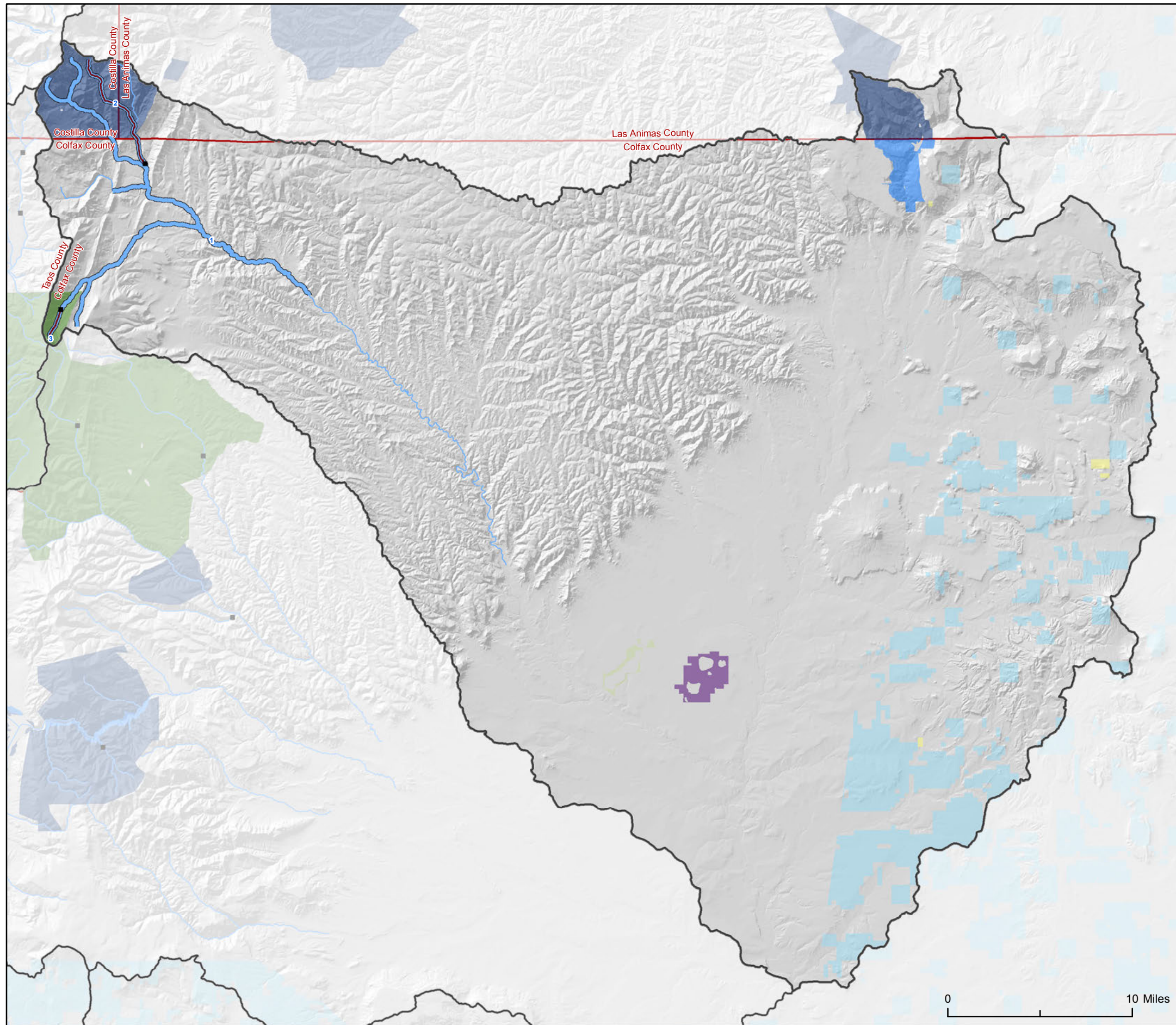


# Canadian Headwaters (11080001)



## Rio Grande Cutthroat Trout

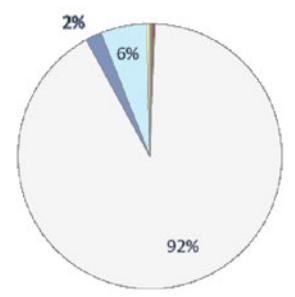
- Conservation Population 52 Mi. (7% of Total Conservation Populations)
- Core Population 9 Mi.
- Historic Distribution 89 Mi.

## Barrier

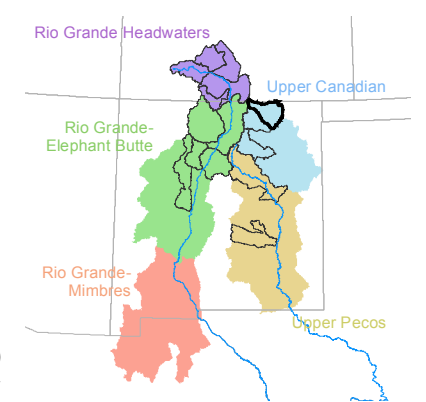
- Complete
- Partial
- Unknown

## Ownership

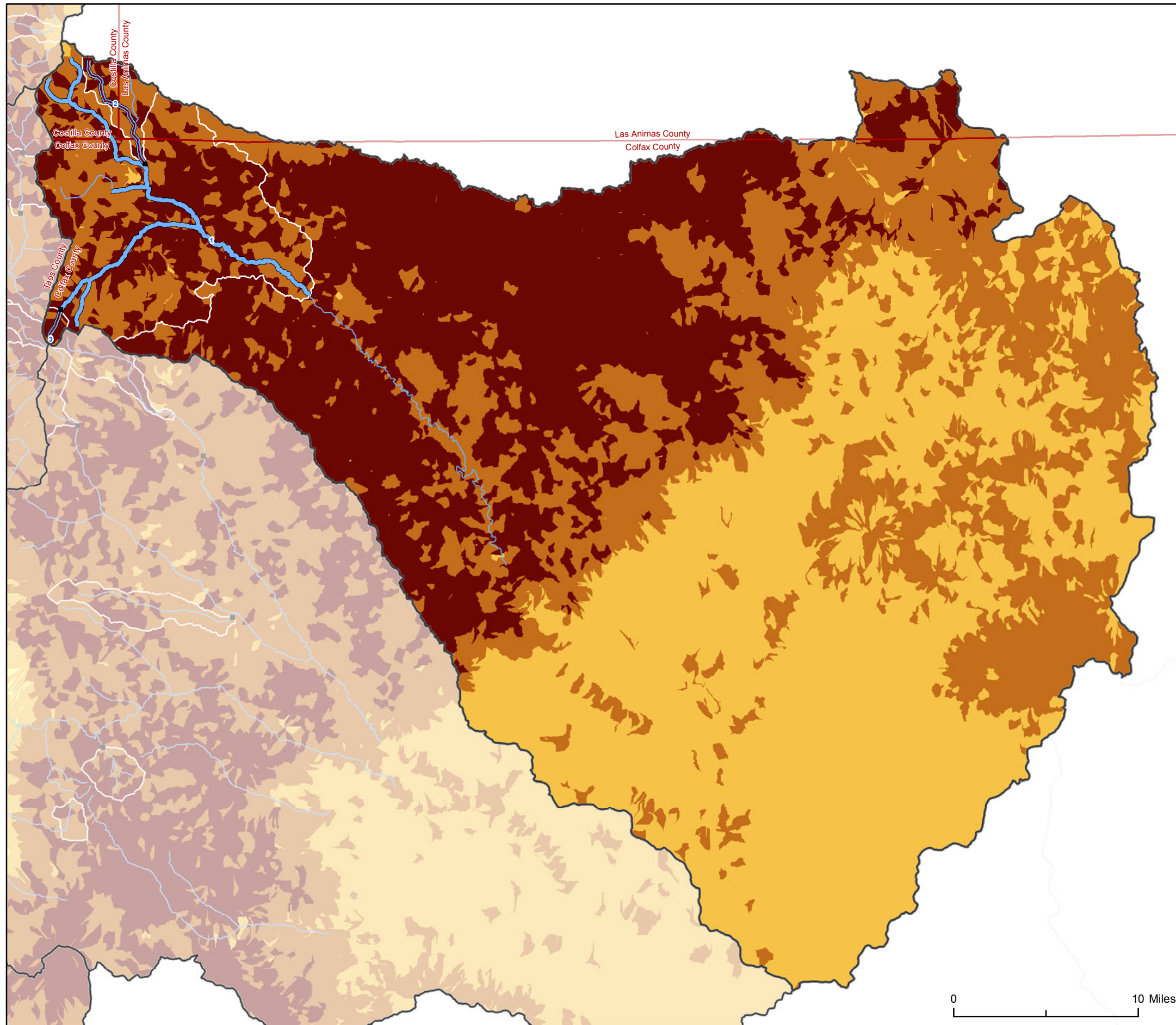
- BLM
- FWS
- USFS
- State Trust
- State Fish & Wildlife
- Other State
- Other Federal



Canadian Headwaters (11080001)  
Overview



# Overall Risk: Wildfire Risk + Debris Flow Risk



## Rio Grande Cutthroat Trout

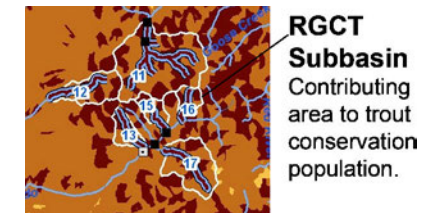
- Conservation Population 52 Mi. (7% of Total Conservation Populations)
- Core Population 9 Mi.
- Historic Distribution 89 Mi.

## Barrier

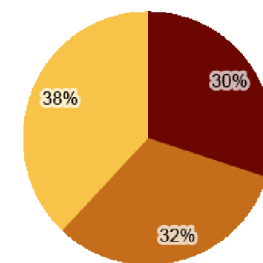
- Complete
- Partial
- Unknown

## Overall Risk

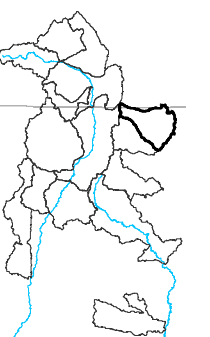
- Moderate
- High
- Extreme



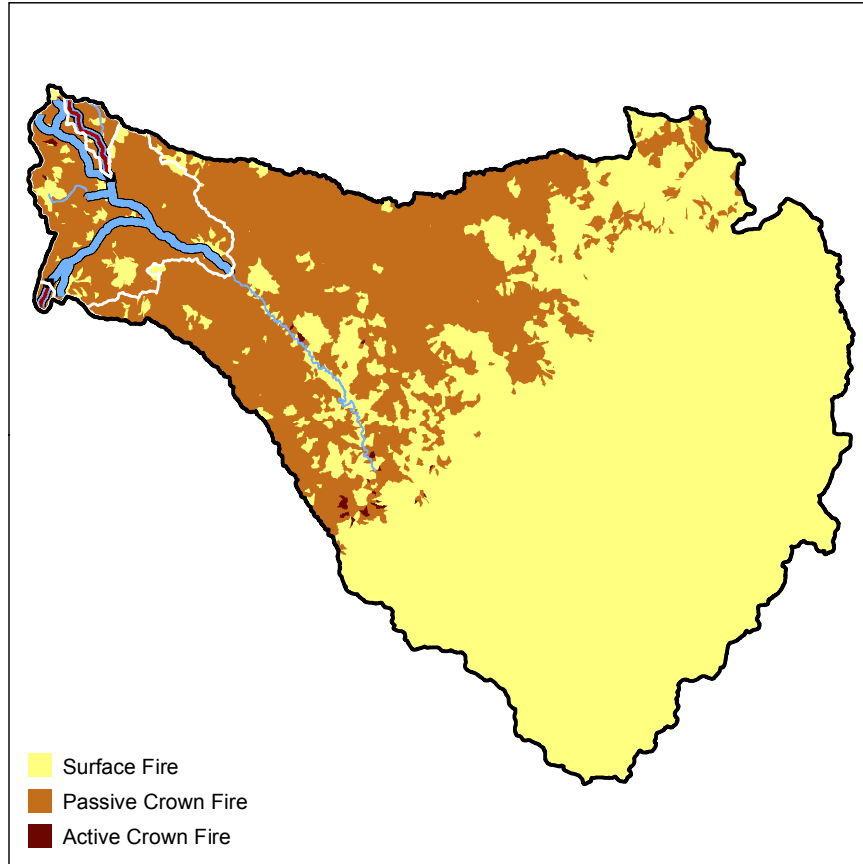
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



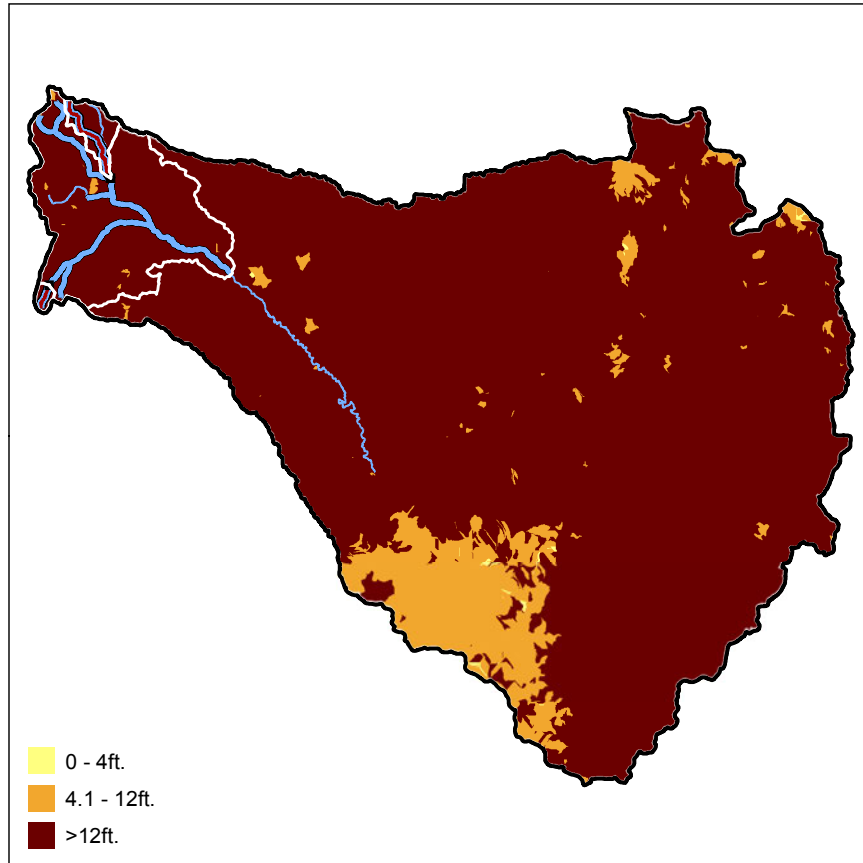
Canadian Headwaters (11080001)  
Overall Risk from Fire



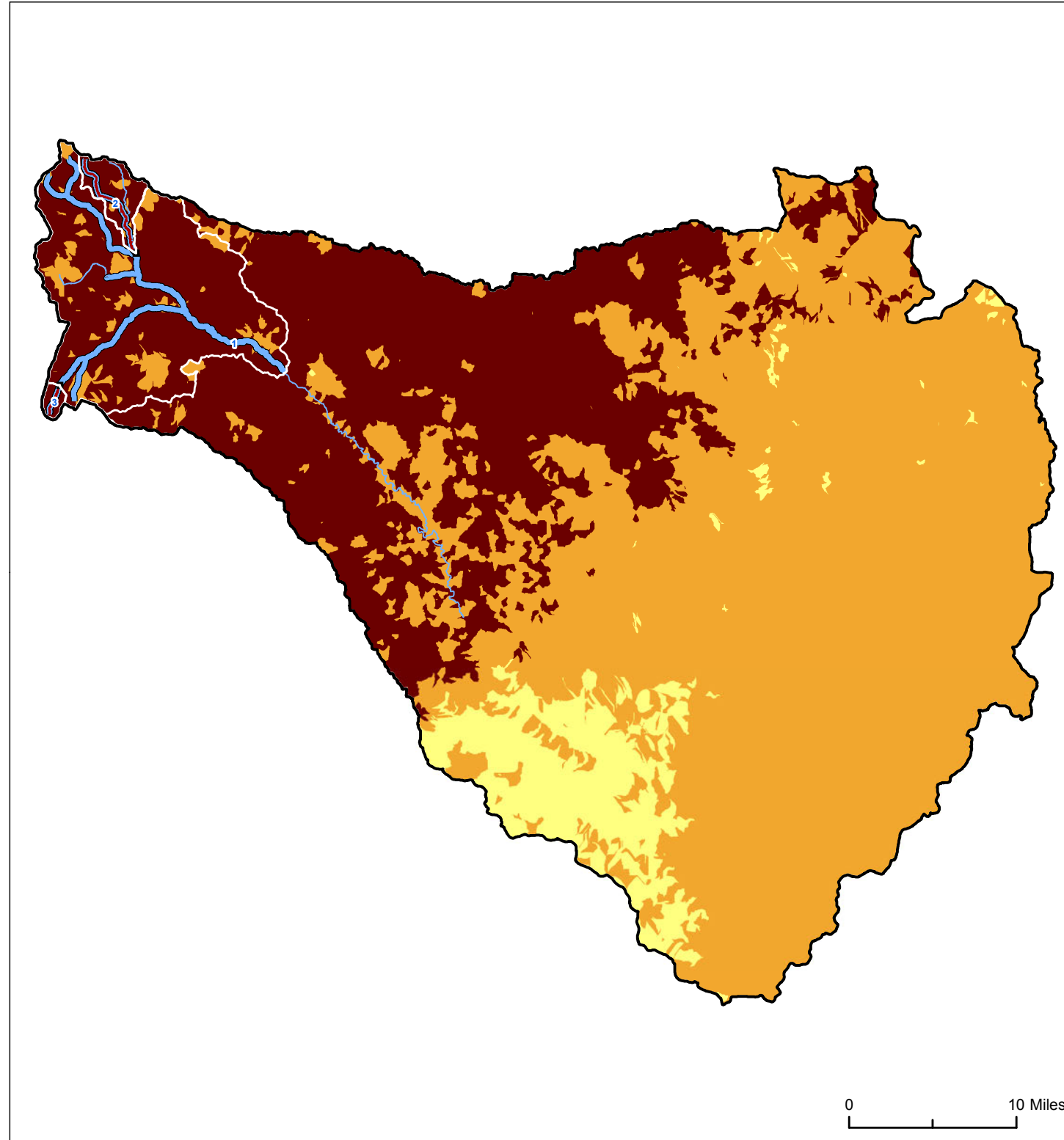
## Crown Fire Potential



## Flame Length



## Overall Wildfire Risk



Overall Wildfire Risk can be considered as the combined hazard of both crown fire potential and flame length. Crown fire is the movement into and through the canopy. Passive crown fires are fires that move through the crown intermittently, and active crown fires are fires that carry continuously through the crowns. Crown fires typically move quickly and are very intense. Flame length is an indicator of fire intensity at the active flaming front and is a good measure of what fire suppression resources can be used on a fire. Flame lengths of <4 feet indicate fires where direct attack is feasible; flame lengths of 4 to 12 feet indicate fires with substantial resistance to control and indirect attack is recommended; flame lengths of >12 feet indicate extreme fires where control of any kind is difficult and safety of firefighters is a concern. The drainage areas at highest risk from wildfire represent areas where the majority of the drainage basin is expected to have the potential for crown fires and flame lengths of >12 feet.

Crown fire potential and expected flame lengths were modeled using FlamMap, an interagency fire behavior mapping and analysis program. Details on the modeling effort can be found in Appendix A.

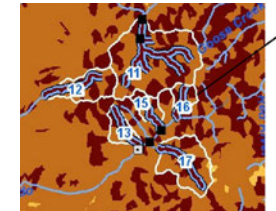
# Wildfire Risk

### Rio Grande Cutthroat Trout

- Conservation Population 52 Mi. (7% of Total Conservation Populations)
- Core Population 9 Mi.
- Historic Distribution 89 Mi.

