Horse Creek Complex
Rebel Fire

Incident Summary
SEPTEMBER 12—SEPTEMBER 27, 2017

ALASKA INCIDENT MANAGEMENT TEAM
Tom Kurth, Incident Commander
Tony Doty, Deputy Incident Commander
Fire Narrative

The Alaska Incident Management Team (IMT) was ordered to the Willamette National Forest on September 8, 2017 to take over the Rebel Fire and Horse Creek Complex. At the time, both of these incidents and the Whitewater Fire were being managed by Southwest Area IMT 1. However, due to the size and complexity of the incidents, Forest officials opted to bring in the Alaska Team to take over the Horse Creek Complex, a group of five fires totaling 25,157 acres, and the 7,777-acre Rebel Fire.

The Alaska IMT arrived on Sunday, September 10, just over a week after returning home from an 18-day assignment on the Umpqua North Complex in southern Oregon. The Team was in-briefed on Sunday and officially took command of the incidents on September 12. The Alaska IMT was the seventh incident management organization on the Forest this season and the third Type 1 IMT to take command of these two incidents, following Pacific Northwest Team 2 and Southwest Area IMT 1.

The Horse Creek Complex and Rebel fires were burning in steep, rugged terrain, mostly within the Three Sisters Wilderness. The steep terrain and fact that the fires were burning in Wilderness made direct suppression tactics extremely difficult and dangerous, forcing fire managers to employ indirect tactics focusing on structure protection and indirect line construction. In addition, heavy smoke during the first week and a half of the Team’s assignment severely limited air operations, preventing fire managers from getting good aerial observations of the entire fire area.

Numerous wildland urban interface (WUI) communities were directly adjacent to the Wilderness Area in which the fires were burning. Varying evacuation alerts had already been put in place by Lane County officials, putting local residents on edge given the prolonged hot, dry weather that was forecast to continue.
In addition, the high level of fire activity in the Pacific Northwest and Northern Rockies was straining local and national resources, making it hard to obtain needed air and ground support. Both the region and the nation were at Preparedness Level 5.

The Rebel Fire and Horse Creek Complex presented several other challenges:

- Various levels of evacuations had been ordered for the McKenzie Bridge, Elk Lake and Lava Lake areas, including a Level 3 for Foley Springs.
- The U.S. Forest Service had issued several closure orders in the Willamette and Deschutes National Forests.
- The Nash, Rebel and Separation fires were burning adjacent to National Scenic Byways and two of the roads, Old McKenzie Highway Oregon 242 and Forest Service Road 19, were closed to the public.
- Critical watersheds for the communities of Bend and Eugene, as well as federal, state, industrial and private timber values were threatened.
- Critical habitat for threatened and endangered species (i.e. Northern Spotted Owl, Bull Trout, Spring Chinook Salmon) were at risk.
- The popular Pacific Crest Trail was directly impacted by the fires and one section of the well-traveled trail was closed, forcing hikers to detour around the fires.

Another challenge presented itself later in the incident in the form of a cold front that moved into the area bringing abundant rain and snow. Over the course of five days (September 17-21), five to six inches of rain fell over much of the fire area while a foot to a foot-and-a-half of snow was recorded at higher elevations. While the rain and snow definitely assisted in fire suppression efforts, it presented a major logistical and operational challenge for fire managers in terms of firefighter safety, travel and access. When the weather finally improved firefighters responded with renewed vigor to complete suppression actions and initiate suppression repair plans.

The Alaska Team extended its two-week tour by five days in an effort to meet the majority of objectives before turning it over to the McKenzie River Ranger District and a Type 3 organization on September 28. At the time of transition, the Horse Creek Complex stood at 33,346 acres while the Rebel Fire was 8,703 acres. Although isolated areas of the fire were still smoldering, fuels were sufficiently wet that additional fire spread was not anticipated.
Management Objectives

- Provide for incident responder and public safety through risk analysis, clear understanding of assignments and implementation of appropriate mitigations.
- Protect communities, homes, infrastructure and timber resources within and adjacent to McKenzie River and Detroit Ranger Districts on the Willamette National Forest and the Bend-Ft. Rock Ranger District on the Deschutes National Forest.
- Account for individual incident costs; ensure cost containment measures are identified, applied, and documented.
- Employ Minimum Impact Suppression Tactics (MIST) for any actions protecting values within wilderness areas.
- Minimize impacts to cultural resources, critical habitat and sensitive species.
- Develop and deliver timely fire information based on emerging issues and community concerns in order to minimize social and political impacts from the fires and closures.
- Enhance community and stakeholder relationships through respect, engagement, communication and trust.
Strategic Direction and Course of Action

