



**Cooper Lake Project  
FERC Project No. 2170**

**DRAFT  
Calibration of SNTMP Model  
Of Cooper Creek**



*Performed for:*

**U.S. Forest Service  
Chugach National Forest**

*Performed by:*

**R2 Resource Consultants, Inc.**

**September 14, 2004**

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HDR Alaska developed a SNTMP model (US Fish and Wildlife Service 1984) of Cooper Creek (HDR Alaska 2004) for the Chugach Electric Association in support of the relicensing process for the Cooper Lake Project, FERC Project No. 2170. In response to a request from the U.S. Forest Service, R2 Resource Consultants (R2), reviewed this model, and then collaborated with HDR Alaska to refine the model to improve the calibration. Results of this calibration are presented herein.

The SNTMP model encompasses a study reach of Cooper Creek, extending from Cooper Lake Dam to the confluence with the Kenai River, a distance of 7.6 kilometers. The model is based on hydrologic, water temperature, and meteorological data collected from May 1 to October 31 2003.

Within this report: **Review Comments** of the original SNTMP model and the **Status of Revisions** to the model are discussed; a summary of the **Model Input Data** is presented; the **Calibration Methodology** is described; and **Calibration Results** are presented.

**Review Comments and Status of Revisions**

R2 Resource Consultants reviewed the original SNTMP model developed by HDR Alaska. Review comments and the status of revisions to the SNTMP model are summarized in Table 1. All of the review comments have been addressed in the current version of the SNTMP model of Cooper Creek. The calibrated model can be used to evaluate alternative operational alternatives.

Table 1. Review comments of the original SNTMP model and status of revisions to the model.

<b>Review Comment</b>	<b>Status of Revision</b>
Water temperatures were not measured in any of the tributary streams to Cooper Creek, except for Stetson Creek. A constant water temperature of 4.1oC was assumed in the SNTMP model for all of the tributary streams (including Stetson Creek).	R2 incorporated the measured water temperatures from Stetson Creek in the model and used the temperature of lateral inflow to calibrate the model.
The elevation of the meteorological station adopted for the SNTMP model was based on the SNOTEL station near the Cooper Lake Intake. An elevation of 350.52 meters (1,150 feet) was used in the model. However, the current full pool elevation of Cooper Lake is 1,194 feet (44 feet above the elevation used for the meteorological station. These elevations are inconsistent with each other.	The elevation of the reference meteorological station was changed to 1,200 feet, consistent with the station description reported on the NRCS website.
The daily mean air temperatures obtained from the NRCS for the SNOTEL station near the Cooper Lake Intake do not match daily mean air temperatures for the same location downloaded from the NRCS website. Although the seasonal patterns are somewhat similar, the temperatures differ when compared on a daily basis.	HDR provided revised daily air temperatures for the reference meteorological station, consistent with data reported on the website.
The average annual air temperature (4.09°C) at the SNOTEL station near the Cooper Lake Intake seems warm when compared to the long-term average air temperature and from the nearby Cooper Lake Project station (3.00°C based on 44 years of record). The elevation of the Cooper Lake Project station is about 212 meters below the elevation of the SNOTEL station near the Cooper Lake Intake. If the moist air lapse rate is applied to this difference in elevation, this would suggest that the average annual air temperature at the Cooper Lake Intake is 1.61°C.	The mean annual air temperature was changed to 1.61 °C. However, this parameter was not used in the current version of the model developed for Cooper Creek.
A shade file was not used for the SNTMP model developed for Cooper Creek.	A shade file was developed by R2 and has been incorporated into the model.
Relative humidity was obtained from a different meteorological station from the reference station adopted for the SNTMP. However, the SNTMP model calculates relative humidity at different locations in the modeled stream network based on the air temperature the point of interest and the air temperature at the meteorological station, using the ideal gas law.	HDR transposed the relative humidity from Kenai Lake to the reference meteorological station by accounting for the difference in air temperature between the two locations.
The water surface stream width in the stream geometry file was specified to remain constant, regardless of the streamflow.	R2 developed a relationship between flow and water surface stream width from the data collected from the PHABSIM sites.
The SNTMP model, in its present condition, is not adequately calibrated. There is poor agreement between a plot of time series of predicted and observed water temperatures, for the non-freezing period from May to October, when the SNTMP model is appropriate to use.	R2 incorporated the measured water temperatures from Stetson Creek in the model and used the temperature of lateral inflow to calibrate the model.

## **Model Input Data**

SNTMP input files developed for calibration are presented in Appendix A. Hydrologic, water temperature, meteorological, stream and valley morphology, and vegetation data are presented herein.

A summary of measured flows on Cooper Creek from May 1 to October 31 2003 is presented in Figure 1. The USGS maintains a streamflow gage (No. 15261000) on Cooper Creek near the confluence with the Kenai River. HDR Alaska installed temporary streamflow gages on Cooper Creek just upstream and just downstream from the confluence with Stetson Creek, referred to as Gages CCA and CCB, respectively. The inflow from Stetson Creek can be calculated from the difference between flows measured at Gages CCB and CCA. The average inflow from Stetson Creek was  $0.88 \text{ m}^3/\text{s}$ , about 53% of the average flow at the USGS gage on Cooper Creek near the confluence with the Kenai River ( $1.64 \text{ m}^3/\text{s}$ ).

Measured water temperatures in Cooper Creek from May 1 to October 1 2003 are shown in Figure 2. HDR Alaska measured water temperatures in Cooper Creek just upstream from the confluence with Stetson Creek (Gage CCA). The USGS measured water temperatures in Cooper Creek near the confluence with the Kenai River (Gage No. 15261000). The water temperatures just upstream from the confluence with Stetson Creek were warmer than the temperatures near the confluence with the Kenai River by an average of about  $1^\circ\text{C}$ . On some days, the water temperature in Cooper Creek just upstream from the confluence with Stetson Creek was as much as  $3^\circ\text{C}$  warmer than the water temperature near the confluence with the Kenai River.

Measured water temperatures of sources of inflow to Cooper Creek are shown in Figure 3. HDR Alaska measured water temperatures in Cooper Lake and in Stetson Creek near the confluence with Cooper Creek. The water temperatures in Cooper Lake are significantly warmer than the water temperatures in Cooper Creek and Stetson Creek.

Measured meteorological data, obtained by HDR Alaska, are shown in Figure 4. These data include air temperatures measured near the Cooper Lake Intake, relative humidity measured at Kenai Lake (and transposed to the Cooper Lake Intake site), wind speed measured at Kenai Lake, and sunshine ratio measured at Soldotna Airport, Alaska.

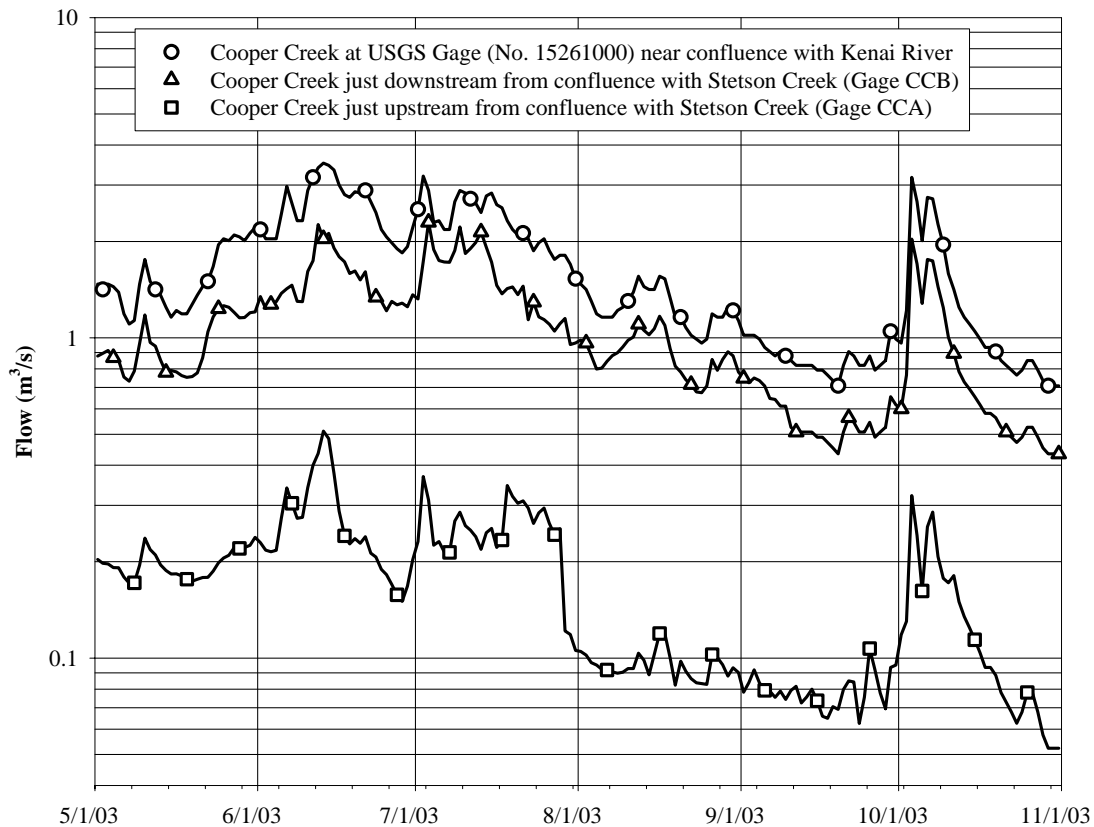


Figure 1. Measured flows in Cooper Creek, Alaska near confluence with Kenai River and just upstream and downstream from confluence with Stetson Creek, May 1 to Oct 31 2003.

Morphological characteristics of Cooper Creek and the valley through which it flows are shown in Figure 5. These characteristics include: the longitudinal profile of Cooper Creek; the latitude of Cooper Creek; the azimuth of the valley alignment; the wetted width for flows of 0.06, 0.5, and 2 m<sup>3</sup>/s; and the side slopes of the east and west sides of the valley.

Physical characteristics of vegetation along the streambanks of Cooper Creek from Cooper Creek Dam to the confluence with the Kenai River are shown in Figure 6. Physical characteristics of the vegetation that influence shade along the creek include height, crown width, offset from streambank, and density.

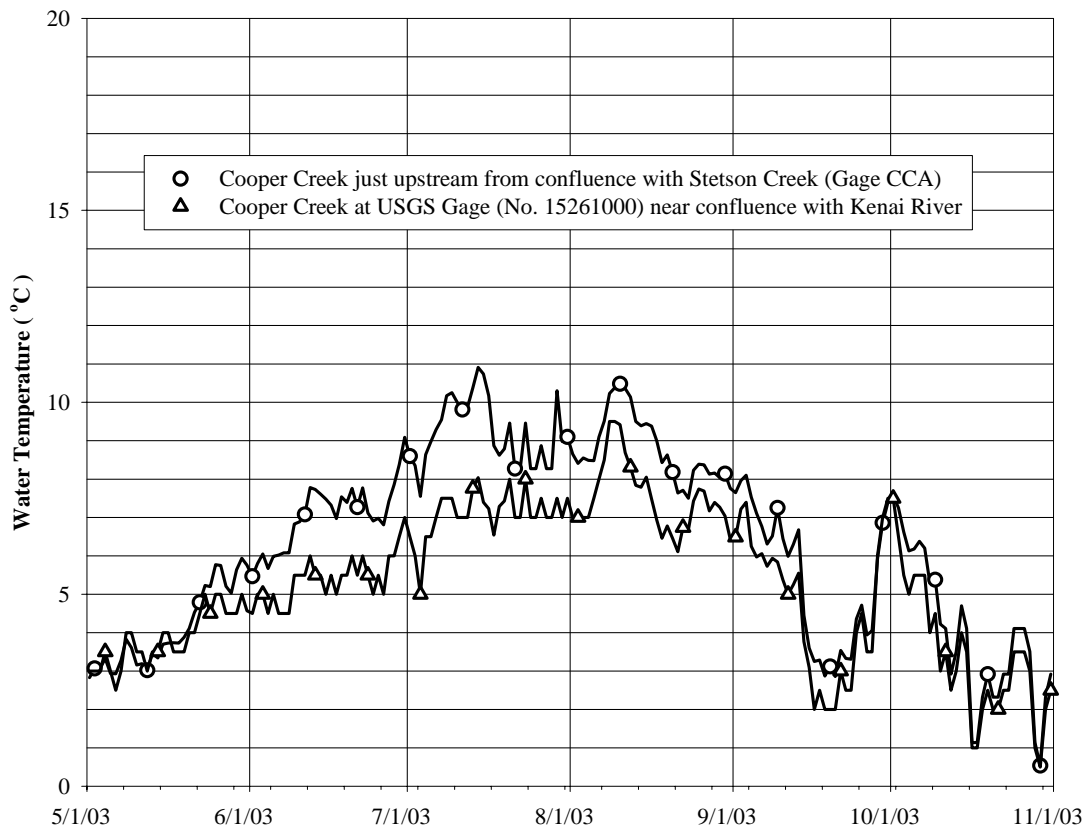


Figure 2. Measured water temperatures in Cooper Creek, Alaska just upstream from confluence with Stetson Creek and near confluence with Kenai River, May 1 to Oct 31 2003.

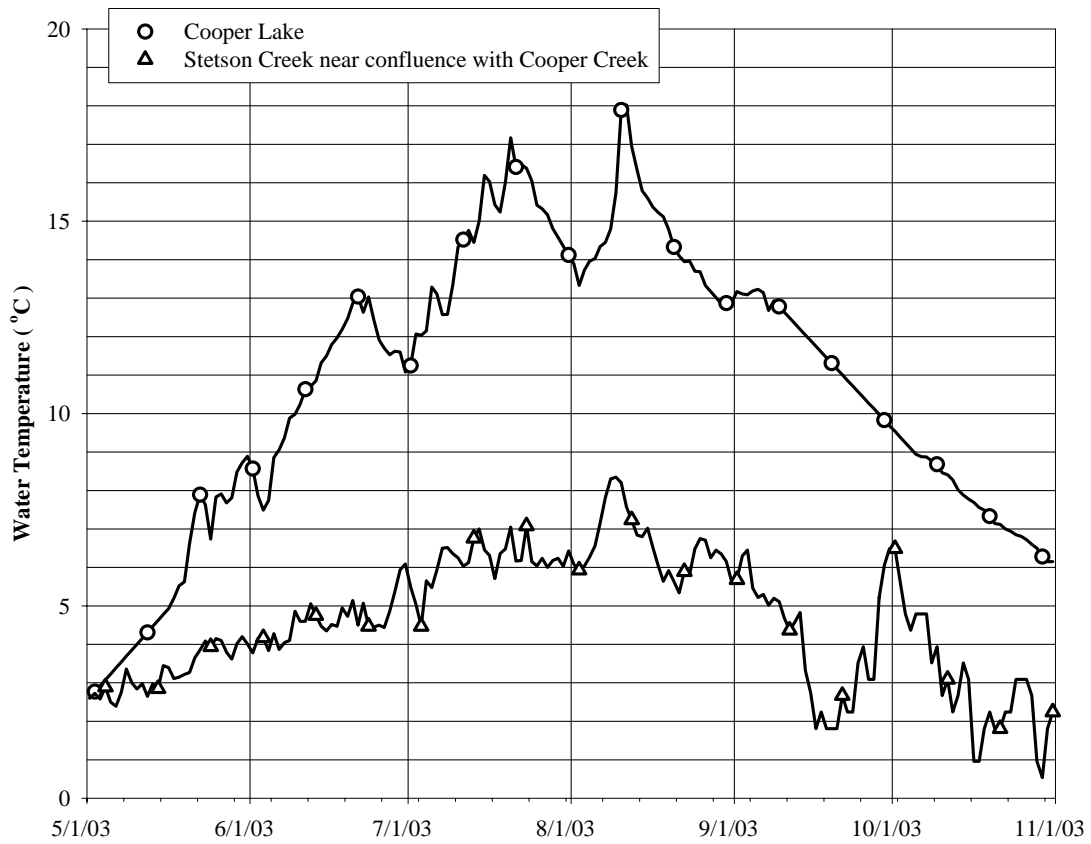


Figure 3. Measured water temperatures in Cooper Lake and in Stetson Creek near the confluence with Cooper Creek, Alaska, May 1 to Oct 31 2003.

