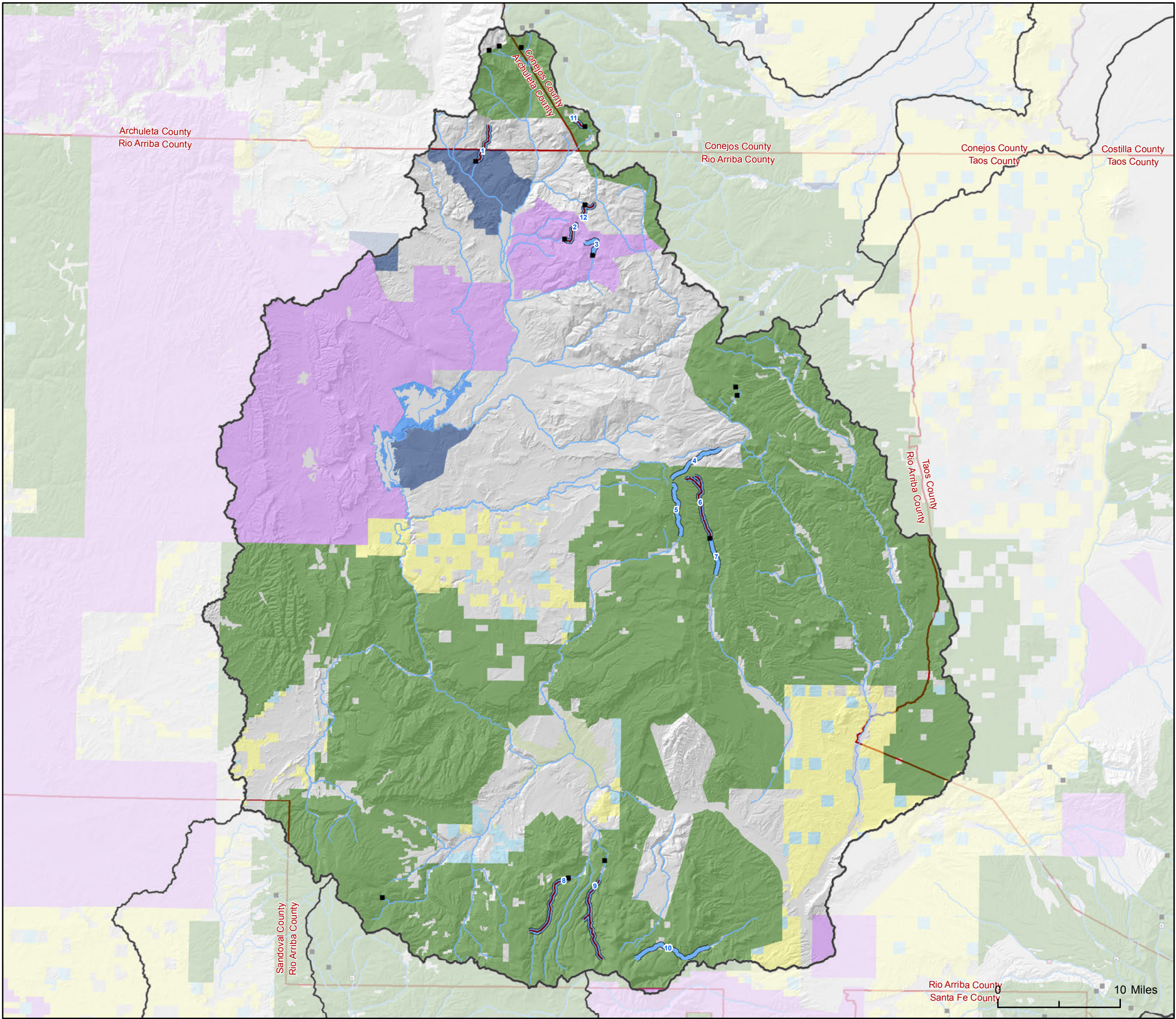


Rio Chama Watershed (13020102)



Rio Grande Cutthroat Trout

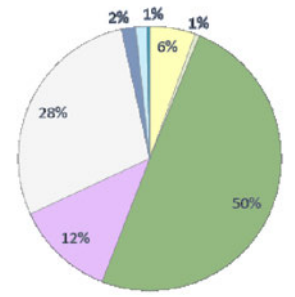
- Conservation Population 56 Mi. (7% of Total Conservation Populations)
- Core Population 32 Mi.
- Historic Distribution 811 Mi.

Barrier

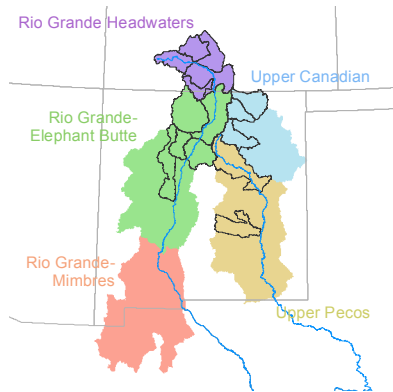
- Complete
- Partial
- Unknown

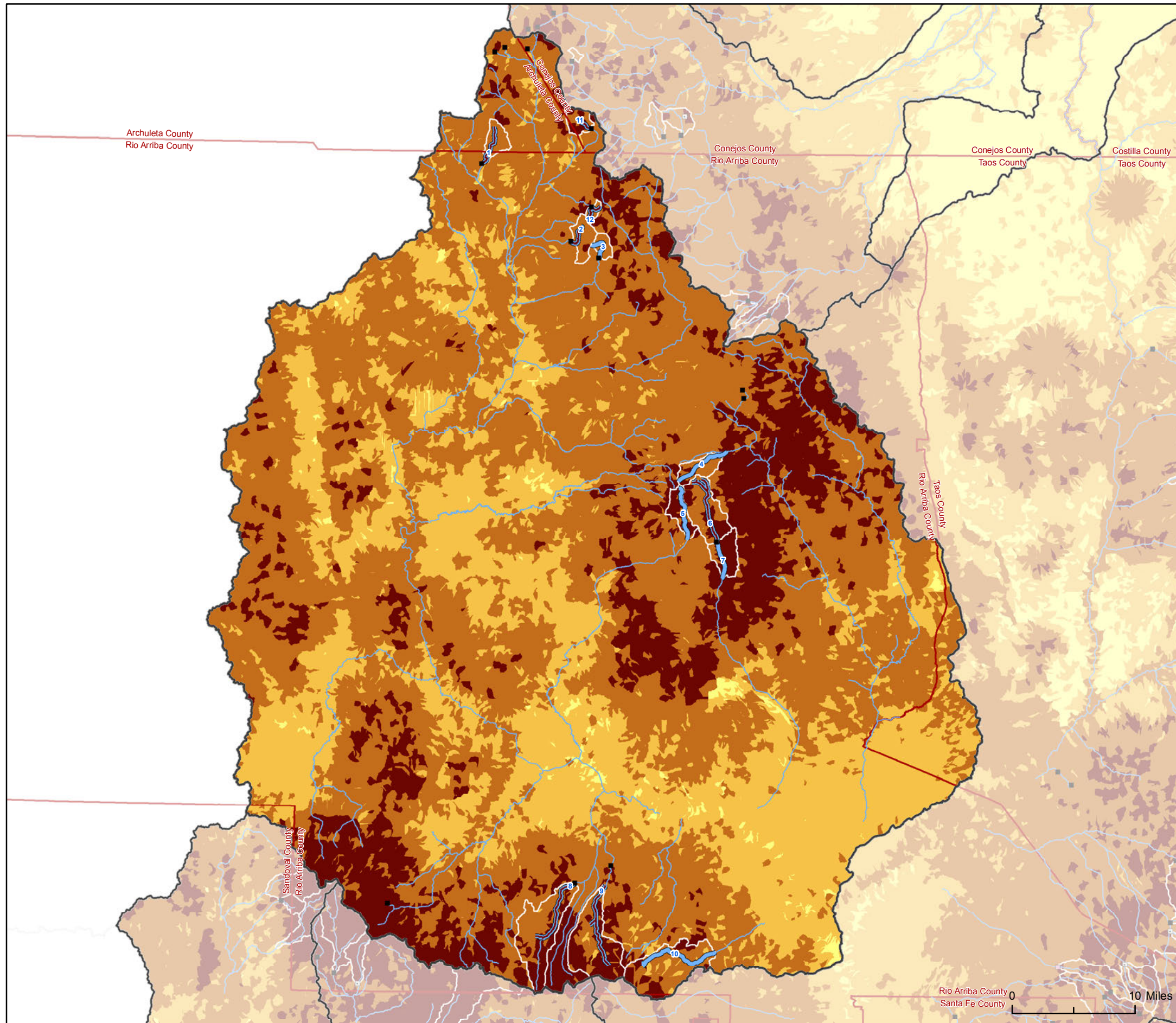
Ownership

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






Rio Chama Watershed (13020102)
Overview








Overall Risk: Wildfire Risk + Debris Flow Risk





Rio Grande Cutthroat Trout

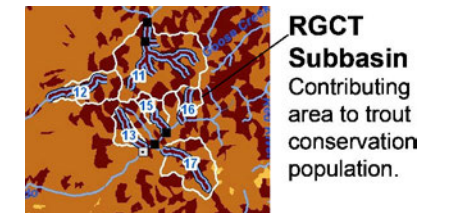
-  Conservation Population 56 Mi. (7% of Total Conservation Populations)
-  Core Population 32 Mi.
-  Historic Distribution 811 Mi.

Barrier

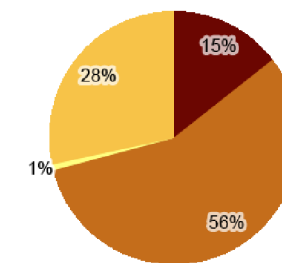
-  Complete
-  Partial
-  Unknown

Overall Risk

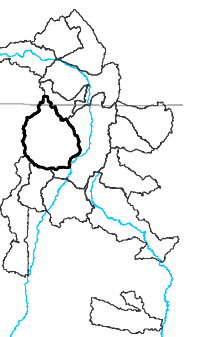
-  Low
-  Moderate
-  High
-  Extreme



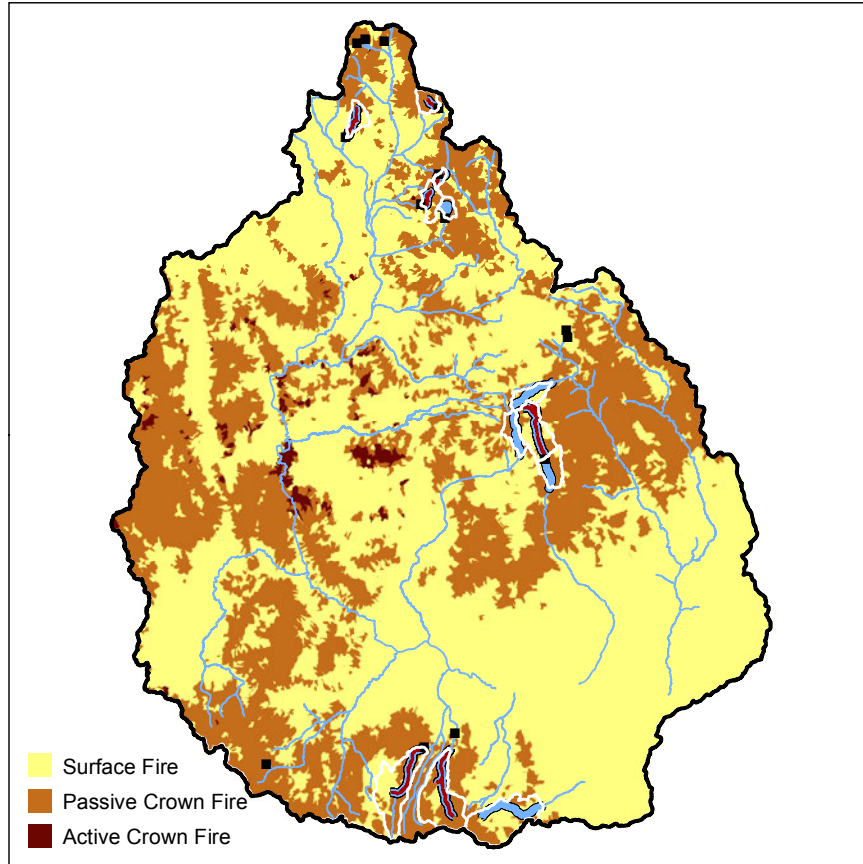
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



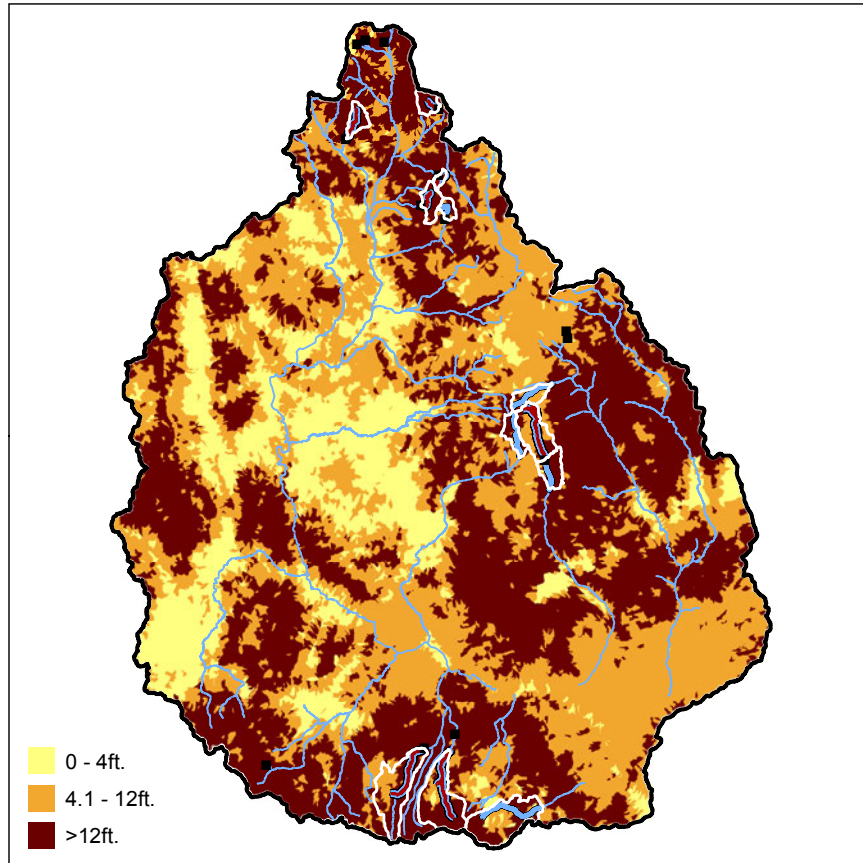
Rio Chama Watershed (13020102)
Overall Risk from Fire



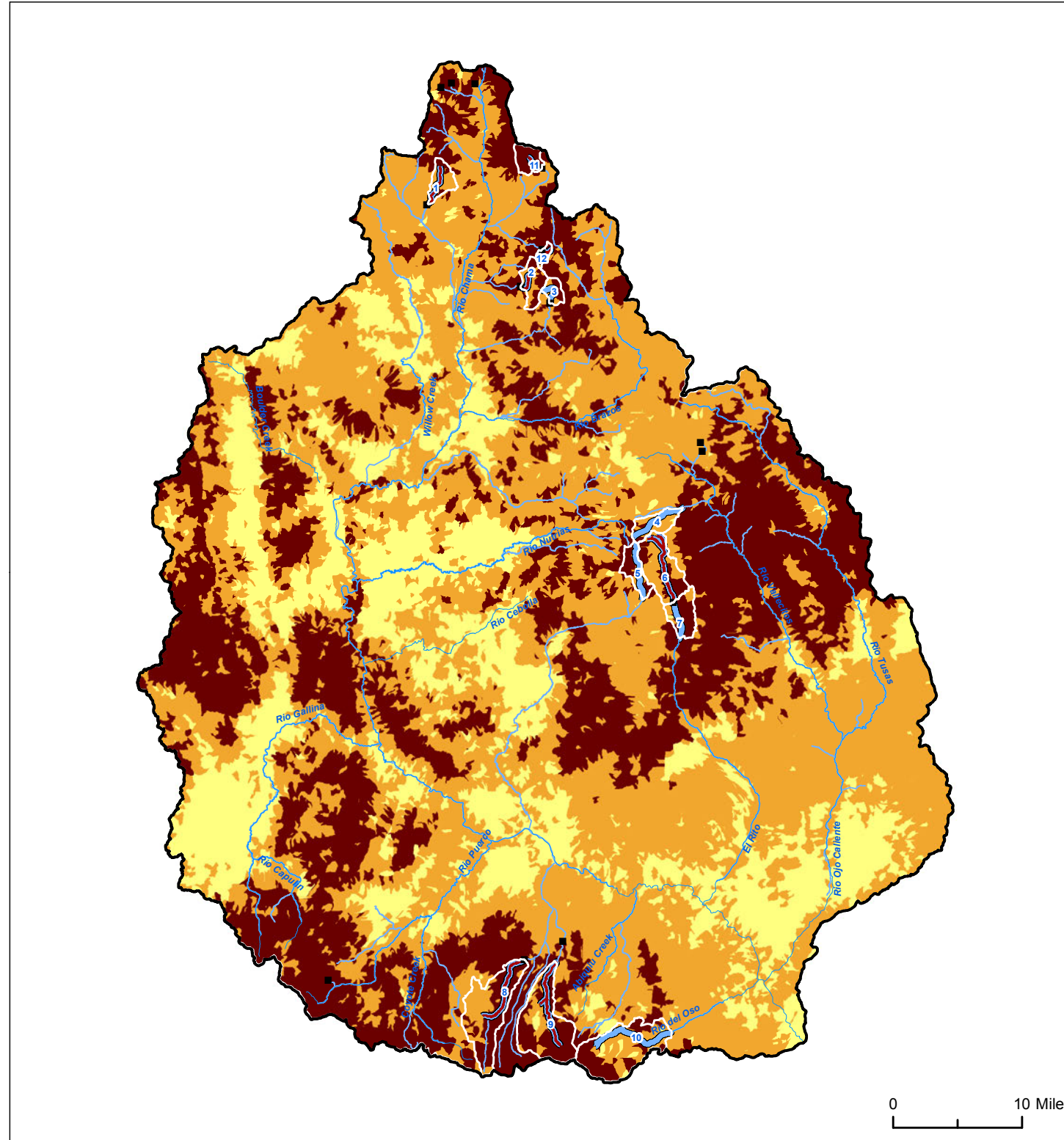
Crown Fire Potential



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.

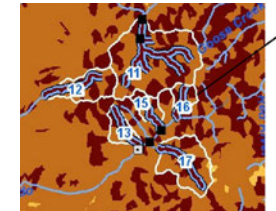
Wildfire Risk

Rio Grande Cutthroat Trout

- Conservation Population 56 Mi. (7% of Total Conservation Populations)
- Core Population 32 Mi.
- Historic Distribution 811 Mi.

Barrier

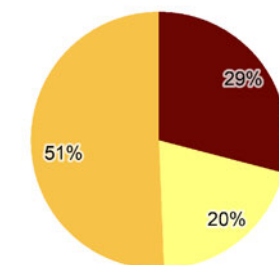
- Complete
- Partial
- Unknown



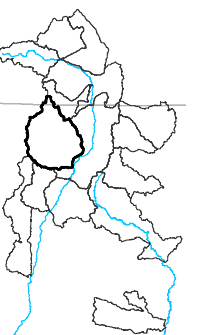
RGCT Subbasin
Contributing area to trout conservation population.

