


# Strategic Risk Assessment (SRA) & Strategic Operations



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# Levels of Risk Management





# Why the SRA?

- Most methods IMT use focus on task-related risks & hazards. Few capture cumulative factors when multiple tasks are implemented over successive days & wide geography
- Assesses Strategic Risk in combination with Operational Risk
- Tension between managing risk to Critical Values & Responders: understanding Acceptable Risk requires collaborative communication





# What is the SRA: Alignment

A collective team of IMT members, Subject Matter Experts (SMEs), and host unit representatives meet for a discussion.

Commonly:

- Safety
- Operations
- Logistics
- Fire Behavior Analyst/Technical Specialist
- Medical Unit Leader
- Air Operations

Strongly recommended:

- Incident Commander or Deputy
- Agency Administrators or Representatives
- Resource Advisors

The investment of time in SRA collaboration provides wholistic understanding and aligned vision for enhanced functionality at all levels.



# What is the SRA: Sensemaking

SRA occurs at the Strategic Action level. It informs and relies on assessed operational risks for tactics (215 R/A).

Conversation helps with sensemaking:

- How does the group feel about the strategic action?
- What is the best alternative & why?
- What are the trade-offs?
- Are there unintended outcomes possible from the use of mitigations?
- Do we have the right resources to accomplish what is required?

SRA focuses on the balance between Critical Values At Risk and on 6 major risk influencers:

- How do they intercept or interplay with the current strategy?





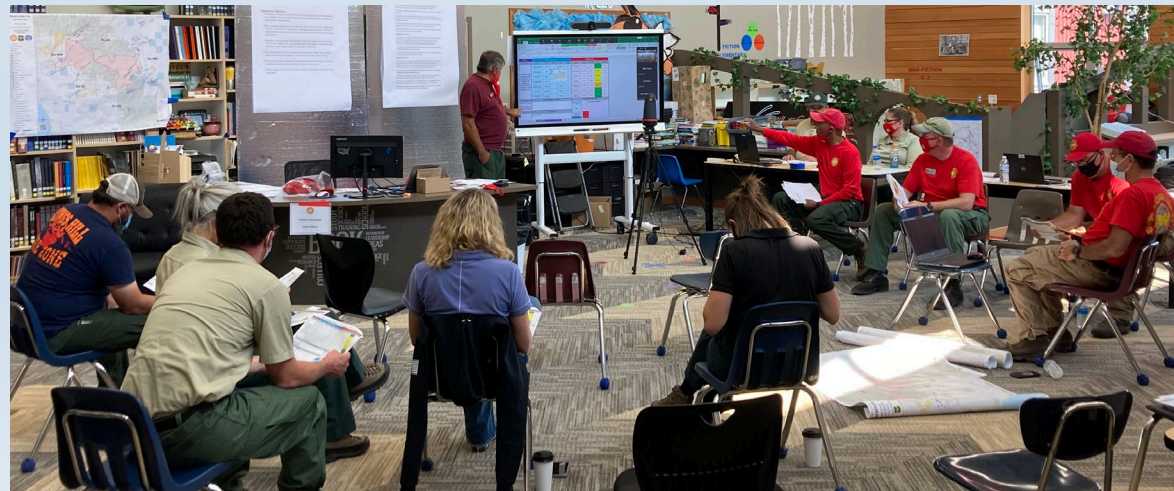
# What did 2021 users think?

*“Having the AAs in the room is a critical connection for complete understanding - hearing the conversation firsthand is invaluable. It helped me understand where I needed to focus. I also got to share clear expectations and nuances related to our Values.”* (Agency Administrator)

*“We’re still working together to get better at thinking strategically as a Team. The SRA really helped us grow and understand at a completely new level.”* (Operations)

*“The 215R tells us how to do things safely. The SRA tells us if we should do it at all.”* (Agency Administrator)

*“This process is more collective and transparent and gets the whole team - and local component - pointing in the same direction right out of the gate.”* (Operations)



# Framing the Actions:

## Incident Strategic Risk Assessment (SRA)

Incident Name: Sample Fire

Date: 6/6/2022

### Strategic Action 1

#### 1. Details

#### 2. Location

#### 3. Resources

#### 4. Duration

#### 5. Probability of Success (%)

Utilize indirect control lines and natural barriers to keep the fire south on national forest to protect private land in critical infrastructure.

Branch II

4 Strike T6 engine Teams, 3 Type 2 crews, 2 Type 1 crews, 6 dozers with overhead, Aircraft fixed & rotor

Personnel  
Total:

275

8 days

70%

#### 6.

#### Discussion Notes:

The spring creek watershed is vital to the local community health as well as economy keeps a town of Spring Creek viable. Where or how does that value compete with the Leased Cabins and Range Allotments? If one value protects others, does that make it the priority? Is the Timber sale sold or not? Need to fine-tune the map showing range allotments and leased FS cabins.



# Critical Values at Risk:

## Critical Values at Risk

7. Critical Values		8. Severity of Impact	9. Probability of Impact	10. Risk Rating
V1	Spring Creek Community	Catastrophic	Possible	Extremely High
V2	Spring Creek Watershed	Catastrophic	Likely	Extremely High
V3	Lamb Cr Timber Sale	Critical	Almost Certain	Extremely High
V4	Range Allotments in South Basin Road	Moderate	Almost Certain	High
V5	Leased FS Cabins (55)	Critical	Possible	High
V6	911 (EMS) communcation towers	Catastrophic	Rare	Moderate
V7	Highway 31 (travel route)	Critical	Unlikely	Moderate

