

Chitty Prescribed Fire

Facilitated Learning Analysis

Apache-Sitgreaves National Forest,
Southwestern Region, US Forest Service
April 2008

Introduction and Executive Summary

On April 12 - 22, 2008 employees on the Clifton Ranger District of the Apache-Sitgreaves National Forest were conducting a complex prescribed fire south of Alpine, Arizona. A spot fire across Eagle Creek the afternoon of April 20, quickly spread beyond the capabilities of assigned resources and fire managers chose to fall back to a previously identified contingency line (a two lane forest highway). Declared a wildfire on April 22, the Eagle Wildfire was contained without further incident on April 28th.

Recognizing the innovative 'Landscape Scale' treatment tactics utilized on the Clifton Ranger District, and the importance of learning from low consequence events, the Regional Office initiated a 'Facilitated Learning Analysis' (www.wildfirelessons.net) "to benefit future landscape treatment endeavors for all prescribed fire practitioners and line officers by facilitating a proactive forum for positive discussion and documentation of acceptable risk."

These words, quoted from the letter of expectations to the Facilitated Learning Analysis Team reveal that the Southwestern Region recognizes the immense task of restoring fire adapted ecosystems, the critical importance of learning from low consequence events, and a systemic strategic flaw when appropriate risks are not taken.

The attached report discusses the following:

- 'Deferred Risk' versus 'Risk Avoidance'
- Previous Wildfire, Prescribed Fire, and Fire Use conditions as a taxpayer 'Investment'
- Tactical resource availability in a nimble and responsive organization
- Site specific 'Learning Opportunities' shared by Chitty Prescribed Fire participants
- Elements identified in the Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide
- Applying the lessons learned
- Lessons Learned Analysis Process

Participants from the Apache-Sitgreaves Forest welcomed the FLA Team and worked diligently to identify and share individual, unit, and organizational learning. Suggestions are included to capitalize and share these lessons with a larger audience. The FLA team collectively believes all Clifton RD and Apache-Sitgreaves NF personnel demonstrated

an unflagging commitment to their mission, each other, and the Forest Service. They accepted responsibility for their actions on site, and expressed desire to participate in future dissemination of the lessons learned. The following, written by Rob Lever, Clifton District Fire Management Officer, speaks volumes for the District's commitment to a resilient future.

Prologue EAGLE FIRE

The showdown in East Eagle, on a corner hard to turn.
One spot with wind across the line, and we would lose the burn.
The confluence of drainages, put us in a hard place.
When we tried to make the corner, we had fire in our face.
The fire got away from us, on that windy April day.
Hold on to your pride gang, or it too will get away.
But like a bronc that throws you, and leaves you in the dirt.
We have to saddle up again, wipe the dust off of our shirt.
The Eagle fire stung us, a wound that time will heal.
It's us and what we do, it's all part of the deal.

Take up tool and torch again, it's work we have to do.
Let our past mistakes not haunt you, spread fire wide and true.
The confluence of drainages, a day that's flag is red.
We've not seen the end of them, and we won't until we're dead.
So approach your burn with caution, but approach with bravery too.
Remember lads if it was easy, they'd call it White Mt. stew.
Take your lumps from Eagle, but dwell forever not.
Take it any other way, and you soon will be forgot.
Cause it's not the measure of us, if our fire misbehaves.
It is the measure of us, if we decide to cave.
Don't forget the fire in Eagle, or the corner hard to turn.
But recall all your pride, that in your belly burns.
Red flag days upon us, fire in our face.
It's where we long to be, some say it is our place.

This fire game is tough boys, you have to pay to play.
The truth of the matter is, I'd have it no other way.
So hold your head up high, for if the truth be known.
There aint a horse that can't be rode, nor a cowboy who can't be thrown.

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Facilitated Learning Analysis

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Risk Deferral versus Risk Avoidance

‘No Action’ is not an option, at least not a responsible option. Land managers and researchers agree that complex fuels conditions, climate change and population migration to the urban-interface make proactive fuels mitigation imperative. Fire and precipitation are dominant factors determining vegetation type and health, and fire suppression and changing climatic conditions have altered these systems. Insensitivity to the natural role of fire and a forest’s fire regime produces a ‘growing’ threat, and many forests are beyond a natural accumulation of vegetation. Skilled fire application is an economical and proven technique to return forests to sustainable health.

The Clifton Ranger District is well aware of the associated consequence of doing nothing. They understand their window to reduce the associated risks is directly related to aggressively taking advantage of all “footprints” of fire and mechanical treatments across their District.

