McCash Fire
September 20-October 2, 2021
Orleans, California

Incident Management Team at Incident Command Post.

Incident Management Team functional resources at Happy Camp Spike.
The McCash Fire was one of several large fires in Northern California ignited during a late-July lightning burst. The fire was detected around 1900 on July 31 in the McCash Fork drainage of Ukonom Creek on the on the Six Rivers National Forest two miles west of the Marble Mountain Wilderness Area. Steep, rugged, and inaccessible terrain hampered initial attack efforts. The combination of long-term drought, heavy fuel loading, and critically low fuel moistures contributed to initial fire spread to the east. The fire crossed into the Marble Mountain Wilderness Area on August 5 and was mapped at 1,161 acres.

At National Planning Level 5, large fires and heavy resource and IMT commitment was already occurring in Northern Rockies and Northwest areas, limiting both IMT and resource availability. Southwest Team 3 (IMT2) assumed command of the McCash Fire on August 7; Great Basin Team 3 (IMT2) transitioned and assumed command on August 24; and Great Basin Team 7 (IMT2) assumed command on September 7. After five weeks of management under three Type 2 Teams, the Alaska Type 1 Team received an order to replace Great Basin Team 7 on September 14.

After travelling on September 17, an in-briefing by Six Rivers National Forest and Klamath National Forest agency administrators was followed by a transition meeting hosted by Great Basin Team 7 at McCash Incident Command Post (ICP) September 18. The Alaska Team shadowed Great Basin Team 7 on September 19 and assumed command on September 20. At that time, the fire was 84,471 acres, 22% contained, with 624 personnel assigned at a cost of $31 million.

The incident was supported from two camp locations, a practice used by the previous team. Incident ICP and Base Camp were located in Orleans and supported Branch XX on the south end of the incident and a Spike Camp was maintained in Happy Camp supporting Branch X on the north side of the fire. Camps were relatively equal in the number of people, with Orleans supporting around 250 firefighters and Happy Camp supporting 350. Morning Operational Briefings were conducted using a hybrid virtual and in-person model with a virtual broadcast via Zoom and radio simulcast over the incident repeater system broadcast from Orleans ICP. A short, traditional face-to-face local briefing immediately followed the broadcast portion. This model allowed consistency in communication and messaging across the incident and the in-person segment of the briefing allowed Operations, Safety, and Logistics to focus on assignments, hazards, and service and support needs unique to the respective branches and camps in Orleans and Happy Camp.
Significant precipitation occurred in the fire area immediately prior to the Alaska Team’s assignment. This event produced between 1.2 and 1.4 inches of rain across the fire area on September 18 and 19. A short-lived transitory high-pressure ridge brought warmer and drier weather to the area from September 20 through September 26, however, fire activity remained subdued due to the recent precipitation and late-season shortened diurnal drying periods. Energy Release Component (ERCs) and 1,000-hour fuel moistures recovered to near seasonal averages during this period and smoldering and creeping fire characteristics allowed firefighters to directly engage in suppression efforts for the first time since the beginning of the fire. Successful direct attack along the northern, western, and southern perimeter led to an increase of containment to 48% on September 27, when the next Pacific trough moved through the area dropping an additional 0.6 to 0.8 of an inch of precipitation across the fire area. By September 29, suppression operations were largely complete apart from a few areas requiring additional mop-up and patrol.

The eastern side of the fire was held by past fire scars in the Marble Mountain Wilderness adjacent to the Pacific Crest Trail (PCT). The fire slopped over the PCT on the northeast side where smokejumpers were inserted for perimeter hot-spotting and successful containment efforts. Accessibility and medical extraction concerns are a challenge on the eastern side of the fire in the Marble Mountain Wilderness Area. Overall, the operational incident strategy remained full suppression, however, considering seasonality, availability of resources and middle management positions, firefighter exposure, and a low to moderate probability of increased fire spread, a confinement strategy for the east side of the incident within the wilderness was chosen as the prudent course of action.

With operational suppression objectives being met, and the threat to critical values at risk diminishing, focus shifted to suppression repair after the September 27 precipitation event. Significant repair of handline, dozerline, roads, and other suppression-related impacts remained across the fire area. Considering weather and resource availability, along with proper delegations and repair prioritization, it was estimated that two weeks of suppression repair remained on the incident beyond the Alaska Team’s tenure. Coordination of repair objectives and agreement on a repair plan was successful with the Karuk Tribe and U.S. Forest Service representatives.

