

# 2014 BLM Instream Flow Recommendations



Hubbard Creek  
near Paonia



# 2015 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
- Decree instream flow increases for streams where existing instream rights could more fully protect the natural environment
- Extend existing instream flow water rights to cover BLM lands





# Streams in Water Division 4



Alkali Creek near Delta

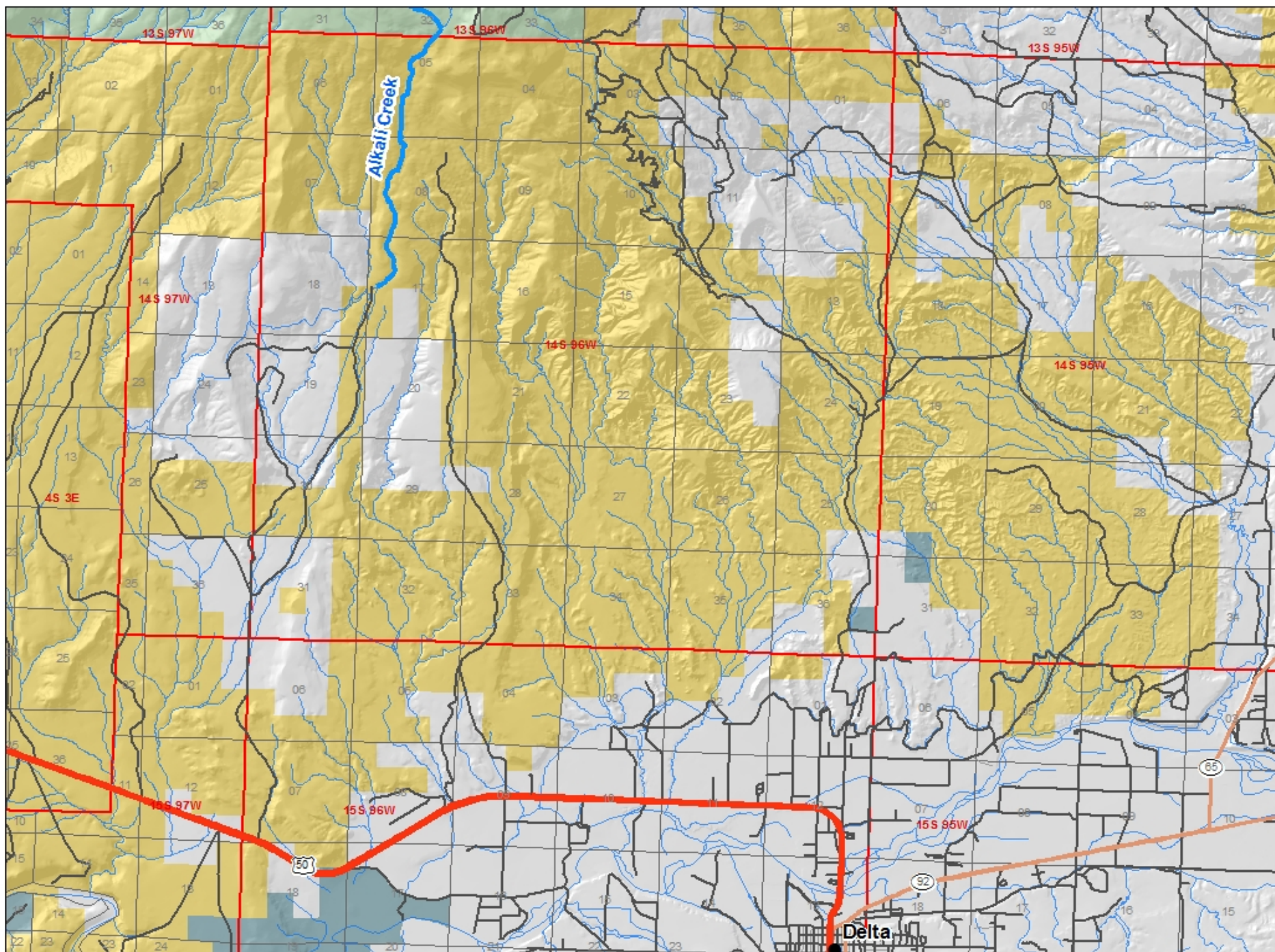


# Alkali Creek

## Delta County









# Alkali Creek



## Natural Environment:

- Fishery – native cutthroat trout – genetic tests underway
- Fish well distributed in reach
- Good macroinvertebrate community for trout
- Riparian community – alder, dogwood, narrowleaf cottonwood, many herbaceous species



# Alkali Creek



Proposed ISF rates:

*Headwaters to Lone Starr  
Ditch*

1.9 cfs May 1 to Aug 15

0.65 cfs Aug 16 to Apr 30



# Alkali Creek

## Water Availability:

- Headwaters stream
- Large springs provide base flow; some snowmelt runoff
- No gage data available

## Water Rights:

- Lone Starr Ditch – 6.5 cfs (proposed lower terminus)



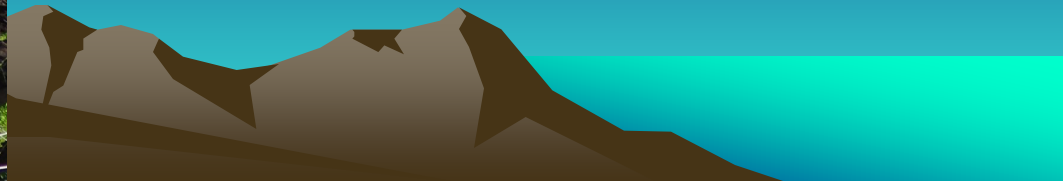


# Alkali Creek



## Stakeholders:

- Owner of Lone Starr Ditch
- US Forest Service
- Colorado Parks and Wildlife
- Colorado River District
- Delta County



