Stream: West Prong SF of Slater Creek (Upper Segment)

Executive Summary

Water Division: 6
Water District: 54
CDOW#: 21123
CWCB ID: 10/6/A-007

Segment: Headwaters to Headgate of Decker Ditch No. 1

Upper Terminus: HEADWATERS IN THE VICINITY OF
(Latitude 40° 46' 33.14"N) (Longitude 107° 21' 18.54"W)

Lower Terminus: HEADGATE OF DECKER DITCH NO. 1
(Latitude 40° 48' 53.13"N) (Longitude 107° 18' 1.02"W)

Watershed: Little Snake (HUC#: 14050003)
Counties: Routt / Moffat
Length: 4.58 miles
USGS Quad: Buck Point
Flow Recommendation: 4.9 cfs (March 1 – July 31)
3.5 cfs (August 1 – October 31)
2.5 cfs (November 1 – February 29)

Staff Analysis and Recommendation

Summary

The information contained in this report and the associated instream flow file folder forms the basis for staff's instream flow recommendation to be considered by the Board. It is staff's opinion that the information contained in this report is sufficient to support the findings required in Rule 5.40.

Colorado's Instream Flow Program was created in 1973 when the Colorado State Legislature recognized "the need to correlate the activities of mankind with some reasonable preservation of the natural environment" (see 37-92-102 (3) C.R.S.). The statute vests the CWCB with the exclusive authority to appropriate and acquire instream flow and natural lake level water rights. In order to encourage other entities to participate in Colorado's Instream Flow Program, the statute directs the CWCB to request instream flow recommendations from other state and federal agencies. The Colorado Division of Wildlife (CDOW) and Trout Unlimited (TU) recommended this segment of West Prong South Fork of Slater Creek to the CWCB for inclusion into the Instream Flow Program. West Prong South Fork of Slater Creek is being considered for inclusion into the Instream Flow Program because it has a natural environment that can be preserved to a reasonable degree with an instream flow water right.

West Prong South Fork of Slater Creek is 5.5 mile long. The West Prong South Fork of Slater Creek (West Prong) originates on the northern flank of the Elkhead Mountains just west of Bears Ears Peaks at an elevation of 10,082 feet. It flows generally northward for 5.5 miles through the Routt National Forest to its confluence with the South Fork of Slater Creek at an elevation of 8,034. This proposed ISF reach covers 4.58 miles and is located entirely on Forest Service Land. West Prong South Fork of Slater Creek is located within Routt and Moffat Counties. The total drainage area of the creek is approximately 6.93 square miles.

The subject of this report is a segment of West Prong South Fork of Slater Creek beginning at the Headwaters and extending downstream to the headgate of Decker Ditch No. 1. The proposed segment is located approximately 20 miles northeast of Craig. Staff has received one joint recommendation for this segment, from the CDOW and TU. The recommendation for this segment is discussed below.

Instream Flow Recommendations

CDOW & TU recommended 4.9 cfs (March 1 – July 31), 3.5 cfs (August 1 – October 31) and 2.5 cfs (November 1 – February 29) based on their data collection efforts and CWCB staff's water availability analysis.

Land Status Review

Upper Terminus	Lower Terminus	Total Length (miles)	Land Ownership	
			% Private	% Public
Headwaters	Headgate of Decker Ditch No. 1	4.58	0%	100%

100% of the public lands are managed by the USFS.

Biological Data

In July and September of 2009 TU and CDOW collected stream cross sectional data, natural environment data, and other data needed to quantify instream flow needs. Previously survey data collected by CDOW indicated the stream supports healthy populations of Colorado River cutthroat trout.

Field Survey Data

TU and CDOW staff used the R2Cross methodology to quantify the amount of water required to preserve the natural environment to a reasonable degree. The R2Cross method requires that stream discharge and channel profile data be collected in a riffle stream habitat type. Riffles are most easily visualized, as the stream habitat types that would dry up first should streamflow cease. This type of hydraulic data collection consists of setting up a transect, surveying the stream channel geometry, and measuring the stream discharge.

Biological Flow Recommendation

The CWCB staff relied upon the biological expertise of the cooperating agencies to interpret output from the R2Cross data collected to develop the initial, biologic instream flow recommendation. This initial recommendation is designed to address the unique biologic requirements of each stream without regard to water availability. Three instream flow hydraulic parameters, average depth, percent wetted perimeter, and average velocity are used to develop biologic instream flow recommendations. The CDOW has determined that maintaining these three hydraulic parameters at adequate levels across riffle habitat types, aquatic habitat in pools and runs will also be maintained for most life stages of fish and aquatic invertebrates (Nehring 1979; Espegren 1996).