Overall Risk

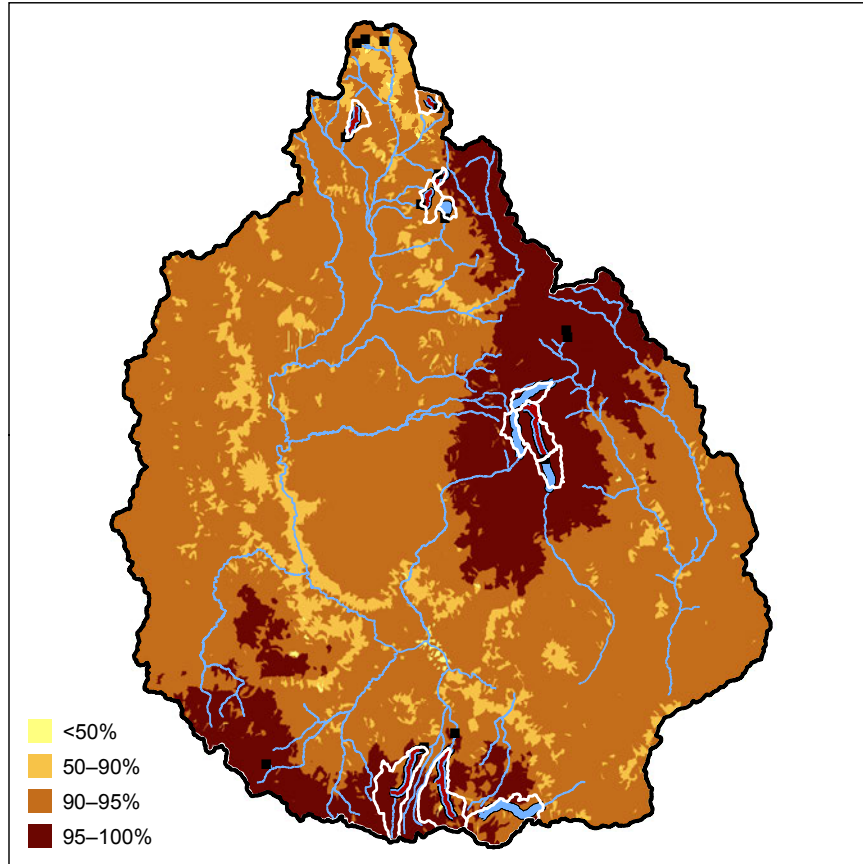
- Low
- Moderate
- High



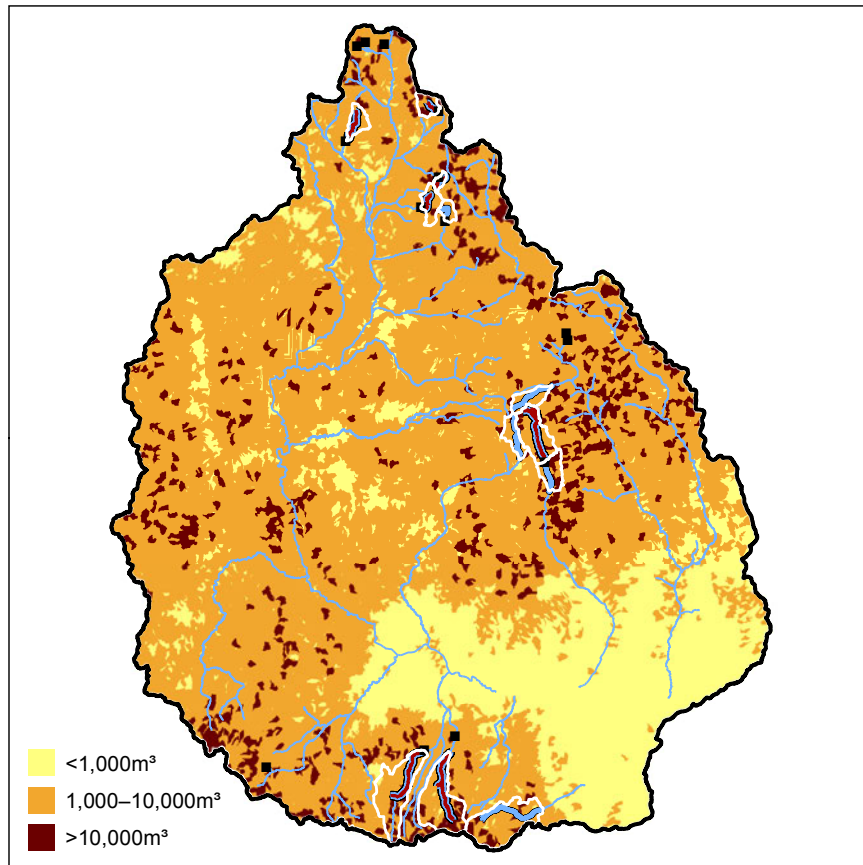
Rio Chama (13020102) Wildfire Risk



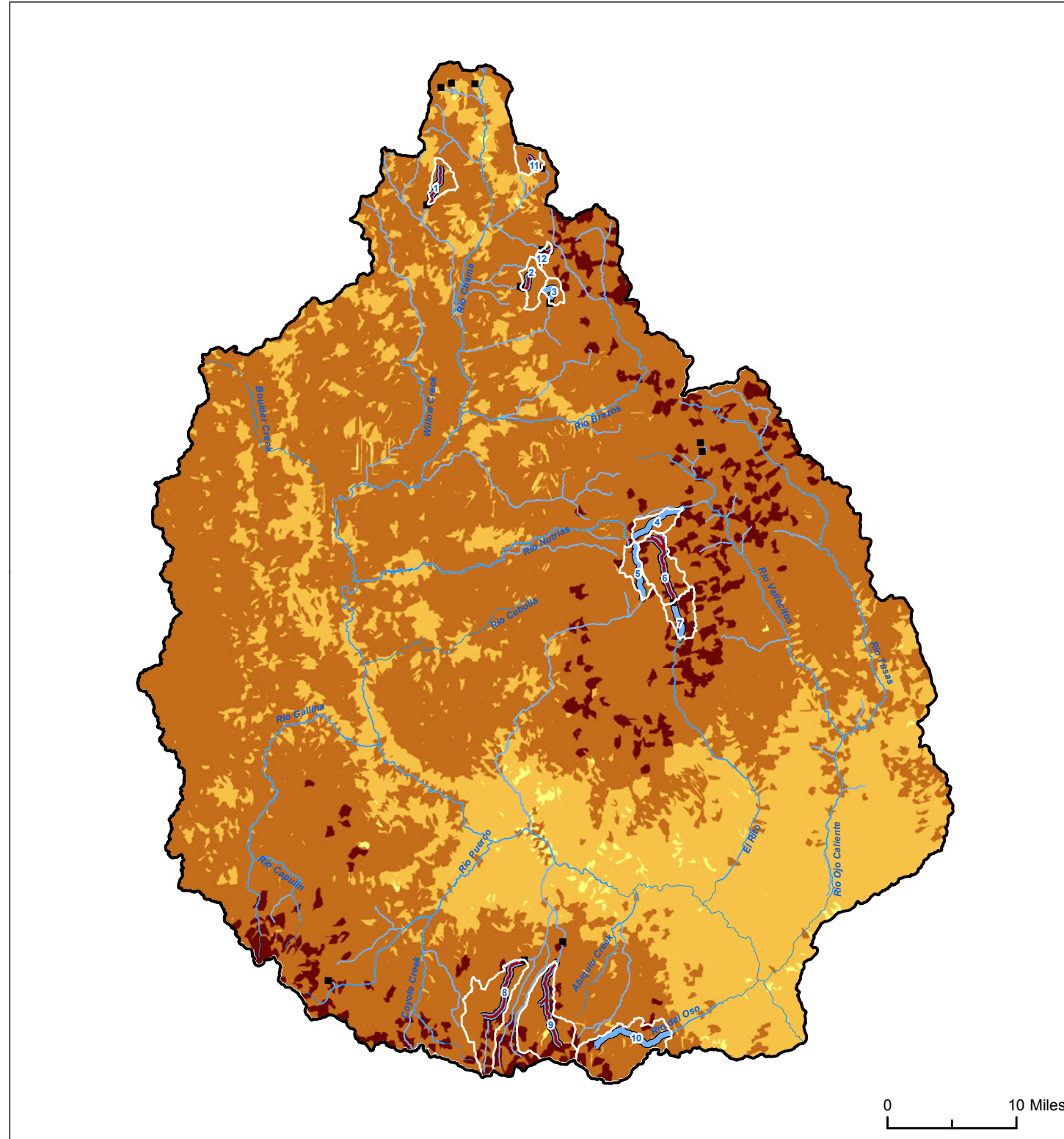
Debris Flow Probability



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

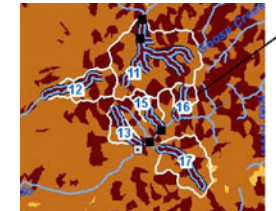
- Conservation Population 56 Mi. (7% of Total Conservation Populations)
- Core Population 32 Mi.
- Historic Distribution 811 Mi.

Barrier

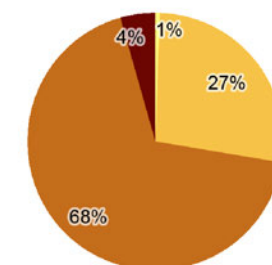
- Complete
- Partial
- Unknown

Debris Flow Risk

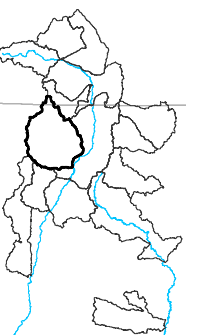
- Low
- Moderate
- High
- Extreme



RGCT Subbasin
Contributing area to trout conservation population.



Rio Chama (13020102) Debris Flow Risk

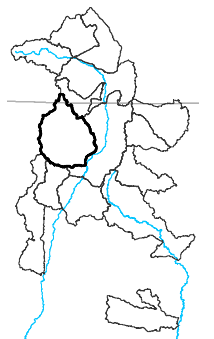


Summary Table

Rio Chama (13020102)

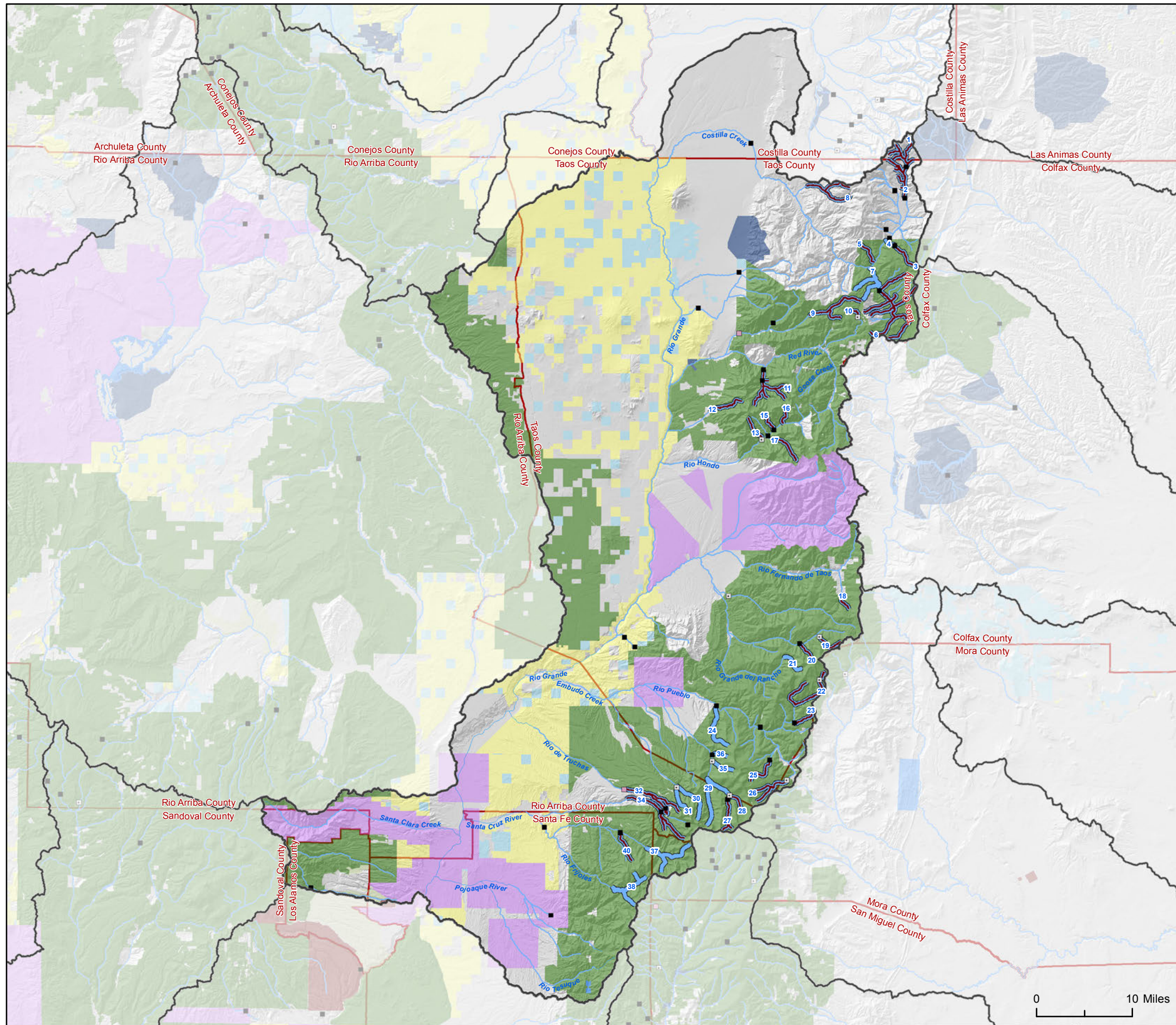
cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Core	11.8	2,559	3,464	905	90.84%	3,628.9	87,094.4	2.88	1.96	4.83	1	2.88	4.17	9.00
<i>Nabor Creek (R)</i>															
02	Core	12.9	2,762	3,300	538	92.25%	4,373.1	135,566.0	2.97	2.00	4.97	1	2.87	4.32	9.29
<i>Little Willow Creek (R)</i>															
03	Conservation	6.2	3,017	3,267	249	93.68%	6,253.0	81,289.0	3.00	2.08	5.08	2	2.54	4.54	9.62
<i>Poso Creek (R)</i>															
04	Conservation	13.7	2,810	3,258	448	97.26%	5,190.8	145,342.4	4.00	2.00	6.00	1	2.25	3.61	9.61
<i>Jaroso Creek (A)</i>															
05	Conservation	12.9	2,794	3,326	532	96.77%	5,200.5	182,018.6	3.86	1.94	5.80	2	2.63	4.37	10.17
<i>Canjilon Creek (A)</i>															
06	Core	32.9	2,757	3,245	488	97.51%	5,253.0	362,453.8	3.99	2.06	6.04	1	2.28	4	9.68
<i>El Rito (A)</i>															
<i>Unnamed Trib. #1 to El Rito (A)</i>															
<i>Unnamed Trib. #2 to El Rito (A)</i>															
07	Conservation	16.9	2,591	2,991	400	97.21%	7,336.3	212,751.4	4.00	2.31	6.31	2	2.79	4	10.79
<i>El Rito</i>															
08	Core	53.0	2,292	3,231	939	95.27%	5,628.4	596,609.4	3.62	2.09	5.72	2	2.72	4.35	10.07
<i>Canones Creek (A)</i>															
<i>Unnamed Trib. to Canones Creek (A)</i>															
09	Core	53.1	2,388	3,421	1,033	93.75%	6,723.1	665,584.6	3.54	2.11	5.65	2	2.67	4.44	10.09
<i>Polvadera Creek (A)</i>															
<i>South Fork Polvadera Creek (A)</i>															
10	Conservation	55.4	2,112	3,527	1,415	93.96%	5,797.6	562,368.9	3.26	2.04	5.30	1	2.46	3.87	9.16
<i>Rio del Oso (A)</i>															
<i>Rito de Abiquiu (A)</i>															
<i>Rito del Oso (A)</i>															
11	Core	10.2	2,966	3,502	536	93.20%	8,415.9	143,070.9	3.00	2.29	5.29	2	3.00	5.00	10.29
<i>Wolf Creek (A)</i>															
12	Core	3.2	3,087	3,305	218	94.52%	6,058.3	42,407.8	3.14	2.00	5.14	2	2.86	4.86	10.00
<i>East Fork Wolf Creek (A)</i>															
<i>Headwater Trib. To East Fork Wolf Creek (A)</i>															

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



Rio Chama (13020102)
Summary Table

Upper Rio Grande (13020101)



Rio Grande Cutthroat Trout

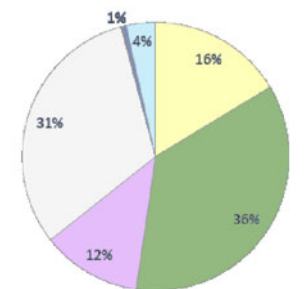
- Conservation Population 217 Mi. (28% of Total Conservation Populations)
- Core Population 161 Mi.
- Historic Distribution 948 Mi.

Barrier

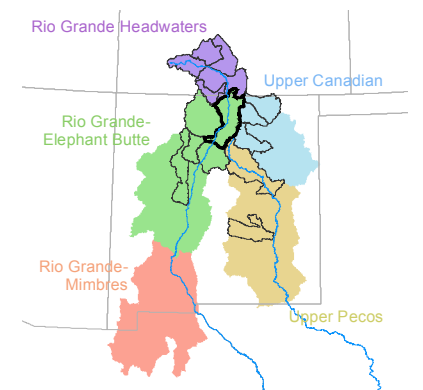
- Complete
- Partial
- Unknown

Ownership

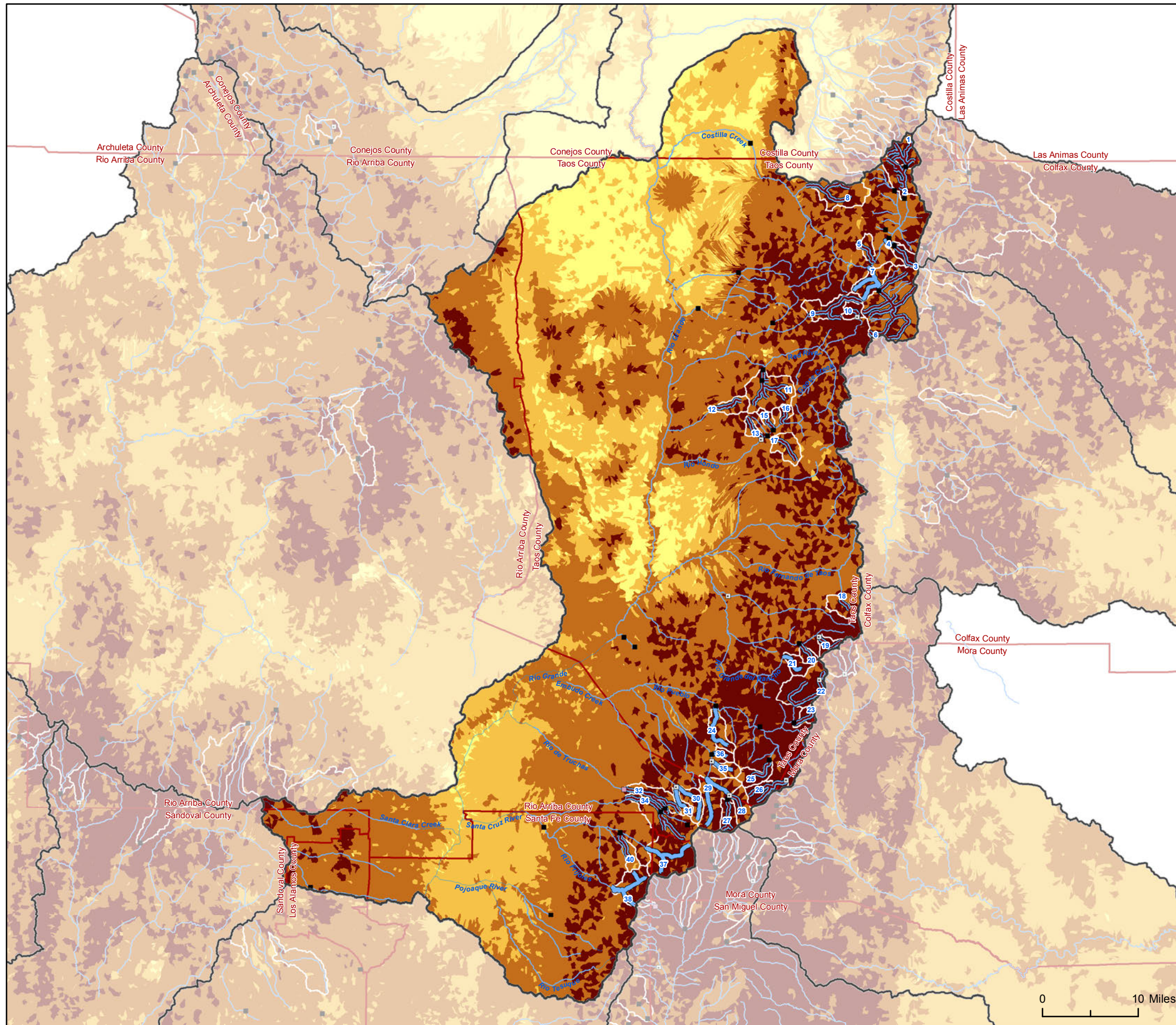
- BLM
- NPS
- USFS
- Tribal
- State Trust
- State Fish & Wildlife
- Other State
- Other Federal