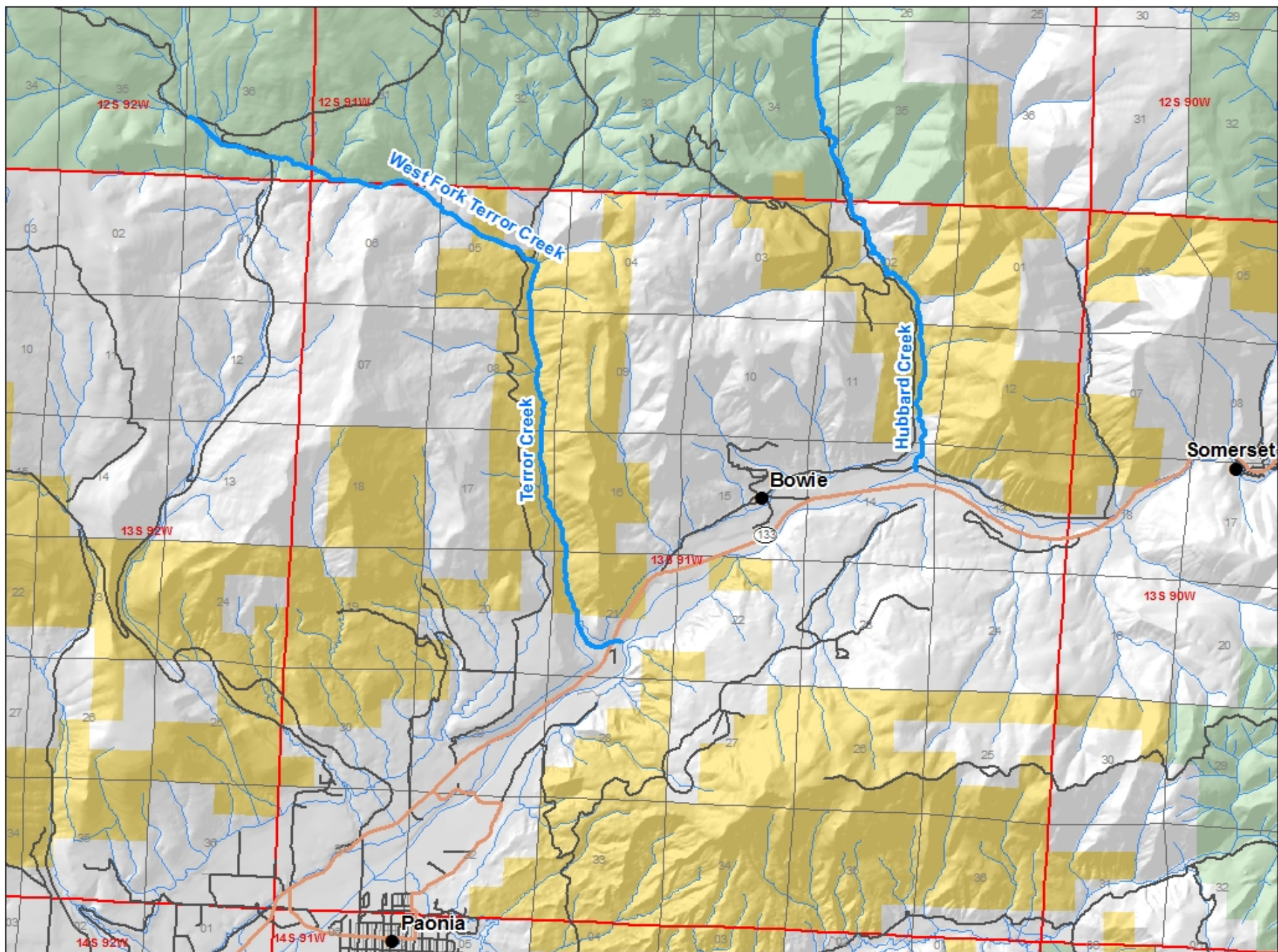


# Hubbard Creek

## Delta County









# Hubbard Creek



## Natural Environment:

- Fishery – Speckled dace, bluehead sucker, rainbow trout, white sucker
- Potential nursery habitat for North Fork Gunnison
- Willow-alder-cottonwood riparian community



# Hubbard Creek



Existing upstream ISF water right, appropriated in 1984:

- 3.0 cfs, year round
- Terminates at Forest Service boundary
- This recommendation would create protection for additional two miles



# Hubbard Creek



## Proposed ISF rates:

*USFS boundary to Deer Trail Ditch*

- 8.3 cfs Apr 1 to June 30
- 3.0 cfs July 1 to Nov 30
- 2.0 cfs Dec 1 to Mar 31

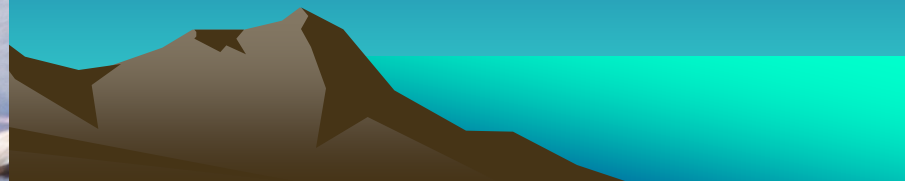


# Hubbard Creek



## Water Availability:

- Reach is low in watershed
- Snowmelt driven hydrology
- Gage data available
- Approx 60 cfs of water rights within watershed





# Hubbard Creek

## Stakeholders:

- North Fork Water Conservancy District
- Grand Mesa Water Conservancy District
- Upstream water rights owners
- Coal companies developing federal leases
- Delta County



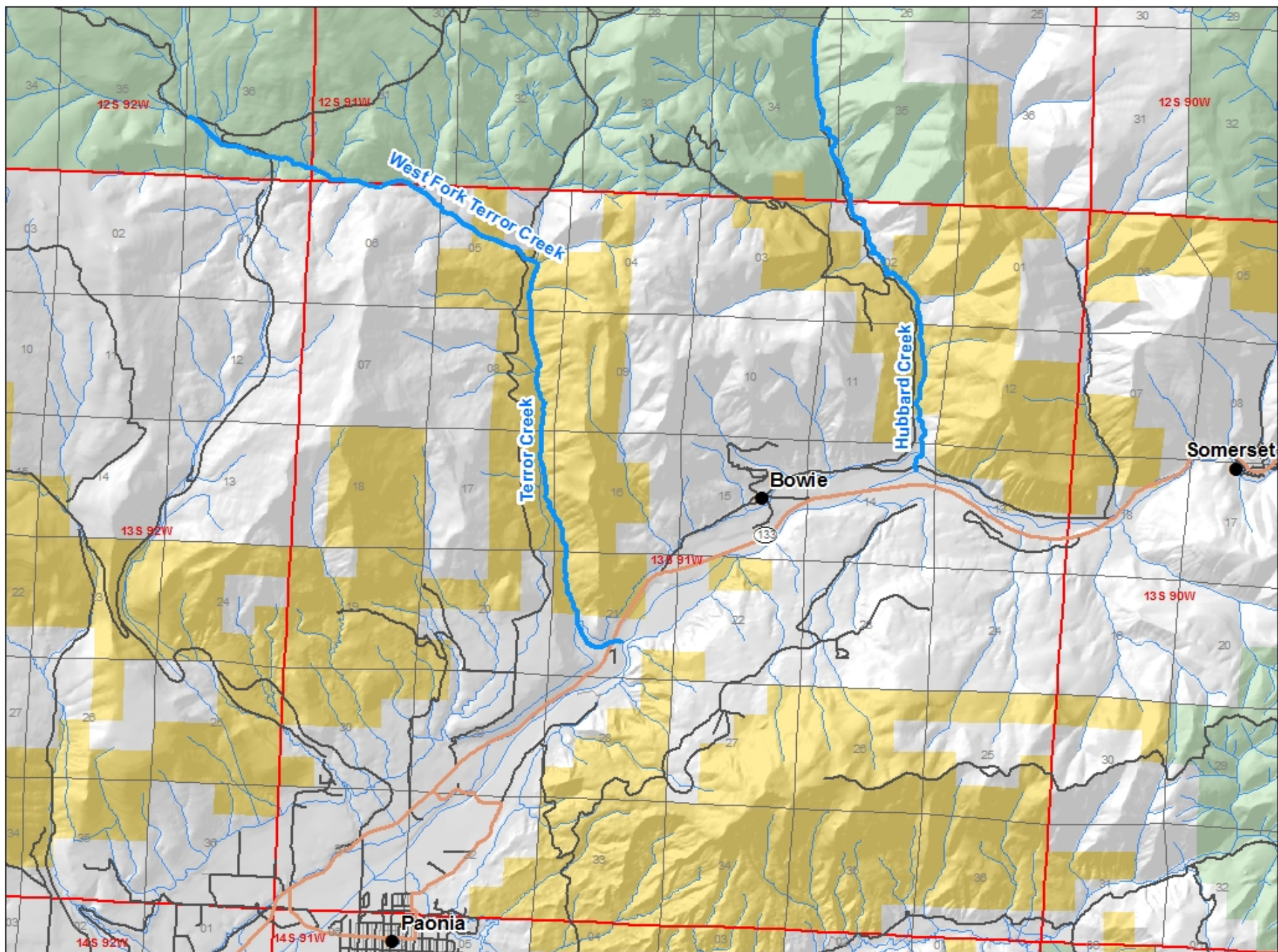


# Terror Creek

## Delta County









# Terror Creek



## Natural Environment:

- Fishery – speckled dace and native cutthroat trout (unknown genetic purity)
- Cottonwood-alder-willow-blue spruce riparian; in excellent condition
- Stream is well shaded and very stable



