CALIFORNIA TROUT

APPENDIX C: SPROUL CREEK WYs 2015-16 STREAMFLOW GAGING

Prepared by:
California Trout North Coast Region
Humboldt State University Institute for River Ecosystems

Prepared for:
North Coast Regional Water Quality Control Board and State Water Resources Control Board
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August 31, 2017

The purpose of this appendix is to present streamflow and water temperature data, along with the supporting information used to develop stage-discharge rating curves and discharge estimates. Water temperature data is presented along with temperature thresholds from the 1999 United States EPA publication: South Fork Eel River Total Maximum Daily Loads for Sediment and Temperature.

- Three gaging sites were continued from 2015: Lower Mainstem Sproul [LMS], West Fork Sproul [WFS], and South Fork Sproul [SFS].
- Two new streamflow gaging sites were installed in 2016 within our two primary study reaches (Upper Mainstem Sproul [UMS] and Upper South Fork Sproul [USF]).
- The five primary gaging sites monitored in 2016 thus include:
    - LMS: Lower Mainstem Sproul Creek (24 mi^2)
    - UMS: Upper Mainstem Sproul Creek (17 mi^2)
    - WFS: West Fork Sproul Creek (8.5 mi^2)
    - SFS: South Fork Sproul Creek (7.1 mi^2)
    - USF: Upper South Fork Sproul Creek (5.0 mi^2)

All CalTrout gages used Onset Corp. Model U20-001-01 Water Level Loggers, recording water depth and temperature at 15-minute intervals. These loggers are unvented, so ambient pressure transducers were deployed in two locations for atmospheric pressure adjustment: at the West Fork Sproul gage site and at the Lower Mainstem Sproul gage site. The lone CEMAR gage installed at the Lower Mainstem Sproul site in 2015 was an In-Situ Level TROLL 500 (vented), also recording water depth and temperature at 15 minute intervals.

Discharge measurements were collected at these five gaging sites from March - November 2016 for development of stage-discharge rating curves. Discharge measurements from 2015 were also available for three of the five gages (LMS, WFS, SFS). Of these three, Lower Mainstem Sproul Creek (LMS) discharge measurements from 2015 and 2016 were combined into a single rating curve applicable to both years, whereas West Fork and South Fork (WFS and SFS) each have two separate rating curves (one for 2015, one for 2016). The rating curves for West Fork and South Fork (WFS and SFS) are based on

different datums for each year, and differences between years are not representative of a rating curve shift.

At the Lower Mainstem site (LMS), two independent water level loggers were deployed from May 26, 2015 to August 10, 2016. The water level logger owned by CEMAR was operated from April 15, 2016 to August 10, 2016; while the CalTrout water level logger was deployed from May 26, 2015 to November 22, 2016 (last download). The corresponding water levels recorded by these two gages differed by an average of 0.00724 ft during the time of overlap. Readings from the two gages tracked one another well; over time, the difference between readings had a slope of less than 0.0000001 (R^2=0.0625).

The CalTrout water level logger memory was exceeded from March 27, 2016 to April 6, 2016 at the three sites continued from 2015 (LMS, WFS, SFS). This was due to the inaccessibility of the loggers during high flows. At the Lower Mainstem (LMS) site, the water level from the CEMAR gage was used to fill in missing data. At the West and South Fork sites (WFS, SFS) a linear equation assuming a steady drop in water surface elevation was used to interpolate between known water levels on March 27 and April 6, 2016.

Additional dataloggers were installed on Little Sproul Creek (LTS), Cox Creek (COX), and West Branch of South Fork Sproul Creek (WBSF) primarily to monitor water depth and water temperature (with fewer stage-discharge measurements). Dataloggers were also installed at the confluence of West Fork and South Fork Sproul Creek and at the Lower Mainstem Sproul Creek gage to collect ambient air pressure, air temperature, and relative humidity data.

Additional streamflow measurements were recorded at Warden Creek and Dry Tributary. All streamflow measurements for 2016 are summarized in Table 1.

Our rating curve and streamflow measurements are focused on the mid-lower part of the hydrograph. Rating curves developed for this study are less relevant for high winter flows, and tend to overestimate winter flows.

Where presented, modeled were derived by scaling down the flow at Lower Mainstem Sproul (drainage area = 24 mi^2) to the relative watershed area. Thus the streamflow estimate for Cox Creek (drainage area = 0.6 mi^2) was derived from the following equation:

Dry Tributary streamflow = Lower Mainstem Sproul Creek streamflow x (0.6/24).

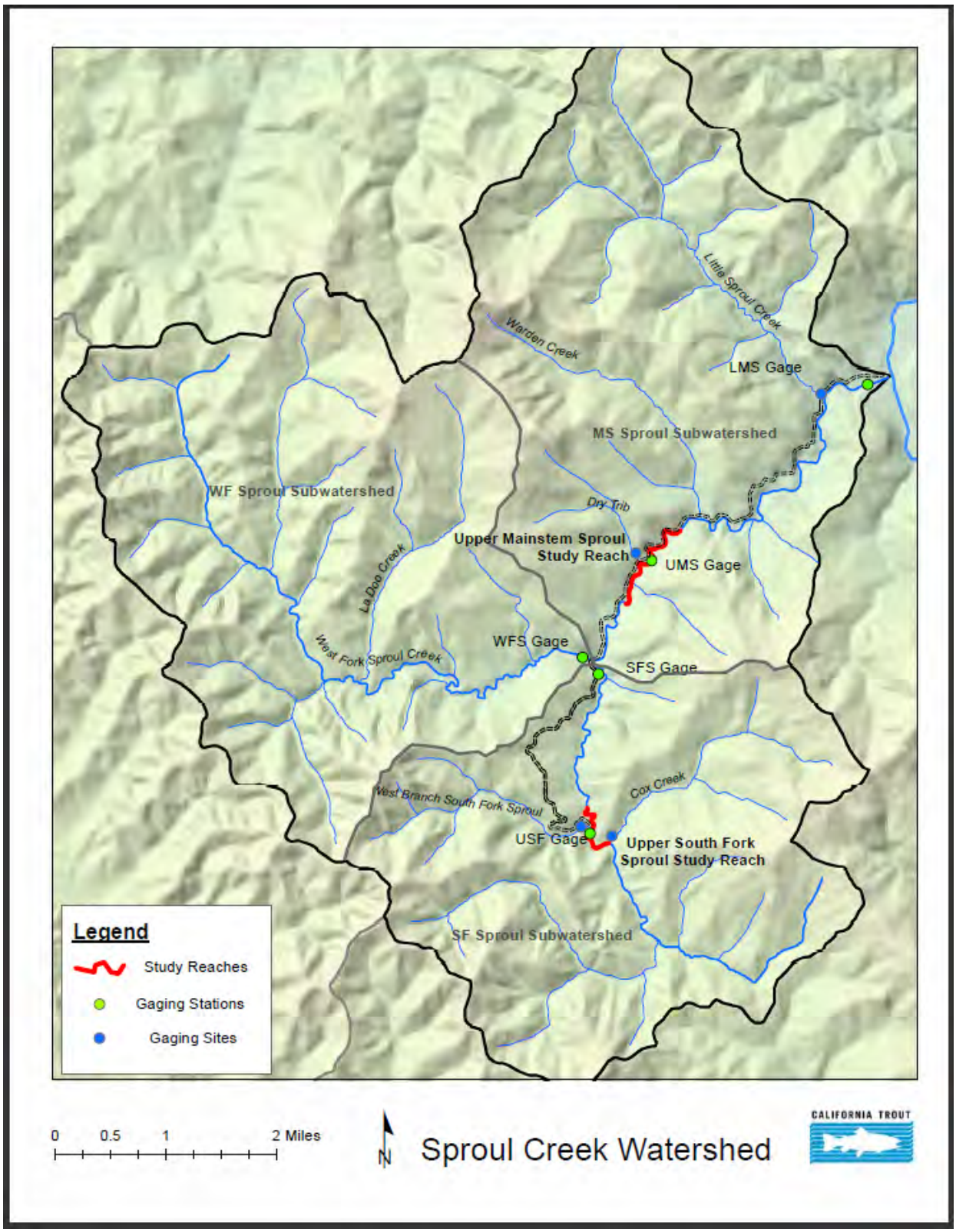

Figure C-1. Sproul Creek watershed map showing location of five primary gaging stations, and secondary gaging sites.

Table C-1. Discharge measurements collected in Sproul Creek watershed throughout the 2016 monitoring season.

	Lower Mainstem Sproul LMS	Upper Mainstem Sproul UMS	WF Sproul WFS	SF Sproul SFS	Upper SF USF	West Branch SF WBR	Cox COX	Little Sproul LSC	Warden Creek WDN	Dry Trib DRY
Drainage Area (mi2)	24.0	17.0	8.5	7.1	5.0	1.1	1.5	3.9	1.6	0.6
Mar 29, 2016	85.3									
Apr 6, 2016	41.09		18.53	13.37	8.83					
Apr 12, 2016					5.95					
Apr 13, 2016	28	18.23								
Apr 14, 2016		21.39			5.6					
Apr 27, 2016	23.93	21.07	9.59	6.9						
Apr 28, 2016		19.7			4.5					
Apr 29, 2016					4.2					
May 4, 2016	18.51		8.168	5.05				2.257	1.15	0.363
May 5, 2016		12.66			3.53					
May 11, 2016	13.03	9.88			3.029	0.614				
May 24, 2016				2.59	2.19	0.55	0.50			
May 25, 2016	11.65	7.12	3.87					1.14		
May 30, 2016					1.556	0.365				
May 31, 2016	7.553	5.638								
Jun 10, 2016		3.898			0.972					
Jun 15, 2016					1.171	0.208	0.153			
Jun 16, 2016	5.093	3.167	2.085	1.119					0.177	0.059
Jun 24, 2016			1.457	0.925	0.755	0.127	0.153	0.365	0.143	0.091
Jun 28, 2016		1.916								
Jun 30, 2016		1.783								
Jul 1, 2016	3.233									
Jul 6, 2016		1.367								
Jul 7, 2016	1.511		0.652	0.539	0.418	0.098	0.075			
Jul 27, 2016		0.27								
Jul 28, 2016	0.317		0.229	0.071	0.124	0.036				
Aug 5, 2016	0.204		0.099		0.032					0.033
Aug 17, 2016	0.056	0.04	0.021		0.026	0.005		0.024		0.023
Oct 6, 2016	0.081									
Oct 20, 2016		5.339								
Oct 27, 2016					44					
Oct 28, 2016					19.84					
Nov 2, 2016	125.6	89.97			31.87					
Nov 3, 2016		67.08	26.14	29.9	22.7					
Nov 4, 2016		50.4			18.88					
Nov 22, 2016		80.39			23.44					
Nov 30, 2016		116.2								

Table C-2. Lower Mainstem Sproul Creek 2016 stream discharge measurements.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Staff Plate (ft)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
4/17/2015	13:00	Darren Mierau	14.0				1.45	
6/26/2015	12:00	Darren Mierau	0.83				0.75	
7/16/2015	12:00	Darren Mierau	0.26				0.64	
8/12/2015	10:29	Darren Mierau	0.02				0.38	
3/29/2016	12:00	Darren Mierau	85.26	0.74		9.26	2.50	
4/6/2016	17:10	Darren Mierau	41.09	1.29		8.71	1.95	datalogger downloaded
4/27/2016	17:00	Darren Mierau	23.93	1.58		8.42	1.66	datalogger downloaded
5/4/2016	10:00	Matt Metheny	18.51	1.74		8.26	1.50	
5/11/2016	16:27	Matt Metheny	13.03	1.88	1.38	8.12	1.38	1.36 using pin, staff plate in
5/25/2016	16:08	Matt Metheny	11.65	2.00	1.24	8.00	1.24	1.24 using pin
5/31/2016	16:24	Darren Mierau	7.553	2.08	1.15	7.92	1.15	1.16 using pin
6/16/2016	16:40	Matt Metheny	5.093		1.04		1.04	
7/7/2016	16:16	Matt Metheny	1.511		0.82		0.82	
7/1/2016	12:00	Darren Mierau	3.233		0.87		0.87	datalogger downloaded
7/28/2016	16:10	Matt Metheny	0.317		0.66		0.66	
8/5/2016	15:38	Darren Mierau	0.204		0.61		0.61	
8/17/2016	15:29	Matt Metheny	0.056		0.54		0.54	
10/6/2016	13:00	Darren Mierau	0.081		0.54		0.54	
11/2/2016	17:15	Darren Mierau	125.6		2.76		2.76	datalogger downloaded

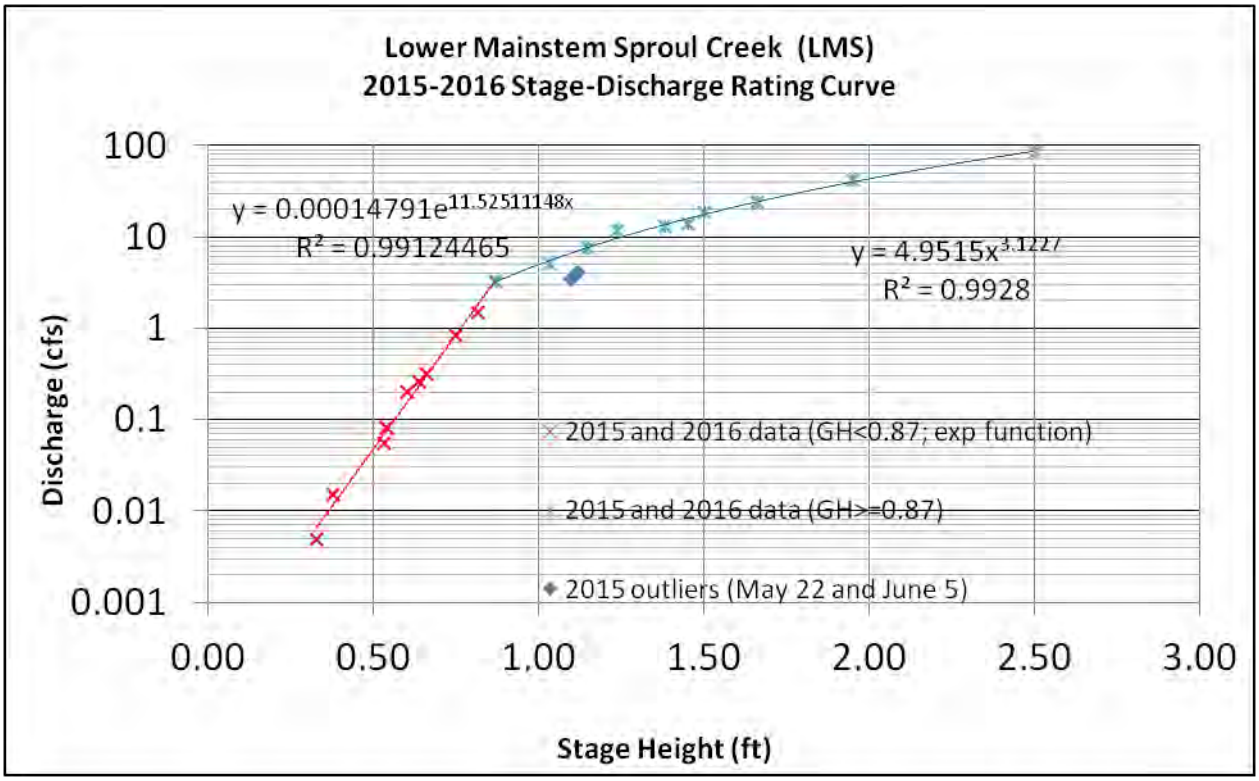

Figure C-2. Lower Mainstem Sproul Creek 2016 Rating Curve.