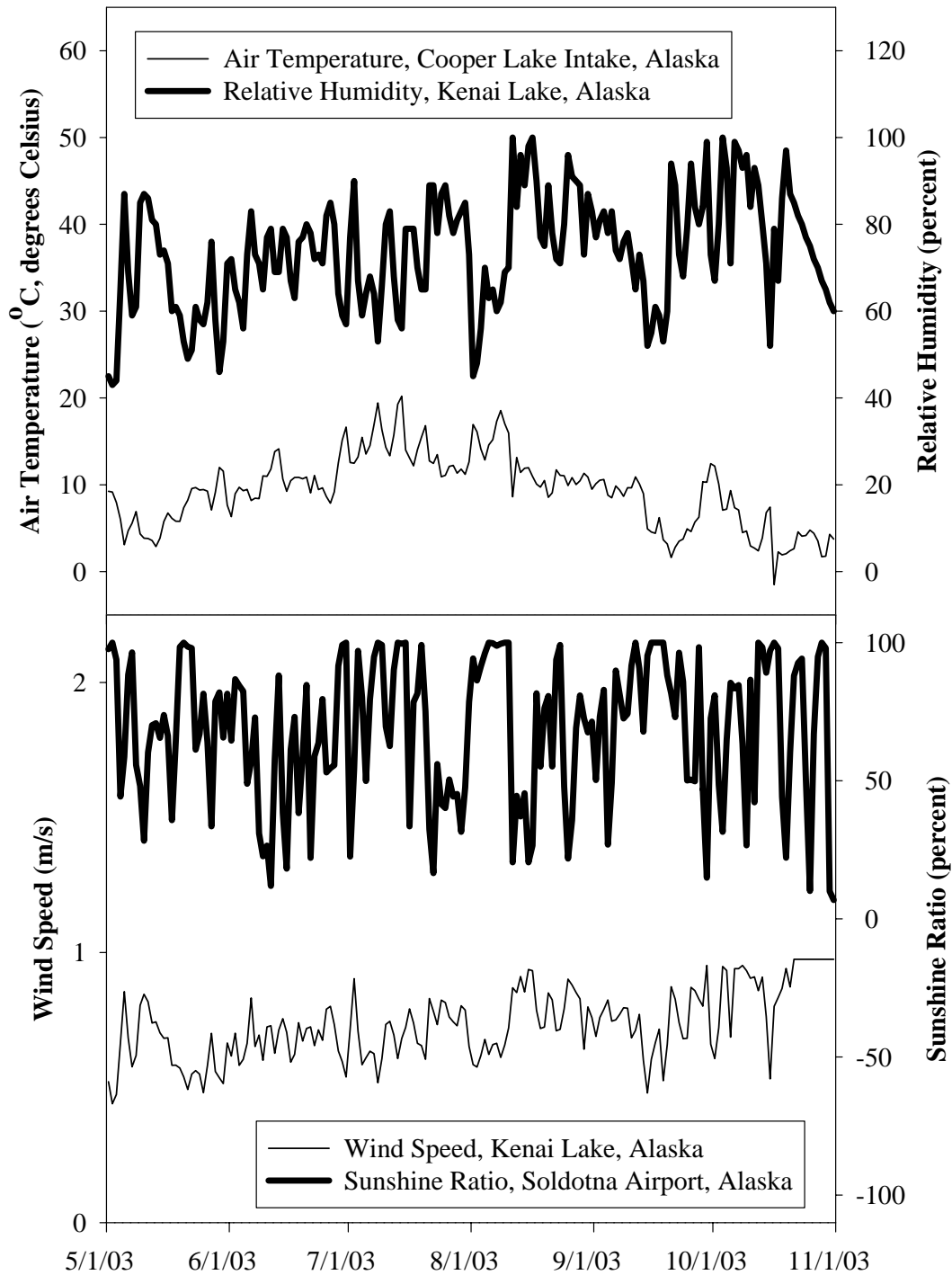


Figure 4. Measured air temperature near Cooper Lake Intake, relative humidity at Kenai Lake (and transposed to Cooper Lake Intake site), wind speed at Kenai Lake, and sunshine ration at Soldotna Airport, Alaska, May 1 to Oct 31 2003.

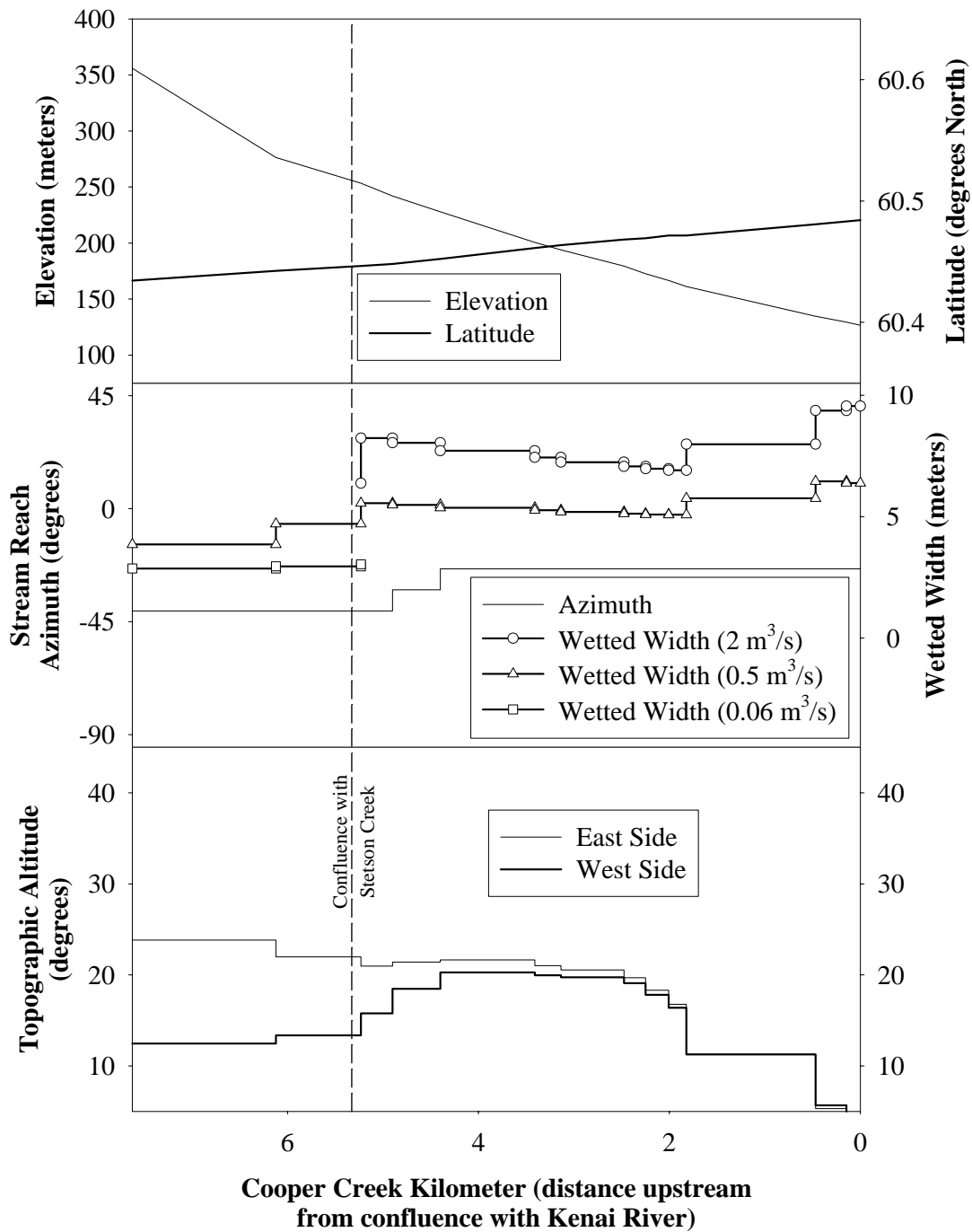


Figure 5. Morphological characteristics of Cooper Creek and valley from Cooper Lake Dam to the confluence with the Kenai River.

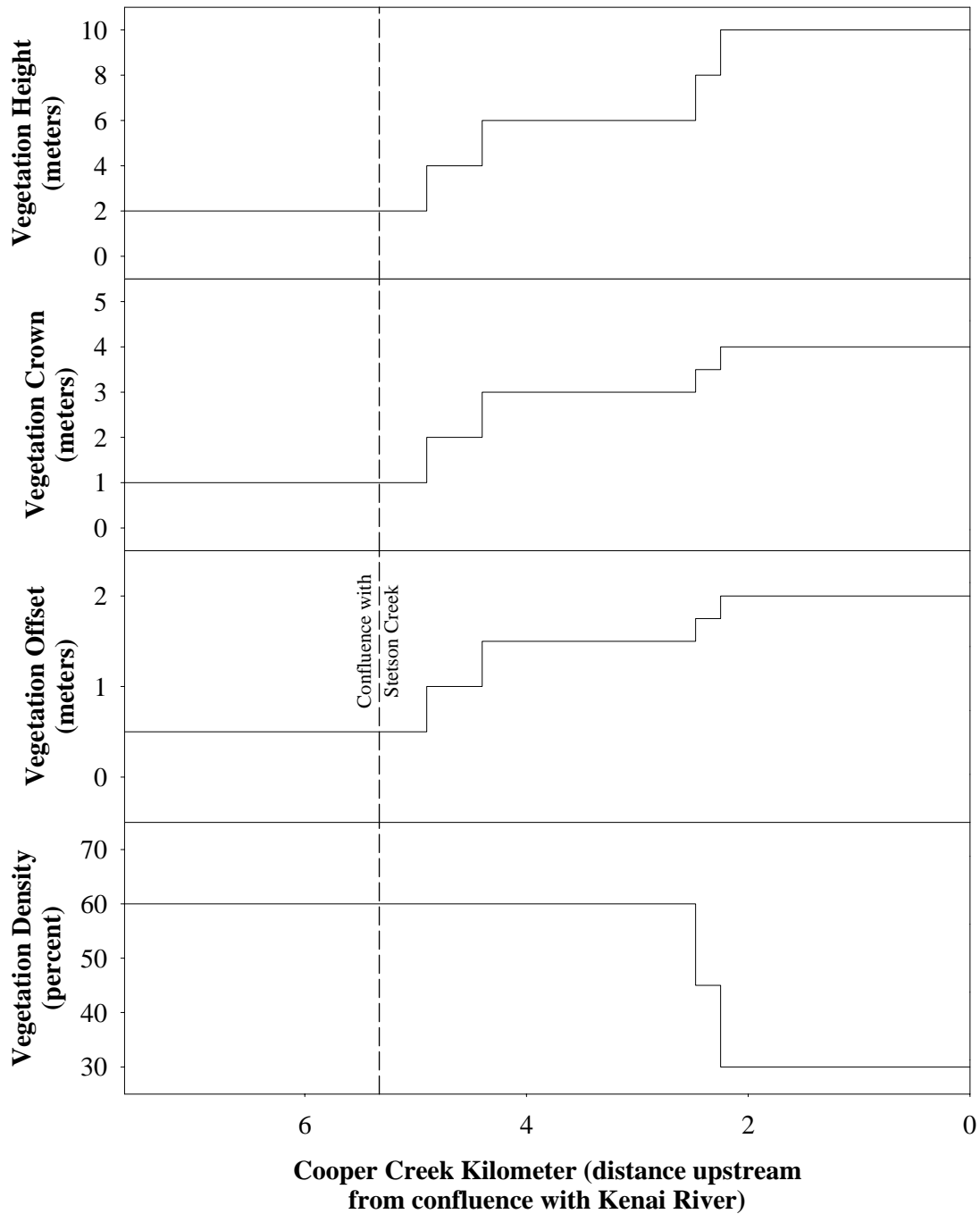


Figure 6. Characteristics of vegetation along streambanks of Cooper Creek, Alaska from Cooper Creek Dam to confluence with Kenai River.

### **Calibration Methodology**

The SNTMP model was calibrated by: adjusting the temperature of accretion flows to Cooper Creek between Cooper Lake Dam and the confluence with Stetson Creek until the predicted temperatures in Cooper Creek just upstream from the confluence with Stetson Creek matched the observed water temperatures at Gage CCA; and then by adjusting the temperature of accretion flows to Cooper Creek between the confluence with Stetson Creek and the confluence with the Kenai River until the predicted temperatures in Cooper Creek near the confluence with the Kenai River matched the observed water temperatures at USGS Gage No. 15261000.

### **Calibration Results**

The assumed water temperatures of accretion flows to Cooper Creek are shown in Figure 7. Comparisons of observed and predicted water temperatures in Cooper Creek just upstream from the confluence with Stetson Creek and near the confluence with the Kenai River are shown in Figures 8 and 9, respectively. There is good agreement between the current predictions and the observed values.

The calibrated model was used to calculate longitudinal profiles of water temperature along Cooper Creek from Cooper Lake Dam to the confluence with the Kenai River on the warmest and coolest day of each month from May to October 2003. The longitudinal profiles during the warming period (May to August) are shown in Figure 10, while the longitudinal profiles during the cooling period (August to October) are shown in Figure 11. These profiles illustrate a significant cooling effect caused by Stetson Creek.

The current version of the calibrated model can be used to evaluate the effects of various operational alternatives on the thermal regime of Cooper Creek below Cooper Lake Dam. The calibrated model was transmitted to HDR Alaska for final analyses of operational alternatives.

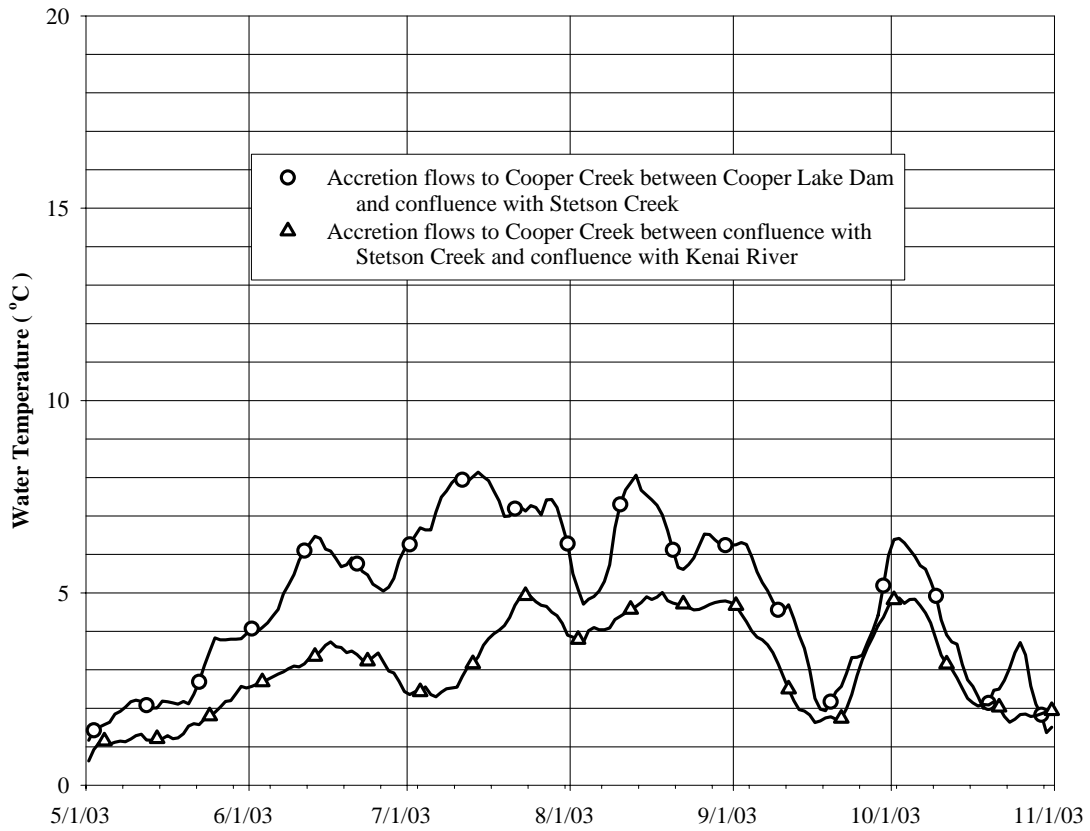


Figure 7. Assumed temperatures of accretion flows to Cooper Creek between Cooper Lake Dam and the confluence with Stetson Creek, and between the confluence with Stetson Creek and the Kenai River, May 1 to October 31 2003.

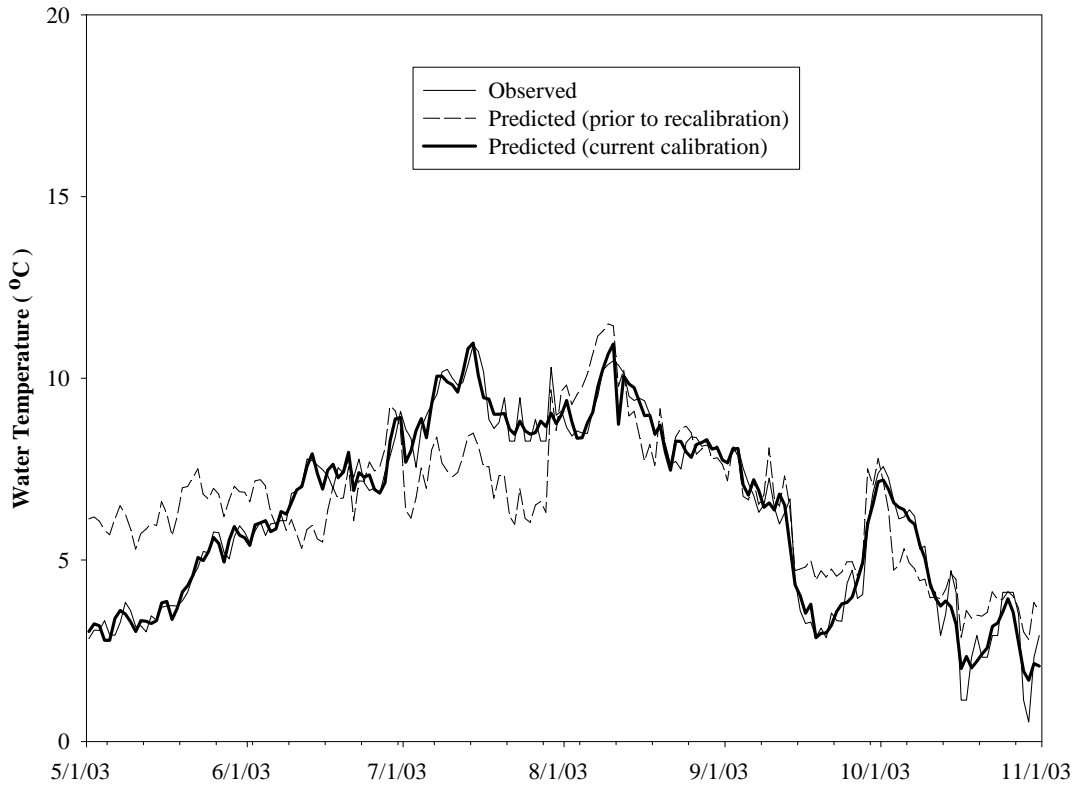


Figure 8. Comparison of observed and predicted water temperatures in Cooper Creek just upstream from confluence with Stetson Creek, May 1 to October 31 2003.

