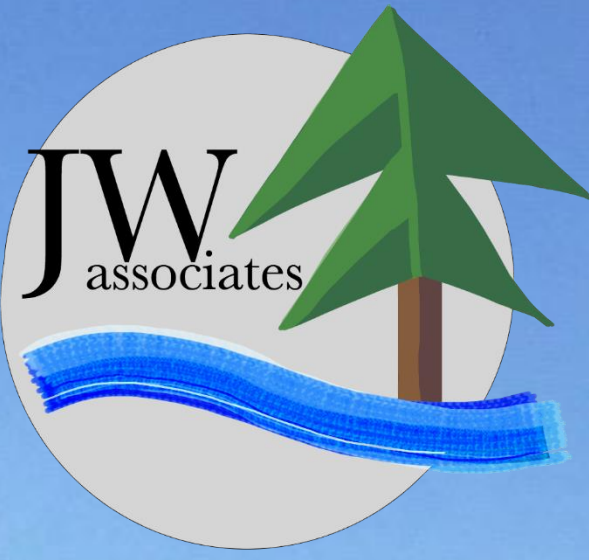




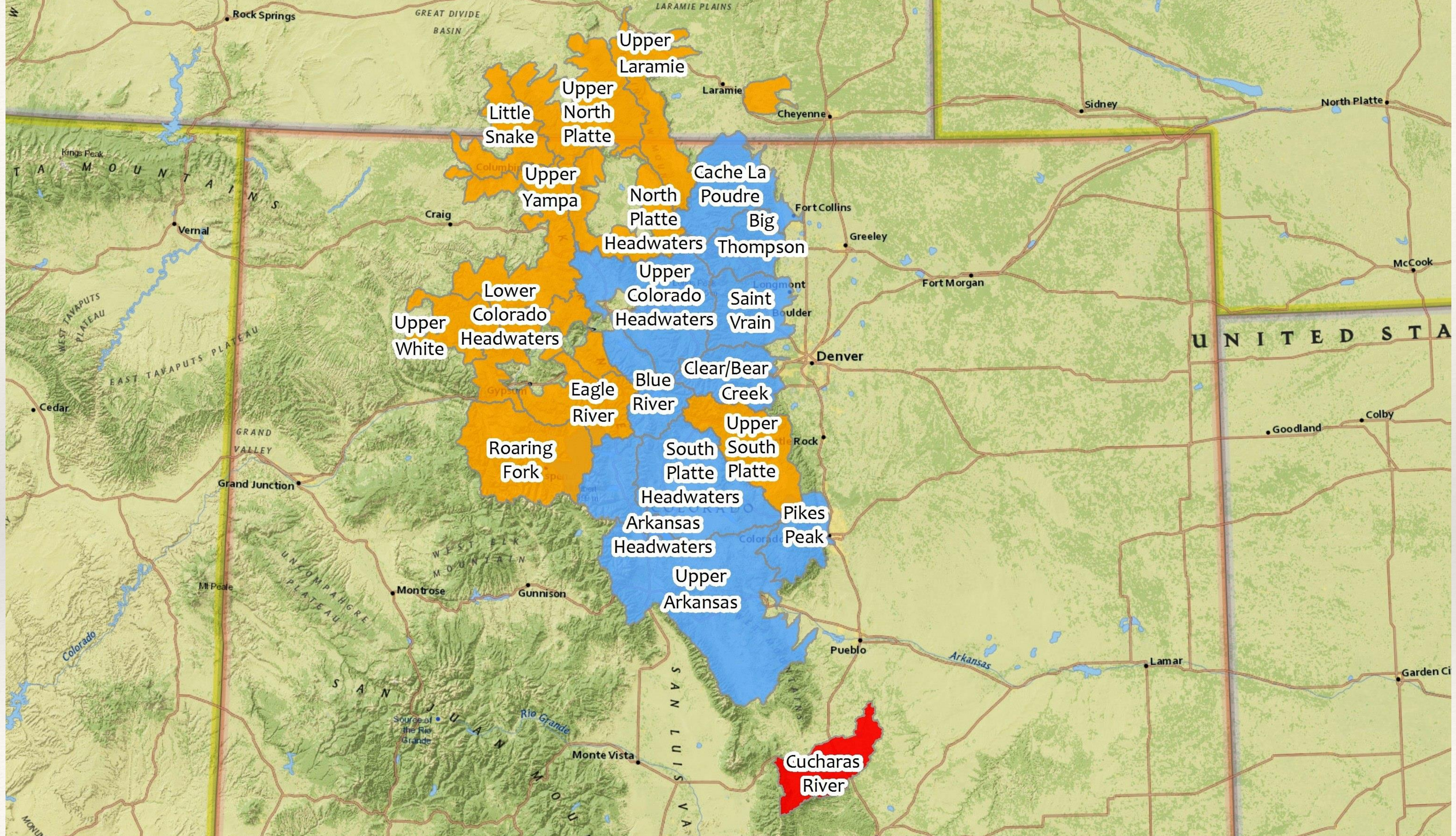
WATERSHED TARGETING & LESSONS LEARNED

AGENDA

- Watershed Wildfire Hazard Assessments
- Lessons Learned
- Going Forward

Watershed Wildfire Protection Group

- ◆ Watershed assessment template
- ◆ Identify critical watersheds for water supply
- ◆ Prioritize sixth-level watersheds
- ◆ Adverse effects of post-wildfire hydrologic changes, including flooding, erosion, and deposition