Upper Rio Grande (13020101)
Overview



Overall Risk: Wildfire Risk + Debris Flow Risk



Rio Grande Cutthroat Trout

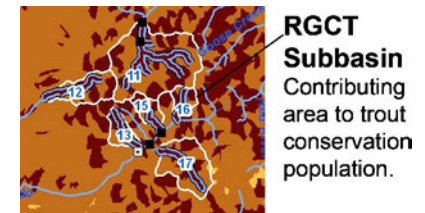
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Barrier

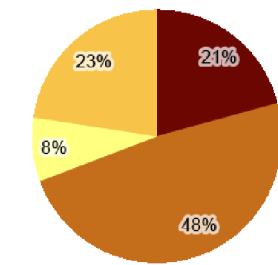
- Complete
- Partial
- Unknown

Overall Risk

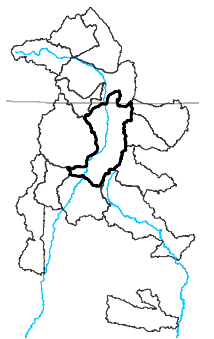
- Low
- Moderate
- High
- Extreme



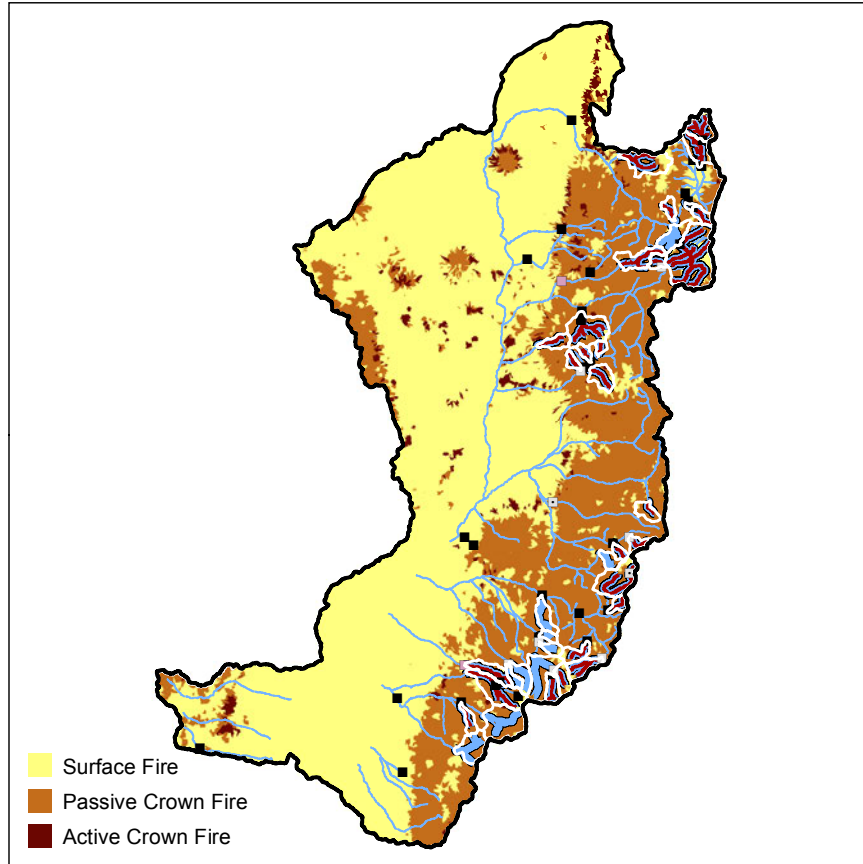
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



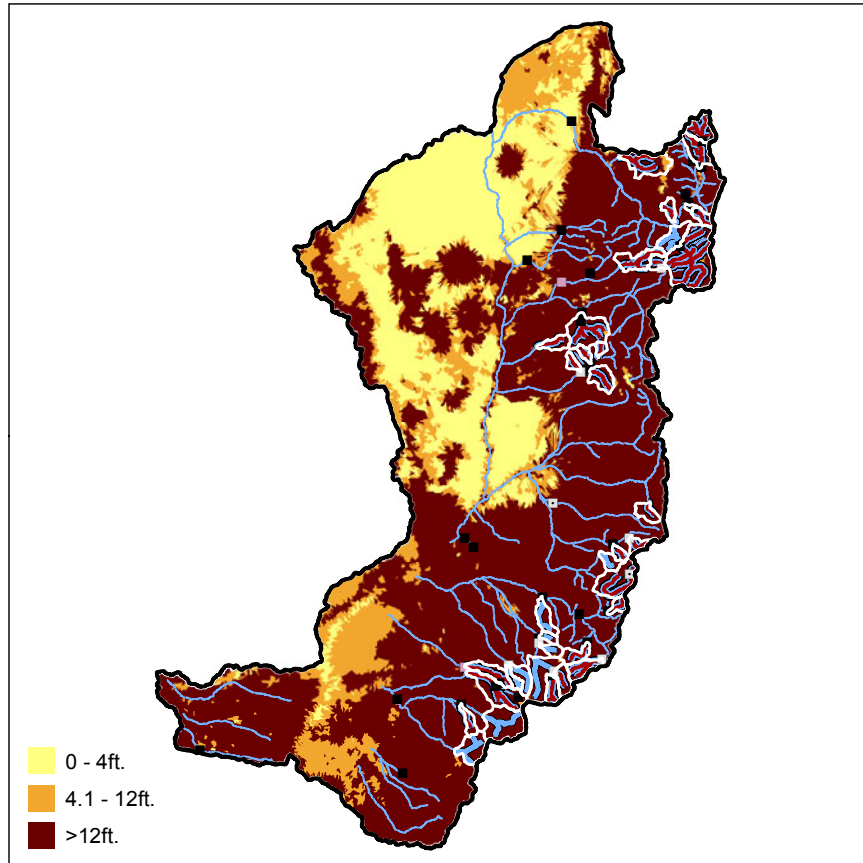
Upper Rio Grande (1302010)
Overall Risk from Fire



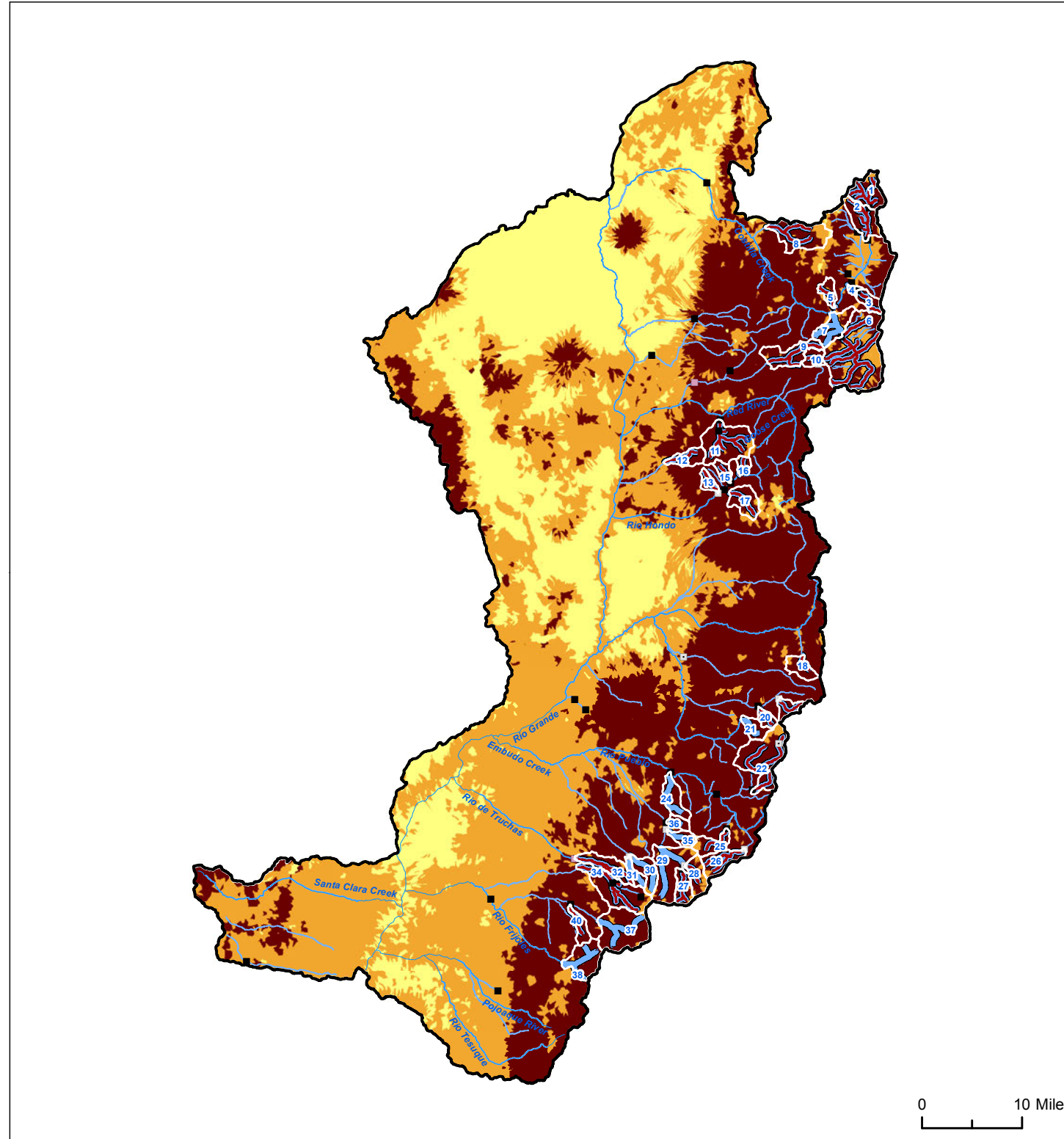
Crown Fire Potential



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.

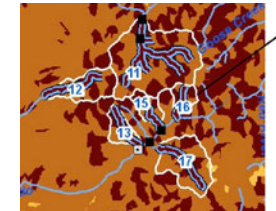
Wildfire Risk

Rio Grande Cutthroat Trout

- Conservation Population 217 Mi. (28% of Total Conservation Populations)
- Core Population 161 Mi.
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Barrier

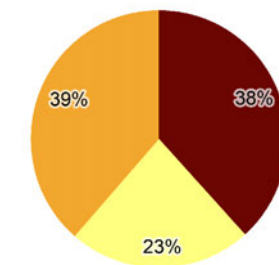
- Complete
- Partial
- Unknown



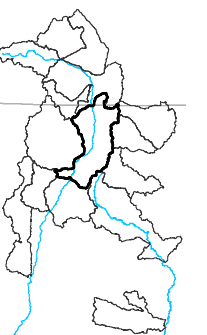
RGCT Subbasin
Contributing area to trout conservation population.

Overall Risk

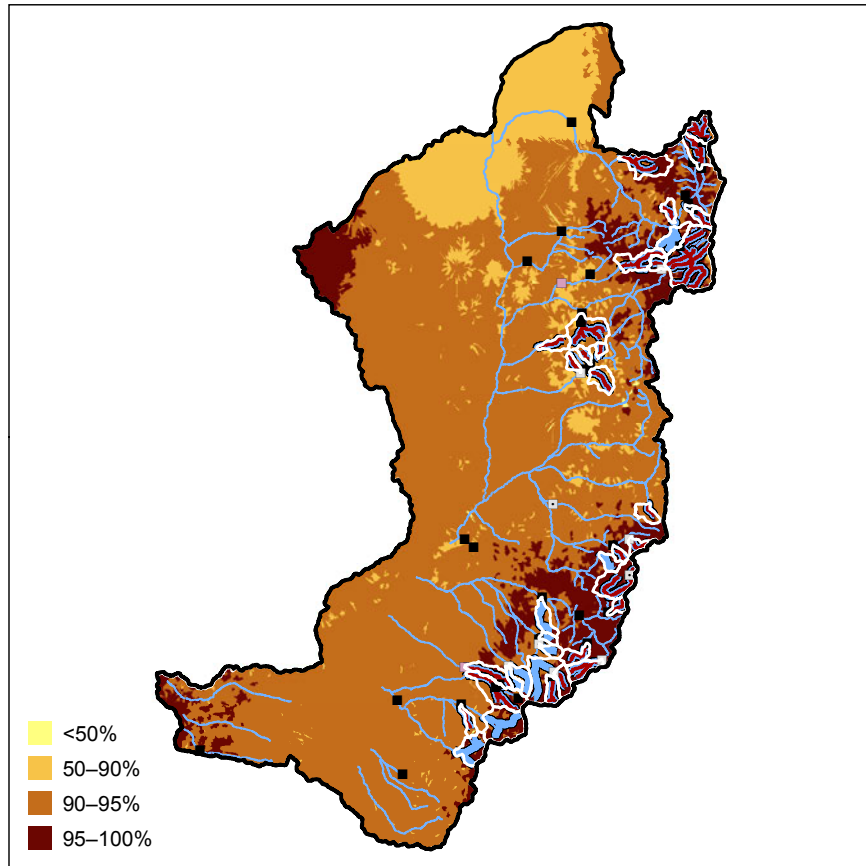
- Low
- Moderate
- High



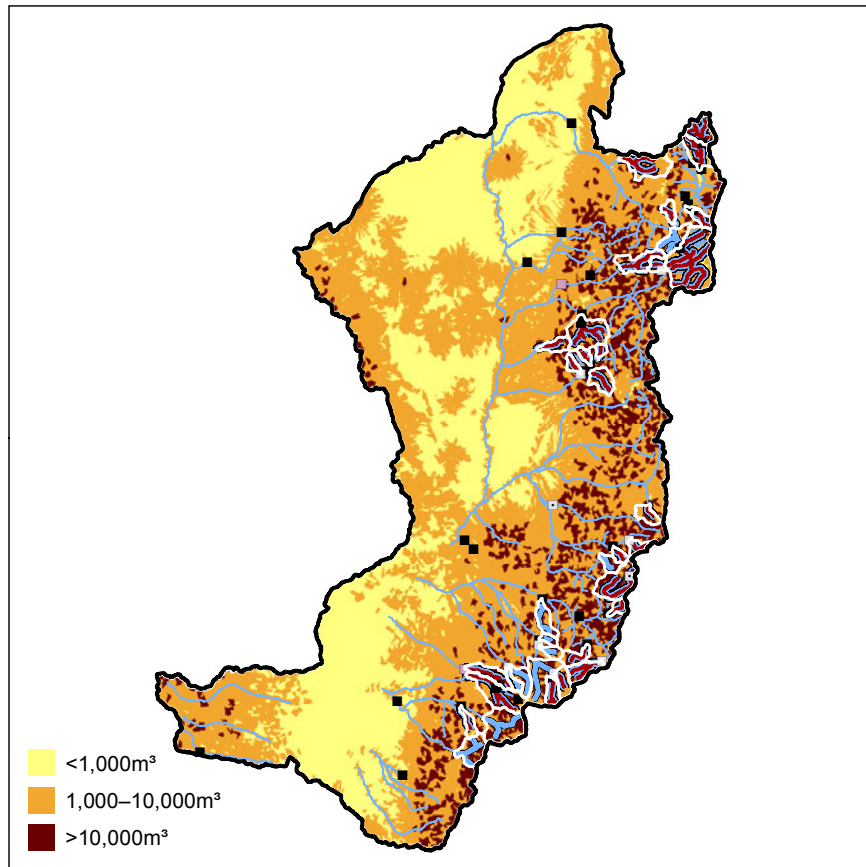
Upper Rio Grande (1302010) Wildfire Risk



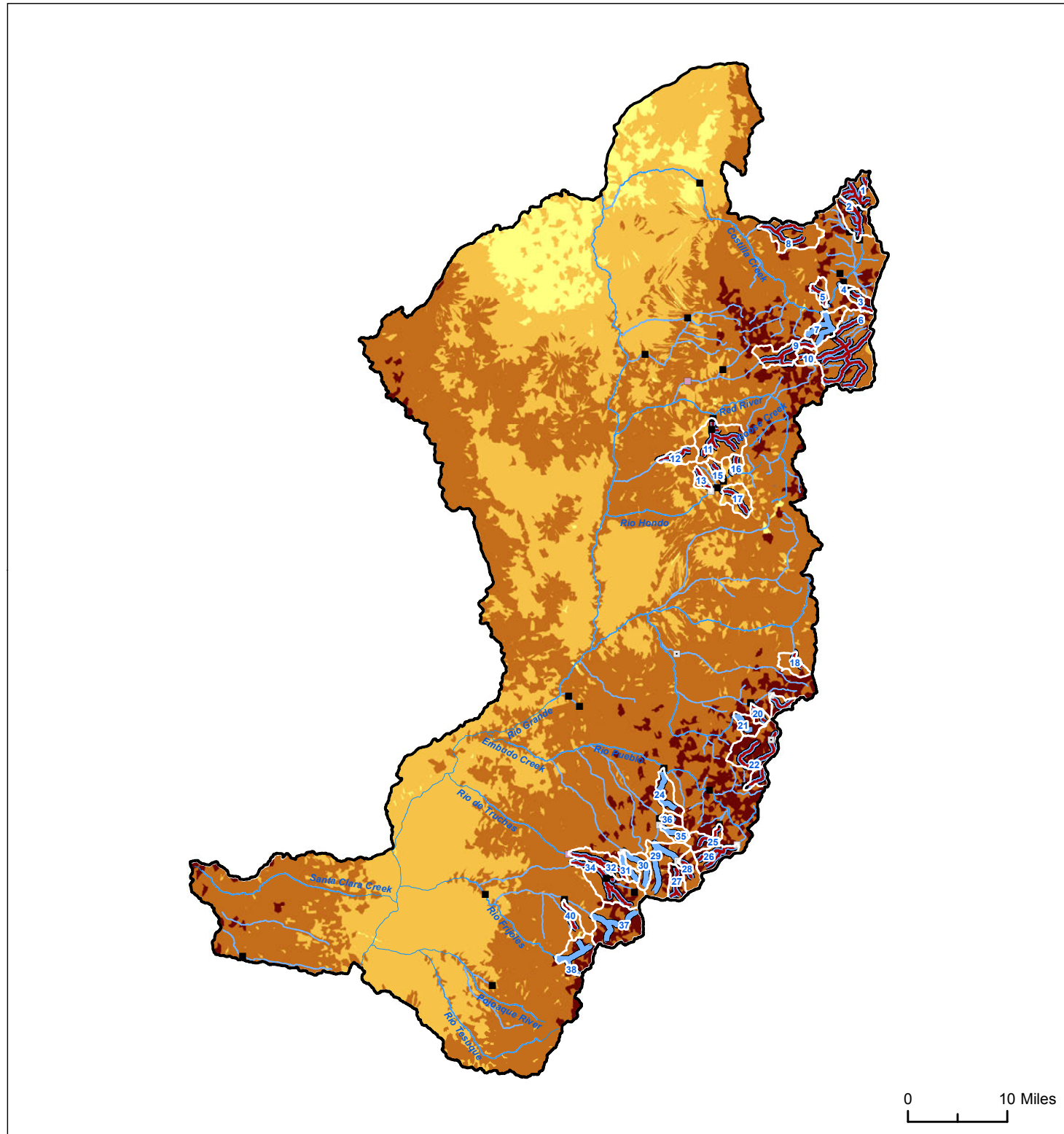
Debris Flow Probability



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

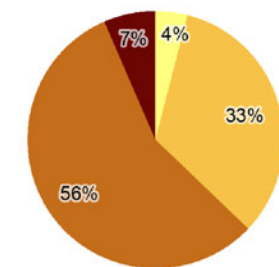
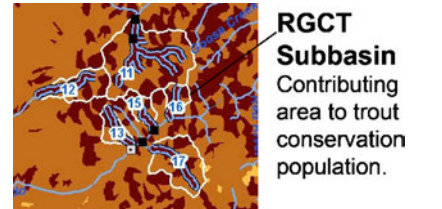
— Conservation Population 217 Mi. (28% of Total Conservation Populations)
— Core Population 161 Mi.
— Historic Distribution 948 Mi.