### Barrier

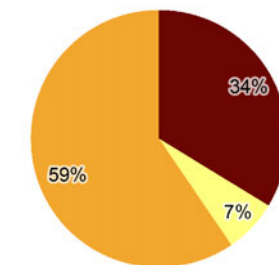
- Complete
- Partial
- Unknown



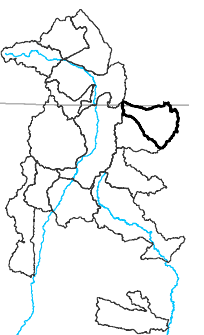
**RGCT Subbasin**  
Contributing area to trout conservation population.

### Overall Risk

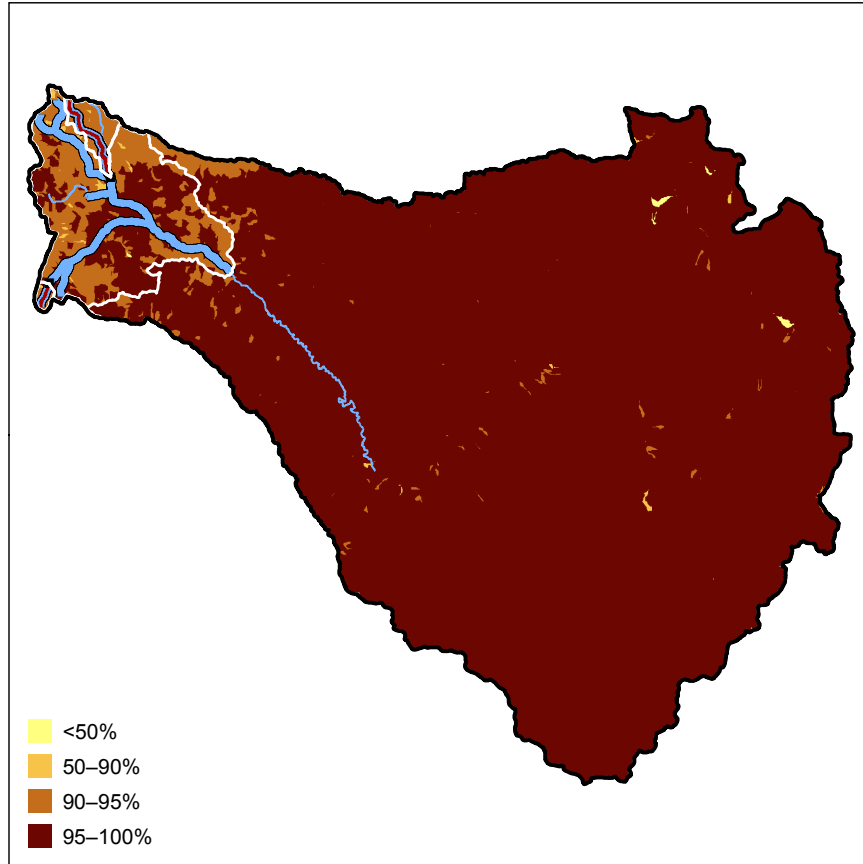
- Low
- Moderate
- High



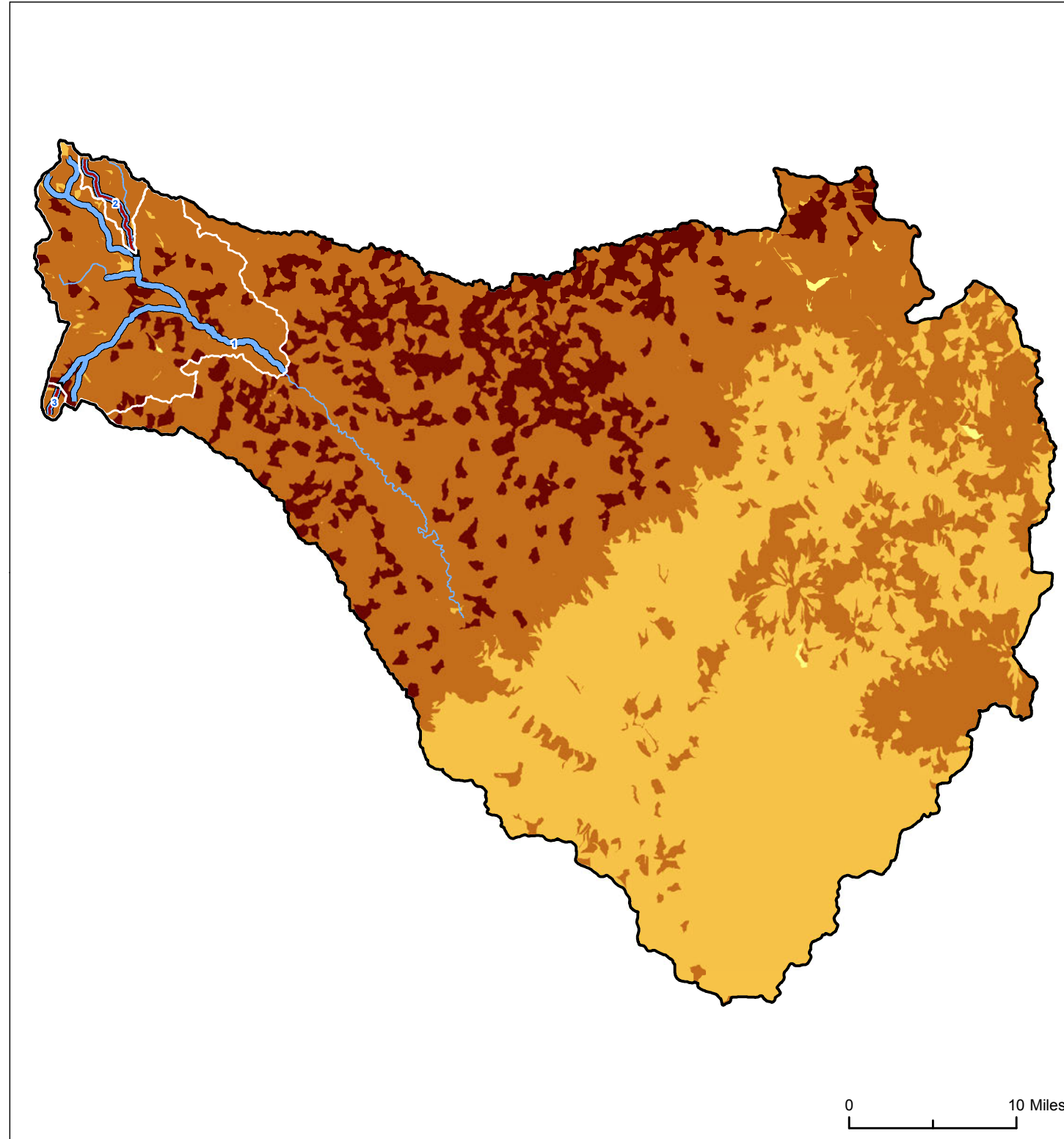
Canadian Headwaters (11080001) Wildfire Risk



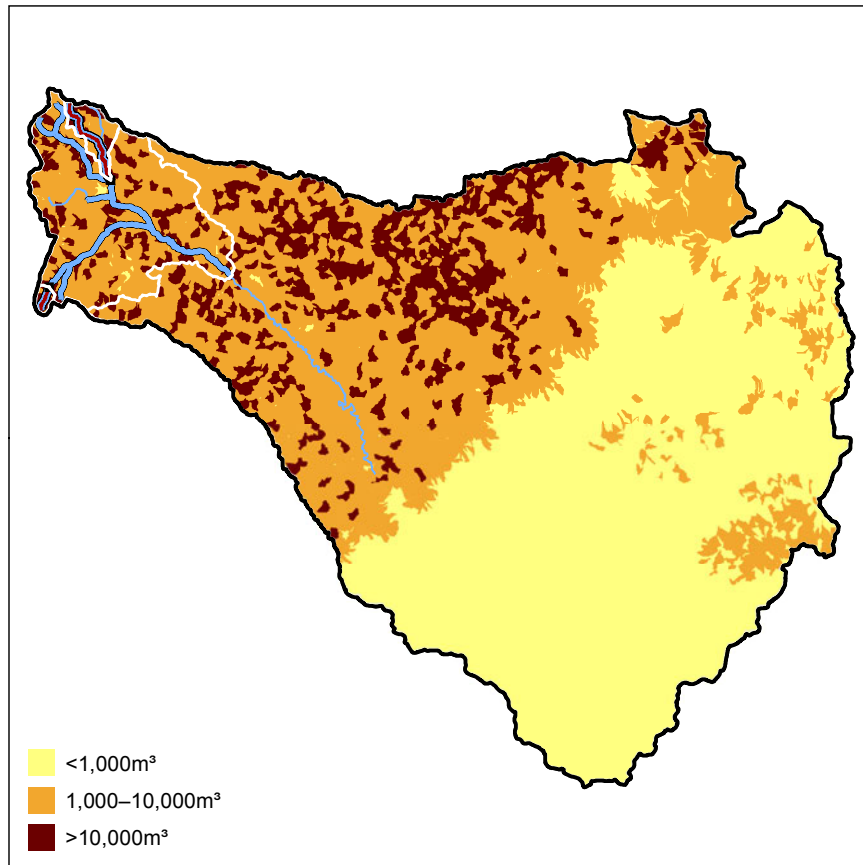
### Debris Flow Probability



### Overall Debris Flow Risk



### Debris Flow Volume



Overall Debris Flow Risk can be considered as the combined hazard of both probability and volume. For example, the most hazardous drainage areas will show both a high probability of occurrence and a large estimated volume of material.

Estimated probability and volume of a debris flow in response to a 10-year 30-min rainfall. Estimations based on method developed by Cannon et al, 2009.

## Debris Flow Risk

**Rio Grande Cutthroat Trout**

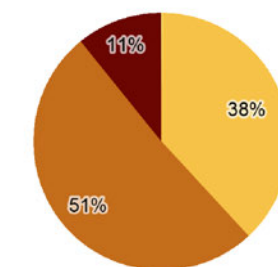
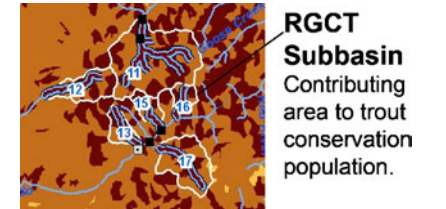
- Conservation Population 52 Mi. (7% of Total Conservation Populations)
- Core Population 9 Mi.
- Historic Distribution 89 Mi.

**Barrier**

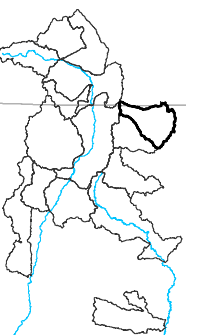
- Complete
- Partial
- Unknown

**Debris Flow Risk**

- Low
- Moderate
- High
- Extreme



Canadian Headwaters (11080001) Debris Flow Risk

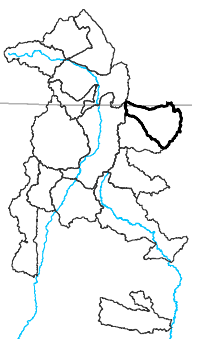


# Summary Table

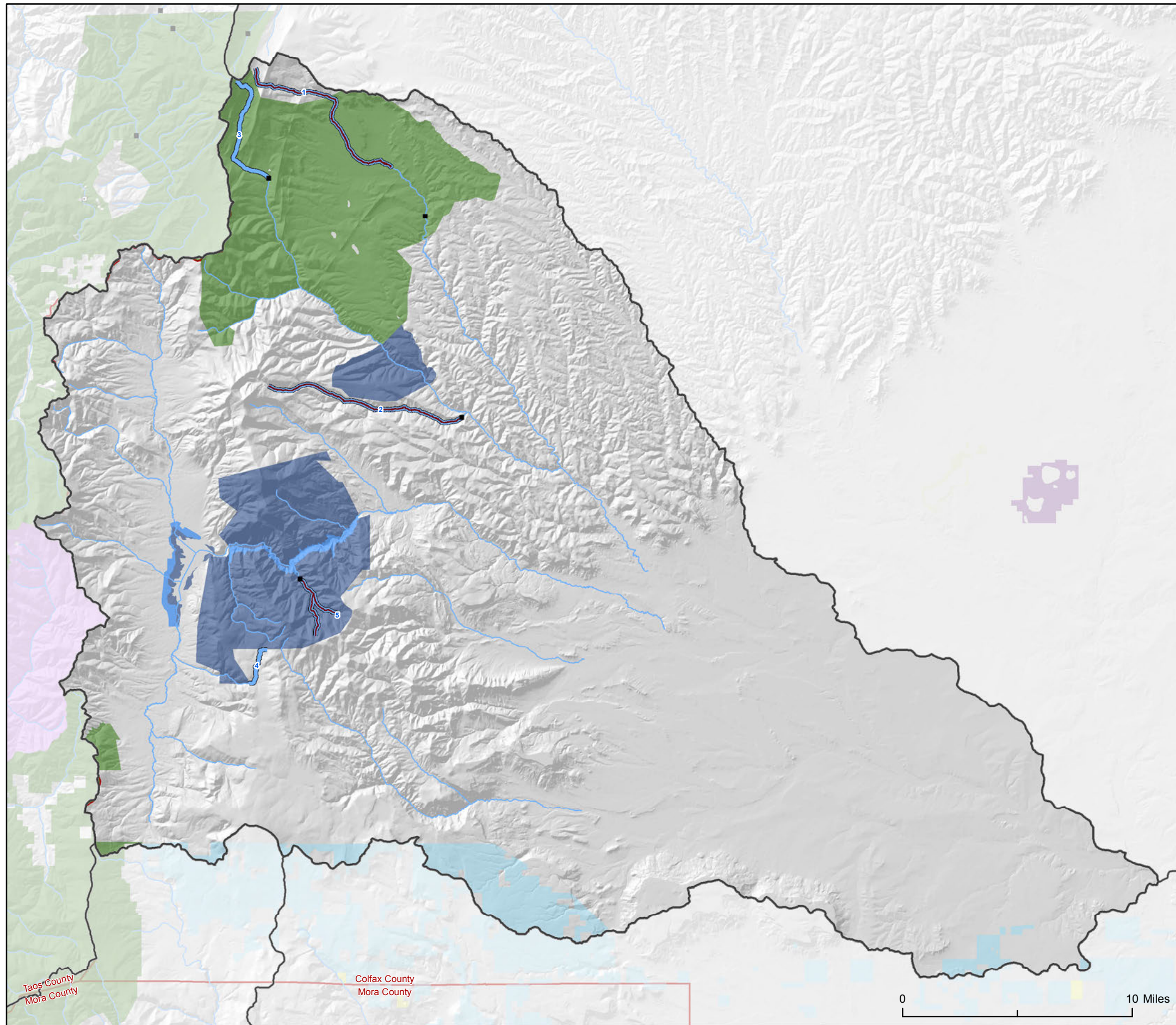
## Canadian Headwaters (11080001)

cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Conservation	353.9	2,247	4,168	1,922	91.38%	6,083.5	4,653,864.3	3.32	2.04	5.36	2	2.98	4.82	10.18
	<i>E. Trib. Ricardo Creek (A)</i>														
	<i>Elk Creek (A)</i>														
	<i>Gold Creek (A)</i>														
	<i>Leandro Creek (R)</i>														
	<i>Little Vermejo Creek (A)</i>														
	<i>Ricardo Creek (A)</i>														
	<i>Vermejo River (A)</i>														
02	Core	28.7	2,574	3,756	1,182	92.45%	6,626.4	364,451.4	2.96	2.15	5.11	2	2.98	4.82	9.93
	<i>Little Vermejo Creek (A)</i>														
03	Core	4.8	3,054	3,836	781	91.99%	11,126.5	77,885.7	2.71	2.43	5.14	2	3.00	5.00	10.14
	<i>Leandro Creek (A)</i>														

(A) and (R) indicate aboriginal and restored populations of trout.



# Cimarron Watershed (11080002)



## Rio Grande Cutthroat Trout

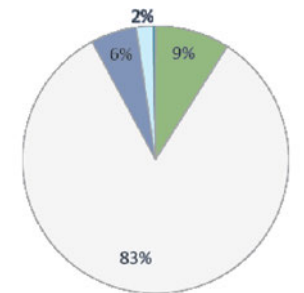
- Conservation Population 32 Mi. (4% of Total Conservation Populations)
- Core Population 24 Mi.
- Historic Distribution 257 Mi.

## Barrier

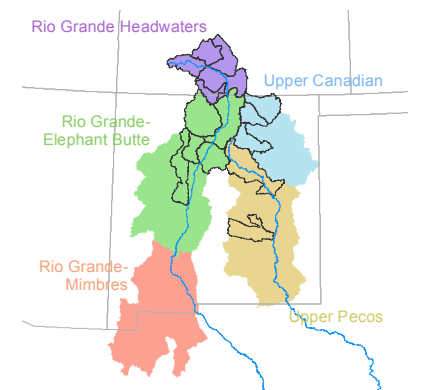
- Complete
- Partial
- Unknown

## Ownership

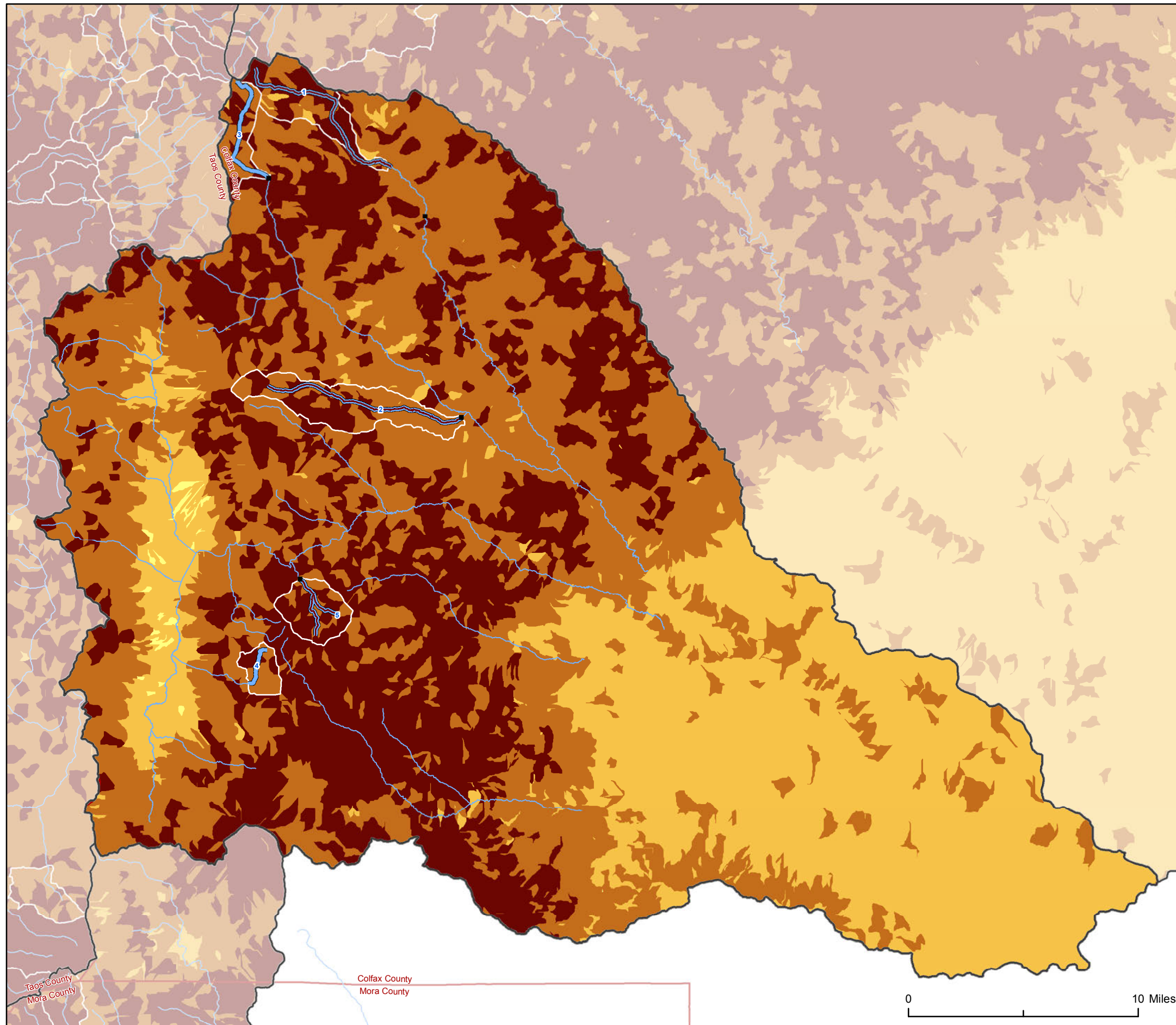
- USFS
- Tribal
- State Trust
- State Fish & Wildlife
- Other State



Cimarron Watershed (11080002)  
Overview



# Overall Risk: Wildfire Risk + Debris Flow Risk



## Rio Grande Cutthroat Trout

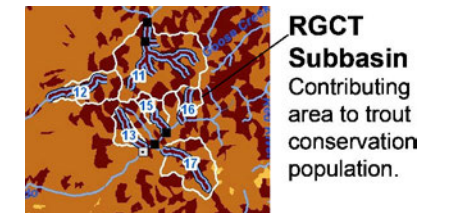
- Conservation Population 32 Mi. (4% of Total Conservation Populations)
- Core Population 24 Mi.
- Historic Distribution 257 Mi.