High Park Fire 2012



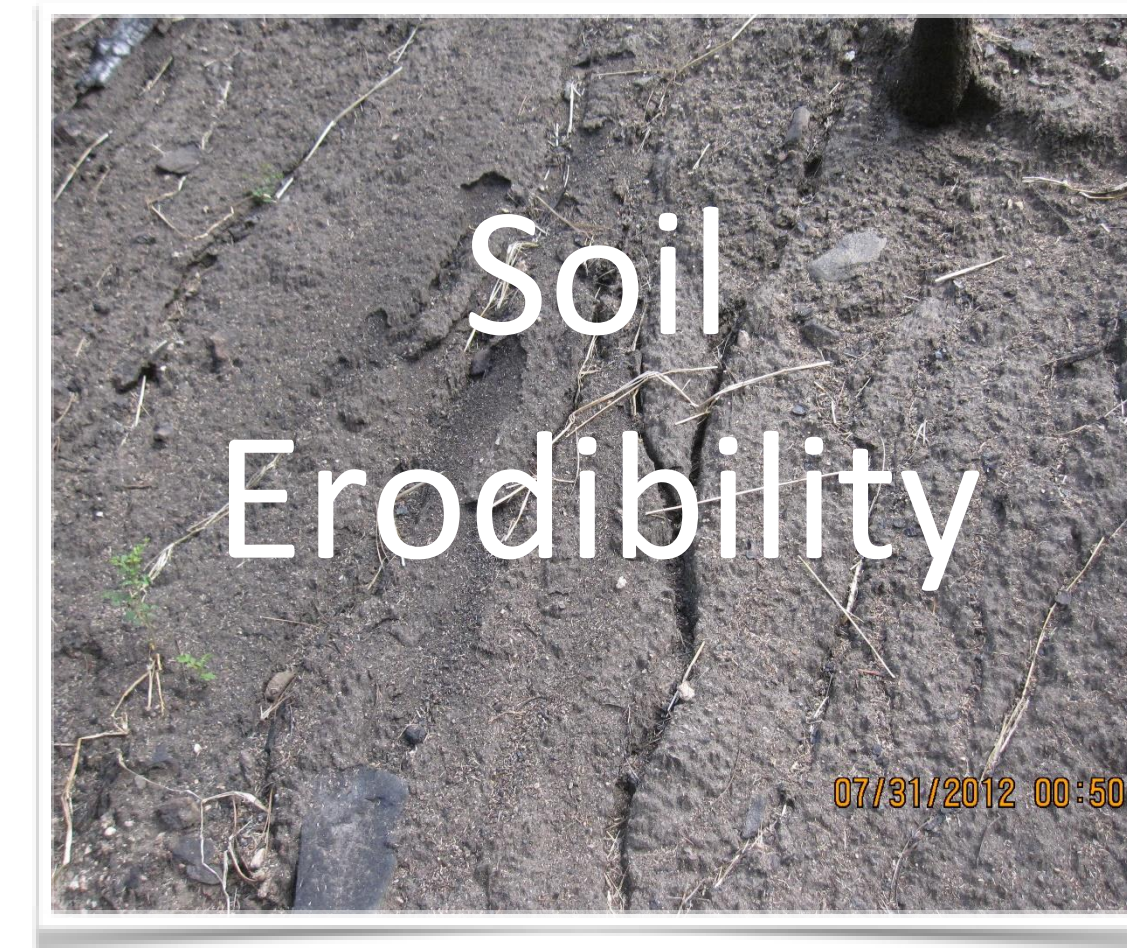
High Park Fire 2012



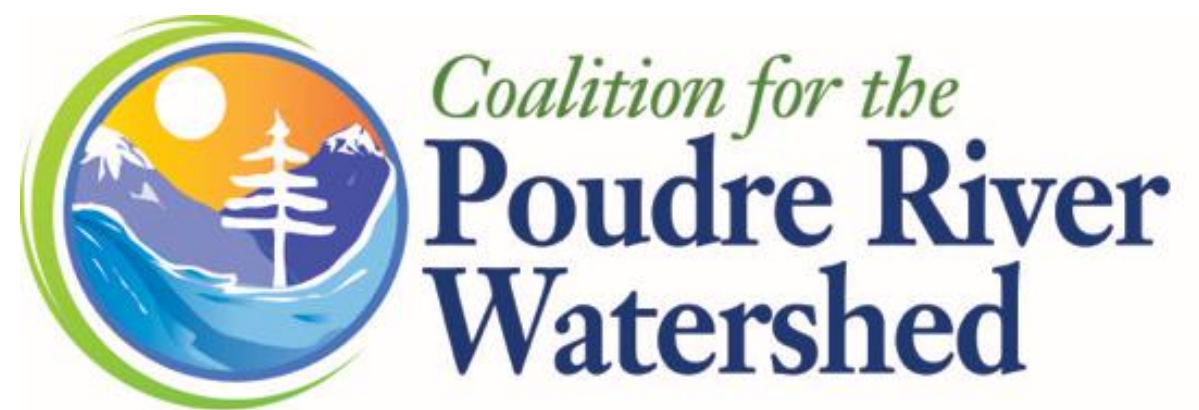
Hewlett Gulch Fire 2012



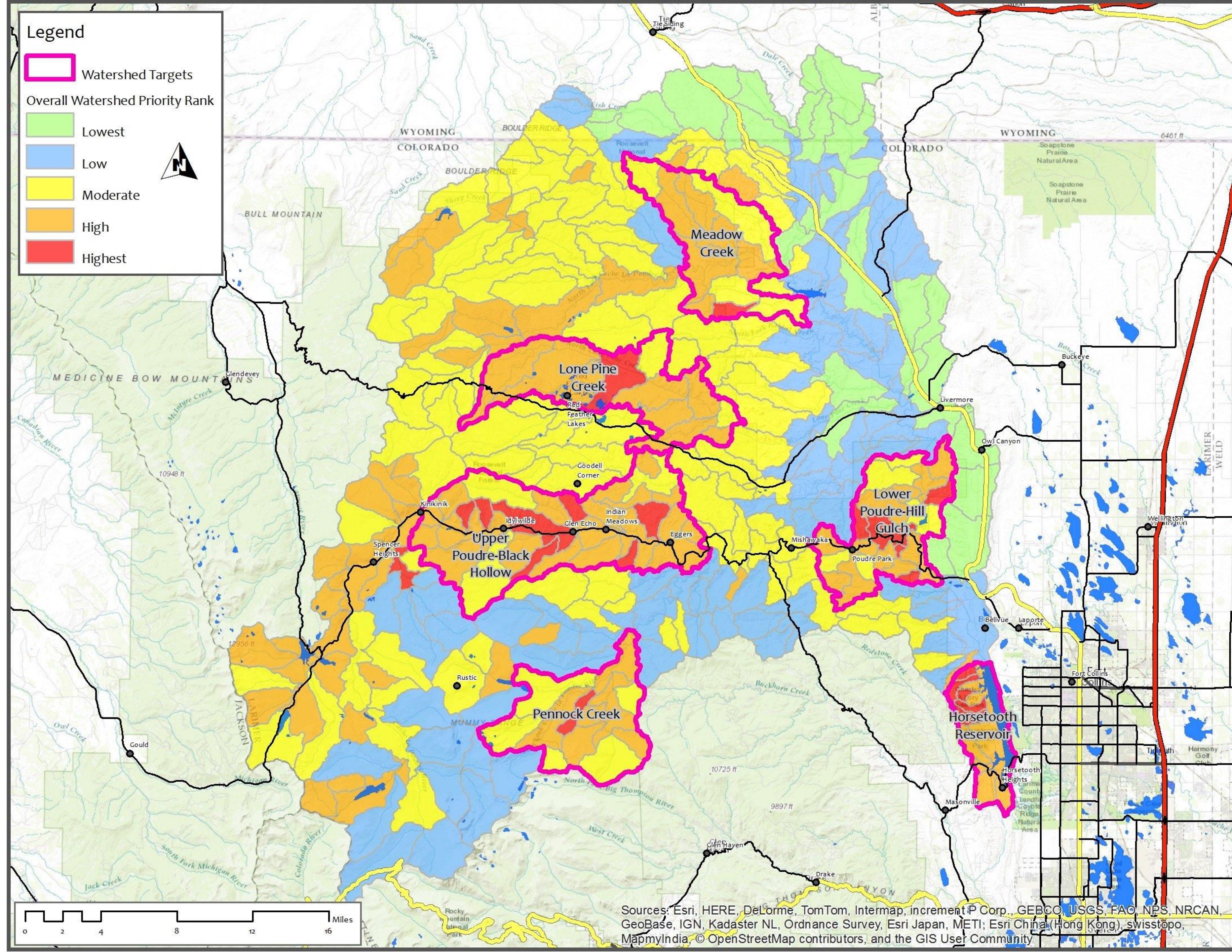
WATERSHED ASSESSMENT COMPONENTS



Upper Poudre Recovery & Resilience Watershed Plan



Target Watershed Areas



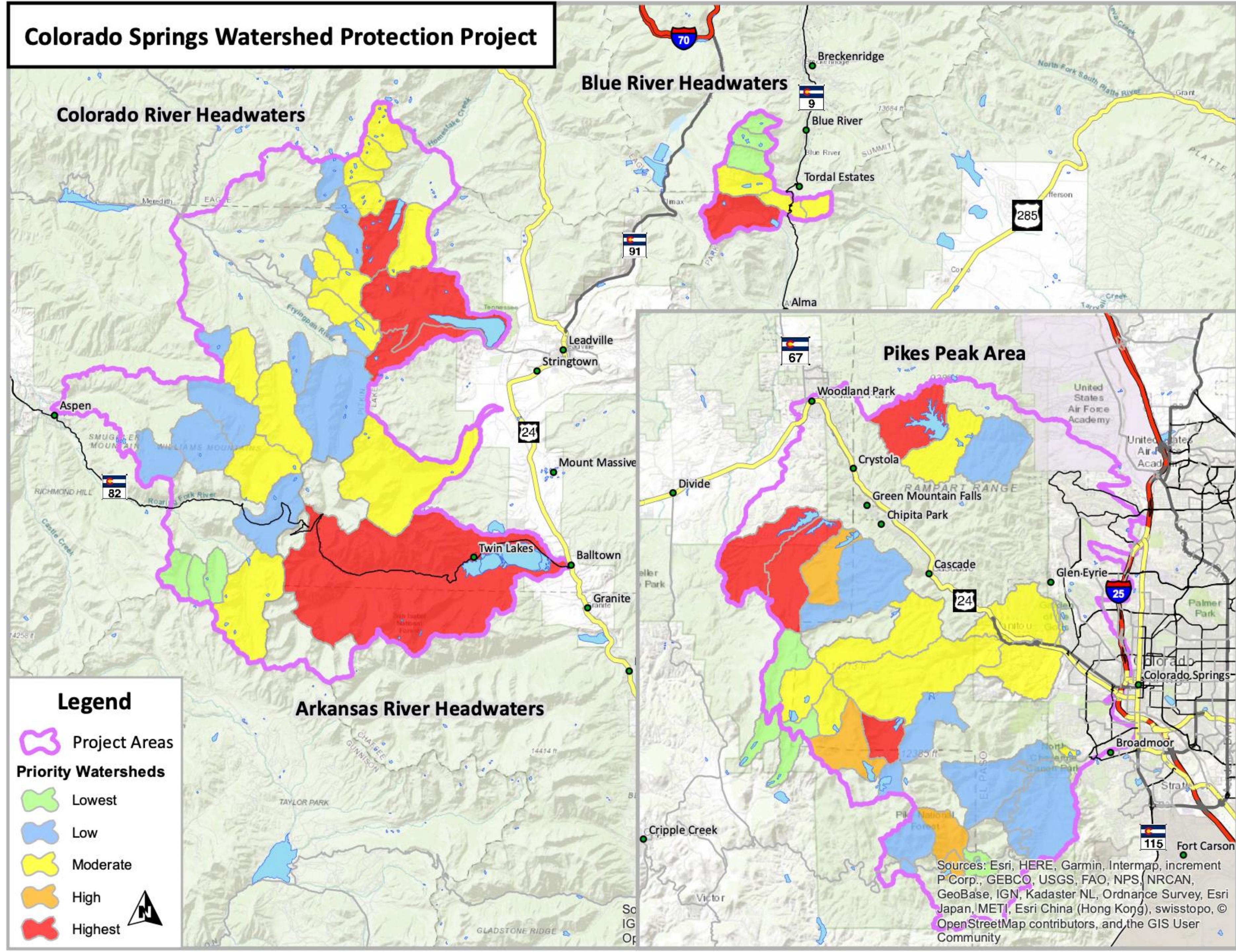
Overall
Priority
Rank

