

**DOUBLE DIAMOND**  
**Facilitated Learning Analysis**



**Double Diamond Wildfire**  
**Fritch, Hutchinson County and**  
**Lake Meredith National Recreation Area**  
**TEXAS**

**May 2014**

# Contents

---

## Table of Contents

|  |           |
|--|-----------|
| <b>1. Introduction.....</b>  | <b>3</b>  |
| <b>2. Incident Narrative .....</b>                                   | <b>4</b>  |
| A. The Fire Didn't Follow the Plan! .....                            | 4         |
| B. Evacuations .....   | 7         |
| C. ICS/Organization .....  | 8         |
| <b>4. Further Learning Opportunities.....</b>                        | <b>13</b> |
| COMMUNICATION .....  | 13        |
| ORGANIZATION .....   | 14        |
| ARE WE LEARNING? .....   | 14        |
| <b>5. Commendations .....</b>  | <b>17</b> |
| <b>6. Leaders Intent and the FLA team.....</b>                       | <b>18</b> |
| The Delegation of Authority: .....                                   | 18        |
| FLA Team Summary .....   | 19        |
| <b>7. Appendices .....</b>   | <b>20</b> |
| Appendix A: Evacuation Extended Information.....                     | 20        |
| Evacuations: The homeowner perspective:.....                         | 23        |
| Appendix B: Prevention / Mitigation Efforts Prior to the Fire: ..... | 24        |
| Appendix C: Fire Behavior Analysis:.....                             | 25        |
| Appendix D: Quotes from the line: .....                              | 27        |

## 1. Introduction

*"I was conducting a burn out when my aunt and uncle ran up to me. They were crying and asking me to help because they thought my grandmother was still in her home. The area she lived in was already on fire. I had to complete the burn out to buy time for others to escape and to keep more homes from burning. They were begging me to help... but I had to do my job and I had to finish the burn out that I was assigned to do"*

*-Firefighter on the Double Diamond fire.*



On May 11<sup>th</sup> 2014, Mother's Day, at 15:59 a call came in to the Hutchinson County Emergency Operations Center (EOC) about a wildfire in Fritch Texas. Twelve hours later 368 structures were destroyed.

The Double Diamond wildfire started in the town of Fritch and quickly spread onto Lake Meredith National Recreation Area (NRA). Resources from the Fritch, Borger and Stinnett Fire Departments, Hutchinson County EOC, Sheriff's Office, the National Park Service, and Texas A&M Forest Service, along with numerous fire departments and public safety organizations helped contain the fire at 2,202 acres. Approximately 747 private acres burned, and 1,455 acres within Lake Meredith NRA.

---

|   |
|---|
| Lost: 225 residences 143 outbuildings (368 structures)  |
| Saved: 241 residences 133 outbuildings (374 structures) |
| Fire related injuries: 0                                |
| Fire related deaths: 0                                  |

---

## 2. Incident Narrative

---

### A. The Fire Didn't Follow the Plan!

Since 2006 there have been several fatality fires in the southern plains ([Wildland Fire Lessons Learned](#)). The area surrounding Fritch Texas had been in a long term drought for 6 years or more. "There was an abundant amount of surface fuels and there was a decrease in resources that had the ability to fight a large wildfire." The local resources felt that conditions on the ground warranted an outreach [program](#) and pre-planning.

In early 2014 multiple personnel from the Fritch Fire Department, Hutchinson County EOC, the Sheriff's Office and the National Park Service (NPS) met regularly to develop a plan. The draft "Fritch Area Defense Plan" (FAD) was a collaborative effort to develop an organized response to a large, rapidly moving ([See Fire Behavior Analysis](#)) wildfire. The objective was to organize resources to best protect the community and limit the loss of life and property. The plan involved discussions on how to develop the Incident Command System (ICS) organization, the establishment of trigger points, evacuation procedures, safety zones, staging areas, and tactical procedures for response to the fire scenario. This process developed thinking and relationships that would be tested in the days ahead. A Fritch fire department officer later said, "...having ¾'s of a plan that we all knew saved lives".

---

"The plan was in draft format. We had worked on it and the main stakeholders knew the plan but we just needed to finish putting it on paper. –Local Fire Chief.

---

On May 11<sup>th</sup> at 15:59 a call came into Hutchinson County fire dispatch about a wildfire in Fritch. Extreme temperature, wind, humidity, and dry fuel conditions were present (Fine Dead Fuels of 1% and 99+% ERC). Many of the area firefighters (Fritch, NPS, and Hutchinson County) had been working a rollover fatality accident, a structural fire, and most recently a 400+ acre grass fire for the previous 18 hours. The Fritch Fire Department is an all-volunteer department that consisted of approximately 25 volunteers at the time of the fire.

Resources were immediately dispatched to the fire (2 engines and a command vehicle) and were unable to catch the fire. Because the Hutchinson County EMC (Emergency Management Coordinator) recognized elements of the FAD scenario, he initiated a request for a Declaration of Disaster within

---

"The fire was moving at 9 feet per second and wooden shingles and house siding were flying like bombs." –Engine Crew Member

---

minutes of the fire start. In Texas, this gives Law Enforcement (LE) officers the ability to enact mandatory evacuations, and allows firefighters the authority to perform tactical activities on

private property. The County EMC stated, "At 16:05 I came over the hill in Borger in my truck and I saw the smoke column coming up from Fritch (10 miles away). At that moment I knew. I immediately turned around and headed back to the Emergency Operations Center to seek a Declaration of Disaster from the County Judge which allows us to enact mandatory evacuations."