The wildfire decisions made by agency administrators can affect human life, private property, and values outside the boundaries of their administrative unit in addition to the land base they manage. These decisions may well be the most critical (and criticized) decisions agency administrators make in the course of their careers. While these decisions consider the political, social, economic, security, infrastructure, and information dimensions – they must be made based on sound risk-management based on the best information available to support the decisions.

On September 13, 2017, The Alaska Incident Management Team (Alaska IMT), under delegation, and in partnership with the US Forest Service, Willamette National Forest, Deschutes National Forest and Oregon Department of Forestry-South Cascades District facilitated a Strategic Planning session for the Horse Creek Complex and Rebel Fire. The intent of the session was to establish a common operating picture and develop strategies to achieve the desired end-state.

Horse Creek Complex and Rebel Fire AK IMT Desired End State

“An After-Action Review of the Horse Creek Complex and Rebel Fire reveals that incident risks were safely, efficiently, and mindfully managed in such a manner that all incident objectives were achieved with the least exposure to incident responders possible. Fires were confined within the Wilderness or contained in order to protect identified values at risk, using tactics that had reasonable objectives and probabilities of success. Organizational capacity and relationships among our interagency partners, cooperators, and communities were strengthened. Costs were commensurate with the objectives and documentation and finance packages enabled an efficient and orderly transfer to the next team or back to the Forest.”
Limited Threat/Minimal Action Suppression Strategy

Much of the Horse Creek Complex and Rebel fires burned within the Three Sisters Wilderness and posed little threat to identified values. In some places the fires were hung up in natural barriers and had a low probability of spread. In other areas fire spread was possible, but spread would be unlikely to impact values. The IMT identified those portions of fire edge that represented Limited Threat to values and thus required Minimal Action, even though they would remain uncontained. The additional exposure and/or cost associated with taking action on these portions of line was evaluated and determined to be unwarranted. Limited Threat/Minimal Action line was regularly reevaluated as conditions and threats evolved.

Rebel Fire—8,703 acres
Limited Threat/Minimal Action line—69%
Line to be contained—31%
Percent completed—88%

Horse Creek Complex - 33,346 acres
Limited Threat/Minimal Action line — 96%
Line to be contained—4%
Percent completed—64%

- Avenue Fire—3,574 acres
  Limited Threat/Minimal Action line—87%
  Line to be contained—13%
  Percent completed—41%

- Separation Fire—17,914 acres
  Limited Threat/Minimal Action line—96%
  Line to be contained—4%
  Percent completed—100%

- Nash Fire—6,738 acres
  Limited Threat/Minimal Action line—100%
  Line to be contained—0%

- Roney Fire—3,548 acres
  Limited Threat/Minimal Action line—100%
  Line to be contained—0%

- Olallie Lookout Fire—1,572 acres
  Limited Threat/Minimal Action line—100%
  Line to be contained—0%

* (Statistics as of 9/26)
Incident Specific Strategic End States

The Incident After-Action Review reveals that for each fire in the complex that:

- **Initial attack.** Initial attack of new fires was successful in cooperation with local resources and Jurisdictional Fire Management Officers within the Temporary Flight Restriction (TFR) area.

- **Direct vs. Indirect.** The northwest edge of the Separation Fire was contained using a combination of direct and indirect strategies in order to protect values to the west including infrastructure in the Highway 242 corridor, timber resources, and private land further to the west. Site protection was provided for values to the north including Camp Melakwa, Frog Camp, Scott Camp, and Hand Lake Shelter. The fire's growth into the Wilderness to the northeast, east, south, and southwest where few values were threatened was monitored and remained largely confined within it.

- **Indirect Lines.** The Nash fire was monitored within the Three Sisters Wilderness Area and remained largely confined within it. Indirect lines outside the Wilderness protected values to the southeast including residences, resorts, private property, Forest Service administrative sites, campgrounds, and infrastructure in the Cascade Lakes Highway corridor.