# Terror Creek



## Proposed ISF Rates:

*Confluence of East Fork and West Fork to Fawcett Ditch*

- 4.8 cfs April 1 to June 30
- 3.9 cfs July 1 to Nov 30
- 1.5 cfs Dec 1 to March 31





# Terror Creek



## Water Availability:

- Snowmelt runoff hydrology somewhat influenced by Overland Ditch diversions from multiple tributaries high in the watershed
- Gage data available

## Water Rights Within Reach:

- Terror Ditch - 13.5 cfs
- Fawcett Ditch - 1.49 cfs
- Holybee Ditch – 0.4 cfs



# Terror Creek



## Stakeholders:

- Owners of Terror, Fawcett, Holybee, and Overland ditches
- North Fork Water Conservancy District
- Grand Mesa Water Conservancy District
- Coal companies developing federal leases
- Delta County



# Streams in Water Division 5



Colorado River near State Bridge

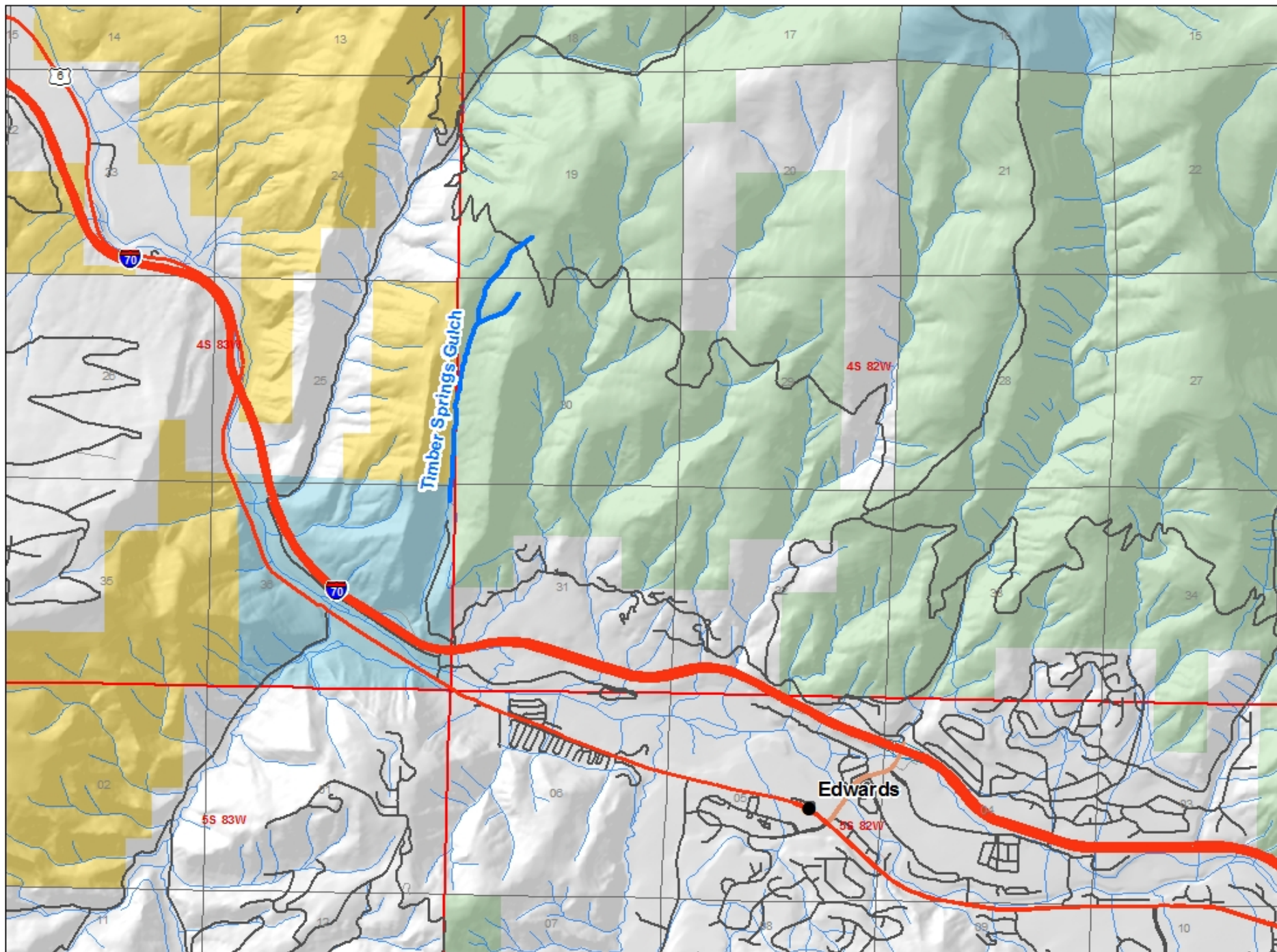


# Timber Springs Gulch

## Eagle County









# Timber Springs Gulch



## Natural Environment:

- Fishery – Native cutthroat trout; blue lineage
- Blue spruce – willow – alder riparian community
- High gradient stream in narrow canyon; many drop pools, generally small substrate
- Pristine and extensive spring complexes



# Timber Springs Gulch



## Proposed ISF Flow Rates:

*Spring complex to  
headgate of Groff Ditch*

- 1.3 cfs Apr 1 to Oct 31
- 1.0 cfs Nov 1 to Mar 31



# Timber Springs Gulch



## Water Availability:

- Flow 100% dependent upon flow from spring complex
- Snowmelt doesn't influence stream – no stream channel above springs
- Collect additional discharge measurements to verify spring flow