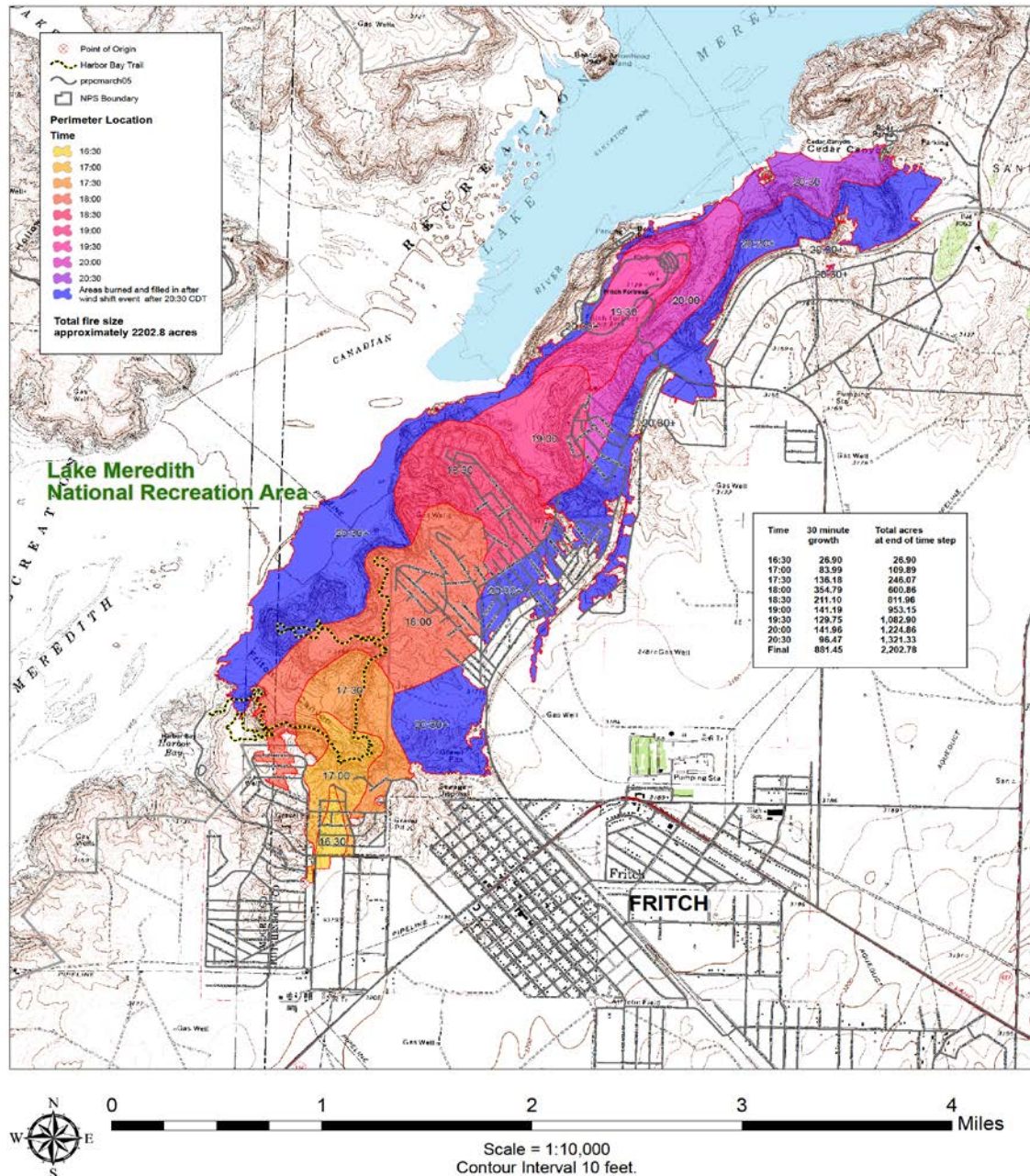
The FAD modeled scenario placed the fire start 30-60 minutes west of Fritch, which would have allowed fire officials time to activate the planned organization before the fire hit the community. Unfortunately the fire started in the wildland urban interface (WUI) community and the first home was on fire within 10-15 minutes with dozens immediately in peril. Several firefighters expressed that, "There was no time to organize, so we just picked-up in the part of the plan that had the town burning and the need for evacuations." A fire chief reported, "...the fire would not follow the plan!"

A NPS firefighter said, "We heard the call come in and we acted. I could hear a lot of radio traffic and we were waiting on a dispatch and I knew that we were going to get called so I got ready. A few minutes later we were en-route to the fire. Once on scene, all hell broke loose. If you thought about all the hazards then you would never get out of the truck. Power lines, gas lines, propane tanks, traffic, burning houses, and a wildfire being pushed by 40+ mph winds."



# Double Diamond Fire - Progression Map Fritch, Texas Sunday, May 11, 2014

Progression perimeters are approximate. Perimeters were hand drawn on a map during the Double Diamond Facilitated Learning Analysis session on June 10, 2014. Progression steps were derived by consensus of persons involved in the fire suppression effort.



## B. Evacuations

---

*“We’ve got the fire from hell,  
let’s go with the plan” –  
Incident Commander*

---

Although an Incident Command Structure (ICS) was loosely created over the entire incident, it was heavily focused toward the fire operations. By default, great latitude was afforded Law Enforcement operations to run the evacuation process as they saw appropriate. With the basic tenets of the draft Fritch Area Defense Plan (FAD) as the basis for operations, the field LE officers largely executed the evacuation without oversight from

the Incident Commander. LE personnel safety, accountability, and evacuation progress was tracked by the Lead Law Enforcement officer in his vehicle by map and paper.

During this evacuation process, officers were very close to the head of the moving fire. “We were only about ½ block ahead of the fire. We could feel the heat of it as we knocked on doors”. It seemed like a continual race to stay ahead of the rapidly moving flames. “The smoke was so thick that at some points we had to be still for a minute to let the smoke clear so we could see where to go next”.

Some residents were ready and willing to leave, but others required assistance either carrying prepared luggage to their vehicles or releasing pets from cages or fenced areas.

Officers had to deal with the full spectrum of emotional reactions to their evacuation orders, as well as adaptively respond to the conditions of the occupants. Each time the officers approached a residence, the encounter was tense, uncertain, rapidly evolving and unique in its circumstances.

---

*“I walked up to this house and I  
could hear folks inside. They opened  
the door and I could see Mother’s  
day dinner on the table. I told them  
to leave immediately because the  
outside of their house was on fire,  
and they had no idea” –Law  
Enforcement Officer*

---



---

*“We cleared almost 300 houses  
that evening and there were  
only 18 refusals to leave. Most  
of those left later as the fire  
approached”-Sheriff Office  
Captain*

---

Based upon the pre-plan as well as local knowledge, two areas of refuge were identified and provided to evacuated residents. While many residents were able to retreat to houses of extended family members or friends not in the fire’s path, those that did not or could not were offered refuge in the Fritch school

gymnasium, as well as a local church. Relief and support organizations, as well as concerned neighbors, provided humanitarian services at those locations.



about the Evacuation [click HERE.](#)

Neighboring emergency service organizations often talk about “team” and tout their ability to work well together, but rarely do they get tested in an environment such as these officers experienced beginning on May 11th 2014. Quick action, ability to implement a plan and adapt it to changing conditions, ability to work through tense, uncertain and rapidly evolving situations, and willingness to abandon agency boundaries and quickly form a new “team” ultimately made this aspect of the incident a success and undoubtedly saved lives. To read more

---

*“At 1615 I came over the crest of the hill and saw fire crossing the road, I expected it to slow down but the pulse never quit. I knew direct attack would be unsuccessful and we needed to start evacuations immediately”*  
-Taskforce Leader

---

### C. ICS/Organization

After initial attack failed, the initial attack resources focused efforts on preventing the fire from spreading northeast into the dense housing areas of Arrowhead West and Arrowhead East. Resources from multiple fire departments attempted to knock the fire down, but with winds pushing horizontal flame lengths to 30 plus feet, the fire quickly jumped roads, threatening and igniting homes and other structures.

