WASHINGTON STATE DEPARTMENT OF ECOLOGY

Lower Skagit Total Maximum Daily Load Data Summary

Abstract

As part of the Lower Skagit Total Maximum Daily Load (TMDL) Study, a series of surveys were conducted in 1994 and 1995. This report presents the data collected during those surveys, as well as a summary of the Quality Assurance and Quality Control analysis of the data. The full report on the Lower Skagit TMDL will be published separately. Preliminary analysis showed widespread elevated levels of FC bacteria and turbidity in tributary streams, stormwater, drainage pump stations, combined sewer overflows, and point sources. In the Skagit River, turbidity and bacteria problems appear to be largely transported from the upper basin to the lower river. Dissolved Oxygen (DO) met the Water Quality Standards throughout the lower Skagit River, but the South Fork Skagit River showed evidence of being the critical location for low DO levels.

Introduction

This report summarizes the data collected as part of the Lower Skagit Total Maximum Daily Load (TMDL) Study. Also included is a summary of the Quality Assurance and Quality Control (QA/QC) analysis of the data. The full report on the Lower Skagit TMDL is scheduled to be published early in 1997.

The data reported here was collected during a series of surveys in 1994 and 1995. The methods used in these surveys are described in the Quality Assurance Project Plan (QAPP) (Pickett, 1995). The data actually collected may vary from the planned monitoring described in the QAPP where conditions found in field required adjustments. A list of parameters measured, abbreviations used in this report, target accuracy and detection limits, and analytical methods are provided in Table 1.

A reconnaissance survey was conducted in September 1994 that included profiles and 48-hour datalogger readings with Hydrolab® multi-parameter meters. Wet season monitoring consisted of eight two-day surveys conducted every two weeks beginning the last week of December 1994 and continuing through the first week of April 1995. Two dry season monitoring surveys were conducted two weeks apart in late September and early October 1995.

Wet season field data were collected with Orion® 250A pH meters, Beckman Solu-bridge conductivity meters, and laboratory sampling. Dry season data were collected with Hydrolab® multi-parameter meters, a YSI® Dissolved Oxygen (DO) meter, and laboratory sampling. Field readings were taken as grabs directly from the water or from a bucket. Laboratory samples were taken directly into the sample bottle, except at locations with access difficulties where samples were taken from a bucket. All bacteria samples were taken directly into the sample bottle except for a few samples from the Sedro-Woolley WWTP which were taken from a bucket.

Figure 1 shows the study area and the locations sampled. The upper end of the study area was upstream of the city of Sedro-Woolley under the pipeline crossings, just downstream of Skiyou Slough where Class AA Water Quality Standards end and Class A Standards begin. The downstream boundary was the Fir Island bridges over the South Fork Skagit River at Conway, and over the North Fork Skagit River at Rexville. The wet and

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03-1016; 03-1017; 03-1018; 03-1019

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Table 1. Summary of field and laboratory measurements, target detection limits, and methods.

Parameter	Abbrev.	Accuracy	Method[1]
Field Measurements			
Velocity		± 0.05 feet/second	Current meter
Specific Conductivity	Cond	± 5 % (at 25°C)	Field Meter (Electrode)
pH	pH	± 0.2 standard units	Field Meter (Electrode)
Temperature	Temp	± 0.2 °C	Red Liquid Thermometer Field Meter (Thermistor)
Dissolved Oxygen	DO	± 0.1 mg/L ± 0.2 mg/L	Winkler Modified Azide (EPA 360.2) Field meter (Polarographic Probe)
General Chemistry		**Reporting Limit**	
Turbidity	Turb	1 NTU	EPA 180.1
Specific Conductivity	Cond	1 µS/cm	Conductivity Bridge
Alkalinity	Alk	1 mg/L (as $CaCO_3$)	EPA 310.1
Fecal coliform	FC	1 cfu/100mL	SM18 Membrane Filter 9222D
Ammonia nitrogen	NH3	0.01 mg/L	EPA 350.1
Nitrate + nitrite nitrogen	N02/3	0.01 mg/L	EPA 353.2
Total persulfate nitrogen	TPN	0.01 mg/L	SM 4500 NO3-F Modified
Chloride	Clrd	0.1 mg/L	EPA 330.0
5-day BOD	BOD5	2 mg/L	EPA 405.1
Ultimate Carbonaceous BOD	UBOD	2 mg/L	NCASI (1987)

[1]SM = Standard methods for the examination of water and wastewater. Eighteenth edition (1992). American Public Health Association, American Water Works Association, and Water Environment Federation. Washington, D.C.

EPA = Methods for the chemical analysis of water and wastes. Environmental Monitoring Supply Laboratory. U.S. Environmental Protection Agency. Cincinnati, OH. EPA-600/4-74-020. 1983.

NCASI = A procedure for the estimation of ultimate oxygen demand (biochemical). National Council of the Paper Industry for Air and Stream Improvement, Inc. Special Report No. 87-06. May 6, 1987.

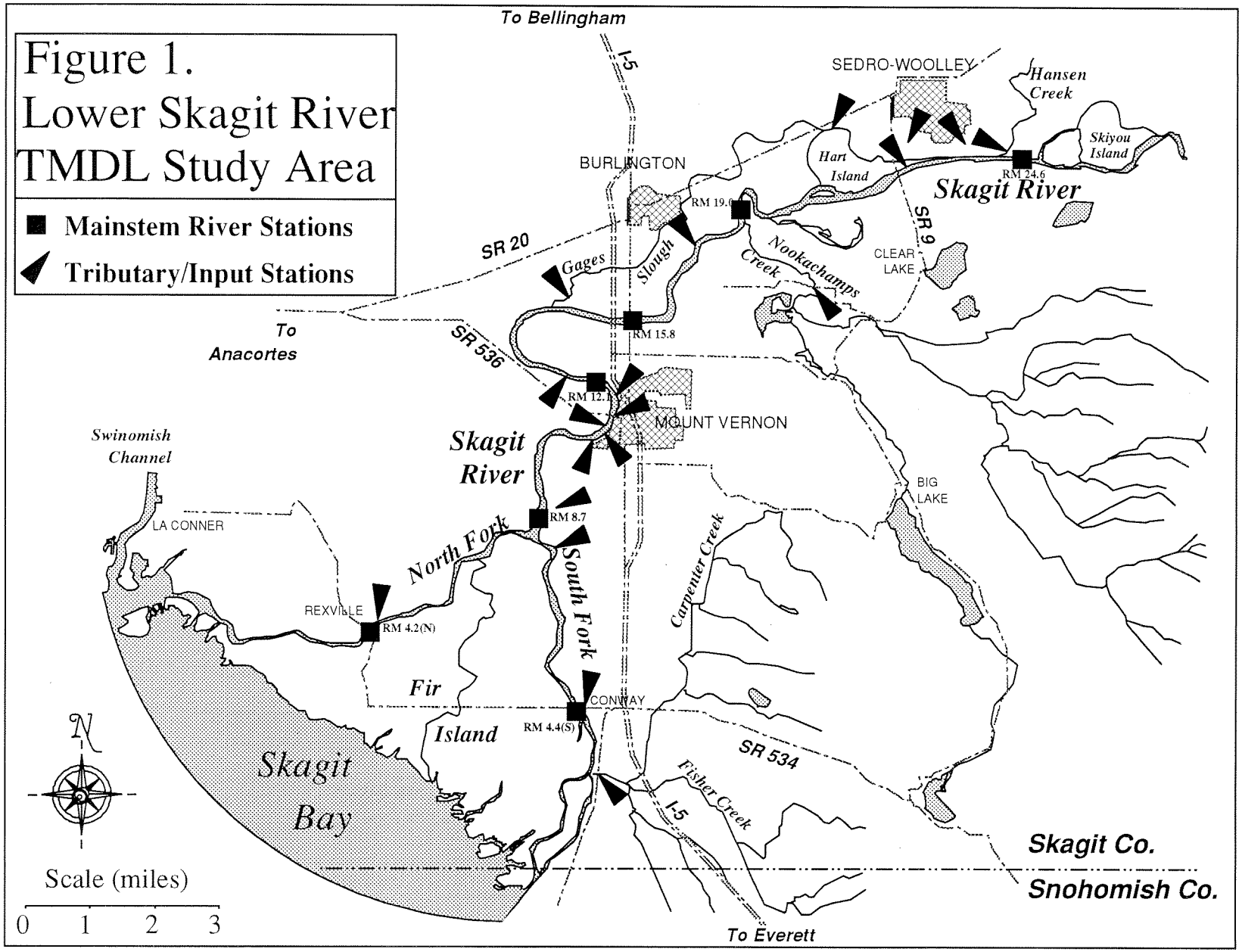
Figure 1.
Lower Skagit River
TMDL Study Area
Mainstem River Stations
Tributary/Input Stations
To Bellingham
I-5
SEDRO-WOOLLEY
Hansen Creek
Skiyou Island
Hart Island
BURLINGTON
RM 24.6
Skagit River
RM 19.0
SR 9
SR 20
Gages Slough
Nookachamps Creek
CLEAR LAKE
To Anacortes
SR 536
RM 15.8
RM 12.1
MOUNT VERNON
Swinomish Channel
Skagit River
BIG LAKE
LA CONNER
RM 8.7
North Fork
South Fork
Carpenter Creek
REXVILLE
RM 4.2(N)
Fir Island
CONWAY
RM 4.4(S)
SR 534
Fisher Creek
I-5
Skagit Bay
N
Scale (miles)
0 1 2 3
Skagit Co.
Snohomish Co.
To Everett

dry season surveys monitored the mainstem and forks of the Skagit River, as well as the variety of loading sources to the river in the study area. Sources include municipal wastewater treatment plants (WWTPs), combined sewer overflows (CSOs), urban stormwater, drainage district pump stations, and tributary creeks.

Conditions during surveys varied widely. The Skagit River during the December 27-28 survey were near flood level, and was also very high during the February 21-22 survey. Some surveys occurred during rainfall or after recent rains, while others took place following short or long periods of dry weather. The effect of these conditions on the data will be analyzed in detail in the final report.

Data Quality

Attachment A gives a detailed summary of the data QA/QC analysis. Data collected in the Lower Skagit TMDL study are usable subject to certain qualifications:

- Qualifiers are provided in the data tables that place conditions on the laboratory data.
- Data variability must be taken into consideration when interpreting results and applying data to other analyses.
- Data from certain locations may have been taken under unusual conditions. Some of these conditions are described below or in Attachment A. The unique circumstances of sampling must be taken into consideration in evaluating the data.

Data from the Skagit River and its tributary creeks (Hansen, Nookachamps, and Carpenter/Fisher Creeks) and some storm drain and pump station sources (Northern State Hospital Drain, Tributary at Riverfront Park, Brickyard Creek, and Gages Slough) were taken directly from flowing surface waters and should be representative of their quality. One exception is that during the December 1994 survey, the Skagit River was flooding and forcing water upstream in Nookachamps Creek, so it is uncertain whether this sample represents the river, the creek, or some mixture of each.

Data from certain storm drain and pump station sources (South Sedro-Woolley Storm Drain, Frontage Road Pump Station [Kulshan Creek], Division Street and Park Street CSOs, Britt Slough Pump Station) were collected some of the time from water flowing directly into the Skagit River, and at other times from water that was backed up, or flowing into or held in a wet well. These conditions were mostly controlled by the height of the river. Other pump stations (Freeway Drive, Westside, Conway, and Rexville) were monitored solely from wet wells or drainage basins, and their representativeness as inputs to the river would depend on whether inflows to the pump stations were causing active pumping to the river. This report does not evaluate whether these sources could have been actively discharging at or near the time of sampling. Prior to use of these data in a detailed analysis, conditions at these locations must be evaluated to determine whether the observed quality is representative of an actual discharge.

Results

Tables with the data collected during the Lower Skagit TMDL Study are provided in Attachment B. The tables are organized as follows:

Table B.1.	Tributary Flows
Table B.2.	Field Measurement Data
Table B.3.	Summary of Dry Season Diurnal DS3 Measurements
Table B.4.	Wet Season Laboratory Results
Table B.5.	Dry Season Laboratory Results
Table B.6.	Summary of Ultimate BOD Test Results
Table B.7.	Complete Dry Season Diurnal DS3 Results

Some significant features of the data worth noting are:

- No Skagit River DO measurement fell below 9 mg/L. This is not consistent with the results of the 1992 survey reported in Entranco (1993), where low DO was found in the Skagit River at several locations. (Data from that report was determined to be of poor quality.)

- Hourly DO data collected by the Hydrolab® Datasonde 3® (DS3) found a curious drop in DO of about 1 mg/L at the higher high tide during the dry season surveys. This pattern can be seen in Figure 2. This phenomenon is associated with stagnant conditions during a high neap tide, and is consistent with similar conditions found in the Snohomish River (Cusimano, 1995).

- During the summer surveys, the South Fork Skagit River showed slightly higher levels of ammonia nitrogen and bacteria as compared to the North Fork and upstream mainstem stations. The reason for this difference is unknown, but it may bear some relation to the dip in DO observed. The final report will include a more detailed analysis of these observations.

- During the September 1995 survey, Kulshan Creek (at the Frontage Road Pump Station) showed unusually high levels of ammonia, nitrate/nitrite, and total persulfate nitrogen; elevated FC bacteria; and low DO compared to other surface waters.

- FC bacteria levels in the CSOs were extremely high, exceeding 100,000 cfu/100mL during several surveys.

Compliance with Standards and Limitations

The data from the study were analyzed for compliance with the Water Quality Standards. Data were also compared to NPDES permit limitations for the WWTPs. (Comparison to permit limitations is done for informational purposes; values above the permit limitations may not necessarily be permit violations.) The Class AA Standards were applied to the Skagit River above Sedro-Woolley, and Class A standards were applied to all other surface waters. The results of that analysis are presented in the following tables in Attachment C:

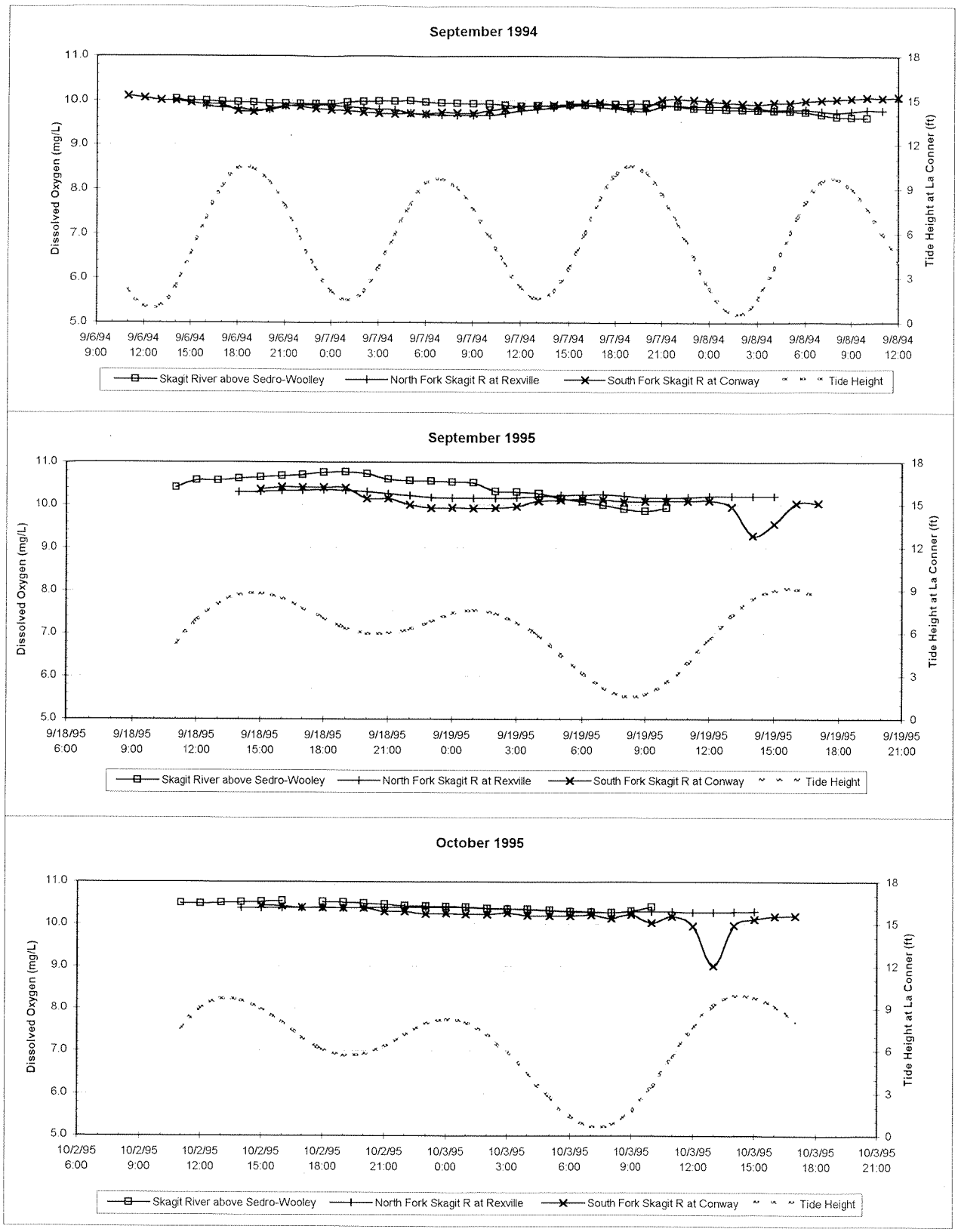

Figure 2. Dry Season Diurnal DS3 Dissolved Oxygen Results (with Tide Height)

Table C.1. Compliance with Fecal Coliform Standards
Table C.2. Compliance with Turbidity Standards
Table C.3. Maximum and Minimum Values for Temperature, pH, and Dissolved Oxygen

The focus of the Lower Skagit TMDL is on compliance with the state Water Quality Standards for fecal coliform (FC) bacteria and dissolved oxygen (DO). The final report will provide an analysis of pollutant loading and compliance with the FC and DO standards under both current and future conditions. However, a simple review of the data reveals some significant patterns.

One goal of the September 1994 reconnaissance survey was to determine whether saline water from Skagit Bay reached the lower boundaries of the study area. Although the river flow is halted, and perhaps slight upstream flow occurs for a short time, no noticeable increase in salinity was found. Therefore, freshwater criteria were applied throughout the study area. Possible impacts of Skagit River bacteria loading on Skagit Bay marine waters will be evaluated in the final report.

Fecal Coliform Bacteria

To evaluate compliance with the Water Quality Standards and for comparison to permit limits for FC, a "daily" or "weekly" geometric mean was calculated from the data for each survey. A "monthly" geometric mean was calculated from the means of three consecutive wet season surveys (a four-week averaging period) and the two dry season surveys, for a total of seven averaging periods. The monthly mean was compared to either the Class A or AA geometric mean criteria or the monthly average permit limits. The maximum daily or weekly geometric mean from each averaging period was compared to the Class A or AA 10th percentile criteria or the weekly average permit limitation.

