NIST Technical Note 2128

Preliminary Data Collected from the Camp Fire Reconnaissance

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National Institute of Standards and Technology
U.S. Department of Commerce

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Cover Page Photo: Paradise, CA. Source: NIST

Abstract

The Camp Fire ignited on the morning of November 8, 2018, in Pulga, California. Fanned by high winds, the fire spread quickly through wildlands and burned into the wildland-urban interface (WUI) communities of Concow, Paradise, and Magalia, California. Within hours, thousands of structures were destroyed as over 30 000 residents evacuated the area. The Camp Fire burned for 18 days, consumed 62 053 ha (153 336 ac), destroyed or damaged 19 558 structures, and killed 85 people. As part of the National Institute of Standards and Technology (NIST) Disaster and Failure Studies Program, a reconnaissance team was deployed to the Butte County, California to collect any perishable data, along with preliminary field data, to evaluate if additional studies or data collection should be performed. A multi-agency team consisting of NIST, U.S. Forest Service (USFS), and Federal Emergency Management Agency (FEMA) members worked closely with the California Department of Forestry and Fire Protection (CAL FIRE) incident command. Two deployments, totaling 18 days in the field, were conducted to collect perishable data including automatic vehicle location data, 911 calls, radio logs, and damaged structure details. The NIST team conducted damage assessments of 132 residential structures. The deployment team determined that the Camp Fire data on structural losses, fire behavior, evacuation and notification challenges, infrastructure response, and firefighting response were of valuable technical interest to support an in-depth case study and learn from this significant WUI fire event.

Key words

disaster resilience; field data collection; large outdoor fires; wildfire; Wildland-Urban Interface; WUI

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1. Introduction

The most destructive wildland-urban interface (WUI) fire in the history of the state of California ignited on November 8, 2018. By the end of the first day, thousands of homes and businesses were destroyed, and an entire region was evacuated. The fire resulted in 85 fatalities.

The National Institute of Standards and Technology (NIST) Fire Research Division and the Disaster Failure Studies Program [1] monitored the developing news of the Camp Fire, and on November 17, 2018, deployed an interagency preliminary reconnaissance team to Paradise, CA to support NIST's ongoing research efforts in WUI fire, disaster response, resiliency, and evacuation.

The primary objective of the reconnaissance was to determine if the Camp Fire offered potentially valuable data that, if collected and analyzed, could provide new technical insight into the WUI fire problem. A previously published NIST report describes the deployment criteria and reconnaissance deployment [2]. This report presents the preliminary data that was collected during the 18-day reconnaissance. Additional data collection and analysis is ongoing and will be presented in an in-depth case study report detailing the timeline of the Camp Fire incident.

The Camp Fire started in the early morning of November 8, 2018 in vegetative fuels in the small community of Pulga, CA, located 5 km (3 mi) to the northeast of Concow, CA. Concow is an unincorporated community and census-designated place of primarily residential occupancies with a population of 762 in the Sierra Nevada foothills in eastern Butte County [3]. Strong winds pushed the fire onward to Paradise, CA, located approximately 5 km (3 mi) further to the west. Paradise is also located in the foothills above the northeastern Sacramento Valley. As of the July 1, 2018 census estimate, the town population was 26 682 [4].

2. Camp Fire Statistics

The Camp Fire started in the vicinity of Camp Creek Road in Pulga, CA (in unincorporated Butte County) on November 8, 2018 at approximately 6:30 am. Strong winds rapidly spread the fire, overtaking Concow and Paradise, CA within the first several hours; the majority of the fire's spread occurred within the first 24 hours. **Figure 1** displays the fire progression through November 14, 2018 [5].

Ultimately, the fire resulted in 85 civilian fatalities and three firefighter injuries and burned 62 053 ha (153 336 ac). A total of 19 558 structures were destroyed or damaged; equivalent to three times the losses of the 2017 Tubbs Fire, CA (5636 structures) or six times the losses of the 1991 Oakland Hills Fire, CA (2900 structures). A majority of destroyed structures were residential, however, significant losses to commercial structures were also experienced. Preliminary estimates indicate that the Camp Fire will be the most costly fire in California history at a cost of $11 billion to $13 billion [6] and $3 billion for cleaning up debris [7].

The agencies responsible for the unified command of the incident were the California Department of Forestry and Fire Protection (CAL FIRE), Butte County Sheriff's Office, Paradise Police Department, and the U.S. Forest Service (USFS). At peak daily staffing, total personnel involved in firefighting exceeded 5600, including 900 pieces of apparatus (622 engines, 101 fire crews, 103 dozers, and 77 water tenders) [8].