## Barrier

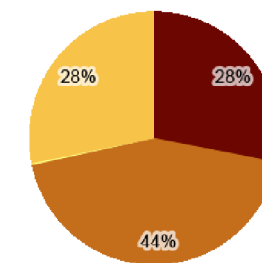
- Complete
- Partial
- Unknown

## Overall Risk

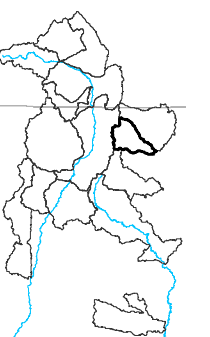
- Low
- Moderate
- High
- Extreme



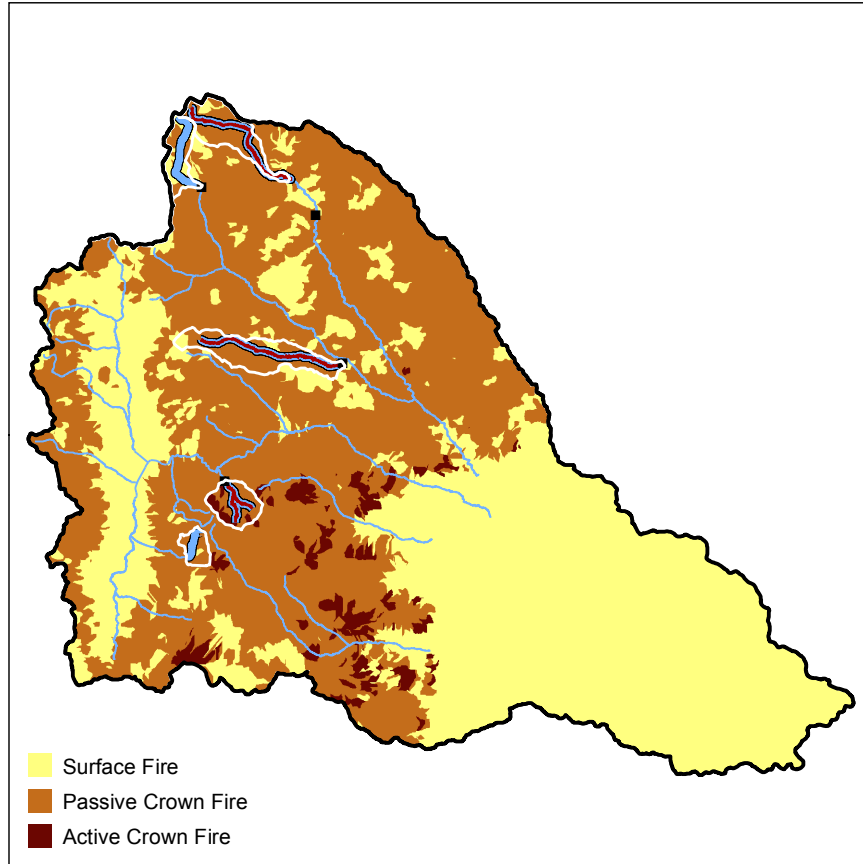
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



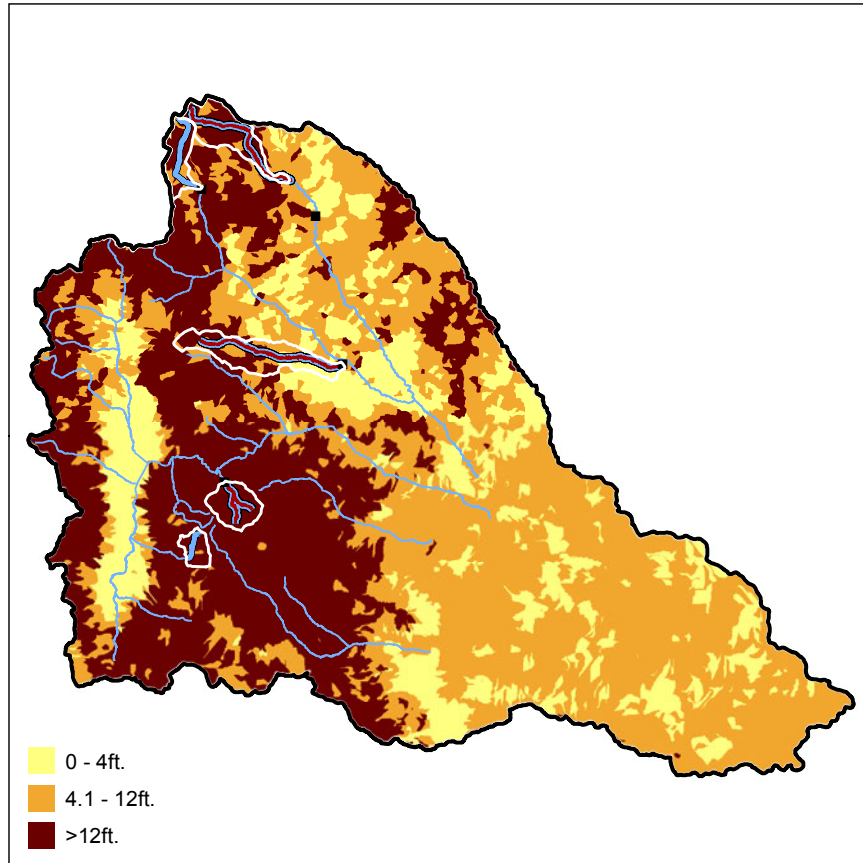
Cimarron Watershed (11080002)  
Overall Risk from Fire



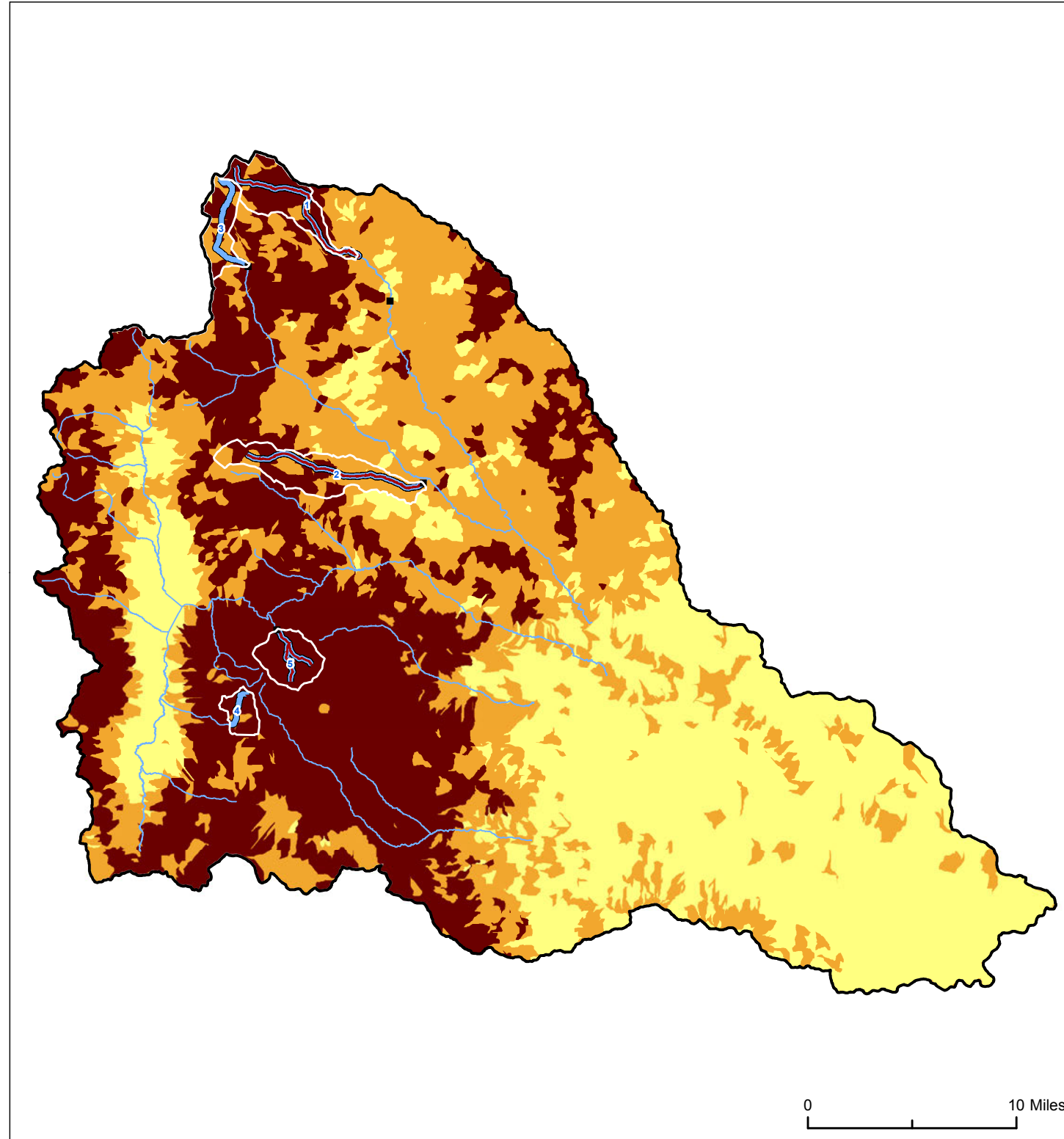
## Crown Fire Potential



## Flame Length



## Overall Wildfire Risk



Overall Wildfire Risk can be considered as the combined hazard of both crown fire potential and flame length. Crown fire is the movement into and through the canopy. Passive crown fires are fires that move through the crown intermittently, and active crown fires are fires that carry continuously through the crowns. Crown fires typically move quickly and are very intense. Flame length is an indicator of fire intensity at the active flaming front and is a good measure of what fire suppression resources can be used on a fire. Flame lengths of <4 feet indicate fires where direct attack is feasible; flame lengths of 4 to 12 feet indicate fires with substantial resistance to control and indirect attack is recommended; flame lengths of >12 feet indicate extreme fires where control of any kind is difficult and safety of firefighters is a concern. The drainage areas at highest risk from wildfire represent areas where the majority of the drainage basin is expected to have the potential for crown fires and flame lengths of >12 feet.

Crown fire potential and expected flame lengths were modeled using FlamMap, an interagency fire behavior mapping and analysis program. Details on the modeling effort can be found in Appendix A.

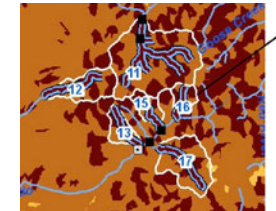
# Wildfire Risk

### Rio Grande Cutthroat Trout

- Conservation Population 32 Mi. (4% of Total Conservation Populations)
- Core Population 24 Mi.
- Historic Distribution 257 Mi.

### Barrier

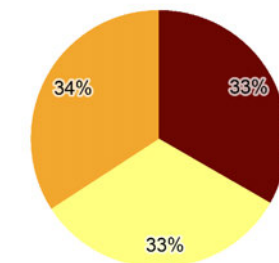
- Complete
- Partial
- Unknown



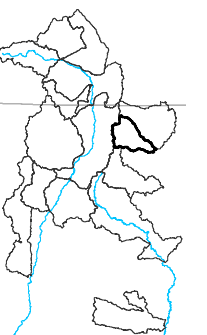
**RGCT Subbasin**  
Contributing area to trout conservation population.

### Overall Risk

- Low
- Moderate
- High

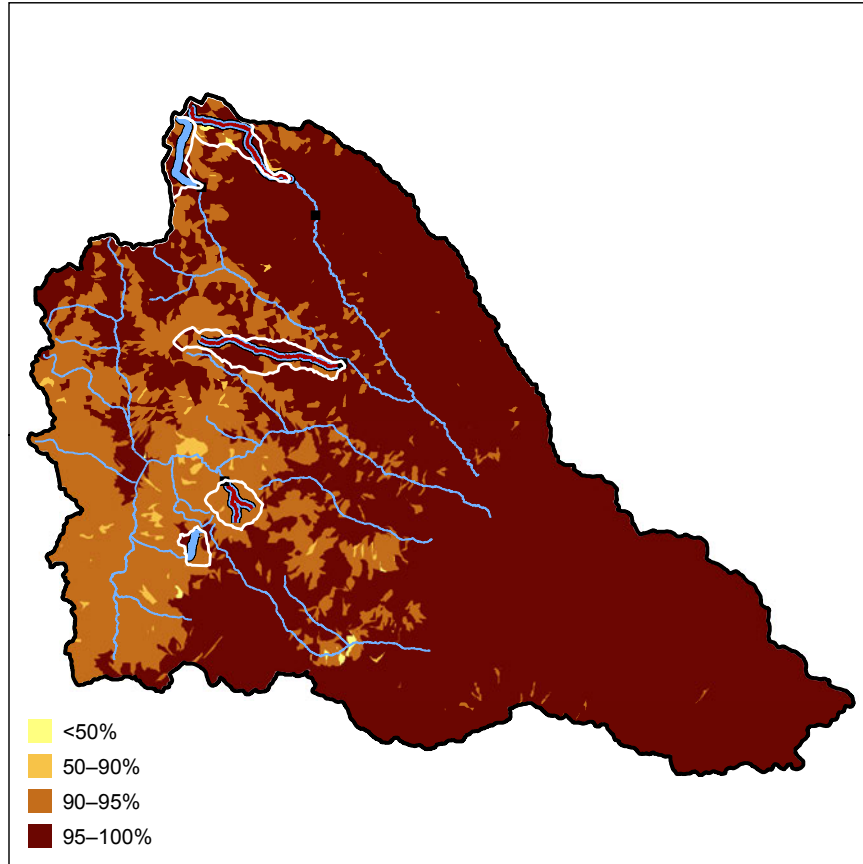


Cimarron (11080002) Wildfire Risk

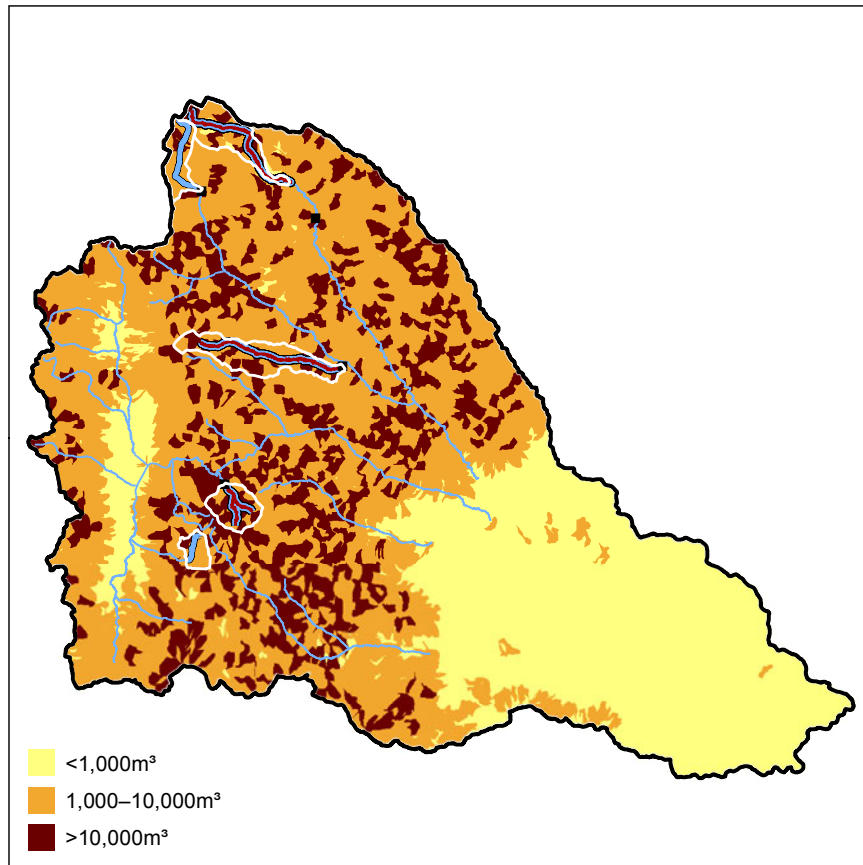




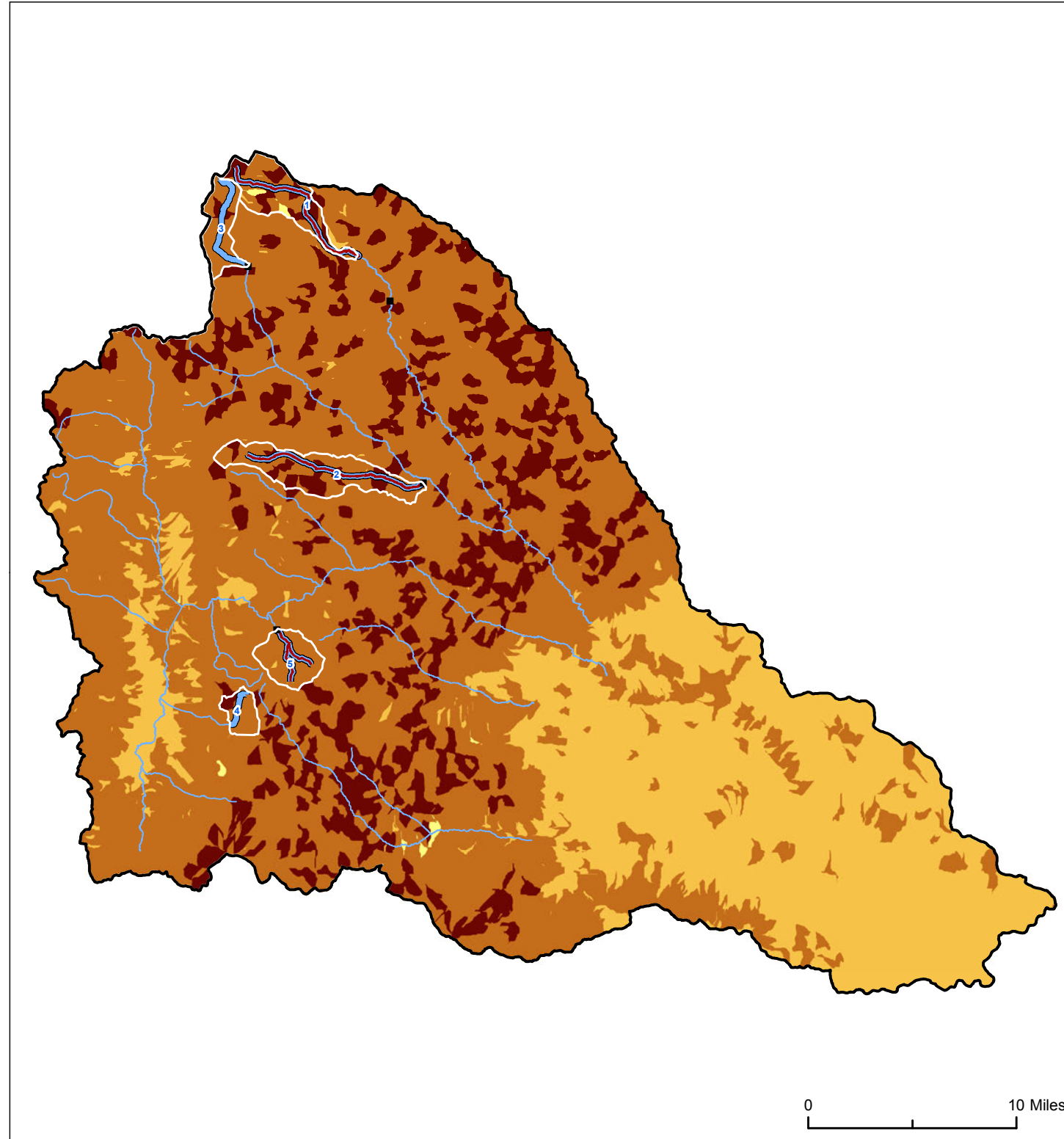
### Debris Flow Probability



### Debris Flow Volume



### Overall Debris Flow Risk



Overall Debris Flow Risk can be considered as the combined hazard of both probability and volume. For example, the most hazardous drainage areas will show both a high probability of occurrence and a large estimated volume of material.

