Burned Area Emergency Response (BAER) Overview and Opportunities

Cara Farr – USFS National BAER Coordinator

Three Phases of Post-Fire Actions

Suppression Repair

Burned Area Emergency Response (BAER)

Rehabilitation and restoration

What is BAER?

A program to identify imminent post-wildfire threats to human life and safety, property and critical natural or cultural resources and take immediate actions to manage unacceptable risks.

The BAER Process

Step 1. Identify critical values

Step 2. Assess for threats

Step 3. Evaluate risk

Step 4. Develop response strategy

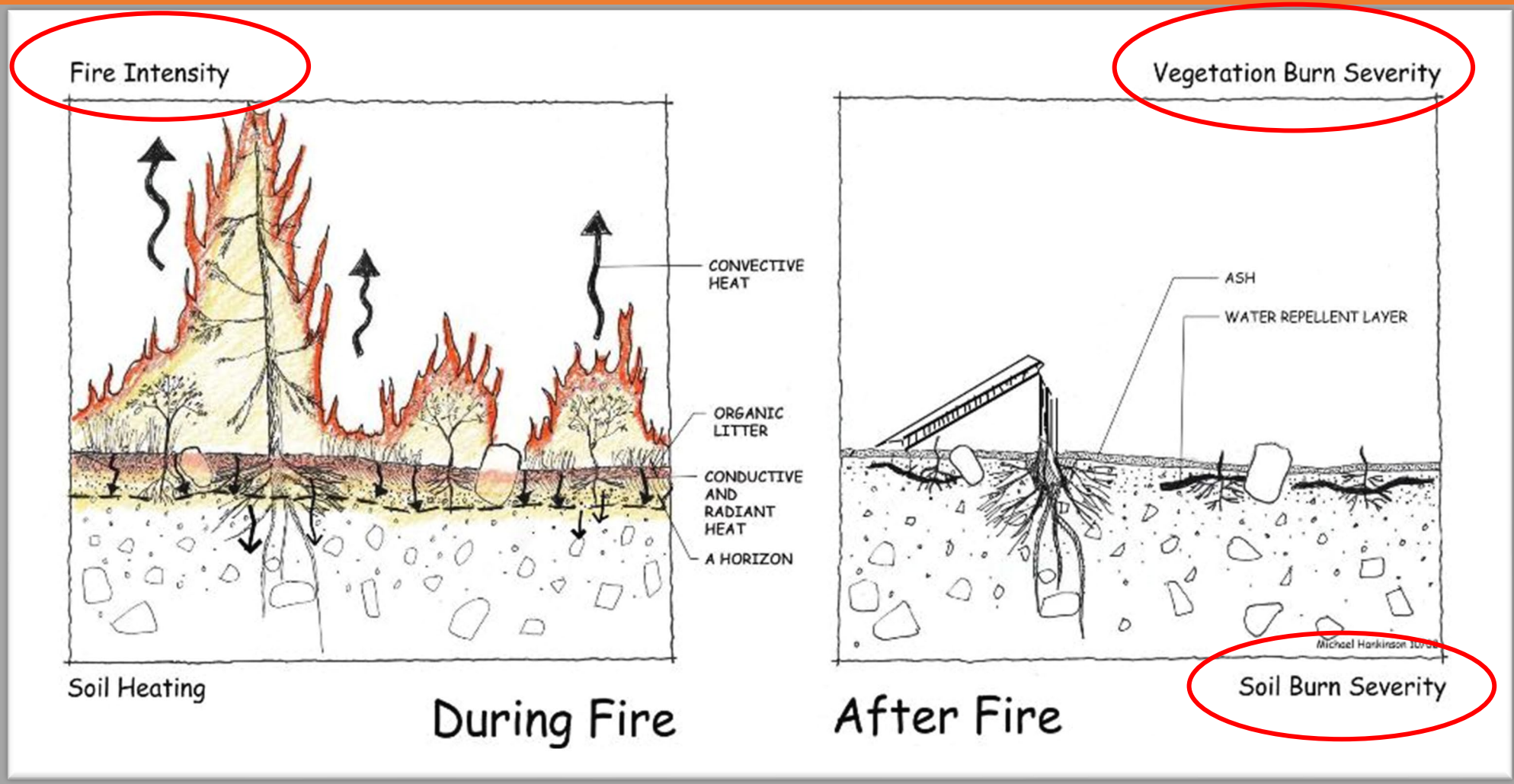
Step 5. Implement the strategy

Assess for Threats and Evaluate Risk

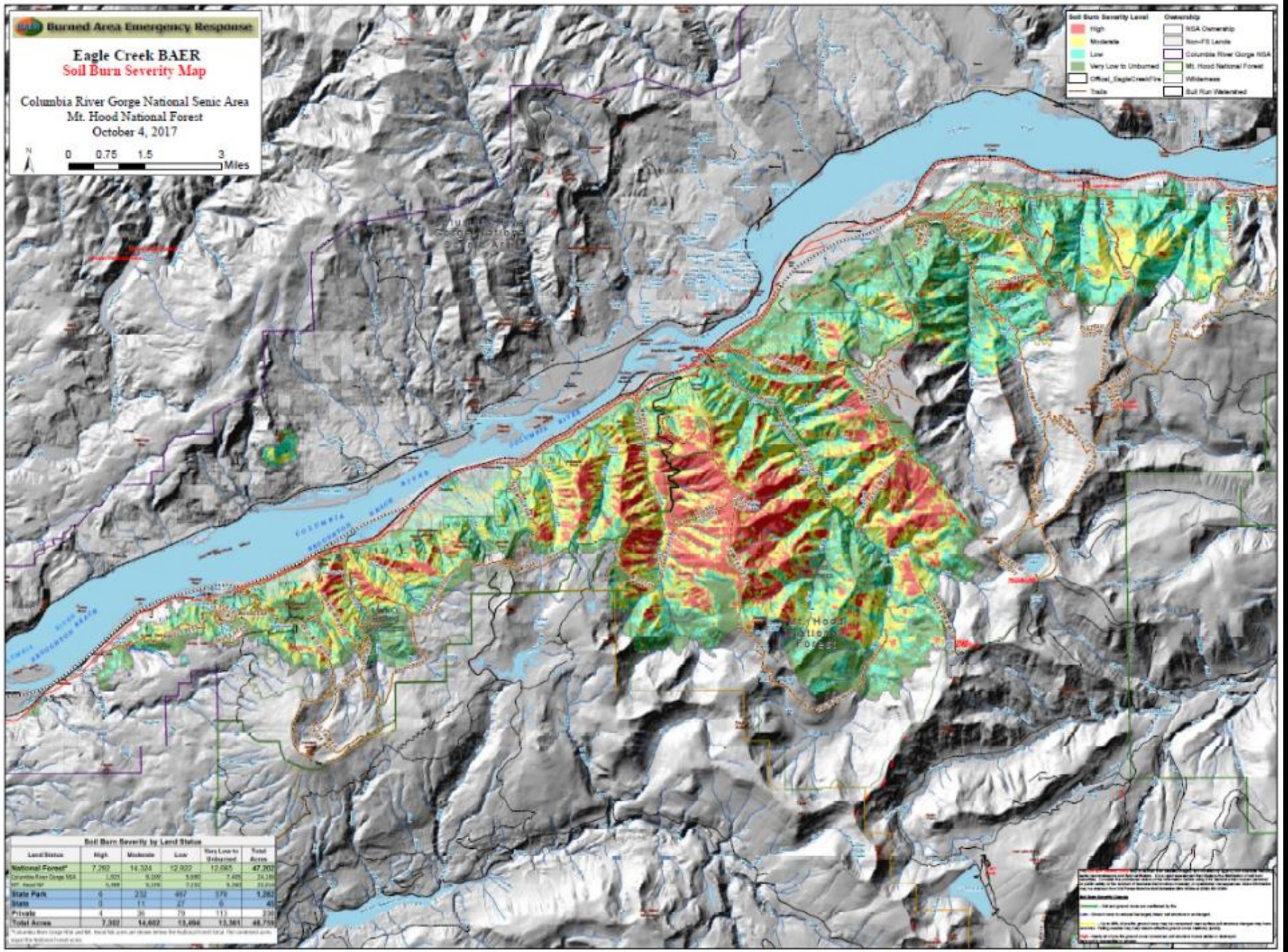
- Soil Burn Severity
- Geologic Hazards
- Erosion and Flooding
- Hazard Trees
- Non-native species