HUC	Sixth-level Watershed Name	Value A - Healthy Upland Habitat	Value B - Naturally Functioning River	Value C - Water Supply	Composite Hazard Rank
10190007080203	Well Gulch	5.0	5.3	4.3	5.3
10190007080204	Arthurs Rock Gulch	4.7	5.1	4.3	5.3
10190007080201	Santanka Gulch	2.5	5.0	5.3	5.2
10190007020811	UT2 to Headwaters CLP	3.8	5.3	3.6	5.1
10190007080205	Mill Creek	5.0	4.0	3.6	5.1
10190007021007	UT2 to Upper CLP River	5.1	3.7	3.6	5.0
10190007020813	Washout Gulch	3.8	5.2	3.3	5.0
10190007030507	UT to Poudre River	3.4	4.7	4.0	4.8
10190007030510	Lower Lower CLP River	2.5	4.3	5.3	4.8
10190007080202	Soldier Canyon	3.4	4.4	4.2	4.8
10190007020817	Crown Point Gulch	4.4	4.2	3.3	4.8
10190007070106	UT to Meadow Creek	4.7	3.0	4.2	4.7
10190007021003	UT to Sevenmile	4.0	5.3	2.5	4.7
10190007020815	Lower Headwaters CLP-Black Hollow	4.0	4.0	3.6	4.6