Table C.1 highlights in **bold** values that exceed the FC criteria or permit limits. The following results are of interest:

- The Skagit River fell below the FC criteria, except during the December 1994 flood conditions, when the Class AA criteria were exceeded at the upstream end of the study area.

- FC levels in the Burlington and Big Lake WWTPs fell below their permit limitations for bacteria at all times. FC levels at the Sedro-Woolley WWTP were above the monthly average permit limitations during two averaging periods - late February through late March 1995, and early March through early April 1995; and exceeded the weekly average permit limitations during the late March and early April surveys. (Note that samples at the Sedro-Woolley WWTP were taken from the manhole nearest the outfall, which is not the sampling location designated in the NPDES permit.) At the Mount Vernon WWTP, FC levels were above the monthly average permit limit during the late September through early October 1995 averaging period; and exceeded the weekly maximum permit limit during both the late September 1995 and early October 1995 surveys.

- Surface waters that exceeded the FC criteria included Hansen Creek, Tributary at Riverfront Park, South Sedro-Woolley Storm Drain, Brickyard Creek, Nookachamps Creek, Kulshan Creek (Frontage Road Pump Station), and the Rexville Pump Station.

Turbidity

To evaluate turbidity standards, values at mainstem and tributary survey stations were compared to "background" levels. For this analysis, background for the Skagit River stations was the upstream sampling site near Sedro-Woolley; and for tributary stations the sources were categorized and the lowest value taken as background for comparison with other stations in each category. The standards were evaluated for each survey.

Table C.2 displays a "NO" for values that exceed the turbidity criteria. The following results are of interest:

- The Skagit River did not exceed turbidity standards during the study. However, the station above Sedro-Woolley exceeded 200 NTU during the December 1995 survey, and exceeded 70 NTU during the late February survey, both high water conditions.

- Surface waters that exceeded turbidity standards more than once during the study included: Hansen, Nookachamps, and Brickyard Creeks; The Britt Slough, Conway, and Rexville Pump Stations; the Tributary at Riverfront Park; and the South Sedro-Woolley Storm Drain.

DO, Temperature, and pH

All surface waters were in compliance with the Water Quality Standards for DO, temperature, and pH, except Kulshan Creek where one measurement fell below the Class A DO criterion. BOD_5 levels fell below permit limits for all WWTPs.

Conclusions and Recommendations

Several conclusions and recommendations result from this preliminary examination of the Lower Skagit TMDL data:

- FC levels at the Sedro-Woolley and Mount Vernon WWTPs were above their permit limits. If these values differ from the permittee's effluent monitoring results, the reason for the inconsistency should be investigated.

- Problems with FC bacteria and turbidity are widespread, and appear to be largely associated with nonpoint sources. FC bacteria will be evaluated in more detail in the Lower Skagit TMDL final report.

- High turbidity and violations of Class AA FC bacteria standards were found in the Skagit River above Sedro-Woolley. Further investigation of water quality problems in the Upper Skagit River should be considered as part of the next Watershed Needs Assessment

- High bacteria levels in CSOs point to the need to continue the program to correct those discharges.

- Results point to the South Fork Skagit River as a critical location for DO in the river. The final report will investigate current and future DO conditions, and evaluate the loading capacity and possible allocation alternatives for ammonia nitrogen and BOD_5.

References

Cusimano, 1995. Snohomish River Estuary Dry Season TMDL Study - Phase I. Environmental Investigations and Laboratory Services Program, Washington State Department of Ecology, Olympia, WA.

Entranco, 1993. Lower Skagit River Basin Water Quality Study Final Report. Prepared by Entranco, Bellevue, WA. Revised and Edited by Skagit County Department of Planning and Community Development, Mount Vernon, WA.

Pickett, P.J., 1995. Quality Assurance Project Plan. Environmental Investigations and Laboratory Services Program, Washington State Department of Ecology, Olympia, WA.

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Attachment A

Data Quality Assurance/Quality Control

All field monitoring meters were calibrated according to manufacturer's specifications. Temperature thermistors in the meters are factory calibrated. All meters were calibrated for DO and pH at least weekly, and for specific conductance at least monthly.

All meters were checked against standards before, during, or after each survey. Meter temperatures were spot-checked with a Standard mercury thermometer, and no readings fell outside the target accuracy of 0.2 °C specified in the QAPP. When paired readings of DS3 and Surveyor 2 (S2) meters were evaluated, the root mean square standard deviation (RMS-SD) of the pairs was 0.16 °C.

The Hydrolab® DO meters were checked in a saturated water bath following each survey, and a residual was calculated (the DS3 reading minus the standard measured by the Winkler method from the water bath). All residuals were within the specified target accuracy for DO meters (± 0.2 mg/L), except for the DS3 deployed near Conway in the September 1994 reconnaissance survey (+0.36 mg/L) and the DS3 deployed near Sedro-Woolley in the September 1995 survey (-1.2 mg/L).

All pH standard checks were within the specified target accuracy (± 0.2 units), except for the DS3 deployed near Sedro-Woolley (+0.24 units) and an S2 used in the September 1995 survey (-.50 units). The RMS-SD of paired S2 and DS3 readings was 0.2 units.

A problem that was encountered while taking pH measurements was that readings from the Skagit River tended to drift upwards if the probe remained in the water. The probes in the S2 and Orion® meters were not designed for the low ionic strength of the Skagit River's water, and the migration of ions across the surface of the probes caused a gradual increasing error. Grab pH measurements in the Skagit River should probably be considered overestimates, especially for multiple sequential readings.

Some Hydrolab® specific conductance readings were outside the specified accuracy (± 5%) during standard checks, but all were within 10% of the standard. Beckman® standard check readings were sometimes outside the target accuracy of 5% of the reading, but 10% or less for all readings, except for one occasion when a meter had a malfunctioning temperature correction dial (24%). In general, most results of standard checks were satisfactory for the purposes of this study. Deviations from acceptable accuracy will be taken into account in the interpretation of results.

To measure the variability (bias and precision) of field data, sequential duplicate samples were taken of laboratory parameters, and field verification samples were taken for comparison with field measurements. To compare paired values, the standard deviation (SD) and coefficient of variation (CV, sometimes called the percent relative standard deviation, or %RSD) were calculated for each pair, and the root mean square calculated for groups of data. In general, the RMS-SD gives a measure of the magnitude of differences, while the RMS-CV gives a percent difference. In interpreting QA/QC results it is important to note that a pair of values that are low in magnitude with a low SD may have a high CV, while a pair of values high in magnitude with a high SD may have a low CV.

Spot grab samples were analyzed for specific conductance and compared to field measurements. Since conductivity readings range from 35 to over 1,000 µS/cm (all conductivity readings standardized to 25°C), the CV is the more appropriate measure. The RMS-CV for all lab/field pairs was 7.9%, and with one exception, RMS-CVs on a weekly basis were all below 10%. Meter readings at the WWTPs during the October 1995 survey varied from laboratory results by 18.6%. Paired DS3 and S2 results had an overall RMS-CV of 11.5%. These results exceed the accuracy of 0.5% specified as a target level in the QAPP, but the results are usable if the variability is taken into account.

DO measurements using the Winkler method sampled as replicate pairs had an overall RMS-SD of 0.17 mg/L. By survey, only the October 1995 survey met the QAPP target accuracy for the Winkler method of 0.1 mg/L, and the poorest accuracy was 0.22 during the September 1995 survey. Although exceeding target accuracy at times, this data will be used with consideration given to the variability.

DO meter readings were paired with Winkler field verification measurements to evaluate the accuracy of the meters. For each DS3 meter during each survey, the average residual ranged from -1.18 to 0.30 mg/L and the RMS-SD ranged from 0.08 to 0.86 mg/L. For S2 and YSI® meter readings for each survey, the average residual ranged from -0.39 to 0.35 mg/L, and the RMS-SD ranged from 0.05 to 0.28 mg/L. Comparing paired S2 and DS3 readings, the average residual and RMS-SD were -0.27 and 0.42 mg/L, respectively. Using a t-test at the 0.05 confidence level, the S2 and DS3 DO readings were significantly different.

To improve the compatibility of DO data, all DO results from meters were adjusted by the average residual between the Winkler and meter results for each meter during each survey. The RMS-SD for adjusted DS3 data improved to 0.12 mg/L overall, and no worse than 0.22 mg/L for any meter. The RMS-SD for adjusted S2 and YSI® data improved to 0.13 mg/L overall, and no meter exceeded 0.18 mg/L. The RMS-SD between adjusted DS3 and S2 readings improved to 0.17 mg/L, and the t-test detected no significant difference between adjusted data at the 0.05 confidence level. Because of this adjustment, DO data from different meters are considered comparable for use in analysis, with consideration given to the estimated variability.

All laboratory analyses were performed within specified holding times. Data reported with qualifiers should be used with caution. All other data reported by Ecology's Manchester Laboratory may be used without qualification.

The data quality objectives for laboratory results were for no parameters to exceed 20% RMS-CV, except for results near the reporting limit and FC bacteria results which should not exceed 50% RMS-CV. All parameters met this objective, except for FC which slightly exceeded the objective with a RMS-CV of 51.5%.

Due to the depth of the manhole used for FC samples at the Sedro-Woolley WWTP, some FC samples were taken from a bucket grab, while other were taken from a bottle lowered in a holder. To check the comparability of these two sampling methods sequential duplicates were taken using both methods during the September 1995 survey. The means of duplicates for the two methods were identical.

For ultimate BOD analyses, all water blanks and sugar standards met QA/QC requirements. Water+nutrients blanks showed increased BOD over water blanks, which deviates from QA/QC requirements, but probably did not detract significantly from the accuracy of results. Some WWTP samples went anoxic during the analysis, but examination of the time series does not suggest that results were affected. Ultimate BOD results are deemed acceptable for use.

Attachment B

Tables of Monitoring Results

Table B.1 Tributary Flows

River Mile	Sampling Station	Date	Time	Discharge (cfs)	Area (ft^2)	Avg Vel. (fps)
24.3	Hansen Creek	10-Jan-95	1320	23.2	19.6	1.18
		23-Jan-95	1350	16.8	10.3	1.63
		7-Feb-95	1330	5.7	52.0	0.11
		21-Feb-95	1315	121.2	47.4	2.56
		7-Mar-95	1130	19.5	14.9	1.31
		21-Mar-95	1154	34.4	26.1	1.32
		4-Apr-95	1200	27.4	16.8	1.63
		19-Sep-96	1300	0.0		
		3-Oct-96	1210	12.2	11.8	1.03
24.2	Northern State Hospital Storm Drain	10-Jan-95	1210	0.00		
		23-Jan-95	1245	0.00		
		7-Feb-95	1220	0.00		
		7-Mar-95	1100	0.00		
		21-Mar-95	1100	0.04		
		4-Apr-95	1125	0.00		
23.6	Tributary @ Riverfront Pk	27-Dec-94	1400	0.001	1.9	0.001
		10-Jan-95	1115	0.01	0.1	0.11
		23-Jan-95	1135	0.0		
		7-Feb-95	1040	0.02	0.1	0.43
		21-Feb-95	1108	0.90	2.5	0.35
		7-Mar-95	950	0.001	0.3	0.00
		21-Mar-95	1005	0.002	0.02	0.12
		4-Apr-95	1150	0.0		
22.9	South Sedro-Woolley Storm Drain	27-Dec-94	1500	0.04	0.1	0.35
		10-Jan-95	1210	0.1	12.0	0.01
		23-Jan-95	1200	0.0		
		7-Feb-95	1110	0.3	1.4	0.24
		21-Feb-95	1200	0.7	7.4	0.10
		7-Mar-95	1100	0.5	3.3	0.14
		21-Mar-95	1045	0.3	1.0	0.26
		4-Apr-95	1105	5.7	3.4	1.67
18.8	Nookachamps Creek	10-Jan-95	1610	179.8	155.8	1.15
		23-Jan-95	1625	146.4	104.6	1.40
		7-Feb-95	1545	192.9	329.6	0.59
		21-Feb-95	1445	886.0	851.5	1.04
		7-Mar-95	1330	78.0	156.2	0.50
		21-Mar-95	1500	359.9	251.7	1.43
		4-Apr-95	1525	124.3	86.8	1.43
		19-Sep-96	1455	2.9	28.0	0.10
		3-Oct-96	915	161.9	135.7	1.19

Table B.1 Tributary Flows

River Mile	Sampling Station	Date	Time	Discharge (cfs)	Area (ft^2)	Avg Vel. (fps)
21.1	Brickyard Creek	27-Dec-94	1610	20.8	12.3	1.69
		10-Jan-95	1450	0.4	2.5	0.15
		23-Jan-95	1350	0.4	3.2	0.11
		7-Feb-95	1250	1.7	2.1	0.82
		21-Feb-95	1400	18.2	5.2	3.52
		7-Mar-95	1240	1.4	1.9	0.76
		21-Mar-95	1230	3.6	5.0	0.73
		4-Apr-95	1350	3.4	2.0	1.69
14.6	Gages Slough	28-Dec-94	1045	0.0		
		11-Jan-95	1000	0.0		
		24-Jan-95	1030	0.0		
		8-Feb-95	1100	0.0		
		22-Feb-95	1115	0.0		
		8-Mar-95	1000	0.5	2.0	0.27
		22-Mar-95	1115	0.7	2.4	0.27
		5-Apr-95	1110	0.6	2.2	0.28
11.9	Kulshan Creek	28-Dec-94	1030	4.7	5.6	0.84
		11-Jan-95	1100	1.1	8.0	0.13
		24-Jan-95	938	0.3	3.0	0.11
		8-Feb-95	1000	0.4	3.4	0.12
		22-Feb-95	940	1.8	3.3	0.54
		8-Mar-95	1020	0.3	0.9	0.36
		22-Mar-95	1035	0.5	3.3	0.16
		5-Apr-95	1045	0.6	5.0	0.13
		19-Sep-96	1700	0.0		
		3-Oct-96	1450	0.4	1.1	0.33
3.1(S)	Carpenter/ Fisher Creeks	28-Dec-94	1625			
		11-Jan-95	1540	129.1	280.7	0.46
		24-Jan-95	1515	98.7	287.2	0.34
		8-Feb-95	1515	18.3	264.3	0.07
		22-Feb-95	1530	67.8	435.2	0.16
		8-Mar-95	1500	0.3	111.9	0.00
		22-Mar-95	1500	70.7	244.9	0.29
		5-Apr-95	1615	6.3	138.8	0.05

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm.	Meter	Meter	Meter	Lab
RIVER STATIONS										
24.6	Skagit R abv Sedro-Woolley	9/6/94	1320	0.0	14.4		7.1	46	9.6	
		9/6/94	1320	2.0	14.4		7.1	46	9.7	
		9/7/94	1715	0.0						10.1
		9/7/94	1715	0.0						9.7
		9/8/94	950	0.0	13.8		7.4	43	9.8	
		9/8/94	1005	0.0						9.6
		12/27/94	1440		5.5		7.3	40		
		12/27/94	1450		5.5		7.3	40		
		1/10/95	1155		5.1	4.9	7.4	65		
		1/24/95	1210		4.4	4.4	7.3	70		
		1/24/95	1220		4.4	4.4	7.4	70		
		1/24/95	1230		4.4	4.4	7.4	70		
		2/7/95	1130		5.5	5.5	7.2	35		
		2/7/95	1145		5.5	5.5	7.3	35		
		2/7/95	1155		5.5	5.5	7.3	37		
		2/21/95	1200			5.2	7.3	38		
		2/21/95	1210			5.2	7.5	38		
		2/21/95	1215			5.3	7.5	38		
		3/7/95	1025			4.4	7.3	68		
		3/7/95	1035			4.3	7.4	68		
		3/7/95	1045			4.4	7.4	65		
		3/21/95	1032			5.8	7.5	63		
		3/21/95	1040			5.8	7.6	63		
		3/21/95	1047			5.8	7.7	63		
		4/4/95	1105			7.4	7.5	75		
		4/4/95	1117			7.4	7.7	73		
		4/4/95	1123			7.4	7.8	75		
		9/18/95	1105	0.0	13.7		7.1	54	10.4	10.4
		9/19/95	1000	0.0	14.2		7.1	52	10.1	10.0
		9/19/95	1000	2.0	14.2		7.1	53	10.1	
		9/19/95	1020	0.0	14.2		7.2	52	10.1	
		9/19/95	1020	2.0	14.2		7.1	52	10.1	
		10/2/95	1055	0.5	12.0		7.3	51	10.6	
		10/2/95	1100	0.0						10.5
		10/3/95	1015	0.0						10.4
		10/3/95	1021	0.0						10.5
		10/3/95	1030	1.0	11.3		7.5	55	10.5	
		10/3/95	1034	1.0	11.3		7.4	55	10.5	
19.0	Skagit R abv Nookachamps	9/19/95	1235	0.0	14.6		7.4	53	10.3	
		9/19/95	1235	2.0	14.5		7.2	53	10.1	
		10/3/95	1318	1.0	11.5		7.2	56	10.2	

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
15.8	Skagit R at Mt. Vernon	12/27/94	1710		5.9	5.9	7.4	48		
		12/28/94	955		5.5	5.3	7.3	41		
		1/10/95	1600		5.5	5.7	7.1	55		
		1/10/95	1620		5.4	5.4	7.2	67		
		1/10/95	1630		5.4	5.6	7.4	67		
		1/11/95	905		5.0	5.1	7.3	65		
		1/11/95	915		5.0	5.0	7.5	60		
		1/11/95	930		5.0	5.0	7.7	62		
		1/24/95	1500		4.5	4.5	7.5	67		
		1/24/95	1510		4.7	4.7	7.7	67		
		1/24/95	1530		4.7	4.6	7.7	68		
		1/25/95	920		4.5	4.6	7.3	72		
		1/25/95	930		4.5	4.7	7.4	72		
		1/25/95	935		4.6	4.7	7.4	72		
		2/7/95	1455		6.1	6.1	7.5	55		
		2/7/95	1505		6.0	6.2	7.6	55		
		2/7/95	1515		6.2	6.5	7.5	57		
		2/8/95	940		5.2	5.2	7.2			
		2/8/95	950		5.3	5.2	7.3			
		2/8/95	955		5.4	5.3	7.3			
		2/21/95	1540			5.3	7.2	43		
		2/21/95	1600			5.5	7.2	42		
		2/21/95	1615			5.5	7.2	43		
		2/22/95	930			5.0	7.4	43		
		2/22/95	935			5.0	7.5	43		
		2/22/95	940			4.9	7.5	45		
		3/7/95	1410			5.0	7.6	74		
		3/7/95	1418			5.1	7.6	69		
		3/7/95	1430			5.2	7.6	69		
		3/8/95	925			5.0	7.4	67		
		3/8/95	935			5.0	7.5	67		
		3/8/95	943			5.0	7.5	68		
		3/21/95	1405			6.5	7.0	65		
		3/21/95	1420			6.5	7.0	63		
		3/21/95	1425			6.6	7.2	64		
		3/22/95	937			5.3	7.7	63		
		3/22/95	945			5.2	8.4	63		
		3/22/95	950			5.2	8.7	64		
		4/4/95	1508			8.2	6.9	71		
		4/4/95	1517			7.9	6.9	76		
		4/4/95	1523			7.9	7.0	74		
		4/5/95	945			6.2	7.7	69		
		4/5/95	950			6.2	8.4	69		
		4/5/95	958			6.2	8.7	71		
		9/19/95	1530	0.5	15.1		7.8	50	9.7	
		9/19/95	1605	0.5	15.1		7.9	51	9.8	
		10/3/95	1335							10.4
		10/3/95	1343	1.0	11.8		7.1	55	10.1	

