

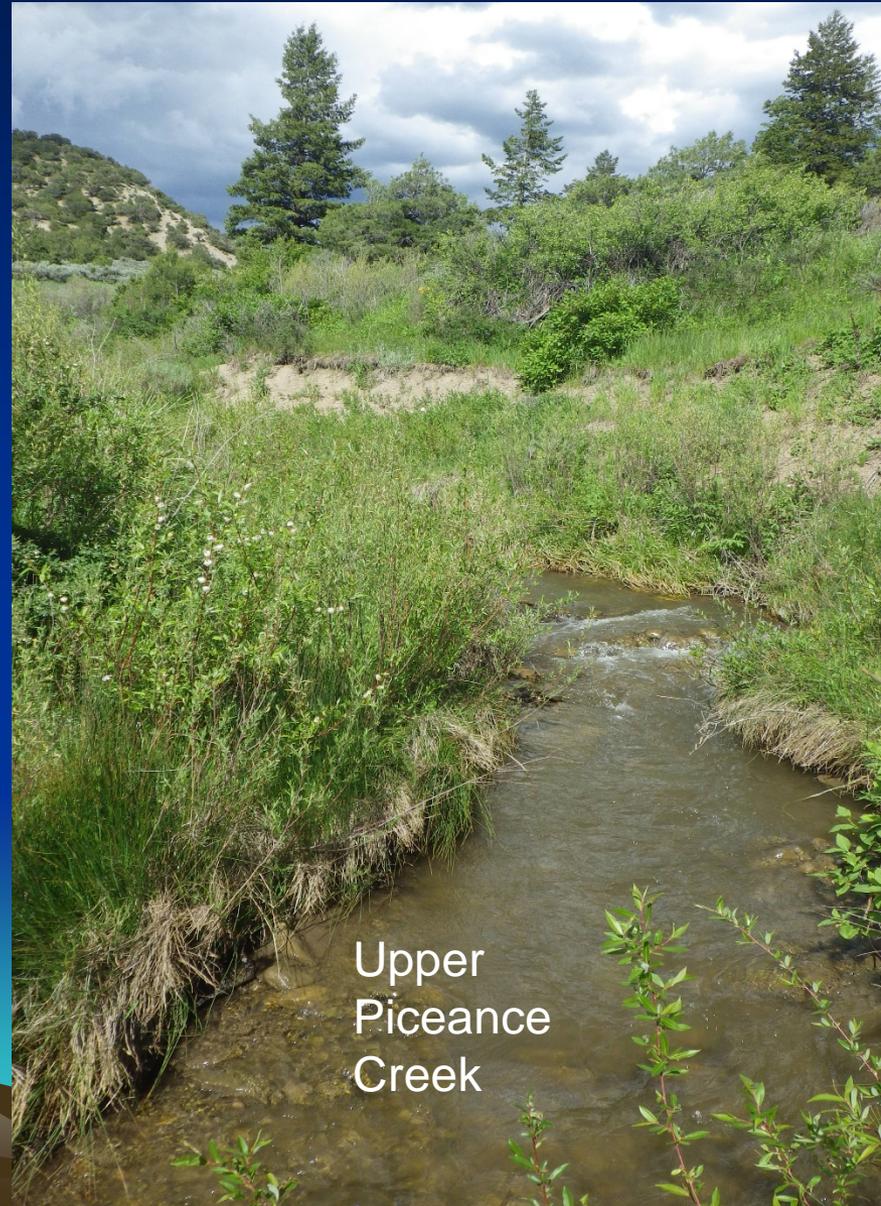
2020 BLM Instream Flow Recommendations



East Muddy Creek north
of Paonia Reservoir

2020 Recommendations Emphasis

- Protect streams that provide habitat for sensitive and native fish species – work to prevent listing under Endangered Species Act
- Protect small streams that have been overlooked during previous protection efforts
- Complete work on previously submitted instream flow recommendations



Upper
Piceance
Creek

Streams in Water Division 2



Arkansas
River

East Fork Arkansas River Location



Climax Mine

Lower Terminus:
Confluence With
Chalk Creek

Upper Terminus:
Headwaters

Leadville

Google Earth

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East Fork Arkansas River



Natural Environment:

Fishery:

- Brook trout

Water Quality:

- Consistently cold stream temperatures
- Ideal pH for salmonids
- Low TDS
- Some heavy metals from historic mining

Riparian community:

- Spruce, willow, river birch



East Fork Arkansas River

Proposed Flow Rates:

7.0 cfs May 1 – Jul 31
2.8 cfs Aug 1 – Sep 30
1.2 cfs Oct 1 – Apr 30

East Fork Arkansas River



Water Availability:

- Snowmelt hydrograph
- At top of watershed
- Existing ISF right located downstream, starting at Chalk Creek -- 15 cfs, year round
- Gage data available downstream

Water Rights:

- None

East Fork Arkansas River



Stakeholders:

- Upper Arkansas Water Conservancy District
- Lake County
- Private landowners
- US Forest Service
- Climax Molybdenum Mine

Next Steps: Analyze data from temporary stream gage; complete outreach to private landowners.