10190007070414	Obenchain Draw	3.2	3.6	4.8	4.6
10190007060204	Mliddle North Fork Lone Pine Creek	4.2	3.7	3.5	4.5
10190007080502	Unnamed 1	2.7	4.4	4.3	4.5
10190007020607	Sheep Creek	4.6	4.3	2.5	4.5
10190007010204	Twin Lake Reservoir	3.6	4.8	3.0	4.5
10190007030509	Unnamed 3	1.3	5.3	4.9	4.5
10190007021009	UT1 to Upper CLP River	4.4	4.3	2.7	4.5

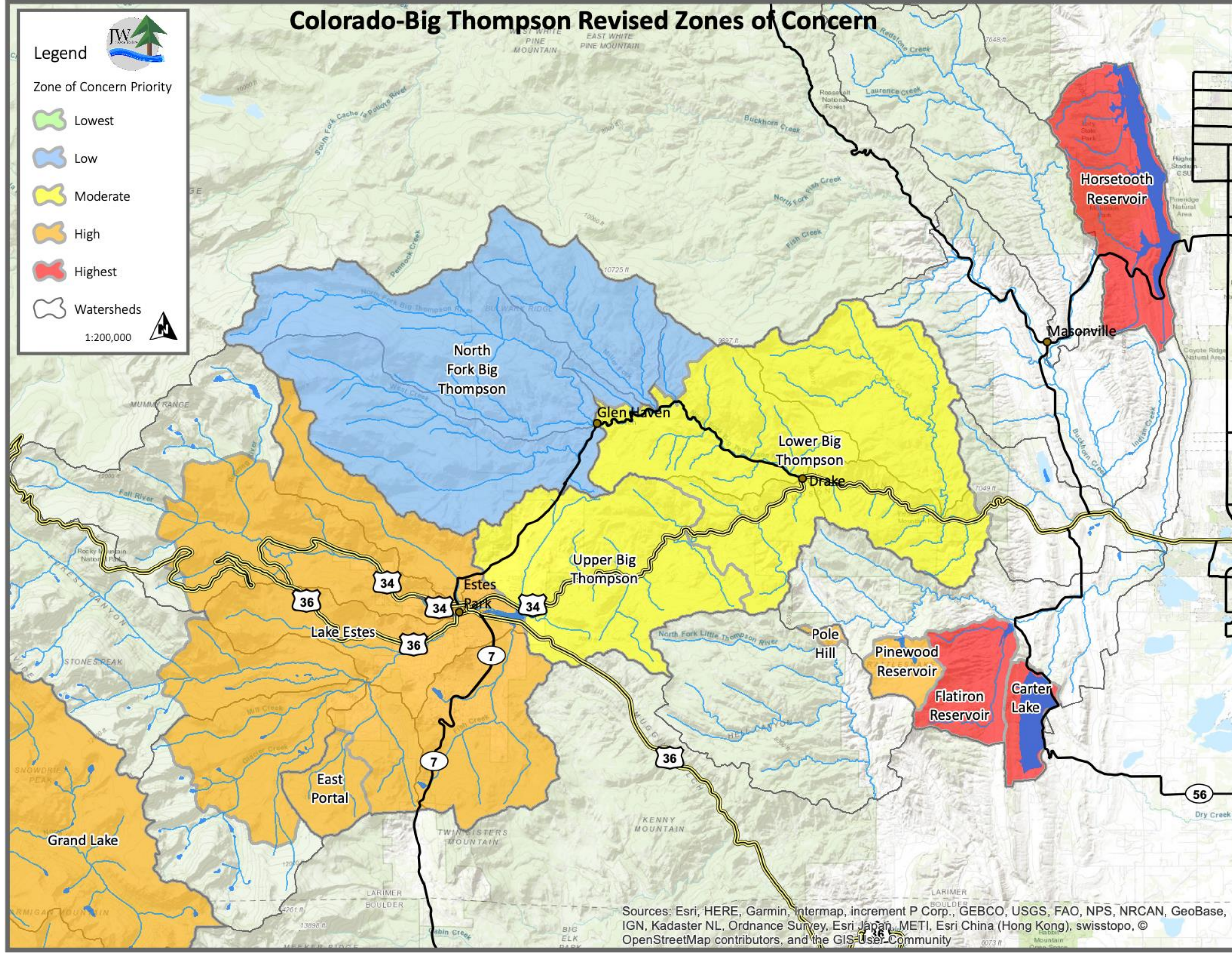
Value B -
Naturally
Functioning
River Rank

