COLORADO
Parks and Wildlife
Department of Natural Resources

Water Resources Section
6060 Broadway
Denver, CO 80216

November 1, 2024

Mr. Rob Viehl, Section Chief
Colorado Water Conservation Board
Stream and Lake Protection Section
1313 Sherman Street, 7th Floor
Denver, CO 80203

Subject: Instream Flow Recommendation for Unnamed Tributary to East Fork Dry Creek in Water Division 4, Ouray & Montrose Counties to be presented at the January 2025 CWCB Meeting

Dear Mr. Viehl:

The information contained within and referred to in this letter forms the scientific and biological basis for an instream flow (ISF) recommendation on the unnamed tributary (UT) to East Fork Dry Creek in Water Division 4. Field investigations relating to this ISF recommendation were initiated by Colorado Parks and Wildlife (CPW) staff in 2019 and completed by CPW and Colorado Water Conservation Board (CWCB) staff in 2022. UT to East Fork Dry Creek is a first order stream that supports native Colorado River cutthroat trout. This ISF recommendation was first presented to interested parties at the ISF Workshop in January 2020. CPW and CWCB staff conducted outreach to the Montrose County Commissioners in 2022 and Ouray County Commissioners in 2024. It is CPW staff's opinion that the information contained in this letter is sufficient for the CWCB's staff to recommend an ISF appropriation to the Board on UT to East Fork Dry Creek as it specifically addresses the findings required in Rule 5(i) of the Instream Flow Program Rules.

CPW participates in the ISF Program and develops ISF recommendations for the Board's consideration in an effort to address CPW's legislative directives "… that the wildlife and their environment are to be protected, preserved, enhanced, and managed for the use, benefit, and enjoyment of the people of this state and its visitors … and that, to carry out such program and policy, there shall be a continuous operation of planning, acquisition, and development of wildlife habitats and facilities for wildlife-related opportunities" [§33-1-101 (1) C.R.S.], and "… that the natural, scenic, scientific, and outdoor recreation areas … be protected, preserved, enhanced and managed for the use, benefit, and enjoyment of the people of this state and (its) visitors … and that, to carry out such program and policy, there shall be a continuous operation of acquisition, development, and management of … lands, waters, and facilities." [§33-10-101 (1) C.R.S.].

In addition to these broad statutory guidelines, CPW's strategic planning document (CPW Strategic Plan, 2015) explains the agency's current goals to, "[c]onserve wildlife and habitat to ensure healthy sustainable populations and ecosystems" in order to, "protect and enhance water resources for fish

and wildlife populations," by pursuing, "partnerships and agreements to enhance instream flows, protect reservoir levels, and influence water management activities," and to, "[a]dvocate for water quality and quantities to conserve aquatic resources." In addition to the CPW Strategic Plan, the agency's fish and wildlife conservation activities are also informed by the State Wildlife Action Plan (2002, Revised 2015). The aforementioned documents direct CPW to advocate for the preservation of the state's fish and wildlife resources and natural environment, and therefore link CPW's mission to the goals and priorities of CWCB's Instream Flow and Natural Lake Level Program.

Recommended Segments & Land Status

CPW is proposing an ISF recommendation on an unnamed tributary (UT) to East Fork Dry Creek from the headwaters (located at UTM 12S 227553.33E 4241879.05N) to the confluence with East Fork Dry Creek (located at UTM 12S 227567.86E 4245975.82N). The reach is approximately 2.75 miles in length. The proposed reach is mainly on public lands managed under the Uncompahgre National Forest. The ISF reach does pass through a small private land inholding near the confluence with East Fork Dry Creek.

Colorado Cutthroat Trout Conservation Goals

In 2001, CPW entered into a multi-state and multi-agency conservation agreement and strategy concerning Colorado River cutthroat trout (*Oncorhynchus clarkii pleuriticus*). Colorado's partners in this plan and agreement include the natural resource management agencies from Utah and Wyoming, a number of federal agencies including the USFS, USFWS, BLM and NPS, and the Ute Indian Tribe of the Uintah and Ouray Reservation. The purpose of the strategy is to provide a framework for the long-term conservation of the Colorado River cutthroat trout (CRCT), and to reduce or eliminate the threats that warrant its status as a sensitive species or species of concern by federal resource agencies. Essentially, the parties agreed that in order to prevent listing of the subspecies, and to reach desired recovery goals without hindering further development of our state resources, continued implementation of the conservation strategy was necessary.

The objectives of the strategy are to identify and characterize all CRCT core and conservation populations, secure and enhance conservation populations, restore populations, secure and enhance watershed conditions, public outreach, data sharing, and coordination. CPW believes that flow protection via establishing an ISF water right is a conservation action that will "secure and enhance watershed conditions" and will support the core conservation populations of CRCT which are resident to the East Fork Dry Creek basin. Information about the species and CPW's conservation strategy can be found here: CPW Cutthroat Trout Research. CPW believes that securing ISF water rights for CRCT is a critical step in the overall preservation and conservation of these important native trout.

Natural Environment and Biological Summary

UT to East Fork Dry Creek is a tributary of the Uncompahgre River which flows northerly off the Uncompahgre Plateau towards the town of Montrose. It is a first order headwaters stream which is snow-melt dominated and influenced by late-summer monsoonal moisture. The mean basin elevation is 9,500 feet. The basin receives approximately 24 inches of mean annual precipitation. Its contributing basin is 2.3 square miles and is forested with dense stands of conifer and aspen. The creek supports a healthy riparian environment.

UT to East Fork Dry Creek is a relatively high-gradient, confined channel with substrate that ranges from cobble to gravel and sand. Fish habitat is complex with lots of large woody debris in the channel, as well as beaver dam complexes and undercut banks. Large woody debris and undercut banks provide

cover for trout. There is ample overhead shading supporting suitable stream temperatures. The creek supports a diverse macroinvertebrate community with stonefly, caddisfly, midges, and round-worms observed in the field.

UT to East Fork Dry Creek supports a self-sustaining population of Colorado River cutthroat trout of the Gunnison Basin lineage. CRCT are state species of special concern and considered federally sensitive species (State Wildlife Action Plan, 2015). Length-frequency data indicates multiple age classes surveyed by CPW in 2017 (see attached), which reinforces that the cutthroat trout in UT to East Fork Dry Creek are a self-sustaining population. Multiple cutthroat trout were observed during the 2020 site visit taking refuge in large pools.

R2Cross Background

Initial biological instream flow recommendations were developed using the R2Cross methodology (Espegren, 1996[1]). R2Cross uses field data that has been collected in a riffle habitat type. Riffles are often the limiting habitat features in streams during low flow events, so maintaining specific hydraulic conditions across riffle habitat types will also maintain aquatic habitat in pools and runs for most life stages of fish and macroinvertebrates (Nehring, 1979[2]). The R2Cross model uses field data, including a survey of cross-sectional channel geometry, a longitudinal slope of the water surface, and a flow measurement, as input to a single transect hydraulic model. R2Cross uses Ferguson's Variable-Power Equation (Ferguson, 2007[3]) to model a stage-discharge relationship and compute corresponding hydraulic parameters of average depth, average velocity, and percent wetted perimeter over modeled stages. Maintaining these three hydraulic parameters at specified levels should ensure conditions that allow movement of fish longitudinally across riffles and adequate depths, velocities, and oxygenation for production of macroinvertebrates and development of trout eggs. Baseflow recommendations are typically developed based on the flows that meet two of three hydraulic criteria and summer flow recommendations are based on hydraulic criteria that meet three of three hydraulic criteria (as described in Nehring 1979 and Espergren 1996).

In 2019 through 2022, CPW and CWCB staff conducted site visits and collected R2Cross datasets on UT to East Fork Dry Creek. Datasets from 2019 were not included in preliminary flow recommendations. This is because 2019 was an extremely wet year. There was still snow on the ground during the survey and streamflow conditions were very high (near bankfull). Data from 2020 was also not used because it was an extremely dry year and streamflow was too low for an accurate flow measurement. The preliminary results of the R2Cross analysis are summarized below using two cross-sections from 2021 and 2022.

[1]Espegren, G.D., 1996, Development of Instream Flow Recommendations in Colorado Using R2CROSS, Colorado Water Conservation Board.

[2]Nehring, B.R., 1979, Evaluation of Instream Flow Methods and Determination of Water Quantity Needs for Streams in the State of Colorado, Colorado Division of Wildlife.

[3] Ferguson, R.I., 2007. Flow resistance equations for gravel- and boulder-bed streams. Water Resources Research 43. https://doi.org/10.1029/2006WR005422

	Bankfull Top Width	Date Measured	Flow Measured	Flow Meeting Two Criteria	Flow Meeting Three Criteria
4	12.88 ft	6/1/2021	1.06 cfs	0.93 cfs	3.6 cfs
5	14.01 ft	5/25/2022	1.49 cfs	1.8 cfs	2.8 cfs
Recommended Flow Rates:				**1.4 cfs**	**3.2 cfs**

The initial biological flow recommendation during the baseflow period is 1.4 cfs. This will maintain percent wetted perimeter of 50 percent and average velocity of 1 foot per second (fps). The initial biological flow recommendation in the summer is 3.2 cfs, which will also maintain these hydraulic parameters, as well as average depths of 0.2 feet.