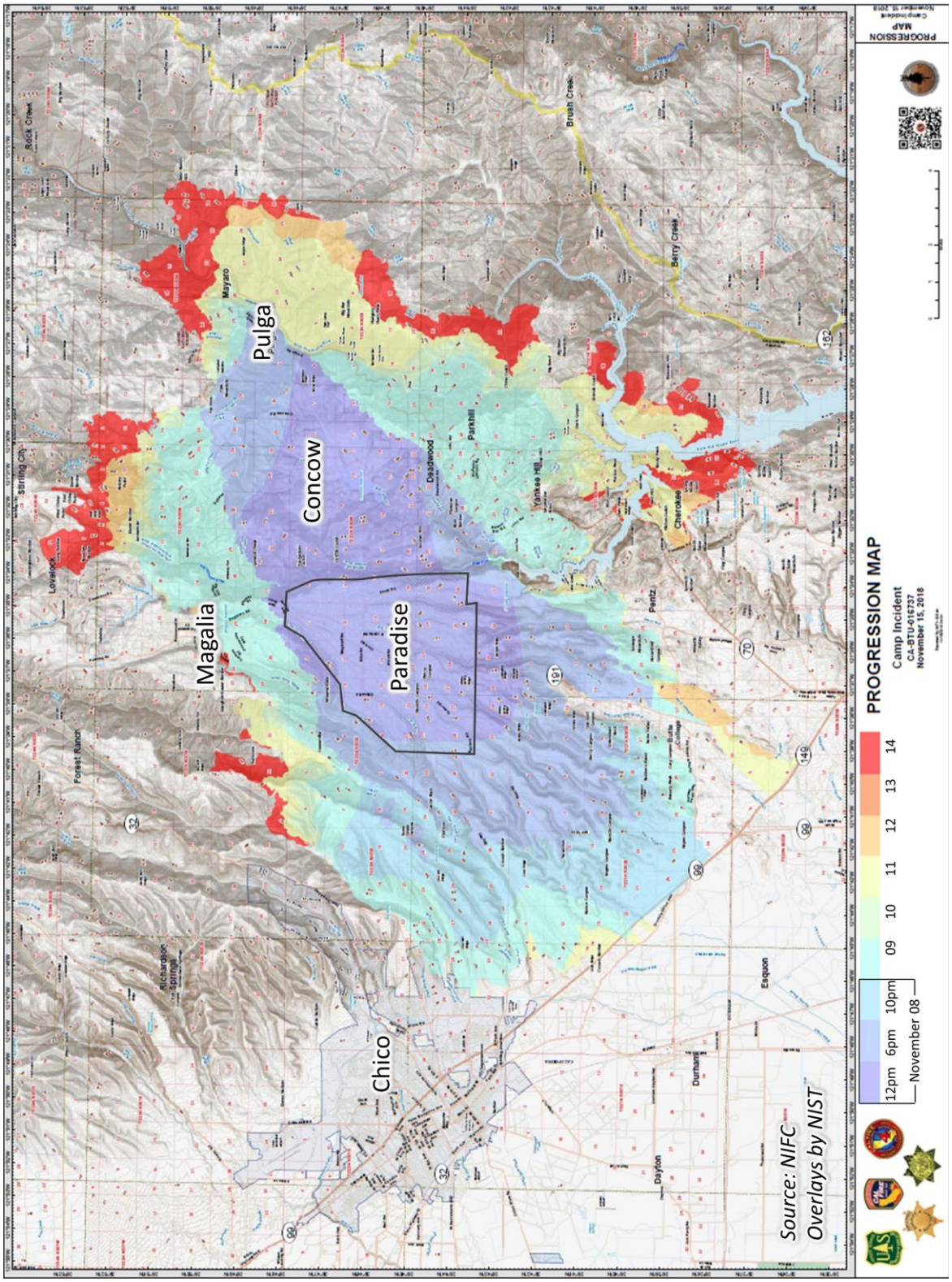

Figure 1. Camp Fire Map showing the fire progression through November 14, 2018 [5]. Overlays have been added to enhance readability.

3. Data Collection

The data presented here includes preliminary data that was collected before, during, and after the field deployments. Data for the Camp Fire is organized into the following framework:

1. Damaged Structure Assessments
    a. CAL FIRE Damage Inspection Specialists (DINS)
    b. NIST Damage Assessments
        i. Data sheets
        ii. Newly identified damaged structures
        iii. Photographs
2. Incident Data
    a. Operations maps and Incident Action Plans (IAP)
    b. Automatic vehicle location (AVL)
    c. Radio log transcript
3. Maps
    a. USGS topographic maps
    b. Evacuation zone maps

3.1. Damaged Structure Assessments

After the emergency response phase of the incident, a team of CAL FIRE Damage Inspection Specialists (DINS) evaluated each structure within the affected area to determine the extent of damage. Additionally, the NIST reconnaissance team performed in-depth assessments of 132 damaged structures with the goal of documenting structure ignitions and exposures, and defensive actions.

3.1.1. CAL FIRE Damage Inspections Data

The CAL FIRE DINS team had the task of assessing every structure larger than 11 m^2 (120 ft^2) within the Camp Fire perimeter. Ultimately, over 23 000 structures were documented.

Table 1 provides a breakdown of damaged and destroyed structures by occupancy type [9]. The data is also available via an interactive web map [10]; a screenshot is shown in **Figure 2**. Red icons indicate *Destroyed* structures, black icons indicate *No Damage*, and green, yellow, and orange icons indicate increasing levels of damage. The map indicates the geographic breadth of significant destruction caused the by the fire.

Table 1. Camp Fire Damage Assessment Summary [9]

Damage Category[a]	Affected (1 % to 9 %)	Minor (10 % to 25 %)	Major (26 % to 50 %)	Destroyed (>50 %)	Total
Single Residence	439	47	3	13 696	14 185
Multiple Residence	21	3	1	276	301
Mixed Commercial/Residential	1	1	0	11	13
Non-residential Commercial Property	76	18	8	528	630
"Other" Minor Structures[b]	87	32	13	4286	4418
Infrastructure[c]	2	0	2	7	11
Total	626	101	27	18 804	19 558

[a] Damage categories are adopted from FEMA preliminary damage assessment guidelines [11].
[b] Uninhabitable structures such as detached garages and sheds.
[c] Infrastructure includes communications towers, water supply equipment, and bridges.