An Incident Complexity Analysis was completed by agency administrators and Alaska Team command and general staff (C&G). The analysis indicated complexity appropriate for a Type 2 Incident Management Team. Operational work areas and support and service needs were assessed and a determination was made by both agency administrators and Alaska Team representatives to combine incident support into a single camp. Happy Camp was chosen to be the preferred location due to transportation times to work areas, infrastructure, and adequate space for expansion. The Alaska Team finished their assignment at Orleans ICP and Happy Camp Spike was bolstered in facilities and infrastructure to support the new incoming Type 2 Team ICP.

An order was placed for a Type 2 IMT on September 26 and filled by CAIIMT 10 on September 28. CAIIMT 10 arrived in Happy Camp on October 1 and was provided a combined in-briefing and transition meeting by agency administrators from the Six Rivers and Klamath national forests. The transition meeting was provided by Alaska IMT C&G. A shadow day occurred on October 2 and CAIIMT assumed command of the incident at 0700 on October 3.

At the time of transition to CAIIMT 10 on October 3, the McCash fire was 93,514 acres, 61% contained, with 507 personnel at a cost of $41,067,892 million.
The Alaska Incident Management Team assumed command of the McCash Fire on September 20, 2021 at 0630. A delegation of authority was granted from respective forest supervisors of the Klamath and Six Rivers national forests. A Memorandum of Understanding between the Karuk Tribe, Klamath National Forest, and the Six Rivers National Forest was presented at the in-briefing.

Norm McDonald
Incident Commander

Incident Objectives
Incident objectives remained consistent during the Alaska IMTs assignment. Agency direction was full containment while keeping the fire to the smallest footprint possible, minimizing fire spread using aggressive and appropriate suppression actions where needed, and confining and containing fire spread with natural barriers where appropriate. Operational emphasis remained focused and vigilant using direct attack. One of the highest priorities was protection of Karuk heritage and cultural sites. Additional values at risk included, but were not limited to: private property, timber, communities, and homes. COVID-19 mitigation measures were in place to maintain a healthy workforce and protect local communities.

Daily Objectives
- Provide for firefighter and public safety by developing and implementing sound strategies and tactics that consider values, risk, resource availability, and probability of success.
- Protect businesses, homes, property, and infrastructure in and around the community of Happy Camp, the Highway 96 corridor, and elsewhere within the planning area. Where possible, take actions to reduce the amount of time that residents must remain evacuated from their homes.
- Implement suppression repair to correct damage associated with fire suppression activities and prevent further environmental or cultural loss.
- Protect and minimize impacts to Karuk ceremonial and cultural sites, critical habitat, and the Klamath River Wild and Scenic Corridor including anadromous fish.
- Protect private and public timber values including Ecotrust Forest Management resources to the east of the fire area.
- Maintain and enhance relationships with agency partners, cooperators, stakeholders, and the public through timely and accurate information exchange. Ensure long-term strategies are communicated.
- Provide initial attack support for new starts within the incident TFR and when requested through the Klamath and Six Rivers National Forests. Coordinate responses with the local unit.
- Follow CDC, local, state, and federal COVID-19 mitigation guidance, and protocols to reduce exposure and protect firefighters and the public from virus spread.
- Provide an atmosphere free of discrimination, harassment, and other forms of inappropriate behavior.
Incident Highlights

- Provided aerial, logistic, and financial support to the Little Marble Fire on the Klamath National Forest leading to 100% containment.
- Multiple community meetings were held in person and virtually.
- Cooperator meetings were held twice weekly with an average of seven virtual attendees.
- Requested use of retardant for Steinacher Ridge was denied.
- Conducted a national demonstration of the use of unmanned aircraft systems (UAS) in collaboration with the National Aeronautics and Space Administration (NASA).
- Updated and validated the Incident Complexity Analysis.

Notable Successes

- Provided combined in-person, virtual, and radio operational briefing between the two camps and virtual resources.
- Use of smokejumpers for remote, hard-to-access, and difficult-to-support fireline in the wilderness near Huckleberry and Buckhorn mountains.
- Demonstration of pilot Strategic Risk Analysis process being developed by the National Incident Management Organization.
- The strategic placement of limited resources to areas of critical risk and threat to values.
- The slower cadence of this incident allowed C&G trainees to operate in most of the primary positions facilitating training and workforce development opportunities.