We are fortunate the outcome of the Chitty Prescribed fire escape can be characterized as a fairly low consequence event; therefore providing an environment ripe for learning.

There is no indication personnel assigned to the Chitty Prescribed Burn were casual or cavalier in their thoughts or actions. While they have demonstrated initiative to take on and understand the many landscape scale prescribed fire challenges, they perceive failing to achieve the original holding perimeter in Crabtree Creek as a significant professional setback.

In reality ‘avoiding risk’ or ‘risk aversion’ may actually be ‘deferring’ risk for another time, perhaps another manager, and perhaps to extreme conditions exacerbated by *additional* fuels.

Employees in the Southwestern Region have demonstrated the ability to manage fire as a valuable tool in moving forests towards greater resilience. Annually the Region treats approximately 250,000 acres through a combination of treatments including prescribed fire, wildland fire use, and mechanical treatments. The majority of the acres are treated with prescribed fire.

Managing fire across the landscape assumes risks. Failure to recognize and mitigate risk can result in dire consequences. Deferral of fuels treatments with known risks may appear as a short-term safe environment in which to operate; however risk deferral and avoidance is a strategic flaw which often precludes future management options. The chances of a desirable outcome are greatly enhanced when we determine the conditions when fire is managed.

Public, political, and agency response to undesirable outcomes have created an unforgiving environment. Even when appropriate risk has been taken, unpredictable events or normal human error may lead to loss of property and additional expense. Land

Agency administrators should be evaluated on taking appropriate risks when 'Deferred Risk' is worse than modest unintended consequences.

and fire managers may take the short term safe route and impede prescribed fire and fire use treatments. In reality 'avoiding risk' or 'risk aversion' may actually be 'deferring' risk for another time, perhaps another manager, and perhaps to extreme conditions exacerbated by additional fuels.

Today's agency administrators are evaluated based on achieving targets and the absence of close calls or accidents. Agency administrators should also be evaluated on taking appropriate risks when 'Deferred Risk' is worse than modest unintended consequences.

Risk Assessment Tools

Many contemporary aviation and occupational safety and health programs utilize a risk management process. Forest Service employees are familiar with the Job Hazard Analysis which exemplifies this type of thinking. Incident Management Teams use an ICS-215a poster to identify risks and appropriate mitigations for firefighters. "Do the job twice, the first time in your head!" Prescribed fire's Complexity Analysis also analyzes risk, and in this case has expanded beyond personal injury concerns to include potential consequences and technical difficulty associated with to the mission.

Interagency Aviation and the Forest Service fire and occupational safety are introducing a Safety Management System (SMS) which further expands risk analysis to include the likelihood and consequence of accidents stemming from identified risks. To streamline and simplify processes, the SMS format should be examined to see if all these risk management endeavors may at least look similar.

Strategic Use of Taxpayer 'Investments'

Prior to aggressive suppression, a more resilient mosaic pattern existed in many forest vegetation types. Fires naturally burned to a more recently burned area where fire behavior was significantly reduced. The new burn served as a buffer for future fires until vegetation was ready to support fire again. Land management practices, including aggressive suppression have interrupted this natural process and wildfires are burning to unprecedented size. Besides a large expensive wildfire, some forests may grow back with "even age" vegetation. This scenario can be equally challenging and condemning due to the reduced dynamic mosaic.

Wildfire, prescribed fire, and fire use are contributing to an expanding dynamic mosaic landscape. For a limited number of years these treated acres act as a barrier to fire spread from adjacent blocks. Considering the costs associated with these wildfires, prescribed fires, or fire use fires, the public has made a considerable 'investment'. Agency administrators and fire managers should be strongly encouraged to take advantage of these investments in current and future planning and implementation efforts.

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Clifton District leadership recognized the previous investments including the 2007 Chitty wildfire, the 2004 KP wildfire, and to a lesser degree the 1999 East Eagle wildfire created a strategic barrier for burning the ‘next’ block, and planned the Chitty Prescribed fire (see the attached Clifton RD fire history map). In April of 2008 an unusual additional advantage occurred (east winds) and they committed to the prescribed fire plan. This was recognized as a narrow weather window of opportunity and leadership opted to utilize this opportunity and previous treatment investments as a winning combination to avoid deferring greater risk to a later date

Not utilizing the taxpayer’s investment in a timely manner may be akin to investing in a building, but failing to fund appropriate maintenance; in a relatively short while the building falls into ruin and the initial investment has been squandered.