Barrier

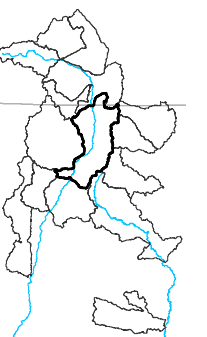
■ Complete
 Partial
■ Unknown

Debris Flow Risk

■ Low
■ Moderate
■ High
■ Extreme



Upper Rio Grande (13020101) Debris Flow Risk

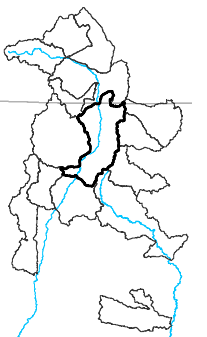


Summary Table

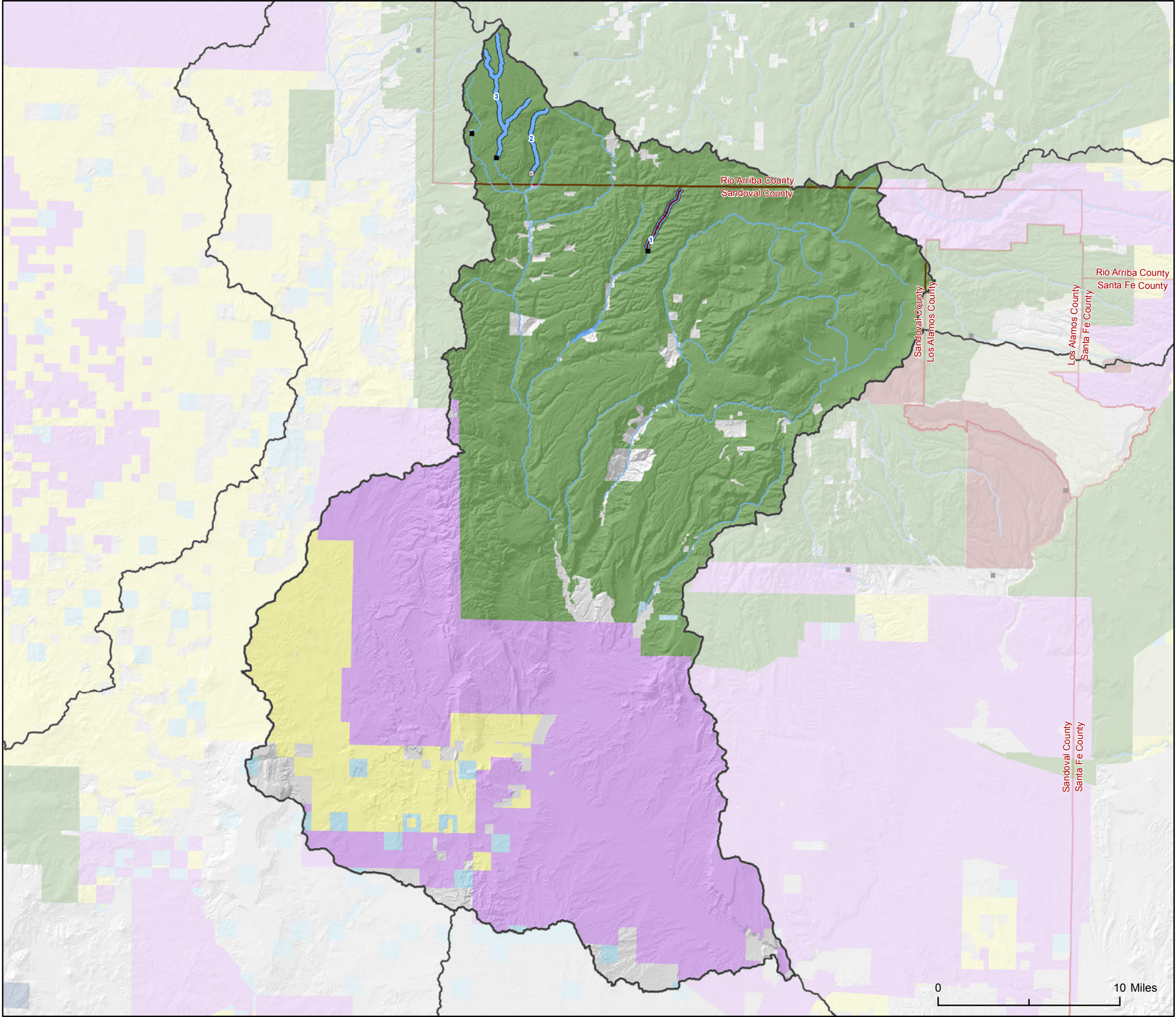
Upper Rio Grande (13020101)

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	21.5	3,096	3,850	754	94.57%	9,140.4	265,071.4	3.41	2.45	5.86	2	2.97	4.90	10.76
<i>State Line Creek, Costilla Creek, East Fork Costilla Creek, West Fork Costilla Creek (R)</i>															
02	Core	21.9	2,957	3,919	962	94.94%	5,974.2	286,761.8	3.56	2.10	5.67	2	3.00	4.88	10.54
<i>Costilla Creek, Frey Creek, Glacier Creek, South Fork Glacier Creek (R)</i>															
03	Core	9.5	2,938	3,830	892	95.40%	10,289.9	123,478.9	3.83	2.33	6.17	2	3.00	5.08	11.25
<i>PowderHouse Creek (R)</i>															
04	Conservation	2.0	2,826	3,163	337	95.38%	5,769.5	23,078.1	3.75	2.00	5.75	2	3.00	4.50	10.25
<i>PowderHouse Creek (A)</i>															
05	Core	8.4	2,775	3,519	744	95.30%	5,753.4	109,314.5	3.68	2.11	5.79	2	3.00	4.68	10.47
<i>La Cueva Creek (A) Comanche Creek (R) Gold Creek (R) Grassy Creek (R) Holman Creek (R) La Belle Creek (R) Little Costilla Creek (R) Vidal Creek (R)</i>															
07	Conservation	110.1	2,726	3,811	1,085	95.36%	4,996.7	1,219,202.2	3.73	1.98	5.71	2	2.98	4.51	10.22
<i>Chuckwagon Creek, Comanche Creek, Fernandez Creek (A)</i>															
08	Core	33.1	2,558	3,930	1,372	94.82%	6,212.6	422,458.3	3.46	2.03	5.49	2	2.84	4.65	10.13
<i>Ute Creek, Unnamed Trib. to Ute Creek (A)</i>															
09	Core	23.8	2,849	3,649	800	95.50%	8,988.4	377,511.4	3.69	2.31	6.00	2	3.00	4.93	10.93
<i>Cabresto Creek (A)</i>															
10	Core	8.5	3,119	3,383	264	97.01%	8,847.1	141,553.8	4.00	2.31	6.31	2	3.00	5.00	11.31
<i>Bitter Creek (A)</i>															
11	Core	42.6	2,435	3,873	1,438	91.55%	8,169.0	612,672.6	2.79	2.24	5.03	2	2.96	4.91	9.93
<i>Columbine Creek, Deer Creek, Placer Fork, Willow Creek (A)</i>															
12	Core	12.3	2,448	3,679	1,231	90.89%	8,296.8	182,529.7	2.73	2.27	5.00	2	3.00	5.05	10.05
<i>San Cristobal Creek (A)</i>															
13	Core	5.7	2,621	3,599	978	90.51%	8,989.2	80,902.9	2.78	2.44	5.22	2	3.00	5.00	10.22
<i>Yerba Creek (A)</i>															
15	Core	5.7	2,689	3,605	915	90.01%	8,050.5	88,555.7	2.64	2.18	4.82	2	3.00	5.00	9.82
<i>Italianos Creek (A)</i>															
16	Core	4.7	2,798	3,718	920	92.00%	8,348.1	66,784.7	2.88	2.38	5.25	2	3.00	4.88	10.13
<i>Gavilan Creek (A)</i>															
17	Core	18.8	2,600	3,922	1,323	83.91%	7,106.7	255,840.1	2.39	2.14	4.53	2	2.94	4.78	9.31
<i>South Fork Rio Hondo (A)</i>															
18	Core	12.1	2,651	3,312	662	93.94%	6,980.7	181,497.6	3.12	2.15	5.27	2	3.00	4.88	10.15
<i>Tienditas Creek (A)</i>															
19	Core	8.9	2,883	3,643	760	96.85%	9,289.7	167,215.4	3.94	2.33	6.28	2	3.00	5.00	11.28
<i>Frijoles Creek (A)</i>															
20	Core	6.5	2,762	3,645	882	95.88%	9,236.0	120,067.5	3.85	2.31	6.15	2	3.00	5.00	11.15
<i>Palociento Creek (A)</i>															
21	Conservation	10.2	2,949	3,644	695	96.10%	12,260.6	183,909.7	3.87	2.67	6.53	2	3.00	5.00	11.53
<i>Rio Grande del Rancho (A)</i>															
22	Core	39.5	2,799	3,644	845	96.44%	10,317.0	588,066.6	3.96	2.54	6.51	2	3.00	4.89	11.40
<i>Rito la Presa (A)</i>															
23	Core	7.7	2,768	3,240	472	97.50%	9,777.3	127,105.0	4.00	2.38	6.38	2	3.00	5.00	11.38
<i>Policarpio Creek (A)</i>															
24	Conservation	16.4	2,386	3,594	1,208	94.68%	9,266.2	259,452.9	3.43	2.36	5.79	2	3.00	5.00	10.79
<i>Osha Creek (R)</i>															
25	Core	14.6	2,852	3,913	1,060	97.40%	8,967.6	260,061.6	3.90	2.31	6.21	2	2.86	4.83	11.03
<i>Rito Angostura (R)</i>															
26	Core	18.3	2,916	3,819	903	98.31%	12,316.0	357,165.2	4.00	2.52	6.52	2	3.00	5.07	11.59
<i>Alamitos Creek, Middle Fork Rio Santa Barbara (A)</i>															
28	Core	15.7	3,102	3,888	786	96.74%	7,844.3	235,327.6	3.83	2.20	6.03	2	2.87	4.50	10.53
<i>East Fork Rio Santa Barbara (A)</i>															
29	Conservation	52.1	2,826	3,960	1,134	92.91%	7,601.8	790,585.1	3.43	2.25	5.68	2	2.92	4.77	10.45
<i>East Fork Rio Santa Barbara, Middle Fork Rio Santa Barbara, West Fork Rio Santa Barbara (A)</i>															
30	Conservation	14.6	2,752	3,911	1,159	92.88%	9,930.4	208,538.7	3.05	2.38	5.43	2	3.00	4.95	10.38
<i>Rio de las Trampas (A)</i>															
31	Conservation	7.6	2,724	3,797	1,074	93.92%	8,908.1	115,805.0	3.00	2.31	5.31	2	3.00	5.00	10.31
<i>Rio San Leonardo (A)</i>															
32	Core	20.7	2,519	3,615	1,095	91.91%	6,048.6	284,285.6	3.19	2.06	5.26	2	3.00	4.89	10.15
<i>Rio de la Cebolla, Rio de Truchas (A)</i>															
34	Core	41.9	2,434	3,981	1,547	93.91%	7,736.2	626,635.8	3.28	2.25	5.53	2	2.99	4.88	10.41
<i>North Fork Rio Quemado, Rio Quemado, South Fork Rio Quemado (A)</i>															
35	Conservation	8.2	2,744	3,911	1,167	92.47%	7,327.4	109,910.3	3.13	2.13	5.27	2	2.93	4.60	9.87
<i>Jicarita Creek (A)</i>															
36	Conservation	5.7	2,679	3,671	991	94.79%	12,950.6	90,654.2	3.43	2.71	6.14	2	3.00	5.00	11.14
<i>Indian Creek (A)</i>															
37	Conservation	46.2	2,667	3,969	1,303	95.10%	9,132.4	703,194.9	3.64	2.39	6.03	2	2.99	4.92	10.95
<i>Rio Medio (A)</i>															
38	Conservation	26.2	2,740	3,760	1,020	94.82%	8,767.1	420,822.7	3.56	2.31	5.88	2	3.00	4.92	10.79
<i>Rio Frijoles, Rito Jaroso (A)</i>															
40	Core	9.4	2,619	3,615	995	90.15%	5,662.1	147,213.4	2.81	1.92	4.73	2	3.00	5.00	9.73
<i>Rio Molino (R)</i>															

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



Jemez Watershed (13020202)



Rio Grande Cutthroat Trout

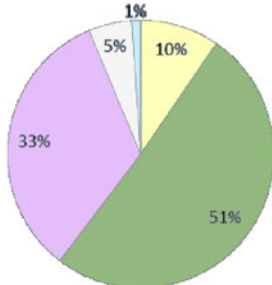
- Conservation Population 21 Mi. (3% of Total Conservation Populations)
- Core Population 5 Mi.
- Historic Distribution 222 Mi.

Barrier

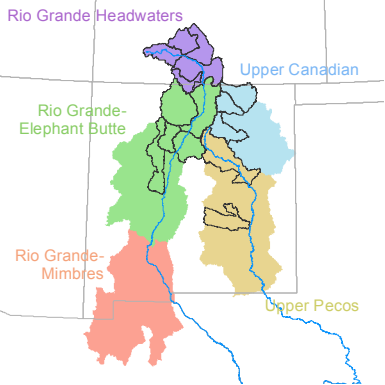
- Complete
- Partial
- Unknown

Ownership

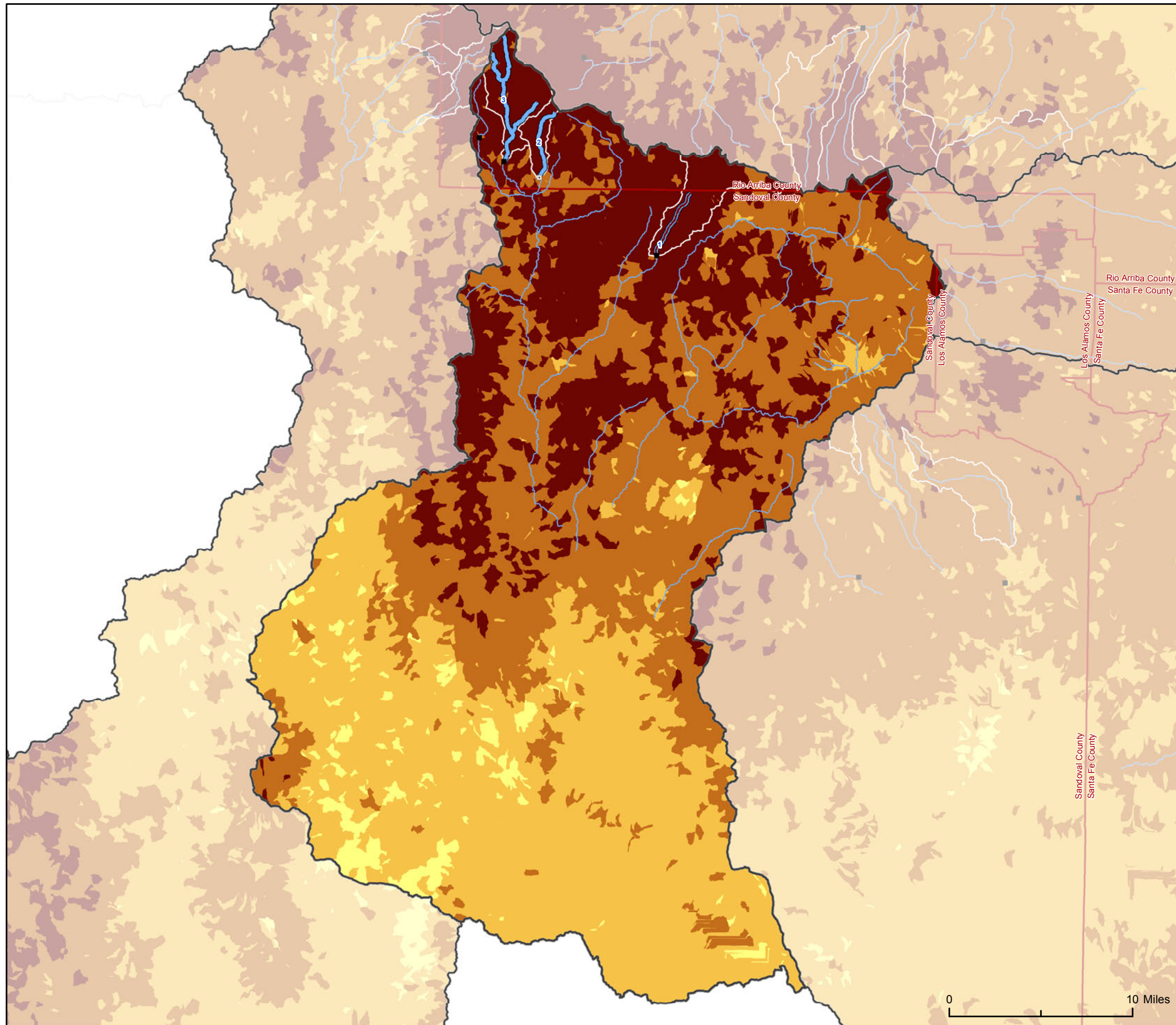
- BLM
- NPS
- USFS
- Tribal
- State Trust
- Other State



Jemez Watershed (13020202)
Overview



Overall Risk: Wildfire Risk + Debris Flow Risk



Rio Grande Cutthroat Trout

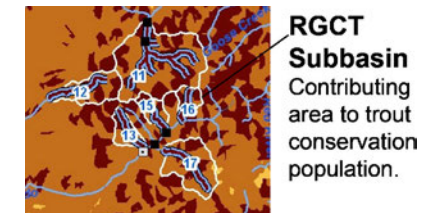
- Conservation Population 21 Mi. (3% of Total Conservation Populations)
- Core Population 5 Mi.
- Historic Distribution 222 Mi.