Key Decisions

- Operating from two camps to reduce COVID-19 and driving hazard exposure.
- READ Liaison (REAL) inclusion for developing partnerships with AREPs, READs, and Tribal Representatives.
- Negotiating the mission of hazard tree mitigation as a separate mission from suppression repair to ensure alignment under the delegation of authority.
Weather

- A strong cold front moved into Northern California as the Alaska IMT mobilized September 17-19. Gusty southwest winds blew across the landscape ahead of the front bringing warm and dry conditions, crashing humidity levels to 9-13% and winds hit speeds of 15-20 mph with gusts to 35 mph. The cold front brought widespread soaking rains the morning of the 19. Rainfall totals of 0.80-1.00 inch were observed on the incident RAWS. A second shortwave pivoted across the fire September 26-27 bringing additional showers. Rainfall amounts of 0.25-0.40 inches were observed across the fire. Cool temperatures and high humidity settled over the area Sunday afternoon.

- Another offshore wind event developed on Monday, September 20. This would prove to be the strongest and most persistent offshore wind event for lasting 10 days. North to northeast winds sustained at 10-20 mph gusted between 25-30 mph. The offshore winds brought rapid drying to the area with humidity levels dropping nearly 40-50% from the previous day and bottoming out near 20%. The offshore flow additionally brought a warming of 15-20 degrees from September 19-20. Winds decreased on Tuesday, September 21st, but very warm and dry conditions were in place as high pressure moved across Northern California. High temperatures warmed into the 80s and lower 90s. September 21 was declared an elevated fire weather day given the weather conditions however, the recent rainfall continued to keep fire activity at a minimum.

- On September 22 a weak cold front moved across the fire and brought slightly cooler temperatures. Between September 23 and 25, high pressure ridging prevailed over Northern California. Temperatures climbed into the 80s and 90s each afternoon with relative humidity values falling into the mid teens. The upper ridge weakened on September 26 and this allowed for cooler temperatures. The winds were gusty out of the southwest at the ridges with a few gusts to 25 mph noted at the RAWS. A cold front approached the region on September 26 and moved over the fire overnight. Light rain developed on the morning of the 27, with periods of rain falling throughout much of the day. Rainfall amounts ranged from 0.57 inches at Dutch Indie to 0.79 inches at RAWS 40. The rainfall ended on the evening of September 27 as high pressure began to build in. Cooler temperatures prevailed across the fire on September 28, with a warming and drying trend beginning on September 29.
Fire Behavior

- The fire area consists primarily of white and red fir on upper slopes with long needle pine (Jeffery and ponderosa), mixed hardwoods (madrone and big-toothed maple) and Douglas fir down to the riparian areas. Much of the conifers to the west of the fire have an understory with snow brush and other types of *Ceanothus* spp. with Chinquapin and tan aak. Fuel models are timber litter (TL5), timber understory (TU5) and moderate dry shrub (SH2).
- The McCash Fire is burning in several fire scars from the past few decades. Fire scars are typically holding the fire in place, while those over ten years old have reburned (local input is that fire scars more than 3-5 years old will carry fire readily). The main part of the fire has experienced the third fire in about 34 years.
- Fire activity has been concentrated in areas of heavier fuels with much older fire history, mainly in the Wooley Creek drainage on south and west aspects. Backing and flanking with short uphill runs have been the main fire behavior in these areas. Interior islands were burning out along with the usual smoldering and creeping in duff and heavy fuels.
- Recent rains have significantly dropped ERCs and increased fuel moistures. Lower energy aspects (north and east) will be slow to dry out with the shorter days and indirect sun. High energy aspects (south and west) will dry out faster and will tend to support more active fire behavior as warming and drying occurs over the next week or so.
Since August 7, six Air Resource Advisors (ARAs) have been associated with the incident. One ARA started on the River Complex doing a large forecast area including the McCash Fire. It was decided by the Six Rivers and the Klamath national forests to order an ARA specific for the McCash Fire.

The smoke forecasting area for the McCash is quite large and runs from Cave Junction, Oregon to Willow Creek, CA then down the entire length of the Klamath River through Happy Camp, Orleans, and finally Klamath Glen on the Yurok reservation.