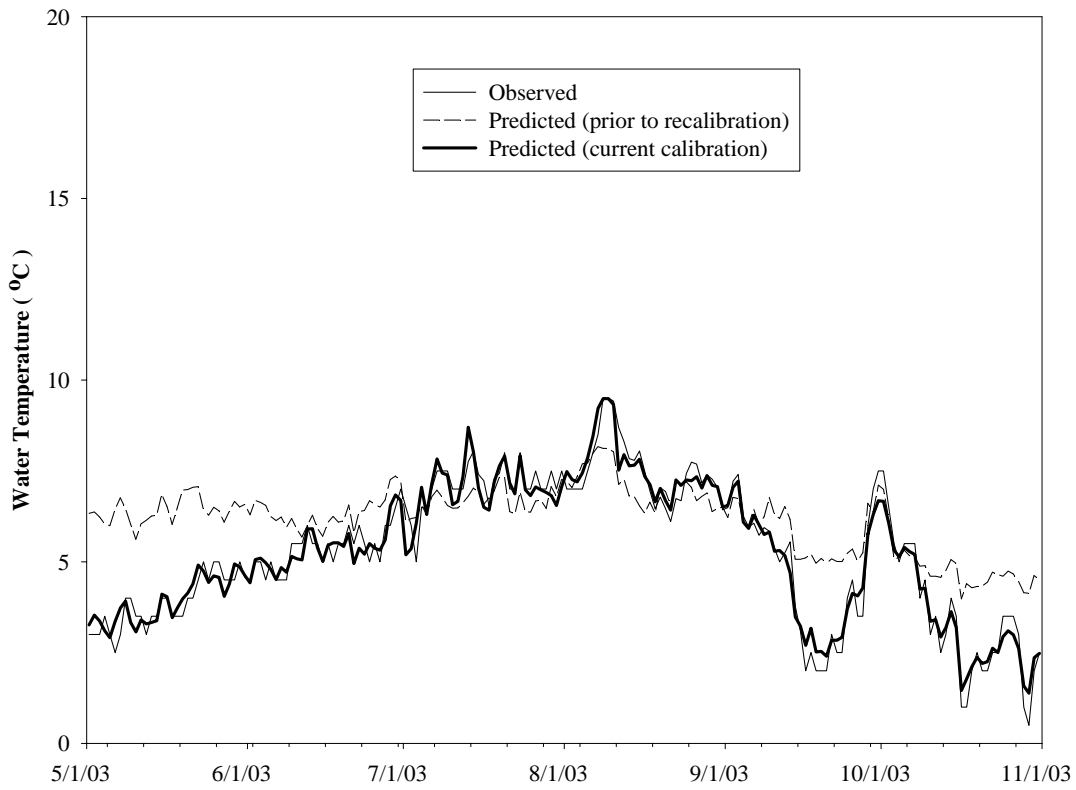


Figure 9. Comparison of observed and predicted water temperatures in Cooper Creek near confluence with Kenai River, May 1 to October 31 2003.

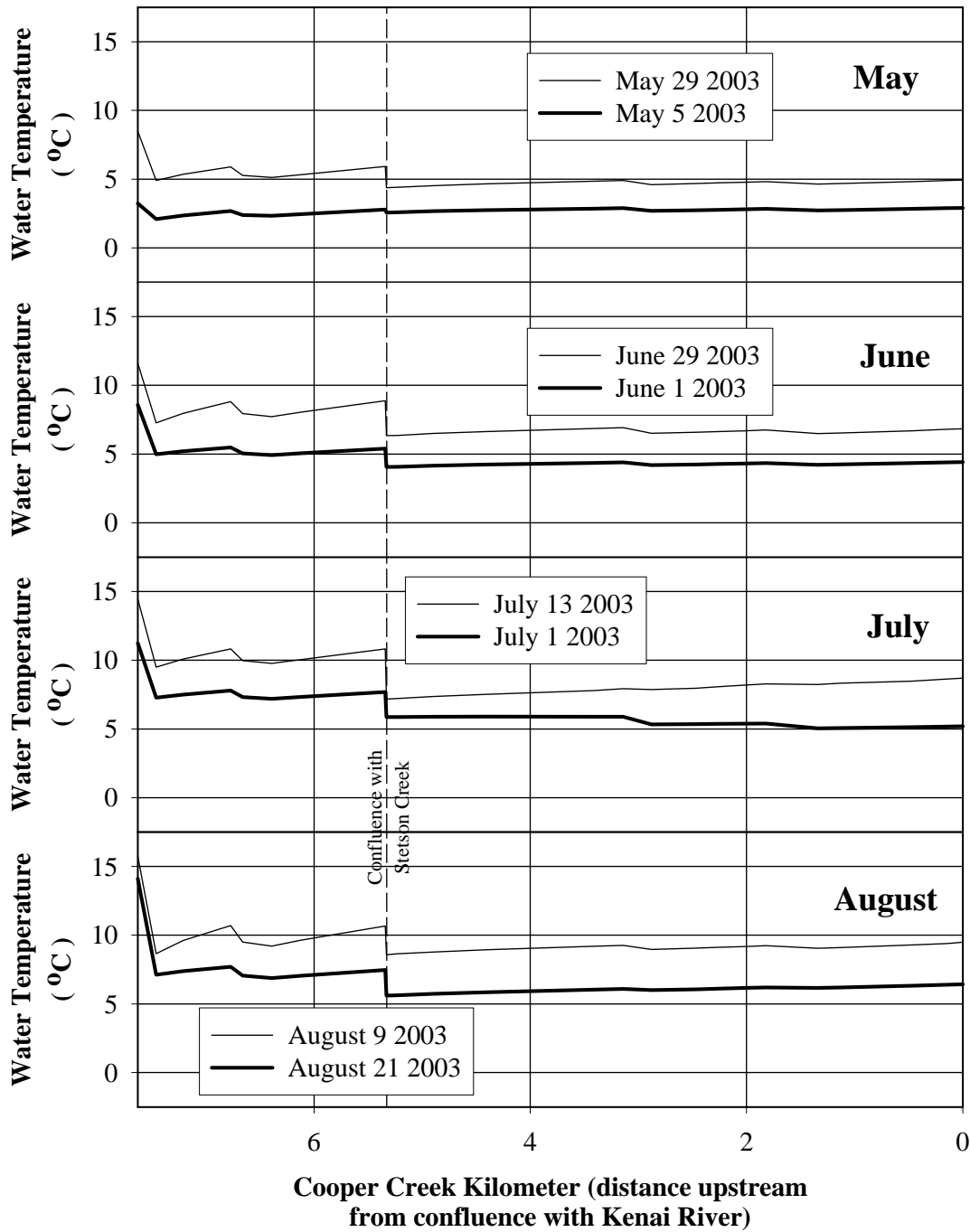


Figure 10. Longitudinal profiles of water temperature in Cooper Creek from Cooper Lake Dam to the confluence with the Kenai River on the warmest and coolest day of each month during the warming period from May to August 2003.

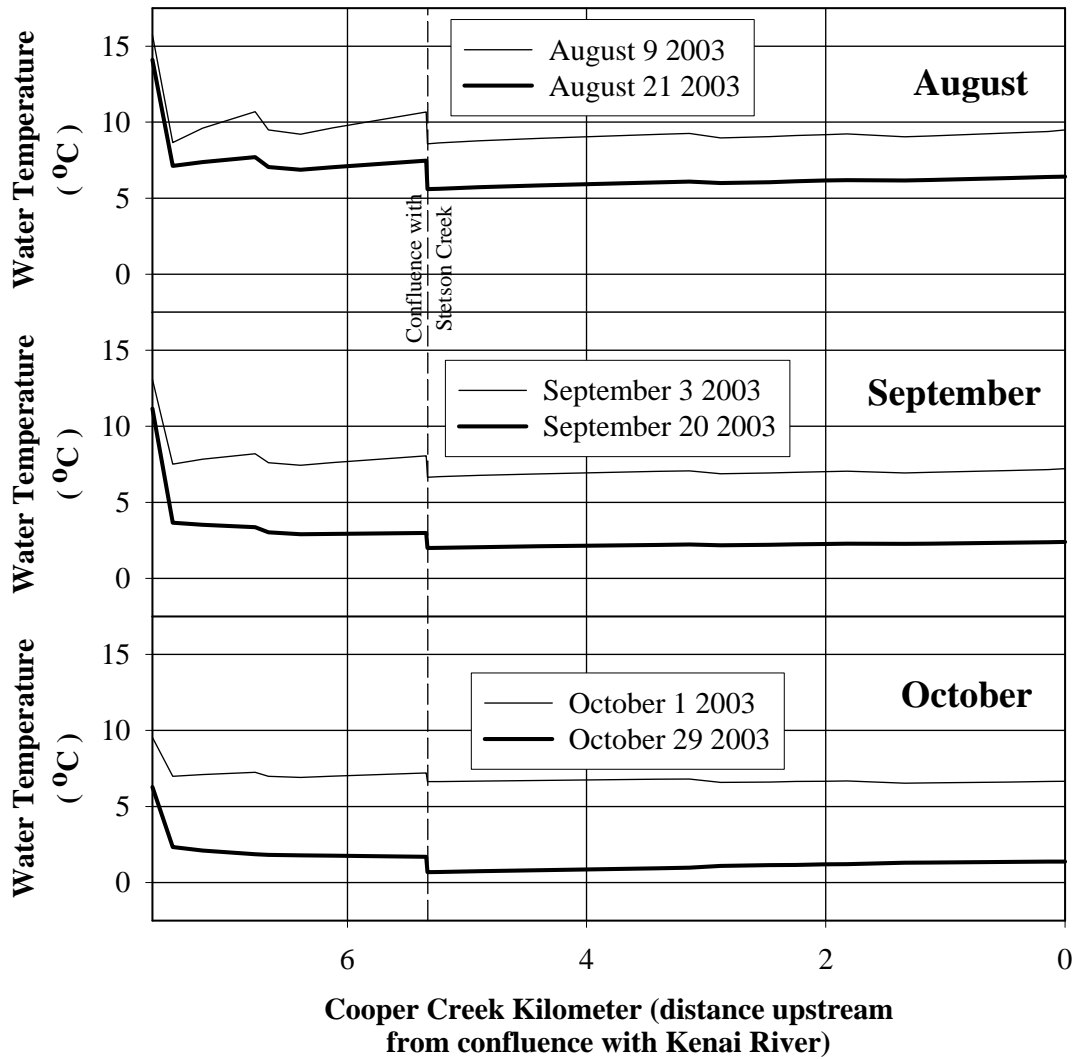


Figure 11. Longitudinal profiles of water temperature in Cooper Creek from Cooper Lake Dam to the confluence with the Kenai River on the warmest and coolest day of each month during the cooling period from August to October 2003.

**References**

HDR Alaska. 2004. Technical Memorandum (Final): Cooper Creek Temperature Model Cooper Lake Project (FERC No. 2170) Prepared for Chugach Electric Association, Inc., June.

U.S. Fish and Wildlife Service. 1984. Instream Water Temperature Model, Instream Flow Information Paper: No. 16, September.

## **APPENDIX A**

### **SNTEMP Input Files for Cooper Creek Temperature Model**

## Appendix A SNTEMP Input Files for Cooper Creek Temperature Model

The Cooper Creek Temperature Model consisted of a total of eight input files including one job control file and seven data files to describe the river network, meteorological, water temperature, hydrological, river/valley morphological, riparian vegetation, and seasonal characteristics of the river system. These eight files are as follows:

1. ***Job Control file***: controls the extent of the temperature model runs. Verification requests, output requests, years of data simulated, node counts, calibration factors, file requests, and temporal and spatial output requests are specified in this file.
2. ***Time Period file***: defines the time period to be simulated and specifies seasonal variables.
3. ***Meteorological file***: contains meteorological data (air temperature, relative humidity, wind speed, and sunshine ratio) for each simulation period.
4. ***Stream Geometry file***: defines the stream morphology in the river network system.
5. ***Study file***: contains all skeleton nodes and any points where output is required by the user.
6. ***Hydrology Node file***: specifies all skeleton nodes where additional hydrologic data are required.
7. ***Hydrology Data file***: contains discharge and temperature for all the nodes in Skeleton file.
8. ***Shade data file***: specifies valley and riparian shade variables.

Contents of these eight files are listed within this appendix.



**Time Period File: CCcalib.tim**

Time Period	file	- Cooper	Cr	Temp	Model	- R2	Calibration,	Sep	14	2004
1-May	121	121	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
2-May	122	122	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
3-May	123	123	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
4-May	124	124	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
5-May	125	125	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
6-May	126	126	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
7-May	127	127	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
8-May	128	128	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
9-May	129	129	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
10-May	130	130	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
11-May	131	131	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
12-May	132	132	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
13-May	133	133	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
14-May	134	134	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
15-May	135	135	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
16-May	136	136	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
17-May	137	137	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
18-May	138	138	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
19-May	139	139	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
20-May	140	140	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
21-May	141	141	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
22-May	142	142	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
23-May	143	143	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
24-May	144	144	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
25-May	145	145	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
26-May	146	146	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
27-May	147	147	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
28-May	148	148	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
29-May	149	149	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
30-May	150	150	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
31-May	151	151	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
1-Jun	152	152	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
2-Jun	153	153	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
3-Jun	154	154	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
4-Jun	155	155	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
5-Jun	156	156	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
6-Jun	157	157	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
7-Jun	158	158	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
8-Jun	159	159	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
9-Jun	160	160	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
10-Jun	161	161	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
11-Jun	162	162	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
12-Jun	163	163	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
13-Jun	164	164	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
14-Jun	165	165	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
15-Jun	166	166	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
16-Jun	167	167	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
17-Jun	168	168	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
18-Jun	169	169	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
19-Jun	170	170	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
20-Jun	171	171	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00
21-Jun	172	172	1	0.06	0.08	0.00	0.00	0.00	0.00	0.00

22-Jun	173	173	1	0.06	0.08	0.00	0.00	0.00	0.00
23-Jun	174	174	1	0.06	0.08	0.00	0.00	0.00	0.00
24-Jun	175	175	1	0.06	0.08	0.00	0.00	0.00	0.00
25-Jun	176	176	1	0.06	0.08	0.00	0.00	0.00	0.00
26-Jun	177	177	1	0.06	0.08	0.00	0.00	0.00	0.00
27-Jun	178	178	1	0.06	0.08	0.00	0.00	0.00	0.00
28-Jun	179	179	1	0.06	0.08	0.00	0.00	0.00	0.00
29-Jun	180	180	1	0.06	0.08	0.00	0.00	0.00	0.00
30-Jun	181	181	1	0.06	0.08	0.00	0.00	0.00	0.00
1-Jul	182	182	1	0.06	0.08	0.00	0.00	0.00	0.00
2-Jul	183	183	1	0.06	0.08	0.00	0.00	0.00	0.00
3-Jul	184	184	1	0.06	0.08	0.00	0.00	0.00	0.00
4-Jul	185	185	1	0.06	0.08	0.00	0.00	0.00	0.00
5-Jul	186	186	1	0.06	0.08	0.00	0.00	0.00	0.00
6-Jul	187	187	1	0.06	0.08	0.00	0.00	0.00	0.00
7-Jul	188	188	1	0.06	0.08	0.00	0.00	0.00	0.00
8-Jul	189	189	1	0.06	0.08	0.00	0.00	0.00	0.00
9-Jul	190	190	1	0.06	0.08	0.00	0.00	0.00	0.00
10-Jul	191	191	1	0.06	0.08	0.00	0.00	0.00	0.00
11-Jul	192	192	1	0.06	0.08	0.00	0.00	0.00	0.00
12-Jul	193	193	1	0.06	0.08	0.00	0.00	0.00	0.00
13-Jul	194	194	1	0.06	0.08	0.00	0.00	0.00	0.00
14-Jul	195	195	1	0.06	0.08	0.00	0.00	0.00	0.00
15-Jul	196	196	1	0.06	0.08	0.00	0.00	0.00	0.00
16-Jul	197	197	1	0.06	0.08	0.00	0.00	0.00	0.00
17-Jul	198	198	1	0.06	0.08	0.00	0.00	0.00	0.00
18-Jul	199	199	1	0.06	0.08	0.00	0.00	0.00	0.00
19-Jul	200	200	1	0.06	0.08	0.00	0.00	0.00	0.00
20-Jul	201	201	1	0.06	0.08	0.00	0.00	0.00	0.00
21-Jul	202	202	1	0.06	0.08	0.00	0.00	0.00	0.00
22-Jul	203	203	1	0.06	0.08	0.00	0.00	0.00	0.00
23-Jul	204	204	1	0.06	0.08	0.00	0.00	0.00	0.00
24-Jul	205	205	1	0.06	0.08	0.00	0.00	0.00	0.00
25-Jul	206	206	1	0.06	0.08	0.00	0.00	0.00	0.00
26-Jul	207	207	1	0.06	0.08	0.00	0.00	0.00	0.00
27-Jul	208	208	1	0.06	0.08	0.00	0.00	0.00	0.00
28-Jul	209	209	1	0.06	0.08	0.00	0.00	0.00	0.00
29-Jul	210	210	1	0.06	0.08	0.00	0.00	0.00	0.00
30-Jul	211	211	1	0.06	0.08	0.00	0.00	0.00	0.00
31-Jul	212	212	1	0.06	0.08	0.00	0.00	0.00	0.00
1-Aug	213	213	1	0.06	0.08	0.00	0.00	0.00	0.00
2-Aug	214	214	1	0.06	0.08	0.00	0.00	0.00	0.00
3-Aug	215	215	1	0.06	0.08	0.00	0.00	0.00	0.00
4-Aug	216	216	1	0.06	0.08	0.00	0.00	0.00	0.00
5-Aug	217	217	1	0.06	0.08	0.00	0.00	0.00	0.00
6-Aug	218	218	1	0.06	0.08	0.00	0.00	0.00	0.00
7-Aug	219	219	1	0.06	0.08	0.00	0.00	0.00	0.00
8-Aug	220	220	1	0.06	0.08	0.00	0.00	0.00	0.00
9-Aug	221	221	1	0.06	0.08	0.00	0.00	0.00	0.00
10-Aug	222	222	1	0.06	0.08	0.00	0.00	0.00	0.00
11-Aug	223	223	1	0.06	0.08	0.00	0.00	0.00	0.00
12-Aug	224	224	1	0.06	0.08	0.00	0.00	0.00	0.00
13-Aug	225	225	1	0.06	0.08	0.00	0.00	0.00	0.00
14-Aug	226	226	1	0.06	0.08	0.00	0.00	0.00	0.00
15-Aug	227	227	1	0.06	0.08	0.00	0.00	0.00	0.00
16-Aug	228	228	1	0.06	0.08	0.00	0.00	0.00	0.00