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
12.1	Skagit R above Division St.	9/19/95	1305	0.0	14.7		7.3	53	10.4	
		9/19/95	1305	2.0	14.7		7.1	53	10.2	
		10/3/95	1400	1.0	12.0		7.1	55	10.3	
8.7	Skagit R above N/S Forks	9/19/95	1320	0.0	14.8		7.3	52	10.4	
		9/19/95	1320	2.0	14.7		7.3	52	10.2	
		10/3/95	1413	1.0	12.1		7.1	55	10.5	
4.2(N)	N Fork Skagit R at Rexville	9/6/94	1325	0.0	14.6		7.1	46	9.8	
		9/6/94	1325	1.0	14.6		7.1	46	9.8	
		9/6/94	1325	2.0	14.6		7.1	46	9.8	
		9/6/94	1325	3.0	14.6		7.1	47	9.8	
		9/6/94	1825	0.0	14.8		7.4	46	9.8	9.8
		9/6/94	1825	1.0	14.7		7.4	46	9.8	
		9/6/94	1825	2.0	14.7		7.4	46	9.8	
		9/6/94	1825	3.0	14.7		7.3	46	9.8	
		9/8/94	1115	0.0						9.8
		9/8/94	1120	0.0	14.5		7.4	44	9.6	
		9/8/94	1120	1.0	14.5		7.4	44	9.7	
		9/8/94	1120	2.0	14.5		7.4	44	9.8	
		9/8/94	1120	3.0	14.5		7.3	44	9.8	
		12/28/94	1520		5.5	5.4	7.2	35		
		1/11/95	1310		5.2	5.2	7.4	63		
		1/11/95	1315		5.3	5.2	7.5	63		
		1/11/95	1330		5.2	5.2	7.5	63		
		1/25/95	1300		4.6	4.6	7.4	71		
		1/25/95	1305		4.6	4.7	7.5	71		
		1/25/95	1310		4.6	4.7	7.5	71		
		2/7/95	1255			5.5	7.2			
		2/7/95	1300			5.5	7.3			
		2/7/95	1307			5.5	7.3			
		2/22/95	1300			5.2	7.5	45		
		2/22/95	1305			5.7	7.5	45		
		2/22/95	1310			5.2	7.5	45		
		3/8/95	1325			5.2	7.5	68		
		3/8/95	1330			5.2	7.5	68		
		3/8/95	1338			5.2	7.5	68		
		3/22/95	1334			7.6	7.6	63		
		3/22/95	1339			5.4	7.6	63		
		3/22/95	1344			5.4	7.7	63		
		4/4/95	1358			6.9	7.7	70		
		4/4/95	1402			6.8	7.7	69		
		4/4/95	1407			6.9	7.8	70		

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC) Meter	TEMP (oC) Therm	PH (s.u.) Meter	COND (uS/cm) Meter	DO (mg/L) Meter	DO (mg/L) Lab
4.2(N)	N Fork Skagit R at Rexville	9/18/95	1330	0.0						9.7
		9/18/95	1330	0.0						10.3
		9/18/95	1340	1.0	14.9		7.1	54	10.1	
		9/19/95	757	0.0						10.4
		9/19/95	800	0.0	14.3		7.2	57	10.3	
		9/19/95	800	2.0	14.3		7.1	57	10.3	
		9/19/95	815	0.0	14.3		7.2	56	10.3	
		9/19/95	815	1.2	14.3		7.0	56	10.2	
		9/19/95	1510	0.0						10.3
		9/19/95	1510	0.0						10.5
		9/19/95	1515	0.0	15.5		7.4	52	10.1	
		9/19/95	1515	2.0	15.3		7.3	52	10.1	
		9/19/95	1525	0.0	15.3		7.3	52	10.3	
		9/19/95	1525	2.0	15.2		7.2	52	10.2	
		10/2/95	1302	0.0						10.3
		10/2/95	1302	0.0						10.5
		10/2/95	1310	1.0	12.3		7.2	51	10.5	
		10/3/95	738	1.0	12.1		7.3	54	10.7	
		10/3/95	747	1.0	12.1		7.2	55	10.6	
		10/3/95	750	0.0						10.4
		10/3/95	1530	1.0	12.4		7.2	55	10.1	
		10/3/95	1540	0.0						10.2
4.4 (S	S Fork Skagit R at Conway	9/6/94	1010	0.0	14.6		6.9	45	9.3	
		9/6/94	1635	0.0	15.4		7.2	47	9.9	
		9/6/94	1635	1.0	15.4		7.2	47	9.8	
		9/6/94	1645	0.0	15.3		7.2	47	9.8	
		9/6/94	1645	1.0	15.3		7.2	47	9.8	
		9/6/94	1645	2.0	15.3		7.2	47	9.8	
		9/6/94	1645	2.9	15.3		7.2	47	9.8	
		9/6/94	1900	0.0						10.2
		9/6/94	1900	0.0						9.9
		9/6/94	1905	0.0	15.1		7.2	47	9.8	
		9/6/94	1905	1.0	15.1		7.2	47	9.8	
		9/6/94	1905	2.0	15.1		7.2	47	9.8	
		9/8/94	1215	0.0						9.7
		9/8/94	1215	0.0						9.8
		9/8/94	1220	0.0	14.6		7.3	44	9.9	
		9/8/94	1220	1.0	14.6		7.3	44	9.8	
		12/28/94	1445		5.8		7.4	44		
		12/28/94	1500		5.8		7.3	48		
		12/28/94	1515		5.7		7.4	43		
		1/11/95	1600		5.7	5.8	7.2	65		
		1/11/95	1615		5.6	5.8	7.2	66		
		1/11/95	1630		5.7	5.8	7.2	65		
		1/25/95	1438		5.0	4.9	7.7	70		
		1/25/95	1456		5.0	5.0	7.8	69		
		1/25/95	1504		4.9	4.9	7.9	70		

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC) Meter	TEMP (oC) Therm	PH (s.u.) Meter	COND (uS/cm) Meter	DO (mg/L) Meter	DO (mg/L) Lab
4.4	(S S Fork Skagit R at Conway	2/8/95	1440		5.8	5.7	7.5	66		
		2/8/95	1455			5.7	7.6	61		
		2/8/95	1505			5.7	7.7	61		
		2/22/95	1555			5.8	7.1	50		
		2/22/95	1605			5.9	7.0	45		
		2/22/95	1615			5.6	7.0	40		
		3/8/95	1355			5.6	7.6	75		
		3/8/95	1400			5.6	7.6	72		
		3/8/95	1410			5.7	7.7	71		
		3/22/95	1355			5.7	7.8	64		
		3/22/95	1400			5.6	7.8	63		
		3/22/95	1410			5.5	7.8	64		
		4/5/95	1453			7.3	7.3	71		
		4/5/95	1458			7.3	7.3	70		
		4/5/95	1506			7.3	7.3	110		
		9/18/95	1500	0.0	15.9		7.2	54	10.2	10.1
		9/18/95	1500	2.0	15.7		7.1	53	10.2	
		9/19/95	815	0.5	14.2		7.3	53	9.8	
		9/19/95	845	0.0						9.9
		9/19/95	850	0.5	14.3		7.2	52	9.8	
		9/19/95	1650	0.0	15.9		7.4	53	10.4	10.4
		9/19/95	1650	2.0	15.9		7.3	53	10.2	
		9/19/95	1755	1.0	15.8		7.3	50	9.7	
		9/19/95	1815	1.0	15.7		7.3	51	9.8	
		10/2/95	1400	0.0						10.4
		10/2/95	1405	1.0	12.4		7.0	51	10.5	
		10/3/95	843	1.0	12.1		7.2	55	10.6	
		10/3/95	848	1.0	12.1		7.1	56	10.4	
		10/3/95	858	0.0						10.2
		10/3/95	900	1.0	12.1		7.1	55	10.4	
		10/3/95	1650	1.0	12.5		7.2	56	10.0	
		10/3/95	1700	2.6						10.3
		10/3/95	1705	1.0	12.4		7.1	56	9.7	
TRIBUTARY STATIONS										
24.3	Hansen Creek	12/27/94	1532		7.4	7.2	7.1	51		
		1/10/95	1235		6.3	6.3	7.3	87		
		1/24/95	1300		3.9	4.0	7.3	98		
		2/7/95	1240		6.8	6.8	7.2	88		
		2/21/95	1300			7.7	7.1	63		
		3/7/95	1120			5.2	7.2	98		
		3/21/95	1140			7.4	7.4	84		
		4/4/95	1157			9.1	7.4	91		
		10/3/95	1123		11.7		7.3	78	10.0	
		10/3/95	1130							9.8
		10/3/95	1130							9.9

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
23.6	Tributary @ Riverfront Pk	12/27/94	1400		7.5		6.6	103		
		1/10/95	1115		6.2	6.4	6.9	2*		
		2/7/95	1040		5.8	6.0	7.0	72		
		2/21/95	1108			7.3	6.9	60		
		3/7/95	950			4.5	7.3	200		
		3/21/95	950			7.2	6.7	206		
18.8	Nookachamps Creek	12/28/94	920		5.8		7.2	52		
		1/10/95	1500		5.1	5.1	7.1	95		
		1/24/95	1535		4.1	4.2	7.1	110		
		2/7/95	1450		7.2	7.2	7.0	105		
		2/22/95	1520			7.7	7.2	68		
		3/7/95	1332			6.4	7.1	118		
		3/21/95	1355			7.6	7.3	100		
		4/4/95	1416			9.8	7.3	113		
		9/19/95	1350		16.9		6.9	167	8.2	
		9/19/95	1405							8.2
		10/3/95	1340		11.1		7.0	52	10.1	
3.1(S)	Carpenter/Fisher Creeks	12/28/94	1610		7.5	7.3	7.1	117		
		1/11/95	1450		6.0	6.0	7.4	150		
		1/25/95	1420		3.5	3.5	7.3	147		
		2/8/95	1425			6.5	7.3			
		2/22/95	1422			8.3	7.3	142		
		3/8/95	1438			6.4	7.4	172		
		3/22/95	1441			6.8	7.4	142		
		4/4/95	1515			10.1	7.7	167		
OVERLAND STORMDRAINS										
24.2	Northern St. Hosp. SD	3/21/95	1058			8.3	7.5	155		
22.9	S. Sedro-Woolley SD	1/10/95	1210		6.5	6.7	6.8	107		
		1/24/95	1200		3.4	3.3	6.8	180		
		2/7/95	1110		8.3	8.4	6.5	152		
		2/21/95	1158			6.5	6.5	33		
		3/7/95	1030			6.3	6.6	185		
		3/21/95	1025			9.0	6.5	124		
		4/4/95	1102			10.4	6.5	142		
22.9	Sedro-Woolley STP SD	12/27/94	1500		8.3		7.1	21		

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
21.1	Brickyard Ck	12/27/94	1610		7.5		7.2	73		
		1/10/95	1415		6.1	6.2	6.9	137		
		1/24/95	1315		2.2	2.0	7.3	118		
		2/7/95	1250		6.1	6.2	7.2	100		
		2/21/95	1400			8.5	6.8	80		
		3/7/95	1240			5.5	7.4	145		
		3/21/95	1215			8.1	6.9	95		
		4/4/95	1349			10.8	7.0	51		
COMBINED SEWER OVERFLOWS										
11.4	Mt. Vernon Division St CSO	12/28/94	1139		8.2		7.1	90		
		1/11/95	1115		8.6	8.9	6.9	92		
		1/25/95	1033		11.6	11.4	8.7	525		
		2/22/95	1015			10.4	7.0	178		
10.9	Mt. Vernon Park St CSO	12/28/94	1243		12.9		6.7	425		
		1/11/95	1200		10.9	11.2	6.7	275		
		1/25/95	1110		12.1	12.2	6.8	438		
		2/8/95	1115		12.0	12.0	6.8	440		
		2/22/95	1100			11.9	6.6	355		
		3/7/95	1130			11.8	6.8	439		
		3/22/95	1125			11.2	6.9	408		
		4/5/95	1150			12.6	6.7	390		
STORMWATER PUMPSTATIONS										
14.6	Gages Slough	2/22/95	1120			6.1	7.1	40		
		3/8/95	1000			7.3	6.9	61		
		3/22/95	1113			6.7	6.8	76		
		4/4/95	1010			10.9	7.0	78		
11.0	Mt. Vernon Westside PS	12/28/94	1210		7.2		7.2	115		
		1/11/95	1140		7.3	7.4	7.0	36		
		1/25/95	1050		7.9	7.9	7.1	220		
		2/8/95	1055		8.6	8.7	7.0	108		
		2/22/95	1040			9.2	6.8	253		
		3/8/95	1100			8.8	6.8	342		
		3/22/95	1105			9.2	7.1	218		
		4/5/95	1132			10.4	7.0	49		
11.9	Mt. Vernon Frontage Rd PS (Kulshan Creek)	12/28/94	1030		7.6		7.0	168		
		1/11/95	905		6.7	6.9	7.0	170		
		1/25/95	908		4.4	4.4	7.0	327		
		2/8/95	910		6.3	6.4	6.9	295		
		2/22/95	848			7.5	6.9	279		
		3/8/95	950			6.9	7.1	34		
		3/22/95	945			6.6	7.0	282		
		4/5/95	1005			7.9	6.9	243		

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
11.9	Mt. Vernon Frontage Rd PS (Kulshan Creek)	9/19/95	1700		15.9		7.0	558	4.8	
		10/3/95	1415							8.4
		10/3/95	1430		14.1		6.9	112	8.3	
11.9	Mt. Vernon Freeway Dr PS	12/28/94	1130		8.7		7.0	52		
		1/11/95	950		8.7	8.9	6.8	108		
		1/25/95	1007		9.4	9.3	6.9	130		
		2/8/95	940		9.5	9.6	6.8	102		
		2/22/95	909			10.0	6.9	86		
		3/8/95	1000			9.5	6.9	220		
		3/22/95	1005			9.6	7.3	91		
		4/5/95	1018			10.6	6.9	78		
8.3	Britt Slough	12/28/94	1320		8.5	8.2	6.6	240		
		1/11/95	1530		7.4	7.5	6.8	305		
		1/25/95	1359		5.0	5.0	6.8	328		
		2/8/95	1405		7.8	8.3	6.8	332		
		2/22/95	1430			11.4	6.5	360		
		3/8/95	1325			8.1	6.8	388		
		3/22/95	1315			7.7	6.9	359		
		4/5/95	1358			11.7	6.8	347		
4.3(N)	Rexville PS	12/28/94	1420		7.5	7.4	6.9	1000		
		1/11/95	1115		7.5	7.4	6.9	>1000		
		1/25/95	1150		5.7	5.8	6.8	820		
		2/8/95	1150			7.8	6.9			
		2/22/95	1150			9.0	7.0	>1000		
		3/8/95	1217			8.3	6.9	735		
		3/22/95	1218			8.3	7.0	670		
		4/4/95	1310			12.8	7.2	690		
4.3(S)	Conway PS	12/28/94	1545		8.3		6.8	650		
		1/11/95	1650		9.1	9.3	6.7	420		
		1/25/95	1524		8.5	8.5	6.8	390		
		2/8/95	1520			9.5	6.8	362		
		2/22/95	1515			10.3	6.6	950		
		3/8/95	1430			9.4	6.8	410		
		3/22/95	1430			7.7	6.8	465		
		4/5/95	1430			12.5	6.7	320		

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
SEWAGE TREATMENT PLANTS										
22.8	Sedro-Woolley STP	1/10/95	1300		10.1	10.3	7.1	292		
		1/24/95	1220		9.5	9.3	7.2	328		
		2/7/95	1145		11.5	11.6	7.2	303		
		2/21/95	1230			11.7	7.1	272		
		3/7/95	1130			10.3	7.4	370		
		3/21/95	1100			11.5	6.9	309		
		4/4/95	1135			12.8	6.9	295		
		9/19/95	1215		19.7	19.8	7.5	400	6.6	6.4
		9/19/95	1215							6.5
		9/19/95	1440					420		
		9/19/95	1900		19.8	19.8	7.6	380	8.0	
		10/2/95	1643		17.9	18.1	7.4	263	5.0	
		10/3/95	1210		17.7	17.7	7.3	370	8.4	
		10/3/95	1221					281		
18.1	Burlington STP	12/27/94	1620		12.5	12.4	7.0	415		
		1/10/95	1525		11.7	11.9	7.0	585		
		1/24/95			11.5	11.5	7.0	440		
		2/7/95	1420		12.9	13.0	7.1	460		
		2/21/95	1500			12.0	6.8			
		3/7/95	1330			12.8	6.9	565		
		3/21/95	1320			12.5	6.9	545		
		4/4/95	1428			14.3	7.1	560		
		9/19/95	845		21.0	21.1	7.3	610	6.0	
		9/19/95	1345		22.0	22.0	7.3	600	6.3	
		10/2/95	1555			19.8	7.0	500	6.0	
		10/3/95	1100		19.5	19.5	7.1	478	5.7	
		10/3/95	1122					570		
10.7	Mt. Vernon STP	12/28/94	1315		12.2		7.0	350		
		1/11/95	1220		12.6	12.7	7.1	590		
		1/25/95	1126		13.1	13.1	7.3	595		
		2/8/95	1145		13.5	13.5	7.2	580		
		2/22/95	1125			12.3	7.1	390		
		3/8/95	1145			13.3	7.3	700		
		3/22/95	1145			13.0	7.2	510		
		4/5/95	1212			14.1	7.2	486		
		9/19/95	1000							1.5
		9/19/95	1005		21.6	21.6	7.3	530	1.3	
		9/19/95	1645					700		
		9/19/95	1710		22.3	22.3	7.4	710	1.8	
		10/2/95	1741		18.8	18.9	7.0	300	1.7	
		10/2/95	1745							1.7
		10/3/95	918		17.8	18.0	7.0	250	1.8	
		10/3/95	930							1.9
		10/3/95	1335					440		