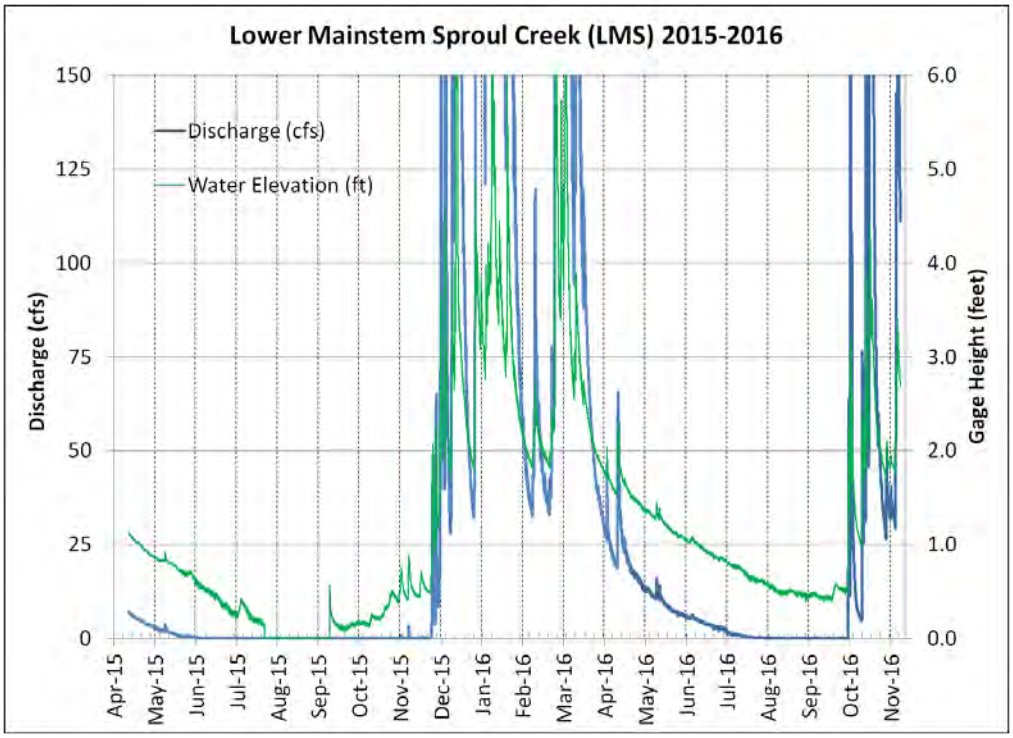

Figure C-3. Lower Mainstem Sproul Creek 2015-2016 Hydrograph.

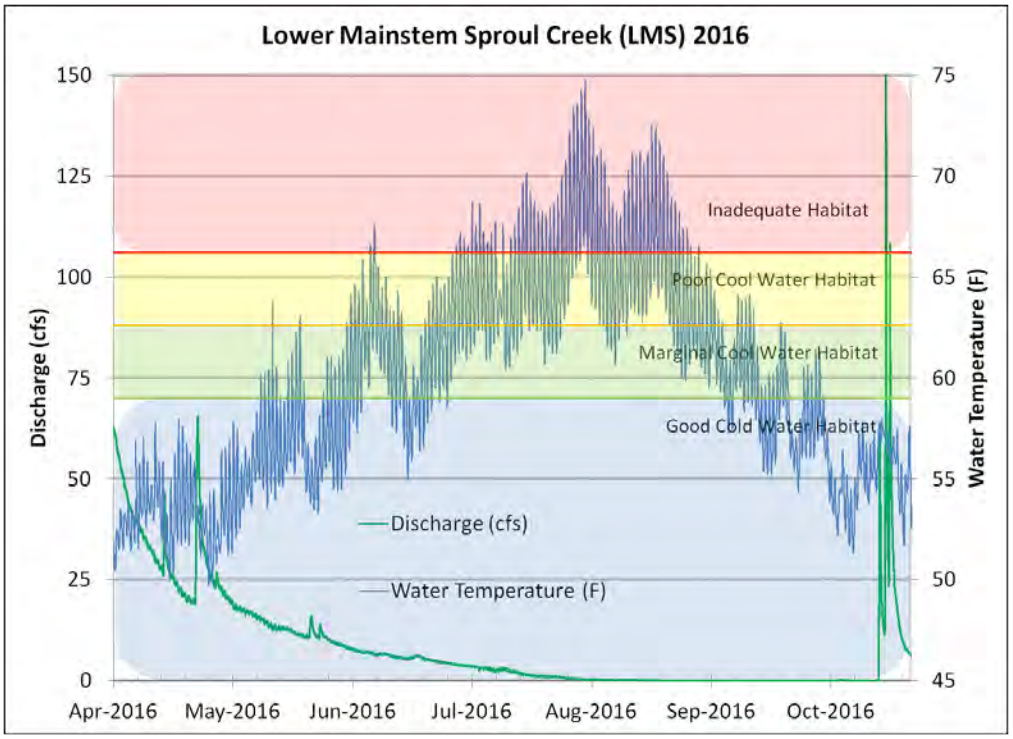

Figure C-4. Lower Mainstem Sproul Creek 2016 water temperature and discharge plot.

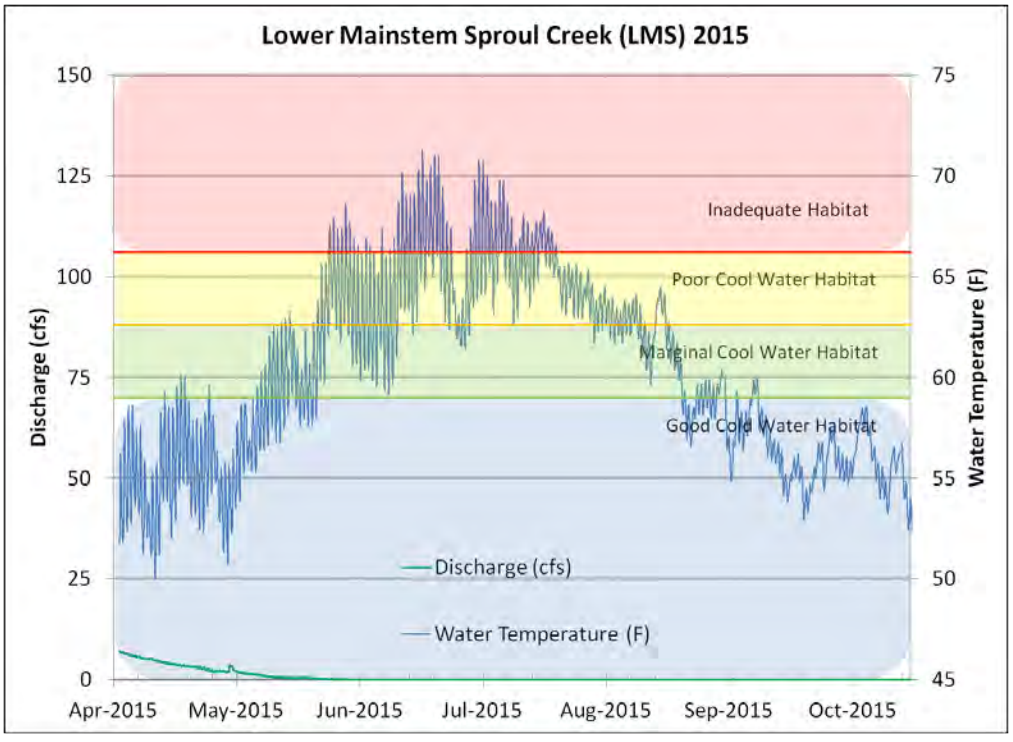

Figure C-5. Lower Mainstem Sproul Creek 2015 water temperature and discharge plot.

Table C-3. Upper Mainstem Sproul Creek 2016 stream discharge measurements. Adapted from standard USGS 9-207 form.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Arbitrary Pin Elev (ft)
8/17/2016	14:01	Matt Metheny	0.04	1.31	0.69
7/27/2016	10:00	Matt Metheny	0.27	1.14	0.86
7/6/2016	9:45	Matt Metheny	1.37	1.00	1.00
6/30/2016	12:16	Matt Metheny	1.78	0.93	1.07
6/16/2016	13:45	Matt Metheny	3.17	0.82	1.18
10/20/2016	11:04	Matt Metheny	5.34	0.69	1.31
5/31/2016	12:20	Darren Mierau	5.64	0.70	1.30
5/25/2016	9:50	Darren Mierau	7.13	0.63	1.37
5/5/2016	15:23	Matt Metheny	12.66	0.42	1.58
4/27/2016	11:19	Darren Mierau	21.07	0.32	1.68
4/14/2016	16:00	Matt Metheny	21.39	0.30	1.70
11/4/2016	12:51	Matt Metheny	50.40	-0.11	2.11
11/3/2016	14:10	Matt Metheny	67.08	-0.28	2.28
11/22/2016	14:11	Darren Mierau	80.39	-0.42	2.42
11/2/2016	15:40	Darren Mierau	89.97	-0.53	2.53
11/30/2016	11:00	Matt Metheny	116.20	-0.66	2.66

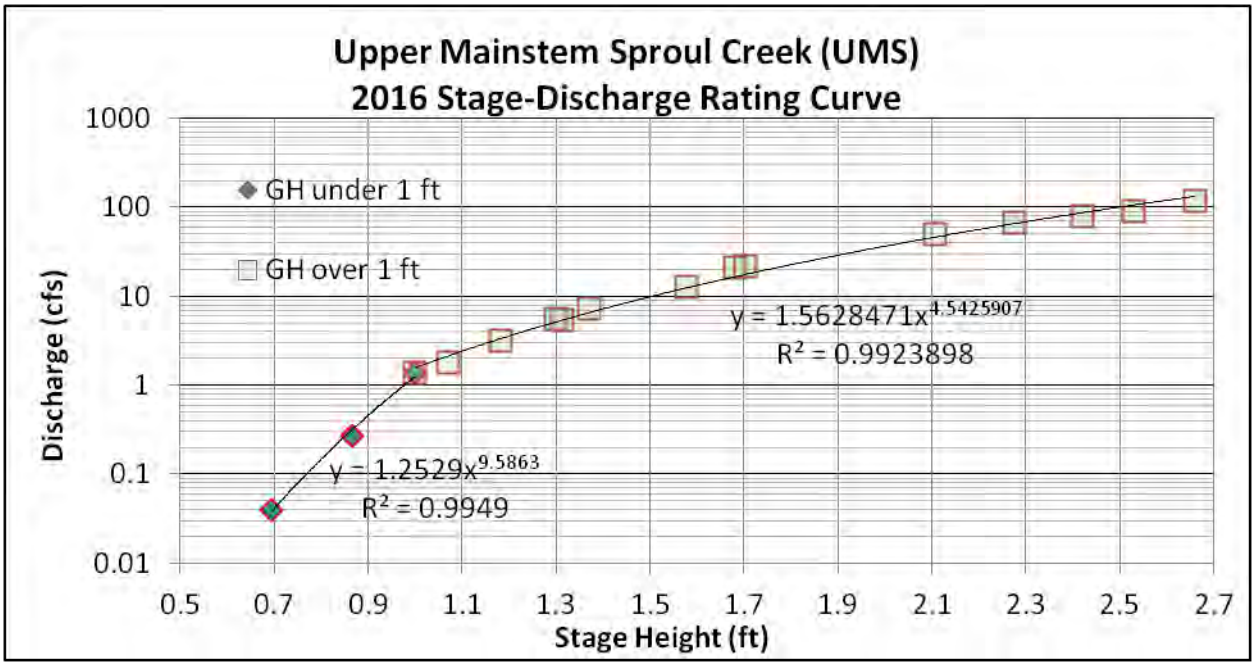

Figure C-6. Upper Mainstem Sproul Creek 2016 rating curve.

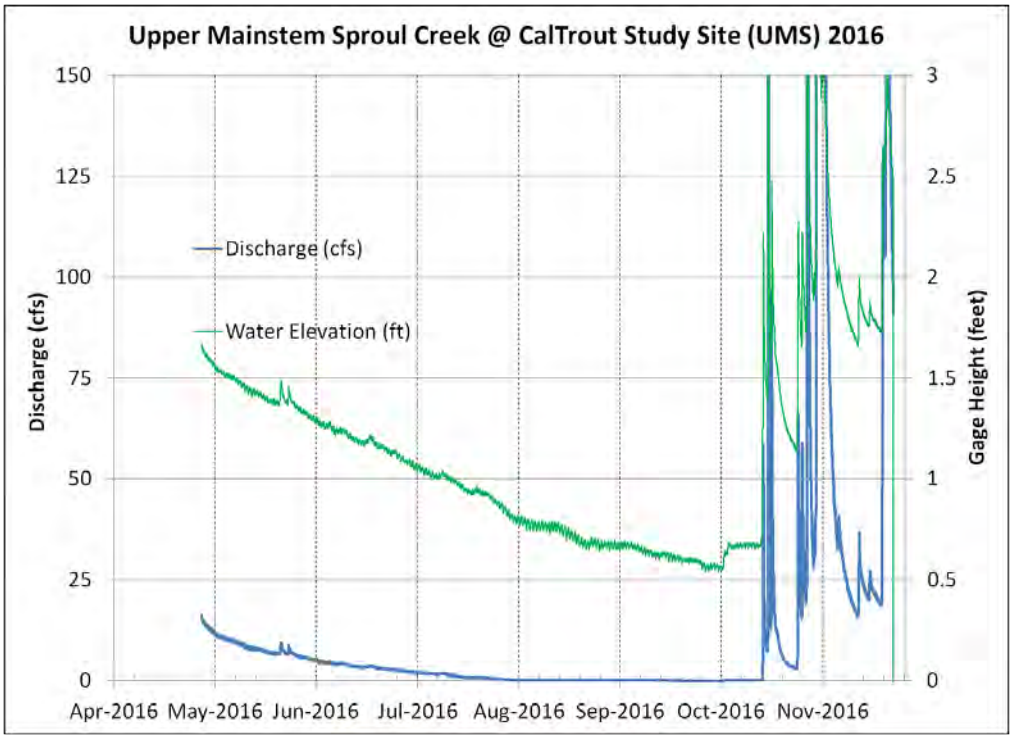

Figure C-7. Upper Mainstem Sproul Creek 2016 hydrograph.

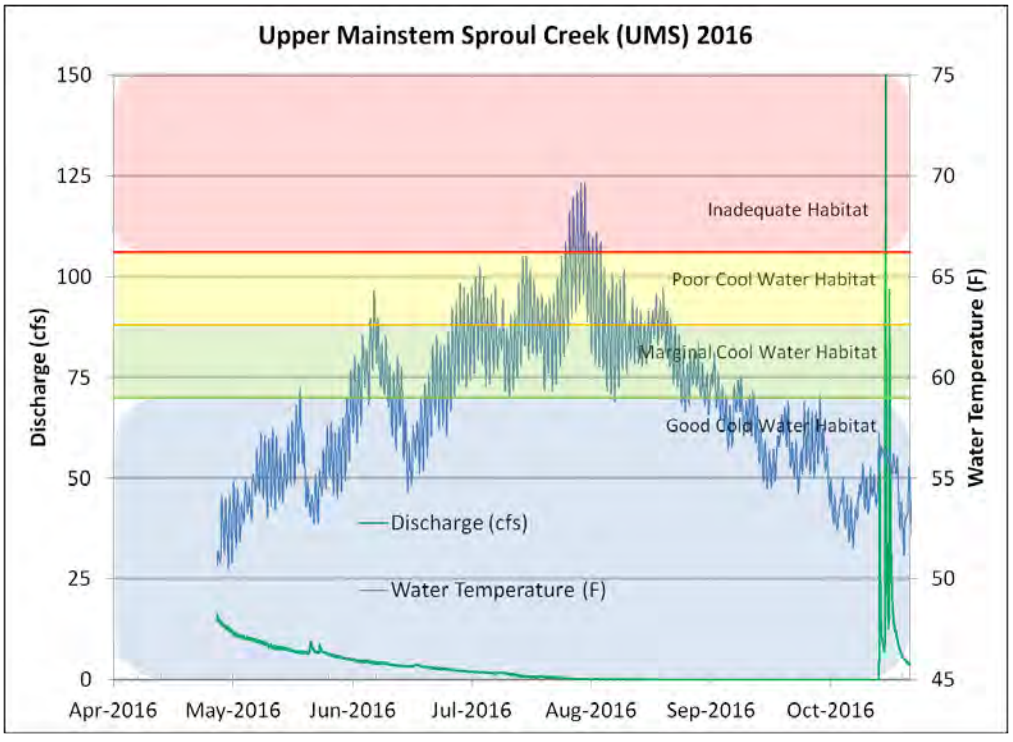

Figure C-8. Upper Mainstem Sproul Creek 2016 water temperature and discharge plot.