East Gulch Location

← Upper Terminus: Confluence with Antelope Gulch

← Lower Terminus: Confluence with Arkansas River

East Gulch



Natural Environment

Good condition globally vulnerable riparian communities:

- Narrowleaf cottonwood – river birch
- Narrowleaf cottonwood – Douglas Fir

Good condition globally secure communities:

- Narrowleaf cottonwood – coyote willow
- Coyote willow – mesic graminoids shrubland



East Gulch

Proposed Flow
Rates:

1.35 cfs April 1 –
June 30

0.45 cfs July 1 –
March 31

East Gulch



Water Availability:

- Snowmelt hydrograph supported by numerous springs
- Reach is in lower portion of watershed
- No gage data available

Water Rights:

- None

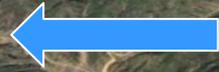
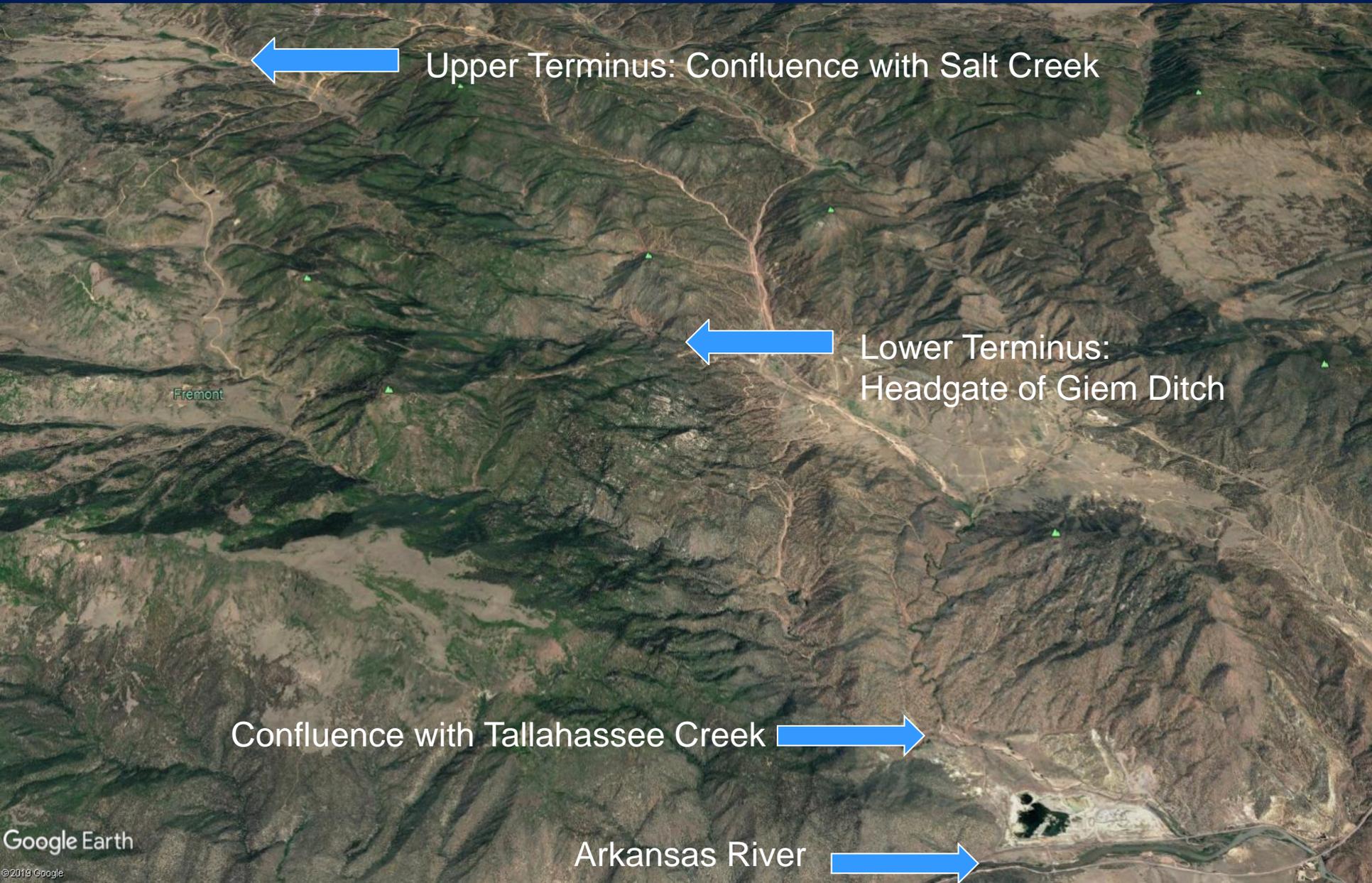
East Gulch



Stakeholders:

- Upper Arkansas Water Conservancy District
- Fremont County
- Private landowners
- Parties interested in Wild & Scenic Rivers analysis process

Cottonwood Creek Location

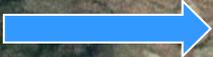


Upper Terminus: Confluence with Salt Creek



Lower Terminus:
Headgate of Giem Ditch

Fremont

Confluence with Tallahassee Creek 

Arkansas River 

Cottonwood Creek



Natural Environment

- Good condition globally vulnerable riparian community comprised of narrowleaf cottonwood – Rocky Mountain juniper
- Good condition globally secure riparian community comprised of narrowleaf cottonwood – coyote willow.