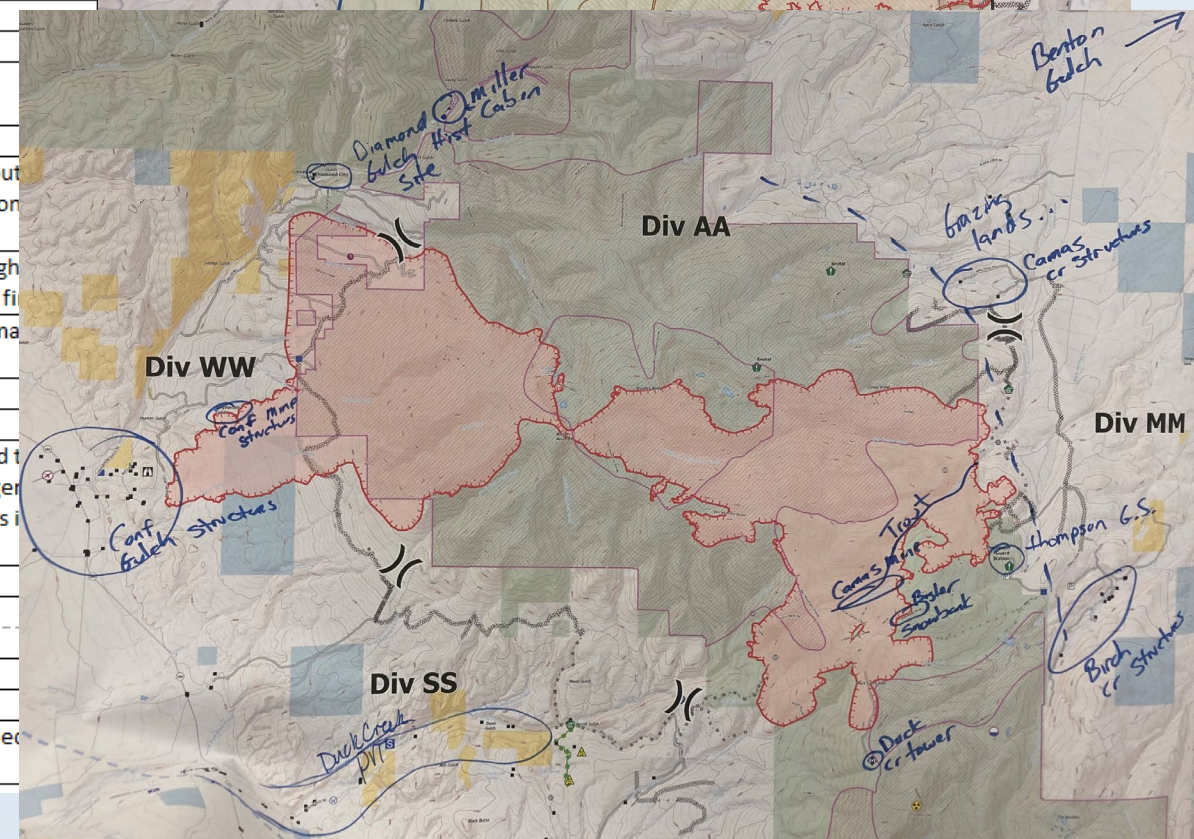
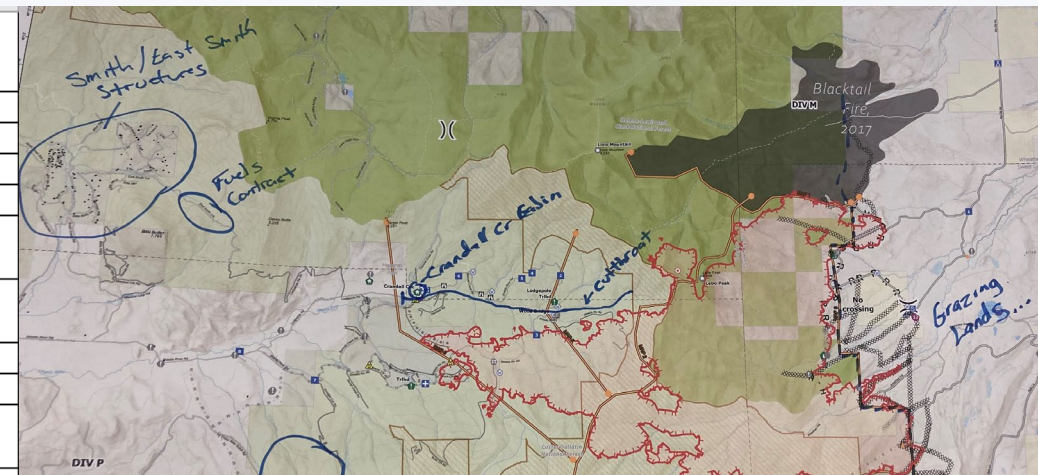
Critical Values at Risk Assessment Matrix		Probability Likelihood of Event Occurring				
		Almost Certain (expected to occur or is happening now)	Likely (will occur frequently/very realistic to occur)	Possible (could occur under specific conditions & some of those conditions are currently evidenced)	Unlikely (Remotely possible but not probable, could occur but deemed unfeasible)	Rare (Improbable; but has occurred in the past)
Severity Consequence if Event Occurs	Catastrophic (asset is destroyed or unusable for months, will permanently affect the natural environment (irreversible), threat to survival of fauna/flora/cultural heritage)	Extremely High	Extremely High	Extremely High	High	Moderate
	Critical (asset is destroyed, unusable or restricted for weeks, medium- to long term impact that can be remediated with dedicated resources)	Extremely High	Extremely High	High	Moderate	Moderate
	Moderate (some portion is unusable or restricted but can be replaced within acceptable timeframe, short-term impact that is able to be addressed through existing processes)	High	High	Moderate	Low	Low
	Negligible (minor damage or only temporarily unavailable or restricted, little to no action needed to mitigate post event)	Moderate	Moderate	Low	Low	Low