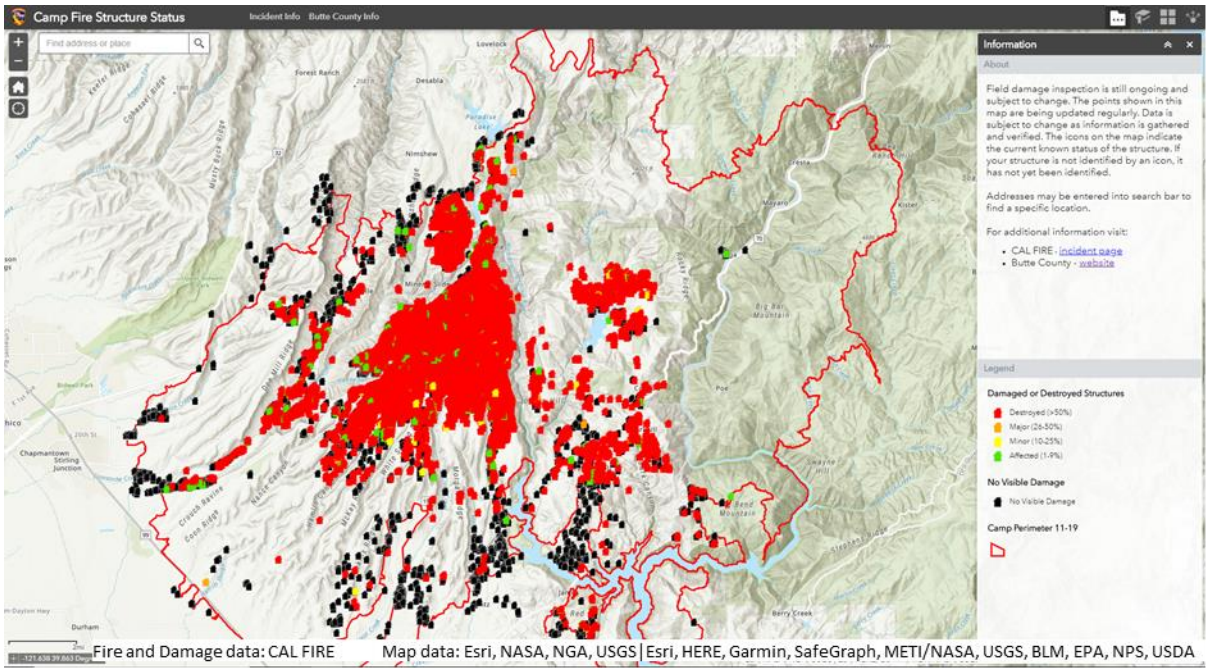

Figure 2. Screenshot of interactive web map [10] produced by CAL FIRE indicating the damage status of all DINS-assessed structures within the fire area.

3.1.2. NIST Damage Assessments

During the NIST data collection efforts in the field between December 1 and December 12, 2018, a total of 132 damaged residential structures were assessed. Each assessment consisted of a three- or four-person team performing a walk-around to identify any damage (**Figure 3**). If damage was found, a Damage Assessment Report (Appendix A) was completed to record the type of damage and other details about the structure characteristics. Photos were taken to document the damage.

The completed structure assessment forms used to document the damage and exposure information collected in the field will be released as part of a Camp Fire report. The 132 sets of accompanying photographs have been redacted to obscure street names and other personal identifying information and are available as supplemental material via the NIST Camp Fire webpage [12].

Figure 3. Camp Fire NIST Field Data Collection.

Figure 4 shows the completed field sketch of a damaged parcel and corresponding satellite image of the damaged parcel. The complete damage assessment form is provided in Appendix B. The damage to the structure was documented in the field, and the identifiable potential exposure sources were measured and marked. In this case, many observations of damage were made, including damage to eaves, windows, walls, and decking.

Damage appeared to be due to both direct flame contact and radiation. Significant damage was observed to windows on the “B” side of the structure (left side of structure when viewed from the road/front). Primary exposure sources included multiple burned down fences, both attached and parallel to the structure within 4.5 m (15 ft), as well as a destroyed home 6.4 m (21 ft) away. **Figure 5** shows a photo of the damaged structure along with a closer view of the broken window with significant heat damage to the interior blinds. Additionally, the

neighboring structure was destroyed and likely produced a significant exposure to the surviving structure. Based on the severity of damage and additional burn and damage markings observed beyond those included in **Figure 5**, it appeared that there was some level of defensive action taken at this structure to prevent it from burning down.

In general, the assessed structures were located using the CAL FIRE Camp Fire DINS data [9, 10], particularly targeting the *Affected (1 % to 9 % damage)* structures. A total of 8 *Minor (10 % to 25 % damage)* and 1 *Major (26 % to 50 % damage)* damaged structures were also assessed. In the areas that were visited by the NIST team, structures marked as *No Damage* were occasionally assessed if the neighboring exposure was suspected to have a potential impact on the structure. In other cases, a *No Damage* structure was given a walk-around just to explore the backyard and observe the lack of fire damage (to vegetation or to structures) to get a general sense of fire behavior at that location.