An Administrative Issue

On the Clifton Ranger District, the ideal situation would have the Chitty Prescribed fire project boundary on the highway (to where the fire eventually burned). However, they could not do this because agency priorities failed to escalate the relatively inexpensive and important consultation update with the US Fish and Wildlife Service to consult on the fire effects regarding Threatened and Endangered Species up to the highway. This necessitated a more difficult and risk prone action in the bottom of Crabtree Creek. While Crabtree Creek is an appropriate and ‘do-able’ perimeter, it is not as good an option as the highway. Post fire effects in the contingency burned acres turned out to be very acceptable to resource experts; therefore, this is a resolvable administrative issue.

This example suggests the Forest Service should have T&E habitat and other natural resource concerns identified and available to enable quick decisions in an environment of rapidly changing opportunities and liabilities. From that, along with operational resource availability (described below) and people held accountable *towards* accepting appropriate risk, the agency is positioned to achieve significant forest / fire restoration.

There were no apparent differences in values and commitment between fire management and the resource specialists. The FLA Team noticed positive working relationships and integration. Fire use, forest health, and habitat restoration were one in the same.

Tactical Resource Availability

Wildland firefighters and Prescribed Fire specialists have pride in what they do; that’s a good thing. Clifton Ranger District employees are particularly proud of their accomplishments and leadership in forest restoration with relatively small numbers of people and resources. While challenges remain, such as better integrating their initiative with ICS, they have done a remarkable job taking on and understanding ‘landscape scale’ prescribed fire projects.

The dilemma occurs when unexpected things ‘hick-up’, and the light nimble ground forces become stretched too thin to meet objectives. One mitigation has been to over staff, inefficiently carrying surplus personnel day after day.

When the Chitty Prescribed Fire, crossed the intended project boundary, managers had problems securing and supporting appropriate resources without declaring it a wildfire.

An interesting template to consider when addressing critical resources needs is used in the Long-Term Implementation Plan for management of long-duration fires. If this type of model was integrated into burn plans written for longer-duration landscape scale prescribed fire applications it may assist leadership in resource prioritization locally and regionally. Central resource allocation decisions could be made by prioritizing the values at risk, regardless if the event is a wildfire, prescribed fire, or wildland fire use event. In this system, resources would be made available for a specific period of time to complete a specific action, and then released, becoming available for another assignment.

In terms of agency objectives, some fire use and prescribed fires may be a higher priority than some wildfires.

At Chitty, any available resource could have been assigned just like response to an initial attack fire; with the expectation they would be available to the system after mitigating the value at risk. It may have been decided that there were higher priorities within the Region and burning the contingency acres to the highway had lower consequences than other Regional liabilities. Either way, wildfire, prescribed fire, and wildland fire use events are evaluated on their contributions towards the agency objectives, and not by category. In terms of agency objectives, some fire use and prescribed fires may be a higher priority than some wildfires.

“Participants” Lessons Learned

The following bullets identify lessons learned and topics discussed by Chitty Prescribed Fire Participants during the FLA. They are not presented here as detailed discussions but as a synopsis, perhaps helping identify trends also seen in other events.

Partnerships

- The Clifton Ranger District successfully fosters partnerships with multiple federal and non-federal cooperators to collaborate on landscape scale restoration projects.
- The partnership program on the Clifton Ranger District is highly successful. This collective commitment to landscape restoration is evident by the number of acres funded and treated annually.
- The number of acres treated annually is impressive relative to the number of employees in the District organization.
- Employees on the Clifton Ranger District share a common vision of landscape restoration. Employees throughout all levels of the District

organization are committed to the restoration of fire adapted landscapes and understand the importance of partnerships in achieving this vision.

Resource Availability

- Participants believe restrictions and the reluctance to use available resources on prescribed fire operations through all levels of the organization jeopardizes successful outcomes.
- The District recognizes the important contributions the Glenwood and Safford engines make in prescribed fire endeavors on the Clifton District. Participants believe that future success will require better local, Forest, and Regional communications resulting in support for resource requests and commitment at all levels.
- Clearly identifying values at risk, resources needed, timeframes, and length of commitment may alleviate the reluctance to commit resources in prescribed fire operations. All levels of the organization could better understand what mix of resources is needed during critical prescribed fire operations and length of commitment to complete the operation.
- Participants expressed the desire for an Agency culture that demonstrates equality in its commitment and support between prescribed fire and wildfire. The current blanket prioritization of wildfire management unjustly enables the inherently flawed culture of deferred risk.