In order to make a preliminary determination whether water is available for the R2Cross-based flow recommendations and to determine the appropriate seasonal transition dates, CPW examined basic hydrologic data and water rights information for UT to East Fork Dry Creek. UT to East Fork Dry Creek does not have any gage data, and because it is high-elevation and undeveloped, CWCB staff relied upon regression equations for monthly flow estimates to determine the seasonality of the flow recommendations. CPW is not aware of the any active water rights within the ISF reach.

Water Availability

CPW's analysis indicates that the following flows are needed to protect the natural environment to a reasonable degree. Based on the hydrology from CSUFlow18 (Eurich et al., 2021[4]), there appears to be water availability limitations during the fall and winter periods. Therefore, CPW's adjusted flow recommendation are the following:

- Early Spring Flow Recommendation (March 1 through March 31): **0.5 cfs**
    - Earlier spring snowmelt may be a reality in a changing climate. This flow recommendation will support sufficient wetted perimeter as fish transition to more metabolic activity coming out of overwintering conditions.
- Rising Limb Flow Recommendation (April 1 through April 30): **1.6 cfs**
    - Maintains adequate wetted perimeter and velocity criteria, as well as average velocities greater than 1 fps. This will support fish as they transition into more metabolic activity as ice cover decreases and flows start to rise during the beginning of snowmelt runoff.
- Summer Flow Recommendation (May 1 through June 30): **3.2 cfs**
    - Maintains adequate depth, velocity, and wetted perimeter during spring snowmelt through its recession. This flow rate will support fish when they are active feeding and spawning. Maintaining all three hydraulic criteria supports beneficial spawning conditions for cutthroat trout who spawn during this time period.

[4] Eurich, A., Kampf, S.K., Hammond, J.C., Ross, M., Willi, K., Vorster, A.G. and Pulver, B., 2021, Predicting mean annual and mean monthly streamflow in Colorado ungauged basins, River Research and Applications, 37(4), 569-578.

- July Flow Recommendation (July 1 through July 31): **1.6 cfs**
    - This flow recommendation will maintain adequate wetted perimeter and velocity that allows of oxygenation supporting production of macroinvertebrates in riffles. Supporting food base productivity will support feeding and growth of cutthroat trout.
- Late Summer & Fall Flow Recommendation (August 1 through October 31): **0.5 cfs**
    - This flow recommendation has been reduced due to water availability constraints but will maintain adequate wetted perimeter in the channel providing sufficient areas of holding habitat and refuge in features like pools and glides.
- Baseflow Recommendation (November 1 through February 28): 0.25 cfs
    - This flow recommendation has been reduced due to water availability constraints but will maintain adequate wetted perimeter during the overwintering period. Sufficient resting habitat will be maintained in deep pools and glides created from large woody debris in the channel.

The purpose of this letter is to formally transmit this ISF recommendation to CWCB for their Board's consideration. Based on CPW's opinion that there is a flow-dependent natural environment in UT to East Fork Dry Creek that can be preserved to a reasonable degree with an ISF water right in the recommended rates. Please refer to attachments which include; R2Cross field forms, R2Cross output, fish survey information, and photographs at each cross section location.

CPW personnel will be available at the January 2025 CWCB meeting to answer any questions that the Board might have regarding these flow recommendations. We appreciate your consideration.

Sincerely,

Katie Birch
CPW Instream Flow Program Coordinator
Attachments (as stated)

COLORADO WATER CONSERVATION BOARD

FIELD DATA FOR INSTREAM FLOW DETERMINATIONS

COLORADO DIVISION OF WILDLIFE

LOCATION INFORMATION

STREAM NAME: Unnamed Trib. East Fork Dry Creek					CROSS-SECTION NO.:
CROSS-SECTION LOCATION: UTM 12S 0751457 4243066					
DATE: 5/25/22	OBSERVERS: Birch McDowell Fields - Sommers				
LEGAL DESCRIPTION	¼ SECTION:	SECTION:	TOWNSHIP: N/S	RANGE: E/W	PM:
COUNTY:	WATERSHED:	WATER DIVISION:	DOW WATER CODE:		
MAP(S): USGS:					
USFS:					

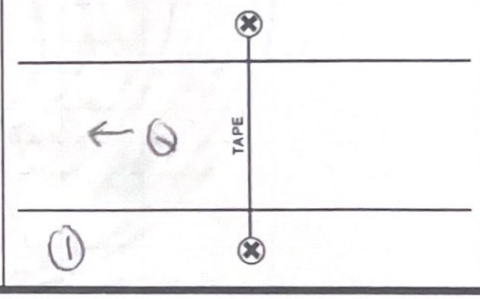
SUPPLEMENTAL DATA

SAG TAPE SECTION SAME AS DISCHARGE SECTION: YES / NO	METER TYPE: FT2 by Fields - Sommers			
METER NUMBER:	DATE RATED:	CALIB/SPIN: _____ sec	TAPE WEIGHT: _____ lbs/foot	TAPE TENSION: _____ lbs
CHANNEL BED MATERIAL SIZE RANGE: med cobble + lg gravel	PHOTOGRAPHS TAKEN: YES/NO	NUMBER OF PHOTOGRAPHS:		

CHANNEL PROFILE DATA

STATION	DISTANCE FROM TAPE (ft)	ROD READING (ft)
⊗ Tape @ Stake LB	0.0	
⊗ Tape @ Stake RB	0.0	
① WS @ Tape LB/RB	0.0	5.80/5.78
② WS Upstream		5.68
③ WS Downstream		6.41
SLOPE	3%	

SKETCH



LEGEND:
Stake ⊗
Station ①
Photo ◇
Direction of Flow ← →

Total = 23.9

AQUATIC SAMPLING SUMMARY

STREAM ELECTROFISHED: YES/NO	DISTANCE ELECTROFISHED: _____ft	FISH CAUGHT: YES/NO	WATER CHEMISTRY SAMPLED: YES/NO

LENGTH - FREQUENCY DISTRIBUTION BY ONE-INCH SIZE GROUPS (1.0-1.9, 2.0-2.9, ETC.)

SPECIES (FILL IN)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	>15	TOTAL

AQUATIC INSECTS IN STREAM SECTION BY COMMON OR SCIENTIFIC ORDER NAME:

COMMENTS

clear, cold water on the receding limb of peak Recent overbanking. Aquatic veg in FP
Q = 1.99 cfs
Fish observed - 4-5" ±
Good clean cobbles

FORM #ISF FD 1-85

DISCHARGE/CROSS SECTION NOTES

STREAM NAME:	CROSS-SECTION NO.	DATE:	SHEET ___ OF ___

BEGINNING OF MEASUREMENT	EDGE OF WATER LOOKING DOWNSTREAM: (0.0 AT STAKE) LEFT / RIGHT	Gage Reading: _____ ft	TIME:

Features: Stake (S) Grassline (G) Waterline (W) Rock (R)	Distance From Initial Point (ft)	Width (ft)	Total Vertical Depth From Tape/Inst (ft)	Water Depth (ft)	Depth of Observation (ft)	Revolutions	Time (sec)	Velocity (ft/sec)		Area (ft^2)	Discharge (cfs)
								At Point	Mean in Vertical		
S	0		4.88	0							
	3.3		5.17								
B	3.5		5.34								
W	4.5		5.78	0							
	5.0		5.80	.06							
	5.5		5.94	.18							
	6.0		6.06	.33							
	6.5		5.99	.29							
	7.0		6.05	.33							
	7.5		5.99	.26							
	8.0		5.96	.25							
	8.5		5.90	.19							
	9.0		5.86	.19							
	9.5		5.85	.10							
	10.0		5.97	.18							
	10.5		5.90	.11							
	11.0		5.88	.08							
	11.5		5.84	.07							
	12.0		5.85	.11							
R	12.5		5.79	0							
	13.0		5.95	.15							
	13.5		5.99	.18							
	14.0		5.90	.10							
	14.5		5.90	.10							
W	15.0		5.80	—							
	15.7		5.49								
B	17.6		5.38								
	19.0		4.92								
S	22.9		4.18								
TOTALS:											

End of Measurement	Time:	Gage Reading: _____ ft	CALCULATIONS PERFORMED BY:	CALCULATIONS CHECKED BY:

COLORADO WATER CONSERVATION BOARD

FIELD DATA FOR INSTREAM FLOW DETERMINATIONS

COLORADO DIVISION OF WILDLIFE

LOCATION INFORMATION

STREAM NAME: Unnamed Trib to EF Dry Creek					CROSS-SECTION NO.: 01-21
CROSS-SECTION LOCATION: near Dry creek Road					
UTM 12S 752001 4243065					
DATE: 6/1/21	OBSERVERS: Birch McDowell				
LEGAL DESCRIPTION	¼ SECTION:	SECTION:	TOWNSHIP: N/S	RANGE: E/W	PM:
COUNTY:	WATERSHED:	WATER DIVISION:	DOW WATER CODE:		
MAP(S): USGS:					
USFS:					