Table B.2 Field Measurement Data

River Mile	Sampling Stations	Date	Time	Depth (m)	TEMP (oC)		PH (s.u.)	COND (uS/cm)	DO (mg/L)	
					Meter	Therm	Meter	Meter	Meter	Lab
7.8(S)	Big Lake STP	12/28/94	1155			10.2	6.8	300		
		1/11/95	1500		9.0	9.2	6.9	398		
		1/25/95	1317		8.9	9.0	6.9	390		
		2/8/95	1300		9.5	9.7	6.9	400		
		2/22/95	1302			9.6	6.8	380		
		3/8/95	850			9.2	7.2	540		
		3/21/95	905			9.2	7.1	400		
		4/4/95	916			10.0	7.0	510		
		9/19/95	1110		16.6	16.6	6.9	385	0.6	
		9/19/95	1545					500		
		9/19/95	1805		16.9	16.9	7.1	525	3.1	
		10/2/95	1718		16.2	16.3	6.8	460	1.5	
		10/3/95	1003		15.9	16.0	6.9	360	1.1	
		10/3/95	1259					290		

Table B.3 Summary of Dry Season Diurnal DS3 Measurements

River Mile	River Station	Date	N	Temp (deg C)	pH (s.u.)	Cond (uS/cm)	DO (%Sat)	DO (mg/L)
24.6	Skagit River above Sedro-Wooley	09/06/94 - 09/08/94	24 min	12.5	7.0	47	93	9.9
			avg	13.6	7.2	48	96	9.9
			max	14.7	7.3	48	98	10.0
			range	2.2	0.3	1	5	0.1
		09/18/95 - 09/19/95	24 min	13.6	7.1	46	96	9.9
			avg	14.2	7.3	47	102	10.4
			max	14.6	7.6	51	105	10.8
			range	1.0	0.5	5	10	0.9
		10/02/95 - 10/03/95	23 min	11.1	6.8	41	94	10.3
			avg	11.7	6.9	43	96	10.4
			max	12.0	7.1	44	98	10.6
			range	0.8	0.4	3	3	0.3
4.2(N)	North Fork Skagit R at Rexville	09/06/94 - 09/08/94	24 min	14.2	7.2	46	95	9.7
			avg	14.5	7.2	48	96	9.8
			max	14.6	7.4	50	97	9.9
			range	0.5	0.2	4	2	0.2
		09/18/95 - 09/19/95	24 min	14.3	6.9	48	99	10.2
			avg	14.8	7.0	49	101	10.2
			max	15.1	7.1	52	103	10.4
			range	0.9	0.1	4	3	0.2
		10/02/95 - 10/03/95	24 min	12.1	7.0	39	96	10.3
			avg	12.3	7.0	42	97	10.3
			max	12.4	7.1	43	97	10.4
			range	0.2	0.1	4	1	0.1
4.4(S)	South Fork Skagit R at Conway	09/06/94 - 09/08/94	24 min	14.3	7.0	47	95	9.7
			avg	14.6	7.1	48	96	9.8
			max	15.4	7.2	51	98	9.9
			range	1.1	0.1	4	3	0.2
		09/18/95 - 09/19/95	24 min	14.1	6.9	47	93	9.3
			avg	14.8	7.0	48	99	10.1
			max	15.5	7.2	51	104	10.4
			range	1.3	0.3	4	12	1.1
		10/02/95 - 10/03/95	24 min	12.1	6.8	38	84	9.0
			avg	12.2	6.8	40	95	10.2
			max	12.3	6.9	42	97	10.4
			range	0.3	0.1	4	13	1.4

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
	RIVER STATIONS							
24.6	Skagit R above Sedro-Woolley	SR-SWR1	94528400	12/27/94	1440	195	41.1	190
		SR-SWR2	94528401	12/27/94	1440			240 S
		SR-SWM1	94528402	12/27/94	1450	220		150 S
		SR-SWM2	94528403	12/27/94	1450			180 S
		SR-SWL1	94528404	12/27/94	1500	200		69 S
		SR-SWL2	94528405	12/27/94	1500			160 S
		SR-SWR1	95028400	1/10/95	1150	10	64.0	6
		SR-SWR2	95028401	1/10/95	1150			9
		SR-SWM1	95028402	1/10/95	1155	8.9		3
		SR-SWM2	95028403	1/10/95	1155			6
		SR-SWL1	95028404	1/10/95	1205	8.7		11
		SR-SWL2	95028405	1/10/95	1205			1 U
		SR-SWR1	95048400	1/24/95	1215	3.8		2
		SR-SWR2	95048401	1/24/95	1215			1 U
		SR-SWM1	95048402	1/24/95	1225	4	66.4	2
		SR-SWM2	95048403	1/24/95	1225			1 U
		SR-SWL1	95048404	1/24/95	1230	3.6		1 U
		SR-SWL2	95048405	1/24/95	1230			2
		SR-SWR1	95068400	2/7/95	1135	13		3
		SR-SWR2	95068401	2/7/95	1135			1 U
		SR-SWM1	95068402	2/7/95	1150	12	53.2	2
		SR-SWM2	95068403	2/7/95	1150	13		1
		SR-SWL1	95068404	2/7/95	1200	11		1 U
		SR-SWL2	95068405	2/7/95	1200			1
		SR-SWR1	95088400	2/21/95	1210	75		21 S
		SR-SWR2	95088401	2/21/95	1210			28 S
		SR-SWM1	95088402	2/21/95	1205	70	37.6	22 S
		SR-SWM2	95088403	2/21/95	1205	60		27 S
		SR-SWL1	95088404	2/21/95	1155	70		29 S
		SR-SWL2	95088405	2/21/95	1155			18 S
		SR-SWR1	95108400	3/7/95	1020	5.2		1 U
		SR-SWR2	95108401	3/7/95	1020			1 U
		SR-SWM1	95108402	3/7/95	1030	5		1 U
		SR-SWM2	95108403	3/7/95	1030			1 U
		SR-SWL1	95108404	3/7/95	1040	4.7	63.4	2
		SR-SWL2	95108405	3/7/95	1040			1 U
		SR-SWR1	95128500	3/21/95	1028	7.9	59.1	1
		SR-SWR2	95128501	3/21/95	1028			2
		SR-SWM1	95128502	3/21/95	1035	8.1		2
		SR-SWM2	95128503	3/21/95	1035			1 U
		SR-SWL1	95128504	3/21/95	1047	7.4		4
		SR-SWL2	95128505	3/21/95	1047			2
		SR-SWR1	95148400	4/4/95	1120	3.3		1 U
		SR-SWR2	95148401	4/4/95	1120			1
		SR-SWM1	95148402	4/4/95	1112	2.6		1 U
		SR-SWM2	95148403	4/4/95	1112	2.7		1 U
		SR-SWL1	95148404	4/4/95	1100	2.8	69.8	5
		SR-SWL2	95148405	4/4/95	1100			2
15.8	Skagit R at Mt. Vernon	SR-MVR1	94528412	12/27/94	1700	210		84 S
		SR-MVR2	94528413	12/27/94	1700			140 S
		SR-MVM1	94528414	12/27/94	1715	210		140 S
		SR-MVM2	94528415	12/27/94	1715			140 S
		SR-MVL1	94528416	12/27/94	1725	210		200 S
		SR-MVL2	94528417	12/27/94	1725			155 S

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
15.8	Skagit R at Mt. Vernon	SR-MVR3	94528440	12/28/94	945	160		50 S
		SR-MVR4	94528441	12/28/94	945			53 S
		SR-MVM3	94528442	12/28/94	955	140	40.1	50 S
		SR-MVM4	94528443	12/28/94	955			53 S
		SR-MVL3	94528444	12/28/94	1015	150		58 S
		SR-MVL4	94528445	12/28/94	1015			110 S
		SR-MVR1	95028412	1/10/95	1630	12		11
		SR-MVR2	95028413	1/10/95	1630			11
		SR-MVM1	95028414	1/10/95	1620	11		20
		SR-MVM2	95028415	1/10/95	1620			3
		SR-MVL1	95028416	1/10/95	1600	12		11
		SR-MVL2	95028417	1/10/95	1600			6
		SR-MVR3	95028440	1/11/95	930	10	62.1	6
		SR-MVR4	95028441	1/11/95	930			6
		SR-MVM3	95028442	1/11/95	915	11		5
		SR-MVM4	95028443	1/11/95	915			3
		SR-MVL3	95028444	1/11/95	905	10		7
		SR-MVL4	95028445	1/11/95	905			4
		SR-MVR1	95048412	1/24/95	1500	4.9		2
		SR-MVR2	95048413	1/24/95	1500			2
		SR-MVM1	95048414	1/24/95	1510	4.5	67.5	1
		SR-MVM2	95048415	1/24/95	1510			1 U
		SR-MVL1	95048416	1/24/95	1530	3.9		1
		SR-MVL2	95048417	1/24/95	1530			2
		SR-MVR3	95048440	1/25/95	915	4		2
		SR-MVR4	95048441	1/25/95	915			2
		SR-MVM3	95048442	1/25/95	925	4		1
		SR-MVM4	95048443	1/25/95	925			1 U
		SR-MVL3	95048444	1/25/95	935	4		1
		SR-MVL4	95048445	1/25/95	935			2
		SR-MVR1	95068412	2/7/95	1515	14	53.8	1 U
		SR-MVR2	95068413	2/7/95	1515			1
		SR-MVM1	95068414	2/7/95	1505	15	54.3	1
		SR-MVM2	95068415	2/7/95	1505			2
		SR-MVL1	95068416	2/7/95	1455	14	54.1	1 U
		SR-MVL2	95068417	2/7/95	1455			5
		SR-MVR3	95068440	2/8/95	1000	11		4
		SR-MVR4	95068441	2/8/95	1000			1
		SR-MVM3	95068442	2/8/95	948	11	55.8	1
		SR-MVM4	95068443	2/8/95	948	11	55.8	2
		SR-MVL3	95068444	2/8/95	945	10	56	1 U
		SR-MVL4	95068445	2/8/95	945			1
		SR-MVR1	95088412	2/21/95	1545	65		27 S
		SR-MVR2	95088413	2/21/95	1545			36 S
		SR-MVM1	95088414	2/21/95	1605	70	38.2	31 S
		SR-MVM2	95088415	2/21/95	1605			39 S
		SR-MVL1	95088416	2/21/95	1620	70		28 S
		SR-MVL2	95088417	2/21/95	1620			29 S
		SR-MVR3	95088440	2/22/95	935	40		32 S
		SR-MVR4	95088441	2/22/95	935			29 S
		SR-MVM3	95088442	2/22/95	932	40	44.4	45
		SR-MVM4	95088443	2/22/95	932			40 S
		SR-MVL3	95088444	2/22/95	925	39		40
		SR-MVL4	95088445	2/22/95	925			40 S

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
15.8	Skagit R at Mt. Vernon	SR-MVR1	95108412	3/7/95	1430	8.1		1
		SR-MVR2	95108413	3/7/95	1430			1
		SR-MVM1	95108414	3/7/95	1418	5.9		1
		SR-MVM2	95108415	3/7/95	1418			2
		SR-MVL1	95108416	3/7/95	1410	5.9		1
		SR-MVL2	95108417	3/7/95	1410			1
		SR-MVR3	95108440	3/8/95	920	5.9		1
		SR-MVR4	95108441	3/8/95	920			1
		SR-MVM3	95108442	3/8/95	930	5.4		5
		SR-MVM4	95108443	3/8/95	930	5.4		3
		SR-MVL3	95108444	3/8/95	940	5.3		4
		SR-MVL4	95108445	3/8/95	940			1
		SR-MVR1	95128512	3/21/95	1425	9		4
		SR-MVR2	95128513	3/21/95	1425			2
		SR-MVM1	95128514	3/21/95	1420	9.4		6
		SR-MVM2	95128515	3/21/95	1420			6
		SR-MVL1	95128516	3/21/95	1405	8.6		2
		SR-MVL2	95128517	3/21/95	1405			5
		SR-MVR3	95128540	3/22/95	933	6.8		2
		SR-MVR4	95128541	3/22/95	933			3
		SR-MVM3	95128542	3/22/95	948	7.6		1
		SR-MVM4	95128543	3/22/95	948			2
		SR-MVL3	95128544	3/22/95	942	7.1		6
		SR-MVL4	95128545	3/22/95	942			1
		SR-MVR1	95148412	4/4/95	1525	3.6		2
		SR-MVR2	95148413	4/4/95	1525			8
		SR-MVM1	95148414	4/4/95	1518	4.3		6
		SR-MVM2	95148415	4/4/95	1518			2
		SR-MVL1	95148416	4/4/95	1510	2.8		7
		SR-MVL2	95148417	4/4/95	1510			7
		SR-MVR3	95148440	4/5/95	956	3.6		3
		SR-MVR4	95148441	4/5/95	956			10
		SR-MVM3	95148442	4/5/95	950	2.8	64.4	5
		SR-MVM4	95148443	4/5/95	950	3.7		5
		SR-MVL3	95148444	4/5/95	940	3.1		4
		SR-MVL4	95148445	4/5/95	940			6
4.2(N)	North Fork Skagit R at Rexville	SR-NFR1	94528450	12/28/94	1515	120		100 S
		SR-NFR2	94528451	12/28/94	1515			69 S
		SR-NFM1	94528452	12/28/94	1520	120		66 S
		SR-NFM2	94528453	12/28/94	1520			63 S
		SR-NFL1	94528454	12/28/94	1530	130		69 S
		SR-NFL2	94528455	12/28/94	1530			110 S
		SR-NFR1	95028450	1/11/95	1325	10		4
		SR-NFR2	95028451	1/11/95	1325			5
		SR-NFM1	95028452	1/11/95	1315	10		6
		SR-NFM2	95028453	1/11/95	1315			11
		SR-NFL1	95028454	1/11/95	1305	10		9
		SR-NFL2	95028455	1/11/95	1305			13
		SR-NFR1	95048450	1/25/95	1255	4.1		1
		SR-NFR2	95048451	1/25/95	1255	4.1		2
		SR-NFM1	95048452	1/25/95	1305	4.5		2
		SR-NFM2	95048453	1/25/95	1305			1
		SR-NFL1	95048454	1/25/95	1310	4.2	67.4	1
		SR-NFL2	95048455	1/25/95	1310			1 U

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
4.2(N)	North Fork Skagit R at Rexville	SR-NFR1	95068450	2/8/95	1303	13		39
		SR-NFR2	95068451	2/8/95	1303			16
		SR-NFM1	95068452	2/8/95	1300	12		33
		SR-NFM2	95068453	2/8/95	1300			21
		SR-NFL1	95068454	2/8/95	1250	12		33
		SR-NFL2	95068455	2/8/95	1250			40
		SR-NFR1	95088450	2/22/95	1308	40		20 S
		SR-NFR2	95088451	2/22/95	1308			25 S
		SR-NFM1	95088452	2/22/95	1303	45		44 S
		SR-NFM2	95088453	2/22/95	1303	45		41 S
		SR-NFL1	95088454	2/22/95	1255	45		32 S
		SR-NFL2	95088455	2/22/95	1255			31 S
		SR-NFR1	95108450	3/8/95	1320	5.6		4
		SR-NFR2	95108451	3/8/95	1320			2
		SR-NFM1	95108452	3/8/95	1328	5.8	65.0	1 U
		SR-NFM2	95108453	3/8/95	1328			5
		SR-NFL1	95108454	3/8/95	1335	5.6		8
		SR-NFL2	95108455	3/8/95	1335			4
		SR-NFR1	95128550	3/22/95	1332	6.7		2
		SR-NFR2	95128551	3/22/95	1332			9
		SR-NFM1	95128552	3/22/95	1339	6.9		6
		SR-NFM2	95128553	3/22/95	1339			2
		SR-NFL1	95128554	3/22/95	1341	7.7		8
		SR-NFL2	95128555	3/22/95	1341			5
		SR-NFR1	95148450	4/5/95	1404	3.2		8
		SR-NFR2	95148451	4/5/95	1404			3
		SR-NFM1	95148452	4/5/95	1400	3.4		2
		SR-NFM2	95148453	4/5/95	1400			5
		SR-NFL1	95148454	4/5/95	1355	3.5		3
		SR-NFL2	95148455	4/5/95	1355			4
4.4	South Fork Skagit R at Conway	SR-SFR1	94528476	12/28/94	1445			68 S
		SR-SFR2	94528477	12/28/94	1445	120		69 S
		SR-SFM1	94528478	12/28/94	1500	120		45 S
		SR-SFM2	94528479	12/28/94	1500			84 S
		SR-SFL1	94528480	12/28/94	1515	120		92 S
		SR-SFL2	94528481	12/28/94	1515			80 S
		SR-SFR1	95028476	1/11/95	1600			7
		SR-SFR2	95028477	1/11/95	1600	11		12
		SR-SFM1	95028478	1/11/95	1615			8
		SR-SFM2	95028479	1/11/95	1615	11		8
		SR-SFL1	95028480	1/11/95	1630			8
		SR-SFL2	95028481	1/11/95	1630	11		8
		SR-SFR1	95048476	1/25/95	1438	5.3		4
		SR-SFR2	95048477	1/25/95	1438			2
		SR-SFM1	95048478	1/25/95	1456	5.1		4
		SR-SFM2	95048479	1/25/95	1456			1
		SR-SFL1	95048480	1/25/95	1504	5.9		5
		SR-SFL2	95048481	1/25/95	1504			2
		SR-SFR1	95068476	2/8/95	1440	14		2
		SR-SFR2	95068477	2/8/95	1440			1
		SR-SFM1	95068478	2/8/95	1455	11	56.1	7
		SR-SFM2	95068479	2/8/95	1455			4
		SR-SFL1	95068480	2/8/95	1505	13		2
		SR-SFL2	95068481	2/8/95	1505			4