# Critical Values at Risk

Strategic Action	Priority	Critical Value at Risk	Severity of Impact	General Location	Branch	Notes
1 or 2	1	Monarch	Catastrophic	Div U/T Break	Balsinger	
3	1	Neihart	Catastrophic	Div T/I Break	Balsinger	
2	1	Hwy 89 Corridor	Catastrophic	Div T	Balsinger	
3	1	Wilsall	Catastrophic	Div P	American Fork	
3	1	Shields River/Smith Creek/East Smith Creek Private Structures	Catastrophic	Div P	American Fork	
3	1	State/Private/NFS grazing lands, livestock and assoc infrastructure	Critical	All	Woods Creek	Camas Creek, Birch Creek, Benton Gulch, Giles Ranch, Lane, Field
	1	Duck Creek Private Structures	Critical	DIV SS	Woods Creek	
1	2	Duck Creek Communication Tower	Critical	Div MM/QQ	Woods Creek	
		State/Private/NFS Grazing Lands and assoc infrastructure East of Belt Park	Critical	Div T	Balsinger	need to check map, might be completed
2	2	Belt Park Community	Critical	Div T	Balsinger	
2	2	Deer Creek Estates	Critical	Div T	Balsinger	
		State/Private/NFS grazing lands, livestock and assoc infrastructure	Critical	All	American Fork	
4	2	Iron Mines Cabin	Critical		Balsinger	
	3	Yellowstone Cutthroat Trout	Critical	Upper Shields	American Fork	important population of trout, large partner investment, concern about fire effects to watershed
	4	Known Heritage Resources	Critical	All	American Fork	READS have inventory of high priority sites, spread across fire
	6	Tillinghast & Harley Creek Westlope Cutthroat Trout	Critical		Balsinger	Retardent Avoidance is primary concern, not fire effects
	3	Miller Cabin	Moderate		Woods Creek	
3	3	Thompson Guard Station	Moderate	Div MM	Woods Creek	
3	4	Tenderfoot Experimental Forest Infrastructure	Moderate	Div I	Balsinger	No Equipment in TCEF, need to check if needed per Forest Manager, concerned about fire effects in forest
	4	Crandall Creek Cabin	Moderate		American Fork	
	4	Porcupine Cabin	Moderate		American Fork	
	5	Harley Park Heritage site	Moderate		Balsinger	No Equipment
	6	Fuel Contracts	Moderate		American Fork	
	7	Trail Contracts	Moderate		American Fork	
	7	Onion Park RNA	Negligible		Balsinger	No equipment, not concerned about fire effects



# Responder Risk:

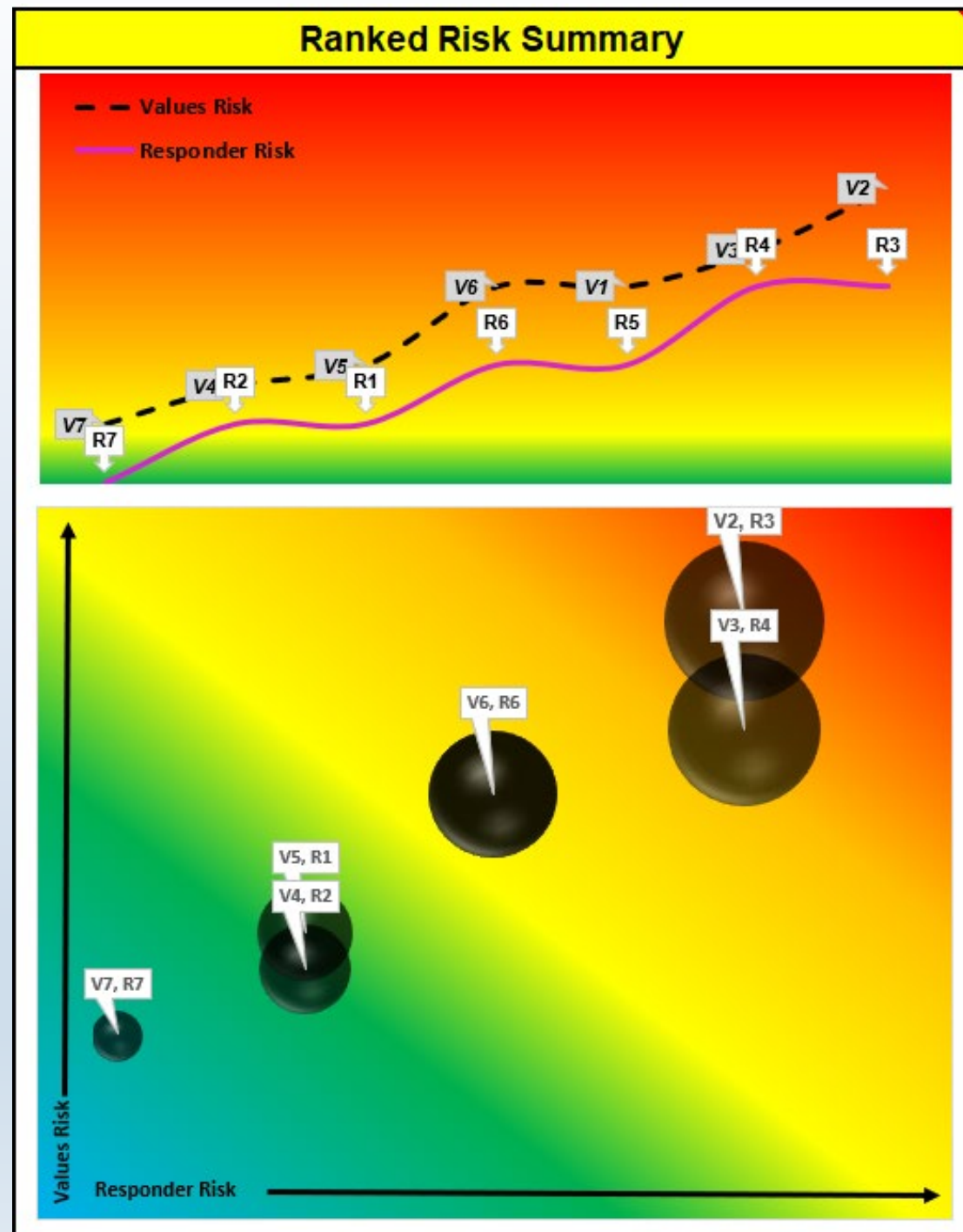
Responder Risk				
11. Major Risk Influencers		12. Severity of Event	13. Probability of Event	14. Risk Rating
R1	Ground Transportation	Critical	Unlikely	Moderate
R2	Rapid Fire Growth	Critical	Unlikely	Moderate
R3	Hit-by Hazards	Catastrophic	Possible	Extremely High
R4	Aviation Operations	Catastrophic	Rare	Moderate
R5	Human Factors	Critical	Possible	High
R6	EMS Response Capability	Critical	Possible	High
R7				No Data

Probability	
15. Risk Mitigations & Rationale	
Current RLS for a tree strike on incident. Where the ground allows mitigate overhead hazards with heavy equipment. Utilize spikes, FOBs and other remote logistical options to minimize drive time and exposure. REMS with UTVs to withdraw/extract the injured and provide for IWI Golden Hour/Andy Palmer protocol. Deference to expertise and respect for the person performing the mission to ensure not only critical mission buy-in, but also the highest margin for safety via a robust feedback loop and 'Go-No-Go' process.	