17-Aug	229	229	1	0.06	0.08	0.00	0.00	0.00	0.00
18-Aug	230	230	1	0.06	0.08	0.00	0.00	0.00	0.00
19-Aug	231	231	1	0.06	0.08	0.00	0.00	0.00	0.00
20-Aug	232	232	1	0.06	0.08	0.00	0.00	0.00	0.00
21-Aug	233	233	1	0.06	0.08	0.00	0.00	0.00	0.00
22-Aug	234	234	1	0.06	0.08	0.00	0.00	0.00	0.00
23-Aug	235	235	1	0.06	0.08	0.00	0.00	0.00	0.00
24-Aug	236	236	1	0.06	0.08	0.00	0.00	0.00	0.00
25-Aug	237	237	1	0.06	0.08	0.00	0.00	0.00	0.00
26-Aug	238	238	1	0.06	0.08	0.00	0.00	0.00	0.00
27-Aug	239	239	1	0.06	0.08	0.00	0.00	0.00	0.00
28-Aug	240	240	1	0.06	0.08	0.00	0.00	0.00	0.00
29-Aug	241	241	1	0.06	0.08	0.00	0.00	0.00	0.00
30-Aug	242	242	1	0.06	0.08	0.00	0.00	0.00	0.00
31-Aug	243	243	1	0.06	0.08	0.00	0.00	0.00	0.00
1-Sep	244	244	1	0.06	0.08	0.00	0.00	0.00	0.00
2-Sep	245	245	1	0.06	0.08	0.00	0.00	0.00	0.00
3-Sep	246	246	1	0.06	0.08	0.00	0.00	0.00	0.00
4-Sep	247	247	1	0.06	0.08	0.00	0.00	0.00	0.00
5-Sep	248	248	1	0.06	0.08	0.00	0.00	0.00	0.00
6-Sep	249	249	1	0.06	0.08	0.00	0.00	0.00	0.00
7-Sep	250	250	1	0.06	0.08	0.00	0.00	0.00	0.00
8-Sep	251	251	1	0.06	0.08	0.00	0.00	0.00	0.00
9-Sep	252	252	1	0.06	0.08	0.00	0.00	0.00	0.00
10-Sep	253	253	1	0.06	0.08	0.00	0.00	0.00	0.00
11-Sep	254	254	1	0.06	0.08	0.00	0.00	0.00	0.00
12-Sep	255	255	1	0.06	0.08	0.00	0.00	0.00	0.00
13-Sep	256	256	1	0.06	0.08	0.00	0.00	0.00	0.00
14-Sep	257	257	1	0.06	0.08	0.00	0.00	0.00	0.00
15-Sep	258	258	1	0.06	0.08	0.00	0.00	0.00	0.00
16-Sep	259	259	1	0.06	0.08	0.00	0.00	0.00	0.00
17-Sep	260	260	1	0.06	0.08	0.00	0.00	0.00	0.00
18-Sep	261	261	1	0.06	0.08	0.00	0.00	0.00	0.00
19-Sep	262	262	1	0.06	0.08	0.00	0.00	0.00	0.00
20-Sep	263	263	1	0.06	0.08	0.00	0.00	0.00	0.00
21-Sep	264	264	1	0.06	0.08	0.00	0.00	0.00	0.00
22-Sep	265	265	1	0.06	0.08	0.00	0.00	0.00	0.00
23-Sep	266	266	1	0.06	0.08	0.00	0.00	0.00	0.00
24-Sep	267	267	1	0.06	0.08	0.00	0.00	0.00	0.00
25-Sep	268	268	1	0.06	0.08	0.00	0.00	0.00	0.00
26-Sep	269	269	1	0.06	0.08	0.00	0.00	0.00	0.00
27-Sep	270	270	1	0.06	0.08	0.00	0.00	0.00	0.00
28-Sep	271	271	1	0.06	0.08	0.00	0.00	0.00	0.00
29-Sep	272	272	1	0.06	0.08	0.00	0.00	0.00	0.00
30-Sep	273	273	1	0.06	0.08	0.00	0.00	0.00	0.00
1-Oct	274	274	1	0.06	0.08	0.00	0.00	0.00	0.00
2-Oct	275	275	1	0.06	0.08	0.00	0.00	0.00	0.00
3-Oct	276	276	1	0.06	0.08	0.00	0.00	0.00	0.00
4-Oct	277	277	1	0.06	0.08	0.00	0.00	0.00	0.00
5-Oct	278	278	1	0.06	0.08	0.00	0.00	0.00	0.00
6-Oct	279	279	1	0.06	0.08	0.00	0.00	0.00	0.00
7-Oct	280	280	1	0.06	0.08	0.00	0.00	0.00	0.00
8-Oct	281	281	1	0.06	0.08	0.00	0.00	0.00	0.00
9-Oct	282	282	1	0.06	0.08	0.00	0.00	0.00	0.00
10-Oct	283	283	1	0.06	0.08	0.00	0.00	0.00	0.00
11-Oct	284	284	1	0.06	0.08	0.00	0.00	0.00	0.00

12-Oct	285	285	1	0.06	0.08	0.00	0.00	0.00	0.00
13-Oct	286	286	1	0.06	0.08	0.00	0.00	0.00	0.00
14-Oct	287	287	1	0.06	0.08	0.00	0.00	0.00	0.00
15-Oct	288	288	1	0.06	0.08	0.00	0.00	0.00	0.00
16-Oct	289	289	1	0.06	0.08	0.00	0.00	0.00	0.00
17-Oct	290	290	1	0.06	0.08	0.00	0.00	0.00	0.00
18-Oct	291	291	1	0.06	0.08	0.00	0.00	0.00	0.00
19-Oct	292	292	1	0.06	0.08	0.00	0.00	0.00	0.00
20-Oct	293	293	1	0.06	0.08	0.00	0.00	0.00	0.00
21-Oct	294	294	1	0.06	0.08	0.00	0.00	0.00	0.00
22-Oct	295	295	1	0.06	0.08	0.00	0.00	0.00	0.00
23-Oct	296	296	1	0.06	0.08	0.00	0.00	0.00	0.00
24-Oct	297	297	1	0.06	0.08	0.00	0.00	0.00	0.00
25-Oct	298	298	1	0.06	0.08	0.00	0.00	0.00	0.00
26-Oct	299	299	1	0.06	0.08	0.00	0.00	0.00	0.00
27-Oct	300	300	1	0.06	0.08	0.00	0.00	0.00	0.00
28-Oct	301	301	1	0.06	0.08	0.00	0.00	0.00	0.00
29-Oct	302	302	1	0.06	0.08	0.00	0.00	0.00	0.00
30-Oct	303	303	1	0.06	0.08	0.00	0.00	0.00	0.00
31-Oct	304	304	1	0.06	0.08	0.00	0.00	0.00	0.00

**Meteorology File: CCcalib.met**

Meteorology file - Cooper Cr Temp Model - R2 Calibration, Sep 14 2004

		1.05479	365.76	1.61	
2003	1-May	9.25	0.45	0.5217	0.9768
	2-May	9.17	0.43	0.4409	1.0000
	3-May	7.96	0.44	0.4746	0.9384
	4-May	6.01	0.65	0.6654	0.4425
	5-May	3.10	0.87	0.8559	0.5873
	6-May	4.71	0.69	0.6848	0.8839
	7-May	5.56	0.59	0.5774	0.9646
	8-May	6.92	0.61	0.6192	0.5569
	9-May	4.35	0.85	0.8050	0.4809
	10-May	3.85	0.87	0.8457	0.2826
	11-May	3.81	0.86	0.8183	0.6027
	12-May	3.59	0.81	0.7396	0.7010
	13-May	2.89	0.80	0.7438	0.7083
	14-May	3.84	0.73	0.7033	0.6553
	15-May	5.77	0.74	0.6829	0.7382
	16-May	6.75	0.71	0.6842	0.6625
	17-May	6.14	0.60	0.5825	0.3569
	18-May	5.80	0.61	0.5833	0.6443
	19-May	5.79	0.59	0.5725	0.9844
	20-May	7.36	0.53	0.5404	1.0000
	21-May	8.23	0.49	0.4935	0.9854
	22-May	9.57	0.51	0.5500	0.9801
	23-May	9.68	0.61	0.5630	0.6129
	24-May	9.40	0.58	0.5500	0.6695
	25-May	9.46	0.57	0.4813	0.8151
	26-May	9.28	0.62	0.5817	0.6406
	27-May	7.10	0.76	0.7008	0.3345
	28-May	9.13	0.58	0.5600	0.7870
	29-May	12.00	0.46	0.5367	0.8200
	30-May	11.57	0.53	0.5150	0.6562
	31-May	7.64	0.71	0.6654	0.8152
	1-Jun	6.33	0.72	0.6171	0.6451
	2-Jun	8.96	0.65	0.7013	0.8681
	3-Jun	9.71	0.62	0.5830	0.8440
	4-Jun	9.32	0.56	0.6052	0.8238
	5-Jun	9.47	0.73	0.6643	0.4889
	6-Jun	8.20	0.83	0.8318	0.5694
	7-Jun	8.45	0.73	0.6522	0.7295
	8-Jun	8.41	0.71	0.6948	0.3093
	9-Jun	11.02	0.65	0.6013	0.2266
	10-Jun	10.97	0.77	0.7254	0.2649
	11-Jun	11.81	0.79	0.7292	0.1195
	12-Jun	13.82	0.69	0.6275	0.5779
	13-Jun	14.14	0.69	0.7130	0.8809
	14-Jun	10.67	0.79	0.7554	0.3841
	15-Jun	9.24	0.77	0.7050	0.1817
	16-Jun	10.48	0.67	0.5942	0.6131
	17-Jun	10.84	0.63	0.6235	0.7312
	18-Jun	10.85	0.76	0.7405	0.3826
	19-Jun	10.69	0.77	0.6725	0.5900
	20-Jun	10.89	0.80	0.7192	0.8470

21-Jun	9.07	0.78	0.7252	0.2207
22-Jun	11.06	0.72	0.6558	0.5883
23-Jun	9.44	0.73	0.7138	0.6368
24-Jun	9.65	0.71	0.6752	0.7956
25-Jun	8.65	0.82	0.7904	0.5303
26-Jun	7.88	0.85	0.8013	0.5458
27-Jun	9.19	0.80	0.7338	0.5565
28-Jun	12.54	0.64	0.6361	0.9157
29-Jun	15.14	0.59	0.5963	0.9915
30-Jun	16.64	0.57	0.5400	1.0000
1-Jul	12.57	0.77	0.7158	0.2257
2-Jul	12.48	0.90	0.9033	0.5437
3-Jul	13.21	0.67	0.7087	0.9705
4-Jul	15.46	0.59	0.5846	0.8018
5-Jul	13.54	0.64	0.6104	0.4991
6-Jul	14.53	0.68	0.6354	0.7947
7-Jul	16.92	0.64	0.6258	0.9484
8-Jul	19.43	0.53	0.5183	1.0000
9-Jul	16.35	0.66	0.6071	0.9915
10-Jul	14.33	0.80	0.7342	0.6957
11-Jul	13.35	0.83	0.7458	0.6256
12-Jul	15.74	0.68	0.6950	0.9014
13-Jul	19.29	0.58	0.6079	1.0000
14-Jul	20.21	0.56	0.6826	0.9958
15-Jul	14.01	0.79	0.7229	1.0000
16-Jul	13.09	0.79	0.7913	0.3350
17-Jul	12.19	0.79	0.7395	0.7846
18-Jul	14.05	0.70	0.6646	0.8159
19-Jul	15.47	0.65	0.6557	0.9917
20-Jul	16.80	0.65	0.6052	0.7508
21-Jul	12.74	0.89	0.8300	0.3244
22-Jul	12.46	0.89	0.7833	0.1658
23-Jul	13.47	0.78	0.7333	0.5602
24-Jul	10.93	0.87	0.8242	0.4151
25-Jul	11.09	0.89	0.8148	0.4012
26-Jul	12.11	0.82	0.7617	0.5045
27-Jul	12.24	0.78	0.7438	0.4424
28-Jul	11.33	0.81	0.7292	0.4523
29-Jul	11.81	0.83	0.8033	0.3154
30-Jul	11.21	0.85	0.7871	0.4760
31-Jul	12.65	0.73	0.6522	0.7846
1-Aug	16.94	0.45	0.5852	0.9426
2-Aug	16.12	0.48	0.5763	0.8630
3-Aug	14.12	0.56	0.6192	0.9143
4-Aug	12.87	0.70	0.6783	0.9613
5-Aug	14.58	0.63	0.6233	1.0000
6-Aug	15.19	0.65	0.6596	0.9979
7-Aug	17.31	0.60	0.6643	0.9884
8-Aug	18.56	0.62	0.6121	0.9958
9-Aug	17.04	0.69	0.6575	1.0000
10-Aug	15.97	0.70	0.7213	1.0000
11-Aug	8.62	1.00	0.8696	0.2050
12-Aug	13.15	0.84	0.8522	0.4456
13-Aug	11.41	0.96	0.9113	0.3706
14-Aug	11.91	0.89	0.8543	0.4549
15-Aug	11.96	0.98	0.9378	0.2048

16-Aug	10.97	1.00	0.9329	0.2655
17-Aug	10.08	0.90	0.7863	0.8168
18-Aug	9.73	0.77	0.7192	0.5510
19-Aug	10.49	0.75	0.7242	0.7629
20-Aug	8.56	0.89	0.8508	0.8069
21-Aug	9.07	0.78	0.8252	0.5517
22-Aug	11.73	0.72	0.7104	0.9380
23-Aug	11.10	0.71	0.7158	0.9917
24-Aug	11.04	0.80	0.7913	0.4798
25-Aug	9.92	0.96	0.9017	0.2184
26-Aug	10.83	0.91	0.8800	0.3574
27-Aug	10.03	0.90	0.8521	0.6906
28-Aug	10.46	0.89	0.8286	0.8089
29-Aug	11.32	0.73	0.6426	0.7254
30-Aug	10.88	0.87	0.7991	0.6749
31-Aug	9.49	0.83	0.7596	0.7138
1-Sep	10.13	0.77	0.6895	0.5027
2-Sep	10.54	0.81	0.7596	0.7314
3-Sep	10.62	0.83	0.7900	0.8294
4-Sep	8.80	0.78	0.8248	0.2685
5-Sep	8.50	0.83	0.7463	0.4928
6-Sep	9.86	0.74	0.7513	0.8985
7-Sep	9.38	0.72	0.7713	0.8120
8-Sep	8.67	0.76	0.7957	0.7254
9-Sep	9.67	0.78	0.7942	0.7422
10-Sep	9.65	0.72	0.6846	0.9173
11-Sep	10.91	0.65	0.7121	1.0000
12-Sep	10.11	0.73	0.7717	0.9059
13-Sep	8.99	0.67	0.6009	0.6780
14-Sep	4.92	0.52	0.4804	0.9531
15-Sep	4.55	0.55	0.6046	1.0000
16-Sep	4.41	0.61	0.6661	1.0000
17-Sep	6.22	0.59	0.7165	1.0000
18-Sep	3.68	0.53	0.5258	1.0000
19-Sep	3.19	0.60	0.6605	0.8810
20-Sep	1.63	0.94	0.8736	0.8167
21-Sep	2.80	0.89	0.8279	0.7302
22-Sep	3.51	0.73	0.7408	0.9633
23-Sep	3.74	0.68	0.6810	0.8584
24-Sep	4.93	0.79	0.6829	0.5008
25-Sep	4.61	0.94	0.8713	0.5042
26-Sep	5.71	0.84	0.8592	0.4979
27-Sep	6.27	0.80	0.8278	0.9832
28-Sep	10.32	0.84	0.8027	0.4689
29-Sep	10.30	0.99	0.9526	0.1490
30-Sep	12.44	0.73	0.6614	0.7263
1-Oct	12.14	0.67	0.6077	0.8093
2-Oct	10.09	0.80	0.7217	0.4849
3-Oct	7.08	1.00	0.9487	0.3151
4-Oct	7.20	0.93	0.9338	0.6485
5-Oct	9.33	0.71	0.6871	0.8549
6-Oct	7.35	0.99	0.9408	0.8345
7-Oct	7.11	0.97	0.9408	0.8463
8-Oct	4.50	0.93	0.9526	0.6339
9-Oct	4.68	0.96	0.9329	0.2661
10-Oct	2.95	0.84	0.9052	0.8656