Estimated probability and volume of a debris flow in response to a 10-year 30-min rainfall. Estimations based on method developed by Cannon et al, 2009.

## Debris Flow Risk

#### Rio Grande Cutthroat Trout

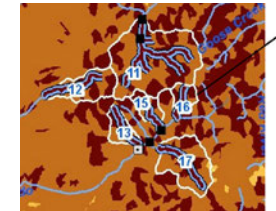
- Conservation Population 32 Mi. (4% of Total Conservation Populations)
- Core Population 24 Mi.
- Historic Distribution 257 Mi.

#### Barrier

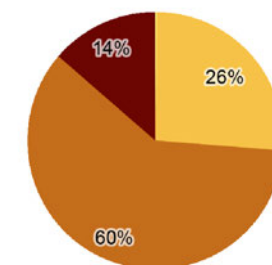
- Complete
- Partial
- Unknown

#### Debris Flow Risk

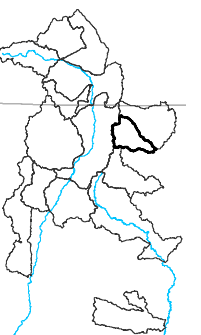
- Low
- Moderate
- High
- Extreme



**RGCT Subbasin**  
Contributing area to trout conservation population.



Cimarron (11080002)  
Debris Flow Risk

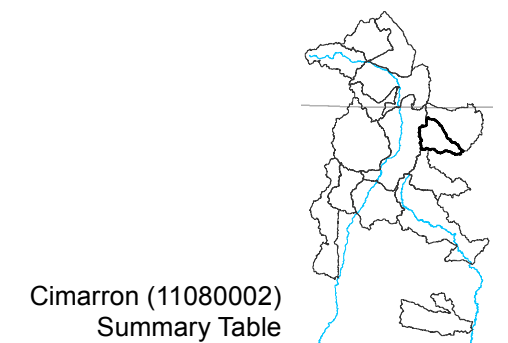


# Summary Table

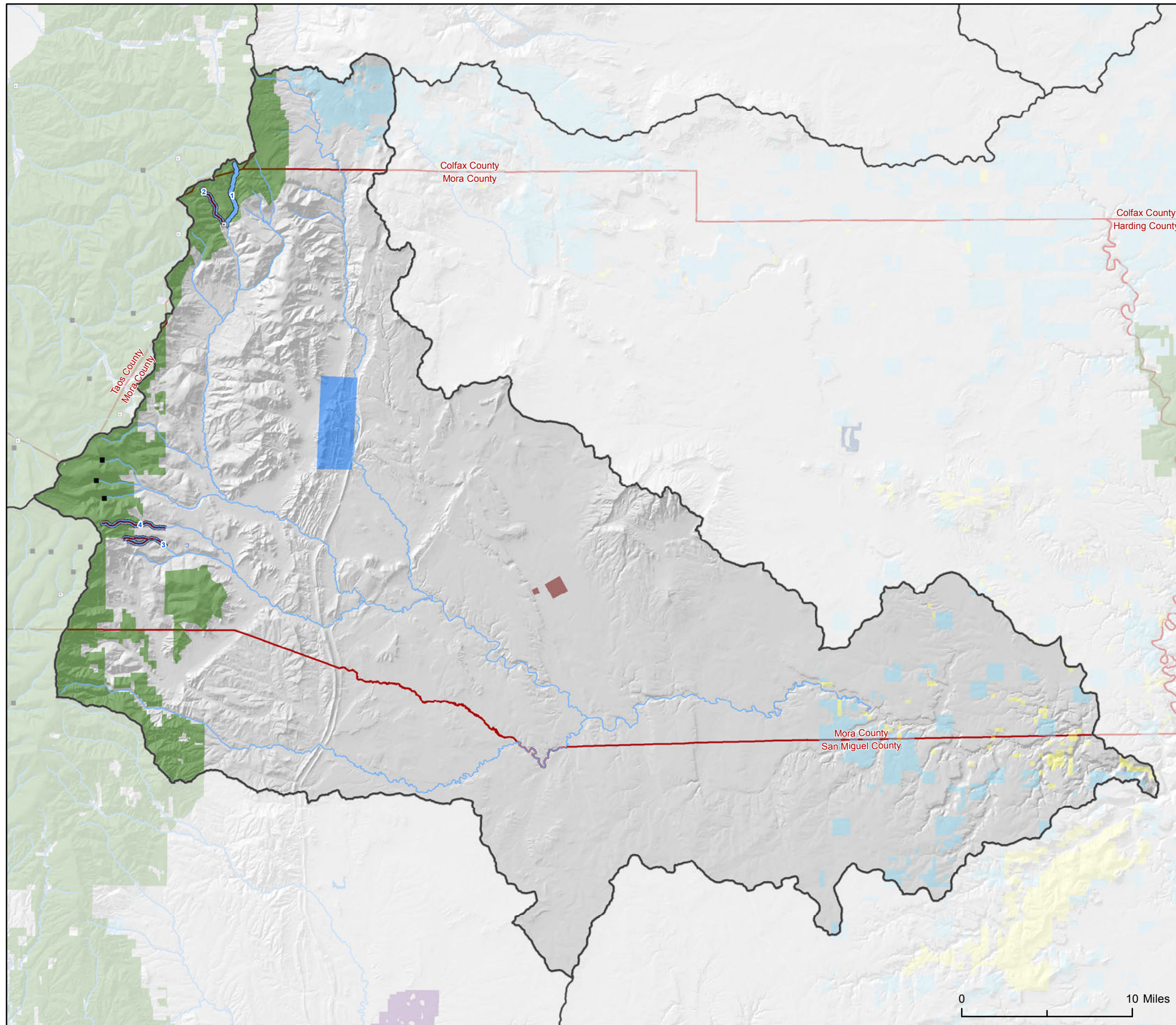
Cimarron (11080002)

cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Core	27.0	2,438	3,630	1,192	89.35%	5,829.6	361,437.2	3.44	2.05	5.48	2	2.82	4.69	10.18
	<i>McCrystal Creek (A)</i>														
	<i>North Ponil Creek (A)</i>														
02	Core	35.3	2,197	3,787	1,590	94.93%	7,444.5	506,225.8	3.54	2.22	5.76	2	2.28	4.19	9.96
	<i>South Ponil Creek (R)</i>														
03	Conservation	15.9	2,810	3,829	1,019	94.75%	5,999.7	185,991.9	3.52	2.06	5.58	2	2.68	4.23	9.81
	<i>Middle Ponil Creek (A)</i>														
04	Conservation	7.7	2,892	3,331	440	94.50%	7,379.1	103,308.0	3.21	2.07	5.29	2	2.93	4.79	10.07
	<i>American Creek (A)</i>														
05	Core	16.9	2,475	3,576	1,101	92.56%	8,148.6	285,199.7	2.94	2.29	5.23	2	3.00	5.34	10.57
	<i>Clear Creek (R)</i>														
	<i>Headwater Trib. to Clear Creek (R)</i>														

(A) and (R) indicate aboriginal and restored populations of trout.



# Mora Watershed (11080004)



## Rio Grande Cutthroat Trout

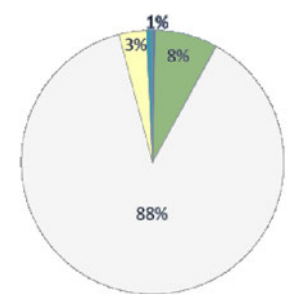
- Conservation Population 15 Mi. ( 2% of Total Conservation Populations)
- Core Population 11 Mi.
- Historic Distribution 277 Mi.

## Barrier

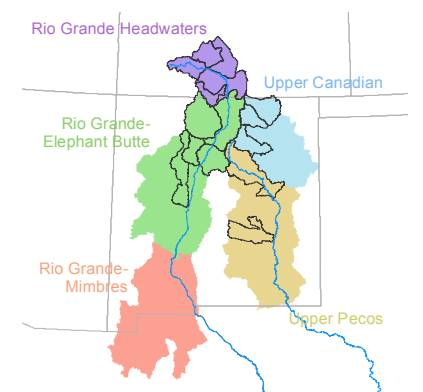
- Complete
- Partial
- Unknown

## Ownership

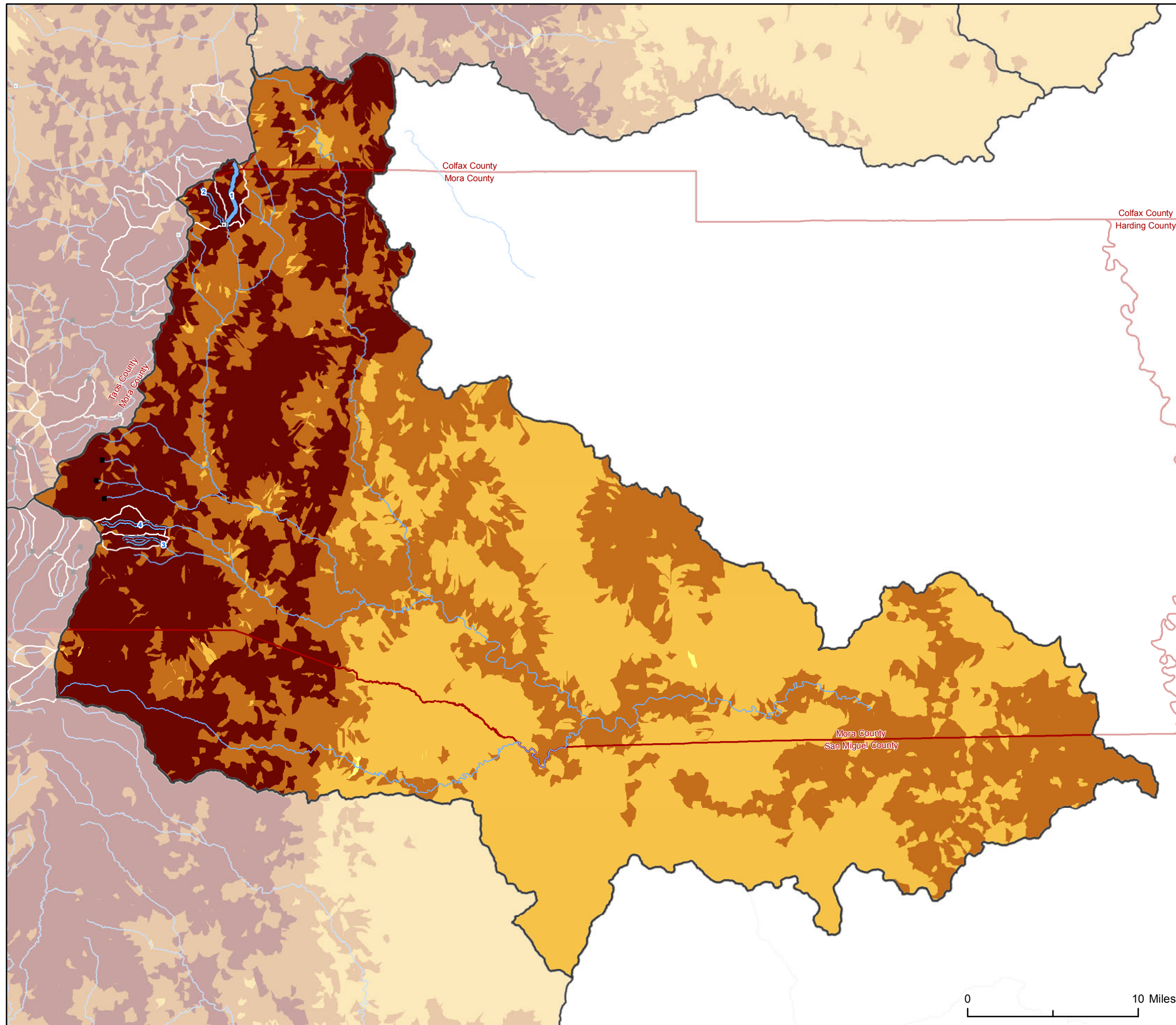
- BLM
- NPS
- USFS
- State Trust
- Other State



Mora Watershed (11080004)  
Overview



# Overall Risk: Wildfire Risk + Debris Flow Risk



## Rio Grande Cutthroat Trout

- Conservation Population 15 Mi. ( 2% of Total Conservation Populations)
- Core Population 11 Mi.
- Historic Distribution 277 Mi.

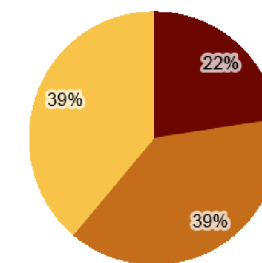
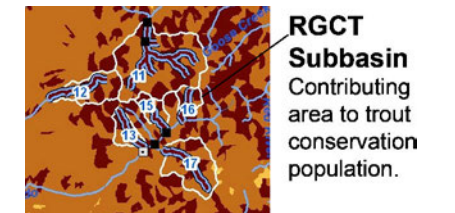
## Barrier

- Complete
- Partial
- Unknown

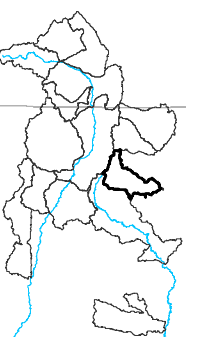
## Overall Risk

- Low
- Moderate
- High
- Extreme

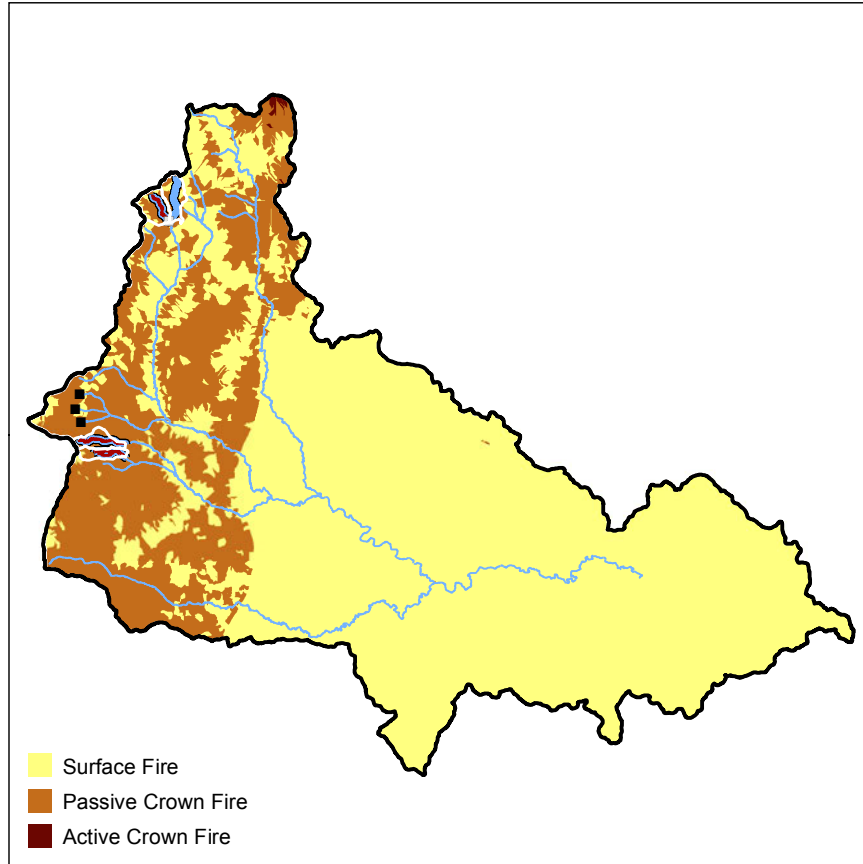
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



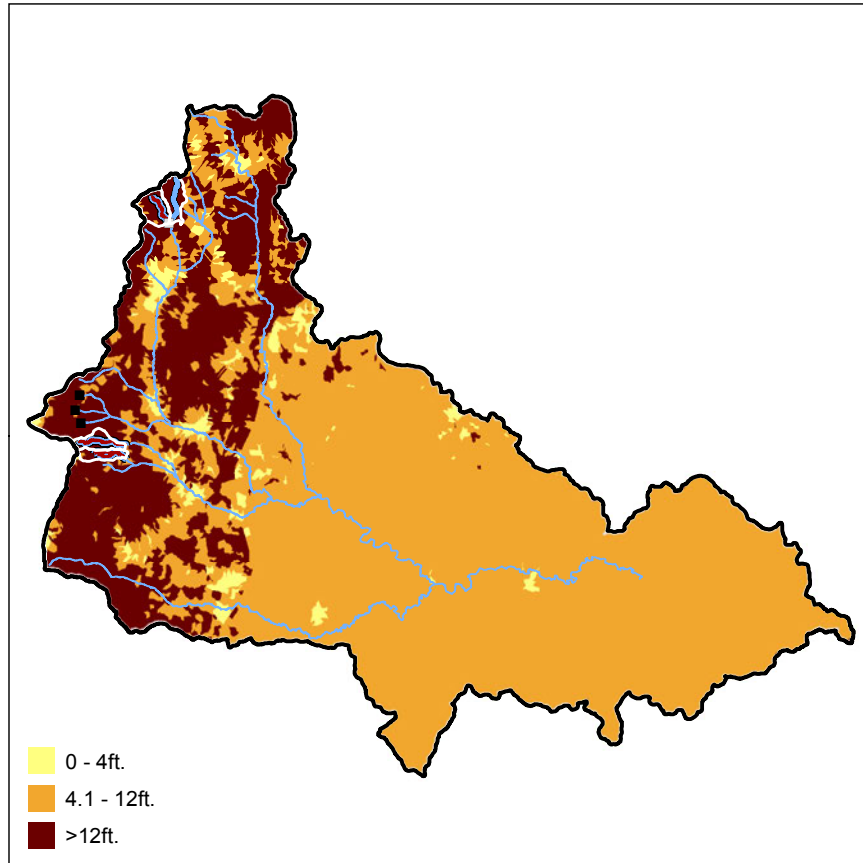
Mora Watershed (11080004)  
Overall Risk from Fire