Cottonwood Creek

Proposed Flow
Rates:

1.25 cfs April 1 –
June 30

0.80 cfs July 1 –
March 31

Cottonwood Creek



Water Availability:

- Snowmelt hydrograph supported by springs
- Reach is in lower portion of watershed
- No gage data available

Water Rights:

- Two small ditches within reach
- 14 water rights upstream totaling approximately 14 cfs

Cottonwood Creek



Stakeholders:

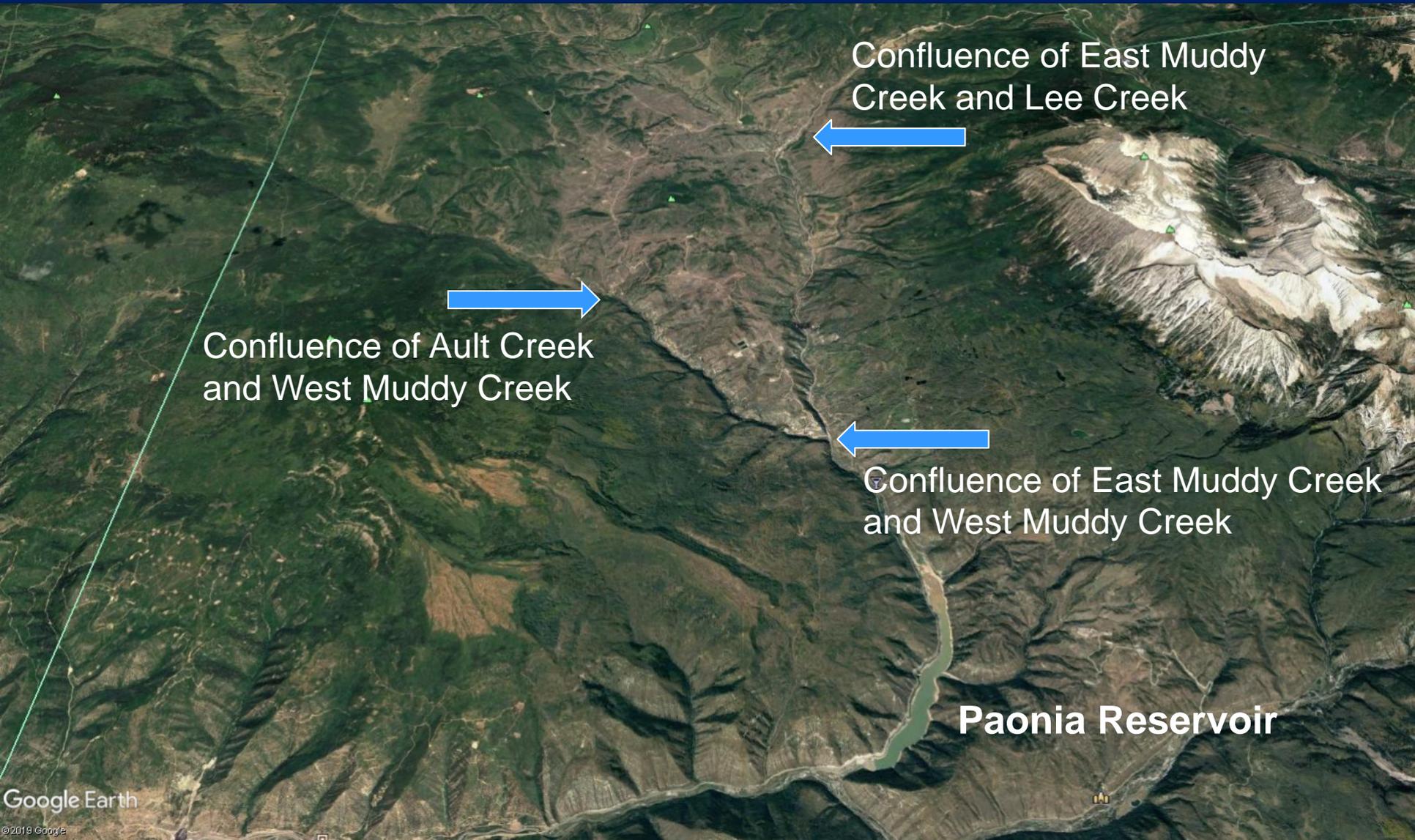
- Upper Arkansas Water Conservancy District
- Fremont County
- Private landowners
- Upstream water right owners
- Parties interested in Wild & Scenic Rivers analysis process

Streams in Water Division 4

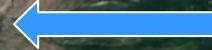


Gunnison River
South of Grand
Junction

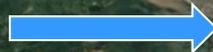
East Muddy Creek and West Muddy Creek - Location



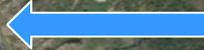
Confluence of East Muddy Creek and Lee Creek



Confluence of Ault Creek and West Muddy Creek



Confluence of East Muddy Creek and West Muddy Creek



Paonia Reservoir

East Muddy Creek



Natural Environment:

- Native fish species: bluehead suckers, speckled dace, mottled sculpin
- Nonnative fish species: rainbow trout, fathead minnow, white sucker
- Macros: mayfly, caddisfly, stonefly
- Riparian community: willow, alder, spruce, narrowleaf cottonwood

East Muddy Creek



Proposed Flow Rates:
35.0 cfs April 1 – July 15
17.0 cfs July 16 – November 30
14.8 cfs December 1 – February 29
19.0 cfs March 1 – March 31

East Muddy Creek



Water Availability:

- Snowmelt driven hydrology
- No large reservoirs or water exports upstream
- Exercise of water rights limited by calls from downstream senior rights

Water Rights:

- 1 water right within reach
- More than 25 surface diversions upstream, totaling approximately 100 cfs

East Muddy Creek



Stakeholders:

- Land and water rights owners along the creek
- Gunnison County
- Mine and natural gas well owners

West Muddy Creek



Natural Environment:

- Native fish species: speckled dace, mottled sculpin
- Macros: mayfly, caddisfly, stonefly
- Riparian community: willow, alder, spruce.