# Risk Summary:

- **Not** a decision tool - shows how components relate to each other
- Used to inform acceptable risk
- Shows which Values are most at risk
- Displays which Risks hold the largest portion of the Strategic Action
- Helps inform messaging & other products (ICS-204, ICS-206, ICS-208, 215 R/A, etc.)





# SRA Product: 2022 v2

Incident Strategic Risk Assessment (SRA)				Incident Name: Sample Fire		Date: 6/6/2022		
Strategic Action 1								
1. Details		2. Location	3. Resources		4. Duration	5. Probability of Success (%)		
Utilize indirect control lines and natural barriers to keep the fire south on national forest to protect private land in critical infrastructure.		Branch II	4 Strike T6 engine Teams, 3 Type 2 crews, 2 Type 1 crews, 6 dozers with overhead, Aircraft fixed & rotor		Personnel Total: 275	8 days	70%	
6. Discussion Notes:	The spring creek watershed is vital to the local community health as well as economy to keep a town of Spring Creek viable. Where or how does that value compete with the Leased Cabins and Range Allotments? If one value protects others, does that make it the priority? Is the Timber sale sold or not? Need to fine-tune the map showing range allotments and leased FS cabins.							
Critical Values at Risk				Ranked Risk Summary				
7. Critical Values		8. Severity of Impact	9. Probability of Impact	10. Risk Rating				
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R6	EMS Response Capability	Critical	Possible					High
R7				No Data	<b>15. Risk Mitigations &amp; Rationale</b> Current RLS for a tree strike on incident. Where the ground allows mitigate overhead hazards with heavy equipment. Utilize spikes, FOBs and other remote logistical options to minimize drive time and exposure. REMS with UTVs to withdraw/extract the injured and provide for IWI Golden Hour/Andy Palmer protocol. Deference to expertise and respect for the person performing the mission to ensure not only critical mission buy-in, but also the highest margin for safety via a robust feedback loop and 'Go-No-Go' process.			
Do alternatives need to be developed?		No	Participants:					Southern Area Blue IMT SRA group and local AA and Fire Management.



# Strategic Operations

New for the 2022 Fire Season



# What if We Can Do Better?

- IMT's who formulate successful strategies; What are they doing and how do they do it?
- How does an IMT apply the tools of science into the strategy inside the time wedge?
- What do successful IMT's have in common?
- How do we better leverage expertise?
- Can we scientifically inform and validate the strategy?
- What processes existed that created synergy in formulation of strategy?
- We naturally operate off our historical catalog of experiences.





# Attributes of Effective Strategic Planning

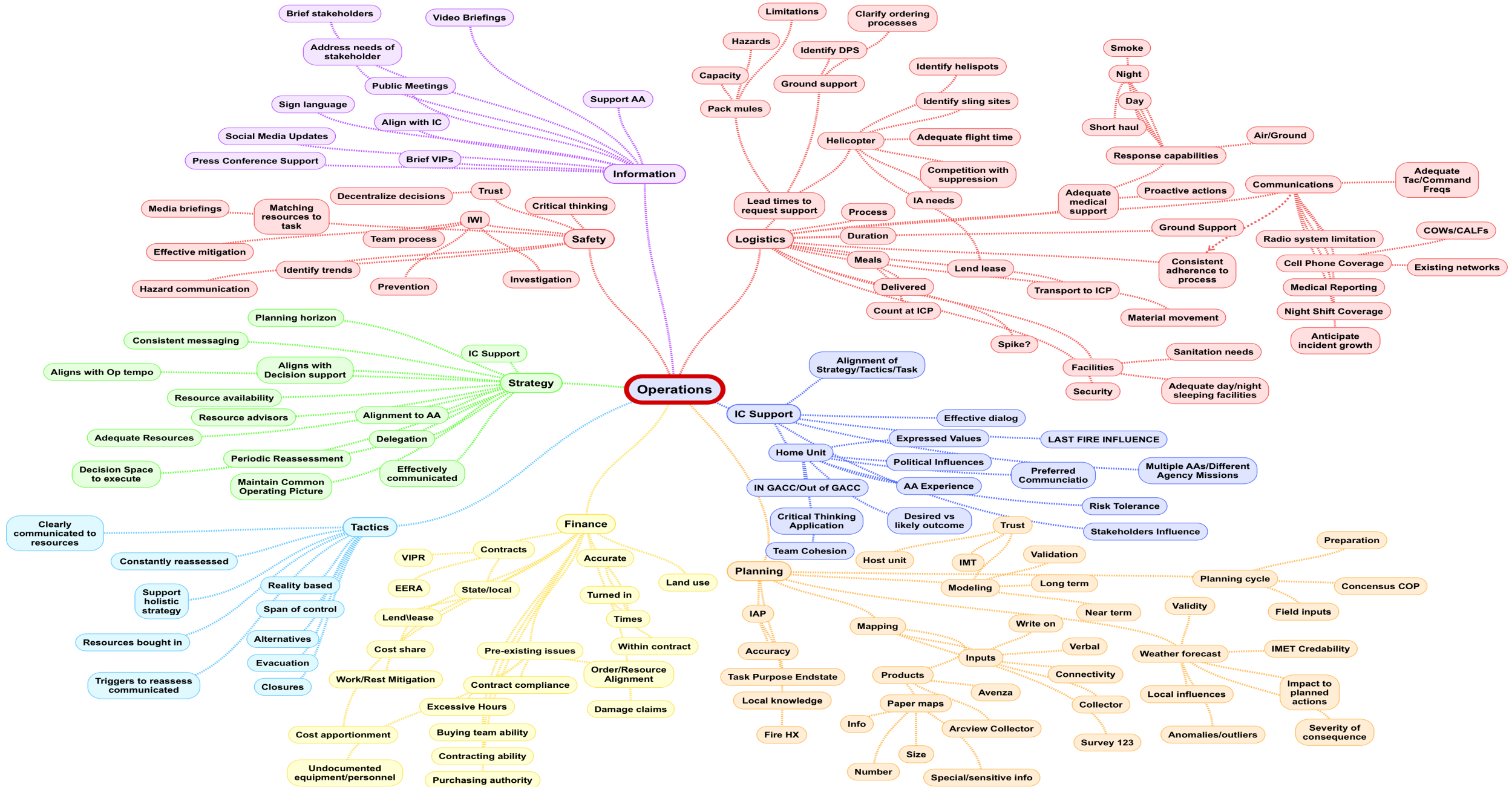
- The IMT has a process & clear intent to have a strategic plan on every incident.
- The IMT commits a resource to produce & maintain the Strategic Operations workload, usually an Operations Chief.
- Strategic Operations incorporates new & advanced Risk Management Assistance (RMA) analytics extensively, along with other modeling & predictive tools balanced and validated on the ground.
- The completed Plan is visual - in map form.
- The IC believes these maps are a vital communications tool, especially with the Agency Administrator.
- The Strategic Plan either
  - validates the objectives given for the incident
  - Serves as an effective tool to negotiate necessary change to objectives when expectations can't be met with the time, space, & resources available to the incident.