Barrier

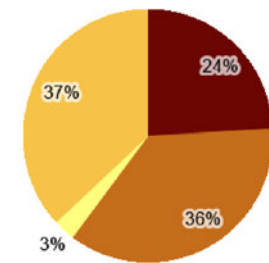
- Complete
- Partial
- Unknown

Overall Risk

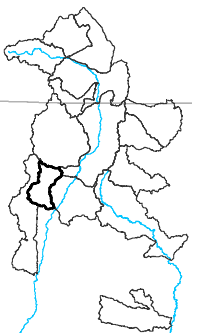
- Low
- Moderate
- High
- Extreme



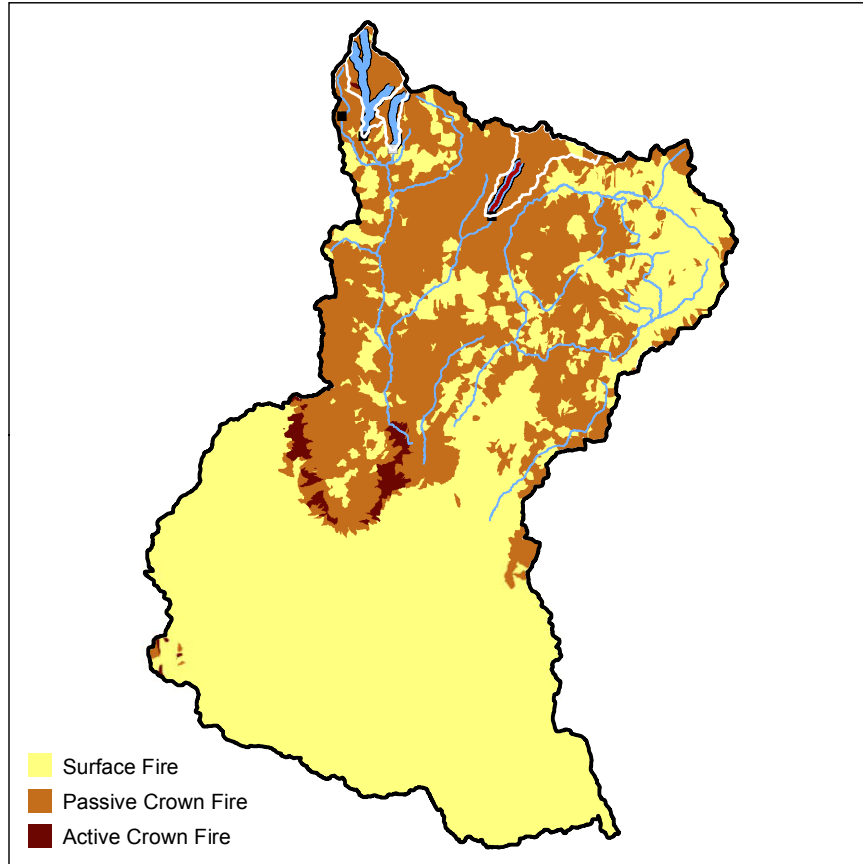
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



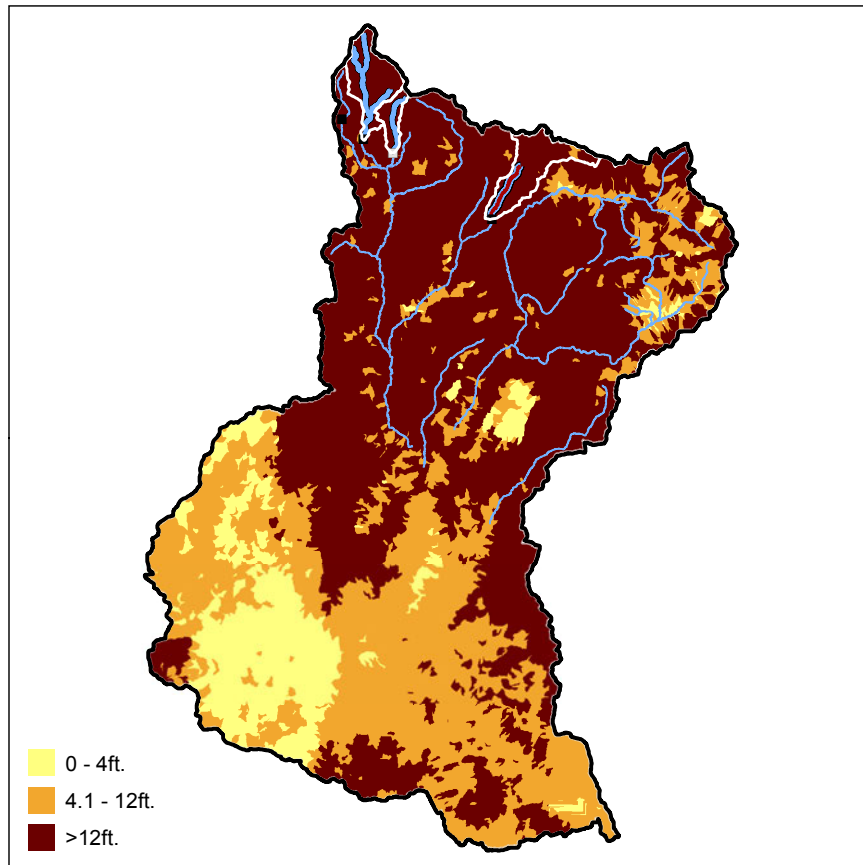
Jemez Watershed (13020202)
Overall Risk from Fire



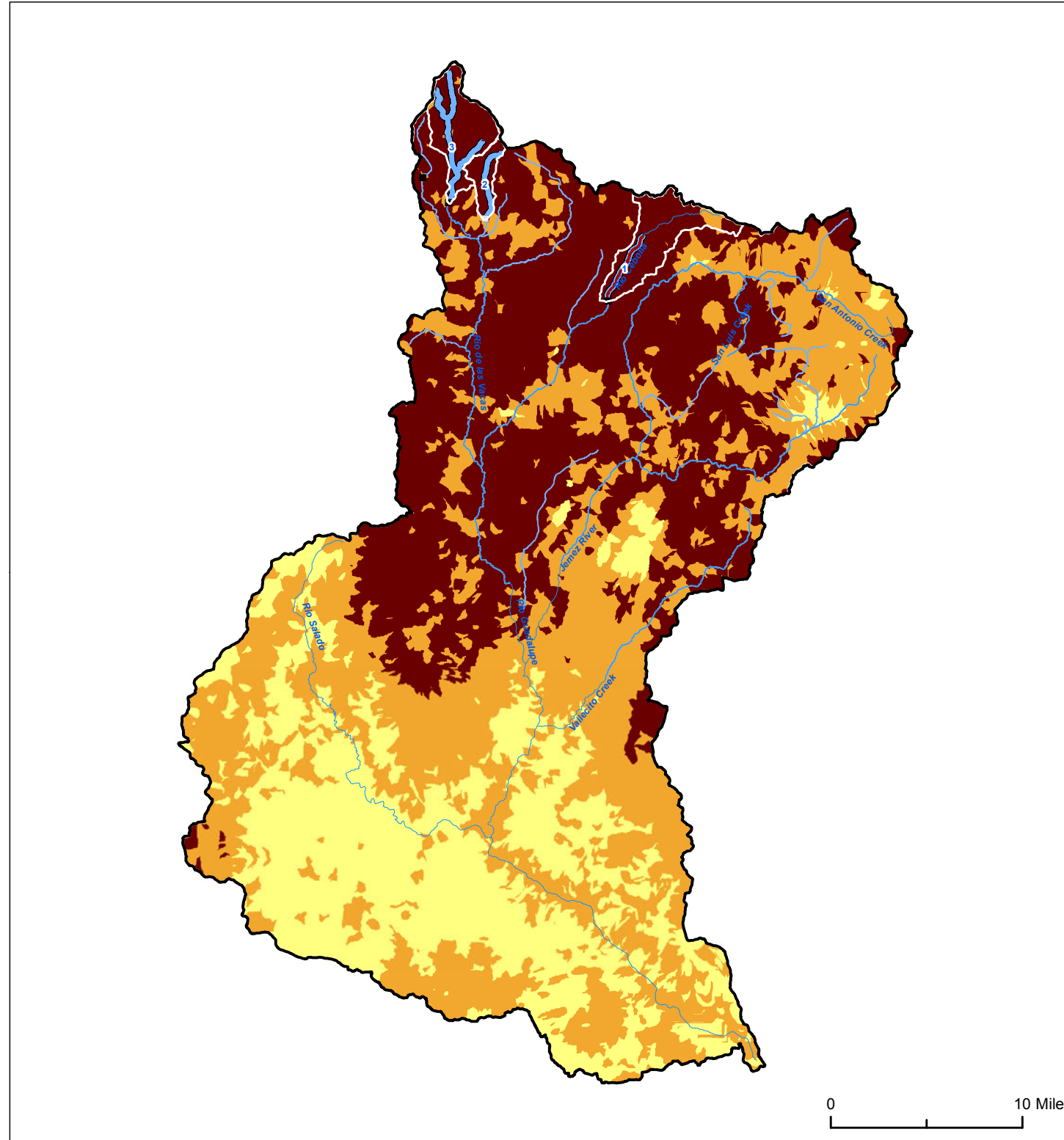
Crown Fire Potential



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.

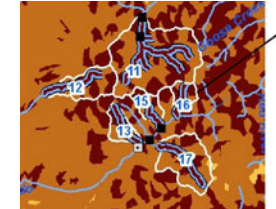
Wildfire Risk

Rio Grande Cutthroat Trout

- Conservation Population 21 Mi. (3% of Total Conservation Populations)
- Core Population 5 Mi.
- Historic Distribution 222 Mi.

Barrier

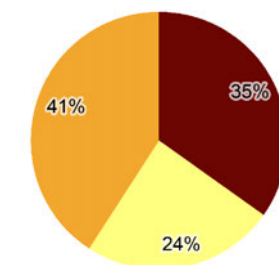
- Complete
- Partial
- Unknown



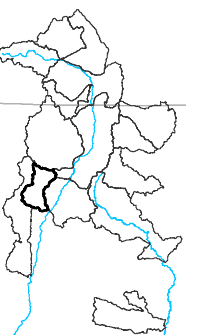
RGCT Subbasin
Contributing area to trout conservation population.

Overall Risk

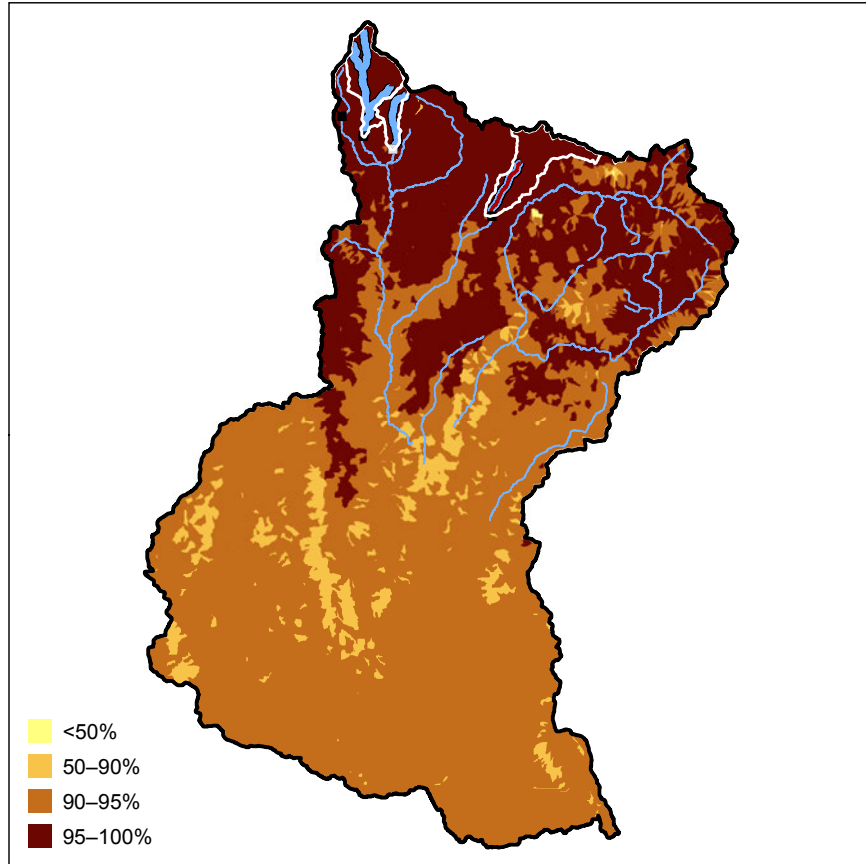
- Low
- Moderate
- High



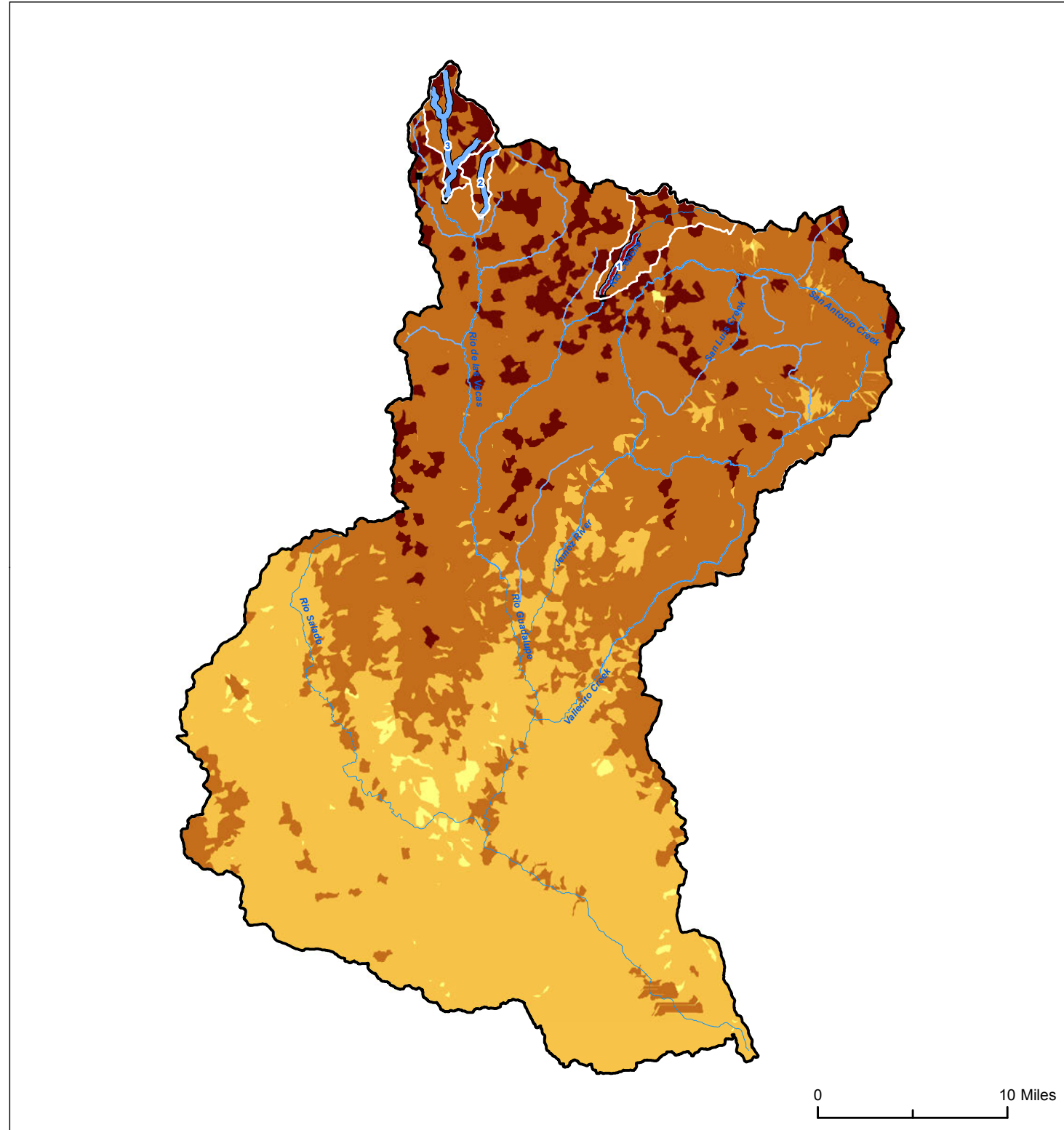
Jemez (1302020)
Wildfire Risk



Debris Flow Probability



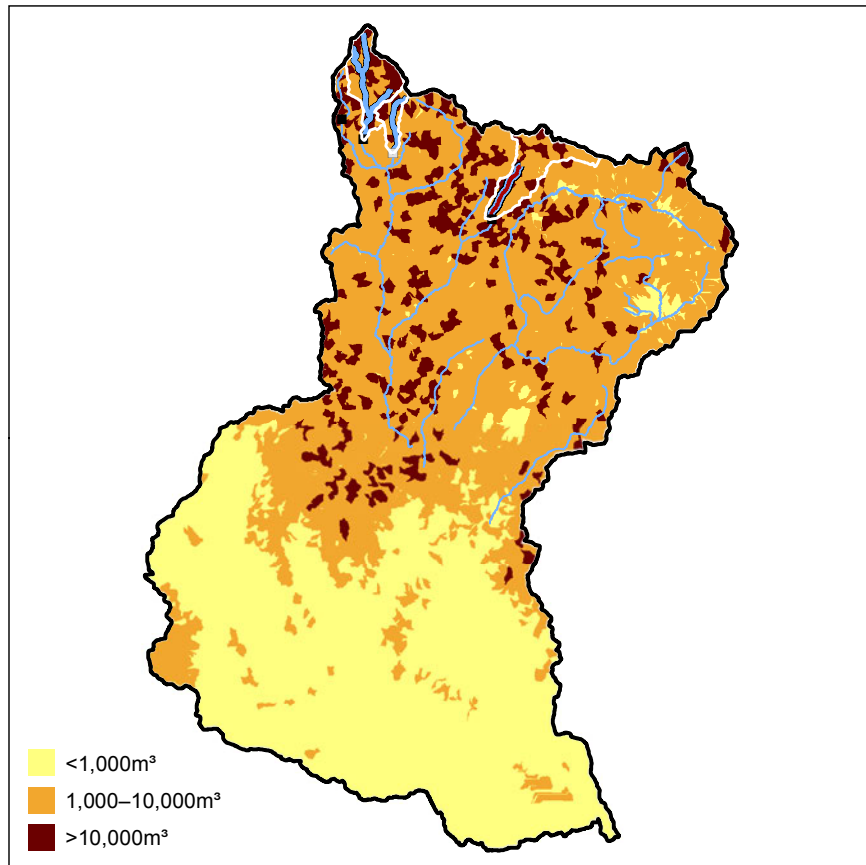
Overall Debris Flow Risk



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 Volume



Debris Flow Risk

Rio Grande Cutthroat Trout

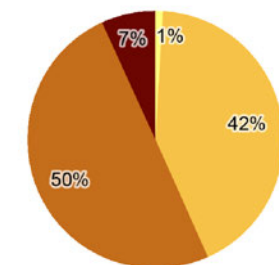
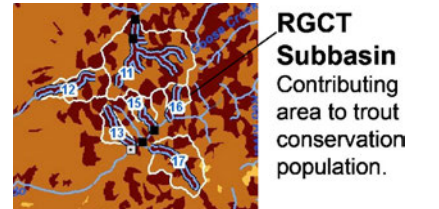
- Conservation Population 21 Mi. (3% of Total Conservation Populations)
- Core Population 5 Mi.
- Historic Distribution 222 Mi.

