2017 BLM Instream Flow Recommendations

Monitor Creek near Delta

2017 Recommendations Emphasis

- Recommendations from previous years-complete work
- Protect streams that provide habitat for sensitive and native fish species – work to prevent listing under Endangered Species Act
- Protect streams that have rare and/or pristine riparian systems
- Focus on cool to warm water habitats

Monitor Creek, Uncompahgre Plateau

Streams in Water Division 7

Dolores River

Disappointment Creek
San Miguel and Dolores Counties

Disappointment Creek Location

Dissapointment Creek

Natural Environment:

Fishery:

- Native – flannelmouth sucker, roundtail chub, (spawning habitat)
- More fish surveys this field season to ID species using upper part of reach

Riparian community:

- narrowleaf cottonwood, willows, river hawthorn, sedges, rushes, common reed.

Disappointment Creek

Disappointment Creek

Water Availability:

- Snowmelt driven hydrograph
- Very low base flows
- At bottom of very large watershed
- Gage data is available

Water Rights:

- 8 water rights within reach, totaling 43.6 cfs
- 7 water rights upstream from reach, totaling 28.6 cfs

Disappointment Creek

Stakeholders:

- Water rights owners within watershed
- Southwestern WCD
- Private land owners along reach
- Dolores and San Miguel Counties
- Colorado Parks and Wildlife

Coyote Wash
Montrose County

Coyote Wash Location

Coyote Wash

Natural Environment:

- Fishery: sand shiners, fathead minnows, red shiners
- Amphibians: red spotted toads, Woodhouse's toads
- Macros: midges, craneflies, damselflies, and mayflies
- Riparian community: Fremont Cottonwood, coyote willow, giant reeds, bulrushes, Baltic Rush, sedges, reed grass.
- Part of BLM's Dolores River Wilderness Study Area

Coyote Wash

Proposed Flow Rates:

- 2.20 cfs Mar 1 to Aug 31
- 0.80 cfs Sep 1 to Feb 28

Higher flow rates will be proposed if area is designated as wilderness.

Coyote Wash

Water Availability:

- Monsoonal and winter storm hydrograph
- Very low base flows
- At bottom of very large watershed extending into Utah
- Gage data is not available

Water Rights:

- No water rights within reach
- Water rights on springs, wells, and reservoirs in Utah for livestock watering purposes

Coyote Wash

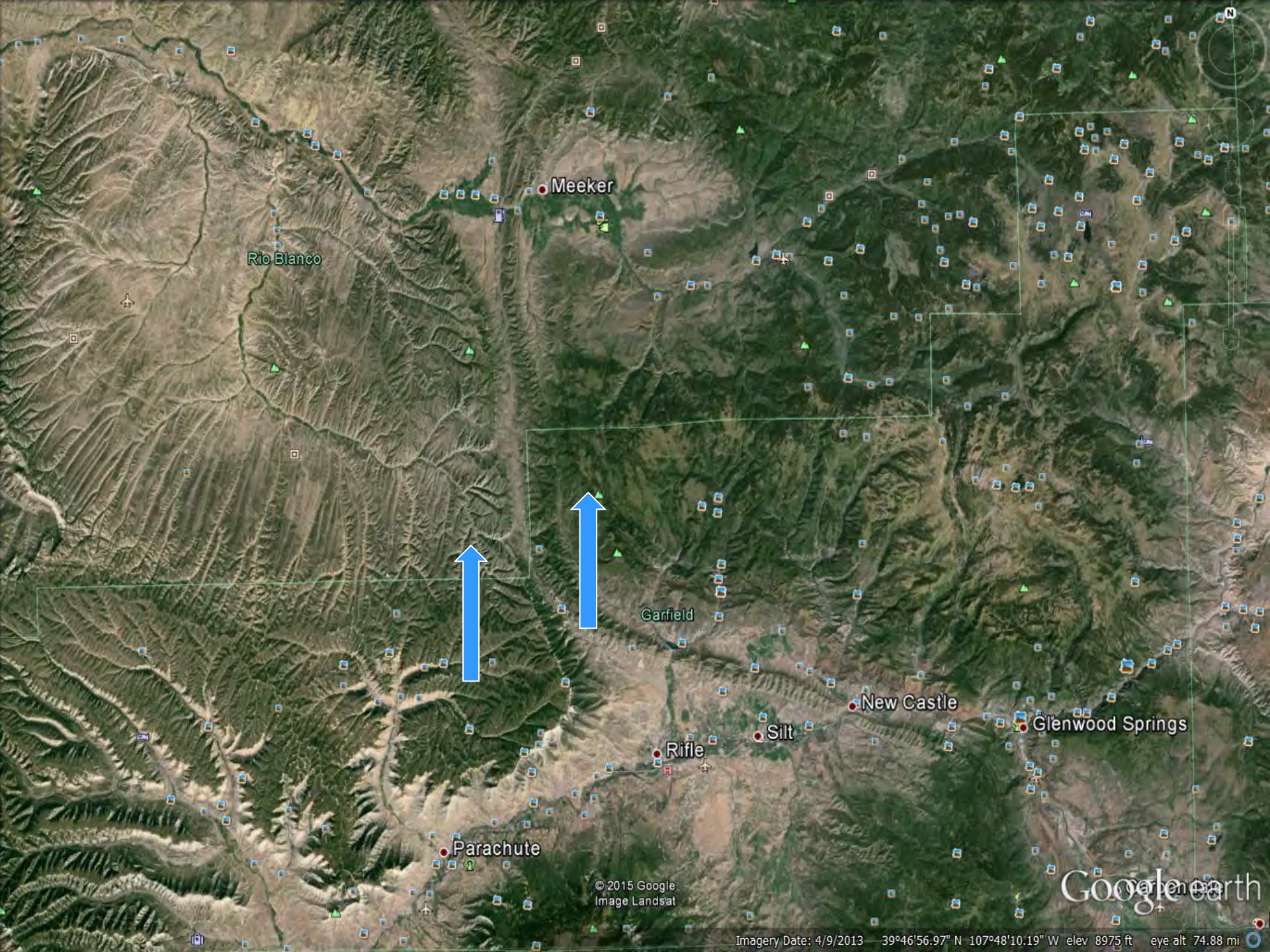
Stakeholders:

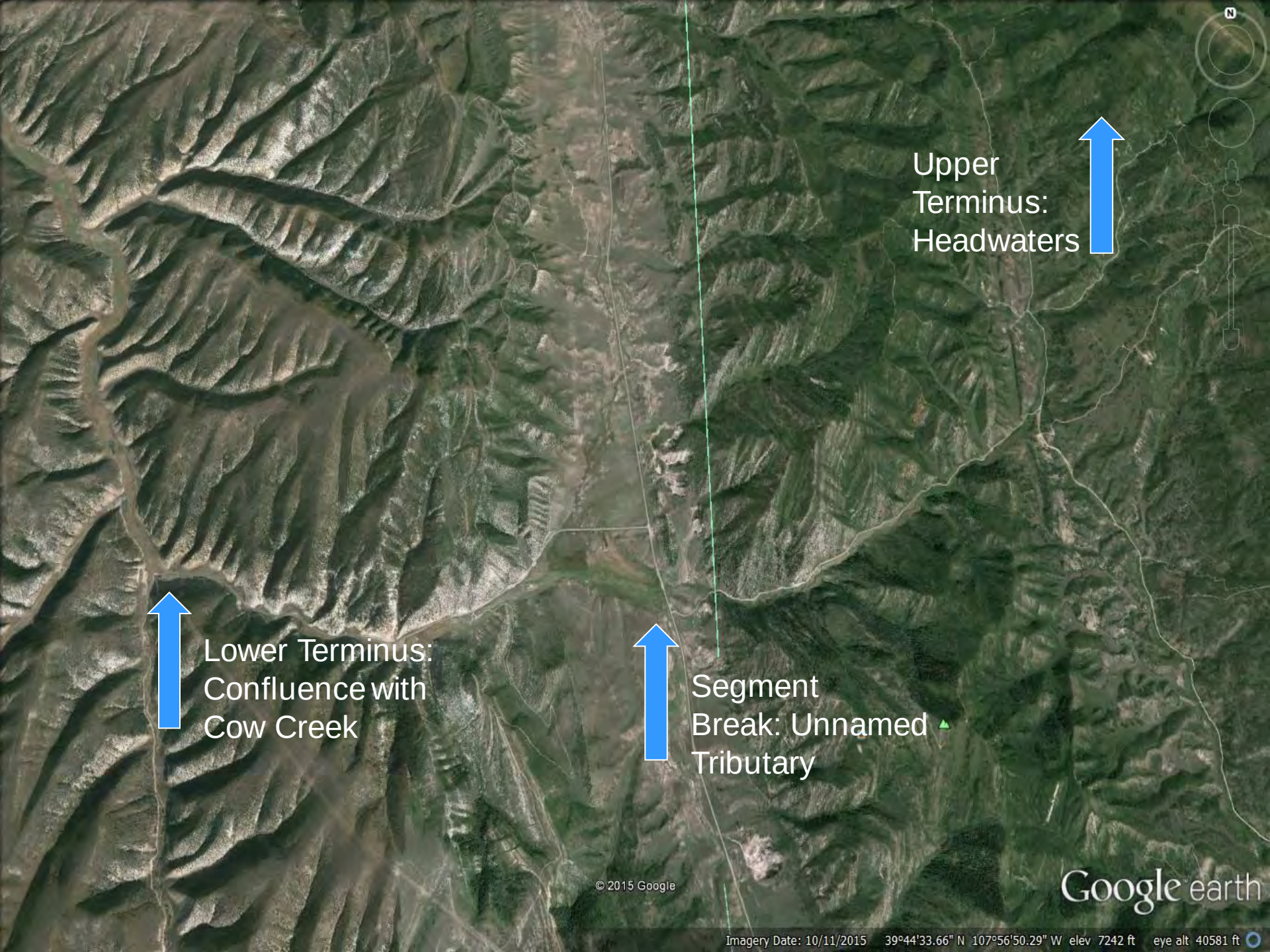
- Wilderness advocate groups
- Southwestern WCD
- Montrose County
- Colorado Parks and Wildlife

Streams in Water Division 6

Yampa River near Maybell

Upper Piceance Creek
Rio Blanco and Garfield Counties


Meeker
Rio Blanco
Garfield
New Castle
Glenwood Springs
Silt
Rifle
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

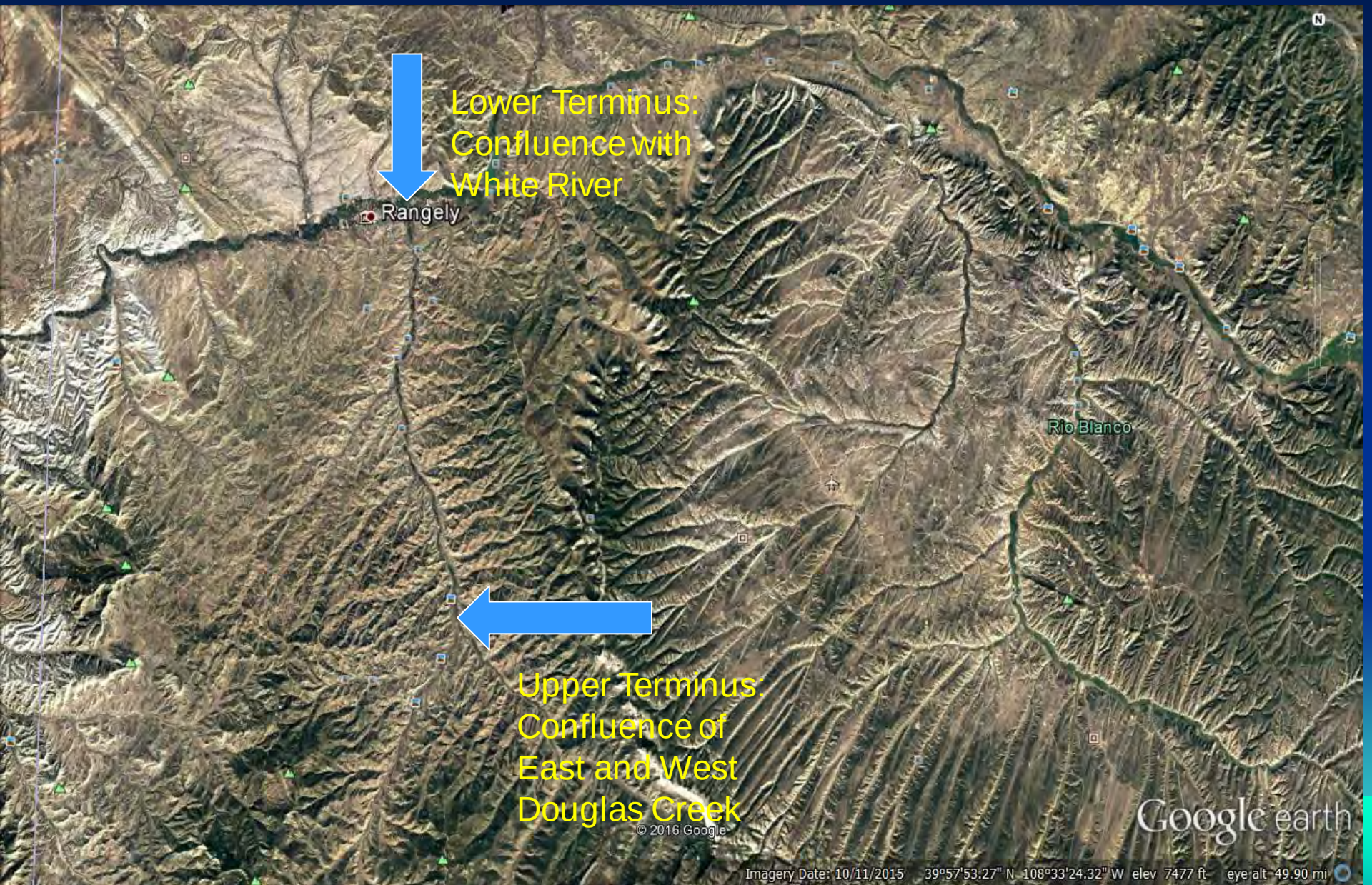
Stakeholders:

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

Lower Douglas Creek

Rio Blanco County

Douglas Creek Location



Douglas Creek

Natural Environment:

- Fishery: speckled dace
- Riparian Community: willows, sedges, rushes with tamarisk
- Riparian community on upward trend with grazing modifications
- Abundant amphibian community, including northern leopard frog, a BLM sensitive species

Douglas Creek

Proposed ISF rates:

- 2.70 cfs Mar 1 to Nov 30
- 1.80 cfs Dec 1 to Feb 28

Douglas Creek

Water Availability:

- Low elevation stream segment at bottom of very large watershed
- Snowmelt driven hydrology
- Gage data available only during very wet and very dry years

Douglas Creek

Water Rights:

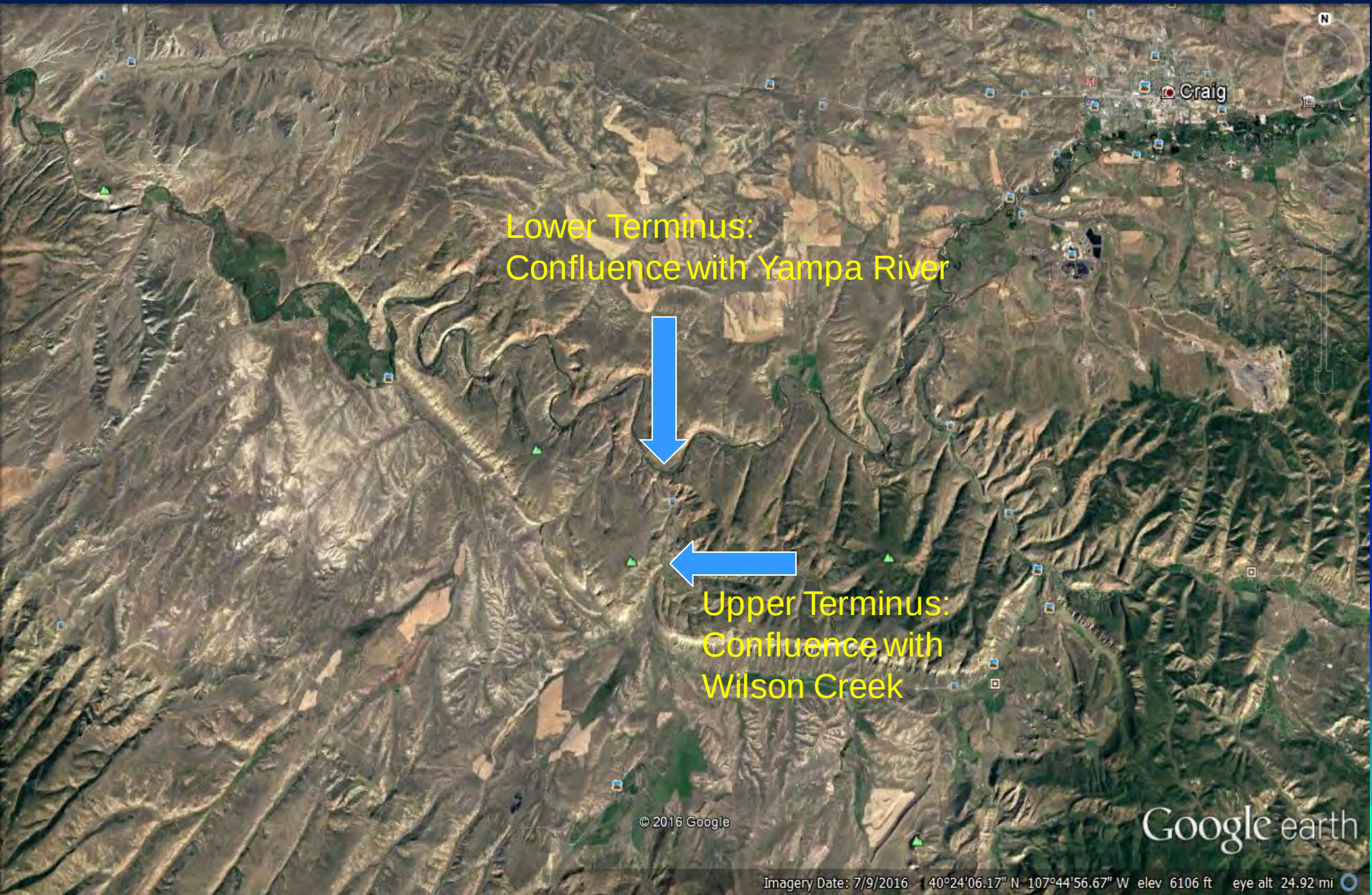
- 14 water rights upstream, totaling at least 44 cfs

Stakeholders:

- Rio Blanco County
- City of Rangely
- Private land owners along lower portion of creek

Milk Creek
Moffat County

Milk Creek Location



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 – redside 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

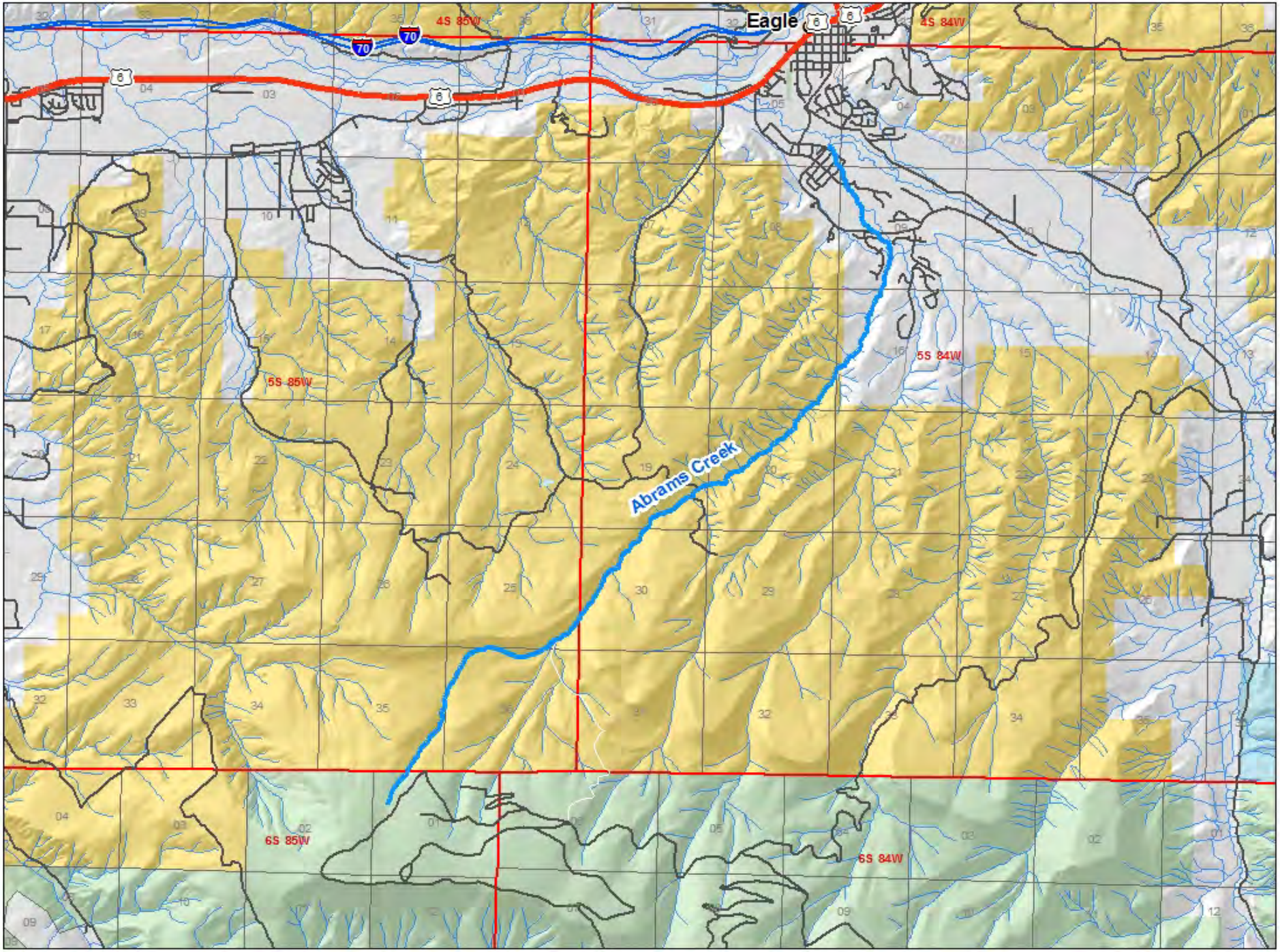
Milk Creek

Stakeholders:

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

Streams in Water Division 5

Abrams Creek
Eagle County

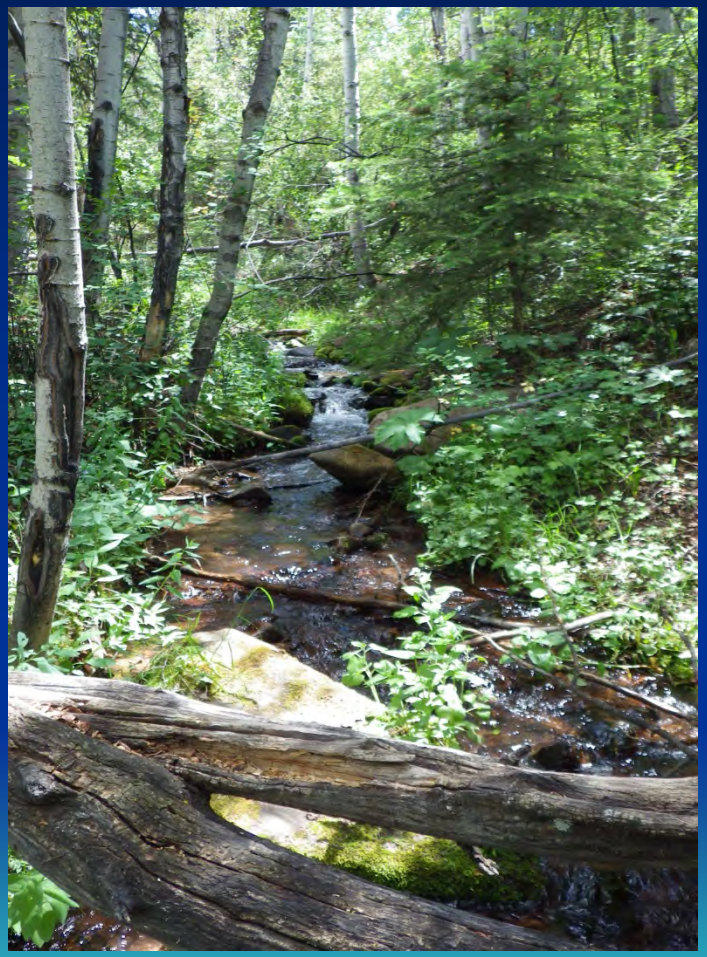

Eagle
4S 85W
4S 84W
5S 85W
5S 84W
6S 85W
6S 84W
Abrams Creek

Abrams Creek

Natural Environment:

- Core conservation population of pure Green Lineage Colorado River Cutthroat Trout
- Only core population in the Eagle River watershed
- Riparian community – spruce/ aspen at high elevation; cottonwood/willow at low elevation; extremely vigorous
-

Abrams Creek



Proposed ISF Flow Rates:

Existing ISF water right: 0.5 cfs year round, 1984 priority

Proposed <u>increases</u>:

- 0.75 cfs Apr 1 to Jul 15

  (1.25 cfs total)
- 0.2 cfs Jul 16 to Mar 31

  (0.7 cfs total)

Abrams Creek

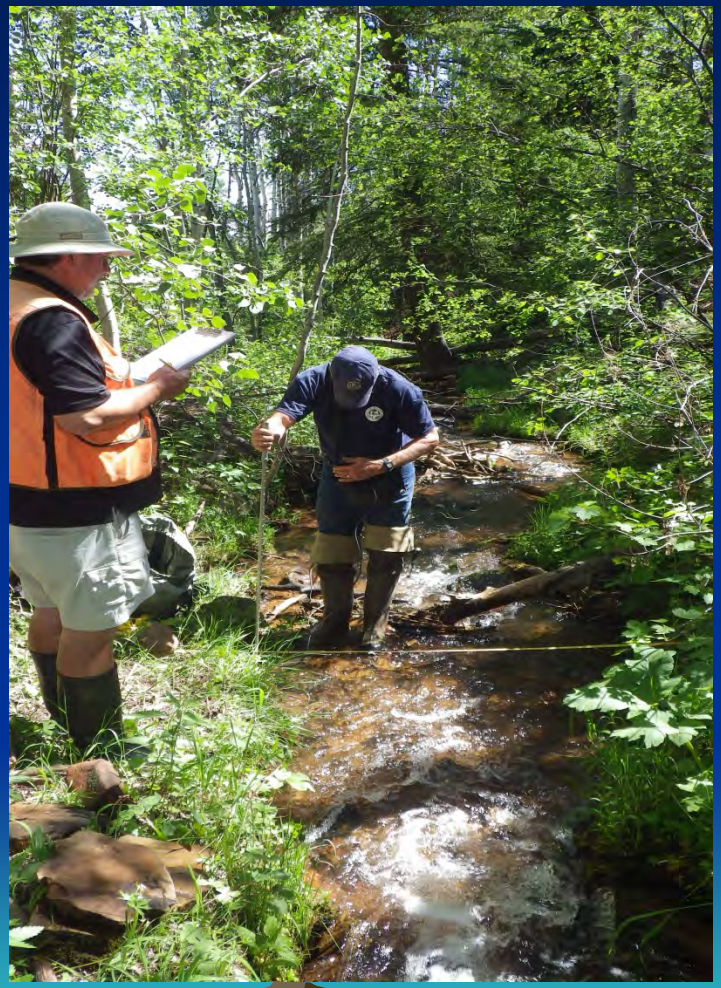
Water Availability:

- Base flow is highly reliable; dependent upon flow from spring complexes
- Snowmelt influenced April through July

Water Rights:

- JPO Ditch #2 – 3.0 cfs
- Mrs. Paye Ditch – 2.2 cfs (recommended as lower terminus)