Prescribed Fire Organization & Operations

- Participants acknowledged remote, landscape scale prescribed fire operations are physically and mentally demanding.
- Due to the physically demanding nature of landscape scale prescribed fire, vital resources needed to implement this project successfully must be available during critical operations.
- The unavailability of these types of resources during critical operations contributed to fatigue of those on-site.
- Participants acknowledged fatigue must be monitored and mitigated due to its impact on operations, human factors, communication, production, and decision making.
- Participants recognized the importance of having a clearly defined chain-of-command which is communicated and understood by all.
- It was expressed that utilizing ICS and its naming conventions for positions and clearly communicating this structure would serve to eliminate chain of command issues.
- Participants recognized the value of previously identifying and briefing the contingency plan. This resulted in an organized transition from a prescribed fire to a Type 3 organization.
- Participants identified the remaining challenge of adapting their streamlined prescribed organization into ICS positions.

Human Dynamics/Communication

- Participants identified the possibility of cumulative fatigue. Local fire personnel had been busy for approximately 2.5 months with prescribed burning approximately 11,000 acres and cutting approximately 600 acres.
- Participants discussed the challenges associated with rapid team building in a high risk environment.
 - Challenges included;
 - Communications
 - Fire terminology
 - Human interactions
 - Skill levels
 - Operational expectations
- Participants identified there was a difference in expectations regarding “coyote tactics”. This may be mitigated by clearly defining expectations in the logistics portion of the operational briefing.
- Participants identified a miscommunication regarding where to end firing operations to stay even with interior backing fire. In light of this observation, participants expressed the need for clarification of short term strategy.
- Participants discussed the need to hire seasonal crew early for the upcoming prescribed fire projects. Although paperwork was processed early in the year, seasonals were not hired in a timely manner and were not available for project implementation. Seasonal hiring was time consuming, frustrating, and distracting to District fire leadership.
- Due to the lack of Regional and Forest support, the Clifton Ranger District routinely utilizes resources from outside the Region to assist in accomplishing prescribed fire operations.

Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide for Escaped Fire Reviews

1. An analysis of seasonal severity, weather events, and on-site conditions leading up to the wildfire declaration.
 - Seasonal severity, weather events, and on-site conditions were properly addressed in the burn plan and monitored and mitigated throughout operations.
2. An analysis of the actions taken leading up to the wildfire declaration for consistency with policy
 - Yes. See Chronology of events
3. An analysis of the Prescribed Fire Plan for consistency with policy
 - Yes the prescribed fire plan is consistent with policy.
4. An analysis of the prescribed fire prescription and associated environmental parameters.

- Burn plan does not link on-site or contingency resource line production capability with potential fire behavior.
5. A review of the approving line officer's qualifications, experience, and involvement.
 - Line officer's qualifications, experience, and involvement exceeded all requirements.
 6. A review of the qualifications and experience of key personnel involved.
 - A "Holding Boss" was identified in the burn plan but there was no official ICS qualification attached to this position. The "Holding Boss" position was not clearly identified in the IAP. Holding functions will be managed by personnel qualified at the appropriate ICS wildland fire operations standard and as required by the prescribed fire complexity, assigned resources, and operational span of control.
 7. A Summary of causal agents contributing to the wildfire declaration.
 - Participants identified several contributing factors to the wildfire declaration:
 - Restrictions on the use of available resources in critical prior to escape declaration
 - Human factors including communication, fatigue, and interpersonal relationships.
 - Confusion regarding prescribed fire organization in Crabtree operations.

Applying Lessons Learned

The Facilitated Learning Analysis Team, in discussions with Chitty prescribed fire participants, Forest and District management, and the Lessons Learned Center have reaffirmed suggestions to disseminate information gained by this analysis. It should be noted that many of the local on site lessons were discussed with crewmembers around a sand table with a local or individual learning objective. While others may gain from those discussions, unnecessarily revealing these conversations will inhibit the next group from sharing openly. The decision to share these, beyond a cursory mention, will be up to those involved.

- Request those involved with preparing a sand table or equivalent presentation regarding the Chitty Prescribed Fire story. This presentation will share the positive landscape scale restoration accomplishments, strategy and tactics, as well as discuss their challenges, such as those discussed with the FLA Team. The audience for these presentations will be upper management, perhaps at the Regional Leadership Team in several Regions.
- Task Regional Training Specialists to prepare a sand table or equivalent presentation to show the positive landscape scale restoration principles exemplified by Chitty Prescribed fire, including challenges, and then lead participants through and exercise to identify landscape scale opportunities on their

- units. The audience for these presentations will be Forest and District Line Officers, Fire Managers, and prescribed fire burn bosses.
- Coordinating with the Lessons Learned Center, produce pod-cast presentations featuring Chitty Prescribed fire personnel discussing lessons learned, close to the ground. This is not a punitive assignment, and will only work with the buy-in of those personnel. Experience has shown this type of assignment has important network, career, and experience building attributes.
 - Post this FLA report on the Lessons Learned Website.
 - Opportunity to discuss at the Regional Line Officer Meeting, August 2008.