Table C-4. Upper South Fork Sproul Creek 2016 stream discharge measurements.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Staff Plate (ft)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
4/6/2016	11:00	Darren Mierau	9.19	0.00		10.00	1.81	
4/12/2016	13:27	Darren Mierau	5.95	0.10		9.90	1.71	
5/11/2016	11:18	Darren Mierau	3.029	0.28		9.72	1.53	
5/24/2016	10:35	Matt Metheny	2.193	0.34		9.66	1.47	
5/30/2016	11:20	Darren Mierau	1.558	0.37		9.63	1.44	
5/31/2016	10:10	Darren Mierau	1.493	0.37		9.63	1.44	
6/15/2016	11:00	Darren Mierau	1.171	0.46	1.35	9.54	1.35	1.35 using pin
6/24/2016	9:30	Darren Mierau	0.755	0.50	1.32	9.50	1.32	1.31 using pin, used staff plate
7/7/2016	10:40	Matt Metheny	0.418		1.24		1.24	Pivot point
7/28/2016	10:30	Matt Metheny	0.124		1.15		1.15	
8/5/2016	13:00	Darren Mierau	0.032		1.11		1.11	outlier, not included in R.C. fit
8/17/2016	11:19	Matt Metheny	0.026		1.04		1.04	
11/3/2016	11:14	Matt Metheny	22.7		2.05		2.05	
11/4/2016	10:34	Matt Metheny	18.88		1.91		1.91	
10/28/2016	10:48	Darren Mierau	19.84		2.03		2.03	
10/27/2016	11:15	Matt Metheny	44		2.82		2.82	outlier, not included in R.C. fit
11/22/2016	10:12	Darren Mierau	23.44		2.13		2.13	outlier, not included in R.C. fit

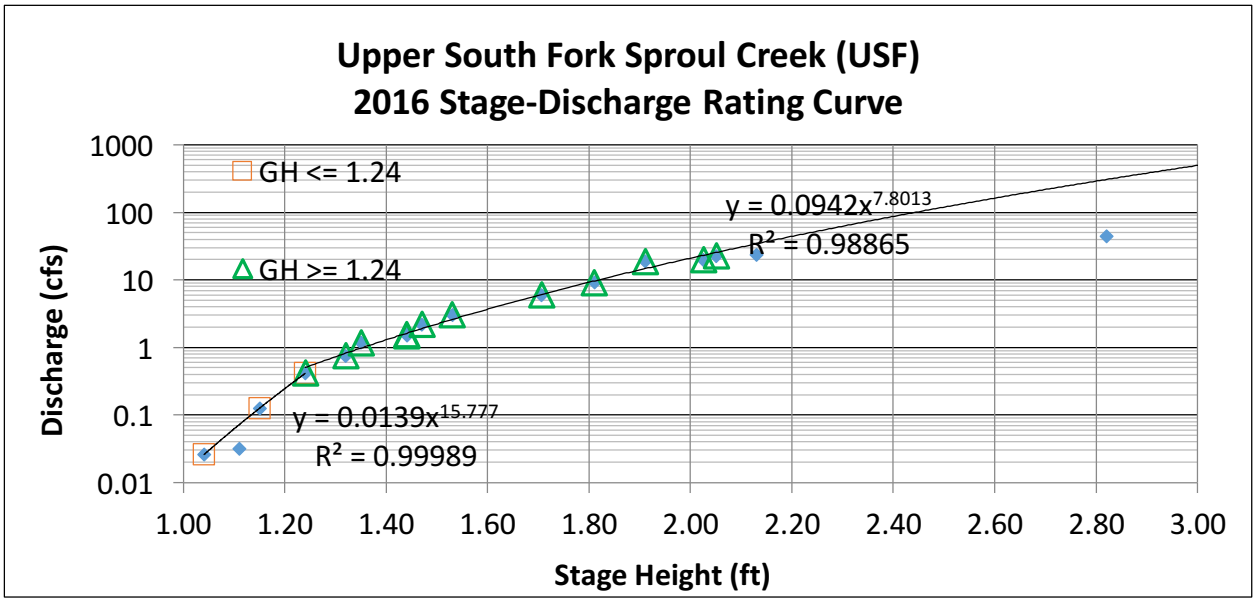

Figure C-9. Upper South Fork Sproul Creek 2016 rating curve.

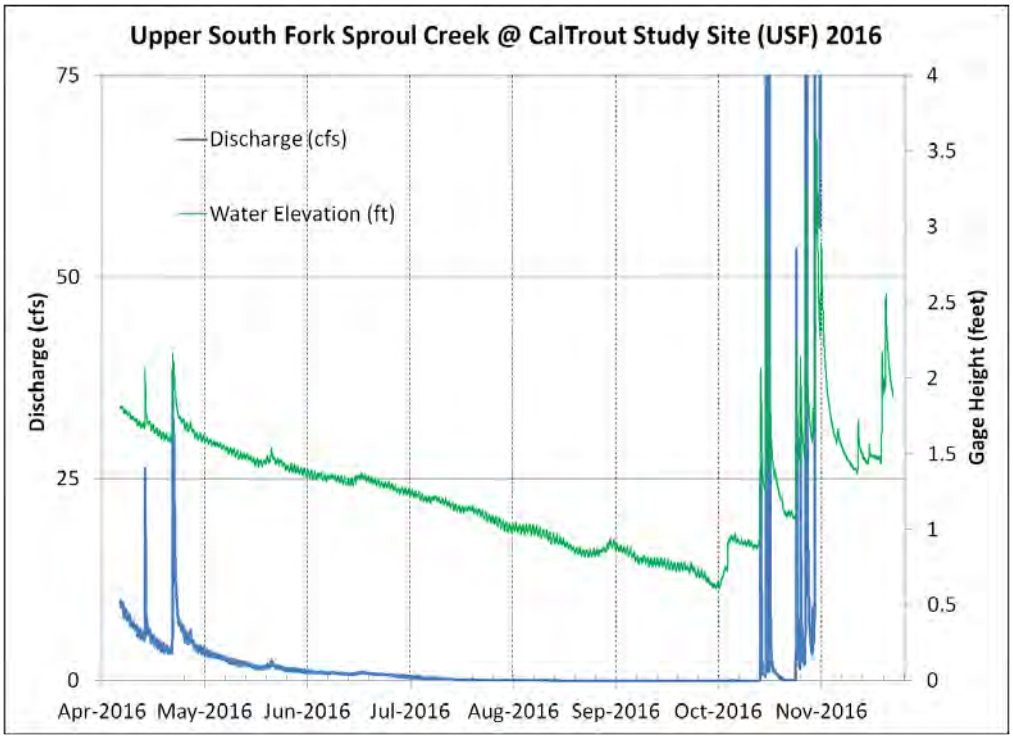

Figure C-10. Upper South Fork Sproul Creek 2016 hydrograph.

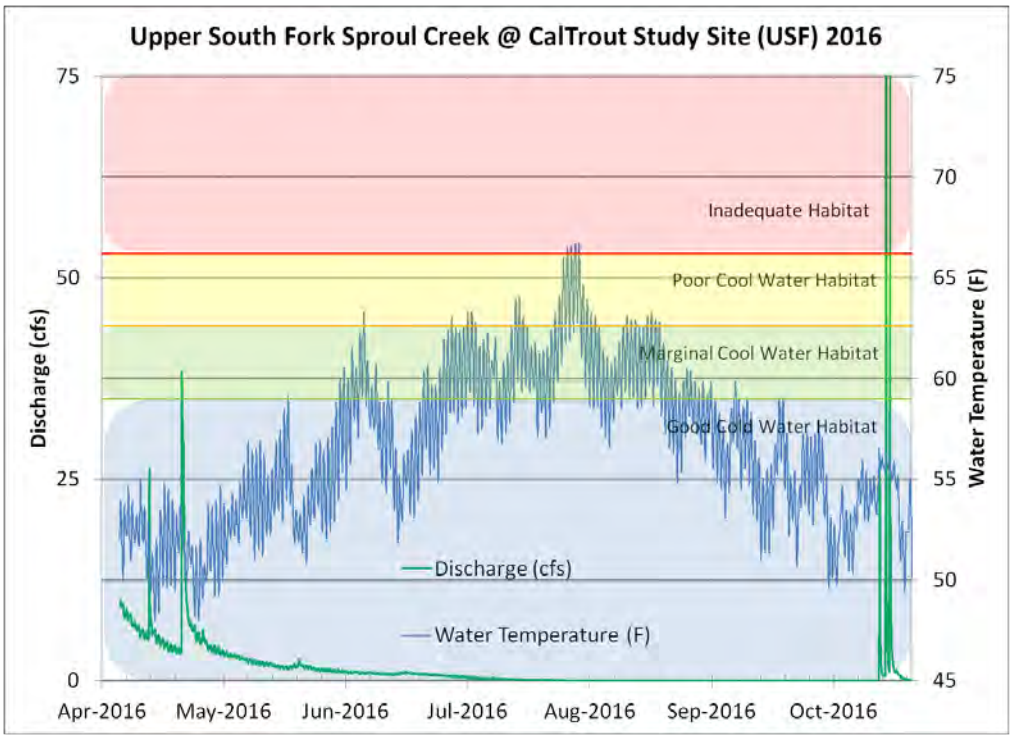

Figure C-11. Upper South Fork Sproul Creek (USF) 2016 water temperature and discharge plot.

Table C-5. Lower South Fork Sproul Creek 2016 stream discharge measurements. Adapted from standard USGS 9-207 form.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Staff Plate (ft)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
6/9/2015		D. Manthorne	0.6	0.16		1.84	0.84	
7/16/2015		Darren Mierau	0.03	0.36		1.64	0.64	
10/28/2015		Darren Mierau	0.076	0.29		1.71	0.71	datalogger downloaded
11/18/2015		Darren Mierau	0.376	0.19		1.81	0.81	
4/6/2016	15:30	Darren Mierau	13.37	-0.70		10.70	1.70	
4/27/2016	14:10	Darren Mierau	6.9	-0.57		10.57	1.57	datalogger downloaded
5/4/2016	14:45	Matt Metheny	5.051	-0.50		10.50	1.50	
5/24/2016	15:50	Matt Metheny	2.591	-0.39		10.39	1.39	
6/16/2016	11:14	Matt Metheny	1.119	-0.22		10.22	1.22	
6/24/2016	14:00	Darren Mierau	0.925	-0.17		10.17	1.17	datalogger downloaded
7/7/2016	15:01	Matt Metheny	0.539	-0.10		10.10	1.10	
7/28/2016	15:00	Matt Metheny	0.071	0.05		9.95	0.95	
11/3/2016	13:14	Matt Metheny	29.9	-1.12		11.12	2.12	

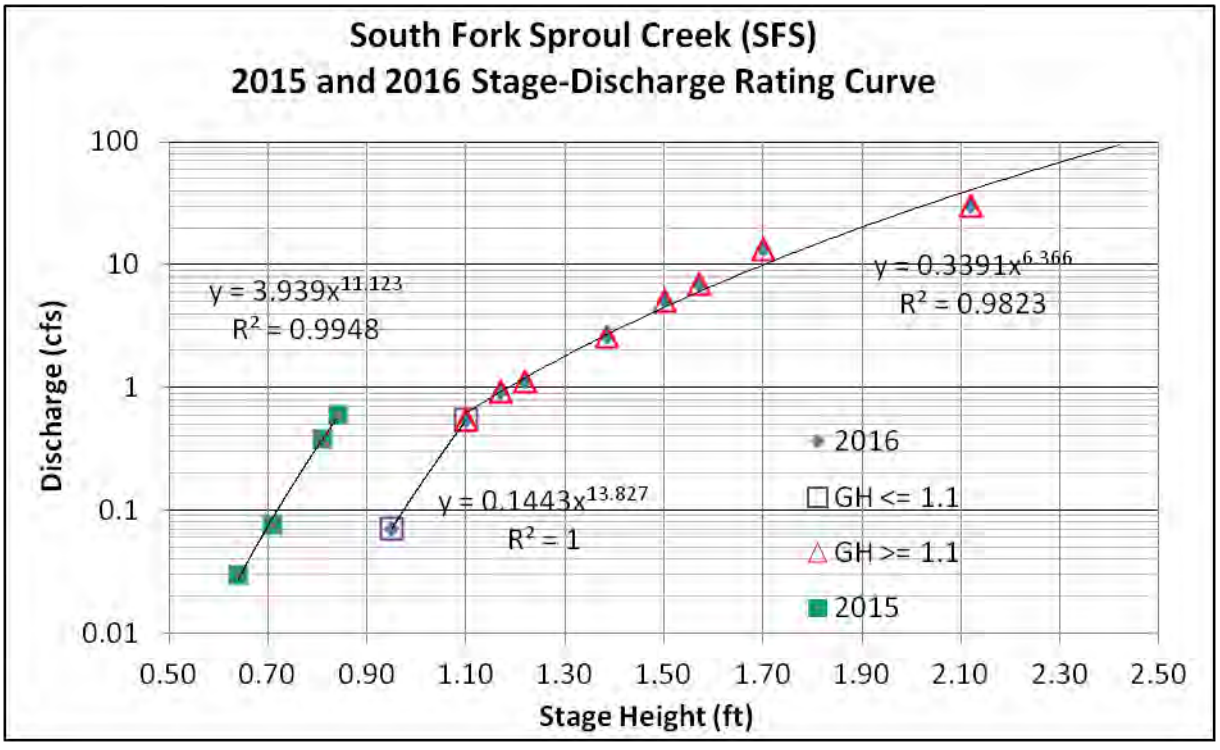

Figure C-12. South Fork Sproul Creek 2015 and 2016 rating curves.

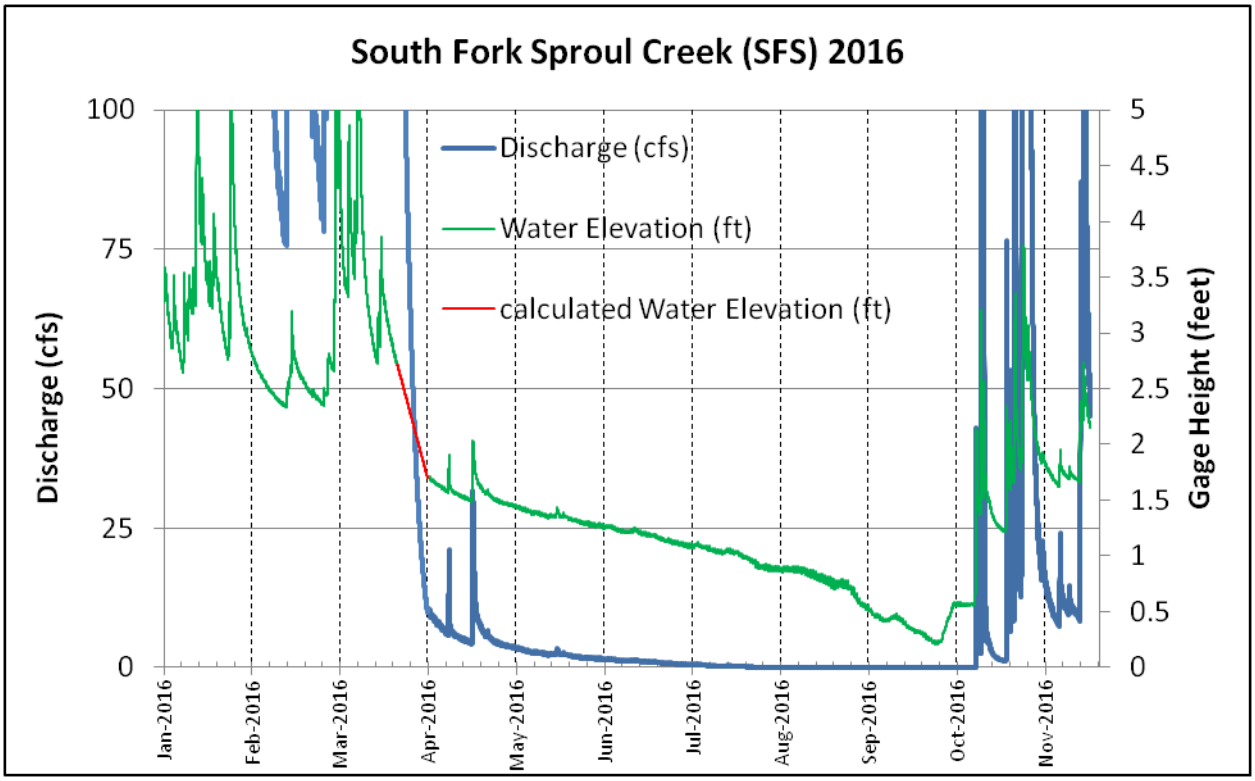

Figure C-13. South Fork Sproul Creek 2016 hydrograph.

