



Considerations for developing Critical Values at Risk in the preseason with partners

Introduction

The Incident Strategic Alignment Process (ISAP)¹ is a structured framework for considering risk and developing strategy during fire management. During the ISAP, Incident Management Team (IMT) members, Agency Administrators (AAs), and other response partners identify and prioritize critical values at risk (CVAR), develop strategic actions to protect CVAR, evaluate the risk to responders, and determine the probability of success. In 2024, the USDA Forest Service Region 5 Fire and Aviation Management Safety First Committee convened ISAP engagement sessions with fire response resources, line officers, and other land management unit staff in the region.² Participants in the Region 5 engagement sessions indicated a need for identifying and mapping CVAR in the preseason with partners. Here we share lessons learned from developing CVAR in the preseason by the Forest Service Region 6 and Enterprise Program.

CVAR drive strategic actions on incidents and include the small set of values an AA would ask a responder to take an elevated, but meaningful, level of risk to protect (Table 1). During an incident, AAs typically work with IMTs to compile a list of CVAR and their location, rate the severity of impact from fire and suppression actions, and determine their relative priority (Appendix 1). However, this requires scarce time and resources, some of which could be done before smoke is in the air. Identifying CVAR in the preseason with partners can:

- support land management units and their cooperators in gaining alignment on CVAR without the time constraints imposed by an active incident;
- help AAs clearly communicate CVAR and intent to incoming IMTs, and the why behind strategic actions to leadership, field resources, cooperators, and other entities; and
- speed up strategy development and implementation.

Considerations for collaborative preseason CVAR meetings

CVAR data considerations: Much of spatial data for CVAR is available on public databases, including the [Risk Management Assistance \(RMA\) Dashboard](#) and [Homeland Infrastructure Foundation-Level Data \(HIFLD\)](#), or can be found in Quantitative Wildfire Risk Assessments or spatial fire plans. Those resources may be consulted first and used to develop a curated list of CVAR relevant to the local context (Table 1).

Table 1. Example CVAR categories.

Category	Description
People and Private Property	Communities or clusters of private property at risk of loss from fire.
Critical Infrastructure	Infrastructure sensitive to fire impact or fire suppression efforts that is necessary for the continued safety and function of the community it serves (e.g., 911 communication lines, highway corridors).
Local Community Drivers	Important economic and cultural drivers critical to the continued persistence of communities and their character that are sensitive to fire impact or suppression efforts (e.g., cultural values, historic landmarks).

Intended audience: Participants may include entities involved in incident-level fire management communications or shared resources, including line officers (AAs), Division Chiefs, fire staff, state and local fire response organizations, emergency managers, and law enforcement. The list of partners will depend on the local context as each landscape has a unique set of interested and affected entities and history of cooperative fire management.

CVAR meeting structure and process: It is useful to have GIS support, a facilitator, and a notetaker to map and collect attribute information for CVAR. Facilitators are particularly important for providing space to discuss whether the value is critical in driving strategy

¹ ISAP Story Map: <https://storymaps.arcgis.com/stories/7e0b757bc6a4480cad008218d6448212>

² R5 ISAP Engagement sessions briefing paper: <https://cfri.box.com/s/6agmvb29ce60ioo374v6u2jinkkvqy7w>

and finding agreement on which values to include. The group can work through each CVAR to document:

- CVAR type and sub-type;
- CVAR abundance (e.g., number of homes in community or cluster);
- responsible party contact information;
- severity of impact from fire and suppression actions; and
- vulnerability (i.e., is the CVAR defensible?) (Figure 1).

CVAR meeting products: ArcGIS online (AGOL), Dashboard, or Experience products can help AAs communicate CVAR to IMTs (Figure 1). Summarizing CVAR by fire protection districts or [Potential Operational Delineations](#) (i.e., a spatial fire planning framework and summary unit that depicts usable

control features like roads and ridges for operational decision-making) may be appropriate.

