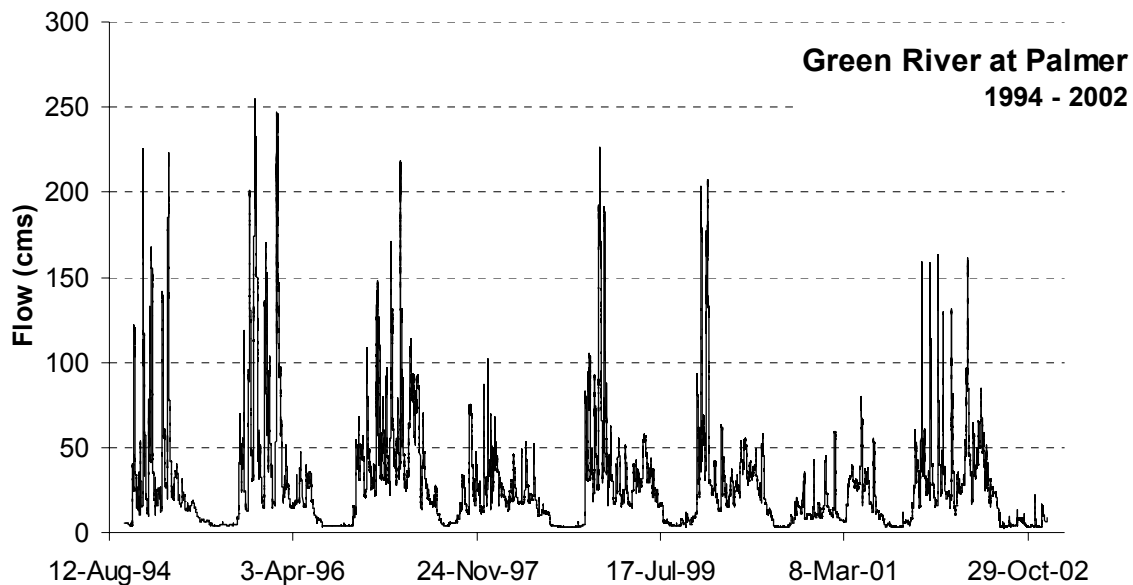


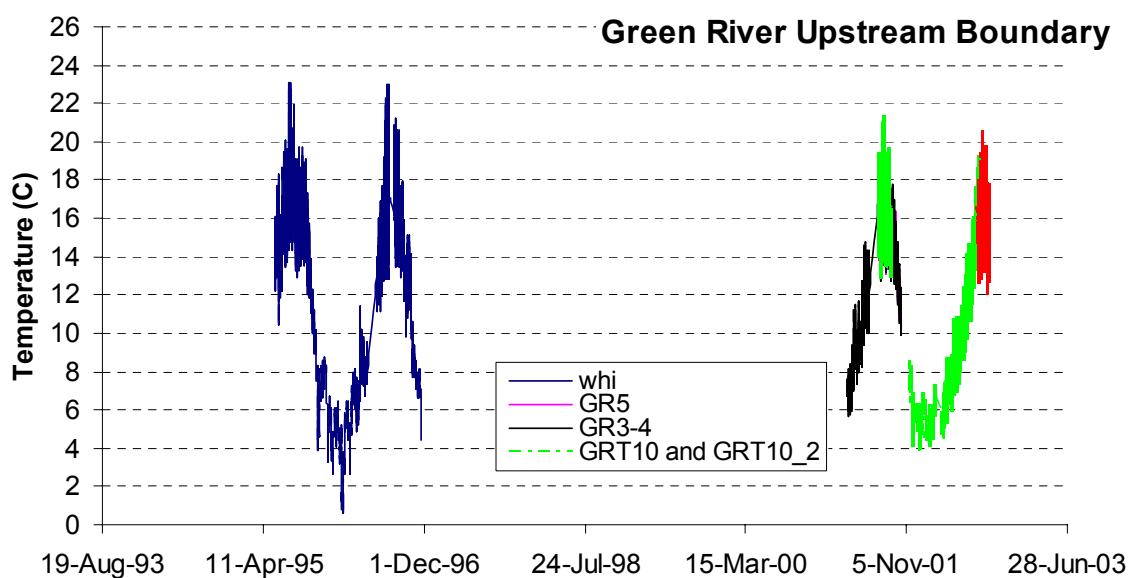
## Appendix A: Boundary Condition and Tributary Flow, Temperature, and Water Quality Data

### Upstream Boundary Data

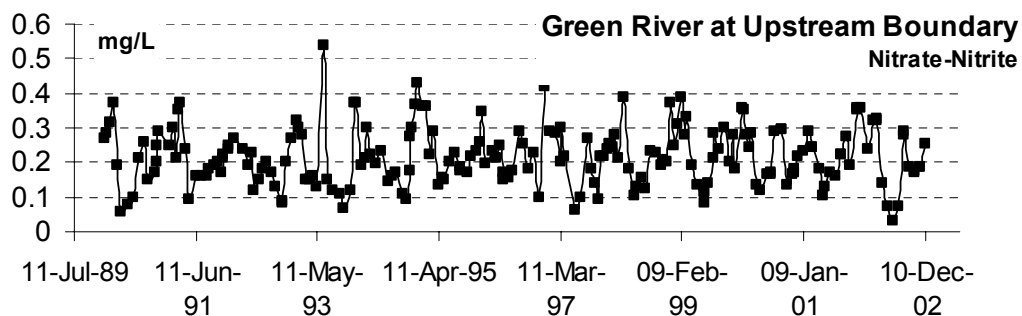
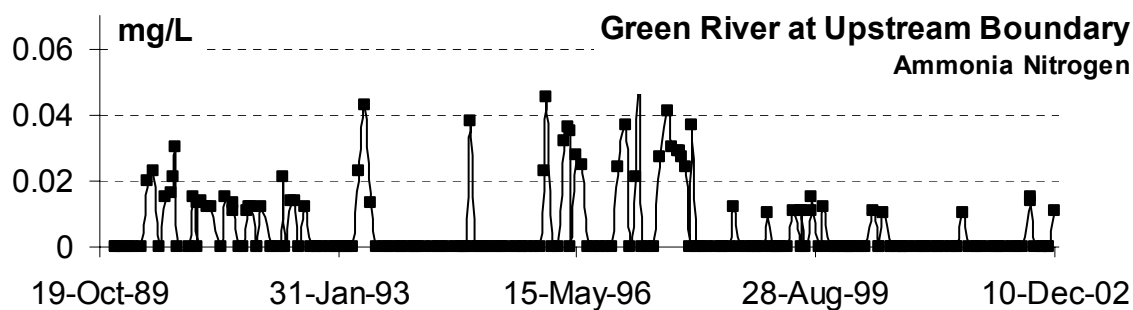
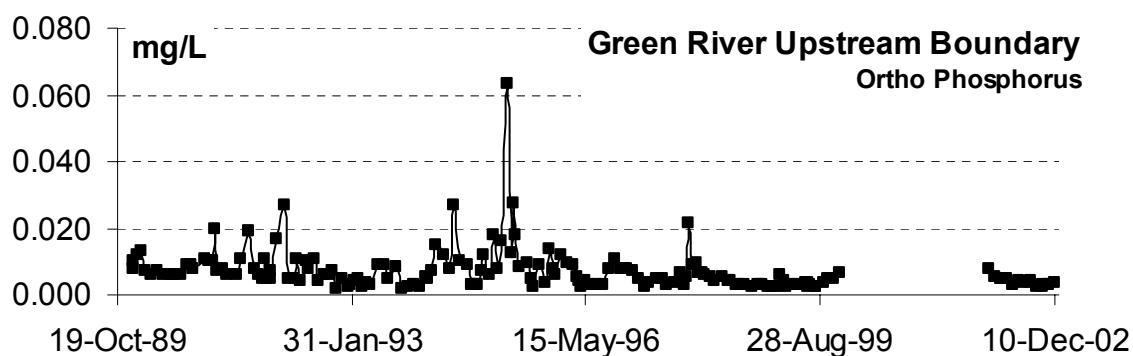
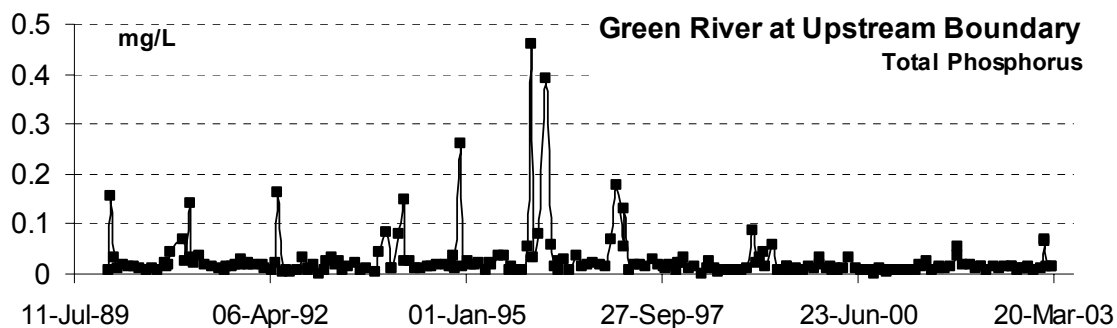
Flow data were obtained on the Green River near Palmer (USGS Gage 12106700) in 15-minute intervals from October 1994 through December 2002.

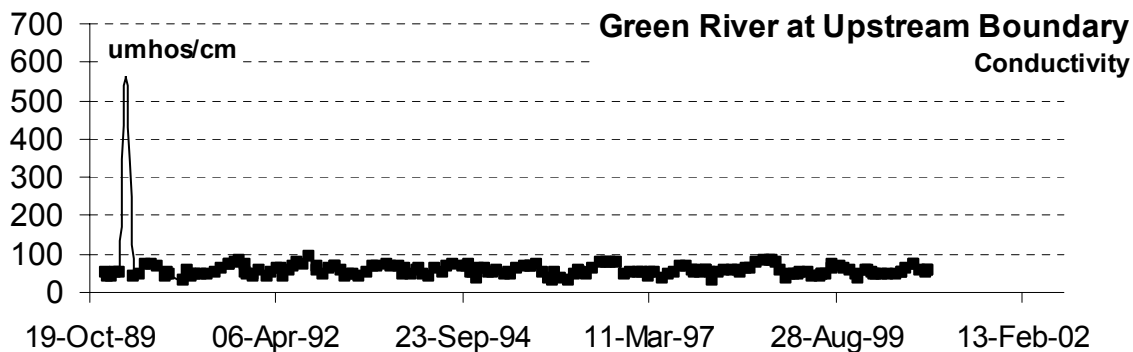
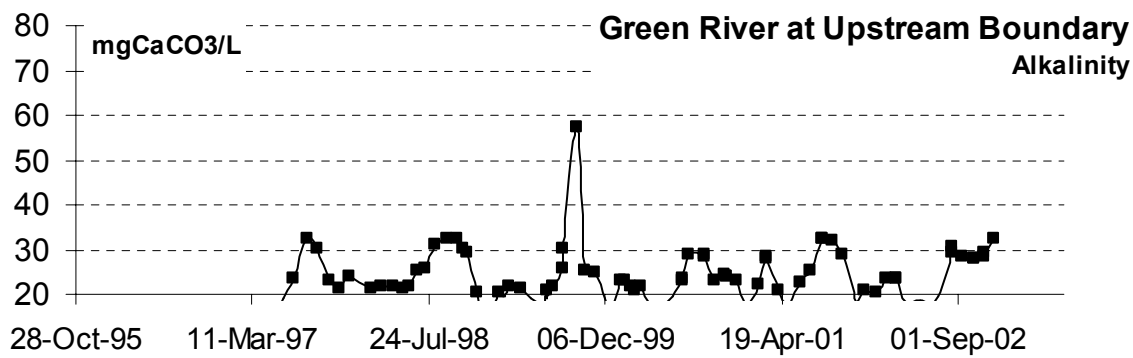
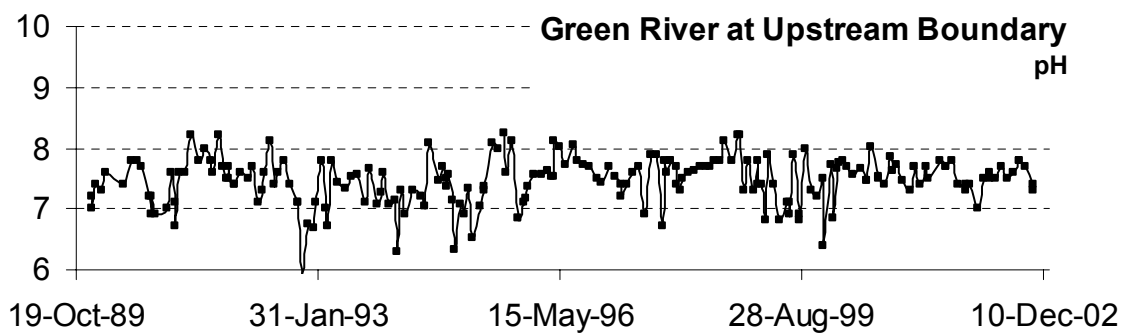
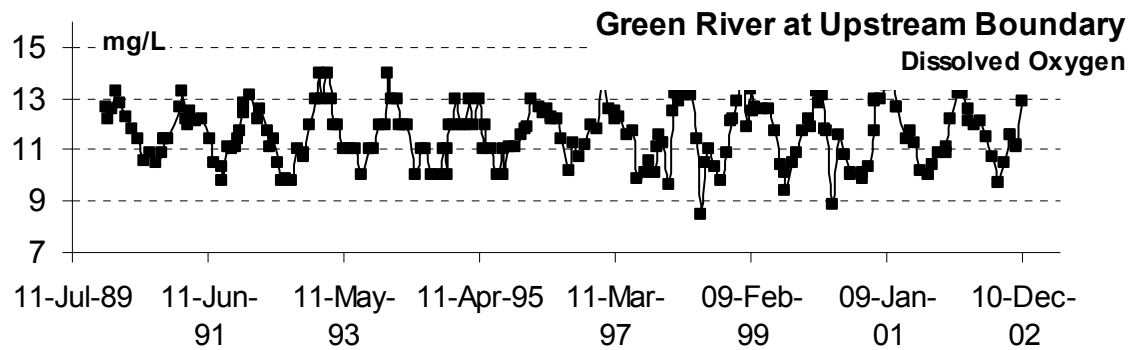


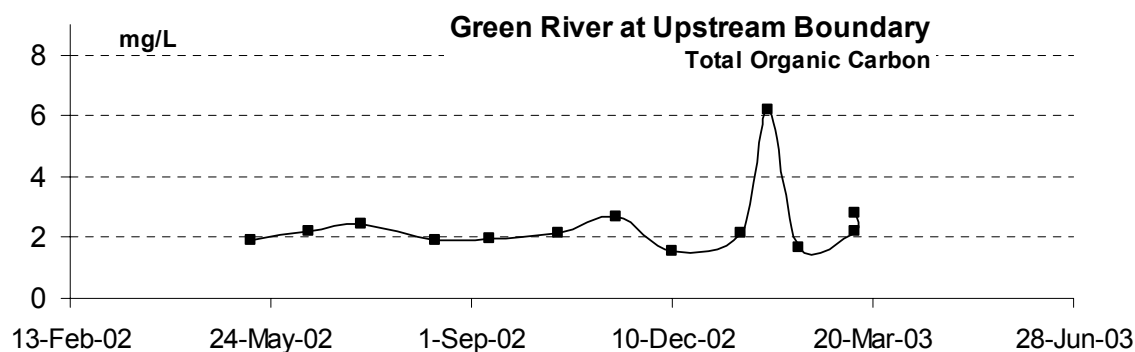
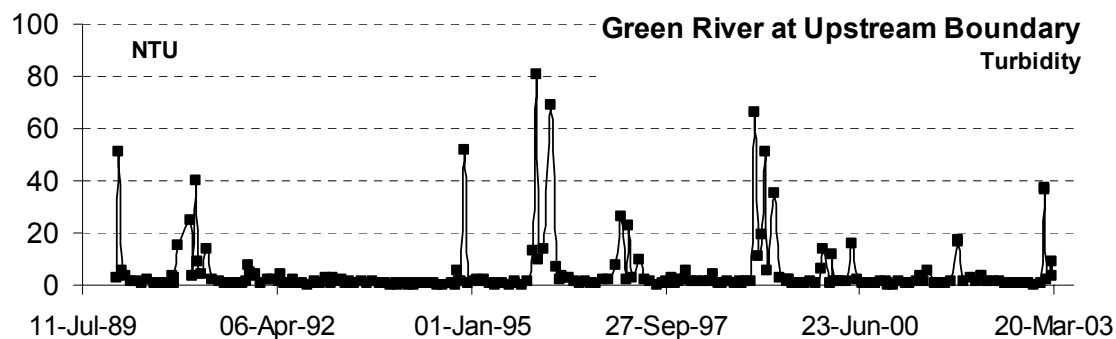
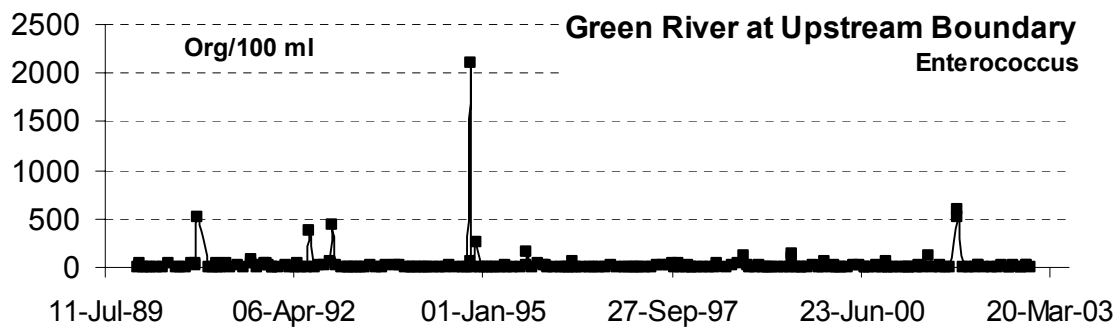
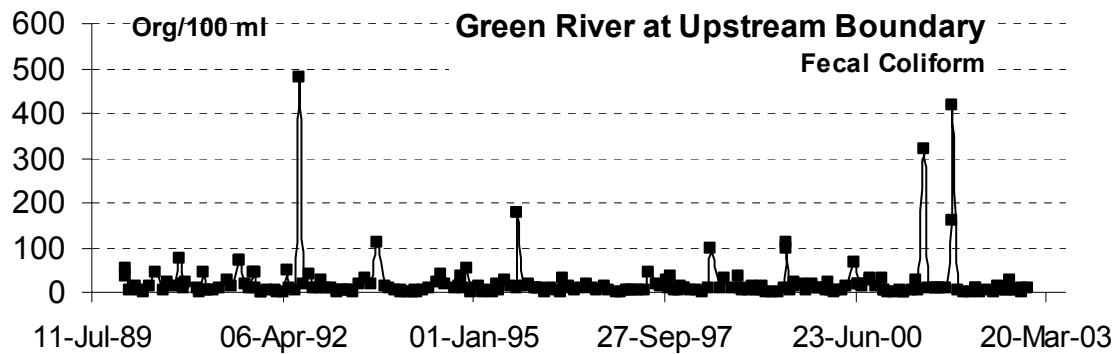
There have been a number of different temperature studies on the Green River near the upstream boundary - including two by the University of Washington (GR3-4 and GR5) and three by King County (WHI, GRT10, and GRT10\_2). The data for all stations are shown below.

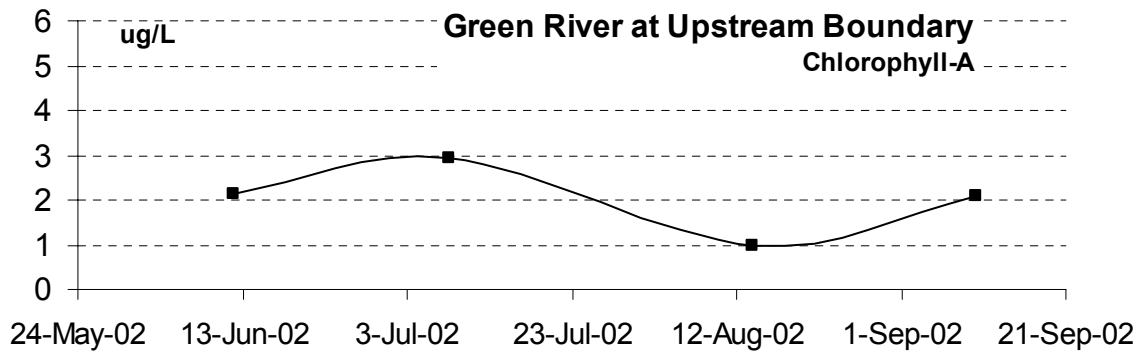
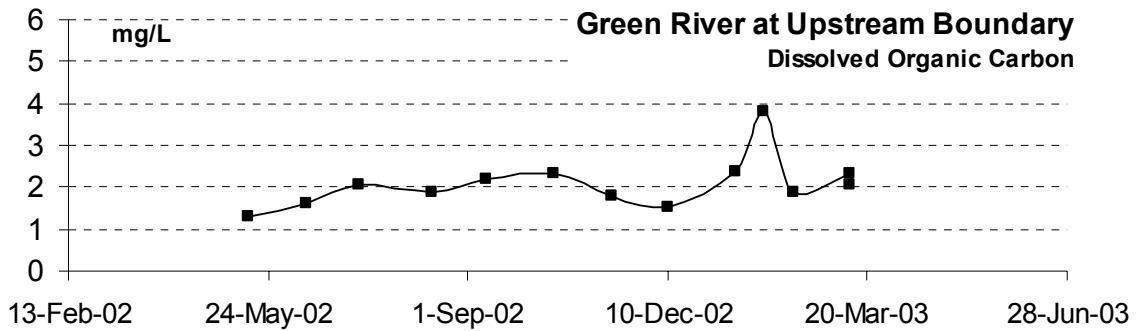


Monthly sampling of water quality constituents was provided from 1990 to 2002.



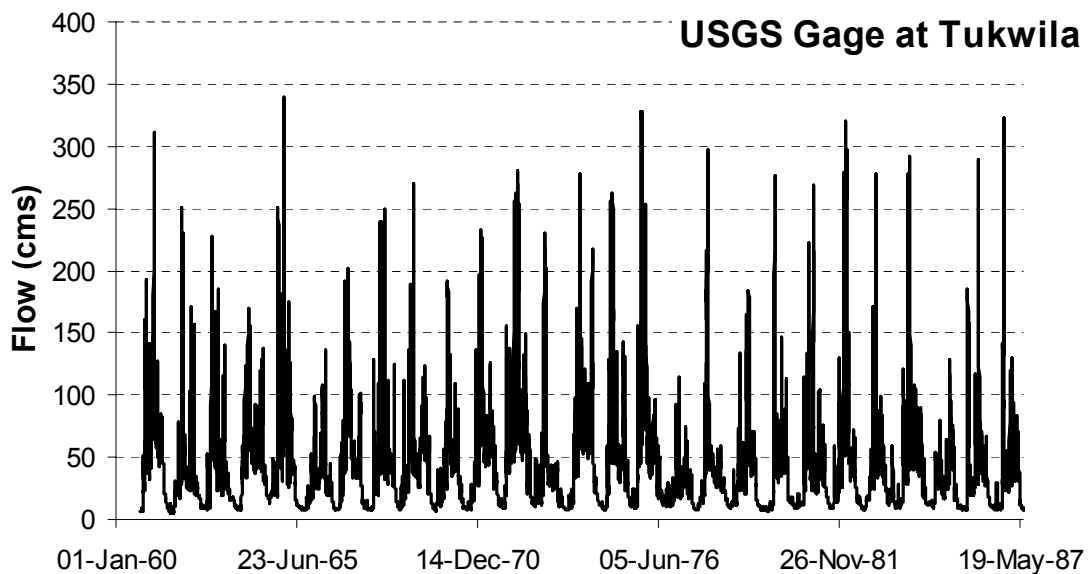




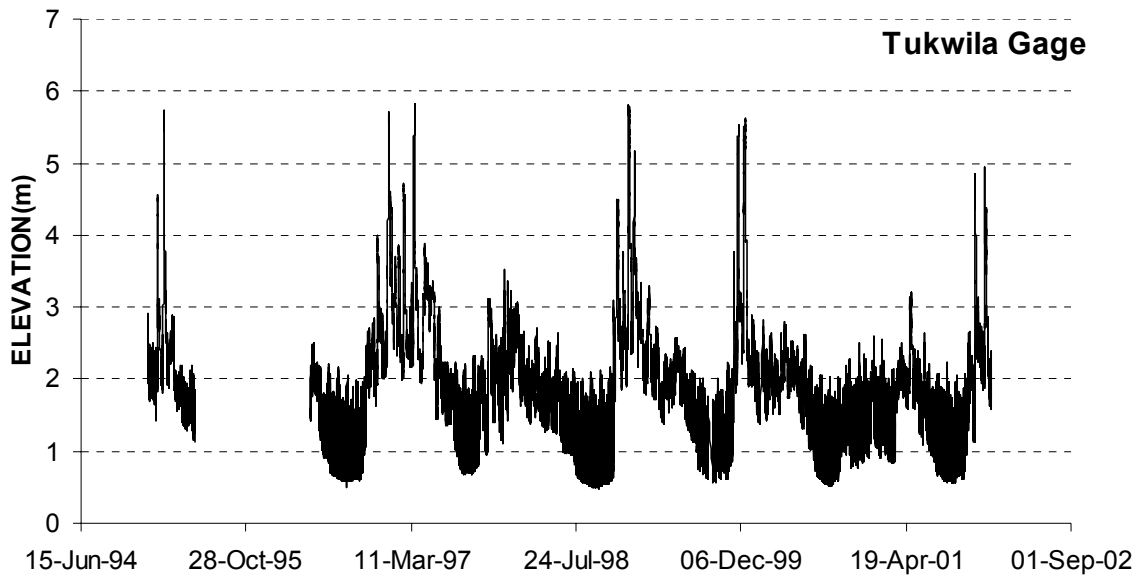


### Downstream Boundary Data

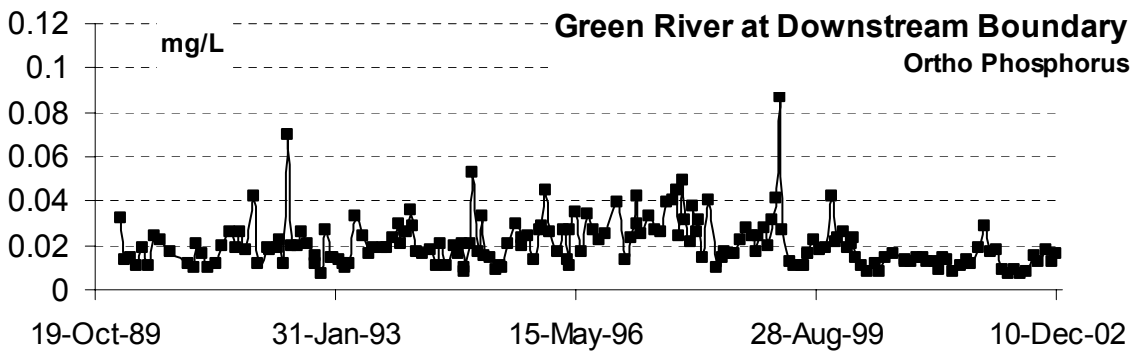
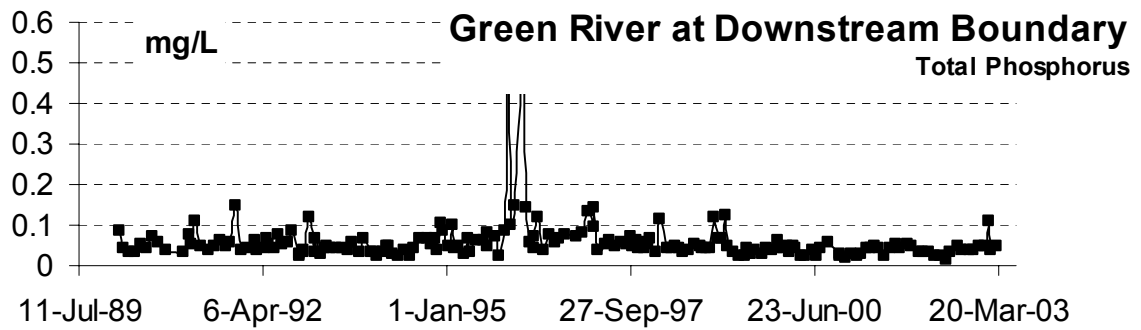
USGS (Gage No.12113350) recorded flow at Tukwila through 1987. Daily average data were provided by King County from 1960 through August 1987.