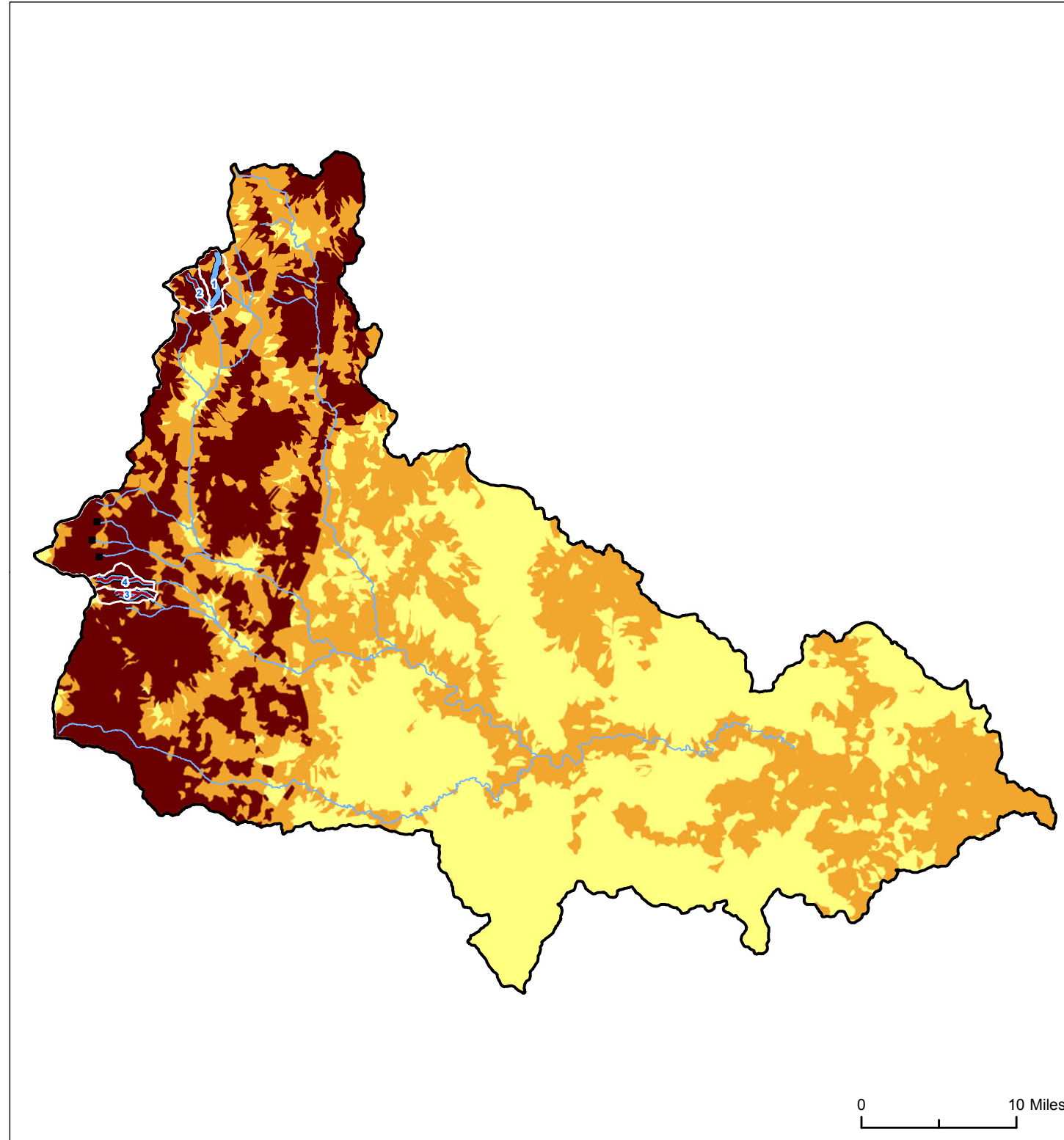
## Crown Fire Potential



## Flame Length



## Overall Wildfire Risk



Overall Wildfire Risk can be considered as the combined hazard of both crown fire potential and flame length. Crown fire is the movement into and through the canopy. Passive crown fires are fires that move through the crown intermittently, and active crown fires are fires that carry continuously through the crowns. Crown fires typically move quickly and are very intense. Flame length is an indicator of fire intensity at the active flaming front and is a good measure of what fire suppression resources can be used on a fire. Flame lengths of <4 feet indicate fires where direct attack is feasible; flame lengths of 4 to 12 feet indicate fires with substantial resistance to control and indirect attack is recommended; flame lengths of >12 feet indicate extreme fires where control of any kind is difficult and safety of firefighters is a concern. The drainage areas at highest risk from wildfire represent areas where the majority of the drainage basin is expected to have the potential for crown fires and flame lengths of >12 feet.

Crown fire potential and expected flame lengths were modeled using FlamMap, an interagency fire behavior mapping and analysis program. Details on the modeling effort can be found in Appendix A.

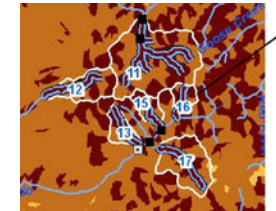
# Wildfire Risk

### Rio Grande Cutthroat Trout

- Conservation Population 15 Mi. (2% of Total Conservation Populations)
- Core Population 11 Mi.
- Historic Distribution 277 Mi.

### Barrier

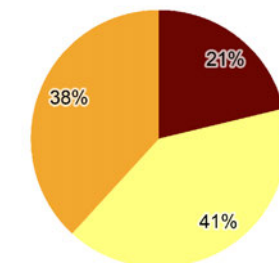
- Complete
- Partial
- Unknown



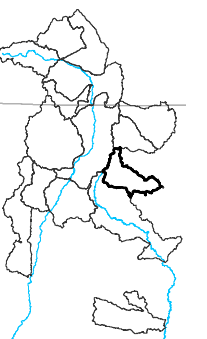
**RGCT Subbasin**  
Contributing area to trout conservation population.

### Overall Risk

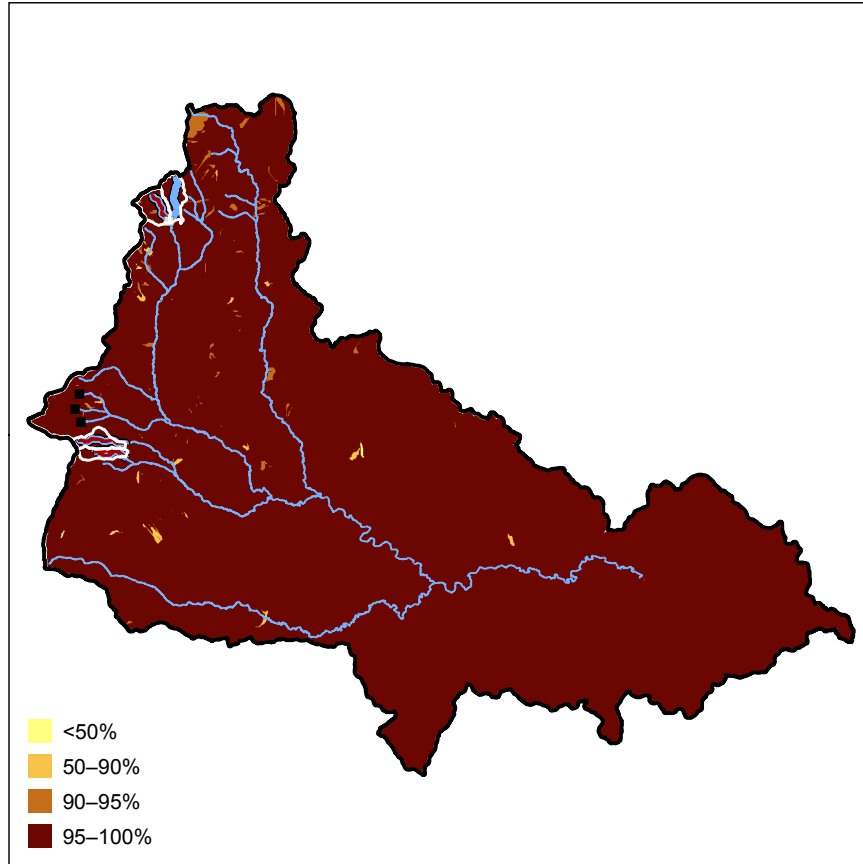
- Low
- Moderate
- High



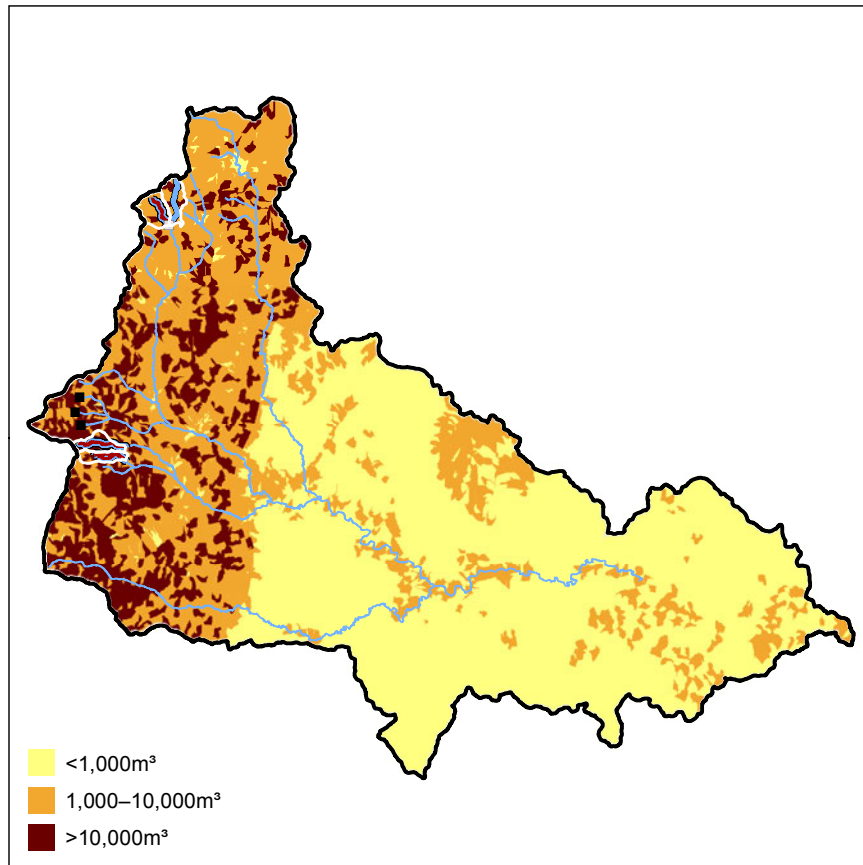
Mora (11080004)  
Wildfire Risk



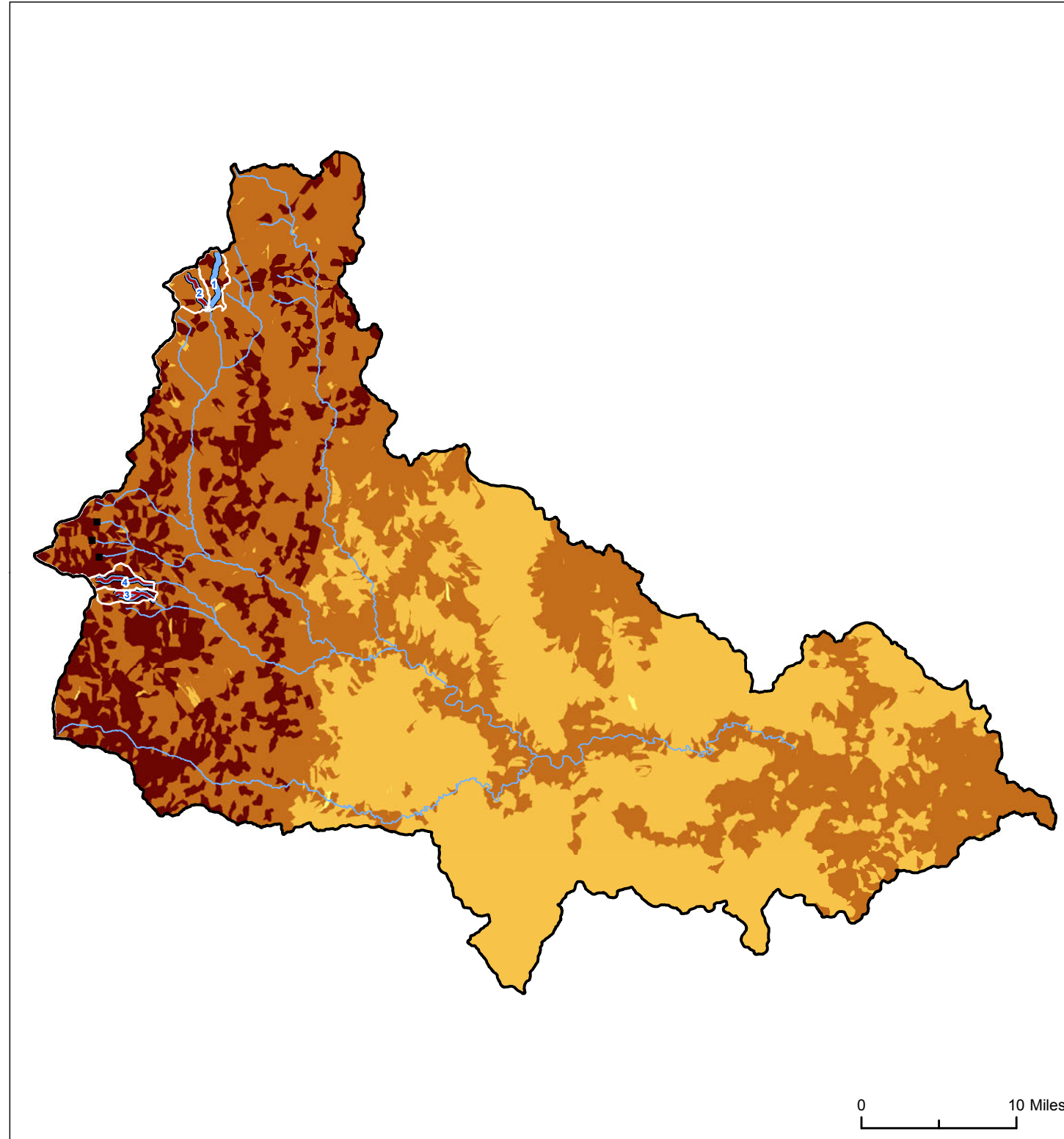
### Debris Flow Probability



### Debris Flow Volume



### Overall Debris Flow Risk



Overall Debris Flow Risk can be considered as the combined hazard of both probability and volume. For example, the most hazardous drainage areas will show both a high probability of occurrence and a large estimated volume of material.

Estimated probability and volume of a debris flow in response to a 10-year 30-min rainfall. Estimations based on method developed by Cannon et al, 2009.

## Debris Flow Risk

#### Rio Grande Cutthroat Trout

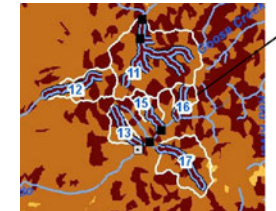
- Conservation Population 15 Mi. (2% of Total Conservation Populations)
- Core Population 11 Mi.
- Historic Distribution 277 Mi.

#### Barrier

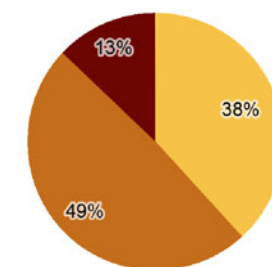
- Complete
- Partial
- Unknown

#### Debris Flow Risk

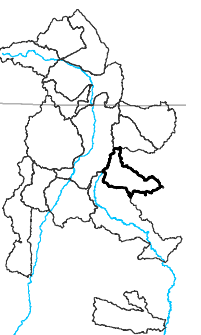
- Low
- Moderate
- High
- Extreme



**RGCT Subbasin**  
Contributing area to trout conservation population.



Mora (11080004)  
Debris Flow Risk

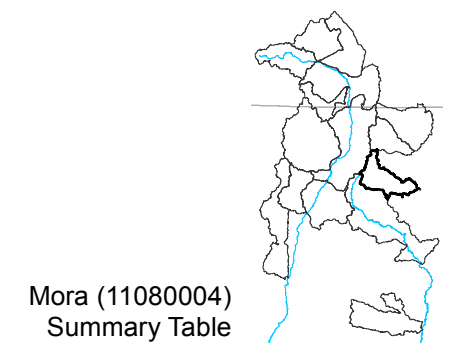


# Summary Table

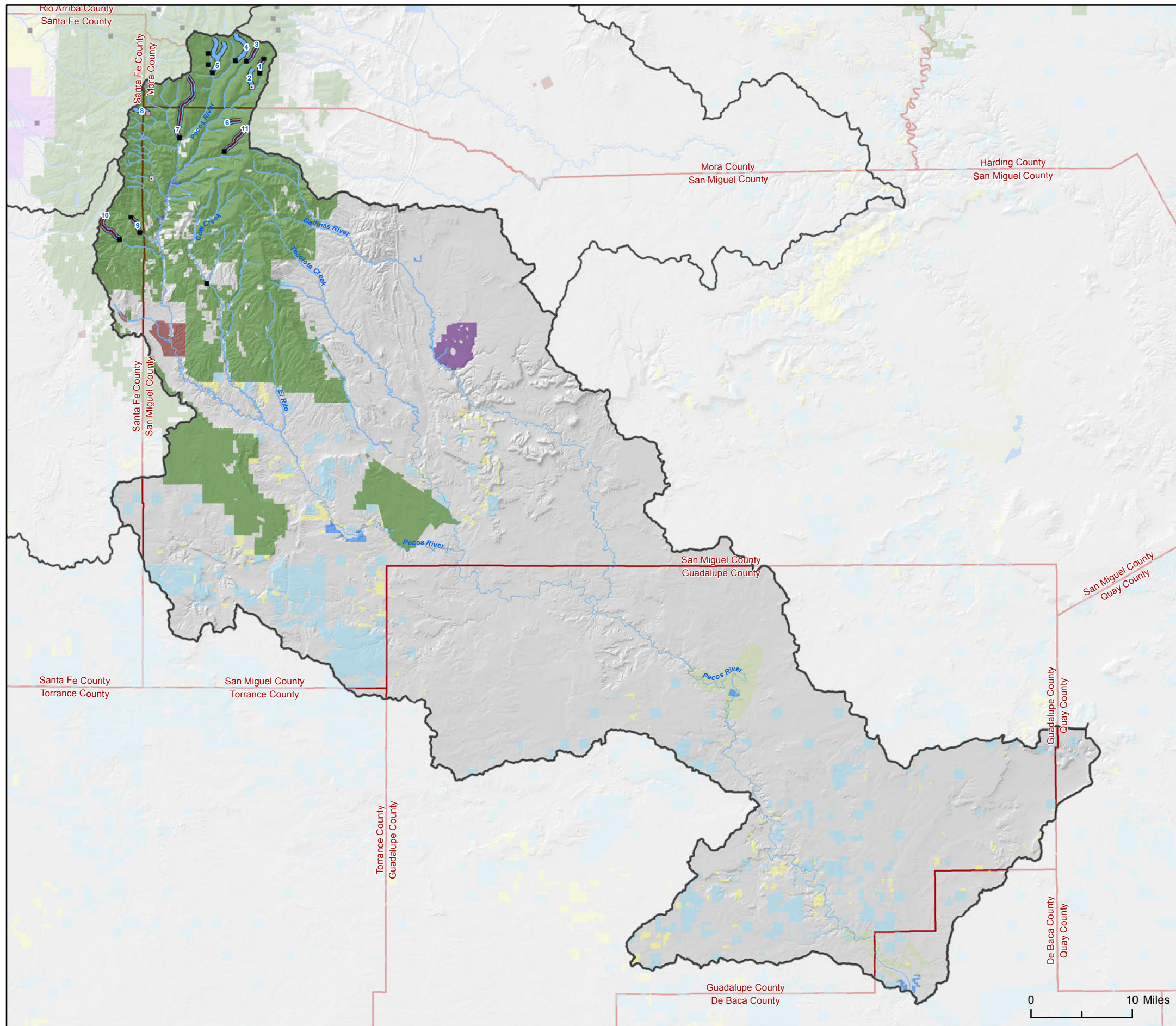
Mora (11080004)

cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Conservation	12.8	2,702	3,470	768	97.52%	7,906.4	166,034.5	4.00	2.24	6.24	2	3.00	4.76	11.00
<i>East Fork Luna Creek (A)</i>															
02	Core	13.4	2,702	3,636	934	96.59%	5,888.1	194,307.3	3.91	2.00	5.91	2	2.88	4.67	10.58
<i>West Fork Luna Creek (R)</i>															
03	Core	7.8	2,439	3,611	1,172	97.14%	6,670.3	140,075.6	3.95	2.14	6.10	2	2.90	4.86	10.95
<i>Headwater Trib. to Rito Morphy (A)</i>															
<i>Rito Morphy (A)</i>															
04	Core	11.0	2,469	3,628	1,159	97.52%	8,895.0	177,899.8	4.00	2.30	6.30	2	2.90	4.90	11.20
<i>Santiago Creek (A)</i>															

(A) and (R) indicate aboriginal and restored populations of trout.