Relative to previous periods this summer, the last two weeks of growth on the McCash Fire have been relatively modest, but not extreme, burning consistently in the 20-2,000 acres per day even with 1.25 inches of rain. Calculated PM2.5 emissions for the entire length of the fire from August 1 to present is approximately 4,655 tons. This is based on half-acre fuel models and assumes 25% burn severity.

Despite the substantial emissions, air quality in the forecast area improved dramatically during the week of September 20, largely due to the absence of large amounts of smoke from other fires in the region and rain.
Operations

Key Decisions
- Rostered a large Operations Section for anticipated staffing needs and providing training opportunities.
- Configured limited resources under a manageable span of control to be best utilized within a large geographical area with multiple missions.
- Aviation and Operations morning meeting ensured the daily priorities were understood and coordinated, empowering helibase to make real-time decisions on aviation usage.
- Section representatives in each camp provided coordination, communication and leadership.

Notable Successes
- The northeast side of fire was addressed safely and with consideration for threatened communities.
- Achieved operational objectives by day 10.
- Initiated suppression repair work.
- Set up a structure and process for READs and Cultural Advisors to operate within Divisions.
- Transfer and transparency of information from Branch, Operations, and Planning Ops. Good working relationships within the section, incorporating holdover leadership.
- UAS with team remains critical for maintaining situational awareness.

Significant Challenges and Resolutions
- Coordinating the concerns from a variety of stakeholders; private, two national forests and Tribal, proved to be challenging. Involving local buy-in and developing relationships with the various entities takes time, but builds trust and partnerships.
- Two camps increase complications with limited support resources available. Support function representation at each camp, while being redundant, would facilitate smoother operations.
- Suppression Repair Plan approval impacted operational tempo. Navigating the nuances of each Forest, Rangers, READs, Cultural Advisors was a significant strain on Operations and REAL initially. Developing a process to expedite plans to utilize staff that are available to begin work, would be a more efficient use of time and resources.
Air Operations

Key Decisions
- Due to national shortages, a dedicated ATGS and UAS module were ordered from Alaska and arrived with the Team.
- The Gasquet Airport was utilized as the primary helibase due to its tendency to be clear of smoke and clouds.
- A “Notice to Airmen” (NOTAM) was issued closing the Gasquet Airport (Ward Field) to private aircraft, as the helicopters were parked on the runway. A land use agreement was established and extended for the use of the airport.
- The IMT loaned its UAS module to the Caldor Fire during a time of critical need, offering goodwill and assisting to bolster forces in a potential problem fire to the south.

Notable Successes
- At the height of the incident, there were nine aircraft, excluding UAS, assigned. Eight helicopters; four Type-1, two Type-2, and two Type 3. There was one air attack platform used throughout the incident.
- The Team used a mix of HLCO and ATGS platforms to provide aerial supervision in varied smokey conditions.
- No fugitive retardant was used during the Team’s assignment period.
- Selection and use of helispots and dip sites were coordinated with cultural and resource advisors to be sensitive to local needs.
- The flexibility and adaptability of aviation personnel to fill critical needs positions (EU crews) was key in maintaining aviation operations.
- Lend/Lease of aircraft to other units and for Initial Attack was appreciated by adjoining units and the MAC.

Significant Challenges and Resolutions
- When the Command repeater system broke down, HLCO and ATGS were used to provide continuous aerial supervision and a human repeater over all divisions of the Fire.
- With the Fire spread over a large area; aviation bases in Medford, OR and Gasquet, CA, two camps and North/South Branches, a morning aviation conference call was utilized to coordinate each day’s activities and priorities.

Dropping water on the fire near Elk Creek.

140,848 gallons of water delivered in wilderness
9,413 pounds of rotor cargo delivered
245 passengers
114.3 rotor flight hours
22.1 fixed-wing flight hours
Safety

Key Decisions

• Rostering three additional safety officers proved invaluable. Enabling the Section to provide leadership at both camps and have one dedicated line safety for duration of assignment.
• Name requested Safety Officers due to unavailability of Safety Officers through the system. Critical need and shortage of available safeties nationally and by name request.

Notable Successes

• The Strategic Risk Assessment (SRA) process went well with input from both Agency Administrators and Team members.
• The Incident worked about 150,000 hours with no reportable injuries or illnesses. The Incident drove just under 75,000 miles during our tenure with no reported accidents.
• Coordinated with Logistics to develop camp Evacuation Plans.
• Developed Emergency Medical plans for night and day operations for each for ICP at Orleans and Happy Camp.
• Having two safety officers at ICP was instrumental for the safety group to get up on step and provide all required products and maintain incident tempo.

