

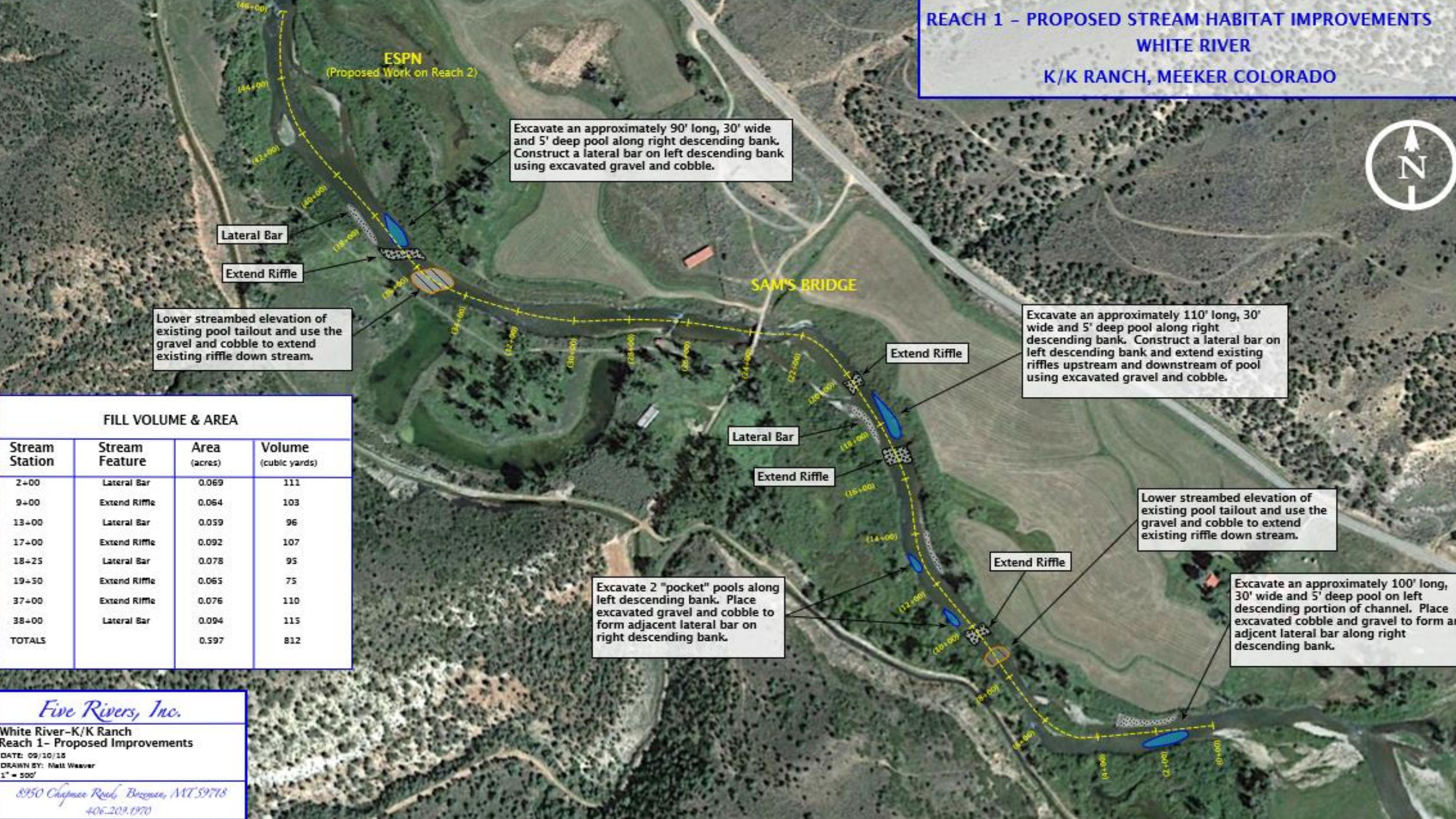
Before



After



REACH 1 - PROPOSED STREAM HABITAT IMPROVEMENTS
WHITE RIVER
K/K RANCH, MEEKER COLORADO



Excavate an approximately 90' long, 30' wide and 5' deep pool along right descending bank. Construct a lateral bar on left descending bank using excavated gravel and cobble.

Excavate an approximately 110' long, 30' wide and 5' deep pool along right descending bank. Construct a lateral bar on left descending bank and extend existing riffles upstream and downstream of pool using excavated gravel and cobble.