HUC	Sixth-level Watershed Name	Sediment Transport Rank	Roads Rank	Debris Flow Rank	Soils/Geology Rank	Composite Hazard Rank
10190007020811	UT2 to Headwaters CLP	5.3	1.4	5.3	3.7	5.3
10190007021003	UT to Sevenmile	4.8	4.6	2.8	3.7	5.3
10190007030505	UT to Hill Gulch	2.8	5.1	3.5	3.7	5.3
10190007030509	Unnamed 3	5.3	2.6	5.3	2.5	5.3
10190007080203	Well Gulch	5.3	2.8	5.3	2.0	5.3
10190007020813	Washout Gulch	5.2	1.3	5.3	3.3	5.2
10190007010202	UT to Head South Fork CLP	4.2	0.5	4.8	5.3	5.2
10190007080204	Arthurs Rock Gulch	4.7	2.0	4.3	3.4	5.1
10190007080201	Santanka Gulch	5.3	4.3	4.2	0.7	5.0
10190007010303	UT3 to Pennock Creek	4.9	1.5	4.5	3.4	5.0
10190007010204	Twin Lake Reservoir	3.6	4.0	4.4	2.0	4.8
10190007080510	Lower Rist	2.2	4.0	3.9	3.7	4.8
10190007080514	Empire Gulch	4.0	4.1	4.3	1.3	4.7
10190007030507	UT to Poudre River	4.1	0.5	4.2	4.9	4.7
10190007030508	Boyd Gulch	4.0	2.9	3.9	2.8	4.7
10190007030506	Shaw Gulch	2.5	2.2	2.2	4.4	4.6

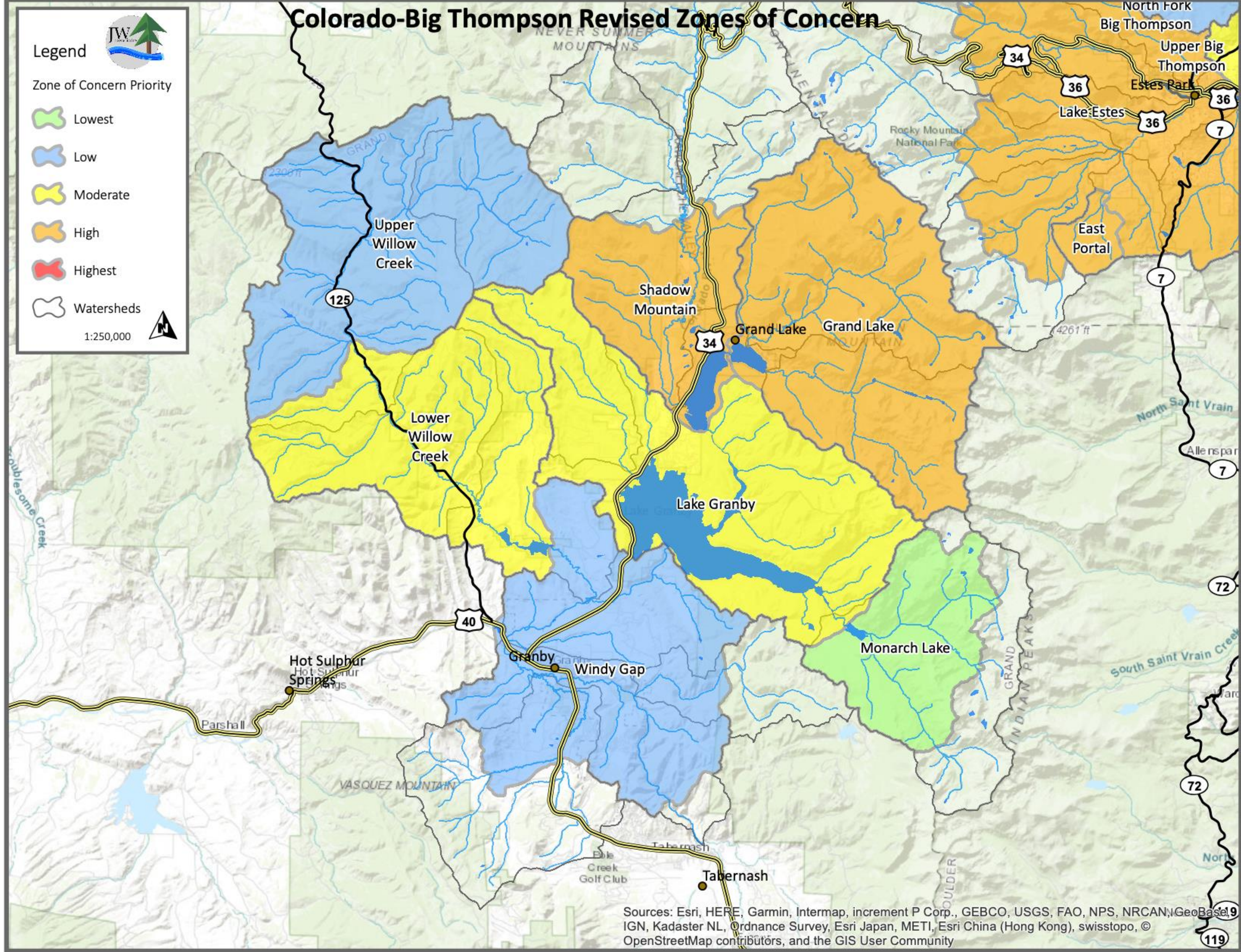
Colorado Springs Watershed Protection Project