# Strategic Operations Defined

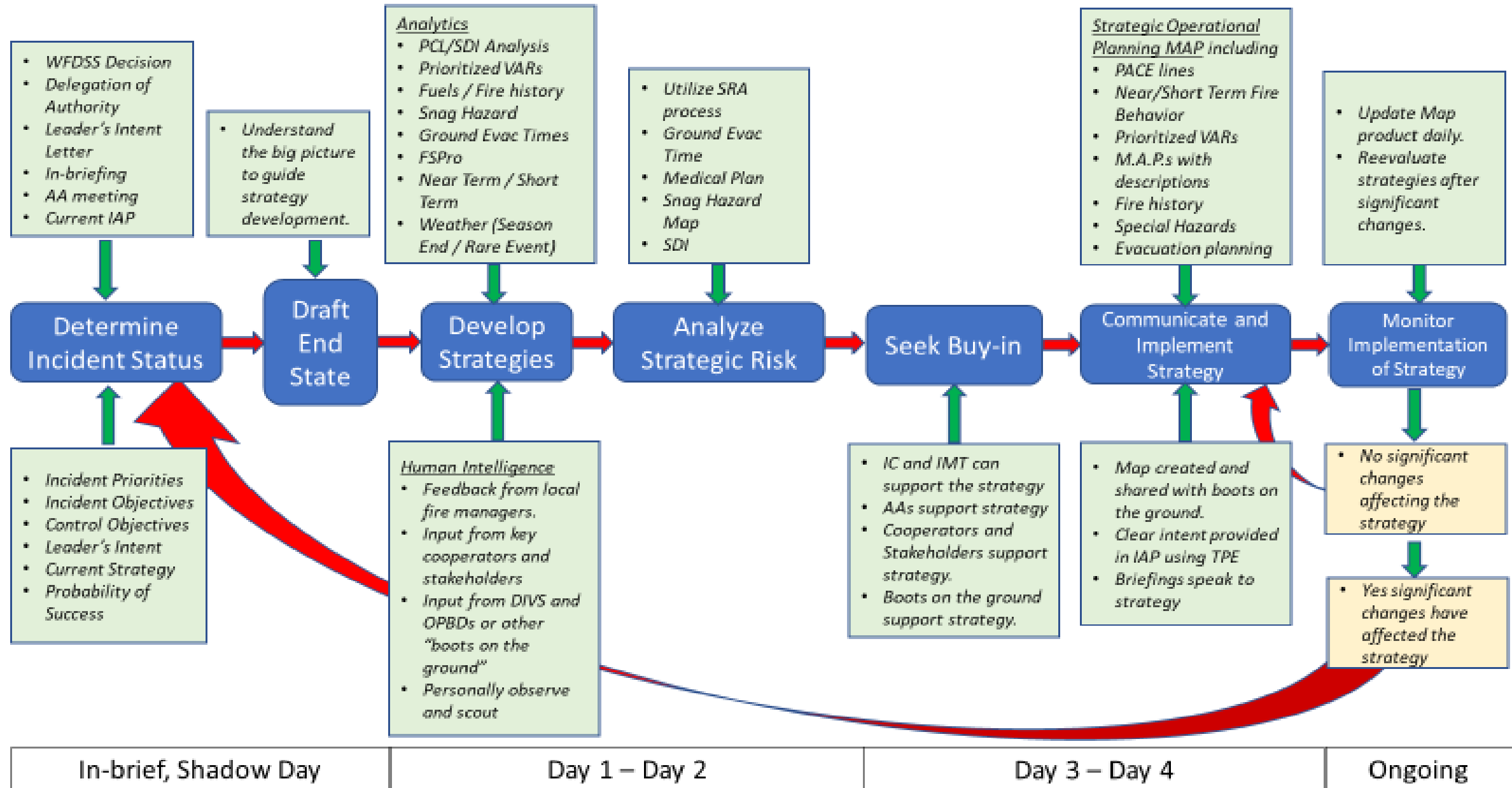
- A current workload (Operations Section Chief and others) responsible for managing strategy-related decisions on behalf of the incident commander by blending best available science, collective experiences, and collaborative planning techniques to develop short- and long-term plans.
- When utilized correctly, all actions taken on an incident will be in concert to accomplish strategic objectives while lowering overall risk to responders & the public, mitigating consequences to critical values, & ensuring wise/appropriate fiscal management.