Lower streambed elevation of existing pool tailout and use the gravel and cobble to extend existing riffle down stream.

Lower streambed elevation of existing pool tailout and use the gravel and cobble to extend existing riffle down stream.

Excavate 2 "pocket" pools along left descending bank. Place excavated gravel and cobble to form adjacent lateral bar on right descending bank.

Excavate an approximately 100' long, 30' wide and 5' deep pool on left descending portion of channel. Place excavated cobble and gravel to form an adjacent lateral bar along right descending bank.

FILL VOLUME & AREA

Stream Station	Stream Feature	Area (acres)	Volume (cubic yards)
2+00	Lateral Bar	0.069	111
9+00	Extend Riffle	0.064	103
13+00	Lateral Bar	0.059	96
17+00	Extend Riffle	0.092	107
18+25	Lateral Bar	0.078	95
19+50	Extend Riffle	0.065	75
37+00	Extend Riffle	0.076	110
38+00	Lateral Bar	0.094	115
TOTALS		0.597	812

Five Rivers, Inc.
 White River-K/K Ranch
 Reach 1- Proposed Improvements
 DATE: 09/10/18
 DRAWN BY: Matt Weaver
 1" = 500'
 8950 Chapman Road, Boronia, WI 53718
 406.203.1970

**REACH 2 – PROPOSED STREAM HABITAT IMPROVEMENTS
WHITE RIVER
K/K RANCH, MEEKER COLORADO**

PROPERTY BOUNDARY (OUT)

PROPERTY BOUNDARY (OUT)

ALEXANDERS

ESPN

Lateral Bar

Excavate an approximately 100' long, 30' wide and 5' deep pool on right descending portion of channel. Place excavated cobble and gravel to form an adjacent lateral bar along left descending bank.

Excavate an approximately 90' long, 35' wide and 5' deep pool on left descending portion of channel. Place excavated cobble and gravel to form an adjacent lateral bar along right descending bank.

Lateral Bar

Arrange approximately 20 existing large natural rocks in this area to improve trout holding water.

Excavate 2 "pocket" pools along left descending bank. Place excavated gravel and cobble to form adjacent lateral bar on right descending bank.

Extend Riffle

Lateral Bar

Reduce riffle height 6" at top of side channel to allow more flow.

FILL VOLUME & AREA			
Stream Station	Stream Feature	Area (acres)	Volume (cubic yards)
43+00	Lateral Bar	0.059	88
45+00	Extend Riffle	0.064	75
60+00	Lateral Bar	0.078	125
65+50	Lateral Bar	0.087	142
TOTALS		0.288	430



Five Rivers, Inc.
 White River-K/K Ranch
 Reach 2- Proposed Improvements
 DATE: 09/10/15
 DRAWN BY: Matt Weaver
 1" = 500'
 8950 Chapman Road, Borgman, MT 59718
 406.209.1970

**REACH 3 – PROPOSED STREAM HABITAT IMPROVEMENTS
WHITE RIVER
K/K RANCH, MEEKER COLORADO**

FILL VOLUME & AREA			
Stream Station	Stream Feature	Area (acres)	Volume (cubic yards)
99+50	Extend Riffle	0.062	128
101+75	Lateral Bar	0.067	125
104+00	Lateral Bar	0.048	116
117+50	Extend Riffle	0.051	81
120+00	Lateral Bar	0.082	133
TOTALS		0.310	583

Excavate an approximately 90' long, 30' wide and 5' deep pool on left descending portion of channel. Place excavated cobble and gravel to form an adjacent lateral bar along right descending bank and to extend upstream riffle.

Excavate an approximately 80' long, 25' wide and 5' deep pool on left descending portion of channel. Place excavated cobble and gravel to form an adjacent lateral bar along right descending bank.

Excavate an approximately 80' long, 25' wide and 5' deep pool along left descending bank. Construct a lateral bar on right descending bank and extend existing riffle upstream of pool using excavated gravel and cobble.