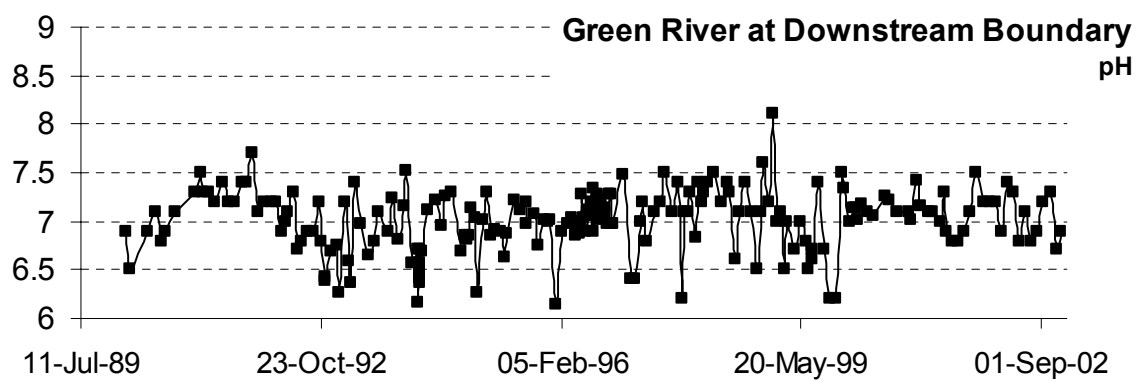
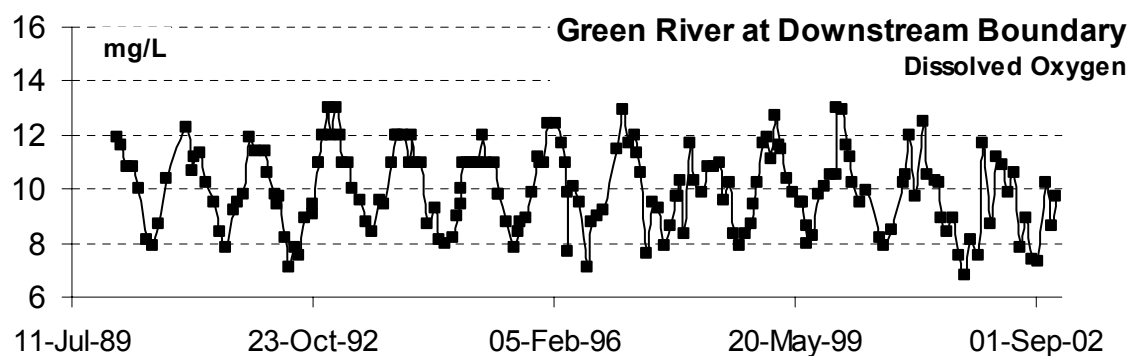
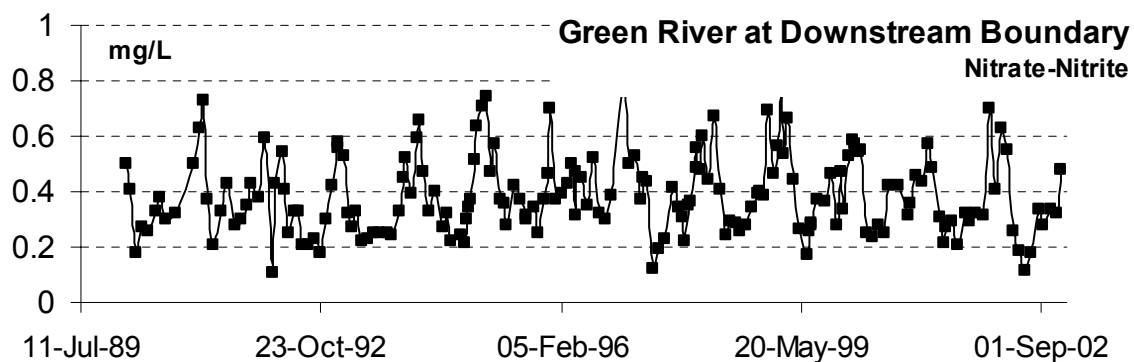
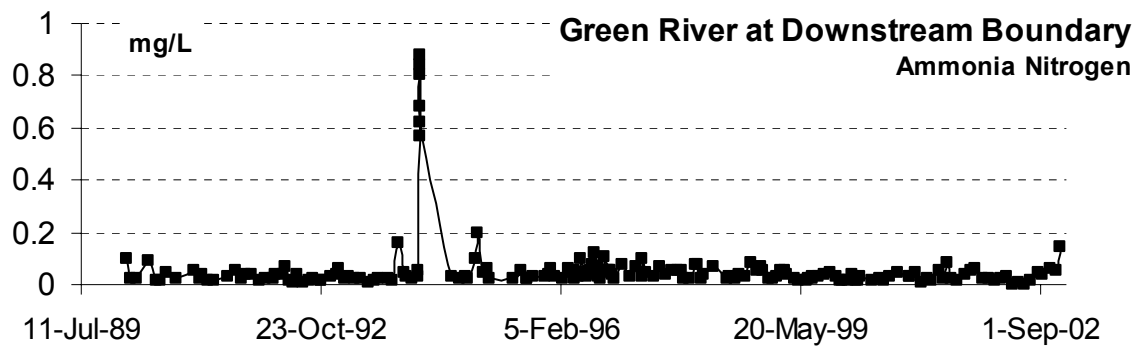


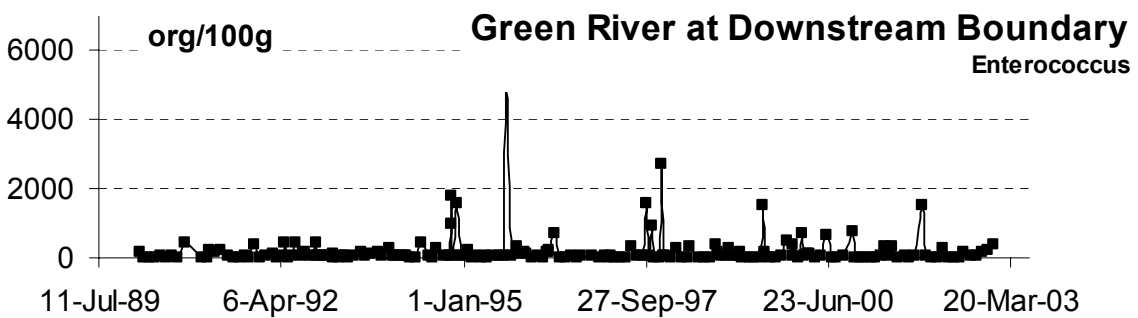
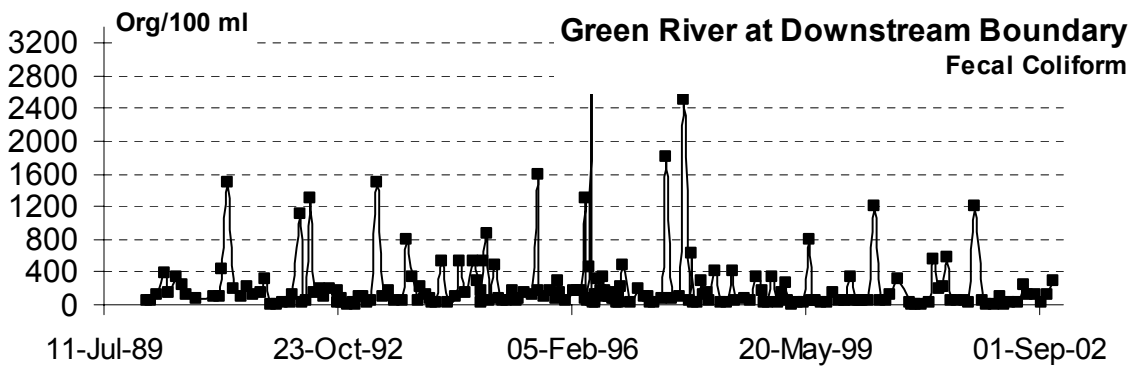
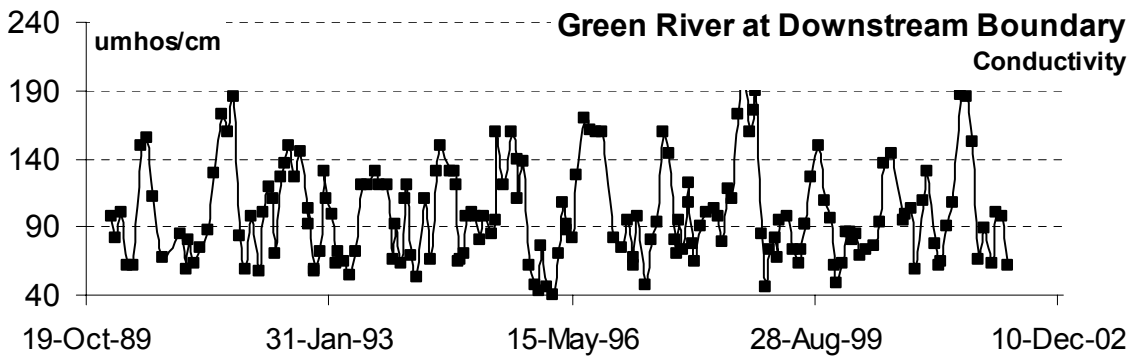
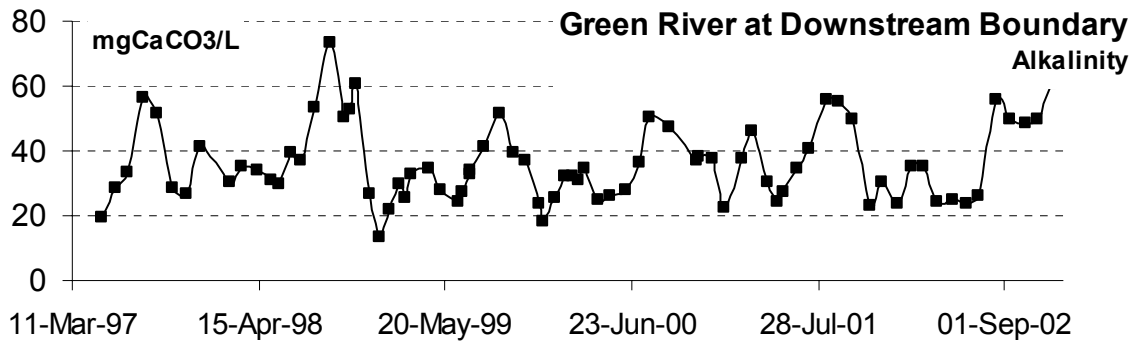
Stage data were obtained on the Green River at Tukwila (USGS Gage 12113500) in hourly intervals from 1995 through June of 2002.



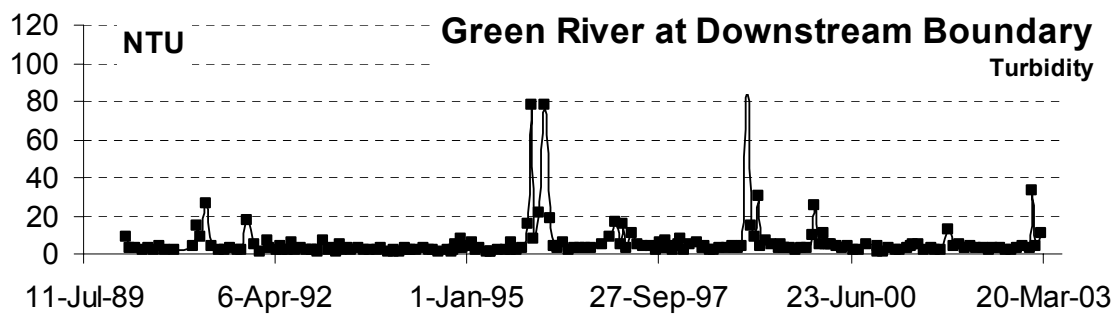
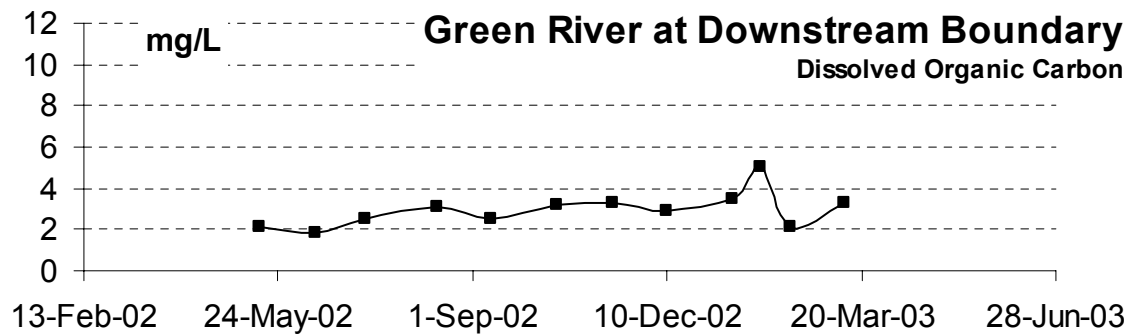
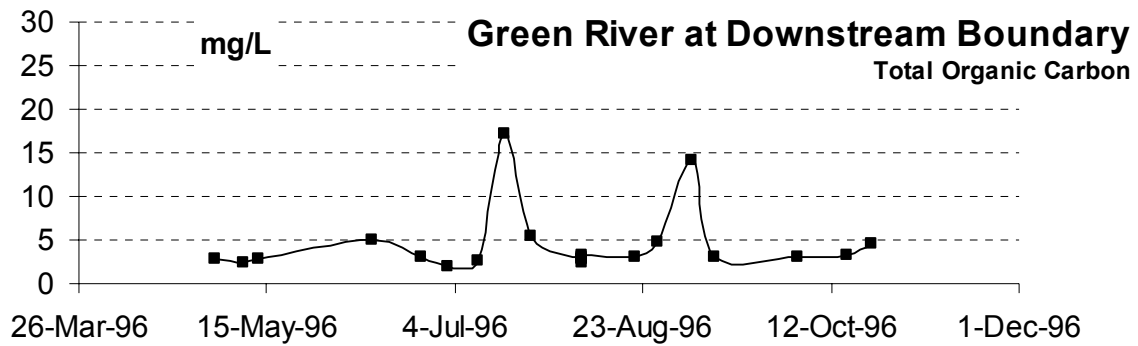
Water quality data were provided from 1990 to 2002.





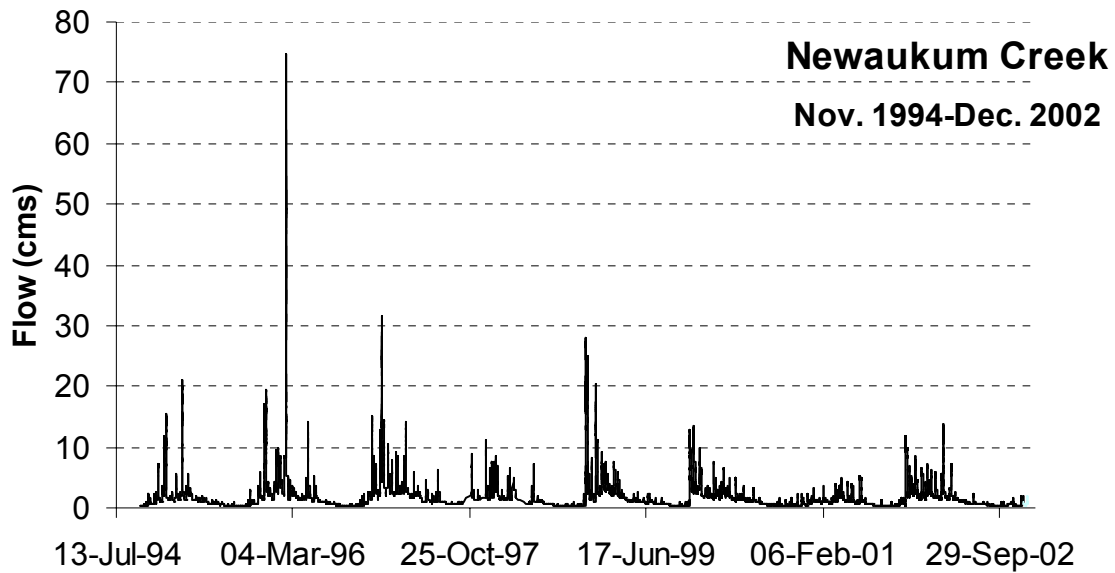




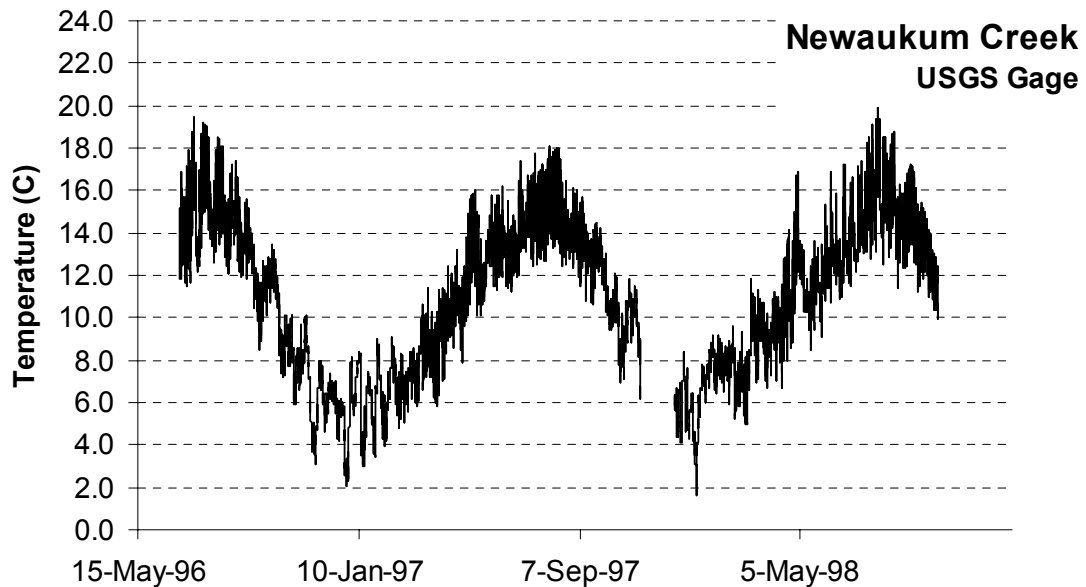


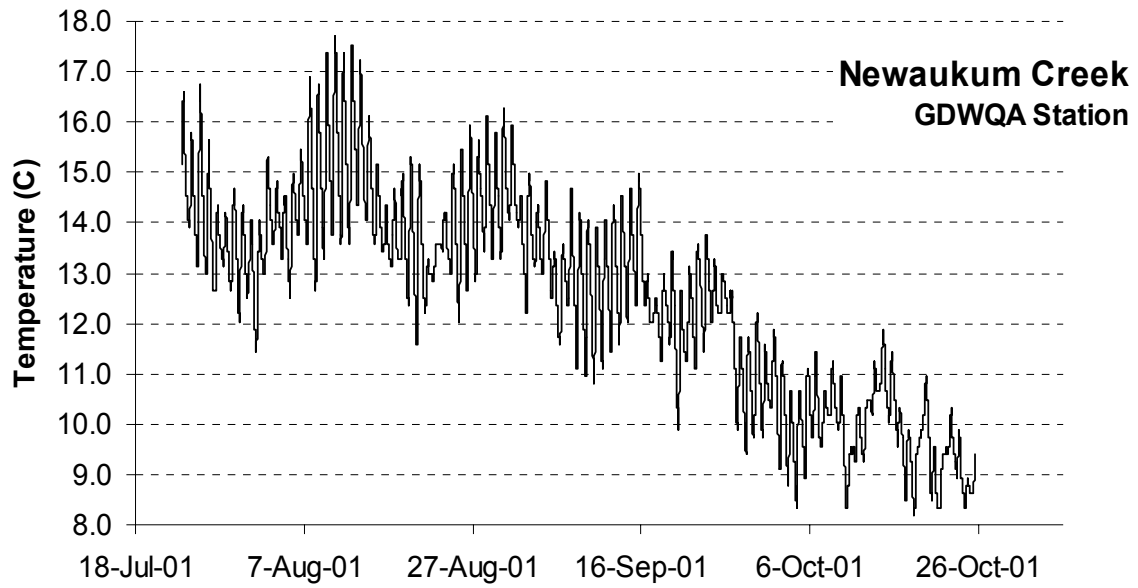
### Newaukum Creek Data

Flow data were obtained on Newaukum Creek (USGS Gage 12108500) from November 1994 through December 2002.

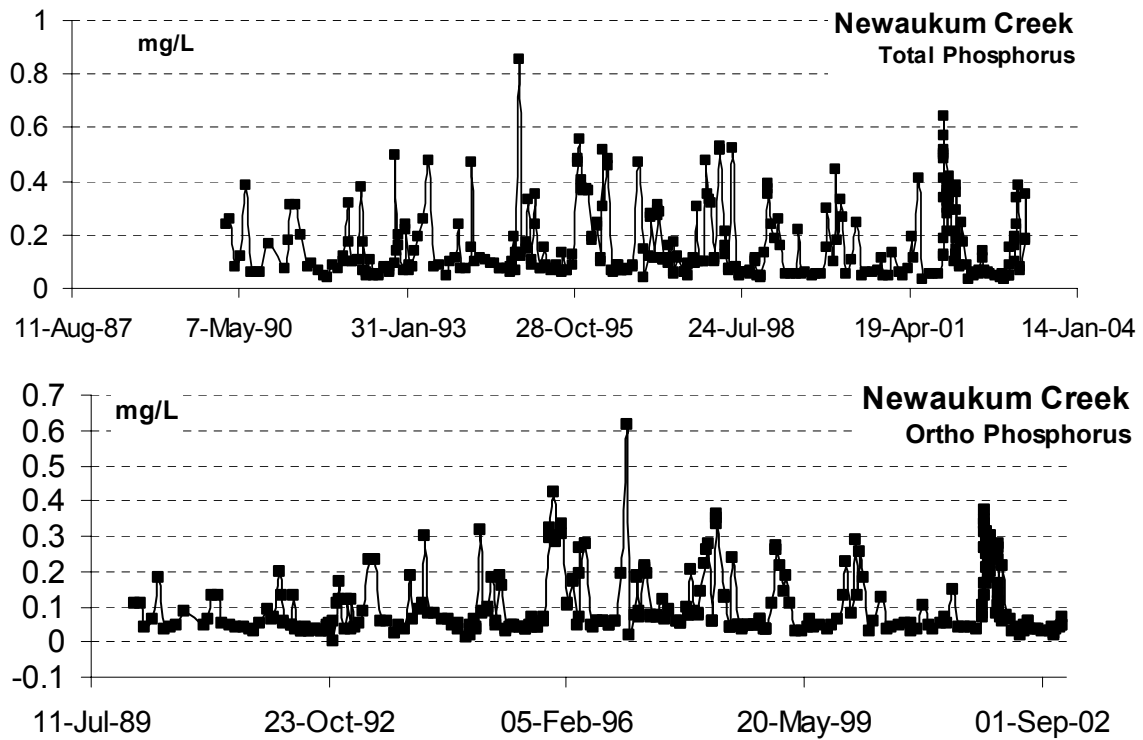


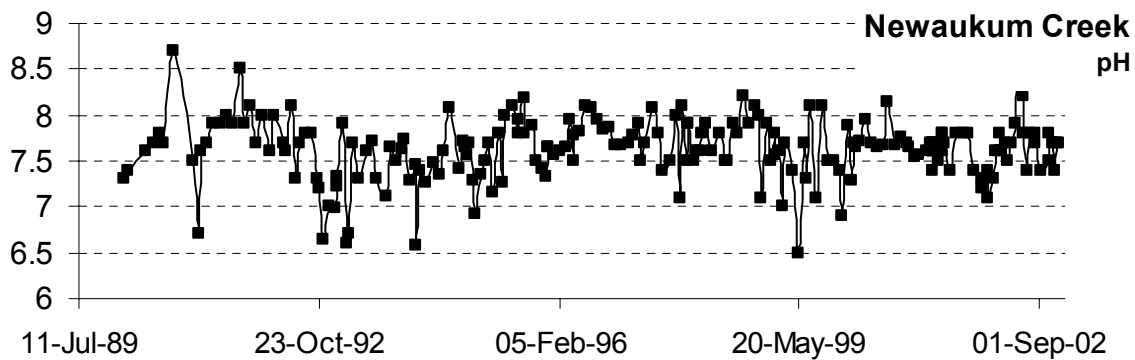
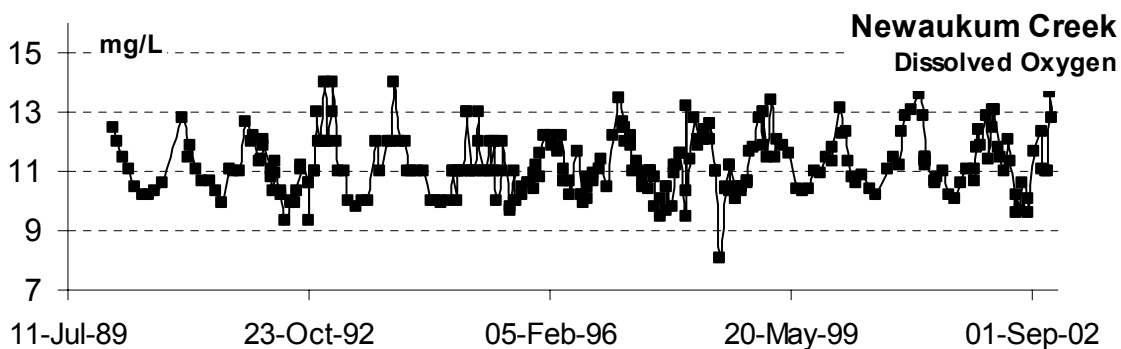
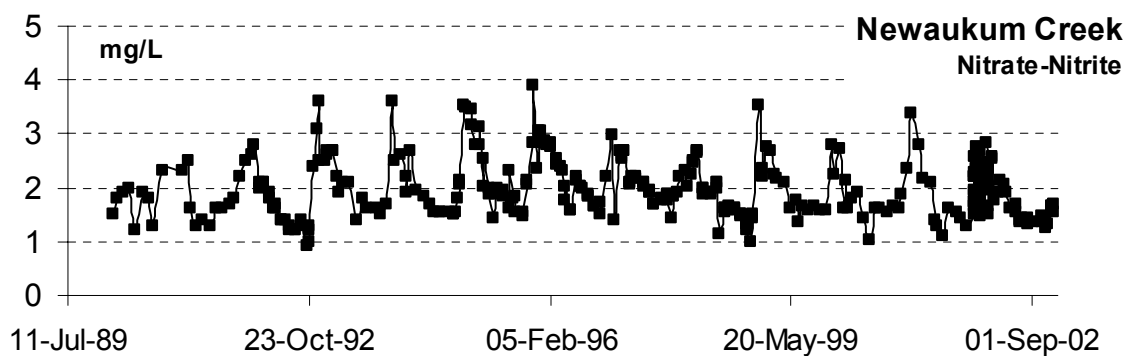
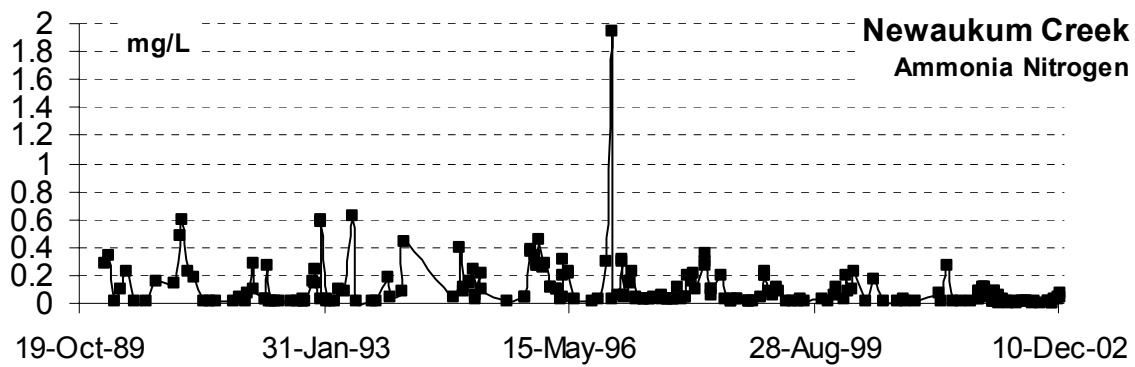
Both King County and the USGS recorded temperature on Newaukum Creek at different times. USGS recorded hourly temperature data from June 1996 to October 1998, and King County recorded temperature at the same location from July 2001 to the present. These data were provided in hourly intervals.

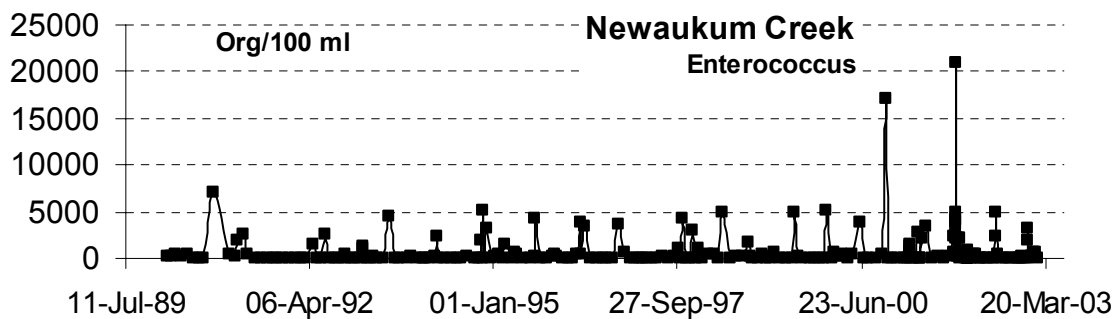
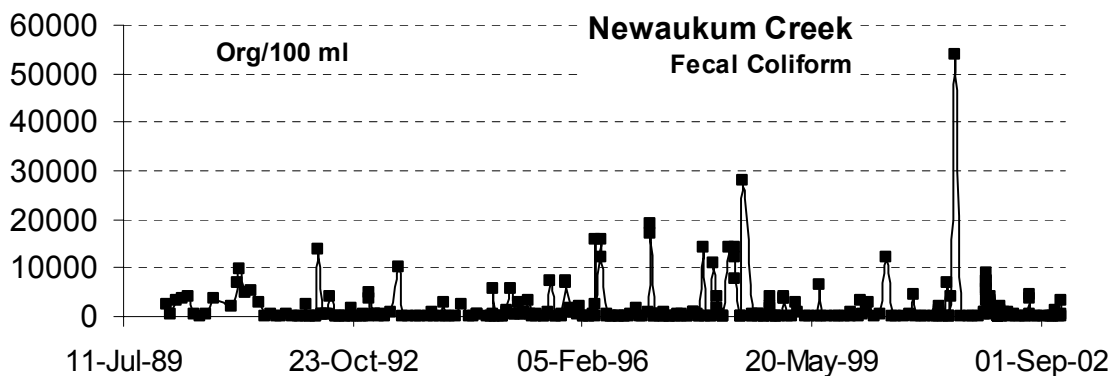
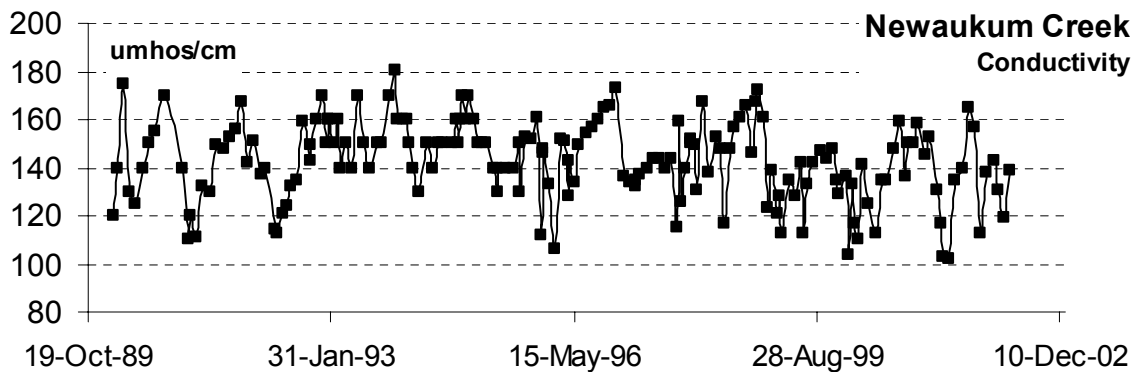
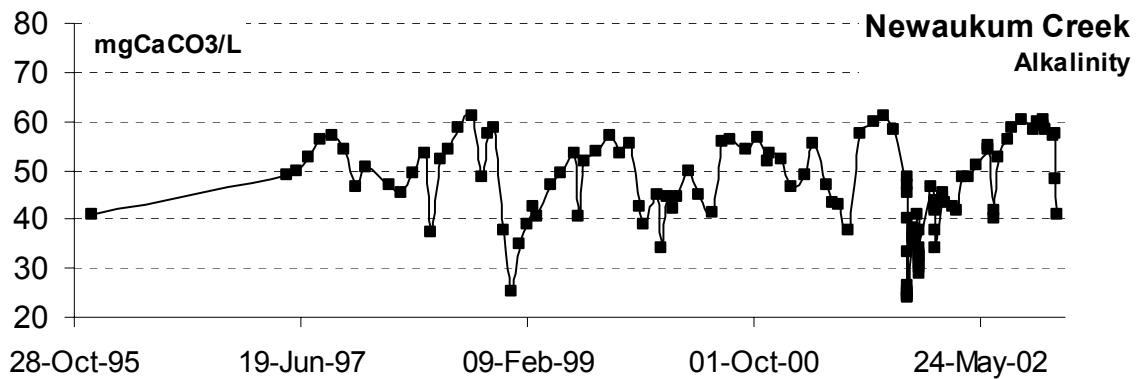


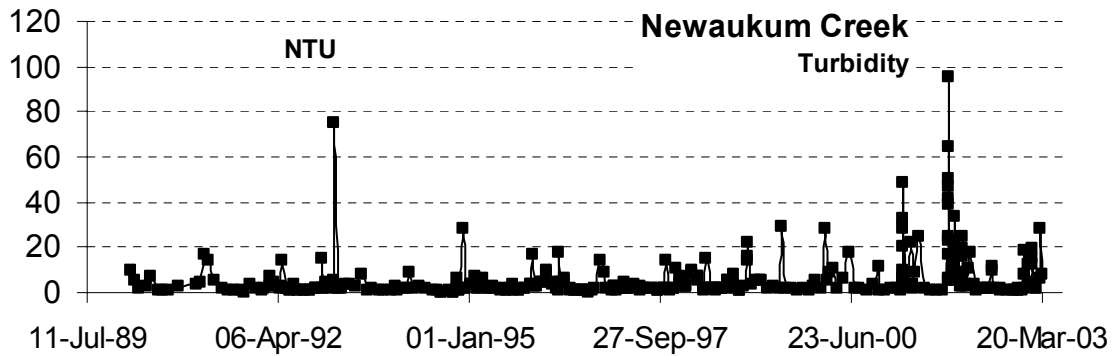
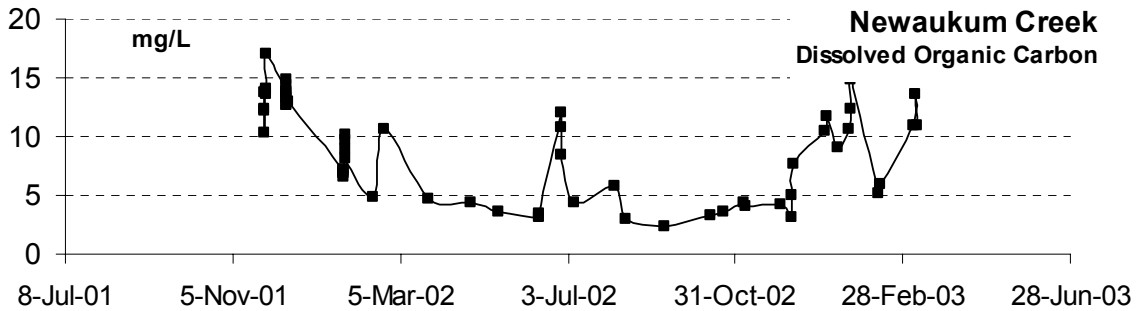
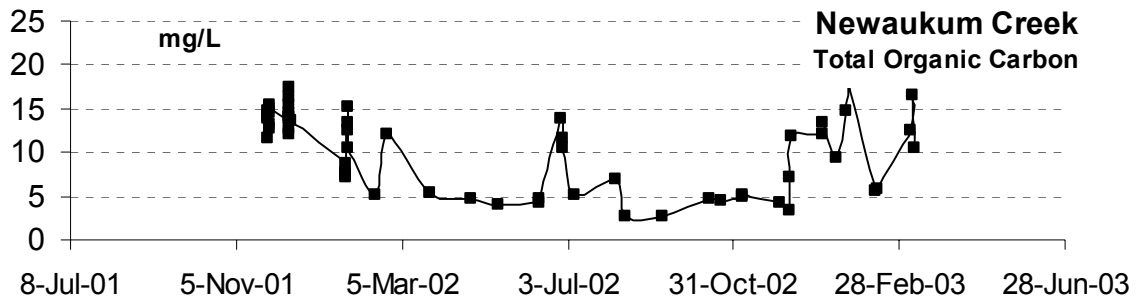


Water quality constituent data have been provided from 1990 to 2002.



