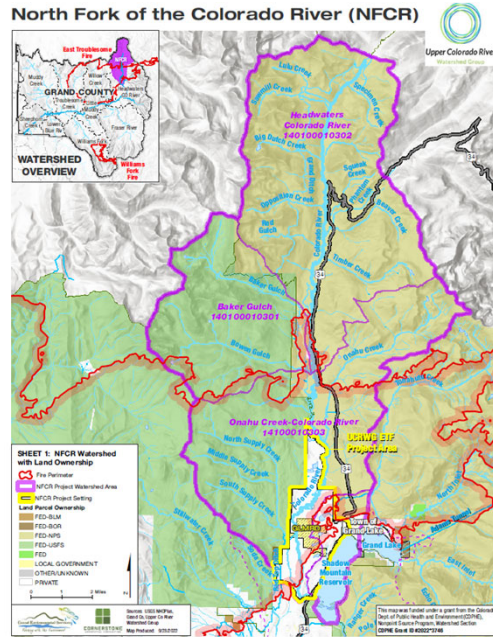




## 2) North Fork Colorado River (NFCR) with East Troublesome Fire (ETF) Path 21Oct20

- The East Troublesome Fire (ETF) burned from west to east:
  - From USFS National Forest System Lands
  - Across the lower North Fork Colorado River valley (NFCR, mostly private lands with a mix of agriculture and residential uses)
  - To NPS Rocky Mountain National Park
- Remarkable survival of the town of Grand Lake can be attributed to more than a decade of pine beetle mitigation forestry enabling well-orchestrated, truly heroic fire fighting teams during the ETF event
- Fire perimeter from Grand County Assessor

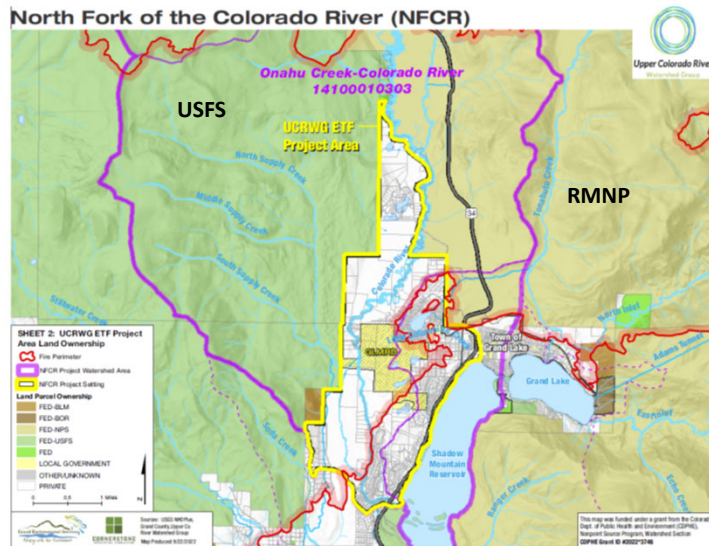


Grand Environmental Services for UCRWG \* 970-509-0199 \* December 2022

3

## 3) UCRWG ETF Project Area

- The UCRWG ETF Project area focuses on private and municipal lands between federal lands on west (National Forest Lands) and east (Rocky Mountain National Park)
- Efforts incorporate lessons learned by the Northern Colorado Water Conservancy District working with USFS on National Forest System lands, also Rocky Mtn National Park (RMNP) directives to allow natural processes to unfold

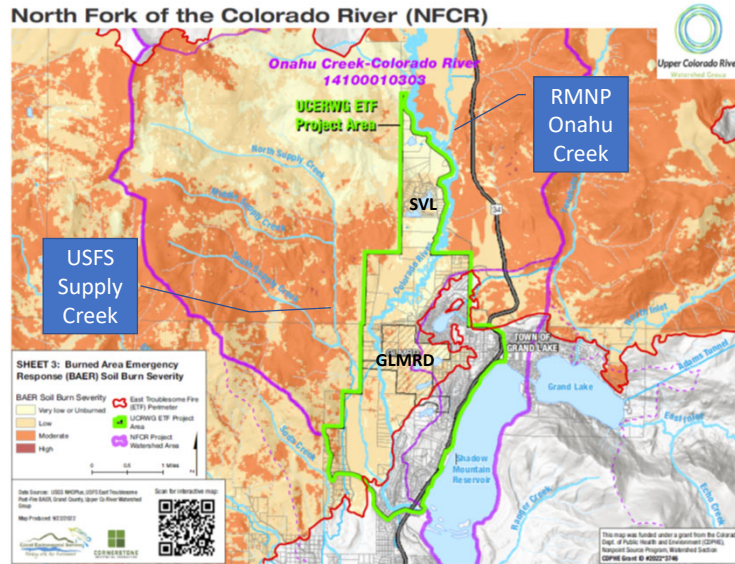


Grand Environmental Services for UCRWG \* 970-509-0199 \* December 2022

4

### 4) UCRWG ETF Project Area with BAER Soil Burn Severity (SBS)

- US Forest Service (USFS) post-fire rapid assessment Burned Area Emergency Response (BAER) is reported as “soil burn severity” (SBS), essentially how deeply were soils burned during the fire and a surrogate for local lands’ ability to support natural recovery processes
- Most of the UCRWG ETF project area experienced very low to low SBS impacts, with notable moderate SBS in hilly terrain near Sun Valley Lake (SLV) and the Grand Lake Metro Recreation District (GLMRD)
- Upstream from the project area are large patches of higher SBS impacts on USFS National Forest System lands in the Supply Creek drainage on RMNP in the Onahu Creek drainage, both delivering increased flows and sediment loads to the NFCR