West Muddy Creek

A photograph of a rocky stream in a forest. A person wearing a hat and a light-colored shirt is standing on the right bank, holding a measuring tape across the stream. The water is clear and flows over numerous rocks. The background is filled with dense green trees and a blue sky with some clouds.

Proposed Flow Rates:
(Subject to additional data collection.)
14.0 cfs April 1- July 15
6.0 cfs July 16 – November 30
4.0 cfs December 1 – February 29
5.5 cfs March 1 – March 31

West Muddy Creek



Water Availability:

- Snowmelt driven hydrology
- Overland Reservoir is only major storage in watershed
- Exercise of water rights limited by calls from downstream senior rights

Water Rights:

- No water rights within reach
- More than 13 surface diversions upstream, totaling approximately 63 cfs

West Muddy Creek



Stakeholders:

- Land and water rights owners along the creek
- Gunnison County
- Mine and natural gas well owners
- Overland Ditch and Reservoir Company – irrigates 5,000 acres in Delta County

Naturita Creek Location



Naturita

Lower Terminus:
San Miguel River

Redvale

Norwood

Break Between Reaches:
Norwood Road Crossing

Existing ISF Right
In Upper Reach:
3.0 cfs, year round

Upper Terminus: East
& West Naturita Creek

Survey

© 2017 Google

Google earth

Naturita Creek



Natural Environment:

- Fishery: bluehead suckers, speckled dace
- Macros: mayfly, caddisfly, stonefly
- Riparian community: cottonwood, willow, box elder, red osier dogwood

Naturita Creek

Proposed Flow Rates

Upper Reach:

Field Work In 2020 to
evaluate adequacy of
3.0 cfs ISF right

Lower Reach:

11.7 cfs April 1-June 30

6.5 cfs July 1 – Sept 30

1.25 cfs Oct 1 – Mar 31

Naturita Creek



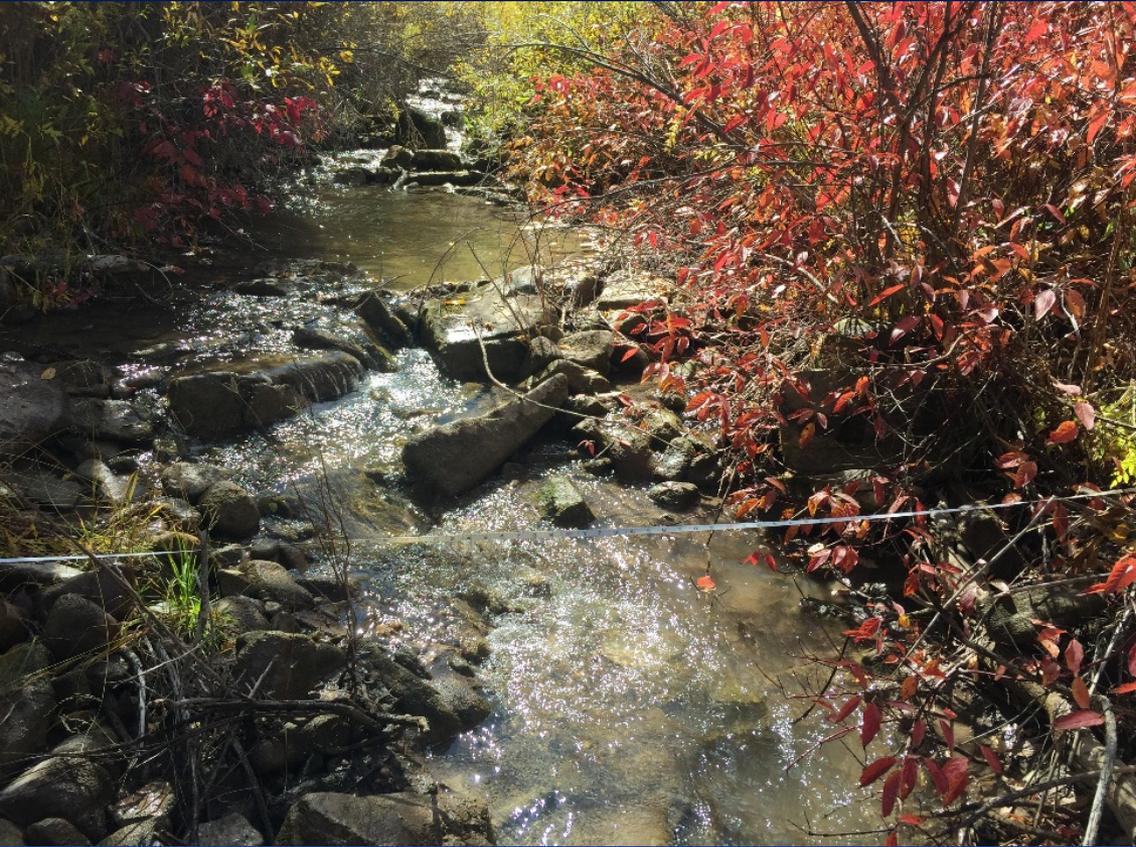
Water Availability:

- Hydrology is complex and highly altered
- Snowmelt driven base hydrology
- Upper reach depleted by diversions and storage
- Lower reach augmented by imported irrigation return flows

Water Rights:

- 3 water rights in upper reach
- 6 water rights in lower reach

Naturita Creek



Stakeholders:

- Land and water rights owners along the creek
- Montrose and Gunnison Counties
- Lone Cone Ditch and Reservoir Company – Cone Reservoir
- Farmer's Development Company – Gurley Reservoir

Next Steps: Analyze data from temporary stream gage; complete outreach to water right owners.

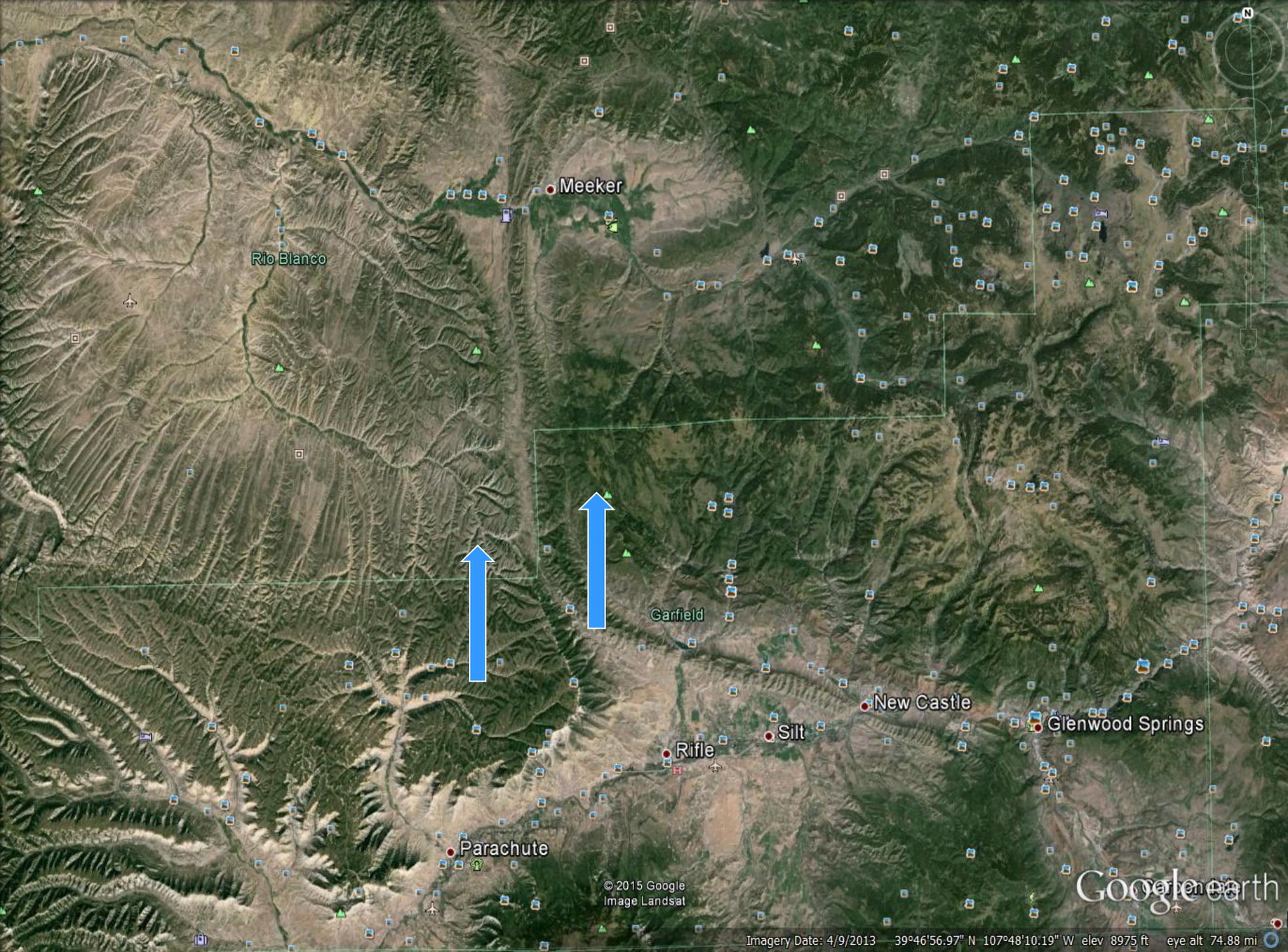
Streams in Water Division 6



Yampa River near Maybell

Upper Piceance Creek Rio Blanco and Garfield Counties





Rio Blanco

Meeker

Garfield

New Castle

Glenwood Springs

Rifle

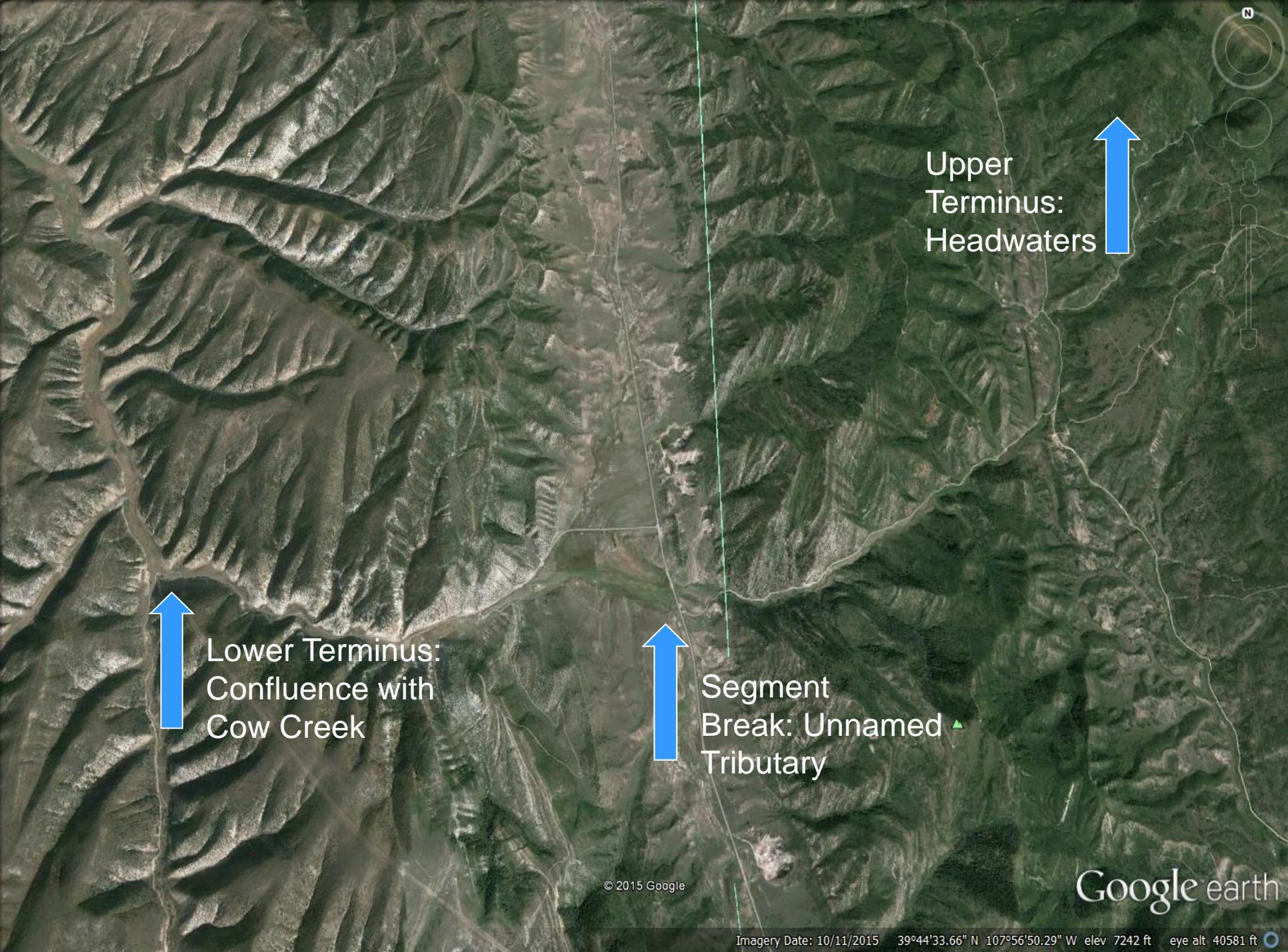
Silt

Parachute

© 2015 Google
Image Landsat

Google earth

Imagery Date: 4/9/2013 39°46'56.97" N 107°48'10.19" W elev 8975 ft eye alt 74.88 mi



Upper
Terminus:
Headwaters



Lower Terminus:
Confluence with
Cow Creek



Segment
Break: Unnamed
Tributary



© 2015 Google

Google earth

Imagery Date: 10/11/2015 39°44'33.66" N 107°56'50.29" W elev 7242 ft eye alt 40581 ft

Upper Piceance Creek



Natural Environment:

- Native Fishery: Speckled Dace, Mountain Suckers
- Riparian community: coyote willow, Geyer's willow, blue spruce, aspen, alder, sedges, rushes

Upper Piceance Creek



Proposed ISF Rates:

Headwaters to Highway 13

- 1.5 cfs Apr 1 to Oct 15
- 0.65 cfs Oct 16 to Mar 31

Highway 13 to Cow Creek

- 2.5 cfs Apr 1 to Oct 15
- 1.7 cfs Oct 16 to Mar 31

Upper Piceance Creek



Water Availability:

- Headwaters stream
- Snowmelt driven hydrograph
- No gage date available
- Installed pressure transducer to gather additional data

Water Rights:

- 5 ditches totaling 5.3 cfs

Upper Piceance Creek



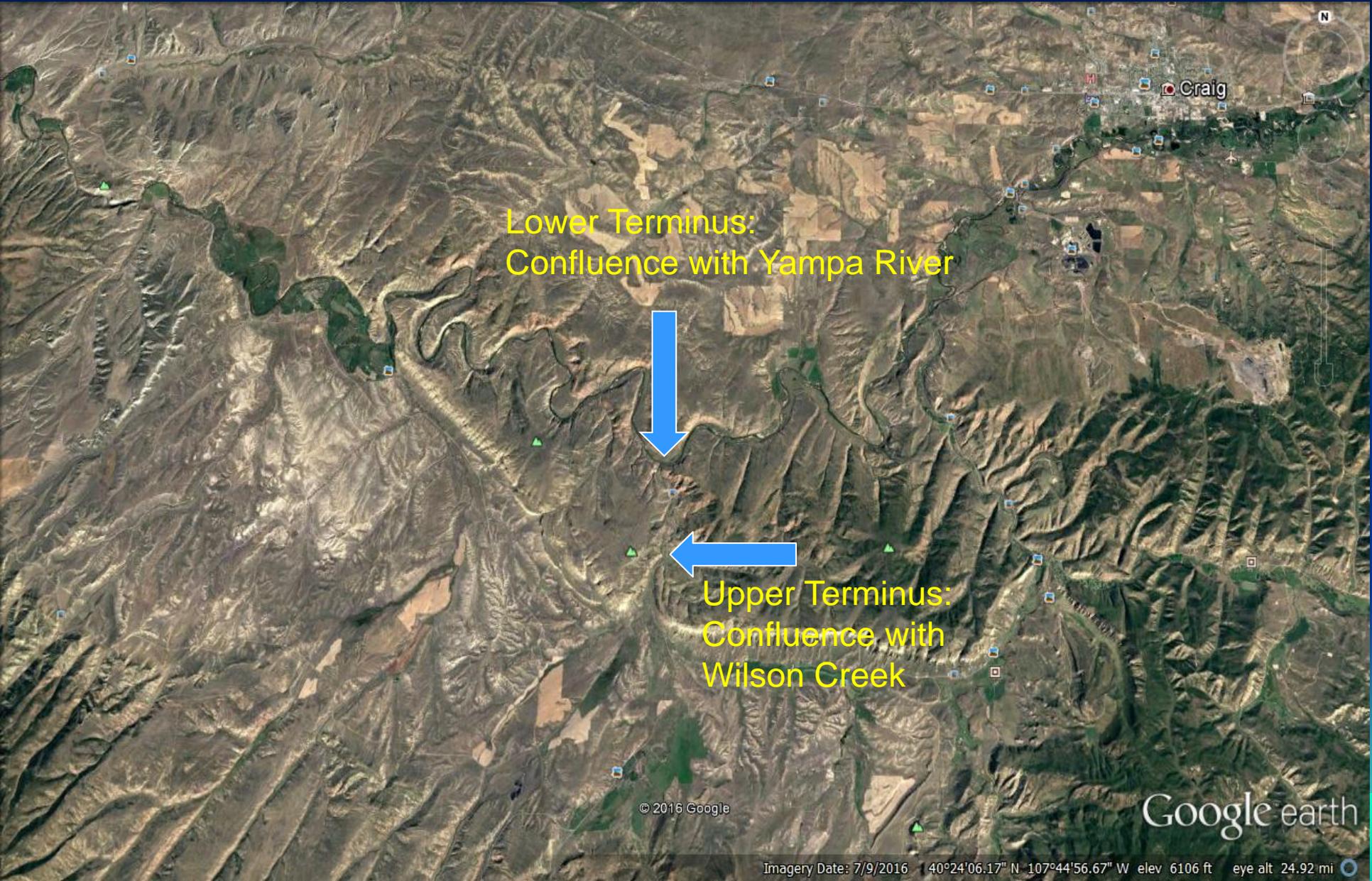
Stakeholders:

- Big Mountain Ranch
- Water rights owners
- Rio Blanco and Garfield Counties

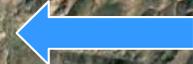
Next Steps:

- Collect data from temporary stream gage for additional year to better define water availability.