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
4.4	South Fork Skagit R at Conway	SR-SFR1	95088476	2/22/95	1620	45		27
		SR-SFR2	95088477	2/22/95	1620			33 S
		SR-SFM1	95088478	2/22/95	1610	36		32
		SR-SFM2	95088479	2/22/95	1610			24
		SR-SFL1	95088480	2/22/95	1600	38		27
		SR-SFL2	95088481	2/22/95	1600			18 S
		SR-SFR1	95108476	3/8/95	1355	6.2		2
		SR-SFR2	95108477	3/8/95	1355			4 X
		SR-SFM1	95108478	3/8/95	1400	6.2		3
		SR-SFM2	95108479	3/8/95	1400			3
		SR-SFL1	95108480	3/8/95	1410	5.6		3
		SR-SFL2	95108481	3/8/95	1410			4
		SR-SFR1	95128576	3/22/95	1355	8.4		7
		SR-SFR2	95128577	3/22/95	1355			6
		SR-SFM1	95128578	3/22/95	1400	8		4
		SR-SFM2	95128579	3/22/95	1400			2
		SR-SFL1	95128580	3/22/95	1410	7.7		3
		SR-SFL2	95128581	3/22/95	1410			6
		SR-SFR1	95148476	4/5/95	1420	3.6		4
		SR-SFR2	95148477	4/5/95	1420			5
		SR-SFM1	95148478	4/5/95	1458	4.2		2
		SR-SFM2	95148479	4/5/95	1458			5
		SR-SFL1	95148480	4/5/95	1506	4.9		4
		SR-SFL2	95148481	4/5/95	1506			3
	TRIBUTARY STATIONS							
24.3	Hansen Creek	HANSNCK1	94528406	12/27/94	1540	370		120
		HANSNCK2	94528407	12/27/94	1540	360		140
		HANSNCK1	95028406	1/10/95	1235	10		40
		HANSNCK2	95028407	1/10/95	1235	9.8		63
		HANSNCK1	95048406	1/24/95	1300	3.1	94.1	53
		HANSNCK2	95048407	1/24/95	1300			52
		HANSNCK1	95068406	2/7/95	1245	7		28
		HANSNCK2	95068407	2/7/95	1245			36
		HANSNCK1	95088406	2/21/95	1255	70		40
		HANSNCK2	95088407	2/21/95	1255			53
		HANSNCK1	95108406	3/7/95	1117	4.8	94.8	10
		HANSNCK2	95108407	3/7/95	1117			17
		HANSNCK1	95128506	3/21/95	1137	7.7		44
		HANSNCK2	95128507	3/21/95	1137	7.9		22
		HANSNCK1	95148406	4/4/95	1152	12	69.6	2400 J
		HANSNCK2	95148407	4/4/95	1152			2800 J
18.8	Nookachamps Creek	NOOKCK1	94528428	12/28/94	921	100	40.0	23
		NOOKCK2	94528429	12/28/94	921			8
		NOOKCK1	95028428	1/10/95	1500	8.5	91.7	170
		NOOKCK2	95028429	1/10/95	1500			100
		NOOKCK1	95048428	1/24/95	1525	7.9		34
		NOOKCK2	95048429	1/24/95	1525	8		25
		NOOKCK1	95068428	2/7/95	1445	6.7	100	180
		NOOKCK2	95068429	2/7/95	1445			200 S
		NOOKCK1	95088428	2/21/95	1520	30	64.5	250 S
		NOOKCK2	95088429	2/21/95	1520			230 S
		NOOKCK1	95108428	3/7/95	1325	9.9		11
		NOOKCK2	95108429	3/7/95	1325	9.5		26
		NOOKCK1	95128528	3/21/95	1354	12	94.5	88 S
		NOOKCK2	95128529	3/21/95	1354			160
		NOOKCK1	95148428	4/4/95	1410	11		320 S
		NOOKCK2	95148429	4/4/95	1410			205 S

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
3.1	Carpenter/Fisher Creeks	CARPCK1	94528456	12/28/94	1610	9.1	114	100
		CARPCK2	94528457	12/28/94	1610			135
		CARPCK1	95028456	1/11/95	1445	4.6	149	88
		CARPCK2	95028457	1/11/95	1445			60
		CARPCK1	95048456	1/25/95	1415	3.6		14
		CARPCK2	95048457	1/25/95	1415			12
		CARPCK1	95068456	2/8/95	1420	3.2	152	45
		CARPCK2	95068457	2/8/95	1420			40
		CARPCK1	95088456	2/22/95	1419	7.9	136	110 S
		CARPCK2	95088457	2/22/95	1419			92
		CARPCK1	95108456	3/8/95	1435	5.2		150
		CARPCK2	95108457	3/8/95	1435			170
		CARPCK1	95128556	3/22/95	1439	6.8	136	200
		CARPCK2	95128557	3/22/95	1439			210
		CARPCK1	95148456	4/5/95	1513	3.7		290
		CARPCK2	95148457	4/5/95	1513			330 S
	OVERLAND STORMWATER							
24.2	Northern St. Hospital Stormdrain	SW-NSH1	95128508	3/21/95	1055	0.5		15
		SW-NSH2	95128509	3/21/95	1055			11
23.6	Tributary @ Riverfront Park	SW-RFP1	94528420	12/27/94		20		670 S
		SW-RFP2	94528421	12/27/94				670
		SW-RFP1	95028420	1/10/95	1115	15		79
		SW-RFP2	95028421	1/10/95	1115			43
		SW-RFP1	95068420	2/7/95	1040	21	69.6	110
		SW-RFP2	95068421	2/7/95	1040			140
		SW-RFP1	95088420	2/21/95	1108	50		43
		SW-RFP2	95088421	2/21/95	1108			49
		SW-RFP1	95108420	3/7/95	951	11	199	34 S
		SW-RFP2	95108421	3/7/95	951	12		63 S
		SW-RFP1	95128520	3/21/95	950	18		360
		SW-RFP2	95128521	3/21/95	950			400
22.9	Sedro-WooleySTP Stormdrain	SW SWS1	94528430	12/27/94		20		19000
		SW SWS2	94528431	12/27/94				14000
22.9	South Sedro-Woolley Stormdrain	SW-SSW1	94528422	12/27/94		8.8		6700 J
		SW-SSW2	94528423	12/27/94				5600 J
		SW-SSW1	95028432	1/10/95	1210	58		9300
		SW-SSW2	95028433	1/10/95	1210			11500
		SW-SSW1	95048432	1/24/95	1200	10		77
		SW-SSW2	95048433	1/24/95	1200			77 U
		SW-SSW1	95068432	2/7/95	1110	13	140	40
		SW-SSW2	95068433	2/7/95	1110			37
		SW-SSW1	95088432	2/21/95	1205	14		290 S
		SW-SSW2	95088433	2/21/95	1205	14	30.1	330 X
		SW-SSW1	95108432	3/7/95	1030	20		2100 J
		SW-SSW2	95108433	3/7/95	1030			1700
		SW-SSW1	95128532	3/21/95	1025	26	108	830 S
		SW-SSW2	95128533	3/21/95	1025			370 S
		SW-SSW1	95148432	4/4/95	1043	34		190
		SW-SSW2	95148433	4/4/95	1043			200
21.1	Brickyard Creek	SW-BYCK1	94528426	12/27/94		34		2400
		SW-BYCK2	94528427	12/27/94				1700
		SW-BYCK1	95028426	1/10/95	1415	6.8	131	580
		SW-BYCK2	95028427	1/10/95	1415			700
		SW-BYCK1	95048426	1/24/95	1315	4.4		15
		SW-BYCK2	95048427	1/24/95	1315	4.5		8

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
21.1	Brickyard Creek	SW-BYCK1	95068426	2/7/95	1250	7.4		34
		SW-BYCK2	95068427	2/7/95	1250			34
		SW-BYCK1	95088426	2/21/95	1405	30		500 S
		SW-BYCK2	95088427	2/21/95	1405			430 S
		SW-BYCK1	95108426	3/7/95	1240	10		33
		SW-BYCK2	95108427	3/7/95	1240			25
		SW-BYCK1	95128526	3/21/95	1215	12	89.9	420 S
		SW-BYCK2	95128527	3/21/95	1215			620 S
		SW-BYCK1	95148426	4/4/95	1336	20		730
		SW-BYCK2	95148427	4/4/95	1336	20		970
	COMBINED SEWER OVERFLOWS							
11.4	Mt. Vernon Division St CSO	CSO-DIV1	94528464	12/28/94	1139	50		200000 J
		CSO-DIV2	94528465	12/28/94	1139			220000 J
		CSO-DIV1	95028464	1/11/95	1115			140000
		CSO-DIV2	95028465	1/11/95	1115	120		150000
		CSO-DIV1	95048464	1/25/95	1033	45	593	540000
		CSO-DIV2	95048465	1/25/95	1033			430000
		CSO-DIV1	95088464	2/22/95	1015	11		61000 J
		CSO-DIV2	95088465	2/22/95	1015			60000 J
10.9	Mt. Vernon Park St CSO	CSO-PRK1	94528468	12/28/94	1243	50		17000 J
		CSO-PRK2	94528469	12/28/94	1243			13000 J
		CSO-PRK1	95028468	1/11/95	1200			10000
		CSO-PRK2	95028469	1/11/95	1200	50		8000
		CSO-PRK1	95048468	1/25/95	1110	65		3800
		CSO-PRK2	95048469	1/25/95	1110			3300
		CSO-PRK1	95068468	2/8/95	1115	65		4600
		CSO-PRK2	95068469	2/8/95	1115			4100
		CSO-PRK1	95088468	2/22/95	1110	20		79000 J
		CSO-PRK2	95088469	2/22/95	1110			83000 J
		CSO-PRK1	95108468	3/8/95	1130	50		2300
		CSO-PRK2	95108469	3/8/95	1130	50		1600
		CSO-PRK1	95128568	3/22/95	1125	60		2300
		CSO-PRK2	95128569	3/22/95	1125			2100 X
		CSO-PRK1	95148468	4/5/95	1150	27	368	280000
		CSO-PRK2	95148469	4/5/95	1150			240000
	STORMWATER PUMPSTATIONS							
14.6	Gages Slough PS	PS-GS1	95088446	2/22/95	1115	27		26
		PS-GS2	95088447	2/22/95	1115			23
		PS-GS1	95108446	3/8/95	953	4.4	59.2	1
		PS-GS2	95108447	3/8/95	953			1 U
		PS-GS1	95128546	3/22/95	1113	5.1		84
		PS-GS2	95128547	3/22/95	1113			69
		PS-GS1	95148446	4/5/95	1005	2.6	71.4	29
		PS-GS2	95148447	4/5/95	1005			35
11.0	Mt. Vernon Westside PS	PS-WS1	94528466	12/28/94	1210	23		330
		PS-WS2	94528467	12/28/94	1210			300
		PS-WS1	95028466	1/11/95	1140			660
		PS-WS2	95028467	1/11/95	1140	35		760
		PS-WS1	95048466	1/25/95	1050	28		180
		PS-WS2	95048467	1/25/95	1050			430
		PS-WS1	95068466	2/8/95	1055	40		7900 J
		PS-WS2	95068467	2/8/95	1055			11000 J
		PS-WS1	95088466	2/22/95	1040	15		2000 S
		PS-WS2	95088467	2/22/95	1040			1700 S

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
11.0	Mt. Vernon Westside PS	PS-WS1	95108466	3/8/95	1100	22		510
		PS-WS2	95108467	3/8/95	1100			440
		PS-WS1	95128566	3/22/95	1105	40	203	2300
		PS-WS2	95128567	3/22/95	1105			2500
		PS-WS1	95148466	4/5/95	1130	70		2100 S
		PS-WS2	95148467	4/5/95	1130			2600 S
11.9	Mt. Vernon Frontage Rd PS	PS-FR1	94528460	12/28/94	1100	15	166	490
		PS-FR2	94528461	12/28/94	1100			450
		PS-FR1	95028460	1/11/95	905	22	168	930
		PS-FR2	95028461	1/11/95	905	23		700
		PS-FR1	95048460	1/25/95	908	6.9		31
		PS-FR2	95048461	1/25/95	908			37
		PS-FR1	95068460	2/8/95	915	7.8		47
		PS-FR2	95068461	2/8/95	915			80
		PS-FR1	95088460	2/22/95	848	13		250 S
		PS-FR2	95088461	2/22/95	848			190 S
		PS-FR1	95108460	3/8/95	950	14		34
		PS-FR2	95108461	3/8/95	950			39
		PS-FR1	95128562	3/22/95	945	9.4		200
		PS-FR2	95128563	3/22/95	945			180
		PS-FR1	95148460	4/5/95	1000	11		2400 S
		PS-FR2	95148461	4/5/95	1000	11		2400 S
11.9	Mt. Vernon Freeway Dr PS	PS-FD1	94528462	12/28/94	1130	13		180
		PS-FD2	94528463	12/28/94	1130			120
		PS-FD1	95028462	1/11/95	950			600
		PS-FD2	95028463	1/11/95	950	120		620
		PS-FD1	95048462	1/25/95	1007	28		8
		PS-FD2	95048463	1/25/95	1007			8
		PS-FD1	95068462	2/8/95	940	45	96.7	240
		PS-FD2	95068463	2/8/95	940			220
		PS-FD1	95088462	2/22/95	910	16		180 S
		PS-FD2	95088463	2/22/95	910			150 S
		PS-FD1	95108462	3/8/95	1000			55
		PS-FD2	95108463	3/8/95	1000	34	155	68
		PS-FD1	95128562	3/22/95	1005	17		43
		PS-FD2	95128563	3/22/95	1005			29
		PS-FD1	95148462	4/5/95	1015	29	69.2	2300
		PS-FD2	95148463	4/5/95	1015			2500
8.3	Britt Slough PS	PS-BRS1	94528474	12/28/94	1320	60		23
		PS-BRS2	94528475	12/28/94	1320			23
		PS-BRS1	95028474	1/11/95	1530			84
		PS-BRS2	95028475	1/11/95	1530	90		120
		PS-BRS1	95048474	1/25/95	1358	120	329	40
		PS-BRS2	95048475	1/25/95	1358			63
		PS-BRS1	95068474	2/8/95	1405	150		29
		PS-BRS2	95068475	2/8/95	1405	160		37
		PS-BRS1	95088474	2/22/95	1450	130		14
		PS-BRS2	95088475	2/22/95	1450			10
		PS-BRS1	95108474	3/8/95	1325	110	374	48
		PS-BRS2	95108475	3/8/95	1325			23
		PS-BRS1	95128574	3/22/95	1315	90		130
		PS-BRS2	95128575	3/22/95	1315	90		110
		PS-BRS1	95148474	4/5/95	1355	90		74
		PS-BRS2	95148475	4/5/95	1355			110

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
4.3(N)	Rexville PS	PS-REX1	94528448	12/28/94	1420	50	1070	2300 S
		PS-REX2	94528449	12/28/94	1420	45	1040	2500 S
		PS-REX1	95028448	1/11/95	1100	15	1280	120 X
		PS-REX2	95028449	1/11/95	1100	16	1290	150 X
		PS-REX1	95048448	1/25/95	1145	18	797	9
		PS-REX2	95048449	1/25/95	1145			9
		PS-REX1	95068448	2/8/95	1150	19	852	150 S
		PS-REX2	95068449	2/8/95	1150			130 S
		PS-REX1	95088448	2/22/95	1148	29	1120	290 S
		PS-REX2	95088449	2/22/95	1148			330 S
		PS-REX1	95108448	3/8/95	1210	19	729	11
		PS-REX2	95108449	3/8/95	1210			11
		PS-REX1	95128548	3/22/95	1211	31	642	51
		PS-REX2	95128549	3/22/95	1211	31	617	43
		PS-REX1	95148448	4/5/95	1310	13	655	2
		PS-REX2	95148449	4/5/95	1310			1 U
4.3(S)	Conway PS	PS-CON1	94528482	12/28/94	1545	26		96 S
		PS-CON2	94528483	12/28/94	1545			120 S
		PS-CON1	95028482	1/11/95	1650	120		1 U
		PS-CON2	95028483	1/11/95	1650			1 U
		PS-CON1	95048482	1/25/95	1524	150		3
		PS-CON2	95048483	1/25/95	1524			1 U
		PS-CON1	95068482	2/8/95	1520	150		1 U
		PS-CON2	95068483	2/8/95	1520			1 U
		PS-CON1	95088482	2/22/95	1521	21	891	91
		PS-CON2	95088483	2/22/95	1521	21		110
		PS-CON1	95108482	3/8/95	1430	170		1 U
		PS-CON2	95108483	3/8/95	1430			1 U
		PS-CON1	95128582	3/22/95	1431	95		8
		PS-CON2	95128583	3/22/95	1431			12
		PS-CON1	95148482	4/5/95	1425	130		59
		PS-CON2	95148483	4/5/95	1425			22
	SEWAGE TREATMENT PLANTS							
22.8	Sedro-Woolley STP	WTP-SW1	94528424	12/27/94	1545	2.8		15
		WTP-SW2	94528425	12/27/94	1545			23
		WTP-SW1	95028424	1/10/95	1300	6		11
		WTP-SW2	95028425	1/10/95	1300			3
		WTP-SW1	95048424	1/24/95	1220	4.1	334	180
		WTP-SW2	95048425	1/24/95	1220			230
		WTP-SW1	95068424	2/7/95	1145	8.4	323	63
		WTP-SW2	95068425	2/7/95	1145	3.6		24
		WTP-SW1	95088424	2/21/95	1235	3.7	266	79
		WTP-SW2	95088425	2/21/95	1235			120
		WTP-SW1	95108424	3/7/95	1130	4.8		96
		WTP-SW2	95108425	3/7/95	1130			110
		WTP-SW1	95128424	3/21/95	1100	10		13000 J
		WTP-SW2	95128425	3/21/95	1100			14000 J
		WTP-SW1	95148424	4/4/95	1125	10	349	30000
		WTP-SW2	95148425	4/4/95	1125			45000 J
18.1	Burlington STP	WTP-BUR1	94528410	12/27/94	1620	6.6	426	8 U
		WTP-BUR2	94528411	12/27/94	1620	6.9		8 U
		WTP-BUR3	94528418	12/28/94	910			8 U
		WTP-BUR4	94528419	12/28/94	910			8 U
		WTP-BUR1	95028410	1/10/95	1530	6.6	558	3
		WTP-BUR2	95028411	1/10/95	1530	5.9		3
		WTP-BUR1	95048410	1/24/95	1430	4.3		1 U
		WTP-BUR2	95048411	1/24/95	1430			1

Table B.4 Wet Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	FC (cfu/100mL)
18.1	Burlington STP	WTP-BUR1	95068410	2/7/95	1420	5	442	71
		WTP-BUR2	95068411	2/7/95	1420			220
		WTP-BUR1	95088410	2/21/95	1500	6.1		1
		WTP-BUR2	95088411	2/21/95	1500			1
		WTP-BUR1	95108410	3/7/95	1330	6	494	3
		WTP-BUR2	95108411	3/7/95	1330			2
		WTP-BUR1	95128510	3/21/95	1320	60		3 U
		WTP-BUR2	95128511	3/21/95	1320	65		8
		WTP-BUR1	95148410	4/4/95	1420	9.5		23
		WTP-BUR2	95148411	4/4/95	1420			110
10.7	Mt. Vernon STP	WTP-MTV1	94528470	12/28/94	1315	3.7		900
		WTP-MTV2	94528471	12/28/94	1315			38
		WTP-MTV1	95028470	1/11/95	1220			77
		WTP-MTV2	95028471	1/11/95	1220	4.4		38
		WTP-MTV1	95048470	1/25/95	1126	3		1 U
		WTP-MTV2	95048471	1/25/95	1126	2.7		1
		WTP-MTV1	95068470	2/8/95	1145	5.7		7
		WTP-MTV2	95068471	2/8/95	1145			1
		WTP-MTV1	95088470	2/22/95	1130	3	403	14
		WTP-MTV2	95088471	2/22/95	1130			40
		WTP-MTV1	95108470	3/8/95	1145	3.7		3
		WTP-MTV2	95108471	3/8/95	1145			5
		WTP-MTV1	95128570	3/22/95	1146	1.9		2
		WTP-MTV2	95128571	3/22/95	1146			2
		WTP-MTV1	95148470	4/5/95	1210	1.6		32
		WTP-MTV2	95148471	4/5/95	1210			65
7.8	Big Lake STP	WTP-BL1	94528472	12/28/94	1150	2.5	310	140
		WTP-BL2	94528473	12/28/94	1150			8
		WTP-BL1	95028472	1/11/95	1500			2
		WTP-BL2	95028473	1/11/95	1500	1	388	1
		WTP-BL1	95048472	1/25/95	1317	2		1 U
		WTP-BL2	95048473	1/25/95	1317			1 U
		WTP-BL1	95068472	2/8/95	1330	0.9		1
		WTP-BL2	95068473	2/8/95	1330			1
		WTP-BL1	95088472	2/22/95	1302	2.1		2
		WTP-BL2	95088473	2/22/95	1302			3
		WTP-BL1	95108472	3/8/95	850	1.9		3
		WTP-BL2	95108473	3/8/95	850			4
		WTP-BL1	95128572	3/22/95	905	3.1	415	1 U
		WTP-BL2	95128573	3/22/95	905			1 U
		WTP-BL1	95148472	4/5/95	912	3.1		2
		WTP-BL2	95148473	4/5/95	912			1 U

Data Quality Codes

U = The analyte was not detected at or above the reported result.