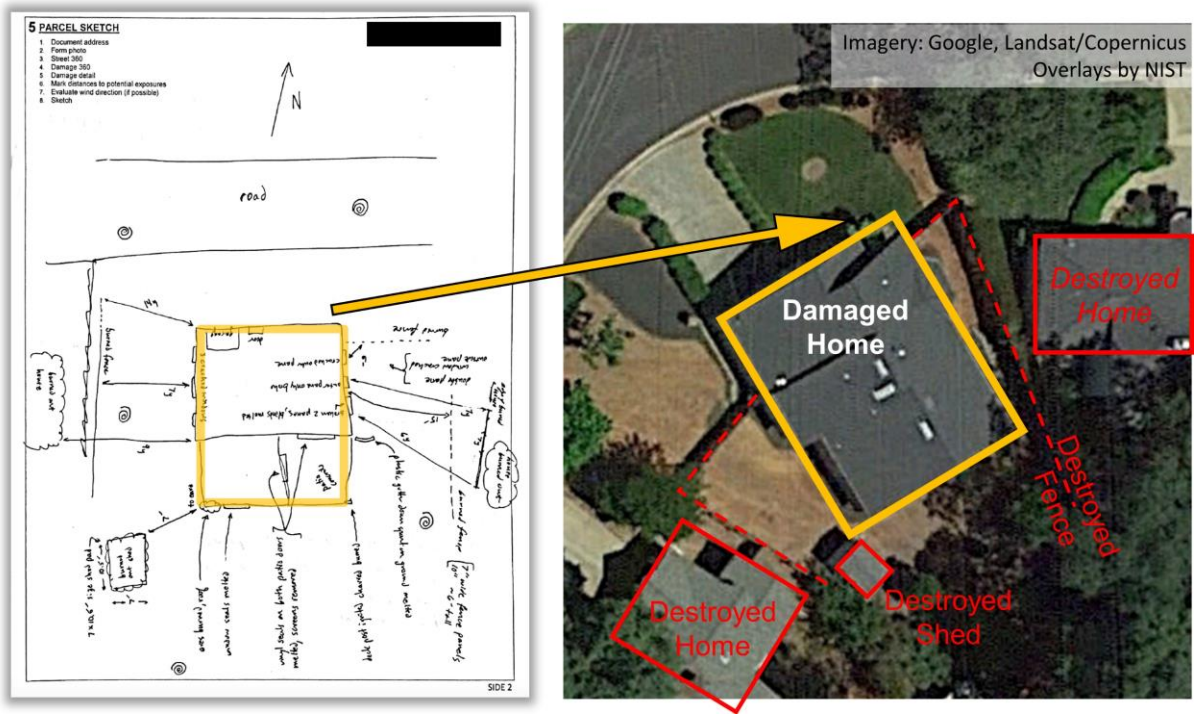

Figure 4. Completed field sketch with damage annotations on the left, and corresponding satellite image of the parcel on the right.

Figure 5. View of damage to structure "side B" (image A and Zoom A, left), and destroyed adjacent structure 6.4 m (21 ft) m away (image B, bottom right).

3.1.3. Newly Identified Damaged Structures and Confirmed Undamaged Structures

The NIST team explored 54 structures identified as *No Damage* and found 27 structures to include varying degrees of light damage, potentially warranting the classification of *Affected (1% to 9%)*. The most common types of damage discovered on these structures were damaged/melted/missing window seals, heat damage to walls and eaves in the form of blistered paint, and cracked windows. Often the cracked windows were positioned behind window screens making them even more difficult to observe.

The photos in **Figure 6** show the difficulty of observing cracked windows depending on the viewing angle. The crack is not visible in the left photo; however, it becomes clearer in the right photo when the viewing angle is changed. The optimal viewing angle depends on the crack and may not be the same perspective for all windows.

The photos in **Figure 7** show an example of a cracked window behind a screen that is even more difficult to see. The crack is not visible in the left photo. In the right photo, a long vertical crack is visible starting from the upper right corner and continuing down approximately one-third the window width away from the right edge.

Table 2 provides a list of structures that were identified as damaged during the NIST damage assessments. Much of the damage was light, and included damage such as blistered paint, missing or melted window seals, and cracked windows. For several structures the only crack was found behind the window screen which further obscured the damage. The findings were forwarded to CAL FIRE so their database could be updated.

The remaining 27 structures of the 54 *No Damage* structures that the NIST team assessed were confirmed to be *No Damage* and are not included in the 132 structures that the NIST team assessed.

Figure 6. Cracked window viewed from two different angles.

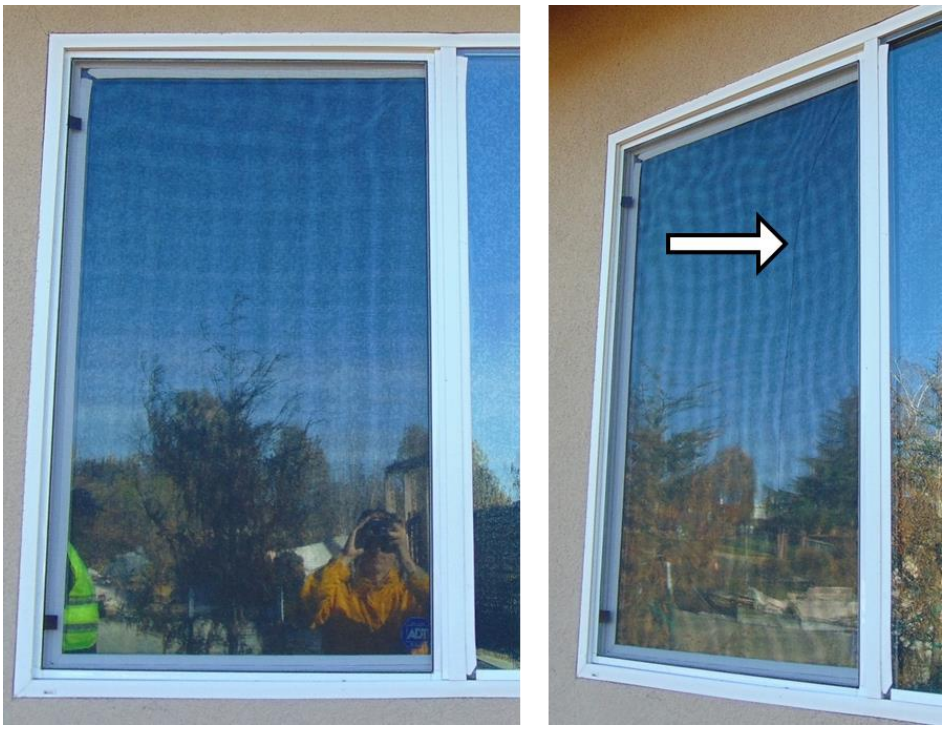

Figure 7. Cracked window behind a screen, viewed from two different angles.

Table 2. Residential structures with damage identified by NIST team.