As had been developed in the FAD, firefighters quickly switched efforts to initiating burn-out operations in blocks along the less intense flanks of the fire (10 ft. flame lengths) to stop lateral spread to new structures. Point source protection was set up for homes in front of the flanking fire front that could be defended. “There was no way we could get in front of the fire; it looked like a running crown fire in the houses” Amarillo FD FF.

At the head of the fire, the fire rapidly jumped one road after another in the Arrowhead East subdivision; engine crews continued to find opportunities to burn from roads and secure the flank of the fire and prevent it from spreading to the west or east into additional housing. “We did what we had planned for under these types of conditions; establish an anchor point, burn-out a section of road, protect the homes we could, and keep moving north with the fire.”

The FAD pre-identified staging areas, water sources, safety zones, lookouts, control lines, and firing operation blocks. The group of firefighters had practiced this scenario of flanking the fire and their respective roles using Sand Table exercises to develop a common operating strategy. By approximately 1730 the fire had moved beyond Arrowhead West and Arrowhead East subdivisions, and was moving into Fritch canyon.



Organization of the resources was a challenge to maintain due to the smoke, heat, and rapidly changing environment. One of the firefighters commented, “At one point I felt like I was alone with Engine 2”. As the fire moved into Fritch canyon, there were no roads, and the fire was divided into Alpha (north end of fire) and Bravo (south end of fire). These “Divisions\*” were each led by one TFLD led group to maintain command and control. Additional resources were needed on the line, but ordering was hampered by communication issues, lack of additional overhead, and the fact that the initial attack resources were constantly moving as they advanced with the fire front.

*\*Note: - these “Divisions” were not structured as ICS units under Division Supervisors, or structural fire Divisions, but were geographic operating areas.*

While fire command in town continued to try to implement elements of the FAD, the Incident Commander was faced with multiple challenges; the expectation he would be working as the Operations Section Chief, inexperience managing an incident of this magnitude, lack of personnel to fill out the ICS organization, radio communication issues in the mobile Command Center brought in from a cooperating county, an overwhelming number of incoming firefighting resources, and an inundation of public and media representatives.

From the fire start the IC realized that he needed additional help. A local firefighter (and former chief of the Fritch Fire Department) returned from the fire with some of the Fritch FD engines and formed a staging area to corral incoming resources. The IC asked this staging area manager to assist in ordering and assigning additional resources. Although staging was established, an Operations Chief was not identified until the next morning.

---

*“I needed an Ops (Operations) to coordinate resources while I was dealing with IC issues. I felt like I wasn’t getting information coming in from the field and an Ops could have helped that” – Incident Commander*

---

Communication issues between staging, command (which was located out of sight nearby), and the field contributed to resources not being efficiently utilized at times. One TFLD reported that he got to a point where “I had way too many engines”. Another TFLD reported later that he was way short of engines. Due to the smoke, lack of maps, confusion as to where the fire was at and moving to, and unfamiliarity with the local area, the IC had to escort equipment out to the fire at times. An engine captain on the line said, “I turned around and there was the IC.”

Some of the engines were sent to the line without escorts; when they arrived at their assigned location, the flank burning task force and engines had already moved on, so the TFLD they were supposed to report to could not be located. A local engine crew later reported, “There was independent action taking place, some of it based on the plan and some not. Initiative was needed to fill gaps in the organization, but actions were not always communicated.”

As the fire spread northeast and the incident grew in size and complexity, needed ICS command roles got lost in the immediate need to staff the fire and organize field operational resources. The firefighters with the most ICS organizational experience were mostly assigned in the field, leaving a dearth of

command positions. They needed to be in two places at once. "I would have liked to fall back and act as Ops or Division, but there was no time and I was needed where the fire was and where it was going."

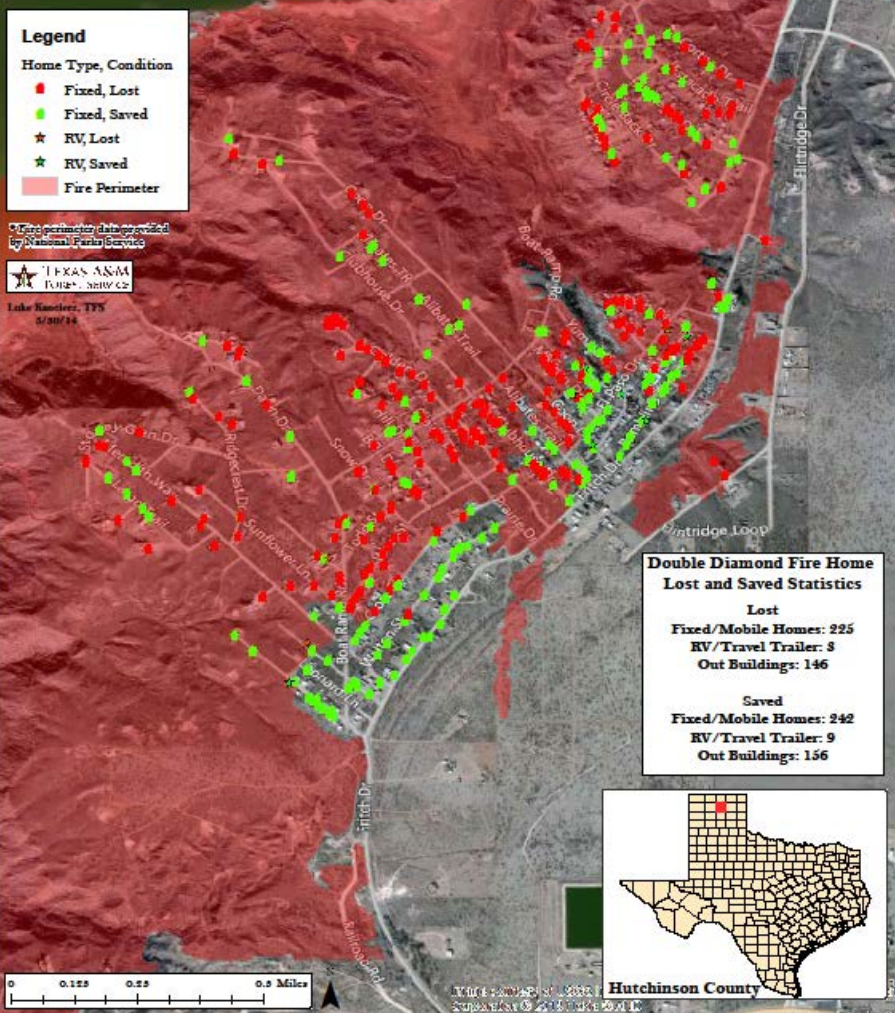
The fire spread north through the Lake Meredith Harbor subdivision. The presence of narrow roads and combustible materials around structures presented significant control problems and contributed to fire intensity and spread. In addition, there are no hydrants in the Lake Meredith Harbor subdivision. Engine crews working in this area reported, "I was leaving a house that was on fire when an exploding acetylene tank went whistling by my head," and "Railroad ties were burning everywhere, the smoke was nasty." This was an extremely hazardous period for the firefighters due to the number of structures that were burning and the hazards they presented.

