



Discussion #1

**Question: Have you ever encountered a situation where the interest of archaeology is pitted against another resource? How was it resolved? Or could it have been resolved better?**

- Decision space in which to operate
- More resources out there that need to be used in decision making, not just archaeology
- Want to accomplish all priorities, but fire dictates what gets taken care of in a difficult situation
- Time, decision space, and good communication
- Knowledge is spotty and the unknown can be greatly affected, knowledge is extremely important
- Pre-fire communication is extremely important
- Education of people managing fires has changed dramatically and is extremely helpful; IFPM standards, education standards

**Question: What are the challenges/rewards you have encountered when working with operations/archaeology? And how have you addressed these challenges?**

Examples -

- Scenario: Archaeology on Forest Service unit in South Dakota, archaeology of lithic scatters VS rock art panel, forest archaeologists did not want to put dozer line down, handline put in and the area burned over and damaged panel (1999)
- Conflict of archaeology VS fire and resulted in affecting the archaeology
- Probably would not happen with current knowledge

Challenges -

- Get priorities straight
- Difficulty in getting READs and ARCHs available and assigned to fires; ROSS availability
- Confidentiality but have to prepare SOP on how and when to release data, archaeology info, etc.
- End up carrying attitudes from incident to incident
- Breached trust leads to mistrust
- Archaeologists are seen as a safety liability
- Stereotypes
- Day job commitments
- No survey done
- Accuracy of data
- Initial attack communication
- Being heard
- No political savvy

Solutions -

- Tribal involvement

- Response and IMT follow same protocols for all response teams
- Start early and maintain those relationships
- Establish relationship with fire and archaeology before the fire starts, pre-season planning
- Be proactive, introduce yourself
- Friendly, respectful, vocal
- Why everyone is there on the fire

Rewards -

- Long term reward = good work completed ahead of time i.e. fuels management
- Creating of advocates/stakeholders
- Understanding why

Address -

- Sacred site information, never intended to release, clear in lines of communication
- Educate of communities, fire and archaeology
- Have the difficult conversations
- Change where archaeologists are in the task purpose and end state plan section, move them into the purpose

**Question: What are the elements of a successful relationship between operations and archaeology? And how do you balance the needs and importance of both?**

- Developing relationships and communication before, during, and after incidents
- READs are often sitting in with planners and creating professional and personal relationships
- Developing roles and responsibilities
- Respect and understanding to work through conflicts
- Ensuring everyone is on the same page
- Communication
- Compromise
- Priorities
- Pre-planning
- Timing
- Defining roles i.e. Lead READ

Discussion #2

**Scenario 1 Description**

*Role: Fire Management Division Supervision (DIVS)*

You are the division supervisor on the heel of a large fire. The Incident Management Team (IMT) is meeting with the Agency Representative (AREP) to decide whether they want to burn out a large unburned area in your division or tie in the line directly. At the briefing this morning, you heard your assignment to be to continue direct line construction with the assumption that we can abandon it if the IMT is directed to burn it out. You've got three hotshot crews assigned to your division and they're staged and ready to go. Now you're out on the line and they're looking at you for direction.

*Role: Archaeologist (ARCH)*

You're assigned to a division on the heel of the fire. This division includes several archaeological sites, including three recorded prehistoric field houses with associated artifact scatters and check dams, an unrecorded historic dump site. Your AREP is meeting with the line officer and the IMT to decide whether to go direct and keep fire out of a drainage to the north or to go indirect and burn out a large area using natural available barriers. The division supervisor you are working with seems to be organizing the three hotshot crews assigned to him to begin line construction. Your understanding from the morning briefing was that they were going to scout possible direct line location and line out the crews but wait until the decision is made at the AREP and IMT meeting.

### **Scenario 2 Description**

*Role: ARCH*

You've been working with the Division Supervisor on a large fire, locating a spike camp and helispot while the crews have started line construction. You're now out walking the handline when you encounter a squad of firefighters who, during the course of the line construction have found a previously un-documented obsidian scatter. They are very interested in the beautiful projectile points they are seeing which small, finely-worked examples of rose-spring points are. They are picking up the points and one firefighter has three points in his hand. The site extends on either side of the new handline.

*Role: Fire Management – Squad Boss*

There has been a shift in strategy and your crew has been pulled back to another ridge and told to start line construction in anticipation of burning out a drainage between you and the main fire. Your squad has been assigned to construct line along the top of a ridge on this large fire. As you moved along the division, your squad has found some really cool arrowheads. The squad has been rooting around on both sides – green and black and have found several points. All of your squad is very interested in archaeology and one of the crew members took an introduction to archaeology class in college.

### **Scenario 3 Description**

*Role: Fire Management – DIVS*

You're the Division Supervisor on the division with the busiest piece of line. There's lots going on and you've got two ARCHs walking around on this division. There's a complex burnout operation that your shot crews are getting ready to start in coordination with a ship bringing ping pong balls. You're uncomfortable with worrying about where the ARCHs are out on the division. If this operation goes south, you want them here with you. You ask them to not go out on the line because you are worried about the implementation of the burnout operation.

*Role: ARCH*

You're one of two line ARCHs on a division where shot crews continue to cut line while a complex burnout operation is also getting started. This is your home unit, and you know there are both recorded, and likely unrecorded prehistoric sites with a lot of flaked lithic "background

noise.” You’re getting ready to head out when the Division Supervisor stops you and says he’s not comfortable with you being out on the line today. Your superintendent has told you to be out there monitoring the line. You’re arduous-duty line qualified with several years of experience and although the other READ is also arduous-duty qualified, he has less experience.