SUPPLEMENTAL DATA

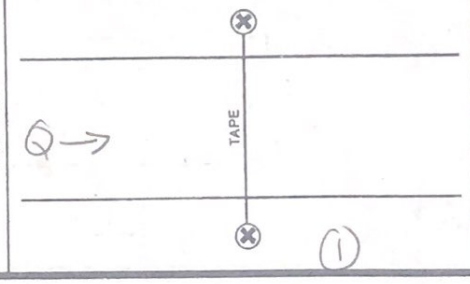
SAG TAPE SECTION SAME AS DISCHARGE SECTION: YES / (NO)	METER TYPE: Hach			
METER NUMBER:	DATE RATED:	CALIB/SPIN: _____ sec	TAPE WEIGHT: _____ lbs/foot	TAPE TENSION: _____ lbs
CHANNEL BED MATERIAL SIZE RANGE: Cobble & large gravel	PHOTOGRAPHS TAKEN: (YES)/NO DMcDowell	NUMBER OF PHOTOGRAPHS: (6)		

CHANNEL PROFILE DATA

4.41

STATION	DISTANCE FROM TAPE (ft)	ROD READING (ft)
(X) Tape @ Stake LB	0.0	X
(X) Tape @ Stake RB	0.0	X
(1) WS @ Tape LB/RB	0.0	4.35 / 4.35
(2) WS Upstream	>15.8	4.29
(3) WS Downstream		4.93
SLOPE	0.040S	

SKETCH



LEGEND:
- Stake (X)
- Station (1)
- Photo (1)
- Direction of Flow

AQUATIC SAMPLING SUMMARY

STREAM ELECTROFISHED: YES/NO	DISTANCE ELECTROFISHED: _____ft	FISH CAUGHT: YES/NO	WATER CHEMISTRY SAMPLED: YES/NO

LENGTH - FREQUENCY DISTRIBUTION BY ONE-INCH SIZE GROUPS (1.0-1.9, 2.0-2.9, ETC.)

SPECIES (FILL IN)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	>15	TOTAL
Stonefly																	

AQUATIC INSECTS IN STREAM SECTION BY COMMON OR SCIENTIFIC ORDER NAME:

COMMENTS

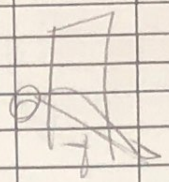
Qmeasured 200 yds u/s in glide. Q file = "UTEFDRY01"
Very cold, clear water Q = 1.06 cfs

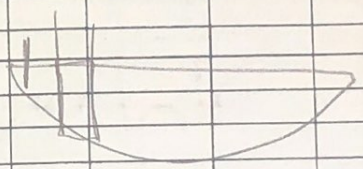
FORM #ISF FD 1-85

DISCHARGE/CROSS SECTION NOTES

STREAM NAME: Unamed trib to EF Dry Creek	CROSS-SECTION NO.: 1-21	DATE: 6/1	SHEET 1 OF 1
BEGINNING OF MEASUREMENT	EDGE OF WATER LOOKING DOWNSTREAM: (0.0 AT STAKE) LEFT / RIGHT	Gage Reading: ____ ft	TIME:

Features (Stake (S) Grassline (G) Waterline (W) Rock (R))	Distance From Initial Point (ft)	Width (ft)	Total Vertical Depth From Tape/Inst (ft)	Water Depth (ft)	Depth of Observation (ft)	Revolutions	Time (sec)	Velocity (ft/sec) At Point	Velocity (ft/sec) Mean in Vertical	Area (ft^2)	Discharge (cfs)
S	0		2.51								
	4.35		3.23								
BF	7.35		3.83								
LWS	9.0		4.35	Ø							
	9.5		4.30	Ø							
	10.0		4.34	0.02							
	10.5		4.32	0.02							
	11.0		4.42	0.12							
	11.5		4.42	0.13							
	12.0		4.34	0.02							
	12.5		4.46	0.16							
	13.0		4.4	0.15							
	13.5		4.32	0.01							
	14.0		4.40	0.07							
	14.5		4.48	0.14							
	15.0		4.42	0.08							
	15.5		4.52	0.19							
	16.0		4.55	0.22							
	16.5		4.58	0.25							
	17.0		4.55	0.23							
	17.5		4.50	0.19							
	18		4.38	0.05							
	18.5		4.37	0.04							
RWS	19.0		4.35	Ø							
	20.1		4.10								
BF	20.25		3.80								
S	22.3		3.73								
TOTALS:											



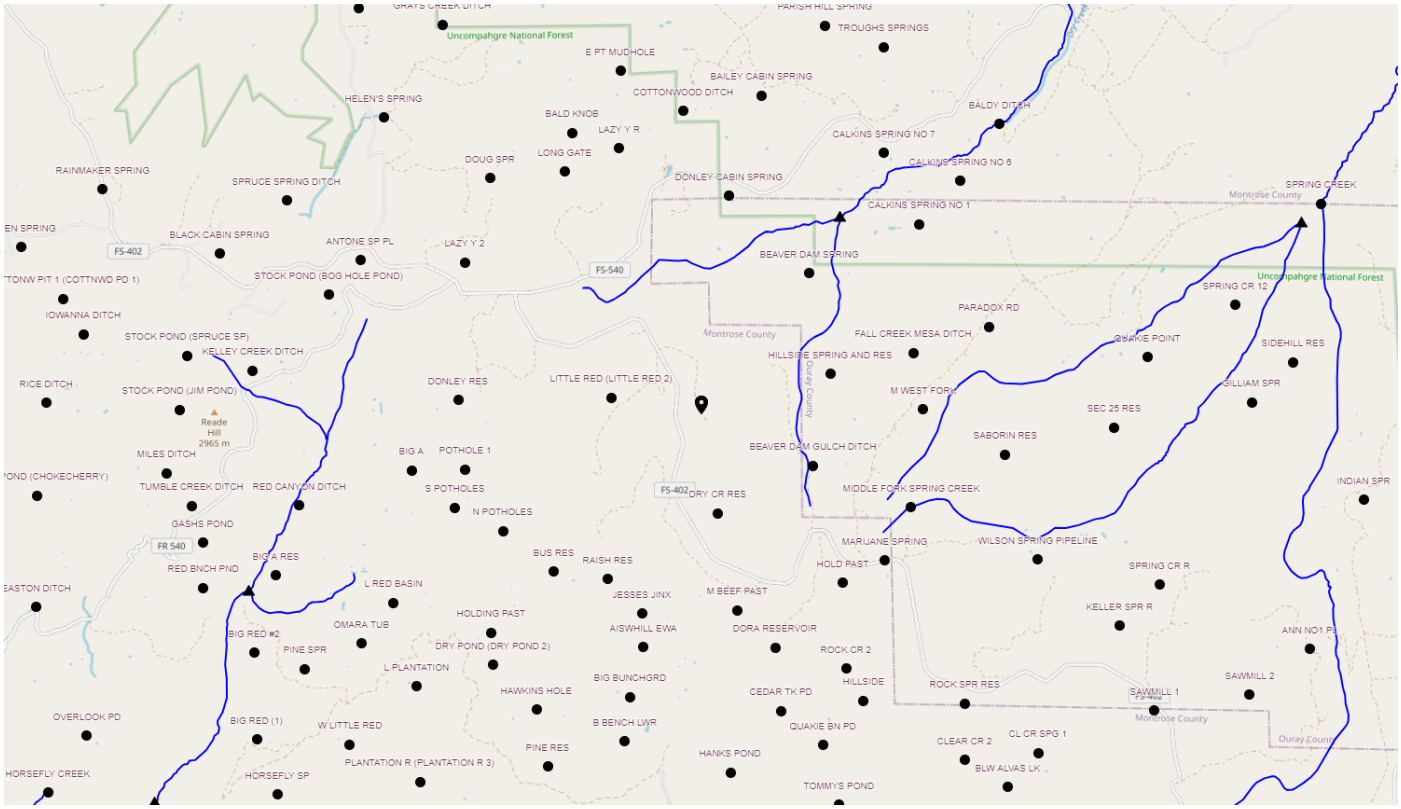


End of Measurement	Time:	Gage Reading: ____ ft	CALCULATIONS PERFORMED BY:	CALCULATIONS CHECKED BY:

R2Cross RESULTS

Stream Name: UT to East Fork Dry Creek
Stream Locations: On USFS lands (see UTMs)
Fieldwork Date: 05/25/2022
Cross-section: 5
Observers: Birch Fields-Sommers McDowell
Coordinate System: UTM Zone 12
X (easting): 751987
Y (northing): 4243066
Date Processed: 06/21/2024
Slope: 0.0305
Discharge: Entered Value: 1.49 (cfs)
Computation method: Ferguson VPE
R2Cross data filename: R2Cross_UT_EF_Dry_5_05-25-2022-Q=1.49.xlsx
R2Cross version: 2.0.2

LOCATION



ANALYSIS RESULTS

Habitat Criteria Results

Bankfull top width (ft) = 14.01

	Habitat Criteria	Discharge (cfs) Meeting Criteria
Mean Depth (ft)	0.2	2.81
Percent Wetted Perimeter (%)	50.0	0.2
Mean Velocity (ft/s)	1.0	1.78