Conclusion

Identifying CVAR during incidents is imperative for developing sound strategy, yet it can take scarce time and resources to complete. Collaborative preseason CVAR exercises provide the time and space to build shared understanding of, and agreement on, the critical values on local landscapes, and facilitate clear and efficient communication of CVAR to incoming resources during incidents. CVAR will need to be revisited and prioritized during incidents (Appendix 1). Yet, the work done in the preseason to identify and map CVAR can increase the speed and efficiency of strategy development and implementation.

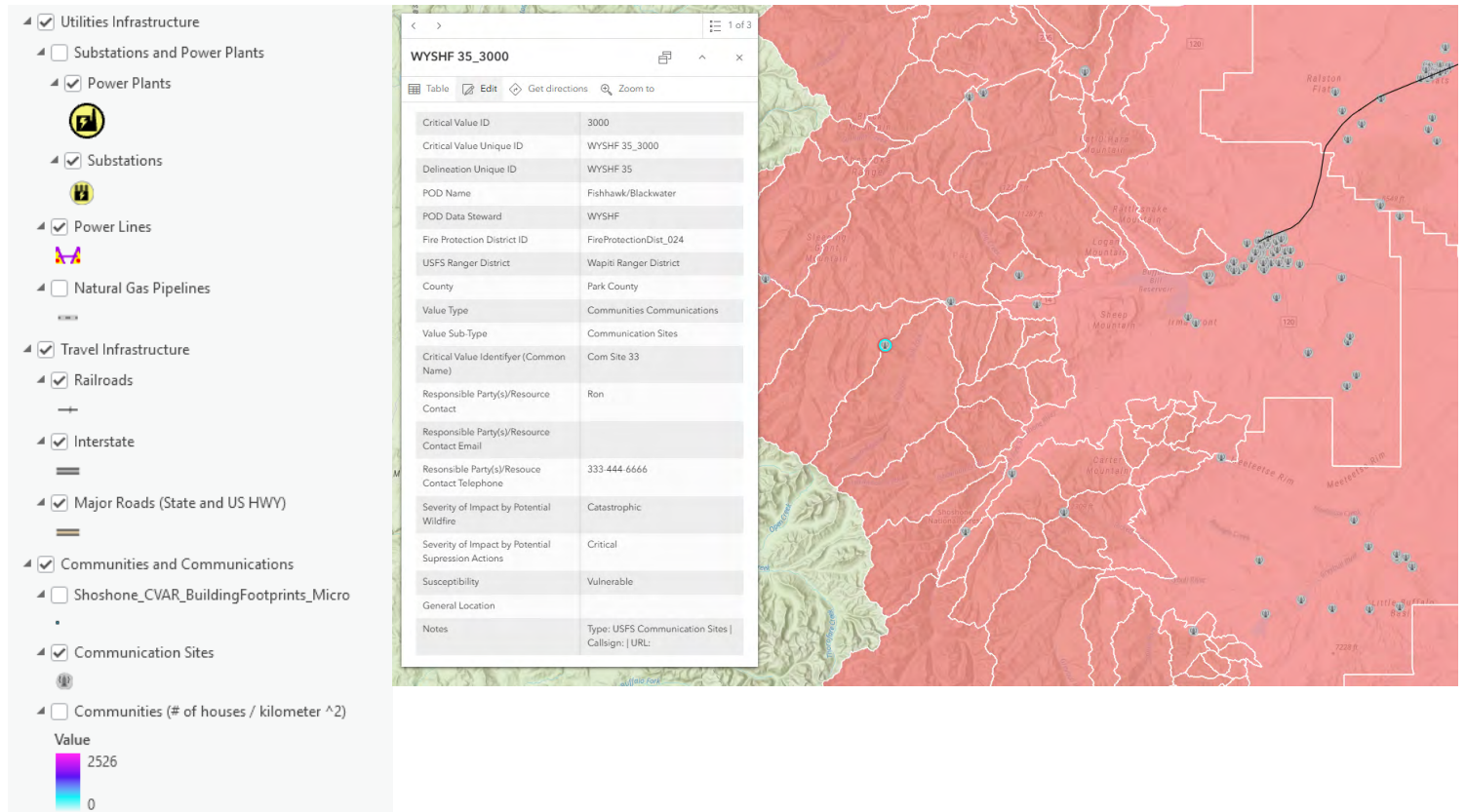


Figure 1: Critical Values at Risk (CVAR) ArcGIS Online (AGOL) example. CVAR categories are listed in the left panel and attribute information is in the middle panel. Data is summarized by PODs (white polygons).