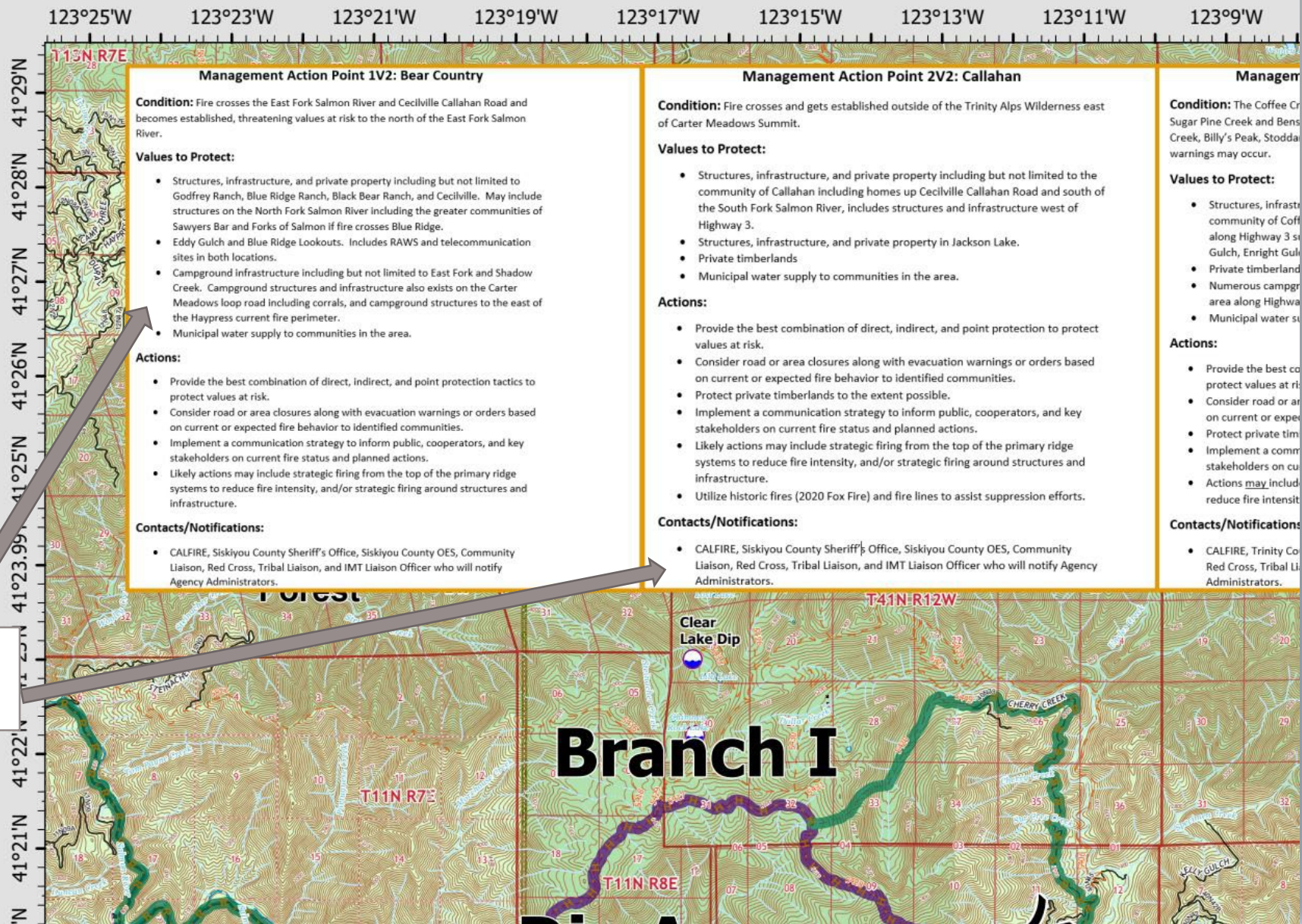




# WILDLAND FIRE



# STRATEGIC PLANNING

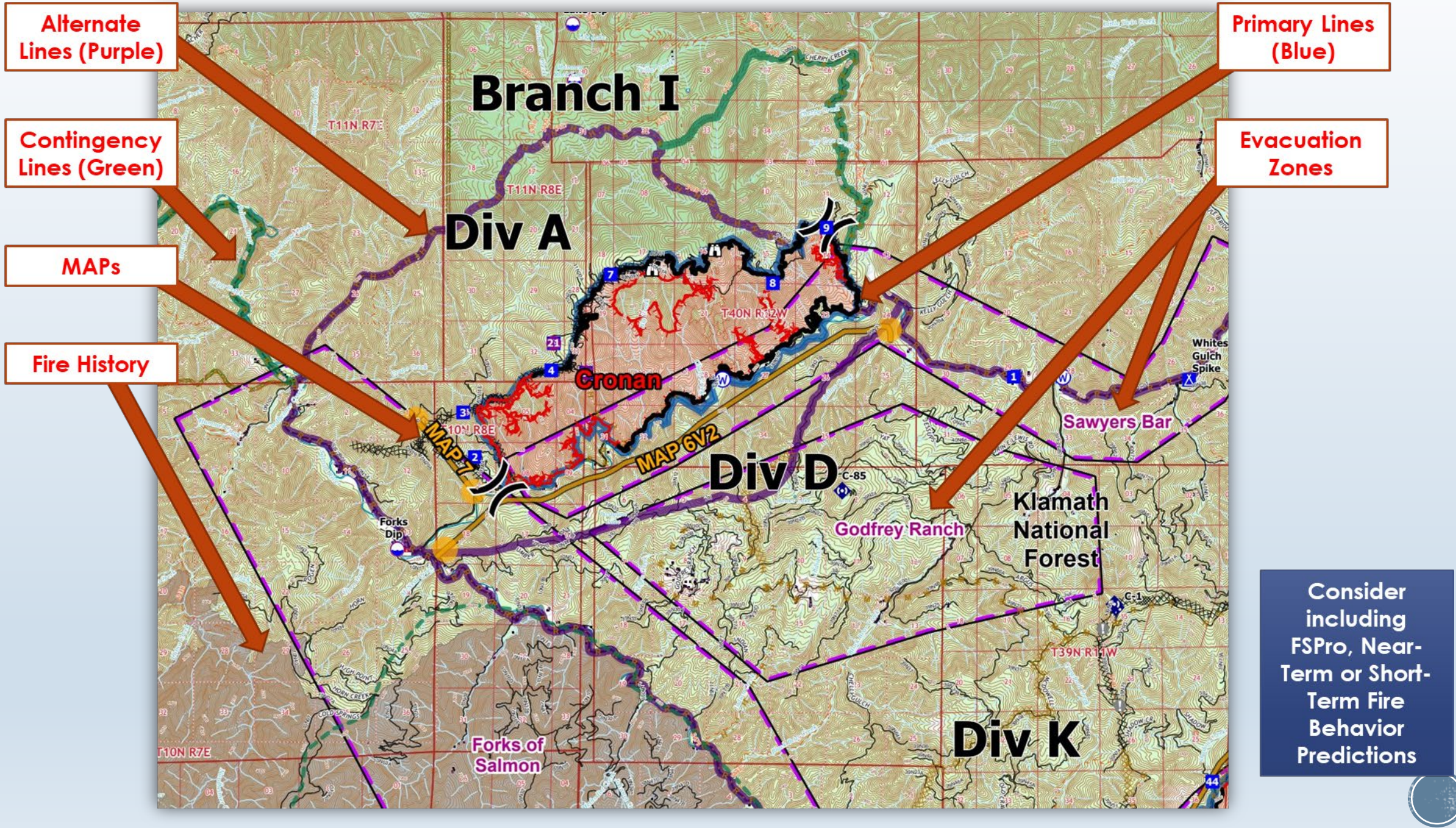


M.A.P.  
Descriptions

Branch I










## RMA Dashboard: Map Viewer Tab (GIS Data)

### Risk Management Assistance Dashboard

[Instructions](#)[Incident Stats](#)[Map Viewer](#)[Timeline Generator](#)[Fire Danger](#)[Severe Fire Weather](#)[Fire Weather Matrix](#)[Season-ending Analysis](#)[Fire Library](#)[Smoke](#)[Alaska](#)



## Welcome to the Risk Management Assistance (RMA) Dashboard!

The RMA Dashboard is a series of tabs to products to help line officers, agency administrators, fire managers, incident management teams, area commands, geographic area coordination centers, and multi-agency coordination groups to make more risk-informed decisions to achieve safer and improved outcomes. These additional analytics are not a replacement for locally-derived and calibrated decision thresholds or procedures as outlined in manual direction (e.g., the WFDSS Decision, Fire Danger Operating Plans). However, it is hoped that these new products can be infused into pre- and post-planning and incident response systems, procedures, and documentation, like the WFDSS Course of Action or Rationale.

The Dashboard tabs are designed to move left to right. We want users to connect the information in the tabs to develop a strategic awareness of the current situation, firefighter and public safety, potential benefits or loss to highly values resources and assets, opportunities for containment, and past and predicted fire behavior and spread. The Incident Stats tab will provide a user with wildfire location and real time summary information . The Map Viewer is a spatial tool to view and create custom maps of the "Big Five/First Five"—SDI, PCL, Snag Hazard, estimated ground evacuation, and PODS—as well as other applicable GIS information and data download instructions. The