Grand Environmental Services for UCRWG \* 970-509-0199 \* December 2022

5

### 5) Soil Burn Severity Indicators\*

Soil Burn Severity	Low SBS	Moderate SBS	High SBS
Ground Cover	<50% consumed	50-80% consumed	>80% consumed
Ash	Ground surface black with recognizable fine fuels	Thin layer of black to gray ash with recognizable fine fuels below	1-3inch layer of powdery gray or white ash
Soil Structure	Structure unchanged	Structure slightly or not altered, some consumption of organic surface layer	Structure reduced or destroyed, consumption of organic mater in top 2 inches
Roots	Roots intact and unchanged	Fine roots near surface charred or scorched, large roots intact	Many or most fine roots consumed or charred, some charring on large roots
Soil Water Repellency	No fire-induced repellency	Weak to medium repellency at or just below surface	Strong repellency at surface or deeper

\*From [Field Guide for Mapping Post-Fire Soil Burn Severity](#), by Parsons et al., USDA Forest Service Rock Mountain Research Station General Technical Report RMRS-GTR-243

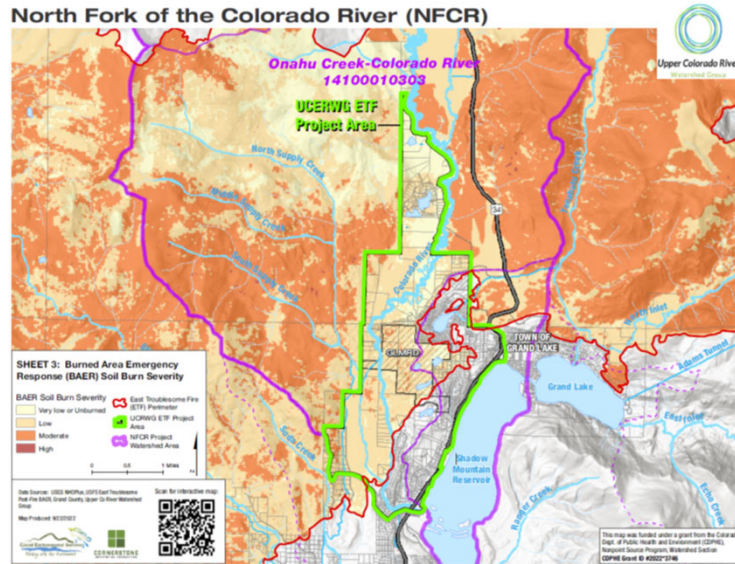
Grand Environmental Services for UCRWG \* 970-509-0199 \* December 2022

6



### 6) UCRWG ETF Project Area with BAER Soil Burn Severity (SBS)

- It should be noted that trees, shrubs, and most structures will burn in even low-SBS fires
- That said, natural recovery processes are already seen in many low-lying areas with plant communities that include sod-forming grass-wildflowers as well as plants like willow, aspen, rose, and cottonwood that have broad root systems

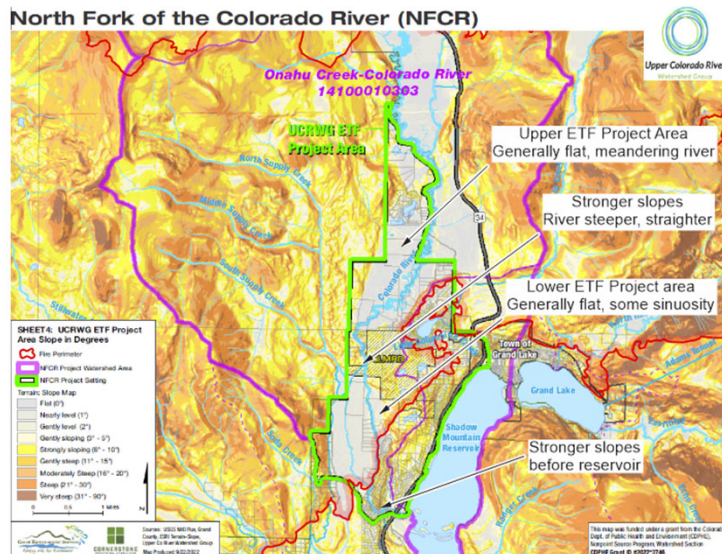


Grand Environmental Services for UCRWG \* 970-509-0199 \* December 2022

7

### 7) Slopes In and Around the Project Area Influenced SBS

- The NFCR valley floor in the UCRWG ETF project area, with notable areas of hilly terrain in the Sun Valley Lake and GLMRD areas
- Flatter areas coincide with lower SBS impacts
- Hilly areas show higher SBS impacts
- Compare with Figure 6 above
- This map originally shared as Sheet 4: UCRWG ETF Project Area Slope in Degrees



Grand Environmental Services for UCRWG \* 970-509-0199 \* December 2022

8