For this segment of stream, two data sets were collected with the results shown in Table 1 below. Table 1 shows who collected the data (Party), the date the data was collected (Date), the measured discharge at the time of the survey (Q), the accuracy range of the predicted flows based on Manning's Equation (240% and 40% of Q), the summer flow recommendation based on meeting 3 of 3 hydraulic criteria and the winter flow recommendation based upon 2 of 3 hydraulic criteria.

Table 1: Data

Party	Date	Q	250%-40%	Summer (3/3)	Winter (2/3)
CDOW/TU	7/7/2009	14.5	36.1 – 5.8	6.9	Out of range
CDOW/TU	9/17/2009	1.0	12.7 – 2.0	2.9	2.5

The summer flow recommendation, which meets 3 of 3 criteria and is within the accuracy range of the R2CROSS model is 4.9 cfs. This recommendation was derived by averaging the results of the two data sets. The winter flow recommendation, which meets 2 or 3 criteria and is within the accuracy range of the R2Cross model is 2.5 cfs. The late summer recommendation of 3.5 cfs was lowered due to water availability constraints.

Hydrologic Data and Analysis

After receiving the cooperating agency's biologic recommendation, the CWCB staff conducted an evaluation of the stream hydrology to determine if water was physically available for an instream flow appropriation. This evaluation was done through a computation that is, in essence, a "water balance". In concept a "water balance" computation can be viewed as an accounting exercise. When done in its most rigorous form, the water balance parses precipitation into all the avenues water pursues after it is deposited as rain, snow, or ice. In other words, given a specified amount of water deposition (input), the balance tries to account for all water depletions (losses) until a selected end point is reached. Water losses include depletions due to evaporation and transpiration, deliveries into ground water storage, temporary surface storage, incorporations into plant and animal tissue and so forth. These losses are individually or collectively subtracted from the input to reveal the net amount of stream runoff as represented by the discharge measured by stream gages. Of course, the measured stream flow need not be the end point of interest; indeed, when looking at issues of water use to extinction stream flow measurements may only describe intermediate steps in the complex accounting process that is a water balance carried out to a net value of zero.

In its analysis, CWCB staff has attempted to use this idea of balancing inputs and losses to determine if water is available for the recommended Instream Flow Appropriation. Of course, this analysis must be a practical exercise rather than a lengthy, and costly, scientific investigation. As a result, staff has simplified the process by lumping together some variables and employing certain rational and scientifically supportable assumptions. The process may be described through the following description of the steps used to complete the evaluation for this particular stream.

The first step required in determining water availability is a determination of the hydrologic regime at the Lower Terminus (LT) of the recommended ISF reach. In the best case this means looking at the data from a gage at the LT. Further, this data, in the best case, has been collected for a long period of time (the longer the better) including wet and dry periods. In the case of **West Prong South Fork Slater Cr - Upper** no such gage is available at the LT. In fact, there is no gage on West Prong South Fork Slater Cr - Upper. It is thus necessary to describe the normal flow regime at Chaparral Creek above the LT through a "representative" gage station. The gage station selected for this purpose was NORTH FORK ELKHEAD CREEK NEAR ELKHEAD, CO (USGS 09245500); it has a period of record (POR) of 15 years collected between 1958 and 1973. The gage is at an elevation of 7,005.00 ft above mean sea level (amsl) and has a drainage area of 21.0 mi^2. The hydrograph (plot of discharge over time) produced from this gage includes the consumptive uses of numerous diversions. However, the existence of these diversions does not preclude use of the data from the gage. To make the measured data transferable to West Prong South Fork Slater Cr - Upper above the LT, the consumptive portions of these diversions were added back to the measured hydrograph. The resulting "adjusted" hydrograph could then be used on West Prong South Fork Slater Cr - Upper above the LT by multiplying the "adjusted" gage discharge values by an area ratio; specifically, the area of West Prong South Fork Slater Cr - Upper above the LT (6.93 mi^2) to North Fork Elkhead Creek Near Elkhead, CO (21.00 mi^2). In this instance, due to the absence of existing significant upstream consumptive irrigation uses or transbasin diversions on West Prong South Fork Slater Cr - Upper above the LT, the resulting

proportioned "adjusted" hydrograph was not further "adjusted" (decreased). Nevertheless, the final hydrograph represents the existing distribution of flow over time.