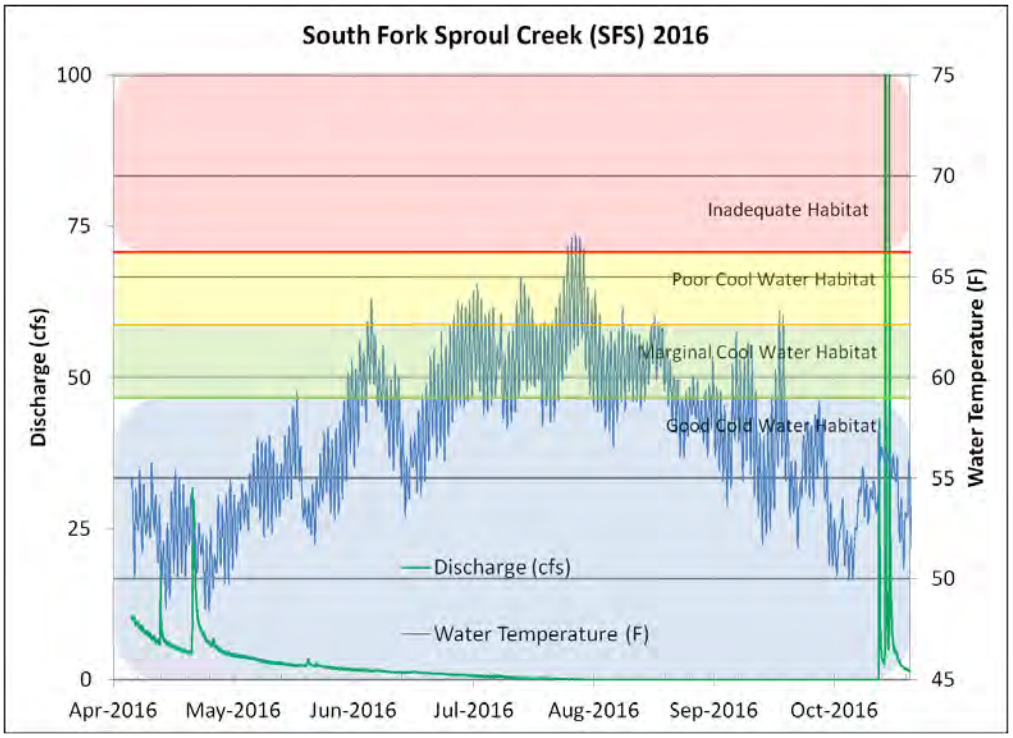

Figure C-14. South Fork Sproul Creek 2016 water temperature and discharge plot.

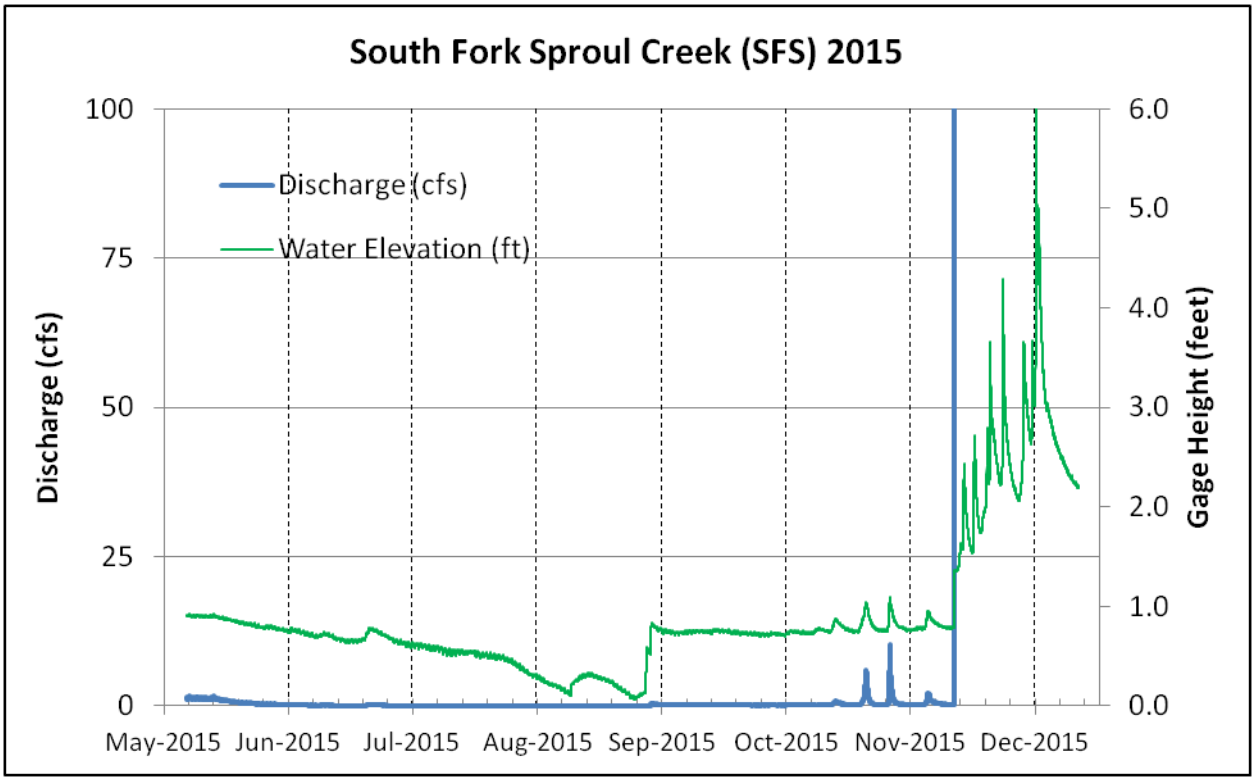

Figure C-15. South Fork Sproul Creek 2015 hydrograph.

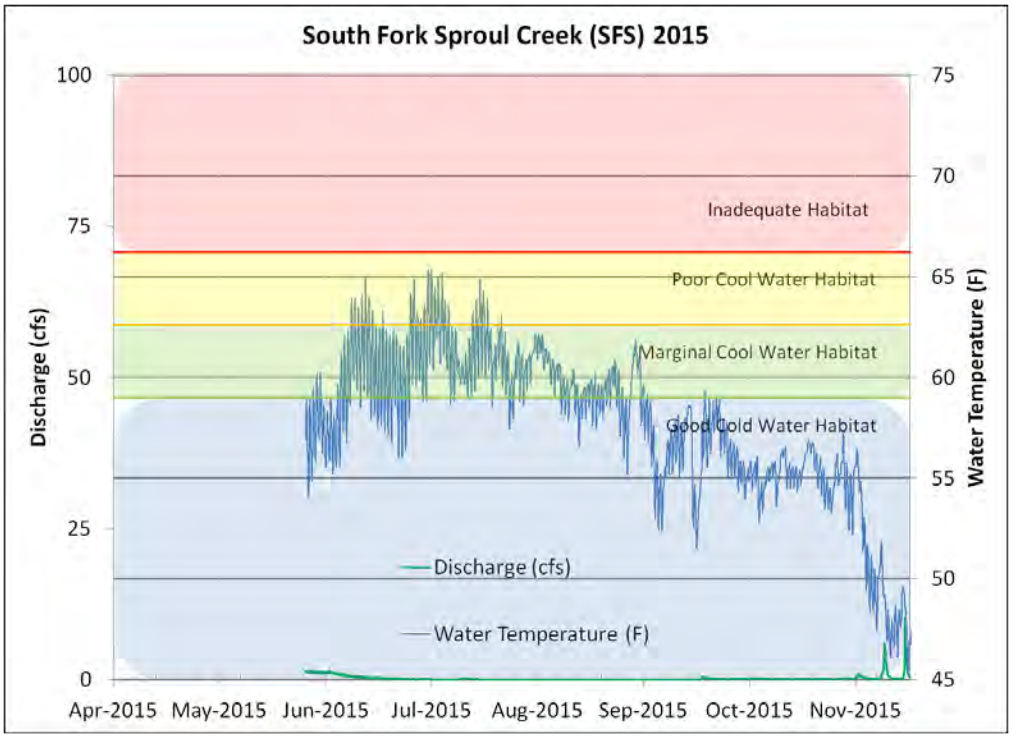

Figure C-16. South Fork Sproul Creek 2015 water temperature and discharge plot.

Table C-6. West Fork Sproul Creek 2016 stream discharge measurements. Adapted from standard USGS 9-207 form.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Staff Plate (ft)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
6/9/2015	12:00	D. Manthorne	0.66	0.33		9.67	0.67	
7/16/2015	13:22	Darren Mierau	0.077	0.42		9.58	0.58	
10/28/2015	10:36	Darren Mierau	0.171	0.38		9.62	0.62	datalogger downloaded
4/6/2016	13:10	Randy Klein	18.53	-0.035		10.04	2.04	
4/27/2016	12:55	Darren Mierau	9.587	0.1		9.90	1.90	datalogger downloaded
5/4/2016	14:00	Matt Metheny	8.168	0.19		9.81	1.81	
5/25/2016	14:01	Darren Mierau	3.869	0.3		9.70	1.70	
6/24/2016	13:15	Darren Mierau	1.457	0.44		9.56	1.56	Pivot point, datalogger downloaded
7/28/2016	15:00	Matt Metheny	0.229	0.59		9.41	1.41	
8/5/2016	12:00	Darren Mierau	0.099	0.64		9.36	1.36	
8/17/2016	13:11	Matt Metheny	0.021	0.76		9.24	1.24	
11/3/2016	13:54	Matt Metheny	26.14	-0.22		10.22	2.22	

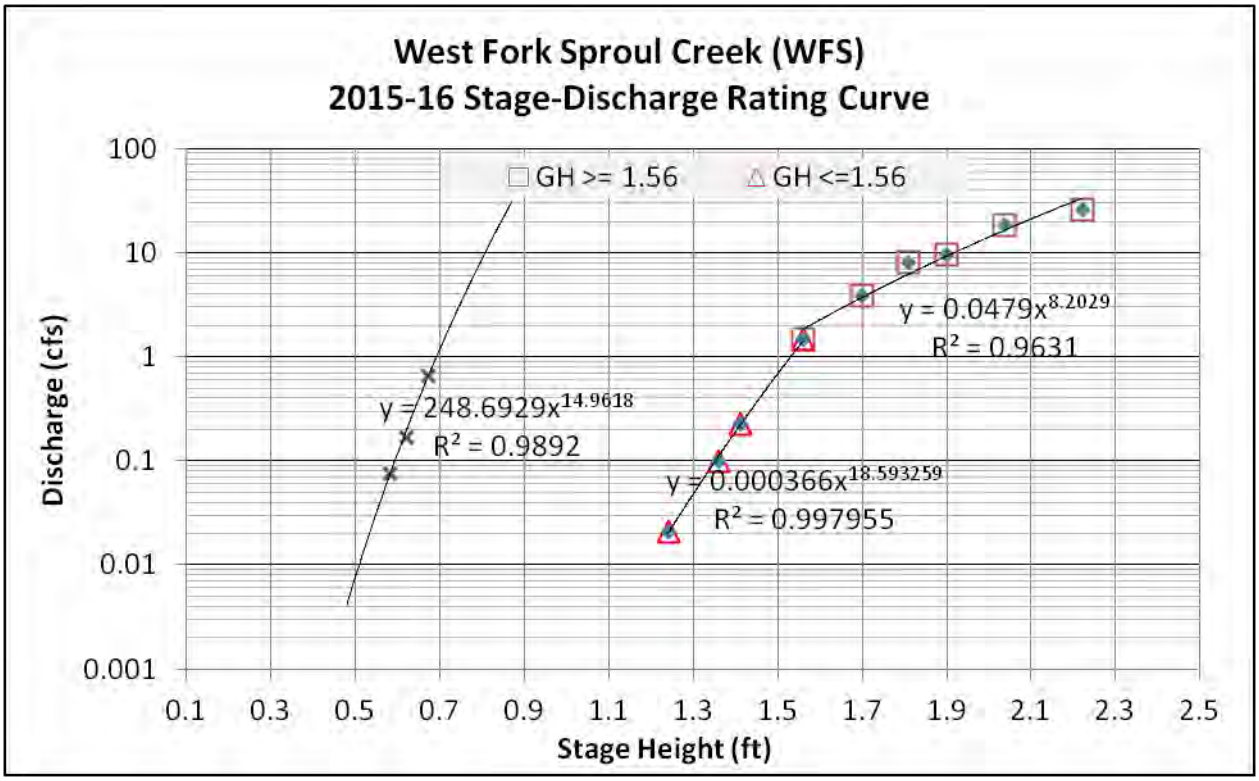

Figure C-17. West Fork Sproul Creek 2015 and 2016 rating curves.

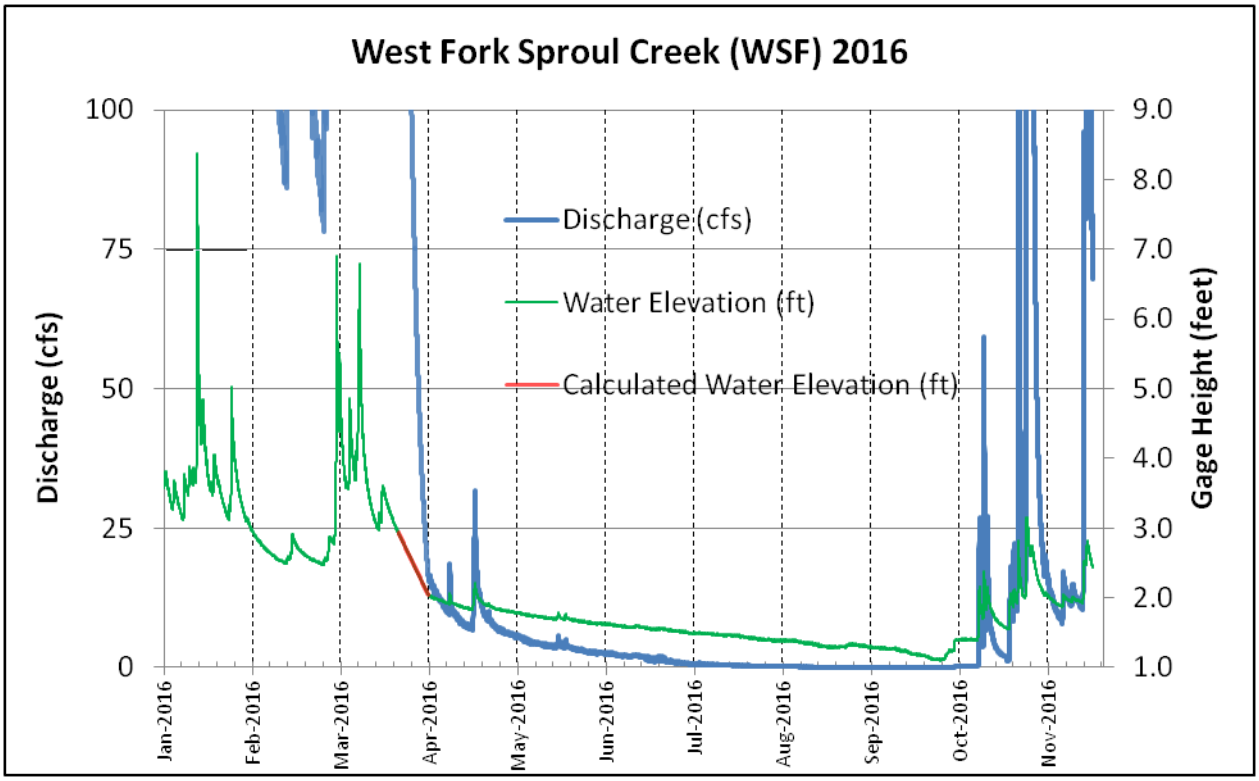

Figure C-18. West Fork Sproul Creek 2016 hydrograph.