Barrier

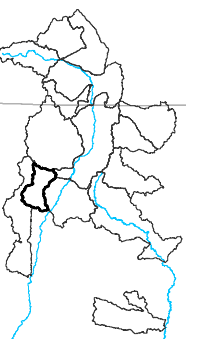
- Complete
- Partial
- Unknown

Debris Flow Risk

- Low
- Moderate
- High
- Extreme



Jemez (13020202) Debris Flow Risk

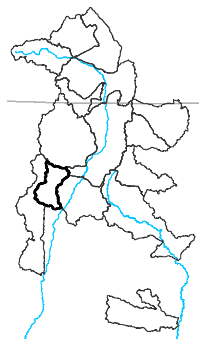


Summary Table

Jemez (13020202)

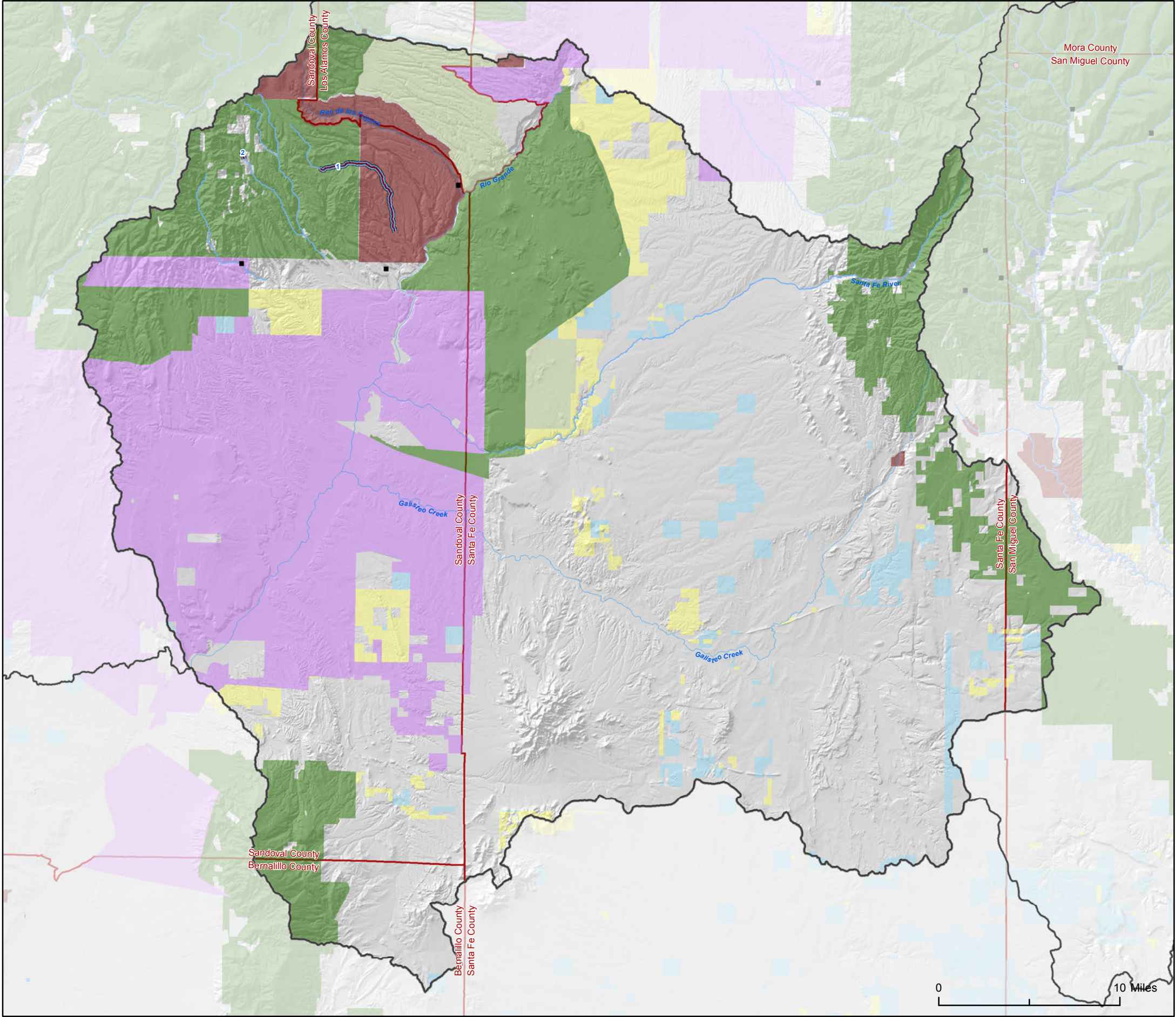
cpID	Population Class	Area (km2)	Elevation (m)			Debris Flow prob. (%)	Debris Flow Volume		Debris Flow Risk Class (mean)			Fire Behavior Risk Class (mean)			Overall Risk
			min	max	range		mean (m3)	total (m3)	prob	volume	combined	crown fire	flame length	combined	
01	Core	39.7	2,479	3,107	628	96.55%	7,060.5	593,079.9	3.98	2.12	6.10	2	2.95	4.87	10.96
	<i>Rio Cebolla</i> (R)														
02	Conservation	10.9	2,555	3,072	517	97.23%	7,476.6	157,009.2	4.00	2.29	6.29	2	3.00	5.00	11.29
	<i>Rito de las Palomas</i> (A)														
03	Conservation	35.2	2,727	3,232	505	98.59%	8,777.8	570,559.7	4.00	2.32	6.32	2	3.00	4.97	11.29
	<i>Rio de las Vacas</i> (R)														
	<i>Rito Anastacio</i> (R)														
	<i>Rito de las Perchas</i> (R)														

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






Jemez (13020202)
Summary Table




Rio Grande-Santa Fe (13020201)









Rio Grande Cutthroat Trout

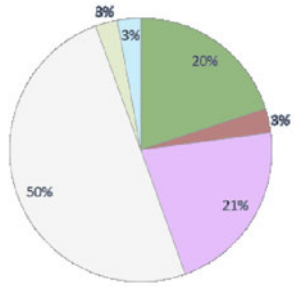
-  Conservation Population 8 Mi. (1% of Total Conservation Populations)
-  Core Population 8 Mi.
-  Historic Distribution 77 Mi.

Barrier

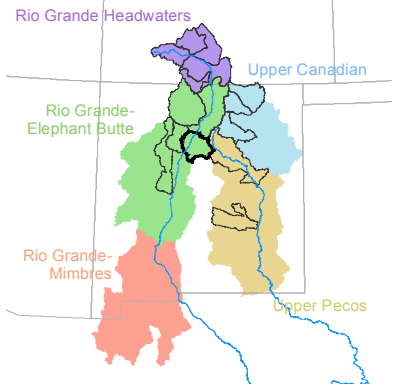
-  Complete
-  Partial
-  Unknown

Ownership

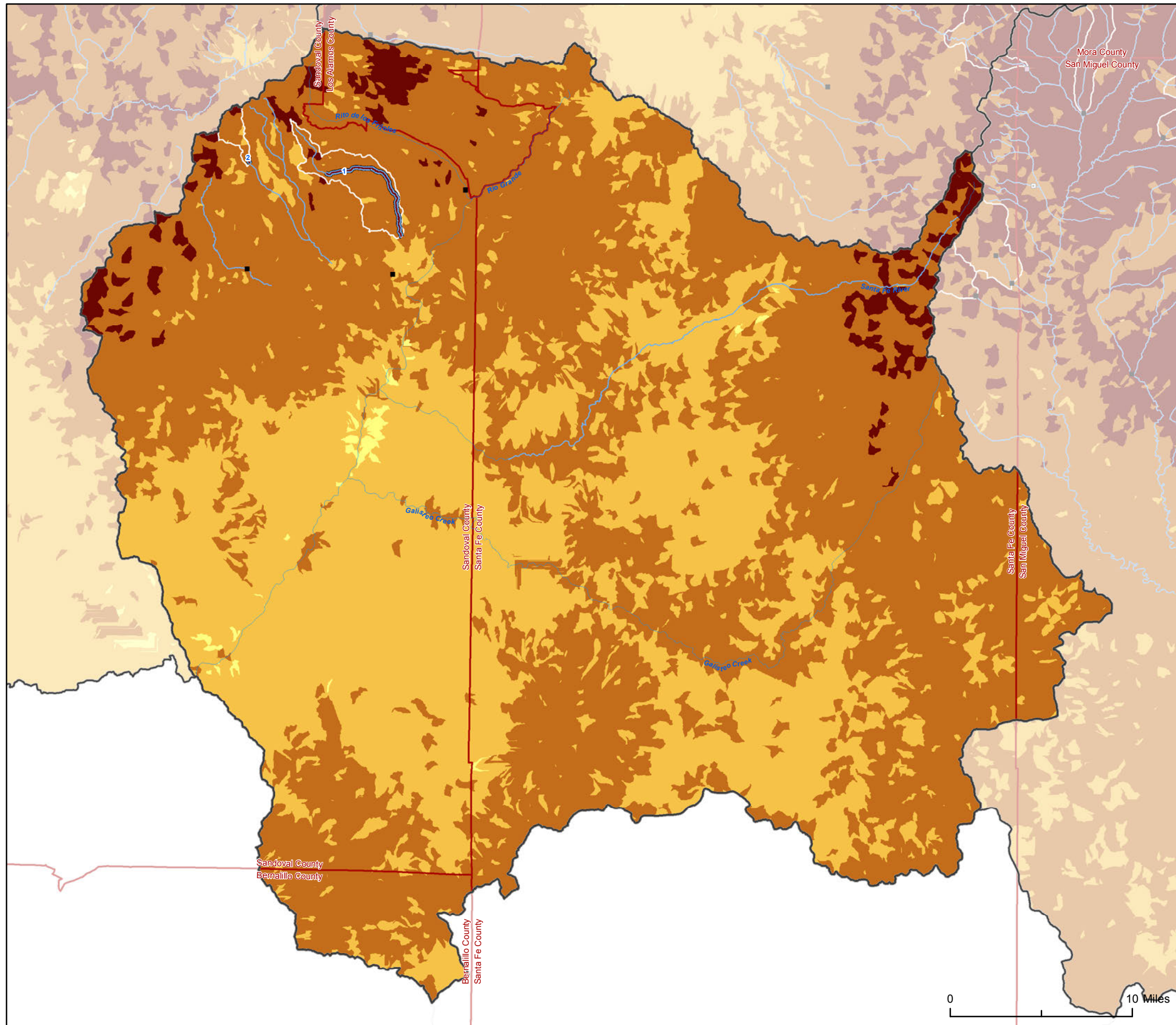
-  BLM
-  NPS
-  USFS
-  Tribal
-  State Trust
-  Other Federal



Rio Grande-Santa Fe (13020201) Overview



Overall Risk: Wildfire Risk + Debris Flow Risk



Rio Grande Cutthroat Trout

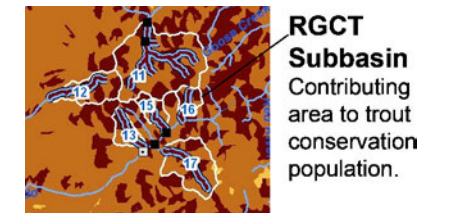
- Conservation Population 8 Mi. (1% of Total Conservation Populations)
- Core Population 8 Mi.
- Historic Distribution 77 Mi.

Barrier

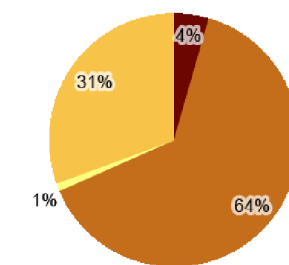
- Complete
- Partial
- Unknown

Overall Risk

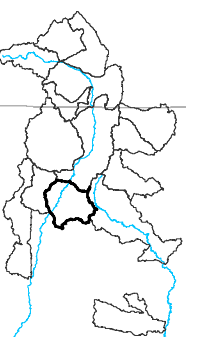
- Low
- Moderate
- High
- Extreme



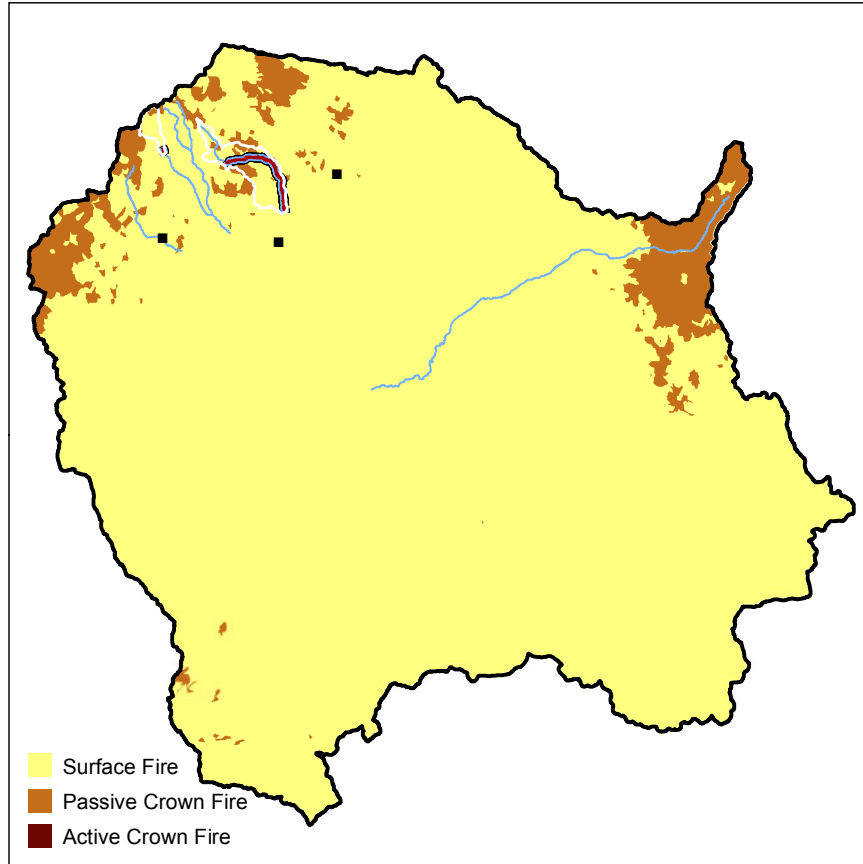
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



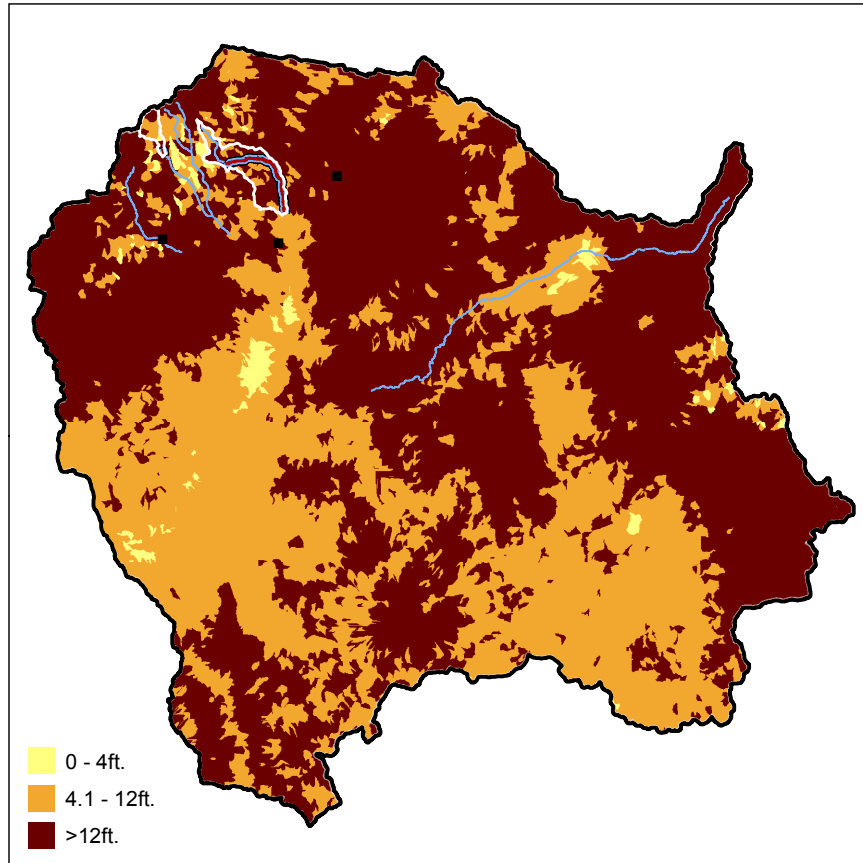
Rio Grande-Santa Fe (13020201)
Overall Risk from Fire



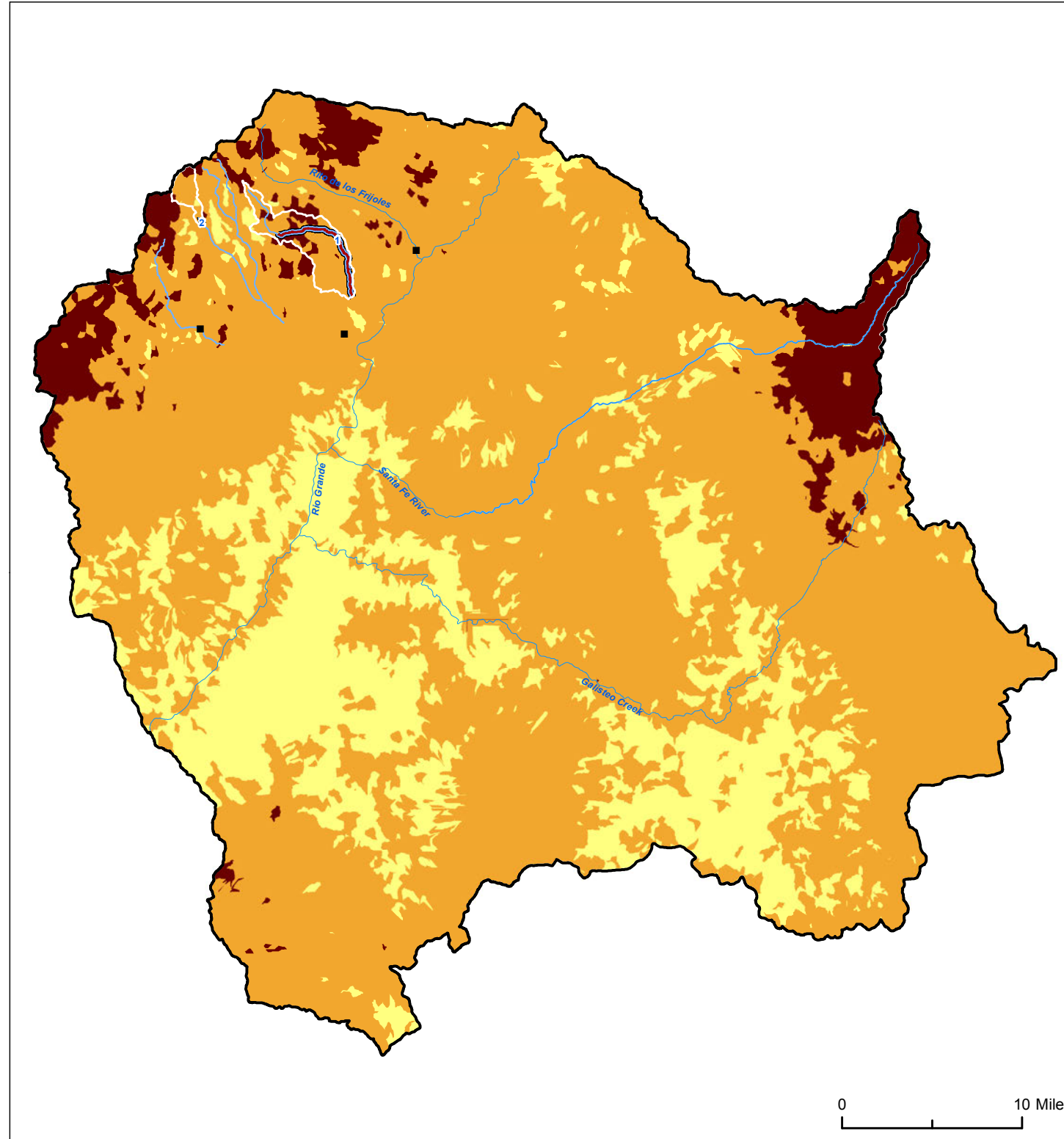
Crown Fire Potential



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.

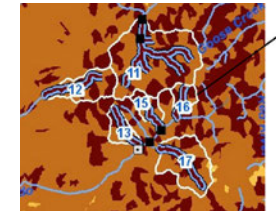
Wildfire Risk

Rio Grande Cutthroat Trout

- Conservation Population 8 Mi. (1% of Total Conservation Populations)
- Core Population 8 Mi.
- Historic Distribution 77 Mi.

Barrier

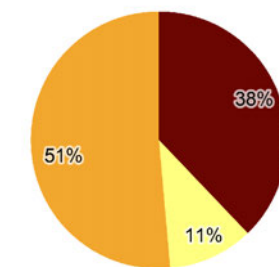
- Complete
- Partial
- Unknown



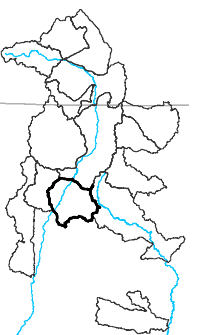
RGCT Subbasin
Contributing area to trout conservation population.