Colorado-Big Thompson Revised Zones of Concern



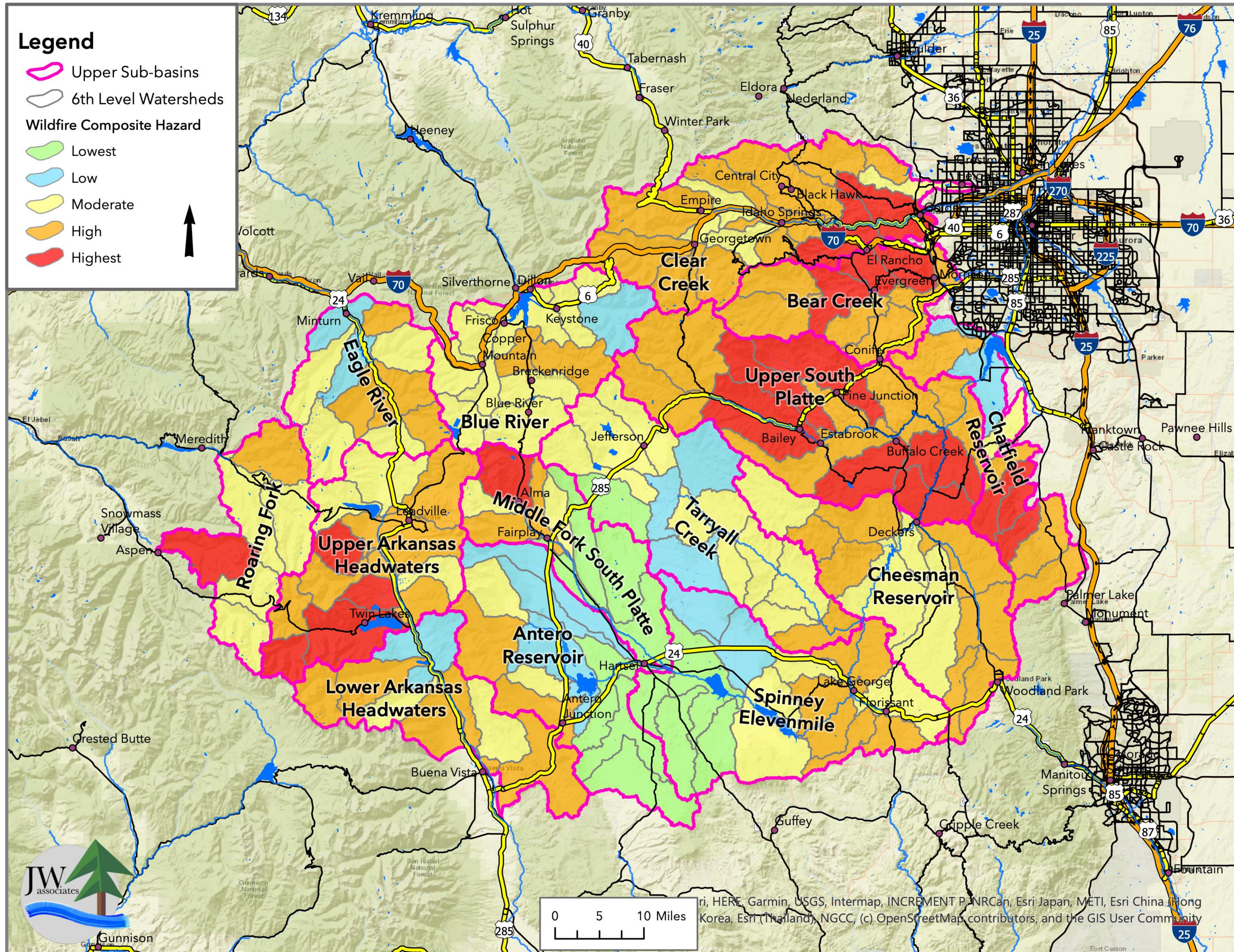
Colorado-Big Thompson Revised Zones of Concern