Attachments:

Chitty Prescribed Fire Chronology

This section presents a summary of the chronology of events surrounding the Chitty Prescribed Fire that occurred from April 12, 2008, the day the prescribed burn began, until the prescribed fire was declared escaped April 22, 2008 at 1800.

4/12/08: The test fire for the Chitty Prescribed Fire was ignited in the northeast corner (Block D) at approximately 1200. The test fire was successfully completed, and the decision to continue the prescribed burn was made by the Burn Boss. Nine fire personnel (six person hand crew, two district personnel and the Burn Boss) were on the scene.

4/13/08: Fire personnel continued black lining south/southwest down Crabtree drainage towards Walnut tank. An increase in fire behavior was noted as the firing operations transitioned out of the perimeter of the Chitty Wildfire (2007). Resources assigned were the same as the previous day.

4/14/08: No ignitions occurred on the prescribed burn. Burn was monitored.

4/15/08: Local resources are assigned to monitor the prescribed burn. Upon entering the prescribed fire area there is a concern the fire has backed further south than anticipated in Crabtree drainage, and was thought to be located south and west of Walnut tank. Resources on scene requested contingency resources are ordered. An off-forest engine is ordered and filled. Upon further investigation by on scene resources, it is determined the prescribed fire has not progressed as far south as initially perceived. Fire spread in the vicinity of Walnut tank is checked with hand line, there are no additional concerns.

4/16/08: Red flag conditions forecasted and communicated to prescribed fire personnel. Ground ignitions are postponed. During the day a helicopter with crew arrive and are briefed on the prescribed fire operations.

During the day resources monitor the prescribed fire. Backing fire is observed in Walnut draw; the handline constructed the previous day is holding fire in the vicinity of Walnut tank. A six person hand crew hikes into Walnut tank and will remain overnight.

4/17/08: Favorable weather conditions are forecasted. Aerial ignition of interior fuels, and backline operations along an old dozer line, west of Walnut tank are successfully completed. During aerial ignitions the Burn Boss recognizes one of the interior strips is inadvertently ignited lower than intended above Hidden tank in a stringer of ponderosa pine.

During the operational period, a trail heading from Walnut tank to East Eagle drainage is noticed and is discussed as a possible contingency line. It is agreed this trail will be utilized as a contingency line and preparation in this drainage is initiated (referred to as the triangle knob). At the end of the operational period all resources in Crabtree drainage hike out to the road, and return to Strayhorse Work center for the evening.

4/18/08: Red flag conditions for wind and low humidity are predicted. The burn boss assigns two individuals to recon and monitor the prescribed fire in Crabtree drainage.

During the aerial recon the burn boss notes the prescribed fire is actively backing above Hidden tank south of dozer line. The burn boss requests firing operations be initiated from the dozer line south to Hidden tank to even up backing fire above Hidden tank. Resources staged at Strayhorse are contacted and begin hiking into the prescribed fire at approximately 1200.

Staged resources from Strayhorse arrive on scene and begin firing operations in Crabtree drainage. During this operation there was a discussion, in Crabtree drainage, regarding the likelihood of success of the current operation. One individual believed the best plan was to fall back to the contingency line (triangle knob). The individual in charge believed it was possible to continue operations in Crabtree drainage. The discussion was not resolved, and the Burn boss was contacted. The Burn Boss reluctantly agreed to drop back to the contingency line (triangle knob) and resources began blackline operations.

At the end of the operational period, six of the eight individuals assigned in Crabtree drainage hike to the road, and spend the night at Strayhorse Work center. The remaining two individuals spend the night at Walnut tank.

The Burn boss places an order for a short crew through Zone Dispatch. This order is not filled.

04/19/08: Red flag conditions predicted. No ignitions are planned for the operational period unless holding lines are jeopardized.

During the morning the two individuals who remained on the prescribed fire begin work. One serves as a lookout and directs buck operations on the backing fire into Crabtree drainage. The other individual continues prepping the contingency line (triangle knob) towards the confluence of Crabtree drainage and East Eagle Creek.

