

# The spatial fire management planning continuum: Enhancing preparedness, communication, and responder safety

Contributed by Tessa Nicolet, WFM RD&A detailer

Many units across the country, especially to the west, are using wildfire risk assessments coupled with suppression difficulty index and potential control locations to develop Potential Wildland fire Operations Delineations or (PODs). What are PODs and what does it mean for Spatial Fire Management.

## What are PODs?

Think: *container, or operationally relevant fire management unit*

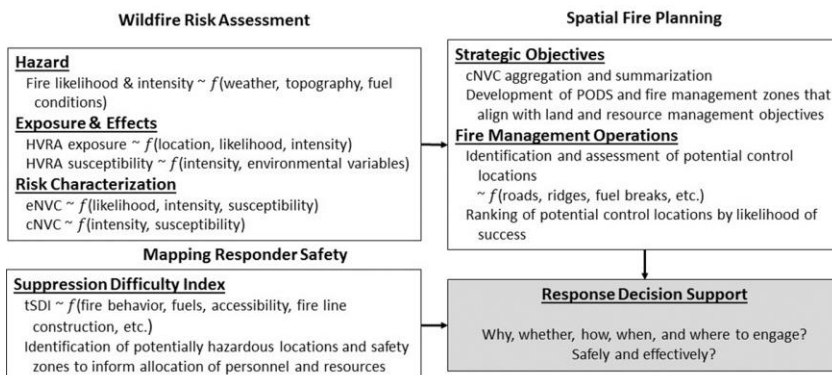
Potential wildland fire operations delineations (PODs) are polygons whose boundary features are relevant to fire control operations (e.g., roads, ridgetops, and water bodies). PODs are useful for summarizing wildfire risk and planning strategic response to unplanned ignitions accordingly. In an operational response context, POD boundaries can be used to guide choices of where to construct or hold fire line as well as where to conduct burnout operations. PODs may also prove useful for strategic fuels planning, with potential applications for designing controlled burn units, reinforcing existing POD boundaries, or prioritizing treatment opportunities within PODs. By vetting and mapping POD boundaries, we are essentially formalizing and institutionalizing the knowledge of fire management experts.

## Why use them?

A basic principle of risk management is to get ahead of problems one may face down the road. Doing so can help reduce time pressure, reduce uncertainty, and expand options – ultimately facilitating safer and more effective response. The Red Book embraces this idea, describing pre-season preparedness work as a key element of risk management that is critical to success when a fire starts. Pre-fire planning can provide a valuable means for building capacity within the organization, communicating hazards and opportunities with key stakeholders and partners, and sharing risks and responsibilities. The Red Book and the Forest Service Wildland Fire Risk Management Protocols both call for managers to collaboratively “predetermine” response strategies that balance protection of values at risk with firefighter and public exposure. Developing PODs, we think, is a good first step to meeting the intent of these requirements. Pre-fire planning with PODs is intended to provide actionable information and to expand flexibility, and not to make decisions.

## How are PODs created?

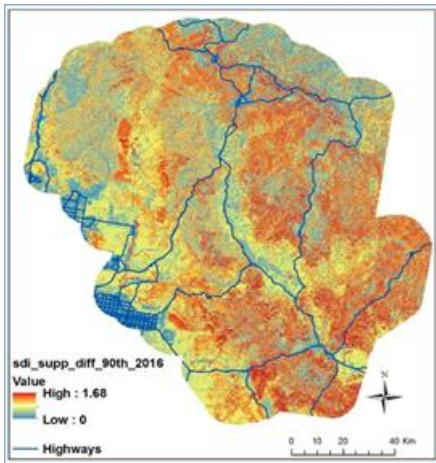
The basic ingredients are local expertise, maps, GIS, and getting out in the field to ground truth. No amount of shiny analytics can or should tell a manager where to locate a POD boundary. That said, RMRS has developed a few tools that we think can help managers evaluate their landscapes to determine areas of high suppression difficulty and to identify potential control locations.