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Appendix 1. Example incident CVAR documentation

Critical Value at Risk	Severity of Impact	General Location	General Notes	Addl. Notes - 8/18
Mallard private inholdings	Critical	Div A - Nez Clear NF / SA1	Inholding of seasonal houses, high value, open area, meadows, riparian areas, primitive setting of forest roads in and out, is defensible, has been impacted by fire before, mallard bridge??	Work Completed: set up as of 8/4 Work Left: POI - unlikely to rare; if predicted weather system materializes, and along with any additional moisture between now and early Sept. would look to start backhaul; monitor need to take freezing weather precautions on water handling equip. If early Sept, need to identify organization after 14 for NIMO.
Cook private inholdings	Critical	Div A - Nez Clear NF / SA1	Less infrastructure than Mallard, beautiful place, no homeowners exemption, seasonal, 1 landowner	Work Completed: setting up as of 8/4 Work Left: same as above for Mallard
Communities of Dixie, Comstock & Midasville	Catastrophic	Div A - Nez Clear NF / SA1	Communities that have been threatened by fire multiple times, SE side has no fire history and no fuels work. No options if it gets into those drainages, it will go into town. Permanent Community, 100 people in old mining claims, 1 road in and 1 out, the escape area for community is on Forest, million dollar cabins, wood bridges, power lines, little community. lot of UTVs, seasonal population is elevated now, no defensible place from River, Dixie is better than Comstock Communities	Work Completed: assessed 8/4; PIO shop with commo into Dixie Work Left: POI - Rare
Arctic Lodge/River of No Return Ranch/Blackie Foster Cabin	Critical	Div Q - Payette NF/SA3 Div Q - Bitterroot NF / SA3	Outfitting lodge, permitted on USFS lands, jet boat access, peak season to be occupied, fishing tours, its defensible Hosting guests, fly in or boat in, on Bitterroot, on USFS Lands, USFS historic cabin on that site, economic and historical value, occupied now, jet boat or river trail	Work Completed: Artic - set up; RONR Ranch setting up; Blackie Foster setting up - 8/4 Work Left: If rain is received threat will be minimal; sites relatively easy to backhaul the hose, pumps, sprinklers (needs: 1 fire mod & a boat); POI - unlikely to rare; if left, need to consider access by river (boats may not be able to run); may be last sites to be backhauled.
Arctic Lookout	Critical	Div Q - Payette NF	historic lookout, wrapped and leave, just restored, heritage site	Work Completed: wrapped as of 8/4 Work Left: If drying pattern return, may have potential; no hurry to remove wrap; district/forest will likely take care of this without issue
Whitewater Ranch area	Critical	Div A - Nez Clear NF / SA3	5 private landowners, seasonal, bridge, wood, campground, jet boat, hydro plants are critical, FS structures are primitive in nature	Work Completed: set up as of 8/4 Work Left: Vendor needs payment and LUA needs closed out; no threat left to Whitewater;
Whitewater Bridge	Moderate	Div A - location on map	USFS bridge within the Whitewater property; was resurfaced by road crew last week	Work Completed: set up as of 8/4 Work Left:
Whitewater USFS	Negligible	Div A - Nez Clear NF?	USFS structures located at the Whitewater area; CG	Work Completed: set up as of 8/4 Work Left:

Figure A1.1: CVAR spreadsheet developed during the 2023 Elkhorn Fire in Idaho. Severity, location, and notes are included to help communicate specific considerations and the progress of work to protect these values as the incident progressed. This spreadsheet is then used to inform strategic actions relative to responder risk and probability of success.