Structure	Damage Type	Side[a]
1	cracked window behind screen, window seal damage	D
2	window seal damage	B
3	cracked window behind screen	C
4	cracked windows, window seal damage	D
5	burned carport roof/wall corner	C
6	cracked windows, window seal damage	B
7	blistered/burned siding and eaves, window seal damage	A/D
8	cracked windows, melted vinyl shutters	A
9	window seal damage	D
10	blistered paint on eaves	B
11	blistered paint on eaves, window seal damage	B
12	cracked window behind screen (2^{nd} story)	B
13	cracked window, blistered paint on walls, melted window frame	D
14	cracked windows, window seal damage, blistered eaves	B/C
15	cracked windows, cracked window behind screen, blistered paint	B/D
16	blistered paint, cracked windows	D
17	blistered eaves, siding, window seal damage	B/C
18	wood door threshold charred	C
19	cracked windows behind screen	A
20	cracked window	C
21	cracked window	A
22	blistered paint on wall, eaves	D
23	interior blinds melted	B
24	blistered paint on wood eaves	D
25	cracked windows	C
26	deck post burned through	C
27	cracked window behind screen, window seal damage	D

[a] The sides of the structures were identified as A being the side facing the street, with B/C/D following in a clockwise direction walking around the structure.

3.1.4. Damaged Structure Images Collected by NIST

Over 1300 images were taken by NIST, USFS, and FEMA personnel during the two initial reconnaissance deployments. The images included street-level views of the damaged properties as well as the surroundings, and detailed views of the damage (such as **Figure 5**, **Figure 6**, and **Figure 7**). The images have been redacted to obscure personally identifying information (i.e., people, address, license plates). The street view images have been electronically stitched into a single panoramic photo. All street view images and selected damage pictures are available online from the NIST Camp Fire webpage [12]. The images are binned by structure number from 001 to 132 and coordinate with the numbers from the accompanying damage inspection form.

3.2. Incident Data

3.2.1. Operations Maps and Incident Action Plans

Maps developed by the incident management team (IMT) were obtained for the first 3 days of the fire. The collection includes maps for public information, operations, fire progression, and aviation. While much of the initial fire spread in Concow and Paradise occurred within the first 5 hours before the first estimated perimeter was drawn, the maps are useful in that they do give a general timeline, ultimately showing the progression multiple times as estimated by aerial infrared flights.

3.2.2. Automatic Vehicle Locator (AVL)

NIST submitted a request under the California Public Records Act to CAL FIRE for copies of the AVL data. Typically, the AVL data collected during last 30 days are stored on the server, while older data is overwritten. NIST received the AVL data from CAL FIRE forty hours before the data was overwritten, highlighting the need for quick response time for successful case studies.

The AVL data was received in comma-separated value (.csv) format and includes apparatus identifier, time, and GPS location. The data captures the movements of 281 apparatus operating in the Butte County region from 12:00 am November 5, 2018 to 8:00 pm November 12, 2018 (local time: Pacific Standard Time, UTC -8). **Figure 8** shows a map of all location points recorded during the time period. The *Mobile Timestamp* represents the time the location data point was recorded, in UTC. The *AVL Timestamp* represents when the data was received by the system server.

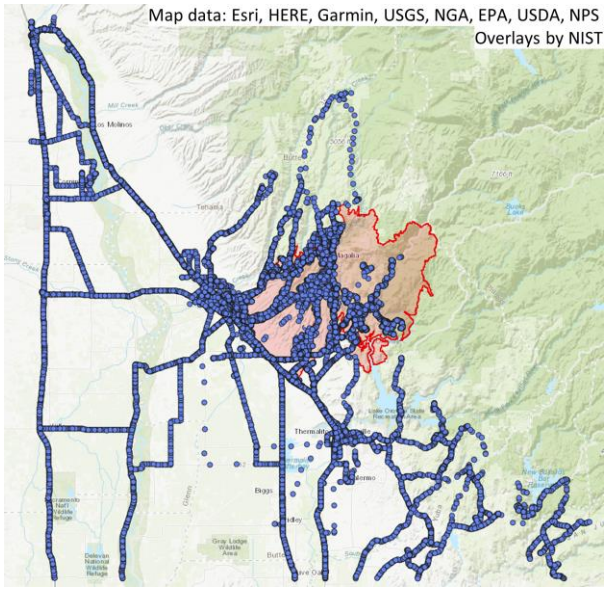

Figure 8. Automatic Vehicle Location data shows the location of all CAL FIRE apparatus with the equipment. The final fire perimeter is shown in red.

3.2.3. Radio Log Transcript

Transcription of the recorded radio communications were obtained from CAL FIRE. The transcription document contains the communications from the main channel (the only channel with recording capability) for the first 19 hours of the incident, from the initial dispatch at 6:31 am, November 8, 2018 through 12:53 am, November 9, 2018. An example of the transcription is presented in Appendix C, which has been annotated with colors to highlight the different types of information that were gathered from the data. The complete original file can be found on the NIST Camp Fire webpage [12].

3.3. Maps

3.3.1. USGS Topographic Maps

Topographic maps of the area covered by the Camp Fire were obtained using the online US Geological Survey (USGS) portal [13]. The topographic maps for the relevant area, indicated by the blue outline in **Figure 9**, are available from the USGS portal, or the NIST Camp Fire webpage [12].

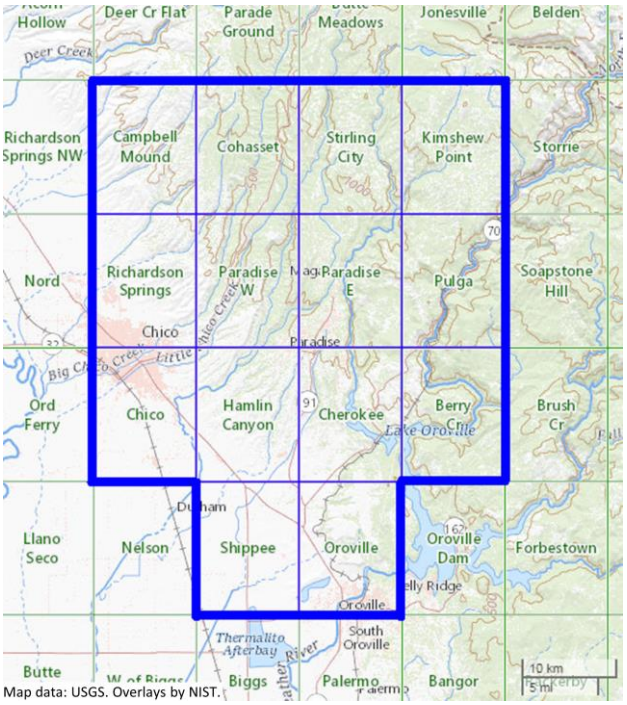

Figure 9. Relevant USGS topographic map sections are outlined in blue.