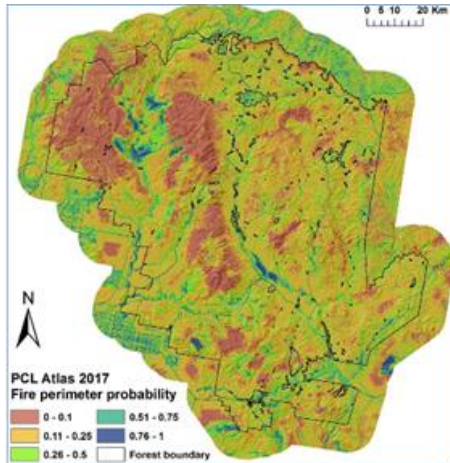
Further reading:

- [Application of Wildfire Risk Assessments in CA; Getting ahead of the Wildfire Problem;](#)
- [Potential Fire Control Locations;](#)
- [Modeling Fuel Treatment Leverage;](#)
- [Wildfire Risk Assessment Process](#)

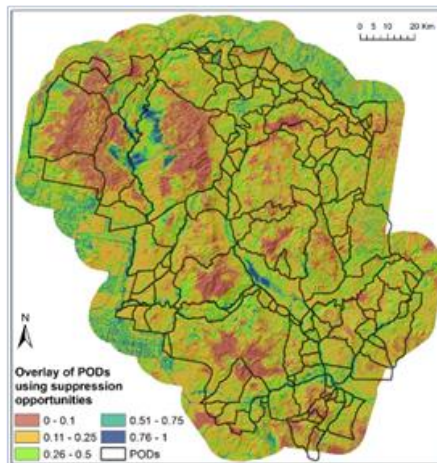
At this time, until units formally add these to Land Resource Management Plans or Fire Management Plans, PODs can be added to WFDSS as Objective Shapes.



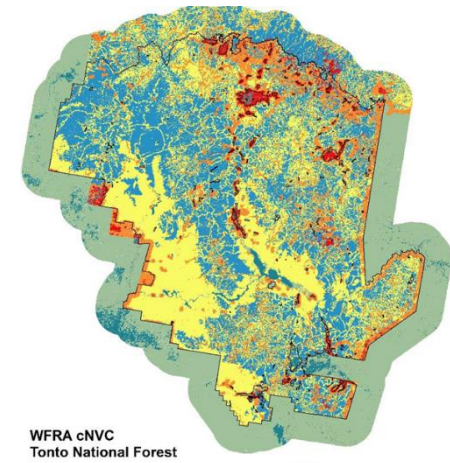
Suppression Difficulty  
Index  
(SDI)



Potential Control  
Locations  
(PCLs)

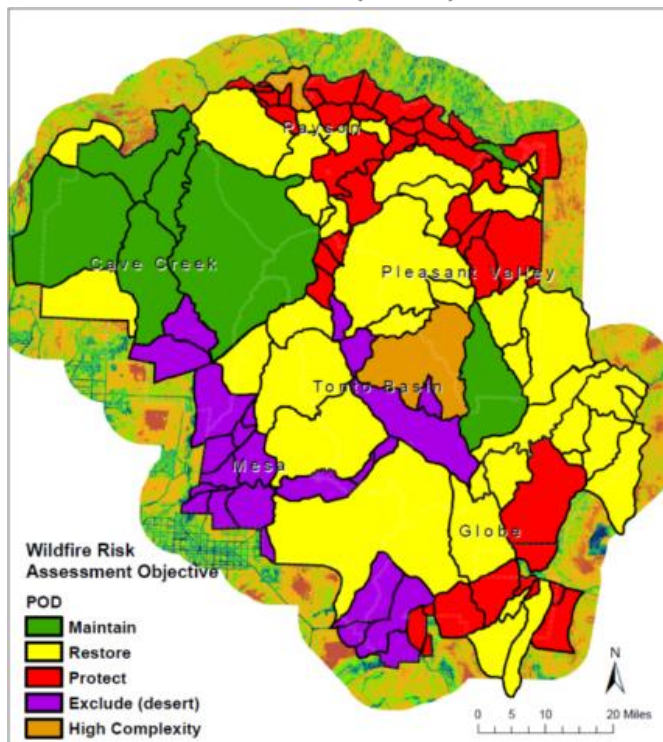


Fire Management  
Units  
(PODs)



Wildfire Risk Assessment  
Results

(Positive numbers are areas with potential for benefit, negative are costs)



**Maintain:** Current conditions are such that high values at risk are at low risk of loss from wildfire, and many natural resources may benefit from fire.

**Restore:** Current conditions are such that high values at risk are at a moderate risk of loss from wildfire. Wildfire should be used to increase ecosystem resilience and provide ecological benefits when conditions allow.

**Protect:** Current conditions are such that high values at risk are at high risk of loss from wildfire.

**Exclude:** Current conditions are such that high values at risk are at high risk of loss from wildfire. Primary protection objective is to minimize both suppression and fire damage to the ecosystem.

**High Complexity:** Current conditions are such that high values at risk are at high risk of loss from wildfire, depending on ignition location and weather conditions.