At times engine personnel were hampered by residents who snuck back into the evacuation area or refused to leave. One engine assigned to protecting structures during the firing operation reported, "There was a guy with a garden hose out in the field watering the grass and bushes who refused to leave. Ten foot flame lengths were approaching him. Our job changed from structure protection to protecting the guy from the flames. We wet the vegetation around him. So we stopped doing structure protection for 45 minutes until the fire front passed the guy."

A major wind shift (north wind) occurred at about 2030. Firefighters were aware of the impending wind shift via National Weather Service notifications, but were surprised by how quickly the shift occurred. Resources were moved to the south end of the fire to prevent the fire escaping established control lines, however increased fire intensity drove most units out of the Lake Meredith Harbor subdivision; many additional structures burned. Engine Captain, "After I got fuel (sic. for the engine) the fire behavior increased and I was not going back in there."

As fire intensity and hazards (power lines and propane tanks) allowed, engines returned to structure protection and worked to extinguish hot spots and threats to homes. Engine crew "Propane tanks were exploding as we went by the houses." Incoming engine crews were assigned to structure protection throughout the fire area and worked through the night. The fire continued to move south along the edge of Lake Meredith until approximately 0200-0300 that morning. Engine crew- "We finally got some food at 2 am when we were pulled off the line and replaced by another engine crew."

# **Double Diamond Fire Damage Assessment Fritch, TX, 2,202.8 Acres May 2014**



### 3. Lessons Learned from Participants

“It would be helpful to have a way to know which houses have been checked/evacuated and ones that had not. During a fire like this you don’t have time to double check or recheck an area.” –LE Evacuation Staff.

“The training we got from the NPS and Borger FD on urban-interface fires helped us out in a big way, we knew what to watch out for and we knew to have LCES in place.” –Fritch Fire Department member.

“Our plan was based on Monday through Friday staffing levels, and we were lucky that weekend. Many of our area firefighters were already on shift because they had just been released from a 400 acre fire when the Double Diamond fire started.” - Fritch Fire Department member.

“You have to have a plan. Nobody will panic as long as they have a plan.” –local volunteer firefighter.

“Our culture is starting to change. We are beginning to realize that we are not supermen. Just because we put on our fire gear does not make us impervious to harm or danger. We have to be smart and engage the fire where we can be successful and as safe as possible.” -local volunteer.



“Not everybody can be the firefighter, when agencies come in to assist you. There may be other positions needed that are more effective than fighting the fire” -local volunteer.

“It would have been nice to know more of the FAD, but the main supervisors and decision makers did. So we were that much better off than having no plan at all.” –new volunteer fire department member.

“Our pre-planning prevented firefighters from getting killed” –Fritch Fire Department member.

“Try to take advantage of training opportunities” –local volunteer.

“Strong line leadership at multiple levels is needed – there was a lack of middle management...This may have hampered effort” –local chief.



## 4. Further Learning Opportunities

---

The intent of the FLA is to promote learning by applying the experiences of others to our own understanding. The following points have been identified as particular areas that are common themes in many accident reviews, investigations, and other FLA's. The discussion questions are provided as a means to facilitate discussion on actionable items that may benefit your organization. We have a responsibility to learn from others, where are the gaps in your organization?

### Communication

In any review, serious accident investigation, or learning analysis that involves more than one person, communication problems are usually identified as major contributing factors; the Double Diamond Fire was no exception.

The communication issues on this incident may be broken down into two categories:

#### 1-Technical

Reverse 911 went out from the Hutchinson County EOC. For the most part this was a tremendous success as it informed a number of at risk public with one call that there was a need to evacuate due to a fast moving fire. However, the call triggered an inundation of phone calls to the EOC inquiring about the severity of the fire, specifics of the evacuation order and numerous other questions. It effectively shut down the EOC phone system as they did not have sufficient staffing to deal with the volume of calls. This temporarily hindered their ability to support the incident.

#### **Discussion Questions –**

There was confusion on which radio frequencies were being utilized on the fire. Despite the success of the LE evacuations, there was little communication between the LE group and Fire Command. Although the initial attack resources had good radio communications with each other. As the incident increased in complexity, incoming responders from outside of Fritch and Hutchinson County did not have all of the correct frequencies nor a way to program needed frequencies into their radios. Frequencies were not clearly identified during the initial phase of the incident and were changed without informing all involved firefighters. As the incident progressed, the assignment of correct frequencies was slowly worked out as responders were given compatible simplex frequencies. However, some IA forces were still using local frequencies and this problem was not remedied until the beginning of the second shift (Monday morning). Also, incoming resources from outside the county may not have been able to utilize the Hutchinson County command (repeater) frequency unless they already had it programmed in their radios.

**Discussion Questions –** How does your organization address frequency management when working with multiple agencies or departments that use different frequencies as well as different radio systems (for example 400mghz vs. 800mghz)? How do you ensure that resources without the ability to program radios have adequate communications? Are there enough shared tactical frequencies to establish multiple divisions?

There were multiple reports of both mobile and hand held radios lacking functionality. The most significant of these was the inoperability of the mobile command trailer from an adjacent county that put the IC/ICP out of communication for 45 minutes during the wind shift period, a critical period during the fire. In addition, the evening that the fire was making its run through the Fritch area, a reconnaissance plane arrived on the fire. Ground personnel were unaware of the physical extent and location of the fire and would have welcomed aerial reconnaissance intelligence, but there were no line personnel on the fire who had radio contact with the plane.

**Discussion Questions** – Are you aware of the kinds of cooperating agency resources and their application to assist you in an incident? Have you had an opportunity to run a simulation to work out any bugs? If aircraft are requested or assigned to an incident, do you know how to communicate with them?

## 2-Interpersonal

As with any group(s) that works together, there will be times when past disagreements will affect their ability to function effectively. On the Double Diamond Fire this seemed focused on the fire departments that responded from outside Hutchinson County. They wanted to employ tactics on the fire that many of the Hutchinson County fire agencies did not agree with for safety reasons, (such as frontal assault on the fire). Within Hutchinson County, cross-agency training was used prior to the Fritch Fire to develop relationships and to develop a common operating picture. Many firefighters stated that this was a critical part of their ability to employ the tactics used and maintain their safety throughout the incident.

**Discussion Questions** – What does your organization do to enhance inter- and intra-agency and departmental cooperation? Are there additional actions you could take to build these relationships further? Have you considered or identified how tactical and strategic objectives used by different agencies or departments may affect the management of an incident?

## **ORGANIZATION**

In many parts of the country where federal lands are not present, the primary firefighting force consists of Volunteer and/or Municipal Fire Departments. These organizations successfully respond to thousands of all-hazard incidents each year but may have limited opportunities to develop personnel with the experience to manage extremely complex incidents. In addition, turn-over within departments varies considerably and creates challenges in maintaining an experienced set of firefighters. The Double Diamond Fire highlighted the absence of sufficient local emergency responders with mid and upper level command experience to manage a complex, fast-moving incident.