3.3.2. Evacuation Zone Maps

Maps identifying the evacuation zones throughout Paradise and the Upper Ridge, (communities north of Paradise, including Magalia) are included in Appendix D.

4. Summary

NIST together with USFS and FEMA conducted two deployments to the Camp Fire in California between November 15 and December 15, 2018. The deployments were used to collect perishable data for an event timeline reconstruction and for characterizing WUI exposures to residential structures. This preliminary data report documents the pre-deployment, field and post-deployment data collected for the Camp Fire. The data presented in this report can be found at https://www.nist.gov/el/fire-research-division-73300/wildland-urban-interface-fire-73305/nist-investigation-california [12].

Acknowledgments

The two reconnaissance deployments would not have been possible without the collaboration and support of CAL FIRE and the first responders that participated in the incident, including the Paradise Fire and Police Departments. Specifically, the NIST/USFS/FEMA Team would like to acknowledge the support of the then California State Fire Marshall, Dennis Mathisen. Chief Mathisen and the CAL FIRE Data Collection Team enabled the NIST Team to effectively access the scene and collect perishable data from the Camp Fire with the help of CAL FIRE damage assessment data.

Additionally, the field data collection would not have been possible without the effective support of the NIST Shadow Team. The Shadow Team enabled the field deployment by addressing all the logistics challenges associated with a twenty-four-hour deployment timeline and provided support to the field team for the duration of the two deployments.

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Appendix A. WUI Data Collection Form

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

DAMAGE ASSESSMENT REPORT

1 COLLECTION DETAILS

Incident Name: Camp Fire **Recording Date:** ____ / ____ / ____ **Time Recorded:** _____

Photo Release Form Approved: ☐ Yes ☐ No ☐ N/A **Photo Numbers:** _____–_____

2 ADDRESS ☐ Fixed ☐ RV/Travel Trailer ☐ Manufactured Home

_____
Street Number Street Name Unit No.

_____
City State ZIP

_____
Property Owner Last Name (if known)

3 DAMAGE TO STRUCTURE

Extent of Damage: ☐ Affected ☐ Minor ☐ Major ☐ Destroyed ☐ No Damage

Ignition/Damage Exposure Type: ☐ Embers ☐ Radiation / Convection ☐ Undetermined

Damaged Feature Assessment:

Feature	Damaged	Feature	Damaged	Feature	Damaged
Roof	☐	Eaves	☐	Windows	☐
Roof Valley / Transitions	☐	Gutters	☐	Doors	☐
Dormers	☐	Siding/Walls	☐	Decking	☐

Window Details: ☐ Single Pane ☐ Double Pane ☐ Frame Damage ☐ Seal Damage ☐ Vinyl ☐ Fiberglass ☐ Wood ☐ Other ☐ Metal ☐ N/D

Door Details: ☐ Window Damage ☐ Door Damage ☐ Frame Damage ☐ Seal Damage ☐ Vinyl ☐ Fiberglass ☐ Wood ☐ Other ☐ Metal ☐ N/D

Decking Details: ☐ Top Side ☐ Posts ☐ Bottom Side ☐ Wood ☐ Composite ☐ Other

4 NOTES/DESCRIPTION
(brief description of damage, general observations, details for Section 3)

SIDE 1

5 PARCEL SKETCH

1. Document address
2. Form photo
3. Street 360
4. Damage 360
5. Damage detail
6. Mark distances to potential exposures
7. Evaluate wind direction (if possible)
8. Sketch

SIDE 2

Damage Assessment Report
Property Information Sheet Instructions

Section 1. Incident & Field Collector Information

Record the Incident Name, Date, and Time.

Obtain photo use approval if necessary. Mark the appropriate box.

Section 2. Address
Complete address information. If information is unknown or uncertain enter 'N/D' (not determined). Mark the type of residence on the property as a Fixed, RV/Trailer, or Manufactured Home. Multi-unit dwellings (e.g., duplexes) should be assessed on a single form, noting all addresses of the structure in the address (123/125 Main St.).

Take a photo of Sections 1 and 2 of the form. This indicates a new damage assessment in the photo record.

Take a 360° photo set from the street.

Section 3. Damage to Structure

Mark the damage level of the structure, typically sourced from CALFIRE assessment. Any parcel, residential or commercial, can have more than one primary structure. This situation will occur in apartments/condominiums, trailer parks, agriculture parcels and other situations for residential areas. These situations require completing a separate form for each primary structure found on the parcel.

EXTENT OF DAMAGE: Determine the damage based upon the CALFIRE assessment, or the following criteria: **Minor** - localized combustion of an element on the exterior house that has **not spread** to other elements, or localized damage that requires rectification for normal house function, e.g. cracked or broken windows, burned window frame and eaves; **Minor** – more significant damage to the structure, primarily to the exterior; **Major** - flames have entered the house and engulfed at least one room in the structure, or sufficient external combustion to compromise the structural integrity of the house; **Destroyed** - more than 50% of the floor area of the structure is burned and no longer habitable; **No Damage** - the structure has not been damaged

IGNITION/DAMAGE EXPOSURE TYPE: Assess the nearby exposure with potential to cause the damage to the structure. If there are no viable sources of radiation or convection, and the damage is limited to an ember ignition, mark **Embers**. For damage caused by radiative or convective heating (e.g., nearby destroyed/burned structure or other combustibles, or signs of heat exposure such as bubbling paint or melted exteriors), mark **Convection/Radiation**. For cases which this cannot be determined, mark **Undetermined**.

