1	<1	<1	<1	<1	<1	<1	<1
50	<1	<1	<1	<1	<1	<1	<1	<1	<1
10	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	<1	<1	<1	<1	<1	<1	<1	<1	<1
50	<1	<1	<1	<1	<1	<1	<1	<1	<1
10	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	<1	<1	<1	<1	<1	<1	<1

TABLE E-5. FALL MIGRATION OF JUVENILE AMERICAN SHAD AND ALEWIVES: UPPER OPTIMAL TEMPERATURE = 26°C, PLANT GENERATION = 320 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	9	3	1	<1	<1	<1	<1	<1	<1
90	8	2	1	<1	<1	<1	<1	<1	<1
50	5	1	1	<1	<1	<1	<1	<1	<1
10	3	1	<1	<1	<1	<1	<1	<1	<1
2	2	1	<1	<1	<1	<1	<1	<1	<1
1	2	<1	<1	<1	<1	<1	<1	<1	<1

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	1	<1	<1	<1	<1	<1	<1	<1	<1
50	3	1	<1	<1	<1	<1	<1	<1	<1
10	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	5	1	<1	<1	<1	<1	<1	<1	<1

TABLE E-6. FALL MIGRATION OF JUVENILE AMERICAN SHAD AND ALEWIVES: UPPER OPTIMAL TEMPERATURE = 26°C, PLANT GENERATION = 440 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	17	7	3	<1	<1	<1	<1	<1	<1
90	15	5	2	<1	<1	<1	<1	<1	<1
50	11	3	2	<1	<1	<1	<1	<1	<1
10	8	2	1	<1	<1	<1	<1	<1	<1
2	6	1	<1	<1	<1	<1	<1	<1	<1
1	5	1	<1	<1	<1	<1	<1	<1	<1

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	1	1	<1	<1	<1	<1	<1	<1	<1
50	6	2	1	<1	<1	<1	<1	<1	<1
10	1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	11	3	1	<1	<1	<1	<1	<1	<1

**TABLE E-7. FALL MIGRATION OF ADULT ATLANTIC SALMON: UPPER
OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 0 MW.**

**a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a
Given River Flow.**

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	9	3	1	<1	<1	<1	<1	<1	<1
90	8	2	1	1	<1	<1	<1	<1	<1
50	6	1	1	<1	<1	<1	<1	<1	<1
10	4	1	<1	<1	<1	<1	<1	<1	<1
2	2	1	<1	<1	<1	<1	<1	<1	<1
1	2	<1	<1	<1	<1	<1	<1	<1	<1

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	1	<1	<1	<1	<1	<1	<1	<1	<1
50	3	1	<1	<1	<1	<1	<1	<1	<1
10	<1	<1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	6	2	<1	<1	<1	<1	<1	<1	<1

**TABLE E-8. FALL MIGRATION OF ADULT ATLANTIC SALMON: UPPER
OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 320 MW.**

**a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a
Given River Flow.**

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	40	19	10	2	<1	<1	<1	<1	<1
90	36	15	8	1	<1	<1	<1	<1	<1
50	30	11	6	1	<1	<1	<1	<1	<1
10	23	8	4	<1	<1	<1	<1	<1	<1
2	18	6	2	<1	<1	<1	<1	<1	<1
1	17	5	2	<1	<1	<1	<1	<1	<1

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	<1	<1	<1	<1	<1	<1	<1	<1	<1
90	4	2	1	<1	<1	<1	<1	<1	<1
50	15	6	3	<1	<1	<1	<1	<1	<1
10	2	1	<1	<1	<1	<1	<1	<1	<1
2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedences	29	11	5	1	<1	<1	<1	<1	<1

**TABLE E-9. FALL MIGRATION OF ADULT ATLANTIC SALMON: UPPER
OPTIMAL TEMPERATURE = 24°C, PLANT GENERATION = 440 MW.**

**a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a
Given River Flow.**

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	56	30	18	4	<1	<1	<1	<1	<1
90	51	26	–	3	<1	<1	<1	<1	<1
50	45	20	12	2	<1	<1	<1	<1	<1
10	36	14	8	1	<1	<1	<1	<1	<1
2	30	11	5	1	<1	<1	<1	<1	<1
1	28	10	4	<1	<1	<1	<1	<1	<1

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	9/1	9/8	9/15	9/22	9/29	10/6	10/13	10/20	10/27
99	1	<1	<1	<1	<1	<1	<1	<1	<1
90	5	3	1	<1	<1	<1	<1	<1	<1
50	22	10	6	1	<1	<1	<1	<1	<1
10	4	1	1	<1	<1	<1	<1	<1	<1
2	1	<1	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	44	20	10	2	<1	<1	<1	<1	<1

TABLE E-10. SPRING MIGRATION OF ADULT ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 15°C, PLANT GENERATION = 0 MW.

- a. **Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.**

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29
99	1	9	49	71	90
90	1	8	44	69	87
50	<1	6	39	65	83
10	<1	5	33	59	77
2	<1	4	30	54	73
1	<1	4	29	52	71

- b. **Probability of Occurrence of Upper Optimal Temperature Exceedences.**

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29
99	<1	<1	<1	1	1
90	<1	1	4	7	9
50	<1	3	19	33	42
10	<1	<1	3	6	8
2	<1	<1	1	1	1
1	<1	<1	<1	1	1
Sum % Exceedence	<1	6	38	65	83

TABLE E-11. SPRING MIGRATION OF ADULT ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 15°C, PLANT GENERATION = 320 MW.