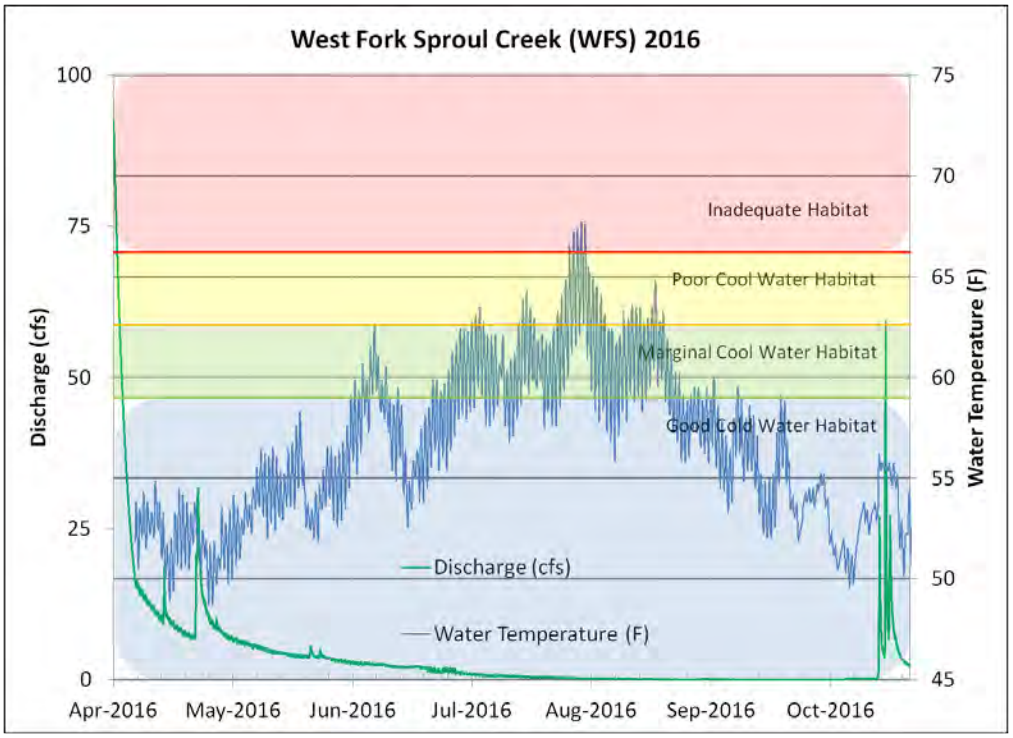

Figure C-19. West Fork Sproul Creek 2016 water temperature and discharge plot.

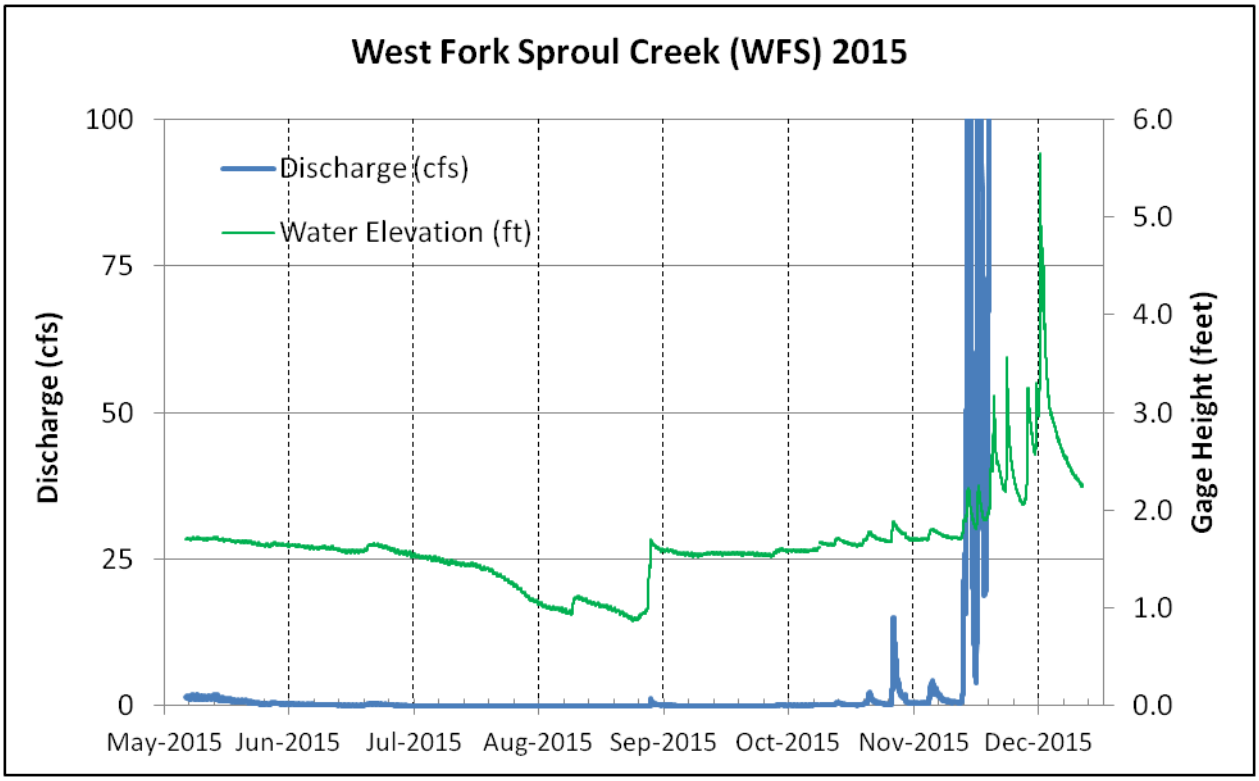

Figure C-20. West Fork Sproul Creek 2015 hydrograph.

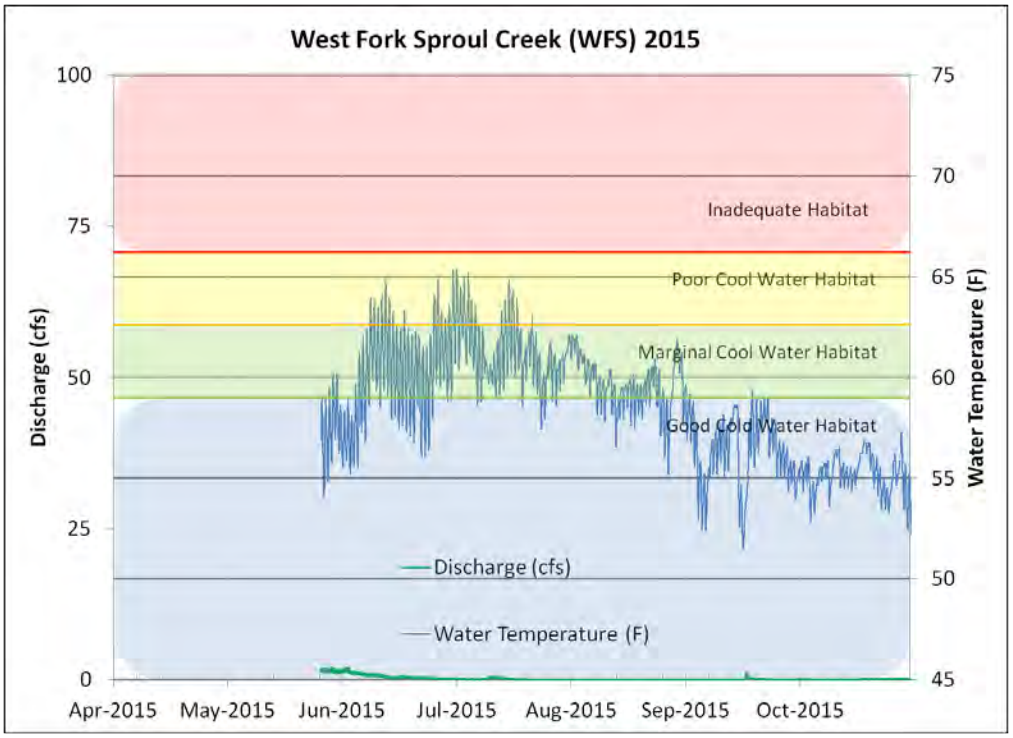

Figure C-21. West Fork Sproul Creek 2015 water temperature and discharge plot.

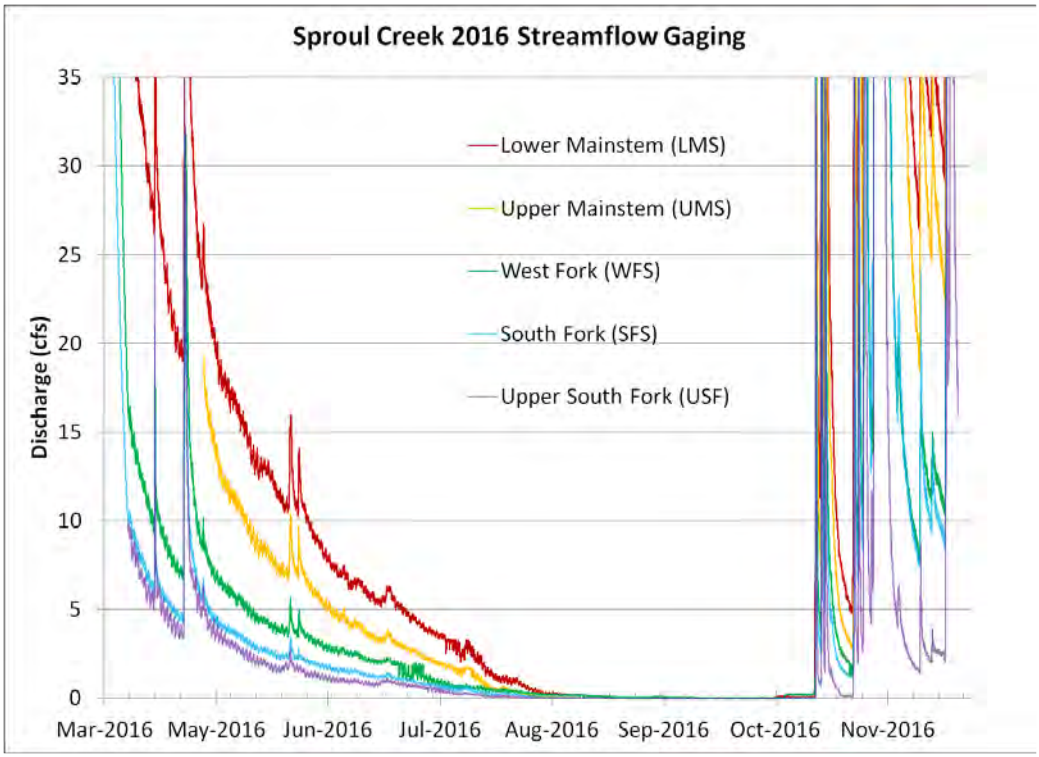

Figure C-22. Summary of 2016 Sproul Creek streamflow gaging, with emphasis on spring recession.

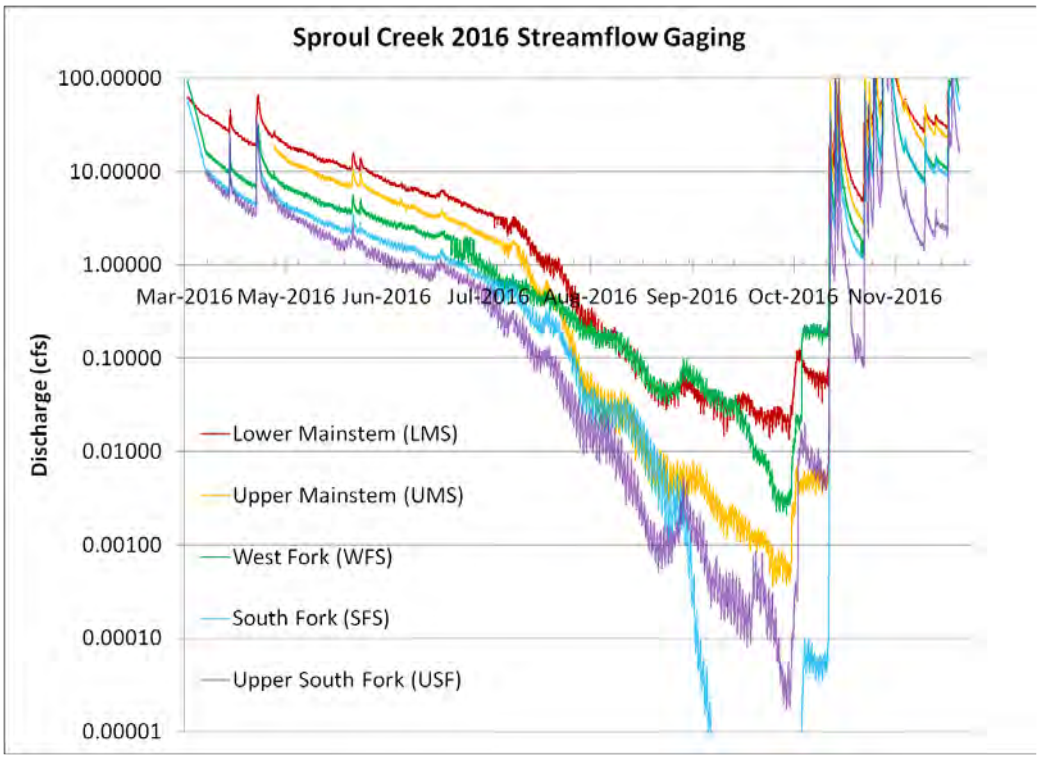

Figure C-23. Summary of 2016 Sproul Creek streamflow gaging, with emphasis on summer baseflows.