The resources that spent the night at Strayhorse Work center begin arriving on scene between 1000 and 1200 and tie in with the on-going operations. During the operational period a snag falls across Crabtree drainage. All personnel on scene concentrate their efforts on line prep along the contingency line (triangle knob).

At the end of the operational period, six of the eight individuals assigned in Crabtree drainage hike to the road, and spend the night at Strayhorse Work center. The remaining two individuals spend the night at Walnut tank.

Red flag conditions did not surface during the operational period however; red flag conditions were observed in the southwest area of the state. The Burn boss anticipated these conditions would be over the prescribed fire area the following operational period.

4/20/08: Fire weather watch is upgraded to red flag conditions for the afternoon. The Prescribed Fire Manager is assigned to oversee all operations in Crabtree drainage to alleviate chain-of-command confusion.

During the morning resources continue to prep the contingency line. At approximately 1030 the Prescribed Fire Manager confirms with the Burn Boss the blackline operations along the contingency line need to be initiated. Blackline operations continue until 1500, at this time the backline is tied into the confluence of East Eagle drainage and Crabtree drainage, with minimal holding issues.

Shortly afterwards a spot fire in a log is detected across Eagle Creek drainage. Bucket operations are not successful, and the spot fire grows to approximately 100+ acres. Discussion between the Burn Boss and Prescribed Fire Manager occur relative to converting the prescribed fire to a wildfire. The decision is made not to make a wildfire declaration at this time. Additional resources are ordered including an IHC and engines; however the burn boss is told no IHC order will be filled until the prescribed fire is declared an escape.

Due to fatigue and lack of resources, the decision was made to fall back to the contingency line, US Hwy 191, from Strayhorse Work center to the confluence of Hot Air and East Eagle Creeks.

During the evening resources burn the contingency line from Strayhorse Work center, along US Hwy 191, to the junction of FS Road 587.

4/21/08: Resources prep along US Hwy 191 to Sheep Saddle. Black line operations are extended to the 217 pit. Resources on scene include: 3 engines, 9 fire fighters, and the Burn Boss.

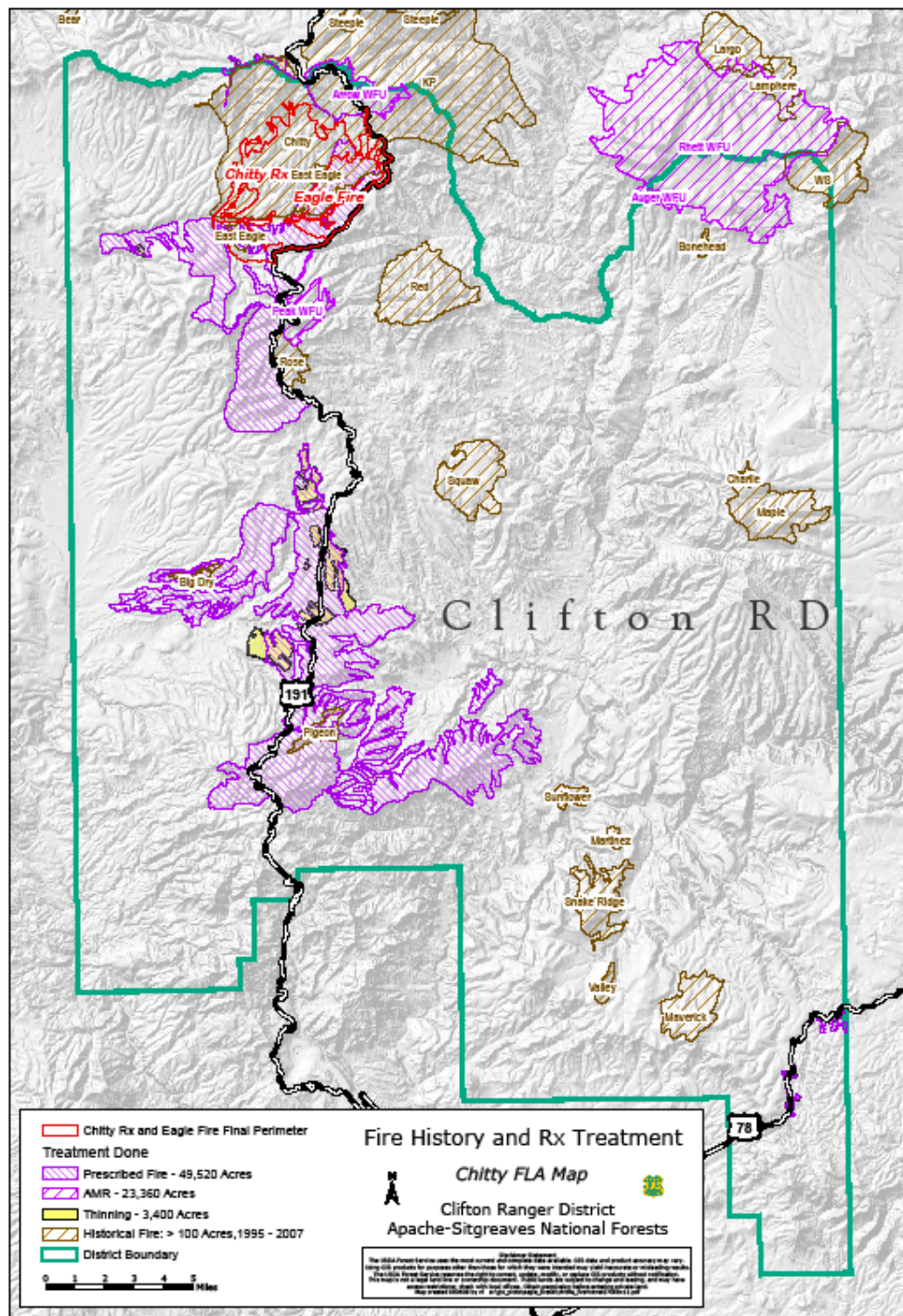
4/22/08: Resources continue with burnout along US Hwy 191. The Chitty prescribed fire is declared the Eagle wildfire at 1800. An additional Forest engine is committed and an IHC (ETA 0800 4/23/08).