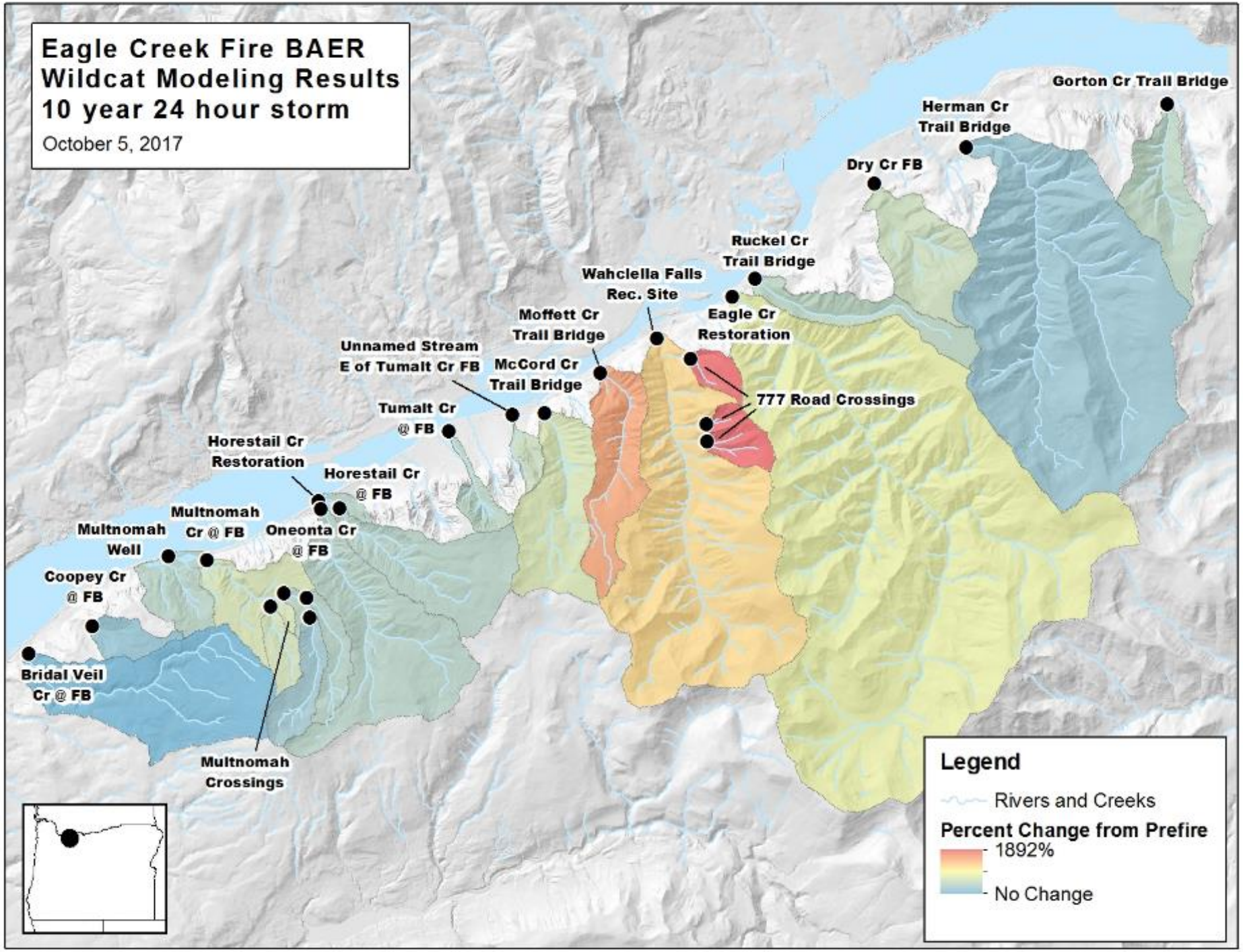
Fire Intensity and Fire Severity

Fire intensity = energy or heat release during the consumption of organic matter.