Table C-7. Cox Creek 2016 stream discharge measurements. Adapted from standard USGS 9-207 form.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
5/24/2016	2:45	Matt Metheny	0.496	N/A	N/A	N/A	before logger was in
6/15/2016	14:40	Matt Metheny	0.153	1.03	1.97	2.67	logger installed
6/24/2016	12:15	Darren Mierau	0.153	1.06	1.94	2.63	ott file cox0624
7/7/2016	1:40	Matt Metheny	0.075	1.13	1.88	2.57	
7/28/2016	1:05	Matt Metheny	0.0015	1.32	1.68	2.39	
8/10/2016	13:10	Matt Metheny	N/A	N/A		2.29	logger moved down
8/18/2016	12:10	Matt Metheny	0	1.56	1.44	2.14	observed disconnection
10/20/2016	15:00	Matt Metheny	N/A	0.73	2.27	2.97	logger removed at 3pm

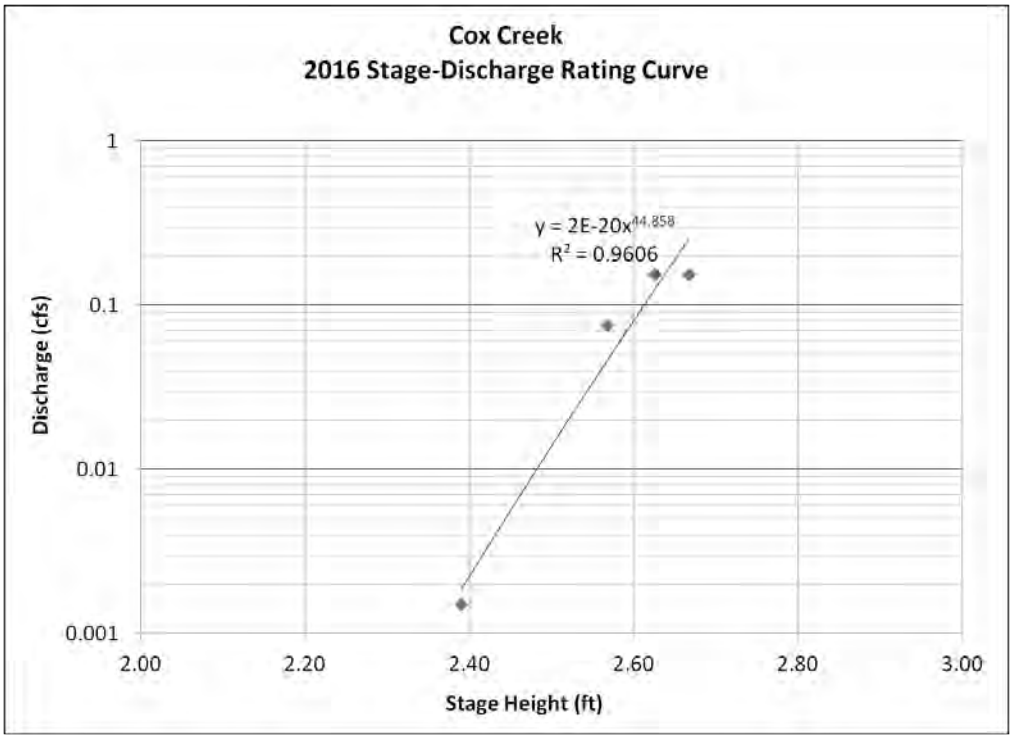

Figure C-24. Cox Creek 2016 stage-discharge rating curve.

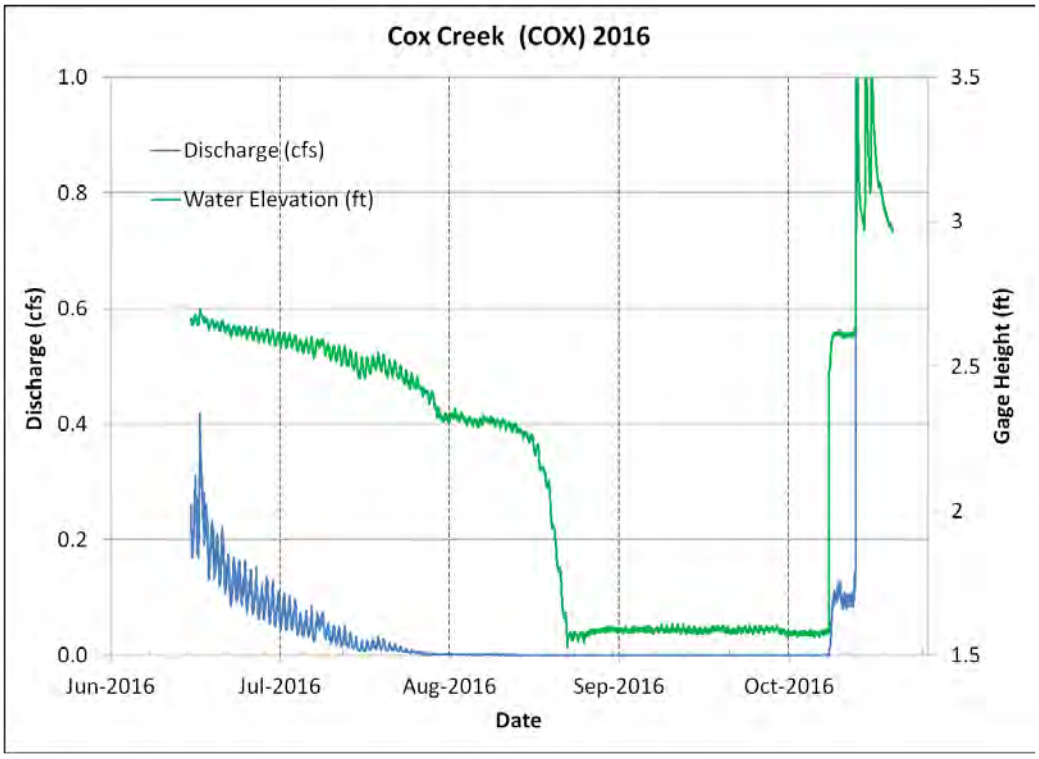

Figure C-25. Cox Creek 2016 hydrograph.

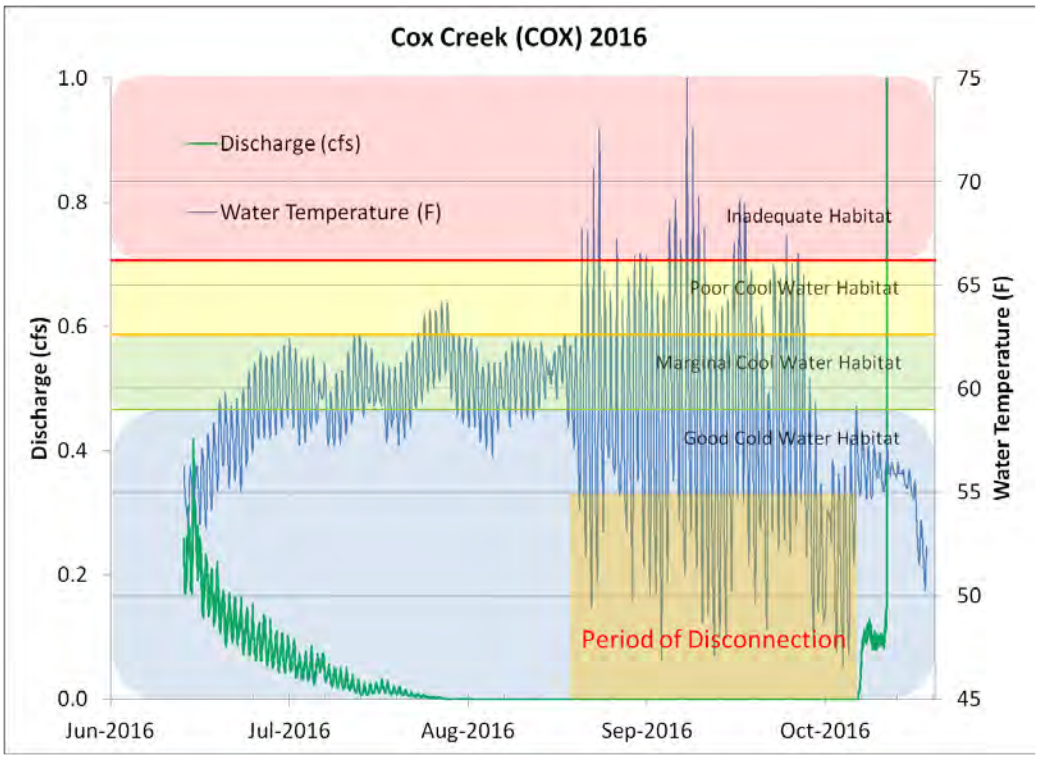

Figure C-26. Cox Creek 2016 water temperature and discharge plot. Ambient air temperature was recorded during period of disconnection.

Table C-8. Little Sproul Creek 2016 stream discharge measurements. Adapted from standard USGS 9-207 form.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
5/4/2016	3:34	Matt Metheny	2.257	0.58	1.42	1.314	logger installed
5/25/2016	3:15	Matt Metheny	1.136	0.66	1.34	1.231	
6/24/2016	12:00	Matt Metheny	0.365	0.8	1.2	1.094	
8/17/2016	3:08	Matt Metheny	0.0235	1.02	0.98	0.878	

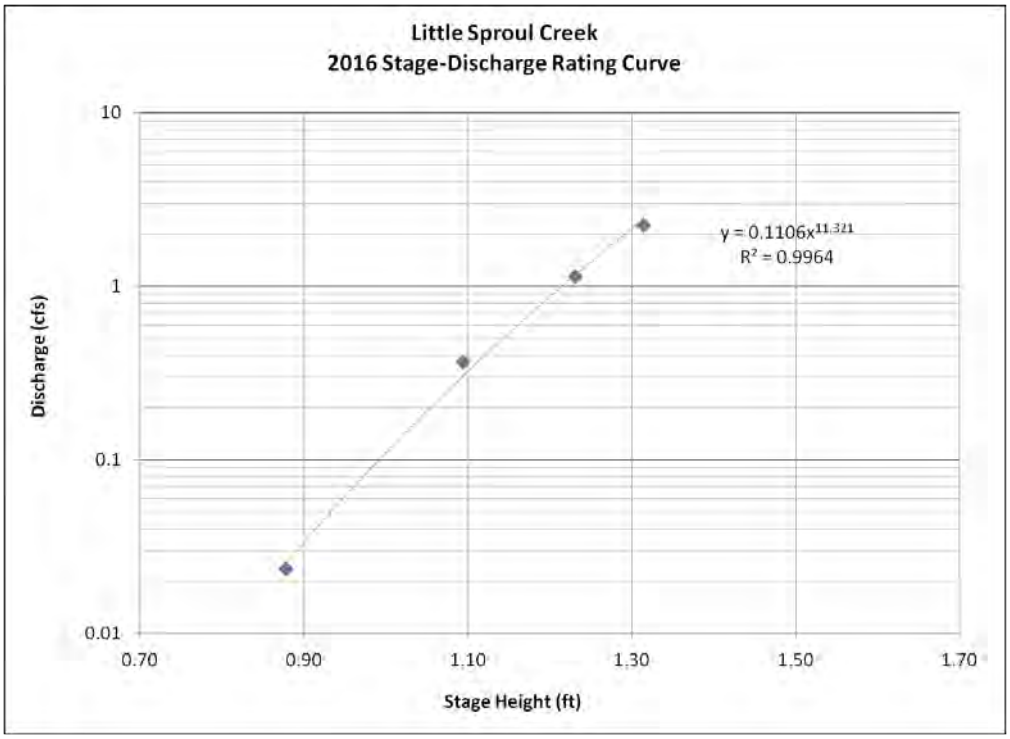

Figure C-27. Little Sproul Creek 2016 stage-discharge rating curve.

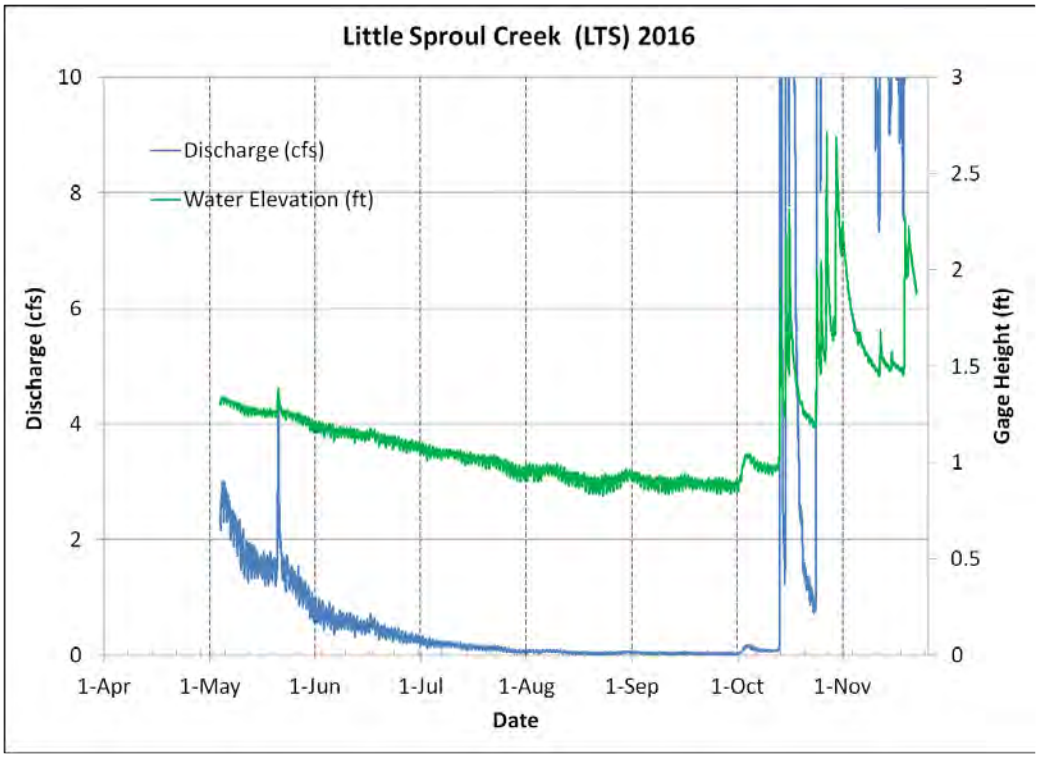

Figure C-28. Little Sproul Creek hydrograph.

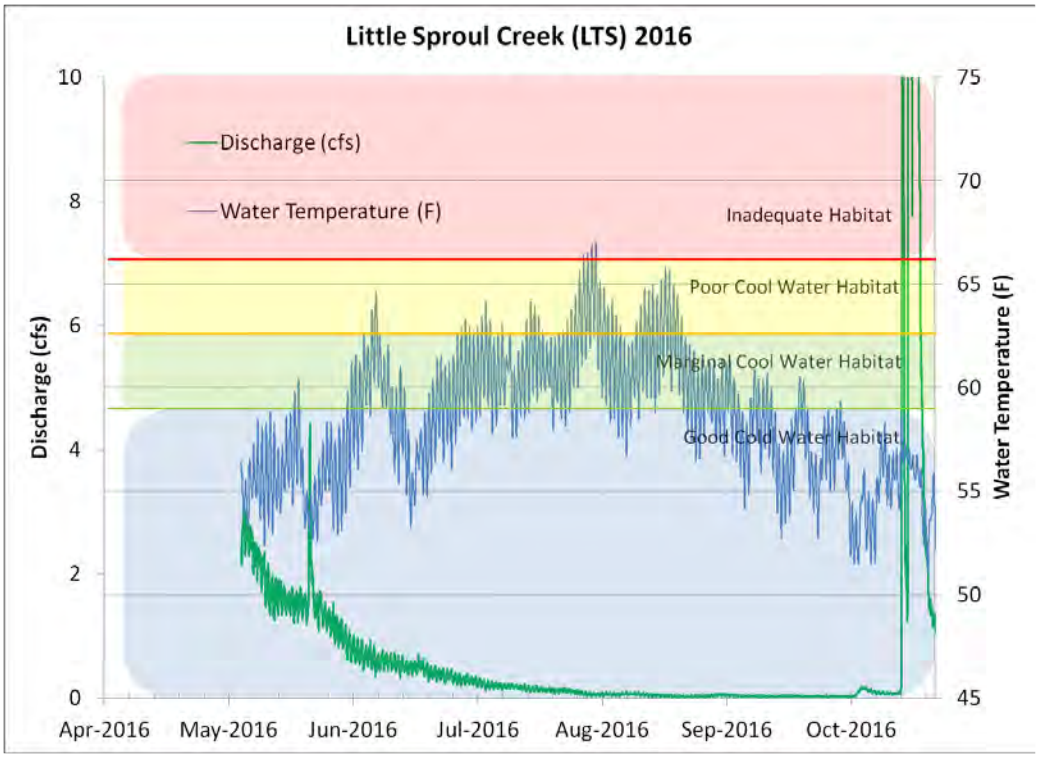

Figure C-29. Little Sproul Creek temperature and discharge plot.