STAGING TABLE

Feature	Distance to Water (ft)	Top Width (ft)	Mean Depth (ft)	Maximum Depth (ft)	Area (sq ft)	Wetted Perimeter (ft)	Percent Wetted Perimeter	Hydraulic Radius (ft)	Manning's n	Mean Velocity (ft/s)	Discharge (cfs)
Bankfull	5.38	14.01	0.43	0.68	6.06	14.28	100.0	0.42	0.04	3.34	20.26
	5.4	13.68	0.43	0.66	5.83	13.95	97.65	0.42	0.04	3.28	19.13
	5.41	13.34	0.42	0.65	5.6	13.61	95.29	0.41	0.04	3.23	18.05
	5.43	13.01	0.41	0.63	5.37	13.27	92.94	0.4	0.04	3.17	17.02
	5.45	12.68	0.41	0.61	5.15	12.94	90.58	0.4	0.05	3.11	16.03
	5.46	12.35	0.4	0.59	4.94	12.6	88.23	0.39	0.05	3.05	15.1
	5.48	12.02	0.39	0.58	4.73	12.27	85.87	0.39	0.05	3.0	14.2
	5.5	11.82	0.38	0.56	4.53	12.06	84.45	0.38	0.05	2.91	13.18
	5.52	11.74	0.37	0.54	4.33	11.98	83.86	0.36	0.05	2.78	12.04
	5.53	11.66	0.35	0.53	4.13	11.89	83.27	0.35	0.05	2.65	10.96
	5.55	11.59	0.34	0.51	3.94	11.81	82.68	0.33	0.05	2.52	9.92
	5.57	11.51	0.32	0.49	3.74	11.73	82.09	0.32	0.05	2.39	8.94
	5.58	11.43	0.31	0.48	3.54	11.64	81.5	0.3	0.05	2.26	8.01
	5.6	11.36	0.3	0.46	3.35	11.56	80.91	0.29	0.05	2.13	7.12
	5.62	11.28	0.28	0.44	3.16	11.47	80.32	0.28	0.06	1.99	6.29
	5.63	11.2	0.26	0.42	2.97	11.39	79.74	0.26	0.06	1.86	5.51
	5.65	11.13	0.25	0.41	2.78	11.3	79.15	0.25	0.06	1.72	4.78
	5.67	11.05	0.23	0.39	2.59	11.22	78.56	0.23	0.06	1.59	4.11
	5.69	10.97	0.22	0.37	2.4	11.14	77.97	0.22	0.06	1.45	3.49
	5.7	10.89	0.2	0.36	2.22	11.05	77.38	0.2	0.07	1.32	2.92
	5.72	10.82	0.19	0.34	2.03	10.97	76.79	0.19	0.07	1.18	2.4
	5.74	10.74	0.17	0.32	1.85	10.88	76.2	0.17	0.08	1.05	1.94
	5.75	10.66	0.16	0.31	1.67	10.8	75.61	0.15	0.08	0.92	1.53
Waterline	5.76	10.65	0.15	0.3	1.63	10.78	75.49	0.15	0.08	0.9	1.46
	5.77	10.59	0.14	0.29	1.49	10.72	75.02	0.14	0.09	0.79	1.18

	5.79	10.33	0.13	0.27	1.31	10.45	73.17	0.13	0.09	0.69	0.9
	5.8	9.79	0.12	0.26	1.14	9.9	69.32	0.11	0.1	0.61	0.69
	5.82	9.44	0.1	0.24	0.97	9.55	66.89	0.1	0.11	0.51	0.5
	5.84	9.1	0.09	0.22	0.82	9.21	64.45	0.09	0.12	0.42	0.34
	5.86	7.79	0.09	0.2	0.67	7.88	55.18	0.09	0.13	0.39	0.26
	5.87	6.94	0.08	0.19	0.55	7.03	49.19	0.08	0.14	0.35	0.19
	5.89	6.12	0.07	0.17	0.44	6.2	43.39	0.07	0.15	0.3	0.13
	5.91	4.87	0.07	0.15	0.34	4.93	34.52	0.07	0.15	0.29	0.1
	5.92	4.33	0.06	0.14	0.26	4.38	30.64	0.06	0.17	0.24	0.06
	5.94	3.78	0.05	0.12	0.2	3.82	26.77	0.05	0.19	0.19	0.04
	5.96	3.16	0.04	0.1	0.14	3.19	22.31	0.04	0.22	0.14	0.02
	5.97	2.38	0.04	0.09	0.09	2.4	16.8	0.04	0.25	0.12	0.01
	5.99	1.74	0.03	0.07	0.05	1.76	12.29	0.03	0.29	0.09	0.0
	6.01	1.26	0.02	0.05	0.03	1.27	8.92	0.02	0.38	0.05	0.0
	6.03	0.78	0.01	0.03	0.01	0.79	5.56	0.01	0.55	0.03	0.0
	6.04	0.31	0.01	0.02	0.0	0.31	2.19	0.01	1.06	0.01	0.0

This Manning's roughness coefficient was calculated based on velocity estimates from the Ferguson VPE method

MODEL SUMMARY

Measured Flow (Qm) =	1.49	(cfs)
Calculated Flow (Qc) =	1.48	(cfs)
(Qm-Qc)/Qm * 100 =	0.98%	
Measured Waterline (WLm) =	5.79	(ft)
Calculated Waterline (WLc) =	5.76	(ft)
(WLm-WLc)/WLm * 100 =	0.56%	
Max Measured Depth (Dm) =	0.33	(ft)
Max Calculated Depth (Dc) =	0.3	(ft)
(Dm-Dc)/Dm * 100 =	8.30%	
Mean Velocity =	0.91	(ft/s)
Manning's n =	0.081	
0.4 * Qm =	0.6	(cfs)
2.5 * Qm =	3.73	(cfs)

FIELD DATA

Feature	Station (ft)	Rod Height (ft)	Water depth (ft)	Velocity (ft/s)
	0	4.88		
	3.3	5.17		
Bankfull	3.5	5.34		
Waterline	4.5	5.78	0	
	5	5.8	0.06	
	5.5	5.94	0.18	
	6	6.06	0.33	
	6.5	5.99	0.29	
	7	6.05	0.33	
	7.5	5.99	0.26	
	8	5.96	0.25	
	8.5	5.9	0.19	
	9	5.86	0.19	
	9.5	5.85	0.1	
	10	5.97	0.18	
	10.5	5.9	0.11	
	11	5.88	0.08	
	11.5	5.84	0.07	
	12	5.85	0.11	
	12.5	5.79	0	
	13	5.95	0.15	
	13.5	5.99	0.18	
	14	5.9	0.1	
	14.5	5.9	0.1	
Waterline	15	5.8	0	
	15.7	5.49		
Bankfull	17.6	5.38		
	19	4.92		
	22.9	4.18		