***Discussion #2 notes:***

**Scenario 1**

- Be clear, concise, and collected to talk to leader to go down to sites to review fuel lead to make a plan
- Spare a crew to determine if site can be prepped or is it better to burnout
- Explain why it is important
- Remember safety when making these determinations and having these conversations
- Take into consideration experience level
- Plans change, IAP can be “penned in”
- ARCHs should be present at DIV breakout
- In operations, difficult to change from digging line, crews will wait
- ARCHs be with line scout if they are looking to place a hand or burn line
- If/when operational tempo slow, ARCHs can take a minute to teach

**Scenario 2**

- Prioritize either site or artifacts dependent on fire activity
- Remove heavy fuels if a burn over is expected
- Decision space coming into play
- Respect archaeology sites
- Utilize archaeology experienced crew members to record information
- Cool to appreciate it, but put it back
- What else is out there
- Call out for READ
- Flag and photos
- Teachable moment
- Scout for acceptable line and communicate with DIV supervisor

**Scenario 3**

- Safety is number one, specifically of people who have to go rescue ARCH
- Communication experience
- Purpose end state
- Can both objectives be met, possibly not enough information on what to monitor
- ARCH may need to pull themselves out and come back out after operational work was done
- Convey to fire crew what ARCH mission is and work together to identify and protect
- If DIV supervisor doesn’t want ARCH out there, have to defer, ARCHs work for the fire at this time

- Decision window comes into play
- Prioritizing safety over resource
- Convince DIV to attach someone to ARCH
- Dealing with time sensitive situation
- No heavy equipment
- Should we be concerned with the lithics?
- Explain experience and qualifications
- Burnout doesn't just happen, conversations should be happening way before this

### Discussion #3

Did we miss any important relationship building/communication building strategies? If yes, what examples would you like to share? What steps will you take on your home unit to begin to establish relationships?

- Do more trainings, work more with fire crews in the field and handling artifacts
- Focus more on planning for archaeology stuff during forest emergency
- Survey accuracy needed to be addressed
- Having a discussion about issues with getting planning for RX burns
- Communicating archaeology needs
- Talk to the fire folks with ARCHs on the ground
- Recommending the archaeologists have fire qualified people employed
- Looking for fire experience when hiring
- Leaving training and communicating about what we learned
- Address cultural concerns alongside other concerns
- Talk more about Rx fire and plans for Rx
- Discuss more about the tough stuff/situations
- Work from the bottom up, seasonal and techs
- Offer para training to new fire personnel
- Attach a cultural resource section to the fire refresher class
- Have archaeologists do more fire trainings to better understand what goes into fire
- Acknowledge that SHPO has a lot of say in the archaeology process
- Discuss SHPO and PA (programmatic agreement)
- GIS/READ kit development
- Discuss building trust
- Future involvement
- Talk about NAGPRA to fire groups to highlight the importance and steps that occur with human remains
- Have a training or breakout on actions, plans and procedures for after a fire
- A BAER class and training

### Desert Science/Tumamoc Hill Conversation

- Tucson fire in charge of Tumamoc Hill fire, first response
- Arizona State Forestry manages Tumamoc
- If there were a start, what would the response plan be
  - 911 goes to Tucson fire

- No engine on road
  - Walk up hill to make assessment
- Action plan is made
  - Difficult to plan because the season affects the situation
- What can Tumamoc Hill do to make the job easier
  - Description and access extremely important
  - Inform 911 dispatch of situation
  - Fuel and road maintenance
  - Smaller vehicle to access hill to locate access to fire to assist in making plan and putting eyes on fire
  - Trim trees back from road
  - Ensure fire has keys for gate and that they work
- IA strategy
  - Hand crew with hand tools and bladder bag
  - Forest Service = eyes in the sky
  - State = locate, and bucket drops
- Building protection
  - Cisterns hold collected water to protect buildings
  - Cisterns 25,000 gal
  - Interior will burn
- Evacuation plan to hikers and workers
  - Trail off top to 22<sup>nd</sup> Street is road access is blocked off
  - UAP filters people downhill (U of A police)
- Any issues with too many responding agencies
  - No, city dispatch determines who initially responds
  - Possibly develop run cards and staffing plans based off of concerns, time and area
  - No real concerns with too many agencies responding
- Learning from previously identified issues and concerns
  - Brush truck acquisitions
  - 2 type 6 vehicles ordered
  - Can we ensure they are deployed and not the big engine
- Make compromises with archaeology sites in case of fire
  - Rock art high priority
  - Weedwhack to reduce fuels
  - Rock walls, firefighters may destroy them by laying hose and climbing over them
  - Tie in with firefighters in the areas so they are aware of what's at risk and how to treat it
  - Reduce fuels around everything
  - Archaeology sites treated in sectors and compartmentalized that are all pre-fuel treated, strategic fuel breaks
- Collections in danger
  - Make a plan to get them into fire safes
- Not an option to fuel treat the site due to the buffle grass
- Buildings have been documented, archives are good and off site
- Cooperative agreement to get work done to make fuel breaks, etc.
- What's better, let it burn over or attempt to attack it
  - Usually aggressive IA

- Need to have this conversation with the tribes to assist in making a decision of priorities and type of attack
- Mosaic burning option?
  - Preseason pre-treatment
  - Strategic line
- Fire behavior is variable at times and seasonality
  - Need to take into account native plants and how they react to fire
- Have practice drills after creating a plan of attack
  - Pre-position water
- Reach out to community for money to protect community value
  - Everyone in the area is invested in this
- TFD exercise
- Tours for firefighters to learn about archaeology in the area
- Tribal involvement in the conversation about priorities, measures of protection
- Historic preservation U of A department to get graduate and undergraduate students into researching the preservation of the facility
- Grants to get money to do all of these options
- Buffle grass eradication is not possible everywhere
- Concentrate on features that are inundated with buffle grass and try to fuel treat them