**Question** – How can your organization assist your local partners with developing skills and experience? What is the role of state and federal agencies in providing mentoring and training opportunities to our local cooperators to build capacity?

Implementation of the FAD was based on a limited local capacity and provided firefighters the knowledge, skills, and understanding to be successful implementing the tactical plan, however, the organization lacked the ability to expand as the incident rapidly increased in size and complexity.

**Question** –Does your organization have a plan in place to meet the needs of an expanding incident?  
How do you supplement your local expertise when it may be overwhelmed in the first few critical hours?

## ARE WE LEARNING?

The following were lessons learned from incidents in the Southern Plains from the 2005 – 2006 fire season ([Wildland Fire Lessons Learned](#)). Observations and implemented practices related to the Double Diamond Fire follow in red.

### FIREFIGHTERS

- Follow the basics: Fasten seatbelts, attack from the black, no alcohol  
-There was no reporting of any of these being issues on this incident.
- Encourage physical fitness  
-Without a baseline this is hard to gauge but everyone can always improve on physical fitness making them better firefighters. It was heartening that there were no injuries reported on this incident.
- Have PPE and wear it  
-There were no reports of any responders not wearing PPE; the staging area managers reported checking all incoming resources for PPE and requiring them to wear it!
- Use anchor points and flanking tactics  
-This was the basic strategy utilized on this fire. There were reports of fire crews from visiting counties being asked to move from doing direct attack on approaching head fires with excessive flame lengths coming out of canyon draws, to ensure their safety.
- Follow ICS –as in one IC per incident  
-This was followed although there was confusion early on regarding who the IC should be. On the second day the fire had an accepted command structure.
- Thorough Briefings  
-The crews that were on initial attack or went through staging had reasonable briefing and assignment instructions; there were some resources that made it to the fire without a briefing. Incident briefings occurred from the second day onward.
- Train for more critical burning conditions  
-This was happening with the departments in Hutchinson County
- Ensure multi-department radio communications  
-Radio issues were identified as a significant issue (see above) and can continue to be improved upon.

### WUI RESIDENTS

- PREPARE defensible space! Well before fires arrive

-Some residents took advantage of guidance provided by the Fritch Fire Department in a recent Firewise effort. Many residents ignored the suggested mitigation work that is needed to help protect residences from wildfire.

- Use fire resistant (vegetation) shelter belts. Not juniper
  - Some residents had green fire resistant lawns; junipers caused control issues in yards in some areas.
- Emphasize fire prevention
  - Prevention efforts may be having an impact as, generally there are said to be fewer human caused fires in Hutchinson County than in the past.
- Prepare family & community fire protection plans
  - Some residents lost everything when their homes burned down, so more needs to be done to prepare families for quick evacuations. NPS had worked with the Fritch area on a CWPP. The FAD was a response to the CWPP and the recognition by firefighters to be better prepared for local wildfires.
- Develop call lists for emergencies
  - County effectively utilized reverse 911 and social media
- Prepare in advance for evacuation-Go early , or Stay and defend
  - The fire did not present the option to go early. The disaster declaration did not offer the option of staying and defending. Many of the 18 evacuation refusals, who may have thought to stay and defend, changed their minds and left when they saw the enormity of the advancing fire front. Luckily they got out safely (although late).
- Conduct simulations for wildfire response
  - This was being done with several departments; the FAD is built on a modeled scenario/simulation, as were the Fritch sand table exercises. Developing strengths in ICS is crucial for a robust and effective response.
- Identify community safety zones
  - This was being accomplished with the FAD that was under development and helped minimize some of the chaos.
- Develop highway warning systems for poor visibility
  - This incident grew so fast that signs were not initially placed on area roadways until subsequent days. It did not grow to sufficient size to significantly impact major highways, but this threat needs to be continually assessed on all wildfires.



## 5. Commendations

---

- The recognition to preplan (the FAD) and prepare for a wildfire that would impact the Fritch community and adjacent NPS land created a collaborative process that mentally prepared fire and community officials for the challenges of this fire and prevented loss of life. This collaborative planning activity over the past year greatly increased areas of success on this fire.
- The fire related cross-training that the Fritch and other Hutchinson County fire departments do with the NPS and other cooperators allowed for firefighters to develop relationships that created common understanding and trust during the emergency. One firefighter said, "I am not going to trust someone I don't know or work with to cover my backdoor."
- The emergency evacuation definitely prevented loss of life. The FAD laid out a basic evacuation framework, but one LE officer managed 2 geographic divisions and kept track of the officers working those areas to create a system that allowed them all to move methodically through the fire chaos. The officers involved were from different departments and jurisdictions but merged into an effective emergency team. These effective evacuations got people out of harm's way and prevented loss of life, the primary objective in an incident like this.
- The use of Facebook from the EOC was a fantastic and successful use of social media to inform the public of the escalating fire situation. Hutchinson County had been working for a couple of years to establish community trust by demonstrating their capacity to quickly inform the public of incidents using Facebook notifications; their diligent work paid off.
- This was a complicated and hazardous fire. The fact that all resources were able to evacuate several hundred homes, keep themselves safe in a challenging and changing fire environment, and make progress on suppressing the fire and yet had no accidents or injuries is a major achievement.

## 6. Leaders Intent and the FLA team

---

### The Delegation of Authority:

June 10, 2014

To: Brent Woffinden, Facilitated Learning Analysis (FLA) Team Leader.

From: Robert Maguire, Superintendent, Lake Meredith NRA  
Danny Richards, Emergency Management Coordinator, Hutchinson County

Subject: Double Diamond FLA

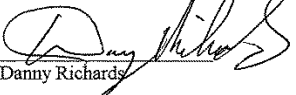
We hereby delegate authority to Brent Woffinden, Team Leader, to conduct a Facilitated Learning Analysis (FLA) of the Double Diamond fire that occurred on May 11<sup>th</sup> within Hutchinson County and Lake Meredith NRA.

The intent of a FLA is to improve performance by benefitting from the shared experiences of participants. We would like you to keep in mind the following items as you and your team move through this process.

- Help the emergency responders within Hutchinson County develop their own corrective actions where necessary.
- Highlight on those practices, decisions, or actions found to be good and/or effective.
- Encourage open, candid and safe discussions while maintaining respectful participation.
- Encourage each individual to seek feedback and insist on effective and active listening.

If you need assistance during this review please contact Fritch Fire Chief Ronnie Morrison on behalf of Hutchinson County. Your NPS contacts will be Bruce Fields or Todd Wood.

Please provide a debrief at 0830 hrs on June 13<sup>th</sup>. We would then like the final report by July 11<sup>th</sup>, 2014. Thank you for your time and assistance.