# Pecos Headwaters (13060001)



## Rio Grande Cutthroat Trout

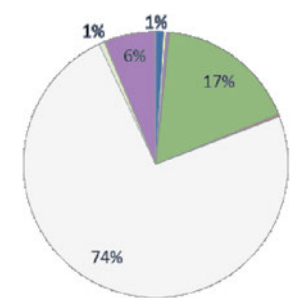
- Conservation Population 36 Mi. ( 5% of Total Conservation Populations)
- Core Population 22 Mi.
- Historic Distribution 451 Mi.

## Barrier

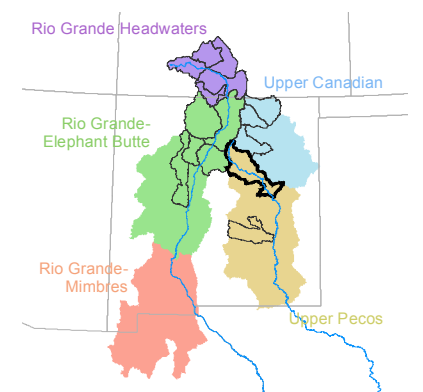
- Complete
- ▣ Partial
- Unknown

## Ownership

- BLM
- FWS
- NPS
- USFS
- State Trust
- State Fish & Wildlife
- Other State
- Other Federal

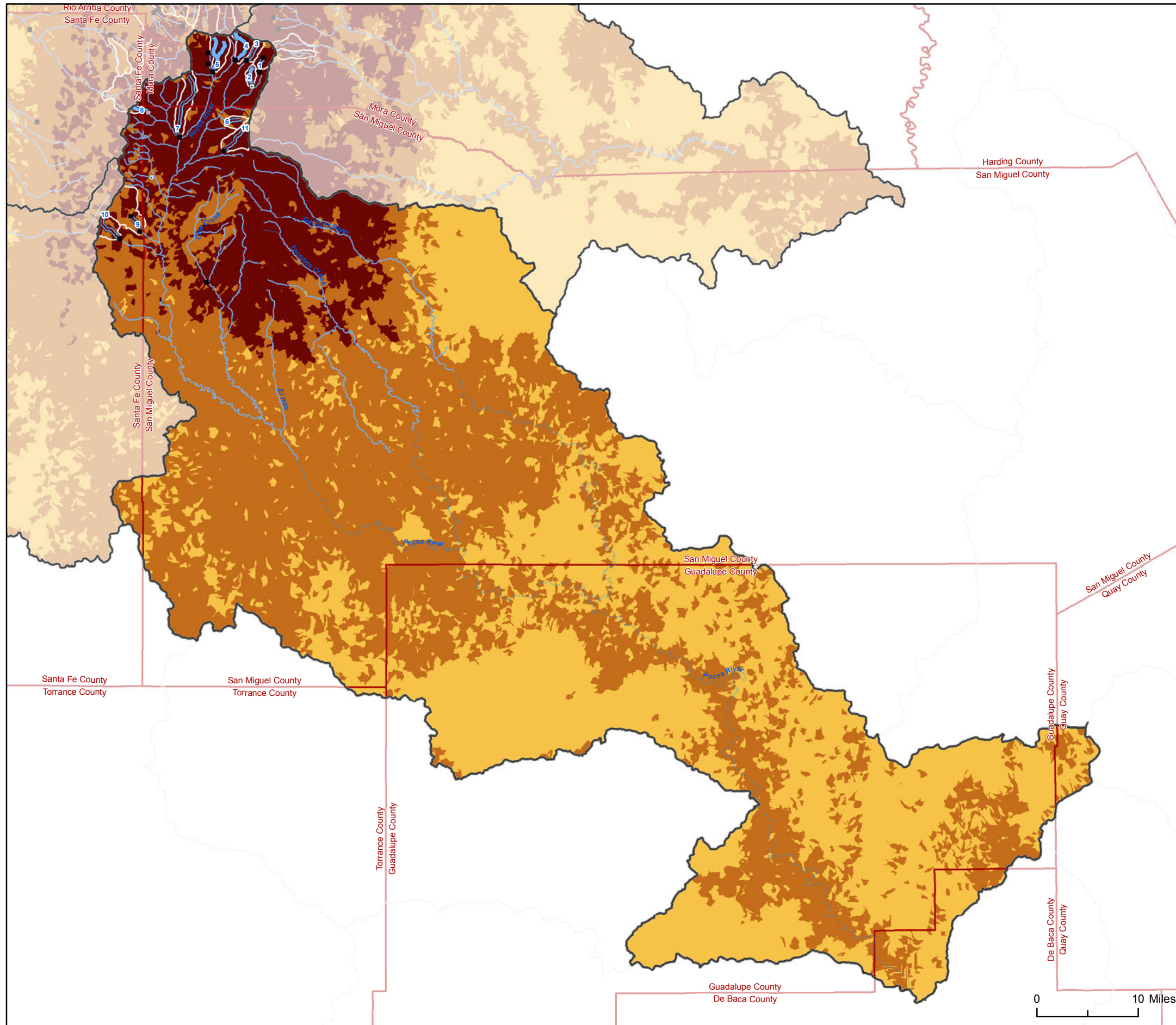


Pecos Headwaters (13060001)  
Overview





# Overall Risk: Wildfire Risk + Debris Flow Risk



## Rio Grande Cutthroat Trout

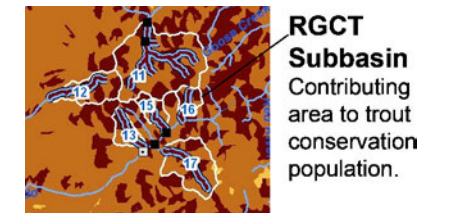
- Conservation Population 36 Mi. ( 5% of Total Conservation Populations)
- Core Population 22 Mi.
- Historic Distribution 451 Mi.

## Barrier

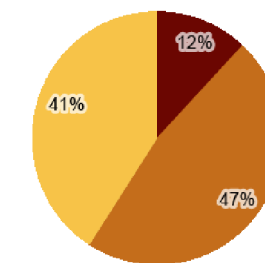
- Complete
- Partial
- Unknown

## Overall Risk

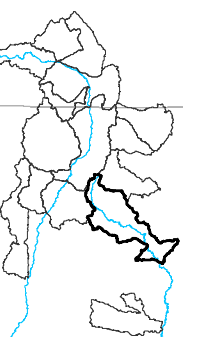
- Low
- Moderate
- High
- Extreme



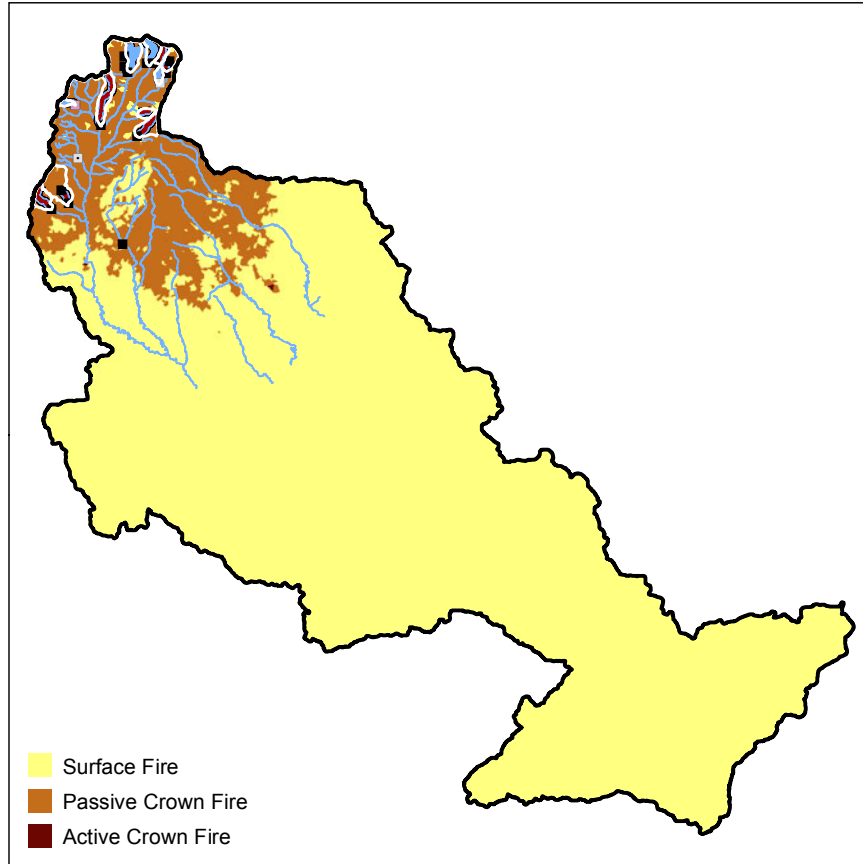
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



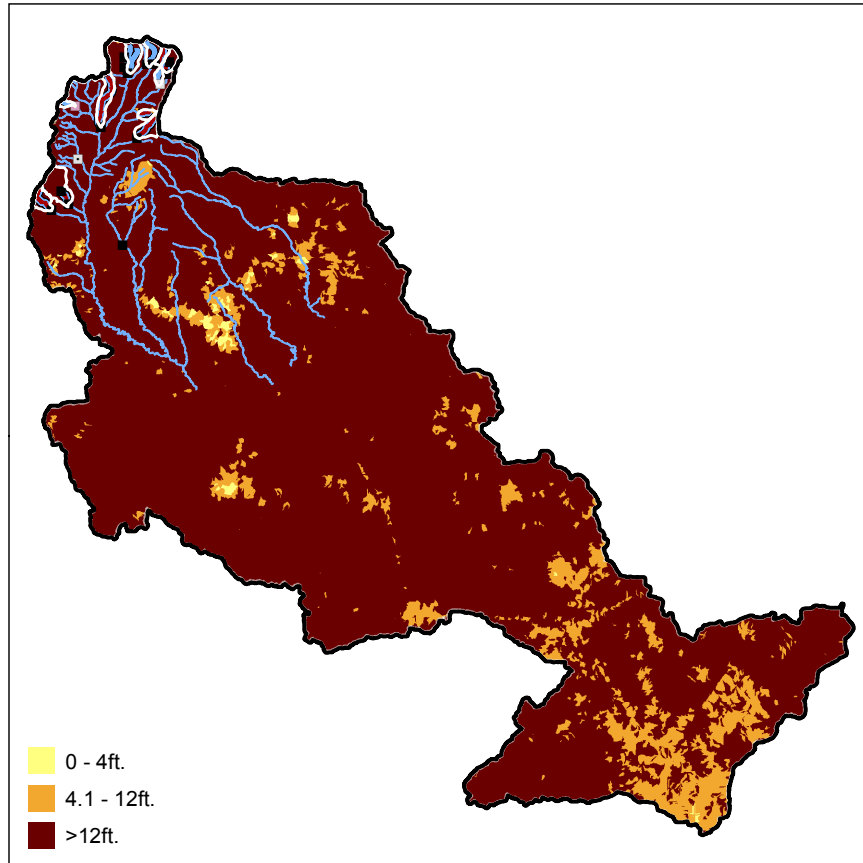
Pecos Headwaters (13060001)  
Overall Risk from Fire



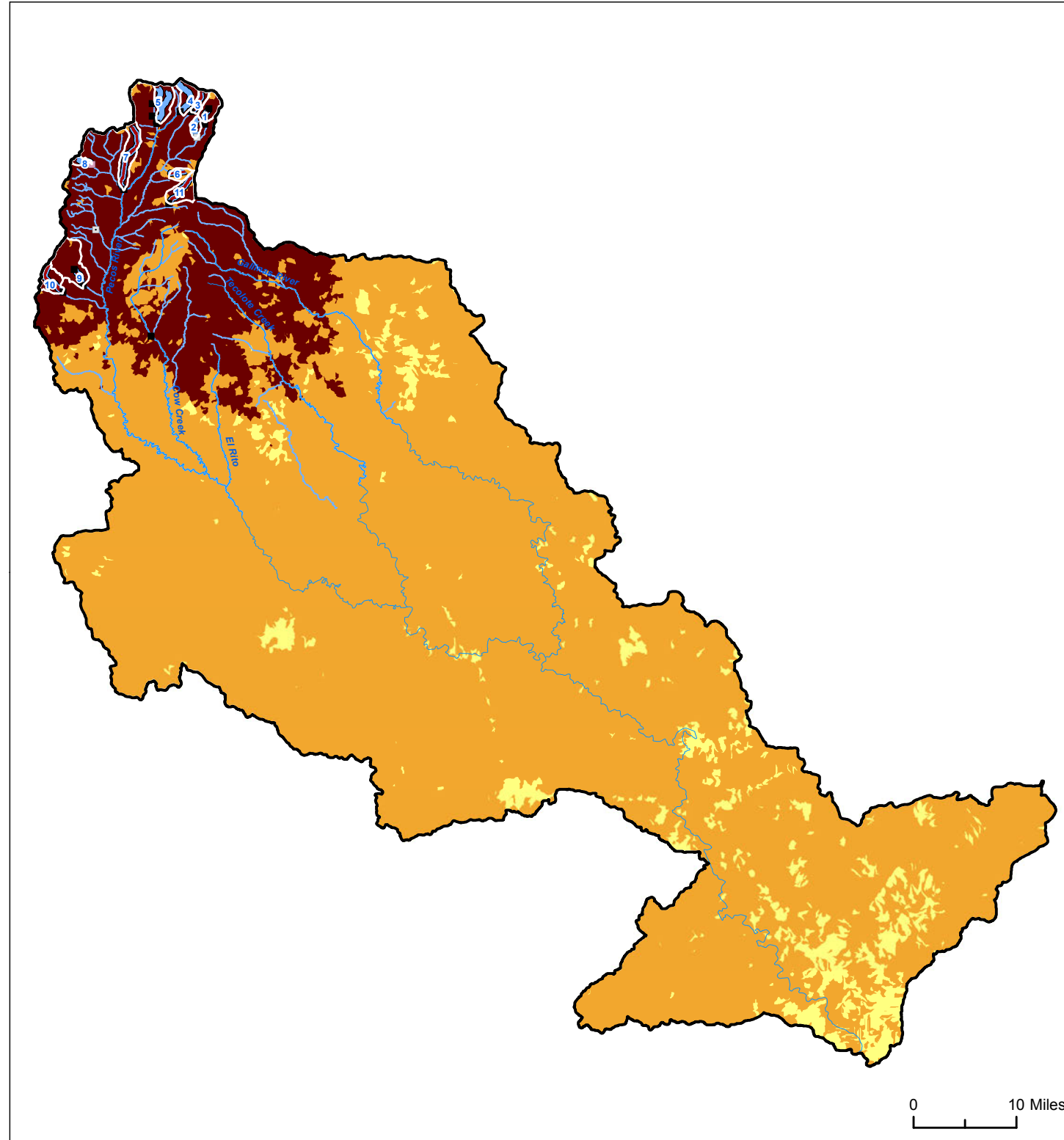
## Crown Fire Potential



## Flame Length



## Overall Wildfire Risk



Overall Wildfire Risk can be considered as the combined hazard of both crown fire potential and flame length. Crown fire is the movement into and through the canopy. Passive crown fires are fires that move through the crown intermittently, and active crown fires are fires that carry continuously through the crowns. Crown fires typically move quickly and are very intense. Flame length is an indicator of fire intensity at the active flaming front and is a good measure of what fire suppression resources can be used on a fire. Flame lengths of <4 feet indicate fires where direct attack is feasible; flame lengths of 4 to 12 feet indicate fires with substantial resistance to control and indirect attack is recommended; flame lengths of >12 feet indicate extreme fires where control of any kind is difficult and safety of firefighters is a concern. The drainage areas at highest risk from wildfire represent areas where the majority of the drainage basin is expected to have the potential for crown fires and flame lengths of >12 feet.

Crown fire potential and expected flame lengths were modeled using FlamMap, an interagency fire behavior mapping and analysis program. Details on the modeling effort can be found in Appendix A.

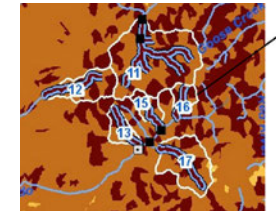
# Wildfire Risk

### Rio Grande Cutthroat Trout

- Conservation Population 36 Mi. (5% of Total Conservation Populations)
- Core Population 22 Mi.
- Historic Distribution 451 Mi.

### Barrier

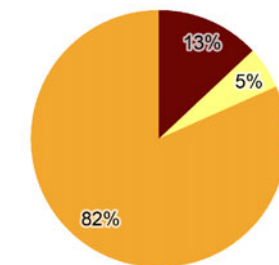
- Complete
- Partial
- Unknown



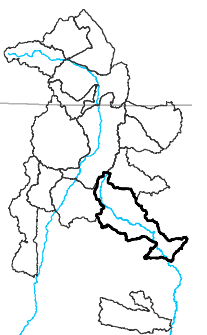
**RGCT Subbasin**  
Contributing area to trout conservation population.

### Overall Risk

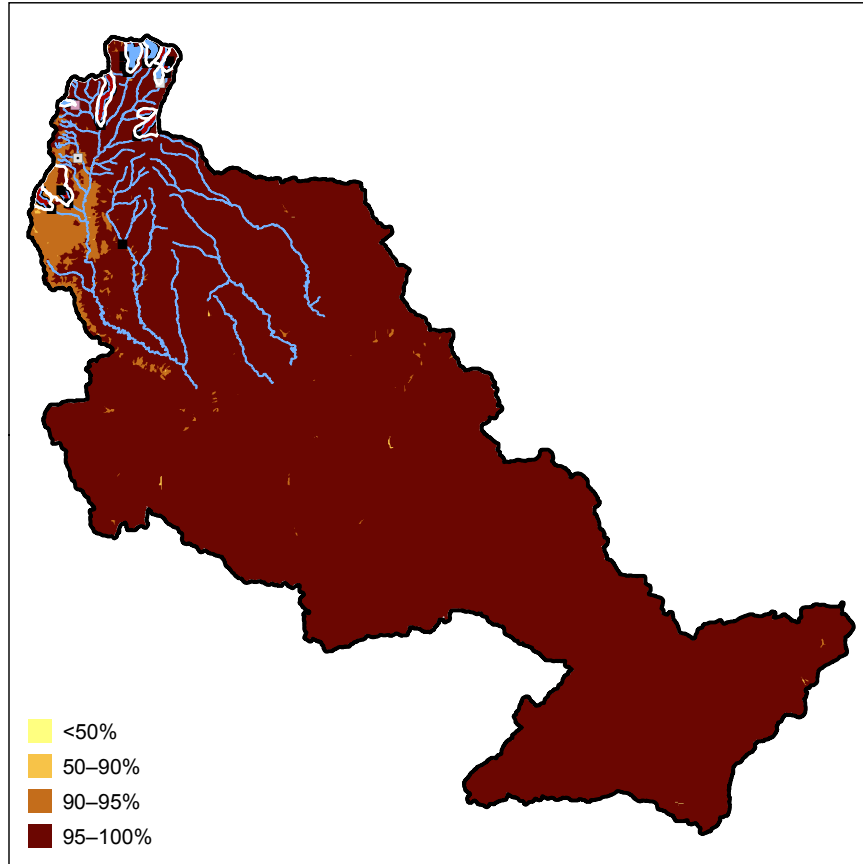
- Low
- Moderate
- High



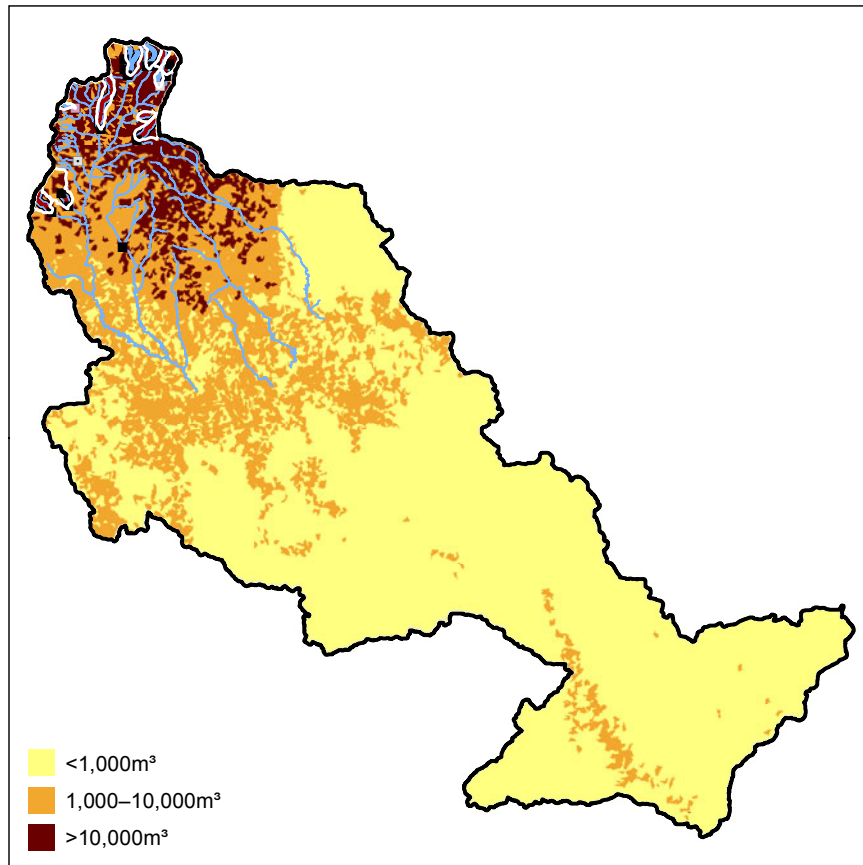
Pecos Headwaters (13060001) Wildfire Risk