## Water Rights:

- None; first ditch is recommended as lower terminus

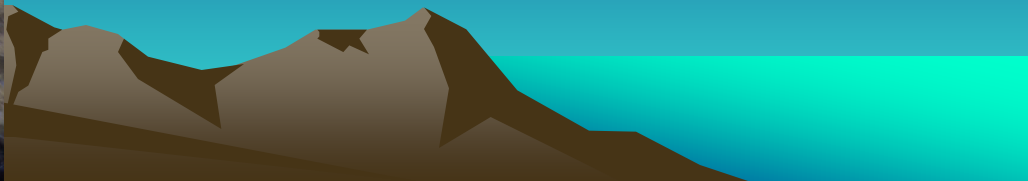


# Timber Springs Gulch



## Stakeholders:

- Eagle County
- Owner of Groff Ditch
- Homeowners Association



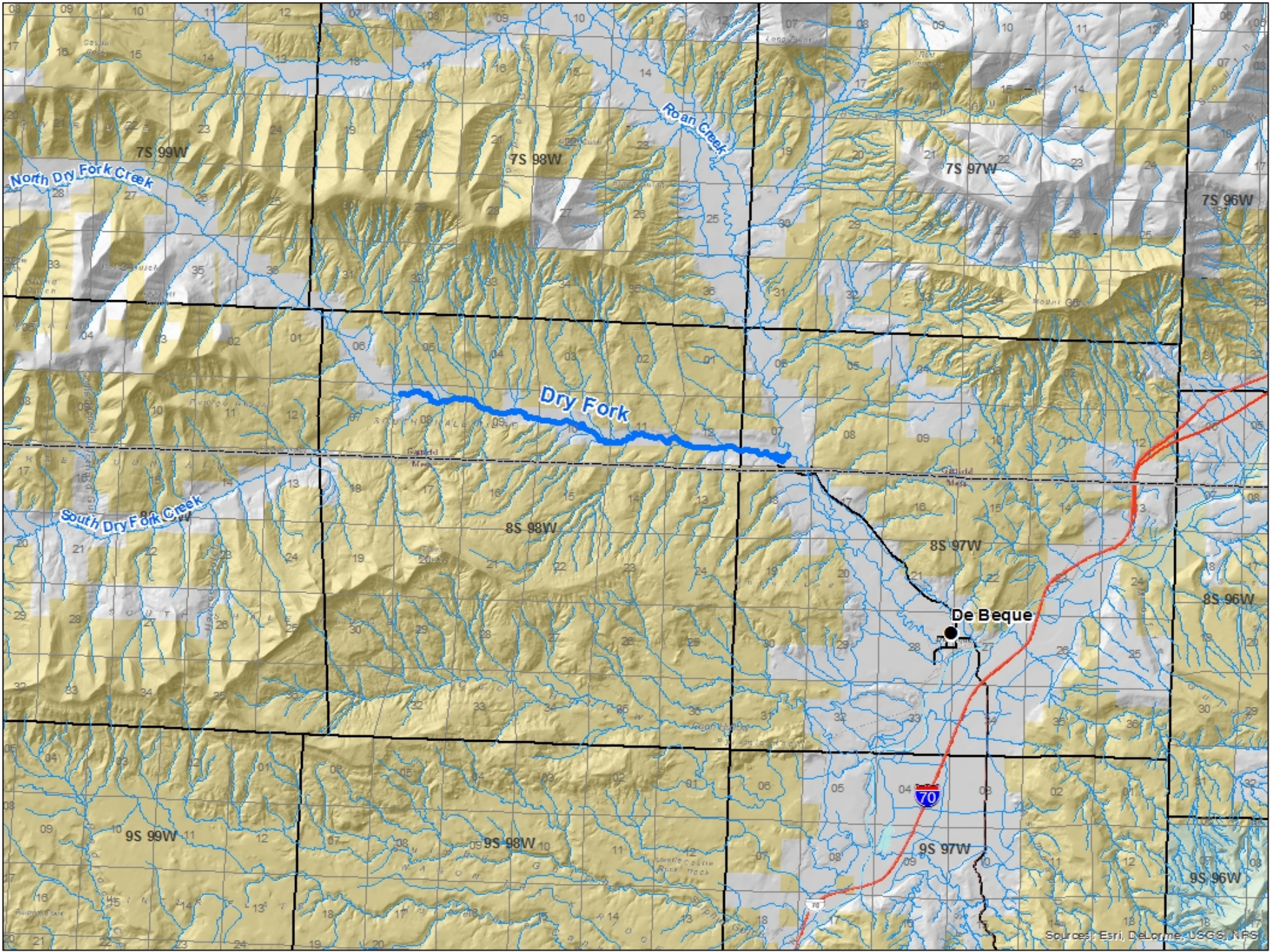


# Dry Fork Roan Creek

## Garfield County







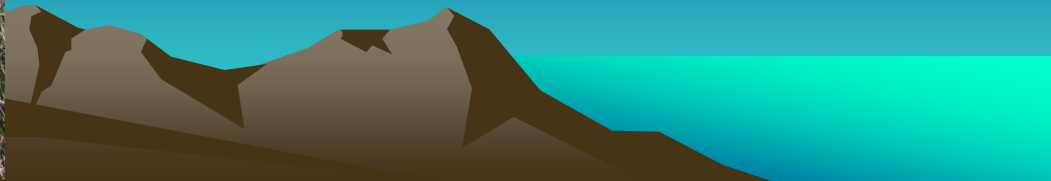


# Dry Fork Roan Creek



## Natural Environment:

- Fishery: Speckled dace, brook stickleback, fathead minnow
- Amphibians: leopard frogs
- Riparian: Sedge-Rush-Willow-Cottonwood
- Narrow stream; small substrate; many overhanging banks
- Recovering from overuse by livestock





# Dry Fork Roan Creek



## Proposed Flow Rates:

*Confluence of North Fork  
and South Fork to  
confluence with Roan Creek*

- 1.4 cfs Mar 1 to May 31
- 1.2 cfs Jun 1 to Nov 30
- 1.05 cfs Dec 1 to Feb 28



# Dry Fork Roan Creek

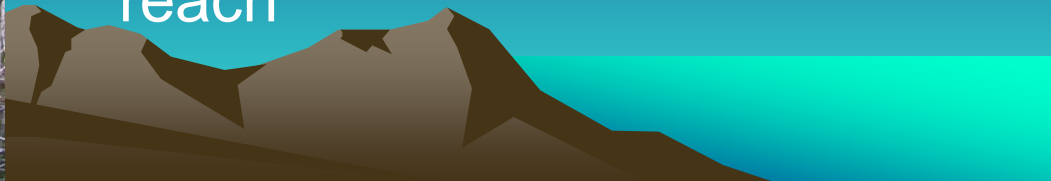


## Water Availability:

- Segment is low in watershed;
- Gage data is available to support water availability
- Flow rates influenced by return flows from irrigation practices

## Water Rights:

- 6 ditches upstream – 9.2 cfs
- 2 ditches within reach – 4.9 cfs
- Most senior rights are located downstream from proposed reach





# Dry Fork Roan Creek



## Stakeholders:

- Garfield County
- Ditch owners
- Oil and gas companies developing leases in the area