J = Estimated results - the "true" results could be greater than or equal to the reported results.

S = Spreader - Non-fecal, motile colony present that may or may not mask the coliform colonies.

X = Significant background colony growth that could mask the coliform colonies.

Table B.5 Dry Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	ALK (mg/L)	CLRD (mg/L)	NO2/3 (mg/L)	NH3 (mg/L)	TPN (mg/L)	BOD5 (mg/L)	FC (cfu/100mL)
	RIVER STATIONS													
24.6	Skagit R above Sedro-Woolley	SR-SWL1	95388410	9/19/95	1005	6.8			0.663	0.050	0.010 U	0.071	2 U	4
		SR-SWL2	95388411	9/19/95	1005									6
		SR-SWR1	95388408	9/19/95	1025	6.8	52.8	20.5	0.710	0.048	0.010 U	0.086	2 U	1
		SR-SWR2	95388409	9/19/95	1025									5
		SR-SWL1	95408410	10/3/95	1020	5.1			0.825	0.090	0.010	0.162	2 U	36
		SR-SWL2	95408411	10/3/95	1020									41
		SR-SWR1	95408408	10/3/95	1035	4.9	50.9	20.7	0.824	0.089	0.010 U	0.144	2 U	45
		SR-SWR2	95408409	10/3/95	1035									36
19.0	Skagit R above Nookachamps Creek	SR-ANC1	95388412	9/19/95	1240	6.3			0.751	0.048	0.010 U	0.080		4
		SR-ANC2	95388413	9/19/95	1240									4
		SR-ANC1	95408412	10/3/95	1315	4.3			0.84	0.092	0.010	0.165		45
		SR-ANC2	95408413	10/3/95	1315									39
15.8	Skagit R at Mt. Vernon	SR-MVL1	95388416	9/19/95	1530	7.9			0.797	0.050	0.010 U	0.086		4
		SR-MVL2	95388417	9/19/95	1530									6
		SR-MVR1	95388414	9/19/95	1600	5.9	54.0	21.2	0.787	0.053	0.010 U	0.092	2 U	2
		SR-MVR2	95388415	9/19/95	1600									3
		SR-MVR1	95408414	10/3/95	1330	5.1			0.884	0.088	0.010 U	0.162	2 U	73 S
		SR-MVR2	95408415	10/3/95	1330	5.3		20.1	0.881	0.090	0.010	0.140		86
12.1	Skagit R above Division St.	SR-ADS1	95388418	9/19/95	1310	6.1			0.792	0.049	0.010 U	0.083		33
		SR-ADS2	95388419	9/19/95	1310									32
		SR-ADS1	95408418	10/3/95	1355	5.4			0.889	0.086	0.010 U	0.135		170 S
		SR-ADS2	95408419	10/3/95	1355									80 S
8.7	Skagit River above N/S Forks	SR-AFK1	95388420	9/19/95	1330	4.3			0.767	0.052	0.014	0.101		29
		SR-AFK2	95388421	9/19/95	1330									20
		SR-AFK1	95408420	10/3/95	1410	4.5			0.871	0.082	0.012	0.127		92 S
		SR-AFK2	95408421	10/3/95	1410									100 S
4.2(N)	North Fork Skagit R at Rexville	SR-NFAL1	95388402	9/19/95	810	7.3			0.724	0.060	0.010 U	0.093	2 U	40
		SR-NFAL2	95388403	9/19/95	810									26
		SR-NFAR1	95388400	9/19/95	830	7.3			0.747	0.059	0.010 U	0.093	2 U	43
		SR-NFAR2	95388401	9/19/95	830									21

Table B.5 Dry Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	ALK (mg/L)	CLRD (mg/L)	NO2/3 (mg/L)	NH3 (mg/L)	TPN (mg/L)	BOD5 (mg/L)	FC (cfu/100mL)
	RIVER STATIONS (con't)													
4.2(N)	North Fork Skagit R at Rexville	SR-NFPL1	95388424	9/19/95	1510	4.8			0.741	0.049	0.010 U	0.088	2 U	17
		SR-NFPL2	95388425	9/19/95	1510									16
		SR-NFPR1	95388422	9/19/95	1530	4.4	52.6	20.4	0.715	0.049	0.010	0.083	2 U	13
		SR-NFPR2	95388423	9/19/95	1530	4.5		20.5	0.720	0.054	0.010	0.087	2 U	20
		SR-NFAL1	95408402	10/3/95	740	4.2			0.802	0.078	0.010 U	0.127	2 U	84
		SR-NFAR1	95408400	10/3/95	730	4.9			0.809	0.079	0.011	0.128	2 U	110
		SR-NFAR2	95408401	10/3/95	730									140
		SR-NFPR1	95408422	10/3/95	1525	3.4	50.4	19.4	0.836	0.081	0.010 U	0.117	2 U	110 S
		SR-NFPR2	95408423	10/3/95	1525									92 S
4.4(S)	South Fork Skagit R at Conway	SR-SFAL1	95388406	9/19/95	805	6.9			0.787	0.068	0.011	0.116	2 U	29
		SR-SFAL2	95388407	9/19/95	805									41
		SR-SFAR1	95388404	9/19/95	830	5.3			0.748	0.066	0.010 U	0.116	2 U	31
		SR-SFAR2	95388405	9/19/95	830									41
		SR-SFPL1	95388428	9/19/95	1820	4.3	54.3	20.7	0.832	0.051	0.043	0.146	2 U	140
		SR-SFPL2	95388429	9/19/95	1820									110
		SR-SFPR1	95388426	9/19/95	1745	4.8			0.824	0.052	0.039	0.151	2 U	21
		SR-SFPR2	95388427	9/19/95	1745									29
		SR-SFAL1	95408406	10/3/95	850	5.0			0.878	0.082	0.037	0.170	2 U	190
		SR-SFAL2	95408407	10/3/95	850									120
		SR-SFAR1	95408404	10/3/95	840	4.5			0.864	0.083	0.035	0.169	2 U	180 S
		SR-SFAR2	95408405	10/3/95	840									190 S
		SR-SFPR1	95408426	10/3/95	1640	5.4			0.898	0.086	0.024	0.151	2 U	140 S
		SR-SFPR2	95408427	10/3/95	1640									120 S
	TRIBUTARY STATIONS													
24.3	Hansen Creek	HANSNCK1	95408440	10/3/95	1130	10			2.40	0.289	0.010 U	0.519		2400 J
		HANSNCK2	95408441	10/3/95	1130									1800 J
18.8	Nookachamps Creek	NOOKCK1	95388442	9/19/95	1340	3.0	174		7.52	0.254	0.044	0.574	3 U	100
		NOOKCK2	95388443	9/19/95	1340	3.2			7.58	0.250	0.043	0.580	3 U	88
		NOOKCK1	95408442	10/3/95	1325	18	56.3		2.62	0.468	0.010 U	0.821	2 U	930 S
		NOOKCK2	95408443	10/3/95	1325									1200 S

Table B.5 Dry Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	ALK (mg/L)	CLRD (mg/L)	NO2/3 (mg/L)	NH3 (mg/L)	TPN (mg/L)	BOD5 (mg/L)	FC (cfu/100mL)
	STORMWATER PUMPSTATIONS													
11.9	Mt. Vernon Frontage Rd PS	PS-FR1	95388444	9/19/95	1655	4.2			39.8	6.31	6.31	15.1	4	1900 J
		PS-FR2	95388445	9/19/95	1655									2100 J
		PS-FR1	95408444	10/3/95	1410	8.0			3.85	0.209	0.091	1.08		1600 S
		PS-FR2	95408445	10/3/95	1410									1000 S
		PS-FR3	95408454	10/3/95	1555								2 U	
	SEWAGE TREATMENT PLANTS													
22.8	Sedro-Woolley STP	WTP-SWA1	95388482	9/19/95	1200	4.2	380	95.9	40.4					2700 X
		WTP-SWA2	95388483	9/19/95	1200	5.2	405	95.5	39.7					2700 X
		WTP-SWA3	95388484	9/19/95	1200									2800 X
		WTP-SWA4	95388485	9/19/95	1200									2600 X
		WTP-SWC1	95388491	9/19/95	1420		387		40.4	0.129	1.26	2.65	3	
		WTP-SWP1	95388462	9/19/95	1900	4.6								80
		WTP-SWP2	95388463	9/19/95	1900									92
		WTP-SWA1	95408482	10/3/95	1155									100
		WTP-SWA2	95408483	10/3/95	1200	2.7								77
		WTP-SWC1	95408491	10/3/95	1227		371		43.1	0.719	0.058	1.10	4 U	
		WTP-SWP1	95408462	10/2/95	1630	3.2								140
		WTP-SWP2	95408463	10/2/95	1635									210
18.1	Burlington STP	WTP-BUA1	95388486	9/19/95	845	2.8	608	191	43.2					180
		WTP-BUA2	95388487	9/19/95	845									130
		WTP-BUC1	95388492	9/19/95	1330		620		45.4	0.293	23.2	25.1	6	
		WTP-BUP1	95388466	9/19/95	1345	2.5								3
		WTP-BUP2	95388467	9/19/95	1345									6
		WTP-BUA1	95408486	10/3/95	1045	2.5								3 U
		WTP-BUA2	95408487	10/3/95	1050									3 U
		WTP-BUC1	95408492	10/3/95	1115		538		37.8	0.103	21.2	22.2	4	
		WTP-BUP1	95408466	10/2/95	1535	4.1								17
		WTP-BUP2	95408467	10/2/95	1540									14

Table B.5 Dry Season Laboratory Results

River Mile	SAMPLING STATIONS	STATION ID	SAMPLE NUMBER	DATE	TIME	TURB (NTU)	COND (uS/cm)	ALK (mg/L)	CLRD (mg/L)	NO2/3 (mg/L)	NH3 (mg/L)	TPN (mg/L)	BOD5 (mg/L)	FC (cfu/100mL)
SEWAGE TREATMENT PLANTS (con't)														
10.7	Mt. Vernon STP	WTP-MVA1	95388488	9/19/95	955	6.6	704	195	64.3					7300 X
		WTP-MVA2	95388489	9/19/95	955									4600 X
		WTP-MVC1	95388494	9/19/95	1710		680		63.1	0.040	26.7	27.8	13	
		WTP-MVP1	95388468	9/19/95	1710	6.1								970
		WTP-MVP2	95388469	9/19/95	1710									870
		WTP-MVA1	95408488	10/3/95	915	4.7								100
		WTP-MVA2	95408489	10/3/95	920									130
		WTP-MVC1	95408494	10/3/95	1335		454		37.8	0.021	21.0	22.9		
		WTP-MVC2	95408495	10/3/95	1340				37.7	0.022	17.6	23.7	12	
		WTP-MVP1	95408468	10/2/95	1730	6.0								82000 J
		WTP-MVP2	95408469	10/2/95	1735									63000 J
7.8(S)	Big Lake STP	WTP-BLA1	95388480	9/19/95	1110	1.5	510	78.8	43.1					14
		WTP-BLA2	95388481	9/19/95	1110									11
		WTP-BLC1	95388490	9/19/95	1540		490		41.1	16.7	1.00	19.9	4.0	
		WTP-BLP1	95388460	9/19/95	1805	1.9								17
		WTP-BLP2	95388461	9/19/95	1805									25
		WTP-BLA1	95408480	10/3/95	958	2.6								28
		WTP-BLA2	95408481	10/3/95	1005									33
		WTP-BLC1	95408490	10/3/95	1259		455		35.5	14.4	1.03	15.5	5	
		WTP-BLP1	95408460	10/2/95	1705	2.6								24
		WTP-BLP2	95408461	10/2/95	1710	2.8								24

Data Quality Codes

U = The analyte was not detected at or above the reported result.

J = Estimated results - the "true" results could be greater than or equal to the reported results.

S = Spreader - Non-fecal, motile colony present.

X = Significant background colony growth.

Table B.6 Summary of Ultimate BOD Test Results

Lab Sample # or ID	Lab Dilution	Station ID	Sampling Date	Ultimate BOD Test Results				
				5-day CBOD (mg/L)	Ultimate CBOD (mg/L)	CBOD Rate Constant (1/day)	'E' = DO <1 mg/L during test	Ratio of Ultimate to 5-day BOD (unitless)
Water	1			0.00				
Water + Nuts	1			0.12				
Seed #1	50			115.00	190.44	0.1553		1.66
Seed #2	25			116.67	154.08	0.2790		1.32
Seeded Water	166.67			113.89				
Sugar Check	50			180.70	307.51	0.1226		1.70
KHP	50			238.20	291.45	0.3559		1.22
388408	1	SR-SWR1	19-Sep-95	0.38	0.85	0.0839		2.26
388442	4	NOOKCK1	19-Sep-95	1.02	3.25	0.0685		3.19
388491	4	WTP-SWC1	19-Sep-95	3.09	5.93	0.1830		1.92
388491R	4	WTP-SWC1	19-Sep-95	3.03	6.57	0.1480		2.17
388494	4	WTP-MVC1	19-Sep-95	9.04	12.43	0.3541	E	1.37
Water	1			0.08	--	--		
Water + Nuts	1			0.08	--	--		
Seed #1	40			127.33	191.99	0.2225		1.51
Seed #2	25			127.50	173.29	0.2778		1.36
Seeded Water	166.67			125.00	--	--		
Sugar Check	50			185.02	305.64	0.1452		1.65
KHP	50			233.35	305.16	0.2676		1.31
408414	1	SR-MVR1	03-Oct-95	0.50	1.02	0.1005		2.03
408426	1	SR-SFPR1	03-Oct-95	0.50	0.87	0.1267		1.74
408440	1	HANSNCK1	03-Oct-95	0.88	2.54	0.0787		2.89
408440R	1	HANSNCK1	03-Oct-95	0.91	2.62	0.0747		2.87
408444	1	PS-FR1	03-Oct-95	1.14	2.93	0.0885		2.57
408490	4	WTP-BLC1	03-Oct-95	5.11	23.36	0.0587		4.58
408490R	4	WTP-BLC1	03-Oct-95	3.41	18.60	0.0708		5.46
408492	4	WTP-BUC1	03-Oct-95	2.63	2.56	0.5003		1.00

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - September 1994 Survey										
Skagit River above Sedro-Woolley										
River Mile 24.6										
DS3 Unit #9										
						Raw		Adjusted		
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO	
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)	
90694	140000	9/6/94 14:00	14.11	7.14	46.4	101.3	10.42	97.5	10.0	
90694	150000	9/6/94 15:00	14.39	7.14	46.7	101.7	10.39	97.8	10.0	
90694	160000	9/6/94 16:00	14.62	7.16	47	102.2	10.39	98.3	10.0	
90694	170000	9/6/94 17:00	14.7	7.19	47.2	102.2	10.37	98.3	10.0	
90694	180000	9/6/94 18:00	14.69	7.21	47.4	102	10.36	98.2	10.0	
90694	190000	9/6/94 19:00	14.56	7.24	47.7	101.6	10.35	97.8	10.0	
90694	200000	9/6/94 20:00	14.41	7.27	47.9	101.1	10.32	97.2	9.9	
90694	210000	9/6/94 21:00	14.22	7.24	48	100.7	10.32	96.8	9.9	
90694	220000	9/6/94 22:00	14.03	7.24	48.2	100.2	10.32	96.4	9.9	
90694	230000	9/6/94 23:00	13.83	7.24	48.3	99.9	10.33	96.1	9.9	
90794	0	9/7/94 0:00	13.61	7.24	48.3	99.3	10.32	95.5	9.9	
90794	10000	9/7/94 1:00	13.36	7.23	48.4	99.1	10.36	95.3	10.0	
90794	20000	9/7/94 2:00	13.13	7.22	48.4	98.7	10.37	95.0	10.0	
90794	30000	9/7/94 3:00	12.95	7.22	48.2	98.4	10.38	94.7	10.0	
90794	40000	9/7/94 4:00	12.78	7.21	48.2	98.1	10.38	94.3	10.0	
90794	50000	9/7/94 5:00	12.65	7.19	48.1	97.9	10.39	94.1	10.0	
90794	60000	9/7/94 6:00	12.57	7.19	48.1	97.5	10.37	93.8	10.0	
90794	70000	9/7/94 7:00	12.52	7.15	48	97.2	10.35	93.5	10.0	
90794	80000	9/7/94 8:00	12.54	7.06	47.8	97.1	10.34	93.4	9.9	
90794	90000	9/7/94 9:00	12.67	7.02	47.7	97.2	10.32	93.5	9.9	
90794	100000	9/7/94 10:00	12.83	6.99	47.5	97.6	10.32	93.8	9.9	
90794	110000	9/7/94 11:00	13.09	7	47.5	97.9	10.29	94.1	9.9	
90794	120000	9/7/94 12:00	13.43	6.96	47.5	98.4	10.27	94.6	9.9	
90794	130000	9/7/94 13:00	13.76	7.03	47.5	99.2	10.28	95.4	9.9	
90794	140000	9/7/94 14:00	14.06	7.08	47.5	99.8	10.27	96.0	9.9	
90794	150000	9/7/94 15:00	14.24	7.17	47.6	100.4	10.29	96.5	9.9	
90794	160000	9/7/94 16:00	14.34	7.19	47.5	100.6	10.29	96.7	9.9	
90794	170000	9/7/94 17:00	14.29	7.26	47.5	100.6	10.3	96.7	9.9	
90794	180000	9/7/94 18:00	14.14	7.2	47.4	100.6	10.33	96.7	9.9	
90794	190000	9/7/94 19:00	14.01	7.28	47.1	100.4	10.34	96.5	9.9	
90794	200000	9/7/94 20:00	13.93	7.29	45.9	100.2	10.34	96.4	9.9	
90794	210000	9/7/94 21:00	13.98	7.24	44.5	100	10.31	96.2	9.9	
90794	220000	9/7/94 22:00	14.06	7.22	43.6	99.8	10.27	96.0	9.9	
90794	230000	9/7/94 23:00	14.06	7.2	43.2	99.4	10.23	95.6	9.8	
90894	0	9/8/94 0:00	13.98	7.18	43.1	99.1	10.21	95.2	9.8	
90894	10000	9/8/94 1:00	13.88	7.17	43	98.7	10.2	94.9	9.8	
90894	20000	9/8/94 2:00	13.76	7.16	42.9	98.3	10.19	94.6	9.8	
90894	30000	9/8/94 3:00	13.63	7.15	42.9	97.9	10.18	94.2	9.8	
90894	40000	9/8/94 4:00	13.53	7.13	43	97.6	10.16	93.8	9.8	
90894	50000	9/8/94 5:00	13.47	7.13	43.1	97.3	10.15	93.6	9.8	
90894	60000	9/8/94 6:00	13.42	7.11	43.2	97	10.13	93.3	9.7	
90894	70000	9/8/94 7:00	13.42	7.08	43.2	96.5	10.07	92.7	9.7	
90894	80000	9/8/94 8:00	13.42	7.01	43.3	96.1	10.03	92.3	9.6	
90894	90000	9/8/94 9:00	13.44	7	43.4	96	10.02	92.3	9.6	
90894	100000	9/8/94 10:00	13.48	6.94	43.5	96	10.01	92.2	9.6	