COMPUTED FROM MEASURED FIELD DATA

Wetted Perimeter (ft)	Water Depth (ft)	Area (ft^2)	Discharge (cfs)	Percent Discharge
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0.5	0.06	0.03	0.03	1.84
0.52	0.18	0.09	0.08	5.52
0.51	0.33	0.17	0.15	10.12
0.5	0.29	0.14	0.13	8.9
0.5	0.33	0.17	0.15	10.12
0.5	0.26	0.13	0.12	7.97
0.5	0.25	0.12	0.11	7.67
0.5	0.19	0.1	0.09	5.83
0.5	0.19	0.1	0.09	5.83
0.5	0.1	0.05	0.05	3.07
0.51	0.18	0.09	0.08	5.52
0.5	0.11	0.06	0.05	3.37
0.5	0.08	0.04	0.04	2.45
0.5	0.07	0.04	0.03	2.15
0.5	0.11	0.06	0.05	3.37
0.5	0	0	0	0
0.52	0.15	0.07	0.07	4.6
0.5	0.18	0.09	0.08	5.52
0.51	0.1	0.05	0.05	3.07
0.5	0.1	0.05	0.05	3.07
0.51	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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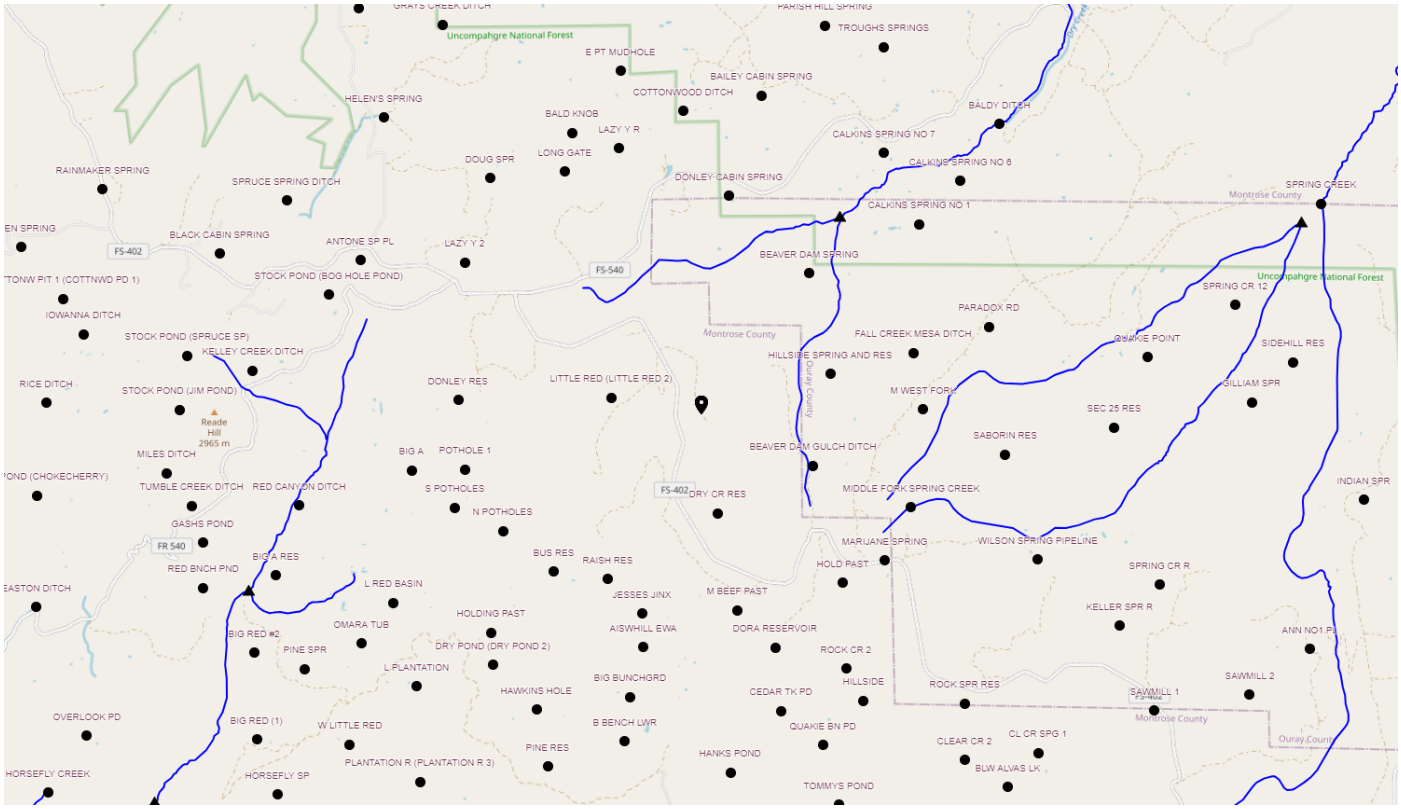
R2Cross RESULTS

Stream Name: Unnamed Trib to EF Dry Creek
Stream Locations: Near Dry Creek Road
Fieldwork Date: 06/01/2021
Cross-section:
Observers: Birch/ McDowell
Coordinate System: UTM Zone 12
X (easting): 752001
Y (northing): 4243065
Date Processed: 06/21/2024
Slope: 0.004
Discharge: Entered Value: 1.06 (cfs)
Computation method: Ferguson VPE
R2Cross data filename: R2Cross_UT_EF_Dry-6-1-2021-4-Q=1.06.xlsx
R2Cross version: 2.0.2

LOCATION



ANALYSIS RESULTS

Habitat Criteria Results

Bankfull top width (ft) = 12.88

	Habitat Criteria	Discharge (cfs) Meeting Criteria
Mean Depth (ft)	0.2	3.64
Percent Wetted Perimeter (%)	50.0	0.53
Mean Velocity (ft/s)	1.0	0.93

STAGING TABLE

Feature	Distance to Water (ft)	Top Width (ft)	Mean Depth (ft)	Maximum Depth (ft)	Area (sq ft)	Wetted Perimeter (ft)	Percent Wetted Perimeter	Hydraulic Radius (ft)	Manning's n	Mean Velocity (ft/s)	Discharge (cfs)
Bankfull	3.83	12.88	0.53	0.75	6.79	13.25	100.0	0.51	0.02	3.17	21.5
	3.85	12.82	0.51	0.73	6.55	13.17	99.37	0.5	0.02	3.1	20.32
	3.87	12.75	0.5	0.71	6.31	13.08	98.74	0.48	0.02	3.04	19.18
	3.89	12.68	0.48	0.69	6.07	13.0	98.11	0.47	0.02	2.97	18.05
	3.9	12.61	0.46	0.68	5.84	12.92	97.48	0.45	0.02	2.91	16.96
	3.92	12.54	0.45	0.66	5.6	12.83	96.86	0.44	0.02	2.84	15.9
	3.94	12.47	0.43	0.64	5.37	12.75	96.23	0.42	0.02	2.77	14.86
	3.96	12.4	0.41	0.62	5.13	12.67	95.6	0.41	0.02	2.7	13.85
	3.98	12.33	0.4	0.6	4.9	12.58	94.97	0.39	0.02	2.63	12.88
	4.0	12.27	0.38	0.58	4.67	12.5	94.34	0.37	0.02	2.55	11.93
	4.02	12.2	0.36	0.56	4.44	12.42	93.71	0.36	0.02	2.48	11.01
	4.04	12.13	0.35	0.54	4.21	12.33	93.08	0.34	0.02	2.4	10.12
	4.05	12.06	0.33	0.53	3.99	12.25	92.45	0.33	0.02	2.32	9.26
	4.07	11.99	0.31	0.51	3.76	12.17	91.82	0.31	0.02	2.24	8.43
	4.09	11.92	0.3	0.49	3.54	12.08	91.19	0.29	0.02	2.16	7.64
	4.11	11.81	0.28	0.47	3.31	11.96	90.28	0.28	0.02	2.08	6.89
	4.13	11.67	0.27	0.45	3.09	11.82	89.17	0.26	0.02	2.0	6.19
	4.15	11.52	0.25	0.43	2.88	11.67	88.06	0.25	0.02	1.92	5.52
	4.17	11.38	0.23	0.41	2.66	11.52	86.95	0.23	0.02	1.83	4.88
	4.19	11.24	0.22	0.39	2.45	11.37	85.84	0.22	0.02	1.74	4.27
	4.21	11.1	0.2	0.38	2.24	11.23	84.73	0.2	0.02	1.65	3.7
	4.22	10.96	0.19	0.36	2.03	11.08	83.62	0.18	0.02	1.56	3.17
	4.24	10.81	0.17	0.34	1.83	10.93	82.51	0.17	0.02	1.46	2.66
	4.26	10.67	0.15	0.32	1.63	10.79	81.4	0.15	0.02	1.35	2.2
	4.28	10.53	0.14	0.3	1.43	10.64	80.29	0.13	0.02	1.24	1.77

	4.3	10.39	0.12	0.28	1.23	10.49	79.19	0.12	0.02	1.12	1.38
	4.32	9.85	0.11	0.26	1.04	9.95	75.09	0.1	0.02	1.03	1.07
Waterline	4.32	9.79	0.1	0.26	1.02	9.89	74.65	0.1	0.02	1.01	1.03
	4.34	8.6	0.1	0.24	0.87	8.68	65.54	0.1	0.02	0.99	0.86
	4.36	7.61	0.09	0.23	0.72	7.68	57.96	0.09	0.02	0.94	0.67
	4.37	6.52	0.09	0.21	0.58	6.59	49.7	0.09	0.02	0.9	0.53
	4.39	5.63	0.08	0.19	0.47	5.69	42.92	0.08	0.02	0.85	0.4
	4.41	5.01	0.07	0.17	0.37	5.05	38.13	0.07	0.02	0.77	0.29
	4.43	3.85	0.08	0.15	0.29	3.88	29.28	0.07	0.02	0.78	0.23
	4.45	3.17	0.07	0.13	0.22	3.19	24.08	0.07	0.02	0.74	0.17
	4.47	2.58	0.07	0.11	0.17	2.6	19.59	0.07	0.02	0.7	0.12
	4.49	2.23	0.06	0.09	0.13	2.24	16.88	0.06	0.02	0.61	0.08
	4.5	2.02	0.04	0.08	0.09	2.03	15.33	0.04	0.02	0.46	0.04
	4.52	1.7	0.03	0.06	0.05	1.7	12.86	0.03	0.03	0.31	0.02
	4.54	1.2	0.02	0.04	0.02	1.2	9.07	0.02	0.04	0.19	0.0
	4.56	0.62	0.01	0.02	0.01	0.63	4.73	0.01	0.06	0.07	0.0

This Manning's roughness coefficient was calculated based on velocity estimates from the Ferguson VPE method

MODEL SUMMARY

Measured Flow (Qm) =	1.06	(cfs)
Calculated Flow (Qc) =	1.04	(cfs)
(Qm-Qc)/Qm * 100 =	2.02%	
Measured Waterline (WLm) =	4.35	(ft)
Calculated Waterline (WLc) =	4.32	(ft)
(WLm-WLc)/WLm * 100 =	0.70%	
Max Measured Depth (Dm) =	0.25	(ft)
Max Calculated Depth (Dc) =	0.26	(ft)
(Dm-Dc)/Dm * 100 =	-4.09%	
Mean Velocity =	1.02	(ft/s)
Manning's n =	0.02	
0.4 * Qm =	0.42	(cfs)
2.5 * Qm =	2.65	(cfs)