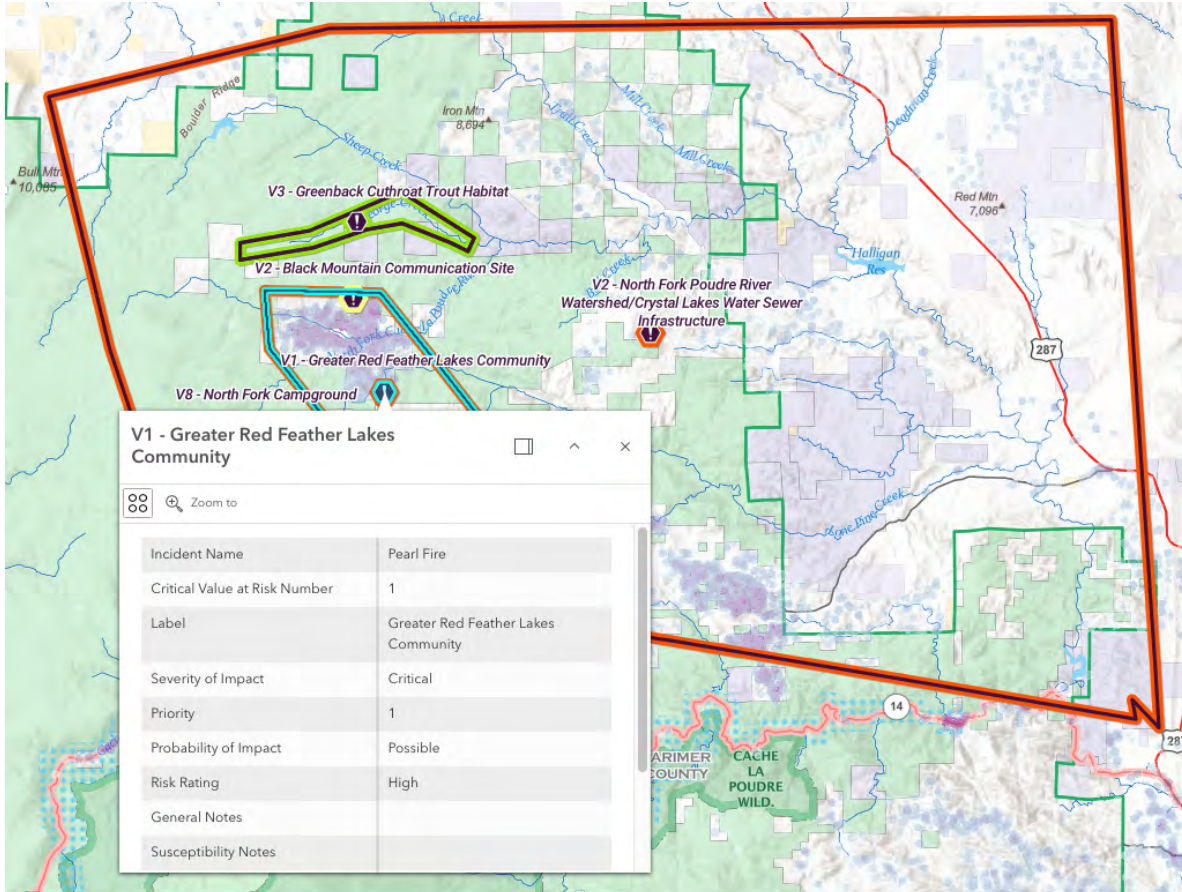


Figure A1.2: CVAR developed for the 2024 Pearl Fire in Colorado. Severity of impact, probability of impact, overall risk rating, and priority are included for response resources to reference. CVAR extents are marked by both polygons and point features. Source: ISAP tab of the [RMA Dashboard](#) (accessible with a NIFC AGOL login).