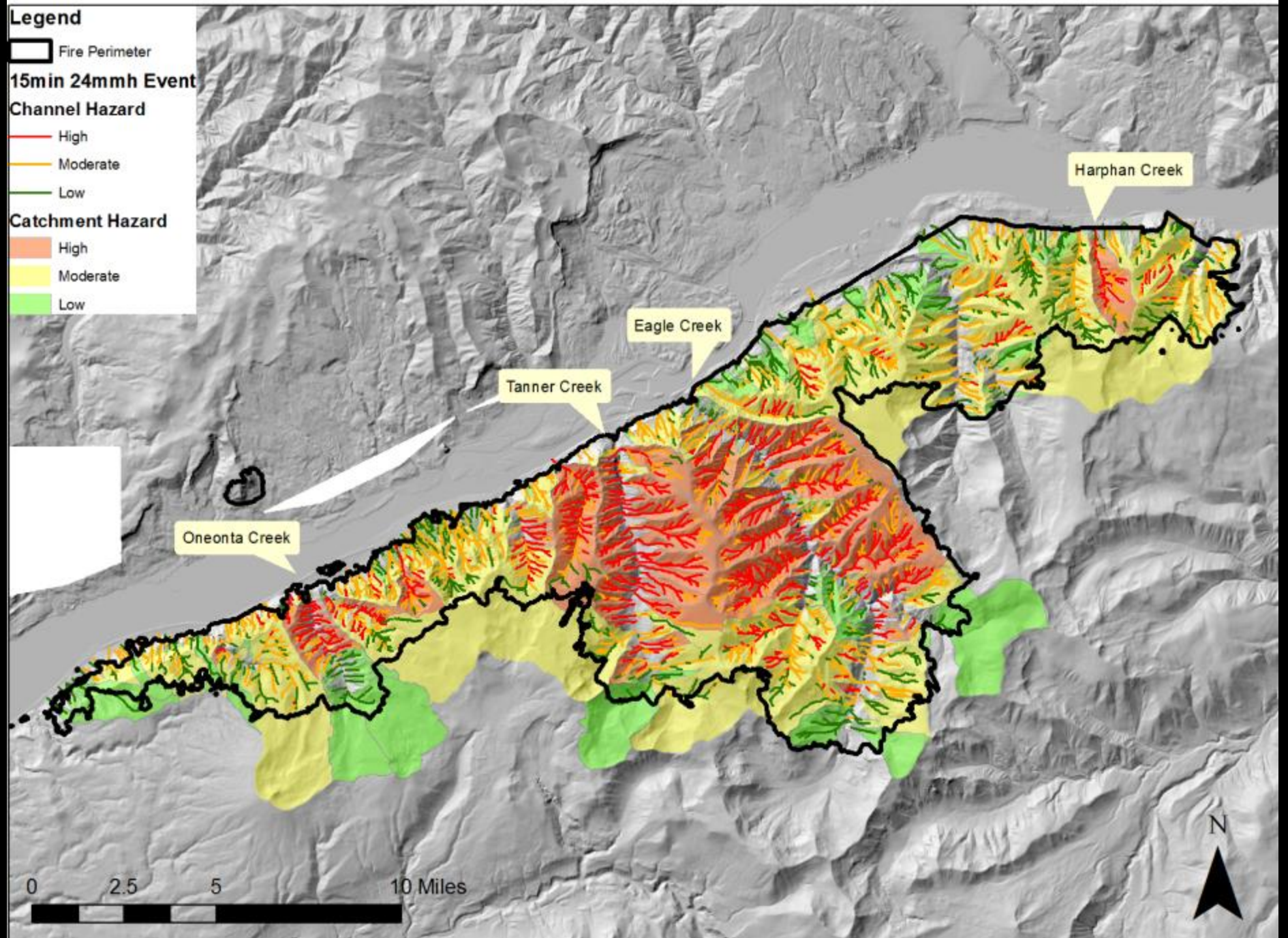


Fire intensity does not always indicate fire effects on soils.


Burned Area Emergency Response
Eagle Creek BAER
Soil Burn Severity Map
Columbia River Gorge National Senic Area
Mt. Hood National Forest
October 4, 2017
N
0 0.75 1.5 3
Miles
Soil Burn Severity Level
High
Moderate
Low
Very Low to Unburned
Ownership
NSA Ownership
Non-FS Lands
Columbia River Gorge NSA
Mt. Hood National Forest
Wilderness
Bull Run Watershed
Trails
Soil Burn Severity by Land Status
Land Status
High
Moderate
Low
Very Low to Unburned
Total Acres
National Forest*
State Park
State
Private
Total Acres


Eagle Creek Fire BAER
Wildcat Modeling Results
10 year 24 hour storm
October 5, 2017
Gorton Cr Trail Bridge
Herman Cr
Trail Bridge
Dry Cr FB
Ruckel Cr
Trail Bridge
Wahclella Falls
Rec. Site
Eagle Cr
Restoration
Moffett Cr
Trail Bridge
Unnamed Stream
E of Tumalt Cr FB
McCord Cr
Trail Bridge
777 Road Crossings
Tumalt Cr
@ FB
Horestail Cr
Restoration
Horestail Cr
@ FB
Multnomah
Cr @ FB
Multnomah
Well
Oneonta Cr
@ FB
Coopey Cr
@ FB
Bridal Veil
Cr @ FB
Multnomah
Crossings
Legend
Rivers and Creeks
Percent Change from Prefire
1892%
No Change

Eagle Creek Fire Debris Flow Hazard



BAER Risk Assessment

Each BAER critical value and threat combination is evaluated for risk.

1 – Magnitude of consequence

2 – Probability of damage or loss

Probability of Damage or Loss	**Magnitude of Consequences**		
	Major (Life loss, substantial/ irreversible damage)	Moderate (Injury of life, long term resource effects)	Minor (no injury, recoverable loss)
	RISK		
Very Likely (>90%)	**Very High**	**Very High**	**Low**
Likely (50-90%)	**Very High**	**High**	**Low**
Possible (10-50%)	**High**	**Intermediate**	**Low**
Unlikely (<10%)	**Intermediate**	**Low**	**Very Low**

Magnitude of Consequence

How significant is the loss or damage estimated to be?