FIELD DATA

Feature	Station (ft)	Rod Height (ft)	Water depth (ft)	Velocity (ft/s)
	0	2.51		
	4.35	3.23		
Bankfull	7.35	3.83		
Waterline	9	4.35	0	
	9.5	4.3	0	
	10	4.34	0.02	
	10.5	4.32	0.02	
	11	4.42	0.12	
	11.5	4.42	0.13	
	12	4.34	0.02	
	12.5	4.46	0.16	
	13	4.4	0.15	
	13.5	4.32	0.01	
	14	4.4	0.02	
	14.5	4.48	0.14	
	15	4.42	0.08	
	15.5	4.52	0.19	
	16	4.55	0.22	
	16.5	4.58	0.25	
	17	4.55	0.23	
	17.5	4.5	0.19	
	18	4.38	0.05	
	18.5	4.37	0.04	
Waterline	19	4.35	0	
	20.1	4.1		
Bankfull	20.25	3.8		
	22.3	3.73		

COMPUTED FROM MEASURED FIELD DATA

Wetted Perimeter (ft)	Water Depth (ft)	Area (ft^2)	Discharge (cfs)	Percent Discharge
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0.5	0.02	0.01	0.01	0.98
0.5	0.02	0.01	0.01	0.98
0.51	0.12	0.06	0.06	5.88
0.5	0.13	0.07	0.07	6.37
0.51	0.02	0.01	0.01	0.98
0.51	0.16	0.08	0.08	7.84
0.5	0.15	0.07	0.08	7.35
0.51	0.01	0.01	0.01	0.49
0.51	0.02	0.01	0.01	0.98
0.51	0.14	0.07	0.07	6.86
0.5	0.08	0.04	0.04	3.92
0.51	0.19	0.1	0.1	9.31
0.5	0.22	0.11	0.11	10.78
0.5	0.25	0.12	0.13	12.25
0.5	0.23	0.12	0.12	11.27
0.5	0.19	0.1	0.1	9.31
0.51	0.05	0.03	0.03	2.45
0.5	0.04	0.02	0.02	1.96
0.5	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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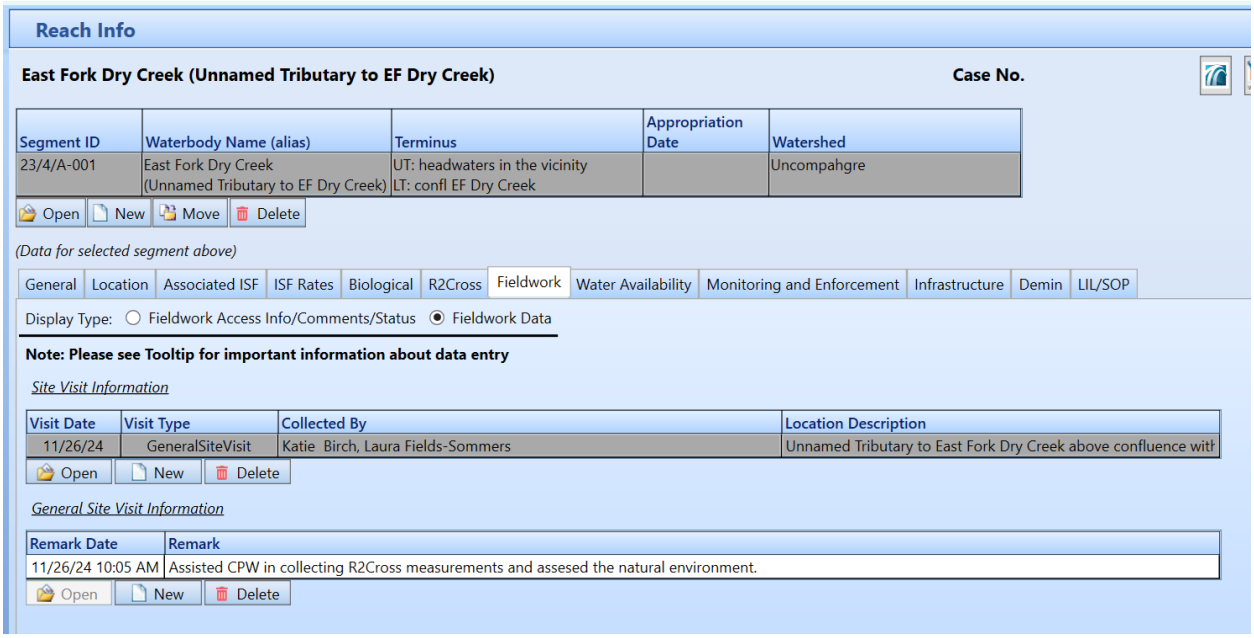

Reach Info
East Fork Dry Creek (Unnamed Tributary to EF Dry Creek)
Case No.
Segment ID
Waterbody Name (alias)
Terminus
Appropriation Date
Watershed
23/4/A-001
East Fork Dry Creek (Unnamed Tributary to EF Dry Creek)
UT: headwaters in the vicinity LT: confl EF Dry Creek
Uncompahgre
Open
New
Move
Delete
(Data for selected segment above)
General
Location
Associated ISF
ISF Rates
Biological
R2Cross
Fieldwork
Water Availability
Monitoring and Enforcement
Infrastructure
Demin
LIL/SOP
Display Type:
Fieldwork Access Info/Comments/Status
Fieldwork Data
Note: Please see Tooltip for important information about data entry
Site Visit Information
Visit Date
Visit Type
Collected By
Location Description
11/26/24
GeneralSiteVisit
Katie Birch, Laura Fields-Sommers
Unnamed Tributary to East Fork Dry Creek above confluence with
Open
New
Delete
General Site Visit Information
Remark Date
Remark
11/26/24 10:05 AM
Assisted CPW in collecting R2Cross measurements and assesed the natural environment.
Open
New
Delete

Profile Name: UTEFDRY0121
Operator Name: DM
16:44:51 06.01.2021

Stage Reference: 0.00 ft

Model: FH950
s/n: 210851004850
Boot: v1.00
Application: v1.06

Sensor Type: Velocity Only
s/n: 210900339474
Boot: v1.00
Application: v1.02

Filter: FPA Parameter: 10 s
Pre-filter: On Rank: 5
EMI: 60Hz.

Station Entry: Non-fixed
Flow Calculation: Mid-section
Start Edge: Right edge water
# of Stations: 21
Stream Width: 6.00 ft
Total Discharge: 1.06 ft^3/s
Total Area: 2.73 ft^2
Mean Depth: 0.45 ft

Measurement Results:

Time	Station	Location (ft)	Method	Depth (ft)	Edge Factor	Surface (ft/s)	0.2 (ft/s)	0.4 (ft/s)	0.6 (ft/s)	0.8 (ft/s)	Bed (ft/s)	Average Velocity (ft/s)	Area (ft^2)	Flow (ft^3/s)
16:23:37	1	2	0 point	0.1	0.5	0	0	0	0	0	0	0	0.01	0
16:27:25	2	2.3	1 point	0.15	-	0	0	0	0.18	0	0	0.18	0.04	0.01
16:28:34	3	2.6	1 point	0.2	-	0	0	0	0.23	0	0	0.23	0.06	0.01
16:29:55	4	2.9	1 point	0.2	-	0	0	0	0.39	0	0	0.39	0.06	0.02
16:32:09	5	3.2	1 point	0.3	-	0	0	0	0.29	0	0	0.29	0.09	0.03
16:32:55	6	3.5	1 point	0.2	-	0	0	0	0.37	0	0	0.37	0.06	0.02
16:33:42	7	3.8	1 point	0.3	-	0	0	0	0.2	0	0	0.2	0.09	0.02
16:35:26	8	4.1	1 point	0.35	-	0	0	0	0.38	0	0	0.38	0.1	0.04
16:36:09	9	4.4	1 point	0.4	-	0	0	0	0.54	0	0	0.54	0.12	0.06
16:36:39	10	4.7	1 point	0.4	-	0	0	0	0.52	0	0	0.52	0.12	0.06
16:37:18	11	5	1 point	3.5	-	0	0	0	0.59	0	0	0.59	1.05	0.62
16:37:54	12	5.3	1 point	0.3	-	0	0	0	0.72	0	0	0.72	0.09	0.06
16:39:02	13	5.6	1 point	0.2	-	0	0	0	0.55	0	0	0.55	0.06	0.03
16:39:57	14	5.9	1 point	0.1	-	0	0	0	0.61	0	0	0.61	0.03	0.02
16:40:25	15	6.2	1 point	0.1	-	0	0	0	0.65	0	0	0.65	0.03	0.02
16:41:05	16	6.5	1 point	0.1	-	0	0	0	0.53	0	0	0.53	0.03	0.02
16:41:36	17	6.8	1 point	0.1	-	0	0	0	0.28	0	0	0.28	0.03	0.01
16:42:07	18	7.1	1 point	0.1	-	0	0	0	0.01	0	0	0.01	0.05	0
16:42:35	19	6.4	1 point	0.1	-	0	0	0	0	0	0	0	0.1	0
16:43:11	20	7.8	1 point	0.1	-	0	0	0	-0.03	0	0	-0.03	0.08	0
16:44:24	21	8	1 point	0.1	-	0	0	0	0	0	0	0	0.41	0