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - September 1994 Survey

North Fork Skagit R at Rexville

River Mile 4.2(N)

DS3 Unit #7

						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
90694	160000	9/6/94 16:00	14.43	7.36	46.2	101	10.31	96.7	9.9
90694	170000	9/6/94 17:00	14.48	7.31	46.2	100.7	10.27	96.4	9.8
90694	180000	9/6/94 18:00	14.54	7.27	46	100.7	10.26	96.5	9.8
90694	190000	9/6/94 19:00	14.57	7.21	45.9	100.3	10.21	96.0	9.8
90694	200000	9/6/94 20:00	14.51	7.24	46.2	100.4	10.23	96.1	9.8
90694	210000	9/6/94 21:00	14.41	7.23	46.4	100.9	10.3	96.6	9.9
90694	220000	9/6/94 22:00	14.39	7.22	46.5	101.1	10.33	96.8	9.9
90694	230000	9/6/94 23:00	14.49	7.23	46.7	101.3	10.33	97.0	9.9
90794	0	9/7/94 0:00	14.56	7.23	46.9	101.4	10.33	97.2	9.9
90794	10000	9/7/94 1:00	14.61	7.24	47	101.2	10.29	96.9	9.9
90794	20000	9/7/94 2:00	14.64	7.24	47.3	101.1	10.27	96.8	9.8
90794	30000	9/7/94 3:00	14.64	7.24	47.6	100.8	10.24	96.5	9.8
90794	40000	9/7/94 4:00	14.64	7.23	47.9	100.7	10.23	96.4	9.8
90794	50000	9/7/94 5:00	14.61	7.26	48.2	99.9	10.15	95.5	9.7
90794	60000	9/7/94 6:00	14.59	7.24	48	99.6	10.13	95.3	9.7
90794	70000	9/7/94 7:00	14.56	7.27	47.8	99.4	10.12	95.1	9.7
90794	80000	9/7/94 8:00	14.56	7.22	48.2	99.3	10.11	95.0	9.7
90794	90000	9/7/94 9:00	14.51	7.19	48.6	99.2	10.11	94.9	9.7
90794	100000	9/7/94 10:00	14.46	7.17	49.1	99	10.1	94.7	9.7
90794	110000	9/7/94 11:00	14.29	7.15	49.4	99.1	10.15	94.9	9.7
90794	120000	9/7/94 12:00	14.24	7.16	49.5	99.5	10.2	95.2	9.8
90794	130000	9/7/94 13:00	14.23	7.19	49.6	99.8	10.24	95.6	9.8
90794	140000	9/7/94 14:00	14.19	7.19	49.7	100.1	10.28	95.9	9.8
90794	150000	9/7/94 15:00	14.16	7.2	49.7	100.4	10.31	96.1	9.9
90794	160000	9/7/94 16:00	14.13	7.22	49.8	100.5	10.33	96.3	9.9
90794	170000	9/7/94 17:00	14.14	7.21	49.8	100.2	10.29	95.9	9.9
90794	180000	9/7/94 18:00	14.26	7.22	49.7	100.2	10.27	96.0	9.8
90794	190000	9/7/94 19:00	14.36	7.24	49.7	100	10.22	95.7	9.8
90794	200000	9/7/94 20:00	14.33	7.25	49.7	99.8	10.21	95.5	9.8
90794	210000	9/7/94 21:00	14.16	7.25	49.8	100.4	10.31	96.1	9.9
90794	220000	9/7/94 22:00	14.13	7.22	49.8	100.5	10.33	96.3	9.9
90794	230000	9/7/94 23:00	14.24	7.23	49.5	100.6	10.31	96.3	9.9
90894	0	9/8/94 0:00	14.41	7.24	49	101.1	10.32	96.8	9.9
90894	10000	9/8/94 1:00	14.52	7.27	48.6	101.2	10.31	96.9	9.9
90894	20000	9/8/94 2:00	14.62	7.29	48.2	101.3	10.29	96.9	9.9
90894	30000	9/8/94 3:00	14.64	7.31	48.1	101.1	10.27	96.8	9.8
90894	40000	9/8/94 4:00	14.61	7.31	47.9	100.6	10.23	96.3	9.8
90894	50000	9/8/94 5:00	14.51	7.32	47.8	100.4	10.23	96.1	9.8
90894	60000	9/8/94 6:00	14.41	7.32	47.7	100.2	10.23	95.9	9.8
90894	70000	9/8/94 7:00	14.38	7.32	47.5	99.7	10.19	95.4	9.8
90894	80000	9/8/94 8:00	14.39	7.31	47.5	99.6	10.17	95.3	9.7
90894	90000	9/8/94 9:00	14.28	7.3	46.7	99.5	10.19	95.2	9.8
90894	100000	9/8/94 10:00	14.28	7.26	45.4	99.9	10.23	95.6	9.8
90894	110000	9/8/94 11:00	14.38	7.22	44.2	99.9	10.21	95.6	9.8

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - September 1994 Survey									
South Fork Skagit R at Conway									
River Mile 4.4(S)									
DS3 Unit #4									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
90694	110000	9/6/94 11:00	14.44	7.13	45.3	100.4	10.25	99.0	10.1
90694	120000	9/6/94 12:00	14.55	7.08	45.7	100.3	10.21	98.8	10.1
90694	130000	9/6/94 13:00	14.7	7.08	46	100.1	10.16	98.6	10.0
90694	140000	9/6/94 14:00	14.8	7.1	46.4	100.1	10.14	98.7	10.0
90694	150000	9/6/94 15:00	14.95	7.09	46.8	100.1	10.1	98.6	10.0
90694	160000	9/6/94 16:00	14.97	7.1	47.1	99.8	10.07	98.3	9.9
90694	170000	9/6/94 17:00	14.97	7.13	47.1	99.7	10.06	98.2	9.9
90694	180000	9/6/94 18:00	15.37	7.12	46.6	99.1	9.92	97.7	9.8
90694	190000	9/6/94 19:00	15.42	7.14	46.7	99	9.89	97.5	9.7
90694	200000	9/6/94 20:00	15.02	7.13	47.3	98.8	9.96	97.3	9.8
90694	210000	9/6/94 21:00	14.5	7.12	47.3	98.3	10.02	96.8	9.9
90694	220000	9/6/94 22:00	14.44	7.12	47.1	98.1	10.01	96.6	9.9
90694	230000	9/6/94 23:00	14.49	7.12	47.4	97.8	9.97	96.3	9.8
90794	0	9/7/94 0:00	14.5	7.13	47.7	97.5	9.94	96.1	9.8
90794	10000	9/7/94 1:00	14.54	7.14	47.8	97.3	9.91	95.8	9.8
90794	20000	9/7/94 2:00	14.54	7.15	48	97	9.88	95.6	9.7
90794	30000	9/7/94 3:00	14.54	7.15	48.3	96.8	9.86	95.4	9.7
90794	40000	9/7/94 4:00	14.52	7.14	48.6	96.7	9.85	95.2	9.7
90794	50000	9/7/94 5:00	14.49	7.17	48.8	96.7	9.86	95.3	9.7
90794	60000	9/7/94 6:00	14.42	7.12	48.5	96.5	9.85	95.0	9.7
90794	70000	9/7/94 7:00	14.34	7.16	48.5	96.6	9.88	95.1	9.7
90794	80000	9/7/94 8:00	14.37	7.09	48.8	96.6	9.87	95.1	9.7
90794	90000	9/7/94 9:00	14.39	7.05	49.5	96.5	9.86	95.0	9.7
90794	100000	9/7/94 10:00	14.44	7.04	49.6	97.3	9.93	95.8	9.8
90794	110000	9/7/94 11:00	14.44	7.06	49.8	97.7	9.97	96.2	9.8
90794	120000	9/7/94 12:00	14.57	7.06	49.9	98.3	10.01	96.9	9.9
90794	130000	9/7/94 13:00	14.74	7.11	50.1	98.9	10.03	97.4	9.9
90794	140000	9/7/94 14:00	14.7	7.14	50.4	99.1	10.05	97.6	9.9
90794	150000	9/7/94 15:00	14.59	7.15	50.5	99	10.07	97.5	9.9
90794	160000	9/7/94 16:00	14.52	7.14	50.6	99.1	10.09	97.6	9.9
90794	170000	9/7/94 17:00	14.49	7.22	50.6	99.2	10.11	97.7	10.0
90794	180000	9/7/94 18:00	14.77	7.14	50.6	99.2	10.05	97.7	9.9
90794	190000	9/7/94 19:00	15.2	7.18	53.5	99.4	9.98	97.9	9.8
90794	200000	9/7/94 20:00	15	7.18	50.7	99.3	10.01	97.8	9.9
90794	210000	9/7/94 21:00	14.3	7.19	50.6	99.4	10.18	98.0	10.0
90794	220000	9/7/94 22:00	14.2	7.18	50.1	99.4	10.2	98.0	10.1
90794	230000	9/7/94 23:00	14.29	7.17	49.9	99.4	10.18	98.0	10.0
90894	0	9/8/94 0:00	14.45	7.18	49.6	99.3	10.14	97.9	10.0
90894	10000	9/8/94 1:00	14.55	7.21	49.1	99.3	10.11	97.8	10.0
90894	20000	9/8/94 2:00	14.62	7.22	48.8	99.2	10.09	97.8	9.9
90894	30000	9/8/94 3:00	14.64	7.25	48.6	99.1	10.07	97.6	9.9
90894	40000	9/8/94 4:00	14.6	7.25	48.5	99.3	10.1	97.8	10.0
90894	50000	9/8/94 5:00	14.49	7.25	48.2	99	10.09	97.5	9.9
90894	60000	9/8/94 6:00	14.39	7.24	47.9	99.1	10.13	97.7	10.0
90894	70000	9/8/94 7:00	14.37	7.26	47.9	99.4	10.16	97.9	10.0
90894	80000	9/8/94 8:00	14.35	7.22	47.8	99.5	10.18	98.1	10.0
90894	90000	9/8/94 9:00	14.29	7.23	46.8	99.6	10.2	98.2	10.1
90894	100000	9/8/94 10:00	14.3	7.2	45.1	99.8	10.22	98.4	10.1
90894	110000	9/8/94 11:00	14.39	7.15	44.3	99.9	10.21	98.5	10.1
90894	120000	9/8/94 12:00	14.42	7.15	43.9	100.2	10.23	98.7	10.1

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - September 1995 Survey									
Skagit River above Sedro-Woolley									
River Mile 24.6									
DS3 Unit #5									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
91895	110000	9/18/95 11:00	13.6	7.6	46	97.4	10.13	100.2	10.4
91895	120000	9/18/95 12:00	13.67	7.28	46.3	99.3	10.3	102.0	10.6
91895	130000	9/18/95 13:00	13.97	7.23	46.8	99.7	10.28	102.5	10.6
91895	140000	9/18/95 14:00	14.25	7.21	47.4	100.8	10.33	103.6	10.6
91895	150000	9/18/95 15:00	14.42	7.25	48.4	101.4	10.36	104.3	10.6
91895	160000	9/18/95 16:00	14.45	7.33	49.6	101.9	10.4	104.7	10.7
91895	170000	9/18/95 17:00	14.45	7.36	50.4	102.1	10.42	104.9	10.7
91895	180000	9/18/95 18:00	14.4	7.39	50.5	102.5	10.48	105.4	10.8
91895	190000	9/18/95 19:00	14.32	7.42	50.3	102.5	10.49	105.3	10.8
91895	200000	9/18/95 20:00	14.32	7.41	49.2	102	10.44	104.8	10.7
91895	210000	9/18/95 21:00	14.48	7.35	47.8	101.2	10.32	104.0	10.6
91895	220000	9/18/95 22:00	14.6	7.34	46.7	101.1	10.28	103.9	10.6
91895	230000	9/18/95 23:00	14.6	7.32	46.2	101	10.27	103.8	10.6
91995	0	9/19/95 0:00	14.53	7.31	45.9	100.6	10.25	103.4	10.5
91995	10000	9/19/95 1:00	14.42	7.31	45.8	100.3	10.24	103.1	10.5
91995	20000	9/19/95 2:00	14.28	7.29	45.8	97.9	10.03	100.7	10.3
91995	30000	9/19/95 3:00	14.18	7.28	45.7	97.7	10.02	100.4	10.3
91995	40000	9/19/95 4:00	14.08	7.27	45.7	97.2	9.99	99.9	10.3
91995	50000	9/19/95 5:00	14.03	7.24	45.6	96	9.88	98.7	10.2
91995	60000	9/19/95 6:00	14	7.23	45.7	95.1	9.8	97.9	10.1
91995	70000	9/19/95 7:00	13.97	7.2	45.9	94.2	9.72	97.0	10.0
91995	80000	9/19/95 8:00	13.95	7.14	46	93.4	9.63	96.1	9.9
91995	90000	9/19/95 9:00	13.98	7.11	46	92.9	9.58	95.7	9.9
91995	100000	9/19/95 10:00	14.02	7.11	46.1	93.6	9.65	96.5	9.9

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - September 1995 Survey									
North Fork Skagit R at Rexville									
River Mile 4.2(N)									
DS3 Unit #6									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
91895	140000	9/18/95 14:00	14.69	7.12	48.5	98.5	10	101.5	10.3
91895	150000	9/18/95 15:00	14.84	7.03	48.2	98.9	10.01	101.9	10.3
91895	160000	9/18/95 16:00	14.99	7.03	48	99.4	10.03	102.4	10.3
91895	170000	9/18/95 17:00	15.07	7	47.8	99.8	10.04	102.7	10.3
91895	180000	9/18/95 18:00	15.11	7.03	47.8	99.9	10.05	102.9	10.4
91895	190000	9/18/95 19:00	15.07	7.03	48.1	99.8	10.04	102.7	10.3
91895	200000	9/18/95 20:00	15.02	6.96	48.5	99.3	10.01	102.3	10.3
91895	210000	9/18/95 21:00	15.01	6.96	49.1	98.8	9.96	101.8	10.3
91895	220000	9/18/95 22:00	15.01	6.95	49.7	98.4	9.92	101.4	10.2
91895	230000	9/18/95 23:00	14.99	6.93	50.2	97.9	9.87	100.9	10.2
91995	0	9/19/95 0:00	14.94	6.91	50.5	97.6	9.86	100.7	10.2
91995	10000	9/19/95 1:00	14.89	6.92	50.4	97.5	9.86	100.5	10.2
91995	20000	9/19/95 2:00	14.84	6.94	50.4	97.5	9.86	100.4	10.2
91995	30000	9/19/95 3:00	14.79	6.96	50.6	97.4	9.87	100.4	10.2
91995	40000	9/19/95 4:00	14.69	6.98	51	97.5	9.89	100.4	10.2
91995	50000	9/19/95 5:00	14.52	7.04	51.8	97.4	9.93	100.4	10.2
91995	60000	9/19/95 6:00	14.37	7.05	52.2	97.2	9.94	100.2	10.2
91995	70000	9/19/95 7:00	14.26	7.02	52	97.1	9.95	100.1	10.3
91995	80000	9/19/95 8:00	14.26	7.05	51.2	96.8	9.92	99.8	10.2
91995	90000	9/19/95 9:00	14.34	7.03	50	96.5	9.87	99.4	10.2
91995	100000	9/19/95 10:00	14.46	7	49	96.8	9.87	99.7	10.2
91995	110000	9/19/95 11:00	14.57	7.01	48.3	97.1	9.88	100.0	10.2
91995	120000	9/19/95 12:00	14.69	7.01	47.9	97.5	9.9	100.5	10.2
91995	130000	9/19/95 13:00	14.82	6.98	47.8	97.8	9.9	100.8	10.2
91995	140000	9/19/95 14:00	14.92	7	47.8	98	9.9	101.0	10.2
91995	150000	9/19/95 15:00	15.02	7.01	47.8	98.2	9.9	101.2	10.2

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - September 1995 Survey									
South Fork Skagit R at Conway									
River Mile 4.4(S)									
DS3 Unit #7									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
91895	150000	9/18/95 15:00	15.43	7.53	47.4	115.5	11.54	103.7	10.4
91895	160000	9/18/95 16:00	15.46	7.22	47.1	116.1	11.6	104.4	10.4
91895	170000	9/18/95 17:00	15.34	7.16	47.1	115.8	11.59	104.0	10.4
91895	180000	9/18/95 18:00	15.19	7.12	47.1	115.4	11.59	103.7	10.4
91895	190000	9/18/95 19:00	15.07	7.08	47.3	115	11.58	103.3	10.4
91895	200000	9/18/95 20:00	14.99	7.04	47.7	112.3	11.33	100.6	10.2
91895	210000	9/18/95 21:00	14.95	7	48.3	112.2	11.33	100.6	10.2
91895	220000	9/18/95 22:00	14.92	6.97	48.8	110.7	11.18	99.0	10.0
91895	230000	9/18/95 23:00	14.87	6.95	49.2	109.8	11.1	98.1	9.9
91995	0	9/19/95 0:00	14.81	6.95	49.5	109.8	11.12	98.2	9.9
91995	10000	9/19/95 1:00	14.74	6.94	49.4	109.4	11.1	97.8	9.9
91995	20000	9/19/95 2:00	14.69	6.95	49.4	109.5	11.12	97.9	9.9
91995	30000	9/19/95 3:00	14.62	6.99	49.7	109.7	11.15	98.1	10.0
91995	40000	9/19/95 4:00	14.52	7.01	50.2	110.6	11.27	99.0	10.1
91995	50000	9/19/95 5:00	14.36	7.03	50.6	110.5	11.3	99.0	10.1
91995	60000	9/19/95 6:00	14.23	7.05	50.8	110.5	11.33	99.0	10.2
91995	70000	9/19/95 7:00	14.14	7.05	50.4	110.1	11.31	98.6	10.1
91995	80000	9/19/95 8:00	14.18	7.05	49.3	109.7	11.26	98.2	10.1
91995	90000	9/19/95 9:00	14.31	7.03	48.2	110.1	11.27	98.6	10.1
91995	100000	9/19/95 10:00	14.46	7.02	47.2	110.4	11.27	98.9	10.1
91995	110000	9/19/95 11:00	14.67	7.01	46.7	111	11.27	99.4	10.1
91995	120000	9/19/95 12:00	14.92	6.99	46.5	111.6	11.28	100.0	10.1
91995	130000	9/19/95 13:00	15.15	7	46.6	110.8	11.14	99.1	10.0
91995	140000	9/19/95 14:00	15.27	7.05	46.7	104.4	10.47	92.7	9.3
91995	150000	9/19/95 15:00	15.32	7.03	46.7	107.3	10.74	95.5	9.6
91995	160000	9/19/95 16:00	15.64	7.03	47.1	112.8	11.22	100.9	10.0
91995	170000	9/19/95 17:00	15.63	7.02	47.5	112.8	11.22	100.9	10.0