Overall Risk

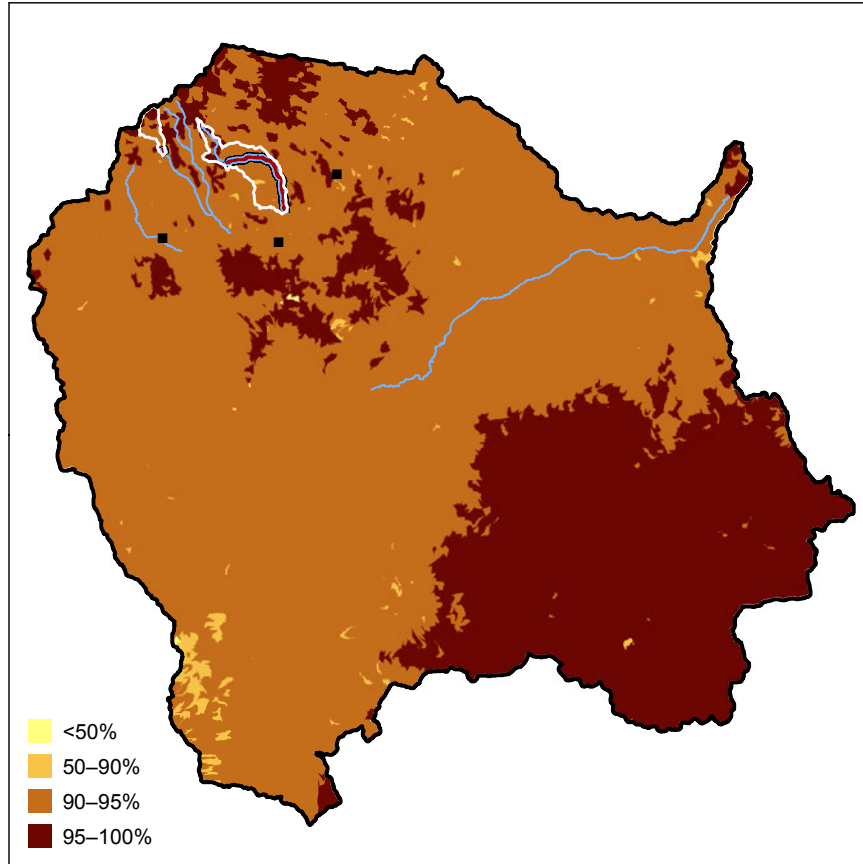
- Low
- Moderate
- High



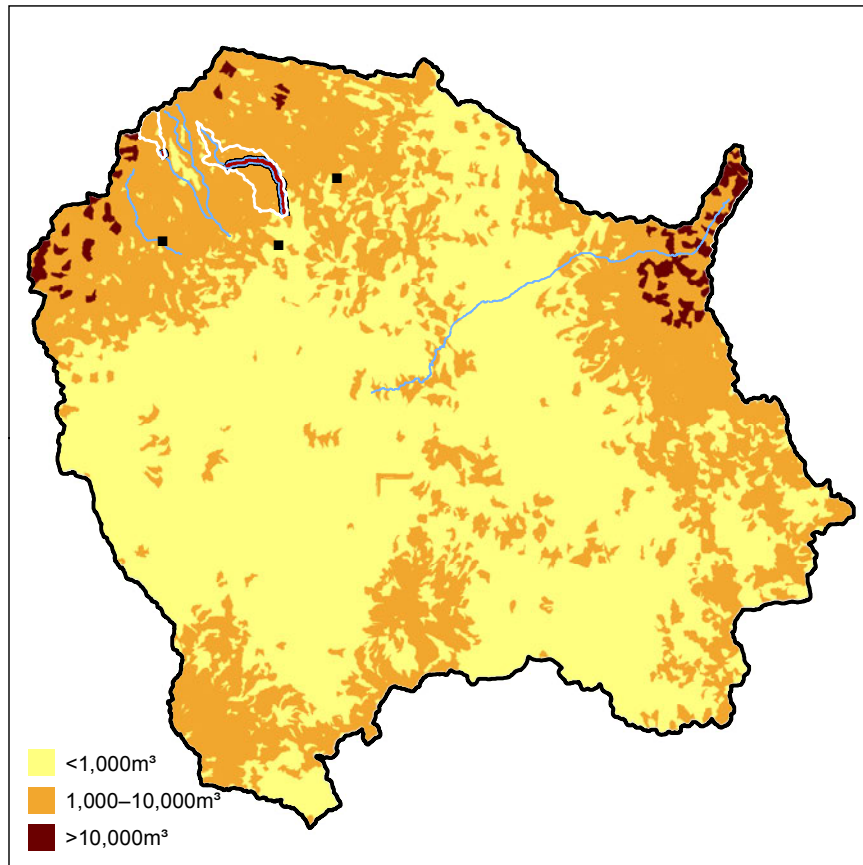
Rio Grande-Santa Fe (13020201) Wildfire Risk



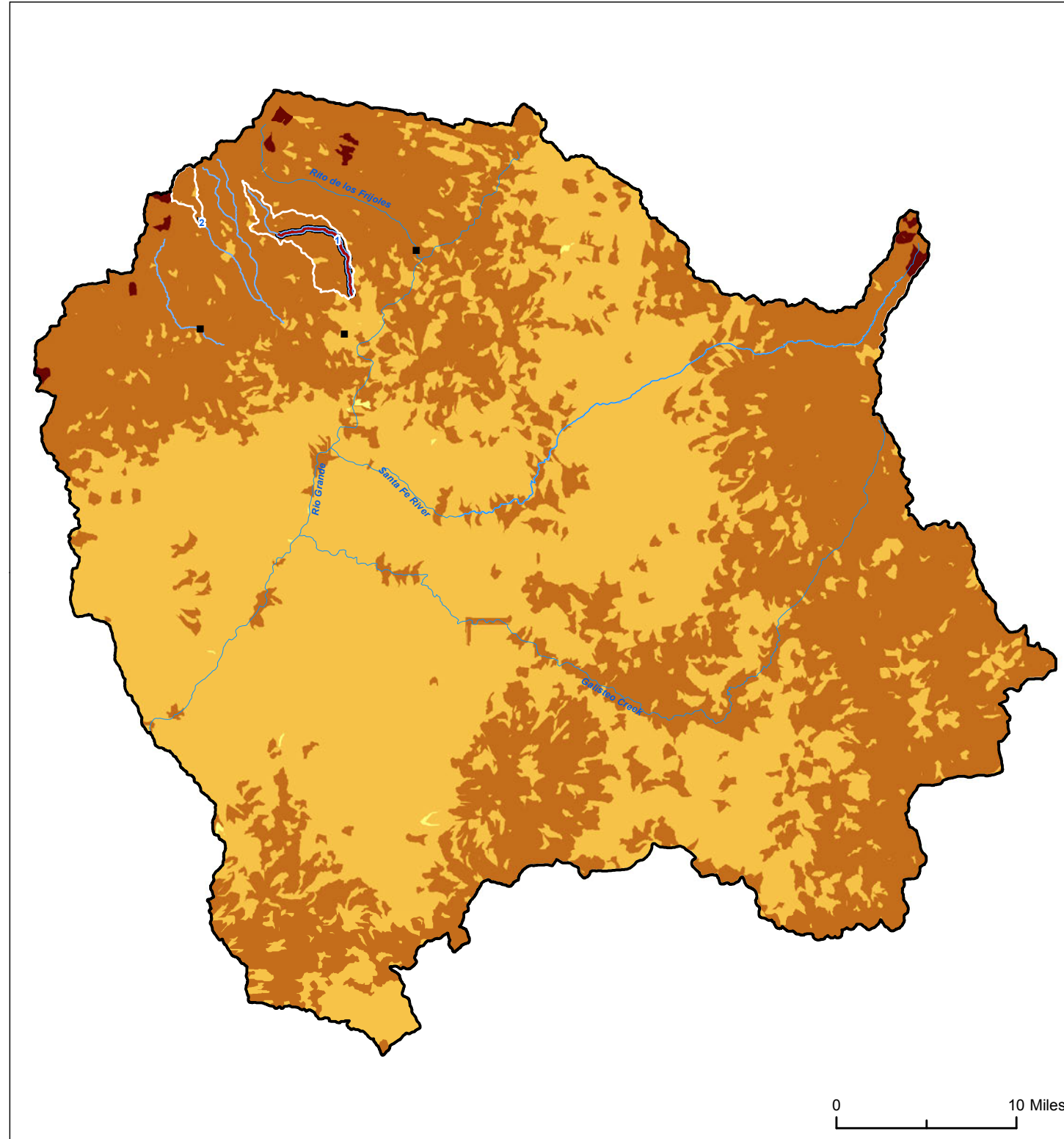
Debris Flow Probability



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

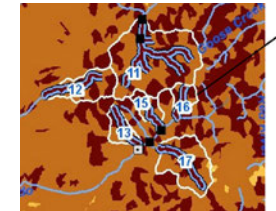
- Conservation Population 8 Mi. (1% of Total Conservation Populations)
- Core Population 8 Mi.
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Barrier

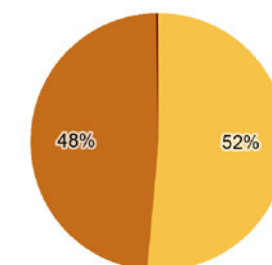
- Complete
- Partial
- Unknown

Debris Flow Risk

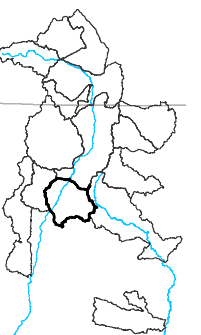
- Low
- Moderate
- High
- Extreme



RGCT Subbasin
Contributing area to trout conservation population.



Rio Grande-Santa Fe (13020201)
Debris Flow Risk

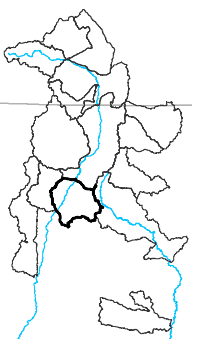


Summary Table

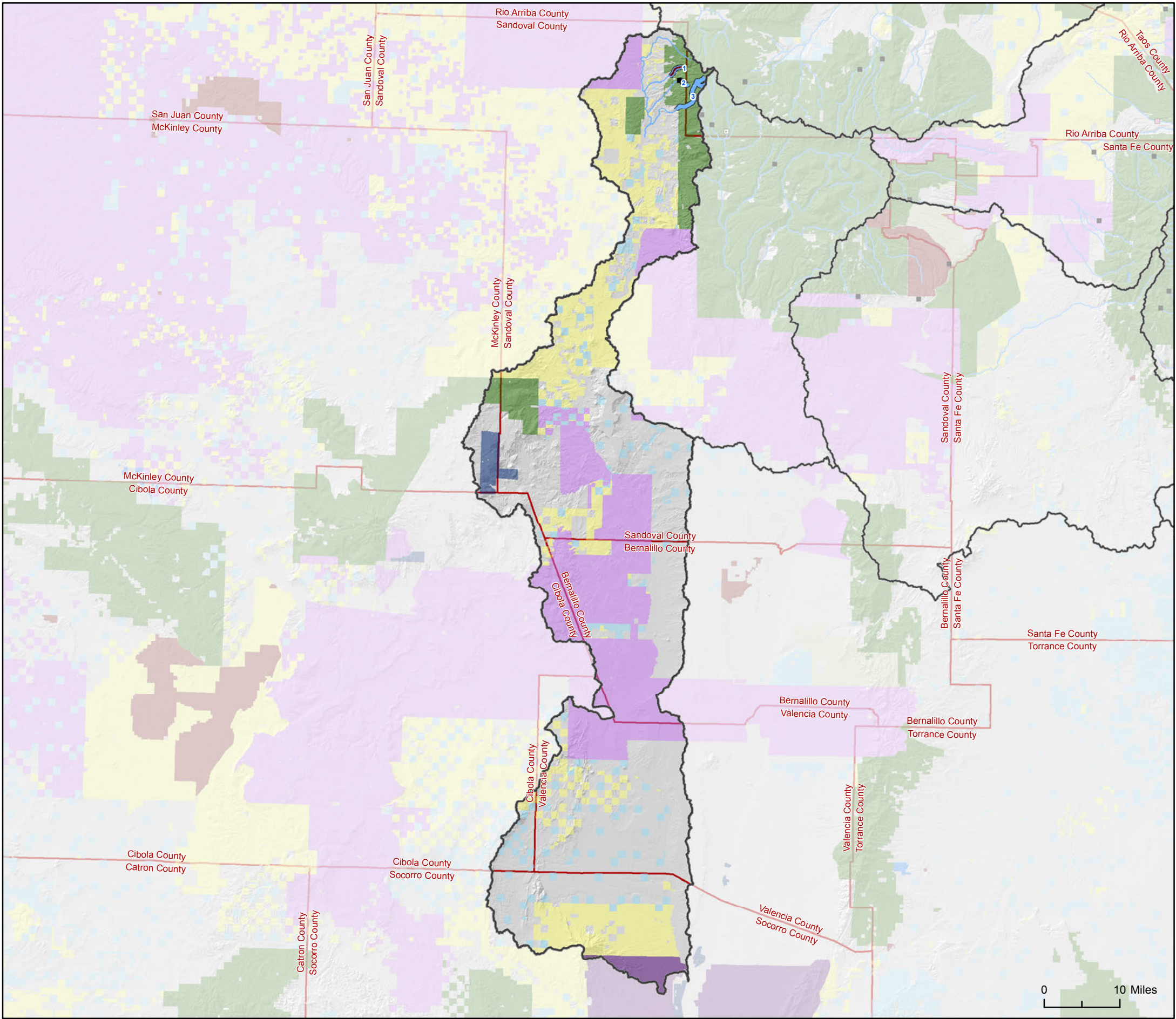
Rio Grande-Santa Fe (13020201)

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	36.3	1,747	2,660	913	93.42%	3,401.7	282,339.2	3.00	1.93	4.93	1	2.65	3.87	8.80
<i>Capulin Creek</i> (R)															
02	Core	7.7	2,375	2,906	531	94.18%	2,743.0	49,373.8	3.17	1.83	5.00	1	2.22	3.28	8.28
<i>Medio Dia Creek</i> (A)															

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



Rio Puerco Watershed (13020204)



Rio Grande Cutthroat Trout

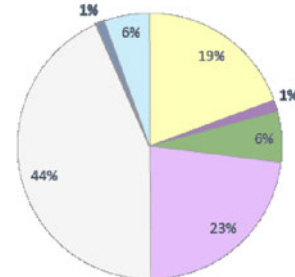
- Conservation Population 13 Mi. (2% of Total Conservation Populations)
- Core Population 3 Mi.
- Historic Distribution 58 Mi.

Barrier

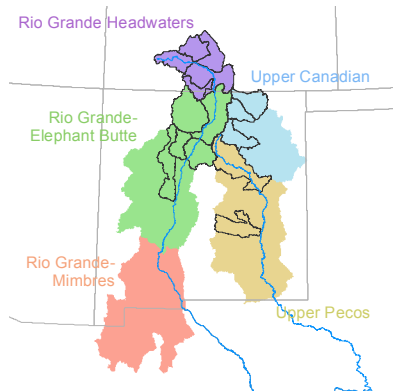
- Complete
- ▣ Partial
- Unknown

Ownership

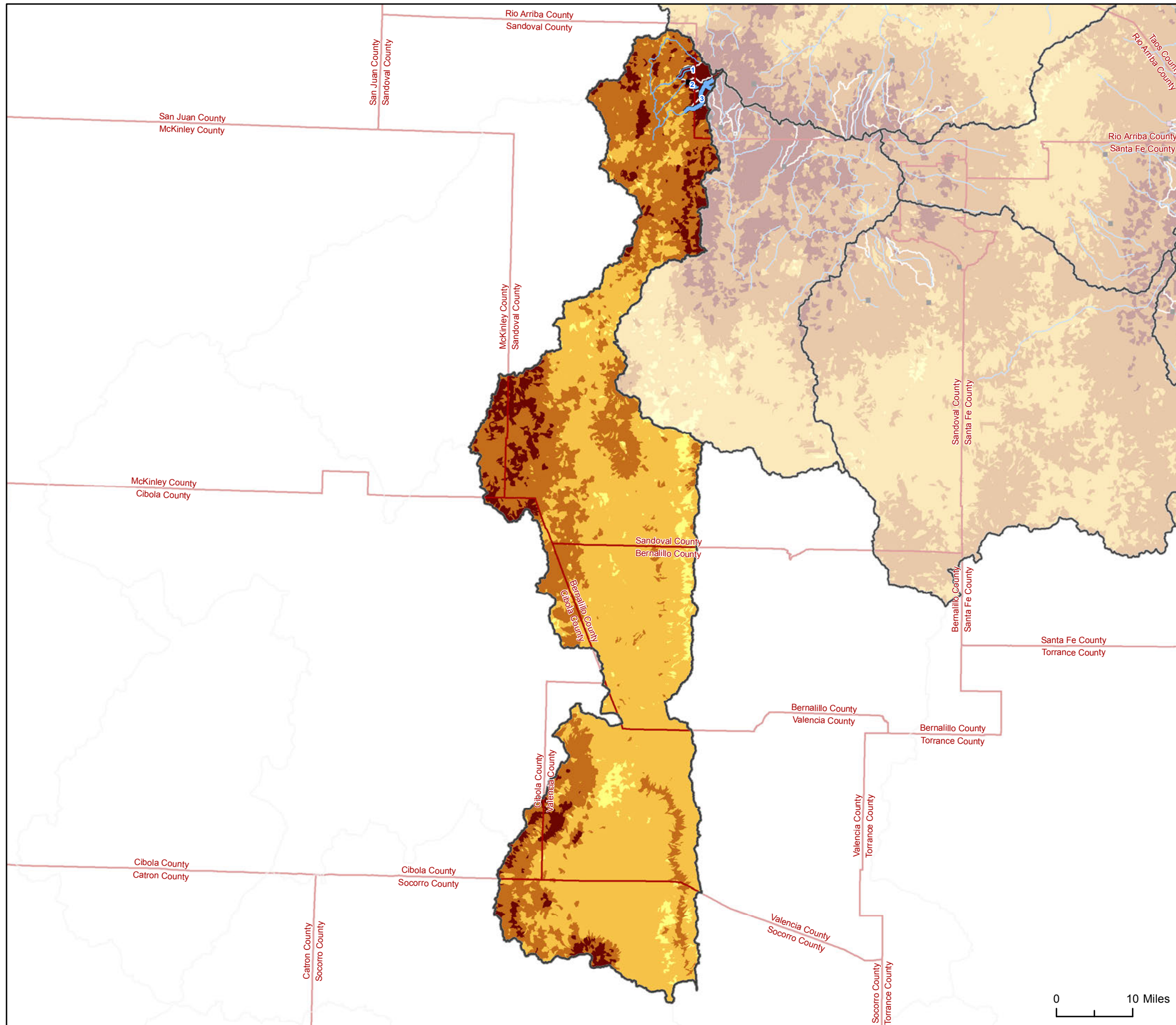
- BLM
- FWS
- USFS
- Tribal
- State Trust
- State Fish & Wildlife



Rio Puerco Watershed (13020204)
Overview



Overall Risk: Wildfire Risk + Debris Flow Risk



Rio Grande Cutthroat Trout

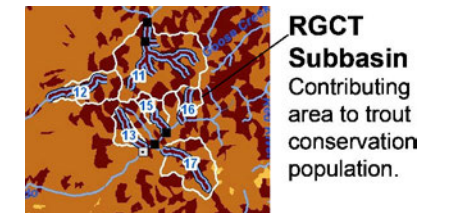
- Conservation Population 13 Mi. (2% of Total Conservation Populations)
- Core Population 3 Mi.
- Historic Distribution 58 Mi.