# Streams in Water Division 6



Yampa River near Maybell

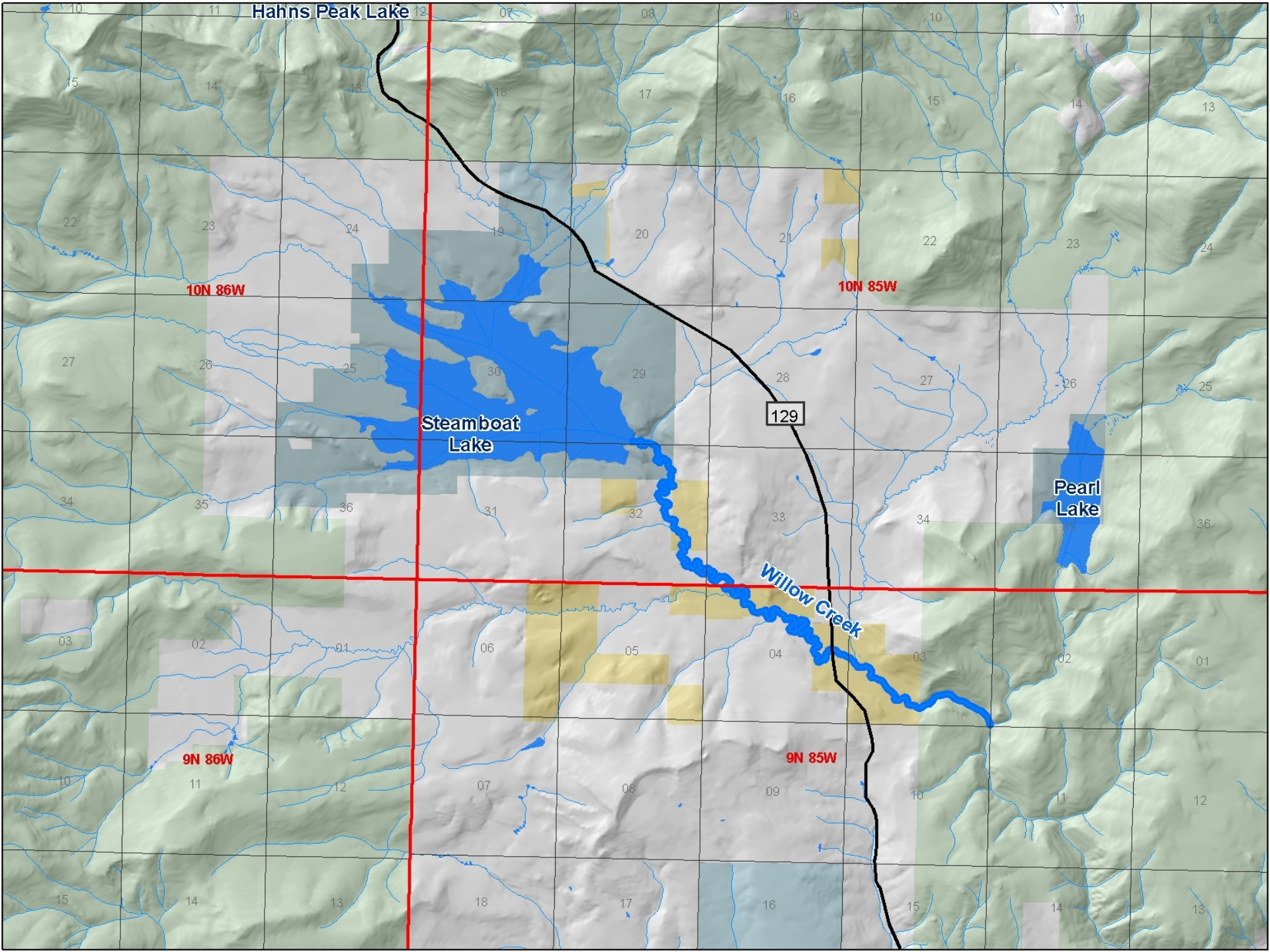


# Willow Creek

## Routt County









# Willow Creek



## Natural Environment:

- Native fishery – mountain suckers, mottled sculpin, speckled dace
- Willow/sedge riparian zone – much of stream channel is not shaded
- Low gradient stream in wide valley



# Willow Creek



Existing ISF water right,  
appropriated in 1977:

- Steamboat Lake to Beaver Creek – 5.0 cfs, year round
- Beaver Creek to Elk River – 7.0 cfs, year round



# Willow Creek



## Proposed Increases:

*Steamboat Lake to  
Beaver Creek*

- 6.9 cfs April 1 to July 31  
(11.9 cfs total ISF right)
- 2.7 cfs August 1 to  
March 31  
(7.70 total ISF right)



# Willow Creek

## Proposed Increases:

Beaver Creek to Lester Creek Segment (no enlargement proposed for lower portion of current ISF reach):

- 13.3 cfs April 1-July 31 (20.3 cfs total ISF right)
- No enlargement proposed for rest of year





# Willow Creek



## Water Availability:

Snowmelt hydrology

Base flows controlled by  
releases from  
Steamboat Lake

Two upstream ditches





# Willow Creek



## Stakeholders:

- Upper Yampa Water Conservancy District
- Steamboat Lake Water and Sanitation District – owns conditional rights
- Tri-State Generation and Transmission Association
- Multiple small landowners
- Colorado Parks & Wildlife





# Willow Creek



## Water Rights:

- Storage rights in Steamboat Lake – 23,000 AF
- Decrees allow part of storage right to be used for augmentation
- Upper Yampa District has requested agreement with CPW to use part of storage to augment out-of-priority depletions in Elk River watershed
- CPW releases 5 cfs from lake outside of snowmelt season

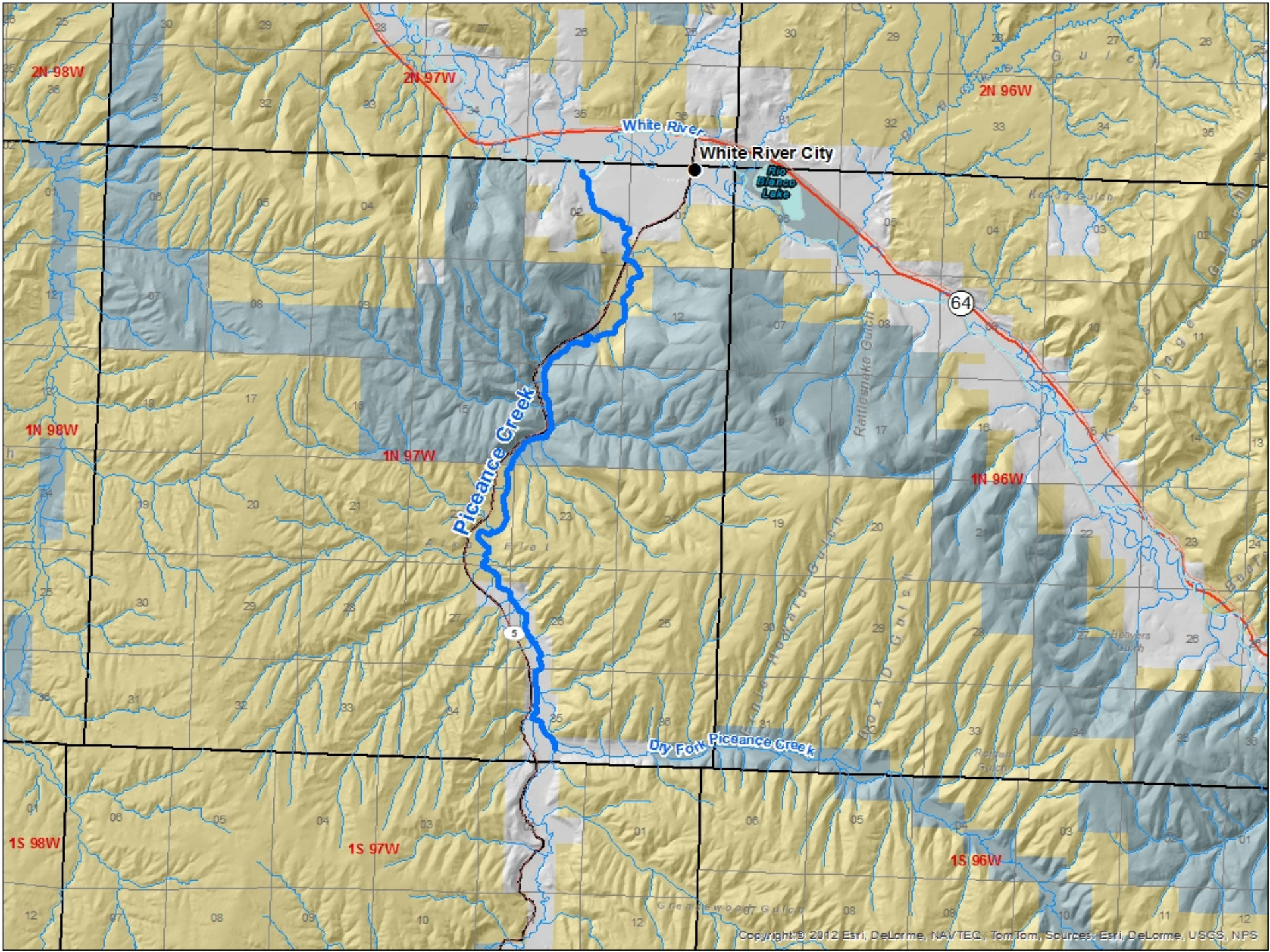


# Piceance Creek

## Rio Blanco County









# Piceance Creek



## Natural Environment:

- Native Fishery: Flannelmouth Sucker, Speckled Dace, Mountain Sucker – important tributary to White River
- Amphibians: Leopard Frog
- Riparian: Willow-Sedges-Rushes
- Moderate gradient stream; confined by bedrock in some locations and meandering in other locations