  
Danny Richards

  
Robert Maguire

  
Brent Woffinden

## FLA Team Summary

The FLA team would like to thank all 46 of the responders that we had the opportunity to interview during this process that allowed us to learn and pass on lessons from their experiences. We are mindful of the residents of Fritch that suffered significant loss due to the fire. It is our belief that the efforts of those that responded to the Double Diamond Fire saved equal or more houses than were lost, and through pre-planning and training employed tactics that prevented injury or loss of life.

There was no doubt that all who responded to this incident will never forget what they experienced, and that this experience will aid them in future and hopefully less complex incidents.

The plan (FAD) that was being developed to respond to a fire such as this was instrumental in reducing property loss, injuries, and death. The rigidity with which many initially followed the plan may have caused undue stress to those involved. Any “plan” needs to have the flexibility to adapt to variables in weather, available staffing and other unforeseen conditions. As community planning continues, the lessons learned from the Double Diamond Fire should prove invaluable in future planning efforts.

One consideration for both near and long term emergency planning would be to consistently re-evaluate where Hutchinson and surrounding counties are at with ICS training and experience. A real capacity to quickly assemble proficient and effective management organizations to supervise complex incidents depends on having both a core of trained and experienced individuals with the knowledge to fully utilize the flexibility of the Incident Command System and the ability to incorporate additional resources from cooperators to fill gaps in the organization. A combination of local and regional expertise will generally be required to meet this need as many local organizations simply do not have the capacity.

| <b><i>Name</i></b>     | <b><i>FLA Position</i></b>   | <b><i>Agency/Position</i></b>                   |
|------------------------|------------------------------|---|
| <i>Brent Woffinden</i> | Team Leader                  | NPS, Deputy Regional Fire Management Officer    |
| <i>Jason Riggins</i>   | Operations                   | USFWS, Fire Management Officer                  |
| <i>Mary Leathers</i>   | Fuels/Historical context     | Texas A&M Forest Service, Prevention Specialist |
| <i>Kevin Albright</i>  | Law Enforcement              | NPS, Law Enforcement Specialist                 |
| <i>Bob Lineback</i>    | ICS and Operations           | Retired Fire Manager and Incident Commander     |
| <i>Matt Lanier</i>     | WUI Specialist/Mitigation    | Texas A&M Forest Service WUI Specialist         |
| <i>Justin Turnbo</i>   | Subject Matter Expert/Editor | NPS, Fuels Management Specialist                |

## 7. Appendices

---

### Appendix A: Evacuation Extended Information

Bred into the fundamental fabric of nearly all law enforcement organizations throughout the country and possibly the world, is a sense of pride, camaraderie and team. How an individual officer defines his or her “team” has a significant impact on the types of and quantity of communication that occurs between individual officers or even management. More often than not, team is defined as a small group that is limited by their uniform or department name, but there exists the exceptions to that norm. As the Double Diamond fire in the town of Fritch began to grow, multiple law enforcement agencies were able to quickly come together for a common mission, which was to evacuate those residents in harm’s way, and to look out for one and another while doing so. In this endeavor, they leaned upon their experience levels as well as upon their shared sense of community responsibility to form an effective, productive and successful “team”.

At approximately 1600 hours on the afternoon of May 11<sup>th</sup> 2014 an NPS ranger, driving through the town of Fritch in his marked NPS vehicle, smelled what he thought was smoke inside his vehicle. He initially attributed the smell to his fire gear which was also in his vehicle with him, but as the smell persisted, he began seeking another source and quickly observed a plume of smoke. Almost simultaneously to the ranger’s arrival on scene was the arrival of an NPS wildland fire engine which had recently returned to the area from assisting with another nearby grassfire. While firefighters began their initial attack on the quickly growing and moving fire, law enforcement initiated evacuation operations to remove residents from harm’s way. What began at first with a single NPS law enforcement ranger and a nearby Texas Department of Public Safety trooper, grew quickly to include at least 15 law enforcement personnel from several different agencies within the first few hours. As more and more law enforcement personnel arrived, they formed a structure consisting of two geographic divisions and an overall LE Operations coordinator (a Hutchinson County Sheriff’s Department supervisor) that arrived at approximately 1630. Initial evacuation notices by officers were largely informative and “strongly suggested” but were backed up with common sense and the ability to show residents the oncoming smoke column and sometimes active flames. Upon notification from the LE Ops, by approximately 1630 the official Evacuation Order had been signed and was now in place. Officers performed a secondary sweep of already completed areas to reemphasize the urgent and now official request. Based on the previously referenced “Fritch Area Defense Plan” (FAD), that had been in draft development over the previous several months, several of the responding officers had a solid grasp on the objectives and implementation strategy of the evacuation.

---

*“We’ve got the fire from hell,  
let’s go with the plan”*

---

In addition to the boots-on-the-ground approach to the evacuation, additional methods of information dissemination were attempted. These methods included using Facebook, Twitter, and reverse 911. While these methods undoubtedly helped alert residents to the approaching danger, an unintended consequence was the rapid and complete inundation of the EOC center with phone calls, requests for additional information, and outside requests for specific welfare checks on family members in the Fritch area. This sudden and complete inundation of calls hampered the EOC’s ability to perform other tasks



such as resource requests and incident coordination. EOC personnel then obtained and placed a picture of the fire on the Facebook page, which was effective in decreasing the amount of calls from citizens inquiring as to the severity of the fire.

Officers, under direction from LE Ops, moved north clearing streets and neighborhoods in a coordinated fashion. Completed streets were radioed into LE Ops who would mark them off of a map he possessed in his vehicle. LE Ops met with local Justice of the Peace (JP) who remained with and assisted him during this initial evacuation phase. The JP assisted with the documentation efforts as information was relayed over the radio. Additionally, residents who were contacted by officers and informed of the evacuation order but refused to vacate their houses were informed of the severity of the fire, but if their refusal to leave their house persisted they were not forcibly removed. Given the compressed time frame to evacuate a large portion of the town and the relatively small number of people to perform the task, it was decided that forcibly detaining people who appeared mentally capable of making an informed decision would occupy too much of the limited LE resources. Their names and addresses were relayed to LE Ops which he documented simply as “refusals” for future follow up. Out of an estimated three hundred houses that were contacted for evacuation by officers, only eighteen refusals were documented. Only one of those refusals was forcibly removed due to the perception by the officers that they were incapable of making an informed decision on their own.

During this evacuation process, officers were reportedly very close to the head of the moving fire. It seemed like it was a continual race to stay ahead of the rapidly moving flames. On several occasions, officers reported that as they approached a house to inform them of the evacuation, the residents expressed skepticism until the officer pointed out the fact that some portion of their house was actively burning as they spoke. They also encountered several people whom officers had to physically carry out to their vehicles due to physical infirmities. Some residents were ready and willing to leave, but required assistance carrying their pre-prepared luggage to their vehicles, and pets were released from cages or fences. Essentially, officers had to deal with the full spectrum of emotional reactions to their evacuation order, as well as adaptively respond to the conditions of the occupants. Each time the officers approached a residence, the encounter was tense, uncertain, rapidly evolving and unique in its circumstances.