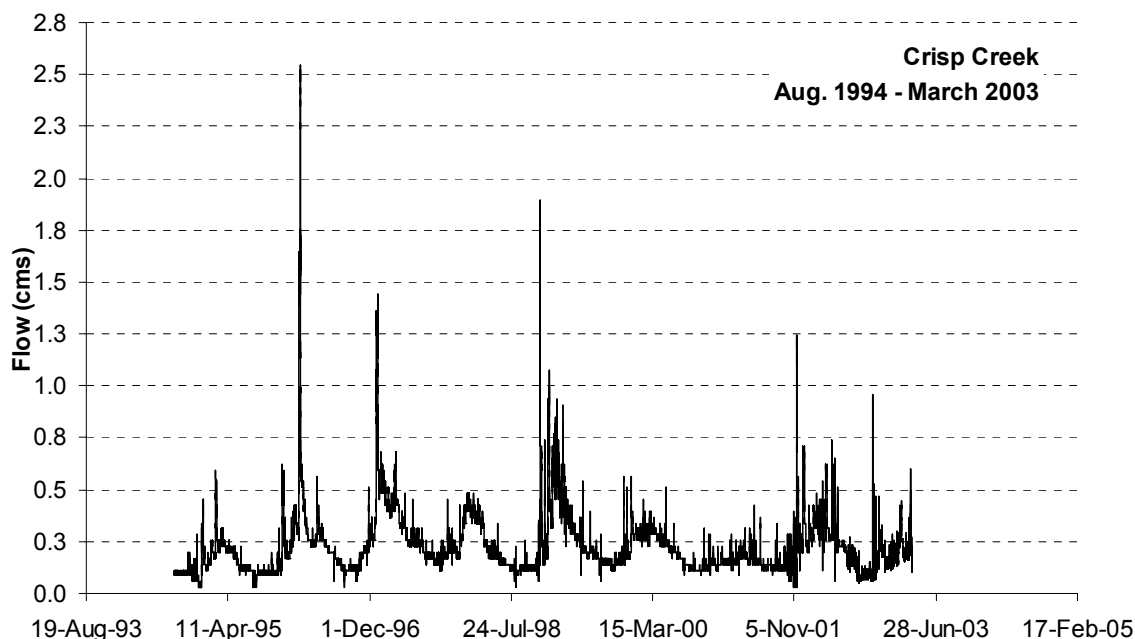




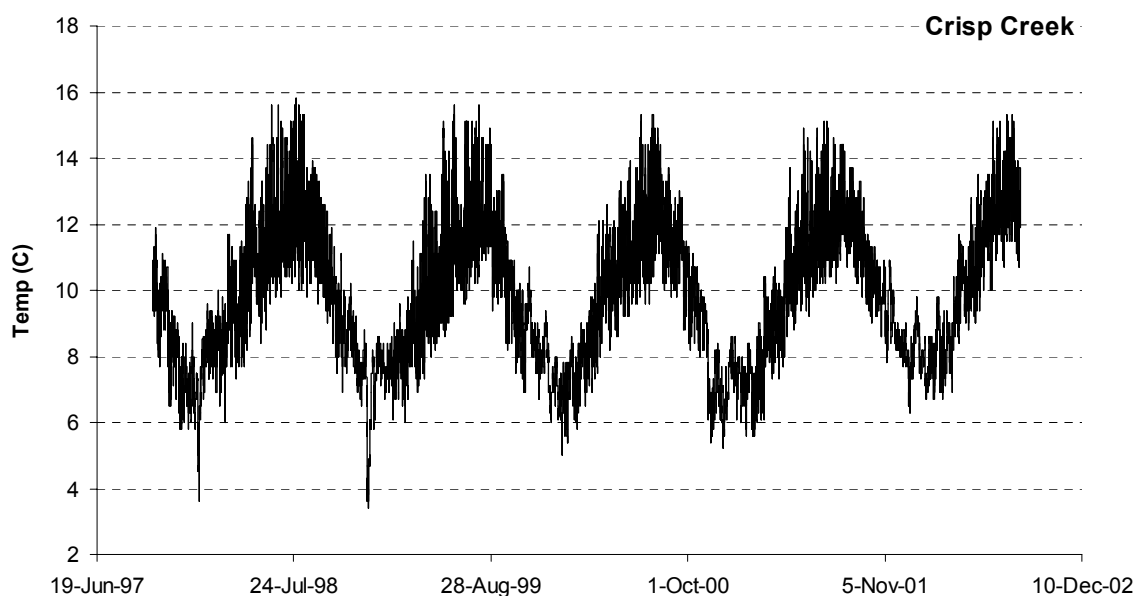


### Crisp Creek Data

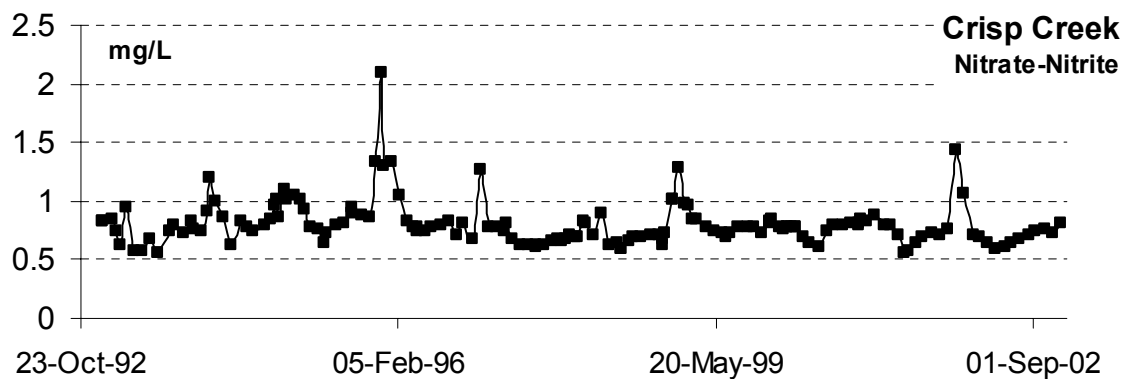
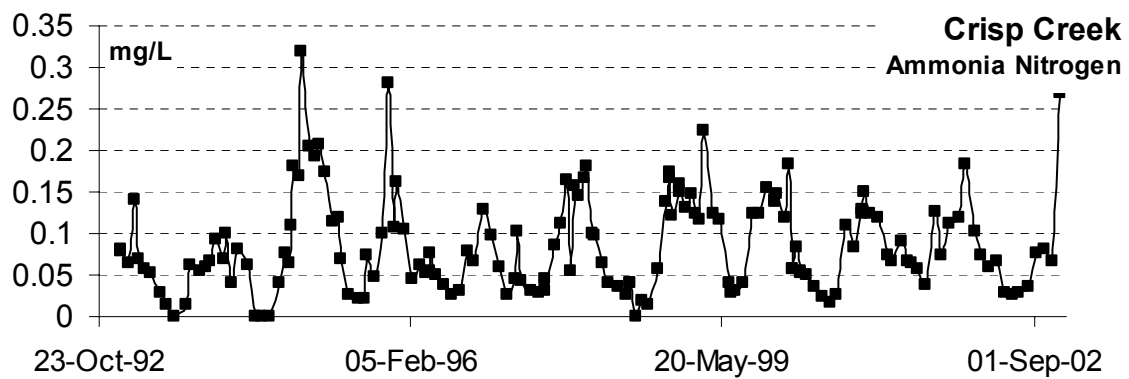
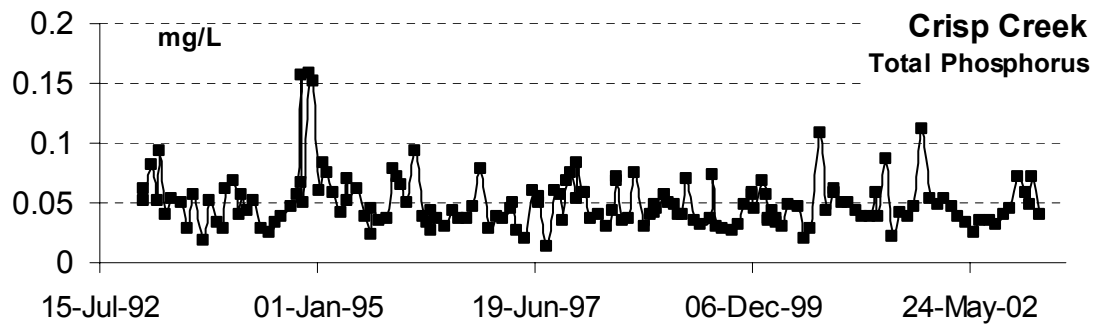
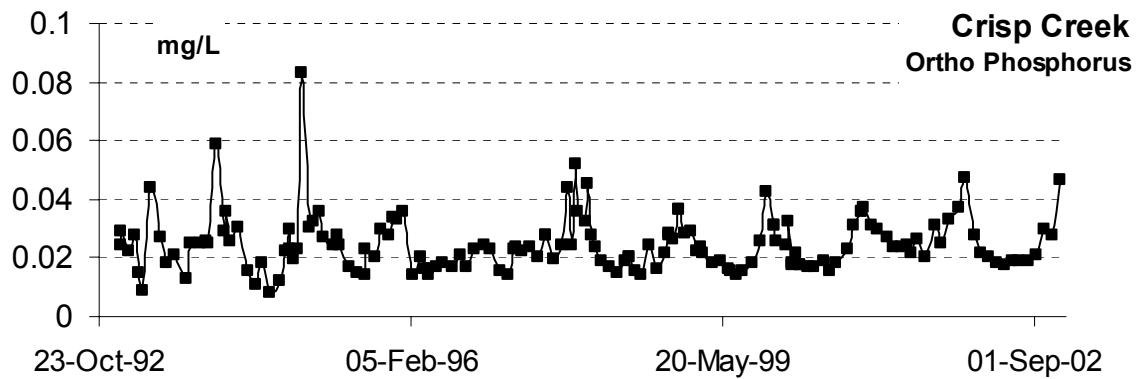
King County has a flow gage (#40d) on Crisp Creek. Data were obtained in 15-minute intervals from August 1994 through March 2003.



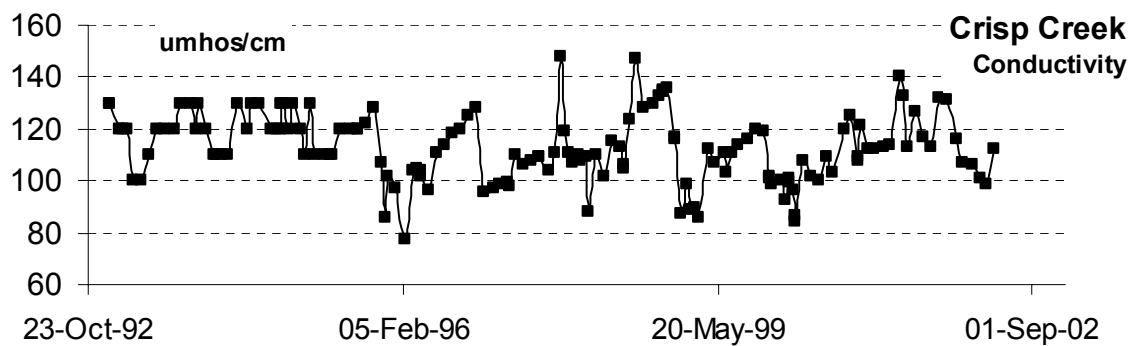
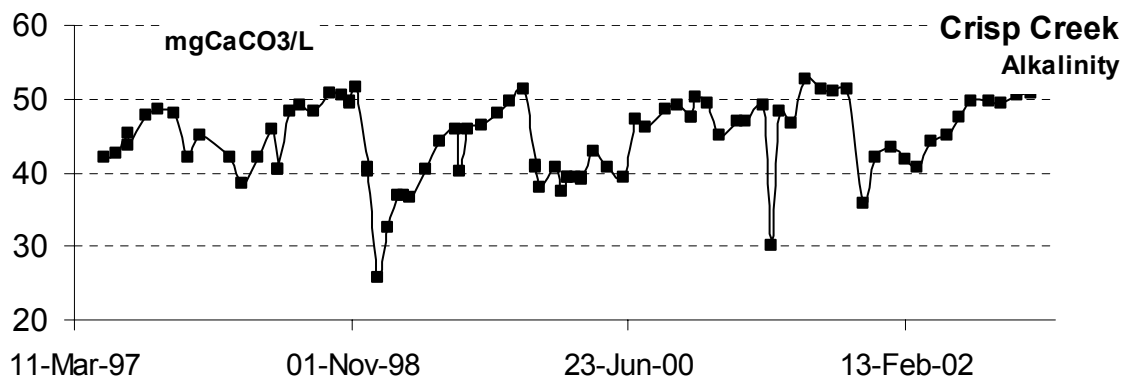
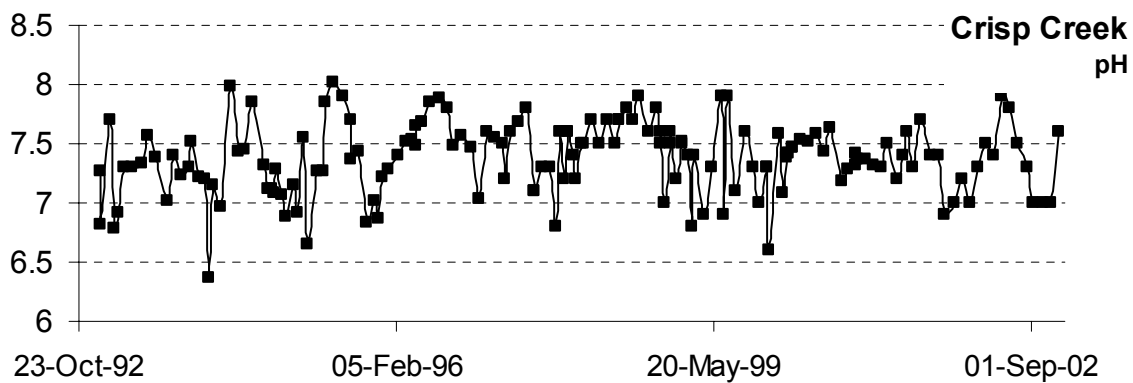
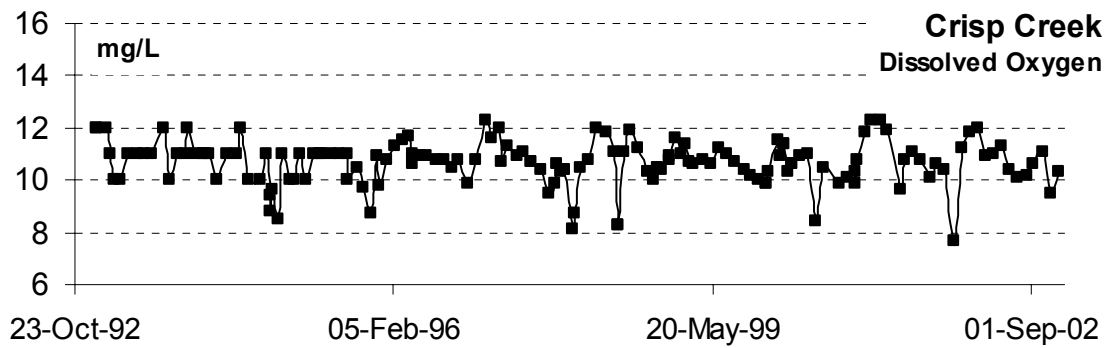
Temperature data for Crisp Creek were recorded by King County (#40d) in 15-minute intervals. Data were provided from October 1997 to August 2002.

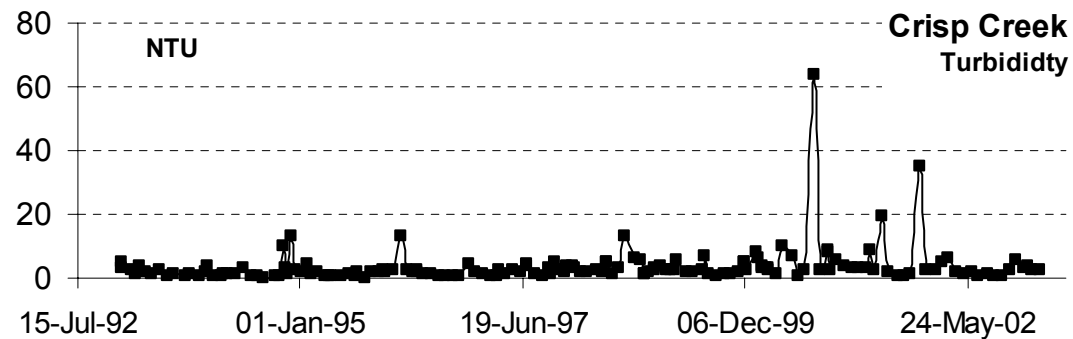
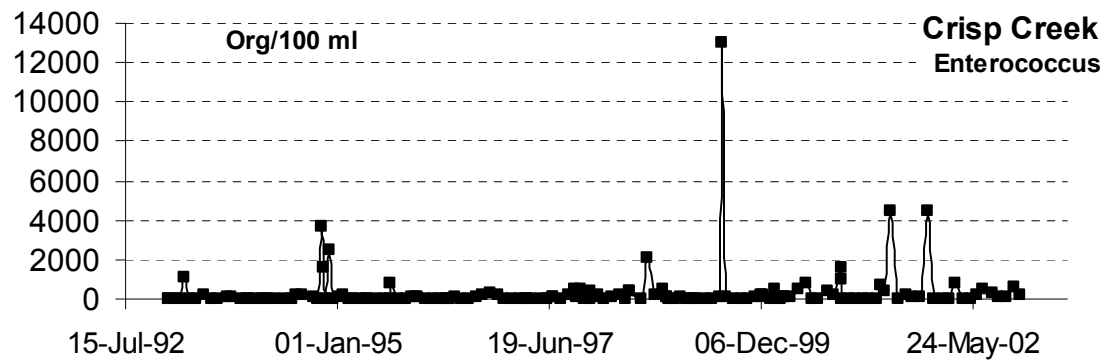
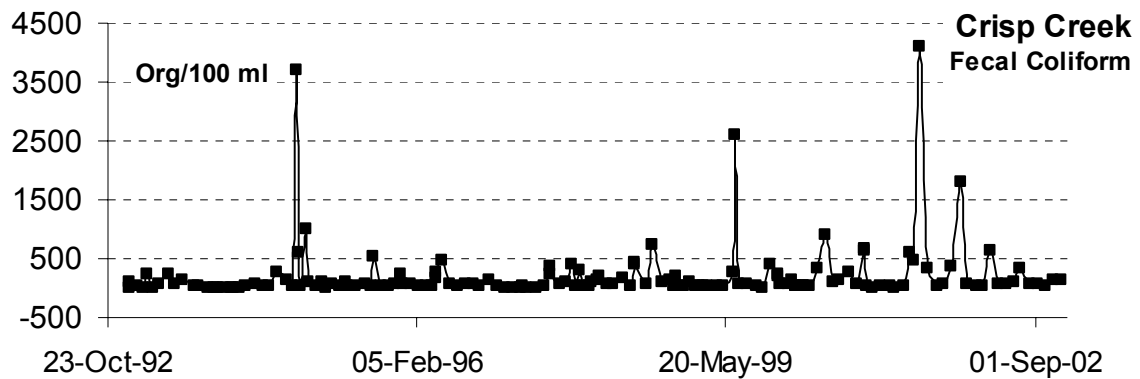


Water quality constituent data were provided from 1990 to 2002.



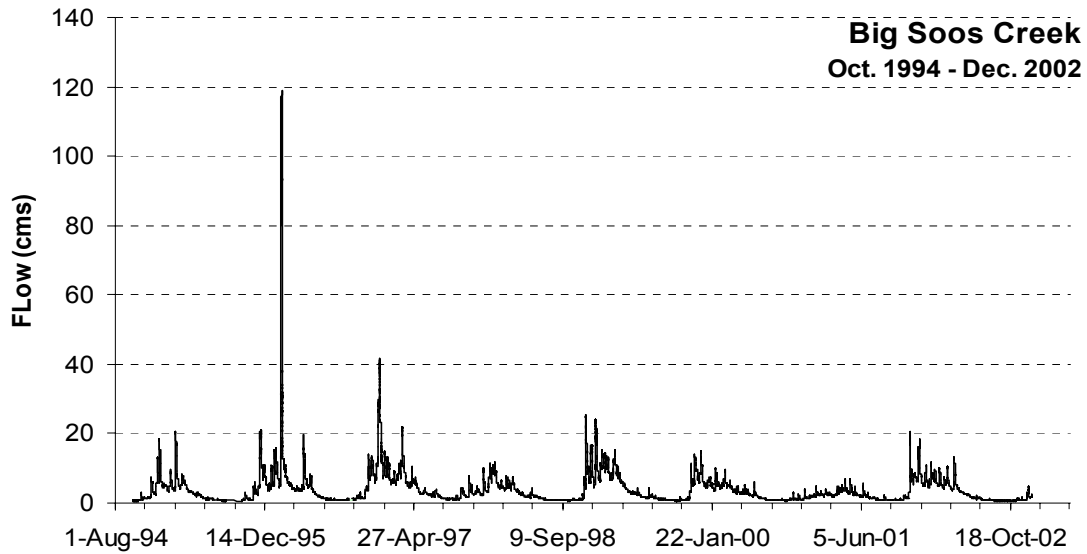




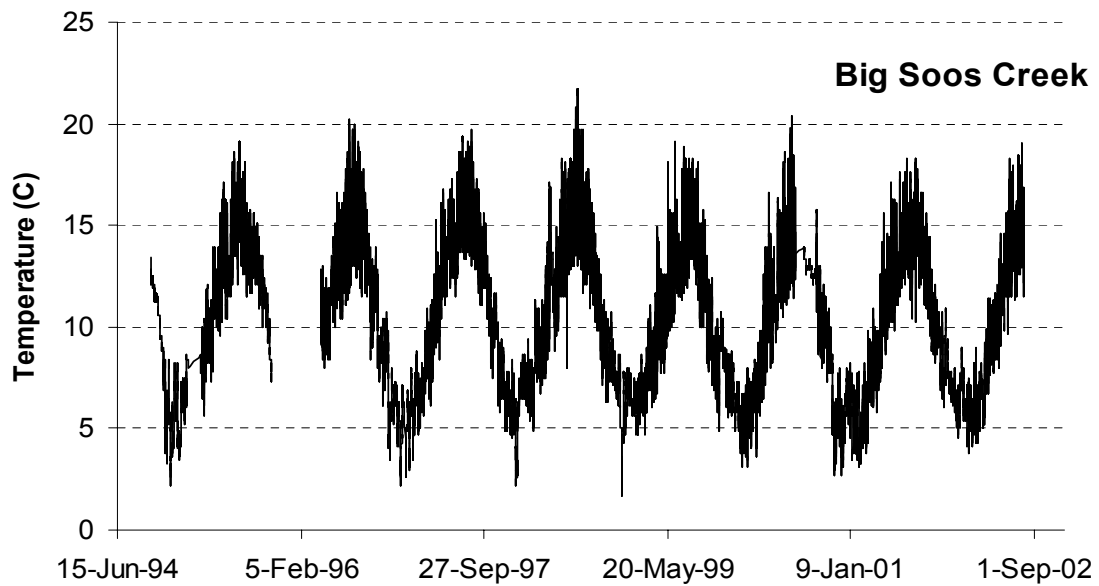


### Big Soos Creek Data

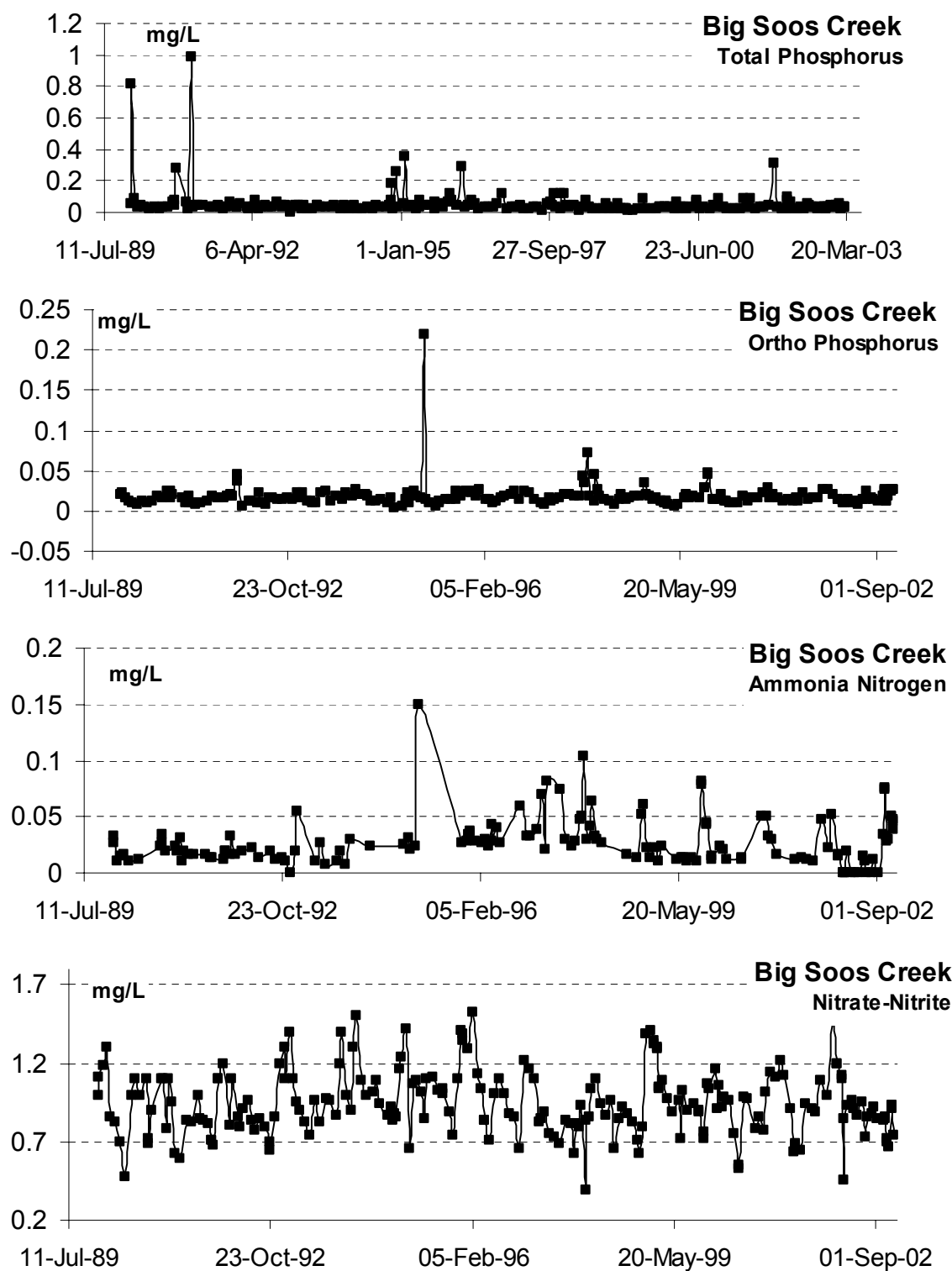
USGS has a flow gage (#12112600) on Big Soos Creek. Data were obtained in 15-minute intervals from October 1994 through December 2002.