Take a 360° photo set that shows the damaged portion of the structure and the surrounding area.

DAMAGED FEATURE ASSESSMENT: Mark the appropriate boxes for the feature of the structure that show signs of fire damage.

Take zoom photos of the damaged features as necessary for future reference.

WINDOW DETAILS: If windows are damaged, indicate whether they are Single or Double Paned, and indicate if the frame or sealing of the window is also damaged. Mark the material of the window frame if possible. If material is undetermined, mark **N/D**.

DOOR DETAILS: If the door is damaged, mark whether it has window, frame, or door damage. Also mark the material of the door.

DECKING DETAILS: Mark the location of the damage on the deck, as well as the material of the deck. Make any additional notes in Section 4.

Section 4. Notes/Description
Briefly describe the damage and the potential exposure. Note any other notable observations.

Section 6. Parcel Sketch
Draw a sketch of the main structure. Document the location, size, and description of potential source of convection or radiation heat damage. Mark the approximate location of the 360° photo sets. Also note any signs of wind direction during the fire event.

Appendix B. Completed WUI Data Collection Form (Example)

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

DAMAGE ASSESSMENT REPORT

1 COLLECTION DETAILS

Incident Name: Camp Fire Recording Date: 12, 2, 18 Time Recorded: 11:55a

Photo Release Form Approved: ☐ Yes ☐ No ☒ N/A Photo Numbers: 1997_2110

2 ADDRESS ☒ Fixed ☐ RV/Travel Trailer ☐ Manufactured Home

[redacted]
Street Number Street Name Unit No.

Paradise CA [redacted]
City State ZIP

Property Owner Last Name (if known)

3 DAMAGE TO STRUCTURE

Extent of Damage: ☐ Affected ☐ Minor ☐ Major ☐ Destroyed ☐ No Damage

Ignition/Damage Exposure Type: ☐ Embers ☒ Radiation / Convection ☐ Undetermined

Damaged Feature Assessment:

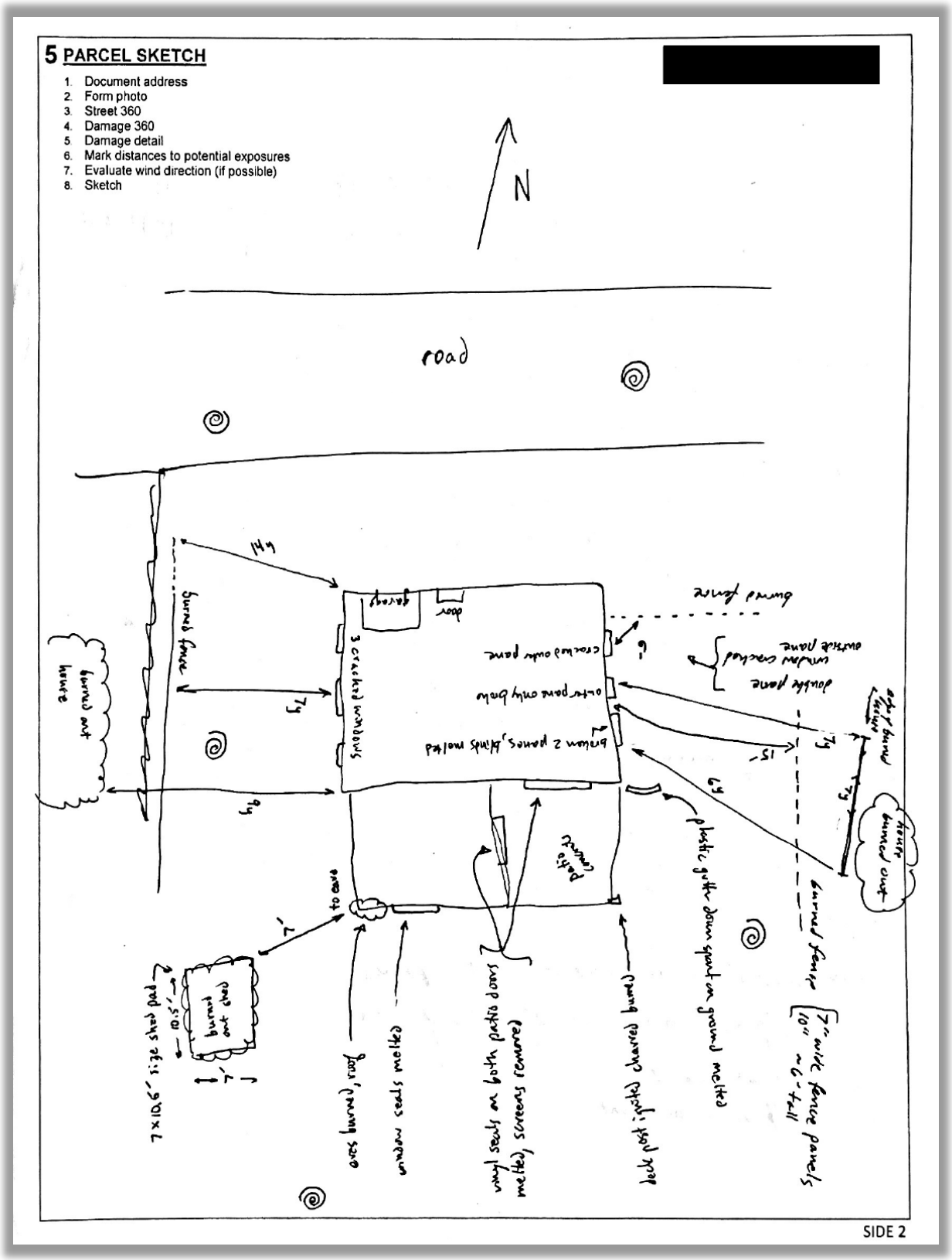
Feature	Damaged	Feature	Damaged	Feature	Damaged
Roof	☐	Eaves	☒	Windows	☒
Roof Valley / Transitions	☐	Gutters	☐	Doors	☐
Dormers	☐	Siding/Walls (fence connection)	☒	Decking	☐