Although a larger Incident Command Structure (ICS) had been loosely created over the entire incident, it was heavily focused toward the fire service and fire operations. By default, great latitude was afforded LE Ops to run the evacuation process as he saw appropriate. With the basic tenets of the draft “Fritch Area Defense Plan” as the basis for operations, the officers in the field largely executed the evacuation without oversight above the LE Ops position. Personnel accountability was all done informally and on a sheet of paper in his vehicle through information he received from his two Division supervisors.

While officers moved through neighborhoods knocking on doors, additional responding officers set up roadblocks which were designed strategically to prohibit vehicles and people from entering the evacuated zones. The initial plan called for specific roads to be used for area egress which would leave other roads open to ingress by firefighters and firefighting apparatus. As emotions ran high, numerous residents found creative ways to avoid those roadblocks

---

*“If I hadn’t turned I would have been clipped by the side mirror”*

- firefighter nearly hit by public vehicle

---

utilizing open fields and small secondary roads to enter into previously evacuated areas. This presented an exceptionally hazardous situation for firefighters engaged with the fire. Many of these vehicles were fast moving and were controlled by drivers distracted by all the fire, smoke, damage and activity occurring around them.

At approximately 2000 hours, as the evacuation process was progressing north through the town's western neighborhoods, information was relayed by several sources to the LE Ops that there was a pending significant wind shift that would transform the southwest wind into a north wind at approximately 2030 hours. LE Ops had previously been working on information that the wind shift would not occur until almost midnight. Based on that information he stopped the northerly progression of the evacuation teams and attempted to start performing secondary sweeps in neighborhoods they had previously canvassed as well as additional neighborhoods that may now be affected.

Based upon the pre-plan as well as local knowledge, two areas of refuge were identified and provided to evacuated residents. While many residents were able to retreat to houses of extended family members or friends not in the fire's path, those that did not or could not were offered refuge in the Fritch school gymnasium, as well as local church. Relief and support organizations, as well as concerned neighbors, provided humanitarian services at those two locations. After the initial phases of operations, officers were stationed at each of those areas and would prove valuable as information conduits between the field officers and concerned evacuees.

As the immediate evacuation concerns waned over time, the law enforcement focus changed to performing roving patrols, perimeter security, and public assistance. Roving patrols were performed to prevent looting, protect firefighters, and to keep public away from the still very present dangers such as downed electrical lines and still active fire. Numerous additional law enforcement officers from nearby agencies arrived and were able to provide some relief to the initial crew which were exhausted and emotionally spent after their harrowing evacuation attempt. Roadblocks were strengthened and maintained, although many determined residents were able to find creative ways to get back into the evacuated zones. These people remained a hazard to ongoing firefighting operations, and when possible were stopped and removed by law enforcement.

Perimeter security and area closures were maintained for several days. Public sentiment at the roadblock areas ranged from supportive and understanding, to angry and heated. Several spirited arguments occurred between law enforcement and residents requesting access to their properties, and one of those encounters resulted in an arrest for drinking and driving. As time, staffing and obligations allowed, officers assisted residents with examining their properties which provided them with some closure and helped them with planning for the next phases of their lives.

Neighboring emergency service organizations often talk about "team" and tout their ability to work well together, but rarely do they get tested in an environment such as these officers experienced beginning on May 11<sup>th</sup> 2014. Quick action, ability to implement a plan and adapt the plan to changing conditions, ability to work through tense, uncertain and rapidly evolving situations, and willingness to abandon agency boundaries and quickly form a new "team" ultimately made this aspect of the incident a success and undoubtedly saved lives.

#### Evacuations: The homeowner perspective:

Several homeowners, who reside in the Lake Meredith subdivision, where the largest number of homes burned, were interviewed about their opinion of the evacuation process. Of the three homeowners interviewed, one was already in Amarillo for personal reasons. However, the two other homeowners were inside their residence during the call for evacuation. The two (who were in their homes at the time of the fire) expressed that the evacuation orders came in a timely manner. In addition, the residence highlighted the level of professionalism and courtesy exhibited by the combined teams of law enforcement officials when prompted to evacuate.

The evacuating households (one of which consisted of an elderly woman, and the other consisted of a young family) told me that their own panic caused them to rush. Therefore, they grabbed whatever items in front of them that seemed essential. The elderly woman stated that she immediately grabbed her meds and her purse and evacuated without any hesitation. However, the young family grabbed more items such as handguns, dogs, purse, truck, food, a sentimental blanket, and money. When asked if either household had a premade evacuation bag or a personal evacuation plan, they both stated that they did not. Therefore, as a future suggestion, there needs to be a bigger push for the *Ready-Set-Go* program – which (in part) educates people on how to plan for and be prepared to immediately evacuate

## Appendix B: Prevention / Mitigation Efforts Prior to the Fire:

Prior to interviewing individual homeowners about their experience with the Double Diamond fire, we interviewed two members of the Fritch VFD. These two members were the Deputy Chief, and a Firefighter. Both of them stated that two months prior to the Double Diamond fire, they initiated a prevention and mitigation push throughout the Lake Meredith and Double Diamond subdivisions. The programs they attempted to inform people about consisted of the *Ready-Set-Go* and *Firewise Communities USA* programs – as well as held an educational town hall meeting. The Ready-Set-Go program covered preparedness and prevention issues such as defensible spacing and construction, as well as building an evacuation kit and creating a personal evacuation plan. The Firewise Communities USA pamphlets focused on mitigation efforts to reduce the intensity of fires in the WUI. Such principles advocated by the Firewise Communities program consisted of Firewise landscaping (reducing or removing the fuels, and creating defensible spacing) and Firewise construction (using certain building materials and techniques). Unfortunately, these efforts did not reach the goal that the members of the Fritch VFD anticipated.

According to the Fire Chief, “only 7 people showed up to the meeting, even after going door to door handing out flyers and using the media to get the information out.” Unfortunately, despite the educational push from the Fritch VFD, many homeowners made no additional efforts to reduce the hazardous fuels surrounding their property. In addition, several buildings and lots were abandoned and unattended. Consequently, this scenario led to a high buildup of surface fuels and brush/small trees adjacent to homes, which exacerbated the likelihood of structural ignitions. Human caused combustible materials (lumber piles, firewood, etc.) were also upwind and adjacent to structures. Many structures had wood construction and roofs. There were several homeowners who utilized some of the mitigation practices in and around their property – which increased the likelihood of these homes being saved.