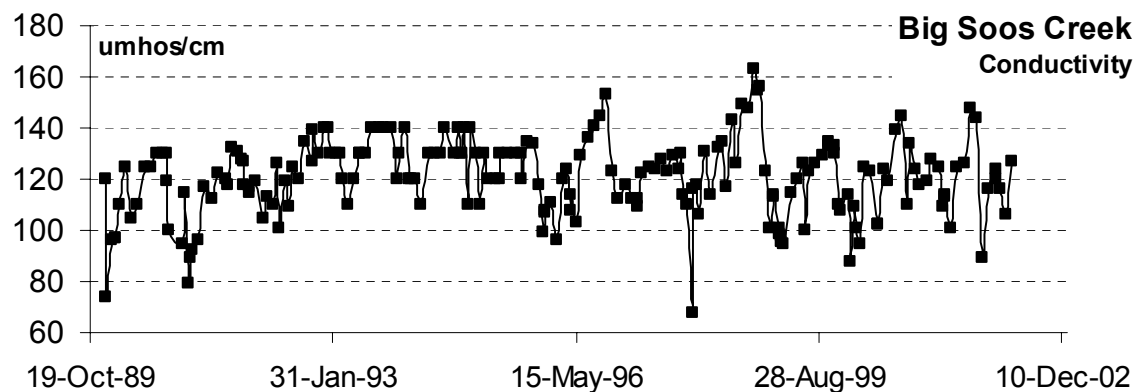
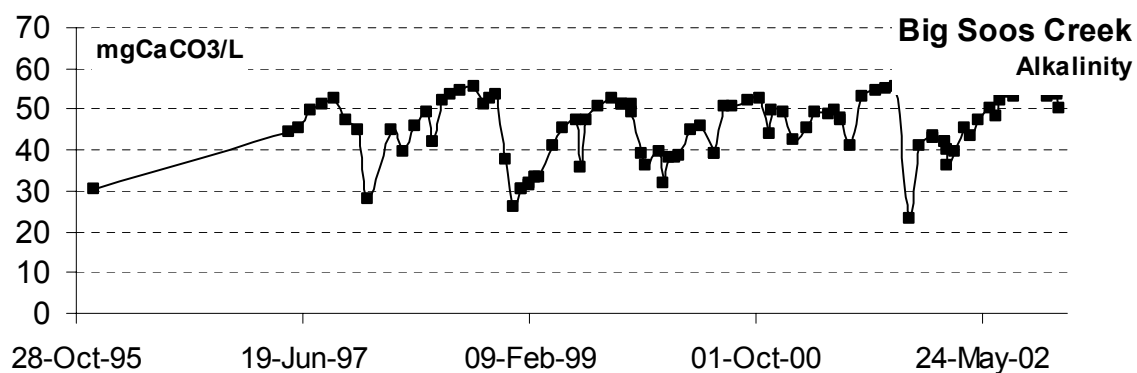
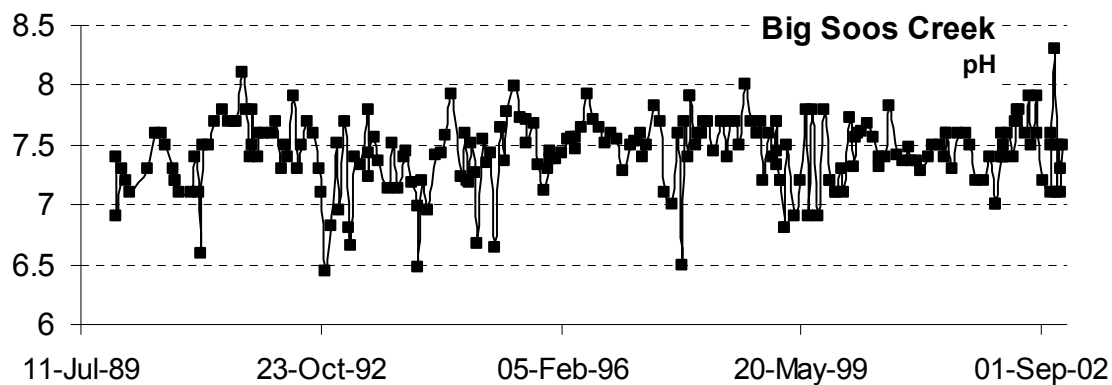
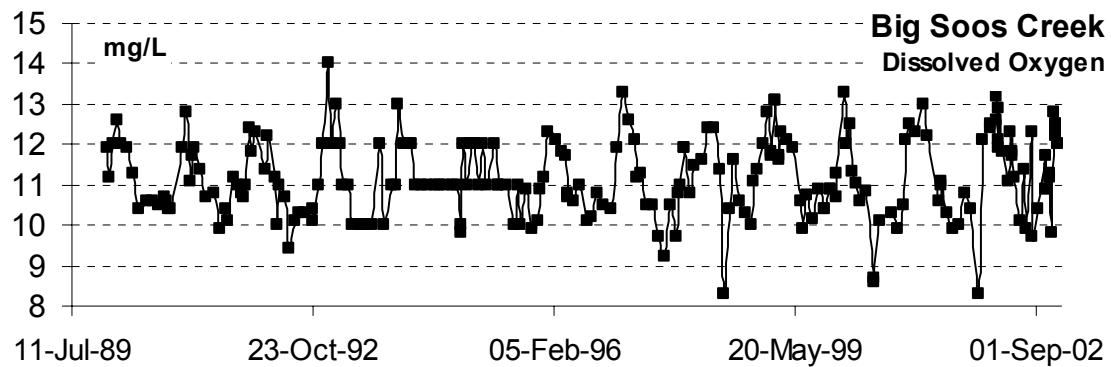


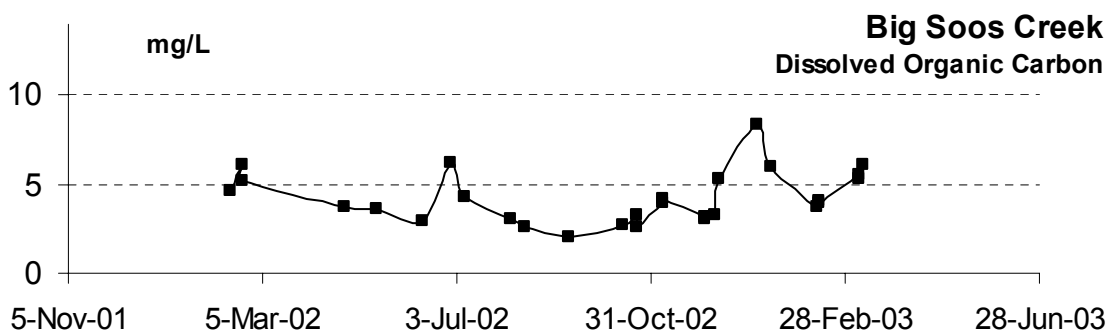
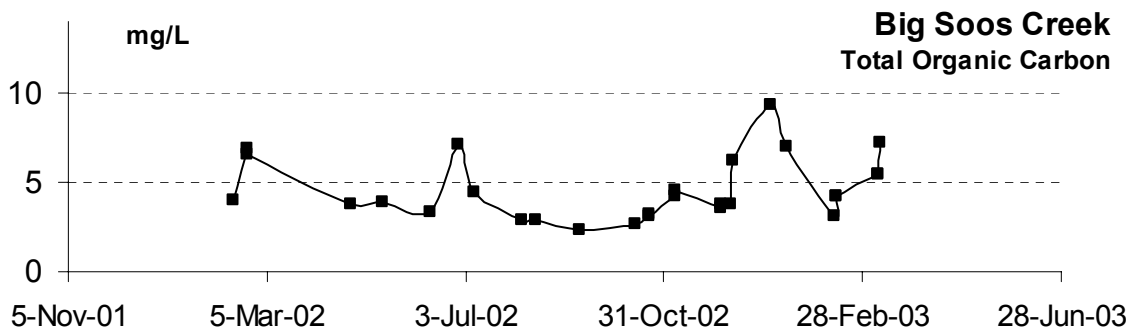
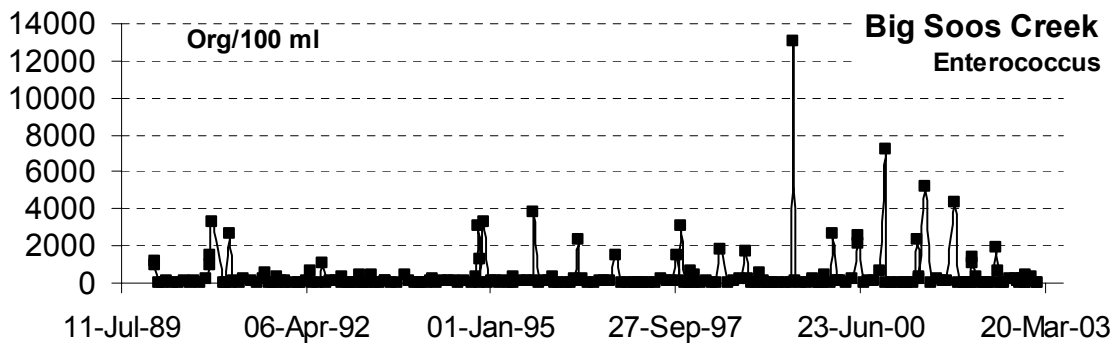
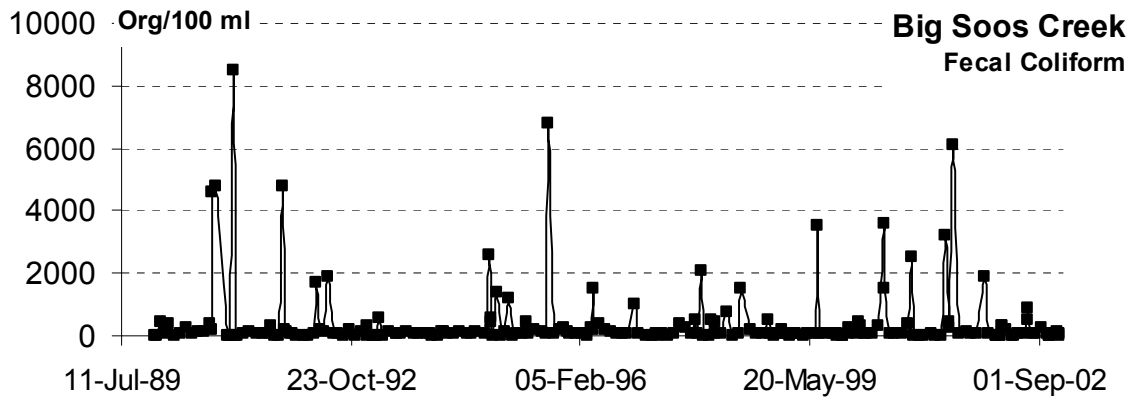
Temperature was recorded by King County (#54a) at the mouth of Big Soos Creek in 15-minute intervals. Data were provided from October 1994 to August 2002.

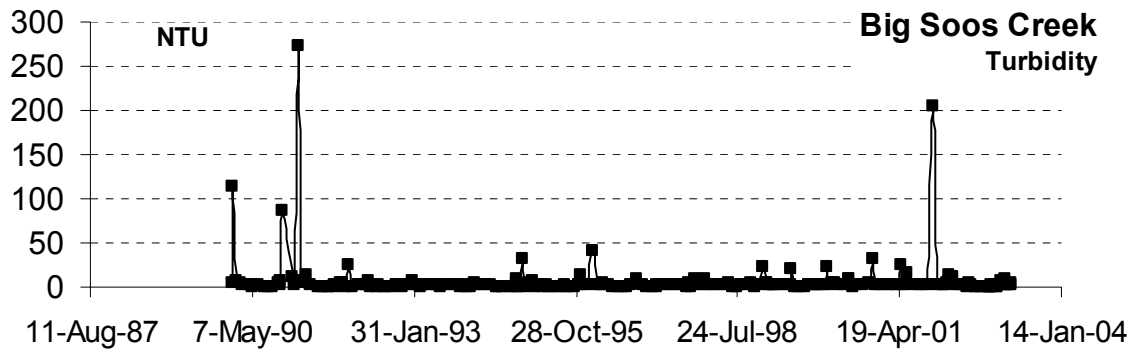


Water quality constituent data were provided from 1990 to 2002.



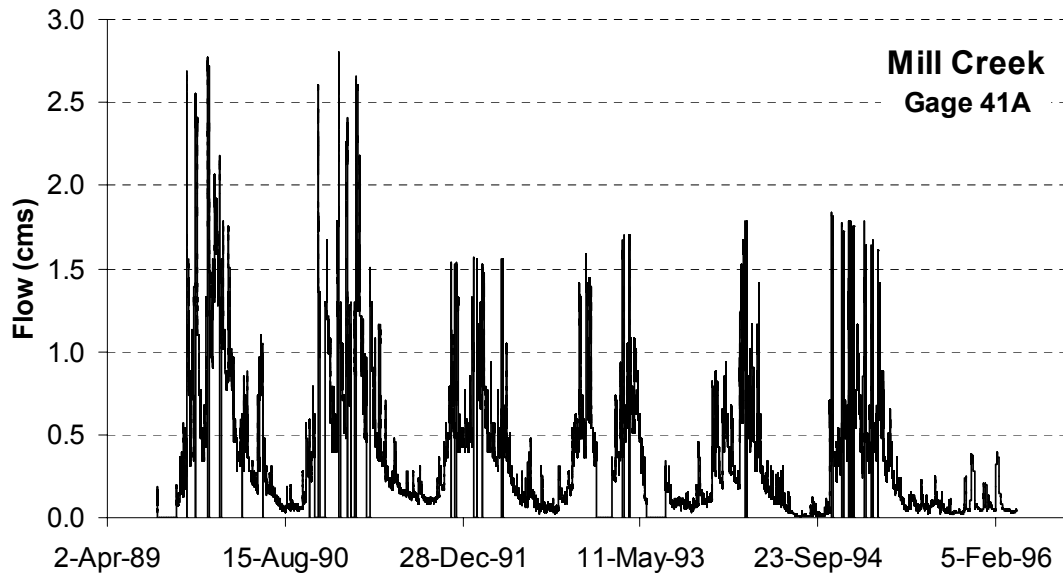




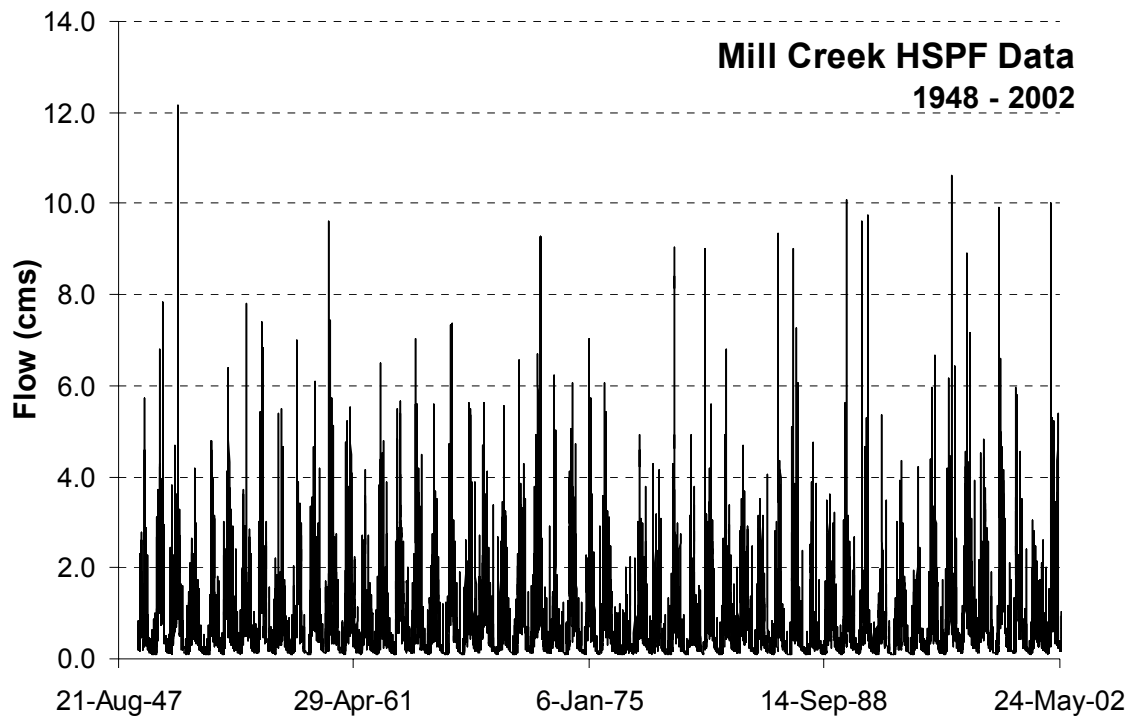


### Mill Creek Data

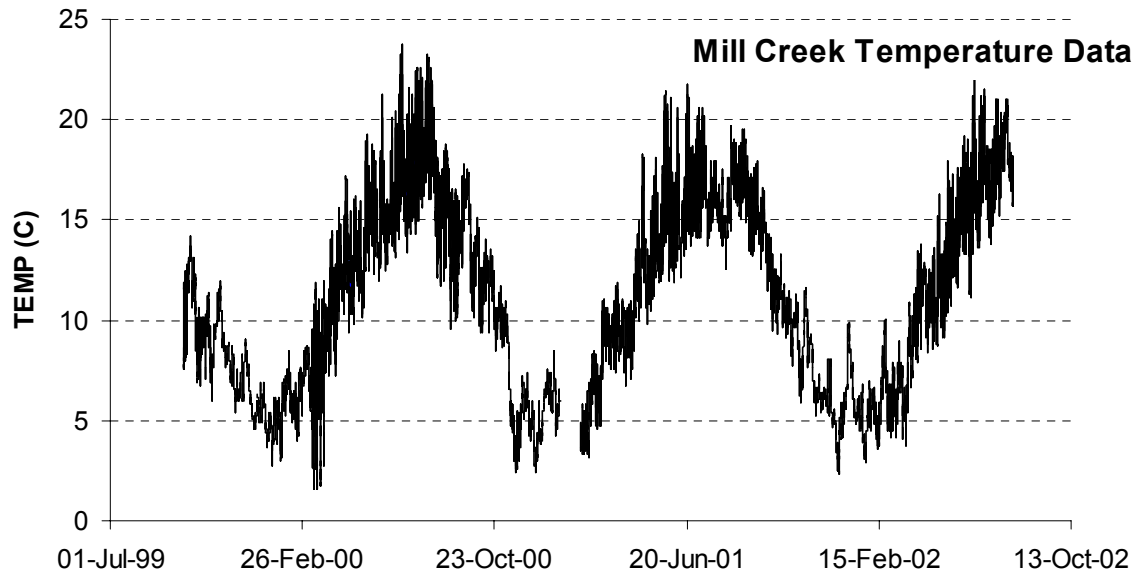
King County has a flow gage (#41a) on Mill Creek that recorded data through March 1996. Data from this gage has been determined to be unreliable because of backwater from Green River (DeGasperi 2003).



King County has modeled the Mill Creek drainage and provided daily average flow data from 1948 to 2002.

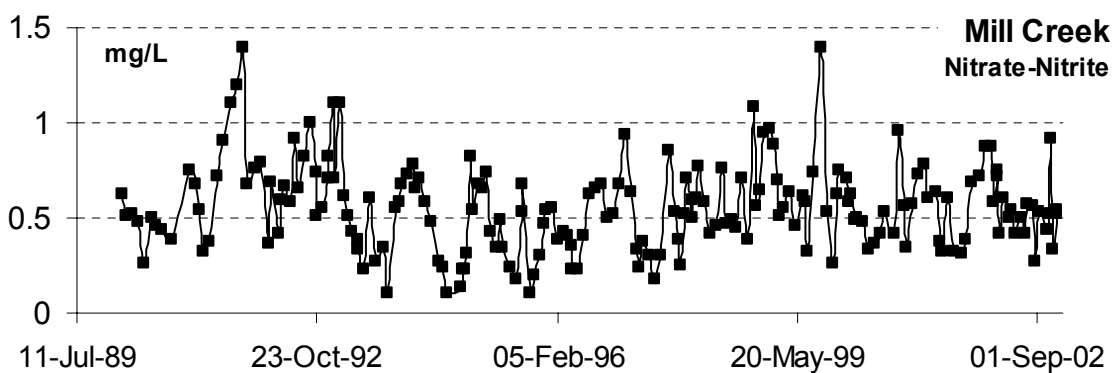
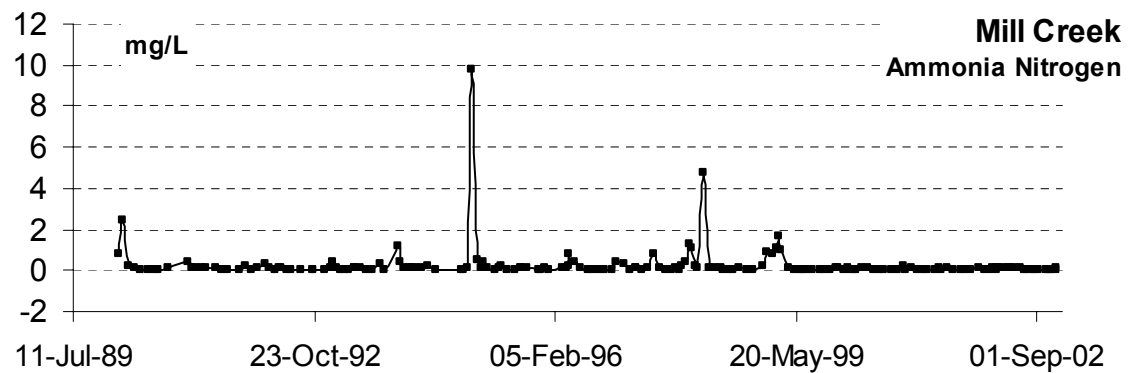
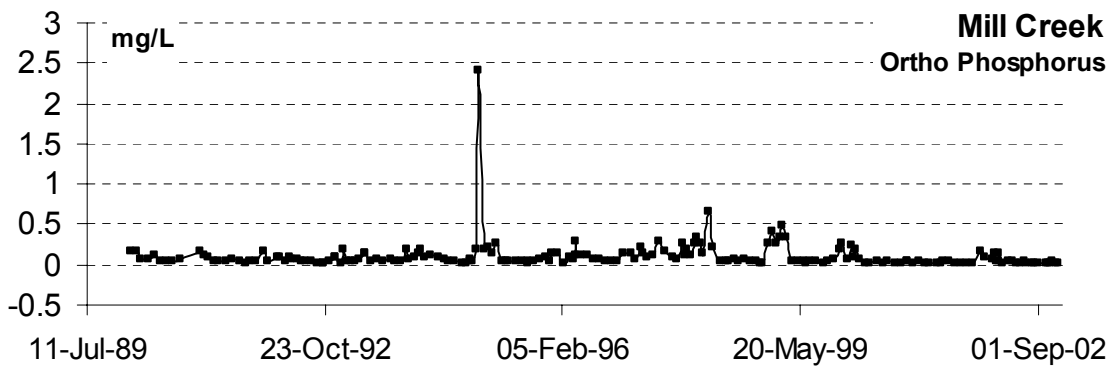
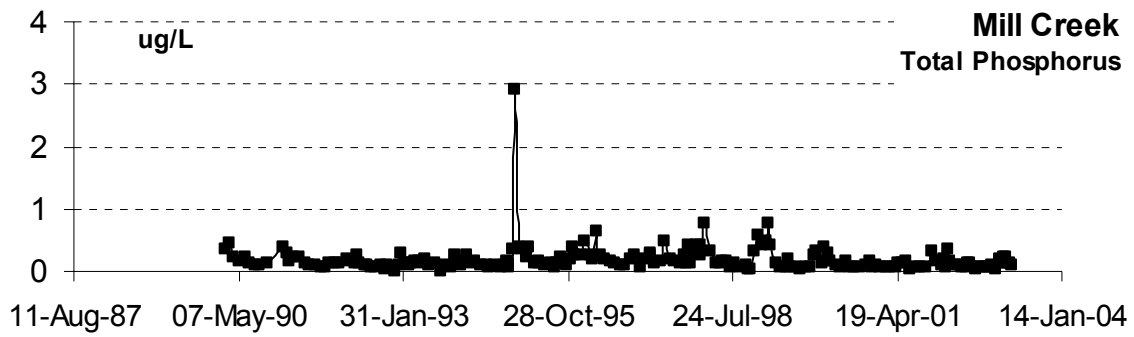


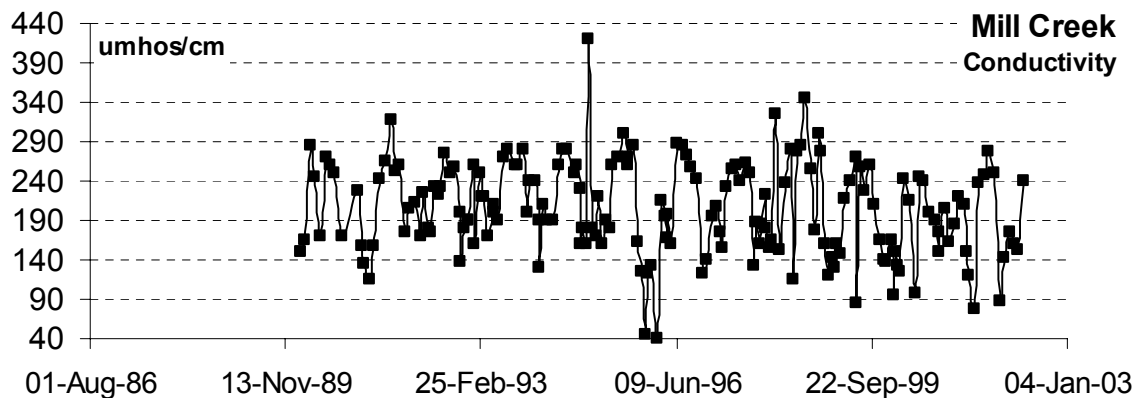
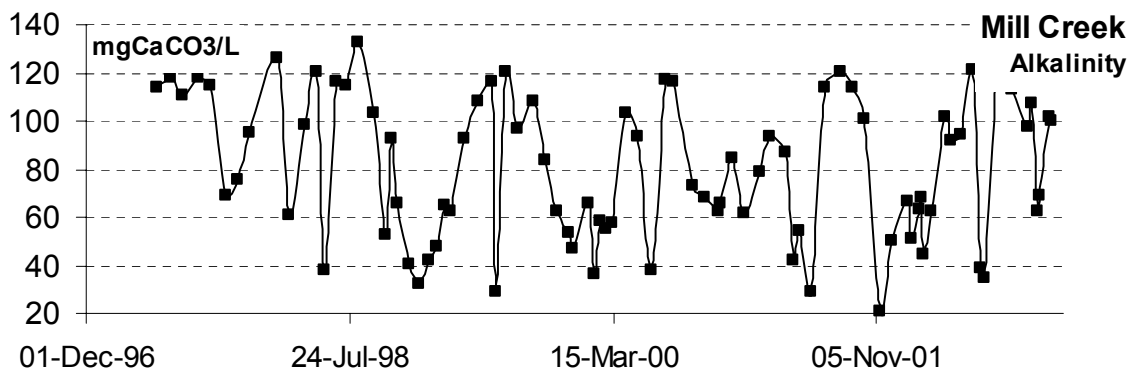
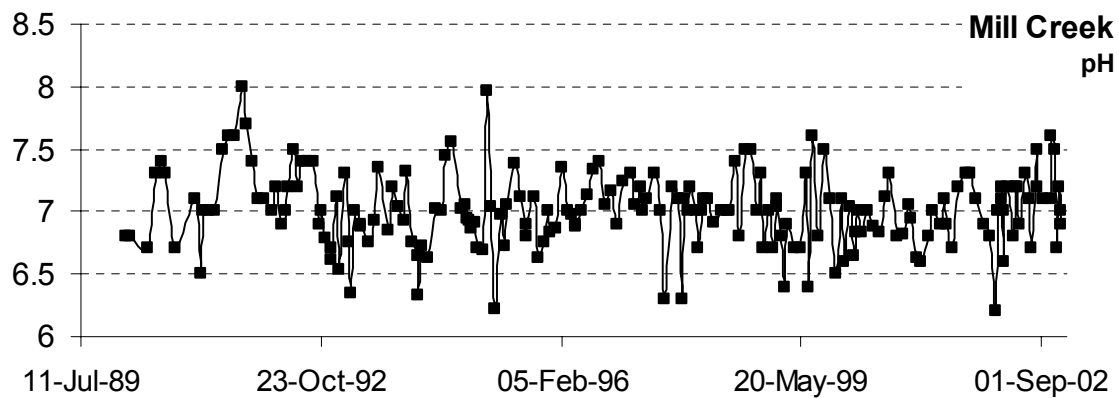
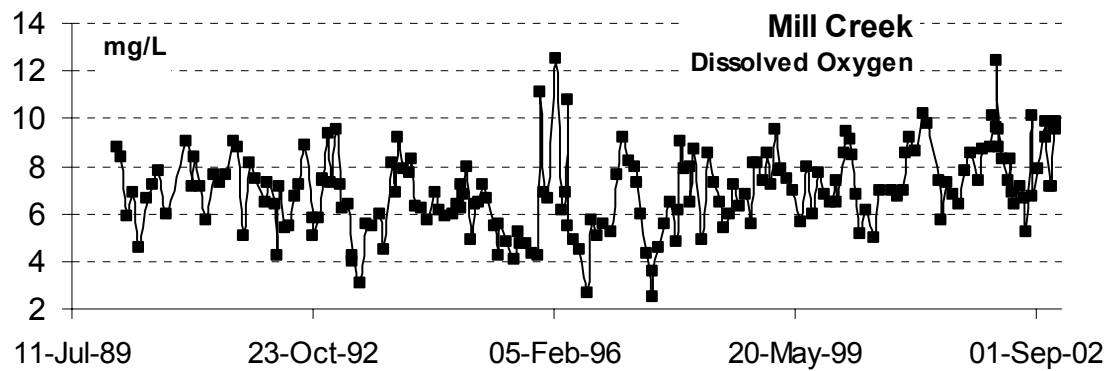
Mill Creek Temperature was recorded in 15-minute intervals by King County (41a), and data were provided from October 1999 to August 2002.

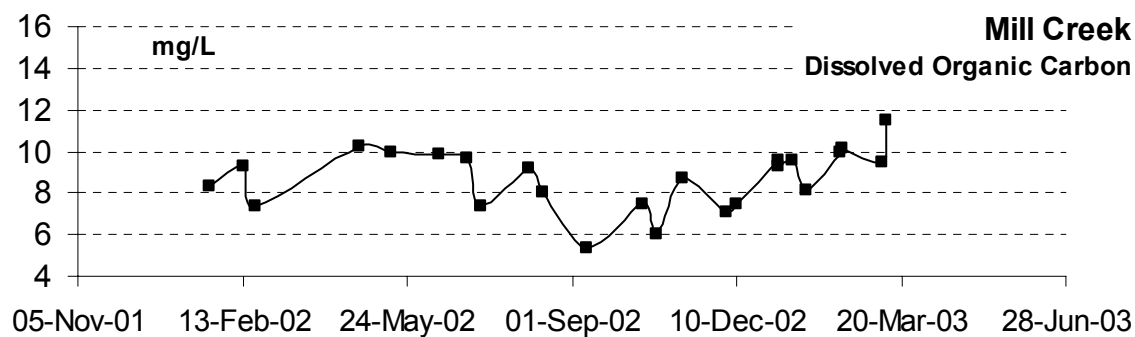
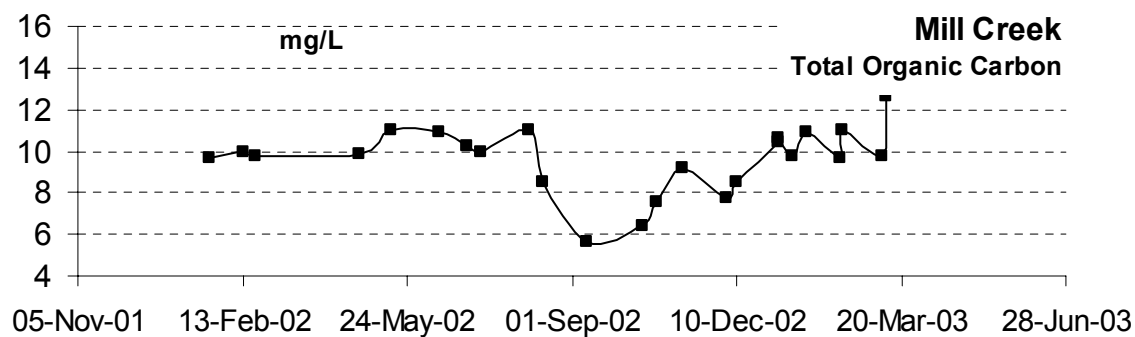
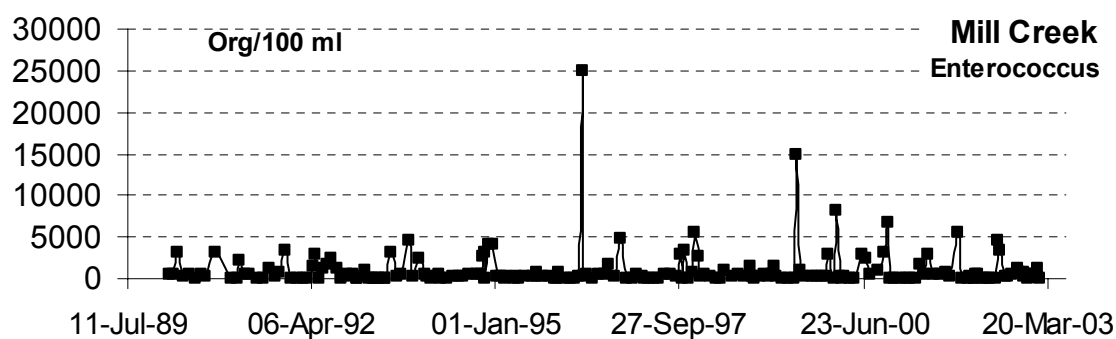
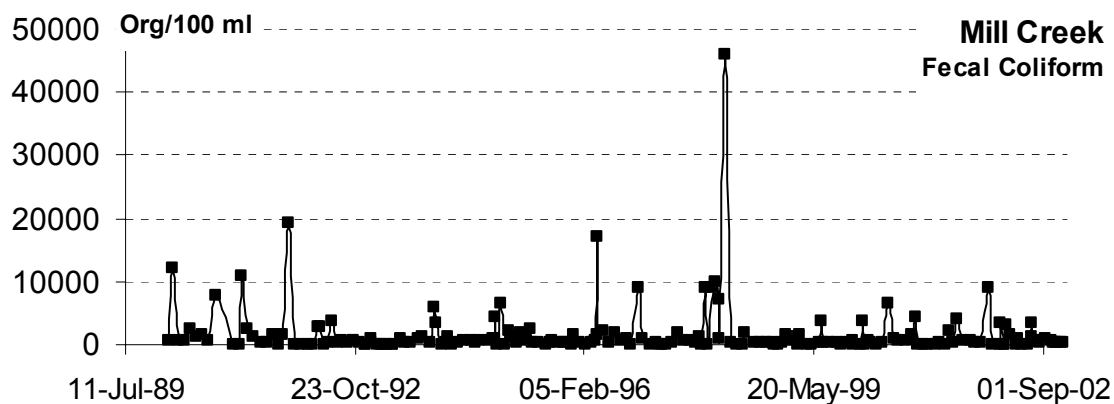


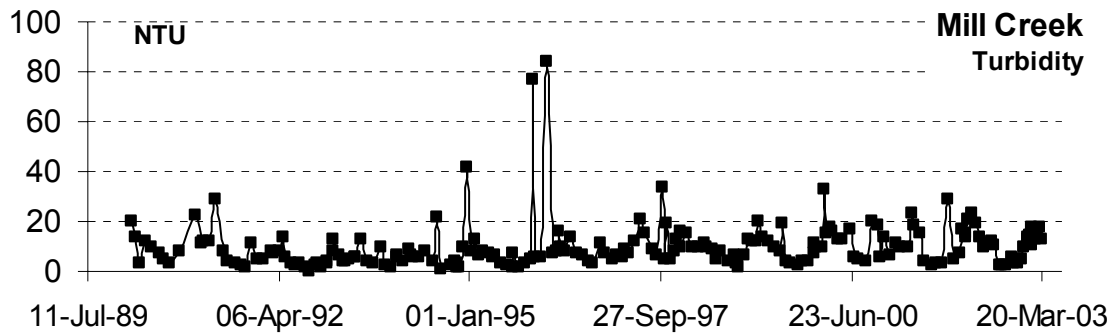
Water quality constituent data were provided from 1990 to 2002.