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Legend

- Upper Sub-basins
- 6th Level Watersheds
- Wildfire Composite Hazard
 - Lowest
 - Low
 - Moderate
 - High
 - Highest

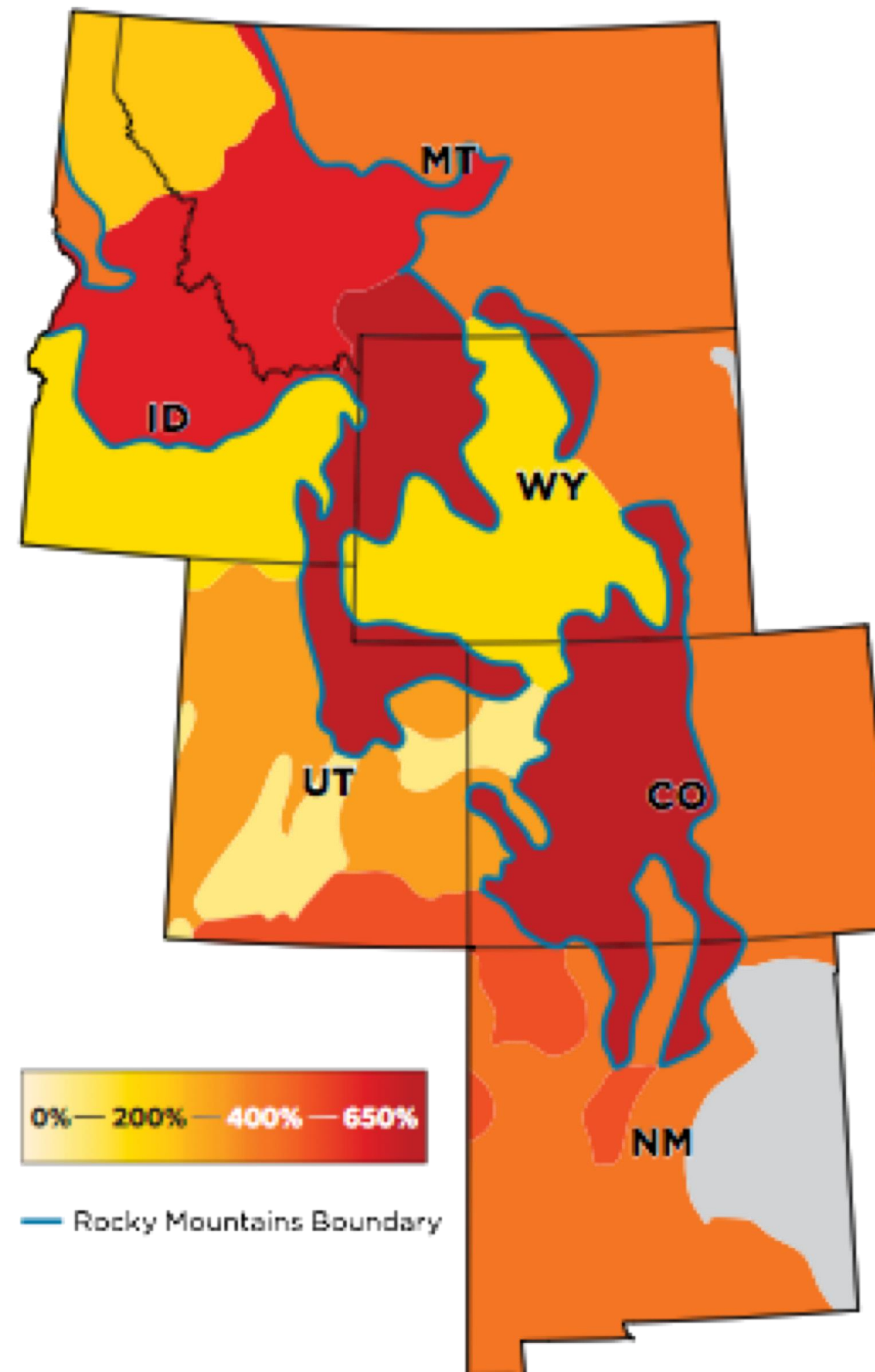


Trends in Watershed Protection

- ✦ Target small watersheds (7th level, HUC 14)
- ✦ Use simple but scientific-based analysis
- ✦ Work across boundaries

FIGURE 4. Projected Changes in Average Area Burned with a 1.8°F Rise in Average Temperature

Climate Change



Trends in Watershed Protection

- ◆ Target small watersheds (7th level, HUC 14)

Use simple but scientific-based analysis

Work across boundaries

- ◆ Create Resilient Watershed/Forests
- ◆ Work suppression into treatments

Spring Creek Fire 2018



Buffalo Fire 2018



Pikes Peak Watershed Protection Planning