Table C-9. West Branch of South Fork Sproul Creek 2016 stream discharge measurements. Adapted from standard USGS 9-207 form.

Date	Time (GMT - 07:00 / PDT)	Hydrologist	Streamflow (cfs)	Pin Elev Field Reading (ft below top of pin)	Arbitrary Pin Elev (ft)	Gage Height (ft)	Notes
5/11/2016	11:00	Matt Metheny	0.614				prior to logger start
5/24/2016	11:00	Matt Metheny	0.546				prior to logger start
5/30/2016	11:00	Matt Metheny	0.365	1.18	8.82	8.82	pin installed, pivot
6/15/2016	10:40	Matt Metheny	0.208	1.21	8.79	8.79	prior to logger start
6/24/2016	9:40	Matt Metheny	0.127	1.23	8.77	8.77	prior to logger start
7/7/2016	11:00	Matt Metheny	0.098	1.29	8.71	8.71	logger installed
7/28/2016	11:25	Matt Metheny	0.036	1.32	8.68	8.68	
8/17/2016	12:45	Matt Metheny	0.005	1.40	8.60	8.60	
9/20/2016	10:55	Matt Metheny	N/A				logger moved
10/27/2016	13:29	Matt Metheny	11.94	0.33	9.67	9.67	
10/28/2016	10:56	Matt Metheny	3.815	0.80	9.20	9.20	
11/3/2016	9:45	Matt Metheny	3.8	0.75	9.25	9.25	
11/4/2016	10:30	Matt Metheny	2.835	0.84	9.16	9.16	

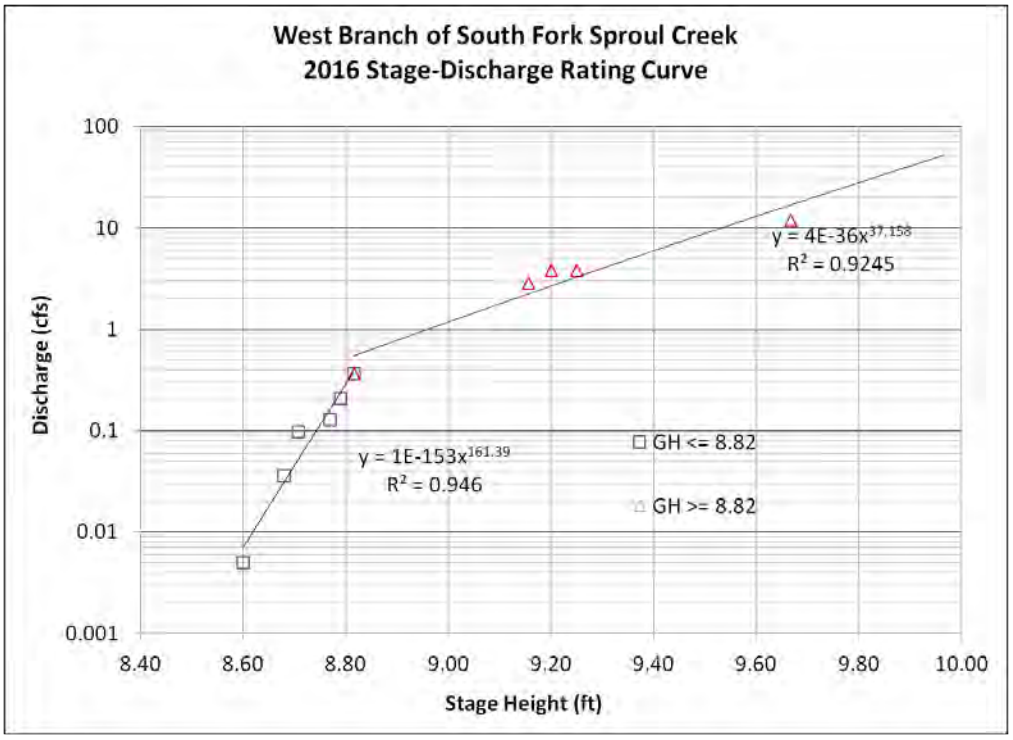

Figure C-30. West Branch of South Fork Sproul Creek 2016 stage-discharge rating curve.

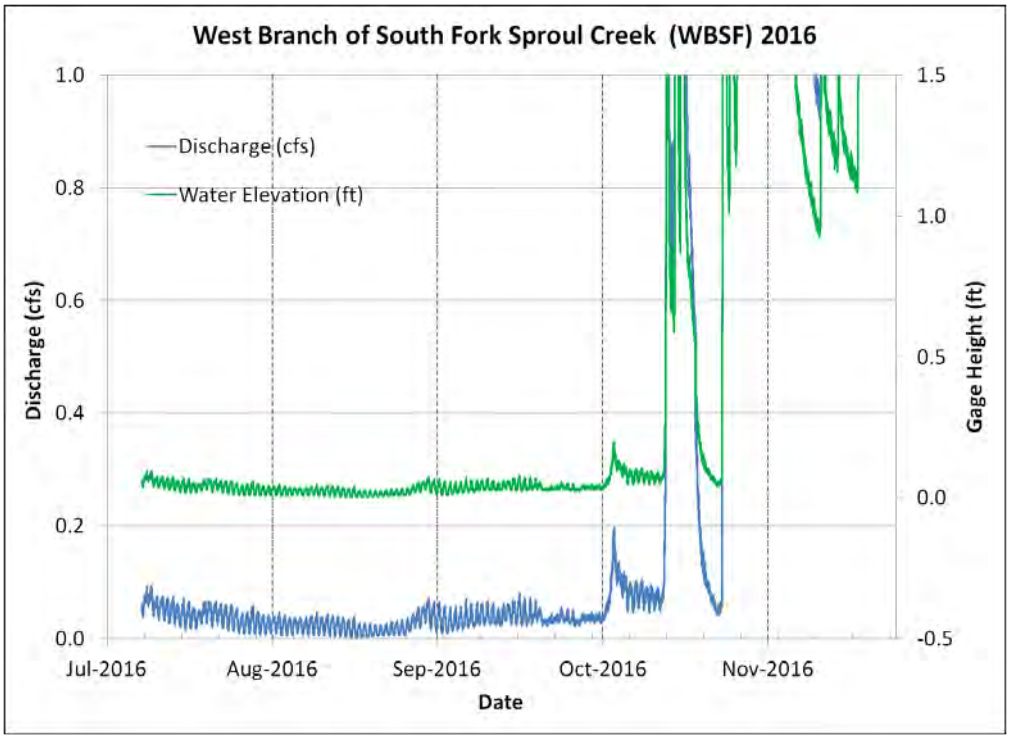

Figure C-31. West Branch of South Fork Sproul Creek hydrograph.

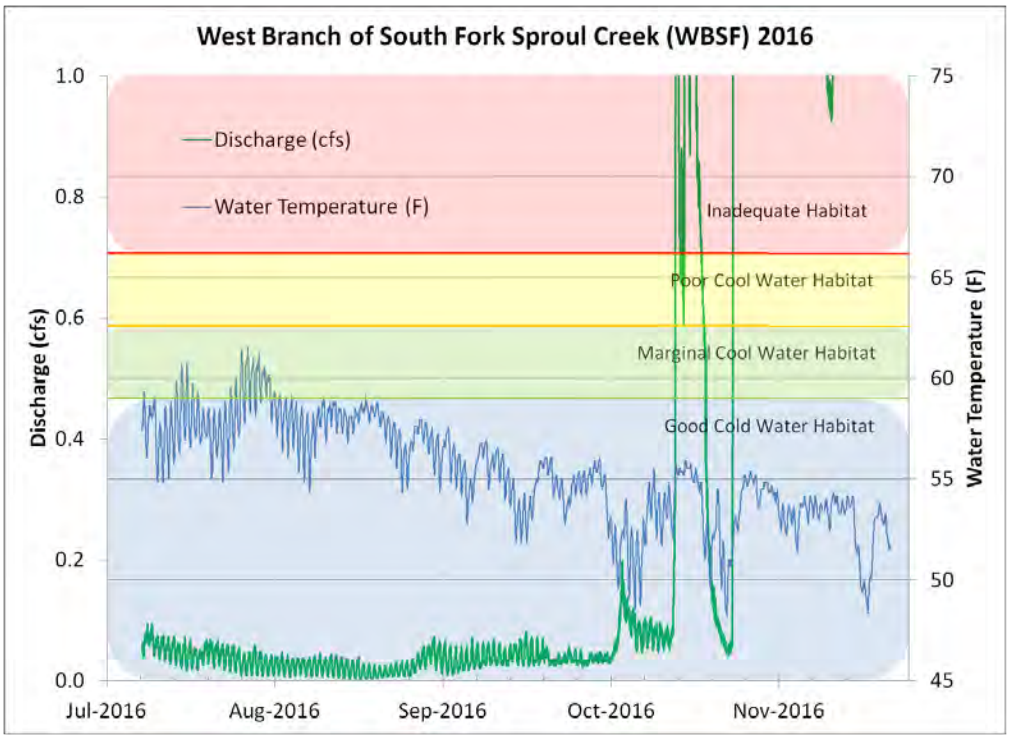

Figure C-32. West Branch of South Fork Sproul Creek) temperature and discharge plot.

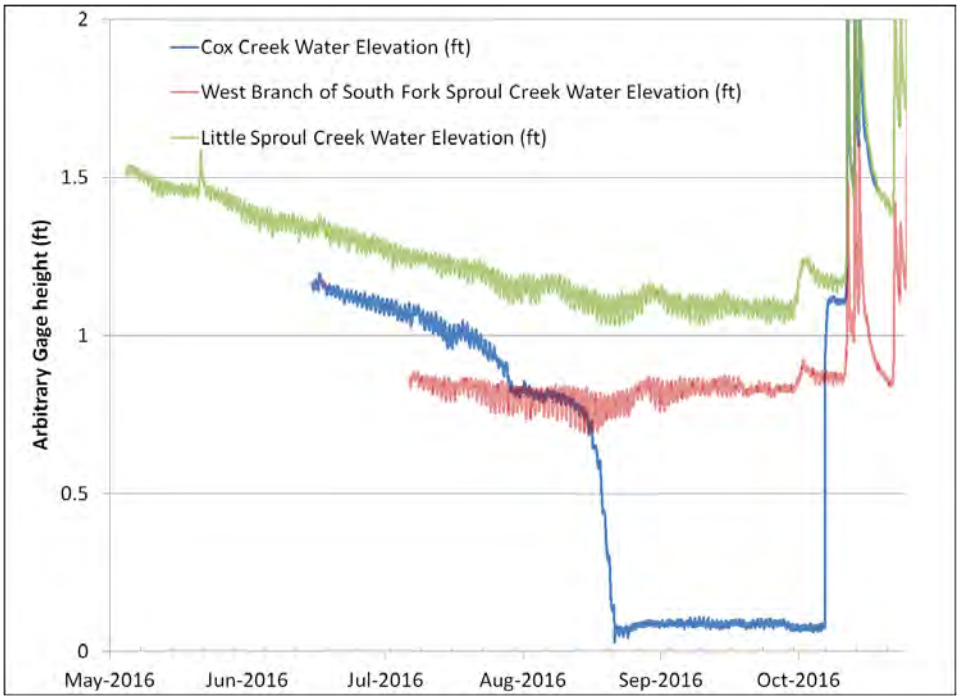

Figure C-33. Demonstration of diversion effect on Cox Creek gage height, compared to West Branch of South Fork Sproul Creek, and Little Sproul Creek. After a period of disconnection, Cox Creek began flowing two days before the first rain event of fall. The response to the rain event is evident on all three hydrographs, whereas the vertical hydrograph response on Cox Creek 2 days earlier is diversion-related.

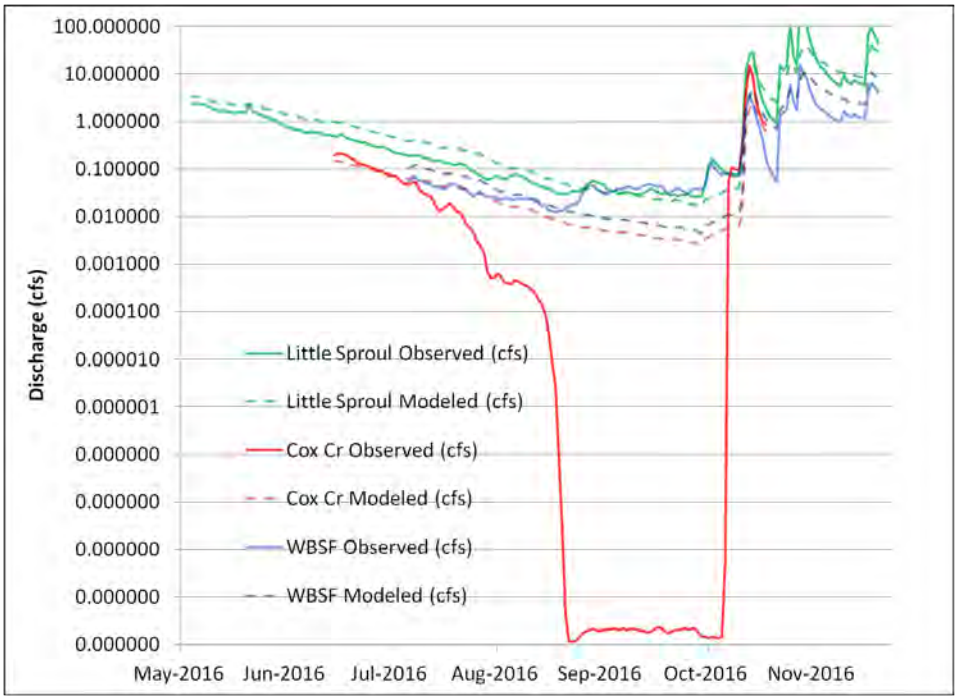

Figure C-34. Demonstration of diversion effect on Cox Creek observed versus modeled streamflows, compared to nearby West Branch of South Fork Sproul Creek, and Little Sproul Creek. Modeled streamflows are derived from Bull Creek, and scaled to drainage area.

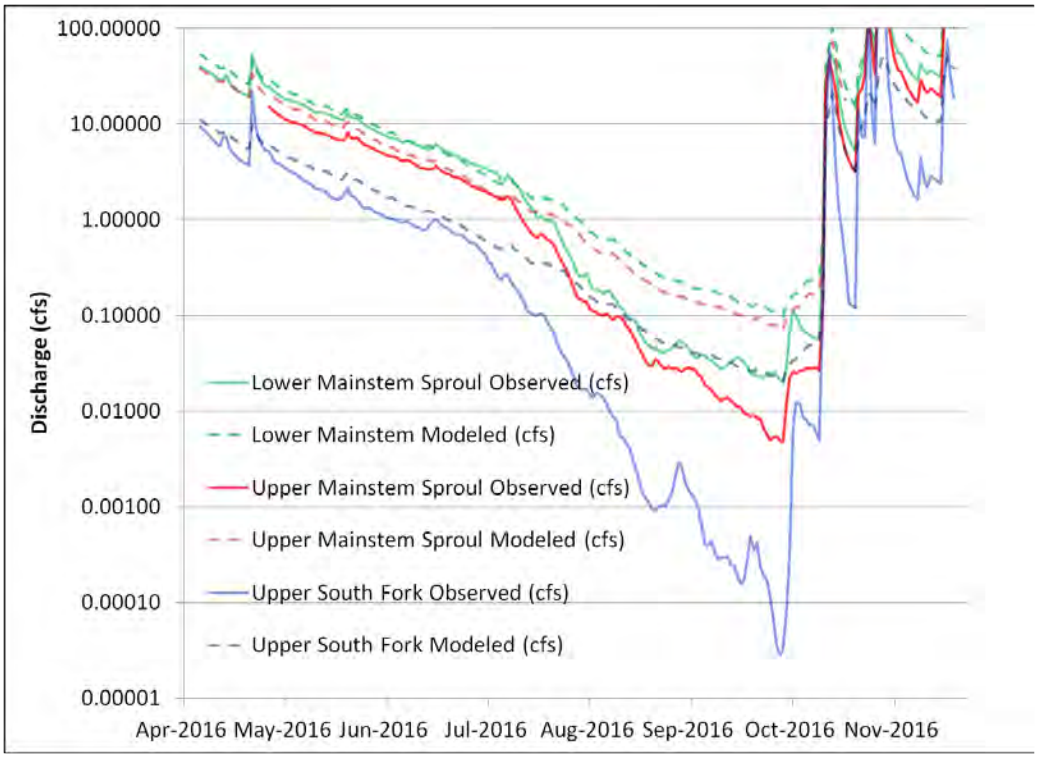

Figure C-35. Comparison of modeled and observed streamflows for Sproul Creek.