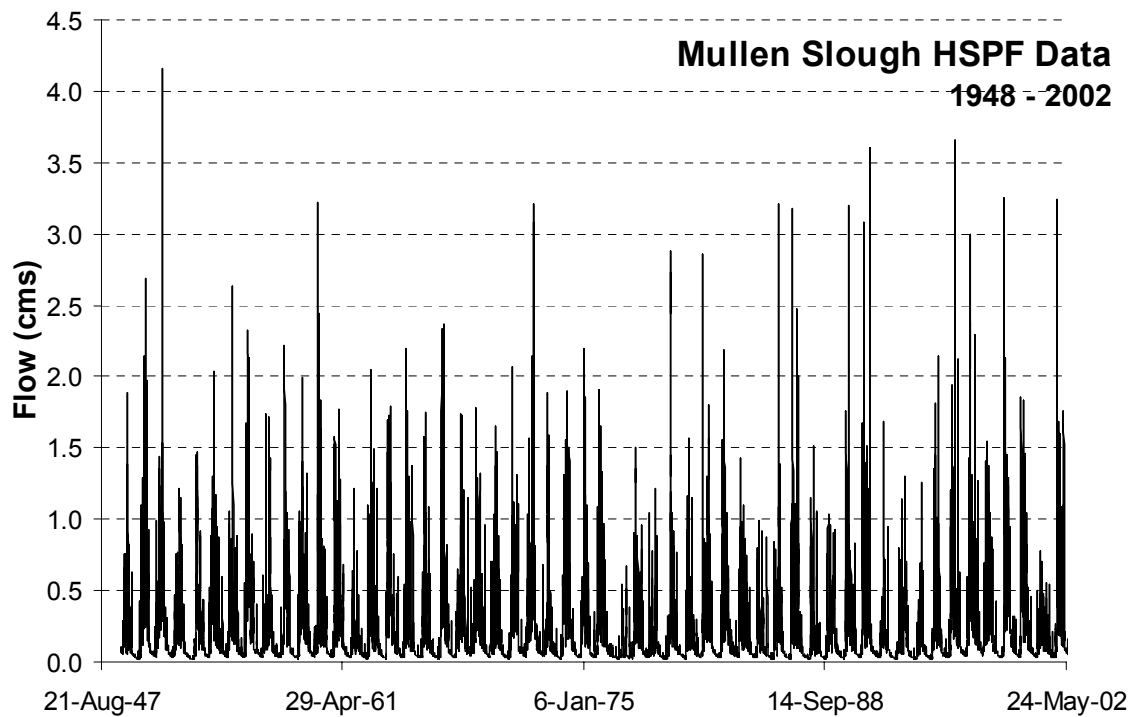


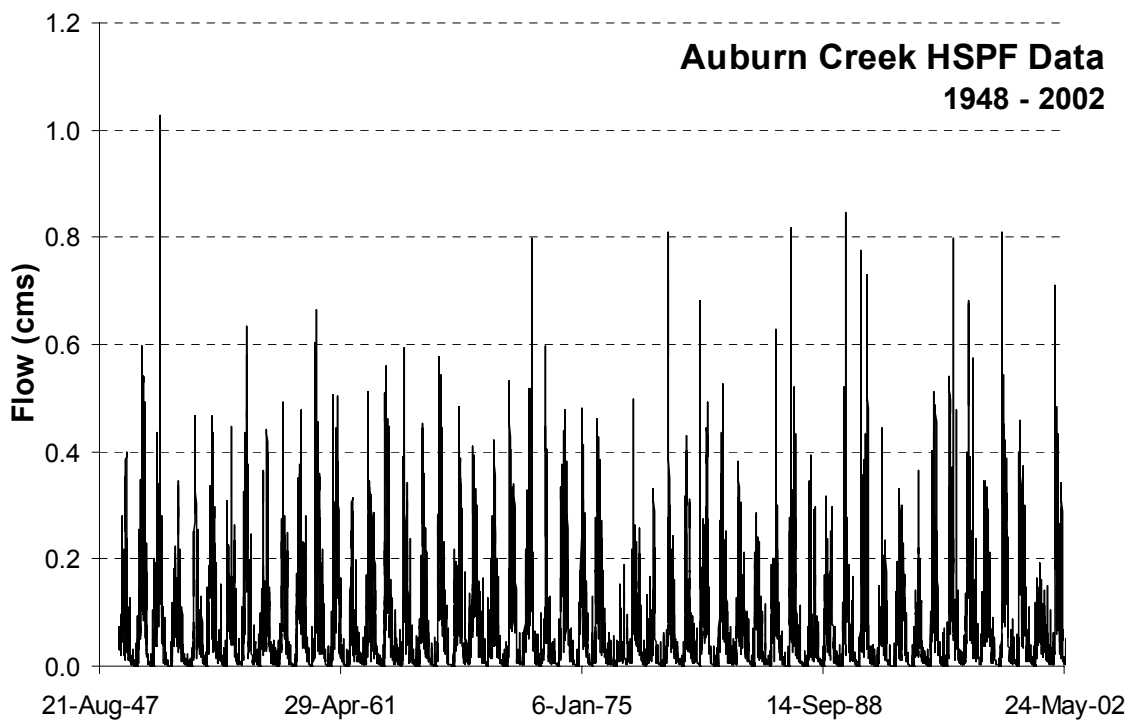
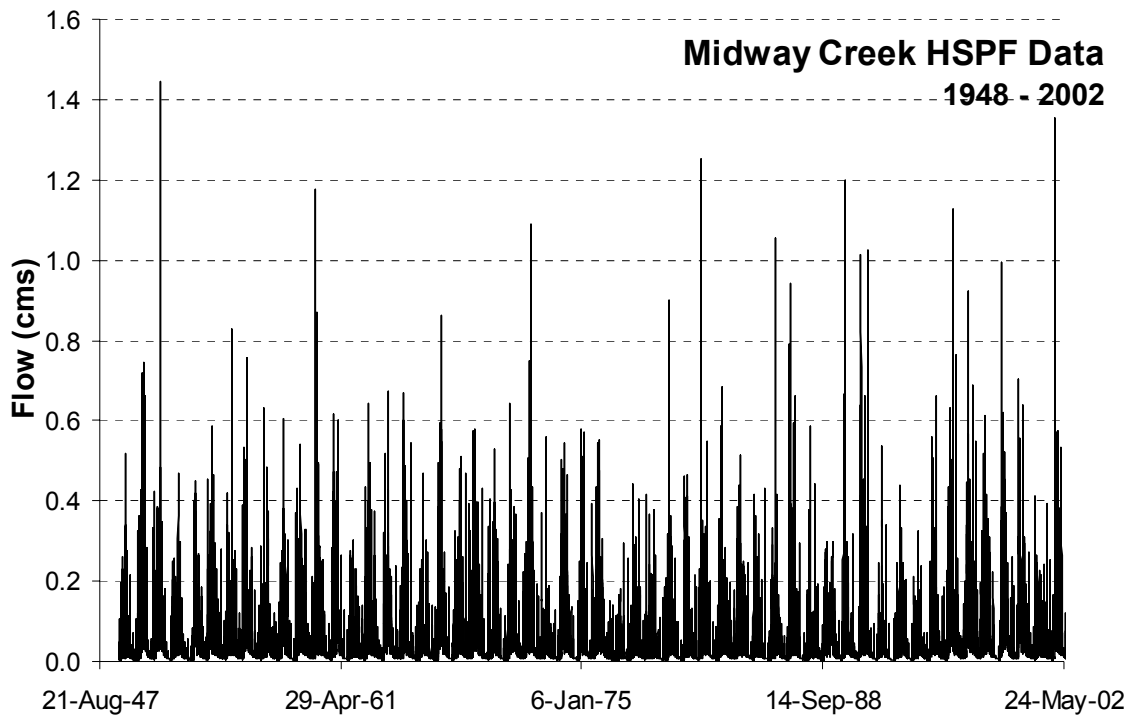




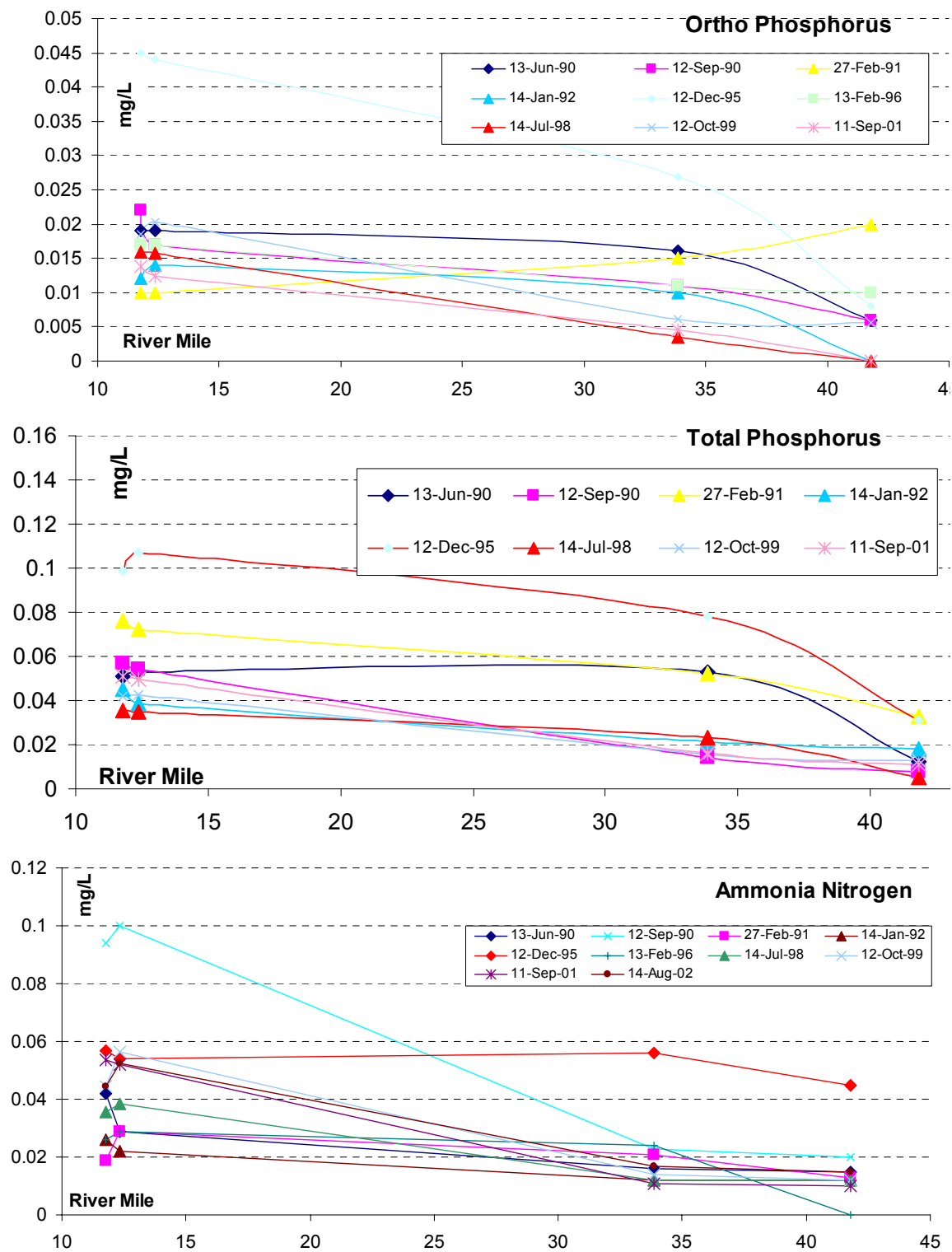
### Mullen Slough, Midway Creek, and Auburn Creek

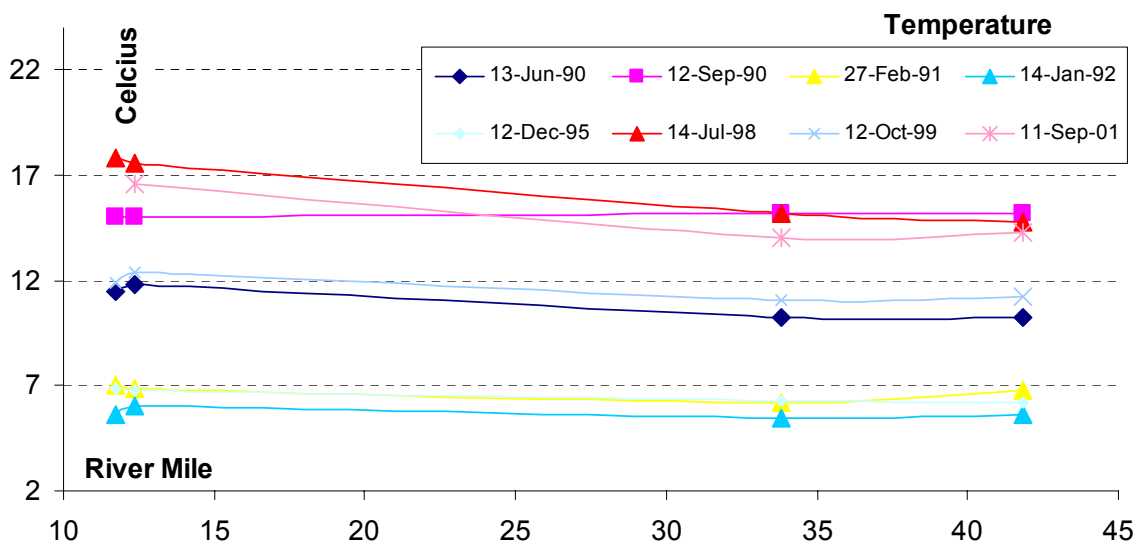
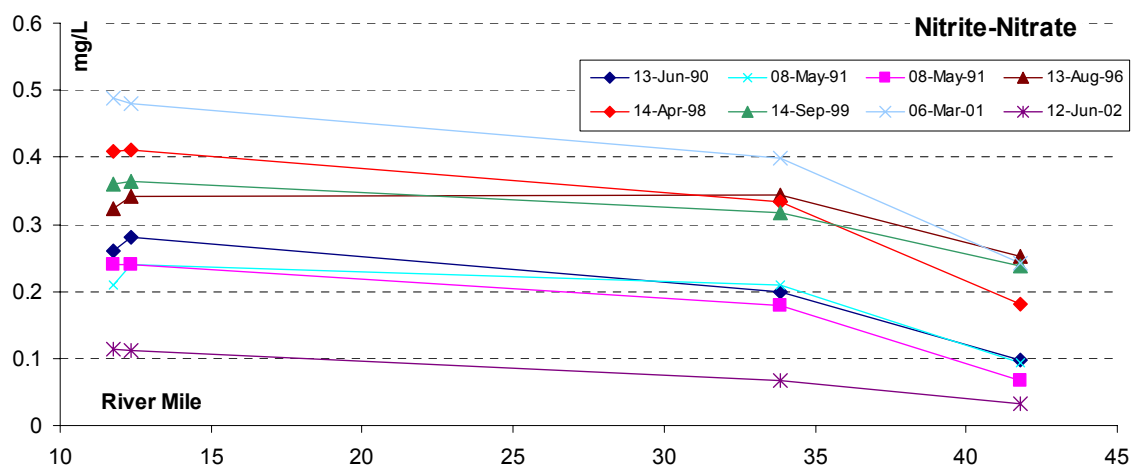
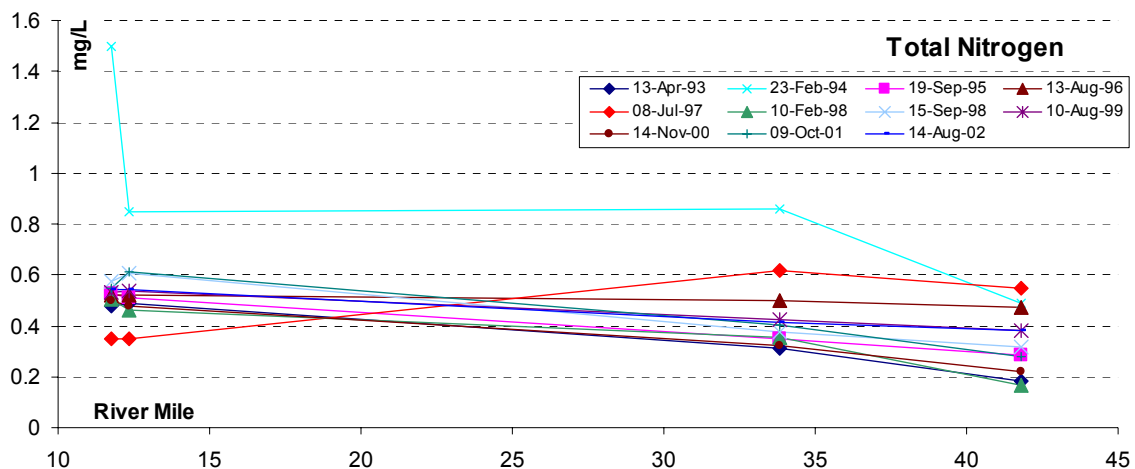
King County provided HSPF data for Mullen Slough, Midway Creek, and Auburn Creek from 1948 to 2002.

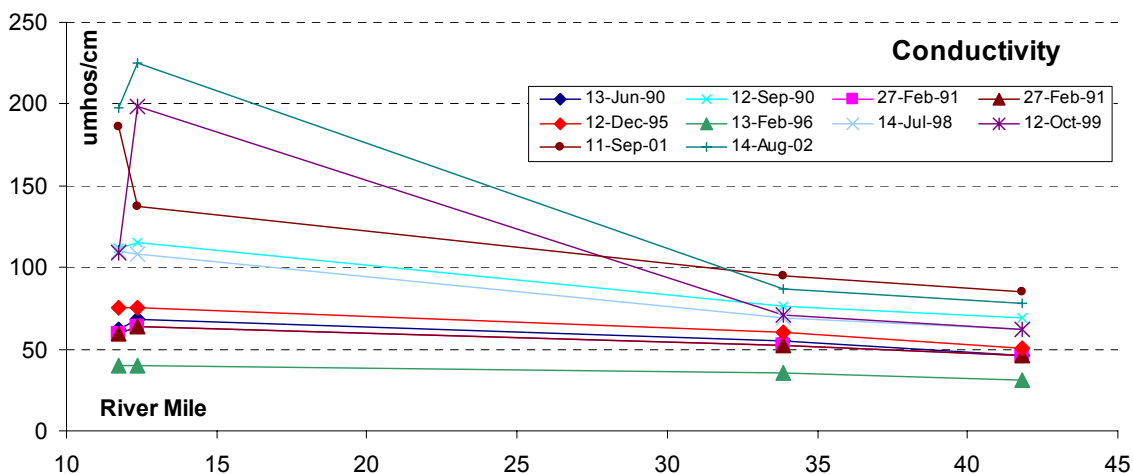
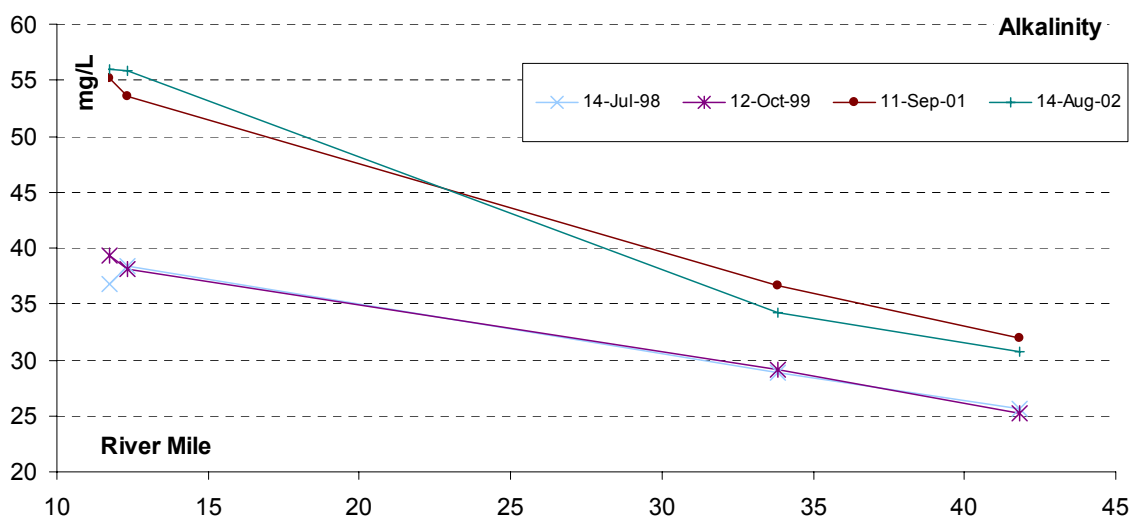
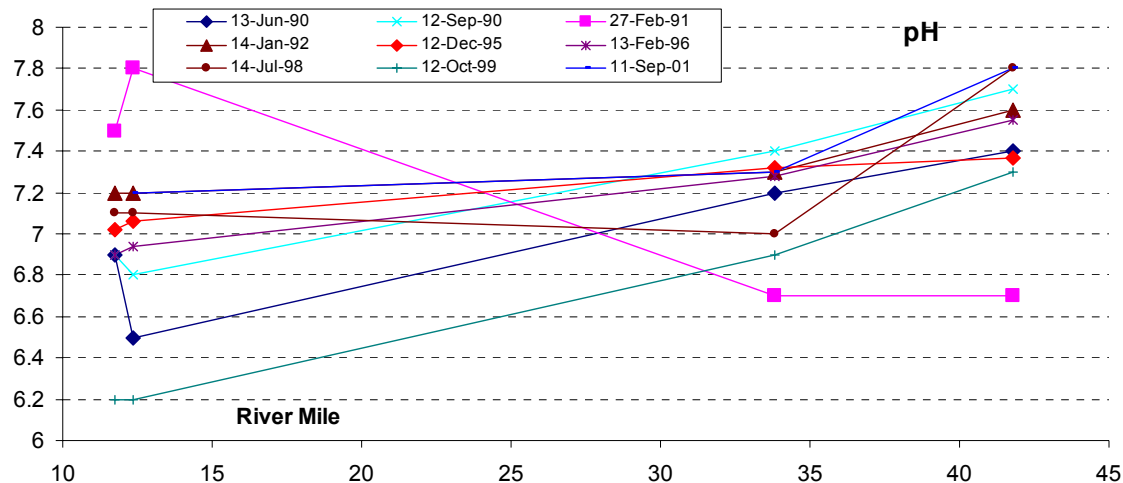




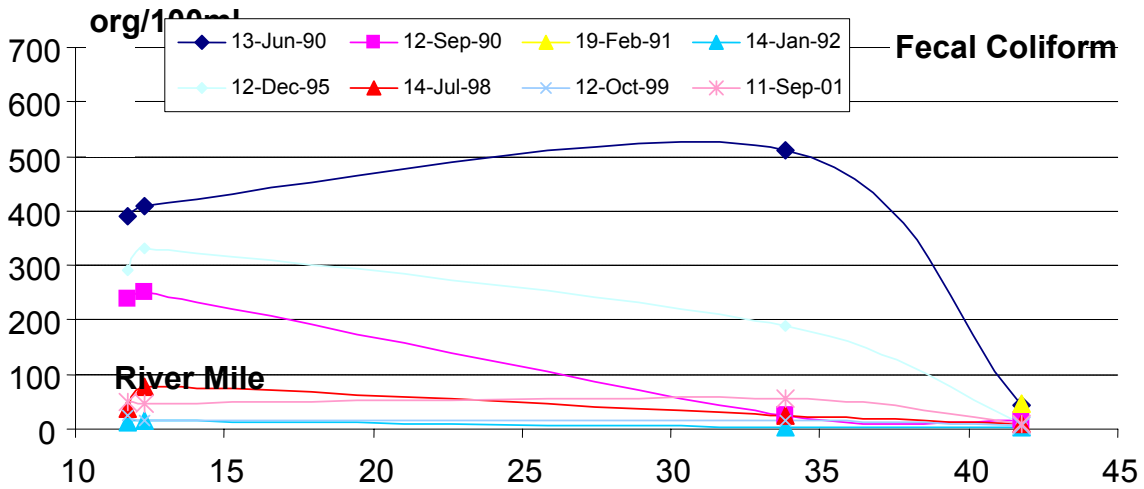
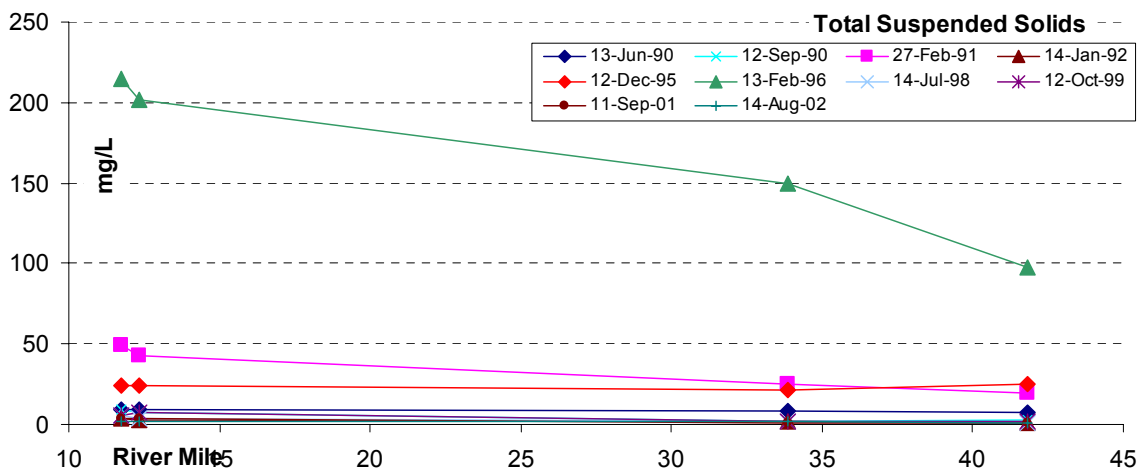
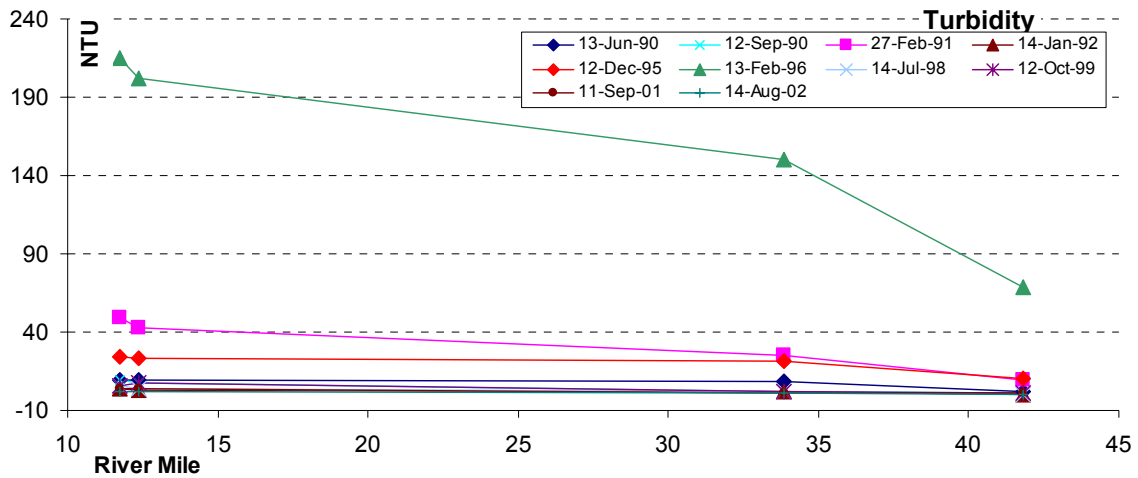
## Appendix B: Water Quality Longitudinal Profiles