Window Details:	☐ Single Pane ☒ Double Pane - broken some both panes	☐ Frame Damage ☒ Seal Damage	☒ Vinyl ☐ Fiberglass	☐ Wood ☐ Other	☐ Metal ☐ N/D
Door Details:	☐ Window Damage ☐ Door Damage	☐ Frame Damage ☒ Seal Damage patio doors	☒ Vinyl ☐ Fiberglass	☐ Wood ☐ Other	☐ Metal ☐ N/D
Decking Details:	☐ Top Side ☒ Posts ☐ Bottom Side		☐ Wood	☐ Composite	☐ Other

4 NOTES/DESCRIPTION
(brief description of damage, general observations, details for Section 3)

- defended
- many cracked windows, some with both panes
- many different ignitions on all sides of home
- shed burned out behind
- houses on 4 sides burned out

SIDE 1



Appendix C. Radio Transcript (Example)

The following is an excerpt from the CAL FIRE radio transcript. Highlights have been added to emphasize different categories of observations that may be collected from the logs; blue: defensive actions, red: fire progression and behavior, green: evacuation, rescue, traffic.

09:17-09:19 priority traffic for Camp IC – We just received a call of a resident with burns [redacted] unknown severity we are starting one air ambulance to the outside fire traffic area.

09:19 WT-3 came staffed and sent to Spring Valley Staging.

09:19 Camp IC: make sure that the air resource monitors air to air victor so there are no issues. IC ask's if we need to send a ground resource, no we do need to assign a ground resource.

09:20 E8332 at Bille/Skyway unable to reach Branch II, do we have a reporting location. Response: negative try VFIRE 26.

09:21 U73 w/FC Norman announces on CMD: Units traveling skyway LE vehicles using the left lane as a west bound route – recommend use stay in eastbound land to avoid a head on.

09:21 Operations advises Branch I of a report of a burn injury at [redacted]

09:21 ECC asks E-941 their location. Wagstaff/Skyway ECC asks E-941 if they can access Pentz Rd/Chloe Ct. area reports of an ambulance on fire. E-941 copies additionally Wagstaff about to be threated multiple cars on fire about to be impacted.

09:22 Talk from Camp Operations (B2118) [redacted] and medic 22-13 will be making their way in and need to make contact with.

09:22 Camp IC:

09:23 E81 advises ECC they are bogged down at Bille/Pentz they are anchored in and going to secure the escape route.

09:23 CAMP IC: just information we are having some significant traffic issues in the Paradise area - all responding emergency resources access into the Paradise will be Clark and Neal Rd. All other routes are being used for evacuation purposes.

09:25 E-941 asks ECC to confirm location of the ambulance on Pentz? Advised Pentz/Chloe Ct.

09:25 U73 attempts to raise Branch II

09:25 Operations asking Branch I confirming the medic unit can make it to that location or should they stage at HWY 70/Concow Rd.

09:26 DIV H raises Branch II

09:26 Someone (no identifier) tells ECC on BTU Local broadcast that they have fire established on Pentz Rd at the curves down in the drainage.

09:26 DIV H tells Branch II coming up Skyway/Pearson believes he is asking where can do you want to meet?

09:27 ECC announces: Units on local net contact Branch II on VFIRE 26 for fires in the Paradise area.

09:27 E2272 E2262 advises ECC entering the unit HWY 70 from the east.

09:27 ECC advises Branch II on landline with RP [redacted] one occupant trapped unable to leave.

09:27 ECC advises E2272 & E2262 to respond to Camp Staging at Spring Valley School Hwy 70/Pentz Rd contact Camp IC or Camp Operations of Butte Support.

09:28 Brach II raises DIV F Priority –

09:28 CHI-E15 advises ECC they are responding

09:28 ECC advises E-941 the medics are now inside the garage [redacted]

09:29 WT74 arrives staging

09:29 Branch II advise DIV F priority traffic: Victim trapped [redacted]

09:29 DIV F asked Branch to repeat address, [redacted]

09:29 CHI-15 broken and unreadable trying to tell ECC something

09:29 ECC advises Branch II

09:30 DIV G attempts to raise Branch II

09:30 DIV G got a report of a Merrill Rd blind non-ambulatory – additionally fire is well established maybe more Clark Rd/Wagstaff additionally fire Clark/Bille from the Paradise Alliance Church working its way south – Branch II advises do what you can do for evacuations and people trapped that's all we can do right now.

09:30 D2103 advises Branch II the priority for fire resources needs to be to get the people out if they could assist in anyway sheltering or protecting. Branch II: that's what we're working on right now were not fighting fire were just trying to get people moving. D2103: Affirmative, I'm up on Pentz Rd sheltering in some ambulances that are disabled, one's on fire believe that's the one you've been talking about. Branch II: what's your location?

09:31 DIV H raises Branch IV. Branch II: DIV H do you have traffic, try tone 2 I can't understand you.

09:31 ST9235G arrived staging.

09:32 DIV H raises Branch II – advises at Wagstaff/Skyway, where do you want to meet?

09:32 B2120 at scene Camp Inc.

09:32 Camp IC raises Branch II with priority traffic.

09:32 E2161 raises ECC, met up with PNF-D2 they said they have not have any request as of yet, he said he's going to make the request and get some equipment from Quincy. Additionally, advise a you have a STG coming down from Hwy 70.

09:33 Branch II asks IC if he has traffic

09:33 Branch II answers Camp IC's priority traffic. Camp IC: apparently, there is a handful of people trapped in the basement of FRH Copy, right now the Hospital is secure actually the safest place to be

Appendix D. Evacuation Zone Maps