{The Following discussion is based upon the US Geological Survey's *Techniques of Water-Resources Investigations* Series, *Book 4: Hydrologic Analysis and Interpretation, Chapter A3: Statistical Methods in Water Resources* (Chapter 3: Describing Uncertainty) by D.R. Helsel and R. M. Hirsch. This technical reference provides the scientific background and guidance important to the systematic interpretation of hydrologic data. The document is available online and is a valuable aid to understanding and interpreting the analyses described here.}

The next step in producing a representation of the discharge at West Prong South Fork Slater Cr - Upper is to compute the Geometric Mean of the area-prorated "adjusted" data values from the North Fork Elkhead Creek Near Elkhead, CO hydrograph. This step is of value because of the inherent statistical weaknesses found in any collection of data intended to measure natural stream discharge. Without getting into the details of statistical theory, it is worth noting that a set of discharge measurements is inherently inaccurate, no matter how well collected, due to the difficulties attendant to data collection, especially hydrologic data. To give deference to this fact and to increase the value of the hydrograph product of this analysis, the Geometric Means of the data were computed and plotted along with the 95% Confidence Intervals about the data. The resultant hydrograph, including recommended Instream Flow values, is displayed in Figure 1 with the data displayed in Table 2.

Figure 1

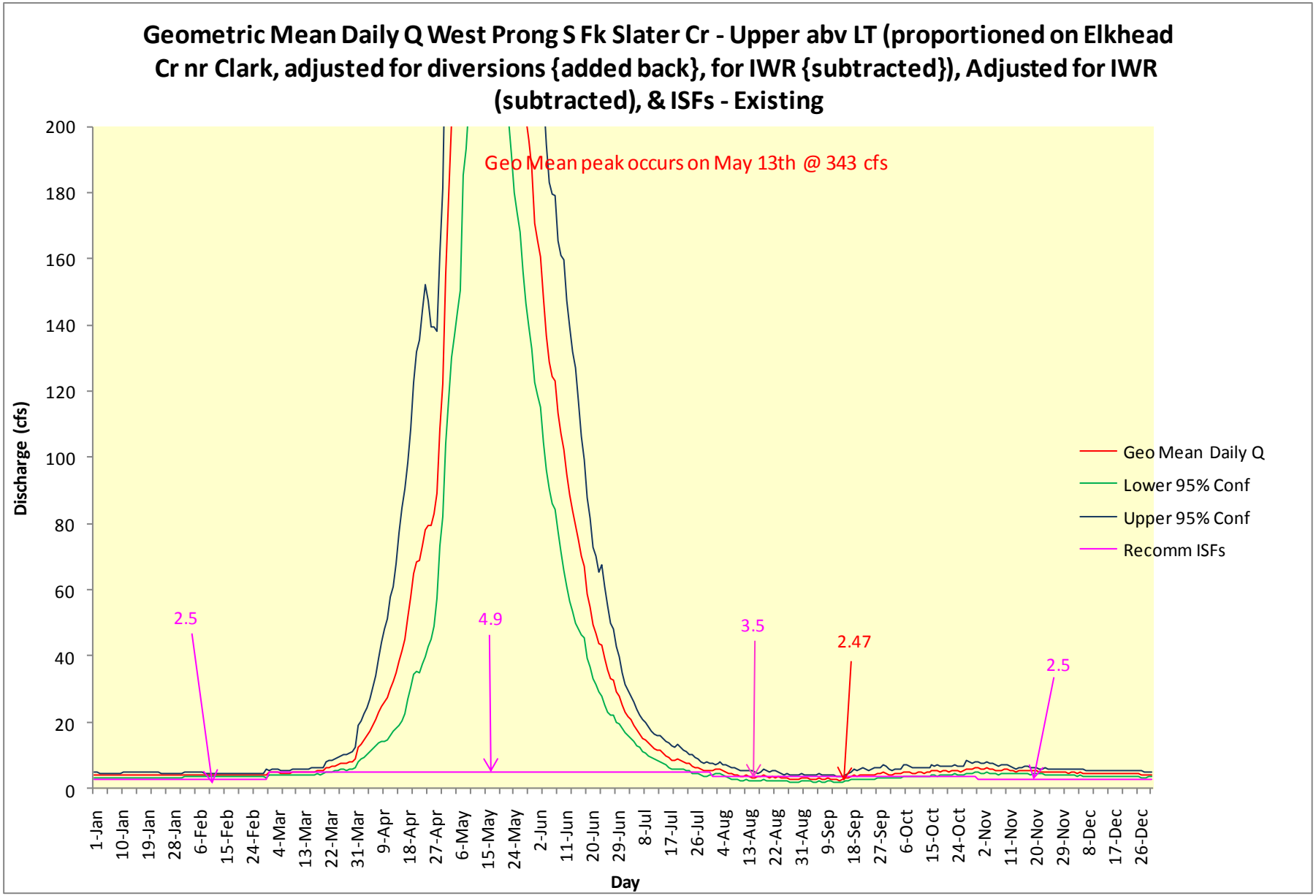

Geometric Mean Daily Q West Prong S Fk Slater Cr - Upper abv LT (proportioned on Elkhead Cr nr Clark, adjusted for diversions {added back}, for IWR {subtracted}), Adjusted for IWR (subtracted), & ISFs - Existing
Geo Mean peak occurs on May 13th @ 343 cfs
Discharge (cfs)
Day
Geo Mean Daily Q
Lower 95% Conf
Upper 95% Conf
Recomm ISFs
2.5
4.9
3.5
2.47
2.5