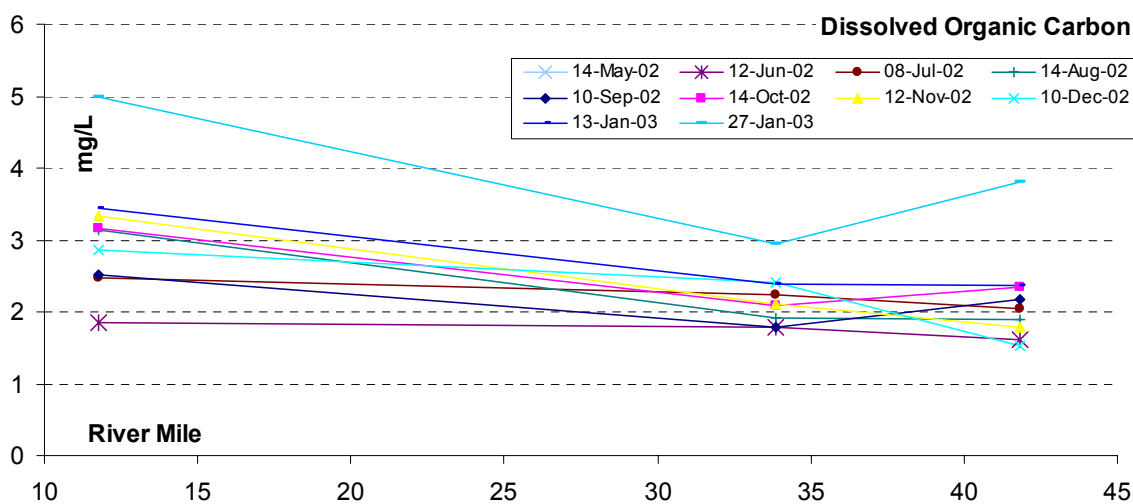
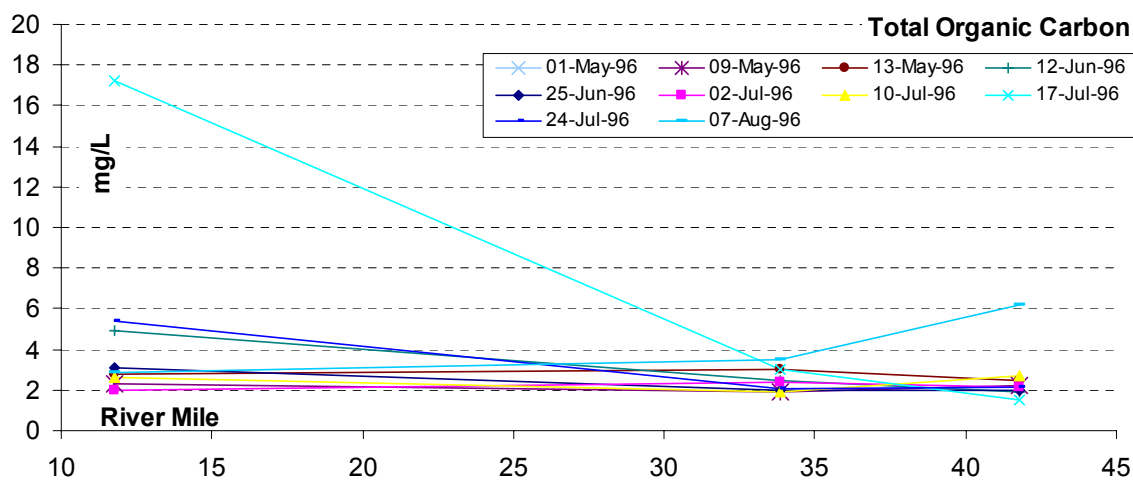
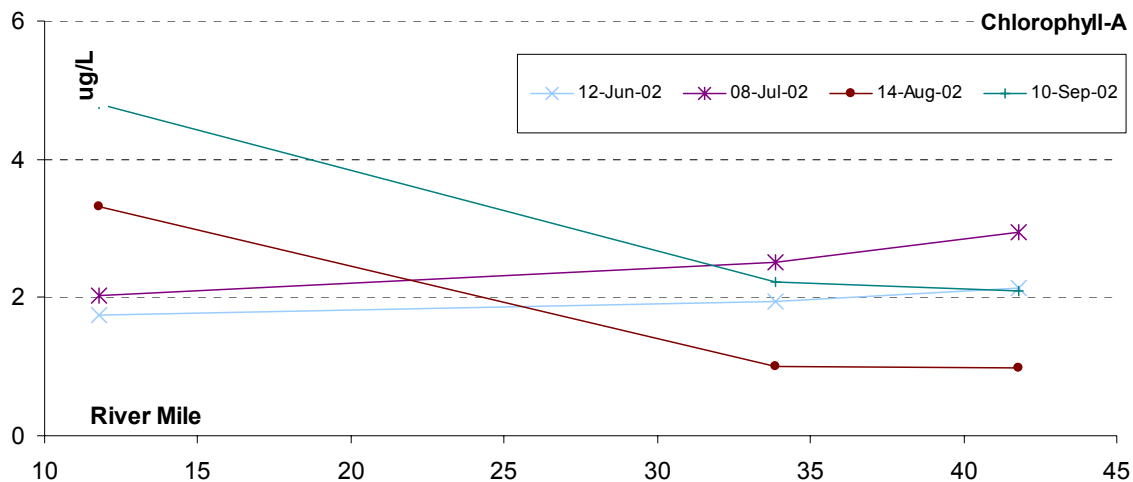












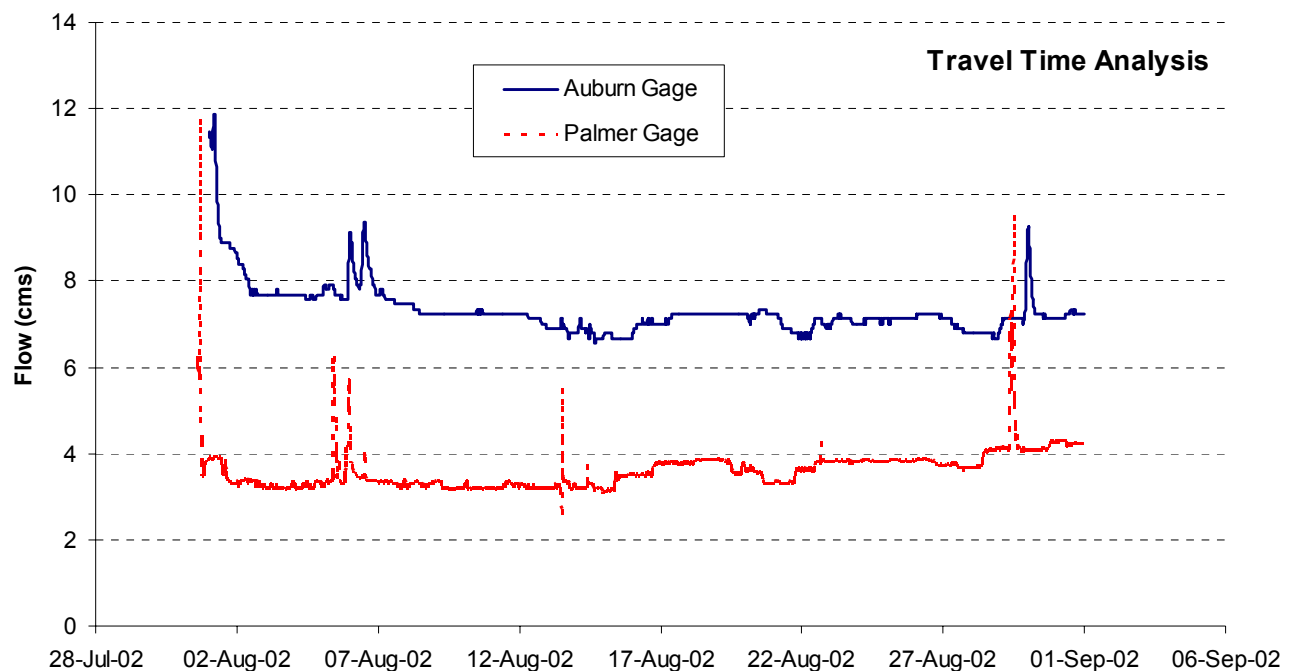
## Appendix C: Travel Time Analysis

Flow data for the upstream boundary comes from a gage located 26 km upstream (USGS Gage 126700, near Palmer). To account for flow between the gage at Palmer and the upstream project boundary, King County hydrologists have prepared HSPF simulations of runoff from the basins tributary to the Green River between these two points. Basin MG3 and a portion of MG2 will be added to flow from the Palmer gage for a better estimate of the flow at the upstream boundary.

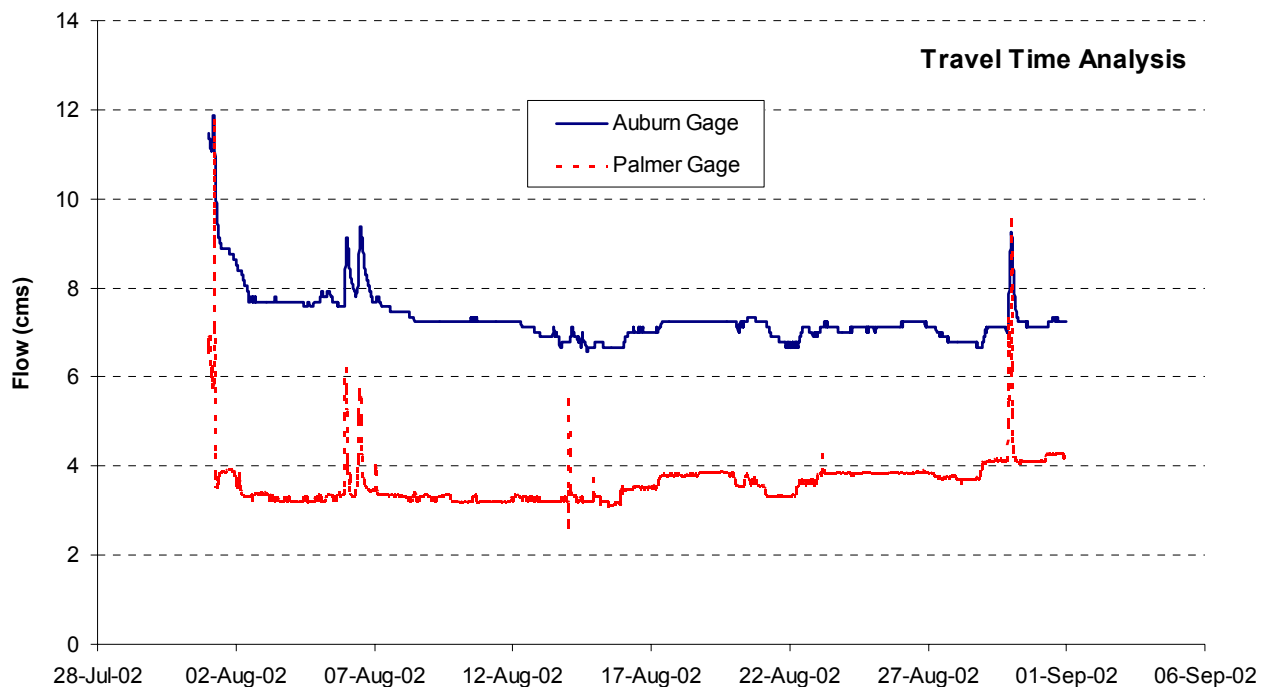
The flow from the Palmer gage takes time to travel down to the upstream project boundary. To estimate this time period, flow data were compared at Palmer Gage and at a USGS gage at Auburn (Gage 12113300) for two separate time periods. Figure 354 shows data from the two gages for the month of August 2002, and Figure 355 shows data for the same month, with the Palmer gage shifted ahead by 12 hours. Figure 356 and Figure 357 compares data from the same time and data shifted 12 hours for May, 2002

The distance from the Palmer gage to the Auburn gage is 47 km, and the distance from the Palmer gage to the upstream boundary is 26 km, a little over half the distance to the Auburn gage. To account for this travel time, data from the Palmer gage will be shifted by six hours when used at the upstream boundary.

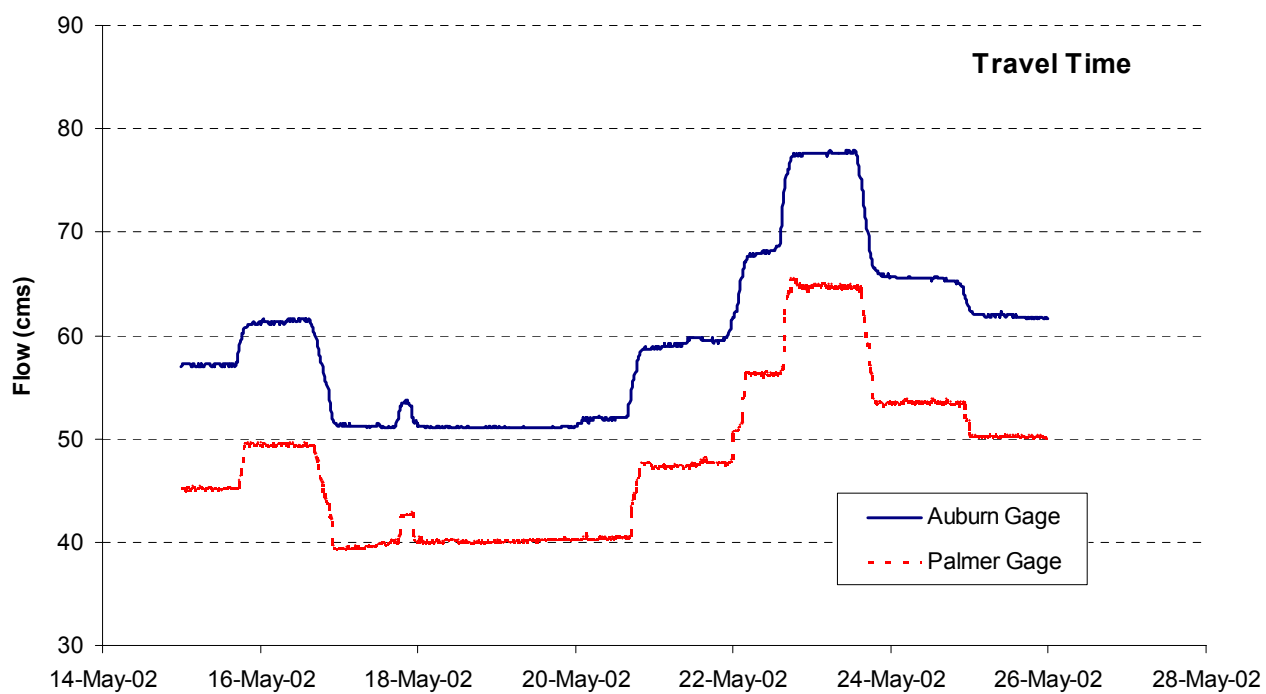
The distance from the Palmer gage to the Auburn gage is 47 km, and the distance from the Palmer gage to the downstream end of Basin MG3 is 15 km, one-third of the distance to the Auburn gage. Therefore, when adding flows from Basin MG3, Flow from MG3 will be shifted by four hours.



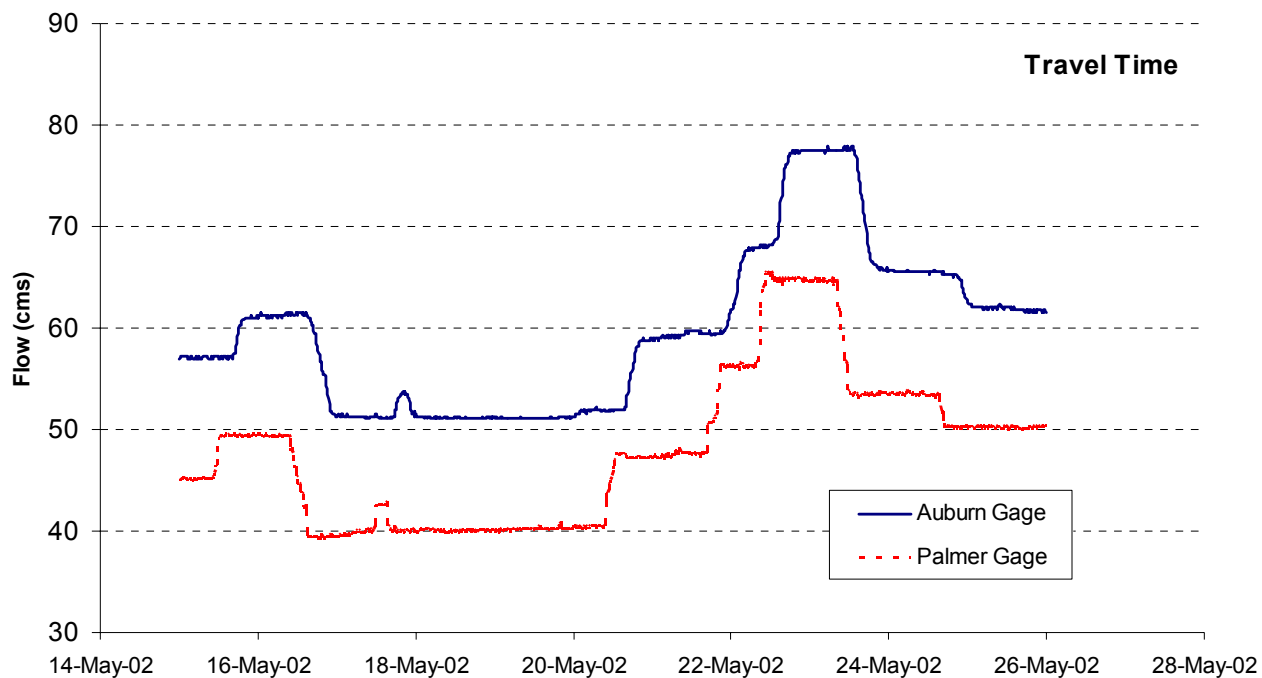
**Figure 354: August 2002 flow data without travel time shift**



**Figure 355: August 2002 flow data shifted by 12 hours**



**Figure 356: May 2002 flow data without travel time shift**



**Figure 357: May 2002 flow data shifted by 12 hours**

## Appendix D: Water Quality Procedures

These water quality procedures were used in initial data setup and were revised as necessary during model calibration. Please see Section 4.0 for additional information.

### Algae:

If data are available:

$$\sum \Phi_{algae} = \Phi_{algae(total)} = \Phi_{Chl\_a(total)} / Chla\_to\_Algae\_ratio \quad (1)$$

Chla\_to\_Algae\_Ratio = 11 and  $\Phi_{Chl\_a(total)} = data$  If missing data for both model run periods, use 0.19 (Average from other stations). If some data are available, use average to fill missing data.

### Total Organic Matter

If Total Organic Carbon (TOC) data were available, then:

$$\Phi_{TOM} = \frac{\Phi_{TOC}}{\delta_O} \quad (2)$$

$$\delta_O = 0.45$$

If TOC data were not available, then:

$$\Phi_{TOM} = \frac{\Phi_{POM} + \Phi_{algae}}{fraction} \quad (3)$$

Where fraction = 0.45

### Detritus:

If Total Organic Carbon (TOC) data were available, then:

$$\Phi_{POM} = frac(\Phi_{TOM}) - \sum \Phi_{algae} \quad (4)$$

$$f = \frac{\Phi_{POM} + \sum \Phi_{algae}}{\Phi_{TSS}} \quad (5)$$

If TOC data were not available, then:

$$\Phi_{POM} = f(\Phi_{TSS}) - \sum \Phi_{algae} \quad (6)$$

Where TOC was not available, an average  $f$  was used from dates where TOC was available.

**ISS:**

$$\Phi_{ISS} = (\Phi_{TSS} - \sum \Phi_{algae} - \Phi_{POM}) \text{ or } \Phi_{ISS} = (1 - f)(\Phi_{TSS}) \quad (7)$$

**Dissolved Organic Matter (DOM)**

$$\Phi_{DOM} = \Phi_{TOM} - \Phi_{POM} \quad (8)$$

**Labile DOM**

$$\Phi_{LDOM} = f_{LDOM} \Phi_{DOM} \quad (9)$$

$$f_{LDOM} = 0.50$$

**Refractory DOM**

$$\Phi_{RDOM} = (1 - f_{LDOM}) \Phi_{DOM} \quad (10)$$

**Labile POM**

$$\Phi_{LPOM} = f_{LPOM} \Phi_{POM} \quad (11)$$

$$f_{LPOM} = 0.5$$

**Refractory POM**

$$\Phi_{RPOM} = (1 - f_{LPOM}) \Phi_{POM} \quad (12)$$

**Total Organic Phosphorus**

$$\Phi_{PO4-P} = \Phi_{PO4} \quad (13)$$

If no data then  $\Phi_{PO4} = \frac{\sum_{j=1}^n \Phi_{PO4-data}}{n}$  for all n data points. PO4 represents Dissolved Ortho Phosphorus. If not available then Ortho Phosphorus.

**Nitrogen**

$$\Phi_{TKN} = \Phi_{NH4} \quad (14)$$

If no data exists for that time then  $\Phi_{NH4} = \frac{\sum_{j=1}^n \Phi_{NH4-data}}{n}$  for all n data points. NH4 represents NH3-N Dissolved, if available, if not then NH3-N total.

### **Nitrite-Nitrate**

$\Phi_{NO3+NO2} = data$  , if missing interpolate with nearest two points

### **Total Inorganic Carbon**

$\Phi_{TIC} = function(\Phi_{alk} + pH + Temp)$  and is solved from the following equation:

$$\Phi_{Alk} = TIC(\alpha_1 + 2\alpha_2) + [OH^-] - [H^+]$$

where  $\alpha_1$  and  $\alpha_2$  vary and are dependent upon temperature.

### **Alkalinity**

$\Phi_{alk} = data$  , if missing interpolate with nearest two points. No data were available for 1995-1996 model run period, so the average from the 2001-2002 run period was used.

### **Dissolved Oxygen**

$\Phi_{DO} = data$  , if missing interpolate with nearest two points

### **Conductivity**

$\Phi_{arbitray\_constituent} = Conductivity = data$  , if missing interpolate with nearest two points

### **Fecal Coliform**

$\Phi_{arbitray\_constituent} = FecalColiform = data$  , if missing interpolate with nearest two points



## Appendix E: Station and Gage Locations

Table 55 and Table 56 list the stations used for model boundary condition and tributary data. Figure 358, on the following page, shows where each station is located.

**Table 55: Flow/Temperature/Water Quality Stations Used; May 1995 - Nov 1996**

Boundary Condition/Tributary	Flow/ Stage	Temperature	Water Quality
Upstream Boundary	USGS 12106700	WHI	B319
Downstream Boundary	USGS 12113350	BIC	3106
Newaukum Creek	USGS 12108500	12108500	322
Crisp Creek	KC 40d	KC 40d	321
Big Soos Creek	USGS 12112600	KC 54a	A320
Auburn Creek	HSPF	Mill Creek	Mill Creek
Mill Creek	HSPF	KC 41a	A315
Mullen Slough	HSPF	Mill Creek	Mill Creek
Midway Creek	HSPF	Mill Creek	Mill Creek
Distributed Inflows	HSPF	NEE	Big Soos Creek

**Table 56: Flow/Temperature/Water Quality Stations Used; April 2001 - July 2002**

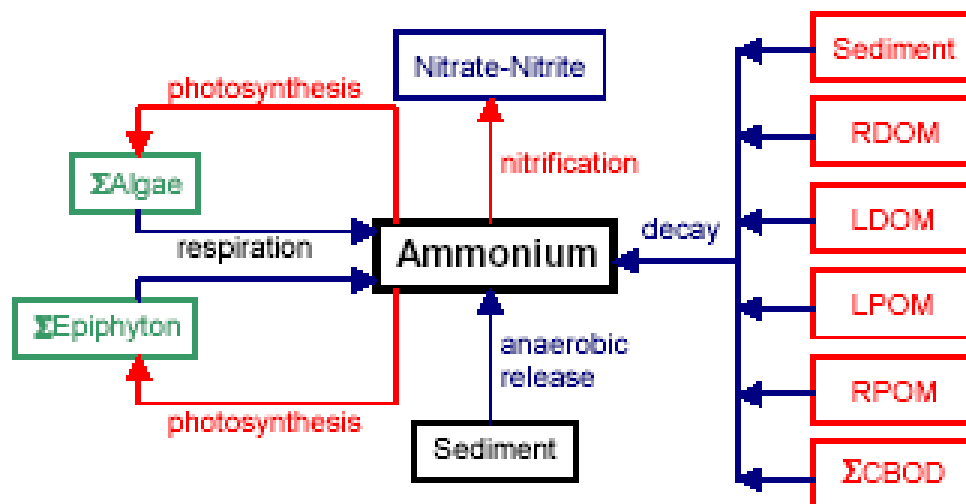
Boundary Condition/Tributary	Flow/ Stage	Temperature	Water Quality
Upstream Boundary	USGS 12106700	GR5, GR3-4, GR10	B319
Downstream Boundary	USGS 12113350	GRT18	3106
Newaukum Creek	USGS 12108500	GDWQA GRT-09	322
Crisp Creek	KC 40d	KC 40d	321
Big Soos Creek	USGS 12112600	KC 54a	A320
Auburn Creek	HSPF	Mill Creek	Mill Creek
Mill Creek	HSPF	KC 41a	A315
Mullen Slough	HSPF	Mill Creek	Mill Creek
Midway Creek	HSPF	Mill Creek	Mill Creek
Distributed Inflows	HSPF	GRT04	Big Soos Creek



Figure 358: Data Monitoring Stations

## Appendix F: Organic Matter Contributions Calculated from Ammonia Nitrogen

For the 2001-2002 model run period initial organic matter model inputs were determined by estimation from two Total Organic Carbon samples from the summer of 2002 (See Appendix D). During model calibration the amount of organic matter in the system was calculated from its contribution to ammonia nitrogen. Figure 359 shows the sources and sinks to Ammonium. CE-QUAL-W2 will output the contributions from each source/sink to a time-series output file. To estimate the amount of organic matter in the system, all values were output except organic matter values. These outputs were subtracted from the total ammonium to estimate the organic matter. This calculation was performed at each date that sampled data were available for input into the model. It was then partitioned between dissolved and particulate organic matter, and used as data input at the upstream boundary.



SOURCE: Cole (2002)

Figure 359: Ammonium Sources and Sinks

## Appendix G: W2 Control File For 2001-2002 Model Run Period

W2 Model Version 3.1

```

TITLE C .....TITLE.....
      Green River - April 1, 2001 through July 31, 2002
      River with 5 branches and 3 water bodies
      Default hydraulic and kinetic coefficients
      Scott Wells, Chris Berger, Rob Annear, PSU
      Tom Cole, WES

GRID      NWB      NBR      IMX      KMX
          3        5      227       22

IN/OUTFL   NTR      NST      NIW      NWD      NGT      NSP      NPI      NPU
          7        0        0        0        0        0        0        0

CONSTITU   NGC      NSS      NAL      NEP      NBOD
          2        1        1        0        0

MISCELL    NDAY
          100

TIME CON   TMSTRT   TMEND      YEAR
          91.000  578.000    2001

DLT CON     NDT    DLTMIN
          1    1.00000

DLT DATE    DLTD      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD
          91.0000

DLT MAX     DLTMAX   DLTMAX   DLTMAX   DLTMAX   DLTMAX   DLTMAX   DLTMAX   DLTMAX   DLTMAX
          200.000

DLT FRN     DLTF      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF
          0.80000

DLT LIM1    VISC      CELC
WB 1         ON        ON
WB 2         ON        ON
WB 3         ON        ON

BRANCH G    US      DS      UHS      DHS      UQB      DQB      NLMIN      SLOPE
BR1          2       26       0       29       0       0        1 0.00300
BR2          29      50      26      53       0       0        1 0.00300
BR3          53      77      50      80       0       0        1 0.00150
BR4          80     124      77     127       0       0        1 0.00120
BR5         127     226     124      -1       0       0        1 0.00034

LOCATION     LAT      LONG      EBOT      BS      BE      JBDN
WB 1       47.2000 122.100  29.2000      1      2      2
WB 2       47.2000 122.100  6.60000      3      4      4
  
```

WB 3	47.2000	122.100	-2.5000	5	5	5			
INIT CND	TEMPI	ICEI	WTYPEC						
WB 1	6.00000	0.00000	FRESH						
WB 2	6.00000	0.00000	FRESH						
WB 3	6.00000	0.00000	FRESH						
CALCULAT	VBC	EBC	MBC	PQC	EVC	PRC			
WB 1	OFF	OFF	OFF	OFF	ON	OFF			
WB 2	OFF	OFF	OFF	OFF	ON	OFF			
WB 3	OFF	OFF	OFF	OFF	ON	OFF			
DEAD SEA	WINDC	QINC	QOUTC	HEATC					
WB 1	ON	ON	ON	ON					
WB 2	ON	ON	ON	ON					
WB 3	ON	ON	ON	ON					
INTERPOL	QINIC	DTRIC	HDIC						
BR1	ON	ON	ON						
BR2	ON	ON	ON						
BR3	ON	ON	ON						
BR4	ON	ON	ON						
BR5	ON	ON	ON						
HEAT EXCH	SLHTC	SROC	RHEVAP	METIC	FETCHC	AFW	BFW	CFW	WINDH
WB 1	TERM	OFF	OFF	ON	OFF	9.20000	0.46000	2.00000	2.00000
WB 2	TERM	OFF	OFF	ON	OFF	9.20000	0.46000	2.00000	2.00000
WB 3	TERM	OFF	OFF	ON	OFF	9.20000	0.46000	2.00000	2.00000
ICE COVE	ICEC	SLICEC	ALBEDO	HWICE	BICE	GICE	ICEMIN	ICET2	
WB 1	OFF	DETAIL	0.25000	10.0000	0.60000	0.07000	0.05000	3.00000	
WB 2	OFF	DETAIL	0.25000	10.0000	0.60000	0.07000	0.05000	3.00000	
WB 3	OFF	DETAIL	0.25000	10.0000	0.60000	0.07000	0.05000	3.00000	
TRANSPOR	SLTRC	THETA							
WB 1	ULTIMATE	0.55000							
WB 2	ULTIMATE	0.55000							
WB 3	ULTIMATE	0.55000							
HYD COEF	AX	DX	CBHE	TSED	FI	TSEDF	FRICC		
WB 1	1.00000	1.00000	7E-08	11.5000	0.01000	1.00000	MANN		
WB 2	1.00000	1.00000	7E-08	11.5000	0.01000	1.00000	MANN		
WB 3	1.00000	1.00000	7E-08	11.5000	0.01000	1.00000	MANN		
EDDY VISC	AZC	AZSLC	AZMAX						
WB 1	NICK	IMP	1.00000						
WB 2	NICK	IMP	1.00000						
WB 3	NICK	IMP	1.00000						
N STRUC	NSTR								
BR1	0								
BR2	0								
BR3	0								
BR4	0								
BR5	0								
STR INT	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC
BR 1									

BR 2  
BR 3  
BR 4  
BR 5

STR TOP	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR
BR1										
BR2										
BR3										
BR4										
BR5										

STR BOT	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR
BR1										
BR2										
BR3										
BR4										
BR5										

STR SINK	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC
BR1										
BR2										
BR3										
BR4										
BR5										

STR ELEV	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR
BR1										
BR2										
BR3										
BR4										
BR5										

STR WIDT	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR
BR1										
BR2										
BR3										
BR4										
BR5										

PIPES	IUPI	IDPI	EUPI	EDPI	WPI	DLXPI	FPI	FMINPI	WTHLC
-------	------	------	------	------	-----	-------	-----	--------	-------

PIPE UP	PUPIC	ETUPI	EBUPI	KTUPI	KBUPI
---------	-------	-------	-------	-------	-------

PIPE DOWN	PDPIC	ETDPI	EBDPI	KTDPI	KBDPI
-----------	-------	-------	-------	-------	-------

SPILLWAY	IUSP	IDSP	ESP	A1SP	B1SP	A2SP	B2SP	WTHLC
----------	------	------	-----	------	------	------	------	-------

SPILL UP	PUSPC	ETUSP	EBUSP	KTUSP	KBUSP
----------	-------	-------	-------	-------	-------

SPILL DOWN	PDSPC	ETUSP	EBUSP	KTDSP	KBDSP
------------	-------	-------	-------	-------	-------

SPILL GAS	GASSPC	EQSP	AGASSP	BGASSP	CGASSP					
GATES WTHLC	IUGT	IDGT	EGT	A1GT	B1GT	G1GT	A2GT	B2GT	G2GT	
GATE WEIR	GTA1	GTB1	GTA2	GTB2	DYNVAR					
GATE UP	PUGTC	ETUGT	EBUGT	KTUGT	KBUGT					
GATE DOWN	PDGTC	ETDGT	EBDGT	KTDGT	KBDGT					
GATE GAS	GASGTC	EQGT	AGASGT	BGASGT	CGASGT					
PUMPS 1	IUPU	IDPU	EPU	STRTPU	ENDPU	EONPU	EOFFPU	QPU	WTHLC	
PUMPS 2	PPUC	ETPU	EBPU	KTPU	KBPU					
WEIR SEG	IWR	IWR	IWR	IWR	IWR	IWR	IWR	IWR	IWR	
WEIR TOP	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	
WEIR BOT	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	
WD INT	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	
WD SEG	IWD	IWD	IWD	IWD	IWD	IWD	IWD	IWD	IWD	
WD ELEV	EWD	EWD	EWD	EWD	EWD	EWD	EWD	EWD	EWD	
WD TOP	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	
WD BOT	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	
TRIB PLA	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC	PTRC	
TRIB INT	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC	TRIC	
TRIB SEG	ITR 26	ITR 32	ITR 76	ITR 134	ITR 145	ITR 159	ITR 171	ITR	ITR	