Timeline Generator plots incident statistical information in an interactive graph that can be saved as a PDF. Fire Danger, Severe Fire Weather, and the Fire Weather Matrix tabs should be viewed collectively to answer the questions, "What is our current fire danger and how does it compare historically?; What is the forecasted fire weather?; What weather variables constitute neutral, elevated, and critical fire weather? The season-ending analysis (the "Jolly Generator") and the fire library are designed to help you leverage past historical data to answer the questions, "When does the fire season typically end?, and what can I learn from past fire events and resources specific to my fire location?

Click [here](#) for more information about the Forest Service RMA program or click [here](#) to [download a the list of RMA analytics](#) with a description and example of each product. Questions and suggestions can be directed to Rick Stratton ([richard.stratton@usda.gov](mailto:richard.stratton@usda.gov)). Special thanks to Lauren Miller (the Dashboard) and Kit O'Connor, Jess Haas, Matt Jolly, Crystal Stonesifer, and Jim Edmonds (product and programming support).

### Ordering RMA

RMA products are available within this Dashboard and on the [RMA SharePoint Site](#). Below is a graphic that lists the RMA product and the delivery mechanism. With the increasing use of RMA analytics, the demand on the RMA analytics group has been substantial. PLEASE use the resources available (i.e., the Dashboard and the SharePoint site), and only request additional support if remote delivery or in person assistance is required. [Further information on how to view, download, and use the information on the RMA Dashboard can be found here](#). Contact Julian Affuso (303-656-8450) or Rick Stratton for more information.



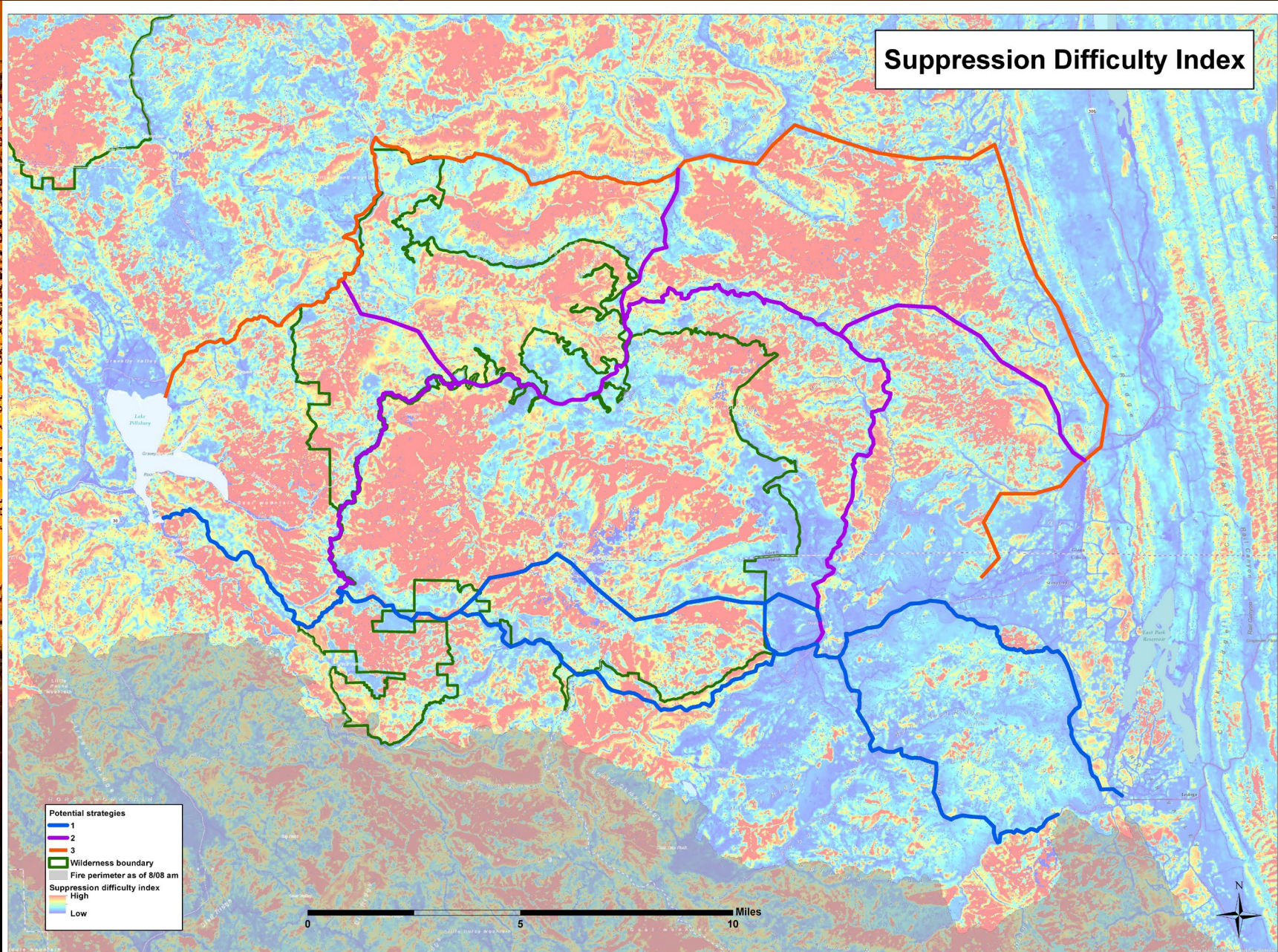
# RMA Products Can be Used to Inform Strategic Analysis