Minor

Moderate

Major

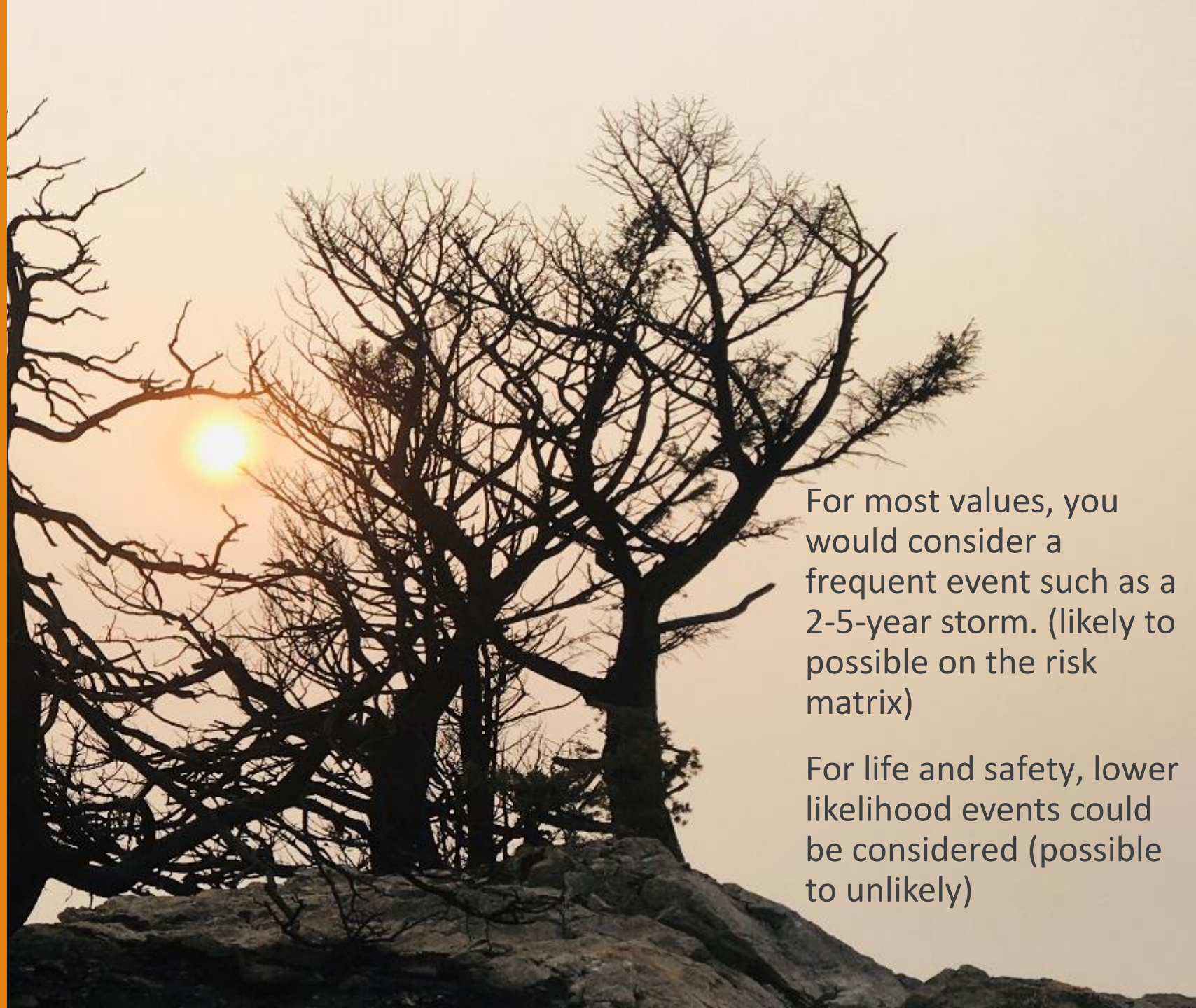
Major = loss of life, injury, or irreversible damage to resources

Minor = Recoverable or localized effects

Probability of Damage or Loss

How likely is the value in question to be damaged or destroyed in the next 3 years by a post-fire event?

Unlikely to Very Likely



For most values, you would consider a frequent event such as a 2-5-year storm. (likely to possible on the risk matrix)

For life and safety, lower likelihood events could be considered (possible to unlikely)