Barrier

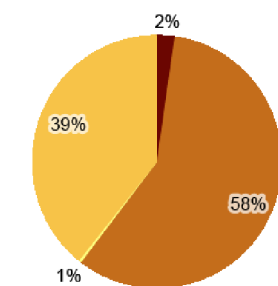
- Complete
- Partial
- Unknown

Overall Risk

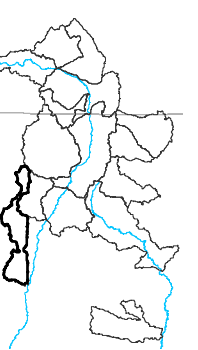
- Low
- Moderate
- High
- Extreme



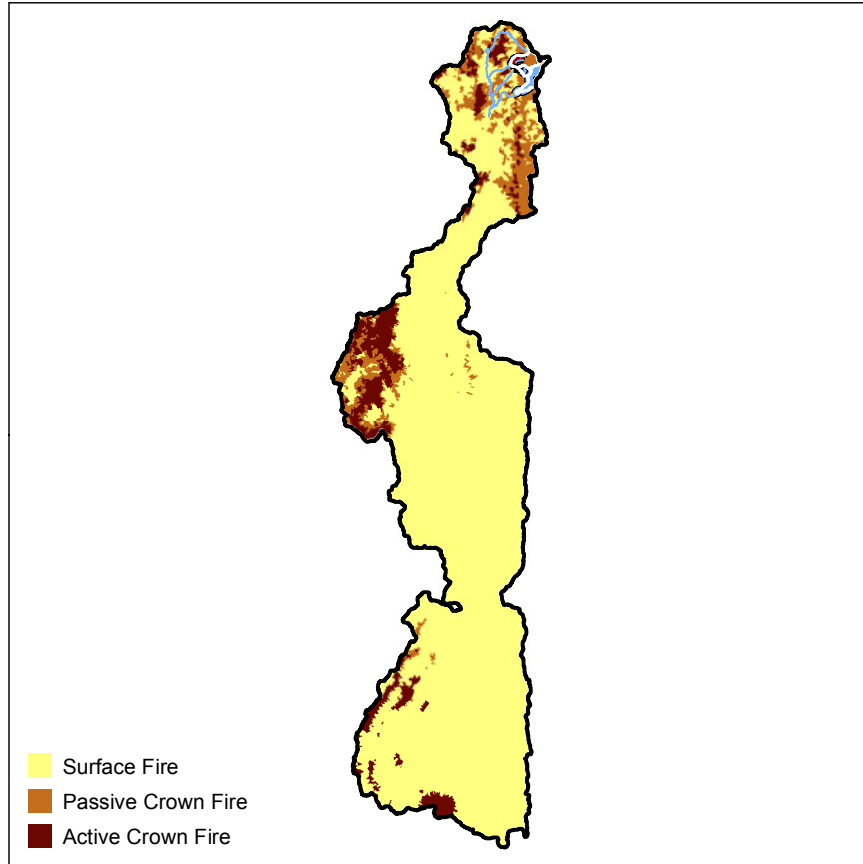
Overall Risk from fire represents the combined hazard from wildfire and debris flows. For example, areas with high overall risk indicate watersheds where if a fire starts, intense fire behavior combined with a high likelihood of and volume of debris flows post fire.



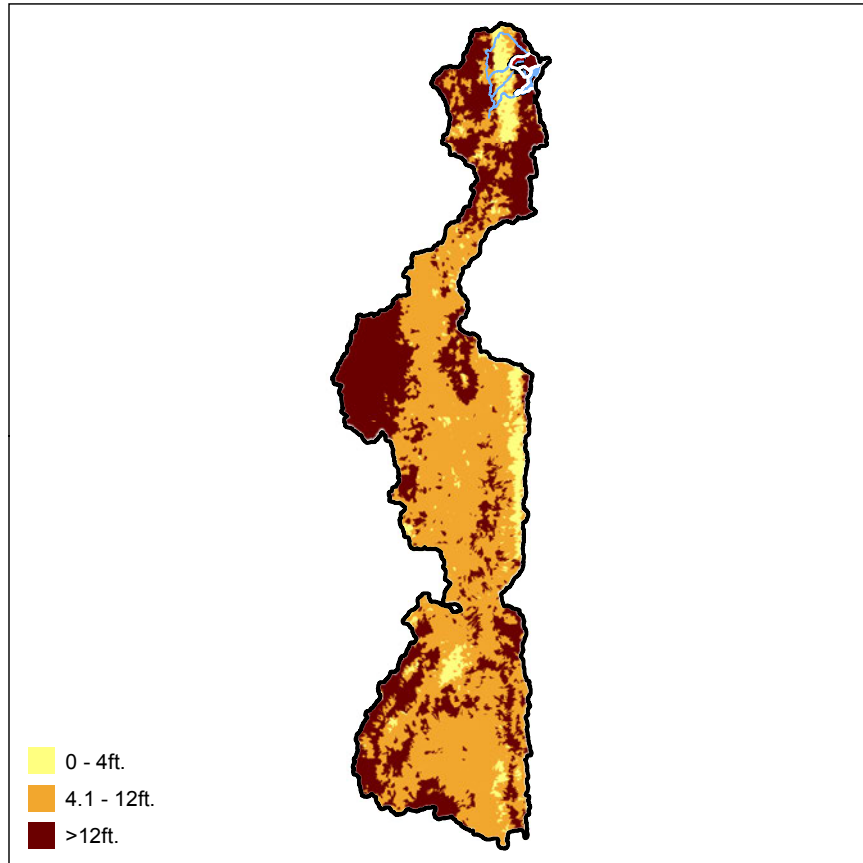
Rio Puerco Watershed (13020204)
Overall Risk from Fire



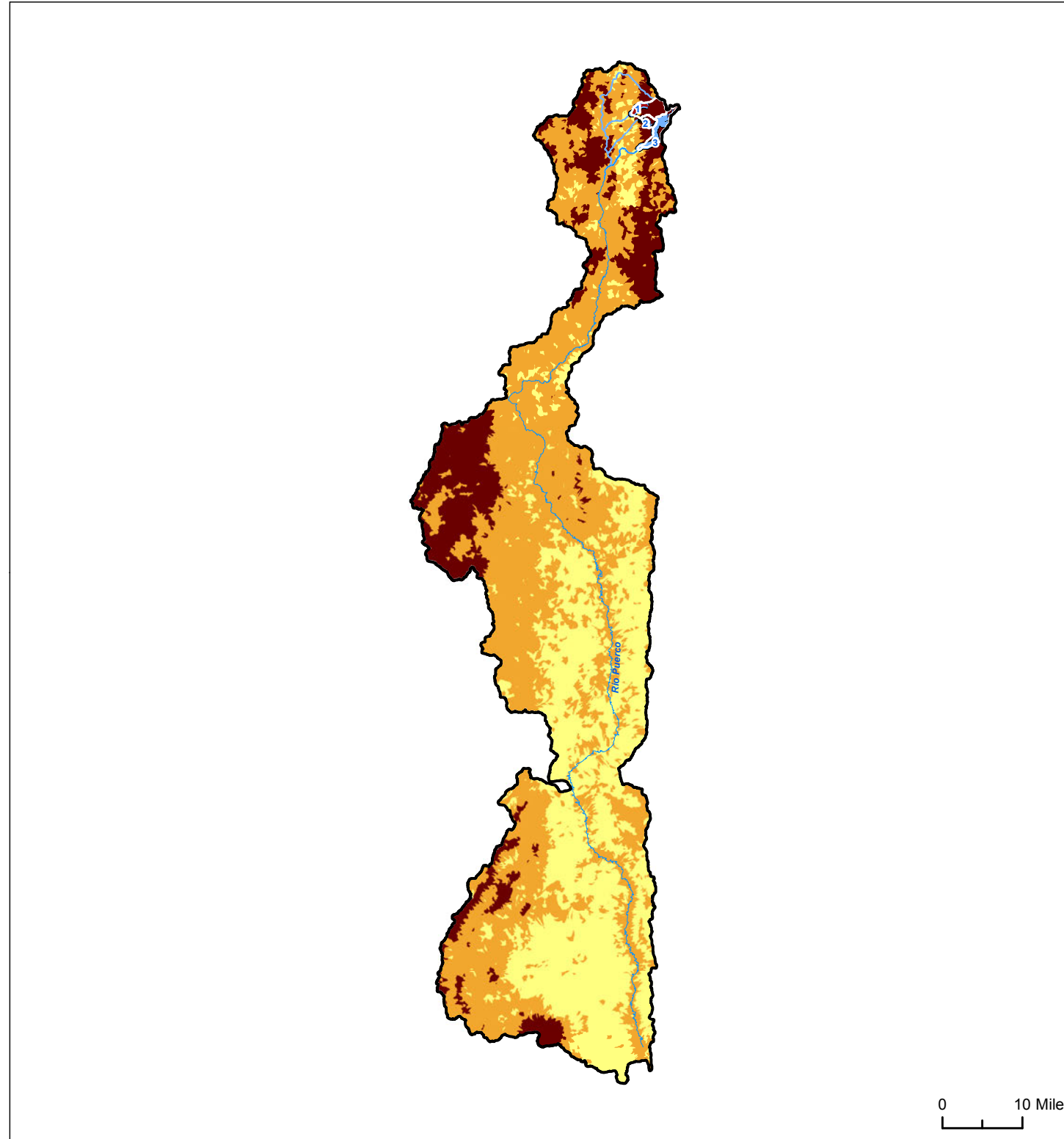
Crown Fire Potential



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.

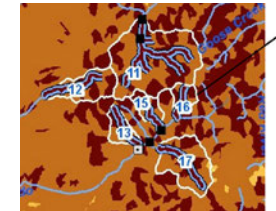
Wildfire Risk

Rio Grande Cutthroat Trout

- Conservation Population 13 Mi. (2% of Total Conservation Populations)
- Core Population 3 Mi.
- Historic Distribution 58 Mi.

Barrier

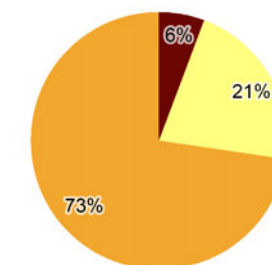
- Complete
- Partial
- Unknown



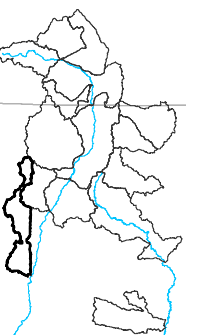
RGCT Subbasin
Contributing area to trout conservation population.

Overall Risk

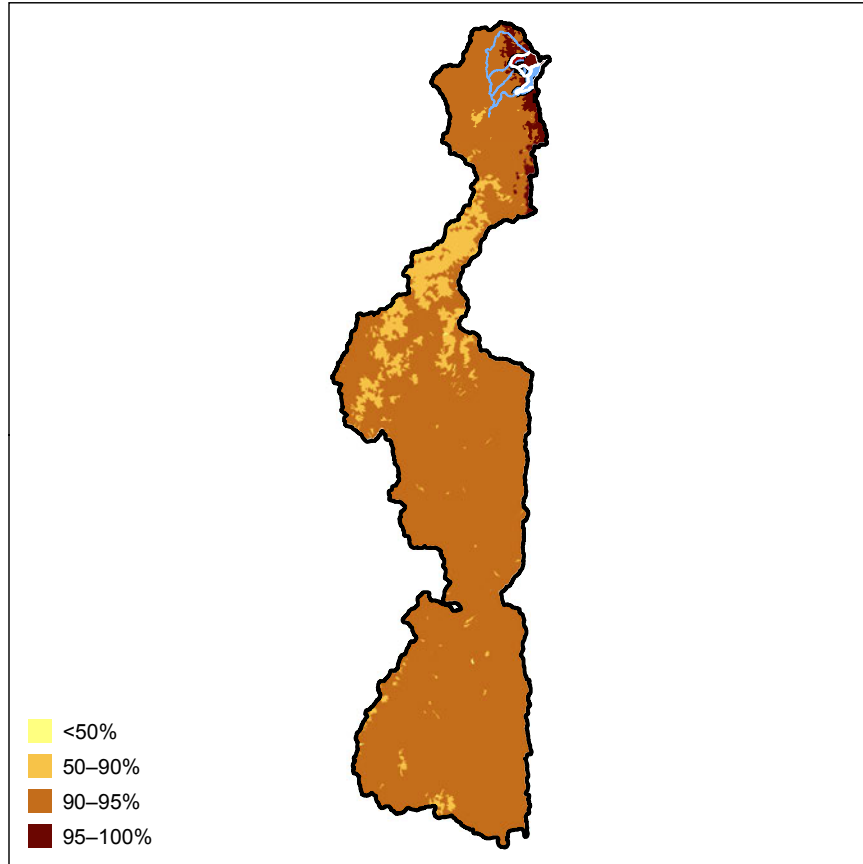
- Low
- Moderate
- High



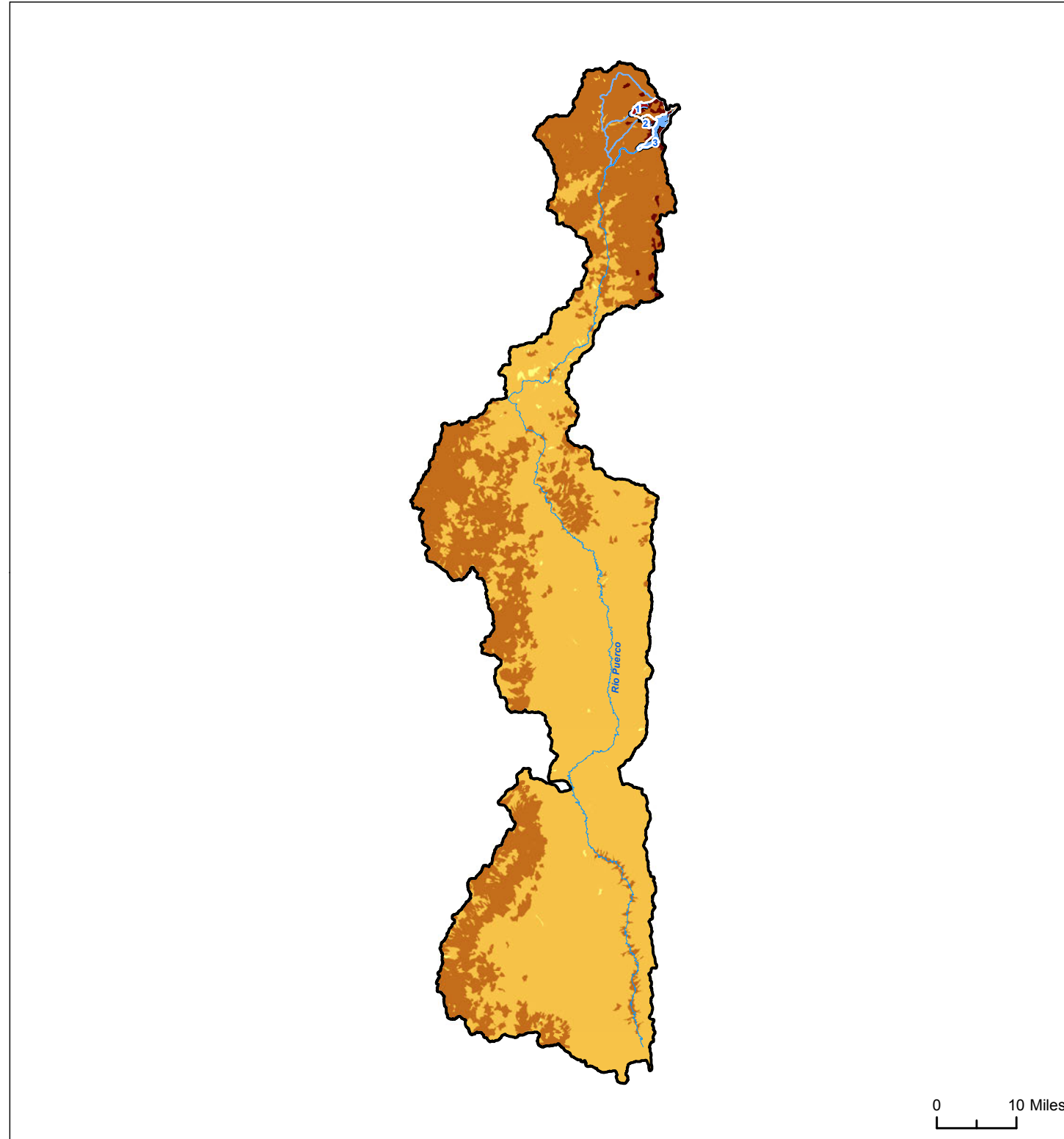
Rio Puerco (13020204)
Wildfire Risk



Debris Flow Probability



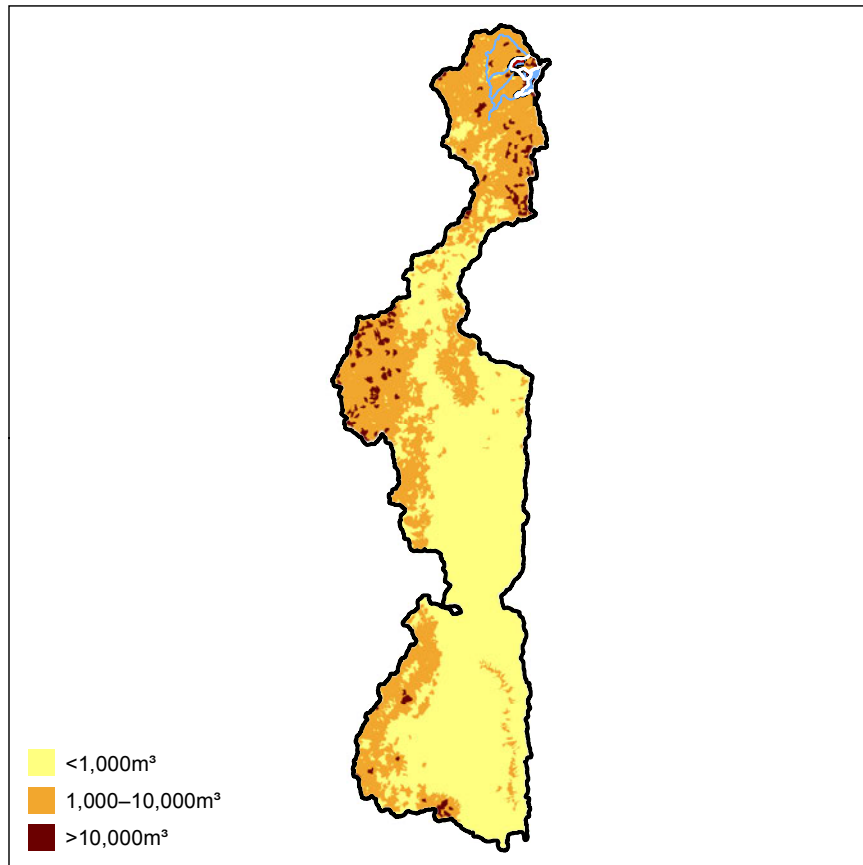
Overall Debris Flow Risk



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 Volume



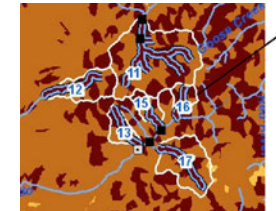
Debris Flow Risk

Rio Grande Cutthroat Trout

- Conservation Population 13 Mi. (2% of Total Conservation Populations)
- Core Population 3 Mi.
- Historic Distribution 58 Mi.

Barrier

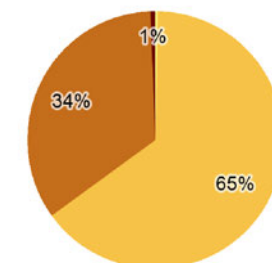
- Complete
- Partial
- Unknown



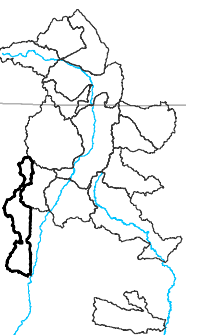
RGCT Subbasin
Contributing area to trout conservation population.

Debris Flow Risk

- Low
- Moderate
- High
- Extreme



Rio Puerco (13020204)
Debris Flow Risk

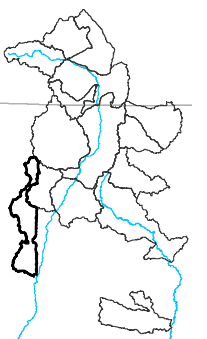


Summary Table

Rio Puerco (13020204)

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	19.8	2,304	3,202	898	96.76%	6,964.3	278,570.7	3.95	2.20	6.15	2	2.75	4.53	10.68
<i>La Jara Creek (R)</i>															
02	Conservation	5.2	2,559	3,156	597	96.72%	9,140.4	82,263.6	4.00	2.44	6.44	2	3.00	5.00	11.44
<i>Rito de los Pinos (A)</i>															
03	Conservation	17.3	2,273	3,225	951	97.45%	7,739.3	255,397.3	3.85	2.24	6.09	2	2.88	4.70	10.79
<i>Rio Puerco (A)</i>															
<i>Unnamed Trib. to Rio Puerco (A)</i>															

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



Rio Puerco (13020204)
Summary Table