# Piceance Creek



## Proposed Flow Rates:

*Confluence with Dry Fork to White River*

- 4.0 cfs January 1 to December 31
- R2Cross modeling shows flow rates that meet wetted perimeter, average depth, and average velocity criteria are very close to one another



# Piceance Creek



## Water Availability:

- Segment is at bottom of watershed below numerous diversions
- Excellent gage data available to support water availability
- Recommended flows available 50% of the time June-July; available at least 75% of the time August through May

## Water Rights:

- Two rights within reach
- More than 100 rights upstream



# Piceance Creek



## Stakeholders:

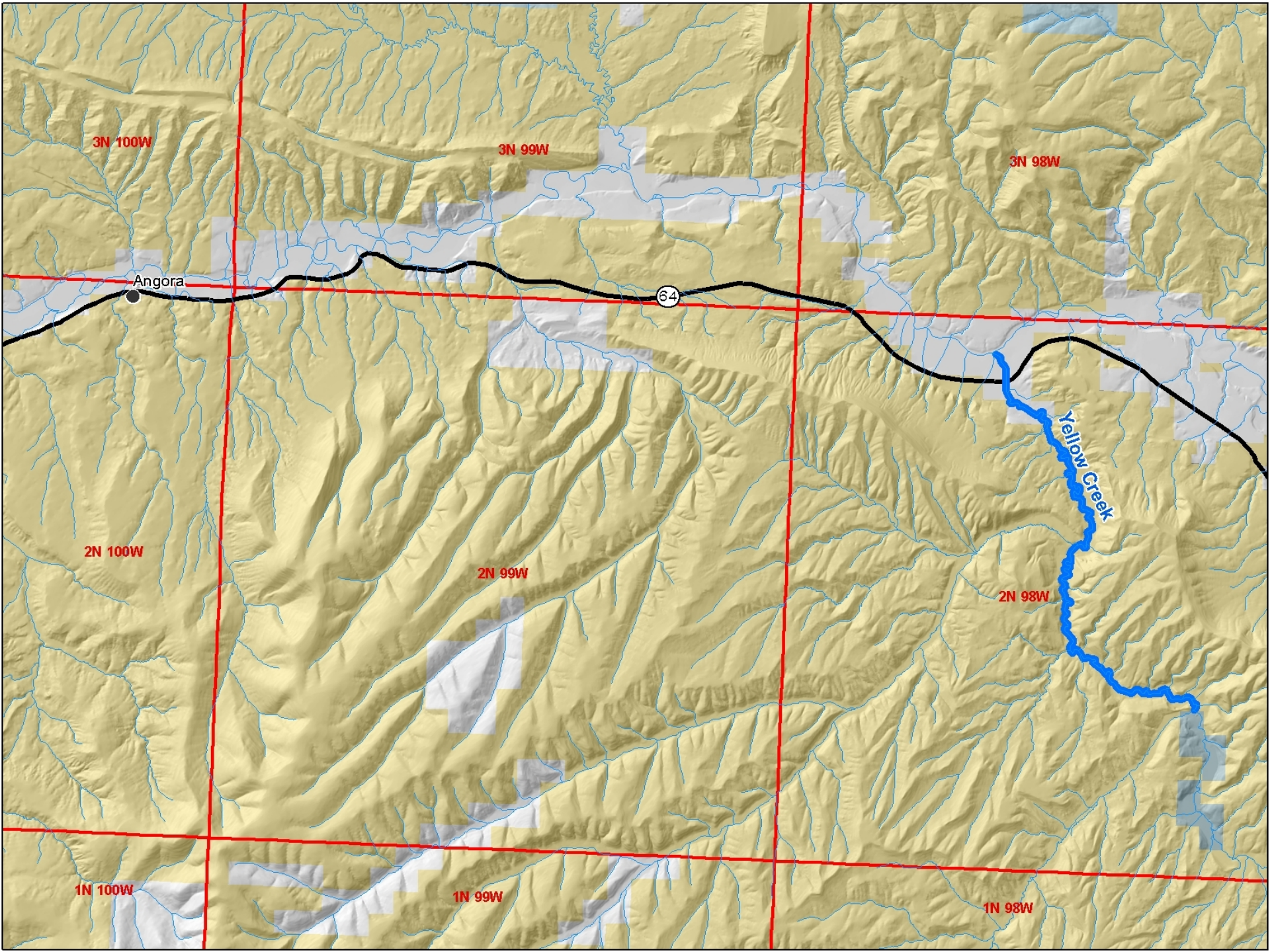
- Rio Blanco County
- Owners of working ranches
- Numerous energy companies, including ExxonMobil, Williams, Barrett, Occidental, Encana



# Yellow Creek Rio Blanco County









# Yellow Creek



## Natural Environment:

Native Fishery –  
speckled dace and  
mountain suckers

Northern leopard frogs

Willow-sedge riparian

Recovering from historic  
livestock and wild  
horse overuse



# Yellow Creek



## Proposed Flow Rates:

*Barcus Gulch to Lambert Spring:*

- 1.5 cfs Apr 1 to Jun 30
- 0.6 cfs Jul 1 to Mar 31

*Lambert Spring to White River:*

- 2.45 cfs Apr 1 to Jun 30
- 1.05 cfs Jul 1 to Mar 31



# Yellow Creek



## Water Availability:

Snowmelt runoff hydrology

Bottom of watershed

Highly dependent on flow  
from springs

## Water Rights:

No water rights within reach

Three upstream ditches,  
totalling 9.4 cfs

Numerous conditional rights  
upstream



# Yellow Creek



## Stakeholders:

Rio Blanco County

Colorado Parks and Wildlife

Energy companies:

Shell, Chevron – oil shale

Natural Soda

Williams Petroleum

BOPCO-building treatment  
plant for produced water

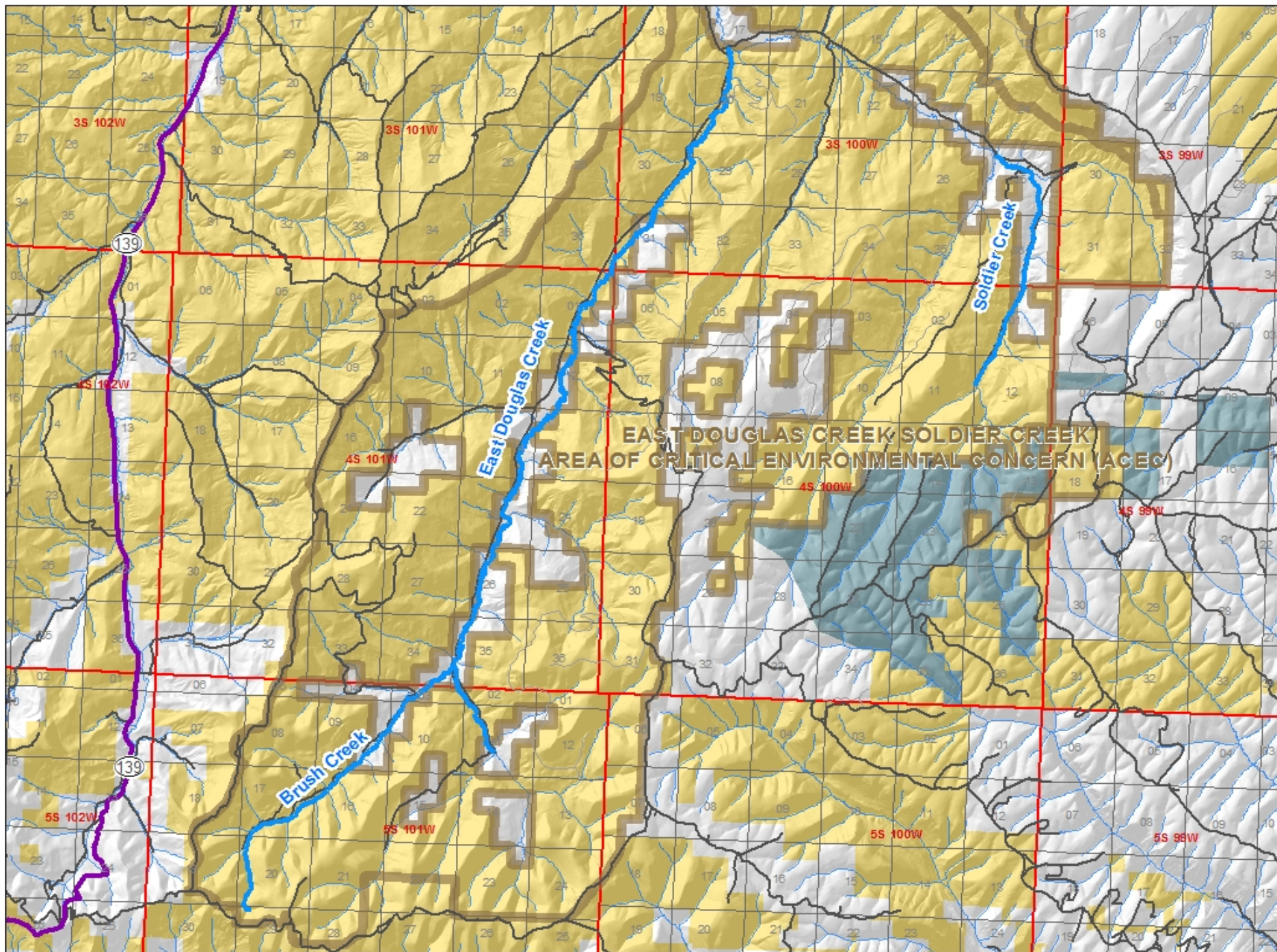


# East Douglas Creek

## Rio Blanco and Garfield Counties









# East Douglas Creek



## Natural Environment:

- Native Fishery: Speckled Dace, Native Cutthroat Trout
- Riparian Community:
  - Blue Spruce-Douglas Fir in upper reaches
  - Sedges-Grasses in lower reach
- Narrow, shaded stream in upper reach    Open, shallower stream in lower reach.



# East Douglas Creek



Existing ISF rights:

*Bear Park Creek to Brush Creek*

1.0 cfs Jan 1 to Dec 31

*Brush Creek to Cathedral Creek*

1.5 cfs Jan 1 to Dec 31



# East Douglas Creek



**Proposed Flow Rates:**  
*Bear Park Creek to Brush Creek*

**3.1 cfs May 1 to July 15**  
(requires 2.1 cfs increase)

**1.5 cfs July 16 to Oct 15**  
(requires 0.5 cfs increase)

**No change to existing ISF**  
**Oct 16 to Apr 30**



# East Douglas Creek



## Proposed Flow Rates:

*Brush Creek to Cathedral Creek*

- 2.0 cfs May 1 to Oct 15  
(requires 0.5 cfs increase)
- No change to existing ISF  
right between Oct 16 and  
Apr 30



# East Douglas Creek



## Water Availability:

- Segments located close to top of watershed; losing stream
- Snowmelt runoff driven; base flows well supported by flow from springs
- No gage data, but gage data available from similar watersheds
- Some diversion records



# East Douglas Creek



## Water Rights:

- No water rights in upper reach
- Mitchell Ditch located in lower reach - 2.59 cfs



# East Douglas Creek



## Stakeholders:

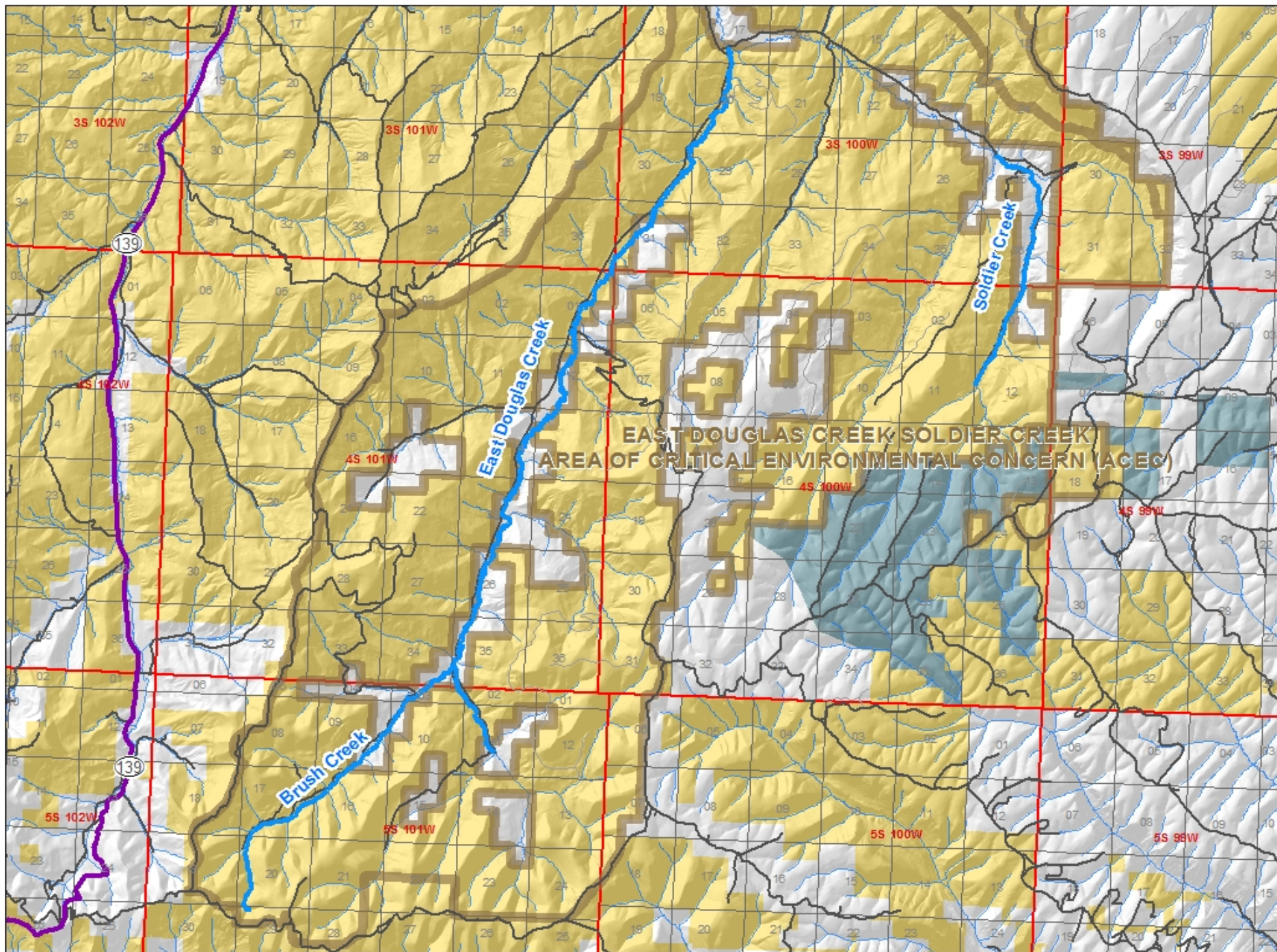
- Rio Blanco and Garfield Counties
- Owners of ranches along creek



# Brush Creek Garfield County









# Brush Creek



## Natural Environment:

- Fishery: rainbow trout, cutthroat trout
- Riparian Community:
  - Blue Spruce-Douglas Fir in upper reaches
  - Sedges-Grasses in lower reach
- Narrow, more shaded stream in upper part of reach    Open, shallower stream in lower part of reach.