Step 4 – Develop a Response Strategy

The BAER Process

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Step 2. Assess for threats

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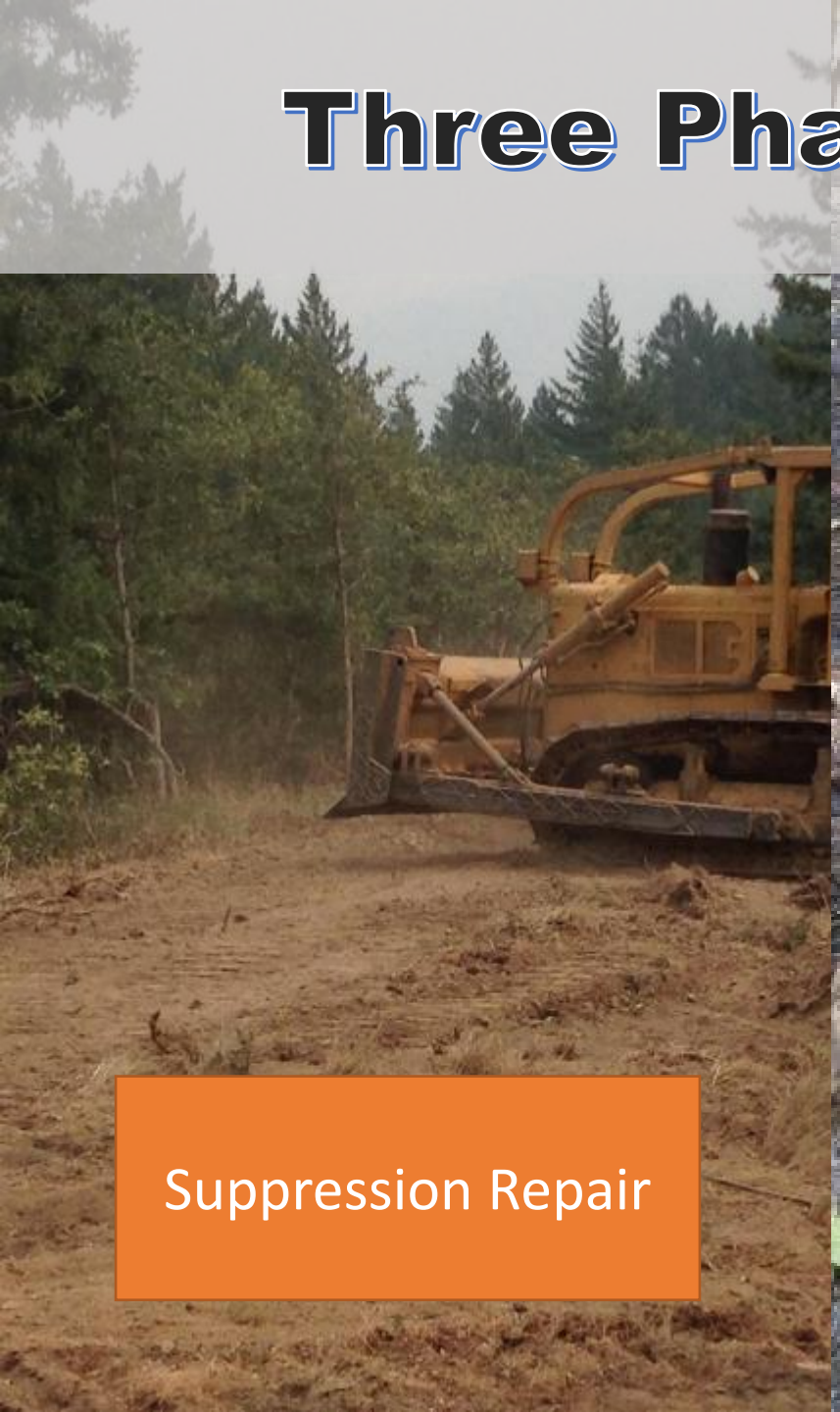
Step 5. Implement the strategy