TRIB TOP	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR	KTTR
TRIB BOT	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR	KBTR
DST TRIB	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC
BR 1	OFF								
BR 2	ON								
BR 3	ON								
BR 4	OFF								
BR 5	OFF								
PUMPBACK	JBG 0	KTG 0	KBG 0	JBP 0	KTP 0	KBP 0			
PRINTER	LJC IV								
HYD PRIN	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC
NVIOL	ON	ON	ON						
U	ON	ON	ON						
W	ON	ON	ON						
T	ON	ON	ON						
RHO	OFF	OFF	OFF						
AZ	OFF	OFF	OFF						
SHEAR	OFF	OFF	OFF						
ST	OFF	OFF	OFF						
SB	OFF	OFF	OFF						
ADMX	OFF	OFF	OFF						
DM	OFF	OFF	OFF						
HDG	OFF	OFF	OFF						
ADMZ	OFF	OFF	OFF						
HPG	OFF	OFF	OFF						
GRAV	OFF	OFF	OFF						
SNP PRINT	SNPC	NSNP	NISNP						
WB 1	ON	1	9						
WB 2	ON	1	5						
WB 3	ON	1	7						
SNP DATE	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD
WB 1	91.0000								
WB 2	91.0000								
WB 3	91.0000								
SNP FREQ	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF
WB 1	10.0000								
WB 2	10.0000								
WB 3	10.0000								
SNP SEG	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP
WB 1	2	5	10	15	20	24	32	38	47
WB 2	60	72	76	94	112				
WB 3	148	160	178	195	205	218	225		
SCR PRINT	SCRC	NSCR							



WB 1	OFF	1							
WB 2	OFF	1							
WB 3	ON	1							
SCR DATE	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD
WB 1	91.0000								
WB 2	91.0000								
WB 3	91.0000								
SCR FREQ	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF
WB 1	0.10000								
WB 2	0.10000								
WB 3	0.10000								
PRF PLOT	PRFC	NPRF	NIPRF						
WB 1	OFF	0	0						
WB 2	OFF	0	0						
WB 3	OFF	0	0						
PRF DATE	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD
WB 1									
WB 2									
WB 3									
PRF FREQ	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF
WB 1									
WB 2									
WB 3									
PRF SEG	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF
WB 1									
WB 2									
WB 3									
SPR PLOT	SPRC	NSPR	NISPR						
WB 1	OFF	0	0						
WB 2	OFF	0	0						
WB 3	OFF	0	0						
SPR DATE	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD
WB 1									
WB 2									
WB 3									
SPR FREQ	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF
WB 1									
WB 2									
WB 3									
SPR SEG	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR
WB 1									
WB 2									
WB 3									
VPL PLOT	VPLC	NVPL							
WB 1	OFF	0							
WB 2	OFF	0							
WB 3	OFF	0							

VPL DATE	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD
WB 1									
WB 2									
WB 3									
VPL FREQ	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF
WB 1									
WB 2									
WB 3									
CPL PLOT	CPLC	NCPL							
WB 1	OFF	0							
WB 2	OFF	0							
WB 3	OFF	0							
CPL DATE	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD
WB 1									
WB 2									
WB 3									
CPL FREQ	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF
WB 1									
WB 2									
WB 3									
FLUXES	FLXC	NFLX							
WB 1	OFF	19							
WB 2	OFF	19							
WB 3	OFF	19							
FLX DATE	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD
WB 1	91.0000	100.000	120.000	135.000	162.000	191.000	227.000	254.000	282.000
	318.000	345.000	380.000	408.000	435.000	464.000	499.000	528.000	554.000
	578.000								
WB 2	91.0000	100.000	120.000	135.000	162.000	191.000	227.000	254.000	282.000
	318.000	345.000	380.000	408.000	435.000	464.000	499.000	528.000	554.000
	578.000								
WB 3	91.0000	100.000	120.000	135.000	162.000	191.000	227.000	254.000	282.000
	318.000	345.000	380.000	408.000	435.000	464.000	499.000	528.000	554.000
	578.000								
FLX FREQ	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF
WB 1	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000								
WB 2	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000								
WB 3	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000								
TSR PLOT	TSRC	NTSR	NITSR						
	ON	1	9						
TSR DATE	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD

	91.0000								
TSR FREQ	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF
	0.04170								
TSR SEG	ITSR	ITSR	ITSR	ITSR	ITSR	ITSR	ITSR	ITSR	ITSR
	178	148	112	94	76	72	164	218	88
TSR LAYE	ETSR	ETSR	ETSR	ETSR	ETSR	ETSR	ETSR	ETSR	ETSR
	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
WITH OUT	WDOC	NWDO	NIWDO						
	OFF	1	1						
WITH DAT	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD
	63.5000								
WITH FRE	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF
	0.01000								
WITH SEG	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO
	30								
RESTART	RSOC	NRSO	RSIC						
	OFF	0	OFF						
RSO DATE	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD
RSO FREQ	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF
CST COMP	CCC	LIMC	CUF						
	ON	OFF	10						
CST ACTIVE	CAC								
TDS	OFF								
Gen1	ON								
Gen2	ON								
ISS1	ON								
PO4	ON								
NH4	ON								
NO3	ON								
DSI	OFF								
PSI	OFF								
FE	OFF								
LDOM	ON								
RDOM	ON								
LPOM	ON								
RPOM	ON								
ALG1	ON								
DO	ON								
TIC	ON								
ALK	ON								
CST DERI	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC
DOC	ON	ON	ON						
POC	OFF	OFF	OFF						

TOC	ON	ON	ON
DON	OFF	OFF	OFF
PON	OFF	OFF	OFF
TON	OFF	OFF	OFF
TKN	OFF	OFF	OFF
TN	ON	ON	ON
DOP	OFF	OFF	OFF
POP	OFF	OFF	OFF
TOP	OFF	OFF	OFF
TP	ON	ON	ON
APR	OFF	OFF	OFF
CHLA	ON	ON	ON
ATOT	OFF	OFF	OFF
%DO	OFF	OFF	OFF
TSS	ON	ON	ON
TISS	OFF	OFF	OFF
CBOD	OFF	OFF	OFF
pH	ON	ON	ON
CO2	OFF	OFF	OFF
HCO3	OFF	OFF	OFF
CO3	OFF	OFF	OFF

CST FLUX	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC
TISSIN	OFF	OFF	OFF						
TISSOUT	OFF	OFF	OFF						
PO4AR	OFF	OFF	OFF						
PO4AG	OFF	OFF	OFF						
PO4AP	OFF	OFF	OFF						
PO4ER	OFF	OFF	OFF						
PO4EG	OFF	OFF	OFF						
PO4EP	OFF	OFF	OFF						
PO4POM	OFF	OFF	OFF						
PO4DOM	OFF	OFF	OFF						
PO4OM	OFF	OFF	OFF						
PO4SED	OFF	OFF	OFF						
PO4SOD	OFF	OFF	OFF						
PO4SET	OFF	OFF	OFF						
NH4NITR	OFF	OFF	OFF						
NH4AR	OFF	OFF	OFF						
NH4AG	OFF	OFF	OFF						
NH4AP	OFF	OFF	OFF						
NH4ER	OFF	OFF	OFF						
NH4EG	OFF	OFF	OFF						
NH4EP	OFF	OFF	OFF						
NH4POM	OFF	OFF	OFF						
NH4DOM	OFF	OFF	OFF						
NH4OM	OFF	OFF	OFF						
NH4SED	OFF	OFF	OFF						
NH4SOD	OFF	OFF	OFF						
NO3DEN	OFF	OFF	OFF						
NO3AG	OFF	OFF	OFF						
NO3EG	OFF	OFF	OFF						
NO3SED	OFF	OFF	OFF						
DSIAG	OFF	OFF	OFF						
DSIEG	OFF	OFF	OFF						
DSIPIS	OFF	OFF	OFF						
DSISED	OFF	OFF	OFF						
DSISOD	OFF	OFF	OFF						

DSISET	OFF	OFF	OFF
PSIAM	OFF	OFF	OFF
PSINET	OFF	OFF	OFF
PSIDK	OFF	OFF	OFF
FESET	OFF	OFF	OFF
FESED	OFF	OFF	OFF
LDOMDK	OFF	OFF	OFF
LRDOM	OFF	OFF	OFF
RDOMDK	OFF	OFF	OFF
LDOMAP	OFF	OFF	OFF
LDOMEF	OFF	OFF	OFF
LPOMDK	OFF	OFF	OFF
LRPOM	OFF	OFF	OFF
RPOMDK	OFF	OFF	OFF
LPOMAP	OFF	OFF	OFF
LPOMEF	OFF	OFF	OFF
LPOMSET	OFF	OFF	OFF
RPOMSET	OFF	OFF	OFF
CBODDK	OFF	OFF	OFF
DOAP	OFF	OFF	OFF
DOAR	OFF	OFF	OFF
DOEP	OFF	OFF	OFF
DOER	OFF	OFF	OFF
DOPOM	OFF	OFF	OFF
DODOM	OFF	OFF	OFF
DOOM	OFF	OFF	OFF
DONITR	OFF	OFF	OFF
DOCBOD	OFF	OFF	OFF
DOREAR	OFF	OFF	OFF
DOSED	OFF	OFF	OFF
DOSOD	OFF	OFF	OFF
TICAG	OFF	OFF	OFF
TICEG	OFF	OFF	OFF
SEDDK	OFF	OFF	OFF
SEDAS	OFF	OFF	OFF
SEDLPOM	OFF	OFF	OFF
SEDSET	OFF	OFF	OFF
SODDK	OFF	OFF	OFF

CST ICON	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB
TDS	1.00000	1.00000	1.00000						
Gen1	100.000	100.000	100.000						
Gen2	45.0000	45.0000	45.0000						
ISS1	3.00000	3.00000	3.00000						
PO4	0.20000	0.20000	0.20000						
NH4	0.30000	0.30000	0.30000						
NO3	0.15000	0.15000	0.15000						
DSI	0.00000	0.00000	0.00000						
PSI	0.00000	0.00000	0.00000						
FE	0.00000	0.00000	0.00000						
LDOM	0.50000	0.50000	0.50000						
RDOM	0.50000	0.50000	0.50000						
LPOM	0.50000	0.50000	0.50000						
RPOM	0.50000	0.50000	0.50000						
ALG1	0.00006	0.00006	0.00006						
DO	8.00000	8.00000	8.00000						
TIC	8.00000	8.00000	8.00000						
ALK	24.0000	24.0000	24.0000						

CST PRIN	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC
TDS	OFF	OFF	OFF							
Gen1	ON	ON	ON							
Gen2	ON	ON	ON							
ISS1	ON	ON	ON							
PO4	ON	ON	ON							
NH4	ON	ON	ON							
NO3	ON	ON	ON							
DSI	OFF	OFF	OFF							
PSI	OFF	OFF	OFF							
FE	OFF	OFF	OFF							
LDOM	ON	ON	ON							
RDOM	ON	ON	ON							
LPOM	ON	ON	ON							
RPOM	ON	ON	ON							
ALG1	ON	ON	ON							
DO	ON	ON	ON							
TIC	ON	ON	ON							
ALK	ON	ON	ON							

CIN CON	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC
TDS	OFF	OFF	OFF	OFF	OFF					
Gen1	ON	ON	ON	ON	ON					
Gen2	ON	ON	ON	ON	ON					
ISS1	ON	ON	ON	ON	ON					
PO4	ON	ON	ON	ON	ON					
NH4	ON	ON	ON	ON	ON					
NO3	ON	ON	ON	ON	ON					
DSI	OFF	OFF	OFF	OFF	OFF					
PSI	OFF	OFF	OFF	OFF	OFF					
FE	OFF	OFF	OFF	OFF	OFF					
LDOM	ON	ON	ON	ON	ON					
RDOM	ON	ON	ON	ON	ON					
LPOM	ON	ON	ON	ON	ON					
RPOM	ON	ON	ON	ON	ON					
ALG1	ON	ON	ON	ON	ON					
DO	ON	ON	ON	ON	ON					
TIC	ON	ON	ON	ON	ON					
ALK	ON	ON	ON	ON	ON					

CTR CON	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC
TDS	OFF	OFF	OFF	OFF	OFF	OFF	OFF			
Gen1	ON	ON	ON	ON	ON	ON	ON			
Gen2	ON	ON	ON	ON	ON	ON	ON			
ISS1	ON	ON	ON	ON	ON	ON	ON			
PO4	ON	ON	ON	ON	ON	ON	ON			
NH4	ON	ON	ON	ON	ON	ON	ON			
NO3	ON	ON	ON	ON	ON	ON	ON			
DSI	OFF	OFF	OFF	OFF	OFF	OFF	OFF			
PSI	OFF	OFF	OFF	OFF	OFF	OFF	OFF			
FE	OFF	OFF	OFF	OFF	OFF	OFF	OFF			
LDOM	ON	ON	ON	ON	ON	ON	ON			
RDOM	ON	ON	ON	ON	ON	ON	ON			
LPOM	ON	ON	ON	ON	ON	ON	ON			
RPOM	ON	ON	ON	ON	ON	ON	ON			
ALG1	ON	ON	ON	ON	ON	ON	ON			
DO	ON	ON	ON	ON	ON	ON	ON			

TIC	ON	ON	ON	ON	ON	ON	ON	ON		
ALK	ON	ON	ON	ON	ON	ON	ON	ON		
CDT CON	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC
TDS	OFF	OFF	OFF	OFF	OFF	OFF				
Gen1	OFF	ON	ON	ON	ON	ON				
Gen2	OFF	ON	ON	ON	ON	ON				
ISS1	OFF	ON	ON	ON	ON	ON				
PO4	OFF	ON	ON	ON	ON	ON				
NH4	OFF	ON	ON	ON	ON	ON				
NO3	OFF	ON	ON	ON	ON	ON				
DSI	OFF	OFF	OFF	OFF	OFF	OFF				
PSI	OFF	OFF	OFF	OFF	OFF	OFF				
FE	OFF	OFF	OFF	OFF	OFF	OFF				
LDOM	OFF	ON	ON	ON	ON	ON				
RDOM	OFF	ON	ON	ON	ON	ON				
LPOM	OFF	ON	ON	ON	ON	ON				
RPOM	OFF	ON	ON	ON	ON	ON				
ALG1	OFF	ON	ON	ON	ON	ON				
DO	OFF	ON	ON	ON	ON	ON				
TIC	OFF	ON	ON	ON	ON	ON				
ALK	OFF	ON	ON	ON	ON	ON				
CPR CON	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC
TDS	OFF	OFF	OFF	OFF	OFF	OFF				
Gen1	OFF	OFF	OFF	OFF	OFF	OFF				
Gen2	OFF	OFF	OFF	OFF	OFF	OFF				
ISS1	OFF	OFF	OFF	OFF	OFF	OFF				
PO4	OFF	OFF	OFF	OFF	OFF	OFF				
NH4	OFF	OFF	OFF	OFF	OFF	OFF				
NO3	OFF	OFF	OFF	OFF	OFF	OFF				
DSI	OFF	OFF	OFF	OFF	OFF	OFF				
PSI	OFF	OFF	OFF	OFF	OFF	OFF				
FE	OFF	OFF	OFF	OFF	OFF	OFF				
LDOM	OFF	OFF	OFF	OFF	OFF	OFF				
RDOM	OFF	OFF	OFF	OFF	OFF	OFF				
LPOM	OFF	OFF	OFF	OFF	OFF	OFF				
RPOM	OFF	OFF	OFF	OFF	OFF	OFF				
ALG1	OFF	OFF	OFF	OFF	OFF	OFF				
DO	OFF	OFF	OFF	OFF	OFF	OFF				
TIC	OFF	OFF	OFF	OFF	OFF	OFF				
ALK	OFF	OFF	OFF	OFF	OFF	OFF				
EX COEF	EXH2O	EXSS	EXOM	BETA	EXC	EXIC				
WB 1	0.45000	0.01000	0.01000	0.45000	OFF	OFF				
WB 2	0.45000	0.01000	0.01000	0.45000	OFF	OFF				
WB 3	0.45000	0.01000	0.01000	0.45000	OFF	OFF				
ALG EX	EXA	EXA	EXA	EXA	EXA	EXA				
	0.20000									
GENERIC	CGQ10	CG0DK	CG1DK	CGS						
CG 1	0.00000	0.00000	0.00000	0.00000						
CG 2	1.04000	0.00000	0.20000	0.00000						
S SOLIDS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS
	1.00000									

ALGAL RATE	AG	AR	AE	AM	AS	AHSP	AHSN	AHSSI	ASAT
ALG1	2.00000	0.04000	0.04000	0.10000	0.10000	0.00300	0.01400	0.00000	75.0000
ALGAL TEMP	AT1	AT2	AT3	AT4	AK1	AK2	AK3	AK4	
ALG1	5.00000	25.0000	35.0000	40.0000	0.10000	0.99000	0.99000	0.10000	
ALG STOI	ALGP	ALGN	ALGC	ALGSI	ACHLA	ALPOM	ANEQN	ANPR	
ALG1	0.00500	0.08000	0.45000	0.18000	100.000	0.80000	2	0.00100	
EPIPHYTE	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC
EPI1	OFF	OFF	OFF						
EPI PRIN	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC
EPI1	OFF	OFF	OFF						
EPI INIT	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI
EPI1	0.00000	0.00000	0.00000						
EPI RATE	EG	ER	EE	EM	EB	EHSP	EHSN	EHSSI	
EPI1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
EPI HALF	ESAT	EHS	ENEQN	ENPR					
EPI1	0.10000	0.00000	0	0.00000					
EPI TEMP	ET1	ET2	ET3	ET4	EK1	EK2	EK3	EK4	
EPI1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
EPI STOI	EP	EN	EC	ESI	ECHLA	EPOM			
EPI1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			
DOM	LDOMDK	RDOMDK	LRDDK						
WB 1	0.10000	0.00100	0.01000						
WB 2	0.10000	0.00100	0.01000						
WB 3	0.10000	0.00100	0.01000						
POM	LPOMDK	RPOMDK	LRPDK	POMS					
WB 1	0.08000	0.00100	0.01000	0.10000					
WB 2	0.08000	0.00100	0.01000	0.10000					
WB 3	0.08000	0.00100	0.01000	0.10000					
OM STOI	ORGP	ORGN	ORGC	ORGSI					
WB 1	0.00500	0.08000	0.45000	0.18000					
WB 2	0.00500	0.08000	0.45000	0.18000					
WB 3	0.00500	0.08000	0.45000	0.18000					
OM RATE	OMT1	OMT2	OMK1	OMK2					
WB 1	4.00000	25.0000	0.10000	0.99000					
WB 2	4.00000	25.0000	0.10000	0.99000					
WB 3	4.00000	25.0000	0.10000	0.99000					
CBOD	KBOD	TBOD	RBOD						
BOD 1	0.25000	1.01400	71.8500						
CBOD STOI	BODP	BODN	BODC						
BOD 1	0.00400	0.06000	0.32000						
PHOSPHOR	PO4R	PARTP							
WB 1	0.00100	0.00000							



WB 2	0.00100	0.00000
WB 3	0.00100	0.00000

AMMONIUM	NH4R	NH4DK
WB 1	0.00100	0.12000
WB 2	0.00100	0.12000
WB 3	0.00100	0.12000

NH4 RATE	NH4T1	NH4T2	NH4K1	NH4K2
WB 1	5.00000	25.0000	0.10000	0.99000
WB 2	5.00000	25.0000	0.10000	0.99000
WB 3	5.00000	25.0000	0.10000	0.99000

NITRATE	NO3DK	NO3S
WB 1	0.03000	1.00000
WB 2	0.03000	1.00000
WB 3	0.03000	1.00000

NO3 RATE	NO3T1	NO3T2	NO3K1	NO3K2
WB 1	5.00000	25.0000	0.10000	0.99000
WB 2	5.00000	25.0000	0.10000	0.99000
WB 3	5.00000	25.0000	0.10000	0.99000

SILICA	DSIR	PSIS	PSIDK	PARTSI
WB 1	5.00000	20.0000	0.05000	0.99000
WB 2	5.00000	20.0000	0.05000	0.99000
WB 3	5.00000	20.0000	0.05000	0.99000

IRON	FER	FES
WB 1	0.00000	0.00000
WB 2	0.00000	0.00000
WB 3	0.00000	0.00000

SED CO2	CO2R
WB 1	0.50000
WB 2	0.50000
WB 3	0.50000

STOICH 1	O2NH4	O2OM
WB 1	4.57000	1.40000
WB 2	4.57000	1.40000
WB 3	4.57000	1.40000

STOICH 2	O2AR	O2AG
ALG1	1.10000	1.40000

STOICH 3	O2ER	O2EG
EPI1	0.00000	0.00000

O2 LIMIT	O2LIM
	0.10000

SEDIMENT	SEDC	SEDCPRC	SEDCI	SEDK	FSOD	FSED
WB 1	OFF	ON	0.00000	0.10000	1.00000	1.00000
WB 2	OFF	ON	0.00000	0.10000	1.00000	1.00000
WB 3	OFF	ON	0.00000	0.10000	1.00000	1.00000

SOD RATE	SODT1	SODT2	SODK1	SODK2
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[illegible]

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RSI FILE.....RSIFN.....
      rsi.npt

QWD FILE.....QWDFN.....
      qwd.npt

QGT FILE.....QGTFN.....
      qgt.npt

WSC FILE.....WSCFN.....
      wsc.npt

SHD FILE.....SHDFN.....
      shade.npt

BTH FILE.....BTHFN.....
WB 1      bth_wb1.npt
WB 2      bth_wb2.npt
WB 3      bth_wb3.npt

MET FILE.....METFN.....

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WB 1 met\_wb1.npt  
WB 2 met\_wb2.npt  
WB 3 met\_wb3.npt

EXT FILE.....EXTFN.....

WB 1 ext\_wb1.npt - not used  
WB 2 ext\_wb2.npt - not used  
WB 3 ext\_wb3.npt - not used

VPR FILE.....VPRFN.....

WB 1 vpr00wb1.npt  
WB 2 vpr00wb2.npt  
WB 3 vpr00wb3.npt

LPR FILE.....LPRFN.....

WB 1 lpr\_1.npt  
WB 2 lpr\_2.npt  
WB 3 lpr\_3.npt

QIN FILE.....QINFN.....

BR1 qin\_br1.npt  
BR2 qin\_br2.npt  
BR3 qin\_br3.npt  
BR4 qin\_br4.npt  
BR5 qin\_br5.npt

TIN FILE.....TINFN.....

BR1 tin\_br1.npt  
BR2 tin\_br2.npt  
BR3 tin\_br3.npt  
BR4 tin\_br4.npt  
BR5 tin\_br5.npt

CIN FILE.....CINFN.....

BR1 cin\_br1.npt  
BR2 cin\_br2.npt  
BR3 cin\_br3.npt  
BR4 cin\_br4.npt  
BR5 cin\_br5.npt

QOT FILE.....QOTFN.....

BR1 qll\_00.npt  
BR2 qot\_br2.npt  
BR3 qot\_br3.npt  
BR4 qot\_br4.npt  
BR5 qot\_br5.npt

QTR FILE.....QTRFN.....

TR1 qtr\_tr1.npt  
TR2 qtr\_tr2.npt  
TR3 qtr\_tr3.npt  
TR4 qtr\_tr4.npt  
TR5 qtr\_tr5.npt  
TR6 qtr\_tr6.npt  
TR7 qtr\_tr7.npt

TTR FILE.....TTRFN.....

TR1 ttr\_tr1.npt

TR2        ttr\_tr2.npt  
 TR3        ttr\_tr3.npt  
 TR4        ttr\_tr4.npt  
 TR5        ttr\_tr5.npt  
 TR6        ttr\_tr6.npt  
 TR7        ttr\_tr7.npt

CTR FILE.....CTRFN.....

TR1        ctr\_tr1.npt  
 TR2        ctr\_tr2.npt  
 TR3        ctr\_tr3.npt  
 TR4        ctr\_tr4.npt  
 TR5        ctr\_tr5.npt  
 TR6        ctr\_tr6.npt  
 TR7        ctr\_tr7.npt

QDT FILE.....QDTFN.....

BR1        qdt\_br1.npt  
 BR2        qdt\_br2.npt  
 BR3        qdt\_br3.npt  
 BR4        qdt\_br4.npt  
 BR5        qdt\_br5.npt

TDT FILE.....TDTFN.....

BR1        tdt\_br1.npt  
 BR2        tdt\_br2.npt  
 BR3        tdt\_br3.npt  
 BR4        tdt\_br4.npt  
 BR5        tdt\_br5.npt

CDT FILE.....CDTFN.....

BR1        cdt\_br1.npt  
 BR2        cdt\_br2.npt  
 BR3        cdt\_br3.npt  
 BR4        cdt\_br4.npt  
 BR5        cdt\_br5.npt

PRE FILE.....PREFN.....

BR1        pre\_br1.npt  
 BR2        pre\_br2.npt  
 BR3        pre\_br3.npt  
 BR4        pre\_br4.npt  
 BR5        pre\_br5.npt

TPR FILE.....TPRFN.....

BR1        tpr\_br1.npt  
 BR2        tpr\_br2.npt  
 BR3        tpr\_br3.npt  
 BR4        tpr\_br4.npt  
 BR5        tpr\_br5.npt

CPR FILE.....CPRFN.....

BR1        cpr\_br1.npt  
 BR2        cpr\_br2.npt  
 BR3        cpr\_br3.npt  
 BR4        cpr\_br4.npt  
 BR5        cpr\_br5.npt

EUH FILE.....EUHFN.....  
  
 BR1      euh\_br1.npt  
 BR2      euh\_br2.npt  
 BR3      euh\_br3.npt  
 BR4      euh\_br4.npt  
 BR5      euh\_br5.npt  
  
 TUH FILE.....TUHFN.....  
 BR1      tuh\_br1.npt  
 BR2      tuh\_br2.npt  
 BR3      tuh\_br3.npt  
 BR4      tuh\_br4.npt  
 BR5      tuh\_br5.npt  
  
 CUH FILE.....CUHFN.....  
 BR1      cuh\_br1.npt  
 BR2      cuh\_br2.npt  
 BR3      cuh\_br3.npt  
 BR4      cuh\_br4.npt  
 BR5      cuh\_br5.npt  
  
 EDH FILE.....EDHFN.....  
 BR1      edh\_br1.npt  
 BR2      edh\_br2.npt  
 BR3      edh\_br3.npt  
 BR4      edh\_br4.npt  
 BR5      edh\_br5.npt  
  
 TDH FILE.....TDHFN.....  
 BR1      tdh\_br1.npt  
 BR2      tdh\_br2.npt  
 BR3      tdh\_br3.npt  
 BR4      tdh\_br4.npt  
 BR5      tdh\_br5.npt  
  
 CDH FILE.....CDHFN.....  
 BR1      cdh\_br1.npt  
 BR2      cdh\_br2.npt  
 BR3      cdh\_br3.npt  
 BR4      cdh\_br4.npt  
 BR5      cdh\_br5.npt  
  
 SNP FILE.....SNPFN.....  
 WB 1      snp1.opt  
 WB 2      snp2.opt  
 WB 3      snp3.opt  
  
 PRF FILE.....PRFFN.....  
 WB 1      prf1.opt  
 WB 2      prf2.opt  
 WB 3      prf3.opt  
  
 VPL FILE.....VPLFN.....  
 WB 1      vpl1.opt  
 WB 2      vpl2.opt  
 WB 3      vpl3.opt

CPL FILE.....CPLFN.....  
 WB 1     cpl1.opt  
 WB 2     cpl2.opt  
 WB 3     cpl3.opt  
  
 SPR FILE.....SPRFN.....  
 WB 1     spr1.opt  
 WB 2     spr2.opt  
 WB 3     spr3.opt  
  
 FLX FILE.....FLXFN.....  
 WB 1     kfl1.opt  
 WB 2     kfl2.opt  
 WB 3     kfl3.opt  
  
 TSR FILE.....TSRFN.....  
           tsr.opt  
  
 WDO FILE.....WDOFN.....  
           wdo.opt

## Appendix H: W2 Control File For 1995-1996 Model Run Period

W2 Model Version 3.1

```
TITLE C .....TITLE.....
Green River - MAY 25, 1995 through November 30, 1996
June 2003
River with 5 branches and 3 water bodies
Default hydraulic and kinetic coefficients
Scott Wells, Chris Berger, Rob Annear, PSU
Tom Cole, WES
```

```
GRID          NWB      NBR      IMX      KMX
              3        5      227      22

IN/OUTFL      NTR      NST      NIW      NWD      NGT      NSP      NPI      NPU
              7        0        0        0        0        0        0        0

CONSTITU      NGC      NSS      NAL      NEP      NBOD
              2        1        1        0        0

MISCELL      NDAY
              100

TIME CON      TMSTRT    TMEND      YEAR
              145.000  701.000    1995

DLT CON      NDT      DLTMIN
              1      1.00000

DLT DATE      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD      DLTD
              145.000

DLT MAX      DLTMAX    DLTMAX    DLTMAX    DLTMAX    DLTMAX    DLTMAX    DLTMAX    DLTMAX    DLTMAX
              200.000

DLT FRN      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF      DLTF
              0.70000

DLT LIM1      VISC      CELC
WB 1          ON        ON
WB 2          ON        ON
WB 3          ON        ON

BRANCH G      US      DS      UHS      DHS      UQB      DQB      NLMIN      SLOPE
BR1           2        26      0        29      0        0        1 0.00310
BR2           29      50      26      53      0        0        1 0.00310
BR3           53      77      50      80      0        0        1 0.00150
BR4           80     124      77     127      0        0        1 0.00120
BR5          127     226     124     -1      0        0        1 0.00034

LOCATION      LAT      LONG      EBOT      BS      BE      JBDN
WB 1        47.2000 122.100 29.2000      1      2      2
```

WB 2	47.2000	122.100	6.60000	3	4	4
WB 3	47.2000	122.100	-2.5000	5	5	5

INIT	CND	TEMPI	ICEI	WTYPEC
WB 1		15.0000	0.00000	FRESH
WB 2		15.0000	0.00000	FRESH
WB 3		15.0000	0.00000	FRESH

CALCULAT	VBC	EBC	MBC	PQC	EVC	PRC
WB 1	OFF	OFF	OFF	OFF	ON	OFF
WB 2	OFF	OFF	OFF	OFF	ON	OFF
WB 3	OFF	OFF	OFF	OFF	ON	OFF

DEAD SEA	WINDC	QINC	QOUTC	HEATC
WB 1	ON	ON	ON	ON
WB 2	ON	ON	ON	ON
WB 3	ON	ON	ON	ON

INTERPOL	QINIC	DTRIC	HDIC
BR1	ON	ON	ON
BR2	ON	ON	ON
BR3	ON	ON	ON
BR4	ON	ON	ON
BR5	ON	ON	ON

HEAT EXCH	SLHTC	SROC	RHEVAP	METIC	FETCHC	AFW	BFW	CFW	WINDH
WB 1	TERM	OFF	OFF	ON	OFF	9.20000	0.46000	2.00000	2.00000
WB 2	TERM	OFF	OFF	ON	OFF	9.20000	0.46000	2.00000	2.00000
WB 3	TERM	OFF	OFF	ON	OFF	9.20000	0.46000	2.00000	2.00000

