Risk Management in Operational Fire Management

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My Bias

Fire managers are:
– action-oriented;
– risk averse;
– watching for the first constraint on their action.

Fire Management Programs are designed by government to minimize risk to society.

And we are good at it.
Risk

Risk is not Bad...

Risk Exists, to be Managed

In all Risk is Opportunity
Complex Systems

Complex Systems
Uncertainty
Risk
Hierarchy of Fire Management Decisions

- **Strategic (10 years)**
  - Level of Protection
  - Investment & Outcomes

- **Allocation (season)**
  - Owning and Contracting
  - Home Basing

- **Deployment (tomorrow, this week)**
  - Move or Add Resources

- **Dispatch (today)**
  - Sending Resources
  - Setting Priorities

- **Tactical (now)**
  - Fire fighting tactics

- **Personal (now)**
  - Personal Action
Are We Managing Risk?

Total Cost
  – at the organizational scale

Fire in Support of Sustainable Ecosystems
  – at the scale of land management

Ministry of Natural Resources
"Do we Understand the Risk Picture?"

“Normal” has changed…

“Your forest has a fire problem…”
  Too much fire some days…
  …and not enough for tomorrow.

Ministry of Natural Resources
“Assessing” Risk

1. Establish the Context
2. Identify the Risks
3. Analyze the Risks
“Managing” Risk?

4. Evaluate your tolerance

5. Take Action
   What can you do to prepare?
   What can you do to provide the most options for the future?

   What are the triggers for action or re-planning?
Tolerance and Trigger Points

For the most part, fire managers have a plan for escalation.

Most do not have a process that will interrupt continuation down the same path.
Risk Perception

Do you have any scars?

What about ones I can’t see?

Does your organization have scars?
Complex Systems

Variability Rules

Extreme Events get Noticed

Scale Matters

Focus on Processes
Common Errors

Stressing about everything and no plan

Working toward a single scenario

No threshold for action

Focusing on short term risks, rather than short term actions to avoid long term risks
Final Thoughts…

The issues and opportunities are at the edges

Decisions are a process, not an event
  – Support processes with information about the system
  – It’s going to be about people, in the end

Fire Managers need to stand up for front-line staff
  …and front line staff need to build trust
Predictable Surprises

Surprises start with expectations…

Risk management is not about focusing on what you know…

…it’s about imagining what you will do when confronted with what you should have expected, but didn’t.