- **Confine vs. Contain.** The northern and western edges of the Avenue Fire were contained and confined using a combination of direct and indirect tactics in order to protect values including the community of McKenzie Bridge, residences, businesses, private lands, infrastructure in the Highway 126 and 242 corridors, and timber resources.

- **Timber Sales.** The Rebel Fire was kept to the east of FS Road 19, timber sales were protected to the south, and the fire was monitored and allowed to burn within the Three Sisters Wilderness.

- **Monitoring.** The Olallie and Roney fires were monitored within the Wilderness and remained largely confined within it. Indirect lines outside the Wilderness protected values to the north including communities, private lands, and infrastructure in the Highway 126 and 242 corridors, as well as timber resources in the Forest. The Box Canyon fire was monitored and remained contained.
Fire Weather

Following a warm and dry summer, conditions in central Oregon began to moderate during the second week of September as several upper level troughs moved inland to the north and south. Little to no precipitation was received over the fire area and temperatures cooled significantly Sept. 5-9. Upper level ridging began rebuilding Sept. 10-11 for a short return to hotter weather followed by several troughs skirting the area, bringing a cooling trend but also a drier air mass over the fire area through Sept. 16.

Light precipitation began falling the afternoon of Sept. 17 and increased markedly Sept. 18-20 as a series of three upper level troughs tracked over the area. During this time, between five and six inches of rain were measured at the four Remote Automated Weather Stations (RAWS) around the fire complex. Also, one to one-and-a-half feet of wet, heavy snow fell on the fires at 5,000 to 6,000 feet elevation. Relative humidities remained at or very near 100 percent for over three days with excellent recoveries overnight. Very strong southwest winds occurred at ridge level, with sustained winds of 20-35 mph and gusts of 40-50 mph on top of Hoodoo Butte, with a peak gust of 64 mph.

Following the dramatic precipitation event, upper level ridging began rebuilding along the coast Sept. 21-22, starting a gradual warming and drying trend. Clouds and a few light sprinkles moved through the area on Sept. 25, however, a thermal trough that began building north on Sept. 26 will bring a more significant warming and drying trend that will continue through Sept. 27-28. The next potential rain event for the area will likely start late in the day on Sept. 29 and continue into Sept. 30.

Fire Behavior

- The most active parts of the complex were the Avenue Fire and north flank of the Separation Fire. The Rebel Fire and others in the Complex were mainly docile.
- Most fire growth occurred late in the day when the inversion cleared and solar radiation could affect the fuels. The steep terrain, coupled with extremely dry fuels, was conducive to rollout and spotting.
- Beard lichen was a vector of spotting. Fire climbed the lichen and then spotted as the burning lichen fell.
- Strong inversions that did not lift out at all, or until late afternoon, helped moderate fire behavior.
- The abundant rain and snowfall substantially moistened fuels and greatly reduced fire behavior.
Liaison

The Alaska IMT was dispatched to the Horse Creek Complex without a Liaison Officer. Since one of the two Public Information Officers on the Team’s roster was also qualified as a Liaison Officer, that individual was reassigned to Liaison duties the day before the team took command. A Liaison Officer trainee had been ordered by the Southwest Type 1 IMT and remained through most of the Alaska IMT’s tour. Due to the long-term nature of this incident (more than 40 days) and number of IMT transitions, consistent communication with cooperators was a challenge. The Southwest Team Liaison worked closely with the Alaska IMT Liaison and Liaison trainee to ensure that key cooperators and significant issues were identified at transfer of command.

- To facilitate continued coordination with cooperators, Liaisons continued holding cooperator conference calls at 1030 daily to provide timely information to cooperators and certain stakeholders.
- Liaison staff coordinated closely with Liaisons on the Whitewater Complex due to geographic proximity and overlap of jurisdictions and cooperators.
- The Liaisons coordinated orderly and timely lifting of evacuation levels in two National Forests (Willamette and Deschutes) and two counties (Lane and Deschutes Counties).
- There was a high level of public interest in the protection of Camp Melakwa, a local camp operated by the Boy Scouts of America, Oregon Trail Council. Liaison staff coordinated closely with the camp’s Program Director, providing periodic status reports about the camp.