Table 2. Geometric Mean Discharge and Recommended Instream Flows			
Date	Existing ISF	Recommended ISF	Proportioned Adjusted GM (abv gage) Adj (-) for Irr & OoB in W Prong S Fk Slater Cr – Upper Cr abv LT
1-Jan		2.50	3.92
2-Jan		2.50	3.92
3-Jan		2.50	3.87
4-Jan		2.50	3.86
5-Jan		2.50	3.83
6-Jan		2.50	3.84
7-Jan		2.50	3.85
8-Jan		2.50	3.83
9-Jan		2.50	3.85
10-Jan		2.50	3.91
11-Jan		2.50	3.96
12-Jan		2.50	3.96
13-Jan		2.50	3.96
14-Jan		2.50	3.97
15-Jan		2.50	3.98
16-Jan		2.50	3.99
17-Jan		2.50	3.98
18-Jan		2.50	4.01
19-Jan		2.50	3.99
20-Jan		2.50	3.97
21-Jan		2.50	3.97
22-Jan		2.50	4.00
23-Jan		2.50	3.98
24-Jan		2.50	3.96
25-Jan		2.50	3.96
26-Jan		2.50	3.95
27-Jan		2.50	3.95
28-Jan		2.50	3.96
29-Jan		2.50	3.93
30-Jan		2.50	3.88
31-Jan		2.50	3.89
1-Feb		2.50	4.06
2-Feb		2.50	4.07
3-Feb		2.50	4.11
4-Feb		2.50	4.12
5-Feb		2.50	4.08
6-Feb		2.50	4.06
7-Feb		2.50	4.03
8-Feb		2.50	3.99
9-Feb		2.50	3.99
10-Feb		2.50	3.97
11-Feb		2.50	3.99
12-Feb		2.50	3.98

13-Feb	2.50	4.01
14-Feb	2.50	3.99
15-Feb	2.50	3.98
16-Feb	2.50	3.97
17-Feb	2.50	3.96
18-Feb	2.50	3.97
19-Feb	2.50	3.97
20-Feb	2.50	3.97
21-Feb	2.50	3.97
22-Feb	2.50	3.96
23-Feb	2.50	3.93
24-Feb	2.50	3.94
25-Feb	2.50	3.98
26-Feb	2.50	4.00
27-Feb	2.50	4.01
28-Feb	2.50	3.99
29-Feb	2.50	4.11
1-Mar	4.90	4.71
2-Mar	4.90	4.76
3-Mar	4.90	4.75
4-Mar	4.90	4.71
5-Mar	4.90	4.67
6-Mar	4.90	4.66
7-Mar	4.90	4.64
8-Mar	4.90	4.69
9-Mar	4.90	4.76
10-Mar	4.90	4.78
11-Mar	4.90	4.79
12-Mar	4.90	4.82
13-Mar	4.90	4.83
14-Mar	4.90	4.85
15-Mar	4.90	4.86
16-Mar	4.90	4.99
17-Mar	4.90	5.07
18-Mar	4.90	5.17
19-Mar	4.90	5.16
20-Mar	4.90	5.23
21-Mar	4.90	6.16
22-Mar	4.90	6.33
23-Mar	4.90	6.46
24-Mar	4.90	6.77
25-Mar	4.90	7.11
26-Mar	4.90	7.39
27-Mar	4.90	7.60
28-Mar	4.90	7.54
29-Mar	4.90	7.86
30-Mar	4.90	8.17
31-Mar	4.90	8.88
1-Apr	4.90	12.38