S CURVE

ROCK RUN

KINGDOM



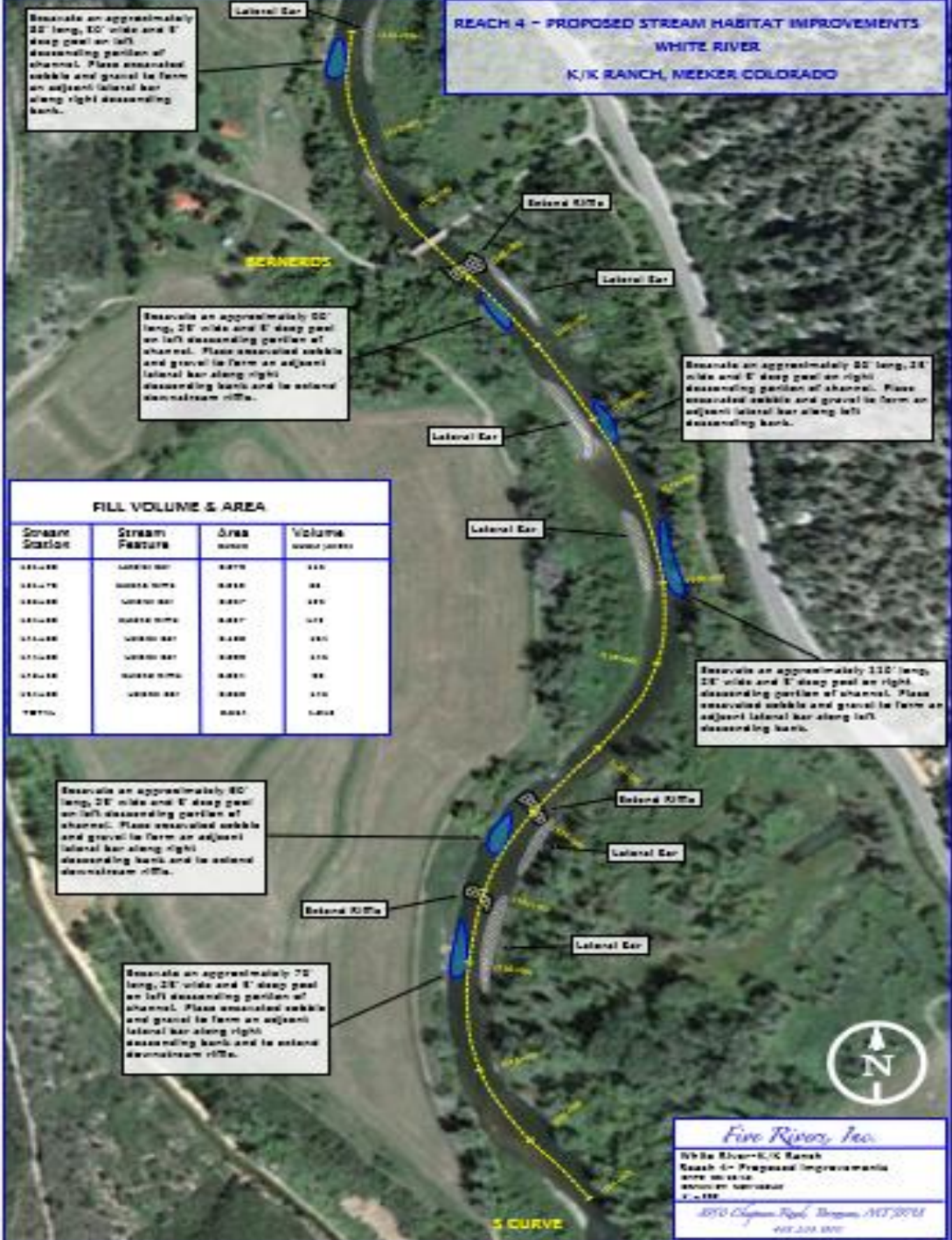
Five Rivers, Inc.

White River-K/K Ranch
Reach 3- Proposed Improvements

DATE: 09/10/15
DRAWN BY: Matt Weaver
1" = 500'

8950 Chaparral Road, Box 508, Meeker, CO 80462
406.209.1970

**REACH 4 - PROPOSED STREAM HABITAT IMPROVEMENTS
WHITE RIVER
K/K RANCH, MEEKER COLORADO**



FILL VOLUME & AREA

Stream Station	Stream Feature	Area (sqft)	Volume (cu yds)
171100	ISLAND RIFFLE	2479	110
171170	LATERAL BAR	2430	88
171200	LATERAL BAR	2407	110
171230	LATERAL BAR	2407	110
171260	LATERAL BAR	2400	100
171290	LATERAL BAR	2400	110
171320	LATERAL BAR	2400	88
171350	LATERAL BAR	2400	110
TOTAL		2001	1004



Five Rivers, Inc.
 White River-K/K Ranch
 Reach 4 - Proposed Improvements
 and associated
 stream channel
 8-188
 2010 Clayton Road, Denver, CO 80201
 303.233.8900