- a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29
99	12	30	85	89	98
90	9	27	71	88	98
50	6	23	66	85	97
10	4	19	60	81	95
2	3	17	57	77	93
1	2	16	56	76	93

- b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29
99	<1	<1	1	1	1
90	1	3	7	9	10
50	3	12	33	43	48
10	<1	2	6	8	9
2	<1	<1	1	2	2
1	<1	<1	1	1	1
Sum % Exceedence	6	23	66	85	96

TABLE E-12. SPRING MIGRATION OF ADULT ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 15°C, PLANT GENERATION = 440 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29
99	21	41	83	93	99
90	17	38	79	92	99
50	13	33	75	90	98
10	8	28	70	87	97
2	6	26	67	84	97
1	5	25	66	83	96

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29
99	<1	<1	1	1	1
90	2	4	8	9	10
50	6	17	37	45	49
10	1	3	7	9	10
2	<1	1	1	2	2
1	<1	<1	1	1	1
Sum % Exceedence	12	33	75	90	98

**TABLE E-13. FALL MIGRATION OF ADULT ATLANTIC SALMON: UPPER
OPTIMAL TEMPERATURE = 10°C, PLANT GENERATION = 0 MW.**

**a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a
Given River Flow.**

% EXCEEDENCE OF FLOW	10/6	10/13	10/20	10/27
99	99	91	89	68
90	97	88	84	60
50	95	81	72	48
10	91	71	51	34
2	87	64	36	26
1	86	62	30	23

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	10/6	10/13	10/20	10/27
99	1	1	1	1
90	10	9	8	6
50	48	40	36	24
10	9	7	5	3
2	2	1	1	1
1	1	1	<1	<1
Sum % Exceedence	95	80	70	47

TABLE E-14. FALL MIGRATION OF ADULT ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 10°C, PLANT GENERATION = 320 MW.

- a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.**

% EXCEEDENCE OF FLOW	10/6	10/13	10/20	10/27
99	100	99	100	95
90	100	98	99	92
50	100	97	98	86
10	99	94	92	77
2	99	91	84	68
1	98	90	80	65

- b. Probability of Occurrence of Upper Optimal Temperature Exceedences.**

EXCEEDENCE OF FLOW	10/6	10/13	10/20	10/27
99	1	1	1	1
90	10	10	10	9
50	50	48	49	43
10	10	9	9	8
2	2	2	2	1
1	1	1	1	1
Sum % Exceedence	100	96	96	85

TABLE E-15. FALL MIGRATION OF ADULT ATLANTIC SALMON: UPPER OPTIMAL TEMPERATURE = 10°C, PLANT GENERATION = 440 MW.

- a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.**

% EXCEEDENCE OF FLOW	10/6	10/13	10/20	10/27
99	100	100	100	98
90	100	99	100	97
50	100	99	99	94
10	100	97	97	88
2	100	96	94	82
1	99	95	92	79

- b. Probability of Occurrence of Upper Optimal Temperature Exceedences.**

% EXCEEDENCE OF FLOW	10/6	10/13	10/20	10/27
99	1	1	1	1
90	10	10	10	10
50	50	49	50	47
10	10	10	10	9
2	2	2	2	2
1	1	1	1	1
Sum % Exceedence	100	98	99	93

TABLE E-16. SPRING MIGRATION OF ATLANTIC SALMON SMOLTS: UPPER OPTIMAL TEMPERATURE = 20°C, PLANT GENERATION = 0 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12
99	<1	<1	4	13	17	17	39
90	<1	<1	3	12	14	14	35
50	<1	<1	2	10	10	13	27
10	<1	<1	1	8	7	8	17
2	<1	<1	1	6	5	5	11
1	<1	<1	1	5	5	4	9

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12
99	<1	<1	<1	<1	<1	<1	<1
90	<1	<1	<1	1	1	1	3
50	<1	<1	1	5	5	6	13
10	<1	<1	<1	1	1	1	2
2	<1	<1	<1	<1	<1	<1	<1
1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	2	10	10	11	26

TABLE E-17. SPRING MIGRATION OF ATLANTIC SALMON SMOLTS: UPPER OPTIMAL TEMPERATURE = 20°C, PLANT GENERATION = 320 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12
99	<1	1	14	33	47	48	75
90	<1	<1	11	31	42	47	71
50	<1	<1	9	27	35	41	63
10	<1	<1	6	22	27	31	50
2	<1	<1	5	18	23	23	39
1	<1	<1	5	17	21	20	35

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12
99	<1	<1	<1	<1	<1	<1	1
90	<1	<1	1	3	4	5	7
50	<1	<1	4	14	17	20	31
10	<1	<1	1	2	3	3	5
2	<1	<1	<1	<1	<1	<1	1
1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	<1	9	27	34	38	61

TABLE E-18. SPRING MIGRATION OF ATLANTIC SALMON SMOLTS: UPPER OPTIMAL TEMPERATURE = 20°C, PLANT GENERATION = 440 MW.

a. Predicted Probability of Exceedence of Upper Optimal Migration Temperature for a Given River Flow.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12
99	<1	1	20	42	60	62	85
90	<1	1	17	40	55	59	82
50	<1	1	13	36	47	54	75
10	<1	<1	11	30	39	43	63
2	<1	<1	9	25	34	34	53
1	<1	<1	8	24	32	31	49

b. Probability of Occurrence of Upper Optimal Temperature Exceedences.

% EXCEEDENCE OF FLOW	5/1	5/8	5/15	5/22	5/29	6/5	6/12
99	<1	<1	<1	<1	1	1	1
90	<1	<1	2	4	5	6	8
50	<1	<1	7	18	24	27	38
10	<1	<1	1	3	4	4	6
2	<1	<1	<1	1	1	1	1
1	<1	<1	<1	<1	<1	<1	<1
Sum % Exceedence	<1	1	13	35	47	51	74