Milk Creek Location



Lower Terminus:
Confluence with Yampa River



Upper Terminus:
Confluence with
Wilson Creek

Milk Creek



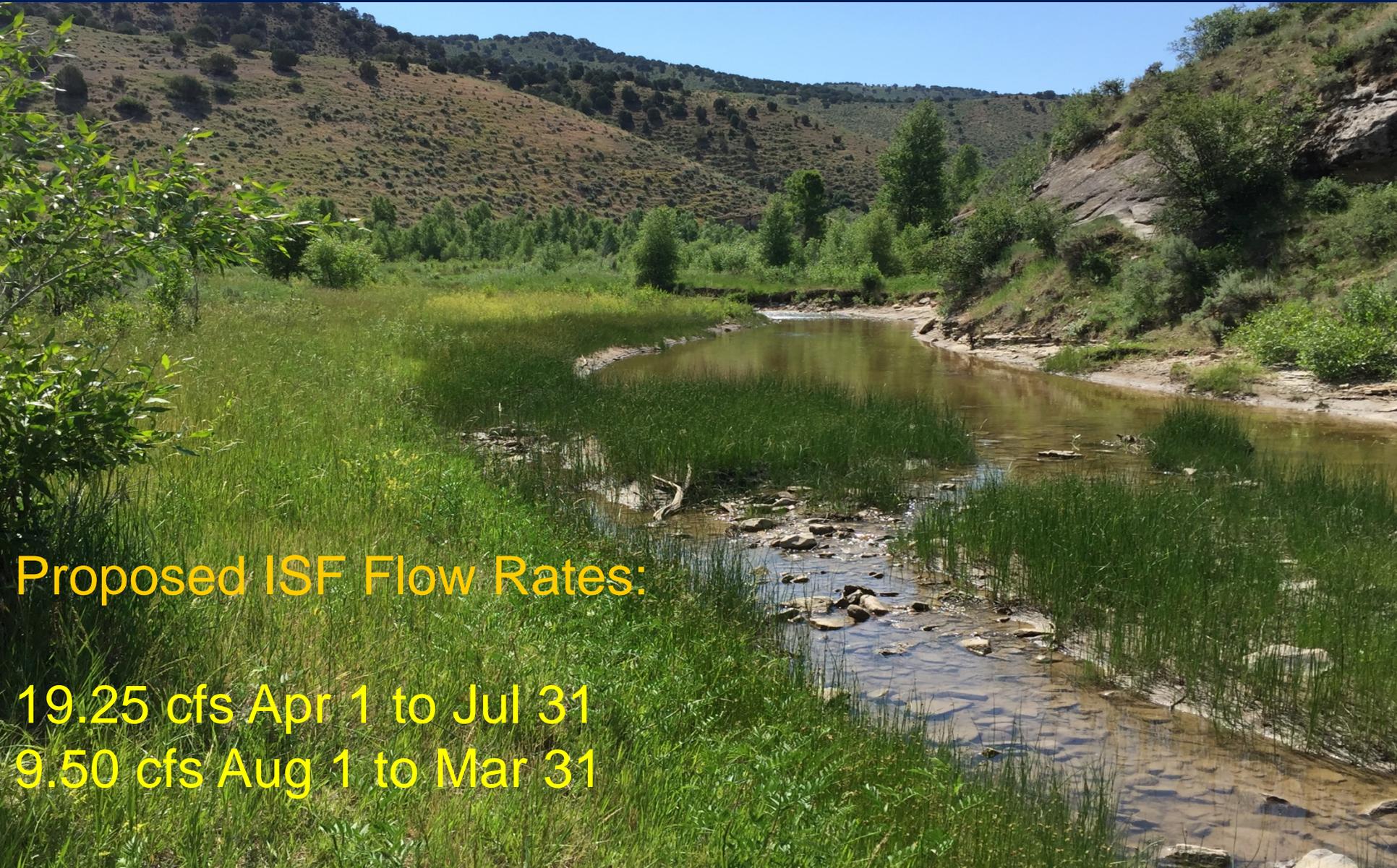
Riparian community: willow, sedges, and rushes with remnant cottonwoods on an upward trend

Natural Environment:

Fishery:

- Native – flannelmouth sucker, bluehead sucker, roundtail chub, speckled dace
- Non-native – redbside shiners, black bullhead, Johnny darter, plains killifish, bluegill sunfish
- CPW are stocking bluehead suckers to benefit Yampa River population

Milk Creek



Proposed ISF Flow Rates:

19.25 cfs Apr 1 to Jul 31

9.50 cfs Aug 1 to Mar 31

Milk Creek



Water Availability:

- Snowmelt driven hydrograph
- Low but reliable base flows
- At bottom of very large watershed
- Gage data is available

Water Rights:

- Very large number of upstream water rights
- No water rights within reach

Milk Creek



Next Steps: Collect data from temporary stream gage for additional year to better define water availability.

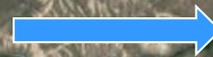
Stakeholders:

- Water rights owners within watershed
- Private landowners along reach
- Colowyo Coal Company
- Moffat County
- Colorado Parks and Wildlife

Watson Creek Location

Lower Terminus:

Hardscrabble Ditch 



Upper Terminus:
Moody Creek

Ref-17

17

Yampa

131

N

Survey

© 2017 Google

Google earth

Imagery Date: 6/18/2014 40°07'41.90" N 106°58'25.74" W elev 8289 ft eye alt 48198 ft

Watson Creek



Natural Environment:

- Fishery: longnose suckers, whitehead suckers, creek chub
- Macros: mayfly, caddisfly and other species typical of cool to warm water
- Riparian community: willow, sedges, rushes

Watson Creek



Proposed Flow Rates
1.90 cfs Apr 1 – Oct 31
1.05 cfs Nov 1 – Mar 31

Watson Creek



Water Availability:

- Reach in middle of watershed
- Snowmelt driven hydrograph
- No gage data available
- Affected by diversion and return flows

Water Rights:

- 6 ditches and 1 reservoir upstream
- 4 ditches in recommended reach

Watson Creek



Stakeholders:

- Routt County
- Upper Yampa Water Conservancy District
- Water right and landowners along the creek

Next Steps:

- Collect data from temporary stream gage for additional year

Questions for BLM?

Contact Roy Smith at r20smith@blm.gov or 303-239-3940



Big Dominguez Creek
near Grand Junction