11-Oct	2.71	0.93	0.9108	0.4217
12-Oct	2.38	0.89	0.8592	1.0000
13-Oct	3.89	0.80	0.9091	0.9833
14-Oct	6.80	0.71	0.7635	0.8914
15-Oct	7.42	0.52	0.5326	0.9707
16-Oct	-1.50	0.79	0.8014	1.0000
17-Oct	2.27	0.67	0.8335	0.9794
18-Oct	1.92	0.86	0.8671	0.4417
19-Oct	2.06	0.97	0.9413	0.2209
20-Oct	2.42	0.87	0.8729	0.6016
21-Oct	2.64	0.85	0.9756	0.8804
22-Oct	4.57	0.82	0.9756	0.9265
23-Oct	4.08	0.80	0.9756	0.9422
24-Oct	4.16	0.77	0.9756	0.5001
25-Oct	4.78	0.75	0.9756	0.1010
26-Oct	4.41	0.72	0.9756	0.6690
27-Oct	3.54	0.70	0.9756	0.9488
28-Oct	1.71	0.67	0.9756	1.0000
29-Oct	1.77	0.65	0.9756	0.9802
30-Oct	4.31	0.62	0.9756	0.1002
31-Oct	3.74	0.60	0.9756	0.0685

**Stream Geometry File: CCcalib.str**

Stream geometry file - Cooper Cr Temp Model  
R2 Calibration Sep 14 2004

Cooper Creek	S		7.626	Cooper Lake Dam			
1.05478	356.01	0.045	4.249	0.1407	0.00	0.0	
Cooper Creek	C		6.122	Change in Aspect			
1.05492	276.36	0.045	5.474	0.2196	0.00	0.0	
Cooper Creek	C		5.231	Change in Aspect			
1.05499	253.32	0.045	6.761	0.2843	0.00	0.0	
Cooper Creek	C		4.900	Change in Aspect			
1.05502	242.04	0.045	6.641	0.2763	0.00	0.0	
Cooper Creek	C		4.400	Change in Aspect			
1.05509	227.96	0.045	6.431	0.2618	0.00	0.0	
Cooper Creek	C		3.410	Change in Aspect			
1.05525	200.60	0.045	6.258	0.2496	0.00	0.0	
Cooper Creek	C		3.136	Change in Aspect			
1.05529	193.88	0.045	6.132	0.2405	0.00	0.0	
Cooper Creek	C		2.475	Change in Aspect			
1.05537	179.41	0.045	6.016	0.2319	0.00	0.0	
Cooper Creek	C		2.249	Change in Aspect			
1.05539	172.69	0.045	5.955	0.2274	0.00	0.0	
Cooper Creek	C		2.007	Change in Aspect			
1.05543	166.56	0.045	5.923	0.2217	0.00	0.0	
Cooper Creek	C		1.822	Change in Aspect			
1.05543	161.15	0.045	6.776	0.2361	0.00	0.0	
Cooper Creek	C		0.468	Change in Aspect			
1.05559	134.61	0.045	7.775	0.2689	0.00	0.0	
Cooper Creek	C		0.145	Change in Aspect			
1.05563	129.46	0.045	7.808	0.2908	0.00	0.0	
Cooper Creek	E		0.0	Cooper Creek Mouth			
1.05565	126.57						

**Study File: CCcalib.stu**

Study file - Cooper Cr Temp Model - R2 Calibration Sep 14 2004  
Cooper Creek S 7.626 Cooper Lake Dam  
Cooper Creek O 7.209 Lake Reach  
Cooper Creek O 6.771 Falls Reach  
Cooper Creek O 1.128 Canyon Reach  
Cooper Creek E 0.0 Cooper Creek Mouth

**Hydrology Node File: CCcalib.nod**

Hydrology node file - Cooper Cr Temp Model - R2 Calibration Sep 14 2004  
Cooper Creek S 7.626 Cooper Lake Dam  
Cooper Creek P 7.459 Trib and Change in Aspect  
Cooper Creek P 6.658 Trib and Change in Aspect  
Cooper Creek P 6.392 Tributary  
Cooper Creek Q 5.343 CCA gage  
Cooper Creek P 5.328 Stetson Creek  
Cooper Creek P 2.878 Trib and Change in Aspect  
Cooper Creek P 1.338 Tributary  
Cooper Creek E 0.0 Cooper Creek Mouth

**Hydrology File: CCcalib.hyd**

Hydrology Data file - Cooper Cr Temp Model - R2 Calibration Sep 14 2004

Cooper Creek	S	7.626	Cooper Lake Dam
2003	1-May	0.01016	2.61 1.17
	2-May	0.00989	2.77 1.43
	3-May	0.00983	2.92 1.51
	4-May	0.00958	3.08 1.58
	5-May	0.00957	3.23 1.64
	6-May	0.00895	3.39 1.85
	7-May	0.00857	3.54 1.92
	8-May	0.00859	3.70 2.03
	9-May	0.00976	3.85 2.17
	10-May	0.01185	4.00 2.21
	11-May	0.01092	4.16 2.18
	12-May	0.01050	4.31 2.08
	13-May	0.00977	4.47 2.01
	14-May	0.00938	4.62 2.01
	15-May	0.00916	4.78 2.19
	16-May	0.00917	4.93 2.17
	17-May	0.00904	5.20 2.14
	18-May	0.00881	5.52 2.11
	19-May	0.00869	5.63 2.18
	20-May	0.00882	6.62 2.12
	21-May	0.00892	7.43 2.37
	22-May	0.00893	7.89 2.69
	23-May	0.00935	7.63 3.11
	24-May	0.00992	6.74 3.48
	25-May	0.01028	7.83 3.83
	26-May	0.01046	7.91 3.78
	27-May	0.01105	7.68 3.78
	28-May	0.01101	7.81 3.80
	29-May	0.01107	8.48 3.80
	30-May	0.01125	8.72 3.81
	31-May	0.01192	8.89 3.94
	1-Jun	0.01147	8.57 4.07
	2-Jun	0.01087	7.86 3.99
	3-Jun	0.01073	7.49 4.10
	4-Jun	0.01086	7.74 4.22
	5-Jun	0.01368	8.86 4.40
	6-Jun	0.01698	9.06 4.57
	7-Jun	0.01522	9.37 4.98
	8-Jun	0.01366	9.88 5.21
	9-Jun	0.01376	9.98 5.48
	10-Jun	0.01703	10.24 5.85
	11-Jun	0.02002	10.63 6.10
	12-Jun	0.02176	10.71 6.28
	13-Jun	0.02556	10.85 6.47
	14-Jun	0.02423	11.32 6.42
	15-Jun	0.01886	11.50 6.14
	16-Jun	0.01438	11.79 6.09
	17-Jun	0.01204	11.97 5.89
	18-Jun	0.01136	12.19 5.68
	19-Jun	0.01180	12.47 5.73

20-Jun	0.01142	12.87	5.91
21-Jun	0.01196	13.04	5.76
22-Jun	0.01062	12.63	5.56
23-Jun	0.01034	13.03	5.47
24-Jun	0.00946	12.43	5.23
25-Jun	0.00911	11.91	5.14
26-Jun	0.00850	11.70	5.05
27-Jun	0.00788	11.53	5.15
28-Jun	0.00752	11.62	5.38
29-Jun	0.00839	11.60	5.85
30-Jun	0.01014	11.08	6.13
1-Jul	0.01156	11.25	6.26
2-Jul	0.01845	12.07	6.48
3-Jul	0.01557	12.03	6.69
4-Jul	0.01126	12.15	6.64
5-Jul	0.01156	13.29	6.64
6-Jul	0.01073	13.11	7.10
7-Jul	0.01069	12.57	7.49
8-Jul	0.01340	12.58	7.65
9-Jul	0.01428	13.34	7.86
10-Jul	0.01295	14.33	8.00
11-Jul	0.01254	14.52	7.94
12-Jul	0.01197	14.76	7.90
13-Jul	0.01093	14.45	8.02
14-Jul	0.01232	15.00	8.14
15-Jul	0.01271	16.19	8.02
16-Jul	0.01109	16.03	7.92
17-Jul	0.01169	15.43	7.65
18-Jul	0.01729	15.24	7.39
19-Jul	0.01600	16.01	6.99
20-Jul	0.01523	17.17	7.00
21-Jul	0.01549	16.41	7.19
22-Jul	0.01471	16.47	7.24
23-Jul	0.01317	16.38	7.13
24-Jul	0.01420	16.05	7.27
25-Jul	0.01471	15.42	7.22
26-Jul	0.01317	15.32	7.03
27-Jul	0.01214	15.17	7.42
28-Jul	0.01265	14.81	7.43
29-Jul	0.00607	14.58	7.22
30-Jul	0.00593	14.35	6.76
31-Jul	0.00528	14.12	6.28
1-Aug	0.00524	13.89	5.50
2-Aug	0.00511	13.33	5.09
3-Aug	0.00484	13.73	4.71
4-Aug	0.00476	13.96	4.84
5-Aug	0.00461	14.03	4.91
6-Aug	0.00459	14.34	5.05
7-Aug	0.00452	14.45	5.30
8-Aug	0.00448	14.80	5.73
9-Aug	0.00452	15.74	6.69
10-Aug	0.00464	17.89	7.30
11-Aug	0.00464	18.02	7.68
12-Aug	0.00518	16.95	7.86
13-Aug	0.00492	16.33	8.06
14-Aug	0.00443	15.79	7.67

15-Aug	0.00513	15.60	7.54
16-Aug	0.00597	15.37	7.42
17-Aug	0.00596	15.23	7.28
18-Aug	0.00500	15.12	7.03
19-Aug	0.00411	14.79	6.62
20-Aug	0.00489	14.33	6.12
21-Aug	0.00455	14.10	5.66
22-Aug	0.00431	13.95	5.61
23-Aug	0.00418	13.96	5.74
24-Aug	0.00416	13.70	5.91
25-Aug	0.00414	13.69	6.22
26-Aug	0.00513	13.33	6.53
27-Aug	0.00502	13.17	6.52
28-Aug	0.00477	13.02	6.38
29-Aug	0.00440	12.85	6.27
30-Aug	0.00467	12.87	6.24
31-Aug	0.00451	12.89	6.24
1-Sep	0.00391	13.17	6.25
2-Sep	0.00419	13.11	6.31
3-Sep	0.00459	13.09	6.26
4-Sep	0.00418	13.19	5.94
5-Sep	0.00396	13.23	5.55
6-Sep	0.00395	13.14	5.27
7-Sep	0.00377	12.68	5.06
8-Sep	0.00394	12.93	4.78
9-Sep	0.00371	12.78	4.56
10-Sep	0.00396	12.63	4.53
11-Sep	0.00408	12.49	4.69
12-Sep	0.00362	12.34	4.33
13-Sep	0.00378	12.19	3.90
14-Sep	0.00400	12.04	3.56
15-Sep	0.00368	11.90	3.01
16-Sep	0.00329	11.75	2.26
17-Sep	0.00324	11.60	1.98
18-Sep	0.00352	11.45	1.94
19-Sep	0.00346	11.31	2.17
20-Sep	0.00399	11.16	2.43
21-Sep	0.00425	11.01	2.57
22-Sep	0.00421	10.86	2.91
23-Sep	0.00313	10.72	3.32
24-Sep	0.00377	10.57	3.33
25-Sep	0.00536	10.42	3.38
26-Sep	0.00460	10.27	3.72
27-Sep	0.00389	10.13	4.03
28-Sep	0.00347	9.98	4.42
29-Sep	0.00468	9.83	5.19
30-Sep	0.00476	9.68	5.98
1-Oct	0.00591	9.54	6.39
2-Oct	0.00651	9.39	6.42
3-Oct	0.01609	9.24	6.30
4-Oct	0.01208	9.09	6.13
5-Oct	0.00810	8.94	5.95
6-Oct	0.01285	8.88	5.71
7-Oct	0.01429	8.87	5.62
8-Oct	0.01037	8.77	5.31
9-Oct	0.00888	8.68	4.92

10-Oct	0.00859	8.46	4.30
11-Oct	0.00905	8.41	3.91
12-Oct	0.00751	8.28	3.73
13-Oct	0.00673	8.02	3.67
14-Oct	0.00622	7.88	3.14
15-Oct	0.00571	7.78	2.74
16-Oct	0.00519	7.69	2.57
17-Oct	0.00468	7.56	2.30
18-Oct	0.00468	7.49	2.00
19-Oct	0.00442	7.33	2.14
20-Oct	0.00390	7.14	2.47
21-Oct	0.00365	7.12	2.50
22-Oct	0.00339	7.00	2.73
23-Oct	0.00313	6.94	3.05
24-Oct	0.00339	6.85	3.45
25-Oct	0.00390	6.81	3.71
26-Oct	0.00390	6.72	3.39
27-Oct	0.00339	6.60	2.58
28-Oct	0.00287	6.50	2.11
29-Oct	0.00262	6.28	1.83
30-Oct	0.00262	6.15	1.37
31-Oct	0.00262	6.15	1.51
Cooper Creek P		7.459	Trib and Change in Aspect
2003	1-May	0.0406	1.17
	2-May	0.0396	1.43
	3-May	0.0393	1.51
	4-May	0.0383	1.58
	5-May	0.0383	1.64
	6-May	0.0358	1.85
	7-May	0.0343	1.92
	8-May	0.0344	2.03
	9-May	0.0390	2.17
	10-May	0.0474	2.21
	11-May	0.0437	2.18
	12-May	0.0420	2.08
	13-May	0.0391	2.01
	14-May	0.0375	2.01
	15-May	0.0366	2.19
	16-May	0.0367	2.17
	17-May	0.0361	2.14
	18-May	0.0353	2.11
	19-May	0.0348	2.18
	20-May	0.0353	2.12
	21-May	0.0357	2.37
	22-May	0.0357	2.69
	23-May	0.0374	3.11
	24-May	0.0397	3.48
	25-May	0.0411	3.83
	26-May	0.0419	3.78
	27-May	0.0442	3.78
	28-May	0.0440	3.80
	29-May	0.0443	3.80
	30-May	0.0450	3.81
	31-May	0.0477	3.94
	1-Jun	0.0459	4.07

2-Jun	0.0435	3.99
3-Jun	0.0429	4.10
4-Jun	0.0434	4.22
5-Jun	0.0547	4.40
6-Jun	0.0679	4.57
7-Jun	0.0609	4.98
8-Jun	0.0546	5.21
9-Jun	0.0550	5.48
10-Jun	0.0681	5.85
11-Jun	0.0801	6.10
12-Jun	0.0870	6.28
13-Jun	0.1022	6.47
14-Jun	0.0969	6.42
15-Jun	0.0754	6.14
16-Jun	0.0575	6.09
17-Jun	0.0482	5.89
18-Jun	0.0455	5.68
19-Jun	0.0472	5.73
20-Jun	0.0457	5.91
21-Jun	0.0478	5.76
22-Jun	0.0425	5.56
23-Jun	0.0413	5.47
24-Jun	0.0379	5.23
25-Jun	0.0364	5.14
26-Jun	0.0340	5.05
27-Jun	0.0315	5.15
28-Jun	0.0301	5.38
29-Jun	0.0336	5.85
30-Jun	0.0406	6.13
1-Jul	0.0463	6.26
2-Jul	0.0738	6.48
3-Jul	0.0623	6.69
4-Jul	0.0450	6.64
5-Jul	0.0462	6.64
6-Jul	0.0429	7.10
7-Jul	0.0428	7.49
8-Jul	0.0536	7.65
9-Jul	0.0571	7.86
10-Jul	0.0518	8.00
11-Jul	0.0502	7.94
12-Jul	0.0479	7.90
13-Jul	0.0437	8.02
14-Jul	0.0493	8.14
15-Jul	0.0508	8.02
16-Jul	0.0443	7.92
17-Jul	0.0468	7.65
18-Jul	0.0692	7.39
19-Jul	0.0640	6.99
20-Jul	0.0609	7.00
21-Jul	0.0619	7.19
22-Jul	0.0589	7.24
23-Jul	0.0527	7.13
24-Jul	0.0568	7.27
25-Jul	0.0589	7.22
26-Jul	0.0527	7.03
27-Jul	0.0486	7.42