Significant Challenges and Resolutions

• Safety officers were stretched thin and were required to cover several divisions over a large geographical area. Poor connectivity in area made it challenging to download with safety officers and utilize the GROUPME app.
• Worked closely with logistics on a potable water contamination incident at Happy Camp. Short-term mitigations and long-term solutions were implemented including contacting the Six Rivers National Forest Safety Officer for operator training on testing procedures and procedures. The training provided for the water operator was videotaped by PIO for future training opportunities.
Planning

Key Decisions

• The ITSS didn’t travel with all the IMT IT gear to reduce logistical hardships. Instead pre-ordered extra laptops, monitors, and other needed equipment to coincide with IMT arrival
• RESL conducted in-person meetings in the field with Operations for IAP Updates.
• Virtual positions to fill roster positions. With clearly defined roles and workflows for the in-person and virtual staff and processes. Virtual positions included Lead GISS, two Demob Leaders, Documentation Unit Leader, and Status Check-in Recorder (SCKN).
• Maintained a Plans presence at Happy Camp to facilitate unit functions such as briefings, check-in and IAP, and map distribution.

Notable Successes

• The Training Specialist (TNSP) was able to collect training data on 41 trainees assigned to the team. The TNSP was able to meet with many trainees during the section break-outs after the morning brief.
• The use of virtual team members to minimize COVID-19 exposure. Virtual workflows provide innovative solutions and continue to be refined. Additionally, working outside the camp environment means that power outages or internet connectivity issues are no longer a complete shutdown in operations.
• The virtual SCKN handled all extensions and crew swapping providing a single point of contact for consistency.
• Adapted and updated workflow processes to integrate the non-virtual, partial-virtual, and in-person environment.
• PIO assistance with AV support for briefings was essential and very successful.

Significant Challenges and Resolutions

• The Team inherited a demobilization process that encouraged an honor system for equipment and supply return and lacked accountability. The Demobilization Unit coordinated with the Logistics and Finance Section Chiefs to address these concerns and start using the virtual demob process that was agreed to during the Team’s spring training session. The current virtual demobilization includes accountability and conforms to standard practices.
• Resource advisors and archaeologists were listed as a critical need for almost the entirety of the AK IMT’s time on the McCash Fire. Numerous incidents locally and regionally spread Forest staff thin, resulting in an undersized READ/ARCH organization that was operating defensively with regards to operational needs. A complete data set of features requiring suppression repair was not available at the time the majority of operational resources turned to suppression repair—the utilization of FOBS greatly aided the speed and efficiency of gathering this data for planning operations and ordering necessary equipment.
• Local agency and Tribal resources were not following best practices regarding length of assignment and extension processes, however, all work-to-rest and fatigue management was accounted for. Education on best practices was provided to local Agency Administrators by the Incident Commander.
Logistics

Key Decisions

• Ordered a communications trailer to provide separation for the RADO’s from other personnel in the section for COVID-19 mitigation, as RADOs cannot do their job with a mask on.
• Ground support located next to supply resulted in quick response for deliveries.
• Rostered additional team members so there were unit leaders at each camp to handle any challenges quickly. (Namely LSC2, SPUL, COMT, FACL’s, MEDL)
• Conference call between ordering managers, expanded dispatch, buying team, and finance to communicate procedures and introduce each other virtually.
• A dedicated COVID-19 coordinator provided a consolidated point of contact for issues surrounding COVID-19 procedures and direction from the incident, the forest, and the counties.

Notable Successes

• A collaboration and creative thinking environment between sections, units, and vendors led to quick resolution of problems.
• Experienced CCC camp crews who are competent and are willing to learn additional skills to support the incident.
• Quickly expanded and reconfigured the existing ICP to accommodate the need of a Type 1 Incident Management team.
• A seasoned MEDL (i) allowed us to divide responsibilities as we would with two MEDLs.