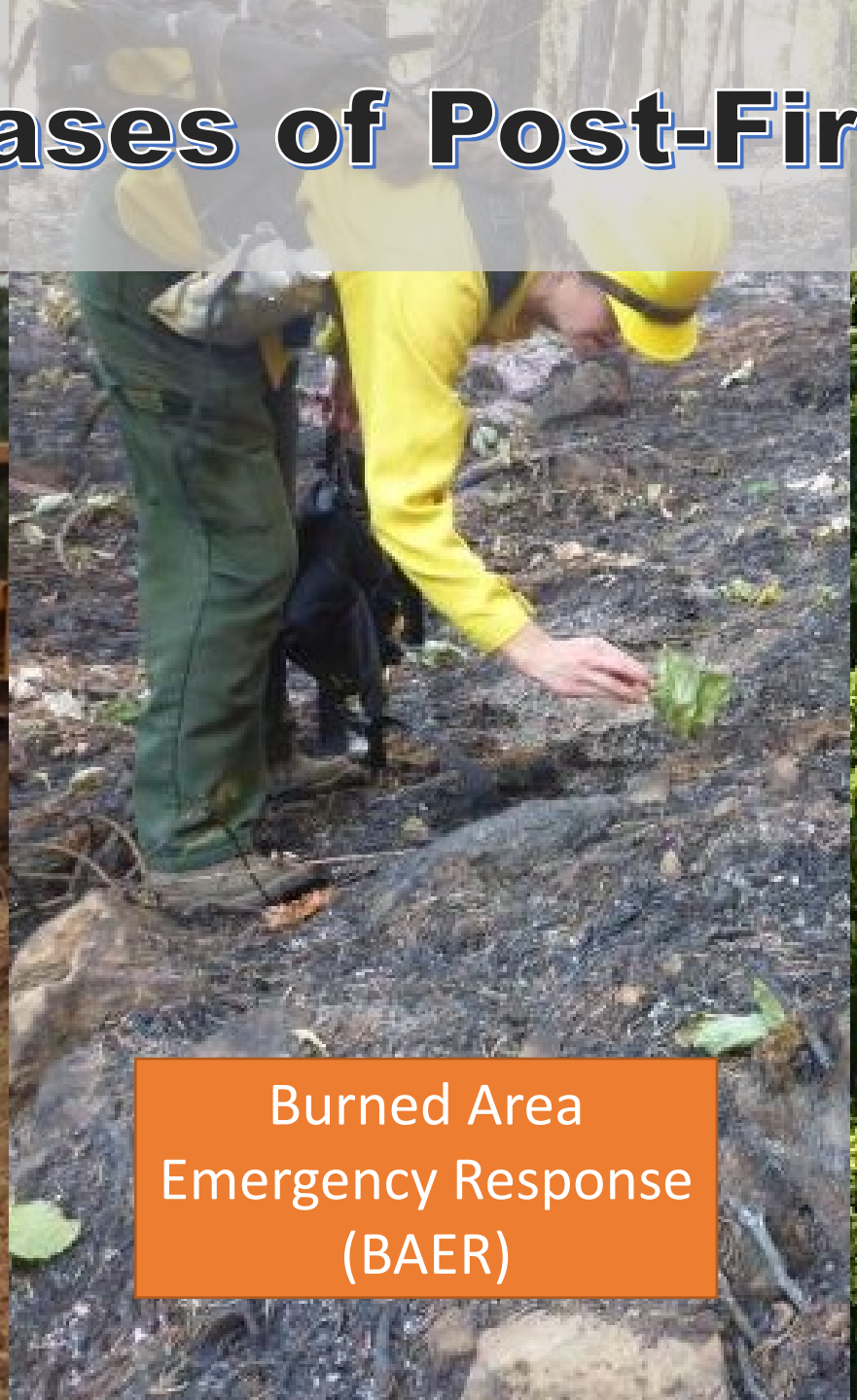
The team size and make-up and level of analysis should be commensurate with the size and complexity of the fire and critical values

If the BAER program is limited to Federal Lands and values….

Three Phases of Post-Fire Actions



Suppression Repair



Burned Area Emergency Response (BAER)

Rehabilitation and restoration

Post-fire impacts to Source Water Areas beyond the emergency phase

THE IMPORTANCE OF COLLABORATION

JOINT CHIEFS' INITIATIVE
COLLABORATIVE FOREST LANDSCAPE RESTORATION PROJECTS
SOURCE WATER PROGRAM
GOOD NEIGHBOR AUTHORITY
AND MORE!


COLLABORATION
PARTNERSHIP
INVESTMENT
The Path Forward

Questions and Discussion