Safety

The four major safety concerns throughout the incident were driving, hazard trees, the use of heavy equipment (i.e. chipping, log hauling, etc.) and the steep terrain in which firefighters were working. Despite these constant safety hazards, the incident had a stellar safety record, with roughly 106,000 person hours worked and no lost-time accidents reported. The following are some preventative measures employed by safety:

- A daily Deliberate Risk Analysis meeting was initiated with C&G staff.
- Morning briefing was moved from 0700 to 0800 to manage fatigue.
- Flaggers and a pilot car were used to increase firefighter and public safety on a short stretch of the Cascade Lakes Highway where work was being done on a fire break.
- Road closures in the fire area reduced the exposure to firefighters and the public.
- Staffing all divisions with Safety Officers (SOFR) was not possible due to resource shortages and orders coming back unfilled. This was resolved by prioritizing SOFRs to the areas of highest need and having SOFRs cover multiple divisions.
- The concern of driving long distances on heavily traveled mountain roads between ICP and Rebel Base Camp was mitigated by thorough briefings, defensive driving, minimizing the number of resources traveling between camps, and carpooling.
Operations

The Alaska IMT’s operational strategy was to follow the plan employed by Southwest Type 1 IMT for 72 hours to determine if changes in tactics or strategies were needed. All divisions were tasked with using the P.A.C.E. model and putting Primary, Alternate, Contingency and Emergency lines on a map for their respective divisions. After 72 hours, the Alaska IMT communicated its strategy and tactics to the Willamette and Deschutes National Forests, at which point the Team and forest agencies came to agreement on strategies and tactics for moving forward.

- The team carried two Unmanned Aerial Systems (UAS) platforms, only one of which had a Forward Looking Infrared (FLIR) camera for head detection. UAS missions were ordered and prioritized by Operations. UAS teams flew multiple missions to check for hot spots, increase situational awareness, map fire perimeters and document repair work. The use of UAS reduced exposure to personnel while also reducing overall incident costs.

- Operations developed a good working relationship with the Oregon Department of Forestry and were able to incorporate them into the operational plan to help protect private land, timber sales and other values at risk on the Avenue Fire.

- Mid-level overhead (Division Supervisors, Task Force Leaders, Heavy Equipment Bosses, etc.) and heavy equipment (chippers, excavators, dump trucks) were difficult to acquire due to the level of fire activity in the Pacific Northwest and Nationally.

- Five straight days of rain/snow hampered fire suppression repair, as well as communications between the Incident Command Post (ICP) and the Nash Fire. Patience and prioritization was required to weather the storm.

- Smoke and weather inhibited aerial operations, increasing the reliance on UAS for situational awareness and mapping missions.

- Given the weather and lack of heavy equipment, the suppression repair plan required extensive coordination among resource advisors and progress was difficult to track.

- With the limited resources on hand it was necessary to work purposefully. “Slow is smooth and smooth is fast” became Operations’ incident motto.

<table>
<thead>
<tr>
<th>Maximum Staffing</th>
<th>Sept. 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Personnel</td>
<td>542</td>
</tr>
<tr>
<td>Hand Crews (T1)</td>
<td>1</td>
</tr>
<tr>
<td>Hand Crews (T2IA)</td>
<td>2</td>
</tr>
<tr>
<td>Hand Crews (T2)</td>
<td>10</td>
</tr>
<tr>
<td>Camp Crews</td>
<td>2</td>
</tr>
<tr>
<td>Engines (T3)</td>
<td>1</td>
</tr>
<tr>
<td>Engines (T4)</td>
<td>4</td>
</tr>
<tr>
<td>Engines (T6)</td>
<td>23</td>
</tr>
<tr>
<td>Helicopters (T2)</td>
<td>1</td>
</tr>
<tr>
<td>Helicopters (T3)</td>
<td>1</td>
</tr>
<tr>
<td>Dozers</td>
<td>4</td>
</tr>
<tr>
<td>Water tenders</td>
<td>4</td>
</tr>
<tr>
<td>Skidgens</td>
<td>2</td>
</tr>
<tr>
<td>Excavators</td>
<td>3</td>
</tr>
<tr>
<td>Feller Bunchers</td>
<td>1</td>
</tr>
<tr>
<td>Chipper</td>
<td>1</td>
</tr>
<tr>
<td>Logging trucks</td>
<td>2</td>
</tr>
<tr>
<td>Tree grinders</td>
<td>2</td>
</tr>
</tbody>
</table>
Air Operations

The Alaska IMT’s aviation strategy was to follow the outgoing Southwest Team’s plan of a shared helibase with the Pacific Northwest Team 8 Air Operations group at the Santiam Junction State Airstrip. Two helicopters, a Type 3 exclusive use and a Type 2 exclusive use were transferred to the Alaska IMT in order to spread operational control while still maintaining the agreement of sharing resources. It also spread the aircraft out between two incidents to more accurately reflect 209 inputs and requests. Helibase infrastructure continued to be managed by the Pacific Northwest Team.