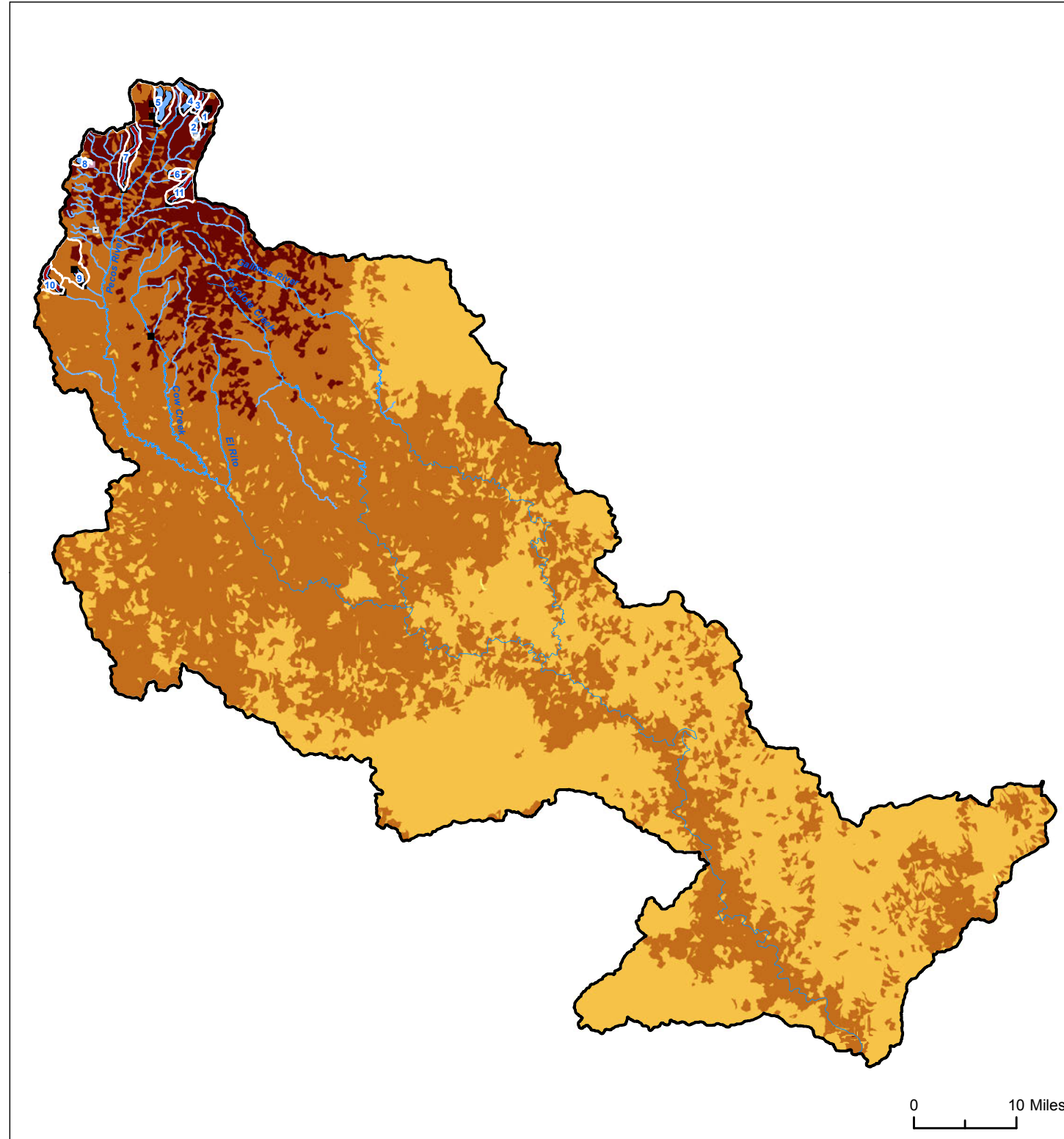
### Debris Flow Probability



### Debris Flow Volume



### Overall Debris Flow Risk



Overall Debris Flow Risk can be considered as the combined hazard of both probability and volume. For example, the most hazardous drainage areas will show both a high probability of occurrence and a large estimated volume of material.

Estimated probability and volume of a debris flow in response to a 10-year 30-min rainfall. Estimations based on method developed by Cannon et al, 2009.

## Debris Flow Risk

#### Rio Grande Cutthroat Trout

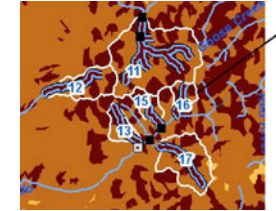
- Conservation Population 36 Mi. (5% of Total Conservation Populations)
- Core Population 22 Mi.
- Historic Distribution 451 Mi.

#### Barrier

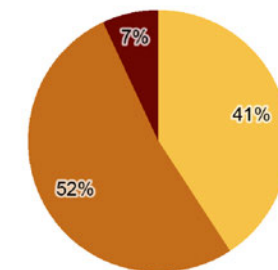
- Complete
- Partial
- Unknown

#### Debris Flow Risk

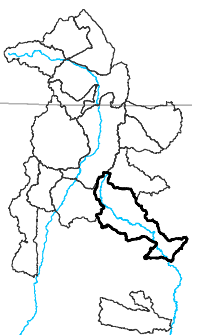
- Low
- Moderate
- High
- Extreme



**RGCT Subbasin**  
Contributing area to trout conservation population.



Pecos Headwaters (13060001) Debris Flow Risk

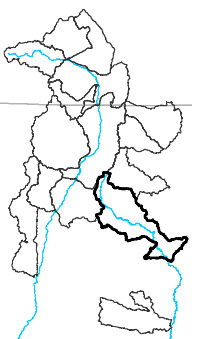


# Summary Table

## Pecos Headwaters (13060001)

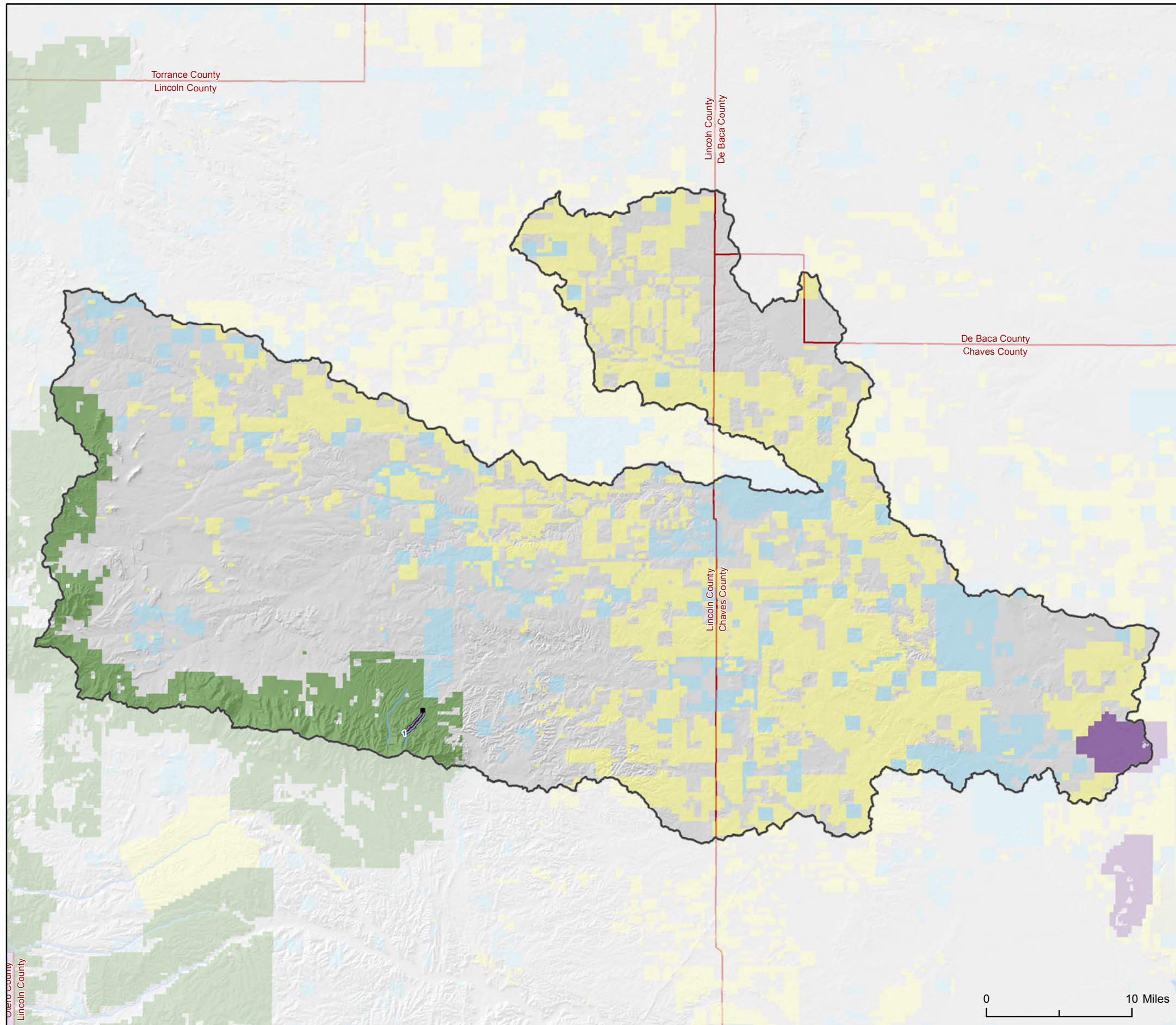
cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Core	10.2	3,224	3,643	419	99.03%	16,041.3	176,454.3	4.00	2.64	6.64	2	2.82	4.55	11.18
<i>Rio Mora (A)</i>															
02	Conservation	3.6	3,161	3,469	308	99.25%	16,853.2	84,266.2	4.00	2.80	6.80	2	3.00	5.00	11.80
<i>Unnamed Trib. to Rio Mora (A)</i>															
03	Core	5.1	3,309	3,640	330	99.12%	19,057.0	95,284.8	4.00	3.00	7.00	2	3.00	5.00	12.00
<i>Rio Valdez (A)</i>															
04	Conservation	11.5	3,162	3,849	687	98.67%	13,259.2	212,147.9	4.00	2.63	6.63	2	3.00	5.00	11.63
<i>Pecos River (A)</i>															
05	Conservation	14.5	2,945	3,813	868	97.78%	10,593.4	275,429.4	4.00	2.35	6.35	2	3.00	5.00	11.35
<i>Rito del Padre (A)</i>															
<i>Rito Maestas (A)</i>															
06	Core	5.7	2,885	3,418	533	99.43%	6,719.1	33,595.3	4.00	2.40	6.40	1	2.60	3.60	10.00
<i>Rito los Esteros (A)</i>															
07	Core	18.8	2,511	3,822	1,311	96.49%	11,839.5	319,666.1	3.85	2.56	6.41	2	3.00	4.93	11.33
<i>Jacks Creek (A)</i>															
08	Conservation	2.7	3,017	3,760	742	95.21%	8,161.1	48,966.8	3.67	2.33	6.00	2	3.00	5.00	11.00
<i>Cave Creek (A)</i>															
09	Core	27.4	2,339	3,354	1,016	93.73%	7,330.3	410,494.5	3.16	2.18	5.34	2	3.00	4.98	10.32
<i>Macho Creek (A)</i>															
10	Core	11.3	2,436	3,162	726	93.07%	8,040.3	176,886.7	3.00	2.27	5.27	2	3.00	5.00	10.27
<i>Dalton Creek (A)</i>															
11	Core	13.1	2,825	3,457	632	99.57%	12,180.0	255,780.4	4.00	2.52	6.52	2	2.86	4.57	11.10
<i>Bear Creek (A)</i>															

(A) and (R) indicate aboriginal and restored populations of trout.



Pecos Headwaters (13060001)  
Summary Table

# Arroyo Del Macho (13060005)



### Rio Grande Cutthroat Trout

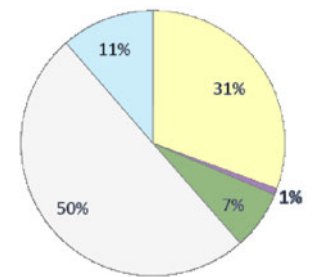
- Conservation Population 2 Mi. ( 0% of Total Conservation Populations)
- Core Population 2 Mi.
- Historic Distribution 8 Mi.

### Barrier

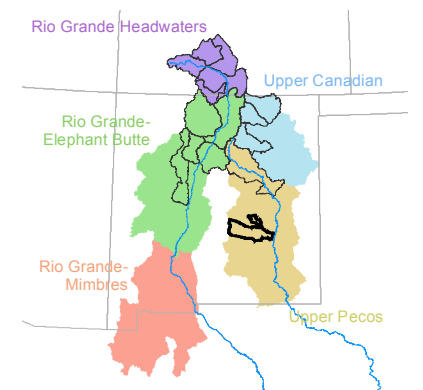
- Complete
- ▣ Partial
- Unknown

### Ownership

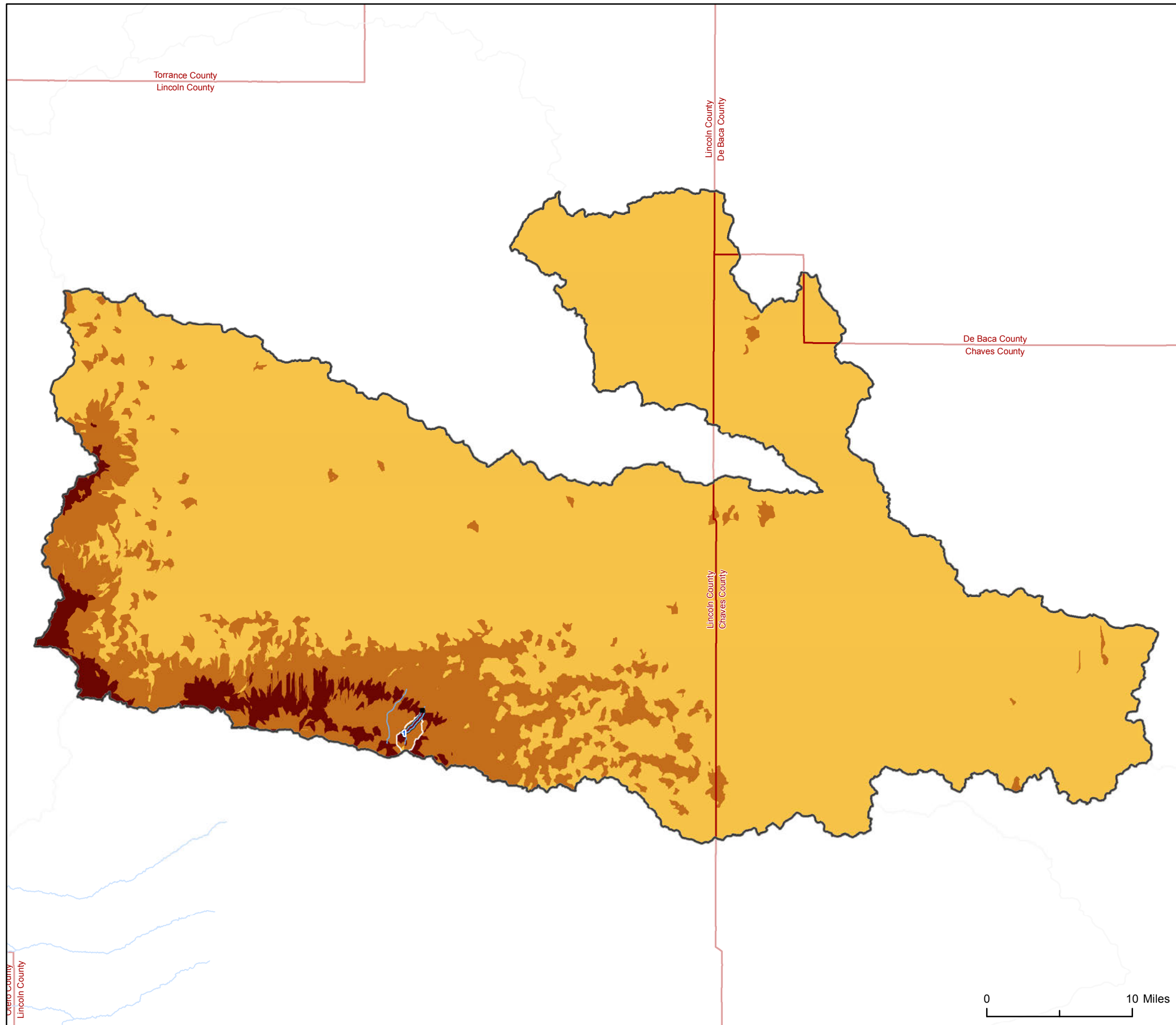
- BLM
- FWS
- USFS
- State Trust



Arroyo Del Macho (13060005)  
Overview



# Overall Risk: Wildfire Risk + Debris Flow Risk



## Rio Grande Cutthroat Trout

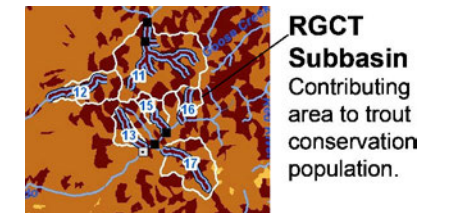
- Conservation Population 2 Mi. ( 0% of Total Conservation Populations)
- Core Population 2 Mi.
- Historic Distribution 8 Mi.