2-Apr	4.90	13.34
3-Apr	4.90	14.56
4-Apr	4.90	15.76
5-Apr	4.90	17.23
6-Apr	4.90	19.07
7-Apr	4.90	20.69
8-Apr	4.90	23.15
9-Apr	4.90	24.79
10-Apr	4.90	26.17
11-Apr	4.90	27.30
12-Apr	4.90	30.22
13-Apr	4.90	32.19
14-Apr	4.90	34.97
15-Apr	4.90	38.36
16-Apr	4.90	41.50
17-Apr	4.90	45.25
18-Apr	4.90	51.57
19-Apr	4.90	57.65
20-Apr	4.90	64.84
21-Apr	4.90	68.21
22-Apr	4.90	68.82
23-Apr	4.90	73.42
24-Apr	4.90	77.96
25-Apr	4.90	79.29
26-Apr	4.90	79.39
27-Apr	4.90	82.79
28-Apr	4.90	89.19
29-Apr	4.90	108.74
30-Apr	4.90	122.07
1-May	4.90	155.26
2-May	4.90	178.76
3-May	4.90	201.33
4-May	4.90	209.29
5-May	4.90	211.09
6-May	4.90	219.70
7-May	4.90	264.81
8-May	4.90	272.75
9-May	4.90	278.83
10-May	4.90	304.39
11-May	4.90	323.25
12-May	4.90	337.41
13-May	4.90	343.20
14-May	4.90	323.58
15-May	4.90	321.84
16-May	4.90	332.58
17-May	4.90	331.36
18-May	4.90	321.53
19-May	4.90	324.35
20-May	4.90	313.02

21-May	4.90	310.43
22-May	4.90	301.91
23-May	4.90	277.04
24-May	4.90	258.70
25-May	4.90	242.29
26-May	4.90	232.30
27-May	4.90	226.75
28-May	4.90	212.82
29-May	4.90	202.31
30-May	4.90	195.74
31-May	4.90	187.48
1-Jun	4.90	170.90
2-Jun	4.90	165.59
3-Jun	4.90	160.52
4-Jun	4.90	148.28
5-Jun	4.90	136.94
6-Jun	4.90	128.75
7-Jun	4.90	124.25
8-Jun	4.90	122.89
9-Jun	4.90	113.31
10-Jun	4.90	107.37
11-Jun	4.90	102.58
12-Jun	4.90	94.80
13-Jun	4.90	88.76
14-Jun	4.90	83.89
15-Jun	4.90	79.64
16-Jun	4.90	75.03
17-Jun	4.90	70.10
18-Jun	4.90	67.22
19-Jun	4.90	58.83
20-Jun	4.90	54.87
21-Jun	4.90	49.31
22-Jun	4.90	46.89
23-Jun	4.90	43.73
24-Jun	4.90	43.28
25-Jun	4.90	39.17
26-Jun	4.90	35.74
27-Jun	4.90	33.36
28-Jun	4.90	32.71
29-Jun	4.90	29.26
30-Jun	4.90	27.72
1-Jul	4.90	25.18
2-Jul	4.90	22.94
3-Jul	4.90	21.63
4-Jul	4.90	20.57
5-Jul	4.90	19.12
6-Jul	4.90	17.52
7-Jul	4.90	16.45
8-Jul	4.90	15.16

9-Jul	4.90	14.45
10-Jul	4.90	13.61
11-Jul	4.90	12.79
12-Jul	4.90	12.09
13-Jul	4.90	11.55
14-Jul	4.90	11.33
15-Jul	4.90	10.53
16-Jul	4.90	9.96
17-Jul	4.90	9.20
18-Jul	4.90	8.60
19-Jul	4.90	8.38
20-Jul	4.90	8.69
21-Jul	4.90	8.46
22-Jul	4.90	8.12
23-Jul	4.90	7.70
24-Jul	4.90	7.46
25-Jul	4.90	6.85
26-Jul	4.90	6.35
27-Jul	4.90	6.26
28-Jul	4.90	5.74
29-Jul	4.90	5.28
30-Jul	4.90	5.17
31-Jul	4.90	5.45
1-Aug	3.50	5.55
2-Aug	3.50	5.67
3-Aug	3.50	5.92
4-Aug	3.50	5.90
5-Aug	3.50	5.24
6-Aug	3.50	5.08
7-Aug	3.50	4.61
8-Aug	3.50	4.26
9-Aug	3.50	4.25
10-Aug	3.50	4.00
11-Aug	3.50	3.56
12-Aug	3.50	3.67
13-Aug	3.50	3.87
14-Aug	3.50	3.66
15-Aug	3.50	3.37
16-Aug	3.50	3.25
17-Aug	3.50	3.40
18-Aug	3.50	3.40
19-Aug	3.50	3.85
20-Aug	3.50	3.53
21-Aug	3.50	3.35
22-Aug	3.50	3.48
23-Aug	3.50	3.37
24-Aug	3.50	3.50
25-Aug	3.50	3.32
26-Aug	3.50	3.07