28-Jul	0.0506	7.43
29-Jul	0.0243	7.22
30-Jul	0.0237	6.76
31-Jul	0.0211	6.28
1-Aug	0.0210	5.50
2-Aug	0.0204	5.09
3-Aug	0.0194	4.71
4-Aug	0.0190	4.84
5-Aug	0.0184	4.91
6-Aug	0.0184	5.05
7-Aug	0.0181	5.30
8-Aug	0.0179	5.73
9-Aug	0.0181	6.69
10-Aug	0.0186	7.30
11-Aug	0.0186	7.68
12-Aug	0.0207	7.86
13-Aug	0.0197	8.06
14-Aug	0.0177	7.67
15-Aug	0.0205	7.54
16-Aug	0.0239	7.42
17-Aug	0.0238	7.28
18-Aug	0.0200	7.03
19-Aug	0.0165	6.62
20-Aug	0.0196	6.12
21-Aug	0.0182	5.66
22-Aug	0.0173	5.61
23-Aug	0.0167	5.74
24-Aug	0.0166	5.91
25-Aug	0.0165	6.22
26-Aug	0.0205	6.53
27-Aug	0.0201	6.52
28-Aug	0.0191	6.38
29-Aug	0.0176	6.27
30-Aug	0.0187	6.24
31-Aug	0.0180	6.24
1-Sep	0.0156	6.25
2-Sep	0.0168	6.31
3-Sep	0.0184	6.26
4-Sep	0.0167	5.94
5-Sep	0.0159	5.55
6-Sep	0.0158	5.27
7-Sep	0.0151	5.06
8-Sep	0.0158	4.78
9-Sep	0.0149	4.56
10-Sep	0.0158	4.53
11-Sep	0.0163	4.69
12-Sep	0.0145	4.33
13-Sep	0.0151	3.90
14-Sep	0.0160	3.56
15-Sep	0.0147	3.01
16-Sep	0.0132	2.26
17-Sep	0.0130	1.98
18-Sep	0.0141	1.94
19-Sep	0.0138	2.17
20-Sep	0.0160	2.43
21-Sep	0.0170	2.57

22-Sep	0.0168	2.91
23-Sep	0.0125	3.32
24-Sep	0.0151	3.33
25-Sep	0.0214	3.38
26-Sep	0.0184	3.72
27-Sep	0.0156	4.03
28-Sep	0.0139	4.42
29-Sep	0.0187	5.19
30-Sep	0.0190	5.98
1-Oct	0.0236	6.39
2-Oct	0.0260	6.42
3-Oct	0.0643	6.30
4-Oct	0.0483	6.13
5-Oct	0.0324	5.95
6-Oct	0.0514	5.71
7-Oct	0.0571	5.62
8-Oct	0.0415	5.31
9-Oct	0.0355	4.92
10-Oct	0.0344	4.30
11-Oct	0.0362	3.91
12-Oct	0.0300	3.73
13-Oct	0.0269	3.67
14-Oct	0.0249	3.14
15-Oct	0.0228	2.74
16-Oct	0.0208	2.57
17-Oct	0.0187	2.30
18-Oct	0.0187	2.00
19-Oct	0.0177	2.14
20-Oct	0.0156	2.47
21-Oct	0.0146	2.50
22-Oct	0.0136	2.73
23-Oct	0.0125	3.05
24-Oct	0.0136	3.45
25-Oct	0.0156	3.71
26-Oct	0.0156	3.39
27-Oct	0.0136	2.58
28-Oct	0.0115	2.11
29-Oct	0.0105	1.83
30-Oct	0.0105	1.37
31-Oct	0.0105	1.51
Cooper Creek	P	6.658 Trib and Change in Aspect
2003	1-May	0.0406 1.17
	2-May	0.0396 1.43
	3-May	0.0393 1.51
	4-May	0.0383 1.58
	5-May	0.0383 1.64
	6-May	0.0358 1.85
	7-May	0.0343 1.92
	8-May	0.0344 2.03
	9-May	0.0390 2.17
	10-May	0.0474 2.21
	11-May	0.0437 2.18
	12-May	0.0420 2.08
	13-May	0.0391 2.01
	14-May	0.0375 2.01

15-May	0.0366	2.19
16-May	0.0367	2.17
17-May	0.0361	2.14
18-May	0.0353	2.11
19-May	0.0348	2.18
20-May	0.0353	2.12
21-May	0.0357	2.37
22-May	0.0357	2.69
23-May	0.0374	3.11
24-May	0.0397	3.48
25-May	0.0411	3.83
26-May	0.0419	3.78
27-May	0.0442	3.78
28-May	0.0440	3.80
29-May	0.0443	3.80
30-May	0.0450	3.81
31-May	0.0477	3.94
1-Jun	0.0459	4.07
2-Jun	0.0435	3.99
3-Jun	0.0429	4.10
4-Jun	0.0434	4.22
5-Jun	0.0547	4.40
6-Jun	0.0679	4.57
7-Jun	0.0609	4.98
8-Jun	0.0546	5.21
9-Jun	0.0550	5.48
10-Jun	0.0681	5.85
11-Jun	0.0801	6.10
12-Jun	0.0870	6.28
13-Jun	0.1022	6.47
14-Jun	0.0969	6.42
15-Jun	0.0754	6.14
16-Jun	0.0575	6.09
17-Jun	0.0482	5.89
18-Jun	0.0455	5.68
19-Jun	0.0472	5.73
20-Jun	0.0457	5.91
21-Jun	0.0478	5.76
22-Jun	0.0425	5.56
23-Jun	0.0413	5.47
24-Jun	0.0379	5.23
25-Jun	0.0364	5.14
26-Jun	0.0340	5.05
27-Jun	0.0315	5.15
28-Jun	0.0301	5.38
29-Jun	0.0336	5.85
30-Jun	0.0406	6.13
1-Jul	0.0463	6.26
2-Jul	0.0738	6.48
3-Jul	0.0623	6.69
4-Jul	0.0450	6.64
5-Jul	0.0462	6.64
6-Jul	0.0429	7.10
7-Jul	0.0428	7.49
8-Jul	0.0536	7.65
9-Jul	0.0571	7.86

10-Jul	0.0518	8.00
11-Jul	0.0502	7.94
12-Jul	0.0479	7.90
13-Jul	0.0437	8.02
14-Jul	0.0493	8.14
15-Jul	0.0508	8.02
16-Jul	0.0443	7.92
17-Jul	0.0468	7.65
18-Jul	0.0692	7.39
19-Jul	0.0640	6.99
20-Jul	0.0609	7.00
21-Jul	0.0619	7.19
22-Jul	0.0589	7.24
23-Jul	0.0527	7.13
24-Jul	0.0568	7.27
25-Jul	0.0589	7.22
26-Jul	0.0527	7.03
27-Jul	0.0486	7.42
28-Jul	0.0506	7.43
29-Jul	0.0243	7.22
30-Jul	0.0237	6.76
31-Jul	0.0211	6.28
1-Aug	0.0210	5.50
2-Aug	0.0204	5.09
3-Aug	0.0194	4.71
4-Aug	0.0190	4.84
5-Aug	0.0184	4.91
6-Aug	0.0184	5.05
7-Aug	0.0181	5.30
8-Aug	0.0179	5.73
9-Aug	0.0181	6.69
10-Aug	0.0186	7.30
11-Aug	0.0186	7.68
12-Aug	0.0207	7.86
13-Aug	0.0197	8.06
14-Aug	0.0177	7.67
15-Aug	0.0205	7.54
16-Aug	0.0239	7.42
17-Aug	0.0238	7.28
18-Aug	0.0200	7.03
19-Aug	0.0165	6.62
20-Aug	0.0196	6.12
21-Aug	0.0182	5.66
22-Aug	0.0173	5.61
23-Aug	0.0167	5.74
24-Aug	0.0166	5.91
25-Aug	0.0165	6.22
26-Aug	0.0205	6.53
27-Aug	0.0201	6.52
28-Aug	0.0191	6.38
29-Aug	0.0176	6.27
30-Aug	0.0187	6.24
31-Aug	0.0180	6.24
1-Sep	0.0156	6.25
2-Sep	0.0168	6.31
3-Sep	0.0184	6.26

4-Sep	0.0167	5.94
5-Sep	0.0159	5.55
6-Sep	0.0158	5.27
7-Sep	0.0151	5.06
8-Sep	0.0158	4.78
9-Sep	0.0149	4.56
10-Sep	0.0158	4.53
11-Sep	0.0163	4.69
12-Sep	0.0145	4.33
13-Sep	0.0151	3.90
14-Sep	0.0160	3.56
15-Sep	0.0147	3.01
16-Sep	0.0132	2.26
17-Sep	0.0130	1.98
18-Sep	0.0141	1.94
19-Sep	0.0138	2.17
20-Sep	0.0160	2.43
21-Sep	0.0170	2.57
22-Sep	0.0168	2.91
23-Sep	0.0125	3.32
24-Sep	0.0151	3.33
25-Sep	0.0214	3.38
26-Sep	0.0184	3.72
27-Sep	0.0156	4.03
28-Sep	0.0139	4.42
29-Sep	0.0187	5.19
30-Sep	0.0190	5.98
1-Oct	0.0236	6.39
2-Oct	0.0260	6.42
3-Oct	0.0643	6.30
4-Oct	0.0483	6.13
5-Oct	0.0324	5.95
6-Oct	0.0514	5.71
7-Oct	0.0571	5.62
8-Oct	0.0415	5.31
9-Oct	0.0355	4.92
10-Oct	0.0344	4.30
11-Oct	0.0362	3.91
12-Oct	0.0300	3.73
13-Oct	0.0269	3.67
14-Oct	0.0249	3.14
15-Oct	0.0228	2.74
16-Oct	0.0208	2.57
17-Oct	0.0187	2.30
18-Oct	0.0187	2.00
19-Oct	0.0177	2.14
20-Oct	0.0156	2.47
21-Oct	0.0146	2.50
22-Oct	0.0136	2.73
23-Oct	0.0125	3.05
24-Oct	0.0136	3.45
25-Oct	0.0156	3.71
26-Oct	0.0156	3.39
27-Oct	0.0136	2.58
28-Oct	0.0115	2.11
29-Oct	0.0105	1.83

	30-Oct	0.0105	1.37
	31-Oct	0.0105	1.51
Cooper Creek	P		6.392 Tributary
2003	1-May	0.0406	1.17
	2-May	0.0396	1.43
	3-May	0.0393	1.51
	4-May	0.0383	1.58
	5-May	0.0383	1.64
	6-May	0.0358	1.85
	7-May	0.0343	1.92
	8-May	0.0344	2.03
	9-May	0.0390	2.17
	10-May	0.0474	2.21
	11-May	0.0437	2.18
	12-May	0.0420	2.08
	13-May	0.0391	2.01
	14-May	0.0375	2.01
	15-May	0.0366	2.19
	16-May	0.0367	2.17
	17-May	0.0361	2.14
	18-May	0.0353	2.11
	19-May	0.0348	2.18
	20-May	0.0353	2.12
	21-May	0.0357	2.37
	22-May	0.0357	2.69
	23-May	0.0374	3.11
	24-May	0.0397	3.48
	25-May	0.0411	3.83
	26-May	0.0419	3.78
	27-May	0.0442	3.78
	28-May	0.0440	3.80
	29-May	0.0443	3.80
	30-May	0.0450	3.81
	31-May	0.0477	3.94
	1-Jun	0.0459	4.07
	2-Jun	0.0435	3.99
	3-Jun	0.0429	4.10
	4-Jun	0.0434	4.22
	5-Jun	0.0547	4.40
	6-Jun	0.0679	4.57
	7-Jun	0.0609	4.98
	8-Jun	0.0546	5.21
	9-Jun	0.0550	5.48
	10-Jun	0.0681	5.85
	11-Jun	0.0801	6.10
	12-Jun	0.0870	6.28
	13-Jun	0.1022	6.47
	14-Jun	0.0969	6.42
	15-Jun	0.0754	6.14
	16-Jun	0.0575	6.09
	17-Jun	0.0482	5.89
	18-Jun	0.0455	5.68
	19-Jun	0.0472	5.73
	20-Jun	0.0457	5.91
	21-Jun	0.0478	5.76

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22-Jun	0.0425	5.56
23-Jun	0.0413	5.47
24-Jun	0.0379	5.23
25-Jun	0.0364	5.14
26-Jun	0.0340	5.05
27-Jun	0.0315	5.15
28-Jun	0.0301	5.38
29-Jun	0.0336	5.85
30-Jun	0.0406	6.13
1-Jul	0.0463	6.26
2-Jul	0.0738	6.48
3-Jul	0.0623	6.69
4-Jul	0.0450	6.64
5-Jul	0.0462	6.64
6-Jul	0.0429	7.10
7-Jul	0.0428	7.49
8-Jul	0.0536	7.65
9-Jul	0.0571	7.86
10-Jul	0.0518	8.00
11-Jul	0.0502	7.94
12-Jul	0.0479	7.90
13-Jul	0.0437	8.02
14-Jul	0.0493	8.14
15-Jul	0.0508	8.02
16-Jul	0.0443	7.92
17-Jul	0.0468	7.65
18-Jul	0.0692	7.39
19-Jul	0.0640	6.99
20-Jul	0.0609	7.00
21-Jul	0.0619	7.19
22-Jul	0.0589	7.24
23-Jul	0.0527	7.13
24-Jul	0.0568	7.27
25-Jul	0.0589	7.22
26-Jul	0.0527	7.03
27-Jul	0.0486	7.42
28-Jul	0.0506	7.43
29-Jul	0.0243	7.22
30-Jul	0.0237	6.76
31-Jul	0.0211	6.28
1-Aug	0.0210	5.50
2-Aug	0.0204	5.09
3-Aug	0.0194	4.71
4-Aug	0.0190	4.84
5-Aug	0.0184	4.91
6-Aug	0.0184	5.05
7-Aug	0.0181	5.30
8-Aug	0.0179	5.73
9-Aug	0.0181	6.69
10-Aug	0.0186	7.30
11-Aug	0.0186	7.68
12-Aug	0.0207	7.86
13-Aug	0.0197	8.06
14-Aug	0.0177	7.67
15-Aug	0.0205	7.54
16-Aug	0.0239	7.42

17-Aug	0.0238	7.28
18-Aug	0.0200	7.03
19-Aug	0.0165	6.62
20-Aug	0.0196	6.12
21-Aug	0.0182	5.66
22-Aug	0.0173	5.61
23-Aug	0.0167	5.74
24-Aug	0.0166	5.91
25-Aug	0.0165	6.22
26-Aug	0.0205	6.53
27-Aug	0.0201	6.52
28-Aug	0.0191	6.38
29-Aug	0.0176	6.27
30-Aug	0.0187	6.24
31-Aug	0.0180	6.24
1-Sep	0.0156	6.25
2-Sep	0.0168	6.31
3-Sep	0.0184	6.26
4-Sep	0.0167	5.94
5-Sep	0.0159	5.55
6-Sep	0.0158	5.27
7-Sep	0.0151	5.06
8-Sep	0.0158	4.78
9-Sep	0.0149	4.56
10-Sep	0.0158	4.53
11-Sep	0.0163	4.69
12-Sep	0.0145	4.33
13-Sep	0.0151	3.90
14-Sep	0.0160	3.56
15-Sep	0.0147	3.01
16-Sep	0.0132	2.26
17-Sep	0.0130	1.98
18-Sep	0.0141	1.94
19-Sep	0.0138	2.17
20-Sep	0.0160	2.43
21-Sep	0.0170	2.57
22-Sep	0.0168	2.91
23-Sep	0.0125	3.32
24-Sep	0.0151	3.33
25-Sep	0.0214	3.38
26-Sep	0.0184	3.72
27-Sep	0.0156	4.03
28-Sep	0.0139	4.42
29-Sep	0.0187	5.19
30-Sep	0.0190	5.98
1-Oct	0.0236	6.39
2-Oct	0.0260	6.42
3-Oct	0.0643	6.30
4-Oct	0.0483	6.13
5-Oct	0.0324	5.95
6-Oct	0.0514	5.71
7-Oct	0.0571	5.62
8-Oct	0.0415	5.31
9-Oct	0.0355	4.92
10-Oct	0.0344	4.30
11-Oct	0.0362	3.91

12-Oct	0.0300	3.73
13-Oct	0.0269	3.67
14-Oct	0.0249	3.14
15-Oct	0.0228	2.74
16-Oct	0.0208	2.57
17-Oct	0.0187	2.30
18-Oct	0.0187	2.00
19-Oct	0.0177	2.14
20-Oct	0.0156	2.47
21-Oct	0.0146	2.50
22-Oct	0.0136	2.73
23-Oct	0.0125	3.05
24-Oct	0.0136	3.45
25-Oct	0.0156	3.71
26-Oct	0.0156	3.39
27-Oct	0.0136	2.58
28-Oct	0.0115	2.11
29-Oct	0.0105	1.83
30-Oct	0.0105	1.37
31-Oct	0.0105	1.51
Cooper Creek Q 5.343 CCA gage		
2003	1-May	0.2032 0.63
	2-May	0.1978 0.93
	3-May	0.1967 1.10
	4-May	0.1916 1.15
	5-May	0.1915 1.07
	6-May	0.1790 1.12
	7-May	0.1715 1.15
	8-May	0.1718 1.13
	9-May	0.1951 1.20
	10-May	0.2369 1.29
	11-May	0.2183 1.33
	12-May	0.2099 1.18
	13-May	0.1955 1.17
	14-May	0.1877 1.21
	15-May	0.1831 1.21
	16-May	0.1834 1.29
	17-May	0.1807 1.21
	18-May	0.1763 1.23
	19-May	0.1738 1.34
	20-May	0.1764 1.54
	21-May	0.1785 1.60
	22-May	0.1787 1.58
	23-May	0.1869 1.72
	24-May	0.1984 1.80
	25-May	0.2055 1.90
	26-May	0.2093 2.03
	27-May	0.2209 2.18
	28-May	0.2202 2.20
	29-May	0.2215 2.38
	30-May	0.2250 2.57
	31-May	0.2384 2.53
	1-Jun	0.2294 2.57
	2-Jun	0.2173 2.63
	3-Jun	0.2147 2.69