Abrams Creek



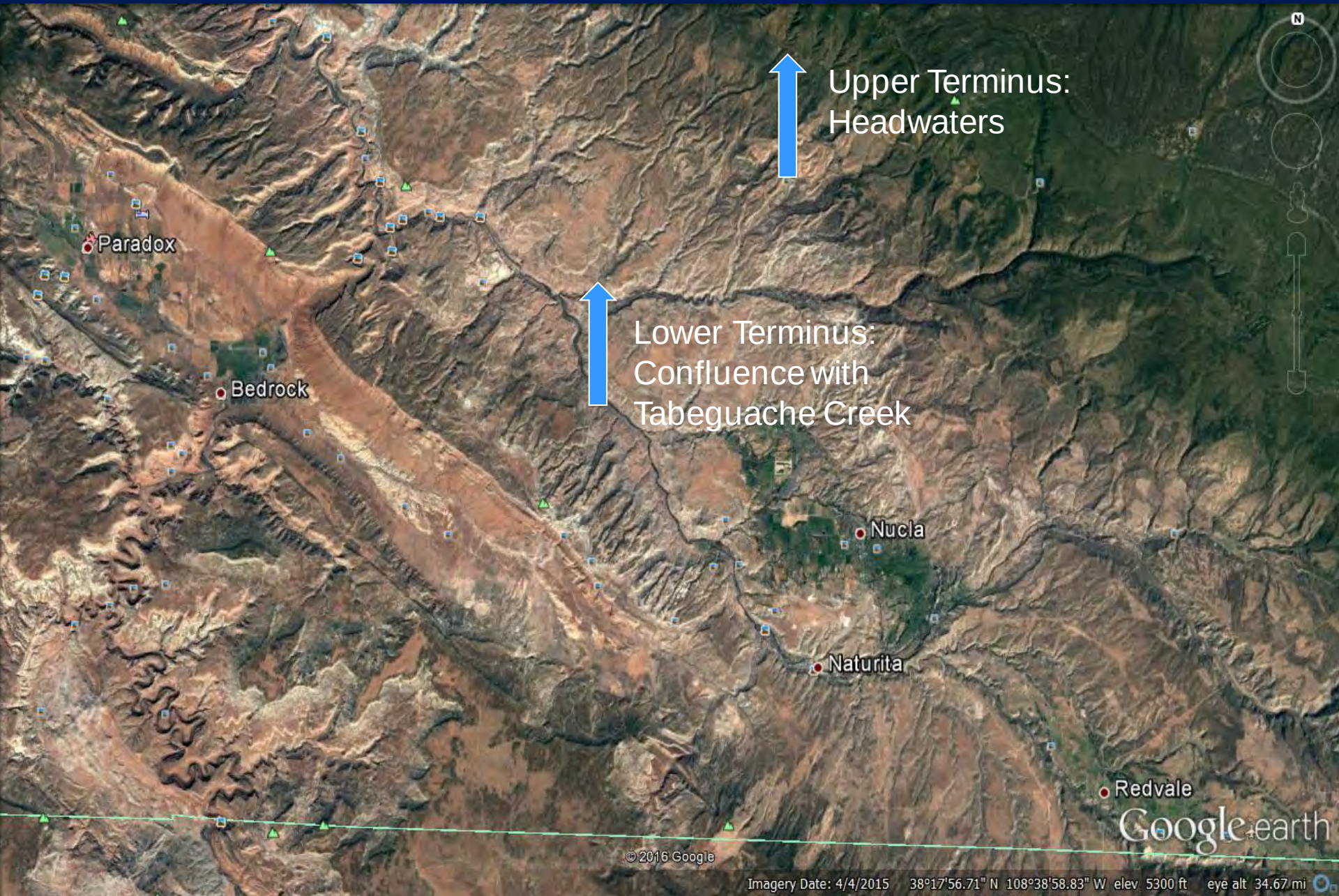
Stakeholders:

- Eagle County
- Town of Eagle
- Colorado Parks and Wildlife
- Buckhorn Metropolitan District (exploring measures to reduce JPO Ditch #2 demand)

Streams in Water Division 4

Spring Creek
Montrose County

Spring Creek Location



Spring Creek

Natural Environment:

- Riparian community: narrowleaf cottonwood, three-leafed sumac, red osier dogwood, and thin leaf alder in exceptionally good condition
- Healthy macroinvertebrate community
- Insufficient base flow and pool habitat for fish
- Abundant amphibians and reptiles

Spring Creek

Proposed ISF rates:

(subject to further data collection and methodology refinement)

1.20 cfs April 1 to Oct 31

0.88 cfs Nov 1 to Mar 31

Based upon R2Cross methodology because this is not a rare or unique riparian community.

Spring Creek

- **No gage data available**

Water Availability:

- Headwaters stream with some diversions
- Springs and groundwater provide base flow; large snowmelt runoff flows

Spring Creek

Water Rights:

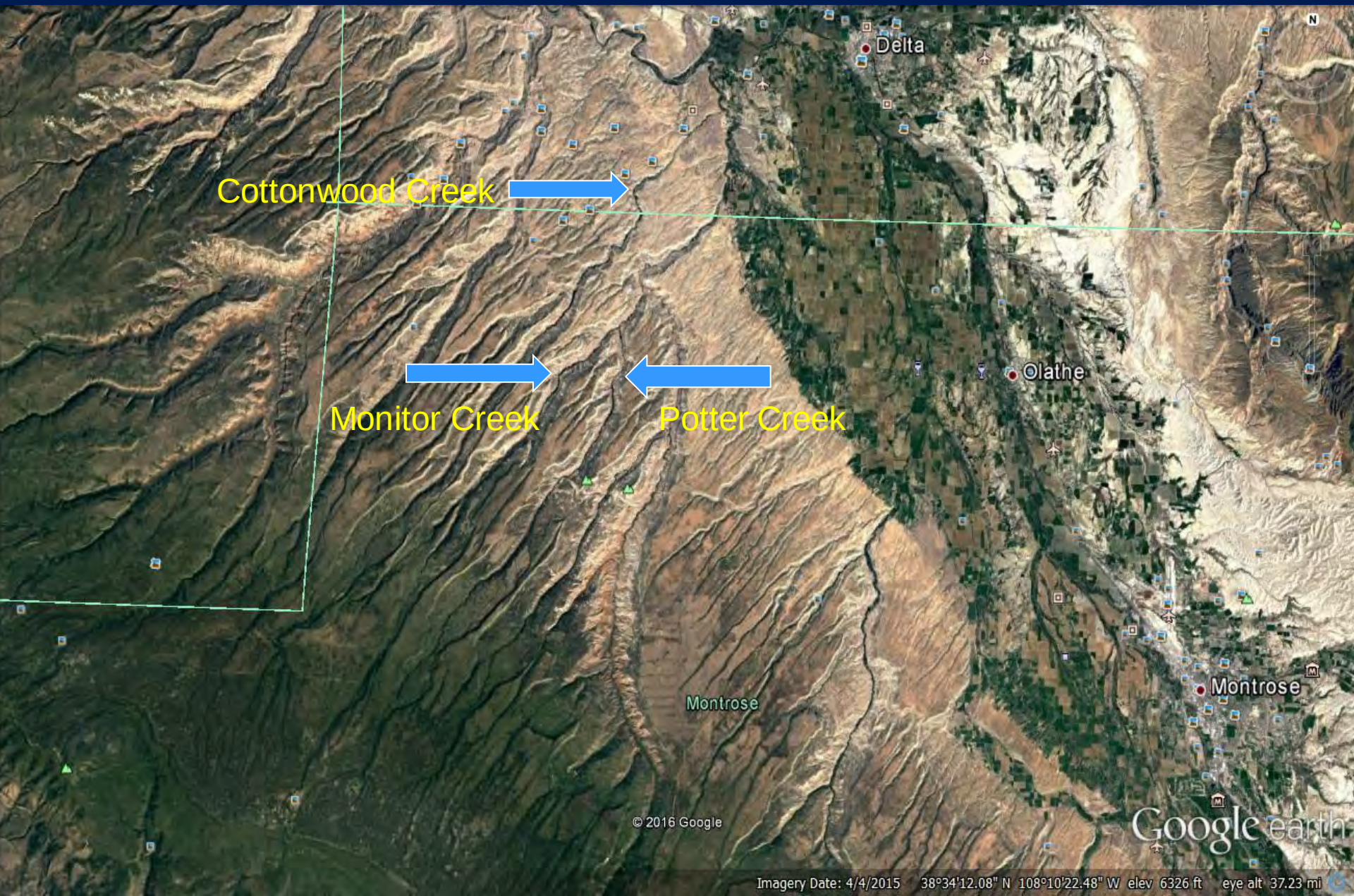
- Crabtree Ditch – 6.0 cfs
- Tilton Ditch – 1.0 cfs
- Spring Creek Ditch 2 – 1.0 cfs
- Spring Creek Ditch 3 – 1.74 cfs

Stakeholders:

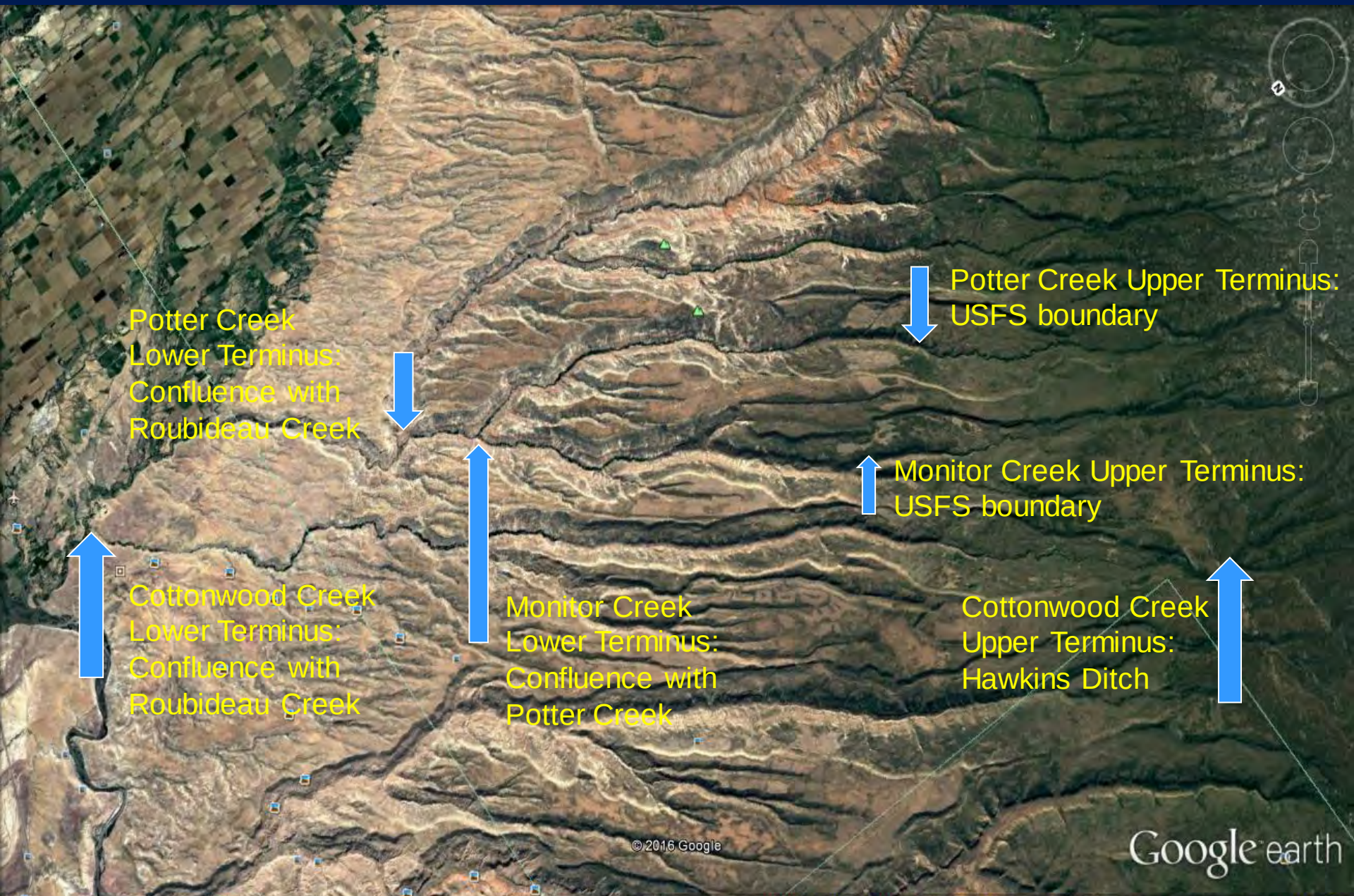
- Land and water rights owners within the reach
- Montrose County
- Private landowners near lower terminus

Cottonwood, Potter, & Monitor Creeks
Montrose and Delta Counties

Cottonwood, Potter, and Monitor Creek Locations



Cottonwood, Potter, and Monitor Creek Locations



Cottonwood Creek

Natural Environment

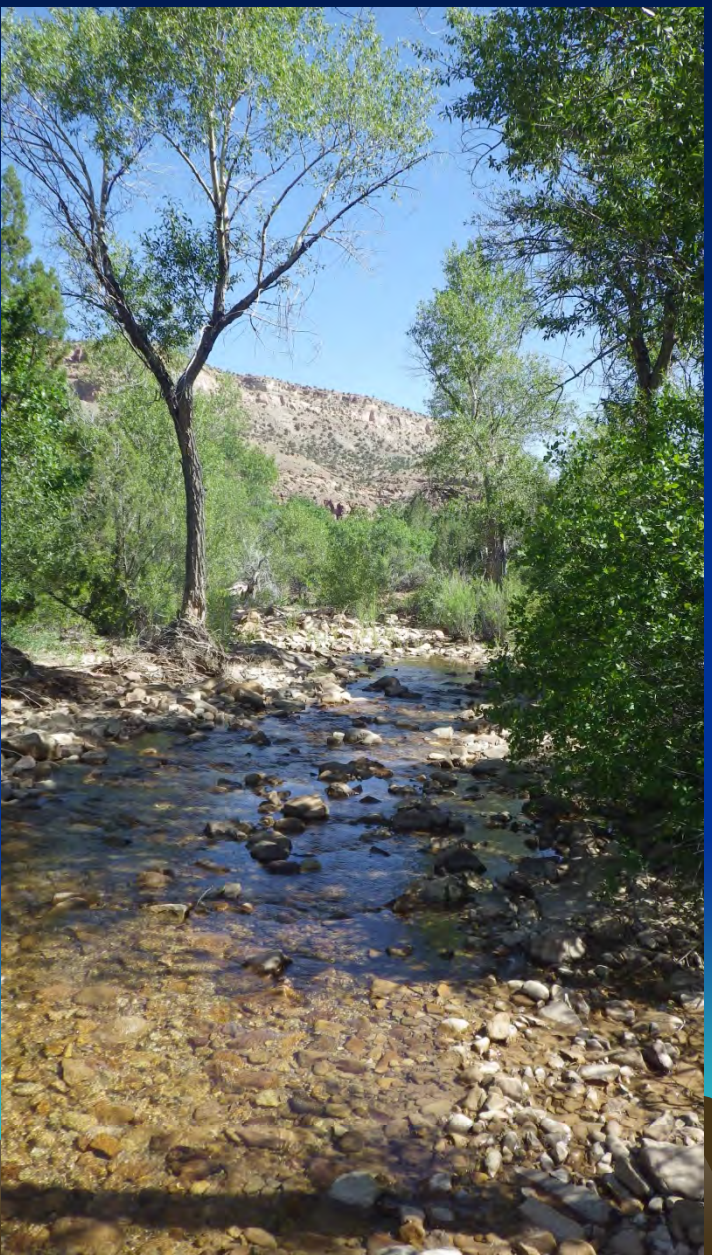
Riparian community:

- Narrowleaf cottonwood / skunkbush sumac
- Globally vulnerable (G3)
- Within CNHP's Cottonwood Creek Potential Conservation Area
- Suitable for Wild & Scenic River designation

Fish Community:

- Bluehead sucker, flannelmouth sucker, speckled dace

Potter Creek



Natural Environment

Riparian community:

- Narrowleaf cottonwood / strapleaf willow / silver buffaloberry
- Critically imperiled globally (G1)
- Within CNHP's Roubideau Creek Potential Conservation Area
- Suitable for Wild & Scenic River designation (in draft plan)

Fish Community:

- Bluehead sucker, flannelmouth sucker, longnose sucker, speckled dace

Monitor Creek

Natural Environment

Riparian community:

- Narrowleaf cottonwood / strapleaf willow / silver buffaloberry (Critically imperiled globally – G1)
- Fremont cottonwood / skunkbush sumac (Globally imperiled – G2)
- Within CNHP's Roubideau Creek Potential Conservation Area
- Suitable for Wild & Scenic River designation (in draft plan)

Fish Community:

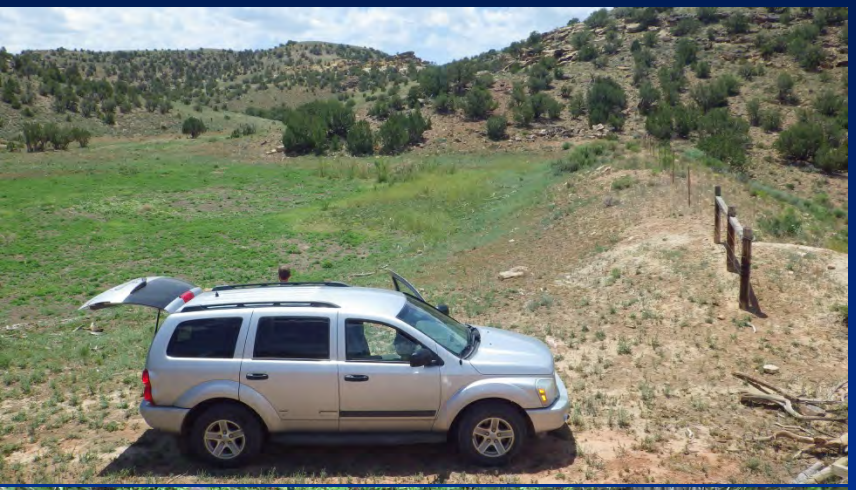
- Bluehead sucker, flannelmouth sucker, long nose sucker, speckled dace

Cottonwood, Potter, and Monitor Creeks

Water Availability:

- Mid-elevation streams with some diversions
- Very large snowmelt runoff flows, very low base flows
- No gage data available

Cottonwood, Potter, and Monitor Creeks



Water Rights

- Cottonwood Creek – more than 40 cfs of rights can dry up creek during base flow periods
- Potter Creek – no water rights
- Monitor Creek – more than 60 cfs of water rights; imported water from Cottonwood Creek

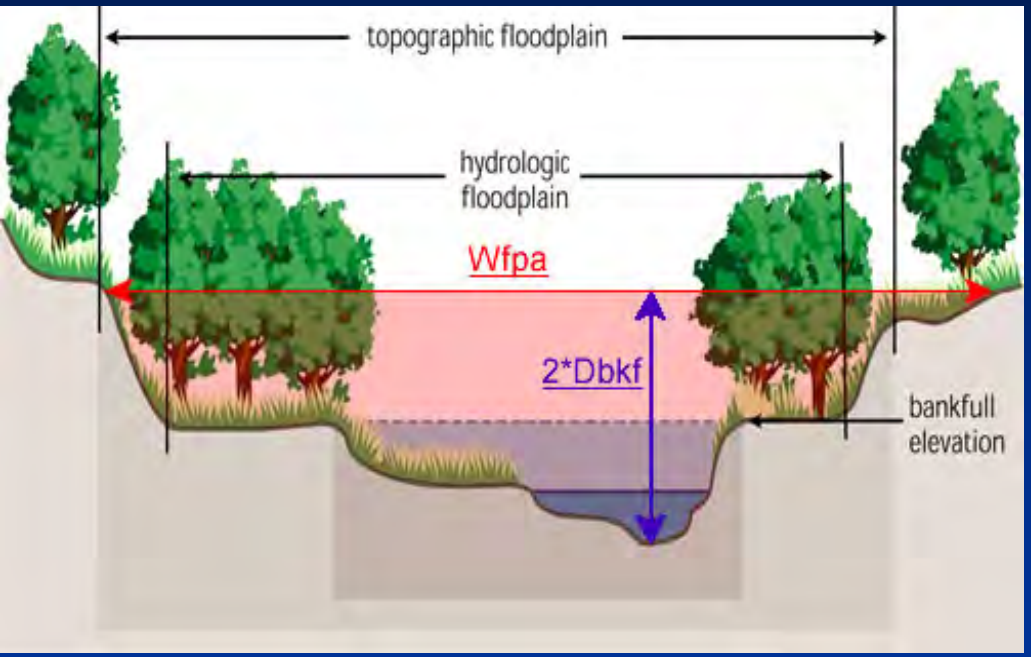
Stakeholders:

- Land and water rights owners on Cottonwood and Monitor
- Montrose / Delta Counties

Riparian Protection Concept

- Preliminary concept presented to Board in May 2014
- CWCB has appropriated flows to protect riparian communities, aquatic macroinvertebrates, wildlife
- Goal is to create an alternative to a federal reserved right that would be created if the creeks are designated as Wild and Scenic Rivers

How do flow rates support riparian communities?



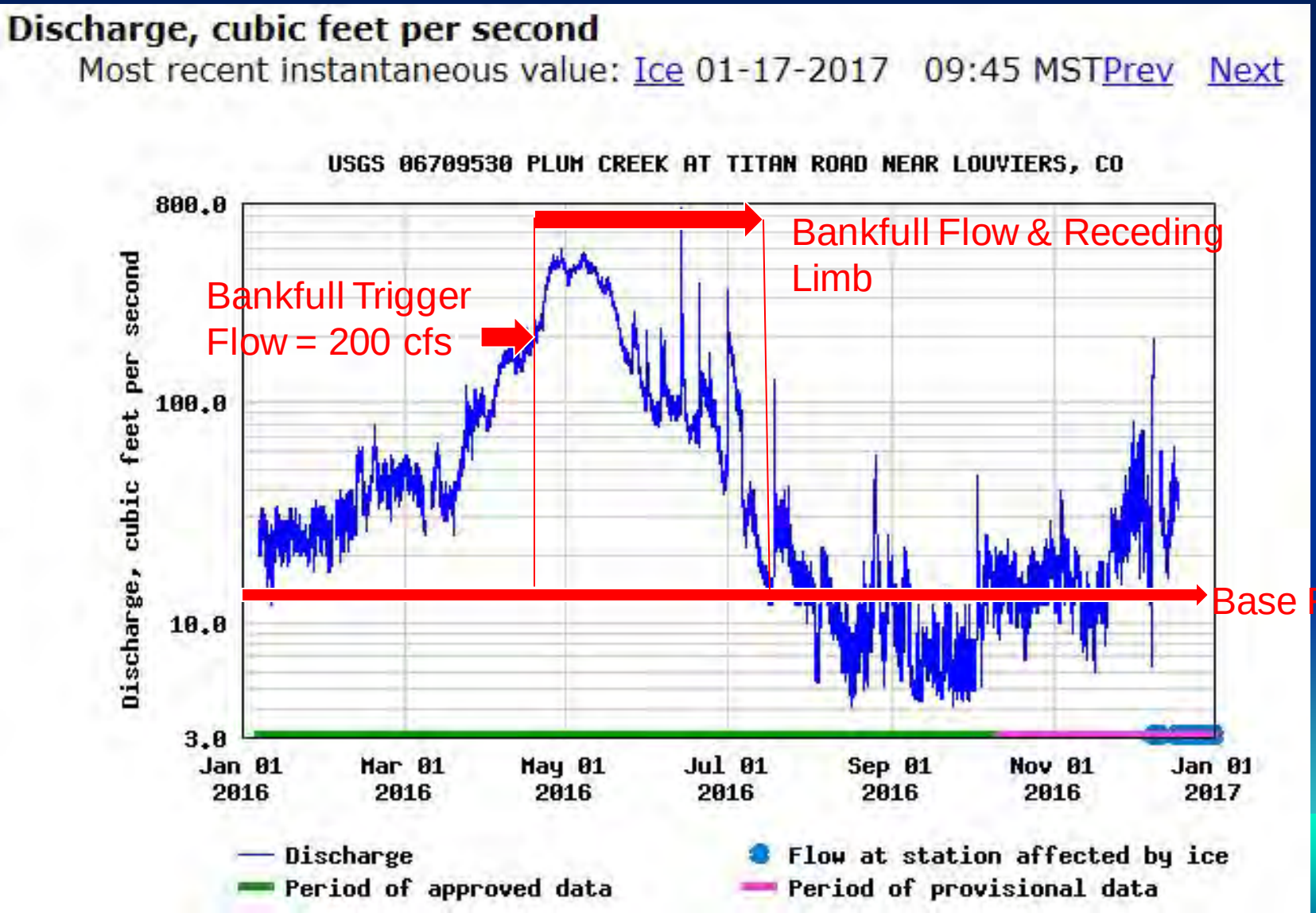
Base flows:

- Maintain wetted root zones
- Help plants withstand high evapotranspiration periods
- Prevent invasion of upland plants that tolerate dry soils

Bankfull Flows (1.5 year return interval) :

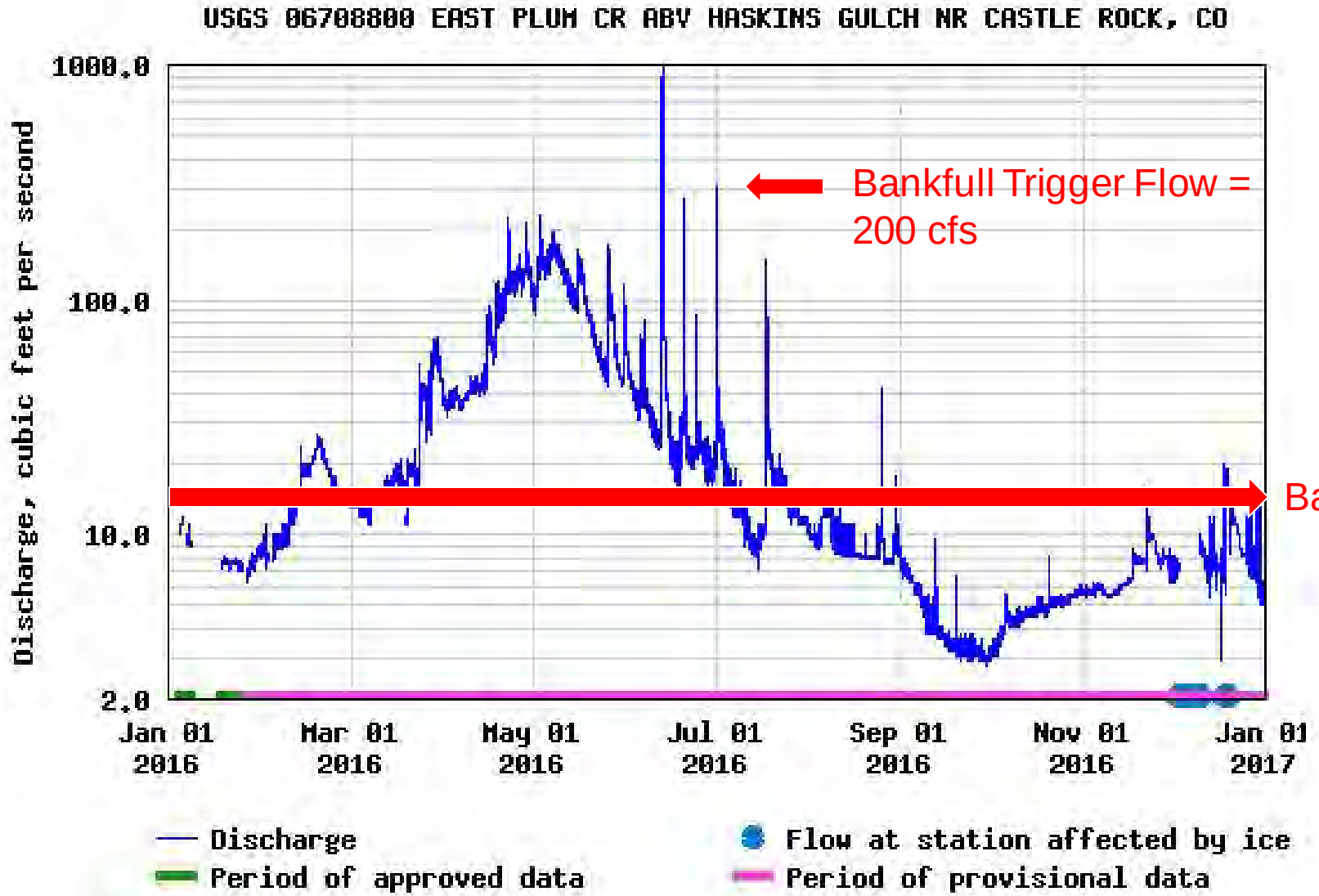
- Create soil moisture conditions for seedlings
- Create disturbed soils for seedling establishment
- Completely recharge alluvial aquifer (root zones)
- Refresh essential nutrients in riparian soils

What parts of hydrograph need to be protected to support riparian community?



Example Wet Year

What parts of hydrograph need to be protected to support riparian community?



Example Dry Year

Cottonwood Creek Recommended Flow Rates

Base Flow Component:

- Add June 16 to March 31 base flow right of 1.87 cfs to the existing ISF right (3.6 cfs from Apr 1 to Jun 15)

Riparian Flood Flow Component:

- When flows hit bankfull trigger at 182 cfs, protect all flows until flow rate recedes to 3.6 cfs.

Potter Creek Recommended Flow Rates

Base Flow Component:

- Rely on existing ISF right:

1.8 cfs Mar 1 to Mar 31

4.0 cfs Apr 1 to Jun 15

1.8 cfs Jun 16 to Jul 31

1.4 cfs Aug 1 to Feb 29

Riparian Flood Flow Component:

- When flows hit bankfull trigger at 47 cfs (above confluence with Monitor) or 213 cfs (below confluence with Monitor), protect all flows until flow rate recedes to 1.4 cfs.

Monitor Creek Recommended Flow Rates

Base Flow Component:

- Establish new ISF right:

2.4 cfs Mar 1 to Mar 31

4.8 cfs Apr 1 to Jun 15

2.4 cfs Jun 16 to Jul 31

1.5 cfs Aug 1 to Feb 29

Riparian Flood Flow Component:

- When flows hit bankfull trigger at 96 cfs, protect all flows until flow rate recedes to 1.5 cfs.

Cottonwood, Potter, and Monitor Creeks

Issues To Be Addressed With CWCB Staff:

- Water Availability – Riparian flows are available, but not 50% of the time
- Administration – When and where is riparian flow trigger measured and enforced?
- Policy – When and where is protection of riparian flood flows appropriate?

Questions for BLM?

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

Big Dominguez Creek
near Grand Junction