27-Aug	3.50	3.10
28-Aug	3.50	2.79
29-Aug	3.50	2.64
30-Aug	3.50	2.82
31-Aug	3.50	2.85
1-Sep	3.50	3.00
2-Sep	3.50	3.06
3-Sep	3.50	2.97
4-Sep	3.50	2.91
5-Sep	3.50	2.67
6-Sep	3.50	2.74
7-Sep	3.50	3.08
8-Sep	3.50	2.83
9-Sep	3.50	2.82
10-Sep	3.50	2.98
11-Sep	3.50	2.85
12-Sep	3.50	2.69
13-Sep	3.50	2.58
14-Sep	3.50	2.47
15-Sep	3.50	2.56
16-Sep	3.50	3.00
17-Sep	3.50	3.26
18-Sep	3.50	3.48
19-Sep	3.50	3.88
20-Sep	3.50	3.80
21-Sep	3.50	3.98
22-Sep	3.50	4.19
23-Sep	3.50	4.10
24-Sep	3.50	3.89
25-Sep	3.50	4.04
26-Sep	3.50	4.24
27-Sep	3.50	4.27
28-Sep	3.50	4.29
29-Sep	3.50	4.70
30-Sep	3.50	4.61
1-Oct	3.50	4.10
2-Oct	3.50	4.13
3-Oct	3.50	4.26
4-Oct	3.50	4.29
5-Oct	3.50	4.45
6-Oct	3.50	4.96
7-Oct	3.50	5.01
8-Oct	3.50	4.91
9-Oct	3.50	4.66
10-Oct	3.50	4.68
11-Oct	3.50	4.79
12-Oct	3.50	4.81
13-Oct	3.50	4.69
14-Oct	3.50	4.72

15-Oct	3.50	4.86
16-Oct	3.50	5.27
17-Oct	3.50	5.23
18-Oct	3.50	5.16
19-Oct	3.50	5.01
20-Oct	3.50	5.24
21-Oct	3.50	5.21
22-Oct	3.50	5.12
23-Oct	3.50	5.21
24-Oct	3.50	5.47
25-Oct	3.50	5.21
26-Oct	3.50	5.10
27-Oct	3.50	5.22
28-Oct	3.50	5.95
29-Oct	3.50	5.94
30-Oct	3.50	6.00
31-Oct	3.50	6.28
1-Nov	2.50	6.23
2-Nov	2.50	5.82
3-Nov	2.50	5.74
4-Nov	2.50	6.37
5-Nov	2.50	5.93
6-Nov	2.50	5.79
7-Nov	2.50	5.49
8-Nov	2.50	5.28
9-Nov	2.50	5.50
10-Nov	2.50	5.59
11-Nov	2.50	5.62
12-Nov	2.50	5.55
13-Nov	2.50	5.35
14-Nov	2.50	5.05
15-Nov	2.50	5.33
16-Nov	2.50	5.34
17-Nov	2.50	5.34
18-Nov	2.50	5.41
19-Nov	2.50	5.19
20-Nov	2.50	5.21
21-Nov	2.50	5.18
22-Nov	2.50	5.08
23-Nov	2.50	5.07
24-Nov	2.50	5.07
25-Nov	2.50	4.96
26-Nov	2.50	4.88
27-Nov	2.50	4.81
28-Nov	2.50	4.86
29-Nov	2.50	4.92
30-Nov	2.50	4.96
1-Dec	2.50	4.74
2-Dec	2.50	4.68

3-Dec	2.50	4.79
4-Dec	2.50	4.78
5-Dec	2.50	4.67
6-Dec	2.50	4.70
7-Dec	2.50	4.65
8-Dec	2.50	4.55
9-Dec	2.50	4.47
10-Dec	2.50	4.45
11-Dec	2.50	4.45
12-Dec	2.50	4.48
13-Dec	2.50	4.48
14-Dec	2.50	4.47
15-Dec	2.50	4.46
16-Dec	2.50	4.44
17-Dec	2.50	4.40
18-Dec	2.50	4.42
19-Dec	2.50	4.45
20-Dec	2.50	4.46
21-Dec	2.50	4.41
22-Dec	2.50	4.32
23-Dec	2.50	4.28
24-Dec	2.50	4.28
25-Dec	2.50	4.32
26-Dec	2.50	4.32
27-Dec	2.50	4.20
28-Dec	2.50	4.12
29-Dec	2.50	4.11
30-Dec	2.50	4.13
31-Dec	2.50	4.10

Existing Water Right Information

Staff has analyzed the water rights tabulation and consulted with the Division Engineer Office (DEO) to identify any potential water availability problems. There is one decreed surface diversion located at the end of this reach, the Decker Ditch No. 1 (11.0 cfs with a 1924 appropriation date). Staff's analysis has determined that water is available for appropriation on West Prong South Fork Slater Creek, from the headwaters to the headgate of the Decker Ditch No. 1, to preserve the natural environment to a reasonable degree without limiting or foreclosing the exercise of valid existing water rights.