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4-Jun	0.2171	2.75
5-Jun	0.2736	2.82
6-Jun	0.3397	2.89
7-Jun	0.3043	2.95
8-Jun	0.2732	3.03
9-Jun	0.2752	3.10
10-Jun	0.3407	3.08
11-Jun	0.4003	3.16
12-Jun	0.4351	3.31
13-Jun	0.5112	3.35
14-Jun	0.4846	3.48
15-Jun	0.3772	3.64
16-Jun	0.2876	3.73
17-Jun	0.2408	3.60
18-Jun	0.2273	3.58
19-Jun	0.2360	3.45
20-Jun	0.2283	3.49
21-Jun	0.2392	3.40
22-Jun	0.2125	3.26
23-Jun	0.2067	3.23
24-Jun	0.1893	3.33
25-Jun	0.1821	3.44
26-Jun	0.1699	3.21
27-Jun	0.1576	2.97
28-Jun	0.1505	2.92
29-Jun	0.1679	2.70
30-Jun	0.2028	2.44
1-Jul	0.2313	2.36
2-Jul	0.3689	2.43
3-Jul	0.3115	2.43
4-Jul	0.2252	2.56
5-Jul	0.2312	2.36
6-Jul	0.2146	2.30
7-Jul	0.2138	2.42
8-Jul	0.2680	2.51
9-Jul	0.2855	2.53
10-Jul	0.2591	2.55
11-Jul	0.2508	2.83
12-Jul	0.2393	3.07
13-Jul	0.2185	3.16
14-Jul	0.2464	3.34
15-Jul	0.2541	3.64
16-Jul	0.2217	3.81
17-Jul	0.2338	3.94
18-Jul	0.3458	4.03
19-Jul	0.3200	4.15
20-Jul	0.3046	4.36
21-Jul	0.3097	4.68
22-Jul	0.2943	4.89
23-Jul	0.2634	4.93
24-Jul	0.2840	4.90
25-Jul	0.2943	4.77
26-Jul	0.2634	4.68
27-Jul	0.2428	4.65
28-Jul	0.2531	4.50
29-Jul	0.1215	4.41

30-Jul	0.1185	4.21
31-Jul	0.1056	3.90
1-Aug	0.1049	3.85
2-Aug	0.1022	3.79
3-Aug	0.0968	3.72
4-Aug	0.0951	4.02
5-Aug	0.0922	4.10
6-Aug	0.0918	4.04
7-Aug	0.0905	4.04
8-Aug	0.0897	4.09
9-Aug	0.0904	4.31
10-Aug	0.0928	4.39
11-Aug	0.0928	4.48
12-Aug	0.1036	4.57
13-Aug	0.0985	4.65
14-Aug	0.0887	4.75
15-Aug	0.1027	4.90
16-Aug	0.1193	4.83
17-Aug	0.1191	4.89
18-Aug	0.1001	5.01
19-Aug	0.0823	4.80
20-Aug	0.0978	4.74
21-Aug	0.0909	4.70
22-Aug	0.0863	4.71
23-Aug	0.0837	4.62
24-Aug	0.0832	4.56
25-Aug	0.0827	4.57
26-Aug	0.1026	4.63
27-Aug	0.1004	4.70
28-Aug	0.0954	4.75
29-Aug	0.0879	4.78
30-Aug	0.0933	4.79
31-Aug	0.0901	4.75
1-Sep	0.0782	4.67
2-Sep	0.0838	4.45
3-Sep	0.0919	4.25
4-Sep	0.0837	4.01
5-Sep	0.0793	3.85
6-Sep	0.0789	3.78
7-Sep	0.0754	3.65
8-Sep	0.0789	3.45
9-Sep	0.0743	3.16
10-Sep	0.0792	2.82
11-Sep	0.0816	2.50
12-Sep	0.0724	2.20
13-Sep	0.0756	1.97
14-Sep	0.0800	1.93
15-Sep	0.0736	1.83
16-Sep	0.0658	1.63
17-Sep	0.0649	1.67
18-Sep	0.0705	1.75
19-Sep	0.0692	1.78
20-Sep	0.0798	1.72
21-Sep	0.0849	1.74
22-Sep	0.0842	1.99
23-Sep	0.0625	2.36

24-Sep	0.0755	2.85
25-Sep	0.1071	3.26
26-Sep	0.0919	3.59
27-Sep	0.0778	3.86
28-Sep	0.0695	4.16
29-Sep	0.0935	4.37
30-Sep	0.0952	4.66
1-Oct	0.1182	4.82
2-Oct	0.1302	4.87
3-Oct	0.3217	4.73
4-Oct	0.2416	4.83
5-Oct	0.1620	4.84
6-Oct	0.2569	4.67
7-Oct	0.2857	4.48
8-Oct	0.2075	4.22
9-Oct	0.1776	3.79
10-Oct	0.1719	3.38
11-Oct	0.1810	3.15
12-Oct	0.1501	3.02
13-Oct	0.1347	2.79
14-Oct	0.1244	2.52
15-Oct	0.1141	2.26
16-Oct	0.1038	2.14
17-Oct	0.0935	2.06
18-Oct	0.0935	2.10
19-Oct	0.0884	2.09
20-Oct	0.0781	2.17
21-Oct	0.0729	2.03
22-Oct	0.0678	1.79
23-Oct	0.0626	1.64
24-Oct	0.0678	1.72
25-Oct	0.0781	1.84
26-Oct	0.0781	1.85
27-Oct	0.0678	1.79
28-Oct	0.0575	1.81
29-Oct	0.0523	1.86
30-Oct	0.0523	1.91
31-Oct	0.0523	1.94
Cooper Creek P 5.328 Stetson Creek		
2003	1-May	0.673 2.60
	2-May	0.697 2.73
	3-May	0.718 2.58
	4-May	0.676 2.89
	5-May	0.659 2.50
	6-May	0.575 2.39
	7-May	0.560 2.75
	8-May	0.616 3.36
	9-May	0.765 3.00
	10-May	0.942 2.84
	11-May	0.749 2.98
	12-May	0.732 2.65
	13-May	0.656 2.98
	14-May	0.592 2.85
	15-May	0.607 3.45
	16-May	0.600 3.40

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17-May	0.583	3.11
18-May	0.576	3.15
19-May	0.584	3.22
20-May	0.601	3.27
21-May	0.688	3.65
22-May	0.867	3.86
23-May	0.976	4.09
24-May	1.035	3.94
25-May	1.055	4.15
26-May	1.035	4.10
27-May	0.980	3.80
28-May	0.935	3.62
29-May	0.936	4.02
30-May	0.974	4.20
31-May	0.966	4.01
1-Jun	1.116	3.78
2-Jun	1.017	4.16
3-Jun	1.057	4.17
4-Jun	1.080	3.84
5-Jun	1.103	4.28
6-Jun	1.084	3.87
7-Jun	1.156	4.05
8-Jun	1.028	4.10
9-Jun	1.021	4.86
10-Jun	1.271	4.60
11-Jun	1.341	4.60
12-Jun	1.824	5.06
13-Jun	1.528	4.75
14-Jun	1.637	4.47
15-Jun	1.531	4.35
16-Jun	1.503	4.52
17-Jun	1.487	4.47
18-Jun	1.361	4.95
19-Jun	1.382	4.73
20-Jun	1.289	5.14
21-Jun	1.369	4.50
22-Jun	1.092	5.07
23-Jun	1.132	4.47
24-Jun	1.111	4.45
25-Jun	1.033	4.50
26-Jun	1.131	4.44
27-Jun	1.110	4.86
28-Jun	1.133	5.37
29-Jun	1.083	5.94
30-Jun	1.161	6.09
1-Jul	1.091	5.49
2-Jul	1.364	5.04
3-Jul	1.985	4.47
4-Jul	1.661	5.65
5-Jul	1.513	5.48
6-Jul	1.510	5.94
7-Jul	1.508	6.50
8-Jul	1.606	6.52
9-Jul	1.935	6.36
10-Jul	1.574	6.25
11-Jul	1.649	6.03

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12-Jul	1.745	6.13
13-Jul	1.923	6.76
14-Jul	1.672	7.00
15-Jul	1.468	6.46
16-Jul	1.238	6.31
17-Jul	1.138	5.71
18-Jul	1.080	6.36
19-Jul	1.121	6.48
20-Jul	1.061	7.05
21-Jul	1.140	6.17
22-Jul	0.844	6.18
23-Jul	1.030	7.08
24-Jul	0.878	6.15
25-Jul	0.847	6.04
26-Jul	0.840	6.24
27-Jul	0.807	6.00
28-Jul	0.852	6.18
29-Jul	1.028	6.24
30-Jul	0.835	6.03
31-Jul	0.858	6.43
1-Aug	0.879	6.08
2-Aug	0.861	5.93
3-Aug	0.783	6.04
4-Aug	0.704	6.27
5-Aug	0.713	6.56
6-Aug	0.754	7.15
7-Aug	0.790	7.82
8-Aug	0.809	8.30
9-Aug	0.846	8.35
10-Aug	0.890	8.20
11-Aug	0.914	7.57
12-Aug	1.000	7.24
13-Aug	0.956	6.84
14-Aug	0.933	6.80
15-Aug	0.965	7.02
16-Aug	1.049	6.53
17-Aug	0.975	6.06
18-Aug	0.825	5.64
19-Aug	0.734	5.92
20-Aug	0.684	5.64
21-Aug	0.649	5.34
22-Aug	0.629	5.89
23-Aug	0.595	5.83
24-Aug	0.591	6.48
25-Aug	0.624	6.75
26-Aug	0.754	6.71
27-Aug	0.691	6.25
28-Aug	0.761	6.45
29-Aug	0.817	6.35
30-Aug	0.786	6.15
31-Aug	0.692	5.62
1-Sep	0.670	5.68
2-Sep	0.641	6.30
3-Sep	0.659	6.45
4-Sep	0.653	5.46
5-Sep	0.627	5.22

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6-Sep	0.568	5.30
7-Sep	0.566	5.02
8-Sep	0.533	5.20
9-Sep	0.537	5.11
10-Sep	0.447	4.68
11-Sep	0.426	4.37
12-Sep	0.436	4.58
13-Sep	0.432	4.83
14-Sep	0.428	3.32
15-Sep	0.416	2.74
16-Sep	0.424	1.81
17-Sep	0.406	2.24
18-Sep	0.382	1.81
19-Sep	0.365	1.81
20-Sep	0.428	1.81
21-Sep	0.478	2.67
22-Sep	0.460	2.24
23-Sep	0.445	2.24
24-Sep	0.432	3.52
25-Sep	0.438	3.94
26-Sep	0.398	3.09
27-Sep	0.430	3.09
28-Sep	0.457	5.22
29-Sep	0.561	6.07
30-Sep	0.523	6.49
1-Oct	0.482	6.49
2-Oct	0.635	5.64
3-Oct	1.712	4.79
4-Oct	1.461	4.37
5-Oct	1.118	4.79
6-Oct	1.501	4.79
7-Oct	1.453	4.79
8-Oct	1.238	3.52
9-Oct	1.065	3.94
10-Oct	0.832	2.67
11-Oct	0.713	3.09
12-Oct	0.633	2.24
13-Oct	0.594	2.67
14-Oct	0.567	3.52
15-Oct	0.541	3.09
16-Oct	0.514	0.96
17-Oct	0.488	0.96
18-Oct	0.488	1.81
19-Oct	0.475	2.24
20-Oct	0.448	1.81
21-Oct	0.435	1.81
22-Oct	0.422	2.24
23-Oct	0.409	2.24
24-Oct	0.422	3.09
25-Oct	0.448	3.09
26-Oct	0.448	3.09
27-Oct	0.422	2.67
28-Oct	0.395	0.96
29-Oct	0.382	0.54
30-Oct	0.382	1.81
31-Oct	0.382	2.24

Cooper Creek	P	2.878 Trib and Change in Aspect
2003	1-May	0.1490 0.63
	2-May	0.1304 0.93
	3-May	0.1395 1.10
	4-May	0.1442 1.15
	5-May	0.1342 1.07
	6-May	0.1088 1.12
	7-May	0.0932 1.15
	8-May	0.0861 1.13
	9-May	0.1280 1.20
	10-May	0.1442 1.29
	11-May	0.1333 1.33
	12-May	0.1186 1.18
	13-May	0.1268 1.17
	14-May	0.1165 1.21
	15-May	0.0926 1.21
	16-May	0.1085 1.29
	17-May	0.1065 1.21
	18-May	0.1091 1.23
	19-May	0.1292 1.34
	20-May	0.1454 1.54
	21-May	0.1445 1.60
	22-May	0.1139 1.58
	23-May	0.1268 1.72
	24-May	0.1802 1.80
	25-May	0.1947 1.90
	26-May	0.1914 2.03
	27-May	0.2236 2.18
	28-May	0.2280 2.20
	29-May	0.2133 2.38
	30-May	0.2313 2.57
	31-May	0.2510 2.53
	1-Jun	0.2088 2.57
	2-Jun	0.2012 2.63
	3-Jun	0.1917 2.69
	4-Jun	0.1855 2.75
	5-Jun	0.2646 2.82
	6-Jun	0.3873 2.89
	7-Jun	0.2932 2.95
	8-Jun	0.2551 3.03
	9-Jun	0.2563 3.10
	10-Jun	0.3192 3.08
	11-Jun	0.3575 3.16
	12-Jun	0.2846 3.31
	13-Jun	0.3681 3.35
	14-Jun	0.3333 3.48
	15-Jun	0.3584 3.64
	16-Jun	0.3026 3.73
	17-Jun	0.2690 3.60
	18-Jun	0.2897 3.58
	19-Jun	0.3106 3.45
	20-Jun	0.3286 3.49
	21-Jun	0.3200 3.40
	22-Jun	0.3392 3.26
	23-Jun	0.2811 3.23

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24-Jun	0.2200	3.33
25-Jun	0.2130	3.44
26-Jun	0.1702	3.21
27-Jun	0.1575	2.97
28-Jun	0.1392	2.92
29-Jun	0.1687	2.70
30-Jun	0.2112	2.44
1-Jul	0.2994	2.36
2-Jul	0.3666	2.43
3-Jul	0.1481	2.43
4-Jul	0.1018	2.56
5-Jul	0.1445	2.36
6-Jul	0.1139	2.30
7-Jul	0.1147	2.42
8-Jul	0.1970	2.51
9-Jul	0.1670	2.53
10-Jul	0.2495	2.55
11-Jul	0.2047	2.83
12-Jul	0.1622	3.07
13-Jul	0.0805	3.16
14-Jul	0.2141	3.34
15-Jul	0.2773	3.64
16-Jul	0.2864	3.81
17-Jul	0.2941	3.94
18-Jul	0.2242	4.03
19-Jul	0.1849	4.15
20-Jul	0.1826	4.36
21-Jul	0.1684	4.68
22-Jul	0.2251	4.89
23-Jul	0.1439	4.93
24-Jul	0.2050	4.90
25-Jul	0.2245	4.77
26-Jul	0.1914	4.68
27-Jul	0.1764	4.65
28-Jul	0.1767	4.50
29-Jul	0.1658	4.41
30-Jul	0.1864	4.21
31-Jul	0.1413	3.90
1-Aug	0.1221	3.85
2-Aug	0.1133	3.79
3-Aug	0.1056	3.72
4-Aug	0.0976	4.02
5-Aug	0.0891	4.10
6-Aug	0.0788	4.04
7-Aug	0.0702	4.04
8-Aug	0.0796	4.09
9-Aug	0.0773	4.31
10-Aug	0.0799	4.39
11-Aug	0.0953	4.48
12-Aug	0.1136	4.57
13-Aug	0.0973	4.65
14-Aug	0.0985	4.75
15-Aug	0.0870	4.90
16-Aug	0.0973	4.83
17-Aug	0.1088	4.89
18-Aug	0.1015	5.01