- Smoky conditions and poor weather severely limited aerial supervision and helicopter flight time. The use of Unmanned Aerial Systems (UAS) for gathering situational awareness, scouting fireline and suppression repair work, and collecting infrared (IR) information proved to be invaluable.

- The Alaska IMT was able to use two CL-415 scoopers for two days as a result of participating in the Northwest Geographic Area Coordination Center morning aviation call.

- The Team was able to use the Oregon Air National Guard (ORANG) UH-72 Lakota for special IR situational awareness while the NI-ROPS IR aircraft was unavailable.

- Having a UAS group supervisor to manage span of control with UAS missions and information, as well as preload all policy requirements with USFS, was critical to success.

- There was one SAFECOM filed by the Alaska IMT during the incident for a UAS hard landing due to a rapid depletion of the battery.

- UAS operation contributed to a Whitewater Fire SAFECOM due to incomplete communication process during a lend/lease operation.

- Defining UAS communication flow as it pertains to Operations and Air Ops was a challenge and needs to be addressed nationally and in SOPs.

- Dip site and helispot information were identified, but documentation on when they were approved, who approved them, and the type of aircraft they were approved for was missing or incomplete.

<table>
<thead>
<tr>
<th>Fixed Wing &amp; Rotors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Passengers transported</td>
<td>35</td>
</tr>
<tr>
<td>Cargo moved</td>
<td>390 lbs</td>
</tr>
<tr>
<td>Water dropped</td>
<td>149,450 gallons</td>
</tr>
<tr>
<td>Flight hours</td>
<td>82.3</td>
</tr>
<tr>
<td>Costs</td>
<td>$404,444</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missions</td>
</tr>
<tr>
<td>Flights</td>
</tr>
<tr>
<td>Flight hours</td>
</tr>
</tbody>
</table>
The Alaska IMT’s Information shop shared an office at the Hoodoo Ski Lodge ICP with the Northwest 11 Type 2 IMT managing the nearby Whitewater fires. The Information shop for both teams shared the same public information phone number, Gmail address, and with a third team, the Forest Service’s Willamette Wildfires 2017 Facebook page. Despite the complexity of two different teams being collocated, information operations proceeded smoothly in a mutually supportive manner.

- The Alaska IMT held two community meetings, one for the McKenzie Bridge area (Sept. 14) and a second at Elk Lake Resort (Sept. 15). Combined attendance was approximately 100 people.

- Community relations were strengthened by Information regularly updating trapline boards, visiting with residents and making regular posts of information and photos to Inciweb and the Willamette Wildfires 2017 Facebook page. Daily updates for the Rebel and Horse Creek Complex fires were sent out to nearly 1,000 people. The information office also played a role in sharing changes in evacuation notices and National Forest area, road, and trail closures.

- With both the Northwest and National preparedness levels at PL5 during most of the incident, it was difficult filling orders for additional Information Officers. Fortunately, prior to the Alaska IMT’s arrival, the Forest Service arranged a detail of four Bureau of Land Management employees to help staff the incident Information unit. The BLM staffers proved to be a major coup, not only providing local knowledge and critically important help in the office and on the trapline, but also opening task books to hopefully pursue their PIO qualifications to help national needs.