CWCB Staff's Instream Flow Recommendation

Staff recommends the Board form its intent to appropriate on the following stream reach:

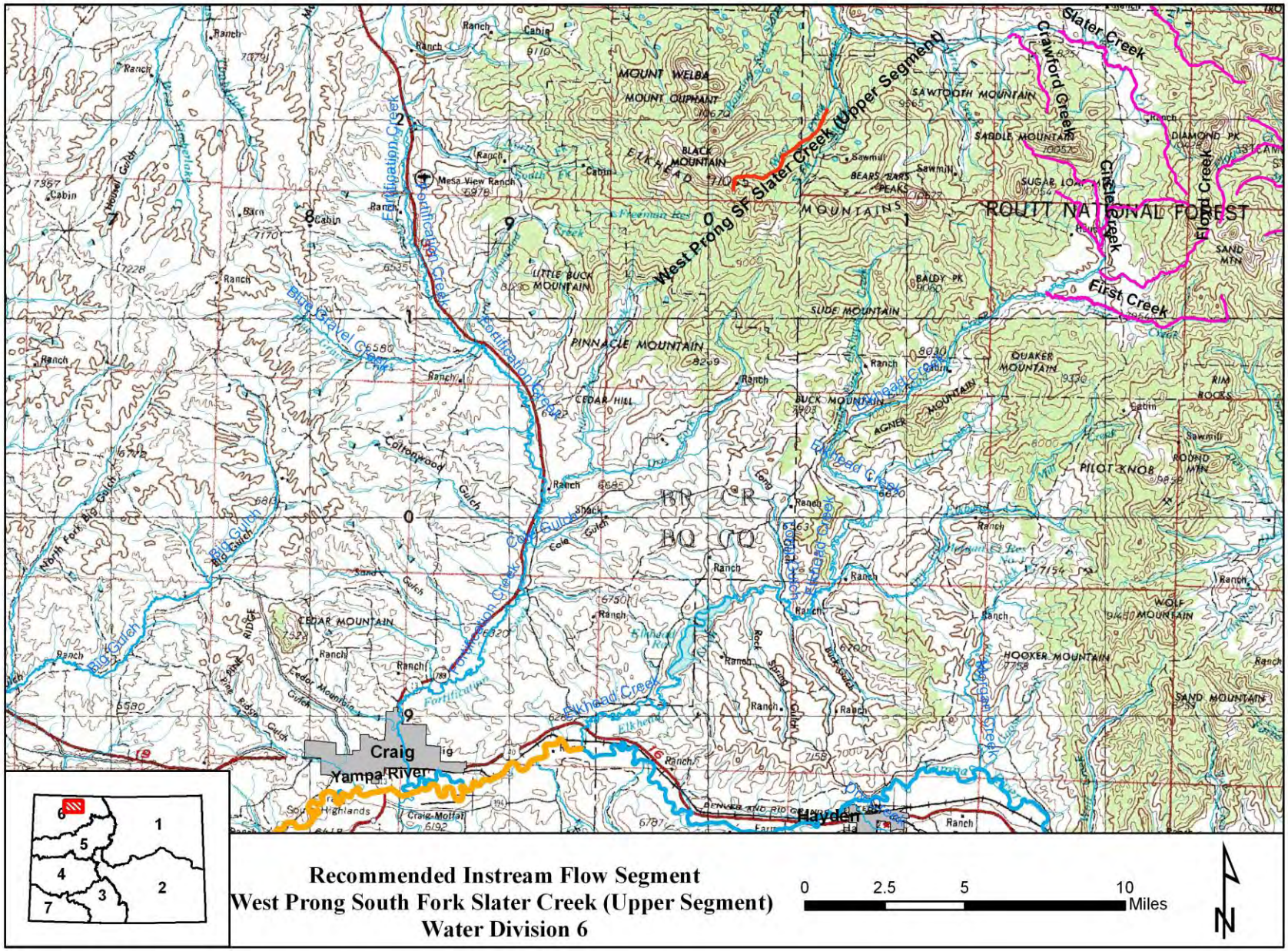
Segment: Headwaters to Headgate of Decker Ditch No. 1

Upper Terminus: HEADWATERS IN THE VICINITY OF
(Latitude 40° 46' 33.14"N) (Longitude 107° 21' 18.54"W)
UTM North: 4516545.97 UTM East: 301250.49
NE SE S34 T10N R89W 6th PM
260' West of the East Section Line; 1255' North of the South Section Line