## Inputs: SURFACE, SIZE, IGNITE

Description ➡

## Fuel/Vegetation, Surface/Understory

Fuel Model



gr4

## Fuel Moisture

1-h Moisture

%



5, 4, 3, 2, 1

10-h Moisture

%



100-h Moisture

%



Live Herbaceous Moisture

%



80

Live Woody Moisture

%



## Weather

Midflame Wind Speed (upslope)

mi/h



15, 20, 25, 30

Air Temperature

oF



75

Fuel Shading from the Sun

%



0

## Terrain

Slope Steepness

%



0

## Fire

Elapsed Time

h



1

## Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always  
for the direction of the spread calculations [SURFACE].

Wind is blowing upslope [SURFACE].

**Surface Rate of Spread (maximum) (ch/h)**

| 1-h<br>Moisture | Midflame Wind Speed (upslope)<br>mi/h |       |       |       |
|-----------------|---------------------------------------|-------|-------|-------|
| %               | 15                                    | 20    | 25    | 30    |
| 5               | 218.1                                 | 330.7 | 361.3 | 361.3 |
| 4               | 228.4                                 | 346.3 | 399.8 | 399.8 |
| 3               | 243.1                                 | 368.6 | 460.4 | 460.4 |
| 2               | 263.4                                 | 399.5 | 552.2 | 554.0 |
| 1               | 290.8                                 | 440.9 | 609.5 | 697.2 |

**Area (ac)**

| 1-h<br>Moisture | Midflame Wind Speed (upslope)<br>mi/h |        |        |        |
|-----------------|---------------------------------------|--------|--------|--------|
| %               | 15                                    | 20     | 25     | 30     |
| 5               | 804.2                                 | 1451.8 | 1644.2 | 1644.2 |
| 4               | 882.0                                 | 1592.2 | 1948.4 | 1948.4 |
| 3               | 999.2                                 | 1803.9 | 2464.4 | 2464.4 |
| 2               | 1173.6                                | 2118.7 | 3335.0 | 3350.3 |
| 1               | 1429.8                                | 2581.1 | 4062.9 | 4899.5 |

**Perimeter (ch)**

| 1-h<br>Moisture | Midflame Wind Speed (upslope)<br>mi/h |     |      |      |
|-----------------|---------------------------------------|-----|------|------|
| %               | 15                                    | 20  | 25   | 30   |
| 5               | 465                                   | 691 | 752  | 752  |
| 4               | 487                                   | 723 | 830  | 830  |
| 3               | 518                                   | 770 | 953  | 953  |
| 2               | 562                                   | 834 | 1139 | 1143 |
| 1               | 620                                   | 921 | 1257 | 1432 |

**Probability of Ignition from a Firebrand (%)**

| 1-h<br>Moisture | Midflame Wind Speed (upslope)<br>mi/h |     |     |     |
|-----------------|---------------------------------------|-----|-----|-----|
| %               | 15                                    | 20  | 25  | 30  |
| 5               | 64                                    | 64  | 64  | 64  |
| 4               | 74                                    | 74  | 74  | 74  |
| 3               | 85                                    | 85  | 85  | 85  |
| 2               | 98                                    | 98  | 98  | 98  |
| 1               | 100                                   | 100 | 100 | 100 |

## Appendix D:

### Quotes from Double Diamond firefighters on the incident in various capacities.

(Collected from meetings, interviews, and other interactions with involved firefighters. These are their ideas, concerns, and thoughts. They are not in context, but they do give snapshots of the fire situation).

FF- “We could see the smoke from the Dairy Queen (they were getting food after returning from the earlier 400 acre grass fire incident). The initial response from the Dairy Queen was an NPS engine, a Fritch engine, and a command vehicle.”

TFLD- “Stop the fire before it gets to the gravel pit area”

IC- “Send us what you can; this fire is going to run”

FF- “At that beginning point, we had only lost 2 structures”

FF- “The fire was moving at 9 feet per second”

Initial Attack FF- “The flame lengths were 40 feet horizontal”

FF- “The flame scar on the roads was completely across the pavement”

Engine Captain- “We were firing and putting engines on the structures in the firing area”

FF- “NPS law enforcement rangers were used as lookouts, as they were fire experienced”

Fire chief- “5 people knew the plan (FAD) by heart”

FF- “There was lots of driving back and forth to see what resources they had and where they were at”

FF- “The sand table exercises we did as part of the plan were very helpful”

FF- “There was a guy who was mowing his yard and refused to evacuate, while we were firing around him”

FF doing some evacuation work- “People did not believe us. They did not want to leave”

FF on drip torch- “There were about 20 spectators in and watching our firing operation”

LE- “We were evacuating people from a house where the people inside did not realize that their back porch was on fire”

IC- “We moved to the Randall County Command unit, and lost radio communications for 45 minutes”

IC- “I tried to go back to the Hutchinson County Communications van, but it had moved and was gone”

Engine captain, on why they had to move some of the engines out of the head fire area, (40’ flame lengths), “They see fire, and they put water on it”

FF- “Some of the engines were dispatched by the TV news reports”

TFLD- "We had no communications with 3 fire trucks..." FF - "We had a lot of spectators on the West Flank; a lot of people (publics) were driving around"

Command- "It was not obvious where everybody was at, or where the fire was at"

Fire Manager- "We ran out of people to implement the plan (FAD)"

TFLD- "Communications with the IC failed about at the wind shift time"

Command person- "TFS was in contact with the air attack plane. But they did not talk to anyone on the ground"

Engine FF- "The grid was shut down by the power company, but no guarantees"

IC- "Resources were assigned, but there was no communications back as to if they arrived and where the fire was at."

Engine captain- "Communications with them was hard; they wouldn't answer"

Engine captain- "The ornamental hydrants on lawns could fake out some of the out of area engines"  
(per local yard art that places decorative fire hydrants on home landscapes)

Experienced FF- "There was no TFLD there when we arrived, so I took on that role"

Fritch FF- "In our training, we actually prepared for the worst"

VFD firefighters on Firewise- "In the future we will be more aggressive about defensible space and talk with the public more about evacuations"

FF- "We couldn't keep the media out of the staging area and talking to firefighters returning from the line"

FF- "That reporter was really aggressive"

Command overhead- "I was the Staging Manager and Operations, in a round-a-bout way"

Command overhead- "I assigned resources, but they couldn't locate their person to report to"

Command overhead- "Communications was the root of all our problems on the incident"

Experienced FF- "Several steps were skipped when the plan (FAD) was activated, and that rattled me"

Command overhead- "Staging was set up and operational by 1630"

Experienced FF- "Fritch has an SOP of mixing experienced with rookie firefighters on the same truck, to prevent inexperienced from all being together"

Engine captain- "Taking S-215 saved my life"

Fritch FF- "If we would not have had the training we had, we would have had fatalities"

FF- "This guy really wanted to drive through our checkpoint. He bumped this county guy 2 times with the bumper. Then the county guy (off duty LE) pulled his gun on him, and that stopped that"

Command overhead- "They abandoned all the perimeter checkpoints they were staffing at 5pm on Monday. They didn't tell anybody, they just left. "

TFLD- "I wish I had been more proactive and not hesitated to request resources when I needed them."