LESSONS LEARNED CHITTY PRESCRIBED FIRE

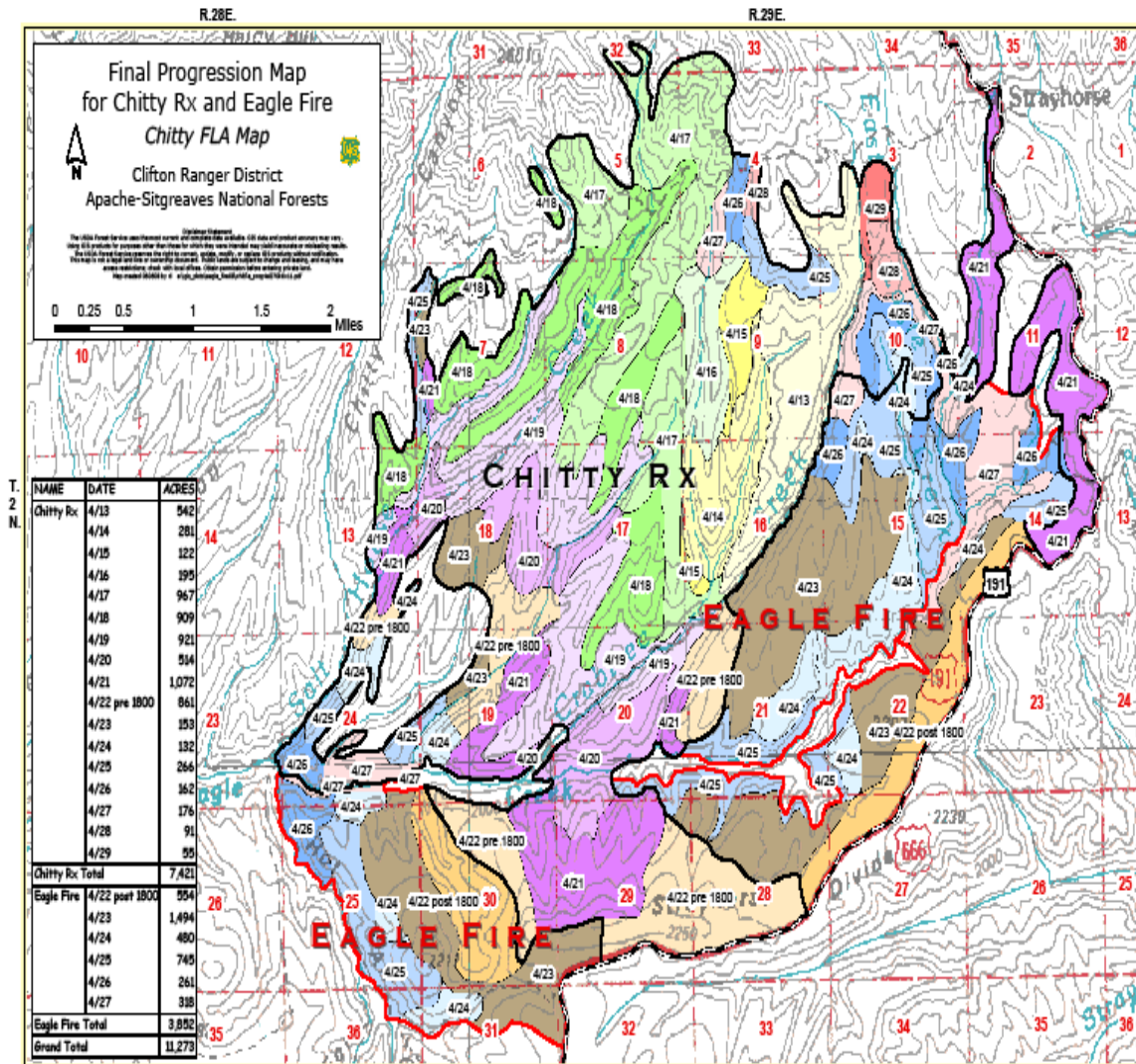
Clifton Ranger District Apache-Sitgreaves National Forests