Discharge Measurement Summary

Site name	Unamedtrib2EForkDry
Site number	5232022
Operator(s)	Lfs
File name	Unamedtrib2EForkDry_20220525-205138.ft
Comment	

Start time	5/25/2022 8:28 PM
End time	5/25/2022 8:50 PM
Start location latitude	38.301
Start location longitude	-108.118
Calculations engine	FlowTracker2

Sensor type	Top Setting
Handheld serial number	FT2H2113010
Probe serial number	FT2P2114008
Probe firmware	1.30
Handheld software	1.6.4

# Stations	Avg interval (s)	Total discharge (ft³/s)
19	40	1.491

Total width (ft)	Total area (ft²)	Wetted Perimeter (ft)
6.650	2.104	6.837

Mean SNR (dB)	Mean depth (ft)	Mean velocity (ft/s)
52.553	0.316	0.709

Mean temp (°F)	Max depth (ft)	Max velocity (ft/s)
47.898	0.680	1.976

Discharge Uncertainty		
Category	**ISO**	**IVE**
Accuracy	1.0%	1.0%
Depth	0.5%	11.5%
Velocity	1.7%	17.4%
Width	0.2%	0.2%
Method	2.4%	
# Stations	2.6%	
Overall	**4.1%**	**20.9%**

Discharge equation	Mid Section
Discharge uncertainty	IVE
Discharge reference	Rated

Data Collection Settings	
Salinity	0.000 PSS-78
Temperature	-
Sound speed	-
Mounting correction	0.000 %

Summary overview

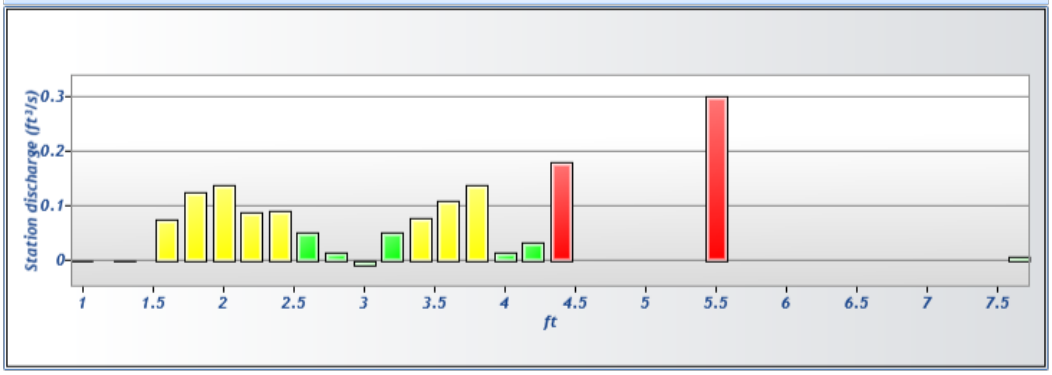
No changes were made to this file
Quality control warnings

Discharge Measurement Summary

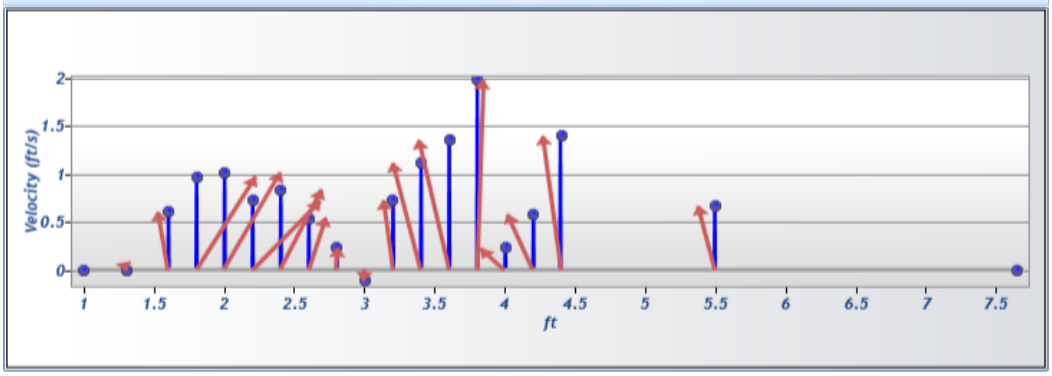
Site name	Unamedtrib2EForkDry
Site number	5232022
Operator(s)	Lfs
File name	Unamedtrib2EForkDry_20220525-205138.ft
Comment	

Station Warning Settings	
Station discharge OK	Station discharge < 5.000%
Station discharge caution	5.000% >= Station discharge < 10.000%
Station discharge warning	Station discharge >= 10.000%

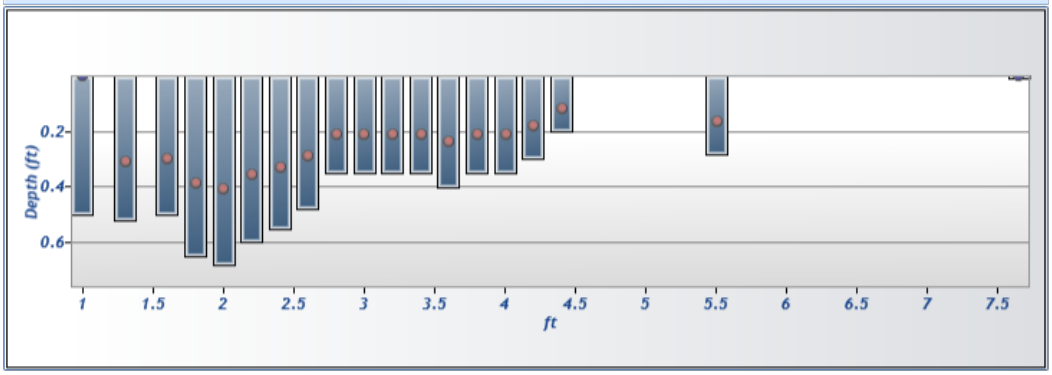
Discharge chart



Velocity chart



Depth chart



Discharge Measurement Summary

Site name	Unamedtrib2EForkDry
Site number	5232022
Operator(s)	Lfs
File name	Unamedtrib2EForkDry_20220525-205138.ft
Comment	

Measurement results

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Samples	Velocity (ft/s)	Correction	Mean Velocity (ft/s)	Area (ft²)	Flow (ft³/s)	%Q	
0	8:28 PM	1.000	None	0.500	0.000	0.000	0	0.000	1.000	-0.003	0.075	0.000	-0.013	✓
1	8:29 PM	1.300	0.6	0.520	0.600	0.312	80	-0.003	1.000	-0.003	0.156	0.000	-0.027	✓
2	8:30 PM	1.600	0.6	0.500	0.600	0.300	80	0.601	1.000	0.601	0.125	0.075	5.040	✓
3	8:32 PM	1.800	0.6	0.650	0.600	0.390	80	0.966	1.000	0.966	0.130	0.126	8.427	✓
4	8:33 PM	2.000	0.6	0.680	0.600	0.408	80	1.011	1.000	1.011	0.136	0.137	9.224	✓
5	8:34 PM	2.200	0.6	0.600	0.600	0.360	80	0.726	1.000	0.726	0.120	0.087	5.845	✓
6	8:35 PM	2.400	0.6	0.550	0.600	0.330	80	0.835	1.000	0.835	0.110	0.092	6.163	✓
7	8:36 PM	2.600	0.6	0.480	0.600	0.288	80	0.538	1.000	0.538	0.096	0.052	3.466	✓
8	8:38 PM	2.800	0.6	0.350	0.600	0.210	80	0.227	1.000	0.227	0.070	0.016	1.066	✓
9	8:39 PM	3.000	0.6	0.350	0.600	0.210	80	-0.114	1.000	-0.114	0.070	-0.008	-0.536	✓
10	8:40 PM	3.200	0.6	0.350	0.600	0.210	80	0.727	1.000	0.727	0.070	0.051	3.416	✓
11	8:41 PM	3.400	0.6	0.350	0.600	0.210	80	1.112	1.000	1.112	0.070	0.078	5.223	✓
12	8:42 PM	3.600	0.6	0.400	0.600	0.240	80	1.349	1.000	1.349	0.080	0.108	7.243	✓
13	8:43 PM	3.800	0.6	0.350	0.600	0.210	80	1.976	1.000	1.976	0.070	0.138	9.282	✓
14	8:45 PM	4.000	0.6	0.350	0.600	0.210	80	0.227	1.000	0.227	0.070	0.016	1.064	✓
15	8:46 PM	4.200	0.6	0.300	0.600	0.180	80	0.574	1.000	0.574	0.060	0.034	2.309	✓
16	8:47 PM	4.400	0.6	0.200	0.600	0.120	80	1.391	1.000	1.391	0.130	0.181	12.133	✓
17	8:48 PM	5.500	0.6	0.280	0.600	0.168	80	0.662	1.000	0.662	0.455	0.301	20.198	✓
18	8:50 PM	7.650	None	0.010	0.000	0.000	0	0.000	1.000	0.662	0.011	0.007	0.477	✓