ICE COVE	ICEC	SLICEC	ALBEDO	HWICE	BICE	GICE	ICEMIN	ICET2
WB 1	OFF	DETAIL	0.25000	10.0000	0.60000	0.07000	0.05000	3.00000
WB 2	OFF	DETAIL	0.25000	10.0000	0.60000	0.07000	0.05000	3.00000
WB 3	OFF	DETAIL	0.25000	10.0000	0.60000	0.07000	0.05000	3.00000

TRANSPOR	SLTRC	THETA
WB 1	ULTIMATE	0.55000
WB 2	ULTIMATE	0.55000
WB 3	ULTIMATE	0.55000

HYD COEF	AX	DX	CBHE	TSED	FI	TSEDF	FRICC
WB 1	1.00000	1.00000	7E-08	11.5000	0.01000	1.00000	MANN
WB 2	1.00000	1.00000	7E-08	11.5000	0.01000	1.00000	MANN
WB 3	1.00000	1.00000	7E-08	11.5000	0.01000	1.00000	MANN

EDDY VISC	AZC	AZSLC	AZMAX
WB 1	NICK	IMP	1.00000
WB 2	NICK	IMP	1.00000
WB 3	NICK	IMP	1.00000

N STRUC	NSTR
BR1	0
BR2	0
BR3	0
BR4	0
BR5	0

STR INT	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC	STRIC
---------	-------	-------	-------	-------	-------	-------	-------	-------	-------



BR 1  
BR 2  
BR 3  
BR 4  
BR 5

STR TOP	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR	KTSTR
BR1										
BR2										
BR3										
BR4										
BR5										

STR BOT	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR	KBSTR
BR1										
BR2										
BR3										
BR4										
BR5										

STR SINK	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC	SINKC
BR1										
BR2										
BR3										
BR4										
BR5										

STR ELEV	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR	ESTR
BR1										
BR2										
BR3										
BR4										
BR5										

STR WIDT	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR	WSTR
BR1										
BR2										
BR3										
BR4										
BR5										

PIPES	IUPI	IDPI	EUPI	EDPI	WPI	DLXPI	FPI	FMINPI	WTHLC
-------	------	------	------	------	-----	-------	-----	--------	-------

PIPE UP	PUPIC	ETUPI	EBUPI	KTUPI	KBUPI
---------	-------	-------	-------	-------	-------

PIPE DOWN	PDPIC	ETDPI	EBDPI	KTDPI	KBDPI
-----------	-------	-------	-------	-------	-------

SPILLWAY	IUSP	IDSP	ESP	A1SP	B1SP	A2SP	B2SP	WTHLC
----------	------	------	-----	------	------	------	------	-------

SPILL UP	PUSPC	ETUSP	EBUSP	KTUSP	KBUSP
----------	-------	-------	-------	-------	-------

SPILL DOWN	PDSPC	ETUSP	EBUSP	KTDSP	KBDSP
------------	-------	-------	-------	-------	-------

SPILL GAS	GASSPC	EQSP	AGASSP	BGASSP	CGASSP					
GATES WTHLC	IUGT	IDGT	EGT	A1GT	B1GT	G1GT	A2GT	B2GT	G2GT	
GATE WEIR	GTA1	GTB1	GTA2	GTB2	DYNVAR					
GATE UP	PUGTC	ETUGT	EBUGT	KTUGT	KBUGT					
GATE DOWN	PDGTC	ETDGT	EBDGT	KTDGT	KBDGT					
GATE GAS	GASGTC	EQGT	AGASGT	BGASGT	CGASGT					
PUMPS 1	IUPU	IDPU	EPU	STRTPU	ENDPU	EONPU	EOFFPU	QPU	WTHLC	
PUMPS 2	PPUC	ETPU	EBPU	KTPU	KBPU					
WEIR SEG	IWR	IWR	IWR	IWR	IWR	IWR	IWR	IWR	IWR	
WEIR TOP	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	KTWR	
WEIR BOT	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	KBWR	
WD INT	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	WDIC	
WD SEG	IWD	IWD	IWD	IWD	IWD	IWD	IWD	IWD	IWD	
WD ELEV	EWD	EWD	EWD	EWD	EWD	EWD	EWD	EWD	EWD	
WD TOP	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	KTWD	
WD BOT	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	KBWD	
TRIB PLA	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC DISTR	PTRC	PTRC	
TRIB INT	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC ON	TRIC	TRIC	
TRIB SEG	ITR 26	ITR 32	ITR 76	ITR 134	ITR 145	ITR 159	ITR 171	ITR	ITR	

TRIB TOP	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR 0	KTTR	KTTR
TRIB BOT	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR 0	KBTR	KBTR
DST TRIB	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC	DTRC
BR 1	OFF								
BR 2	ON								
BR 3	ON								
BR 4	OFF								
BR 5	OFF								
PUMPBACK	JBG 0	KTG 0	KBG 0	JBP 0	KTP 0	KBP 0			
PRINTER	LJC IV								
HYD PRIN	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC	HPRWBC
NVIOL	ON	ON	ON						
U	ON	ON	ON						
W	ON	ON	ON						
T	ON	ON	ON						
RHO	OFF	OFF	OFF						
AZ	OFF	OFF	OFF						
SHEAR	OFF	OFF	OFF						
ST	OFF	OFF	OFF						
SB	OFF	OFF	OFF						
ADMX	OFF	OFF	OFF						
DM	OFF	OFF	OFF						
HDG	OFF	OFF	OFF						
ADMZ	OFF	OFF	OFF						
HPG	OFF	OFF	OFF						
GRAV	OFF	OFF	OFF						
SNP PRINT	SNPC	NSNP	NISNP						
WB 1	ON	1	1						
WB 2	ON	1	1						
WB 3	ON	1	1						
SNP DATE	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD	SNPD
WB 1	145.000								
WB 2	145.000								
WB 3	145.000								
SNP FREQ	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF	SNPF
WB 1	10.0000								
WB 2	10.0000								
WB 3	10.0000								
SNP SEG	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP	ISNP
WB 1	2								
WB 2	94								
WB 3	226								
SCR PRINT	SCRC	NSCR							

WB 1	OFF	1							
WB 2	OFF	1							
WB 3	ON	1							
SCR DATE	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD	SCRD
WB 1	145.000								
WB 2	145.000								
WB 3	145.000								
SCR FREQ	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF	SCRF
WB 1	0.10000								
WB 2	0.10000								
WB 3	0.15000								
PRF PLOT	PRFC	NPRF	NIPRF						
WB 1	OFF	0	0						
WB 2	OFF	0	0						
WB 3	OFF	0	0						
PRF DATE	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD	PRFD
WB 1									
WB 2									
WB 3									
PRF FREQ	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF	PRFF
WB 1									
WB 2									
WB 3									
PRF SEG	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF	IPRF
WB 1									
WB 2									
WB 3									
SPR PLOT	SPRC	NSPR	NISPR						
WB 1	OFF	0	0						
WB 2	OFF	0	0						
WB 3	OFF	0	0						
SPR DATE	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD	SPRD
WB 1									
WB 2									
WB 3									
SPR FREQ	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF	SPRF
WB 1									
WB 2									
WB 3									
SPR SEG	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR	ISPR
WB 1									
WB 2									
WB 3									
VPL PLOT	VPLC	NVPL							
WB 1	OFF	0							
WB 2	OFF	0							
WB 3	OFF	0							

VPL DATE	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD	VPLD
WB 1									
WB 2									
WB 3									
VPL FREQ	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF	VPLF
WB 1									
WB 2									
WB 3									
CPL PLOT	CPLC	NCPL							
WB 1	OFF	32							
WB 2	OFF	32							
WB 3	OFF	32							
CPL DATE	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD	CPLD
WB 1	400.0	401.0	402.0	403.0	404.0	405.0	406.0	407.0	408.0
	409.0	410.0	411.0	412.0	413.0	414.0	415.0	416.0	417.0
	418.0	419.0	420.0	421.0	422.0	423.0	424.0	425.0	426.0
	427.0	428.0	429.0	430.0	431.0				
WB 2	400.0	401.0	402.0	403.0	404.0	405.0	406.0	407.0	408.0
	409.0	410.0	411.0	412.0	413.0	414.0	415.0	416.0	417.0
	418.0	419.0	420.0	421.0	422.0	423.0	424.0	425.0	426.0
	427.0	428.0	429.0	430.0	431.0				
WB 3	400.0	401.0	402.0	403.0	404.0	405.0	406.0	407.0	408.0
	409.0	410.0	411.0	412.0	413.0	414.0	415.0	416.0	417.0
	418.0	419.0	420.0	421.0	422.0	423.0	424.0	425.0	426.0
	427.0	428.0	429.0	430.0	431.0				
CPL FREQ	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF	CPLF
WB 1	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	400.00				
WB 2	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	400.00				
WB 3	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668	0.1668
	0.1668	0.1668	0.1668	0.1668	400.00				
FLUXES	FLXC	NFLX							
WB 1	OFF	18							
WB 2	OFF	18							
WB 3	OFF	18							
FLX DATE	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD	FLXD
WB 1	145.000	164.000	199.000	227.000	262.000	318.000	346.000	374.000	409.000
	437.000	473.000	500.000	528.000	563.000	591.000	619.000	647.000	683.000
WB 2	145.000	164.000	199.000	227.000	262.000	318.000	346.000	374.000	409.000
	437.000	473.000	500.000	528.000	563.000	591.000	619.000	647.000	683.000
WB 3	145.000	164.000	199.000	227.000	262.000	318.000	346.000	374.000	409.000
	437.000	473.000	500.000	528.000	563.000	591.000	619.000	647.000	683.000
FLX FREQ	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF	FLXF

WB 1	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
WB 2	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
WB 3	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000	76.0000
TSR PLOT	TSRC ON	NTSR 1	NITSR 9						
TSR DATE	TSRD 145.000	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD	TSRD
TSR FREQ	TSRF 0.04170	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF	TSRF
TSR SEG	ITSR 178	ITSR 148	ITSR 112	ITSR 94	ITSR 76	ITSR 72	ITSR 160	ITSR 218	ITSR 226
TSR LAYE	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000	ETSR 0.00000
WITH OUT	WDOC OFF	NWDO 1	NIWDO 1						
WITH DAT	WDOD 63.5000	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD	WDOD
WITH FRE	WDOF 0.10000	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF	WDOF
WITH SEG	IWDO 30	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO	IWDO
RESTART	RSOC OFF	NRSO 0	RSIC OFF						
RSO DATE	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD	RSOD
RSO FREQ	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF	RSOF
CST COMP	CCC ON	LIMC OFF	CUF 10						
CST ACTIVE	CAC								
TDS	OFF								
Gen1	ON								
Gen2	ON								
ISS1	ON								
PO4	ON								
NH4	ON								
NO3	ON								
DSI	OFF								
PSI	OFF								
FE	OFF								
LDOM	ON								

RDOM	ON
LPOM	ON
RPOM	ON
ALG1	ON
DO	ON
TIC	ON
ALK	ON

CST DERI	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC	CDWBC
DOC	ON	ON	ON							
POC	OFF	OFF	OFF							
TOC	ON	ON	ON							
DON	OFF	OFF	OFF							
PON	OFF	OFF	OFF							
TON	OFF	OFF	OFF							
TKN	OFF	OFF	OFF							
TN	ON	ON	ON							
DOP	OFF	OFF	OFF							
POP	OFF	OFF	OFF							
TOP	OFF	OFF	OFF							
TP	ON	ON	ON							
APR	OFF	OFF	OFF							
CHLA	ON	ON	ON							
ATOT	OFF	OFF	OFF							
%DO	OFF	OFF	OFF							
TSS	ON	ON	ON							
TISS	OFF	OFF	OFF							
CBOD	OFF	OFF	OFF							
pH	ON	ON	ON							
CO2	OFF	OFF	OFF							
HCO3	OFF	OFF	OFF							
CO3	OFF	OFF	OFF							

CST FLUX	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC	CFWBC
TISSIN	OFF	OFF	OFF							
TISSOUT	OFF	OFF	OFF							
PO4AR	OFF	OFF	OFF							
PO4AG	OFF	OFF	OFF							
PO4AP	OFF	OFF	OFF							
PO4ER	OFF	OFF	OFF							
PO4EG	OFF	OFF	OFF							
PO4EP	OFF	OFF	OFF							
PO4POM	OFF	OFF	OFF							
PO4DOM	OFF	OFF	OFF							
PO4OM	OFF	OFF	OFF							
PO4SED	OFF	OFF	OFF							
PO4SOD	OFF	OFF	OFF							
PO4SET	OFF	OFF	OFF							
NH4NITR	OFF	OFF	OFF							
NH4AR	OFF	OFF	OFF							
NH4AG	OFF	OFF	OFF							
NH4AP	OFF	ON	OFF							
NH4ER	OFF	OFF	OFF							
NH4EG	OFF	OFF	OFF							
NH4EP	OFF	OFF	OFF							
NH4POM	OFF	OFF	OFF							
NH4DOM	OFF	OFF	OFF							
NH4OM	OFF	OFF	OFF							

NH4SED	OFF	ON	OFF
NH4SOD	OFF	ON	OFF
NO3DEN	OFF	OFF	OFF
NO3AG	OFF	OFF	OFF
NO3EG	OFF	OFF	OFF
NO3SED	OFF	OFF	OFF
DSIAG	OFF	OFF	OFF
DSIEG	OFF	OFF	OFF
DSIPIS	OFF	OFF	OFF
DSISED	OFF	OFF	OFF
DSISOD	OFF	OFF	OFF
DSISET	OFF	OFF	OFF
PSIAM	OFF	OFF	OFF
PSINET	OFF	OFF	OFF
PSIDK	OFF	OFF	OFF
FESET	OFF	OFF	OFF
FESED	OFF	OFF	OFF
LDOMDK	OFF	OFF	OFF
LRDOM	OFF	OFF	OFF
RDOMDK	OFF	OFF	OFF
LDOMAP	OFF	OFF	OFF
LDOMEF	OFF	OFF	OFF
LPOMDK	OFF	OFF	OFF
LRPOM	OFF	OFF	OFF
RPOMDK	OFF	OFF	OFF
LPOMAP	OFF	OFF	OFF
LPOMEF	OFF	OFF	OFF
LPOMSET	OFF	OFF	OFF
RPOMSET	OFF	OFF	OFF
CBODDK	OFF	OFF	OFF
DOAP	OFF	OFF	ON
DOAR	OFF	OFF	ON
DOEP	OFF	OFF	ON
DOER	OFF	OFF	ON
DOPOM	OFF	OFF	ON
DODOM	OFF	OFF	ON
DOOM	OFF	OFF	ON
DONITR	OFF	OFF	ON
DOCBOD	OFF	OFF	ON
DOREAR	OFF	OFF	ON
DOSED	OFF	OFF	ON
DOSOD	OFF	OFF	ON
TICAG	OFF	OFF	ON
TICEG	OFF	OFF	ON
SEDDK	OFF	OFF	ON
SEDAS	OFF	OFF	ON
SEDLPOM	OFF	OFF	ON
SEDSET	OFF	OFF	ON
SODDK	OFF	OFF	ON

CST ICON	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB	C2IWB
TDS	1.00000	1.00000	1.00000						
Gen1	100.000	100.000	100.000						
Gen2	45.0000	45.0000	45.0000						
ISS1	3.00000	3.00000	3.00000						
PO4	0.02000	0.02000	0.02000						
NH4	0.03000	0.03000	0.03000						



NO3	0.25000	0.25000	0.25000
DSI	0.00000	0.00000	0.00000
PSI	0.00000	0.00000	0.00000
FE	0.00000	0.00000	0.00000
LDOM	0.50000	0.50000	0.50000
RDOM	0.50000	0.50000	0.50000
LPOM	0.50000	0.50000	0.50000
RPOM	0.50000	0.50000	0.50000
ALG1	0.00006	0.00006	0.00006
DO	11.0000	11.0000	11.0000
TIC	12.0000	12.0000	12.0000
ALK	24.0000	24.0000	24.0000

CST PRIN	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC	CPRWBC
TDS	OFF	OFF	OFF							
Gen1	ON	ON	ON							
Gen2	ON	ON	ON							
ISS1	ON	ON	ON							
PO4	ON	ON	ON							
NH4	ON	ON	ON							
NO3	ON	ON	ON							
DSI	OFF	OFF	OFF							
PSI	OFF	OFF	OFF							
FE	OFF	OFF	OFF							
LDOM	ON	ON	ON							
RDOM	ON	ON	ON							
LPOM	ON	ON	ON							
RPOM	ON	ON	ON							
ALG1	ON	ON	ON							
DO	ON	ON	ON							
TIC	ON	ON	ON							
ALK	ON	ON	ON							

CIN CON	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC	CINBRC
TDS	OFF	OFF	OFF	OFF	OFF					
Gen1	ON	ON	ON	ON	ON					
Gen2	ON	ON	ON	ON	ON					
ISS1	ON	ON	ON	ON	ON					
PO4	ON	ON	ON	ON	ON					
NH4	ON	ON	ON	ON	ON					
NO3	ON	ON	ON	ON	ON					
DSI	OFF	OFF	OFF	OFF	OFF					
PSI	OFF	OFF	OFF	OFF	OFF					
FE	OFF	OFF	OFF	OFF	OFF					
LDOM	ON	ON	ON	ON	ON					
RDOM	ON	ON	ON	ON	ON					
LPOM	ON	ON	ON	ON	ON					
RPOM	ON	ON	ON	ON	ON					
ALG1	ON	ON	ON	ON	ON					
DO	ON	ON	ON	ON	ON					
TIC	ON	ON	ON	ON	ON					
ALK	ON	ON	ON	ON	ON					

CTR CON	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC	CTRTRC
TDS	OFF	OFF	OFF	OFF	OFF	OFF	OFF			
Gen1	ON	ON	ON	ON	ON	ON	ON			
Gen2	ON	ON	ON	ON	ON	ON	ON			
ISS1	ON	ON	ON	ON	ON	ON	ON			

PO4	ON	ON	ON	ON	ON	ON	ON
NH4	ON	ON	ON	ON	ON	ON	ON
NO3	ON	ON	ON	ON	ON	ON	ON
DSI	OFF	OFF	OFF	OFF	OFF	OFF	OFF

PSI	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FE	OFF	OFF	OFF	OFF	OFF	OFF	OFF
LDOM	ON	ON	ON	ON	ON	ON	ON
RDOM	ON	ON	ON	ON	ON	ON	ON
LPOM	ON	ON	ON	ON	ON	ON	ON
RPOM	ON	ON	ON	ON	ON	ON	ON
ALG1	ON	ON	ON	ON	ON	ON	ON
DO	ON	ON	ON	ON	ON	ON	ON
TIC	ON	ON	ON	ON	ON	ON	ON
ALK	ON	ON	ON	ON	ON	ON	ON

CDT CON	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC	CDTBRC
TDS	OFF	OFF	OFF	OFF	OFF				
Gen1	OFF	ON	ON	OFF	ON				
Gen2	OFF	ON	ON	OFF	ON				
ISS1	OFF	ON	ON	OFF	ON				
PO4	OFF	ON	ON	OFF	ON				
NH4	OFF	ON	ON	OFF	ON				
NO3	OFF	ON	ON	OFF	ON				
DSI	OFF	OFF	OFF	OFF	OFF				
PSI	OFF	OFF	OFF	OFF	OFF				
FE	OFF	OFF	OFF	OFF	OFF				
LDOM	OFF	ON	ON	OFF	ON				
RDOM	OFF	ON	ON	OFF	ON				
LPOM	OFF	ON	ON	OFF	ON				
RPOM	OFF	ON	ON	OFF	ON				
ALG1	OFF	ON	ON	OFF	ON				
DO	OFF	ON	ON	OFF	ON				
TIC	OFF	ON	ON	OFF	ON				
ALK	OFF	ON	ON	OFF	ON				

CPR CON	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC	CPRBRC
TDS	OFF	OFF	OFF	OFF	OFF				
Gen1	OFF	OFF	OFF	OFF	OFF				
Gen2	OFF	OFF	OFF	OFF	OFF				
ISS1	OFF	OFF	OFF	OFF	OFF				
PO4	OFF	OFF	OFF	OFF	OFF				
NH4	OFF	OFF	OFF	OFF	OFF				
NO3	OFF	OFF	OFF	OFF	OFF				
DSI	OFF	OFF	OFF	OFF	OFF				
PSI	OFF	OFF	OFF	OFF	OFF				
FE	OFF	OFF	OFF	OFF	OFF				
LDOM	OFF	OFF	OFF	OFF	OFF				
RDOM	OFF	OFF	OFF	OFF	OFF				
LPOM	OFF	OFF	OFF	OFF	OFF				
RPOM	OFF	OFF	OFF	OFF	OFF				
ALG1	OFF	OFF	OFF	OFF	OFF				
DO	OFF	OFF	OFF	OFF	OFF				
TIC	OFF	OFF	OFF	OFF	OFF				
ALK	OFF	OFF	OFF	OFF	OFF				

EX COEF	EXH2O	EXSS	EXOM	BETA	EXC	EXIC
WB 1	0.45000	0.01000	0.01000	0.45000	OFF	OFF

WB 2	0.45000	0.01000	0.01000	0.45000	OFF	OFF			
WB 3	0.45000	0.01000	0.01000	0.45000	OFF	OFF			
ALG EX	EXA	EXA	EXA	EXA	EXA	EXA			
	0.20000								
GENERIC	CGQ10	CG0DK	CG1DK	CGS					
CG 1	0.00000	0.00000	0.00000	0.00000					
CG 2	1.04000	0.00000	0.20000	0.00000					
S SOLIDS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS	SSS
	0.50000								
ALGAL RATE	AG	AR	AE	AM	AS	AHSP	AHSN	AHSSI	ASAT
ALG1	2.00000	0.04000	0.04000	0.10000	0.10000	0.00300	0.01400	0.00000	75.0000
ALGAL TEMP	AT1	AT2	AT3	AT4	AK1	AK2	AK3	AK4	
ALG1	5.00000	25.0000	35.0000	40.0000	0.10000	0.99000	0.99000	0.10000	
ALG STOI	ALGP	ALGN	ALGC	ALGSI	ACHLA	ALPOM	ANEQN	ANPR	
ALG1	0.00500	0.08000	0.45000	0.18000	100.000	0.80000	2	0.00100	
EPIPHYTE	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC	EPIC
EPI1	OFF	OFF	OFF						
EPI PRIN	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC	EPRC
EPI1	OFF	OFF	OFF						
EPI INIT	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI	EPICI
EPI1	0.00000	0.00000	0.00000						
EPI RATE	EG	ER	EE	EM	EB	EHSP	EHSN	EHSSI	
EPI1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
EPI HALF	ESAT	EHS	ENEQN	ENPR					
EPI1	0.10000	0.00000	0	0.00000					
EPI TEMP	ET1	ET2	ET3	ET4	EK1	EK2	EK3	EK4	
EPI1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
EPI STOI	EP	EN	EC	ESI	ECHLA	EPOM			
EPI1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000			
DOM	LDOMDK	RDOMDK	LRDDK						
WB 1	0.10000	0.00100	0.01000						
WB 2	0.10000	0.00100	0.01000						
WB 3	0.10000	0.00100	0.01000						
POM	LPOMDK	RPOMDK	LRPDK	POMS					
WB 1	0.08000	0.00100	0.01000	0.10000					
WB 2	0.08000	0.00100	0.01000	0.10000					
WB 3	0.08000	0.00100	0.01000	0.10000					
OM STOIC	ORGP	ORGN	ORGC	ORGS					
WB 1	0.00500	0.08000	0.45000	0.18000					
WB 2	0.00500	0.08000	0.45000	0.18000					
WB 3	0.00500	0.08000	0.45000	0.18000					

OM RATE	OMT1	OMT2	OMK1	OMK2
WB 1	4.00000	25.0000	0.10000	0.99000
WB 2	4.00000	25.0000	0.10000	0.99000
WB 3	4.00000	25.0000	0.10000	0.99000

CBOD	KBOD	TBOD	RBOD
BOD 1	0.01000	0.01000	0.01000

CBOD STOIC	BODP	BODN	BODC
BOD 1	0.00000	0.00000	0.00000

PHOSPHOR	PO4R	PARTP
WB 1	0.0300	0.00000
WB 2	0.0300	0.00000
WB 3	0.0300	0.00000

AMMONIUM	NH4R	NH4DK
WB 1	0.00100	0.12000
WB 2	0.00100	0.12000
WB 3	0.00100	0.12000

NH4 RATE	NH4T1	NH4T2	NH4K1	NH4K2
WB 1	5.00000	25.0000	0.10000	0.99000
WB 2	5.00000	25.0000	0.10000	0.99000
WB 3	5.00000	25.0000	0.10000	0.99000

NITRATE	NO3DK	NO3S
WB 1	0.03000	1.00000
WB 2	0.03000	1.00000
WB 3	0.03000	1.00000

NO3 RATE	NO3T1	NO3T2	NO3K1	NO3K2
WB 1	5.00000	25.0000	0.10000	0.99000
WB 2	5.00000	25.0000	0.10000	0.99000
WB 3	5.00000	25.0000	0.10000	0.99000

SILICA	DSIR	PSIS	PSIDK	PARTSI
WB 1	5.00000	20.0000	0.05000	0.99000
WB 2	5.00000	20.0000	0.05000	0.99000
WB 3	5.00000	20.0000	0.05000	0.99000

IRON	FER	FES
WB 1	0.00000	0.00000
WB 2	0.00000	0.00000
WB 3	0.00000	0.00000

SED CO2	CO2R
WB 1	0.50000
WB 2	0.50000
WB 3	0.50000

STOICH 1	O2NH4	O2OM
WB 1	4.57000	1.40000
WB 2	4.57000	1.40000
WB 3	4.57000	1.40000

STOICH 2	O2AR	O2AG
ALG1	1.10000	1.40000



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qgt.npt

WSC FILE.....WSCFN.....
    wsc.npt

SHD FILE.....SHDFN.....
    shade.npt

BTH FILE.....BTHFN.....
WB 1    bth_wb1.npt
WB 2    bth_wb2.npt
WB 3    bth_wb3.npt

MET FILE.....METFN.....
WB 1    met_wb1.npt
WB 2    met_wb2.npt
WB 3    met_wb3.npt

EXT FILE.....EXTFN.....
WB 1    ext_wb1.npt - not used
WB 2    ext_wb2.npt - not used
WB 3    ext_wb3.npt - not used

VPR FILE.....VPRFN.....
WB 1    vpr00wb1.npt
WB 2    vpr00wb2.npt
WB 3    vpr00wb3.npt

LPR FILE.....LPRFN.....
WB 1    lpr_1.npt
WB 2    lpr_2.npt
WB 3    lpr_3.npt

QIN FILE.....QINFN.....
BR1     qin_br1.npt
BR2     qin_br2.npt
BR3     qin_br3.npt
BR4     qin_br4.npt
BR5     qin_br5.npt

TIN FILE.....TINFN.....
BR1     tin_br1.npt
BR2     tin_br2.npt
BR3     tin_br3.npt
BR4     tin_br4.npt
BR5     tin_br5.npt

CIN FILE.....CINFN.....
BR1     cin_br1.npt
BR2     cin_br2.npt
BR3     cin_br3.npt
BR4     cin_br4.npt
BR5     cin_br5.npt

QOT FILE.....QOTFN.....
BR1     qll_00.npt
BR2     qot_br2.npt
BR3     qot_br3.npt

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BR4 qot\_br4.npt  
BR5 qot\_br5.npt

QTR FILE.....QTRFN.....

TR1 qtr\_tr1.npt  
TR2 qtr\_tr2.npt  
TR3 qtr\_tr3.npt  
TR4 qtr\_tr4.npt  
TR5 qtr\_tr5.npt  
TR6 qtr\_tr6.npt  
TR7 qtr\_tr7.npt

TTR FILE.....TTRFN.....

TR1 ttr\_tr1.npt  
TR2 ttr\_tr2.npt  
TR3 ttr\_tr3.npt  
TR4 ttr\_tr4.npt  
TR5 ttr\_tr5.npt  
TR6 ttr\_tr6.npt  
TR7 ttr\_tr7.npt

CTR FILE.....CTRFN.....

TR1 ctr\_tr1.npt  
TR2 ctr\_tr2.npt  
TR3 ctr\_tr3.npt  
TR4 ctr\_tr4.npt  
TR5 ctr\_tr5.npt  
TR6 ctr\_tr6.npt  
TR7 ctr\_tr7.npt

QDT FILE.....QDTFN.....

BR1 qdt\_br1.npt  
BR2 qdt\_br2.npt  
BR3 qdt\_br3.npt  
BR4 qdt\_br4.npt  
BR5 qdt\_br5.npt

TDT FILE.....TDTFN.....

BR1 tdt\_br1.npt  
BR2 tdt\_br2.npt  
BR3 tdt\_br3.npt  
BR4 tdt\_br4.npt  
BR5 tdt\_br5.npt

CDT FILE.....CDTFN.....

BR1 cdt\_br1.npt  
BR2 cdt\_br2.npt  
BR3 cdt\_br3.npt  
BR4 cdt\_br4.npt  
BR5 cdt\_br5.npt

PRE FILE.....PREFN.....

BR1 pre\_br1.npt  
BR2 pre\_br2.npt  
BR3 pre\_br3.npt  
BR4 pre\_br4.npt  
  
BR5 pre\_br5.npt

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TPR FILE.....TPRFN.....
BR1      tpr_br1.npt
BR2      tpr_br2.npt
BR3      tpr_br3.npt
BR4      tpr_br4.npt
BR5      tpr_br5.npt

CPR FILE.....CPRFN.....
BR1      cpr_br1.npt
BR2      cpr_br2.npt
BR3      cpr_br3.npt
BR4      cpr_br4.npt
BR5      cpr_br5.npt

EUH FILE.....EUHFN.....
BR1      euh_br1.npt
BR2      euh_br2.npt
BR3      euh_br3.npt
BR4      euh_br4.npt
BR5      euh_br5.npt

TUH FILE.....TUHFN.....
BR1      tuh_br1.npt
BR2      tuh_br2.npt
BR3      tuh_br3.npt
BR4      tuh_br4.npt
BR5      tuh_br5.npt

CUH FILE.....CUHFN.....
BR1      cuh_br1.npt
BR2      cuh_br2.npt
BR3      cuh_br3.npt
BR4      cuh_br4.npt
BR5      cuh_br5.npt

EDH FILE.....EDHFN.....
BR1      edh_br1.npt
BR2      edh_br2.npt
BR3      edh_br3.npt
BR4      edh_br4.npt
BR5      edh_br5.npt

TDH FILE.....TDHFN.....
BR1      tdh_br1.npt
BR2      tdh_br2.npt
BR3      tdh_br3.npt
BR4      tdh_br4.npt
BR5      tdh_br5.npt

CDH FILE.....CDHFN.....
BR1      cdh_br1.npt
BR2      cdh_br2.npt
BR3      cdh_br3.npt
BR4      cdh_br4.npt
BR5      cdh_br5.npt

SNP FILE.....SNPFN.....

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WB 1      snp1.opt  
WB 2      snp2.opt  
WB 3      snp3.opt

PRF FILE.....PRFFN.....

WB 1      prf1.opt  
WB 2      prf2.opt  
WB 3      prf3.opt

VPL FILE.....VPLFN.....

WB 1      vpl1.opt  
WB 2      vpl2.opt  
WB 3      vpl3.opt

CPL FILE.....CPLFN.....

WB 1      cpl1.opt  
WB 2      cpl2.opt  
WB 3      cpl3.opt

SPR FILE.....SPRFN.....

WB 1      spr1.opt  
WB 2      spr2.opt  
WB 3      spr3.opt

FLX FILE.....FLXFN.....

WB 1      kfl1.opt  
WB 2      kfl2.opt  
WB 3      kfl3.opt

TSR FILE.....TSRFN.....

tsr.opt

WDO FILE.....WDOFN.....

wdo.opt