1. Recognize human factors that can affect fire operations, including physical fatigue, mental fatigue, and interpersonal relations.
2. Plan for contingency resources when operations extend beyond the expected.
3. Recognize commitment of personnel and resources that may extend for weeks during long-term implementation.
4. Ensure layout of prescribed burns takes advantage of the best holding lines available.
5. Carefully gauge commitment of personnel critical to prescribed burn operation.
6. Coordination between the Ranger District, Forest and Region needs to be improved to sustain productivity in prescribed burning.
7. Contingency plans may need to be augmented by logistical considerations.
8. Be sure and articulate the **Big Picture** in briefings, and reinforce with all units, especially those working remotely.
9. Discussion of contingency plans with resources prior to escape makes for a smooth transition to a wildfire organization.
10. Prescribed fire needs to be considered as important as wildfire in the need for resources and support.
11. Identification of weak holding points may best determine the required resource mix.

Fire History Map, Clifton Ranger District



Progression Map, Eagle Fire and Chitty Prescribed Fire



Lessons Learned Analysis Process

The Chitty Prescribed Fire presents a perfect opportunity to learn from a lesser or near miss event. That complex systems have unintended consequences is a given, and an organization should judge itself by how well it extracts learning from the ‘free lessons’. Opposite free lessons are ‘brutal audits’ where significant damage or death may have occurred. In this case only acres intended for eventual burning were affected. Utilizing thoughtful discussions and sand table story telling, many program, unit, and individual lessons have been mined.

The intent of a Facilitated Learning Analysis (FLA) is to improve performance by capitalizing on the shared experiences of participants. Blaming is replaced by learning, enhancing Recognition Primed Decision Making, therefore posturing for success on future events. By conducting FLAs, the organization learns from “weak signals” of error, instead of waiting for difficult and complex reactions to serious accident or tragedy. While maintaining high levels of respectful contemplative dialog, we revisit recent performance to improve future performance.

FLA models ‘doctrine on the ground’ focusing on principles and experience, to gain knowledge and skill.

FLA helps fill the gap between a routine After Action Review (AAR) and a Serious Accident Investigation (SAI).

The wildland fire community has been initiating important systemic change. Initiatives including Doctrine, Leadership, Lessons Learned, and High Reliability Organizing are well served by FLA. One principle common to all of these programs is ‘Respectful Communications’. Another is ‘Learning’. Mindfulness, situational awareness, mental engagement, avoiding complacency, and nuanced understanding all reinforce the alert firefighter in paying close attention to dynamic situations.

An FLA generally includes one facilitator but may be a team. It adapts to the audience, the event, the organization, and the individual facilitating. Significant events and lesser errors are seen as learning opportunities. Significant events can be positive or negative. They may or may not include injury or property damage. They are willingly conducted at a wide range of organizational levels, with products or results that may or may not be shared. Whenever possible, initiatives and corrective actions are generated from within the group.

Documentation may be brief, including a brief 1-2 page report that describes the *process used* for the FLA. These reports will be collected and made available at the Wildland Fire Lessons Learned Center as examples to help others implement a process for their own near miss events or learning opportunities.

The FLA document (at www.wildfirelessons.net) provides theory, process, questions and answers, and many examples where this strategy has been used, or activities that helped shape FLA. Reference material is also listed.