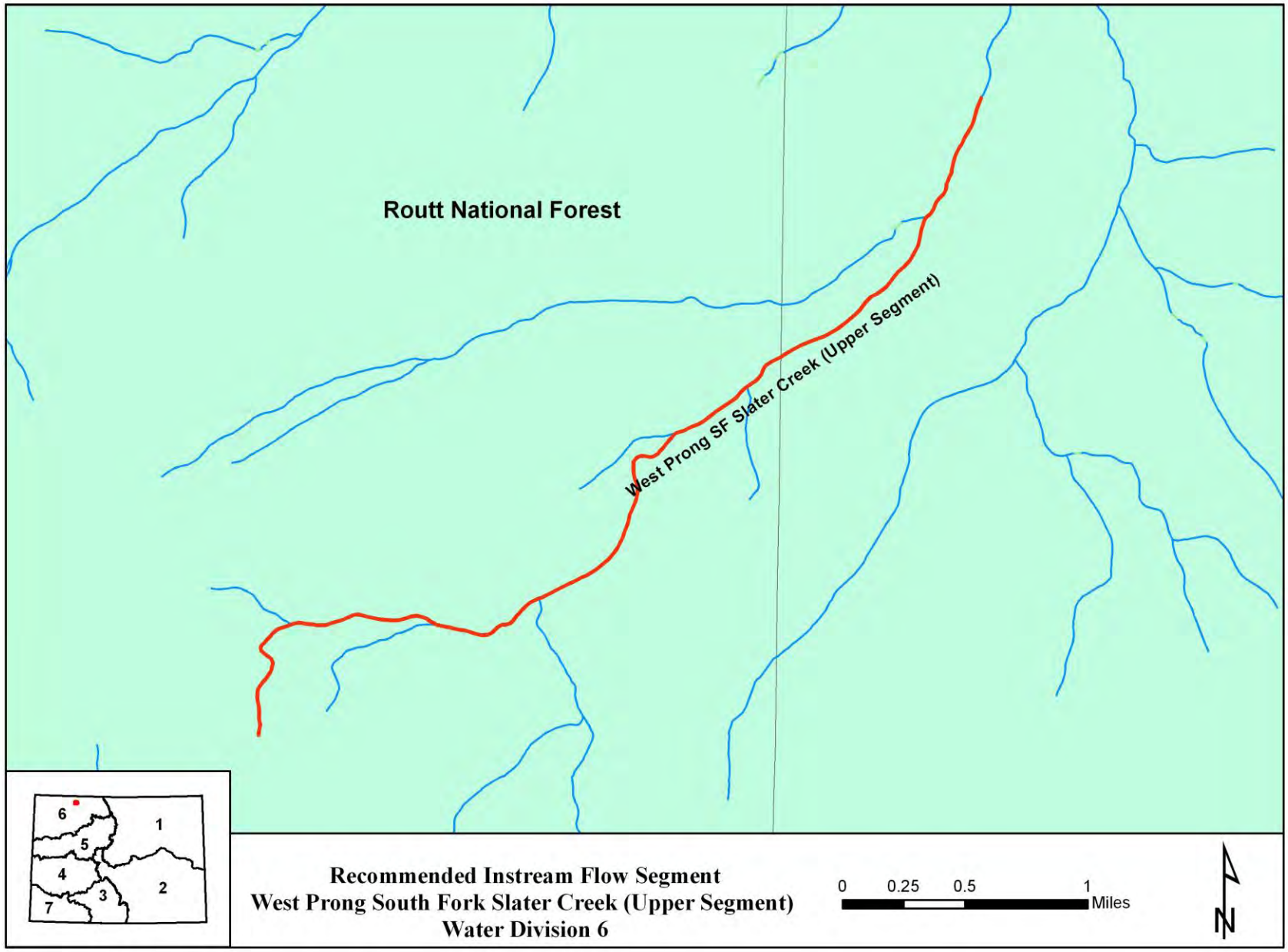
Lower Terminus: HEADGATE OF DECKER DITCH NO. 1
(Latitude 40° 48' 53.13"N) (Longitude 107° 18' 1.02"W)
UTM North: 4520739.95 UTM East: 305994.29
SE NE S19 T10N R88W 6th PM
935' West of the East Section Line; 1775' South of the North Section Line

Watershed: Little Snake (HUC#: 14050003)
Counties: Routt
Length: 4.58 miles
USGS Quad: Buck Point
Flow Recommendation: 4.9 cfs (March 1 – July 31)
3.5 cfs (August 1 – October 31)
2.5 cfs (November 1 – February 29)

Vicinity Map



Land Use Map


Routt National Forest
West Prong SF Slater Creek (Upper Segment)
6
1
5
4
3
2
7
Recommended Instream Flow Segment
West Prong South Fork Slater Creek (Upper Segment)
Water Division 6
0
0.25
0.5
1
Miles
N

Topographic & Water Rights Map