19-Aug	0.0861	4.80
20-Aug	0.0947	4.74
21-Aug	0.0841	4.70
22-Aug	0.0761	4.71
23-Aug	0.0782	4.62
24-Aug	0.0723	4.56
25-Aug	0.0711	4.57
26-Aug	0.0832	4.63
27-Aug	0.0923	4.70
28-Aug	0.0761	4.75
29-Aug	0.0852	4.78
30-Aug	0.0847	4.79
31-Aug	0.0876	4.75
1-Sep	0.0678	4.67
2-Sep	0.0737	4.45
3-Sep	0.0673	4.25
4-Sep	0.0637	4.01
5-Sep	0.0569	3.85
6-Sep	0.0649	3.78
7-Sep	0.0590	3.65
8-Sep	0.0734	3.45
9-Sep	0.0665	3.16
10-Sep	0.0808	2.82
11-Sep	0.0783	2.50
12-Sep	0.0783	2.20
13-Sep	0.0783	1.97
14-Sep	0.0783	1.93
15-Sep	0.0758	1.83
16-Sep	0.0758	1.63
17-Sep	0.0734	1.67
18-Sep	0.0709	1.75
19-Sep	0.0684	1.78
20-Sep	0.0783	1.72
21-Sep	0.0858	1.74
22-Sep	0.0833	1.99
23-Sep	0.0783	2.36
24-Sep	0.0783	2.85
25-Sep	0.0833	3.26
26-Sep	0.0758	3.59
27-Sep	0.0783	3.86
28-Sep	0.0808	4.16
29-Sep	0.0982	4.37
30-Sep	0.0932	4.66
1-Oct	0.0907	4.82
2-Oct	0.1131	4.87
3-Oct	0.2846	4.73
4-Oct	0.2398	4.83
5-Oct	0.1827	4.84
6-Oct	0.2473	4.67
7-Oct	0.2448	4.48
8-Oct	0.2050	4.22
9-Oct	0.1777	3.79
10-Oct	0.1454	3.38
11-Oct	0.1305	3.15
12-Oct	0.1156	3.02
13-Oct	0.1081	2.79

14-Oct	0.1032	2.52
15-Oct	0.0982	2.26
16-Oct	0.0932	2.14
17-Oct	0.0883	2.06
18-Oct	0.0883	2.10
19-Oct	0.0858	2.09
20-Oct	0.0808	2.17
21-Oct	0.0783	2.03
22-Oct	0.0758	1.79
23-Oct	0.0734	1.64
24-Oct	0.0758	1.72
25-Oct	0.0808	1.84
26-Oct	0.0808	1.85
27-Oct	0.0758	1.79
28-Oct	0.0709	1.81
29-Oct	0.0684	1.86
30-Oct	0.0684	1.91
31-Oct	0.0684	1.94

Cooper Creek P 1.338 Tributary

2003	1-May	0.1490	0.63
	2-May	0.1304	0.93
	3-May	0.1395	1.10
	4-May	0.1442	1.15
	5-May	0.1342	1.07
	6-May	0.1088	1.12
	7-May	0.0932	1.15
	8-May	0.0861	1.13
	9-May	0.1280	1.20
	10-May	0.1442	1.29
	11-May	0.1333	1.33
	12-May	0.1186	1.18
	13-May	0.1268	1.17
	14-May	0.1165	1.21
	15-May	0.0926	1.21
	16-May	0.1085	1.29
	17-May	0.1065	1.21
	18-May	0.1091	1.23
	19-May	0.1292	1.34
	20-May	0.1454	1.54
	21-May	0.1445	1.60
	22-May	0.1139	1.58
	23-May	0.1268	1.72
	24-May	0.1802	1.80
	25-May	0.1947	1.90
	26-May	0.1914	2.03
	27-May	0.2236	2.18
	28-May	0.2280	2.20
	29-May	0.2133	2.38
	30-May	0.2313	2.57
	31-May	0.2510	2.53
	1-Jun	0.2088	2.57
	2-Jun	0.2012	2.63
	3-Jun	0.1917	2.69
	4-Jun	0.1855	2.75
	5-Jun	0.2646	2.82

6-Jun	0.3873	2.89
7-Jun	0.2932	2.95
8-Jun	0.2551	3.03
9-Jun	0.2563	3.10
10-Jun	0.3192	3.08
11-Jun	0.3575	3.16
12-Jun	0.2846	3.31
13-Jun	0.3681	3.35
14-Jun	0.3333	3.48
15-Jun	0.3584	3.64
16-Jun	0.3026	3.73
17-Jun	0.2690	3.60
18-Jun	0.2897	3.58
19-Jun	0.3106	3.45
20-Jun	0.3286	3.49
21-Jun	0.3200	3.40
22-Jun	0.3392	3.26
23-Jun	0.2811	3.23
24-Jun	0.2200	3.33
25-Jun	0.2130	3.44
26-Jun	0.1702	3.21
27-Jun	0.1575	2.97
28-Jun	0.1392	2.92
29-Jun	0.1687	2.70
30-Jun	0.2112	2.44
1-Jul	0.2994	2.36
2-Jul	0.3666	2.43
3-Jul	0.1481	2.43
4-Jul	0.1018	2.56
5-Jul	0.1445	2.36
6-Jul	0.1139	2.30
7-Jul	0.1147	2.42
8-Jul	0.1970	2.51
9-Jul	0.1670	2.53
10-Jul	0.2495	2.55
11-Jul	0.2047	2.83
12-Jul	0.1622	3.07
13-Jul	0.0805	3.16
14-Jul	0.2141	3.34
15-Jul	0.2773	3.64
16-Jul	0.2864	3.81
17-Jul	0.2941	3.94
18-Jul	0.2242	4.03
19-Jul	0.1849	4.15
20-Jul	0.1826	4.36
21-Jul	0.1684	4.68
22-Jul	0.2251	4.89
23-Jul	0.1439	4.93
24-Jul	0.2050	4.90
25-Jul	0.2245	4.77
26-Jul	0.1914	4.68
27-Jul	0.1764	4.65
28-Jul	0.1767	4.50
29-Jul	0.1658	4.41
30-Jul	0.1864	4.21
31-Jul	0.1413	3.90

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1-Aug	0.1221	3.85
2-Aug	0.1133	3.79
3-Aug	0.1056	3.72
4-Aug	0.0976	4.02
5-Aug	0.0891	4.10
6-Aug	0.0788	4.04
7-Aug	0.0702	4.04
8-Aug	0.0796	4.09
9-Aug	0.0773	4.31
10-Aug	0.0799	4.39
11-Aug	0.0953	4.48
12-Aug	0.1136	4.57
13-Aug	0.0973	4.65
14-Aug	0.0985	4.75
15-Aug	0.0870	4.90
16-Aug	0.0973	4.83
17-Aug	0.1088	4.89
18-Aug	0.1015	5.01
19-Aug	0.0861	4.80
20-Aug	0.0947	4.74
21-Aug	0.0841	4.70
22-Aug	0.0761	4.71
23-Aug	0.0782	4.62
24-Aug	0.0723	4.56
25-Aug	0.0711	4.57
26-Aug	0.0832	4.63
27-Aug	0.0923	4.70
28-Aug	0.0761	4.75
29-Aug	0.0852	4.78
30-Aug	0.0847	4.79
31-Aug	0.0876	4.75
1-Sep	0.0678	4.67
2-Sep	0.0737	4.45
3-Sep	0.0673	4.25
4-Sep	0.0637	4.01
5-Sep	0.0569	3.85
6-Sep	0.0649	3.78
7-Sep	0.0590	3.65
8-Sep	0.0734	3.45
9-Sep	0.0665	3.16
10-Sep	0.0808	2.82
11-Sep	0.0783	2.50
12-Sep	0.0783	2.20
13-Sep	0.0783	1.97
14-Sep	0.0783	1.93
15-Sep	0.0758	1.83
16-Sep	0.0758	1.63
17-Sep	0.0734	1.67
18-Sep	0.0709	1.75
19-Sep	0.0684	1.78
20-Sep	0.0783	1.72
21-Sep	0.0858	1.74
22-Sep	0.0833	1.99
23-Sep	0.0783	2.36
24-Sep	0.0783	2.85
25-Sep	0.0833	3.26

26-Sep	0.0758	3.59
27-Sep	0.0783	3.86
28-Sep	0.0808	4.16
29-Sep	0.0982	4.37
30-Sep	0.0932	4.66
1-Oct	0.0907	4.82
2-Oct	0.1131	4.87
3-Oct	0.2846	4.73
4-Oct	0.2398	4.83
5-Oct	0.1827	4.84
6-Oct	0.2473	4.67
7-Oct	0.2448	4.48
8-Oct	0.2050	4.22
9-Oct	0.1777	3.79
10-Oct	0.1454	3.38
11-Oct	0.1305	3.15
12-Oct	0.1156	3.02
13-Oct	0.1081	2.79
14-Oct	0.1032	2.52
15-Oct	0.0982	2.26
16-Oct	0.0932	2.14
17-Oct	0.0883	2.06
18-Oct	0.0883	2.10
19-Oct	0.0858	2.09
20-Oct	0.0808	2.17
21-Oct	0.0783	2.03
22-Oct	0.0758	1.79
23-Oct	0.0734	1.64
24-Oct	0.0758	1.72
25-Oct	0.0808	1.84
26-Oct	0.0808	1.85
27-Oct	0.0758	1.79
28-Oct	0.0709	1.81
29-Oct	0.0684	1.86
30-Oct	0.0684	1.91
31-Oct	0.0684	1.94

Cooper Creek	E	0	Cooper Creek Mouth
2003	1-May	1.472	3.0
	2-May	1.416	3.0
	3-May	1.472	3.0
	4-May	1.444	3.5
	5-May	1.388	3.0
	6-May	1.189	2.5
	7-May	1.104	3.0
	8-May	1.133	4.0
	9-May	1.472	4.0
	10-May	1.756	3.5
	11-May	1.501	3.5
	12-May	1.416	3.0
	13-May	1.359	3.5
	14-May	1.246	3.5
	15-May	1.161	4.0
	16-May	1.218	4.0
	17-May	1.189	3.5
	18-May	1.189	3.5

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19-May	1.274	3.5
20-May	1.359	4.0
21-May	1.444	4.0
22-May	1.501	4.5
23-May	1.671	5.0
24-May	1.954	4.5
25-May	2.039	5.0
26-May	2.010	5.0
27-May	2.095	4.5
28-May	2.067	4.5
29-May	2.010	4.5
30-May	2.124	5.0
31-May	2.209	4.6
1-Jun	2.180	4.5
2-Jun	2.039	5.0
3-Jun	2.039	5.0
4-Jun	2.039	4.5
5-Jun	2.435	5.0
6-Jun	2.973	4.5
7-Jun	2.633	4.5
8-Jun	2.322	4.5
9-Jun	2.322	5.5
10-Jun	2.888	5.5
11-Jun	3.171	5.5
12-Jun	3.398	6.0
13-Jun	3.511	5.5
14-Jun	3.455	5.5
15-Jun	3.341	5.0
16-Jun	3.002	5.5
17-Jun	2.803	5.0
18-Jun	2.747	5.5
19-Jun	2.860	5.5
20-Jun	2.832	6.0
21-Jun	2.888	5.5
22-Jun	2.662	6.0
23-Jun	2.464	5.5
24-Jun	2.180	5.0
25-Jun	2.067	5.5
26-Jun	1.982	5.0
27-Jun	1.897	6.0
28-Jun	1.841	6.0
29-Jun	1.926	6.5
30-Jun	2.209	7.0
1-Jul	2.520	6.5
2-Jul	3.200	6.0
3-Jul	2.888	5.0
4-Jul	2.294	6.5
5-Jul	2.322	6.5
6-Jul	2.180	7.0
7-Jul	2.180	7.5
8-Jul	2.662	7.5
9-Jul	2.888	7.5
10-Jul	2.832	7.0
11-Jul	2.718	7.0
12-Jul	2.633	7.0
13-Jul	2.464	7.8

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14-Jul	2.775	8.0
15-Jul	2.832	7.4
16-Jul	2.605	7.2
17-Jul	2.549	6.5
18-Jul	2.322	7.3
19-Jul	2.180	7.4
20-Jul	2.095	8.0
21-Jul	2.124	7.0
22-Jul	2.039	7.0
23-Jul	1.869	8.0
24-Jul	1.982	7.0
25-Jul	2.039	7.0
26-Jul	1.869	7.5
27-Jul	1.756	7.0
28-Jul	1.812	7.0
29-Jul	1.812	7.5
30-Jul	1.699	7.0
31-Jul	1.529	7.5
1-Aug	1.472	7.0
2-Aug	1.416	7.0
3-Aug	1.303	7.0
4-Aug	1.189	7.0
5-Aug	1.161	7.5
6-Aug	1.161	8.0
7-Aug	1.161	8.5
8-Aug	1.218	9.5
9-Aug	1.246	9.5
10-Aug	1.303	9.4
11-Aug	1.388	8.7
12-Aug	1.557	8.3
13-Aug	1.444	7.8
14-Aug	1.416	7.8
15-Aug	1.416	8.1
16-Aug	1.557	7.5
17-Aug	1.529	6.9
18-Aug	1.331	6.5
19-Aug	1.161	6.8
20-Aug	1.161	6.5
21-Aug	1.076	6.1
22-Aug	1.019	6.7
23-Aug	0.991	6.7
24-Aug	0.963	7.4
25-Aug	0.991	7.7
26-Aug	1.189	7.7
27-Aug	1.161	7.2
28-Aug	1.161	7.4
29-Aug	1.246	7.3
30-Aug	1.218	7.0
31-Aug	1.133	6.4
1-Sep	1.019	6.5
2-Sep	1.019	7.2
3-Sep	1.019	7.4
4-Sep	0.991	6.2
5-Sep	0.934	6.0
6-Sep	0.906	6.1
7-Sep	0.878	5.7

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8-Sep	0.906	5.9
9-Sep	0.878	5.8
10-Sep	0.850	5.4
11-Sep	0.821	5.0
12-Sep	0.821	5.3
13-Sep	0.821	5.5
14-Sep	0.821	3.8
15-Sep	0.793	3.1
16-Sep	0.793	2.0
17-Sep	0.765	2.5
18-Sep	0.736	2.0
19-Sep	0.708	2.0
20-Sep	0.821	2.0
21-Sep	0.906	3.0
22-Sep	0.878	2.5
23-Sep	0.821	2.5
24-Sep	0.821	4.0
25-Sep	0.878	4.5
26-Sep	0.793	3.5
27-Sep	0.821	3.5
28-Sep	0.850	6.0
29-Sep	1.048	7.0
30-Sep	0.991	7.5
1-Oct	0.963	7.5
2-Oct	1.218	6.5
3-Oct	3.171	5.5
4-Oct	2.662	5.0
5-Oct	2.010	5.5
6-Oct	2.747	5.5
7-Oct	2.718	5.5
8-Oct	2.265	4.0
9-Oct	1.954	4.5
10-Oct	1.586	3.0
11-Oct	1.416	3.5
12-Oct	1.246	2.5
13-Oct	1.161	3.0
14-Oct	1.104	4.0
15-Oct	1.048	3.5
16-Oct	0.991	1.0
17-Oct	0.934	1.0
18-Oct	0.934	2.0
19-Oct	0.906	2.5
20-Oct	0.850	2.0
21-Oct	0.821	2.0
22-Oct	0.793	2.5
23-Oct	0.765	2.5
24-Oct	0.793	3.5
25-Oct	0.850	3.5
26-Oct	0.850	3.5
27-Oct	0.793	3.0
28-Oct	0.736	1.0
29-Oct	0.708	0.5
30-Oct	0.708	2.0
31-Oct	0.708	2.5

**Shade File: CCcalib.shd**

Shade file - Cooper Cr Temp Model  
R2 Calibration Sep 14 2004

Cooper Creek	S		7.626	Cooper Lake Dam
1.05478	-0.7105	3.05		
0.4158	2.0	1.0	0.50	0.60
0.2175	2.0	1.0	0.50	0.60
Cooper Creek	C		6.122	Change in Aspect
1.05492	-0.7105	3.26		
0.3835	2.0	1.0	0.50	0.60
0.2331	2.0	1.0	0.50	0.60
Cooper Creek	C		5.231	Change in Aspect
1.05499	-0.7105	8.63		
0.3660	2.0	1.0	0.50	0.60
0.2752	2.0	1.0	0.50	0.60
Cooper Creek	C		4.900	Change in Aspect
1.05502	-0.5643	5.97		
0.3736	4.0	2.0	1.00	0.60
0.3223	4.0	2.0	1.00	0.60
Cooper Creek	C		4.400	Change in Aspect
1.05509	-0.4182	7.13		
0.3775	6.0	3.0	1.50	0.60
0.3537	6.0	3.0	1.50	0.60
Cooper Creek	C		3.410	Change in Aspect
1.05525	-0.4182	7.25		
0.3666	6.0	3.0	1.50	0.60
0.3483	6.0	3.0	1.50	0.60
Cooper Creek	C		3.136	Change in Aspect
1.05529	-0.4182	7.68		
0.3585	6.0	3.0	1.50	0.60
0.3443	6.0	3.0	1.50	0.60
Cooper Creek	C		2.475	Change in Aspect
1.05537	-0.4182	9.51		
0.3436	8.0	3.5	1.75	0.45
0.3332	8.0	3.5	1.75	0.45
Cooper Creek	C		2.249	Change in Aspect
1.05539	-0.4182	8.99		
0.3193	10.0	4.0	2.00	0.30
0.3108	10.0	4.0	2.00	0.30
Cooper Creek	C		2.007	Change in Aspect
1.05543	-0.4182	8.17		
0.2927	10.0	4.0	2.00	0.30
0.2860	10.0	4.0	2.00	0.30
Cooper Creek	C		1.822	Change in Aspect

1.05543	-0.4182	5.36			
0.1970	10.0	4.0	2.00	0.30	
0.1965	10.0	4.0	2.00	0.30	
Cooper Creek	C		0.468	Change in Aspect	
1.05559	-0.4182	9.91			
0.0926	10.0	4.0	2.00	0.30	
0.0990	10.0	4.0	2.00	0.30	
Cooper Creek	C		0.145	Change in Aspect	
1.05563	-0.4182	5.46			
0.0635	10.0	4.0	2.00	0.30	
0.0718	10.0	4.0	2.00	0.30	