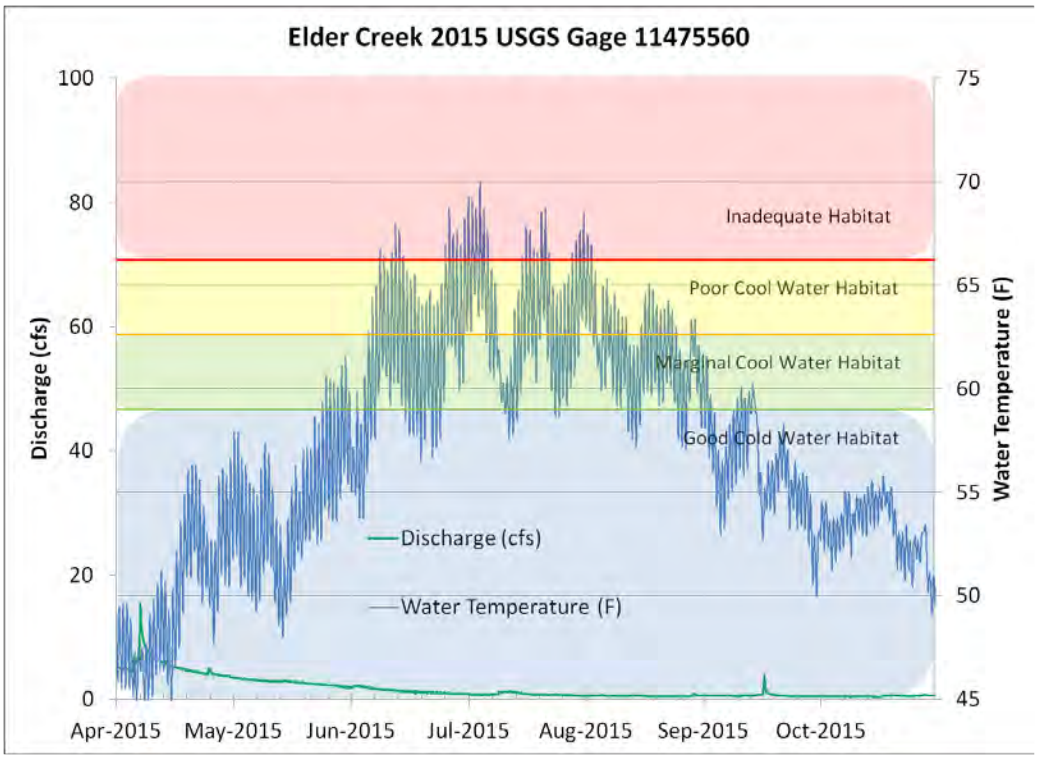

Figure C-36. Elder Creek 2015 water temperature plot.

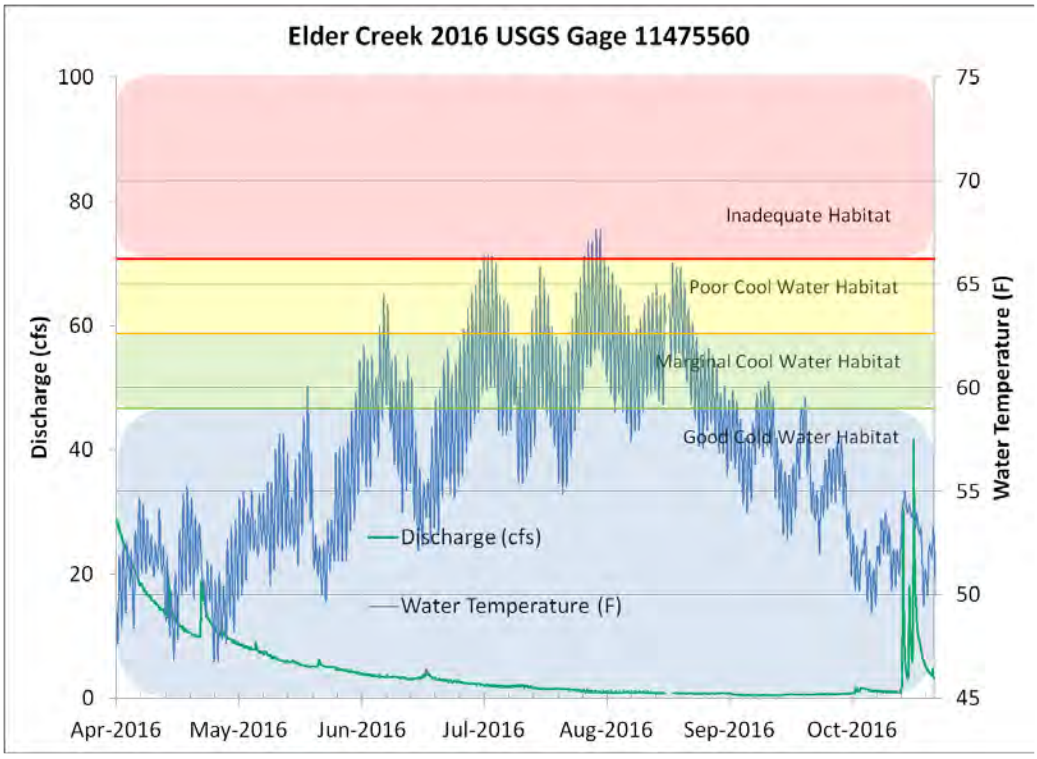

Figure C-37. Elder Creek 2016 water temperature plot.

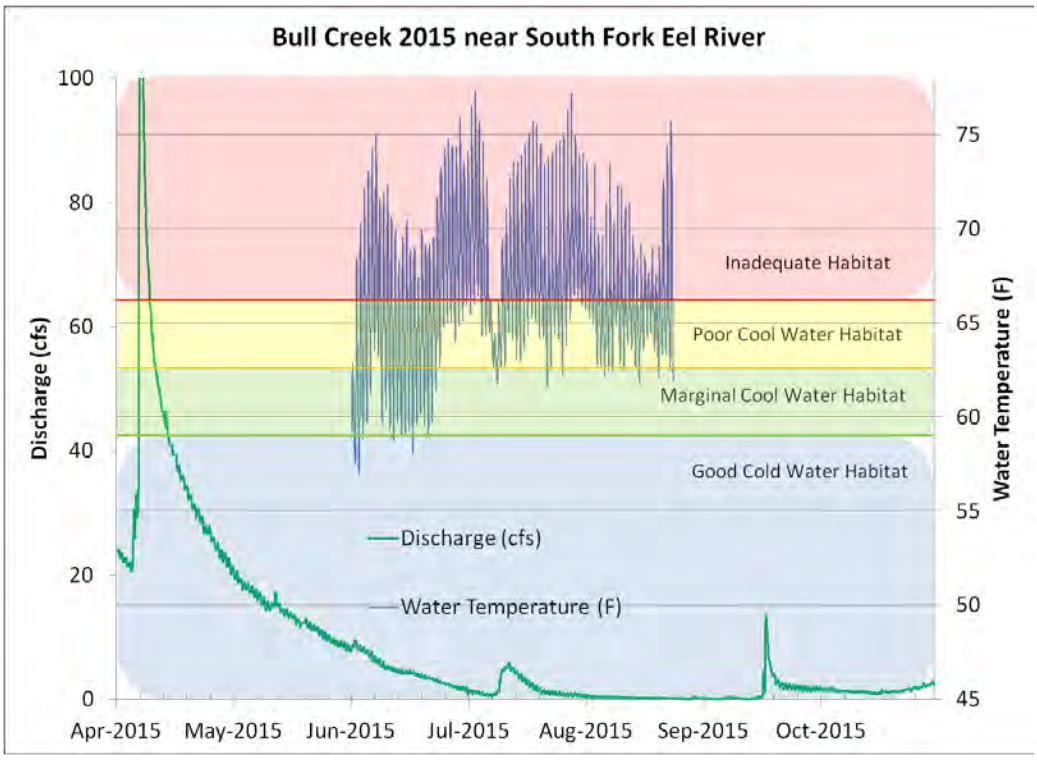

Figure C-38. Bull Creek 2015 water temperature plot (data from CA State Parks).

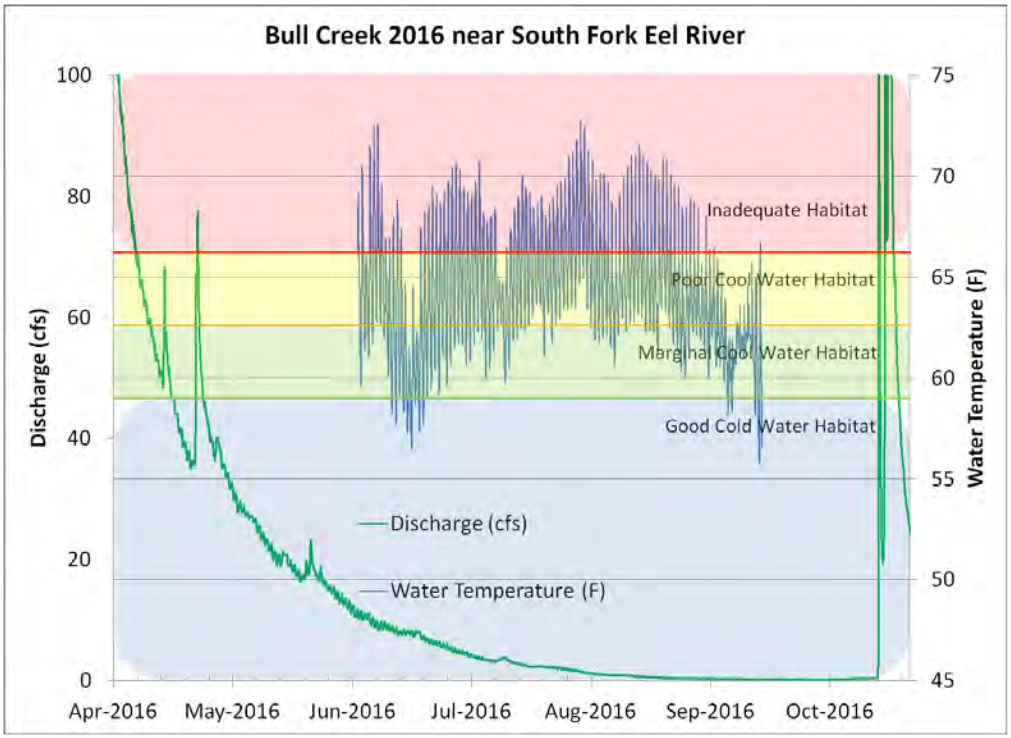

Figure C-39. Bull Creek 2016 water temperature plot (data from CA State Parks).

Figure C-40. Lower Mainstem Sproul Creek (LMS) staff gage and water level data logger location, visible in center of photo. Photo taken on November 30, 2016. Sproul Creek Road bridge is visible at top left.

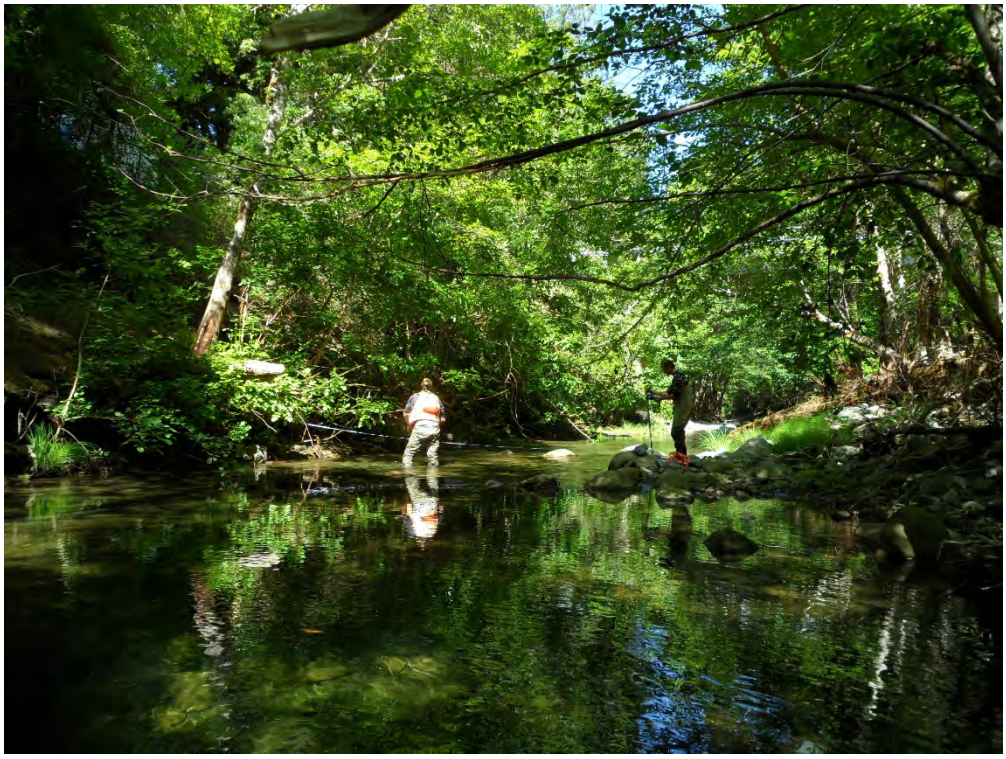

Figure C-41. Lower Mainstem Sproul Creek gaging site near South Fork Eel River (LMS) on May 31, 2016. Photo taken from upstream at a measured discharge of 7.553 cfs.

Figure C-42. Upper Mainstem Sproul Creek (UMS) staff gage and water level data logger location, underneath blue flagging. Photo taken on November 30, 2016. Note that the gage is underwater.

Figure C-43. Upper Mainstem Sproul Creek gaging site at CalTrout study site (UMS) on May 25, 2016. Photo taken from upstream at a measured discharge of 7.125 cfs.

Figure C-44. Upper South Fork Sproul Creek (USF) staff gage and water level data logger location at CalTrout Study Site. Photo taken from downstream. Staff gage is visible in center of photo in white.

Figure C-45. Upper South Fork Sproul Creek (USF) gaging site at CalTrout Study Site on April 6, 2016. Photo taken from upstream at a measured discharge of 9.19 cfs.

Figure C-46. South Fork Sproul (SFS) Creek staff gage and data logger location, underneath orange arrow. Photo taken from downstream on March 29, 2016.

Figure C-47. South Fork Sproul Creek (SFS) gaging site on November 3, 2016. Photo taken from upstream at a measured discharge of 29.9 cfs.

Figure C-48. West Fork Sproul Creek (WFS) staff gage and water level data logger location (WFS), underneath orange arrow. Photo taken on April 27, 2016 from downstream.

Figure C-49. West Fork Sproul Creek gaging site (WFS) on November 3, 2016. Photo taken from downstream at a measured discharge of 26.14 cfs.

Literature Cited

USEPA (U.S. Environmental Protection Agency). 1999b. South Fork Eel River total maximum daily loads for sediment and temperature. San Francisco, CA. December 1999.