# Brush Creek



## Proposed Flow Rates:

*Headwaters to confluence  
with East Douglas Creek*

0.65 cfs April 1 to Oct 31

0.5 cfs Nov 1 to March 31

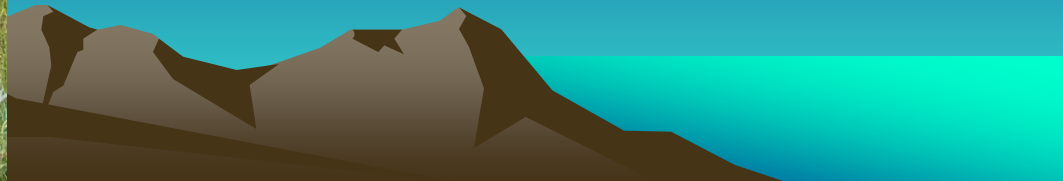


# Brush Creek



## Water Availability:

- Segments at top of watershed
- Snowmelt runoff driven; base flows well supported by flow from springs
- No gage data, but gage data available from similar watersheds
- No water rights in reach





# Brush Creek



## Stakeholders:

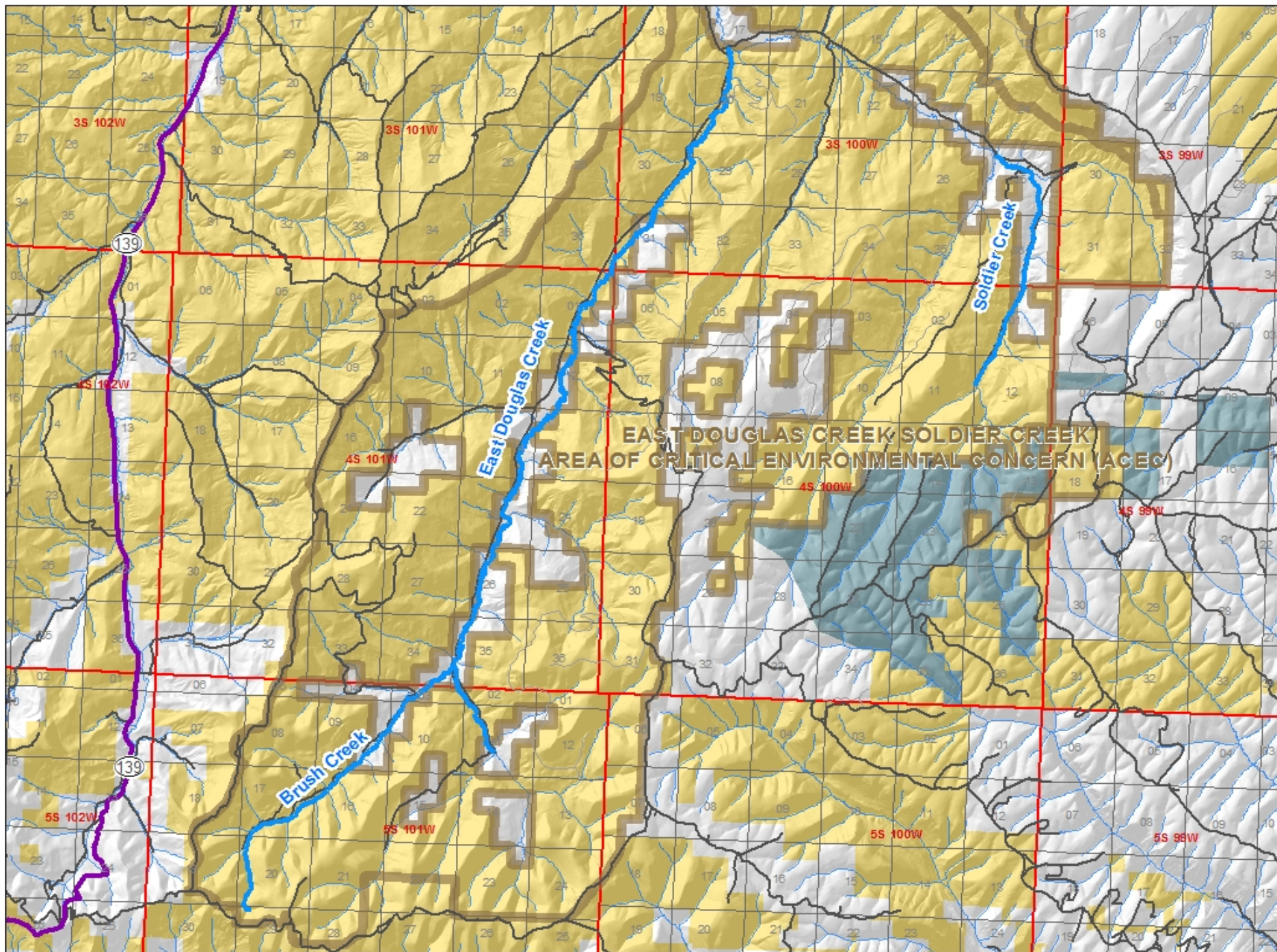
- Garfield County
- Owners of ranches along creek



# Soldier Creek Garfield County









# Soldier Creek



## Natural Environment:

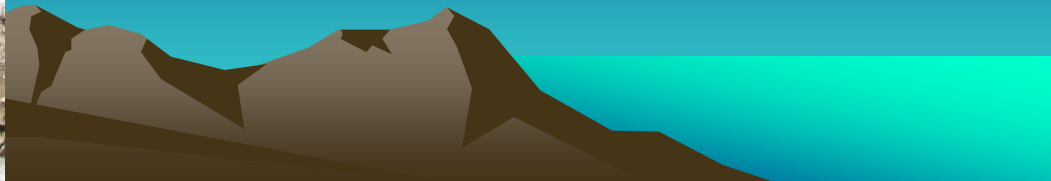
- Fishery: native cutthroat trout; unknown genetic purity
- Willow-rush-sedge riparian community
- Riparian community in good condition, but lack of tree species limits shading.



# Soldier Creek



Existing ISF rights  
appropriated in 1985:  
1.5 cfs Jan 1 to Dec 31





# Soldier Creek



## Proposed Flow Rates:

*Confluence of Right Fork and Middle Fork to confluence with Cathedral Creek*

- 2.3 cfs May 1 to Sep 15 (requires 0.8 cfs increase)
- No change to existing ISF right Sep 16 to April 30

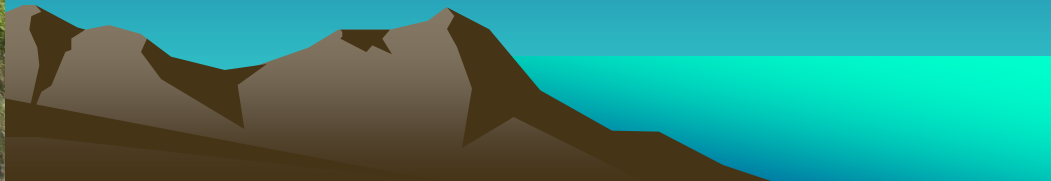


# Soldier Creek



## Water Availability:

- Segment at top of watershed
- Snowmelt runoff driven; base flows well supported by flow from springs
- No gage data, but gage data available from similar watersheds
- No water rights in reach





# Soldier Creek



## Stakeholders:

- Garfield County
- Owners of ranches along creek



# Questions for BLM?

Contact Roy Smith at [r20smith@blm.gov](mailto:r20smith@blm.gov) or 303-239-3940



Big Dominguez Creek