Discharge Measurement Summary

Site name	Unamedtrib2EForkDry
Site number	5232022
Operator(s)	Lfs
File name	Unamedtrib2EForkDry_20220525-205138.ft
Comment	

Quality Control Settings	
Maximum depth change	50.000%
Maximum spacing change	100.000%
SNR threshold	10.000 dB
Standard error threshold	0.033 ft/s
Spike threshold	10.000%
Maximum velocity angle	20.000 deg
Maximum tilt angle	5.000 deg

Quality control warnings

St#	Time	Location (ft)	Method	Depth (ft)	%Depth	Measured Depth (ft)	Warnings
1	8:29 PM	1.300	0.6	0.520	0.600	0.312	Boundary Interference,SNR Threshold Variation
2	8:30 PM	1.600	0.6	0.500	0.600	0.300	Boundary Interference,Standard Error > QC
3	8:32 PM	1.800	0.6	0.650	0.600	0.390	Velocity Angle > QC
4	8:33 PM	2.000	0.6	0.680	0.600	0.408	Velocity Angle > QC
5	8:34 PM	2.200	0.6	0.600	0.600	0.360	Velocity Angle > QC
9	8:39 PM	3.000	0.6	0.350	0.600	0.210	Velocity Angle > QC
10	8:40 PM	3.200	0.6	0.350	0.600	0.210	Standard Error > QC
11	8:41 PM	3.400	0.6	0.350	0.600	0.210	Standard Error > QC
12	8:42 PM	3.600	0.6	0.400	0.600	0.240	Standard Error > QC
13	8:43 PM	3.800	0.6	0.350	0.600	0.210	Standard Error > QC
14	8:45 PM	4.000	0.6	0.350	0.600	0.210	Standard Error > QC,Velocity Angle > QC
15	8:46 PM	4.200	0.6	0.300	0.600	0.180	Standard Error > QC
16	8:47 PM	4.400	0.6	0.200	0.600	0.120	Standard Error > QC,High Stn % Discharge
17	8:48 PM	5.500	0.6	0.280	0.600	0.168	Standard Error > QC,High Stn % Discharge

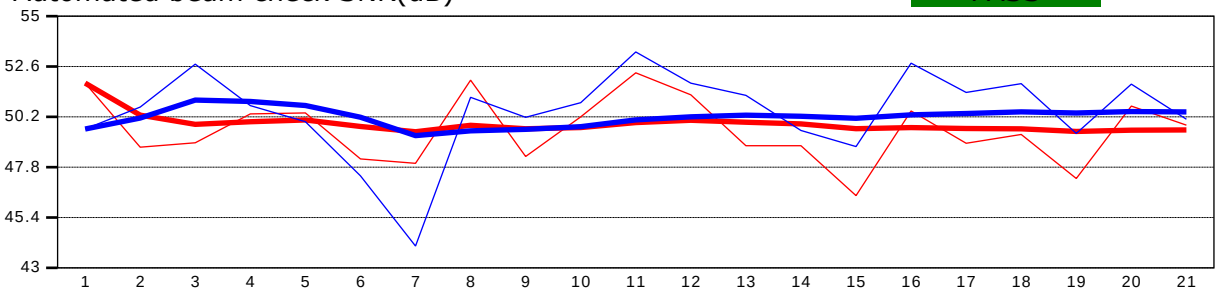
Discharge Measurement Summary

Site name	Unamedtrib2EForkDry
Site number	5232022
Operator(s)	Lfs
File name	Unamedtrib2EForkDry_20220525-205138.ft
Comment	

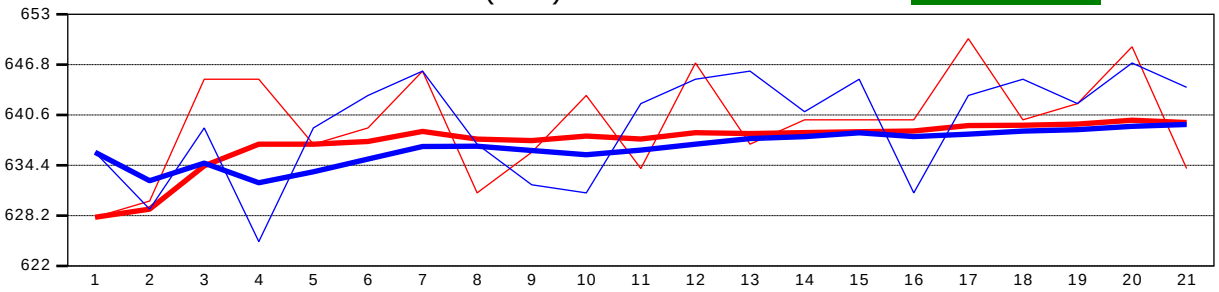
Beam 1	
Beam 2	

Automated beam check Start time 5/25/2022 8:28:03 PM

Automated beam check SNR(dB) PASS



Automated beam check Noise level(cnts) PASS



Automated beam check Quality control warnings

No quality control warnings

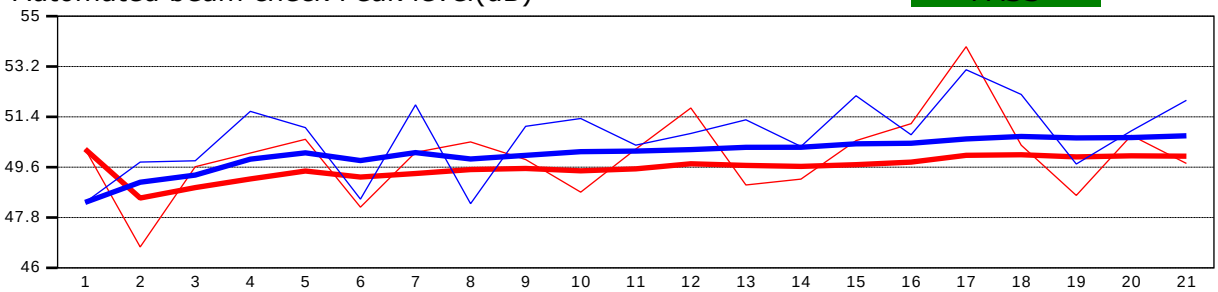
Discharge Measurement Summary

Site name	Unamedtrib2EForkDry
Site number	5232022
Operator(s)	Lfs
File name	Unamedtrib2EForkDry_20220525-205138.ft
Comment	

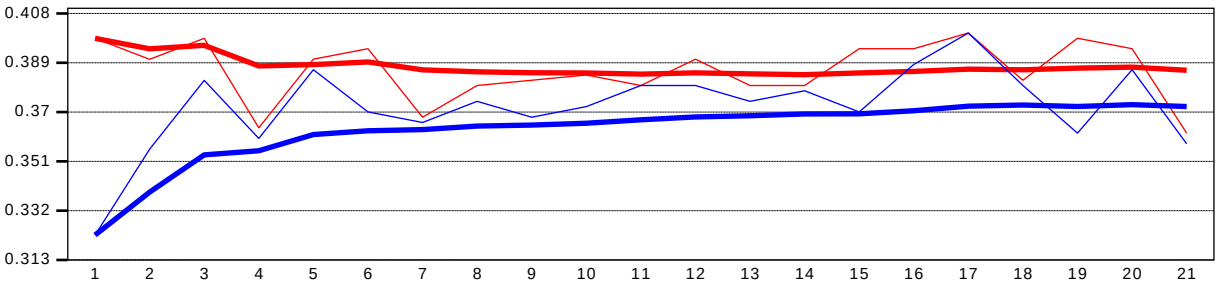
Beam 1	
Beam 2	

Automated beam check Start time 5/25/2022 8:28:03 PM

Automated beam check Peak level(dB) PASS



Automated beam check Peak position(ft) PASS



Automated beam check Quality control warnings

No quality control warnings

Unnamed Tributary to East Fork Dry Creek, Cross Section 1, looking upstream.

Unnamed Tributary to East Fork Dry Creek, Cross Section 1, looking downstream.

Unnamed Tributary to East Fork Dry Creek, Cross Section 2, looking upstream.

Unnamed Tributary to East Fork Dry Creek, Cross Section 2, looking downstream.

Unnamed Tributary to East Fork Dry Creek, Cross Section 2, looking across the riffle.

Unnamed Tributary to East Fork Dry Creek, Cross Section 2, looking across the riffle.

Unnamed Tributary to East Fork Dry Creek, Cross Section 2, looking downstream from left bank.

Unnamed Tributary to East Fork Dry Creek, Cross Section 2, nearby microhabitat.

Unnamed Tributary to East Fork Dry Creek, Large woody debris in channel

Unnamed Tributary to East Fork Dry Creek, Cross-section 2, Flow measurement location.

Unnamed Tributary to East Fork Dry Creek, Fish habitat overview.