## Barrier

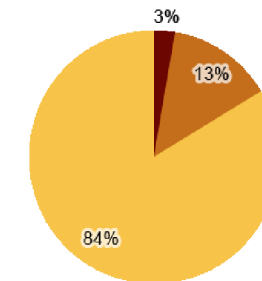
- Complete
- Partial
- Unknown

## Overall Risk

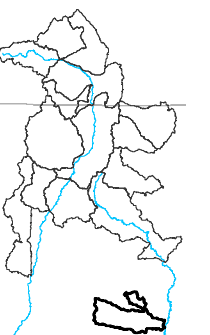
- Moderate
- High
- Extreme



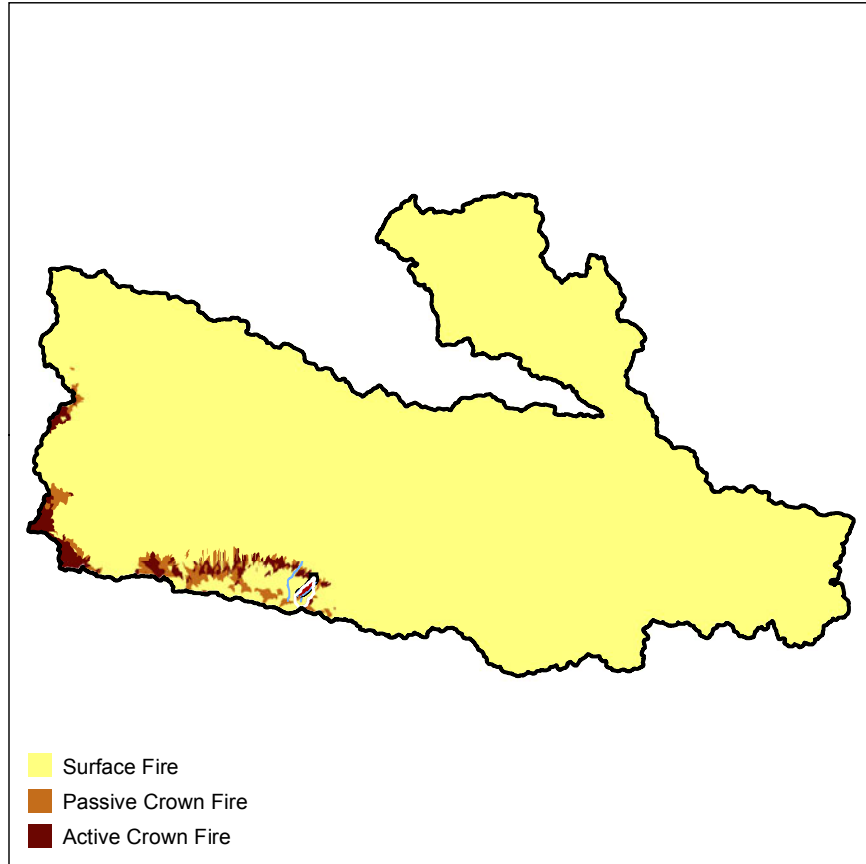
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



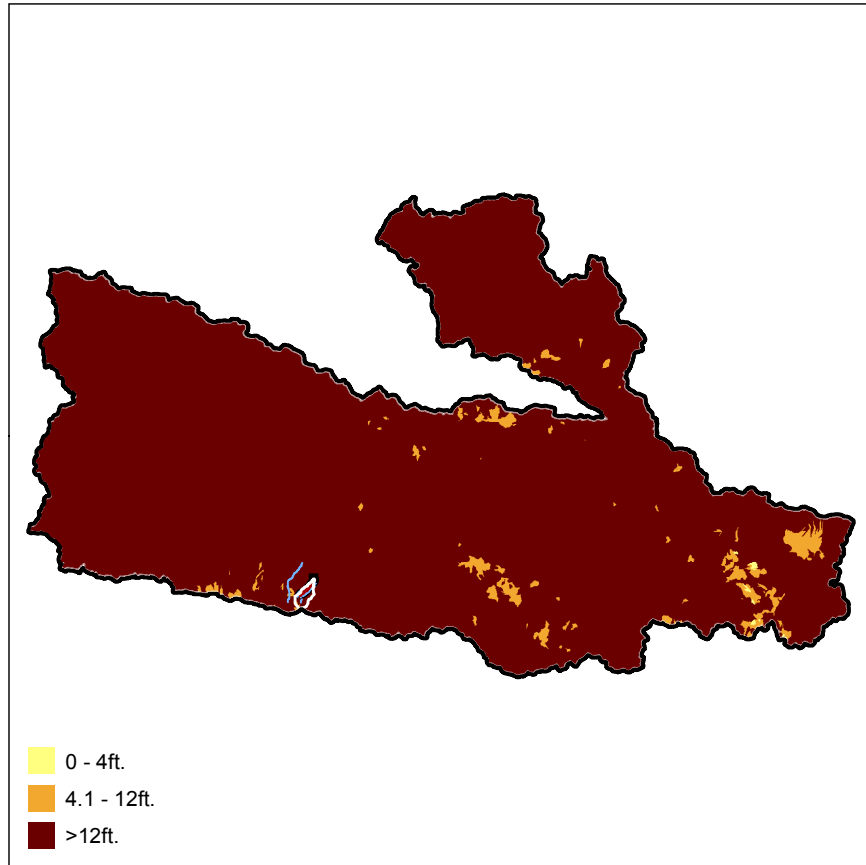
Arroyo Del Macho (13060005)  
Overall Risk from Fire



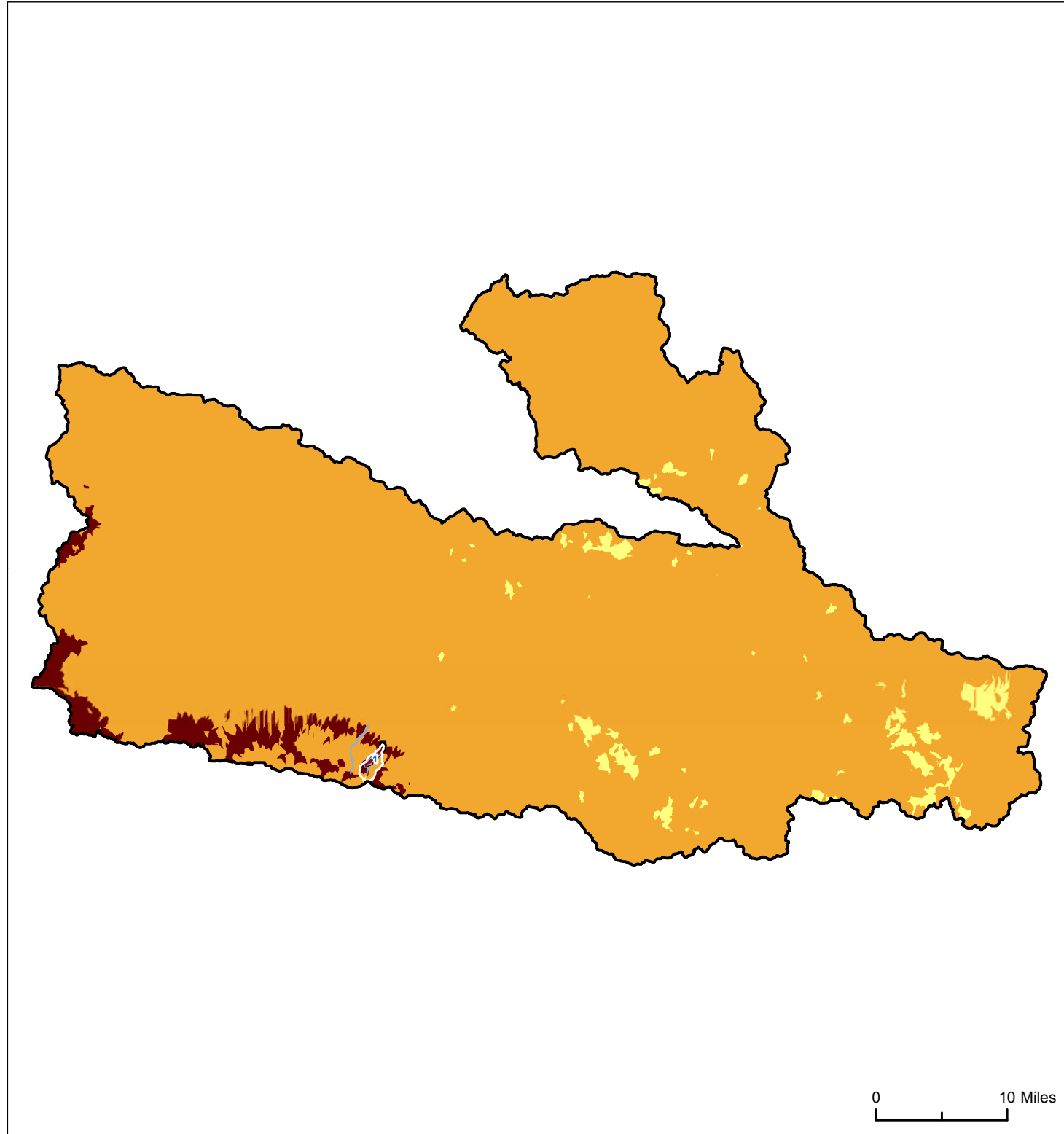
### Crown Fire Potential



### Flame Length



### Overall Wildfire Risk



Overall Wildfire Risk can be considered as the combined hazard of both crown fire potential and flame length. Crown fire is the movement into and through the canopy. Passive crown fires are fires that move through the crown intermittently, and active crown fires are fires that carry continuously through the crowns. Crown fires typically move quickly and are very intense. Flame length is an indicator of fire intensity at the active flaming front and is a good measure of what fire suppression resources can be used on a fire. Flame lengths of <4 feet indicate fires where direct attack is feasible; flame lengths of 4 to 12 feet indicate fires with substantial resistance to control and indirect attack is recommended; flame lengths of >12 feet indicate extreme fires where control of any kind is difficult and safety of firefighters is a concern. The drainage areas at highest risk from wildfire represent areas where the majority of the drainage basin is expected to have the potential for crown fires and flame lengths of >12 feet.

Crown fire potential and expected flame lengths were modeled using FlamMap, an interagency fire behavior mapping and analysis program. Details on the modeling effort can be found in Appendix A.

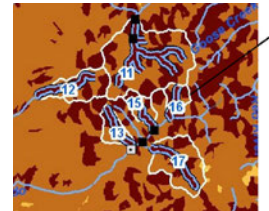
## Wildfire Risk

### Rio Grande Cutthroat Trout

- Conservation Population 2 Mi. (0% of Total Conservation Populations)
- Core Population 2 Mi.
- Historic Distribution 8 Mi.

### Barrier

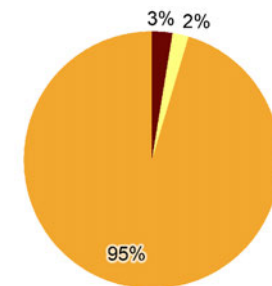
- Complete
- Partial
- Unknown



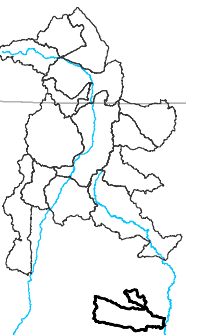
**RGCT Subbasin**  
Contributing area to trout conservation population.

### Overall Risk

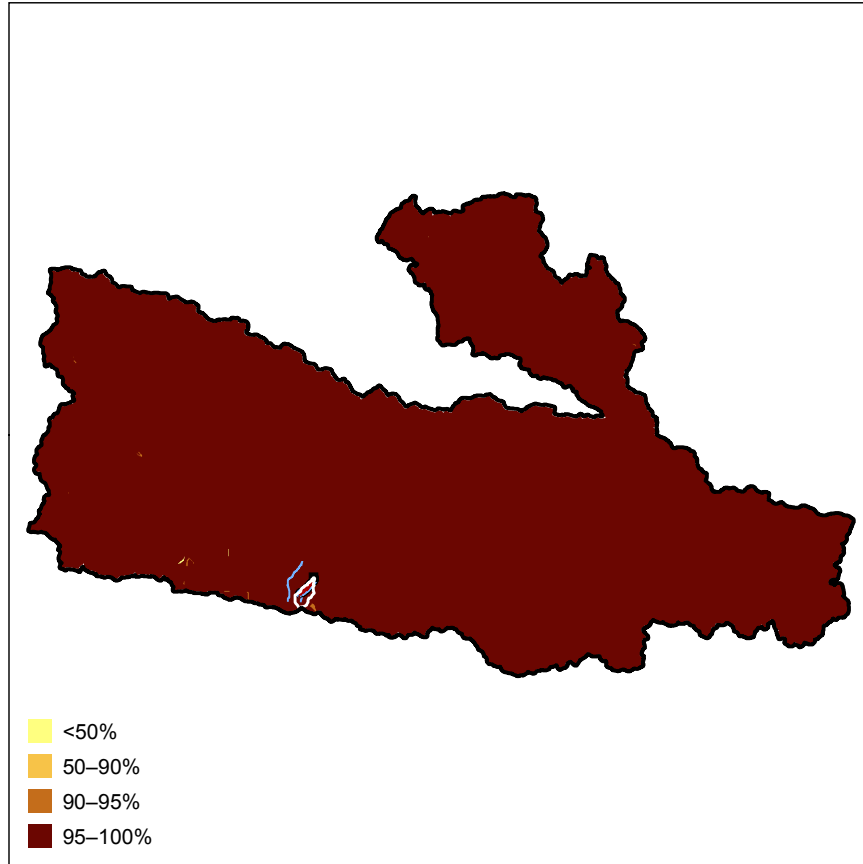
- Low
- Moderate
- High



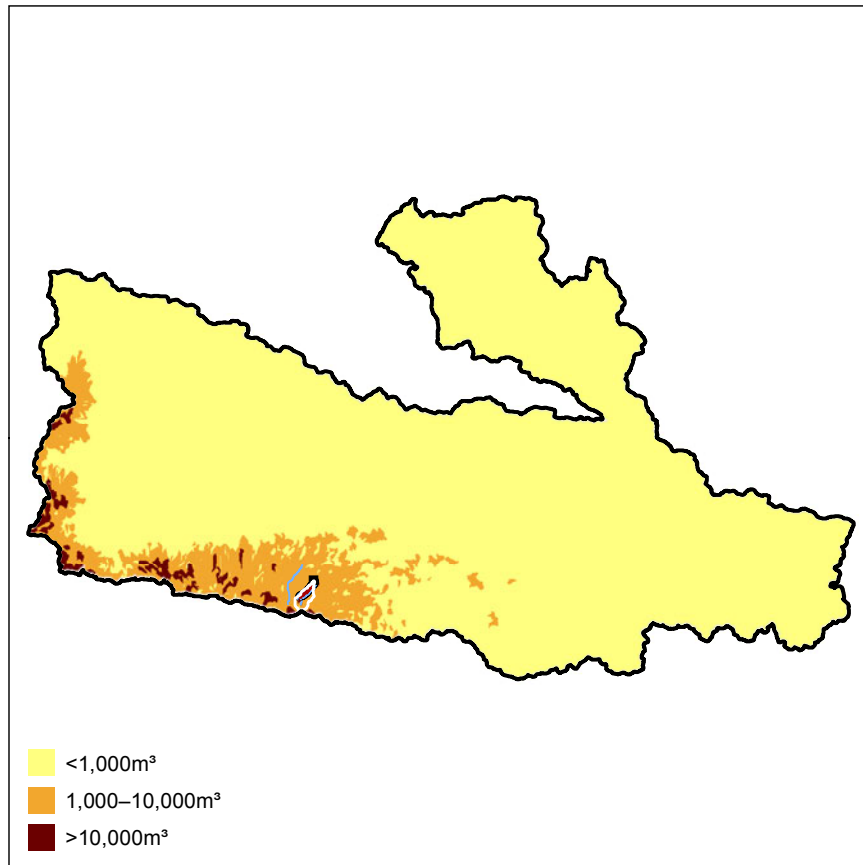
Arroyo Del Macho (13060005) Wildfire Risk



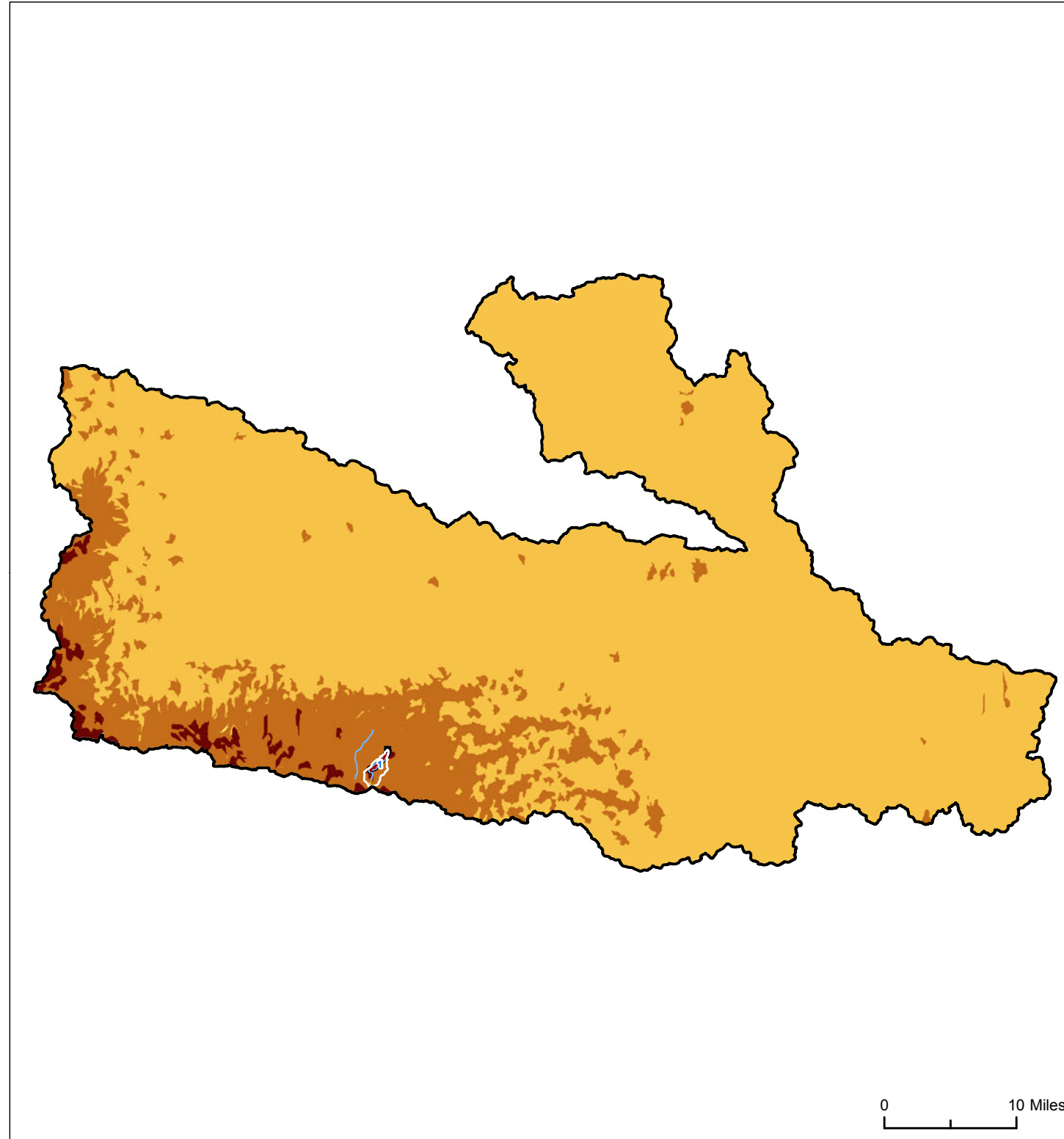
### Debris Flow Probability



### Debris Flow Volume



### Overall Debris Flow Risk



Overall Debris Flow Risk can be considered as the combined hazard of both probability and volume. For example, the most hazardous drainage areas will show both a high probability of occurrence and a large estimated volume of material.

Estimated probability and volume of a debris flow in response to a 10-year 30-min rainfall. Estimations based on method developed by Cannon et al, 2009.

## Debris Flow Risk

#### Rio Grande Cutthroat Trout

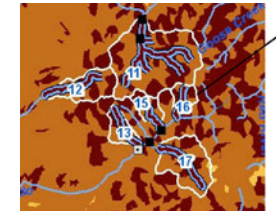
- Conservation Population 2 Mi. (0% of Total Conservation Populations)
- Core Population 2 Mi.
- Historic Distribution 8 Mi.

#### Barrier

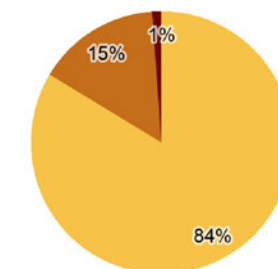
- Complete
- Partial
- Unknown

#### Debris Flow Risk

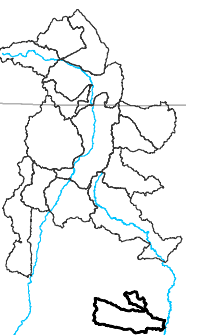
- Low
- Moderate
- High
- Extreme



**RGCT Subbasin**  
Contributing area to trout conservation population.



Arroyo Del Macho (13060005)  
Debris Flow Risk





# Summary Table

Arroyo Del Macho (13060005)

cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Core	6.8	1,860	3,065	1,206	97.13%	4,832.0	72,480.1	4.00	1.93	5.93	1	2.87	3.93	9.87
<i>Pinelodge Creek</i> (A)															
(A) and (R) indicate aboriginal and restored populations of trout.															