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - October 1995 Survey									
Skagit River above Sedro-Woolley									
River Mile 24.6									
DS3 Unit #9									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
100295	110000	10/2/95 11:00	11.59	7.13	41.1	94.3	10.36	96.5	10.5
100295	120000	10/2/95 12:00	11.65	6.91	41.4	94.4	10.35	96.5	10.5
100295	130000	10/2/95 13:00	11.73	6.86	41.7	94.8	10.37	96.9	10.5
100295	140000	10/2/95 14:00	11.82	6.83	42	95.1	10.39	97.3	10.5
100295	150000	10/2/95 15:00	11.88	6.81	42.3	95.4	10.4	97.5	10.5
100295	160000	10/2/95 16:00	11.91	6.91	42.5	95.6	10.42	97.7	10.6
100295	180005	10/2/95 18:00	11.95	6.91		95.5	10.4	97.6	10.5
100295	190029	10/2/95 19:00	11.9	6.92	43	95.4	10.39	97.4	10.5
100295	200000	10/2/95 20:00	11.87	6.91	43.2	95	10.36	97.1	10.5
100295	210000	10/2/95 21:00	11.87	6.9	43.3	94.8	10.34	96.9	10.5
100295	220000	10/2/95 22:00	11.87	6.88	43.5	94.5	10.31	96.6	10.4
100295	230000	10/2/95 23:00	11.88	6.87	43.6	94.4	10.29	96.5	10.4
100395	0	10/3/95 0:00	11.87	6.87	43.6	94.3	10.28	96.3	10.4
100395	10000	10/3/95 1:00	11.85	6.86	43.6	94.1	10.27	96.2	10.4
100395	20000	10/3/95 2:00	11.82	6.85	43.6	93.8	10.24	95.9	10.4
100395	30000	10/3/95 3:00	11.77	6.84	43.6	93.5	10.22	95.6	10.4
100395	40000	10/3/95 4:00	11.7	6.83	43.5	93.3	10.22	95.4	10.4
100395	50000	10/3/95 5:00	11.65	6.81	43.6	93	10.2	95.1	10.3
100395	60000	10/3/95 6:00	11.6	6.81	43.6	92.6	10.17	94.7	10.3
100395	70000	10/3/95 7:00	11.57	6.81	43.5	92.5	10.16	94.6	10.3
100395	80000	10/3/95 8:00	11.54	6.79	43.4	92.4	10.15	94.4	10.3
100395	90000	10/3/95 9:00	11.41	6.78	43.6	92.4	10.18	94.4	10.3
100395	100000	10/3/95 10:00	11.13	6.78	44.1	92.6	10.28	94.7	10.4

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - October 1995 Survey									
North Fork Skagit R at Rexville									
River Mile 4.2(N)									
DS3 Unit #6									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
100295	140000	10/2/95 14:00	12.26	7.1	39.3	96.7	10.32	96.9	10.4
100295	150000	10/2/95 15:00	12.29	7.04	39.3	96.8	10.32	97.0	10.4
100295	160000	10/2/95 16:00	12.32	7.03	39.2	96.9	10.32	97.0	10.4
100295	170000	10/2/95 17:00	12.36	7.03	39.2	96.9	10.32	97.1	10.4
100295	180000	10/2/95 18:00	12.32	7.02	39.4	97	10.33	97.1	10.4
100295	190000	10/2/95 19:00	12.31	7.03	39.5	96.8	10.32	97.0	10.4
100295	200000	10/2/95 20:00	12.27	7.02	39.7	96.8	10.33	97.0	10.4
100295	210000	10/2/95 21:00	12.22	7.02	40	96.7	10.33	96.9	10.4
100295	220000	10/2/95 22:00	12.21	7.03	40.2	96.7	10.33	96.9	10.4
100295	230000	10/2/95 23:00	12.22	7.01	40.4	96.7	10.33	96.9	10.4
100395	0	10/3/95 0:00	12.26	7.05	40.7	96.8	10.33	97.0	10.4
100395	10000	10/3/95 1:00	12.29	7.06	40.9	96.9	10.33	97.1	10.4
100395	20000	10/3/95 2:00	12.31	7.06	41.3	96.8	10.31	96.9	10.4
100395	30000	10/3/95 3:00	12.31	7.07	41.6	96.7	10.31	96.9	10.4
100395	40000	10/3/95 4:00	12.29	7.04	42.1	96.5	10.29	96.7	10.4
100395	50000	10/3/95 5:00	12.29	7.04	42.6	96.3	10.26	96.4	10.3
100395	60000	10/3/95 6:00	12.24	7.03	42.8	96	10.25	96.2	10.3
100395	70000	10/3/95 7:00	12.19	7.04	42.9	95.9	10.24	96.0	10.3
100395	80000	10/3/95 8:00	12.16	7.05	43	95.6	10.22	95.7	10.3
100395	90000	10/3/95 9:00	12.13	7.05	43	95.6	10.24	95.9	10.3
100395	100000	10/3/95 10:00	12.14	7.03	43.1	95.7	10.24	95.9	10.3
100395	110000	10/3/95 11:00	12.17	7.04	43.1	95.8	10.24	96.0	10.3
100395	120000	10/3/95 12:00	12.22	7.07	43.2	95.7	10.22	95.9	10.3
100395	130000	10/3/95 13:00	12.29	7.08	43.2	95.9	10.22	96.0	10.3
100395	140000	10/3/95 14:00	12.31	7.05	43.2	95.9	10.23	96.2	10.3
100395	150000	10/3/95 15:00	12.32	7.06	43.2	96.1	10.24	96.3	10.3

Table B.7 Complete Dry Season Diurnal DS3 Results

Lower Skagit TMDL DS3 Data - October 1995 Survey									
South Fork Skagit R at Conway									
River Mile 4.4(S)									
DS3 Unit #4									
						Raw		Adjusted	
Date	Time	Date &	Temp	pH	Cond	DO	DO	DO	DO
MMDDYY	HHMMSS	Time	(degC)	(std. unit)	(uS/cm)	%Sat	(mg/l)	%Sat	(mg/l)
100295	150000	10/2/95 15:00	12.34	6.88	37.7	94.8	10.24	97.8	10.5
100295	160000	10/2/95 16:00	12.34	6.86	37.5	94.6	10.21	97.5	10.4
100295	170000	10/2/95 17:00	12.31	6.82	37.5	94.2	10.18	97.1	10.4
100295	180000	10/2/95 18:00	12.29	6.79	37.7	94.2	10.17	97.0	10.4
100295	190000	10/2/95 19:00	12.24	6.79	37.8	94	10.17	96.9	10.4
100295	200000	10/2/95 20:00	12.19	6.78	38	93.9	10.17	96.8	10.4
100295	210000	10/2/95 21:00	12.17	6.79	38.2	93.1	10.09	96.0	10.3
100295	220000	10/2/95 22:00	12.16	6.79	38.5	93.1	10.09	96.0	10.3
100295	230000	10/2/95 23:00	12.19	6.8	38.7	92.6	10.03	95.5	10.2
100395	0	10/3/95 0:00	12.21	6.81	38.7	92.7	10.04	95.6	10.3
100395	10000	10/3/95 1:00	12.24	6.79	39.1	92.7	10.02	95.5	10.2
100395	20000	10/3/95 2:00	12.24	6.79	39.5	92.7	10.02	95.5	10.2
100395	30000	10/3/95 3:00	12.22	6.8	40.2	92.9	10.05	95.7	10.3
100395	40000	10/3/95 4:00	12.24	6.79	41.1	92.4	9.99	95.2	10.2
100395	50000	10/3/95 5:00	12.21	6.78	41.5	92.2	9.98	95.1	10.2
100395	60000	10/3/95 6:00	12.16	6.79	41.5	92.1	9.98	95.0	10.2
100395	70000	10/3/95 7:00	12.11	6.79	41.3	92.3	10.01	95.1	10.2
100395	80000	10/3/95 8:00	12.08	6.79	41.3	91.5	9.93	94.3	10.1
100395	90000	10/3/95 9:00	12.09	6.78	41.5	92.3	10.02	95.2	10.2
100395	100000	10/3/95 10:00	12.12	6.77	41.3	90.6	9.82	93.4	10.0
100395	110000	10/3/95 11:00	12.17	6.79	41.3	92	9.97	94.9	10.2
100395	120000	10/3/95 12:00	12.24	6.79	41.3	90.1	9.74	92.9	10.0
100395	130000	10/3/95 13:00	12.27	6.86	41.4	81.4	8.8	84.2	9.0
100395	140000	10/3/95 14:00	12.34	6.81	41.4	90.3	9.75	93.2	10.0
100395	150000	10/3/95 15:00	12.31	6.78	41.5	91.7	9.9	94.5	10.1
100395	160000	10/3/95 16:00	12.24	6.77	41.5	92.2	9.97	95.0	10.2
100395	170000	10/3/95 17:00	12.24	6.76	41.7	92.3	9.98	95.1	10.2

Attachment C

Tables of Compliance with Standards and Limitations

Table C.1 Compliance with Fecal Coliform Standards

SAMPLING STATIONS	River Mile	Monthly Geometric Means							Maximum Weekly or 10th Percentile Geometric Means						
		12/27/94 - 1/25/95	1/11/95 - 2/8/95	1/25/95 - 2/22/95	2/8/95 - 3/8/95	2/22/95 -3/22/95	3/8/95 - 4/5/95	9/19/95 - 10/3/95	12/27/94 - 1/25/95	1/11/95 - 2/8/95	1/25/95 - 2/22/95	2/8/95 - 3/8/95	2/22/95 -3/22/95	3/8/95 - 4/5/95	9/19/95 - 10/3/95
Skagit R above Sedro-Woolley	24.6	10	1	6	5	1	2	11	**154**	1	24	24	2	2	39
Hansen Creek	24.3	70	41	38	25	20	**284**	**2078**	130	52	46	46	31	**2592**	**2078**
Northern St. Hospital Stormdrain	24.2					13	13						13	13	0
Tributary @ Riverfront Park	23.6	**198**	**124**	75	46	**133**	**379**		**670**	124	124	46	**379**	**379**	0
South Sedro-Woolley SD	22.9	**1997**	54	**109**	**765**	**1023**	**329**		**10342**	77	**309**	**1889**	**1889**	**554**	0
Sedro-Woolley STP	22.8	28	89	62	100	1177	22264	243	203	203	97	103	13491	36742	481
Brickyard Creek	21.1	**242**	19	**126**	**115**	**121**	**655**		**2020**	34	**464**	**464**	**510**	**841**	0
Skagit R abv Nookachamps Ck	19.0							13							42
Nookachamps Creek	18.8	37	74	**213**	64	45	**174**	**315**	130	190	**240**	**240**	119	**256**	**1056**
Burlington STP	18.1	4	11	11	2	3	16	13	8	125	125	2	5	50	25
Skagit R at Mt. Vernon	15.8	9	2	3	6	4	3	17	139	5	31	37	37	5	79
Skagit R above Division St.	12.1							62							117
Gages Slough PS	14.6				24	5	9					24	24	76	0
Mt. Vernon Frontage Rd PS	11.9	**234**	**165**	46	**116**	89	83	**1590**	**807**	**807**	61	**218**	**218**	190	**1997**
Mt. Vernon Freeway Dr PS	11.9	90	70	43	**194**	**100**	46		**610**	**610**	**230**	**230**	164	61	0
Mt. Vernon Division St CSO	11.4	**244675**			**60498**	**60498**			**481871**			**60498**	**60498**		0
Mt. Vernon Westside PS	11.0	**396**	**444**	**1610**	**4146**	**935**	**1066**		**708**	**708**	**9322**	**9322**	**1844**	**2398**	0
Mt. Vernon Park St CSO	10.9	**7780**		**3922**	**18753**	**12463**	**2053**		**14866**		**4343**	**80975**	**80975**	**2198**	0
Mt. Vernon STP	10.7	22	7	2	8	10	3	2570	185	54	3	24	24	4	2863
Skagit River above N/S Forks	8.7							48							96
Britt Slough PS	8.3	49	71	41	20	20	63		100	100	50	33	33	120	0
Big Lake STP	7.8	4	1	1	2	3	2	21	33	1	1	2	3	3	27
Conway PS	4.4	6	1	1	10	10	3		107	2	2	100	100	10	0
South Fork Skagit R at Conway	4.3	11	5	3	9	9	4	81	71	8	3	26	26	4	147
Rexville PS	4.2	**143**	35	35	**208**	58	23		**2398**	134	140	**309**	**309**	47	0
North Fork Skagit R at Rexville	4.1	9	3	6	30	10	4	48	78	7	29	31	31	5	101
Carpenter/Fisher Creeks	3.1	48	31	23	65	**127**	**181**		116	73	42	101	160	**205**	0
		Values in **Bold** exceed state Water Quality Standards													

Table C.2 Compliance with Turbidity Standards

SAMPLING STATIONS	River Mile	Site Complies with Standard? 12/27/94 12/28/94	1/10/95 1/11/95	1/24/95 1/25/95	2/7/95 2/8/95	2/21/95 2/22/95	3/7/95 3/8/95	3/21/95 3/22/95	4/4/95 4/5/95	9/19/95	10/3/95
Creeks											
Hansen Creek	24.3	NO	NO	bkgd	yes	NO	bkgd	yes	NO		yes
Nookachamps Creek	18.8	NO	yes	yes	yes	NO	yes	NO	NO	yes	NO
Kulshan Creek	11.9	NO	NO	yes	yes	NO	NO	yes	NO	bkgd	bkgd
Carpenter/Fisher Creeks	3.1	bkgd	bkgd	yes	bkgd	bkgd	yes	bkgd	bkgd		
Rural Pump Stations											
Gages Slough PS	14.6					NO	bkgd	bkgd	bkgd		
Britt Slough PS	8.3	NO	NO	NO	NO	NO	NO	NO	NO		
Conway PS	4.4	bkgd	NO	NO	NO	bkgd	NO	NO	NO		
Rexville PS	4.2	NO	bkgd	bkgd	bkgd	NO	NO	NO	NO		
Skagit River											
Skagit R above Sedro-Woolley	24.6	bkgd	bkgd	bkgd	bkgd	bkgd	bkgd	bkgd	bkgd	bkgd	bkgd
Skagit R abv Nookachamps Ck	19.0									yes	yes
Skagit R at Mt. Vernon	15.8	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Skagit R above Division St.	12.1									yes	yes
Skagit River above N/S Forks	8.7									yes	yes
North Fork Skagit R at Rexville	4.1	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
South Fork Skagit R at Conway	4.3	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Storm Drains											
Tributary @ Riverfront Park	23.6	NO	NO		NO	NO	yes	NO			
South Sedro-Woolley SD	22.9	bkgd	NO	NO	NO	bkgd	NO	NO	NO		
Brickyard Creek	21.1	NO	bkgd	bkgd	bkgd	NO	bkgd	bkgd	bkgd		

Explanation of terms:
"bkgd" = background value (lowest value for each survey and sampling station category).
"yes" = station complies with standard as compared to background value.
"NO" = station does not comply with standards as compared to background.

Table C.3 Maximum and Minimum Values for Temperature, pH, and Dissolved Oxygen

SAMPLING STATIONS	River Mile	TEMP (oC)		PH (s.u.)		COND (uS/cm)		DO (mg/L)	
		Max	Min	Max	Min	Max	Min	Max	Min
Skagit R above Sedro-Woolley	24.6	14.7	4.3	7.8	6.8	75	35	10.8	9.6
Hansen Creek	24.3	11.7	3.9	7.4	7.1	98	51	10.0	9.8
Northern St. Hospital Stormdrain	24.2	8.3	8.3	7.5	7.5	155	155		
Tributary @ Riverfront Park	23.6	7.5	4.5	7.3	6.6	206	60		
South Sedro-Woolley SD	22.9	10.4	3.3	7.1	6.5	185	21		
Sedro-Woolley STP	22.8	**19.8**	9.3	7.6	6.9	420	263	8.4	**5.0**
Brickyard Creek	21.1	10.8	2.0	7.4	6.8	145	51		
Skagit R abv Nookachamps Ck	19.0	14.6	11.5	7.4	7.2	56	53	10.3	10.1
Nookachamps Creek	18.8	16.9	4.1	7.3	6.9	167	52	10.1	8.2
Burlington STP	18.1	**22.0**	11.5	7.3	6.8	610	415	6.3	**5.7**
Skagit R at Mt. Vernon	15.8	15.1	4.5	7.9	6.9	76	41	10.4	**9.7**
Skagit R above Division St.	12.1	14.7	12.0	7.3	7.1	55	53	10.4	10.2
Gages Slough PS	14.6	10.9	6.1	7.1	6.8	78	40		
Mt. Vernon Frontage Rd PS (Kulshan Ck)	11.9	15.9	4.4	7.1	6.9	558	34	8.4	**4.8**
Mt. Vernon Freeway Dr PS	11.9	10.6	8.7	7.3	6.8	220	52		
Mt. Vernon Division St CSO	11.4	11.6	8.2	**8.7**	6.9	525	90		
Mt. Vernon Westside PS	11.0	10.4	7.2	7.2	6.8	342	36		
Mt. Vernon Park St CSO	10.9	12.9	10.9	6.9	6.6	440	275		
Mt. Vernon STP	10.7	**22.3**	12.2	7.4	7.0	710	250	1.9	**1.3**
Skagit River above N/S Forks	8.7	14.8	12.1	7.3	7.1	55	52	10.5	10.2
Britt Slough PS	8.3	11.7	5.0	6.9	6.5	388	240		
Big Lake STP	7.8	16.9	8.9	7.2	6.8	540	290	3.1	**0.6**
Conway PS	4.4	12.5	7.7	6.8	6.6	950	320		
South Fork Skagit R at Conway	4.3	15.9	4.9	7.9	6.8	110	38	10.6	9.0
Rexville PS	4.2	12.8	5.7	7.2	6.8	1000	670		
North Fork Skagit R at Rexville	4.1	15.5	4.6	7.8	6.9	71	35	10.7	9.6
Carpenter/Fisher Creeks	3.1	10.1	3.5	7.7	7.1	172	117		