<table>
<thead>
<tr>
<th>Public Info (as of 9/25)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facebook</strong></td>
</tr>
<tr>
<td>Number of posts</td>
</tr>
<tr>
<td>People reached</td>
</tr>
<tr>
<td>Likes</td>
</tr>
<tr>
<td>Shares</td>
</tr>
<tr>
<td>Comments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Trapline</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of traplines</td>
</tr>
<tr>
<td>Number of stops</td>
</tr>
<tr>
<td>Number of info boards</td>
</tr>
<tr>
<td>Total miles driven</td>
</tr>
<tr>
<td>Contacts made</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Phone calls</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
</tr>
<tr>
<td>Media</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Media Interviews</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper</td>
</tr>
<tr>
<td>Radio</td>
</tr>
<tr>
<td>Television</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Community Meetings</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>McKenzie Bridge (9/14)</td>
</tr>
<tr>
<td>Elk Lake Resort (9/15)</td>
</tr>
</tbody>
</table>
Logistics

- The Hoodoo Ski Lodge provided a large, clean and warm work space for an Incident Command Post.
- Redmond Mobilization Center Ground Support Unit had 25 4x4 pickups with heavy-duty, 10-ply tires. This saved money and time on repair and replacement of tires.
- Sharing an ICP with two fires required additional time to brief all personnel on the unusual arrangement. Although there were some cost savings with sharing the weed wash, caterer and the shower unit, the tracking of all other unshared supplies, equipment and overhead was burdensome.
- Tracking of resources between Whitewater and Rebel fires was difficult due to the long duration of the incidents and incomplete lend/lease records. The Logistics Sections for both the Alaska Team (Horse Creek Complex and Rebel Fire) and the Northwest Team 11 (Whitewater Fire) coordinated a joint meeting for each section to meet the other and start the process of identifying which team would be responsible for tracking resources.
- Because contracted security personnel staffing road closures were unfamiliar with fire operations and the Incident Command System, Logistics requested that the Information shop provide them with a daily fire update while Logistics provided a simple communications plan identifying the division they were working in, the command channel and their checkpoint number that was applied to the road map by Plans.
- The Medical Unit at ICP supported medical units at Rebel Base and Wanoga Camp. Together the three units had 281 firefighter visits and 31 treatments (i.e. blisters, minor lacerations, etc.) . The most prevalent complaint was common colds. There were three firefighters referred to local clinics - one for a Staph infection that was sent on to the emergency room, one for a broken finger that was x-rayed and is pending review by an orthopedic surgeon, and a firefighter that had complications from a previous bout of Zika virus (non-contagious) who was treated and returned to work. The Medical Unit also aided local agencies in the recovery of a lost hiker and in the management of a civilian cardiac arrest along the Highway 126 corridor.
- A QR code was put on the front page of the Incident Action Plan (IAP) daily as a link to the Medical Incident Report, 9 Line.
Finance

- The Finance section encountered the challenge of dealing with a complex database and had to devote many hours doing adjustments to ensure accruals were accurate. The process required constant coordination between both Cost Unit Leaders.
- One of the main challenges of the Finance Section was working in the same space with the Finance Section from the Whitewater fires. A joint meeting was held between the sections of both teams to decide how best to work together to provide more efficient service to incident personnel.
- The location of Rebel Base required someone from the Time Unit to travel to the morning briefing to collect needed documents, time, and other information after the briefing. Information was included in the IAP to maintain contact with staff at the remote camp.

**Horse Creek Complex Cost Summary**

- Total: $9,223,142
- September 25, 2017

**Rebel and Box Canyon Fires Cost Summary**

- Total Cost: $7,209,201
- September 25, 2017
Plans

- Having digital maps available for download from both the NIFC ftp site (via a QR code printed on the IAP) and an on-site wireless USB device reduced the number of printed maps needed daily.

- Having the bulk of the personnel located 40 minutes away at Rebel Base was a challenge that was resolved by sending several Planning Section personnel there for the morning briefing and daily coordination.

- There was carryover in staffing from the previous team that allowed for a smooth transition and provided help to the lead GIS Specialist (GISS) while waiting for other GISSs to arrive. A trainee stayed with the team for five days, and a qualified GISS stayed for three days. Both individuals were skilled with ArcGIS Online (AGOL), and the training and knowledge they provided to the incoming Alaska GISSs was crucial to their success.

- After discussions with the outgoing Incident Technology Support Specialist (ITSS), it was decided to leave the existing network infrastructure equipment in place because both teams were sharing the network and could then share the eISuite site database easily.

- Keeping two Internet Service Providers (ISPs) offering internet via satellite allowed for redundancy and twice as much bandwidth. However, it also at least doubled the cost for incident Internet service.