Significant Challenges and Resolutions

• A positive water test was received from the Happy Camp potable water vendor. The Logistics staff at Happy Camp quickly identified the proper procedures to mitigate any possible future contaminations by following bleaching procedures as directed.
• RADO and INCM positions were impossible to fill. Deciding as a team, not to have night shift radio and instead team members from logistics and medical monitored radio and telephone at night.
• The noise level from the generators was too loud. Sound proofing added to the yurt and boxes were built around the generators.
• Initially local purchase items lacked ‘S’ numbers, which made it difficult to determine which camp and section the item was intended for. The buying team, supply and ordering collaborated to sort out past orders and developed a system to track ‘S’ numbers when items are delivered. Common item purchases that ordered could not be identified were “pooled” to fill orders on first come first serve.
• One of the incident Ambulances was identified with an issue involving faulty brakes and advised them to tow it to be repaired. With only two ambulances, a request was placed for an ALS ambulance under a critical need. This request has not filled due to a shortage of available ambulances.
Information

Key Decisions
• The Information Team arrived on the incident fully staffed to do the job right. The team includes a combination of trainees and qualified PIOs to ensure cross training and coverage for more communities.
• Assessed, improved and expanded the trapline to communities beyond the direct impact of the fire. Because of the regional impact of fires, residents have more questions and information needs. Through this expansion, the Team has been able to build relationships with local and regional influencers.

Notable Successes
• A community meeting was held in Happy Camp per request of the Happy Camp Fire Protection District Chief. To mitigate COVID-19 concerns it was held outdoors, recorded and posted on YouTube and the forests’ Facebook pages.
• A virtual community meeting was held upon invitation from the Karuk Tribe. Because of COVID-19 concerns, presentations were recorded as a virtual community meeting then premiered on Facebook. Questions were solicited online in advance of the meeting and asked on camera as if they were being called in live. It was successful in giving the feel of a live meeting, was COVID-19-safe, and delivered information the community wanted.
• The Team built relationships with key unofficial community liaisons. These social media influencers belong to local groups, represent local community concerns, and are contributors to or administrators of regional Facebook pages with significant followings.
• Staff at Happy Camp facilitated community meetings and relationship building in communities north of the fire.

Significant Challenges and Resolutions
• COVID-19 remains a challenge. Recognizing and addressing local rumors and concerns quickly was an important resolution. COVID-19 messaging was included in the daily update and discussed in the Karuk virtual community meeting.

Use of the UAS with NASA in the field.
Liaison

Key Decisions
• Open communication with the Karuk Tribal Liaison, noticing that the Karuk Tribe was absent from the first briefing and correcting that for the next briefing.

Notable Successes
• Coordination of lowering evacuation warnings and orders with Siskiyou County and the County providing access to the Zone Haven evacuation software.
• Having knowledge of Northern California fire issues and region prior to arrival.
• Sharing knowledge of volunteer fire department federal property acquisition programs with the local fire chief.

Significant Challenges and Resolutions
• Poor communications quality of Teams sound and audio, continue to challenge the efficiency and effectiveness of the Cooperators Meetings.
• Slower than normal operational pace and low interest by Cooperators limits opportunities to challenge Liaison Trainee but lends opportunity for Liaison trainee to gain knowledge observing thru the lens of an Alaska Agency Administrator.
Finance Section

Key Decisions
- Ensured 100% electronic filing as requested by AAs through full utilization of SharePoint site.
- Distributed on-site finance personnel to accommodate and balance resource load at both ICP and spike camp locations.
- Coordinated and integrated several virtual section positions.

Notable Successes
- Implementation of a power automate import flow from finance inbox to appropriate MS Teams folders was paramount to the expedient processing of time and check-in data submitted electronically by resources.
- Sustained usage and refinement of automated workflow from incident inception provided for a steady throughput of electronic documents. Automated workflows for finance reported the following effective percentages:

Significant Challenges and Resolutions
- Finance was split between two camps, ICP, and Happy Camp spike, as well as several virtual timekeepers. With the connectivity technology in place, the section was able to effectively communicate with all section members, including virtual timekeepers.
- Section had some members who were not familiar with electronic processes and struggled to maintain workflow, auditing processes, and understanding of NWCG recommended naming conventions. Provided quality mentoring, training and guidance and developed new skills that advanced knowledge and confidence. Adjusted duties as needed for time-sensitive assignments to others within section who were willing and able to complete those tasks in the most efficient manner.

Structure protection crews assisted in brush clearing and other fire-wise mitigations along China Grade Road.
## Estimated Cost

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### Estimated Total Cost

$39,086.96

**Estimated Date**: August 1 to September 2021

**Estimated Incident Cost**

$30,000.00

**Grand Total**

$39,086.96

**Incident Manager**

Mccash

**AK Team**

McClain

**IC**

Norm McDonald