- Ground Evacuation
- Snag Hazard
- Suppression Difficulty Index (SDI)
- Potential Control Locations (PCL)
- \*LINE (e.g., a primary, alternate , or POD) SDI, PCL, Snag, Ground Evac, and FSPro
- Season-Ending Analysis
- Quantitative Wildfire Risk Assessment (cNVC)



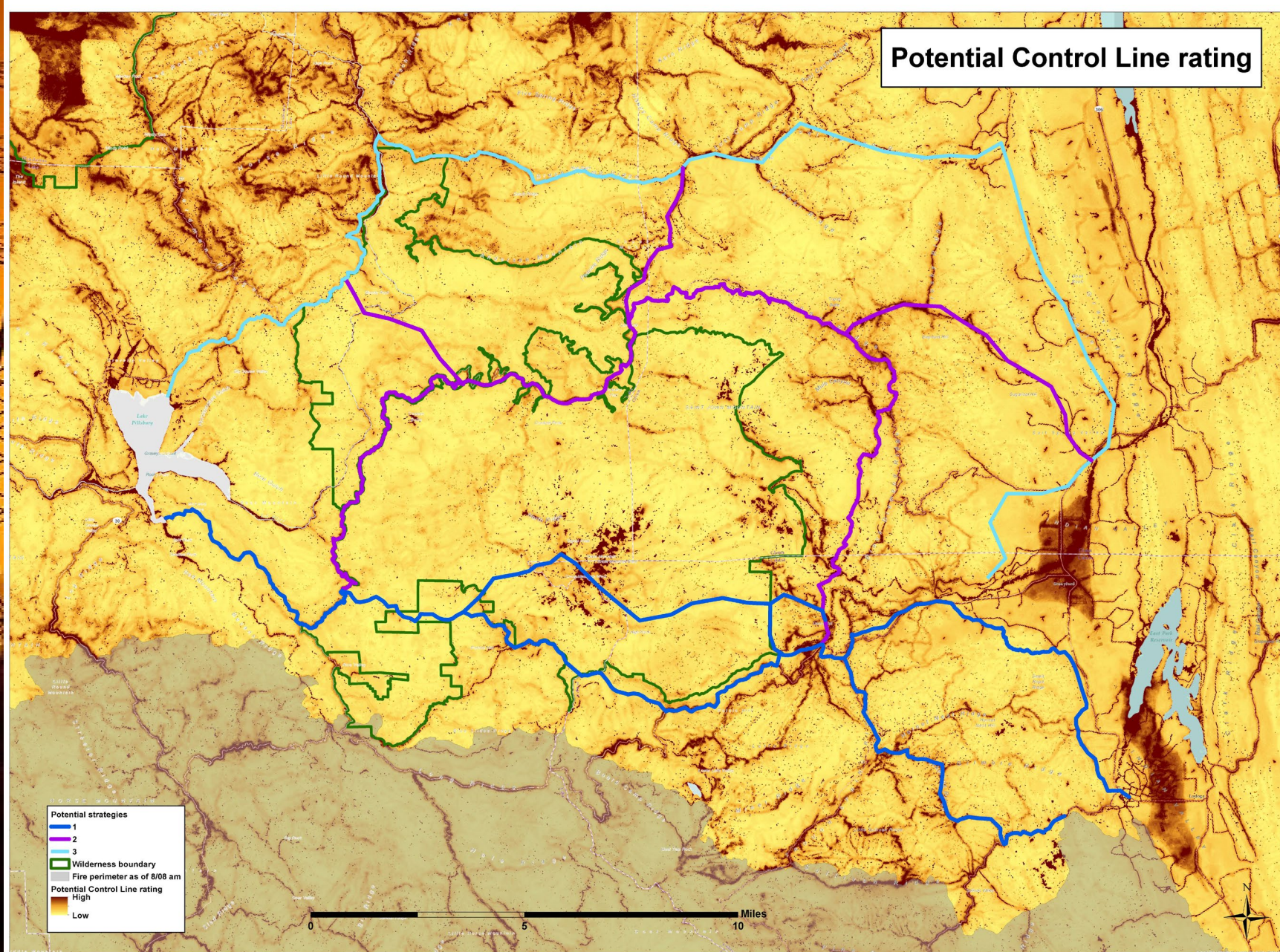


# Mendocino Complex – Use of SDI to Inform Strategic Alternatives





# Mendocino Complex – Use of PCL to Inform Strategic Alternatives





# **2022: WHAT'S NEXT?**

- Interagency Participation/Leadership
- Revisit 2021 Field Teams (12)
- Add 8 new teams in 2022
- Establish larger, interagency coaching bench
- Comm Plan
- Socialization:
  - Agencies
  - Training courses
  - IMRR
  - IMTs
  - GACCs
  - AAs
  - READs, SMEs, etc.

# Questions?

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