- Maintaining two databases was very challenging for several reasons:
  - IAP production: This challenge was overcome by deciding to create the IAP in Microsoft Word.
  - Tracking resources and providing ICS 209 counts: This was initially a big concern for safety and accountability when taking over the fire from the previous team. This challenge was overcome by using the “Other 2” field to identify the fire a resource was working on. Three Resource Unit Leaders (RESL) were needed to manage the dual databases.

- Extension documentation was missing for some resources when the Alaska IMT arrived. This was overcome by scrutinizing financial records to verify work-to-rest ratios were being met.
IMT Notable Successes

- Clear identification of values at risk from our Agency Administrators helped ensure a common operating picture for all incident personnel. These values were identified on operational and incident maps which aided responders on the ground, Agency Administrators and stakeholders.

- There were no significant accidents or serious injuries during the Alaska IMT’s tenure.

- The Alaska IMT coordinated development of a Rapid Lessons Learned (RLS) for publishing on the Wildland Fire Lessons Learned Center website regarding communications and jurisdictional issues learned on a response to a civilian incident.

- The local Resource Advisors communicated well with the Alaska IMT and provided invaluable information to minimize environmental impacts.

- Of special note was an invitation for firefighters to attend the monthly potluck dinner at the Upper McKenzie Community Center. This gesture was accepted and the Snake River Valley Type 2 crew attended along with a few members of the Alaska IMT. The heartfelt appreciation from the community to the firefighters at this event was palpable.

- Near the end of a busy fire season, each unit and section coordinated and communicated well to meet deadlines and achieve common goals. There was good Team morale and cohesiveness, and a productive interface with Agency Administrators.

- World renowned forest ecologist Dr. Jerry Franklin of the University of Washington, with a class of 20 forestry students, visited Rebel Base Camp for the Operational Briefing on Sept 13. After the briefing, several members of the IMT individually addressed the students about various aspects of Incident Management. This was facilitated at the request of the Research Coordinator on the Willamette National Forest.
Significant Challenges and Resolutions

- Inclement weather challenged all resources when the fire area received 6 inches of rain over a 4-day period. A significant increase in hazard trees and rolling debris coming off steep terrain was mitigated by holding firefighters off the line during the worst of the storm and only putting them to work in areas that were safe from hazards.

- The eISuite database could not be split between the Rebel Fire/Horse Creek Complex and the White-water Complex. This limitation drove the decision to collocate the Incident Command Posts for the respective complexes and their IMTs. This limitation added additional responder exposure by precluding IMTs from moving their respective ICP closer to the complexes they were managing. EISuite experts were consulted but could not resolve the issue. Responder exposure was partially mitigated by placing camps for operational personnel closer to work areas. However, longer travel to accommodate briefings and other camp services exposed IMT leadership to increased risk.

- The FAMWeb 209-reporting system restricts options for reporting containment, confinement, and costs on complexed incidents. In order to clearly report cost and progress on complexed fires detailed explanations were required in the Remarks block. This reporting issue will be elevated to the National Wildfire Coordinating Group (NWCG) Data Management Committee by the Plans Chief.

- The use of ArcGIS Online (AGOL) is both a challenge and a success in a variety of different ways. Previous teams on the incident had implemented AGOL for several purposes, including Public Information maps, Evacuation and Closure maps, and Collector maps used by the Field Observers (FOBS) and Resource Advisors (READ) for gathering field data. However, because it is an emerging technology in the firefighting world, and because there are not standard workflows and processes in place with which all GISSs are familiar, it also creates a lot of confusion, messy data, overwritten/disappearing data, etc. The skill level among GISSs, FOBS, READs and Operations personnel also varies greatly when it comes to using AGOL, which makes it difficult to carry on processes that were already in place when teams/resources transition. Some of the GISS workload was simplified by using AGOL, but for the most part the job was more complicated and frustrating. Communication and collaboration between Operations, READs and Plans was also a bit strained due to unfamiliarity with and resistance to AGOL. In order to use AGOL successfully in the future, more training is needed during the off-season, but it needs to be full team training, not simply GISS training. GISSs need to work with Operations and Structure Protection Specialists to establish standard workflows, procedures, surveys/forms/maps/tools that everyone on the team is familiar with and agrees will help the team accomplish its objectives in the most efficient way possible.
Horse Creek Complex
Rebel Fire
Sept. 12-27, 2017